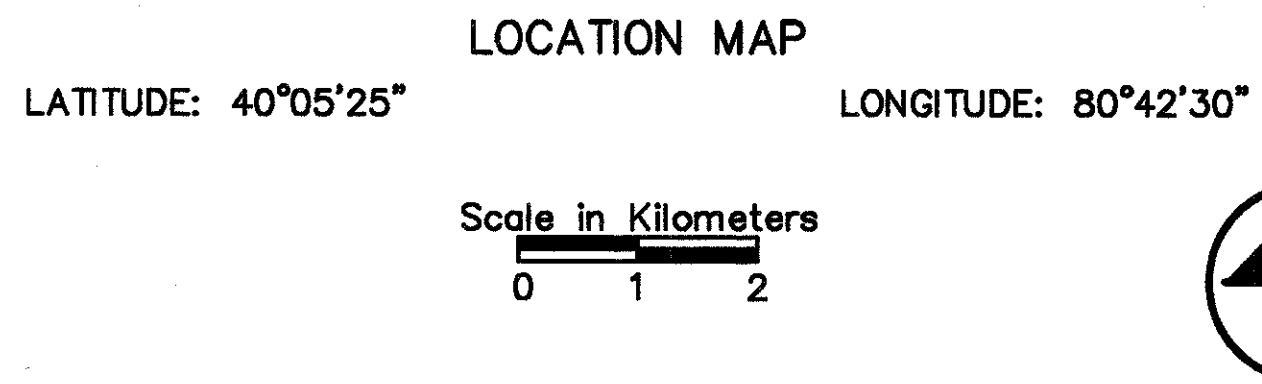
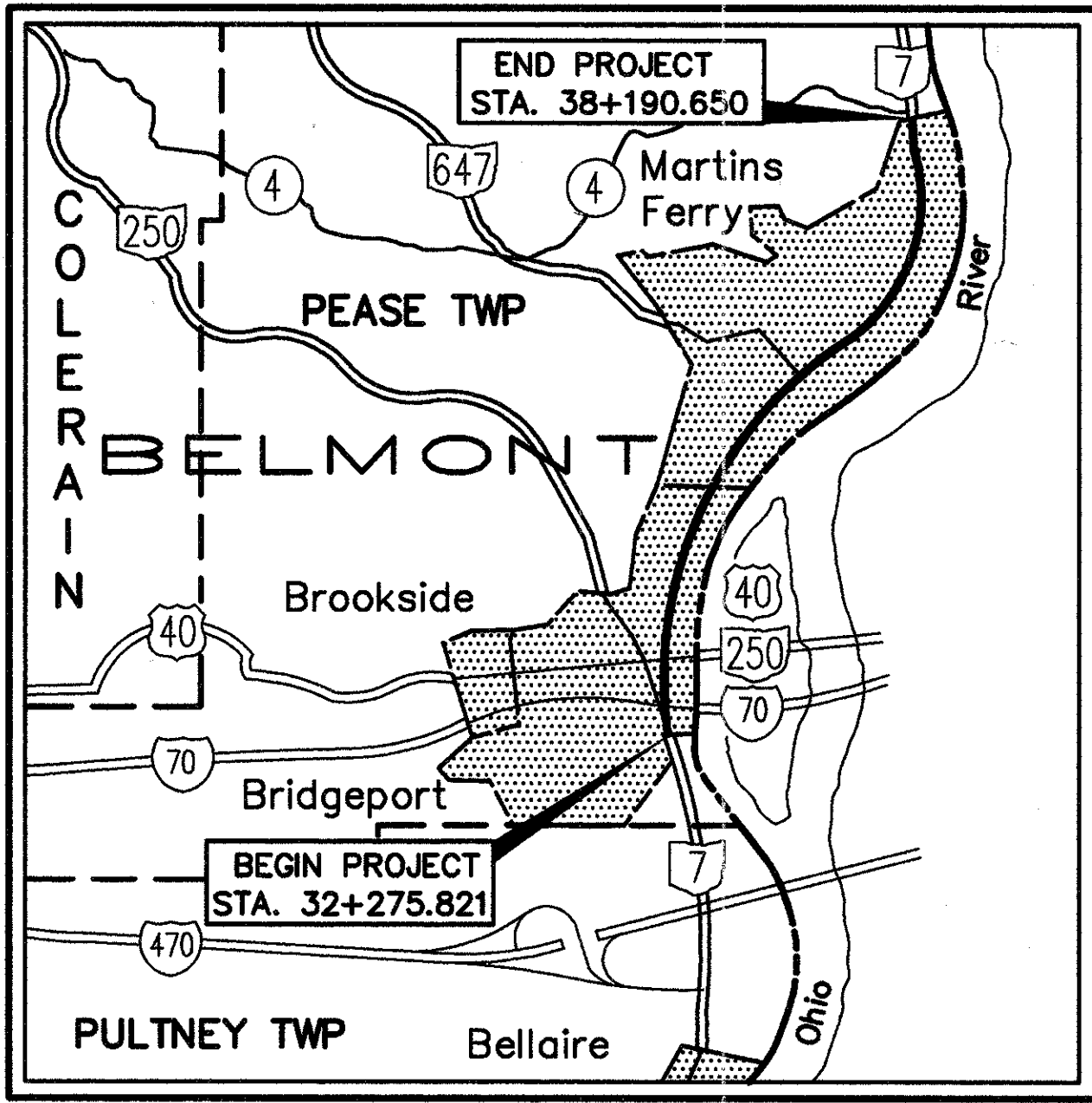




Portion To Be Improved -----

State & Federal Routes -----

County Roads -----

DESIGN DESIGNATION

CURRENT ADT (1995) ----- 45890

DESIGN YEAR ADT (2015) ----- 68840

DESIGN HOURLY VOLUME (2015) ----- 6200

DIRECTIONAL DISTRIBUTION ----- 56%

TRUCKS (24 HOUR B & C) ----- 7%

DESIGN SPEED ----- 100 KMH

LEGAL SPEED ----- 80 KMH (50 MPH)

DESIGN FUNCTIONAL CLASSIFICATION-----

URBAN PRINCIPAL ARTERIAL/EXPRESSWAY

DESIGN EXCEPTIONS APPROVED

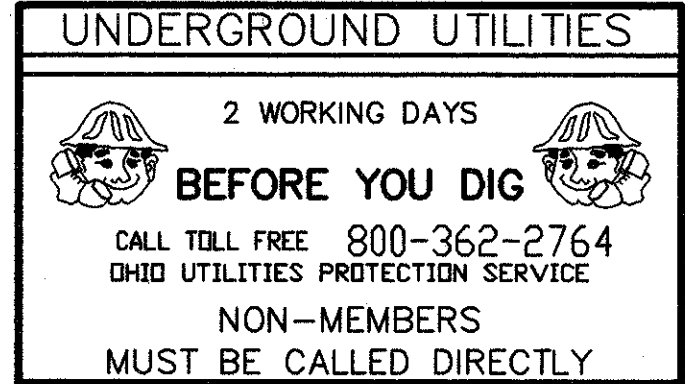
SHOULDER WIDTH JANUARY 13, 1995

BRIDGE WIDTH JANUARY 13, 1995

SUPERELEVATION JANUARY 13, 1995

STOPPING SIGHT DISTANCE JANUARY 13, 1995

VERTICAL ALIGNMENT JANUARY 13, 1995



Plan Prepared By:

W. E. QUICKSALL AND ASSOCIATES INC.

CONSULTING ENGINEERS

554 West High Ave.

New Philadelphia, Ohio

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

**BEL-7-32.276**

CITY OF MARTINS FERRY

VILLAGE OF BRIDGEPORT

PEASE TOWNSHIP

BELMONT COUNTY

INDEX OF SHEETS:

|                                        |       |                                     |                 |
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| SCHEMATIC PLAN                         | 2-3   | CENTERLINE REFERENCES               | 93              |
| TYPICAL SECTIONS                       | 4-10  | INTERSECTION DETAILS AND QUANTITIES | 94-103          |
| GENERAL NOTES                          | 11-13 | UNDERDRAIN                          | 104-107         |
| MAINTENANCE OF TRAFFIC                 | 14-34 | DRAINAGE DETAILS AND QUANTITIES     | 108-122         |
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| CONCRETE BARRIER AND MEDIAN QUANTITIES | 51-52 | CAST-IN-PLACE STRUCTURES:           | 200-236         |
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| STORM WATER POLLUTION PREVENTION PLAN  | 56-58 |                                     |                 |
| PLAN - S.R. 7                          | 59-68 |                                     |                 |
| CROSS SECTIONS - S.R. 7                | 69-73 |                                     |                 |
| MEDIAN DETAILS                         | 74-80 |                                     |                 |

PROJECT DESCRIPTION

This project consists of resurfacing of 5.91km of existing pavement, remove existing median, add new median and median underdrains, and concrete barrier. Add pavement widening and underdrain in designated areas. Replace fence, guardrail, signing and lighting. Provide new signal system at Aetna Street. Rehabilitate bridges on S.R. 7 over IR-70, over Center Street, and the pedestrian bridge over S.R. 7.

LIMITED ACCESS

This improvement is especially designed for through traffic and has been declared a limited access highway or freeway by action of the Director in accordance with the provisions of Section 5511.02 of the Revised Code of Ohio.

1997 SPECIFICATIONS

The standard specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal shall govern this improvement.

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

Under authority of Section 4511.21, division (I) of the revised code of Ohio, the revised prima facie speed limits as indicated herein are determined to be reasonable and safe, and are hereby established for the duration of this project. The prima facie speed limit or limits hereby established shall become effective when appropriate signs giving notice thereof are erected.

Approved Date 1/13/95 District Deputy Director

Approved \_\_\_\_\_ Date \_\_\_\_\_ Director, Department of Transportation

| STANDARD CONSTRUCTION DRAWINGS |          |         |          |           |         |           |           |           |           | SUPPLEMENTAL SPECIFICATIONS |          |
|--------------------------------|----------|---------|----------|-----------|---------|-----------|-----------|-----------|-----------|-----------------------------|----------|
| BP-2.1M                        | 4-8-97   | GR-3.5M | 1-3-96   | RM-4.2M   | 6-30-95 |           | TC-52.20M | 7-29-94   | HL-20.14M | 5-1-95                      |          |
| BP-2.2M                        | 4-8-97   | GR-4.1M | 11-30-94 | RM-4.3M   | 6-30-95 | TC-9.10M  | 2-1-94    | TC-61.10M | 3-31-94   | HL-20.15M                   | 3-31-95  |
| BP-2.5M                        | 4-8-97   | GR-4.2M | 4-21-95  | RM-4.4M   | 6-30-95 | TC-9.30M  | 2-1-94    | TC-65.10M | 11-1-95   | HL-30.11M                   | 3-31-95  |
| BP-3.1M                        | 10-28-94 |         |          | MH-1.1M   | 9-6-95  | TC-12.30M | 2-1-94    | TC-65.11M | 11-1-95   | HL-30.21M                   | 5-1-95   |
| BP-4.1M                        | 10-28-94 | CB-2.1M | 7-12-95  | MH-3.1M   | 9-6-95  | TC-21.20M | 12-10-96  | TC-65.12M | 11-1-95   | HL-30.22M                   | 3-31-95  |
| BP-5.1M                        | 10-28-94 | CB-2.2M | 7-12-95  | MH-1.2M   | 9-6-95  | TC-21.40M | 2-1-94    | TC-71.10M | 9-1-93    | HL-30.31M                   | 5-1-95   |
| BP-7.1M                        | 10-28-94 | CB-3.2M | 7-12-95  |           |         | TC-22.10M | 2-1-94    | TC-72.20M | 9-1-93    | HL-30.33M                   | 8-31-94  |
|                                |          | I-1.1M  | 9-6-95   | MT-35.11M | 1-30-95 | TC-22.20M | 2-1-94    | TC-81.10M | 12-10-96  | HL-40.10M                   | 3-31-95  |
| F-1.1M                         | 4-8-97   | I-1.2M  | 9-6-95   | MT-35.10M | 1-30-95 | TC-31.21M | 3-31-94   | TC-82.10M | 11-24-93  | HL-50.11M                   | 3-31-95  |
| F-3.1M                         | 4-21-95  | I-2.1M  | 4-8-97   | MT-95.30M | 4-25-94 | TC-32.10M | 3-31-94   | TC-83.10M | 11-24-93  | HL-50.21M                   | 8-31-94  |
| F-3.3M                         | 4-21-95  | I-2.2M  | 9-6-95   | MT-95.31M | 4-25-94 |           |           | TC-83.20M | 11-24-93  | HL-60.11M                   | 5-1-95   |
| F-3.4M                         | 4-8-97   |         |          | MT-95.40M | 4-25-94 | TC-41.10M | 3-31-94   | TC-84.20M | 11-24-93  | HL-60.12M                   | 3-31-95  |
|                                |          | DM-1.1M | 6-30-95  | MT-98.12M | 6-24-93 | TC-41.20M | 7-1-94    | TC-85.20M | 11-24-93  | HL-60.31M                   | 3-31-95  |
| GR-1.1M                        | 11-30-94 | DM-1.2M | 6-30-95  | MT-98.13M | 6-24-93 | TC-41.40M | 3-31-94   |           |           |                             |          |
| GR-1.2M                        | 1-3-96   | DM-4.2M | 6-30-95  | MT-98.14M | 6-24-93 | TC-41.41M | 3-31-94   | HL-10.11M | 5-1-95    | PCB-91M                     | 3-20-95  |
| GR-1.3M                        | 11-30-94 | DM-4.3M | 6-30-95  | MT-98.15M | 6-24-93 | TC-41.50M | 7-1-94    | HL-10.12M | 5-1-95    | AS-1-81M                    | 10-25-94 |
| GR-2.1M                        | 11-30-94 | DM-4.4M | 6-30-95  | MT-98.16M | 6-24-93 | TC-42.10M | 3-31-94   | HL-10.13M | 5-1-95    | VPF-1-90M                   | 3-20-95  |
| GR-3.1M                        | 11-30-94 | RM-1.1M | 4-8-97   |           |         | TC-42.20M | 3-31-94   | HL-20.11M | 3-31-95   | EXJ-4-87M                   | 2-18-97  |
| GR-3.2M                        | 11-30-94 | RM-3.1M | 6-30-95  | MT-99.20M | 1-30-95 | TC-52.10M | 7-29-94   | HL-20.13M | 1-31-97   | SD-1-69                     | 6-12-69  |



FEDERAL PROJECT NO.  
**NH-1 (202)**

PID NO.  
**11896**

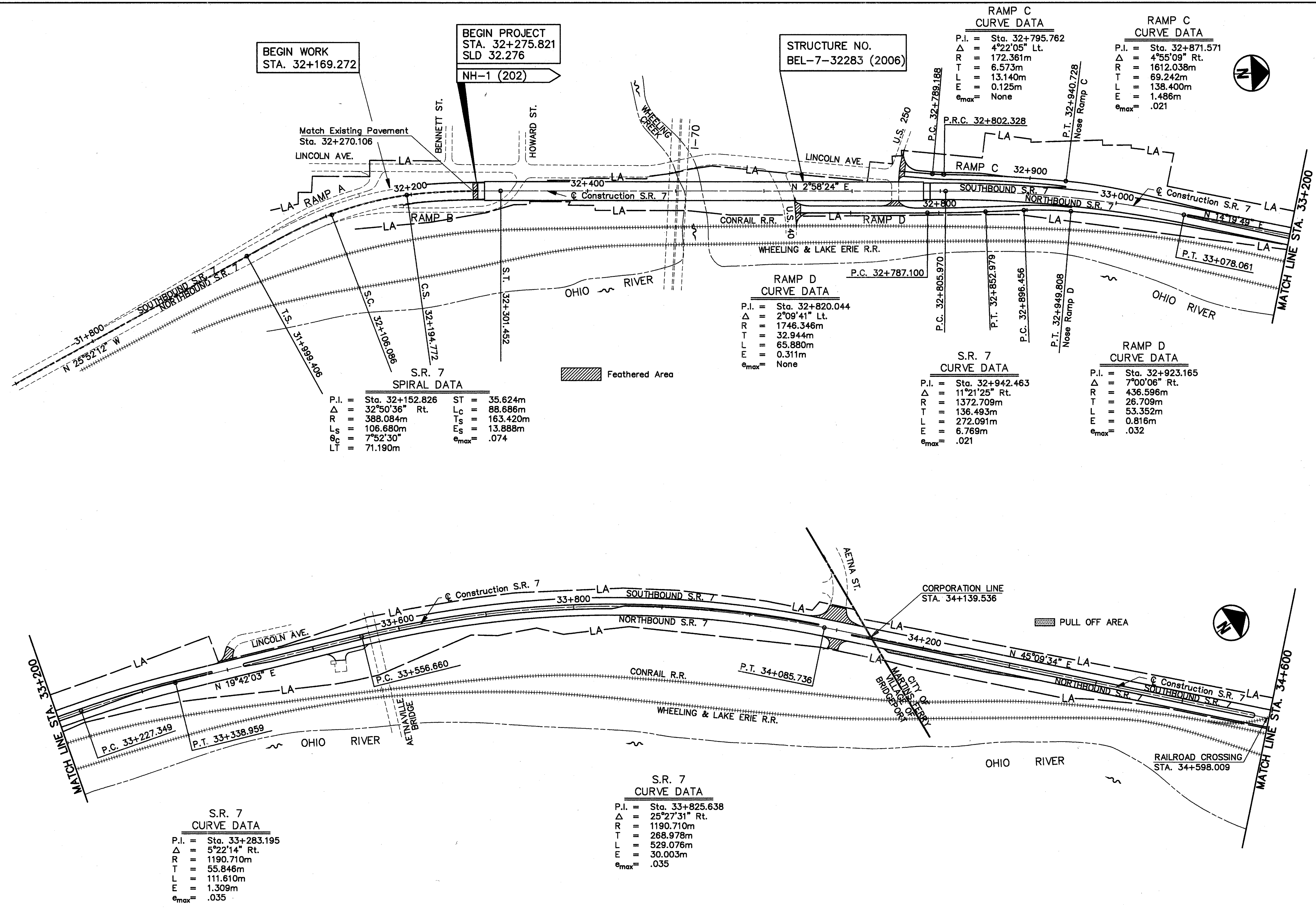
CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT  
NONE

**BEL-7-32.276**

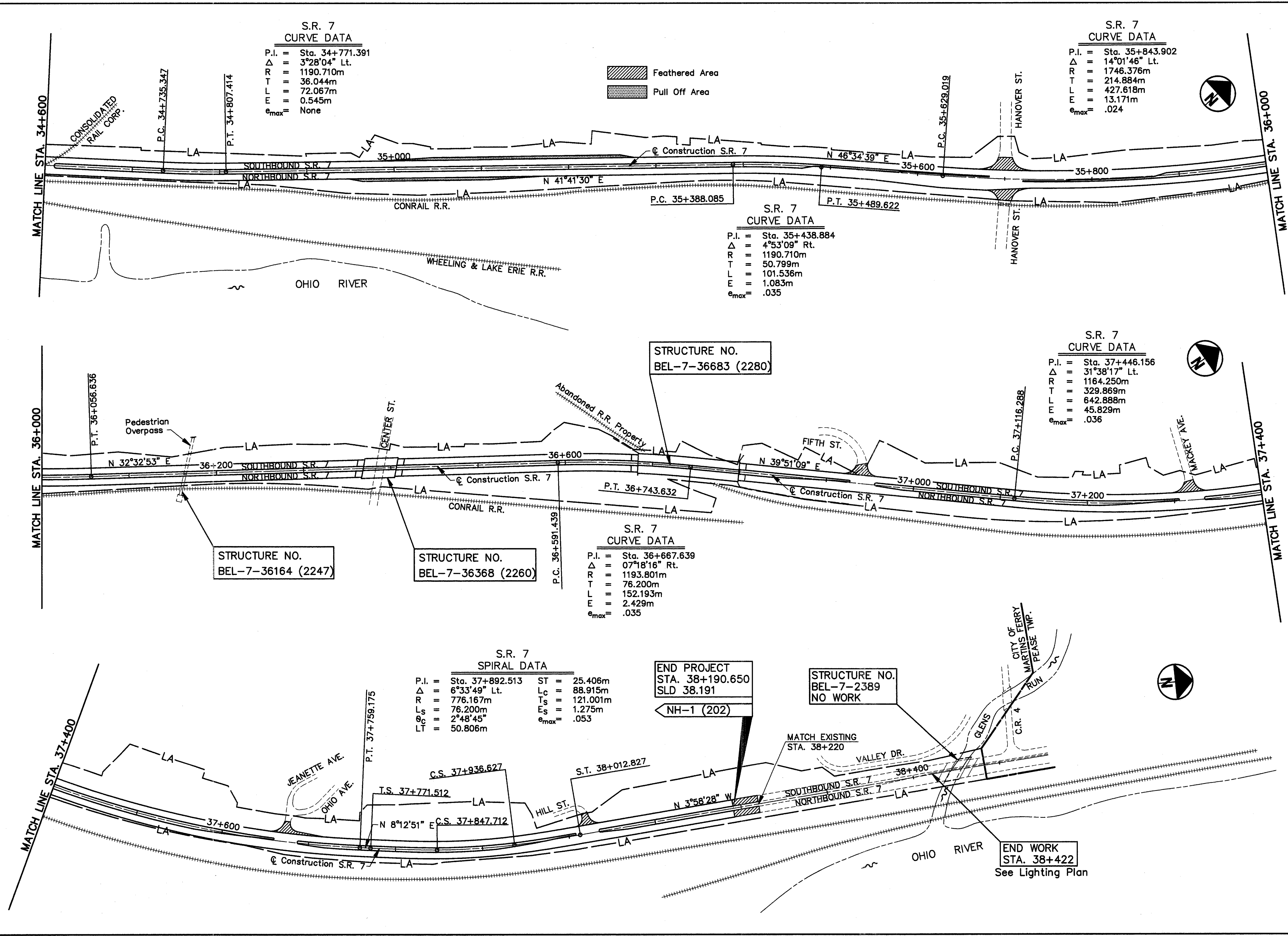


HA-332-01(10/20/05) - OCT 22, 1997 - 07:43:30





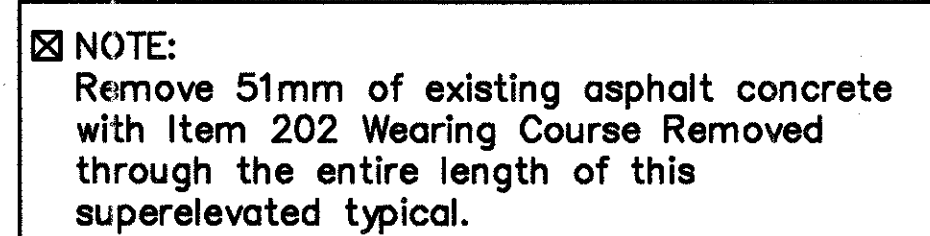
14-9327-01-13201052.dwg - OCT 20, 1997 - 07:43:38











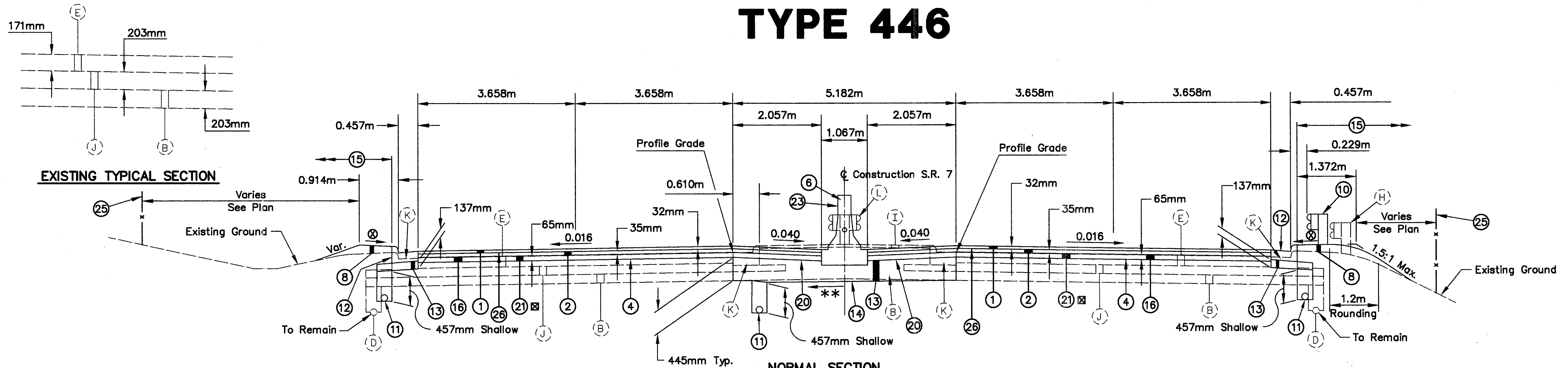
- ### PROPOSED LEGEND

- EXISTING LEGEND

- |     |                                             |
|-----|---------------------------------------------|
| (A) | EXISTING 229mm REINFORCED CONCRETE PAVEMENT |
| (B) | EXISTING SUBBASE                            |
| (C) | EXISTING AGGREGATE BASE                     |
| (D) | EXISTING 152mm PIPE UNDERDRAIN              |
| (E) | EXISTING ASPHALT CONCRETE                   |
| (F) | EXISTING CONCRETE SIDEWALK                  |
| (G) | EXISTING CONCRETE CURB                      |
| (H) | EXISTING GUARDRAIL                          |
| (I) | EXISTING CONCRETE MEDIAN                    |
| (J) | EXISTING MACADAM BASE COURSE                |
| (K) | EXISTING CURB & GUTTER                      |
| (L) | EXISTING GUARDRAIL BARRIER DESIGN           |



# TYPE 446



- ⊗ 0.040
- \*\* 0.020
- ⊙ 0.040 or Applicable Superelevation Rate if greater See Sheet No. 7
- ⊠ See Detail Sheet No. 7
- Slope Same As Pavement

(See Median Detail, Sheet No. 10)

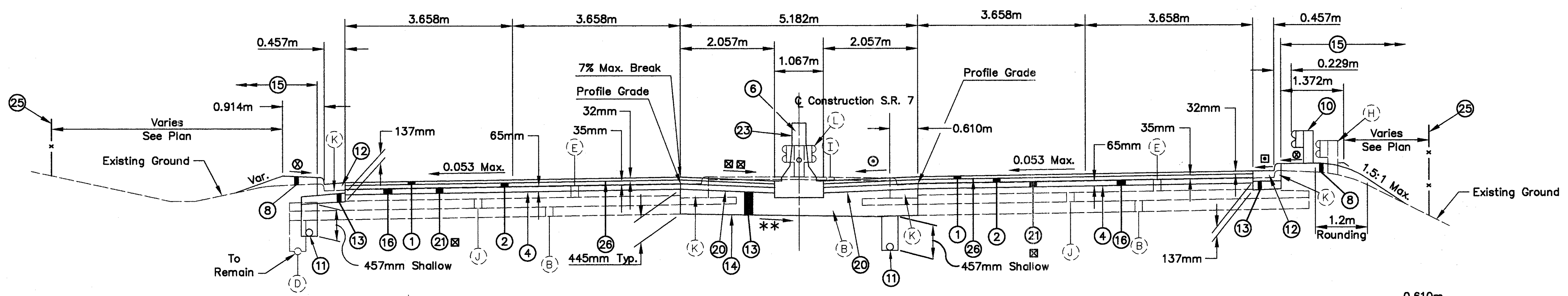
Deduct For Structure & Approach Slabs  
Deduct For R.R. Spur Crossing

**NORMAL SECTION**  
SECTION APPLIES:

|                                    |                    |
|------------------------------------|--------------------|
| STA. 33+420.911 TO STA. 33+474.251 | = 53.340m          |
| STA. 34+167.671 TO STA. 34+647.731 | = 480.060m         |
| STA. 34+891.571 TO STA. 35+303.051 | = 411.480m         |
| STA. 36+134.273 TO STA. 36+507.653 | = 373.380m         |
| STA. 36+827.693 TO STA. 37+033.433 | = 205.740m         |
| STA. 38+068.730 TO STA. 38+190.650 | = 121.920m         |
| STA. 36+360.679 TO STA. 36+413.897 | = -53.218m         |
| STA. 34+594.815 TO STA. 34+601.283 | = -6.468m          |
| <b>TOTAL</b>                       | <b>= 1586.234m</b> |

**NOTE:**  
Remove 38mm of existing asphalt concrete with Item 254 Pavement Planing, Bituminous through the entire length of these typicals excepting stations 36+129 to 36+199 where removal depth shall be 75mm. (See Detail Sheet No. 90)

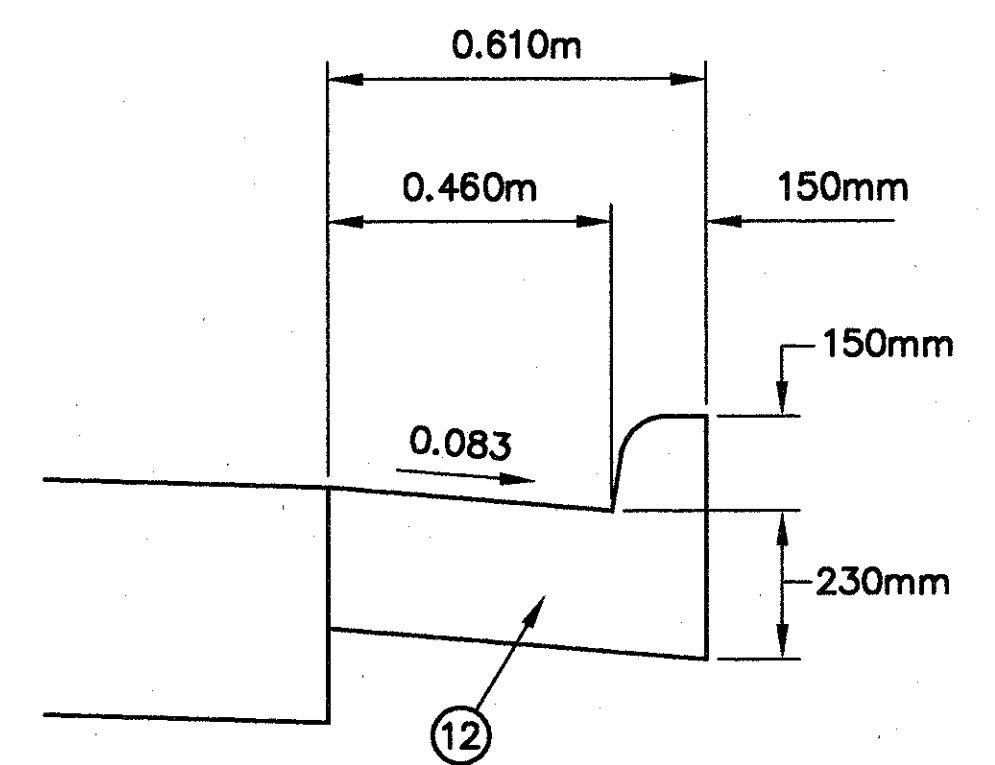
For Legend, See Sheet No. 5  
For Concrete Barrier Profile, See General Note Sheet 12



(See Median Detail, Sheet No. 10)  
(See Median Detail, Sheet No. 10)  
(See Median Detail, Sheet No. 10)  
(See Median Detail, Sheet No. 10)  
Deduct For Structure & Approach Slabs

**SUPERELEVATED SECTION**  
SECTION APPLIES:

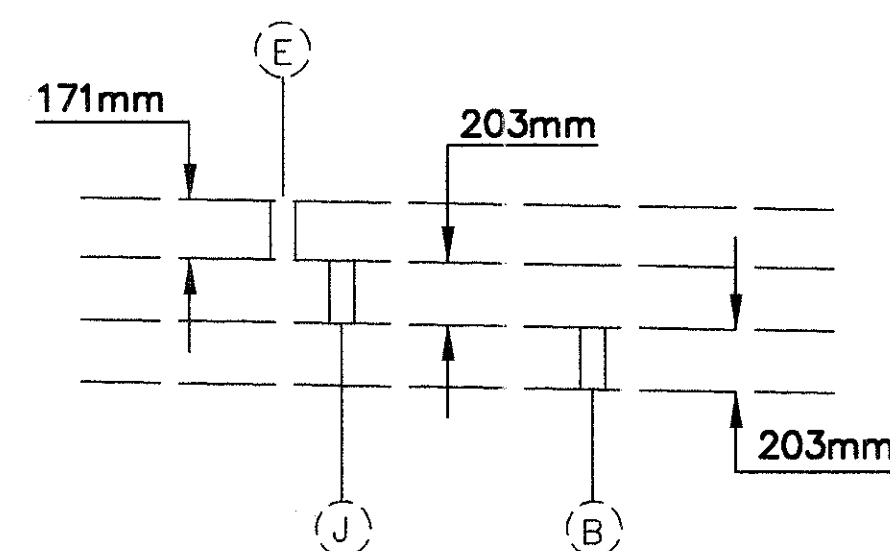
|                                    |                    |
|------------------------------------|--------------------|
| STA. 33+062.771 TO STA. 33+420.911 | = 358.140m         |
| STA. 33+474.251 TO STA. 34+167.671 | = 693.420m         |
| STA. 34+647.731 TO STA. 34+891.571 | = 243.840m         |
| STA. 35+303.051 TO STA. 36+134.273 | = 831.222m         |
| STA. 36+507.653 TO STA. 36+827.693 | = 320.040m         |
| STA. 37+033.433 TO STA. 38+068.730 | = 1035.297m        |
| STA. 36+675.522 TO STA. 36+806.738 | = -131.216m        |
| <b>TOTAL</b>                       | <b>= 3350.743m</b> |



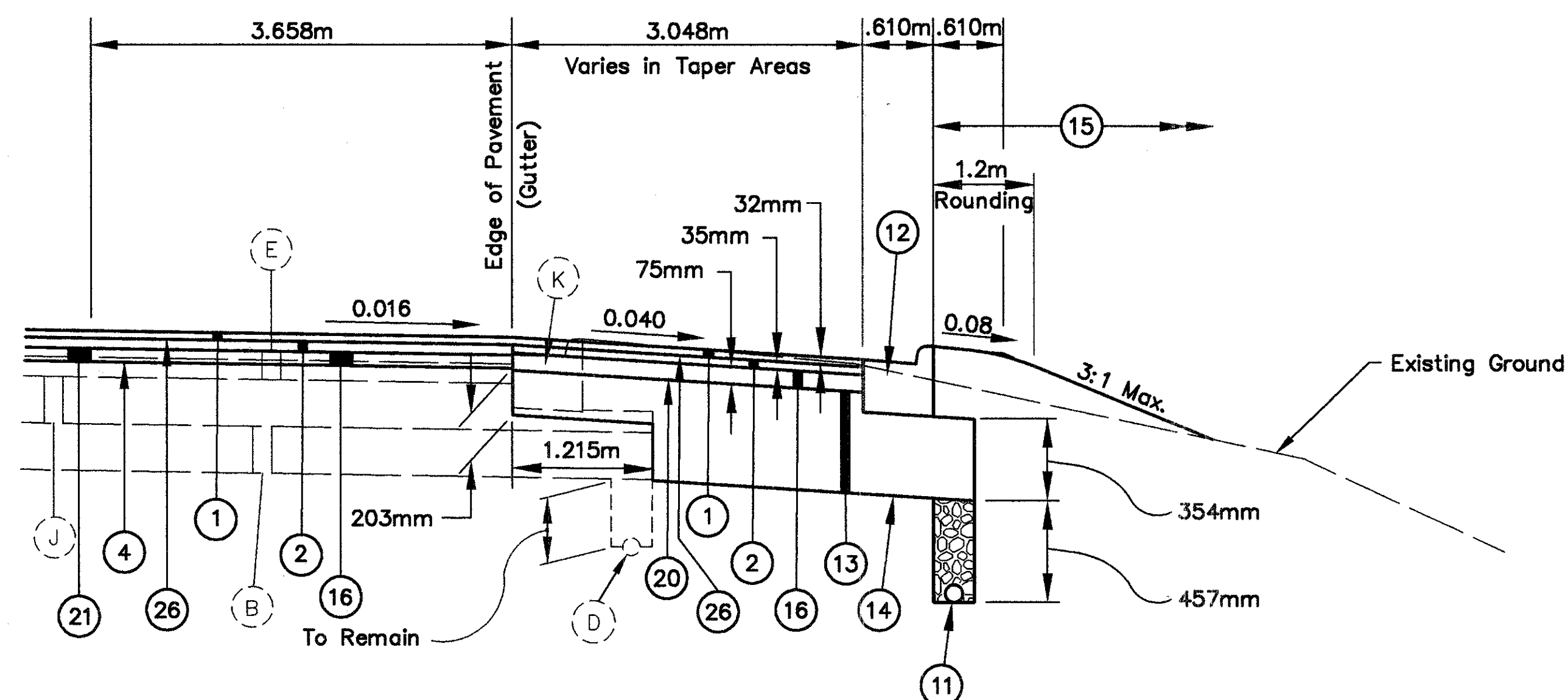
**COMBINATION CURB AND GUTTER, TYPE 2**  
**NORMAL SECTION**



# TYPE 446



EXISTING TYPICAL SECTION

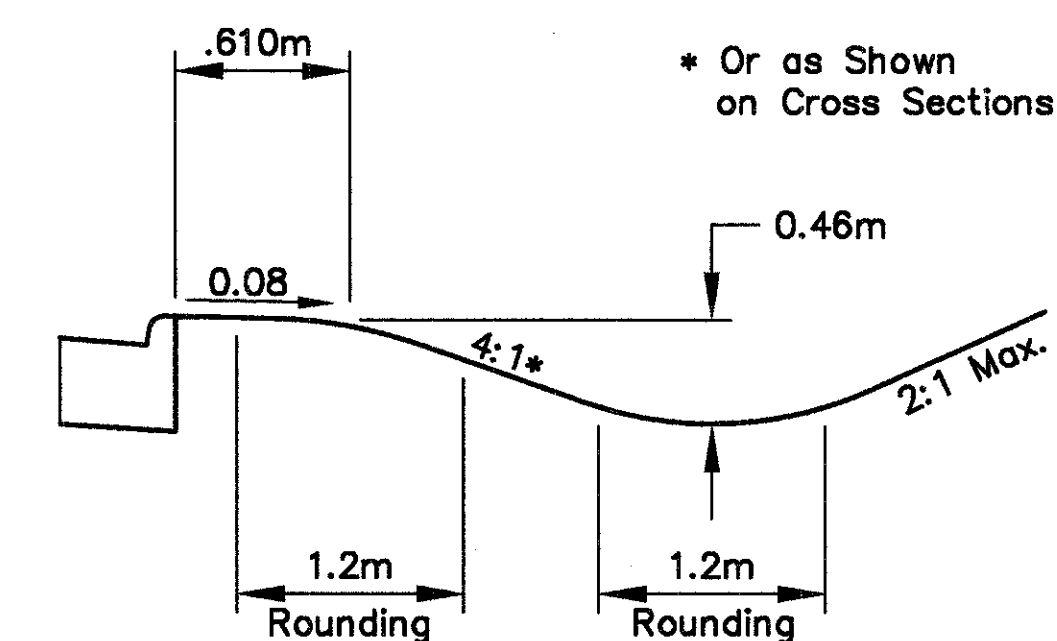


PAVEMENT WIDENING SECTION

SECTION APPLIES:

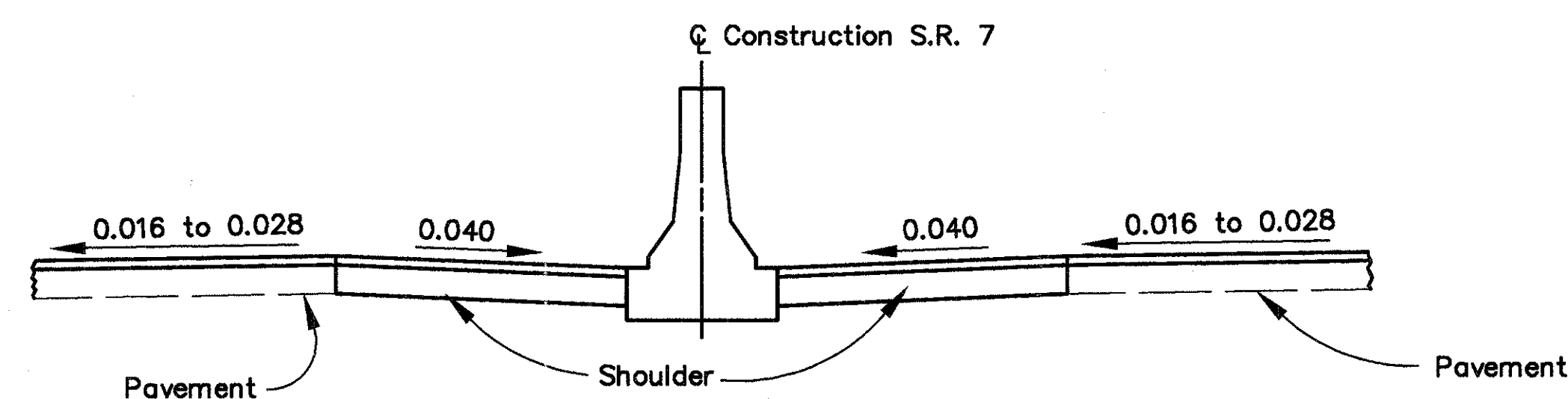
|                                        |   |          |
|----------------------------------------|---|----------|
| STA. 34+156.000 TO STA. 34+337.040 RT. | = | 181.040m |
| STA. 34+948.000 TO STA. 35+170.040 RT. | = | 222.040m |
| STA. 34+983.960 TO STA. 35+260.000 LT. | = | 276.040m |
| TOTAL                                  |   | 679.120m |

For Legend, See Sheet No. 5

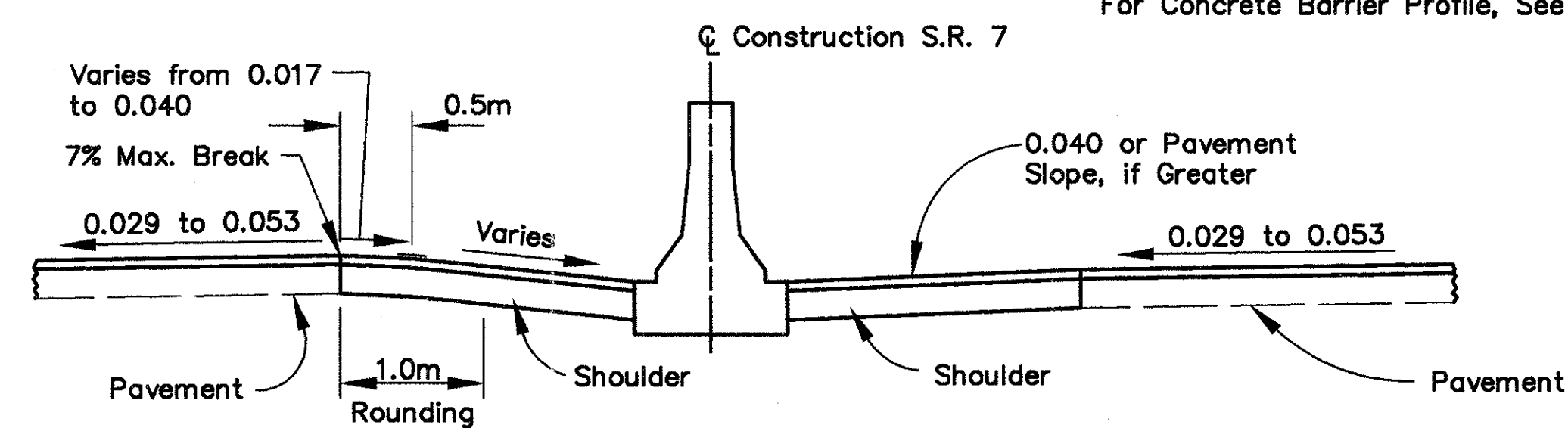


TYPICAL DITCH SECTION

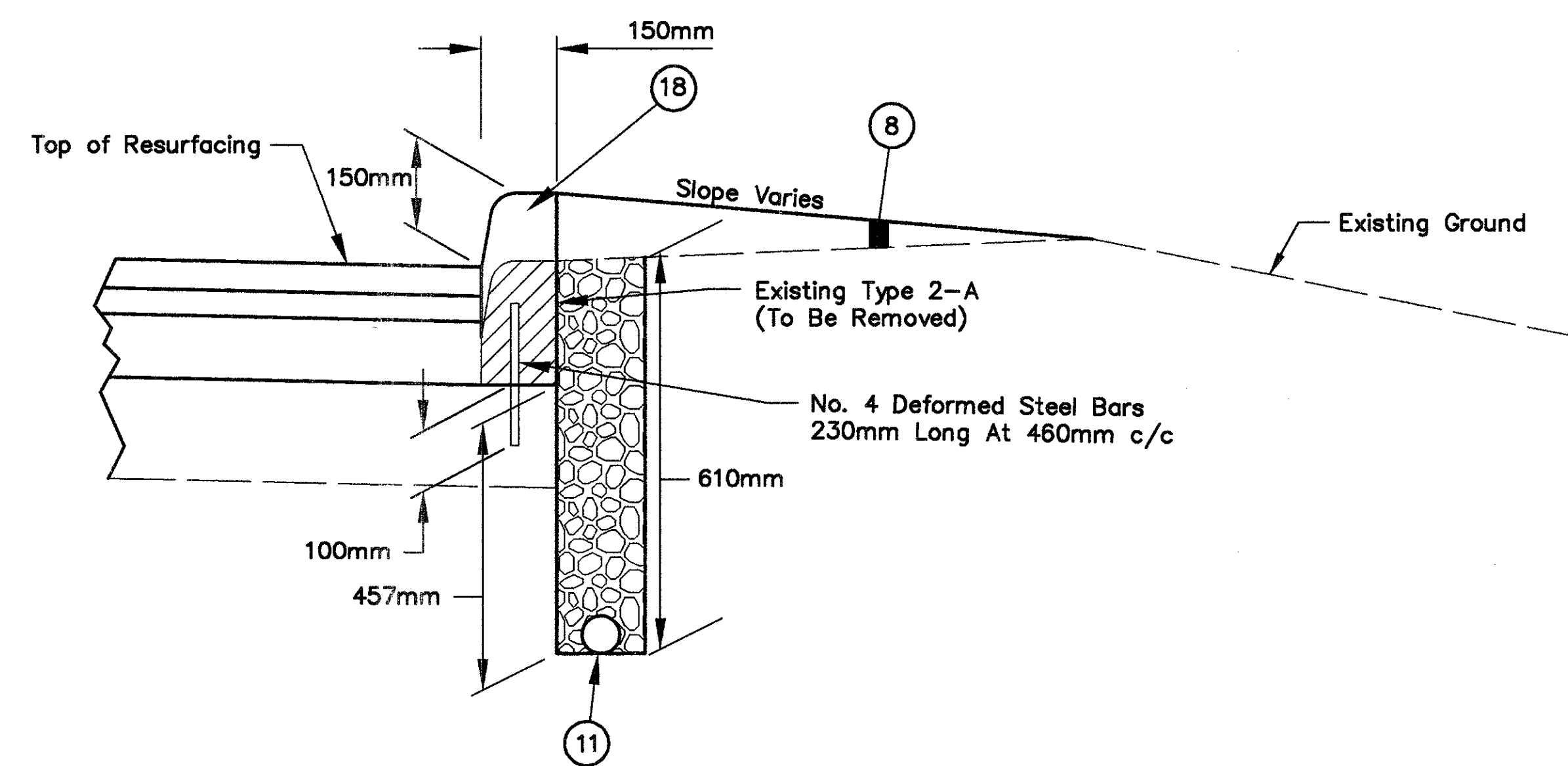
STA. 34+156.000 TO STA. 34+325.000 RT.  
STA. 34+982.000 TO STA. 35+250.000 LT.



For Concrete Barrier Profile, See Sheet No. 12



SUPERELEVATED S.R. 7 MEDIAN SHOULDER SLOPES



CURB REPLACEMENT DETAIL

See General Note Sheet No. 12

Sta. 32+940.728 To Sta. 33+062.771 Lt.  
Sta. 32+949.808 To Sta. 33+062.771 Rt.

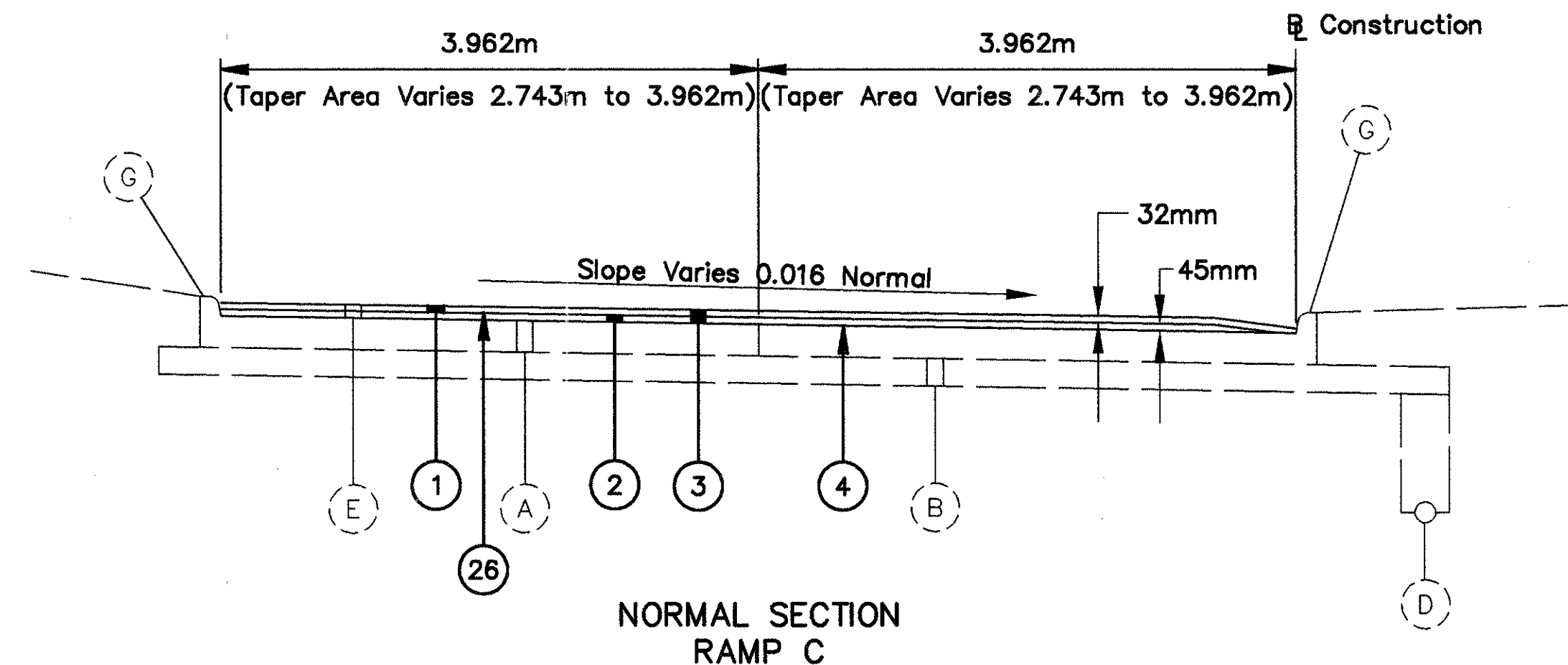
S.R. 7 TYPICAL SECTIONS

BEL-7-32.276

7  
242

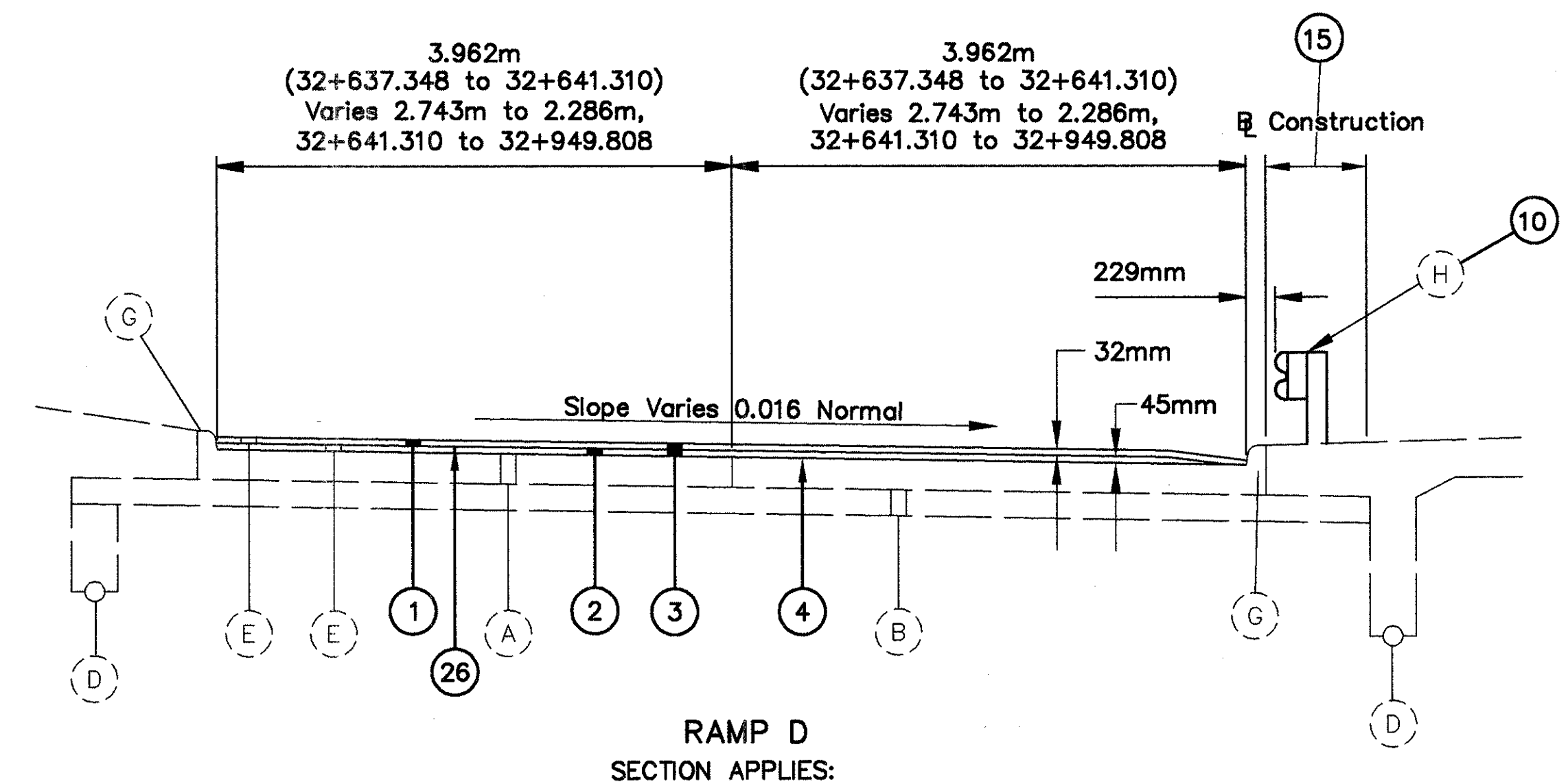


# TYPE 446



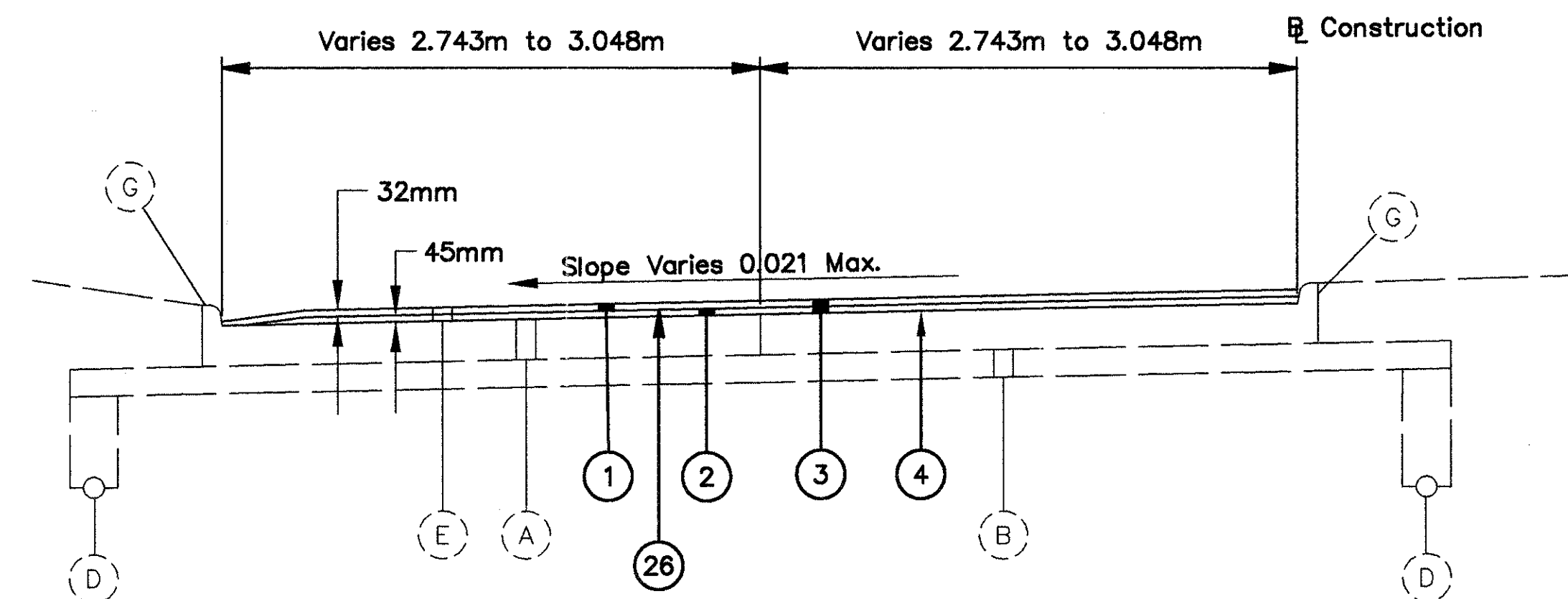
SECTION APPLIES:

(TAPER AREA) STA. 32+813.260 TO STA. 32+874.220 = 60.960m  
STA. 32+751.519 TO STA. 32+813.260 = 61.741m  
TOTAL = 122.701m



STA. 32+637.348 TO STA. 32+940.728 = 303.380m

NOTE: Existing Curb on Ramps is to Remain.

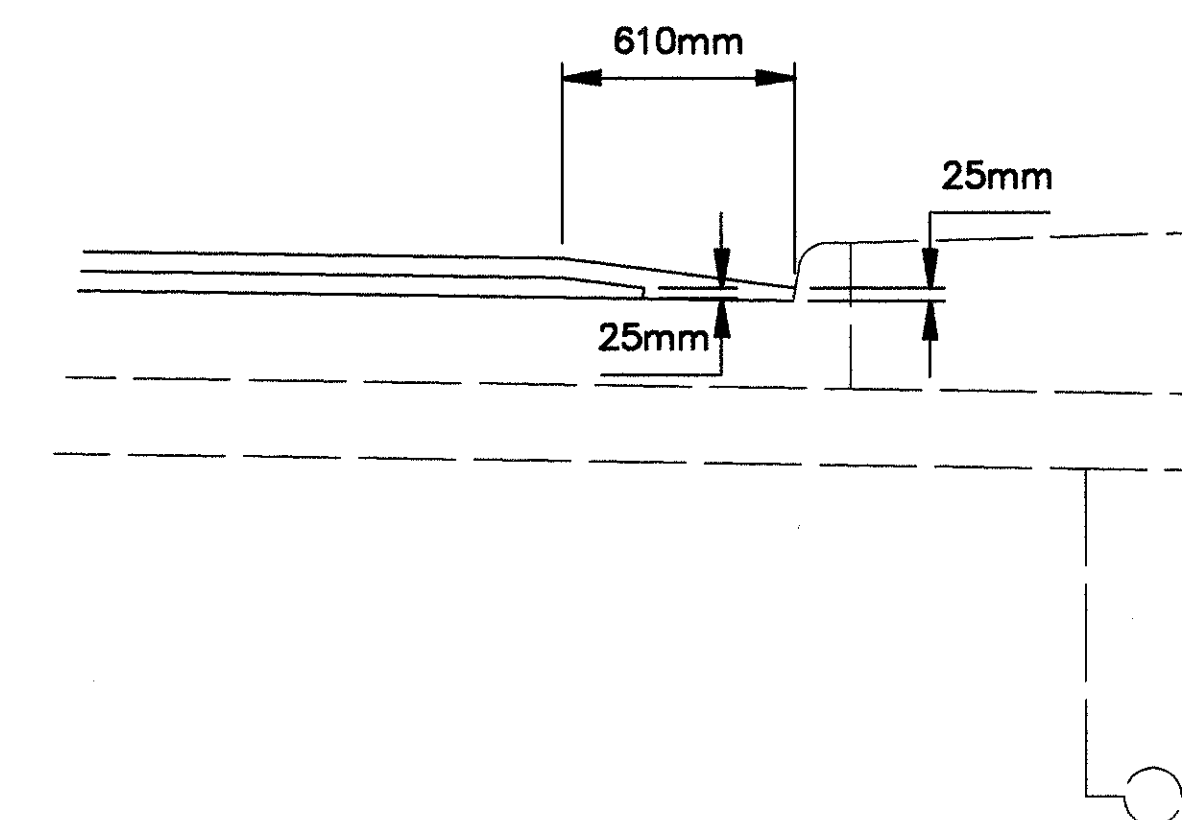
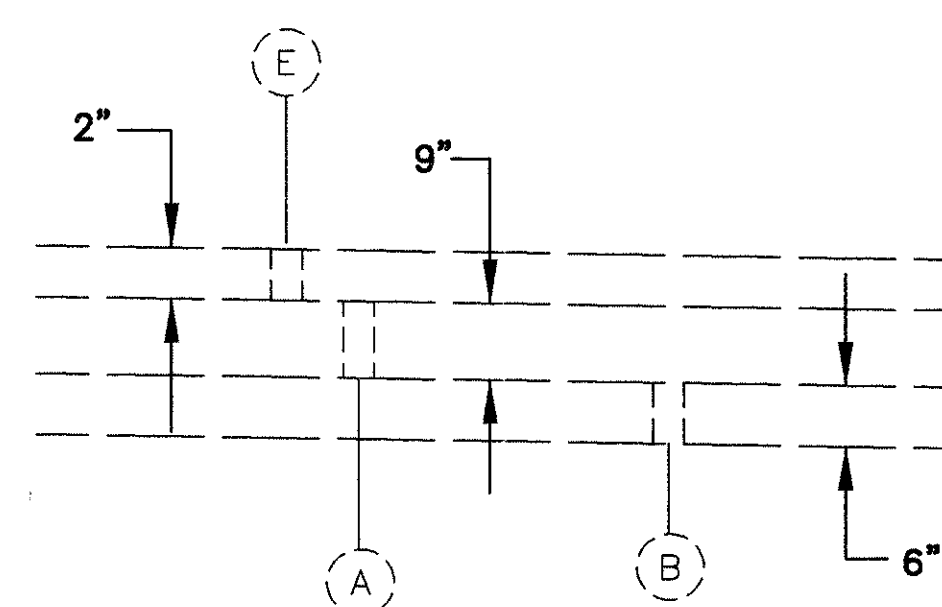


SECTION APPLIES:

STA. 32+874.220 TO STA. 32+940.728 = 66.508m

NOTE:  
Remove 51mm of existing asphalt concrete  
With Item 202 Wearing Course Removed  
through the entire length of these sections.

For Legend, See Sheet No. 5



Not To Scale

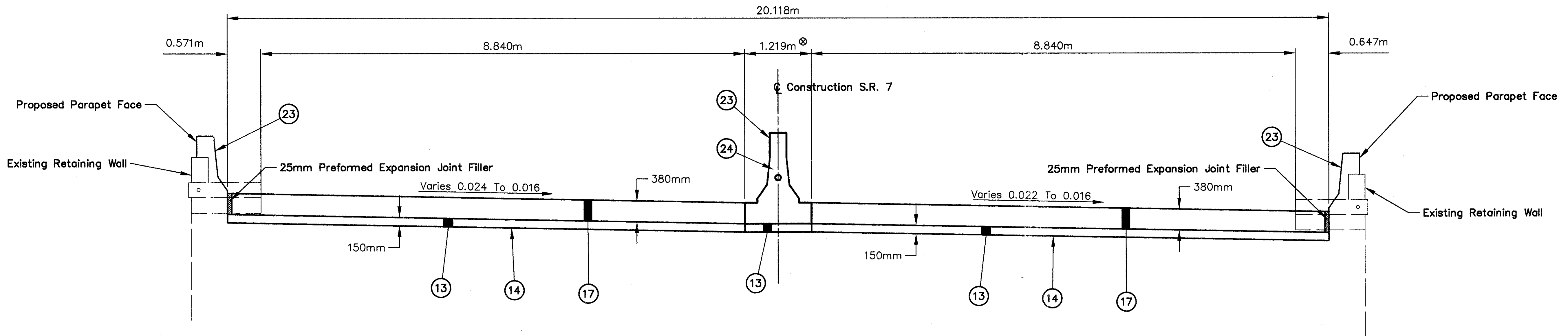
RAMP TYPICAL SECTIONS

BEL-7-32.276

8  
242



# TYPE 611



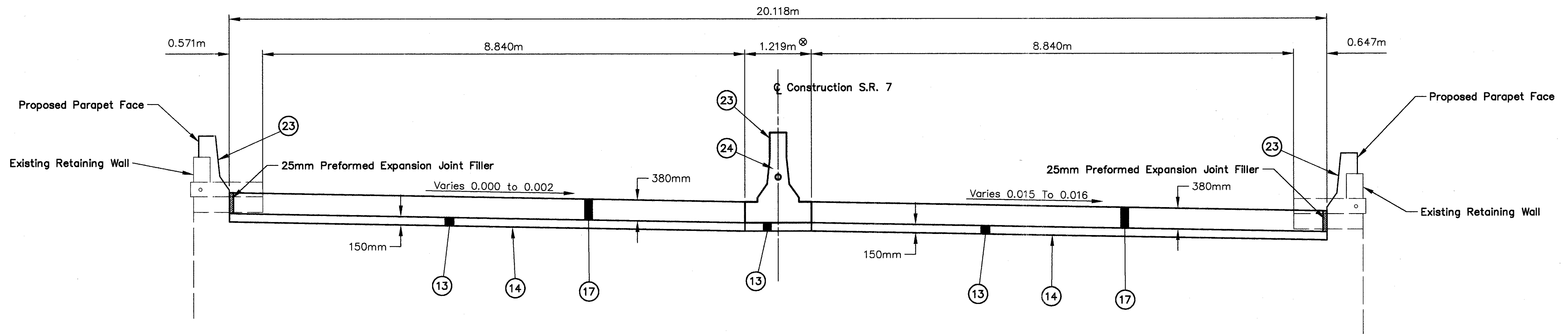
## APPROACH SLAB SECTION

STRUCTURE BEL-7-32283

STA. 32+275.821 TO STA. 32+283.441 = 7.60m

⊗ See Detail on Sheet No. 82

For Legend, See Sheet No. 5



## APPROACH SLAB SECTION

STRUCTURE BEL-7-32283

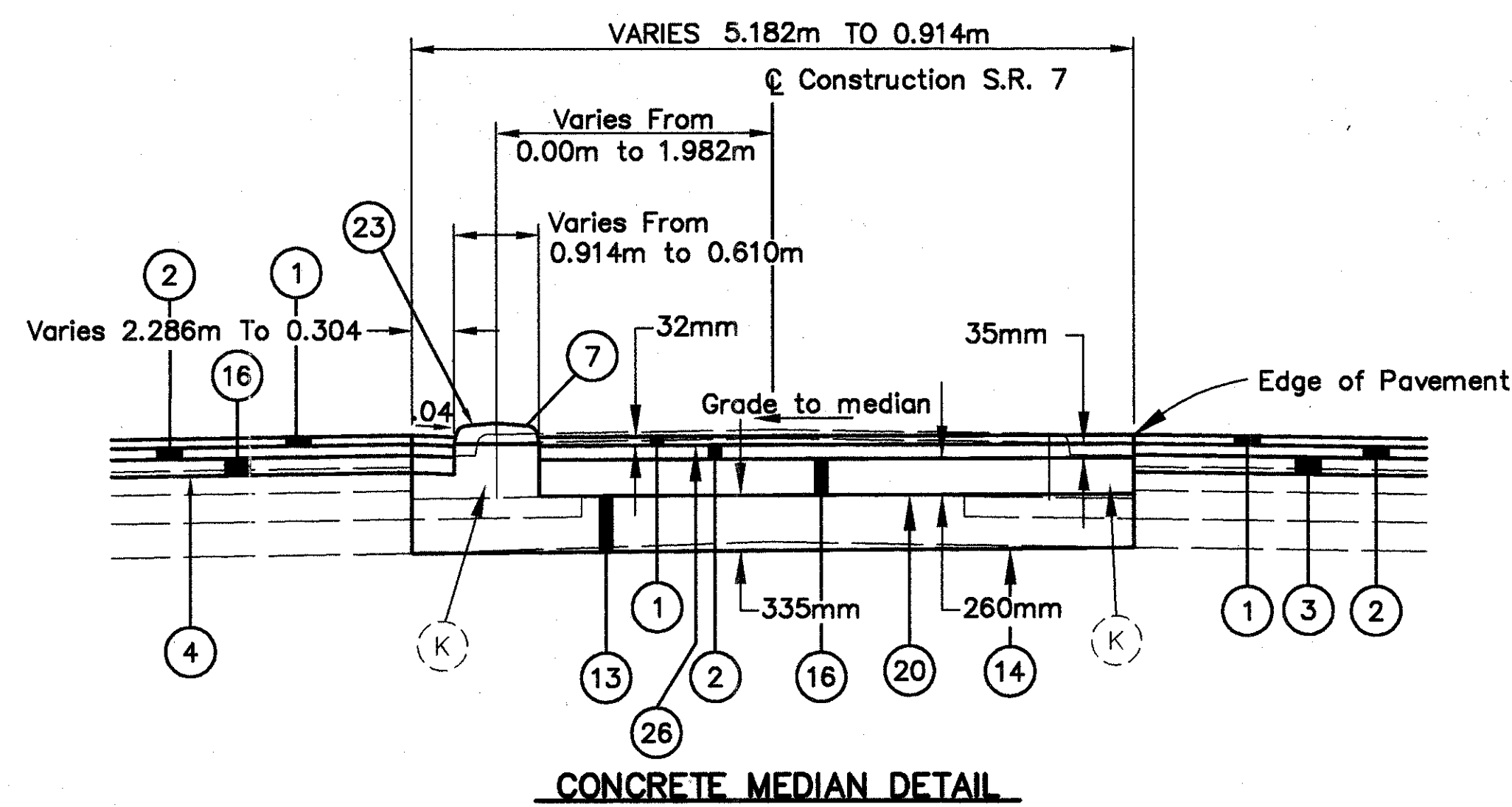
STA. 32+781.027 TO STA. 32+788.647 = 7.60m

APPROACH SLAB SECTION

BEL-7-32.276

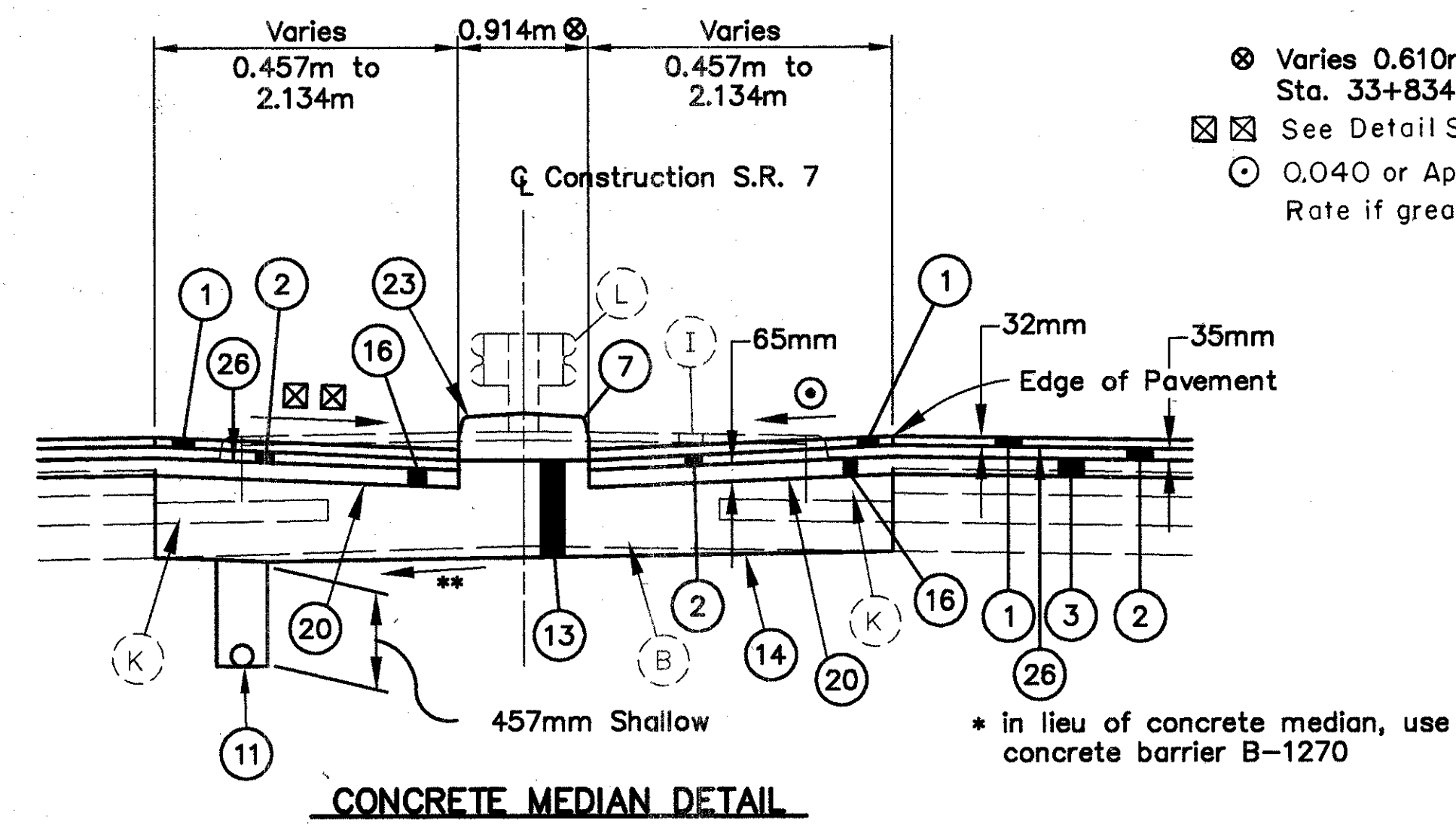
9  
242





STA. 33+843.400 TO STA. 34+078.705  
 STA. 34+117.695 TO STA. 34+250.300  
 STA. 35+466.700 TO STA. 35+682.005  
 STA. 35+720.795 TO STA. 35+886.100

For Legend, See Sheet No. 5



\* STA. 33+148.524 TO STA. 33+381.744  
 STA. 33+419.844 TO STA. 33+450.781  
 STA. 33+834.000 TO STA. 33+843.400  
 STA. 34+250.300 TO STA. 34+346.000  
 STA. 35+437.000 TO STA. 35+466.700  
 STA. 35+886.100 TO STA. 35+953.000  
 STA. 36+673.997 TO STA. 36+675.522  
 STA. 36+799.118 TO STA. 36+926.448  
 STA. 36+956.471 TO STA. 37+304.976  
 STA. 37+335.640 TO STA. 37+659.645  
 STA. 37+688.144 TO STA. 38+007.679  
 STA. 38+036.097 TO STA. 38+067.084



PROFILE AND ALIGNMENT

THE PROPOSED PAVEMENT RESURFACING SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. THE EXISTING ALIGNMENT AND PROFILE SATISFY DESIGN CRITERIA.

PREVIOUS CONSTRUCTION PLANS

THE FOLLOWING CONSTRUCTION PLANS ARE AVAILABLE FOR REFERENCE BY CONTACTING THE DISTRICT 11 OFFICE IN NEW PHILADELPHIA, OHIO:

- BEL-7-19.86 (1961) ORIGINAL CONSTRUCTION PLAN
- BEL-7-20.64 (1966) ORIGINAL CONSTRUCTION PLAN
- BEL-7-(17.86)(18.87) (1984) SAFETY UPGRADING

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

UNDERGROUND UTILITIES

THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC.

UTILITY OWNERSHIP

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

COLUMBIA GAS TRANSMISSION CORP.  
DRAWER A  
BROOKVILLE, PENNSYLVANIA 15825  
PHONE (814) 849-0203

AEP OHIO POWER COMPANY  
301 CLEVELAND AVE. S.W.  
CANTON, OHIO 44701-4630  
PH. 330-438-7721

COLUMBIA GAS OF OHIO, INC.  
216 HIGHLAND AVENUE  
P.O. BOX 250  
CAMBRIDGE, OHIO 43725-0250  
PHONE (740) 432-8225

CITY OF MARTINS FERRY  
FIFTH AND WALNUT STREETS  
MARTINS FERRY, OHIO 43935  
PHONE (740) 633-2876

VILLAGE OF BRIDGEPORT  
CITY BUILDING  
301 MAIN ST.  
BRIDGEPORT, OHIO 43912  
PHONE (740) 635-2424

SIGNALS AND LIGHTING  
OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 11  
2201 REISER AVE. S.E.  
NEW PHILADELPHIA, OHIO 44663-1000  
PHONE (330) 339-6633

ITEM 407. TACK COAT

ITEM 407. TACK COAT FOR INTERMEDIATE COURSE

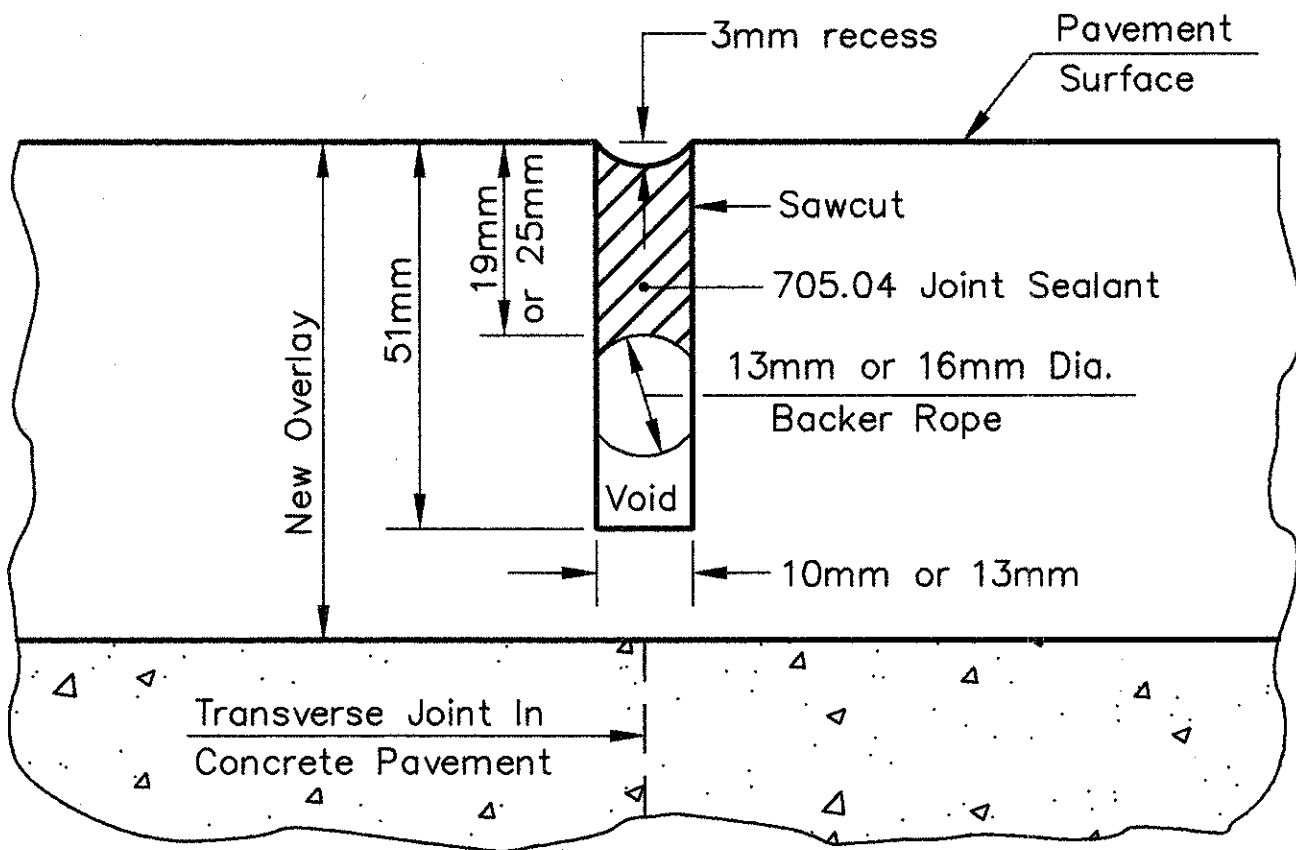
THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.340 LITERS PER SQUARE METER OF TACK COAT FOR ESTIMATING PURPOSES ONLY.

MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. 93

ITEM 413 - SAWING & SEALING ASPHALT CONCRETE PAVEMENT JOINTS

THE CONTRACTOR SHALL SAW AND SEAL THE JOINTS ACCORDING TO THE DIMENSIONS SHOWN IN THE DETAIL BELOW. THE JOINTS SHALL BE SAWED WITHIN 24 HOURS AFTER PLACEMENT OF THE SURFACE COURSE.



DETAIL FOR TRANSVERSE JOINT IN NEW ASPHALT CONCRETE OVERLAY

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

ITEM 203 - LINEAR GRADING

THIS WORK SHALL INCLUDE THE EXCAVATION AND EMBANKMENT REQUIRED TO GRADE BEYOND THE PROPOSED CURB AND GUTTER. VEGETATION, MATERIAL BUILDUP, AND COLLECTED DEBRIS WITHIN THE LINEAR GRADING LIMITS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AS PER SECTION 203.05, OR WASTED OVER FILL SLOPES AT THE DIRECTION OF THE ENGINEER.

THE EXCAVATED MATERIAL SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO SECTION 203.02, PLACED TO GRADE AS SHOWN ON THE TYPICAL SECTIONS, OR AS APPROVED BY THE ENGINEER. THE GRADED AREA SHALL BE SEEDED AS PER 659.

LINEAR GRADING WIDTHS SHOWN ON THE PLAN REPRESENT MINIMUM REQUIREMENTS, AND THE ENGINEER MAY INCREASE THESE WIDTHS AS DETERMINED BY HIS ANALYSIS OF PROJECT CONDITIONS AT NO ADDITIONAL COST TO THE STATE.

THE METHOD OF MEASUREMENT SHALL BE PER METER MEASURED ALONG THE OUTSIDE CURBLINE FOR THE NORTHBOUND AND SOUTHBOUND LANES, AS SHOWN IN THE LINEAR GRADING TABLE ON SHEET NO. 53

PAYMENT FOR THE ABOVE WORK, EXCEPT FOR ITEM 659, WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 203, METER, LINEAR GRADING, AND SHALL INCLUDE THE COST OF ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS AS NECESSARY TO COMPLETE THE WORK.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND CONSTRUCTING THE FULL PAVEMENT WIDTH IN STAGES, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LONGITUDINAL JOINTS SHALL BE LAPPED AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1M.

FENCE GROUNDING

ANY RIGHT OF WAY FENCE CROSSING UNDER OVERHEAD ELECTRIC POWER LINES OR TRANSMISSION LINES SHALL BE GROUNDED IN ACCORDANCE WITH STANDARD DRAWING HL-50.11M.

GROUND RODS SHALL BE USED AS DIRECTED BY THE ENGINEER. FOR LOCATIONS AND QUANTITIES SEE SHEET NO. 237

ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN

WORK UNDER THIS ITEM SHALL BE WITHIN THE AREA 0.305m FROM TYPE CLT FENCE LIMITS, AS WELL AS THE ADDITIONAL AREAS SHOWN IN THE TABLE BELOW, AND SHALL CONSIST OF THE FOLLOWING:

1. THE REMOVAL OF ALL TREES (WITH THE EXCEPTION OF PINE TREES), STUMPS, AND BRUSH TO GROUND LEVEL.
2. THE REMOVAL OF ALL LITTER.
3. MOWING OF ALL VEGETATION TO A HEIGHT OF BETWEEN 76mm AND 127mm.
4. TREATMENT OF THE REMOVAL AREAS WITH THE FOLLOWING HERBICIDES WITHIN 24 HOURS AFTER VEGETATION IS CUT: 3.8L DOW "TORDON K" COMBINED WITH 1.9L 2, 4 D-AMINE OR AN APPROVED EQUAL IN SUFFICIENT WATER TO MAKE 190L OF TOTAL SPRAY MIX PER HECTARE. AN ESTIMATED AREA OF 5.5± ALONG THE FENCE LINE HECTARES IS TO BE TREATED WITH THE HERBICIDE.

THE CONTRACTOR SHALL BE LICENSED BY THE OHIO DEPARTMENT OF AGRICULTURE AS A COMMERCIAL APPLICATOR AND ALL PERSONS INVOLVED IN THE ACTUAL HERBICIDAL SPRAYING SHALL BE LICENSED AS COMMERCIAL OPERATORS IN THE APPROPRIATE CATEGORY. THE CONTRACTOR SHALL FOLLOW LABEL RECOMMENDATIONS CONCERNING APPLICATION METHODS.

| ADDITIONAL REMOVAL AREAS           | OFFSET FROM CENTERLINE |
|------------------------------------|------------------------|
| STA. 33+652.690 TO STA. 33+700 LT. | 15m TO FENCE           |
| STA. 35+715.422 TO STA. 35+800 LT. | 15m TO FENCE           |
| STA. 36+570 TO STA. 36+680 LT.     | GUARDRAIL TO FENCE     |
| STA. 36+800 TO STA. 36+860 LT.     | GUARDRAIL TO FENCE     |

THE AREAS NOTED ABOVE ARE APPROXIMATE AND ARE INCLUDED WITH THE INTENTION OF CLEARING THE RIGHT OF WAY OF TREES AND BRUSH. WORK SHALL BE PERFORMED WITHIN THE LIMITS OF THE RIGHT OF WAY.

THE FOLLOWING IS AN ESTIMATE OF THE NUMBER OF TREES TO BE REMOVED:

| SIZE  | NO. OF TREES |
|-------|--------------|
| 457mm | 24           |

PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR CLEARING AND GRUBBING, AS PER PLAN.

GENERAL NOTES

BEL-7-32.276



GUARDRAIL REPLACEMENT

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE THE EXISTING GUARDRAIL, PREPARE THE SITE, AND INSTALL NEW GUARDRAIL IN A CONTINUOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON THE SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED UNTIL SUCH TIME AS THE ENGINEER IS ASSURED OF COMPLIANCE.

CONNECTIONS BETWEEN EXISTING GUARDRAIL AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN ON STANDARD DRAWING GR-1.1M AND GR-1.2M. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 446 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-28, AS PER PLAN

MATERIALS FURNISHED FOR FINE AND COURSE AGGREGATE USED IN THIS ITEM SHALL EXCLUDE ALL STONE AND CRUSHED CARBONATE STONE.

SAME SEASON COMPLETION OF SURFACE COURSE

ANY LENGTH OF RESURFACING WORK STARTED IN A CONSTRUCTION SEASON SHALL HAVE THE SURFACE COURSE PLACED THAT SAME SEASON.

WATERING PERMANENT SEEDED AREAS

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR THE PERMANENT SEEDED AREAS PER 659.09:

|             |       |      |           |
|-------------|-------|------|-----------|
| 659, WATER  | ----- | 330  | CU. METER |
| 659, MOWING | ----- | 8423 | SQ. METER |

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

|                                     |       |      |           |
|-------------------------------------|-------|------|-----------|
| 207, TEMPORARY SEEDING AND MULCHING | ----- | 6738 | SQ. METER |
| 207, STRAW OR HAY BALES             | ----- | 250  | EACH      |
| 207, FILTER FABRIC FENCE            | ----- | 3695 | METER     |
| 207, TEMPORARY DITCH PROTECTION     | ----- | 79   | SQ. METER |
| 659, MOWING                         | ----- | 8423 | SQ. METER |
| 659, COMMERCIAL FERTILIZER          | ----- | 1583 | KILOGRAM  |
| 659, REPAIR SEEDING AND MULCHING    | ----- | 1685 | SQ. METER |
| 659, WATER                          | ----- | 66   | CU. METER |

REMOVAL OF EXISTING BUS STOP

THIS ITEM SHALL CONSIST OF THE REMOVAL OF TWO EXISTING BUS STOPS ON THE NORTHBOUND SIDE LOCATED AT MACKEY AVE. AND HILL ST.

THE REMOVAL SHALL INCLUDE THE EXISTING STEEL POSTS, FENCE, AND CONCRETE SLAB.

PAYMENT FOR THE ABOVE WILL BE MADE AT THE CONTRACT LUMP SUM PRICE BID FOR ITEM 202 - STRUCTURE REMOVED.

ITEM 606. ANCHOR ASSEMBLY, TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING AN ET-2000, OPTION "B", GUARDRAIL END TERMINAL AS MANUFACTURED BY SYRO STEEL COMPANY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 216-545-4373).

THE LENGTH OF THE ET-2000 SYSTEM IS CONSIDERED TO BE 15.24m INCLUSIVE OF TWO 7.62m LONG RAIL ELEMENTS.

THE ANCHOR ASSEMBLY SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S CURRENT SPECIFICATIONS AND AT THE LOCATIONS SHOWN IN THE PLANS.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT BID PRICE FOR 606, EACH, ANCHOR ASSEMBLY, TYPE E AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED HARDWARE, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM SPECIAL. IMPACT ATTENUATOR, G.R.E.A.T. TYPE

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING AN IMPACT ATTENUATOR AS REQUIRED IN THE PLANS, AND SHALL ALSO INCLUDE ALL RELATED HARDWARE, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER TO CONSTRUCT A COMPLETE AND FUNCTIONAL G.R.E.A.T. IMPACT ATTENUATOR SYSTEM.

THE ATTENUATOR SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS, AND IN REASONABLY CLOSE CONFORMITY AS DETAILED ON SHEET NO. 85. THE ATTENUATOR SHALL BE MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., AND IS DISTRIBUTED BY BALDWIN & SOURS, 5263 TRABUE ROAD, COLUMBUS, OHIO 43228 (TELEPHONE 614-851-8800).

THE CONCRETE MEDIAN BARRIER SHALL BE TRANSITIONED TO A RECTANGULAR SHAPE FOR USE AS A CONCRETE BACKUP FOR THE G.R.E.A.T. SYSTEM. THE MANUFACTURER SHALL PROVIDE ALL DETAILS FOR THE BACKUP SYSTEM WHICH ARE NOT SHOWN IN THE PLAN. THE COST ASSOCIATED WITH CONSTRUCTING THE CONCRETE BACKUP SHALL BE CONSIDERED INCIDENTAL TO, AND INCLUDED WITH THE COST OF THE IMPACT ATTENUATOR.

THE NOSE COVER OF THE ATTENUATOR SHALL BE YELLOW, AND MARKED WITH THREE EVENLY SPACED FOUR INCH WIDE HORIZONTAL STRIPES OF WHITE REFLECTIVE MATERIAL MEETING THE REQUIREMENTS OF 730.19 FOR A PERMANENT INSTALLATION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING, REPAIRING, AND OTHERWISE RESTORING THE ATTENUATOR IN ACCORDANCE WITH THE MANUFACTURER'S MAINTENANCE INSTRUCTIONS WHILE THE ATTENUATOR IS IN USE DURING CONSTRUCTION OF THE PROJECT. IF THE ATTENUATOR GETS DAMAGED BEYOND REPAIR DUE TO VEHICULAR IMPACT PRIOR TO ACCEPTANCE BY THE STATE, IT SHALL BE REPAIRED AS SPECIFIED IN THE PROPOSAL WITHIN 24 HOURS OF THE INCIDENT WHICH CAUSED DAMAGE TO THE ATTENUATOR. IN ADDITION TO ANY EXTRA UNITS SUPPLIED FOR THIS PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING ALL NECESSARY MATERIALS, LABOR, AND EQUIPMENT REQUIRED TO PERFORM THE ABOVE DESCRIBED RESTORATION OF THE ATTENUATOR.

THE ESTIMATED QUANTITY BELOW SHALL BE USED AS DIRECTED BY THE ENGINEER FOR USE IN THE ABOVE MENTIONED RESTORATION ONLY WHEN THE ENGINEER DECIDES THAT MINOR OR MAJOR REPAIRS CANNOT BE PERFORMED WITHIN THE 24 HOUR TIME LIMITATION:

ITEM SPECIAL, REPLACEMENT IMPACT ATTENUATOR, G.R.E.A.T. TYPE - - - - - 1 EACH

PERMANENTLY INSTALLED IMPACT ATTENUATORS SHALL BE BID AS ITEM SPECIAL, EACH, IMPACT ATTENUATOR, G.R.E.A.T. TYPE.

THE MODEL NUMBERS OF THE PERMANENT UNIT AND THE REPLACEMENT UNIT SHALL BE 200200SF6, UNI-DIRECTIONAL, AND 206206SF6, UNI-DIRECTIONAL.

PAYMENT FOR THE ABOVE WORK, INCLUDING FURNISHING, INSTALLING, MAINTAINING, AND RESTORING THE ATTENUATOR AFTER EACH VEHICULAR IMPACT, WILL BE MADE AT THE RESPECTIVE CONTRACT PRICE FOR ITEM SPECIAL, EACH, REPLACEMENT IMPACT ATTENUATOR, G.R.E.A.T. TYPE, AND ITEM SPECIAL, EACH, IMPACT ATTENUATOR, G.R.E.A.T. TYPE, AND SHALL INCLUDE THE COST OF ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

CONCRETE BARRIER PROFILE

ALTHOUGH THE NORTHBOUND AND SOUTHBOUND PROFILE GRADE POINTS ARE SHOWN TO BE AT THE SAME ELEVATION, THEY MAY ACTUALLY DIFFER BY A SLIGHT AMOUNT. IN SUCH CASE, THE LOWER OF THE TWO PROFILE GRADES SHALL BE SELECTED AS THE REFERENCE ELEVATION, AND THE PAVED SHOULDER ON THE SIDE OF THE REFERENCE ELEVATION SHALL BE SLOPED AS SHOWN ON THE TYPICAL SECTIONS. THE BASE PORTION OF THE CONCRETE BARRIER SHALL BE CONSTRUCTED LEVEL, AND THE RATE OF CROSS SLOPE ON THE OPPOSITE PAVED SHOULDER SHALL VARY AS NECESSARY TO MEET THE OTHER PROFILE GRADE.

ITEM SPECIAL. SEALING OF CONCRETE SURFACES (EPOXY)

AN EPOXY CONCRETE SEALER SHALL BE APPLIED TO THE PROPOSED CONCRETE BARRIER AND CONCRETE MEDIAN AS SHOWN IN THE TYPICAL SECTIONS.

THE SEALING OPERATIONS SHALL BE COMPLETED PRIOR TO MOUNTING THE 802 BARRIER REFLECTORS.

REFER TO THE PROPOSAL NOTE FOR SURFACE PREPARATION REQUIREMENTS, APPLICATION RATES, MATERIAL REQUIREMENTS, AND APPLICATION PROCEDURES.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO SEAL THE CONCRETE SURFACES AS SPECIFIED ABOVE:

ITEM SPECIAL, SEALING OF CONCRETE SURFACES (EPOXY) - - - - - 11,060 SQ. METER

ITEM 202. CURB REMOVED, AS PER PLAN

EXISTING TYPE 2-A CURB SHALL BE REMOVED FLUSH WITH THE SURFACE OF THE EXISTING REINFORCED CONCRETE PAVEMENT.

THE REMOVAL SHALL BE ACCOMPLISHED BY HORIZONTALLY SAWING OR OTHERWISE CUTTING THE CURB IN A MANNER WHICH DOES NOT SPALL OR DAMAGE THE CONCRETE PAVEMENT.

PAYMENT FOR THE ABOVE WORK WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 202, METER, CURB REMOVED, AS PER PLAN, AND SHALL INCLUDE THE COST FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

ITEM 609. CURB, TYPE 2-B, AS PER PLAN

THIS ITEM SHALL CONSIST OF CONSTRUCTING TYPE 2-B CURB PER ST'D DWG. BP-5.1M, AND SHALL ALSO INCLUDE THE COST OF FURNISHING AND INSTALLING THE NO. 4 DEFORMED STEEL BARS AS SHOWN ON SHEET NO. 7.

INSTALLING OF THE BAR SHALL INCLUDE THE DRILLING OF A 16mm DIAMETER HOLE VERTICALLY INTO THE EXISTING REINFORCED CONCRETE PAVEMENT, AND ANCHORING THE BAR USING AN EPOXY, POLYESTER, OR VINYLESTER MORTER.

PAYMENT FOR THE ABOVE WORK WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 609, METER, CURB, TYPE 2-B, AS PER PLAN, AND SHALL INCLUDE THE COST FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

230mm ITEM 305 CONCRETE BASE, AS PER PLAN

WHERE THE NEW PAVEMENT BUTTS INTO THE EXISTING PAVEMENT, A DOWELLED TYPE Y JOINT PER BP-2.5M SHALL BE PROVIDED. GROUTING AND DRILLING REQUIREMENTS SHALL BE PER ITEM 255 AND BP-2.5M EXCEPT THE REQUIREMENT THAT THE DRILLING DEVICE SHALL BE CAPABLE OF DRILLING THREE HOLES AT ONE TIME SHALL BE WAIVED. ALL WORK AND MATERIALS REQUIRED TO PROVIDE THESE JOINTS SHALL BE INCIDENTAL TO 230mm ITEM 305 CONCRETE BASE, AS PER PLAN.

DOWEL BASKET ASSEMBLIES

WHERE DOWEL BASKET ASSEMBLIES ARE USED BY THE CONTRACTOR, ALL SPACER WIRES (SHIPPING WIRES) SHALL BE REMOVED FROM THE BASKET ASSEMBLIES PRIOR TO PAVING. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THE DOWEL BASKET ASSEMBLIES ARE STABLE AND HELD FIRMLY IN PLACE.

CALCULATED  
WCR  
CHECKED  
SAH

GENERAL NOTES

BEL-7-32.276

12  
242



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REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

PAVEMENT REPLACEMENT

EXISTING PAVEMENT REMOVED DURING CONSTRUCTION OF INLETS AND STORM SEWERS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 603 AND SHALL BE REPLACED IN ACCORDANCE WITH THE PAVEMENT REPLACEMENT DETAIL SHOWN ON THE MISCELLANEOUS DETAILS.

PAYMENT FOR REPLACEMENT OF DAMAGED PAVEMENTS SHALL BE INCLUDED WITH THE UNIT PRICE BID FOR ITEM 603.

INLET RECONSTRUCTED TO GRADE, AS PER PLAN

WHERE THIS ITEM IS SPECIFIED IN THE PLANS, THE CONTRACTOR SHALL CAREFULLY REMOVE THE EXISTING INLET UPPER BOX AND RECONSTRUCT THE WALLS OF THE LOWER BOX AS SHOWN ON SHEET NO. 120. THE 108mm THICKNESS SHOWN ON THE DETAIL IS ONLY APPROXIMATE. THE ACTUAL THICKNESS REQUIRED TO RAISE THE WALLS SHALL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. IF, IN THE OPINION OF THE ENGINEER, RECONSTRUCTION REVEALS EXCESSIVE WALL FAILURE, THE EXISTING WALLS SHALL BE REMOVED AND REBUILT TO THE DEPTH SPECIFIED BY THE ENGINEER.

AFTER THE WALLS OF THE LOWER BOX HAVE BEEN RECONSTRUCTED, THE CONTRACTOR SHALL INSTALL A NEW INLET UPPER BOX IN ACCORDANCE WITH STANDARD DRAWING I-1.1M. THE INLET TOP SHALL BE PROVIDED WITH LEFT AND RIGHT SIDE OPENINGS AND THE WINDOW ELEVATION SHALL BE DEPRESSED 100mm IN LIEU OF 50mm AS SHOWN ON THE STANDARD DRAWING FOR INLET WINDOW LENGTHS, SEE MISCELLANEOUS DETAILS, SHEET NO. 120.

THE COST OF ALL MATERIALS, LABOR AND EQUIPMENT NEEDED TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 604 - INLET RECONSTRUCTED TO GRADE, AS PER PLAN.

INLET ADJUSTED TO GRADE, AS PER PLAN

WHERE THIS ITEM IS SPECIFIED IN THE PLANS, THE CONTRACTOR SHALL CAREFULLY REMOVE THE EXISTING INLET UPPER BOX AND RECONSTRUCT THE WALLS OF THE LOWER BOX AS SHOWN ON SHEET NO. 121. THE 108mm THICKNESS SHOWN ON THE DETAIL IS ONLY APPROXIMATE. THE ACTUAL THICKNESS REQUIRED TO RAISE THE WALLS SHALL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. IF, IN THE OPINION OF THE ENGINEER, RECONSTRUCTION REVEALS EXCESSIVE WALL FAILURE, THE EXISTING WALLS SHALL BE REMOVED AND REBUILT TO THE DEPTH SPECIFIED BY THE ENGINEER.

AFTER THE WALLS OF THE LOWER BOX HAVE BEEN RECONSTRUCTED, THE CONTRACTOR SHALL RESET THE EXISTING INLET UPPER BOX.

THE COST OF ALL MATERIALS, LABOR AND EQUIPMENT NEEDED TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 604 - INLET ADJUSTED TO GRADE, AS PER PLAN.

PRECAST INLETS OR CATCH BASINS

BEFORE ORDERING PRECAST INLETS OR CATCH BASINS, THE CONTRACTOR SHALL FIELD VERIFY ALL PERTINENT DIMENSIONS.

SANITARY WORK

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.42, 707.43, 707.44, 707.45, 707.46, 707.47, 707.51, 707.52, 748.01, 748.02, 706.01, 706.02, OR 706.08 WITH JOINTS AS PER 706.11 OR 706.12

THE PAY ITEM MEASURED PER METER SHALL BE:

ITEM 603, 200 mm CONDUIT, TYPE B, FOR SANITARY

ITEM 603, 450 mm CONDUIT, TYPE B, FOR SANITARY

ITEM 605, 100mm SHALLOW PIPE UNDERDRAIN 707.31, AS PER PLAN  
ITEM 605, 100mm UNCLASSIFIED PIPE UNDERDRAIN 707.31, AS PER PLAN  
ITEM 605, 150mm UNCLASSIFIED PIPE UNDERDRAIN 707.31, AS PER PLAN

DESCRIPTION: THESE ITEMS SHALL CONSIST OF FURNISHING AND INSTALLING A PIPE UNDERDRAIN SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS, DETAILS AS SHOWN ON STANDARD DRAWING DM-1.2M AND AS DIRECTED BY THE ENGINEER.

MATERIALS: THE UNDERDRAIN SHALL BE A PIPE UNDERDRAIN SYSTEM PER ITEM 605

THE SHALLOW PIPE UNDERDRAINS SHALL BE PLACED AT THE DEPTH SPECIFIED ON THE TYPICAL SECTIONS. THE UNCLASSIFIED PIPE UNDERDRAINS SHALL BE PLACED AT THE DEPTH SPECIFIED ON THE UNDERDRAIN QUANTITIES TABLE SHOWN ON SHEETS NO. 104 TO 107

THE OUTLET FOR THE UNDERDRAIN SYSTEM SHALL BE CONSTRUCTED AS SOON AS POSSIBLE AFTER PLACEMENT OF THE UNDERDRAINS TO DRAIN THE SUBBASE AND SUBGRADE. ALL PIPE BENDS AND BRANCHES NEEDED TO CONNECT THE PROPOSED UNDERDRAIN TO THE PROPOSED OUTLET OR TO AN EXISTING UNDERDRAIN SHALL BE MANUFACTURED FITTINGS.

METHOD OF MEASUREMENT: COMPLETED AND ACCEPTED UNDERDRAINS WILL BE MEASURED BY THE METER IN PLACE.

BASIS OF PAYMENT: WORK COMPLETED AND ACCEPTED UNDER THESE ITEMS AND MEASURED WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER METER FOR ITEM 605, 100mm SHALLOW PIPE UNDERDRAIN 707.31, AS PER PLAN, ITEM 605, 100mm UNCLASSIFIED PIPE UNDERDRAIN 707.31, AS PER PLAN, OR ITEM 605, 150mm UNCLASSIFIED AS PER PLAN. THE PRICE SHALL BE FULL COMPENSATION FOR EXCAVATION AND BACKFILL; FOR FURNISHING MATERIALS, INCLUDING MATERIAL FOR OUTLET FITTINGS, FOR ALL LABOR, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

EROSION CONTROL

ITEM 670 IS PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS AND TURF OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE 670. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES OF THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION. IN ADDITION, THESE ITEMS SHALL MEET THE REQUIREMENT OF 108.04.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

MANHOLES, CATCH BASINS AND INLETS REMOVED OR ABANDONED

CASTINGS DESIGNATED FOR REMOVAL SHALL BE CAREFULLY REMOVED AND STORED WITHIN THE RIGHT-OF-WAY FOR SALVAGE BY THE VILLAGE OF BRIDGEPORT AND THE CITY OF MARTINS FERRY.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

ITEM SPECIAL, MISCELLANEOUS METAL

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIALS SHALL MEET ITEM 604 OF THE SPECIFICATIONS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

SPECIAL, MISCELLANEOUS METAL ----- 3500 kg

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

ITEM SPECIAL, PIPE CLEANOUT

THIS ITEM SHALL CONSIST OF REMOVING ALL FOREIGN MATERIAL, MATERIAL BUILDUP, AND OBSTRUCTIONS FROM THE INSIDE OF EXISTING CONDUIT. CONDUIT TO BE CLEANED SHALL BE DETERMINED BY THE ENGINEER BY INSPECTION WITH THE CONTRACTOR. THE CLEANOUT SHALL BE ACCOMPLISHED BY USING A HIGH PRESSURE WATER JET, VACU-JET, OR ANY OTHER METHOD AS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL DISPOSE OF ALL COLLECTED MATERIAL AND DEBRIS AS PER 203.05.

THE LENGTH TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF METERS OF EXISTING PIPE CLEANED AS DIRECTED BY THE ENGINEER.

PAYMENT FOR THE ABOVE WORK WILL BE MADE AT THE CONTRACT PRICE FOR ITEM SPECIAL, METER, PIPE CLEANOUT, AND SHALL INCLUDE THE COST OF ALL LABOR, TOOLS, EQUIPMENT, MATERIAL, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL, PIPE CLEANOUT ----- 2500 METER

DRAINAGE PAY ITEM DESCRIPTIONS

THE FOLLOWING DRAINAGE PAY ITEM DESCRIPTIONS HAVE BEEN USED IN THE PLANS:

INLET, NO. 2-6, AS PER PLAN  
INLET, NO. 2-8, AS PER PLAN  
INLET, NO. 2-10, AS PER PLAN  
INLET, NO. 2-12, AS PER PLAN  
INLET, NO. 3D1270  
INLET, NO. 3D1270, AS PER PLAN  
INLET, NO. 2-A-6  
INLET, NO. 2-A-8

ALL REFERENCES IN THE PLANS TO THOSE ITEM DESCRIPTIONS LISTED ABOVE SHALL BE CONSIDERED TO READ AS FOLLOWS:

INLET, MEDIAN, 1.8M, AS PER PLAN  
INLET, MEDIAN, 2.4M, AS PER PLAN  
INLET, MEDIAN, 3.0M, AS PER PLAN  
INLET, MEDIAN, 3.6M, AS PER PLAN  
INLET, NO. 3D1270, TYPE B1  
INLET, NO. 3D1270, TYPE B1, AS PER PLAN  
INLET, PAVEMENT, 1.8M  
INLET, PAVEMENT, 2.4M

GENERAL NOTES

BEL-7-32.276



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MAINTAINING TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

AT LEAST ONE LANE OF TRAFFIC SHALL BE MAINTAINED IN EACH DIRECTION ON S.R. 7 AT ALL TIMES, THE LENGTH OF RESTRICTED TRAFFIC LANES SHALL BE KEPT TO A MINIMUM CONSISTENT WITH THE SPECIFICATION REQUIREMENTS FOR THE PROTECTION OF WORK ITEMS WHICH NECESSITATE THE RESTRICTION. THE LIMITS AND DURATION OF LANE CLOSURES SHALL SUBJECT TO THE APPROVAL OF THE ENGINEER.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

TRAFFIC SHALL BE MAINTAINED AS SPECIFIED BY USE OF THE EXISTING AND/OR RESURFACED PAVEMENT.

CONSTRUCTION WORK SHALL BE PERMITTED ON ONLY ONE SIDE OF THE DIRECTIONAL ROADWAY AT A TIME AND ANY OPEN PAVEMENT TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH BARRICADES, DRUMS OR VERTICAL PANELS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE WORK ZONES THAT ALTERNATELY CLOSE BOTH THE PASSING LANE AND THE TRAVEL LANE UNLESS THE DISTANCE BETWEEN THE LANE RESTRICTIONS EXCEEDS 3 km.

ALL LANES SHALL BE OPEN TO TRAFFIC BETWEEN 4:00 PM PRECEDING AND 8:00 AM AFTER A MAJOR LEGAL HOLIDAY INCLUDING HOLIDAY WEEKENDS.

MAJOR LEGAL HOLIDAYS SHALL INCLUDE MEMORIAL DAY, LABOR DAY, THANKSGIVING, AND THE FOURTH OF JULY.

IN ADDITION TO ITEM 108.06, DELAYS CAUSED BY WEATHER OR SEASONAL CONDITIONS SHALL BE ANTICIPATED AND NOT CONSIDERED AS A BASIS FOR EXTENSION OF TIME.

TRAFFIC SHALL NOT BE CROSSED OVER THE MEDIAN AT ANY TIME.

IF THE CONTRACTOR ELECTS TO SUBMIT A REVISED MAINTENANCE OF TRAFFIC PLAN, HE MUST SUBMIT IT TO THE DISTRICT CONSTRUCTION ENGINEER, FOR APPROVAL, SEVEN (7) WORKING DAYS PRIOR TO PUTTING ANY MAINTENANCE OF TRAFFIC DEVICES INTO EFFECT.

THE CONTRACTOR SHALL EMPLOY AN ENGINEER REGISTERED BY THE OHIO STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND SURVEYORS WITH EXPERIENCE IN MAINTENANCE OF TRAFFIC ON MULTILANE HIGHWAY PROJECTS TO SUPERVISE AND IMPLEMENT THE MAINTENANCE OF TRAFFIC REQUIREMENTS OF THIS PROJECT. THE CONTRACTOR'S ENGINEER SHALL SUBMIT IN WRITING A GENERAL MAINTENANCE OF TRAFFIC PLAN RELATIVE TO HIS PROPOSED WORK SCHEDULE FOR THE ENTIRE PROJECT AT THE PRECONSTRUCTION CONFERENCE. HE/SHE SHALL SUBMIT IN WRITING DETAILED SCHEDULES AND PLANS FOR EXECUTION OF SPECIFIC WORK ACTIVITIES WHICH IMPACT TRAFFIC OPERATIONS. THIS INFORMATION SHALL BE SUBMITTED AT LEAST 28 DAYS PRIOR TO IMPLEMENTATION. ALL MAINTENANCE OF TRAFFIC PLANS WILL BE SUBJECT TO THE APPROVAL OF THE ODOT ENGINEER. HE/SHE SHALL PERSONALLY SUPERVISE THE IMPLEMENTATION OF EACH MAINTENANCE OF TRAFFIC OPERATION. ANY NEEDED ADJUSTMENTS TO THE TRAFFIC CONTROL SHALL BE MADE PROMPTLY. ALL COSTS FOR CONTRACTOR'S ENGINEER SHALL BE INCLUDED IN ITEM 614.

CONES SHALL NOT BE ACCEPTABLE TRAFFIC CONTROL DEVICES FOR LANE RESTRICTIONS OR LANE REDUCTIONS THAT ARE IN OPERATION MORE THAN ONE-HALF HOUR BEFORE SUNRISE. ALL NIGHTTIME LANE RESTRICTIONS OR LANE REDUCTIONS SHALL REQUIRE DRUMS OR BARRICADES AT A MAXIMUM SPACING OF 12 METERS.

A FLASHING ARROW BARRICADE(MT-35/10M) SHALL BE USED FOR TRAFFIC CONTROL WHENEVER THERE IS A LANE RESTRICTION, LANE REDUCTION, OR LANE SHIFT OF ALL THROUGH TRAFFIC.

THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL FLAGS, FLAGGERS, WATCHMEN, BARRICADES, SIGNS, SIGN SUPPORTS AND INCIDENTALS RELATED THERETO. THE ABOVE ITEMS SHALL BE UTILIZED IN CONFORMANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, LATEST REVISION.

IN ADDITION TO THE REQUIREMENTS OF CMS SECTION 614.10 AT THE END OF EACH DAY OF WORK, THE CONTRACTOR SHALL REPLACE (WITH TEMPORARY PAVEMENT MARKINGS) ALL LANE LINES, EDGE LINES CHANNELIZING LINES OR STOP LINES THAT WERE REMOVED OR COVERED DURING THE PAVEMENT REMOVAL OPERATIONS AND/OR PAVING OPERATIONS.

ITEM 622 PORTABLE CONCRETE BARRIER, 813mm AND ITEM 622 PORTABLE CONCRETE BARRIER, 813mm, BRIDGE MOUNTED, SHALL BE FURNISHED, INSTALLED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. THE PORTABLE CONCRETE BARRIER, 813mm SHALL BE USED TO CLOSE ONE LANE OF ROADWAY DURING BRIDGE REPAIR OPERATIONS. SEE SHEETS 32, 33 & 34 FOR ADDITIONAL DETAILS. THE PORTABLE CONCRETE BARRIER, 813mm, BRIDGE MOUNTED, SHALL NOT BE PINNED TO THE DECK. PORTABLE CONCRETE BARRIER SHALL BE USED ON THE BRIDGES LISTED BELOW:

1. BEL-7-3228 LT. & RT.
2. BEL-7-3637 LT. & RT.

THIS ITEM SHALL BE PAID FOR BY THE ACTUAL LINEAR FEET OF ITEM 622 PORTABLE CONCRETE BARRIER, 813mm AND ITEM 622 PORTABLE CONCRETE BARRIER, 813mm, BRIDGE MOUNTED, INSTALLED AT A PARTICULAR LOCATION. PORTABLE CONCRETE BARRIER SHOULD BE INSTALLED ACCORDING TO STANDARD DRAWING PCB-91.

NO FULL DEPTH BRIDGE OR PARAPET REPAIRS SHALL BE PERFORMED OVER AN OPEN LANE OF TRAFFIC. A SAFETY NET OR PLATFORM SHALL BE REQUIRED TO PROTECT THE ROADWAY. THE CONTRACTOR SHALL PROVIDE A SAFETY NET OR PLATFORM OF SUITABLE STRENGTH ON THE UNDERSIDE OF THE DECK. THE DESIGN OF THE NET OR PLATFORM SHALL CONFORM WITH OSHA REQUIREMENTS AND THE APPROVAL OF THE ENGINEER AND SHALL REMAIN IN PLACE UNTIL THE WORK HAS BEEN COMPLETED AND ACCEPTED OR AS DIRECTED BY THE ENGINEER.

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, 615 TEMPORARY PAVEMENT, AND TEMPORARY SURFACES USING 404, 410 AND 616.

IN ADDITION TO CMS SECTION 614.10, "BUMP" AND "MAINTAIN PRESENT LANE" SIGNS SHALL BE SUPPLIED AND USED AS DIRECTED BY THE ENGINEER. THESE SHALL BE PAID FOR AS ITEM 614 EACH WORK ZONE MARKING SIGNS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

MAINTENANCE OF TRAFFIC SEQUENCE OF OPERATION

PHASE 1 - S.R. 7 TRAFFIC WILL BE MAINTAINED AT ALL TIMES. PLACE TEMPORARY CONCRETE BARRIER AS SHOWN IN PHASE 1 MAINTENANCE OF TRAFFIC DETAILS, AND DIVERT BOTH NORTHBOUND AND SOUTHBOUND S.R. 7 TRAFFIC TO THE OUTSIDE LANES.

REMOVE EXISTING CONCRETE MEDIAN, GUARDRAIL, CURB AND GUTTER, AND INLETS WITHIN THE MEDIAN AREA.

CONSTRUCT PROPOSED CONCRETE BARRIER, CONCRETE MEDIAN, SHOULDERS, INLETS, LIGHTING AND SIGNING WITHIN THE MEDIAN AREA.

CONSTRUCT S.R. 7 PAVEMENT AND SHOULDERS ON THE INSIDE LANE AS SHOWN ON THE TYPICAL SECTIONS.

MAINTAIN TRAFFIC AT THE INTERSECTIONS AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS.

MAINTAIN EXISTING LIGHTING WHEREVER POSSIBLE.

THE CONTRACTOR SHALL NOTIFY THE ODOT DISTRICT TRAFFIC ENGINEER (330-339-6633) AND THE MAYOR OF MARTINS FERRY A MINIMUM OF 14 DAYS PRIOR TO BEGINNING WORK ON THE SIGNALIZED INTERSECTIONS OF S.R. 7 & AETNA ST. AND S.R. 7 & HANOVER ST.

PHASE 2 - RAMPS C AND D WILL BE CLOSED TO TRAFFIC DURING PHASE 2 FOR ONE EVENING PER RAMP BETWEEN THE HOURS OF 8:00 P.M. TO 6:00 A.M. THIS CLOSING WILL BE IN AFFECT FOR TWO CONSECUTIVE EVENINGS DURING THE WEEK, NOT INCLUDING FRIDAY, SATURDAY OR SUNDAY. THE CONTRACTOR SHALL REMOVE THE EXISTING RAMP PAVEMENT WEARING COURSE AND REPLACE THE ASPHALT AS SHOWN ON THE TYPICAL SECTIONS, WITHIN THIS PERIOD.

PLACE TEMPORARY CONCRETE BARRIER AS SHOWN IN PHASE 2 MAINTENANCE OF TRAFFIC DETAILS, AND DIVERT BOTH NORTHBOUND AND SOUTHBOUND S.R. 7 TRAFFIC TO THE NEW PAVEMENT/SHOULDERS ON THE INSIDE LANE.

REMOVE EXISTING CURB AND GUTTER, GUARDRAIL, CATCH BASINS/INLETS, LIGHTING AND SIGNING WITHIN THE WORK AREA ON THE OUTSIDE LANE.

CONSTRUCT PROPOSED CURB AND GUTTER, GUARDRAIL, CATCH BASINS/INLETS, LIGHTING AND SIGNING.

CONSTRUCT S.R. 7 PAVEMENT ON THE OUTSIDE LANE AS SHOWN ON THE TYPICAL SECTIONS. MAINTAIN TRAFFIC AT INTERSECTIONS AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS FOR PHASE 2.

THE CONTRACTOR SHALL NOTIFY THE ODOT DISTRICT TRAFFIC ENGINEER (330-339-6633) AND THE MAYOR OF MARTINS FERRY A MINIMUM OF 14 DAYS PRIOR TO BEGINNING WORK ON THE SIGNALIZED INTERSECTIONS OF S.R. 7 & AETNA ST. AND S.R. 7 & HANOVER ST.

CONTRACTOR'S EQUIPMENT - OPERATION AND STORAGE

THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAFFIC. A QUALIFIED FLAGGER SHALL BE EMPLOYED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM. THE CONTRACTOR'S EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE (1) AMBER FLASHING LIGHT. PAVERS, ROLLERS, AND OTHER EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY WHEN PAVEMENT REPAIR OR PAVING OPERATIONS ARE SCHEDULED TO BEGIN WITHIN THE NEXT WORKDAY; OTHERWISE THE EQUIPMENT SHALL BE STORED AT A STORAGE AREA, THE LOCATION OF WHICH SHALL HAVE PRIOR APPROVAL OF THE ENGINEER. ALL OTHER EQUIPMENT INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT THE APPROVED CONTRACTOR'S STORAGE AREA.

ITEM 622. PORTABLE CONCRETE BARRIER

IT IS ANTICIPATED THAT THE SAME BARRIER WILL BE USED IN VARIOUS PHASES OF CONSTRUCTION. MOVEMENT OF THE CONCRETE BARRIER BETWEEN PHASES SHALL BE ACCOMPLISHED IN ONE WORKING DAY. FLAGGERS SHALL BE UTILIZED FOR PROTECTION OF VEHICULAR TRAFFIC UNTIL MOVEMENT OF THE BARRIER IS COMPLETE.

ITEM 614 LAW ENFORCEMENT OFFICER (WITH PATROL CAR)

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER (AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

- FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.
- DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.
- DURING MAINTENANCE OF TRAFFIC AT THE INTERSECTIONS OF S.R. 7 WITH AETNA ST. AND HANOVER ST.
- DURING PEAK HOURS AT THE INTERSECTION OF S.R. 7 AND FIFTH ST. AS DIRECTED BY THE ENGINEER
- AS DIRECTED BY THE ENGINEER TO ENSURE SAFE TRAFFIC OPERATION

LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH THE OHIO HIGHWAY PATROL, 660 EAST MAIN STREET, COLUMBUS, OHIO, TELEPHONE 614-466-2660, AND/OR VILLAGE OF BRIDGEPORT, 301 MAIN STREET, TELEPHONE 740-635-2424, AND/OR CITY OF MARTINS FERRY, CITY BUILDING, TELEPHONE 740-633-2876.

LAW ENFORCEMENT OFFICERS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 LAW ENFORCEMENT OFFICER (WITH PATROL CAR). THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614 LAW ENFORCEMENT OFFICER WITH PATROL CAR ----- 1500 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, HE MAY DO SO AT HIS OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614 MAINTAINING TRAFFIC.

ITEM 614. BARRIER REFLECTORS

REFLECTORS AND THEIR MOUNTING SHALL CONFORM TO ITEM 626 EXCEPT THAT SPACING SHALL BE 7.62m.



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ITEM 614 – PORTABLE CHANGEABLE MESSAGE SIGN.

BY CLASS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR. THE LIST CURRENTLY CONTAINS CLASS III AND II UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 198m AND 259m RESPECTIVELY.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE HIGH INTENSITY YELLOW REFLECTIVE SHEETING SURFACES OF 229mm BY 381mm MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PREPROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED, BUT NORMALLY, NOT MORE THAN TWO MESSAGE PHASES SHOULD BE EMPLOYED, ALTHOUGH THREE PHASES MAY BE USED IN UNUSUAL CONDITIONS. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST ONCE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.03(C). THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC AND THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 104.04.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID PER EACH FOR ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGED MESSAGES WILL BE IMPLEMENTED WITHIN HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO SHEET NO. 16 FOR THIS ITEM.

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN ----- 4 EACH

ITEM 614 ADVANCE NOTICE TO PAVE

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE DISTRICT CONSTRUCTION ENGINEER A DETAILED SCHEDULE 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, AND HOW HE PROPOSES TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

WINTER TRAFFIC LIMITATIONS

ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC BETWEEN NOVEMBER 15 AND APRIL 15. NOVEMBER 15 SHALL BE CONSIDERED TO CONSTITUTE AN INTERIM COMPLETION DATE AND LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH SECTION 108.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR EACH CALENDAR DAY THAT ALL LANES ARE NOT OPEN AND AVAILABLE TO TRAFFIC.

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.



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PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER SQUARE METER FOR ITEM SPECIAL, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

ITEM SPECIAL, REPLACEMENT DRUM

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM SPECIAL, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

ITEM 614. WORK ZONE SPEED LIMIT SIGN

THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SPEED LIMIT OR MINIMUM SPEED SIGNS WITHIN THE REDUCED SPEED ZONE. THESE SIGNS SHALL BE RESTORED DURING SUSPENSION OR TERMINATION OF THE REDUCED SPEED LIMIT. THE EXPENSE OF COVERING OR REMOVAL AND RESTORATION OF EXISTING SPEED LIMIT OR MINIMUM SPEED SIGNS SHALL BE INCLUDED IN THE PAY ITEM FOR THE WORK ZONE SPEED LIMIT SIGNS.

THE CONTRACTOR SHALL ERECT A WORK ZONE SPEED LIMIT SIGN IN ADVANCE OF ANY LANE RESTRICTION EXPECTED TO LAST AT LEAST 30 DAYS OR AS DIRECTED BY THE ENGINEER. THE SIGN SHALL BE MOUNTED ON BOTH SIDES OF DIVIDED HIGHWAYS, 150 METERS IN ADVANCE OF THE LANE REDUCTION TAPER. THE SIGN SHALL BE MOUNTED ON THE RIGHT SIDE, 75 METERS IN ADVANCE OF THE LANE REDUCTION TAPER ON UNDIVIDED HIGHWAYS. THE SIGN SHALL BE REPEATED, ON THE SIDE NEAREST TRAFFIC, EVERY 1600 METERS FOR 55 MPH ZONES AND EVERY 800 METERS FOR 45 MPH ZONES. THESE SIGNS SHALL ALSO BE ERECTED IMMEDIATELY AFTER EACH OPEN ENTRANCE RAMP WITHIN THE ZONE. A SIGN TO INDICATE THE RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE ERECTED AT THE END OF ANY REDUCED SPEED ZONE. THIS SIGN SHALL BE AN R-8A.

WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGNS AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION WITHIN THE PROJECT DUE TO CHANGES IN THE SPEED ZONE DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

614, WORK ZONE SPEED LIMIT SIGN ----- 30 EACH

⊗ QUANTITY DOUBLED FOR SECOND APPLICATION

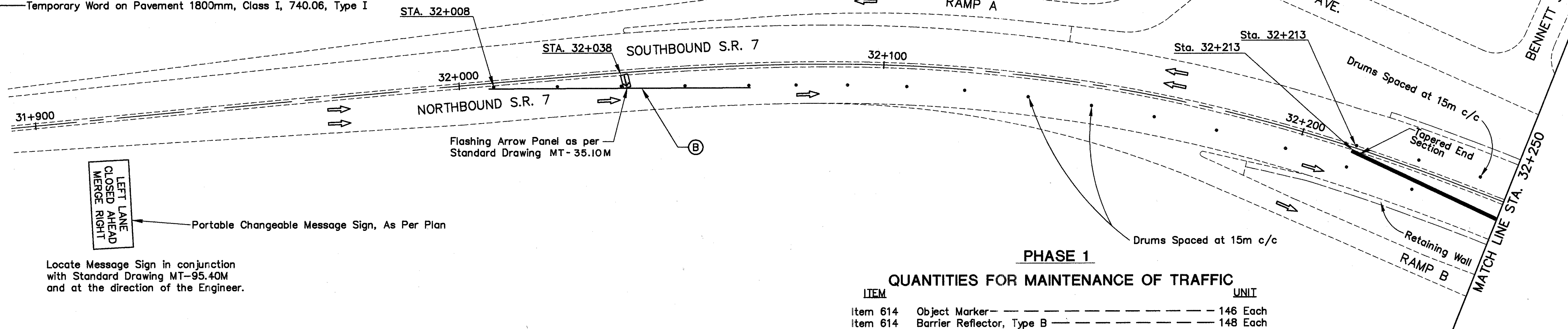
| FROM SHEET NO. |         |         |    |         |         |     |    |     |     |    |     |     |      | TOTAL | ITEM | UNIT      | DESCRIPTION                                                          |
|----------------|---------|---------|----|---------|---------|-----|----|-----|-----|----|-----|-----|------|-------|------|-----------|----------------------------------------------------------------------|
| 15             | 17      | 19      | 20 | 21      | 23      | 24  | 25 | 26  | 27  | 28 | 29  | 30  | 31   |       |      |           |                                                                      |
|                |         |         |    |         |         |     |    |     |     |    |     |     |      |       |      |           |                                                                      |
|                | 146     | 150     |    | 146     | 150     |     |    |     |     |    |     |     |      | 592   | 614  | Each      | OBJECT MARKER                                                        |
|                | 148     | 144     |    | 148     | 144     |     |    |     |     |    |     |     |      | 584   | 614  | Each      | BARRIER REFLECTOR, TYPE B                                            |
|                |         |         |    |         | 0.02    |     |    |     |     |    |     |     | 0.06 | 0.08  | 614  | Kilometer | TEMPORARY CENTER LINE, CLASS I, 740.06, TYPE I                       |
|                | ⊗ 0.12  |         |    | ⊗ 0.14  |         |     |    |     |     |    |     |     |      | 0.26  | 614  | Kilometer | TEMPORARY EDGE LINE, CLASS I, 740.06, TYPE I                         |
|                |         | 2       | 2  |         | 3       | 8   | 4  | 4   | 8   | 2  | 6   | 16  | 4    | 59    | 614  | Each      | TEMPORARY LANE ARROW, CLASS I, 740.06, TYPE I                        |
|                |         | 20      |    |         | 30      | 120 |    | 116 | 120 |    | 100 | 121 | 124  | 751   | 614  | Meter     | TEMPORARY CHANNELIZING LINE, CLASS I, 740.06, TYPE I                 |
|                |         | 45      |    |         |         |     |    |     |     |    |     | 186 |      | 231   | 614  | Meter     | TEMPORARY DOTTED LINE, CLASS I, 740.06, TYPE I                       |
|                |         | 1       | 1  |         | 2       | 2   | 2  | 2   | 2   | 1  | 1   | 8   | 4    | 26    | 614  | Each      | TEMPORARY WORD ON PAVEMENT, 1800mm, CLASS I, 740.06, TYPE I          |
|                |         |         |    |         | 13      |     | 6  | 6   |     | 4  | 4   |     | 12   | 45    | 614  | Meter     | TEMPORARY STOP LINE, CLASS I, 740.06, TYPE I                         |
| 4              |         |         |    |         |         |     |    |     |     |    |     |     |      | 4     | 614  | Each      | PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN<br>(See Sheet No. 15 ) |
|                |         |         |    |         |         |     |    |     |     |    |     |     |      |       |      |           |                                                                      |
|                | 164.592 | 463.296 |    | 164.592 | 463.296 |     |    |     |     |    |     |     |      | 1256  | 622  | Meter     | PORTABLE CONCRETE BARRIER, 813mm                                     |
|                | 993.648 | 310.896 |    | 993.648 | 310.896 |     |    |     |     |    |     |     |      | 2609  | 622  | Meter     | PORTABLE CONCRETE BARRIER 813mm, BRIDGE MOUNTED                      |
|                |         |         |    |         |         |     |    |     |     |    |     |     |      |       |      |           |                                                                      |
|                |         |         |    |         |         |     |    |     |     |    |     |     |      |       |      |           |                                                                      |

W. E. QUICKSALL AND ASSOCIATES INC. CONSULTING ENGINEERS



TEMPORARY PAVEMENT MARKING LEGEND

- (A) Temporary Centerline, Class I, 740.06, Type I
- (B) Temporary Edge Line, Class I, 740.06, Type I
- (C) Temporary Channelizing Line, Class I, 740.06, Type I
- (D) Temporary Dotted Line, Class I, 740.06, Type I
- (E) Temporary Stop Line, Class I, 740.06, Type I
- (F) Temporary Lane Arrow, Class I, 740.06, Type I
- (G) Temporary Word on Pavement 1800mm, Class I, 740.06, Type I



NOTE: For Location Of Maintenance Of Traffic Signs, See Standard Drawing MT-95.30M

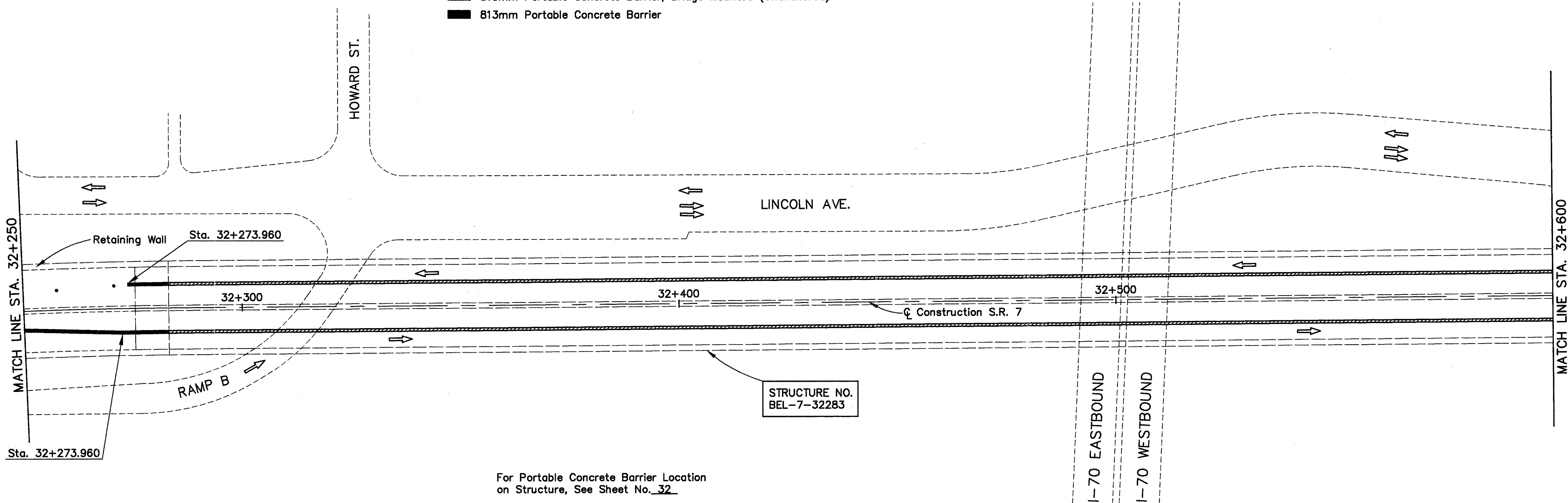
PHASE 1  
QUANTITIES FOR MAINTENANCE OF TRAFFIC

| ITEM                                                     | UNIT           |
|----------------------------------------------------------|----------------|
| Item 614 Object Marker                                   | 146 Each       |
| Item 614 Barrier Reflector, Type B                       | 148 Each       |
| Item 614 Temporary Edge Line, Class I, 740.06, Type I    | 0.06 Kilometer |
| Item 622 Portable Concrete Barrier, 813mm                | 164.592 Meter  |
| Item 622 Portable Concrete Barrier, 813mm Bridge Mounted | 993.648 Meter  |

QUANTITIES CARRIED TO SHEET NO. 16

CONCRETE BARRIER LEGEND

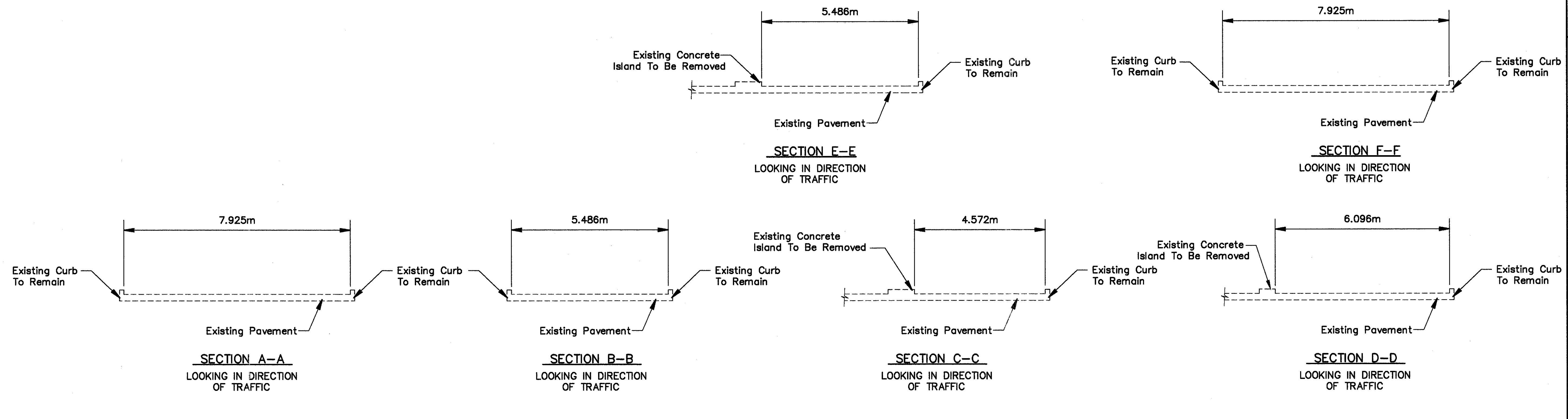
- 813mm Portable Concrete Barrier, Bridge Mounted (Unanchored)
- 813mm Portable Concrete Barrier





# **MAINTENANCE OF TRAFFIC PHASE 1**

**BEL-7-32.276**

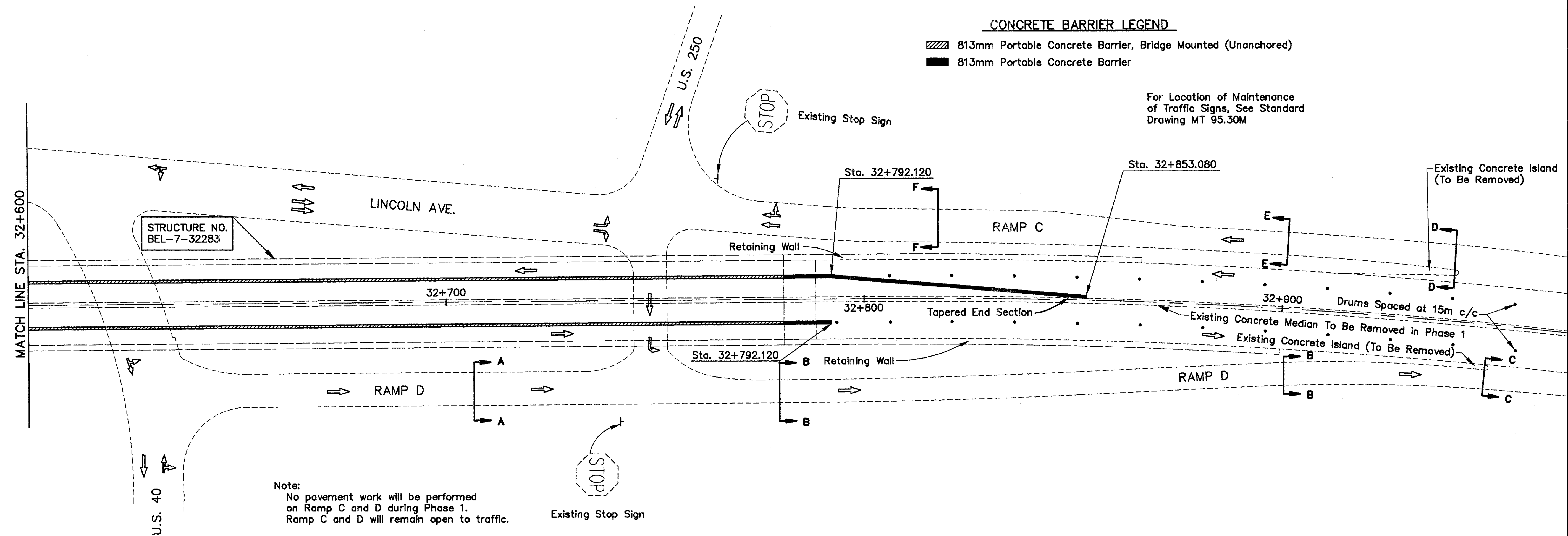


NOTE: Ramp C and D have existing curb to remain.

## **CONCRETE BARRIER LEGEND**

- 813mm Portable Concrete Barrier, Bridge Mounted (Unanchored)
- 813mm Portable Concrete Barrier

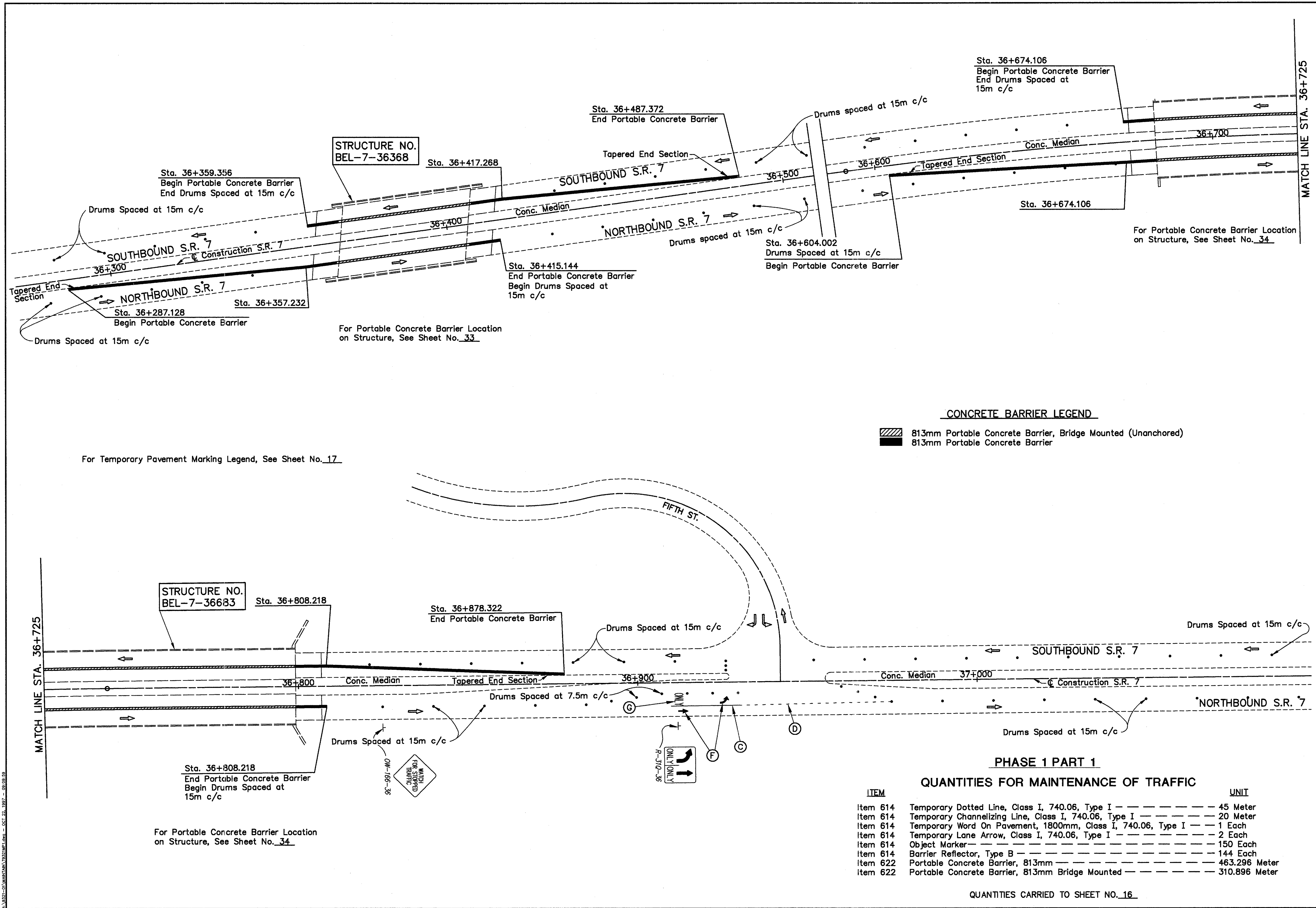
For Location of Maintenance of Traffic Signs, See Standard Drawing MT 95.30M



Note:  
No pavement work will be performed on Ramp C and D during Phase 1.  
Ramp C and D will remain open to traffic.



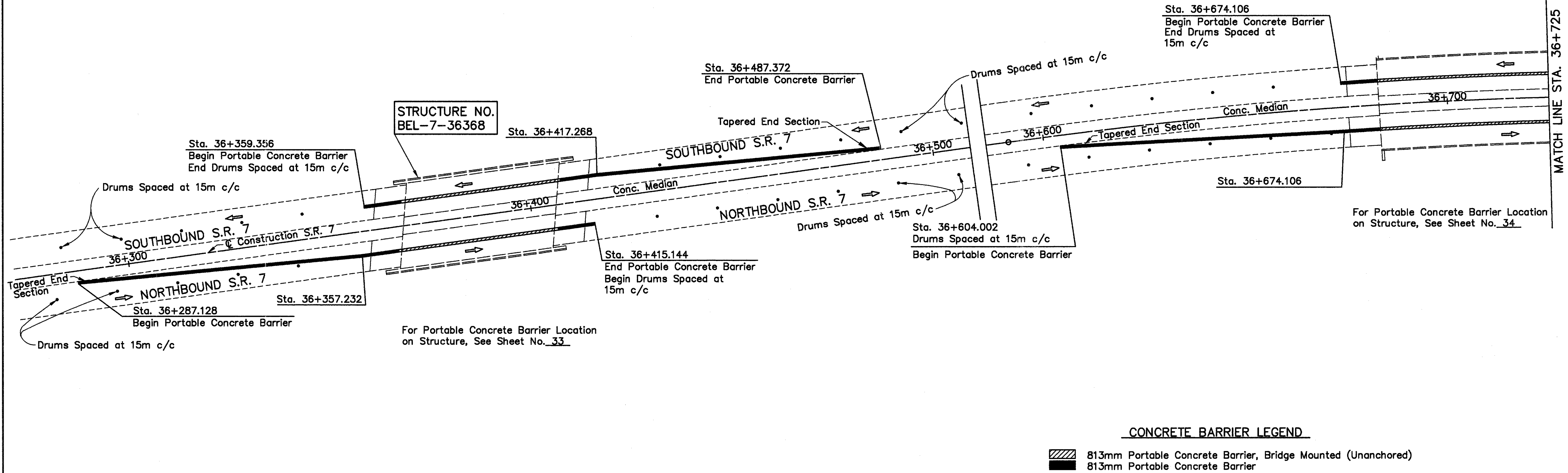
H:\327-CLM\327-CLM\327-CLM.dwg - OCT 22, 1997 - 09:05:59





**MAINTENANCE OF TRAFFIC  
PHASE 1 - PART 2**

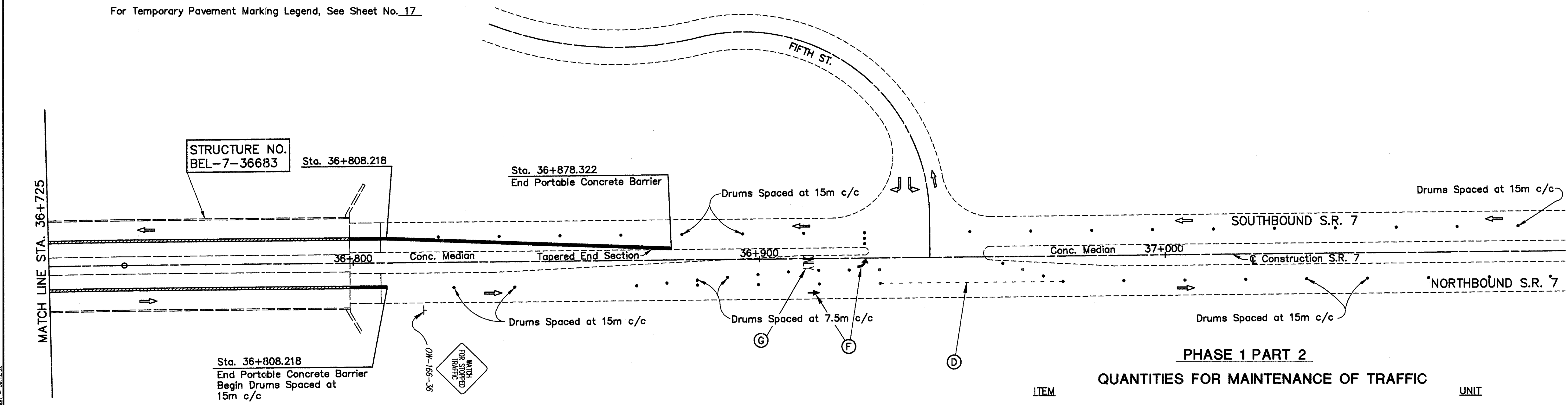
**BEL-7-32.276**



**CONCRETE BARRIER LEGEND**

- 813mm Portable Concrete Barrier, Bridge Mounted (Unanchored)
- 813mm Portable Concrete Barrier

For Temporary Pavement Marking Legend, See Sheet No. 17



**PHASE 1 PART 2**

**QUANTITIES FOR MAINTENANCE OF TRAFFIC**

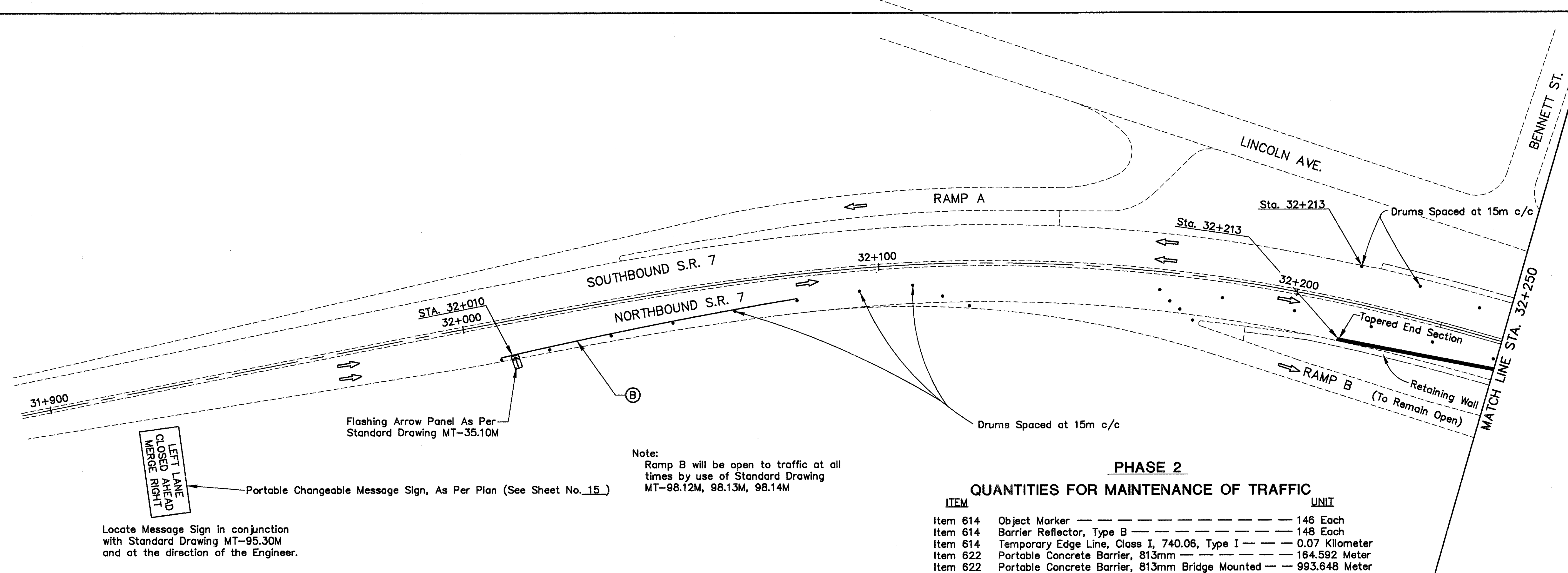
| ITEM     |                                                            | UNIT   |
|----------|------------------------------------------------------------|--------|
| Item 614 | Temporary Word On Pavement, 1800mm, Class I, 740.06 Type I | 1 Each |
| Item 614 | Temporary Lane Arrow, Class I, 740.06, Type I              | 2 Each |

QUANTITIES CARRIED TO SHEET NO. 16



# **MAINTENANCE OF TRAFFIC PHASE 2**

**BEL-7-32.276**



Note:  
Ramp B will be open to traffic at all times by use of Standard Drawing MT-98.12M, 98.13M, 98.14M

## **PHASE 2 QUANTITIES FOR MAINTENANCE OF TRAFFIC**

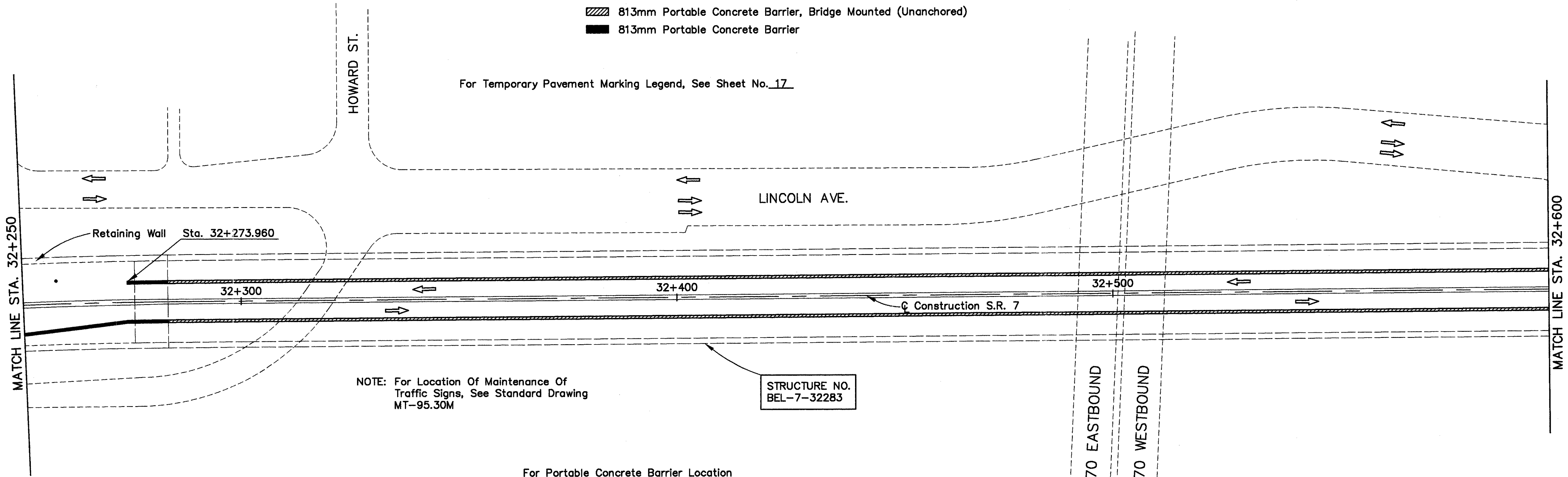
| ITEM     |                                                 | UNIT           |
|----------|-------------------------------------------------|----------------|
| Item 614 | Object Marker                                   | 148 Each       |
| Item 614 | Barrier Reflector, Type B                       | 148 Each       |
| Item 614 | Temporary Edge Line, Class I, 740.06, Type I    | 0.07 Kilometer |
| Item 622 | Portable Concrete Barrier, 813mm                | 164.592 Meter  |
| Item 622 | Portable Concrete Barrier, 813mm Bridge Mounted | 993.648 Meter  |

QUANTITIES CARRIED TO SHEET NO. 16

## **CONCRETE BARRIER LEGEND**

- 813mm Portable Concrete Barrier, Bridge Mounted (Unanchored)
- 813mm Portable Concrete Barrier

For Temporary Pavement Marking Legend, See Sheet No. 17



NOTE: For Location Of Maintenance Of Traffic Signs, See Standard Drawing MT-95.30M

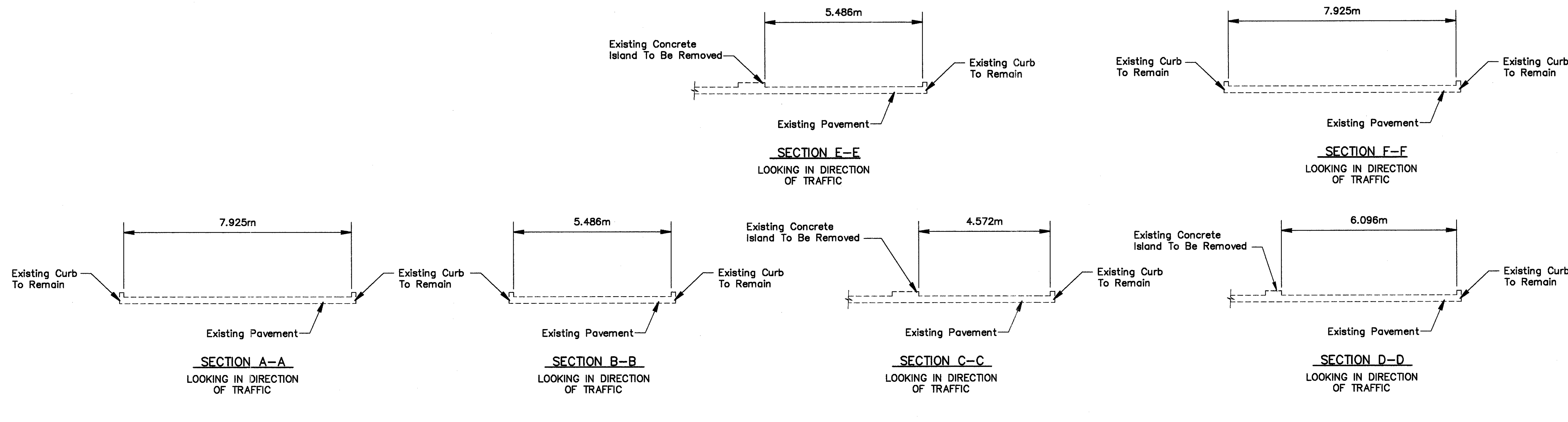
STRUCTURE NO. BEL-7-32283

For Portable Concrete Barrier Location on Structure, See Sheet No. 32



# **MAINTENANCE OF TRAFFIC PHASE 2**

**BEL-7-32.276**



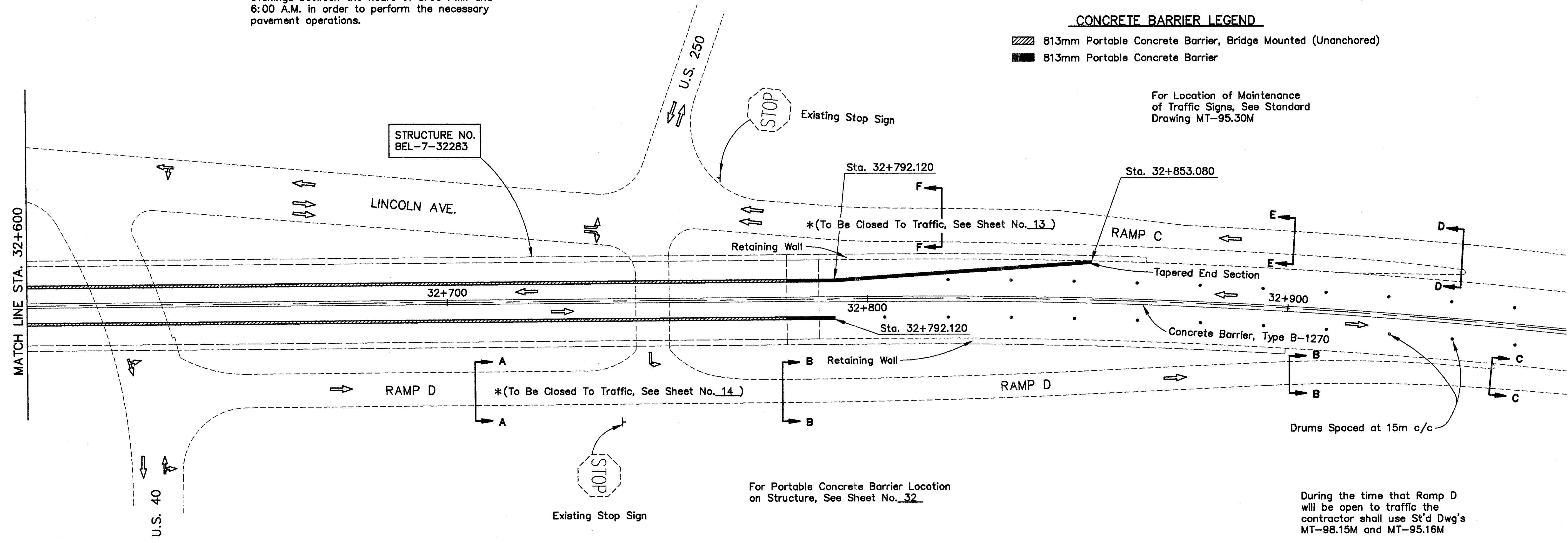
NOTE: Ramp C and D have existing curb to remain.

\*Note:  
Ramp C & D will be closed to traffic for two evenings between the hours of 8:00 P.M. and 6:00 A.M. in order to perform the necessary pavement operations.

**CONCRETE BARRIER LEGEND**

- 813mm Portable Concrete Barrier, Bridge Mounted (Unanchored)
- 813mm Portable Concrete Barrier

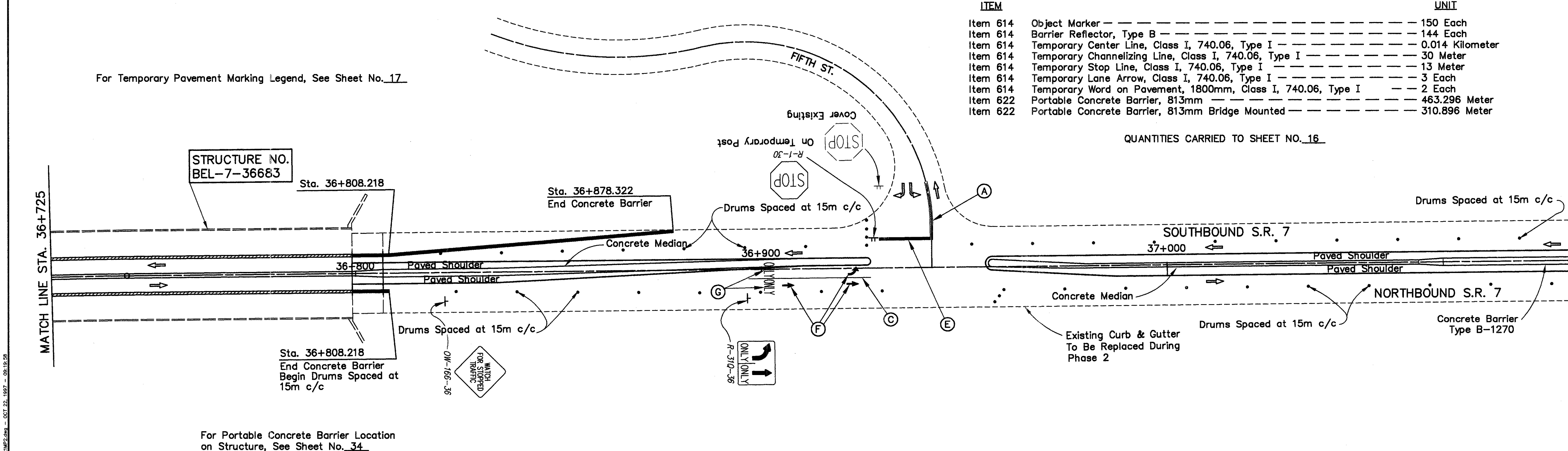
For Location of Maintenance of Traffic Signs, See Standard Drawing MT-95.30M



For Portable Concrete Barrier Location on Structure, See Sheet No. 32

During the time that Ramp D will be open to traffic the contractor shall use St'd Dwg's MT-98.15M and MT-95.16M





QUANTITIES CARRIED TO SHEET NO. 16



PHASE 1 PART 1

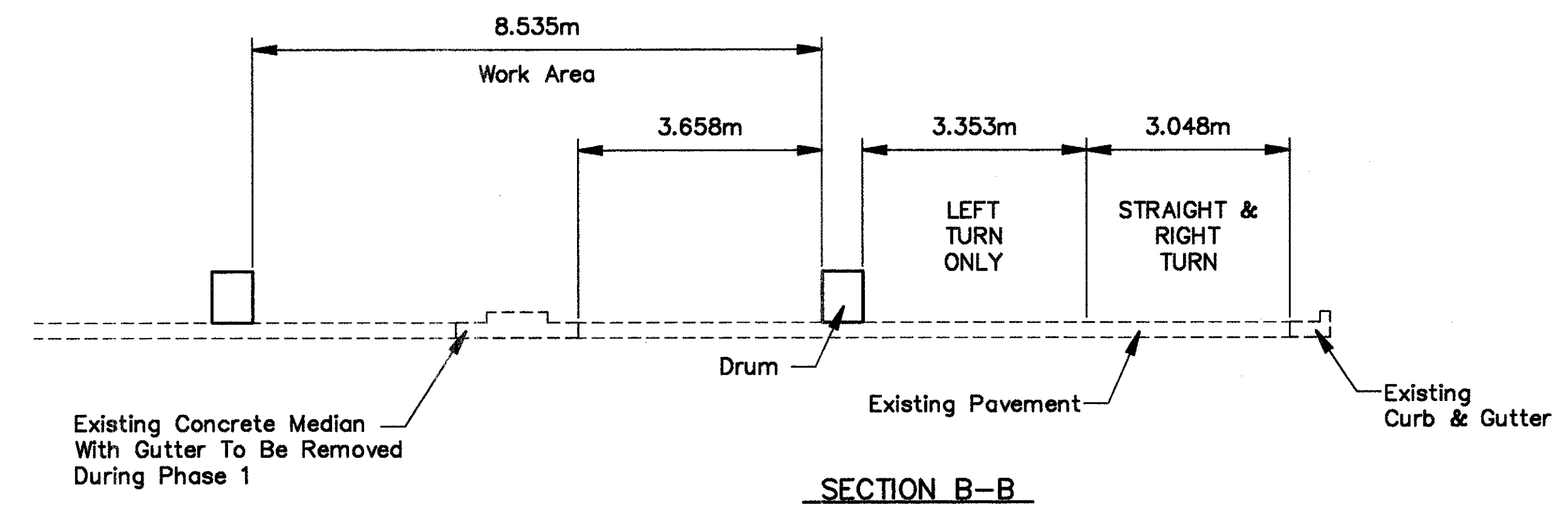
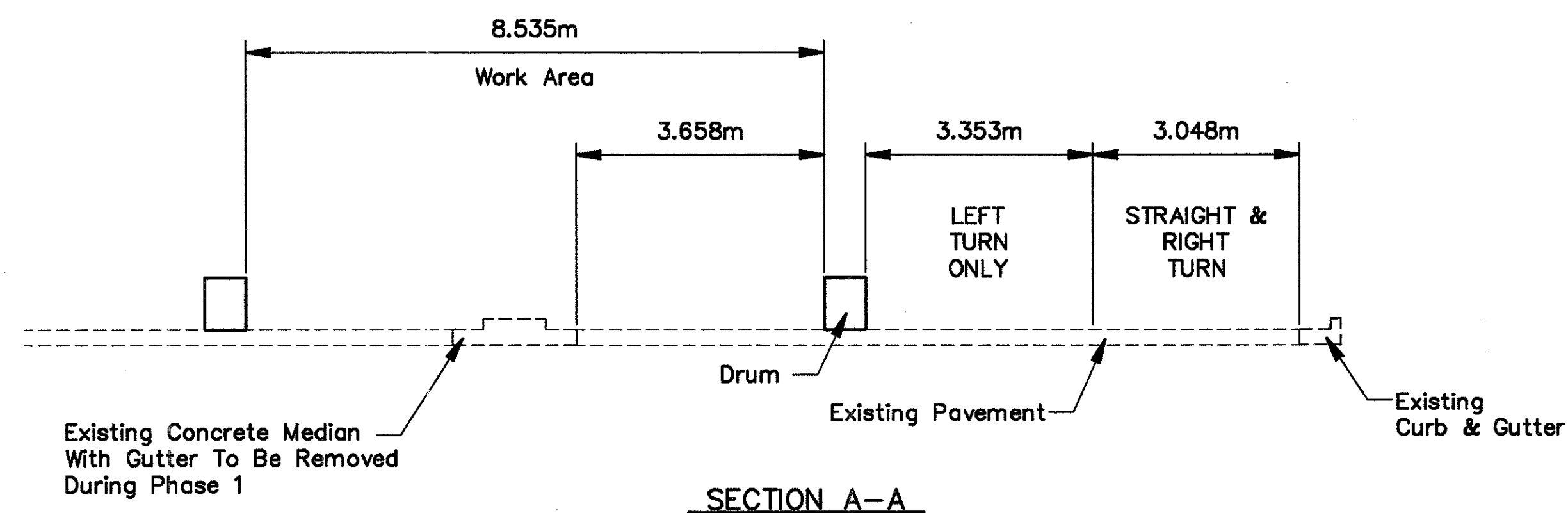
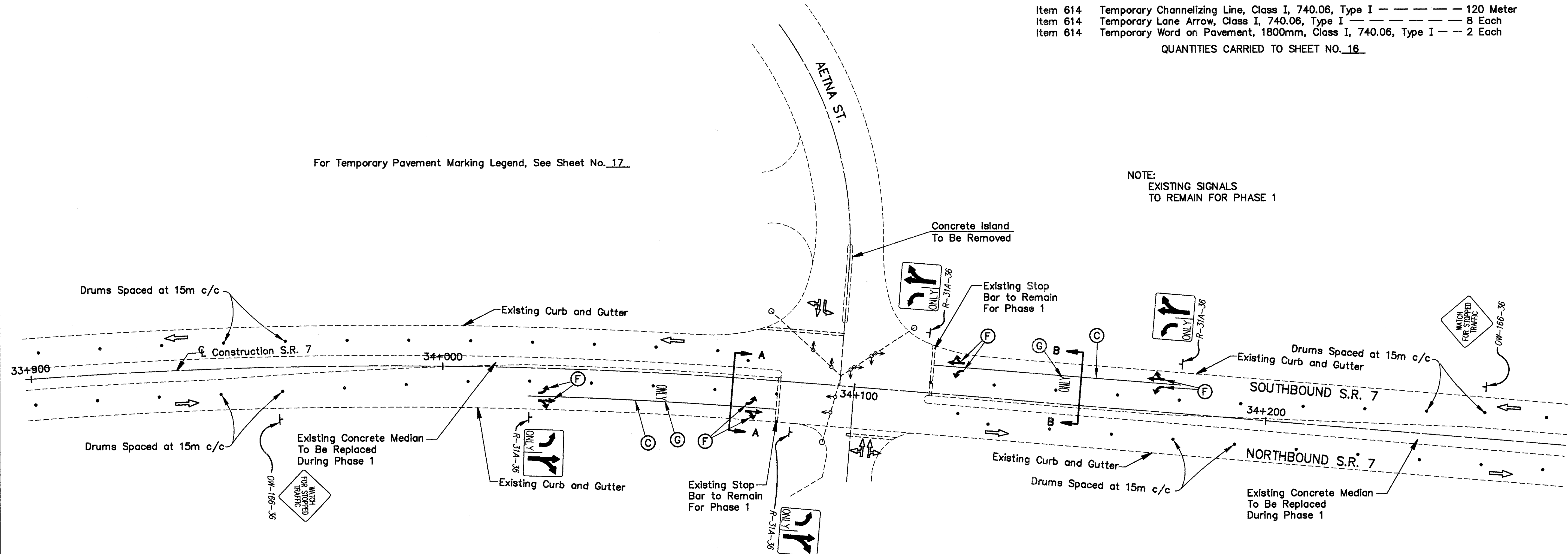
QUANTITIES FOR MAINTENANCE OF TRAFFIC

| ITEM     |                                                             | UNIT      |
|----------|-------------------------------------------------------------|-----------|
| Item 614 | Temporary Channelizing Line, Class I, 740.06, Type I        | 120 Meter |
| Item 614 | Temporary Lane Arrow, Class I, 740.06, Type I               | 8 Each    |
| Item 614 | Temporary Word on Pavement, 1800mm, Class I, 740.06, Type I | 2 Each    |

QUANTITIES CARRIED TO SHEET NO. 16

For Temporary Pavement Marking Legend, See Sheet No. 17

NOTE:  
EXISTING SIGNALS  
TO REMAIN FOR PHASE 1

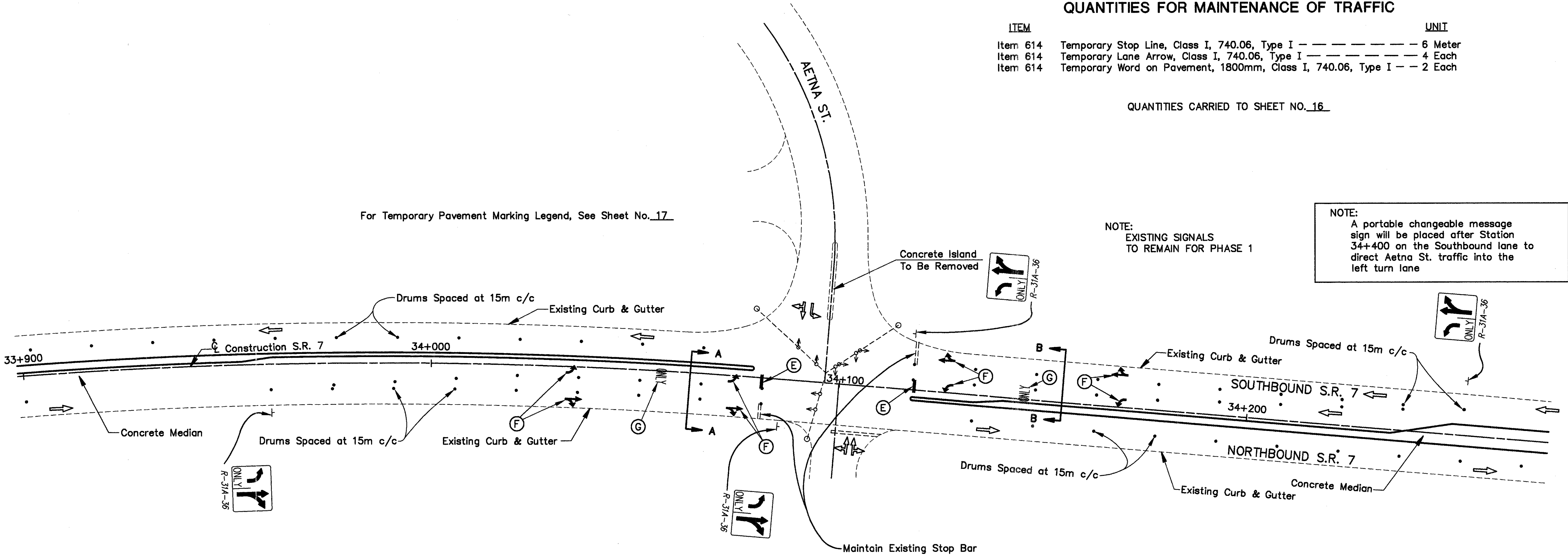




**PHASE 1 - PART 2  
QUANTITIES FOR MAINTENANCE OF TRAFFIC**

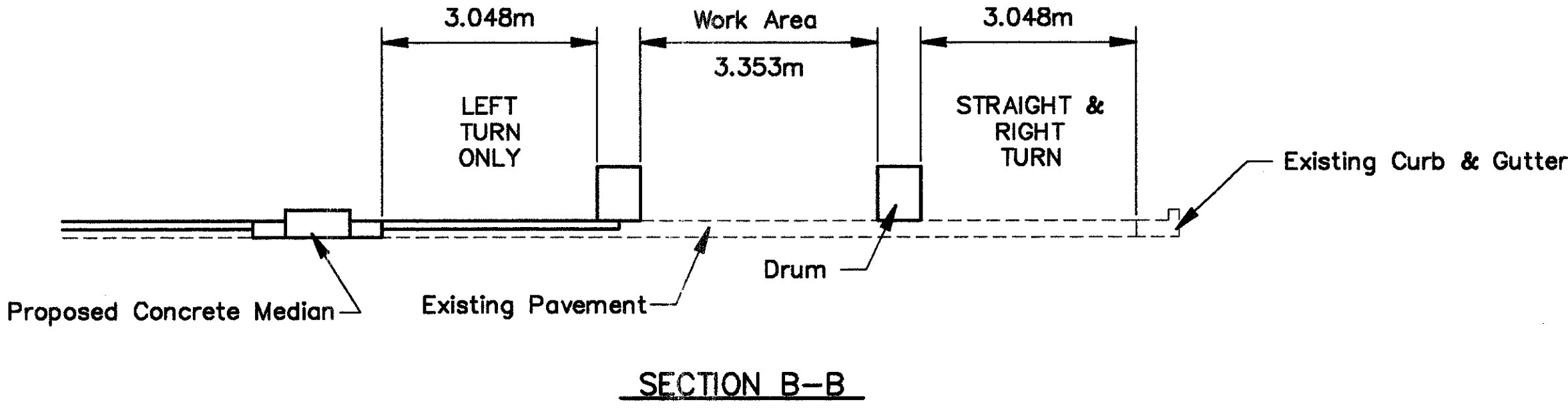
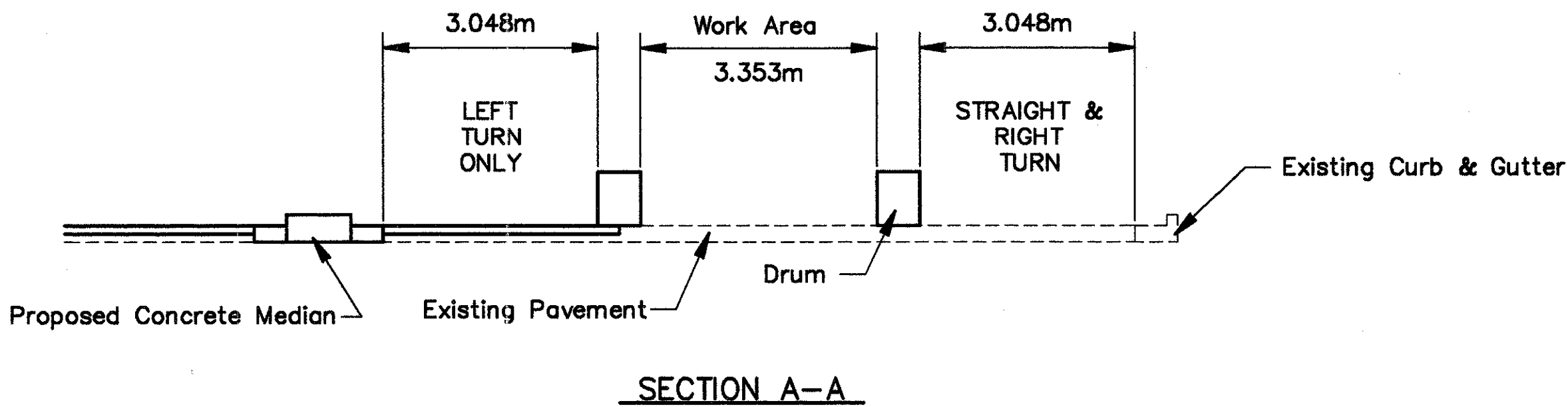
| ITEM                                                                 | UNIT    |
|----------------------------------------------------------------------|---------|
| Item 614 Temporary Stop Line, Class I, 740.06, Type I                | 6 Meter |
| Item 614 Temporary Lane Arrow, Class I, 740.06, Type I               | 4 Each  |
| Item 614 Temporary Word on Pavement, 1800mm, Class I, 740.06, Type I | 2 Each  |

QUANTITIES CARRIED TO SHEET NO. 16



NOTE:  
A portable changeable message sign will be placed prior to Station 33+800 on the Northbound lane to direct Aetna St. traffic into the left turn lane

NOTE:  
During Phase 1, the temporary drums will need to be moved around in the work area in order to maintain 3.048m driving lanes





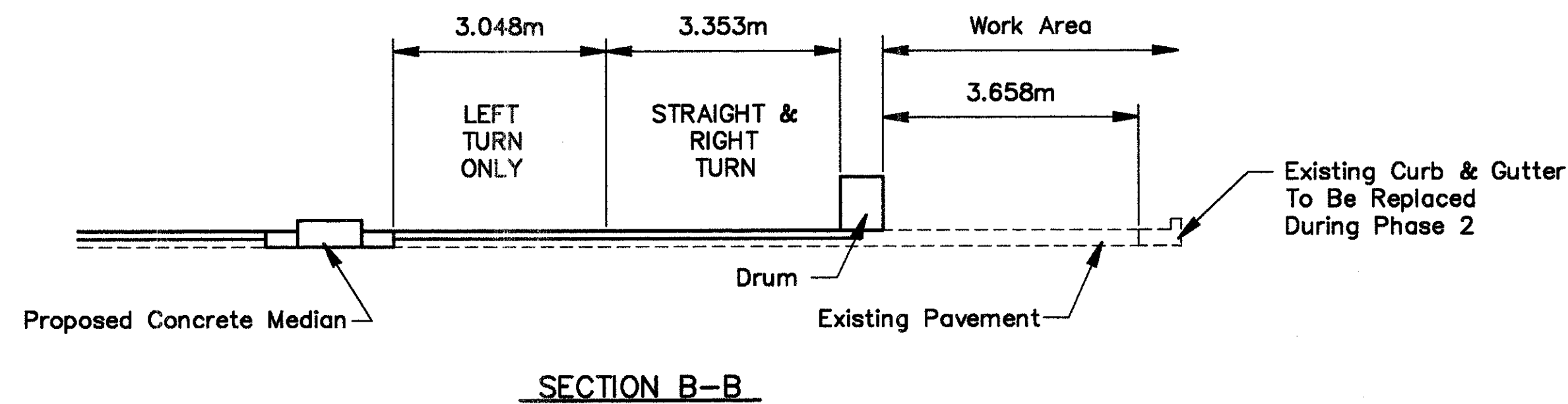
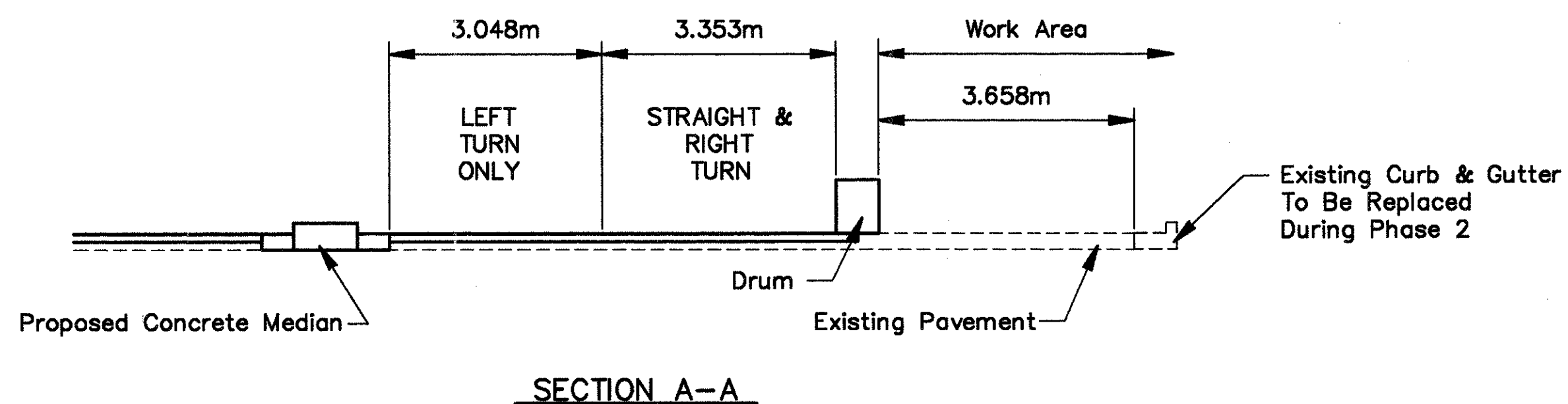
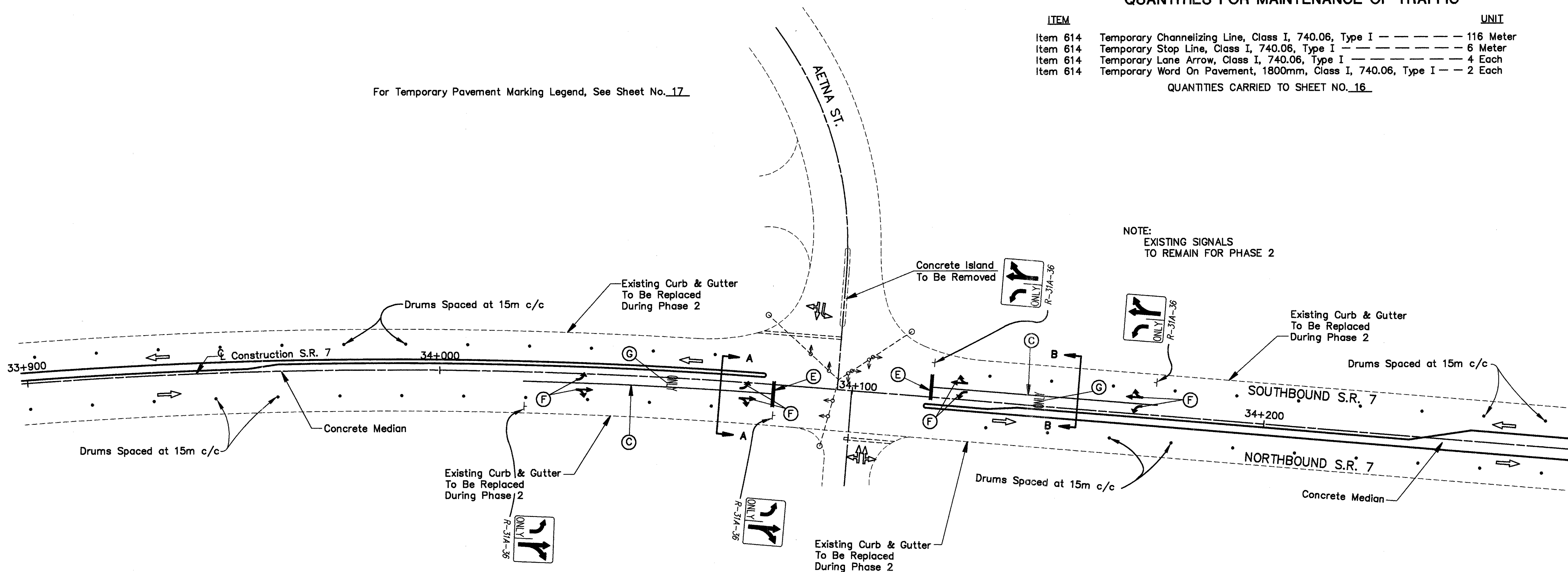
**PHASE 2**

**QUANTITIES FOR MAINTENANCE OF TRAFFIC**

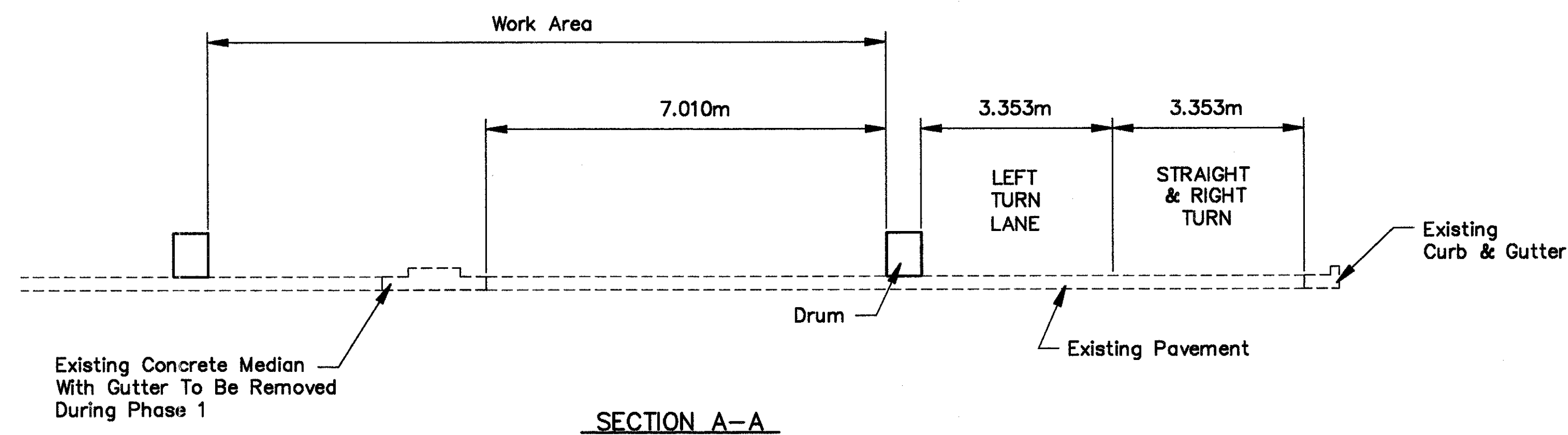
| ITEM     |                                                             | UNIT      |
|----------|-------------------------------------------------------------|-----------|
| Item 614 | Temporary Channelizing Line, Class I, 740.06, Type I        | 116 Meter |
| Item 614 | Temporary Stop Line, Class I, 740.06, Type I                | 6 Meter   |
| Item 614 | Temporary Lane Arrow, Class I, 740.06, Type I               | 4 Each    |
| Item 614 | Temporary Word On Pavement, 1800mm, Class I, 740.06, Type I | 2 Each    |

QUANTITIES CARRIED TO SHEET NO. 16

For Temporary Pavement Marking Legend, See Sheet No. 17





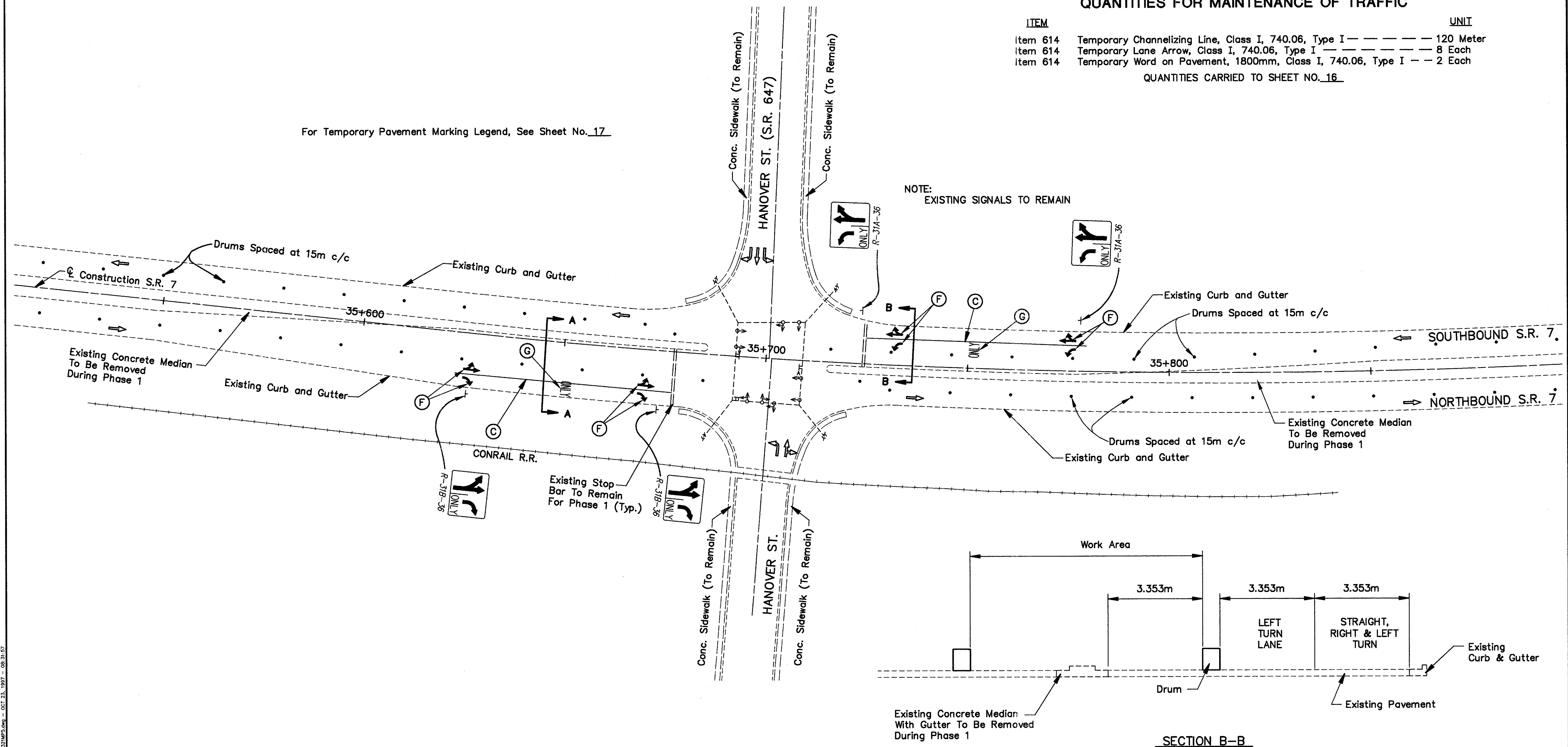


**PHASE 1 - PART 1  
QUANTITIES FOR MAINTENANCE OF TRAFFIC**

| ITEM                                                                 | UNIT      |
|----------------------------------------------------------------------|-----------|
| Item 614 Temporary Channelizing Line, Class I, 740.06, Type I        | 120 Meter |
| Item 614 Temporary Lane Arrow, Class I, 740.06, Type I               | 8 Each    |
| Item 614 Temporary Word on Pavement, 1800mm, Class I, 740.06, Type I | 2 Each    |

QUANTITIES CARRIED TO SHEET NO. 16

For Temporary Pavement Marking Legend, See Sheet No. 17

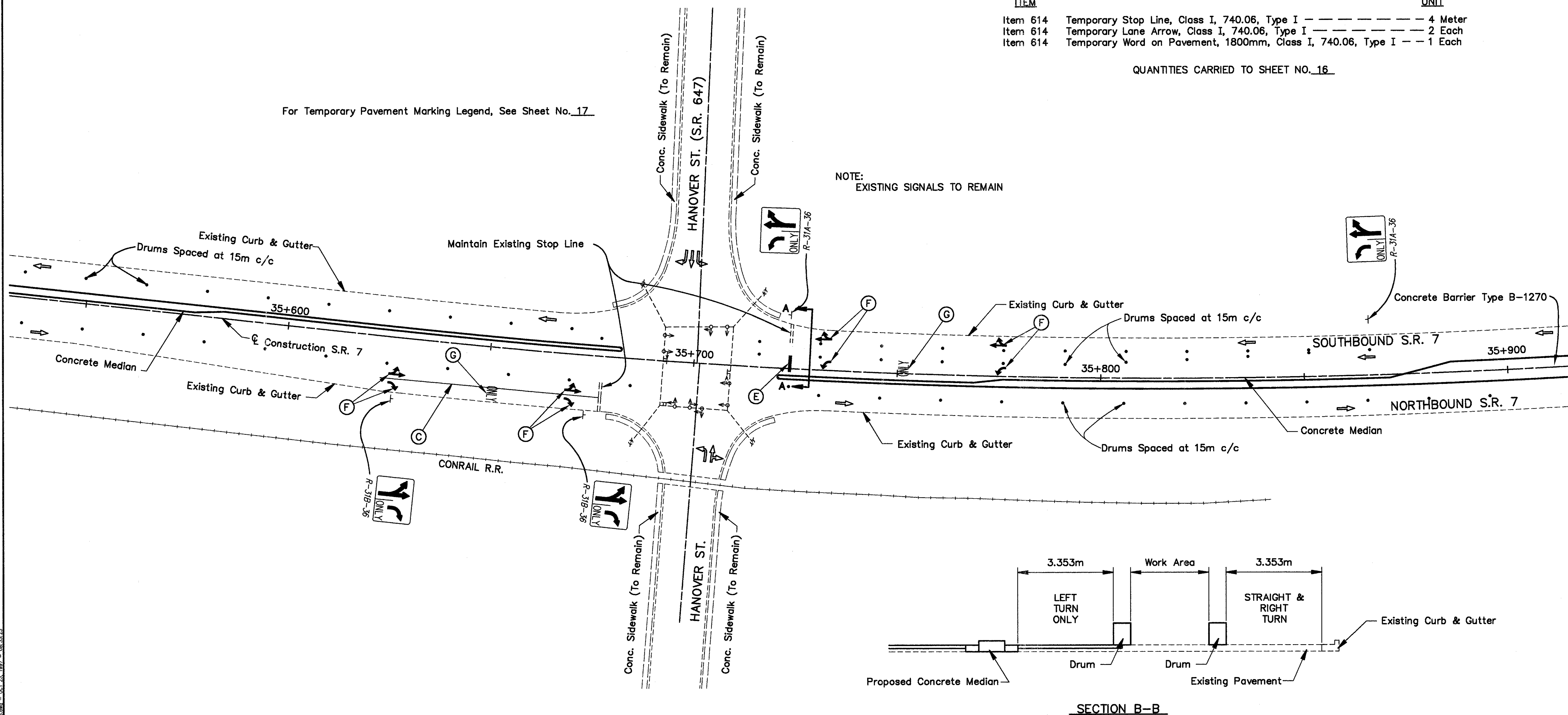




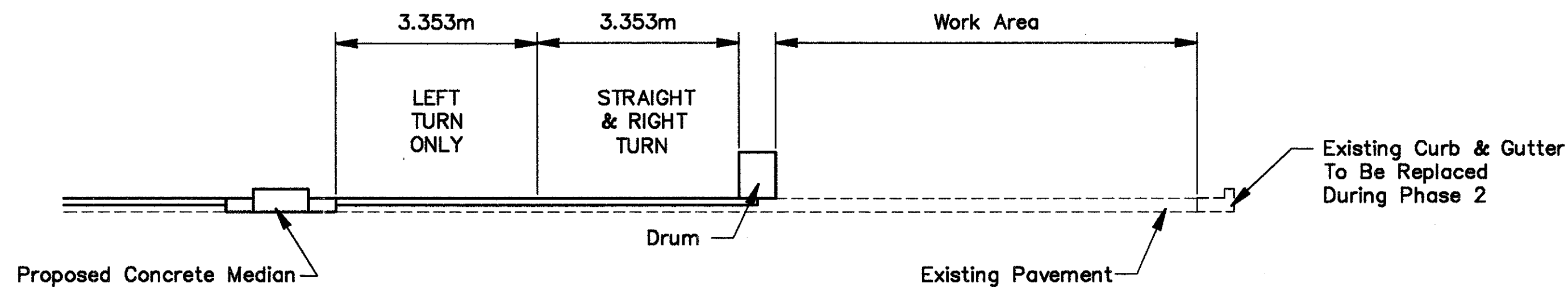
**PHASE 1 - PART 2**  
**QUANTITIES FOR MAINTENANCE OF TRAFFIC**

| ITEM                                                                 | UNIT    |
|----------------------------------------------------------------------|---------|
| Item 614 Temporary Stop Line, Class I, 740.06, Type I                | 4 Meter |
| Item 614 Temporary Lane Arrow, Class I, 740.06, Type I               | 2 Each  |
| Item 614 Temporary Word on Pavement, 1800mm, Class I, 740.06, Type I | 1 Each  |

QUANTITIES CARRIED TO SHEET NO. 16







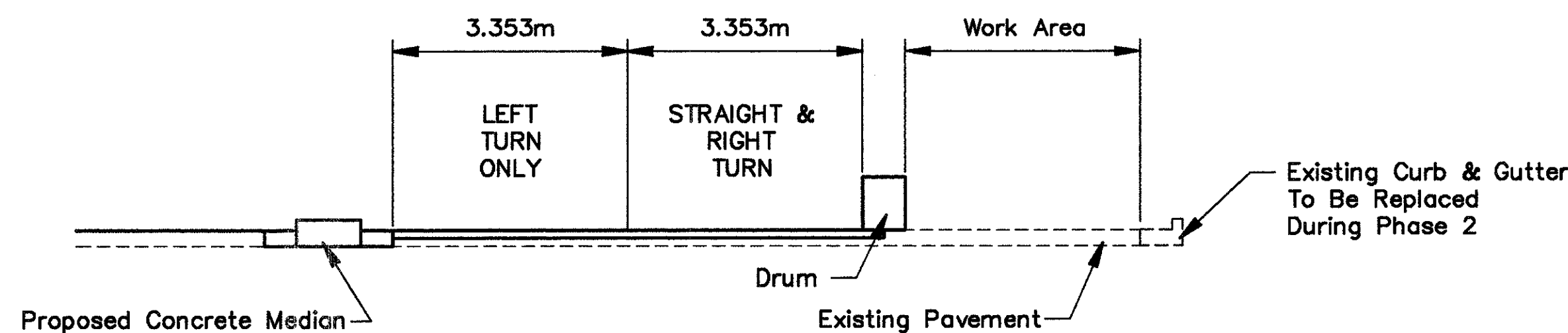
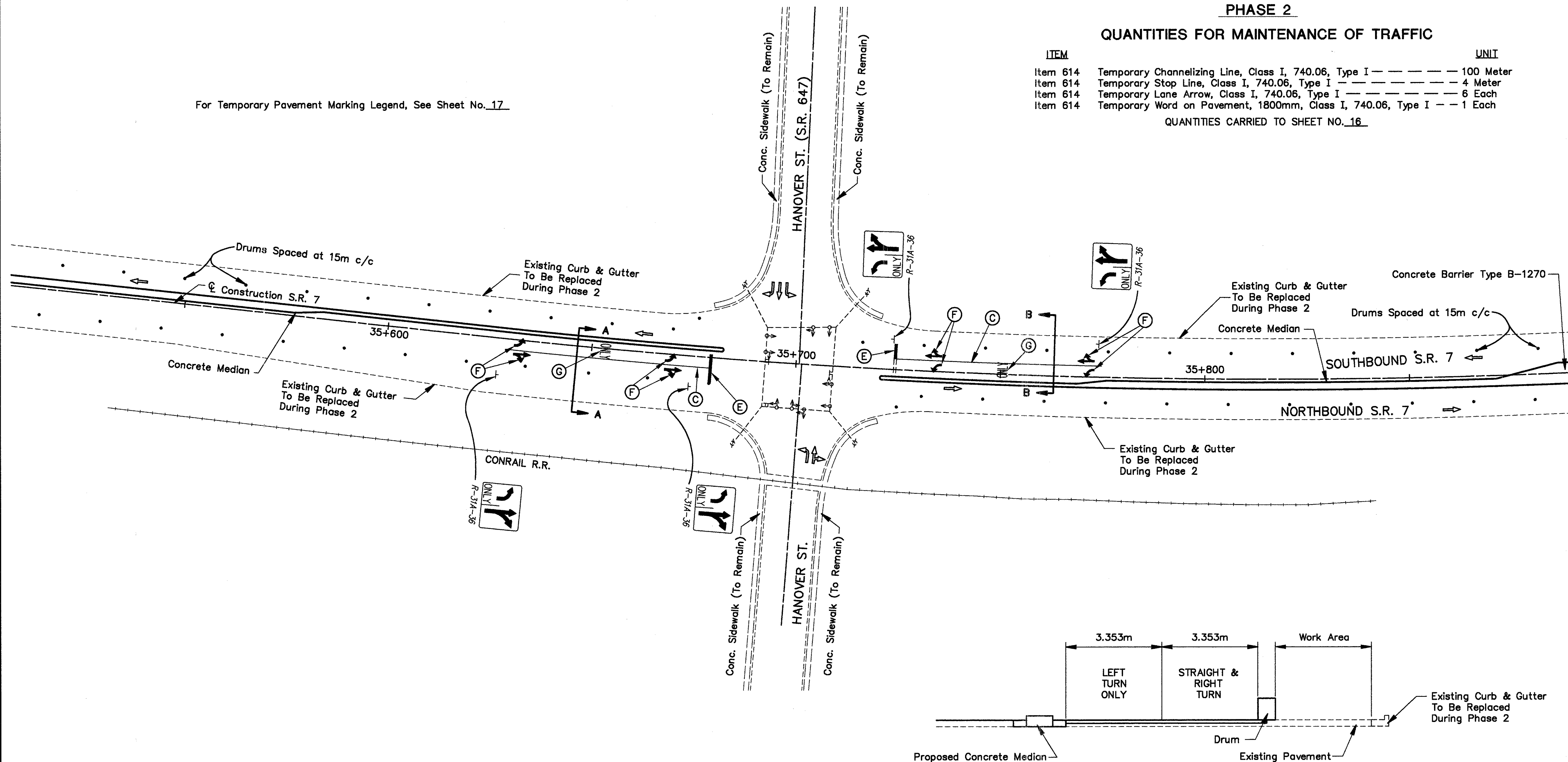
**SECTION A-A**

For Temporary Pavement Marking Legend, See Sheet No. 17

**PHASE 2  
QUANTITIES FOR MAINTENANCE OF TRAFFIC**

| ITEM                                                                 | UNIT      |
|----------------------------------------------------------------------|-----------|
| Item 614 Temporary Channelizing Line, Class I, 740.06, Type I        | 100 Meter |
| Item 614 Temporary Stop Line, Class I, 740.06, Type I                | 4 Meter   |
| Item 614 Temporary Lane Arrow, Class I, 740.06, Type I               | 6 Each    |
| Item 614 Temporary Word on Pavement, 1800mm, Class I, 740.06, Type I | 1 Each    |

QUANTITIES CARRIED TO SHEET NO. 16

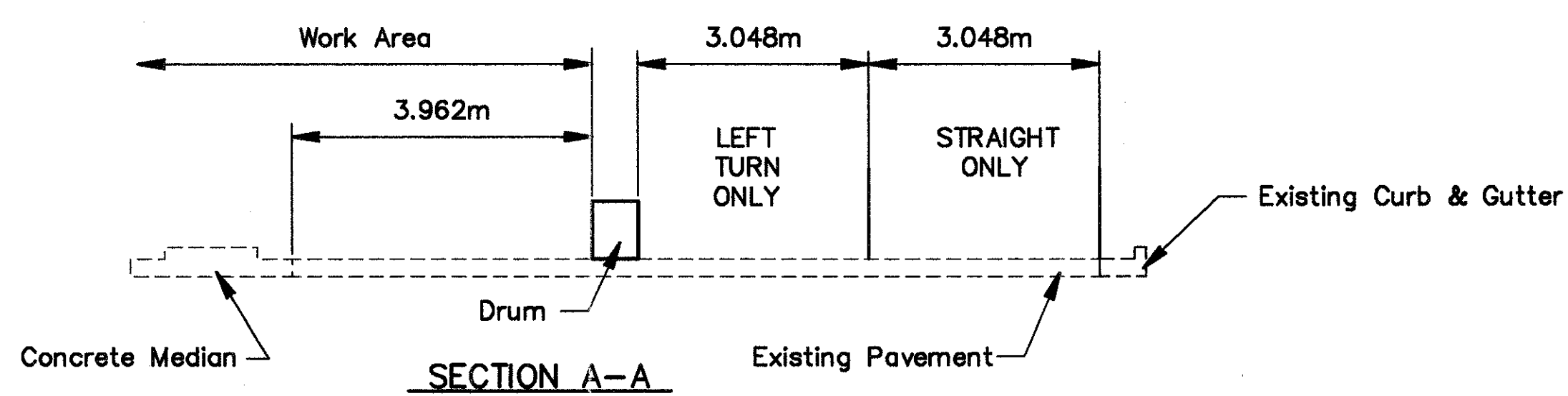


**SECTION B-B**

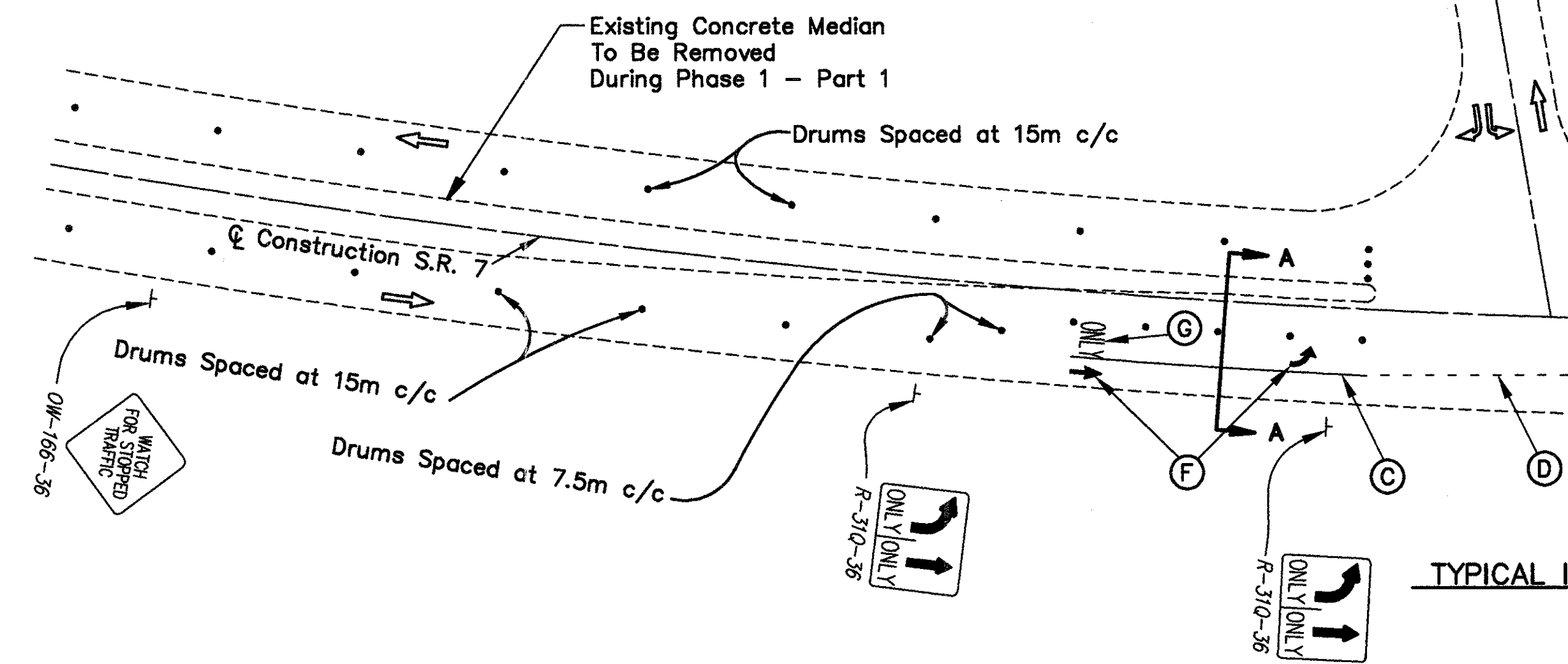


| QUANTITIES FOR MAINTENANCE OF TRAFFIC |                                                             | UNIT      |
|---------------------------------------|-------------------------------------------------------------|-----------|
| Item 614                              | Temporary Channelizing Line, Class I, 740.06, Type I        | 121 Meter |
| Item 614                              | Temporary Dotted Line, Class I, 740.06, Type I              | 186 Meter |
| Item 614                              | Temporary Lane Arrow, Class I, 740.06, Type I               | 16 Each   |
| Item 614                              | Temporary Word on Pavement, 1800mm, Class I, 740.06, Type I | 8 Each    |

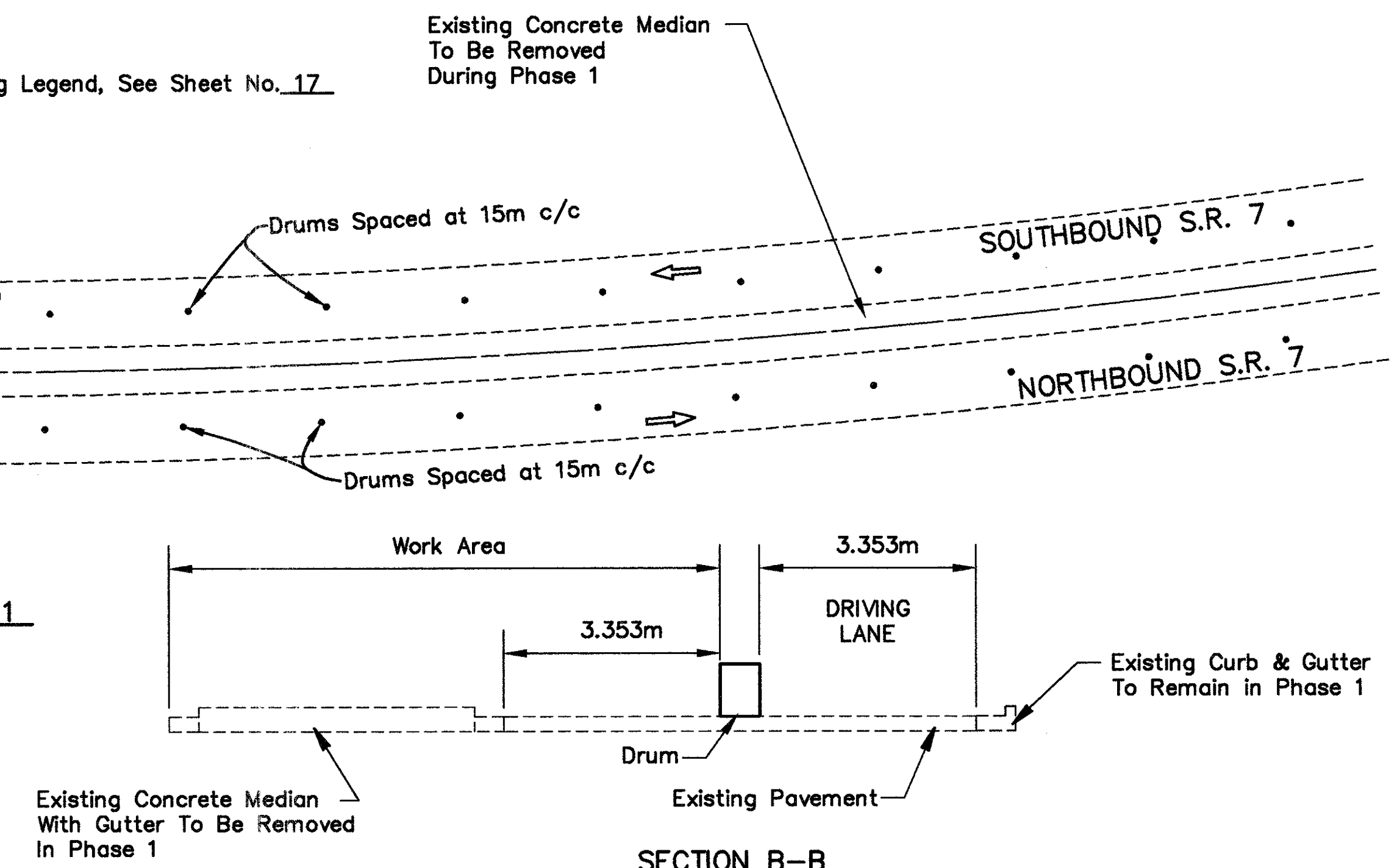
QUANTITIES CARRIED TO SHEET NO. 16



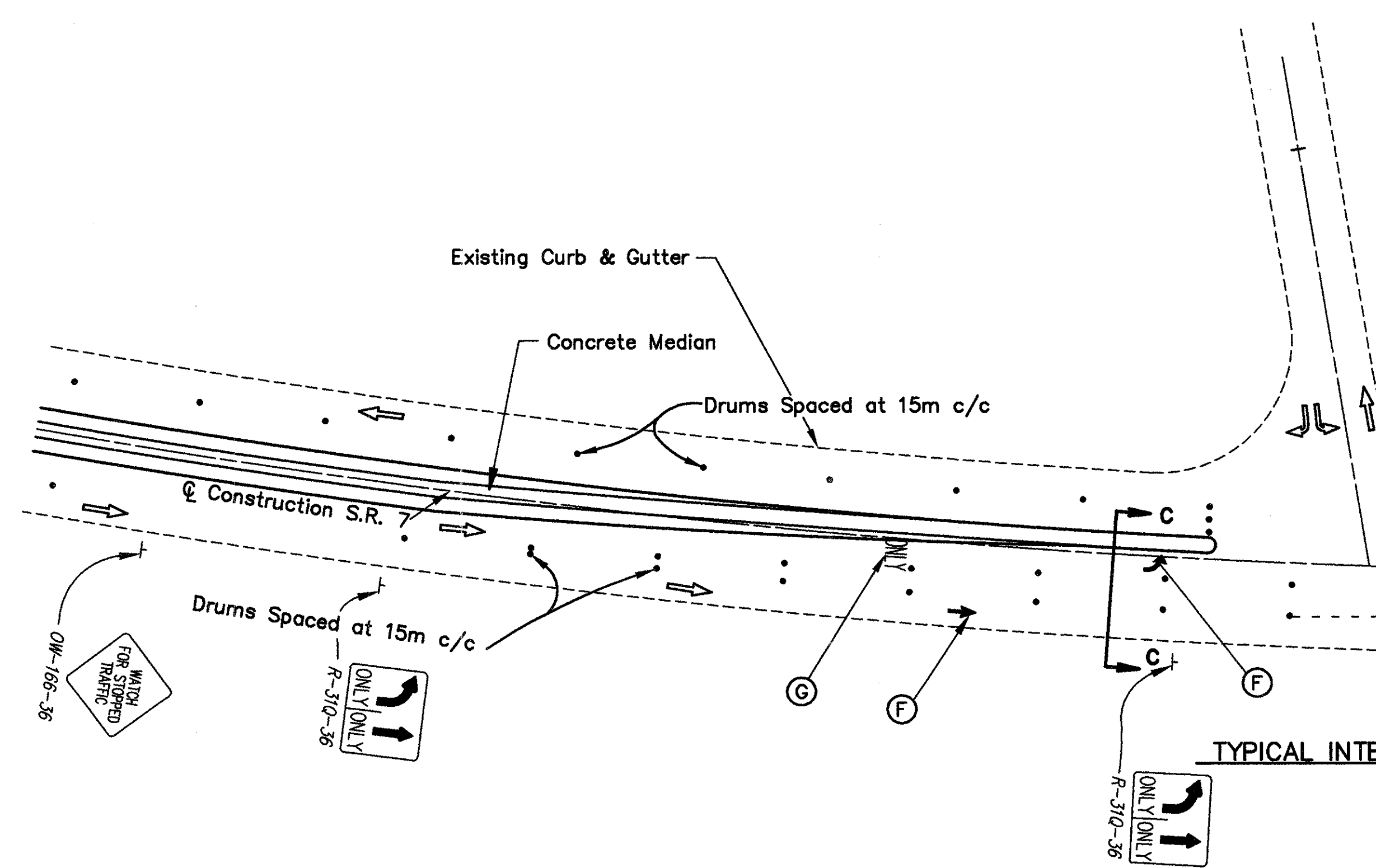
For Temporary Pavement Marking Legend, See Sheet No. 17



**TYPICAL INTERSECTION - PHASE 1 PART 1**  
LINCOLN AVE.  
MACKEY AVE.  
JEANETTE AVE.  
HILL ST.

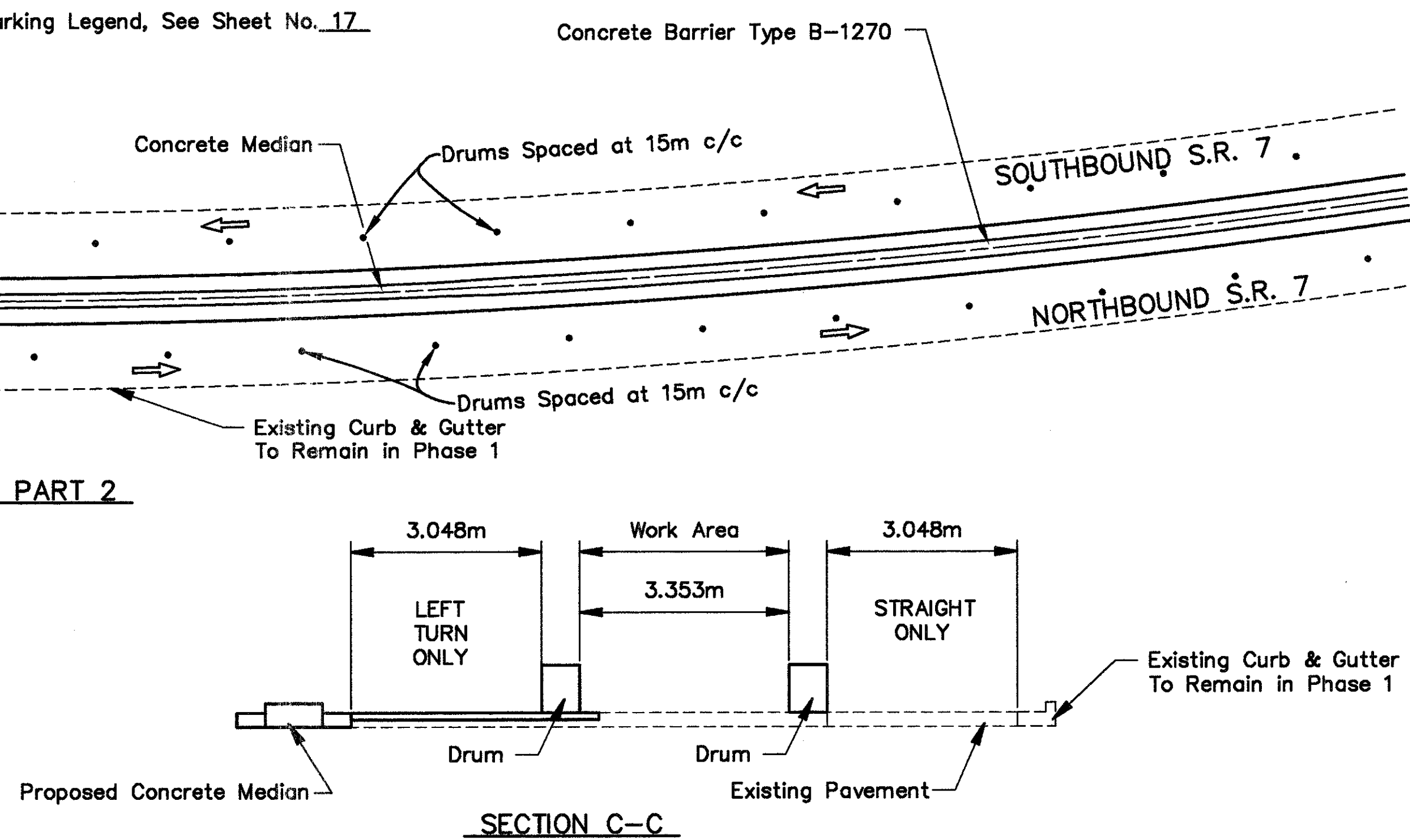


**SECTION B-B**



For Temporary Pavement Marking Legend, See Sheet No. 17

**TYPICAL INTERSECTION DETAIL - PHASE 1 PART 2**  
LINCOLN AVE.  
MACKEY AVE.  
JEANETTE AVE.  
HILL ST.



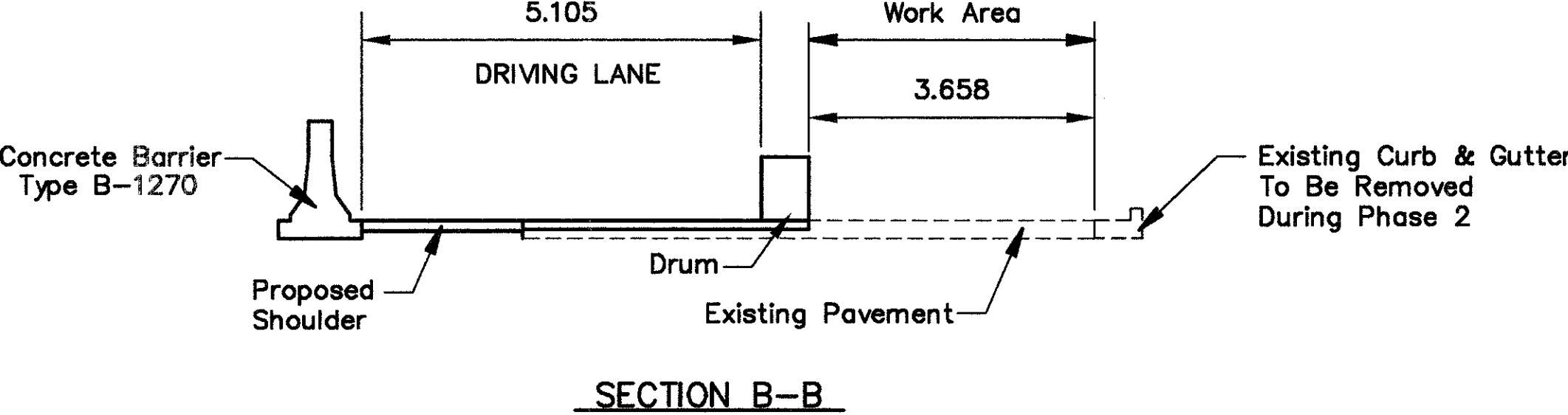
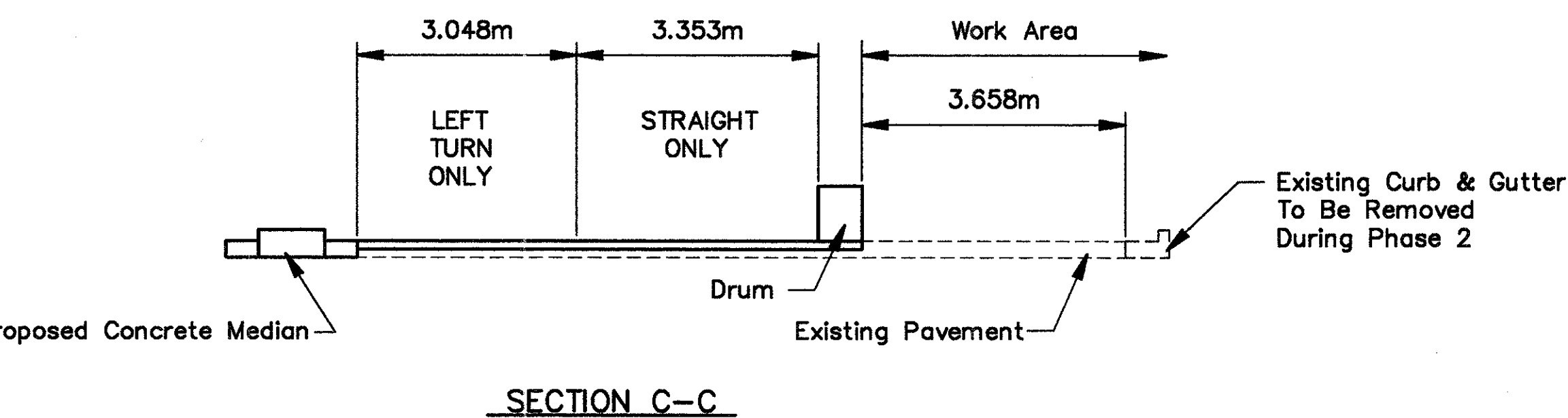
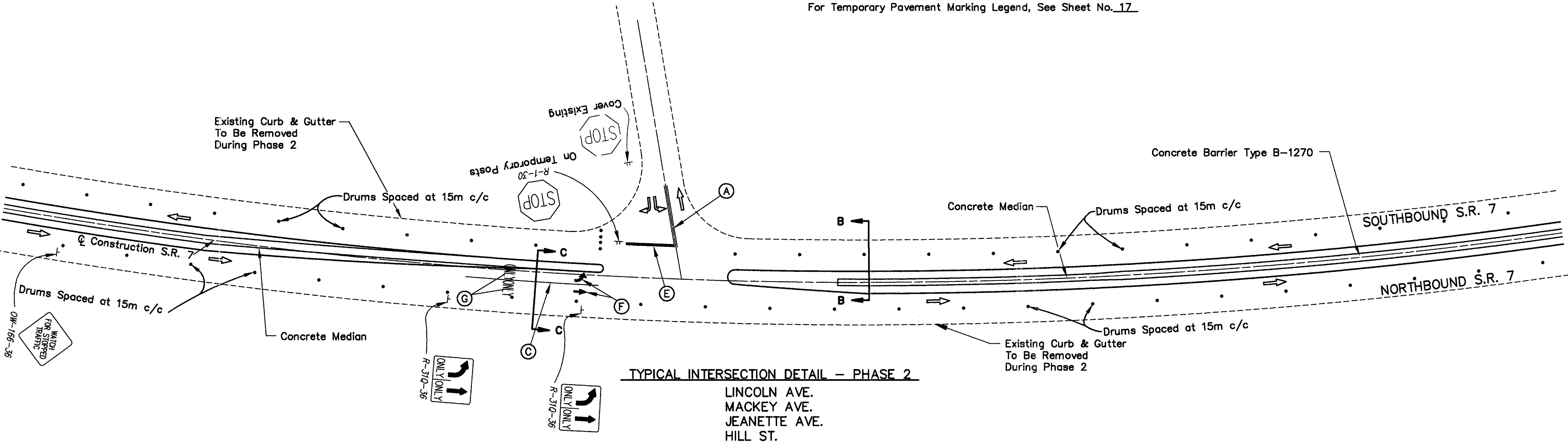
**SECTION C-C**



# PHASE 2 QUANTITIES FOR MAINTENANCE OF TRAFFIC

| ITEM                               |                                                             | UNIT            |
|------------------------------------|-------------------------------------------------------------|-----------------|
| Item 614                           | Temporary Center Line, Class I, 740.06, Type I              | 0.058 Kilometer |
| Item 614                           | Temporary Channelizing Line, Class I, 740.06, Type I        | 124 Meter       |
| Item 614                           | Temporary Stop Line, Class I, 740.06, Type I                | 12 Meter        |
| Item 614                           | Temporary Lane Arrow, Class I, 740.06, Type I               | 4 Each          |
| Item 614                           | Temporary Word on Pavement, 1800mm, Class I, 740.06, Type I | 4 Each          |
| QUANTITIES CARRIED TO SHEET NO. 16 |                                                             |                 |

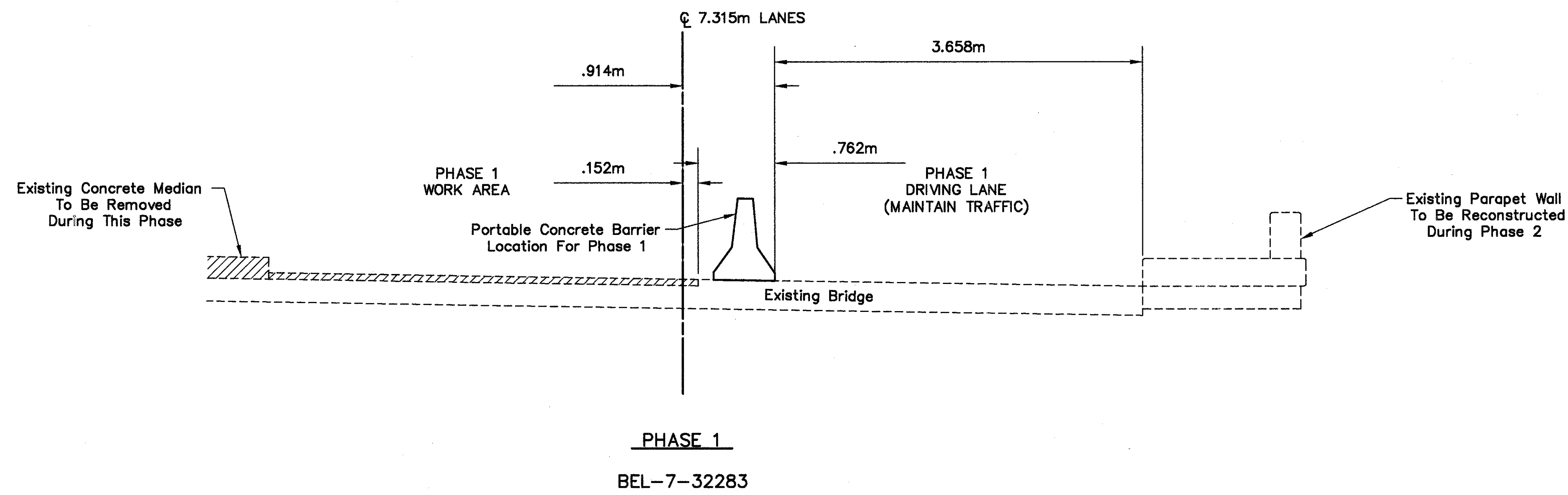
For Temporary Pavement Marking Legend, See Sheet No. 17



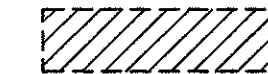


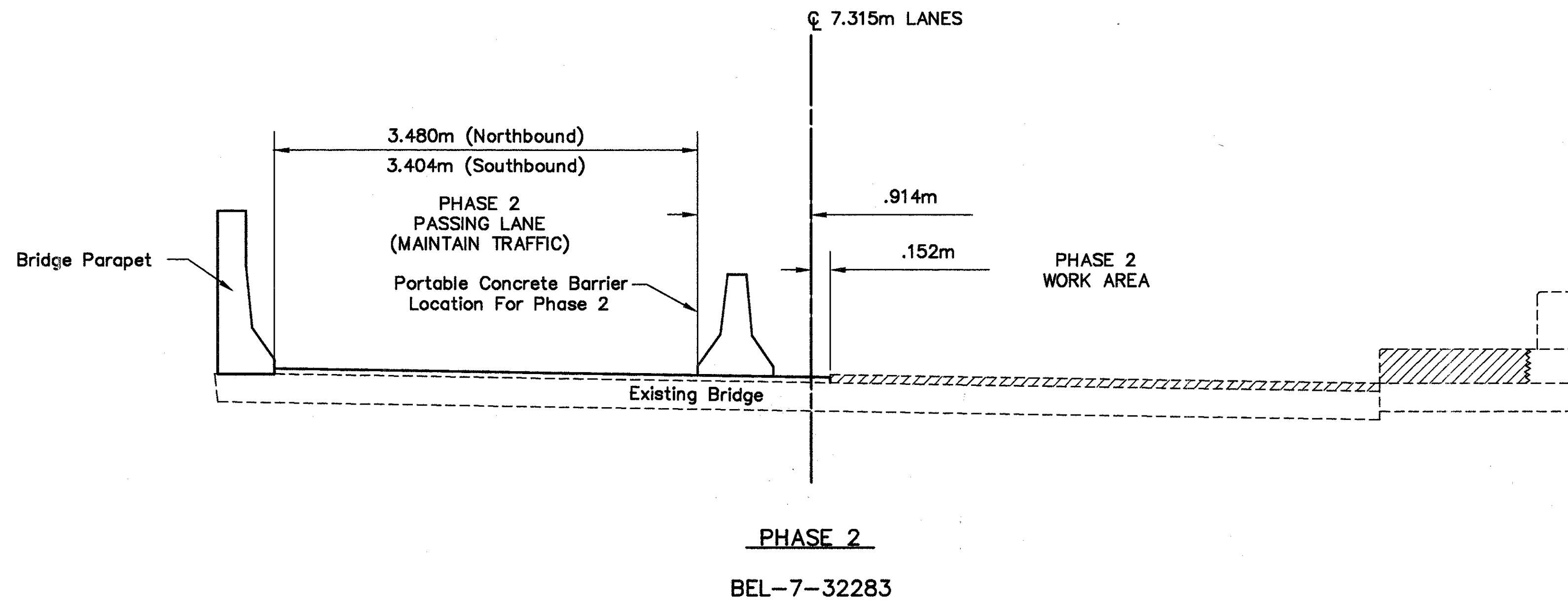
**MAINTENANCE OF TRAFFIC PLAN  
BEL-7-32283 STRUCTURE DETAILS**

**BEL-7-32.276**

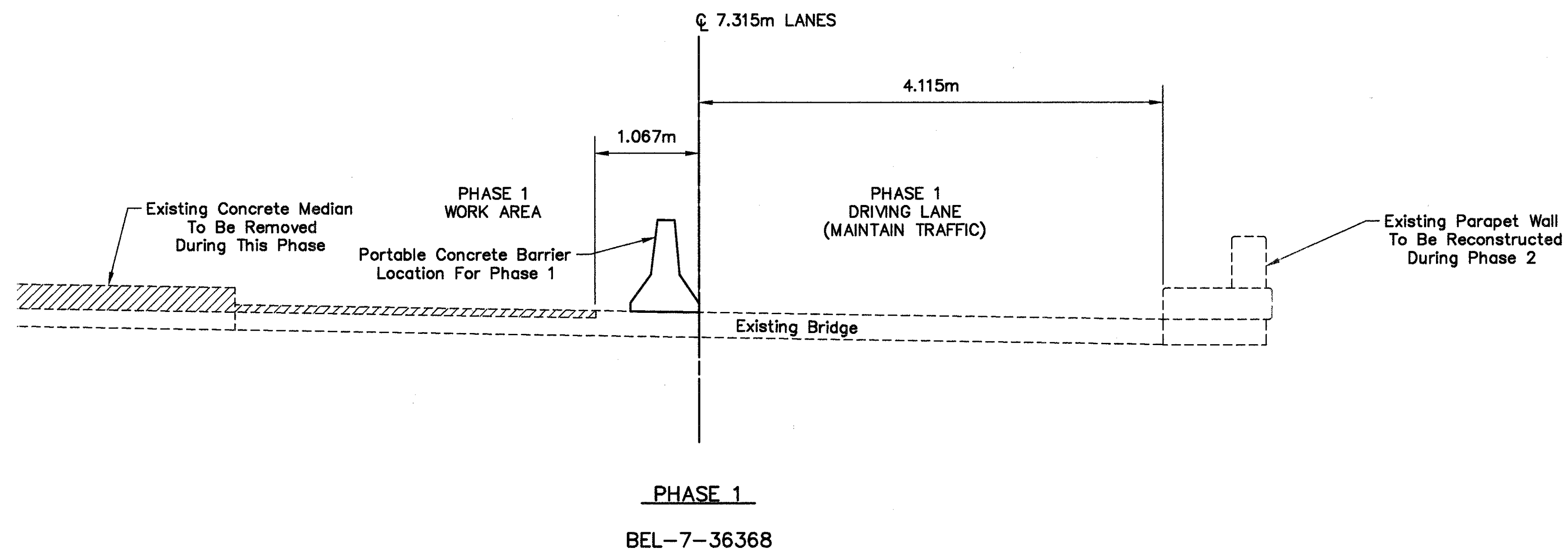


NOTE: Northbound Lanes Shown.  
Typicals Apply To Both Northbound  
And Southbound Lanes

 Material Removed During Work Phase

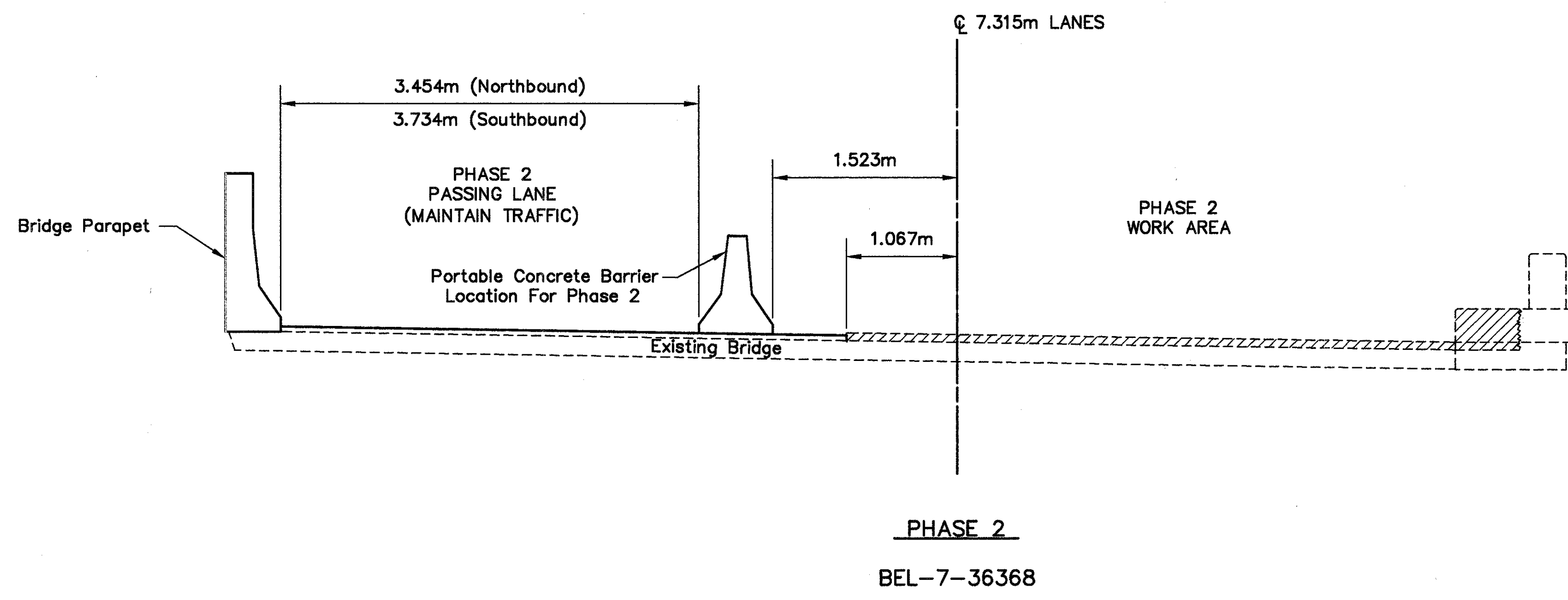






NOTE: Northbound Lane Shown.  
Typicals Apply To Both Northbound  
And Southbound Lanes

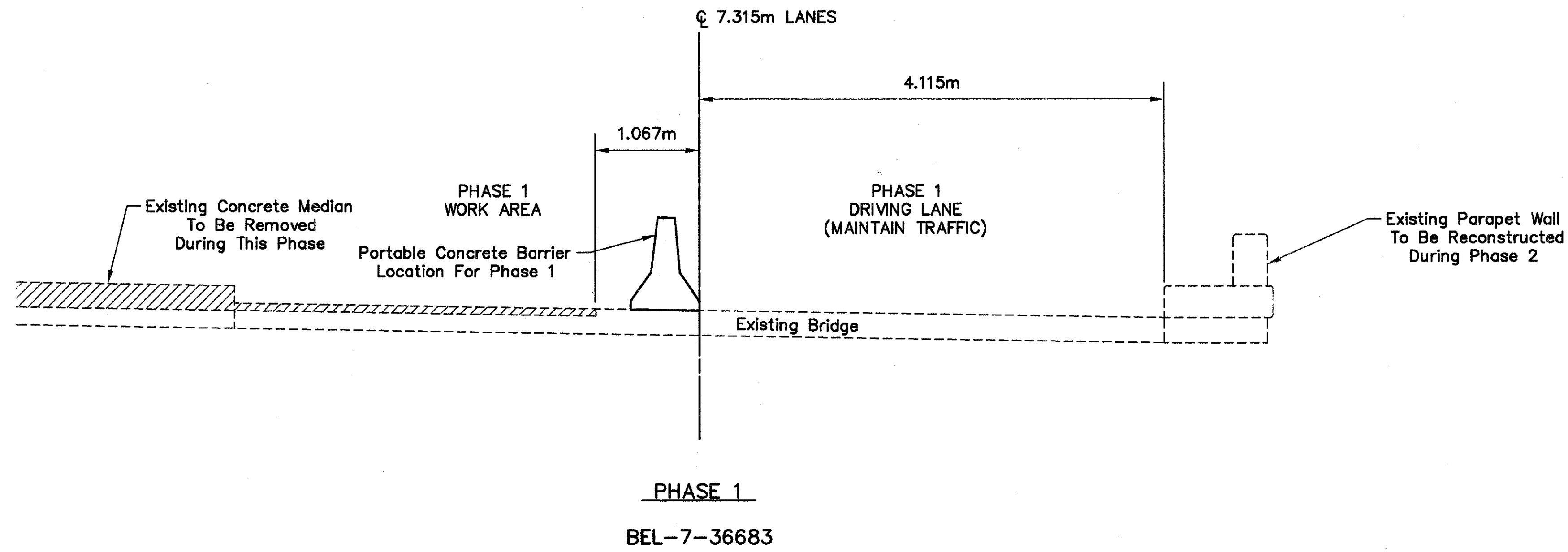
Material Removed During Work Phase





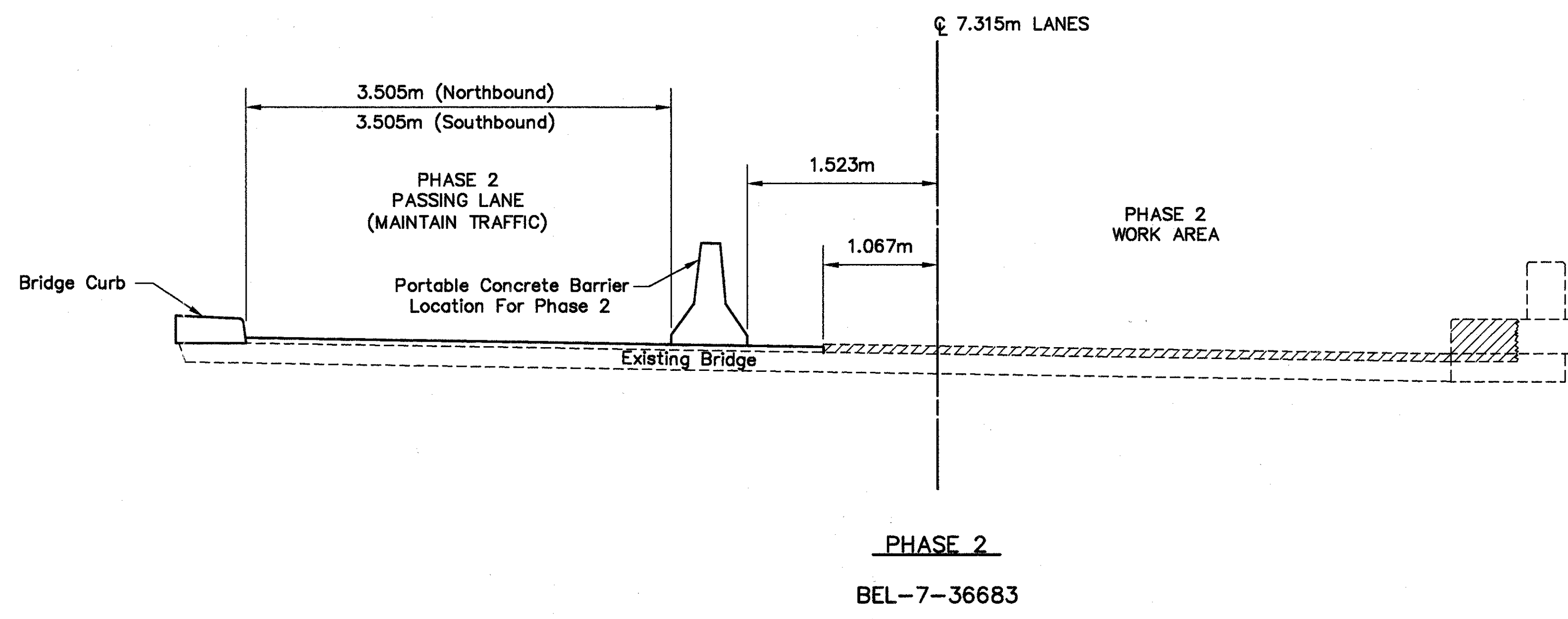
**MAINTENANCE OF TRAFFIC PLAN  
BEL-7-36683 STRUCTURE DETAILS**

**BEL-7-32.276**



NOTE: Northbound Lanes Shown.  
Typicals Apply To Both Northbound  
And Southbound Lanes

Material Removed During Work Phase





|            |         |
|------------|---------|
| CALCULATED | CHECKED |
| WCR        | BL      |

## GENERAL SUMMARY

**BEL-7-32.276**



|            |         |
|------------|---------|
| CALCULATED | CHECKED |
| WCR        | BL      |

## GENERAL SUMMARY

**BEL-7-32.276**



|                   |               |
|-------------------|---------------|
| CALCULATED<br>WCR | CHECKED<br>BL |
|-------------------|---------------|

## GENERAL SUMMARY

**BEL-7-32.276**



| SHEET NUMBER |     |                               |     |         |          |          |         |     |     |     |     |              |        |     |     |     |     | ITEM                            | ITEM EXT.                                 | GRAND TOTAL                   | UNIT                                 | DESCRIPTION                                                                                                                                                | SEE SHEET NO.          |
|--------------|-----|-------------------------------|-----|---------|----------|----------|---------|-----|-----|-----|-----|--------------|--------|-----|-----|-----|-----|---------------------------------|-------------------------------------------|-------------------------------|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 162          | 163 | 182                           | 183 | 184     | 185      | 186      | 187     | 188 | 189 | 190 | 191 | 192          | 193    | 194 | 195 | 196 | 197 |                                 |                                           |                               |                                      |                                                                                                                                                            |                        |
|              |     | 10<br>54<br>103<br>139<br>109 |     |         |          |          |         |     |     |     |     |              |        |     |     |     |     | 202<br>202<br>202<br>202<br>202 | 75300<br>75400<br>75402<br>75500<br>75504 | 10<br>54<br>103<br>139<br>114 | EACH<br>EACH<br>EACH<br>EACH<br>EACH | LIGHTING<br><br>PULL BOX REMOVED<br>LIGHT POLE REMOVED<br>LIGHT POLE REMOVED FOR STORAGE<br>LIGHT POLE FOUNDATION REMOVED<br>LUMINAIRE REMOVED FOR STORAGE | <br><br><br>162<br>162 |
|              |     | 54<br>4                       |     |         | 4<br>74  |          |         |     |     |     |     |              |        |     |     |     |     | 202<br>202<br>202               | 75506<br>75511<br>98200                   | 58<br>4<br>166                | EACH<br>EACH<br>METER                | LUMINAIRE REMOVED<br>POWER SERVICE REMOVED, AS PER PLAN<br>REMOVAL MISC.: POLE AND BRACKET CABLE REMOVED                                                   | <br>162                |
|              |     |                               |     | 6       | 12       |          | 6       | 12  |     | 6   | 6   |              | 12     | 6   | 12  | 6   | 6   | 603                             | 00400                                     | 90                            | METER                                | 100mm CONDUIT, TYPE E                                                                                                                                      |                        |
|              |     |                               |     | 15<br>7 | 14<br>10 | 20<br>12 | 20      | 20  | 28  | 24  | 18  | 22<br>1<br>1 | 30     | 32  | 12  | 24  | 26  | 625<br>625<br>625               | 00500<br>00600<br>00800                   | 317<br>44<br>1                | EACH<br>EACH<br>EACH                 | CONNECTOR KIT, TYPE II<br>CONNECTOR KIT, TYPE III<br>CONNECTOR KIT, TYPE V                                                                                 |                        |
|              |     |                               |     |         | 1        | 1        | 1       | 4   |     | 2   |     | 4<br>3       | 2      | 2   | 2   |     | 2   | 625                             | 00900<br>01004                            | 6<br>22                       | EACH<br>EACH                         | CONNECTOR KIT, TYPE VI<br>CONNECTOR KIT, TYPE VII B                                                                                                        |                        |
|              |     |                               |     | 1       | 1        | 1        | 2       |     | 1   | 3   |     | 1            | 1<br>1 | 1   |     | 1   | 1   | 625<br>625                      | 01100<br>02913                            | 14<br>3                       | EACH<br>EACH                         | CONNECTOR KIT, TYPE VII C<br>LIGHT POLE, DESIGN A2.4B9.1, AS PER PLAN                                                                                      | <br>163                |
|              |     |                               |     |         | 1        |          |         |     |     |     |     |              |        |     |     |     |     | 625                             | 03001                                     | 1                             | EACH                                 | LIGHT POLE, DESIGN A1.8B9.9, AS PER PLAN                                                                                                                   | 163                    |
|              |     |                               |     |         |          |          | 6       |     | 10  | 10  |     | 1            | 14     | 2   |     | 3   | 12  | 625                             | 04000<br>04200                            | 3<br>55                       | EACH<br>EACH                         | LIGHT POLE, DESIGN AT1.8B10.4<br>LIGHT POLE, DESIGN AT3.0B10.4                                                                                             |                        |
|              |     |                               |     |         |          |          |         |     |     |     |     |              |        | 12  |     |     | 12  | 625                             | 04300                                     | 24                            | EACH                                 | LIGHT POLE, DESIGN AT3.7B10.4                                                                                                                              |                        |
|              |     |                               |     | 11      | 4<br>9   | 6<br>4   | 2<br>10 |     |     |     |     |              |        |     |     |     |     | 625<br>625<br>625               | 05714<br>06200                            | 23<br>23                      | EACH<br>EACH                         | LIGHT POLE, DESIGN A3.0BB12.2<br>LIGHT POLE, DESIGN AT3.0B12.7                                                                                             |                        |
|              |     |                               |     |         |          |          | 4       | 9   | 3   | 2   | 5   | 9            |        |     |     |     |     | 625<br>625                      | 10500<br>10500                            | 5<br>27                       | EACH<br>EACH                         | LIGHT POLE, MISC.: DESIGN AON4.6, AS PER PLAN<br>LIGHT POLE, MISC.: DESIGN A3.0BB9.1                                                                       | 162                    |
|              |     |                               |     | 36      |          |          |         |     |     |     |     |              |        |     |     |     |     | 625                             | 10600                                     | 36                            | EACH                                 | LIGHT POLE ANCHOR L-BOLTS                                                                                                                                  |                        |
|              |     |                               |     |         |          |          | 6       |     | 10  | 10  |     | 1            | 14     | 14  | 3   | 12  | 12  | 625                             | 14000                                     | 82                            | EACH                                 | LIGHT POLE FOUNDATION, 610mm x 1.8m DEEP                                                                                                                   |                        |
|              |     |                               |     |         | 9        | 4        | 10      |     |     |     |     |              |        |     |     |     |     | 625                             | 14100                                     | 23                            | EACH                                 | LIGHT POLE FOUNDATION, 610mm x 2.4m DEEP                                                                                                                   |                        |
|              |     |                               |     | 2       | 4        | 6        | 2       | 4   | 9   | 3   | 2   | 9            |        |     |     |     |     | 625                             | 14306                                     | 41                            | EACH                                 | MEDIAN LIGHT POLE FOUNDATION, 3.0m DEEP                                                                                                                    |                        |
|              |     |                               |     |         |          |          |         |     | 1   |     |     |              |        |     |     |     |     | 625                             | 18000                                     | 1                             | EACH                                 | BRACKET ARM, 3 METER                                                                                                                                       |                        |
|              |     |                               |     |         |          |          |         |     |     |     |     |              |        |     |     |     |     | 625                             | 23200                                     | 6585                          | METER                                | NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE                                                                                                                     |                        |
|              |     |                               |     |         |          |          |         |     |     |     |     |              |        |     |     |     |     | 625                             | 23300                                     | 2278                          | METER                                | NO. 2 AWG 5000 VOLT DISTRIBUTION CABLE                                                                                                                     |                        |
|              |     |                               |     |         |          |          |         |     |     |     |     |              |        |     |     |     |     | 625                             | 23306                                     | 492                           | METER                                | NO. 10 AWG 600 VOLT DISTRIBUTION CABLE                                                                                                                     |                        |
|              |     |                               |     |         |          |          |         |     |     |     |     |              |        |     |     |     |     | 625                             | 23400                                     | 5958                          | METER                                | NO. 10 AWG POLE AND BRACKET CABLE                                                                                                                          |                        |
|              |     |                               |     |         |          |          |         |     |     |     |     |              |        |     |     |     |     | 625                             | 24100                                     | 1821                          | METER                                | 38mm DUCT CABLE WITH TWO NO. 4 AWG 5000 VOLT CABLES                                                                                                        |                        |
|              |     |                               |     |         |          |          |         |     |     |     |     |              |        |     |     |     |     | 625                             | 24320                                     | 5907                          | METER                                | 38mm DUCT CABLE WITH THREE NO. 4 AWG 5000 VOLT CABLES                                                                                                      |                        |
|              |     |                               |     |         |          |          |         |     |     |     |     |              |        |     |     |     |     | 625                             | 24330                                     | 59                            | METER                                | 38mm DUCT CABLE WITH THREE NO. 2 AWG 5000 VOLT CABLES                                                                                                      |                        |
|              |     |                               |     |         |          |          |         |     |     |     |     |              |        |     |     |     |     | 625                             | 25300                                     | 37                            | METER                                | CONDUIT, 38mm, 713.04                                                                                                                                      | </                     |



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| CALCULATED | CHECKED |
| WCR        | SAH     |

## GENERAL SUMMARY

**BEL-7-32.276**



|                   |                |
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| CALCULATED<br>WCR | CHECKED<br>SAH |
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## GENERAL SUMMARY

**BEL-7-32.276**



|                   |               |
|-------------------|---------------|
| CALCULATED<br>WCR | CHECKED<br>BL |
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|                                                                                                                                                                                                                                                               |                                             |     |                                                                                                                                                                                                                                                                                     |            |     |         |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----|---------|----|
| <div style="display: flex; justify-content: space-between; align-items: center;"><div style="border: 1px solid black; border-radius: 50%; padding: 5px; text-align: center;">41<br/>242</div><div style="text-align: center;"><b>BEL-7-32.276</b></div></div> | <h1 style="margin: 0;">GENERAL SUMMARY</h1> |     | <table style="width: 100%; border-collapse: collapse;"><tr><td style="width: 50%; text-align: center;">CALCULATED</td><td style="width: 50%; text-align: center;">WCR</td></tr><tr><td style="text-align: center;">CHECKED</td><td style="text-align: center;">BL</td></tr></table> | CALCULATED | WCR | CHECKED | BL |
|                                                                                                                                                                                                                                                               | CALCULATED                                  | WCR |                                                                                                                                                                                                                                                                                     |            |     |         |    |
| CHECKED                                                                                                                                                                                                                                                       | BL                                          |     |                                                                                                                                                                                                                                                                                     |            |     |         |    |



NORTHBOUND S.R. 7 PAVEMENT RESURFACING QUANTITIES

NOTE:  
For Sidestreet Pavement Quantities, See Sheet No. 103.

⊗ COMPUTER AREA

| LOCATION                                         | STATION    |            | LENGTH  | WIDTH  | AREA      | 202                         |                              | 203                    |                                                           | 254                                | THICKNESS | 301                                          | 304                        | 305                                          | 407       | 407                                        | 446       |                                                                                  |           |                                                                       | REMARKS                                                                       |
|--------------------------------------------------|------------|------------|---------|--------|-----------|-----------------------------|------------------------------|------------------------|-----------------------------------------------------------|------------------------------------|-----------|----------------------------------------------|----------------------------|----------------------------------------------|-----------|--------------------------------------------|-----------|----------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------|-------------------------------------------------------------------------------|
|                                                  | FROM       | TO         |         |        |           | CONCRETE<br>BASE<br>REMOVED | WEARING<br>COURSE<br>REMOVED | SUBGRADE<br>COMPACTION | EXCAVATION<br>NOT INCLUDING<br>EMBANKMENT<br>CONSTRUCTION | PAVEMENT<br>PLANING,<br>BITUMINOUS |           | BITUMINOUS<br>AGGREGATE<br>BASE,<br>PG 64-28 | 150mm<br>AGGREGATE<br>BASE | 230mm<br>CONCRETE<br>BASE,<br>AS PER<br>PLAN | TACK COAT | TACK COAT<br>FOR<br>INTERMEDIATE<br>COURSE | THICKNESS | ASPHALT<br>CONCRETE<br>SURFACE<br>COURSE,<br>TYPE 1,<br>PG 64-28,<br>AS PER PLAN | THICKNESS | ASPHALT<br>CONCRETE<br>INTERMEDIATE<br>COURSE,<br>TYPE 2,<br>PG 64-28 |                                                                               |
|                                                  |            |            | Meter   | Meter  | Sq. Meter | Sq. Meter                   | Sq. Meter                    | Sq. Meter              | Cu. Meter                                                 | Sq. Meter                          | mm        | Cu. Meter                                    | Cu. Meter                  | Sq. Meter                                    | Liter     | Liter                                      | mm        | Cu. Meter                                                                        | mm        | Cu. Meter                                                             |                                                                               |
| Along Retaining Wall                             | 32+188.031 | 32+275.821 | 87.790  | 0.533  | 46.792    |                             |                              |                        |                                                           |                                    |           |                                              |                            | 46.792                                       | 15.909    |                                            | 51        | 2.386                                                                            |           |                                                                       |                                                                               |
| Feathered Area<br>BEL-7-32283                    | 32+270.106 | 32+275.821 | 5.715   | 8.840  | 50.521    |                             | 50.521                       |                        |                                                           |                                    |           |                                              |                            |                                              | 17.177    |                                            | 19        | 0.960                                                                            |           |                                                                       | See Detail on Sheet No. 81                                                    |
| Concrete Base Section                            | 32+788.647 | 32+823.647 | 35.000  | 8.840  | 309.400   | 309.400                     | 309.400                      | 309.400                | 66.799                                                    |                                    | 65        | 20.111                                       | 46.410                     | 309.400                                      | 105.196   | 105.196                                    | 32        | 9.901                                                                            | 50        | 15.470                                                                | For Approach Slab Details, See Sheet No. 82                                   |
| Along Retaining Wall                             | 32+788.647 | 32+823.647 | 35.000  | 0.533  | 18.655    |                             |                              |                        |                                                           |                                    | 65        | 1.213                                        |                            | 18.655                                       | 6.343     | 6.343                                      | 32        | 0.597                                                                            | 50        | 0.933                                                                 |                                                                               |
|                                                  | 32+823.647 | 32+899.939 | 76.292  | 0.533  | 40.664    |                             |                              |                        |                                                           |                                    | 65        | 2.643                                        |                            | 40.664                                       | 13.826    | 13.826                                     | 32        | 1.301                                                                            | 50        | 2.033                                                                 |                                                                               |
| NORTHBOUND                                       | 32+823.647 | 33+062.771 | 239.124 | 8.840  | 2113.856  |                             | 2113.856                     |                        |                                                           |                                    | 65        | 137.401                                      |                            |                                              | 718.711   | 718.711                                    | 32        | 67.643                                                                           | 50        | 105.693                                                               |                                                                               |
|                                                  | 33+062.771 | 33+082.082 | 19.311  | 8.840  | 170.709   |                             |                              |                        |                                                           | 170.709                            | 65        | 11.096                                       |                            |                                              | 58.041    | 58.041                                     | 32        | 5.463                                                                            | 35        | 5.975                                                                 |                                                                               |
|                                                  | 33+082.082 | 33+205.951 | 123.869 | 7.851  | 972.496   |                             |                              |                        |                                                           | 972.496                            | 65        | 63.212                                       |                            |                                              | 330.648   | 330.648                                    | 32        | 31.120                                                                           | 35        | 34.037                                                                |                                                                               |
|                                                  | 33+205.951 | 33+244.127 | 38.176  | 7.315  | 279.257   |                             |                              |                        |                                                           | 279.257                            | 65        | 18.152                                       |                            |                                              | 94.948    | 94.948                                     | 32        | 8.936                                                                            | 35        | 9.774                                                                 |                                                                               |
|                                                  | 33+244.127 | 33+320.327 | 76.200  | 8.992  | 685.190   |                             |                              |                        |                                                           | 685.190                            | 65        | 44.537                                       |                            |                                              | 232.965   | 232.965                                    | 32        | 21.926                                                                           | 35        | 23.982                                                                |                                                                               |
|                                                  | 33+320.327 | 33+382.202 | 61.875  | 10.668 | 660.083   |                             |                              |                        |                                                           | 660.083                            | 65        | 42.905                                       |                            |                                              | 224.428   | 224.428                                    | 32        | 21.123                                                                           | 35        | 23.103                                                                |                                                                               |
| Ramp D Accel. Lane                               | 32+949.808 | 33+193.741 | 243.933 | 2.896  | 706.430   |                             |                              |                        |                                                           | 706.430                            | 65        | 45.918                                       |                            |                                              | 240.186   | 240.186                                    | 32        | 22.606                                                                           | 35        | 24.725                                                                |                                                                               |
| Lincoln Ave.                                     | 33+382.202 | 33+418.626 | 36.424  | 12.497 | 455.191   |                             |                              |                        |                                                           | 455.191                            | 65        | 29.587                                       |                            |                                              | 154.765   | 154.765                                    | 32        | 14.566                                                                           | 35        | 15.932                                                                | Includes Area From West Edge Of Median to<br>East Edge of Northbound Pavement |
| NORTHBOUND                                       | 33+418.626 | 33+450.781 | 32.155  | 8.278  | 266.179   |                             |                              |                        |                                                           | 266.179                            | 65        | 17.302                                       |                            |                                              | 90.501    | 90.501                                     | 32        | 8.518                                                                            | 35        | 9.316                                                                 |                                                                               |
|                                                  | 33+450.781 | 33+944.101 | 493.320 | 7.315  | 3608.636  |                             |                              |                        |                                                           | 3608.636                           | 65        | 234.561                                      |                            |                                              | 1226.936  | 1226.936                                   | 32        | 115.476                                                                          | 35        | 126.302                                                               |                                                                               |
|                                                  | 33+944.101 | 34+020.301 | 76.200  | 8.992  | 685.190   |                             |                              |                        |                                                           | 685.190                            | 65        | 44.537                                       |                            |                                              | 232.965   | 232.965                                    | 32        | 21.926                                                                           | 35        | 23.982                                                                |                                                                               |
|                                                  | 34+020.301 | 34+082.175 | 61.874  | 10.668 | 660.072   |                             |                              |                        |                                                           | 660.072                            | 65        | 42.905                                       |                            |                                              | 224.424   | 224.424                                    | 32        | 21.122                                                                           | 35        | 23.103                                                                |                                                                               |
| Aetna St.                                        | 34+082.175 | 34+117.532 | 35.357  | 10.821 | 382.598   |                             |                              |                        |                                                           | 382.598                            | 65        | 24.869                                       |                            |                                              | 130.083   | 130.083                                    | 32        | 12.243                                                                           | 35        | 13.391                                                                | Includes Area From West Edge Of Median to<br>East Edge of Northbound Pavement |
| NORTHBOUND                                       | 34+117.532 | 34+530.531 | 412.999 | 7.315  | 3021.088  |                             |                              |                        |                                                           | 3021.088                           | 65        | 196.371                                      |                            |                                              | 1027.170  | 1027.170                                   | 32        | 96.675                                                                           | 35        | 105.738                                                               |                                                                               |
| Feathered Area                                   | 34+530.531 | 34+539.602 | 9.071   | 7.315  | 66.354    |                             |                              |                        |                                                           | 66.354                             | 50        | 3.318                                        |                            |                                              | 22.560    | 22.560                                     | 32        | 2.123                                                                            | 35        | 2.322                                                                 | See Detail on Sheet No. 89                                                    |
|                                                  | 34+539.602 | 34+551.093 | 11.491  | 7.315  | 84.057    |                             |                              |                        |                                                           | 84.057                             |           |                                              |                            |                                              | 28.579    | 28.579                                     | 32        | 2.690                                                                            | 51        | 4.287                                                                 |                                                                               |
|                                                  | 34+551.093 | 34+560.769 | 9.676   | 7.315  | 70.780    |                             |                              |                        |                                                           | 70.780                             |           |                                              |                            |                                              | 24.065    |                                            | 48        | 3.397                                                                            |           |                                                                       |                                                                               |
|                                                  | 34+560.769 | 34+568.631 | 7.862   | 7.315  | 57.511    |                             |                              |                        |                                                           | 57.511                             |           |                                              |                            |                                              | 19.554    |                                            | 32        | 1.840                                                                            |           |                                                                       |                                                                               |
|                                                  | 34+568.631 | 34+589.328 | 20.697  |        | ⊗ 81.416  |                             |                              |                        |                                                           | 81.416                             |           |                                              |                            |                                              | 27.681    |                                            | 32        | 2.605                                                                            |           |                                                                       |                                                                               |
| Railroad Crossing                                |            |            |         |        |           |                             |                              |                        |                                                           |                                    |           |                                              |                            |                                              |           |                                            |           |                                                                                  |           |                                                                       |                                                                               |
| Feathered Area                                   | 34+578.211 | 34+595.864 | 17.653  |        | ⊗ 60.949  |                             |                              |                        |                                                           | 60.949                             |           |                                              |                            |                                              | 20.723    |                                            | 32        | 1.950                                                                            |           |                                                                       | See Detail on Sheet No. 89                                                    |
|                                                  | 34+595.864 | 34+605.298 | 9.434   | 7.315  | 69.010    |                             |                              |                        |                                                           | 69.010                             |           |                                              |                            |                                              | 23.463    |                                            | 32        | 2.208                                                                            |           |                                                                       | See Detail on Sheet No. 89                                                    |
|                                                  | 34+605.298 | 34+616.910 | 11.612  | 7.315  | 84.942    |                             |                              |                        |                                                           | 84.942                             |           |                                              |                            |                                              | 28.880    |                                            | 48        | 4.077                                                                            |           |                                                                       |                                                                               |
|                                                  | 34+616.910 | 34+630.698 | 13.788  | 7.315  | 100.859   |                             |                              |                        |                                                           | 100.859                            |           |                                              |                            |                                              | 34.292    | 34.292                                     | 32        | 3.227                                                                            | 51        | 5.144                                                                 |                                                                               |
|                                                  | 34+630.698 | 34+641.584 | 10.886  | 7.315  | 79.631    |                             |                              |                        |                                                           | 79.631                             | 50        | 3.982                                        |                            |                                              | 27.075    | 27.075                                     | 32        | 2.548                                                                            | 35        | 2.787                                                                 |                                                                               |
| NORTHBOUND                                       | 34+641.584 | 35+548.019 | 906.435 | 7.315  | 6630.572  |                             |                              |                        |                                                           | 6630.572                           | 65        | 430.987                                      |                            |                                              | 2254.394  | 2254.394                                   | 32        | 212.178                                                                          | 35        | 232.070                                                               |                                                                               |
|                                                  | 35+548.019 | 35+624.219 | 76.200  | 10.821 | 824.560   |                             |                              |                        |                                                           | 824.560                            | 65        | 53.596                                       |                            |                                              | 280.350   | 280.350                                    | 32        | 26.386                                                                           | 35        | 28.860                                                                |                                                                               |
|                                                  | 35+624.219 | 35+678.893 | 54.674  | 14.326 | 783.260   |                             |                              |                        |                                                           | 783.260                            | 65        | 50.912                                       |                            |                                              | 266.308   | 266.308                                    | 32        | 25.064                                                                           | 35        | 27.414                                                                |                                                                               |
| Hanover St.                                      | 35+678.893 | 35+732.821 | 53.928  |        | ⊗ 613.192 |                             |                              |                        |                                                           | 613.192                            | 65        | 39.857                                       |                            |                                              | 208.485   | 208.485                                    | 32        | 19.622                                                                           | 35        | 21.462                                                                | Includes Area From West Edge Of Median to<br>East Edge of Northbound Pavement |
| NORTHBOUND                                       | 35+732.821 | 36+121.000 | 388.179 | 7.315  | 2839.529  |                             |                              |                        |                                                           | 2839.529                           | 65        | 184.569                                      |                            |                                              | 965.440   | 965.440                                    | 32        | 90.865                                                                           | 35        | 99.384                                                                |                                                                               |
| Feathered Area                                   | 36+121.000 | 36+129.000 | 8.000   | 7.315  | 58.520    |                             |                              |                        |                                                           | 58.520                             | 78        | 4.565                                        |                            |                                              | 19.897    | 19.897                                     | 32        | 1.873                                                                            | 35        | 2.048                                                                 | See Detail On Sheet No. 90                                                    |
| NORTHBOUND                                       | 36+129.000 | 36+199.000 | 70.000  | 7.315  | 512.050   |                             |                              |                        |                                                           | 512.050                            | 90        | 46.085                                       |                            |                                              | 174.097   | 174.097                                    | 32        | 16.386                                                                           | 35        | 17.922                                                                |                                                                               |
| Feathered Area                                   | 36+199.000 | 36+207.000 | 8.000   | 7.315  | 58.520    |                             |                              |                        |                                                           | 58.520                             | 78        | 4.565                                        |                            |                                              | 19.897    | 19.897                                     | 32        | 1.873                                                                            | 35        | 2.048                                                                 | See Detail On Sheet No. 90                                                    |
| NORTHBOUND                                       | 36+207.000 | 36+325.151 | 118.151 | 7.315  | 864.275   |                             |                              |                        |                                                           | 864.275                            | 65        | 56.178                                       |                            |                                              | 293.853   | 293.853                                    | 32        | 27.657                                                                           | 35        | 30.250                                                                |                                                                               |
| Feathered Area                                   | 36+325.151 | 36+335.411 | 10.260  | 7.315  | 75.052    |                             |                              |                        |                                                           | 75.052                             | 50        | 3.753                                        |                            |                                              | 25.518    | 25.518                                     | 32        | 2.402                                                                            | 35        | 2.627                                                                 |                                                                               |
|                                                  | 36+335.411 | 36+348.407 | 12.996  | 7.315  | 95.066    |                             |                              |                        |                                                           | 95.066                             |           |                                              |                            |                                              | 32.322    | 32.322                                     | 32        | 3.042                                                                            | 51        | 4.848                                                                 |                                                                               |
|                                                  | 36+348.407 | 36+359.351 | 10.944  | 7.315  | 80.055    |                             |                              |                        |                                                           | 80.055                             |           |                                              |                            |                                              | 27.219    |                                            | 48        | 3.843                                                                            |           |                                                                       | See Detail On Sheet No. 81                                                    |
| BEL-7-36368                                      |            |            |         |        |           |                             |                              |                        |                                                           |                                    |           |                                              |                            |                                              |           |                                            |           |                                                                                  |           |                                                                       | For Approach Slab Details, See Sheet No. 82                                   |
| Feathered Area                                   | 36+412.569 | 36+425.513 | 10.944  | 7.315  | 80.055    |                             |                              |                        |                                                           | 80.055                             |           |                                              |                            |                                              | 27.219    |                                            | 48        | 3.843                                                                            |           |                                                                       | See Detail On Sheet No. 81                                                    |
|                                                  | 36+425.513 | 36+436.509 | 12.996  | 7.315  | 95.066    |                             |                              |                        |                                                           | 95.066                             |           |                                              |                            |                                              | 32.322    | 32.322                                     | 32        | 3.042                                                                            | 51        | 4.848                                                                 |                                                                               |
|                                                  | 36+436.509 | 36+446.769 | 10.260  | 7.315  | 75.052    |                             |                              |                        |                                                           | 75.052                             | 50        | 3.753                                        |                            |                                              | 25.518    | 25.518                                     | 32        | 2.402                                                                            | 35        | 2.627                                                                 |                                                                               |
| NORTHBOUND                                       | 36+446.769 | 36+641.322 | 194.553 | 7.315  | 1423.155  |                             |                              |                        |                                                           | 1423.155                           | 65        | 92.505                                       |                            |                                              | 483.873   | 483.873                                    | 32        | 45.541                                                                           | 35        | 49.810                                                                |                                                                               |
| S.R. 7 NORTHBOUND TOTALS CARRIED TO SHEET NO. 43 |            |            |         |        |           | 309.400                     | 2473.777                     | 309.400                | 66.799                                                    | 28416.607                          |           | 1955.945                                     | 46.410                     | 415.511                                      | 10538.806 | 10306.916                                  |           | 997.172                                                                          |           | 1104.247                                                              |                                                                               |

S.R. 7 RESURFACING QUANTITIES

BEL-7-32.276



|                   |                |
|-------------------|----------------|
| CALCULATED<br>SAH | CHECKED<br>WCR |
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⊗ COMPUTER AREA

## S.R. 7 RESURFACING QUANTITIES

**BEL-7-32.276**



SOUTHBOUND S.R. 7 PAVEMENT RESURFACING QUANTITIES

NOTE:  
For Sidestreet Pavement Quantities, See Sheet No. 103.

⊗COMPUTER AREA

| LOCATION                                            | STATION    |            | LENGTH   | WIDTH  | AREA      | 202                         |                              | 203                    |                                                           | 254                                | 301       |                                              | 304                        | 305                                          | 407       | 407                                        | 446       |                                                                                  |           |                                                                       | REMARKS                    |
|-----------------------------------------------------|------------|------------|----------|--------|-----------|-----------------------------|------------------------------|------------------------|-----------------------------------------------------------|------------------------------------|-----------|----------------------------------------------|----------------------------|----------------------------------------------|-----------|--------------------------------------------|-----------|----------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------|----------------------------|
|                                                     |            |            |          |        |           | CONCRETE<br>BASE<br>REMOVED | WEARING<br>COURSE<br>REMOVED | SUBGRADE<br>COMPACTION | EXCAVATION<br>NOT INCLUDING<br>EMBANKMENT<br>CONSTRUCTION | PAVEMENT<br>PLANING,<br>BITUMINOUS | THICKNESS | BITUMINOUS<br>AGGREGATE<br>BASE,<br>PG 64-28 | 150mm<br>AGGREGATE<br>BASE | 230mm<br>CONCRETE<br>BASE,<br>AS PER<br>PLAN | TACK COAT | TACK COAT<br>FOR<br>INTERMEDIATE<br>COURSE | THICKNESS | ASPHALT<br>CONCRETE<br>SURFACE<br>COURSE,<br>TYPE 1,<br>PG 64-28,<br>AS PER PLAN | THICKNESS | ASPHALT<br>CONCRETE<br>INTERMEDIATE<br>COURSE,<br>TYPE 2,<br>PG 64-28 |                            |
|                                                     | FROM       | TO         | Meter    | Meter  | Sq. Meter | Sq. Meter                   | Sq. Meter                    | Sq. Meter              | Cu. Meter                                                 | Sq. Meter                          | mm        | Cu. Meter                                    | Cu. Meter                  | Sq. Meter                                    | Liter     | Liter                                      | mm        | Cu. Meter                                                                        | mm        | Cu. Meter                                                             |                            |
| Along Retaining Wall                                | 32+218.266 | 32+275.821 | 57.555   | 0.533  | 30.677    |                             |                              |                        |                                                           |                                    |           |                                              |                            | 30.677                                       | 10.430    |                                            | 51        | 1.565                                                                            |           |                                                                       |                            |
| Feathered Area<br>BEL-7-32283                       | 32+270.106 | 32+275.821 | 5.715    | 8.840  | 50.521    |                             | 50.521                       |                        |                                                           |                                    |           |                                              |                            |                                              | 17.177    |                                            | 19        | 0.960                                                                            |           |                                                                       | See Detail On Sheet No. 81 |
| Concrete Base Section                               | 32+788.647 | 32+823.647 | 35.000   | 8.840  | 309.400   | 309.400                     | 309.400                      | 309.400                | 66.799                                                    |                                    | 65        | 20.111                                       | 46.410                     | 309.400                                      | 105.196   | 105.196                                    | 32        | 9.901                                                                            | 55        | 17.017                                                                | See Detail On Sheet No. 81 |
| Along Retaining Wall                                | 32+788.647 | 32+823.647 | 35.000   | 0.533  | 18.655    |                             |                              |                        |                                                           |                                    | 65        | 1.213                                        |                            | 18.655                                       | 6.343     | 6.343                                      | 32        | 0.597                                                                            | 55        | 1.026                                                                 |                            |
|                                                     | 32+823.647 | 32+866.063 | 42.416   | 0.533  | 22.608    |                             |                              |                        |                                                           |                                    | 65        | 1.470                                        |                            | 22.608                                       | 7.687     | 7.687                                      | 32        | 0.723                                                                            | 55        | 1.243                                                                 |                            |
|                                                     | 32+823.647 | 33+062.771 | 239.124  | 8.840  | 2113.856  |                             | 2113.856                     |                        |                                                           |                                    | 65        | 137.401                                      |                            |                                              | 718.711   | 718.711                                    | 32        | 67.643                                                                           | 55        | 116.262                                                               |                            |
|                                                     | 33+062.771 | 33+082.082 | 19.311   | 8.840  | 170.709   |                             |                              |                        |                                                           | 170.709                            | 65        | 11.096                                       |                            |                                              | 58.041    | 58.041                                     | 32        | 5.463                                                                            | 35        | 5.975                                                                 |                            |
| SOUTHBOUND                                          | 33+082.082 | 33+205.951 | 123.869  | 7.851  | 972.496   |                             |                              |                        |                                                           | 972.496                            | 65        | 63.212                                       |                            |                                              | 330.648   | 330.648                                    | 32        | 31.120                                                                           | 35        | 34.037                                                                |                            |
|                                                     | 33+205.951 | 34+082.175 | 876.224  | 7.315  | 6409.579  |                             |                              |                        |                                                           | 6409.579                           | 65        | 416.623                                      |                            |                                              | 2179.257  | 2179.257                                   | 32        | 205.107                                                                          | 35        | 224.335                                                               |                            |
| Ramp C Decel. Lane                                  | 32+940.728 | 33+123.884 | 183.156  |        | ⊗800.713  |                             |                              |                        |                                                           | 800.713                            | 65        | 52.046                                       |                            |                                              | 272.242   | 272.242                                    | 32        | 25.623                                                                           | 35        | 28.025                                                                |                            |
| Aetna St.                                           | 34+082.175 | 34+117.532 | 35.357   | 8.992  | 317.930   |                             |                              |                        |                                                           | 317.930                            | 65        | 20.665                                       |                            |                                              | 108.096   | 108.096                                    | 32        | 10.174                                                                           | 35        | 11.128                                                                |                            |
| SOUTHBOUND                                          | 34+117.532 | 34+173.920 | 56.388   | 10.668 | 601.547   |                             |                              |                        |                                                           | 601.547                            | 65        | 39.101                                       |                            |                                              | 204.526   | 204.526                                    | 32        | 19.250                                                                           | 35        | 21.054                                                                |                            |
|                                                     | 34+173.920 | 34+249.968 | 76.048   | 8.992  | 683.824   |                             |                              |                        |                                                           | 683.824                            | 65        | 44.449                                       |                            |                                              | 232.500   | 232.500                                    | 32        | 21.882                                                                           | 35        | 23.934                                                                |                            |
|                                                     | 34+249.968 | 34+546.728 | 296.760  | 7.315  | 2170.799  |                             |                              |                        |                                                           | 2170.799                           | 65        | 141.102                                      |                            |                                              | 738.072   | 738.072                                    | 32        | 69.466                                                                           | 35        | 75.978                                                                |                            |
|                                                     | 34+546.728 | 34+559.428 | 12.700   | 7.315  | 92.900    |                             |                              |                        |                                                           | 92.900                             | 50        | 4.645                                        |                            |                                              | 31.586    | 31.586                                     | 32        | 2.973                                                                            | 35        | 3.252                                                                 |                            |
| Feathered Area                                      | 34+559.428 | 34+575.515 | 16.087   | 7.315  | 117.676   |                             |                              |                        |                                                           | 117.676                            |           |                                              |                            |                                              | 40.010    | 40.010                                     | 32        | 3.766                                                                            | 51        | 6.001                                                                 |                            |
|                                                     | 34+575.515 | 34+589.061 | 13.546   | 7.315  | 99.089    |                             |                              |                        |                                                           | 99.089                             |           |                                              |                            |                                              | 33.690    |                                            | 48        | 4.756                                                                            |           |                                                                       |                            |
|                                                     | 34+589.061 | 34+600.068 | 11.007   | 7.315  | 80.516    |                             |                              |                        |                                                           | 80.516                             |           |                                              |                            |                                              | 27.376    |                                            | 32        | 2.577                                                                            |           |                                                                       |                            |
|                                                     | 34+600.068 | 34+612.421 | 12.353   |        | ⊗46.782   |                             |                              |                        |                                                           | 46.782                             |           |                                              |                            |                                              | 15.906    |                                            | 32        | 1.497                                                                            |           |                                                                       | See Detail On Sheet No. 89 |
| Railroad Crossing                                   | 34+605.655 | 34+617.225 | 11.570   |        | ⊗40.987   |                             |                              |                        |                                                           | 40.987                             |           |                                              |                            |                                              | 13.936    |                                            | 32        | 1.312                                                                            |           |                                                                       |                            |
| Feathered Area                                      | 34+617.225 | 34+625.087 | 7.862    | 7.315  | 57.511    |                             |                              |                        |                                                           | 57.511                             |           |                                              |                            |                                              | 19.554    |                                            | 32        | 1.840                                                                            |           |                                                                       |                            |
|                                                     | 34+625.087 | 34+634.763 | 9.676    | 7.315  | 70.780    |                             |                              |                        |                                                           | 70.780                             |           |                                              |                            |                                              | 24.065    |                                            | 48        | 3.397                                                                            |           |                                                                       |                            |
|                                                     | 34+634.763 | 34+646.254 | 11.491   | 7.315  | 84.057    |                             |                              |                        |                                                           | 84.057                             |           |                                              |                            |                                              | 28.579    | 28.579                                     | 32        | 2.690                                                                            | 51        | 4.287                                                                 |                            |
|                                                     | 34+646.254 | 34+655.325 | 9.071    | 7.315  | 66.354    |                             |                              |                        |                                                           | 66.354                             | 50        | 3.318                                        |                            |                                              | 22.560    | 22.560                                     | 32        | 2.123                                                                            | 35        | 2.322                                                                 | See Detail On Sheet No. 89 |
| SOUTHBOUND                                          | 34+655.325 | 35+678.893 | 1023.568 | 7.315  | 7487.400  |                             |                              |                        |                                                           | 7487.400                           | 65        | 486.681                                      |                            |                                              | 2545.716  | 2545.716                                   | 32        | 239.597                                                                          | 35        | 262.059                                                               |                            |
| Hanover St.                                         | 35+678.893 | 35+732.821 | 53.928   | 8.992  | 484.921   |                             |                              |                        |                                                           | 484.921                            | 65        | 31.520                                       |                            |                                              | 164.873   | 164.873                                    | 32        | 15.517                                                                           | 35        | 16.972                                                                |                            |
| SOUTHBOUND                                          | 35+732.821 | 35+777.017 | 44.196   | 10.668 | 471.483   |                             |                              |                        |                                                           | 471.483                            | 65        | 30.646                                       |                            |                                              | 160.304   | 160.304                                    | 32        | 15.087                                                                           | 35        | 16.502                                                                |                            |
|                                                     | 35+777.017 | 35+853.217 | 76.200   | 8.992  | 685.190   |                             |                              |                        |                                                           | 685.190                            | 65        | 44.537                                       |                            |                                              | 232.965   | 232.965                                    | 32        | 21.926                                                                           | 35        | 23.982                                                                |                            |
|                                                     | 35+853.217 | 36+121.000 | 267.783  | 7.315  | 1958.833  |                             |                              |                        |                                                           | 1958.833                           | 65        | 127.324                                      |                            |                                              | 666.003   | 666.003                                    | 32        | 62.683                                                                           | 35        | 68.559                                                                |                            |
|                                                     | 36+121.000 | 36+129.000 | 8.000    | 7.315  | 58.520    |                             |                              |                        |                                                           | 58.520                             | 65        | 3.804                                        |                            |                                              | 19.897    | 19.897                                     | 32        | 1.873                                                                            | 35        | 2.048                                                                 | See Detail On Sheet No. 90 |
| Feathered Area                                      | 36+129.000 | 36+199.000 | 70.000   | 7.315  | 512.050   |                             |                              |                        |                                                           | 512.050                            | 65        | 33.283                                       |                            |                                              | 174.097   | 174.097                                    | 32        | 16.386                                                                           | 35        | 17.922                                                                |                            |
| SOUTHBOUND                                          | 36+199.000 | 36+207.000 | 8.000    | 7.315  | 58.520    |                             |                              |                        |                                                           | 58.520                             | 65        | 3.804                                        |                            |                                              | 19.897    | 19.897                                     | 32        | 1.873                                                                            | 35        | 2.048                                                                 | See Detail On Sheet No. 90 |
| Feathered Area                                      | 36+207.000 | 36+327.807 | 120.807  | 7.315  | 883.703   |                             |                              |                        |                                                           | 883.703                            | 65        | 57.441                                       |                            |                                              | 300.459   | 300.459                                    | 32        | 28.279                                                                           | 35        | 30.930                                                                |                            |
|                                                     | 36+327.807 | 36+338.067 | 10.260   | 7.315  | 75.052    |                             |                              |                        |                                                           | 75.052                             | 50        | 3.753                                        |                            |                                              | 25.518    | 25.518                                     | 32        | 2.402                                                                            | 35        | 2.627                                                                 |                            |
|                                                     | 36+338.067 | 36+351.063 | 12.996   | 7.315  | 95.066    |                             |                              |                        |                                                           | 95.066                             |           |                                              |                            |                                              | 32.322    | 32.322                                     | 32        | 3.042                                                                            | 51        | 4.848                                                                 | See Detail On Sheet No. 81 |
|                                                     | 36+351.063 | 36+362.007 | 10.944   | 7.315  | 80.055    |                             |                              |                        |                                                           | 80.055                             |           |                                              |                            |                                              | 27.219    |                                            | 48        | 3.843                                                                            |           |                                                                       |                            |
| BEL-7-36368                                         | 36+415.225 | 36+426.169 | 10.944   | 7.315  | 80.055    |                             |                              |                        |                                                           | 80.055                             |           |                                              |                            |                                              | 27.219    |                                            | 48        | 3.843                                                                            |           |                                                                       |                            |
| Feathered Area                                      | 36+426.169 | 36+439.165 | 12.996   | 7.315  | 95.066    |                             |                              |                        |                                                           | 95.066                             |           |                                              |                            |                                              | 32.322    | 32.322                                     | 32        | 3.042                                                                            | 51        | 4.848                                                                 | See Detail On Sheet No. 81 |
|                                                     | 36+439.165 | 36+449.425 | 10.260   | 7.315  | 75.052    |                             |                              |                        |                                                           | 75.052                             | 50        | 3.753                                        |                            |                                              | 25.518    | 25.518                                     | 32        | 2.402                                                                            | 35        | 2.627                                                                 |                            |
|                                                     | 36+449.425 | 36+641.322 | 191.897  | 7.315  | 1403.727  |                             |                              |                        |                                                           | 1403.727                           | 65        | 91.242                                       |                            |                                              | 477.267   | 477.267                                    | 32        | 44.919                                                                           | 35        | 49.130                                                                |                            |
|                                                     | 36+641.322 | 36+651.582 | 10.260   | 7.315  | 75.052    |                             |                              |                        |                                                           | 75.052                             | 50        | 3.753                                        |                            |                                              | 25.518    | 25.518                                     | 32        | 2.402                                                                            | 35        | 2.627                                                                 |                            |
| Feathered Area                                      | 36+651.582 | 36+664.578 | 12.996   | 7.315  | 95.066    |                             |                              |                        |                                                           | 95.066                             |           |                                              |                            |                                              | 32.322    | 32.322                                     | 32        | 3.042                                                                            | 51        | 4.848                                                                 | See Detail On Sheet No. 81 |
|                                                     | 36+664.578 | 36+675.522 | 10.944   | 7.315  | 80.055    |                             |                              |                        |                                                           | 80.055                             |           |                                              |                            |                                              | 27.219    |                                            | 48        | 3.843                                                                            |           |                                                                       |                            |
|                                                     | 36+806.738 | 36+817.682 | 10.944   | 7.315  | 80.055    |                             |                              |                        |                                                           | 80.055                             |           |                                              |                            |                                              | 27.219    |                                            | 48        | 3.843                                                                            |           |                                                                       |                            |
|                                                     | 36+817.682 | 36+830.678 | 12.996   | 7.315  | 95.066    |                             |                              |                        |                                                           | 95.066                             |           |                                              |                            |                                              | 32.322    | 32.322                                     | 32        | 3.042                                                                            | 51        | 4.848                                                                 | See Detail On Sheet No. 81 |
| Feathered Area                                      | 36+830.678 | 36+840.938 | 10.260   | 7.315  | 75.052    |                             |                              |                        |                                                           | 75.052                             | 50        | 3.753                                        |                            |                                              | 25.518    | 25.518                                     | 32        | 2.402                                                                            | 35        | 2.627                                                                 |                            |
|                                                     | 36+840.938 | 38+190.650 | 1349.712 | 7.315  | 9873.143  |                             |                              |                        |                                                           | 9873.143                           | 65        | 641.754                                      |                            |                                              | 3356.869  | 3356.869                                   | 32        | 315.941                                                                          | 35        | 345.560                                                               |                            |
| SOUTHBOUND                                          | 38+190.650 | 38+210.009 | 19.359   | 7.315  | 141.611   |                             |                              |                        |                                                           |                                    |           |                                              |                            |                                              | 48.148    |                                            | 63        | 8.921                                                                            |           |                                                                       |                            |
| Feathered Area                                      | 38+210.009 | 38+220.000 | 9.991    | 7.315  | 73.084    |                             | 73.084                       |                        |                                                           |                                    |           |                                              |                            |                                              | 24.849    |                                            | 48        | 3.508                                                                            |           |                                                                       | See Detail On Sheet No. 81 |
| S.R. 7 SOUTHBOUND TOTALS CARRIED TO GENERAL SUMMARY |            |            |          |        |           | 309.400                     | 2546.861                     | 309.400                | 66.799                                                    | 37762.431                          |           | 2523.500                                     | 46.410                     | 381.340                                      | 13777.768 | 13433.761                                  |           | 1310.063                                                                         |           | 1441.488                                                              |                            |

S.R. 7 RESURFACING QUANTITIES

BEL-7-32.276



|                   |                |
|-------------------|----------------|
| CALCULATED<br>WCR | CHECKED<br>LVM |
|-------------------|----------------|

⊗ COMPUTER AREA

**RAMP RESURFACING QUANTITIES &  
PULL OFF AREA QUANTITIES**

## PULL OFF AREA QUANTITIES

45  
242

**BEL-7-32.276**



MEDIAN SHOULDER QUANTITIES

| ⊗ COMPUTER AREA                                                       |            |            |         |                            |                           |                          |                         |                                 |                                                           |                        |           |                                              |                                 |                   |                                            |                             |           |                                                                                 |           |                                                                       |                                        |                                  | CALCULATED<br>SAH | CHECKED<br>WCR |
|-----------------------------------------------------------------------|------------|------------|---------|----------------------------|---------------------------|--------------------------|-------------------------|---------------------------------|-----------------------------------------------------------|------------------------|-----------|----------------------------------------------|---------------------------------|-------------------|--------------------------------------------|-----------------------------|-----------|---------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------|----------------------------------------|----------------------------------|-------------------|----------------|
| LOCATION                                                              | STATION    |            | LENGTH  | TOTAL<br>SHOULDER<br>WIDTH | TOTAL<br>SHOULDER<br>AREA | TOTAL<br>MEDIAN<br>WIDTH | TOTAL<br>MEDIAN<br>AREA | 203                             |                                                           |                        | 301       |                                              | 304                             |                   | 407                                        | 408                         | 446       |                                                                                 |           |                                                                       | REMARKS                                |                                  |                   |                |
|                                                                       |            |            |         |                            |                           |                          |                         | COMPUTER<br>AVERAGE<br>END AREA | EXCAVATION<br>NOT INCLUDING<br>EMBANKMENT<br>CONSTRUCTION | SUBGRADE<br>COMPACTION | THICKNESS | BITUMINOUS<br>AGGREGATE<br>BASE,<br>PG 64-28 | COMPUTER<br>AVERAGE<br>END AREA | AGGREGATE<br>BASE | TACK COAT<br>FOR<br>INTERMEDIATE<br>COURSE | BITUMINOUS<br>PRIME<br>COAT | THICKNESS | ASPHALT<br>CONCRETE<br>SURFACE<br>COURSE,<br>TYPE 1,<br>PG 64-28<br>AS PER PLAN | THICKNESS | ASPHALT<br>CONCRETE<br>INTERMEDIATE<br>COURSE,<br>TYPE 2,<br>PG 64-28 |                                        |                                  |                   |                |
|                                                                       | FROM       | TO         | Meter   | Meter                      | Sq. Meter                 | Meter                    | Sq. Meter               |                                 |                                                           |                        |           |                                              |                                 |                   |                                            |                             |           |                                                                                 |           |                                                                       |                                        | Sq. Meter                        | Cu. Meter         | Sq. Meter      |
| Median Area Ramp B                                                    | 32+177.642 | 32+181.761 | 4.119   | 1.520                      | 6.261                     |                          |                         |                                 |                                                           | 0.8                    | 6.3       | 65                                           | 0.407                           |                   | 0.939                                      | 2.129                       | 11.270    | 32                                                                              | 0.200     | 35                                                                    | 0.219                                  | See Detail On Sheet No. 83       |                   |                |
| Median Area Ramp C                                                    | 32+873.302 | 32+940.804 | 67.502  |                            | ⊗213.353                  |                          |                         |                                 |                                                           | 27.1                   | 213.4     | 65                                           | 13.868                          |                   | 32.003                                     | 72.540                      | 384.035   | 32                                                                              | 6.827     | 35                                                                    | 7.467                                  | See Detail On Sheet No. 84       |                   |                |
| Median Area Ramp D                                                    | 32+899.939 | 32+950.423 | 50.484  |                            | ⊗92.016                   |                          |                         |                                 |                                                           | 11.7                   | 92.0      | 65                                           | 5.981                           |                   | 13.802                                     | 31.285                      | 165.629   | 32                                                                              | 2.945     | 35                                                                    | 3.221                                  | See Detail On Sheet No. 84       |                   |                |
| Median Barrier                                                        | 32+235.359 | 32+270.106 | 34.747  |                            |                           | 1.219                    | 42.357                  | 0.457                           | 15.9                                                      |                        |           |                                              | 0.457                           | 15.879            |                                            |                             |           |                                                                                 |           |                                                                       |                                        | Includes Area Under Barrier Only |                   |                |
| Median Barrier                                                        | 32+788.647 | 33+062.771 | 274.124 |                            |                           | 1.219                    | 334.157                 | 0.457                           | 125.3                                                     |                        |           |                                              | 0.457                           | 125.275           |                                            |                             |           |                                                                                 |           |                                                                       |                                        | Includes Area Under Barrier Only |                   |                |
| Median Shoulder                                                       | 33+062.771 | 33+082.080 | 19.309  | 1.070                      | 20.660                    | 2.183                    | 42.152                  | 0.833                           | 16.1                                                      | 42.2                   | 65        | 1.343                                        | 1.008                           | 19.463            | 7.024                                      | 37.188                      | 32        | 0.661                                                                           | 35        | 0.723                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+082.080 | 33+205.951 | 123.871 | 2.592 Avg.                 | 321.074                   | 3.683 Avg.               | 456.217                 | 1.848                           | 228.9                                                     | 456.2                  | 65        | 20.870                                       | 1.786                           | 221.234           | 109.165                                    | 577.933                     | 32        | 10.274                                                                          | 35        | 11.238                                                                |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+205.951 | 33+244.127 | 38.176  | 4.114                      | 157.056                   | 5.182                    | 197.828                 | 2.893                           | 110.4                                                     | 197.8                  | 65        | 10.209                                       | 2.563                           | 97.845            | 53.399                                     | 282.701                     | 32        | 5.026                                                                           | 35        | 5.497                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+244.127 | 33+320.327 | 76.200  | 2.438 Avg.                 | 185.776                   | 3.506 Avg.               | 267.157                 | 1.741                           | 132.7                                                     | 267.2                  | 65        | 12.075                                       | 1.705                           | 129.921           | 63.164                                     | 334.397                     | 32        | 5.945                                                                           | 35        | 6.502                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+320.327 | 33+364.066 | 43.739  | 0.762                      | 33.330                    | 1.829                    | 79.999                  | 0.589                           | 25.8                                                      | 80.0                   | 65        | 2.166                                        | 0.847                           | 37.047            | 11.332                                     | 59.994                      | 32        | 1.067                                                                           | 35        | 1.167                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+364.066 | 33+373.210 | 9.144   | 0.838 Avg.                 | 7.662                     | 1.829                    | 16.724                  | 0.597                           | 5.5                                                       | 16.7                   | 65        | 0.498                                        | 0.854                           | 7.809             | 2.605                                      | 13.792                      | 32        | 0.245                                                                           | 35        | 0.268                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+373.210 | 33+381.287 | 8.077   | 0.610                      | 4.926                     | 1.829                    | 14.773                  | 0.197                           | 1.6                                                       | 14.8                   | 65        | 0.320                                        | 0.316                           | 2.552             | 1.675                                      | 8.867                       | 32        | 0.158                                                                           | 35        | 0.172                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+381.287 | 33+382.201 | 0.914   | 1.829                      | 1.672                     | 1.829                    | 1.672                   | 0.604                           | 0.6                                                       | 1.7                    | 65        | 0.109                                        | 1.028                           | 0.940             | 0.568                                      | 3.009                       | 32        | 0.053                                                                           | 35        | 0.059                                                                 |                                        |                                  |                   |                |
| Lincoln Ave.                                                          |            |            |         |                            |                           |                          |                         |                                 |                                                           |                        |           |                                              |                                 |                   |                                            |                             |           |                                                                                 |           |                                                                       | No Median Work                         |                                  |                   |                |
| Median Shoulder                                                       | 33+418.626 | 33+420.301 | 1.675   | 3.354 Avg.                 | 5.618                     | 4.267 Avg.               | 7.147                   | 2.276                           | 3.8                                                       | 7.1                    | 65        | 0.365                                        | 2.275                           | 3.811             | 1.910                                      | 10.112                      | 32        | 0.180                                                                           | 35        | 0.197                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+420.301 | 33+449.257 | 28.956  | 4.268                      | 123.584                   | 5.182                    | 150.050                 | 2.893                           | 83.8                                                      | 150.1                  | 65        | 8.033                                        | 2.717                           | 78.673            | 42.019                                     | 222.451                     | 32        | 3.955                                                                           | 35        | 4.325                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+449.257 | 33+450.781 | 1.524   | 4.116 Avg.                 | 6.272                     | 5.182                    | 7.897                   | 2.893                           | 4.4                                                       | 7.9                    | 65        | 0.408                                        | 2.730                           | 4.161             | 2.132                                      | 11.290                      | 32        | 0.201                                                                           | 35        | 0.220                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+450.781 | 33+458.858 | 8.077   | 3.962                      | 32.002                    | 5.182                    | 41.855                  | 2.063                           | 16.7                                                      | 41.9                   | 65        | 2.080                                        | 2.071                           | 16.727            | 10.881                                     | 57.604                      | 32        | 1.024                                                                           | 35        | 1.120                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+458.858 | 33+468.002 | 9.144   | 4.192 Avg.                 | 38.332                    | 5.182                    | 47.384                  | 2.893                           | 26.5                                                      | 47.4                   | 65        | 2.492                                        | 2.570                           | 23.500            | 13.033                                     | 68.998                      | 32        | 1.227                                                                           | 35        | 1.342                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+468.002 | 33+553.276 | 85.274  | 4.114                      | 350.818                   | 5.182                    | 441.890                 | 2.893                           | 246.7                                                     | 441.9                  | 65        | 22.803                                       | 2.563                           | 218.557           | 119.278                                    | 631.472                     | 32        | 11.226                                                                          | 35        | 12.279                                                                |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+553.276 | 33+565.468 | 12.192  | 3.658 Avg.                 | 44.598                    | 5.182                    | 63.179                  | 2.893                           | 35.3                                                      | 63.2                   | 65        | 2.899                                        | 2.498                           | 30.456            | 15.163                                     | 80.276                      | 32        | 1.427                                                                           | 35        | 1.561                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+565.468 | 33+574.998 | 9.530   | 3.200                      | 30.496                    | 5.182                    | 49.384                  | 2.893                           | 27.6                                                      | 49.4                   | 65        | 1.982                                        | 2.432                           | 23.177            | 10.369                                     | 54.893                      | 32        | 0.976                                                                           | 35        | 1.067                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+574.998 | 33+587.190 | 12.192  | 3.658 Avg.                 | 44.598                    | 5.182                    | 63.179                  | 2.893                           | 35.3                                                      | 63.2                   | 65        | 2.899                                        | 2.498                           | 30.456            | 15.163                                     | 80.276                      | 32        | 1.427                                                                           | 35        | 1.561                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+587.190 | 33+816.779 | 229.589 | 4.114                      | 944.530                   | 5.182                    | 1189.730                | 2.893                           | 664.2                                                     | 1189.7                 | 65        | 61.394                                       | 2.563                           | 588.437           | 321.140                                    | 1700.154                    | 32        | 30.225                                                                          | 35        | 33.059                                                                |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+816.779 | 33+825.923 | 9.144   | 4.192 Avg.                 | 38.332                    | 5.182                    | 47.384                  | 2.893                           | 26.5                                                      | 47.4                   | 65        | 2.492                                        | 2.570                           | 23.500            | 13.033                                     | 68.998                      | 32        | 1.227                                                                           | 35        | 1.342                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 33+825.923 | 33+834.000 | 8.077   | 3.962                      | 32.002                    | 5.182                    | 41.855                  | 2.063                           | 16.7                                                      | 41.9                   | 65        | 2.080                                        | 2.071                           | 16.727            | 10.881                                     | 57.604                      | 32        | 1.024                                                                           | 35        | 1.120                                                                 |                                        |                                  |                   |                |
| Aetna St.                                                             | 0+984.608  | 0+965.492  | 19.116  | 1.219                      | 23.302                    |                          |                         |                                 | 3.0                                                       |                        | 65        | 1.515                                        |                                 | 3.495             | 7.923                                      | 41.944                      | 32        | 0.746                                                                           | 35        | 0.816                                                                 | Replace Concrete Median                |                                  |                   |                |
| For Aetna St.<br>Median and Turn Lane Quantities,<br>See Sheet No. 49 |            |            |         |                            |                           |                          |                         |                                 |                                                           |                        |           |                                              |                                 |                   |                                            |                             |           |                                                                                 |           |                                                                       |                                        |                                  |                   |                |
| Median Shoulder                                                       | 34+250.300 | 34+344.476 | 94.176  | 4.268                      | 401.944                   | 5.182                    | 488.020                 | 2.893                           | 272.5                                                     | 488.0                  | 65        | 26.126                                       | 2.717                           | 255.876           | 136.661                                    | 723.499                     | 32        | 12.862                                                                          | 35        | 14.068                                                                |                                        |                                  |                   |                |
| Median Shoulder                                                       | 34+344.476 | 34+346.000 | 1.524   | 4.116 Avg.                 | 6.272                     | 5.182                    | 7.897                   | 2.893                           | 4.4                                                       | 7.9                    | 65        | 0.408                                        | 2.730                           | 4.161             | 2.132                                      | 11.290                      | 32        | 0.201                                                                           | 35        | 0.220                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 34+346.000 | 34+354.077 | 8.077   | 3.962                      | 32.002                    | 5.182                    | 41.855                  | 2.063                           | 16.7                                                      | 41.9                   | 65        | 2.080                                        | 2.071                           | 16.727            | 10.881                                     | 57.604                      | 32        | 1.024                                                                           | 35        | 1.120                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 34+354.077 | 34+363.221 | 9.144   | 4.192 Avg.                 | 38.332                    | 5.182                    | 47.384                  | 2.893                           | 26.5                                                      | 47.4                   | 65        | 2.492                                        | 2.570                           | 23.500            | 13.033                                     | 68.998                      | 32        | 1.227                                                                           | 35        | 1.342                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 34+363.221 | 34+564.779 | 201.558 | 4.114                      | 829.210                   | 5.182                    | 1044.474                | 2.893                           | 583.1                                                     | 1044.5                 | 65        | 53.899                                       | 2.563                           | 516.593           | 281.931                                    | 1492.578                    | 32        | 26.535                                                                          | 35        | 29.022                                                                |                                        |                                  |                   |                |
| Median Shoulder                                                       | 34+564.779 | 34+573.923 | 9.144   | 4.192 Avg.                 | 38.332                    | 5.182                    | 47.384                  | 2.893                           | 26.5                                                      | 47.4                   | 65        | 2.492                                        | 2.570                           | 23.500            | 13.033                                     | 68.998                      | 32        | 1.227                                                                           | 35        | 1.342                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 34+573.923 | 34+582.000 | 8.077   | 3.962                      | 32.002                    | 5.182                    | 41.855                  | 2.063                           | 16.7                                                      | 41.9                   | 65        | 2.080                                        | 2.071                           | 16.727            | 10.881                                     | 57.604                      | 32        | 1.024                                                                           | 35        | 1.120                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 34+582.000 | 34+594.963 | 12.963  | 5.182                      | 67.174                    | 5.182                    | 67.174                  | 3.303                           | 42.8                                                      | 67.2                   | 65        | 4.366                                        | 2.418                           | 31.345            | 22.839                                     | 120.913                     | 32        | 2.150                                                                           | 35        | 2.351                                                                 | Includes Area Up To Railroad<br>Tracks |                                  |                   |                |
| Railroad                                                              |            |            |         |                            |                           |                          |                         |                                 |                                                           |                        |           |                                              |                                 |                   |                                            |                             |           |                                                                                 |           |                                                                       | No Median Work                         |                                  |                   |                |
| Median Shoulder                                                       | 34+600.963 | 34+612.000 | 11.037  | 5.182                      | 57.194                    | 5.182                    | 57.194                  | 3.303                           | 36.5                                                      | 57.2                   | 65        | 3.718                                        | 2.418                           | 26.687            | 19.446                                     | 102.949                     | 32        | 1.830                                                                           | 35        | 2.002                                                                 | Includes Area Up To Railroad<br>Tracks |                                  |                   |                |
| Median Shoulder                                                       | 34+612.000 | 34+620.077 | 8.077   | 3.962                      | 32.002                    | 5.182                    | 41.855                  | 2.063                           | 16.7                                                      | 41.9                   | 65        | 2.080                                        | 2.071                           | 16.727            | 10.881                                     | 57.604                      | 32        | 1.024                                                                           | 35        | 1.120                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 34+620.077 | 34+629.221 | 9.144   | 4.192 Avg.                 | 38.332                    | 5.182                    | 47.384                  | 2.893                           | 26.5                                                      | 47.4                   | 65        | 2.492                                        | 2.570                           | 23.500            | 13.033                                     | 68.998                      | 32        | 1.227                                                                           | 35        | 1.342                                                                 |                                        |                                  |                   |                |
| Median Shoulder                                                       | 34+629.221 | 35+299.284 | 670.063 | 4.114                      | 2756.640                  | 5.182                    | 3472.266                | 2.893                           | 1938.5                                                    | 3472.3                 | 65        | 179.182                                      | 2.563                           | 1717.371          | 937.258                                    | 4961.952                    | 32        | 88.212                                                                          | 35        | 96.482                                                                |                                        |                                  |                   |                |
| Median Shoulder                                                       | 35+299.284 | 35+311.476 | 12.192  | 3.810 Avg.                 | 46.452                    | 5.182                    | 63.179                  | 2.893                           | 35.3                                                      | 63.2                   | 65        | 3.019                                        |                                 |                   |                                            |                             |           |                                                                                 |           |                                                                       |                                        |                                  |                   |                |



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| CALCULATED<br>SAH | CHECKED<br>WCR |
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| <div> <div>47</div> <div>242</div> </div> | <div> <div>BEL-7-32.276</div> <div>MEDAIN SHOULDER QUANTITIES</div> </div> | CALCULATED |
|                                           |                                                                            | SAH        |
|                                           |                                                                            | CHECKED    |
|                                           |                                                                            | WCR        |



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## MEDIAN SHOULDER QUANTITIES

**BEL-7-32.276**



| MEDIAN SHOULDER AND PAVEMENT TURN LANE QUANTITIES |            |            |         |                            |                           |                          |                         |                                 |                                                           |                        |           |                                              |                                 |                   |                                            |                             |           |                                                                                  |    |           |         | CALCULATED<br>SAH<br>CHECKED<br>WCR                                   |           |
|---------------------------------------------------|------------|------------|---------|----------------------------|---------------------------|--------------------------|-------------------------|---------------------------------|-----------------------------------------------------------|------------------------|-----------|----------------------------------------------|---------------------------------|-------------------|--------------------------------------------|-----------------------------|-----------|----------------------------------------------------------------------------------|----|-----------|---------|-----------------------------------------------------------------------|-----------|
| LOCATION                                          | STATION    |            | LENGTH  | TOTAL<br>PAVEMENT<br>WIDTH | TOTAL<br>PAVEMENT<br>AREA | TOTAL<br>MEDIAN<br>WIDTH | TOTAL<br>MEDIAN<br>AREA | 203                             |                                                           |                        | 301       |                                              | 304                             |                   | 407                                        | 408                         | 446       |                                                                                  |    |           | REMARKS |                                                                       |           |
|                                                   |            |            |         |                            |                           |                          |                         | COMPUTER<br>AVERAGE<br>END AREA | EXCAVATION<br>NOT INCLUDING<br>EMBANKMENT<br>CONSTRUCTION | SUBGRADE<br>COMPACTION | THICKNESS | BITUMINOUS<br>AGGREGATE<br>BASE,<br>PG 64-28 | COMPUTER<br>AVERAGE<br>END AREA | AGGREGATE<br>BASE | TACK COAT<br>FOR<br>INTERMEDIATE<br>COURSE | BITUMINOUS<br>PRIME<br>COAT | THICKNESS | ASPHALT<br>CONCRETE<br>SURFACE<br>COURSE,<br>TYPE 1,<br>PG 64-28,<br>AS PER PLAN |    | THICKNESS |         | ASPHALT<br>CONCRETE<br>INTERMEDIATE<br>COURSE,<br>TYPE 2,<br>PG 64-28 |           |
|                                                   | Sq. Meter  | Cu. Meter  |         |                            |                           |                          |                         |                                 |                                                           |                        |           |                                              |                                 |                   |                                            |                             |           | Sq. Meter                                                                        | mm |           |         | Cu. Meter                                                             | Sq. Meter |
| Concrete Median Transition                        | 33+834.000 | 33+835.524 | 1.524   | 4.268 Avg.                 | 6.504                     | 5.182                    | 7.897                   | 2.893                           | 4.4                                                       | 7.9                    | 65        | 0.423                                        | 2.558 Avg.                      | 3.898             | 2.211                                      | 6.504                       | 32        | 0.208                                                                            | 35 | 0.228     |         |                                                                       |           |
|                                                   | 33+835.524 | 33+843.400 | 7.876   | 4.572                      | 36.009                    | 5.182                    | 40.813                  | 2.893                           | 22.8                                                      | 40.8                   | 65        | 2.341                                        | 2.709                           | 21.336            | 12.243                                     | 36.009                      | 32        | 1.152                                                                            | 35 | 1.260     |         |                                                                       |           |
| Lt. Shoulder                                      |            |            |         | 1.295 Avg.                 | 19.425                    |                          |                         |                                 |                                                           |                        | 65        | 3.195                                        |                                 |                   | 6.605                                      | 19.425                      | 32        | 0.622                                                                            | 35 | 0.680     |         |                                                                       |           |
| Rt. Full Depth Pavement Subbase                   | 33+843.400 | 33+858.400 | 15.000  | 3.277 Avg.                 | 49.155                    |                          |                         |                                 |                                                           |                        | 260       | 12.780                                       |                                 |                   | 16.713                                     | 49.155                      | 32        | 1.573                                                                            | 35 | 1.720     |         |                                                                       |           |
|                                                   |            |            |         |                            |                           | 5.182                    | 77.730                  | 2.893                           | 43.4                                                      | 77.7                   |           |                                              | 2.042 Avg.                      | 30.630            |                                            |                             |           |                                                                                  |    |           |         |                                                                       |           |
| Lt. Shoulder                                      | 33+858.400 | 34+078.705 | 220.305 | 0.304                      | 66.973                    |                          |                         |                                 |                                                           |                        | 65        | 4.353                                        |                                 |                   | 22.771                                     | 66.973                      | 32        | 2.143                                                                            | 35 | 2.344     |         |                                                                       |           |
| Rt. Full Depth Pavement Subbase                   | 33+858.400 | 33+944.101 | 85.701  | 4.268                      | 365.772                   |                          |                         |                                 |                                                           |                        | 260       | 95.101                                       |                                 |                   | 124.362                                    | 365.772                     | 32        | 11.705                                                                           | 35 | 12.802    |         |                                                                       |           |
|                                                   |            |            |         |                            |                           | 5.182                    | 444.103                 | 2.893                           | 247.9                                                     | 444.1                  |           |                                              | 2.054                           | 176.030           |                                            |                             |           |                                                                                  |    |           |         |                                                                       |           |
| Rt. Full Depth Pavement Subbase                   | 33+944.101 | 34+020.301 | 76.200  | 2.591 Avg.                 | 197.434                   |                          |                         |                                 |                                                           |                        | 260       | 51.333                                       |                                 |                   | 67.128                                     | 197.434                     | 32        | 6.318                                                                            | 35 | 6.910     |         |                                                                       |           |
|                                                   |            |            |         |                            |                           | 3.505                    | 267.081                 | 1.690 Avg.                      | 128.8                                                     | 267.1                  |           |                                              | 1.425 Avg.                      | 108.585           |                                            |                             |           |                                                                                  |    |           |         |                                                                       |           |
| Rt. Full Depth Pavement Subbase                   | 34+020.301 | 34+078.705 | 58.404  | 0.914                      | 53.381                    |                          |                         |                                 |                                                           |                        | 260       | 13.879                                       |                                 |                   | 18.150                                     | 53.381                      | 32        | 1.708                                                                            | 35 | 1.868     |         |                                                                       |           |
|                                                   |            |            |         |                            |                           | 1.828                    | 106.763                 | 0.486                           | 28.4                                                      | 106.8                  |           |                                              | 0.795                           | 46.431            |                                            |                             |           |                                                                                  |    |           |         |                                                                       |           |
| Full Depth Pavement                               | 34+078.705 | 34+082.175 | 3.470   | 1.828                      | 6.343                     | 1.828                    | 6.343                   | 0.486                           | 1.7                                                       | 6.3                    | 260       | 1.649                                        | 0.602                           | 2.089             | 2.157                                      | 6.343                       | 32        | 0.203                                                                            | 35 | 0.222     |         |                                                                       |           |
|                                                   |            |            |         |                            |                           |                          |                         |                                 |                                                           |                        |           |                                              |                                 |                   |                                            |                             |           |                                                                                  |    |           |         |                                                                       |           |
| Full Depth Pavement                               | 34+117.075 | 34+117.695 | 0.620   | 1.828                      | 1.133                     | 1.828                    | 1.133                   | 0.486                           | 0.3                                                       | 1.1                    | 260       | 0.295                                        | 0.602                           | 0.373             | 0.385                                      | 1.133                       | 32        | 0.036                                                                            | 35 | 0.040     |         |                                                                       |           |
| Rt. Shoulder                                      | 34+117.695 | 34+235.300 | 117.605 | 0.304                      | 35.752                    |                          |                         |                                 |                                                           |                        | 65        | 2.324                                        |                                 |                   | 12.156                                     | 35.752                      | 32        | 1.144                                                                            | 35 | 1.251     |         |                                                                       |           |
| Lt. Full Depth Pavement Subbase                   | 34+117.695 | 34+170.299 | 52.604  | 0.914                      | 48.080                    |                          |                         |                                 |                                                           |                        | 260       | 38.330                                       |                                 |                   | 16.347                                     | 48.080                      | 32        | 1.539                                                                            | 35 | 1.683     |         |                                                                       |           |
|                                                   |            |            |         |                            |                           | 1.828                    | 96.160                  | 1.466                           | 25.6                                                      | 96.2                   |           |                                              | 0.795 Avg.                      | 41.820            |                                            |                             |           |                                                                                  |    |           |         |                                                                       |           |
| Lt. Full Depth Pavement Subbase                   | 34+170.299 | 34+235.300 | 65.001  | 2.268 Avg.                 | 147.422                   |                          |                         |                                 |                                                           |                        | 260       | 38.330                                       |                                 |                   | 50.123                                     | 147.422                     | 32        | 4.718                                                                            | 35 | 5.160     |         |                                                                       |           |
|                                                   |            |            |         |                            |                           | 3.182                    | 206.833                 | 1.466 Avg.                      | 95.3                                                      | 206.8                  |           |                                              | 1.295 Avg.                      | 84.176            |                                            |                             |           |                                                                                  |    |           |         |                                                                       |           |
| Rt. Shoulder                                      |            |            |         | 1.195 Avg.                 | 16.104                    |                          |                         |                                 |                                                           |                        | 65        | 2.652                                        |                                 |                   | 5.475                                      | 16.104                      | 32        | 0.515                                                                            | 35 | 0.564     |         |                                                                       |           |
| Lt. Full Depth Pavement Subbase                   | 34+235.300 | 34+248.776 | 13.475  | 3.028 Avg.                 | 40.805                    |                          |                         |                                 |                                                           |                        | 260       | 10.609                                       |                                 |                   | 13.874                                     | 40.805                      | 32        | 1.306                                                                            | 35 | 1.428     |         |                                                                       |           |
|                                                   |            |            |         |                            |                           | 4.832                    | 206.833                 | 1.466 Avg.                      | 95.3                                                      | 206.8                  |           |                                              | 1.938 Avg.                      | 26.116            |                                            |                             |           |                                                                                  |    |           |         |                                                                       |           |
| Rt. Shoulder                                      |            |            |         | 2.106 Avg.                 | 2.510                     |                          |                         |                                 |                                                           |                        | 65        | 0.180                                        |                                 |                   | 0.853                                      | 2.510                       | 32        | 0.080                                                                            | 35 | 0.088     |         |                                                                       |           |
| Lt. Full Depth Pavement Subbase                   | 34+248.776 | 34+249.968 | 1.192   | 2.324 Avg.                 | 2.770                     |                          |                         |                                 |                                                           |                        | 260       | 0.720                                        |                                 |                   | 0.942                                      | 2.770                       | 32        | 0.089                                                                            | 35 | 0.097     |         |                                                                       |           |
|                                                   |            |            |         |                            |                           | 5.156                    | 206.833                 | 1.466 Avg.                      | 95.3                                                      | 206.8                  |           |                                              | 2.129 Avg.                      | 2.538             |                                            |                             |           |                                                                                  |    |           |         |                                                                       |           |
| Rt. Shoulder                                      |            |            |         | 2.130 Avg.                 | 0.707                     |                          |                         |                                 |                                                           |                        | 65        | 0.047                                        |                                 |                   | 0.240                                      | 0.707                       | 32        | 0.023                                                                            | 35 | 0.025     |         |                                                                       |           |
| Lt. Full Depth Pavement Subbase                   | 34+249.968 | 34+250.300 | 0.332   | 2.174 Avg.                 | 0.722                     |                          |                         |                                 |                                                           |                        | 260       | 0.188                                        |                                 |                   | 0.245                                      | 0.722                       | 32        | 0.023                                                                            | 35 | 0.025     |         |                                                                       |           |
|                                                   |            |            |         |                            |                           | 5.182                    | 206.833                 | 1.466 Avg.                      | 95.3                                                      | 206.8                  |           |                                              | 2.175                           | 0.722             |                                            |                             |           |                                                                                  |    |           |         |                                                                       |           |
| TOTAL CARRIED TO GENERAL SUMMARY                  |            |            |         |                            |                           |                          |                         |                                 | 884.5                                                     | 1875.2                 |           | 278.729                                      |                                 | 544.744           | 372.980                                    | 1097.001                    |           | 35.105                                                                           |    | 38.395    |         |                                                                       |           |
| BEL-7-32.276                                      |            |            |         |                            |                           |                          |                         |                                 |                                                           |                        |           |                                              |                                 |                   |                                            |                             |           |                                                                                  |    |           |         |                                                                       |           |
| 49<br>242                                         |            |            |         |                            |                           |                          |                         |                                 |                                                           |                        |           |                                              |                                 |                   |                                            |                             |           |                                                                                  |    |           |         |                                                                       |           |

MEDIAN SHOULDER AND PAVEMENT QUANTITIES

BEL-7-32.276

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242



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## MEDIAN SHOULDER AND PAVEMENT QUANTITIES

**BEL-7-32.276**

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242



⊗ Quantity represents total length of barrier or median after deduction for Inlets

CALCULATED  
WCR  
CHECKED  
SAH

CONCRETE BARRIER AND MEDIAN QUANTITIES

| PLAN SHEET NO.                 | REF. NO. | S.R. 7 STATION |            | SIDE | 612             | 622                          |                                           |                                             |        |                                             |                                             | SPECIAL |  |    |  | FOR DETAIL SEE SHEET NO. |                                    |
|--------------------------------|----------|----------------|------------|------|-----------------|------------------------------|-------------------------------------------|---------------------------------------------|--------|---------------------------------------------|---------------------------------------------|---------|--|----|--|--------------------------|------------------------------------|
|                                |          |                |            |      | CONCRETE MEDIAN | CONCRETE BARRIER TYPE B-1270 | CONCRETE BARRIER TYPE B-1270, AS PER PLAN | CONCRETE BARRIER TYPE B-1270, AS PER PLAN A |        | CONCRETE BARRIER TYPE B-1270, AS PER PLAN C | CONCRETE BARRIER TYPE B-1270, AS PER PLAN D |         |  |    |  |                          | IMPACT ATTENUATOR, G.R.E.A.T. TYPE |
|                                |          | FROM           | TO         |      | Sq. Meter       | Meter                        | Meter                                     | Meter                                       |        | Meter                                       | Meter                                       |         |  |    |  |                          | Each                               |
| 59                             | 1-M      | 32+181.761     | 32+188.031 | Rt.  | 7.088           |                              |                                           |                                             |        |                                             |                                             |         |  |    |  | 83                       |                                    |
| 59                             | 1-AT     | 32+181.761     | 32+188.005 | Rt.  |                 |                              |                                           |                                             |        |                                             |                                             | 1       |  |    |  | 83                       |                                    |
| 60                             | 2-AT     | 32+866.063     | 32+873.302 | Lt.  |                 |                              |                                           |                                             |        |                                             |                                             | 1       |  |    |  | 84                       |                                    |
|                                |          |                |            |      |                 |                              |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 59                             | 1-B      | 32+235.359     | 32+275.821 | ℄    |                 |                              | 40.462                                    |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 59                             | 2-B      | 32+275.821     | 32+283.441 | ℄    |                 |                              |                                           | 7.620                                       |        |                                             |                                             |         |  |    |  | 82                       |                                    |
| 60                             | 3-B      | 32+781.027     | 32+788.647 | ℄    |                 |                              |                                           | 7.620                                       |        |                                             |                                             |         |  |    |  | 82                       |                                    |
| 60                             | 4-B      | 32+788.647     | 33+062.771 | ℄    |                 |                              | ⊗ 249.740                                 |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 60                             | 5-B      | 33+062.771     | 33+364.066 | ℄    |                 | ⊗ 276.911                    |                                           |                                             |        |                                             |                                             |         |  |    |  | 74                       |                                    |
| 61                             | 6-B      | 33+364.066     | 33+373.210 | ℄    |                 |                              |                                           |                                             | 9.144  |                                             |                                             |         |  |    |  | 74                       |                                    |
|                                |          |                |            |      |                 |                              |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 61                             | 3-AT     | 33+373.210     | 33+381.287 | ℄    |                 |                              |                                           |                                             |        |                                             |                                             | 1       |  |    |  | 85                       |                                    |
| 61                             | 7-B      | 33+419.844     | 33+450.781 | ℄    | 28.289          |                              |                                           |                                             |        |                                             |                                             |         |  |    |  | 74                       |                                    |
|                                |          |                |            |      |                 |                              |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 61                             | 4-AT     | 33+450.781     | 33+458.858 | ℄    |                 |                              |                                           |                                             |        |                                             |                                             | 1       |  |    |  | 85                       |                                    |
|                                |          |                |            |      |                 |                              |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 61                             | 8-B      | 33+458.858     | 33+468.002 | ℄    |                 |                              |                                           |                                             | 9.144  |                                             |                                             |         |  |    |  | 74                       |                                    |
| 61                             | 9-B      | 33+468.002     | 33+553.276 | ℄    |                 | 85.274                       |                                           |                                             |        |                                             |                                             |         |  |    |  | 74                       |                                    |
| 61                             | 10-B     | 33+553.276     | 33+587.190 | ℄    |                 |                              |                                           |                                             |        | 33.914                                      |                                             |         |  |    |  | 86                       |                                    |
| 61                             | 11-B     | 33+587.190     | 33+816.779 | ℄    |                 | ⊗ 205.205                    |                                           |                                             |        |                                             |                                             |         |  |    |  | 75                       |                                    |
| 61                             | 12-B     | 33+816.779     | 33+825.923 | ℄    |                 |                              |                                           |                                             | 9.144  |                                             |                                             |         |  |    |  | 75                       |                                    |
|                                |          |                |            |      |                 |                              |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 61                             | 5-AT     | 33+825.923     | 33+834.000 | ℄    |                 |                              |                                           |                                             |        |                                             |                                             | 1       |  |    |  | 85                       |                                    |
|                                |          |                |            |      |                 |                              |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 61                             | 13-B     | 33+834.000     | 34+081.718 | ℄    | ⊗ 224.282       |                              |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 62                             | 14-B     | 34+117.532     | 34+346.000 | ℄    | 208.911         |                              |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
|                                |          |                |            |      |                 |                              |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 62                             | 6-AT     | 34+346.000     | 34+354.077 | ℄    |                 |                              |                                           |                                             |        |                                             |                                             | 1       |  |    |  | 85                       |                                    |
|                                |          |                |            |      |                 |                              |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 62                             | 15-B     | 34+354.077     | 34+363.221 | ℄    |                 |                              |                                           |                                             | 9.144  |                                             |                                             |         |  |    |  |                          |                                    |
| 62                             | 16-B     | 34+363.221     | 34+564.779 | ℄    |                 | ⊗ 195.462                    |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 62                             | 17-B     | 34+564.779     | 34+573.923 | ℄    |                 |                              |                                           |                                             | 9.144  |                                             |                                             |         |  |    |  | 76                       |                                    |
|                                |          |                |            |      |                 |                              |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 62                             | 7-AT     | 34+573.923     | 34+582.000 | ℄    |                 |                              |                                           |                                             |        |                                             |                                             | 1       |  |    |  | 76                       |                                    |
| 62                             | 8-AT     | 34+612.000     | 34+620.077 | ℄    |                 |                              |                                           |                                             |        |                                             |                                             | 1       |  |    |  | 76                       |                                    |
|                                |          |                |            |      |                 |                              |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 62                             | 18-B     | 34+620.077     | 34+629.221 | ℄    |                 |                              |                                           |                                             | 9.144  |                                             |                                             |         |  |    |  | 76                       |                                    |
| 62                             | 19-B     | 34+629.221     | 35+299.284 | ℄    |                 | ⊗ 639.583                    |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 63                             | 20-B     | 35+299.284     | 35+326.716 | ℄    |                 |                              |                                           |                                             |        | 27.432                                      |                                             |         |  |    |  | 86                       |                                    |
| 63                             | 21-B     | 35+326.716     | 35+419.779 | ℄    |                 | 93.063                       |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 64                             | 22-B     | 35+419.779     | 35+428.923 | ℄    |                 |                              |                                           |                                             | 9.144  |                                             |                                             |         |  |    |  |                          |                                    |
|                                |          |                |            |      |                 |                              |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 64                             | 9-AT     | 35+428.923     | 35+437.000 | ℄    |                 |                              |                                           |                                             |        |                                             |                                             | 1       |  |    |  | 77                       |                                    |
|                                |          |                |            |      |                 |                              |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 64                             | 23-B     | 35+437.000     | 35+684.998 | ℄    | ⊗ 218.408       |                              |                                           |                                             |        |                                             |                                             |         |  |    |  | 77                       |                                    |
| 64                             | 24-B     | 35+715.600     | 35+953.000 | ℄    | ⊗ 210.947       |                              |                                           |                                             |        |                                             |                                             |         |  |    |  | 77                       |                                    |
|                                |          |                |            |      |                 |                              |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| 64                             | 10-AT    | 35+953.000     | 35+961.077 | ℄    |                 |                              |                                           |                                             |        |                                             |                                             | 1       |  |    |  | 85                       |                                    |
|                                |          |                |            |      |                 |                              |                                           |                                             |        |                                             |                                             |         |  |    |  |                          |                                    |
| TOTALS CARRIED TO SHEET NO. 52 |          |                |            |      |                 | 897.925                      | 1495.498                                  | 290.202                                     | 15.240 |                                             | 64.008                                      | 61.346  |  | 10 |  |                          |                                    |

CONCRETE BARRIER AND MEDIAN QUANTITIES

BEL-7-32.276

51  
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| MEDIAN REMOVAL QUANTITIES        |          |                |            |      |         |            |                         |                         | Quantity represents total length after deduction for existing inlets. |  |
|----------------------------------|----------|----------------|------------|------|---------|------------|-------------------------|-------------------------|-----------------------------------------------------------------------|--|
| PLAN SHEET NO.                   | REF. NO. | S.R. 7 STATION |            | SIDE | LENGTH  | WIDTH      | 202                     |                         |                                                                       |  |
|                                  |          |                |            |      |         |            | CONCRETE MEDIAN REMOVED | CURB AND GUTTER REMOVED |                                                                       |  |
|                                  |          | FROM           | TO         |      | Meter   | Meter      | Sq. Meter               | Meter                   |                                                                       |  |
| 59                               | 1-R      | 32+179.294     | 32+188.005 | RT.  | 8.711   | 2.256 AVG. | 19.652                  |                         |                                                                       |  |
| 59                               | 2-R      | 32+235.359     | 32+283.441 | ℄    | 48.082  | 1.219      | 58.612                  |                         |                                                                       |  |
| 60                               | 3-R      | 32+781.027     | 33+082.080 | ℄    | 301.053 | 1.219      | 366.984                 |                         |                                                                       |  |
| 60                               | 4-R      | 33+082.080     | 33+205.951 | ℄    | 123.871 | 2.438 AVG. | ⊙ 293.929               | 247.742                 |                                                                       |  |
| 60                               | 5-R      | 33+205.951     | 33+244.128 | ℄    | 38.177  | 3.962      | ⊙ 134.350               | 76.354                  |                                                                       |  |
| 60                               | 6-R      | 33+244.128     | 33+320.328 | ℄    | 76.200  | 2.286 AVG. | 174.193                 | 152.400                 |                                                                       |  |
| 61                               | 7-R      | 33+320.328     | 33+382.201 | ℄    | 61.873  | 1.829      | 113.166                 |                         |                                                                       |  |
| 61                               | 8-R      | 33+419.235     | 33+450.781 | ℄    | 31.546  | 3.048 AVG. | 96.152                  | 63.092                  |                                                                       |  |
| 61                               | 9-R      | 33+450.781     | 33+944.101 | ℄    | 493.320 | 3.962      | ⊙ 1925.551              | 986.634                 |                                                                       |  |
| 61                               | 10-R     | 33+944.101     | 34+020.301 | ℄    | 76.200  | 2.286 AVG. | 174.193                 | 152.406                 |                                                                       |  |
| 62                               | 11-R     | 34+020.301     | 34+082.174 | ℄    | 61.873  | 1.829      | ⊙ 106.476               |                         |                                                                       |  |
| 62                               | 12-R     | 34+117.075     | 34+173.920 | ℄    | 56.845  | 1.829      | 103.970                 |                         |                                                                       |  |
| 62                               | 13-R     | 34+173.920     | 34+249.968 | ℄    | 76.048  | 2.286 AVG. | 173.846                 | 152.096                 |                                                                       |  |
| 62                               | 14-R     | 34+249.968     | 34+583.636 | ℄    | 333.668 | 3.962      | 1321.993                | 667.336                 |                                                                       |  |
| 62                               | 15-R     | 34+610.389     | 35+548.019 | ℄    | 937.630 | 3.962      | ⊙ 3678.662              | 1875.260                |                                                                       |  |
| 64                               | 16-R     | 35+548.019     | 35+624.219 | ℄    | 76.200  | 2.286 AVG. | 174.193                 | 152.400                 |                                                                       |  |
| 64                               | 17-R     | 35+624.219     | 35+685.456 | ℄    | 61.237  | 1.829      | ⊙ 106.427               | 122.474                 |                                                                       |  |
| 64                               | 18-R     | 35+715.144     | 35+777.017 | ℄    | 61.873  | 1.829      | ⊙ 109.821               |                         |                                                                       |  |
| 64                               | 19-R     | 35+777.017     | 35+853.217 | ℄    | 76.200  | 2.286 AVG. | ⊙ 165.832               | 152.400                 |                                                                       |  |
| 64                               | 20-R     | 35+853.217     | 36+368.299 | ℄    | 515.082 | 3.962      | ⊙ 2028.679              | 1030.164                |                                                                       |  |
| 65                               | 21-R     | 36+406.277     | 36+683.142 | ℄    | 276.865 | 3.962      | ⊙ 1072.787              | 553.730                 |                                                                       |  |
| 66                               | 22-R     | 36+799.118     | 36+834.551 | ℄    | 35.433  | 3.962      | 140.386                 | 70.866                  |                                                                       |  |
| 66                               | 23-R     | 36+834.551     | 36+910.751 | ℄    | 76.200  | 2.286 AVG. | 174.193                 | 152.400                 |                                                                       |  |
| 66                               | 24-R     | 36+910.751     | 36+926.906 | ℄    | 16.155  | 1.829      | 29.547                  |                         |                                                                       |  |
| 66                               | 25-R     | 36+955.862     | 36+987.409 | ℄    | 31.547  | 2.286 AVG. | 72.116                  | 63.094                  |                                                                       |  |
| 66                               | 26-R     | 36+987.409     | 37+213.079 | ℄    | 225.670 | 3.962      | 894.105                 | 451.340                 |                                                                       |  |
| 66                               | 27-R     | 37+213.079     | 37+289.279 | ℄    | 76.200  | 2.286 AVG. | ⊙ 167.225               | 152.400                 |                                                                       |  |
| 66                               | 28-R     | 37+289.279     | 37+305.435 | ℄    | 16.155  | 1.829      | ⊙ 26.202                |                         |                                                                       |  |
| 66                               | 29-R     | 37+335.030     | 37+366.577 | ℄    | 31.547  | 2.286 AVG. | 72.116                  | 63.094                  |                                                                       |  |
| 66                               | 30-R     | 37+366.577     | 37+567.748 | ℄    | 201.171 | 3.962      | ⊙ 784.964               | 402.342                 |                                                                       |  |
| 67                               | 31-R     | 37+567.748     | 37+643.948 | ℄    | 76.200  | 2.286 AVG. | ⊙ 167.225               | 152.400                 |                                                                       |  |
| 67                               | 32-R     | 37+643.948     | 37+660.104 | ℄    | 16.156  | 1.829      | 29.549                  |                         |                                                                       |  |
| 67                               | 33-R     | 37+687.534     | 37+719.081 | ℄    | 31.547  | 2.286 AVG. | ⊙ 67.935                | 63.094                  |                                                                       |  |
| 67                               | 34-R     | 37+719.081     | 37+915.782 | ℄    | 196.701 | 3.962      | ⊙ 769.668               | 393.402                 |                                                                       |  |
| 67                               | 35-R     | 37+915.782     | 37+991.982 | ℄    | 76.200  | 2.286 AVG. | ⊙ 168.619               | 152.400                 |                                                                       |  |
| 67                               | 36-R     | 37+991.982     | 38+008.136 | ℄    | 16.154  | 1.829      | ⊙ 26.201                |                         |                                                                       |  |
| 67                               | 37-R     | 38+035.537     | 38+067.084 | ℄    | 31.547  | 2.286 AVG. | 72.116                  | 63.094                  |                                                                       |  |
| 67                               | 38-R     | 38+067.084     | 38+190.650 | ℄    | 123.566 | 3.962      | 489.568                 | 247.132                 |                                                                       |  |
| 66                               | 39-R     | 38+190.650     | 38+220.000 | ℄    | 29.350  | 4.270      | 125.325                 |                         |                                                                       |  |
| 60                               | 55-R     | 32+866.063     | 32+941.332 | LT.  | 76.200  | 2.286 AVG. | 174.193                 | 152.400                 |                                                                       |  |
| 62                               | 58-R     | AETNA ST.      |            | ℄    | 16.154  | 1.829      | 29.546                  |                         |                                                                       |  |
| 60                               | 70-R     | 32+899.939     | 32+950.423 | RT.  | 50.484  | 2.185 AVG. | 110.308                 | 152.400                 |                                                                       |  |
| TOTAL CARRIED TO GENERAL SUMMARY |          |                |            |      |         |            | 16990.575               | 9116.346                |                                                                       |  |

| CONCRETE BARRIER AND MEDIAN QUANTITIES |          |                |            |      |                 |                              |                                           |                                             |                                             |                                             |                                             |                                     |                                   | Quantity represents total length of barrier or median after deduction for inlets |    |
|----------------------------------------|----------|----------------|------------|------|-----------------|------------------------------|-------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|-------------------------------------|-----------------------------------|----------------------------------------------------------------------------------|----|
| PLAN SHEET NO.                         | REF. NO. | S.R. 7 STATION |            | SIDE | 612             | 622                          |                                           |                                             |                                             |                                             |                                             |                                     | SPECIAL                           | FOR DETAIL SEE SHEET NO.                                                         |    |
|                                        |          |                |            |      | CONCRETE MEDIAN | CONCRETE BARRIER TYPE B-1270 | CONCRETE BARRIER TYPE B-1270, AS PER PLAN | CONCRETE BARRIER TYPE B-1270, AS PER PLAN A | CONCRETE BARRIER TYPE B-1270, AS PER PLAN B | CONCRETE BARRIER TYPE B-1270, AS PER PLAN C | CONCRETE BARRIER TYPE B-1270, AS PER PLAN D | CONCRETE BARRIER TYPE B, REINFORCED | IMPACT ATTENUATOR G.R.E.A.T. TYPE |                                                                                  |    |
|                                        |          | FROM           | TO         |      | Sq. Meter       | Meter                        | Meter                                     | Meter                                       | Meter                                       | Meter                                       | Meter                                       | Meter                               | Each                              |                                                                                  |    |
| 64                                     | 25-B     | 35+961.077     | 35+970.221 | ℄    |                 |                              |                                           |                                             |                                             |                                             | 9.144                                       |                                     |                                   |                                                                                  | 77 |
| 64                                     | 26-B     | 35+970.221     | 35+986.284 | ℄    |                 | ⊗ 9.967                      |                                           |                                             |                                             |                                             |                                             |                                     |                                   |                                                                                  |    |
| 64                                     | 27-B     | 35+986.284     | 36+013.716 | ℄    |                 |                              |                                           |                                             |                                             |                                             |                                             | 27.432                              |                                   |                                                                                  | 86 |
| 64                                     | 28-B     | 36+013.716     | 36+144.249 | ℄    |                 | 130.533                      |                                           |                                             |                                             |                                             |                                             |                                     |                                   |                                                                                  |    |
| 64                                     | 29-B     | 36+144.249     | 36+183.873 | ℄    |                 |                              |                                           |                                             |                                             |                                             |                                             | 39.624                              |                                   |                                                                                  | 86 |
| 64                                     | 30-B     | 36+183.873     | 36+360.679 | ℄    |                 | 176.806                      |                                           |                                             |                                             |                                             |                                             |                                     |                                   |                                                                                  |    |
| 65                                     | 31-B     | 36+360.679     | 36+368.299 | ℄    |                 |                              |                                           |                                             | 7.620                                       |                                             |                                             |                                     |                                   |                                                                                  | 82 |
| 65                                     | 32-B     | 36+406.277     | 36+413.897 | ℄    |                 |                              |                                           |                                             | 7.620                                       |                                             |                                             |                                     |                                   |                                                                                  | 82 |
| 65                                     | 33-B     | 36+413.897     | 36+521.284 | ℄    |                 | ⊗ 101.291                    |                                           |                                             |                                             |                                             |                                             |                                     |                                   |                                                                                  |    |
| 65                                     | 34-B     | 36+521.284     | 36+548.716 | ℄    |                 |                              |                                           |                                             |                                             |                                             |                                             | 27.432                              |                                   |                                                                                  | 86 |
| 65                                     | 35-B     | 36+548.716     | 36+656.776 | ℄    |                 | ⊗ 95.868                     |                                           |                                             |                                             |                                             |                                             |                                     |                                   |                                                                                  |    |
| 65                                     | 36-B     | 36+656.776     | 36+665.920 | ℄    |                 |                              |                                           |                                             |                                             | 9.144                                       |                                             |                                     |                                   |                                                                                  | 78 |
| 65                                     | 11-AT    | 36+665.920     | 36+673.997 | ℄    |                 |                              |                                           |                                             |                                             |                                             |                                             |                                     | 1                                 |                                                                                  | 85 |
| 65                                     | 37-B     | 36+673.997     | 36+683.142 | ℄    | 8.358           |                              |                                           |                                             |                                             |                                             |                                             |                                     |                                   |                                                                                  |    |
| 64                                     | 38-B     | 36+799.118     | 36+926.448 | ℄    | ⊗ 113.086       |                              |                                           |                                             |                                             |                                             |                                             |                                     |                                   |                                                                                  | 78 |
| 64                                     | 39-B     | 36+956.471     | 37+304.976 | ℄    | ⊗ 313.099       |                              |                                           |                                             |                                             |                                             |                                             |                                     |                                   |                                                                                  | 78 |
| 64                                     | 40-B     | 37+335.640     | 37+659.645 | ℄    | ⊗ 287.909       |                              |                                           |                                             |                                             |                                             |                                             |                                     |                                   |                                                                                  | 79 |
| 67                                     | 41-B     | 37+688.144     | 38+007.679 | ℄    | ⊗ 285.492       |                              |                                           |                                             |                                             |                                             |                                             |                                     |                                   |                                                                                  | 79 |
| 67                                     | 42-B     | 38+036.097     | 38+068.608 | ℄    | 29.728          |                              |                                           |                                             |                                             |                                             |                                             |                                     |                                   |                                                                                  | 76 |
| 67                                     | 12-AT    | 38+068.608     | 38+076.685 | ℄    |                 |                              |                                           |                                             |                                             |                                             |                                             |                                     | 1                                 |                                                                                  | 85 |
| 67                                     | 43-B     | 38+076.685     | 38+085.829 | ℄    |                 |                              |                                           |                                             |                                             | 9.144                                       |                                             |                                     |                                   |                                                                                  | 76 |
| 67                                     | 44-B     | 38+085.829     | 38+186.383 | ℄    |                 | ⊗ 94.458                     |                                           |                                             |                                             |                                             |                                             |                                     |                                   |                                                                                  | 76 |
| 68                                     | 45-B     | 38+186.383     | 38+190.650 | ℄    |                 |                              |                                           |                                             |                                             |                                             |                                             | 4.267                               |                                   |                                                                                  | 87 |
| 68                                     | 46-B     | 38+190.650     | 38+220.000 | ℄    | 76.040          |                              |                                           |                                             |                                             |                                             |                                             |                                     |                                   |                                                                                  | 76 |
| SUB-TOTAL THIS SHEET                   |          |                |            |      | 1113.712        | 608.923                      |                                           |                                             | 15.240                                      | 27.432                                      | 94.488                                      | 4.267                               | 2                                 |                                                                                  |    |
| SUB-TOTAL FROM SHEET NO. 51            |          |                |            |      | 897.925         | 1495.498                     | 290.202                                   | 15.240                                      |                                             | 64.008                                      | 61.346                                      |                                     | 10                                |                                                                                  |    |
| TOTAL CARRIED TO GENERAL SUMMARY       |          |                |            |      | 2011.637        | 2104.421                     | 290.202                                   | 15.240                                      | 15.240                                      | 91.44                                       | 155.834                                     | 4.267                               | 12                                |                                                                                  |    |

CONCRETE BARRIER AND MEDIAN QUANTITIES

BEL-7-32.276



| LINEAR GRADING                   |                   |            |  |                |  |                           |
|----------------------------------|-------------------|------------|--|----------------|--|---------------------------|
| PLAN SHEET NO.                   | LOCATION          |            |  | 203            |  | COMMENTS                  |
|                                  |                   |            |  | LINEAR GRADING |  |                           |
|                                  | FROM              | TO         |  | METER          |  |                           |
|                                  | NORTHBOUND S.R. 7 |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
| 60-62                            | 32+949.808        | 34+114.698 |  | 1165.160       |  |                           |
| 62                               | 34+114.698        | 34+568.631 |  | 453.933        |  | Includes Aetna St. East   |
| 62-64                            | 34+595.864        | 35+730.388 |  | 1948.523       |  |                           |
| 64-65                            | 35+730.388        | 36+366.193 |  | 637.657        |  | Includes Hanover St. East |
| 65                               | 36+404.171        | 36+683.142 |  | 278.273        |  |                           |
| 66-68                            | 36+799.118        | 38+190.650 |  | 1399.109       |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
| 60                               | 32+637.612        | 32+739.556 |  | 110.677        |  | Ramp D Lt.                |
| 60                               | 32+662.245        | 32+949.808 |  | 321.070        |  | Ramp D Rt.                |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
| SOUTHBOUND S.R. 7                |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
| 59                               | 32+169.272        | 32+218.266 |  | 48.994         |  |                           |
| 60-61                            | 32+940.728        | 33+410.658 |  | 486.927        |  | Includes Lincoln Ave.     |
| 61-62                            | 33+410.658        | 34+131.035 |  | 721.732        |  | Includes Aetna St. West   |
| 62                               | 34+131.035        | 34+600.068 |  | 467.427        |  |                           |
| 62-64                            | 34+617.225        | 35+733.736 |  | 1112.518       |  | Includes Hanover St. West |
| 64-65                            | 35+733.736        | 36+370.404 |  | 634.837        |  |                           |
| 65                               | 36+408.382        | 36+683.142 |  | 275.520        |  |                           |
| 66                               | 36+799.118        | 37+116.288 |  | 160.129        |  | Includes Fifth St.        |
| 66                               | 37+116.288        | 37+339.098 |  | 385.731        |  | Includes Mackey Ave.      |
| 66-67                            | 37+339.098        | 37+716.185 |  | 353.758        |  | Includes Jeanette Ave.    |
| 67                               | 37+716.185        | 38+037.999 |  | 327.076        |  | Includes Hill St.         |
| 67-68                            | 38+037.999        | 38+190.650 |  | 152.651        |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
|                                  |                   |            |  |                |  |                           |
| TOTAL CARRIED TO GENERAL SUMMARY |                   |            |  | 11441.702      |  |                           |

[illegible]

**BEL-7-32.276**



GUARDRAIL SUMMARY

| ITEM 413 – SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS |     |       |
|----------------------------------------------------------------|-----|-------|
| MAINLINE                                                       |     |       |
| Sta. 32+788.647 to Sta. 33+062.771 = 274.124m                  |     |       |
| 14.630m x 2 Cuts/Joint = 29m/Joint                             |     |       |
| 274.124m ÷ 18.288m = 15 joints                                 |     |       |
| 15 Joints x 29m =                                              | 435 | Meter |
| RAMP C                                                         |     |       |
| Sta. 32+751.519 to Sta. 32+874.220 = 122.701m                  |     |       |
| Sta. 32+874.220 to Sta. 32+940.728 = 66.508m                   |     |       |
| 7.924m x 2 Cuts/Joint = 16m/Joint                              |     |       |
| 5.994m x 2 Cuts/ Joint = 12m/Joint                             |     |       |
| 122.701m ÷ 18.288 = 7 Joints                                   |     |       |
| 66.508m ÷ 18.288 = 4 Joints                                    |     |       |
| 7 Joints x 16m =                                               | 112 |       |
| 4 Joints x 12m =                                               | 48  |       |
|                                                                | 160 | Meter |
| RAMP D                                                         |     |       |
| Sta. 32+637.348 to Sta. 32+770 = 132.652                       |     |       |
| Sta. 32+770 to Sta. 32+895.008 = 125.008                       |     |       |
| Sta. 32+895.008 to Sta. 32+949.808 = 54.800m                   |     |       |
| 7.924m x 2 Cuts/Joint = 16m/Joint                              |     |       |
| 5.486m x 2 Cuts/Joint = 11m/Joint                              |     |       |
| 5.029m x 2 Cuts/ Joint = 10m/Joint                             |     |       |
| 132.652m ÷ 18.288 = 7 joints                                   |     |       |
| 125.008m ÷ 18.288 = 7 Joints                                   |     |       |
| 54.800m ÷ 18.288 = 3 Joints                                    |     |       |
| 7 Joints x 16m =                                               | 112 |       |
| 7 Joints x 11m =                                               | 77  |       |
| 3 Joints x 10m =                                               | 30  |       |
|                                                                | 219 | Meter |
| TOTAL CARRIED TO THE GENERAL SUMMARY = 814 Meter               |     |       |

| PLAN SHEET NO.                    | REF. NO. | STATION<br>( ± ) |            | SIDE  | 202               |                                  | 606               |                                   |                       |     |      |                                |     |      |                                                  |   |
|-----------------------------------|----------|------------------|------------|-------|-------------------|----------------------------------|-------------------|-----------------------------------|-----------------------|-----|------|--------------------------------|-----|------|--------------------------------------------------|---|
|                                   |          |                  |            |       | GUARDRAIL REMOVED | GUARDRAIL REMOVED BARRIER DESIGN | GUARDRAIL, TYPE 5 | GUARDRAIL, BARRIER DESIGN, TYPE 5 | ANCHOR ASSEMBLY, TYPE |     |      | BRIDGE TERMINAL ASSEMBLY, TYPE |     |      | BRIDGE TERMINAL ASSEMBLY, TYPE 1, BARRIER DESIGN |   |
|                                   |          |                  |            |       |                   |                                  |                   |                                   | E                     | A   | T    | 1                              | 2   |      |                                                  |   |
|                                   |          | FROM             | TO         |       |                   |                                  |                   |                                   | EA.                   | EA. | EA.  | EA.                            | EA. | EACH |                                                  |   |
| S.R. 7                            |          | Meter            | Meter      | Meter | Meter             | EA.                              | EA.               | EA.                               | EA.                   | EA. | EACH |                                |     |      |                                                  |   |
|                                   |          |                  |            |       |                   |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 59                                | 1-GR     | 32+172.546       | 32+218.266 | LT.   | 45.762            |                                  | 41.910            |                                   |                       |     |      | 1                              |     | 1    |                                                  |   |
| 59                                | 40-R     | 32+179.595       | 32+188.031 | RT.   | 8.436             |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 59                                | 41-R     | 32+235.359       | 32+283.441 | CL    |                   | 48.082                           |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 60                                | 42-R     | 32+781.027       | 33+252.196 | CL    |                   | 471.169                          |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 60                                | 43-R     | 32+866.069       | 32+896.477 | LT.   | 30.408            |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 60                                | 44-R     | 32+974.119       | 33+011.897 | LT.   | 37.778            |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
|                                   |          |                  |            |       |                   |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 60                                | 2-GR     | 32+949.808       | 33+376.528 | RT.   | 425.683           |                                  | 422.910           |                                   |                       |     |      | 1                              |     |      |                                                  |   |
| 61                                | 45-R     | 33+443.691       | 33+944.101 | CL    |                   | 500.410                          |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 62                                | 3-GR     | 34+011.663       | 34+068.813 | LT.   | 53.845            |                                  | 38.100            |                                   | 1                     |     |      | 1                              |     |      |                                                  |   |
| 62                                | 46-R     | 34+250.000       | 34+578.205 | CL    |                   | 328.205                          |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 62                                | 4-GR     | 34+339.083       | 34+552.443 | RT.   | 210.109           |                                  | 194.310           |                                   | 1                     |     |      | 1                              |     |      |                                                  |   |
| 62                                | 5-GR     | 34+580.334       | 34+946.094 | RT.   | 365.624           |                                  | 346.710           |                                   | 1                     |     |      | 1                              |     |      |                                                  |   |
|                                   |          |                  |            |       |                   |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 62                                | 47-R     | 34+615.689       | 35+549.095 | CL    |                   | 933.406                          |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 63                                | 6-GR     | 35+181.031       | 35+676.331 | RT.   | 506.730           |                                  | 487.680           |                                   | 1                     |     |      | 1                              |     |      |                                                  |   |
| 64                                | 7-GR     | 35+710.785       | 36+362.238 | RT.   | 657.952           |                                  | 653.415           |                                   |                       |     |      | 1                              | 1   |      |                                                  |   |
| 64&97                             | 8-GR     | 35+709.442       | 35+791.879 | LT.   | 100.041           |                                  | 76.200            |                                   | 1                     | 1   |      | 1                              |     |      |                                                  |   |
| 64                                | 48-R     | 35+851.593       | 36+368.299 | CL    |                   | 516.706                          |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
|                                   |          |                  |            |       |                   |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 65                                | 9-GR     | 36+252.676       | 36+366.976 | LT.   | 110.730           |                                  | 110.490           |                                   |                       |     |      | 1                              |     | 1    |                                                  |   |
| 65                                | 49-R     | 36+406.277       | 36+683.142 | CL    |                   | 276.865                          |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 65                                | 10-GR    | 36+407.575       | 36+683.783 | RT.   | 275.509           |                                  | 276.208           |                                   |                       |     |      |                                | 1   | 1    |                                                  |   |
| 65                                | 11-GR    | 36+412.979       | 36+452.984 | LT.   | 37.780            |                                  | 24.765            |                                   | 1                     |     |      |                                | 1   |      |                                                  |   |
| 65                                | 12-GR    | 36+561.832       | 36+683.752 | LT.   | 121.692           |                                  | 118.110           |                                   |                       |     |      | 1                              |     | 1    |                                                  |   |
|                                   |          |                  |            |       |                   |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 66                                | 50-R     | 36+799.118       | 36+842.083 | CL    |                   | 42.965                           |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 66                                | 13-GR    | 36+798.477       | 36+857.532 | LT.   | 57.389            |                                  | 43.815            |                                   | 1                     |     |      |                                | 1   |      |                                                  |   |
| 66                                | 14-GR    | 36+798.508       | 38+192.968 | RT.   | 1387.921          |                                  | 1394.460          |                                   |                       |     |      |                                |     | 1    |                                                  |   |
| 66                                | 51-R     | 36+979.876       | 37+219.969 | CL    |                   | 240.093                          |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
|                                   |          |                  |            |       |                   |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 66                                | 52-R     | 37+358.379       | 37+579.376 | CL    |                   | 220.997                          |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 67                                | 53-R     | 37+711.310       | 37+925.027 | CL    |                   | 213.717                          |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
|                                   |          |                  |            |       |                   |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 67                                | 54-R     | 38+059.650       | 38+220.000 | CL    |                   | 160.350                          |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
|                                   |          |                  |            |       |                   |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 68                                | 15-GR    | 38+190.650       | 38+220.000 | CL    |                   |                                  |                   | 29.350                            |                       |     |      |                                |     |      | 1                                                |   |
|                                   |          |                  |            |       |                   |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| RAMP D                            |          |                  |            |       |                   |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| 60                                | 16-GR    | 32+637.612       | 32+787.057 | LT.   | 106.280           |                                  | 95.250            |                                   |                       | 1   |      | 1                              |     |      |                                                  |   |
| 60                                | 17-GR    | 32+664.058       | 32+949.808 | RT.   | 285.702           |                                  | 278.130           |                                   |                       | 1   |      |                                |     |      |                                                  |   |
|                                   |          |                  |            |       |                   |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
|                                   |          |                  |            |       |                   |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
|                                   |          |                  |            |       |                   |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
|                                   |          |                  |            |       |                   |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
|                                   |          |                  |            |       |                   |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
|                                   |          |                  |            |       |                   |                                  |                   |                                   |                       |     |      |                                |     |      |                                                  |   |
| TOTALS CARRIED TO GENERAL SUMMARY |          |                  |            |       | 4825.371          | 3952.965                         | 4602.463          | 29.350                            | 7                     | 3   |      | 11                             | 4   | 5    |                                                  | 1 |

MISCELLANEOUS ROADWAY QUANTITIES

BEL-7-32.276

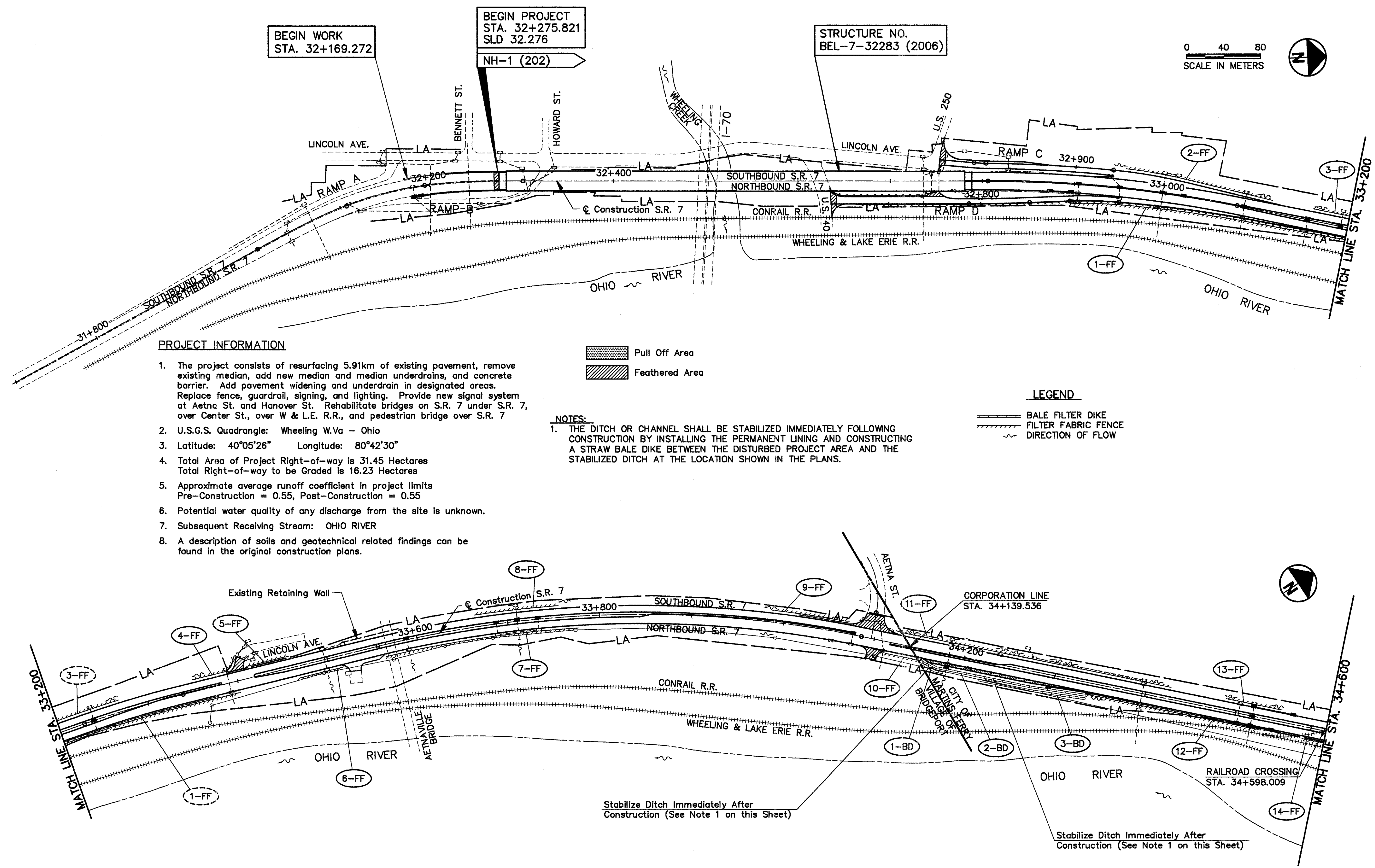






# STORM WATER POLLUTION PREVENTION PLAN

BEL-7-32.276



## PROJECT INFORMATION

- The project consists of resurfacing 5.91km of existing pavement, remove existing median, add new median and median underdrains, and concrete barrier. Add pavement widening and underdrain in designated areas. Replace fence, guardrail, signing, and lighting. Provide new signal system at Aetna St. and Hanover St. Rehabilitate bridges on S.R. 7 under S.R. 7, over Center St., over W & L.E. R.R., and pedestrian bridge over S.R. 7.
- U.S.G.S. Quadrangle: Wheeling W.Va - Ohio
- Latitude: 40°05'26" Longitude: 80°42'30"
- Total Area of Project Right-of-way is 31.45 Hectares  
Total Right-of-way to be Graded is 16.23 Hectares
- Approximate average runoff coefficient in project limits  
Pre-Construction = 0.55, Post-Construction = 0.55
- Potential water quality of any discharge from the site is unknown.
- Subsequent Receiving Stream: OHIO RIVER
- A description of soils and geotechnical related findings can be found in the original construction plans.

- Pull Off Area
- Feathered Area

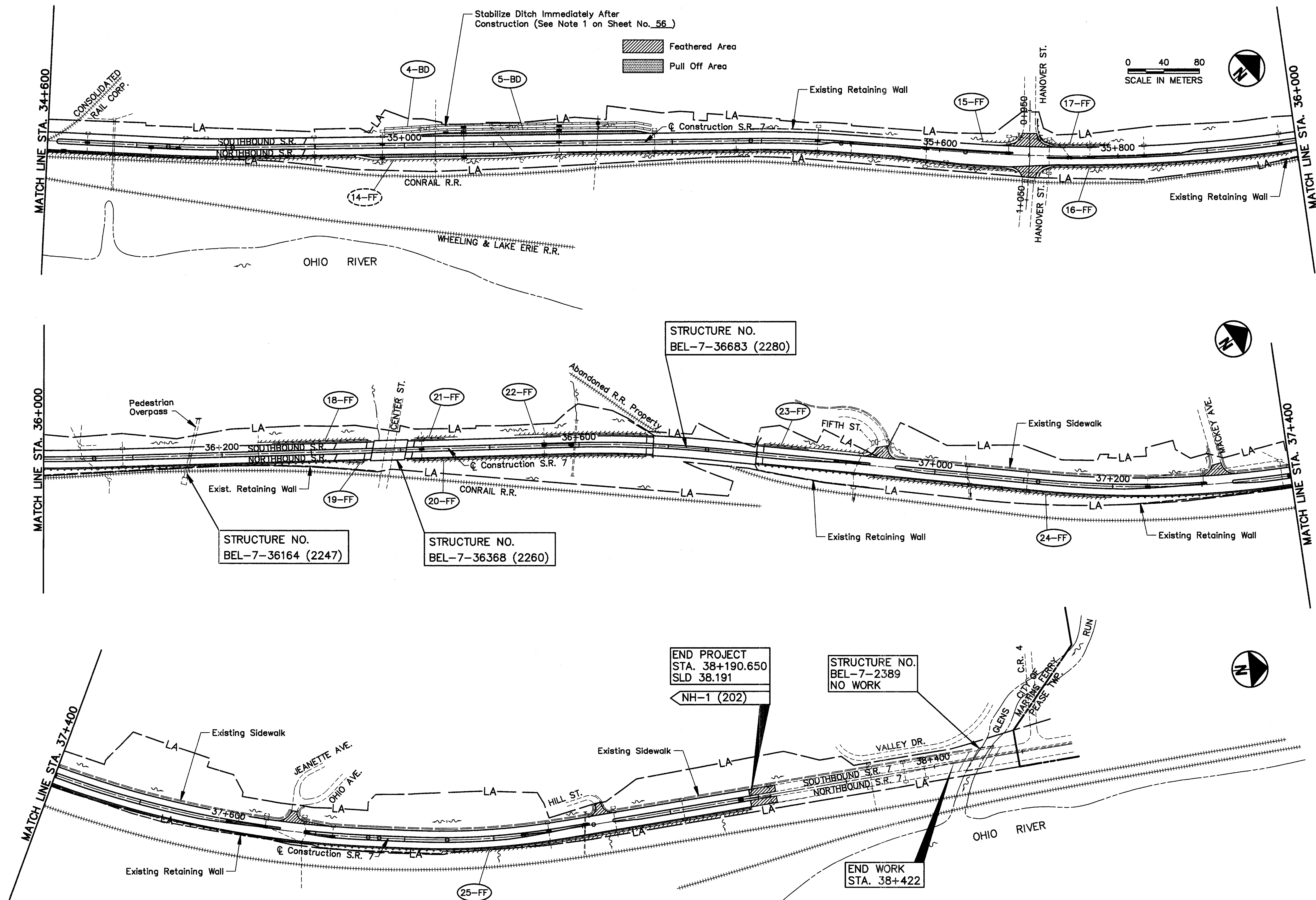
## NOTES:

- THE DITCH OR CHANNEL SHALL BE STABILIZED IMMEDIATELY FOLLOWING CONSTRUCTION BY INSTALLING THE PERMANENT LINING AND CONSTRUCTING A STRAW BALE DIKE BETWEEN THE DISTURBED PROJECT AREA AND THE STABILIZED DITCH AT THE LOCATION SHOWN IN THE PLANS.

## LEGEND

- BALE FILTER DIKE
- FILTER FABRIC FENCE
- DIRECTION OF FLOW

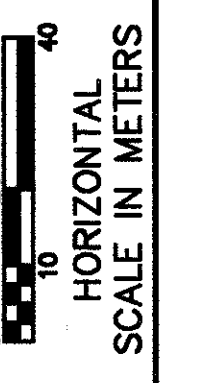








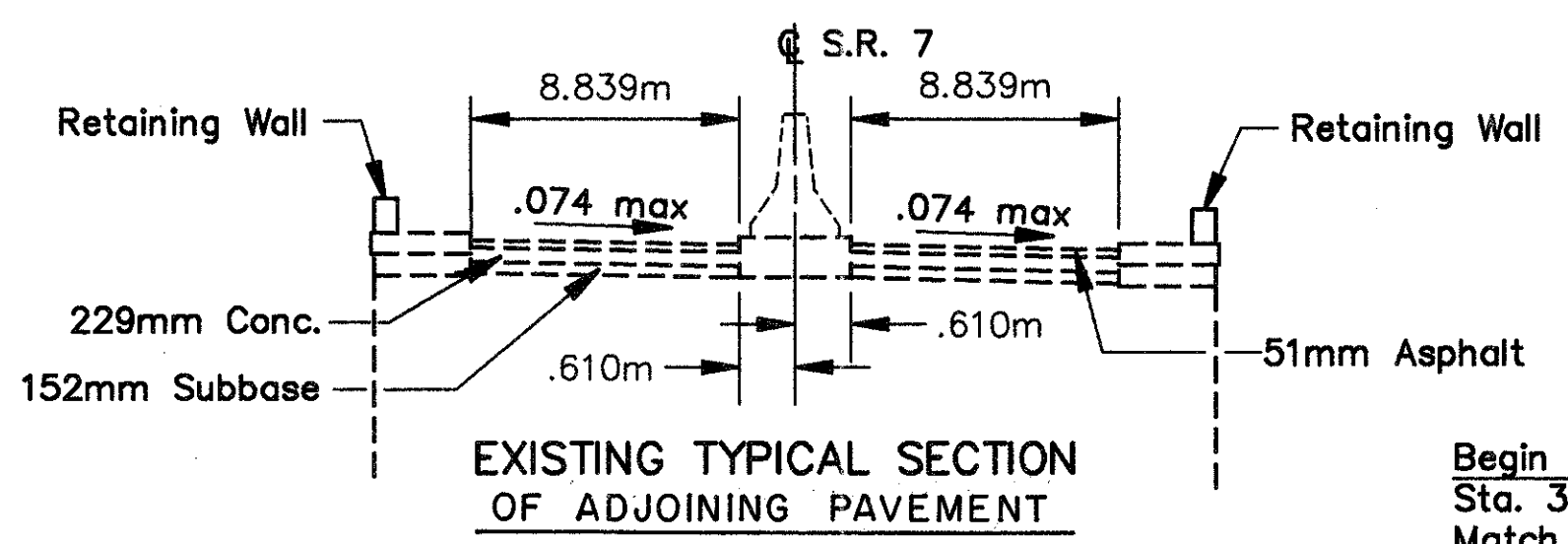
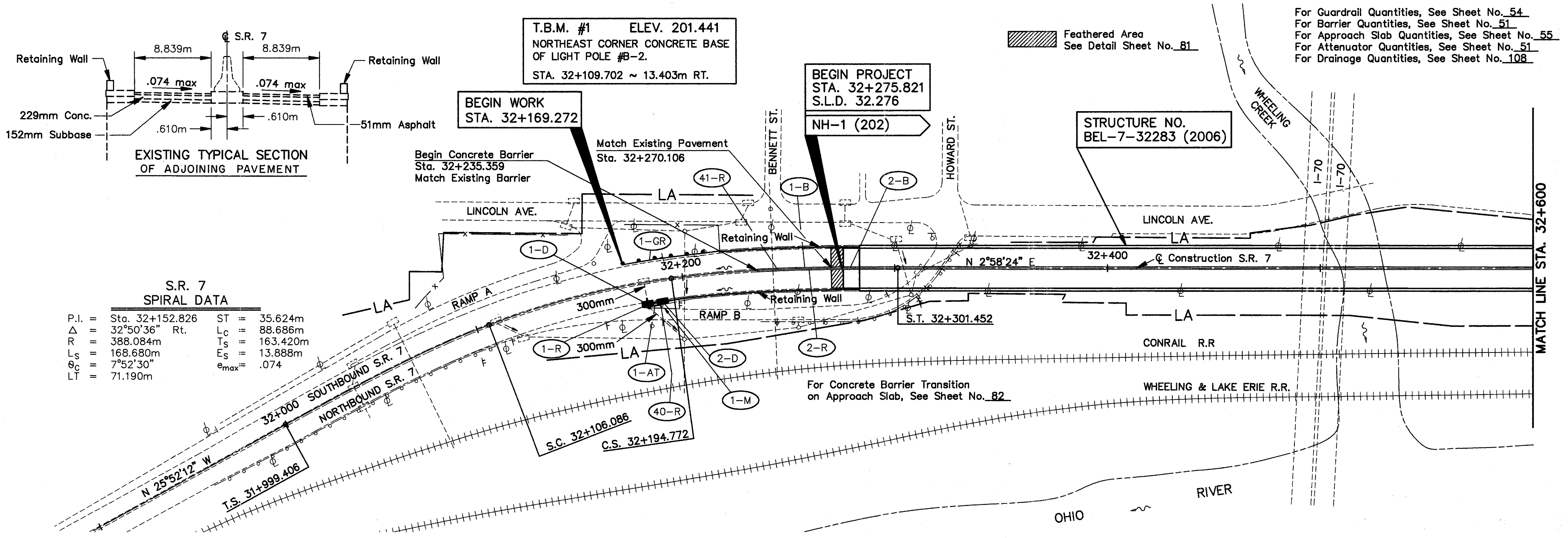




CALCULATED  
SAH  
CHECKED  
WCR

PLAN SHEET STA. 32+169.272 TO 32+600

BEL-7-32.276



S.R. 7  
SPIRAL DATA

|        |                 |        |          |
|--------|-----------------|--------|----------|
| P.I. = | Sta. 32+152.826 | ST =   | 35.624m  |
| Δ =    | 32°50'36" Rt.   | Lc =   | 88.686m  |
| R =    | 388.084m        | Ts =   | 163.420m |
| Ls =   | 168.680m        | Es =   | 13.888m  |
| θc =   | 7°52'30"        | emax = | .074     |
| LT =   | 71.190m         |        |          |

For Guardrail Quantities, See Sheet No. 54  
For Barrier Quantities, See Sheet No. 51  
For Approach Slab Quantities, See Sheet No. 55  
For Attenuator Quantities, See Sheet No. 51  
For Drainage Quantities, See Sheet No. 108

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0 10 20 30 40  
HORIZONTAL  
SCALE IN METERS

CALCULATED  
SAH  
CHECKED  
WCR

PLAN SHEET STA. 32+600 TO STA. 33+300

BEL-7-32.276

60  
242

T.B.M. #2 ELEV. 200.931  
SOUTHEAST CORNER CONCRETE BASE  
OF LIGHT POLE #B-14.  
STA. 32+620.778 ~ 20.392m RT.

RAMP C  
CURVE DATA  
P.I. = Sta. 32+795.762  
 $\Delta$  = 4°22'05" Lt.  
R = 172.361m  
T = 6.573m  
L = 13.140m  
E = 0.125m  
e<sub>max</sub> = None

For Concrete Barrier Transition  
on Approach Slab, See Sheet No. 82

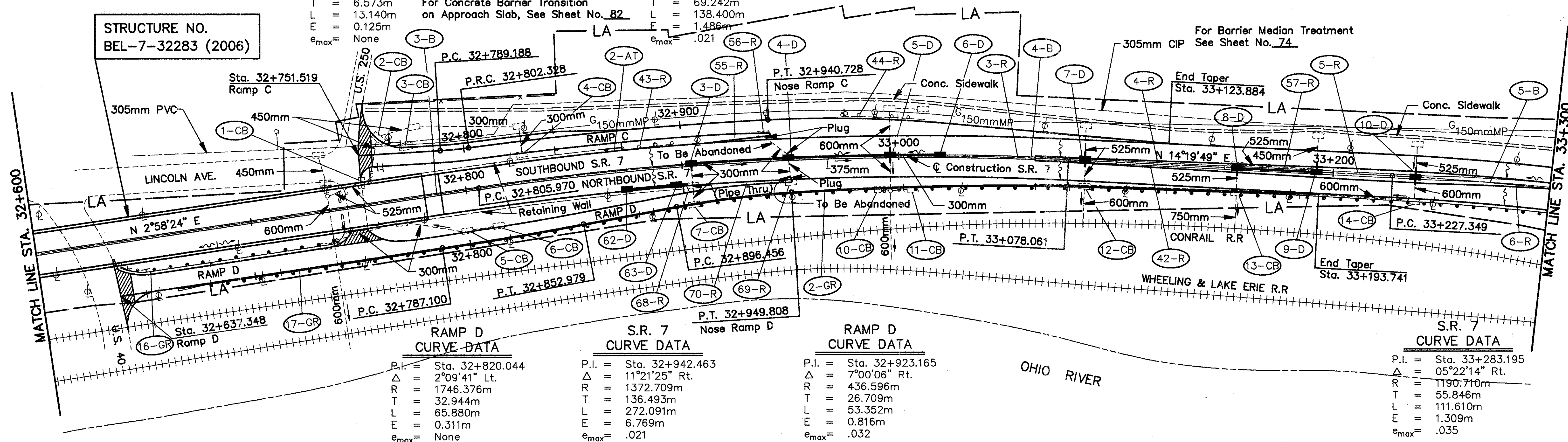
RAMP C  
CURVE DATA  
P.I. = Sta. 32+871.571  
 $\Delta$  = 4°55'09" Rt.  
R = 1612.038m  
T = 69.242m  
L = 138.400m  
E = 1.486m  
e<sub>max</sub> = .021

T.B.M. #3 ELEV. 202.211  
NORTHEAST CORNER CONCRETE BASE  
OF LIGHT POLE #A-28.  
STA. 32+889.448 ~ 21.997m LT.

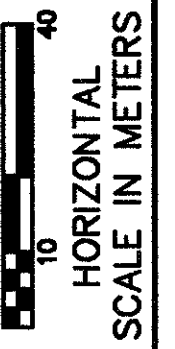
T.B.M. #4 ELEV. 202.346  
NORTHEAST CORNER CONCRETE BASE  
OF LIGHT POLE #A-32.  
STA. 33+143.446 ~ 12.759m LT.

For Guardrail Quantities, See Sheet No. 54  
For Barrier Quantities, See Sheet No. 51  
For Approach Slab Quantities, See Sheet No. 55  
For Attenuator Quantities, See Sheet No. 51  
For Drainage Quantities, See Sheet No. 108

STRUCTURE NO.  
BEL-7-32283 (2006)







CALCULATED  
SAH  
CHECKED  
WCR

PLAN SHEET STA. 33+300 TO STA. 34+000

BEL-7-32.276

61  
242

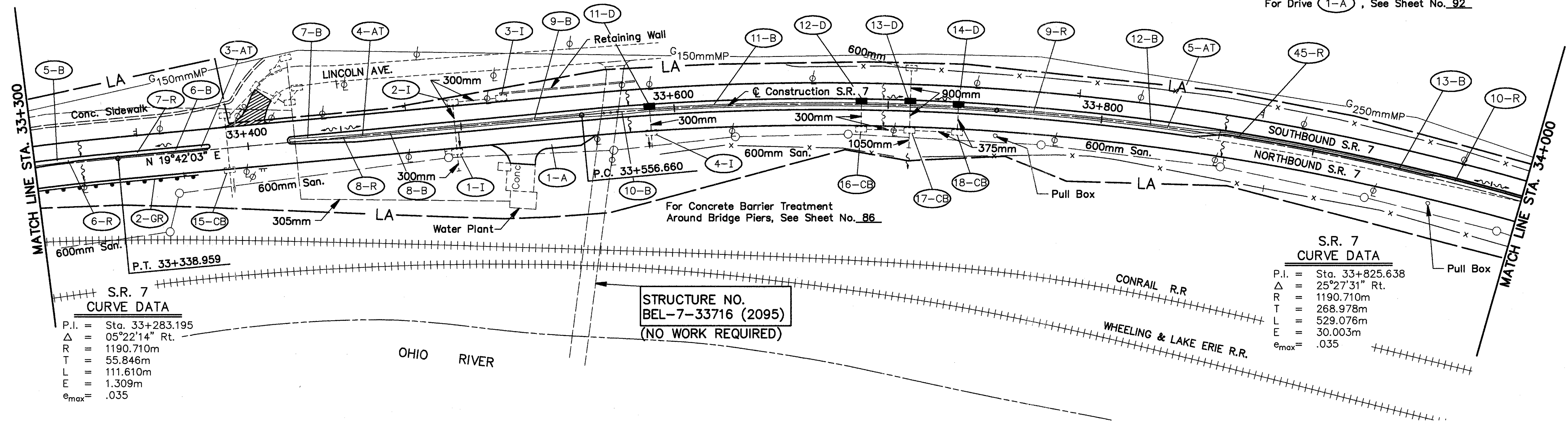
For Barrier Median Treatment  
See Sheet No. 74

Feathered Area  
See Detail Sheet No. 81  
For Lincoln Ave. Intersection Detail, See Sheet No. 94

T.B.M. #5 ELEV. 203.311  
NORTHEAST CORNER CONCRETE BASE  
OF LIGHT POLE #J-6  
STA. 33+474.339 ~ 11.877m RT.

T.B.M. #6 ELEV. 202.461  
SOUTHEAST CORNER CONCRETE BASE  
OF LIGHT POLE #G-6  
STA. 33+855.288 ~ 15.073m RT.

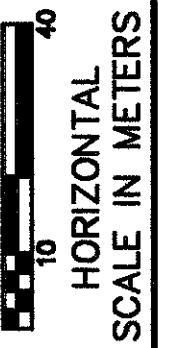
For Guardrail Quantities, See Sheet No. 54  
For Barrier Quantities, See Sheet No. 51  
For Attenuator Quantities, See Sheet No. 51  
For Drainage Quantities, See Sheet No. 108  
For Drive 1-A, See Sheet No. 92



S.R. 7  
CURVE DATA  
P.I. = Sta. 33+283.195  
 $\Delta$  = 05°22'14" Rt.  
R = 1190.710m  
T = 55.846m  
L = 111.610m  
E = 1.309m  
 $e_{max}$  = .035

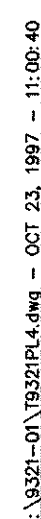
S.R. 7  
CURVE DATA  
P.I. = Sta. 33+825.638  
 $\Delta$  = 25°27'31" Rt.  
R = 1190.710m  
T = 268.978m  
L = 529.076m  
E = 30.003m  
 $e_{max}$  = .035





|     |         |     |
|-----|---------|-----|
| SAH | CHECKED | WCR |
|-----|---------|-----|

**BEL-7-32.276**

$$\frac{62}{242}$$


W. E. QUICKSALL AND ASSOCIATES INC. CONSULTING ENGINEERS





0 10 20  
HORIZONTAL  
SCALE IN METERS

CALCULATED  
SAH  
CHECKED  
WCR

PLAN SHEET STA. 34+700 TO STA. 35+400

BEL-7-32.276

63  
242

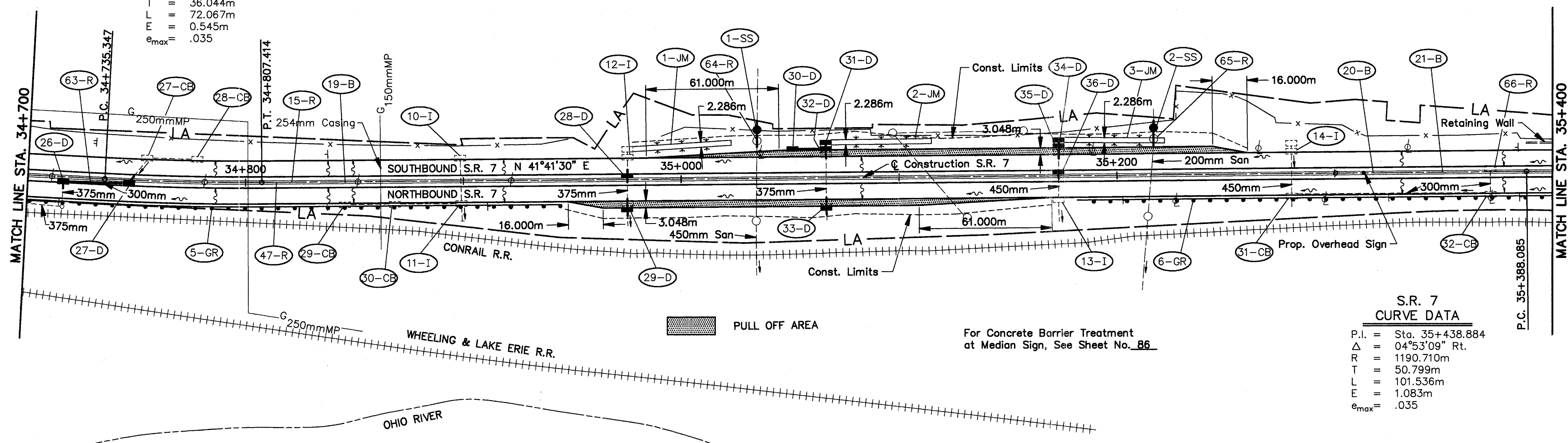
S.R. 7  
CURVE DATA

P.I. = Sta. 34+771.391  
 $\Delta$  =  $03^{\circ}28'04''$  Lt.  
R = 1190.710m  
T = 36.044m  
L = 72.067m  
E = 0.545m  
 $e_{max}$  = .035

T.B.M. #10 ELEV. 202.641  
TOP OF NORTHWEST BOLT OF SIGN  
POLE.  
STA. 34+910.981 ~ 11.747m RT.

T.B.M. #11 ELEV. 203.781  
NORTHWEST CORNER CONCRETE BASE  
OF LIGHT POLE #A-6  
STA. 35+265.060 ~ 11.901m LT.

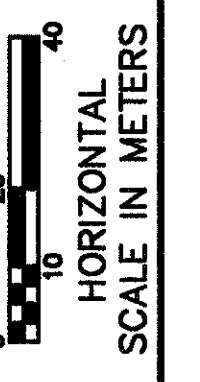
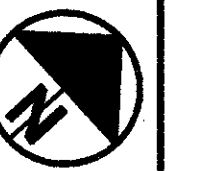
For Guardrail Quantities, See Sheet No. 54  
For Barrier Quantities, See Sheet No. 51  
For Drainage Quantities, See Sheet No. 109  
For Pull Off Area Cross Sections, See Sheet No. 70 to 73  
For Pull Off Area Stations and Quantities, See Sheet No. 45



S.R. 7  
CURVE DATA

P.I. = Sta. 35+438.884  
 $\Delta$  =  $04^{\circ}53'09''$  Rt.  
R = 1190.710m  
T = 50.799m  
L = 101.536m  
E = 1.083m  
 $e_{max}$  = .035





CALCULATED  
SAH  
CHECKED  
WCR

PLAN SHEET STA. 35+400 TO STA. 36+100

BEL-7-32.276

64  
242

T.B.M. #12 ELEV. 204.341  
SOUTHEAST CORNER CONCRETE BASE  
OF LIGHT POLE #C-3.  
STA. 35+485.758 ~ 11.812m LT.

T.B.M. #13 ELEV. 203.136  
SOUTHWEST CORNER CONCRETE BASE  
OF SIGNAL POLE AT SOUTHWEST  
CORNER OF HANOVER ST. AND S.R. 7.  
STA. 35+681.403 ~ 15.273m LT.

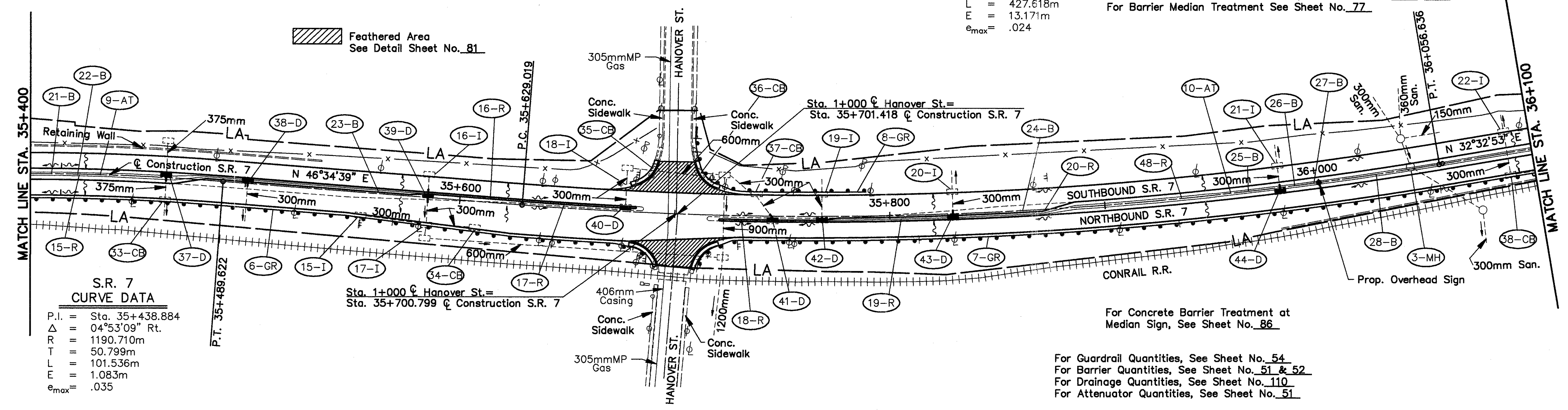
S.R. 7  
CURVE DATA  
P.I. = Sta. 35+843.902  
 $\Delta$  = 14°01'46" Lt.  
R = 1746.376m  
T = 214.884m  
L = 427.618m  
E = 13.171m  
 $e_{max}$  = .024

T.B.M. #14 ELEV. 204.701  
SOUTHWEST CORNER CONCRETE BASE  
OF LIGHT POLE #C-11.  
STA. 36+019.914 ~ 11.958m LT.

For Hanover St. Intersection Details, See Sheet No's. 97 & 98  
For Barrier Median Treatment See Sheet No. 77

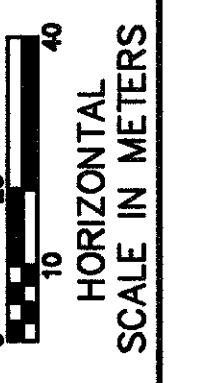
For Concrete Barrier Treatment at  
Median Sign, See Sheet No. 86

For Guardrail Quantities, See Sheet No. 54  
For Barrier Quantities, See Sheet No. 51 & 52  
For Drainage Quantities, See Sheet No. 110  
For Attenuator Quantities, See Sheet No. 51



S.R. 7  
CURVE DATA  
P.I. = Sta. 35+438.884  
 $\Delta$  = 04°53'09" Rt.  
R = 1190.710m  
T = 50.799m  
L = 101.536m  
E = 1.083m  
 $e_{max}$  = .035

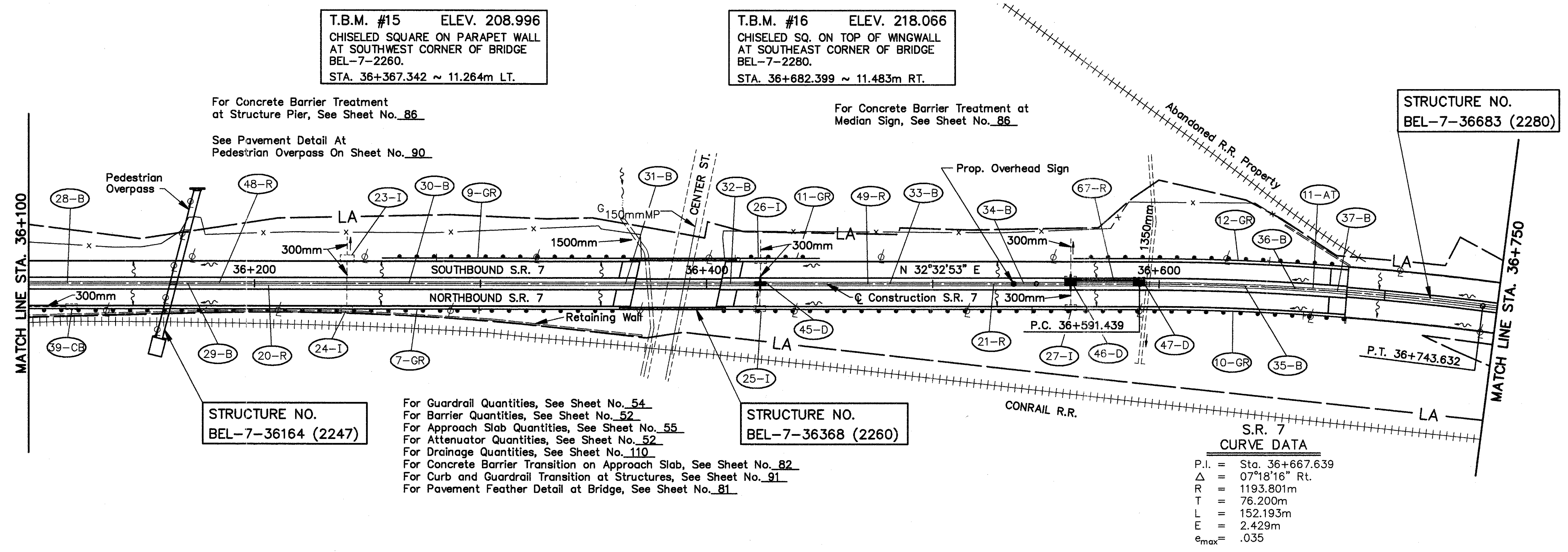




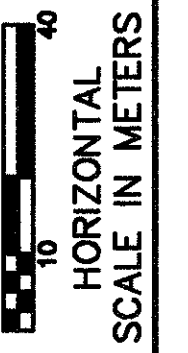
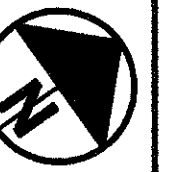
CALCULATED  
SAH  
CHECKED  
WCR

PLAN SHEET STA. 36+100 TO STA. 36+750

BEL-7-32.276







CALCULATED  
SAH  
CHECKED  
WCR

PLAN SHEET STA. 36+750 TO STA. 37+450

BEL-7-32.276

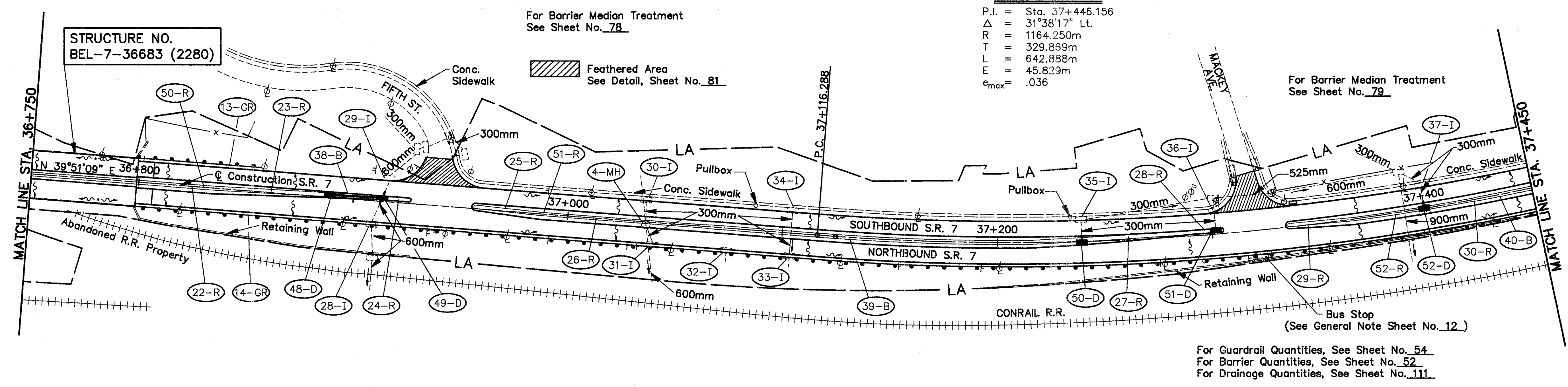
66  
242

T.B.M. #17 ELEV. 213.836  
SOUTHEAST CORNER CONCRETE BASE  
OF LIGHT POLE #E-5.  
STA. 37+048.895 ~ 12.111m RT.

T.B.M. #18 ELEV. 206.741  
CHISELED SQ. ON TOP OF RETAINING  
WALL BESIDE LIGHT POLE #F-2.  
STA. 37+429.682 ~ 12.918m RT.

For Fifth St. Intersection Detail, See Sheet No. 99  
For Mackey Ave. Intersection Detail, See Sheet No. 100

S.R. 7  
CURVE DATA  
P.I. = Sta. 37+446.156  
 $\Delta$  =  $31^{\circ}38'17''$  Lt.  
R = 1164.250m  
T = 329.869m  
L = 642.888m  
E = 45.829m  
 $e_{max}$  = .036



For Barrier Median Treatment  
See Sheet No. 78

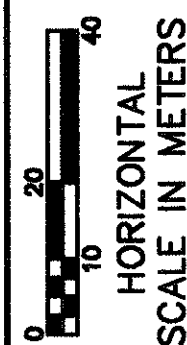
Feathered Area  
See Detail, Sheet No. 81

For Barrier Median Treatment  
See Sheet No. 79

For Guardrail Quantities, See Sheet No. 54  
For Barrier Quantities, See Sheet No. 52  
For Drainage Quantities, See Sheet No. 111

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CALCULATED  
SAH  
CHECKED  
WCR

PLAN SHEET STA. 37+450 TO STA. 38+100

BEL-7-32.276

67  
242

### S.R. 7 CURVE DATA

P.I. = Sta. 37+446.156  
 $\Delta$  =  $31^{\circ}38'17''$  Lt.  
R = 1164.250m  
T = 329.869m  
L = 642.888m  
E = 45.829m  
 $e_{max}$  = .036

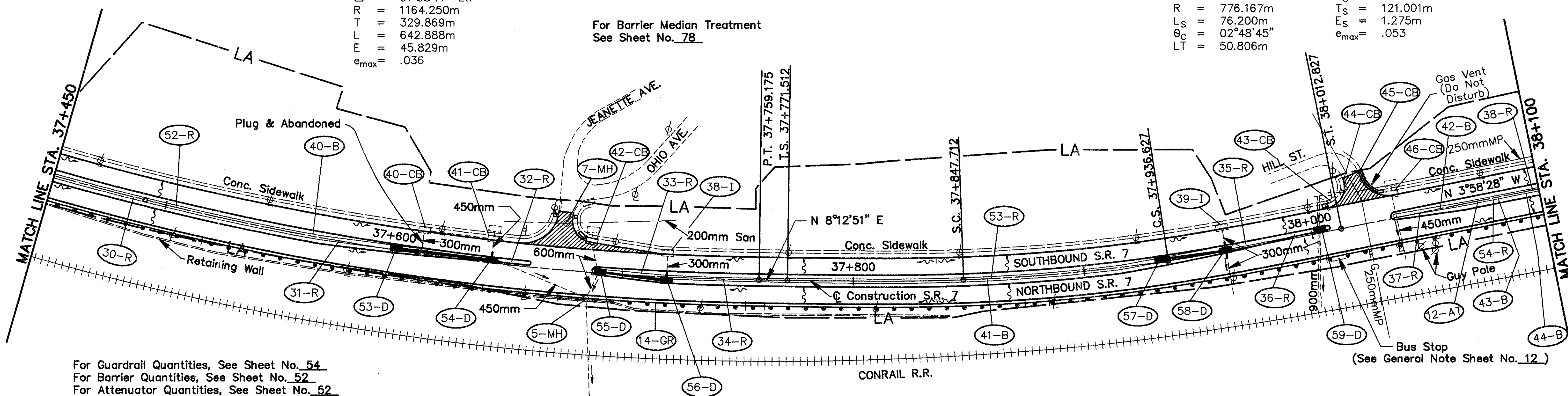
 Feathered Area  
See Detail, Sheet No. 81

For Barrier Median Treatment  
See Sheet No. 78

T.B.M. #19 ELEV. 203.416  
CHISELED SQ. ON TOP OF RETAINING  
WALL BELOW LIGHT POLE #F-8.  
STA. 37+809.701 ~ 15.830m RT.

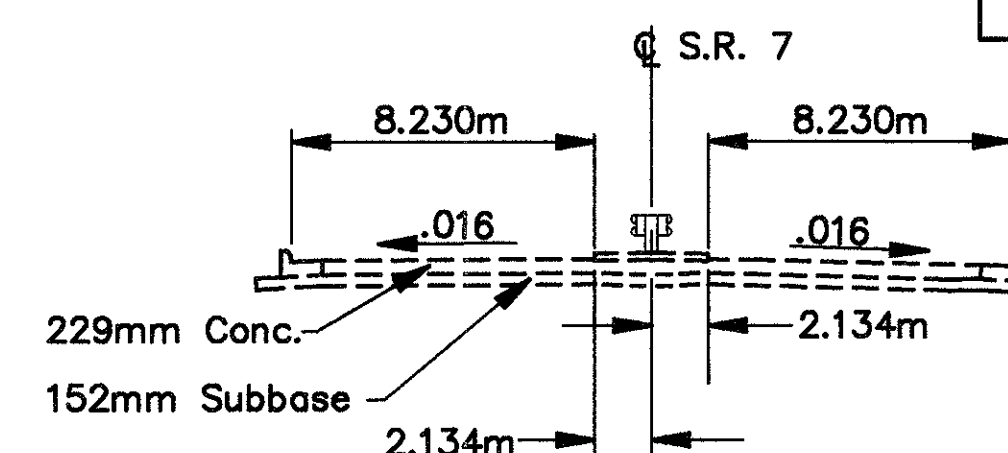
### S.R. 7 SPIRAL DATA

P.I. = Sta. 37+892.513 ST = 25.406m  
 $\Delta$  =  $06^{\circ}33'49''$  Lt.  $L_c$  = 88.915m  
R = 776.167m  $T_s$  = 121.001m  
 $L_s$  = 76.200m  $E_s$  = 1.275m  
 $\theta_{sc}$  =  $02^{\circ}48'45''$   $e_{max}$  = .053  
LT = 50.806m



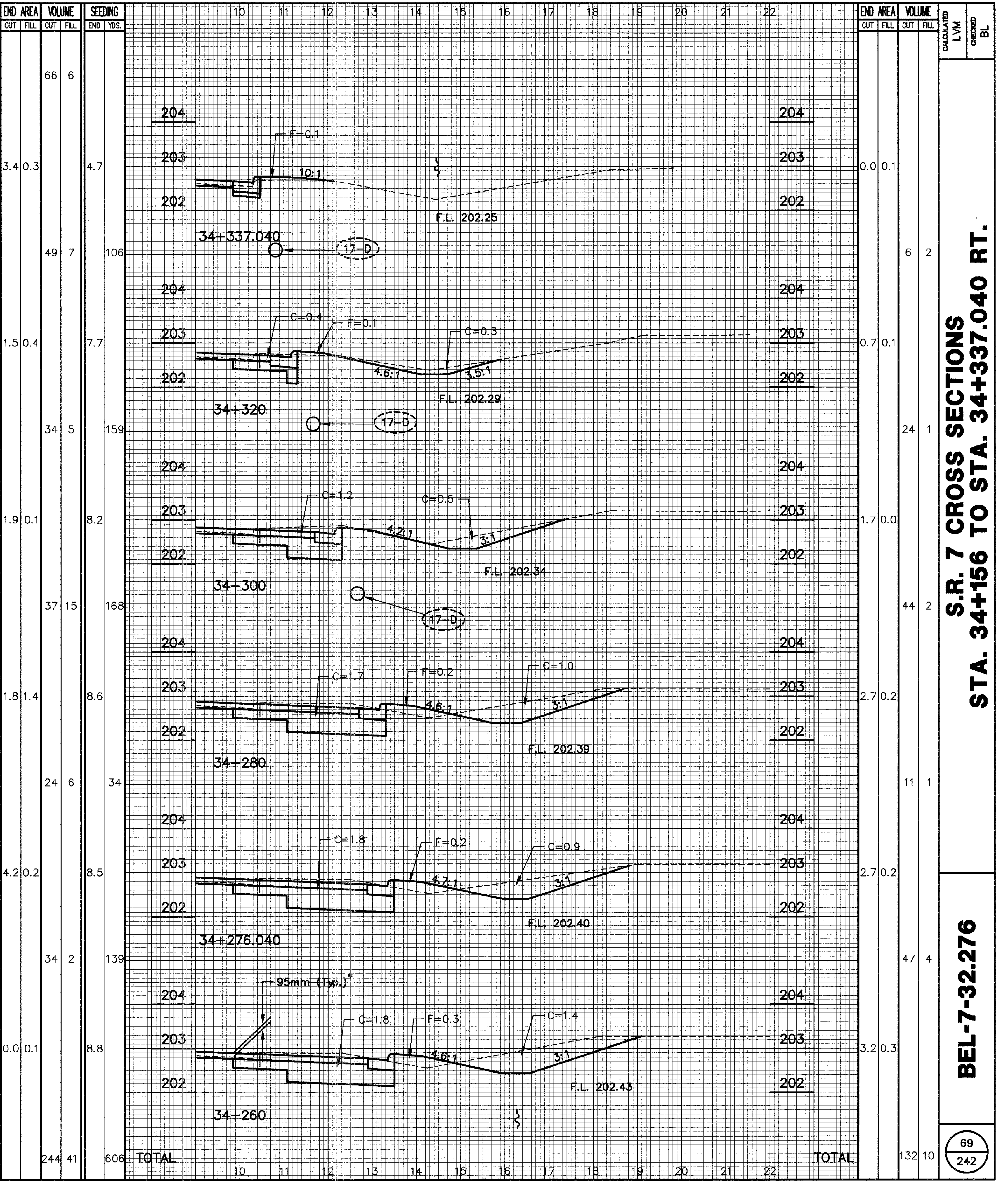
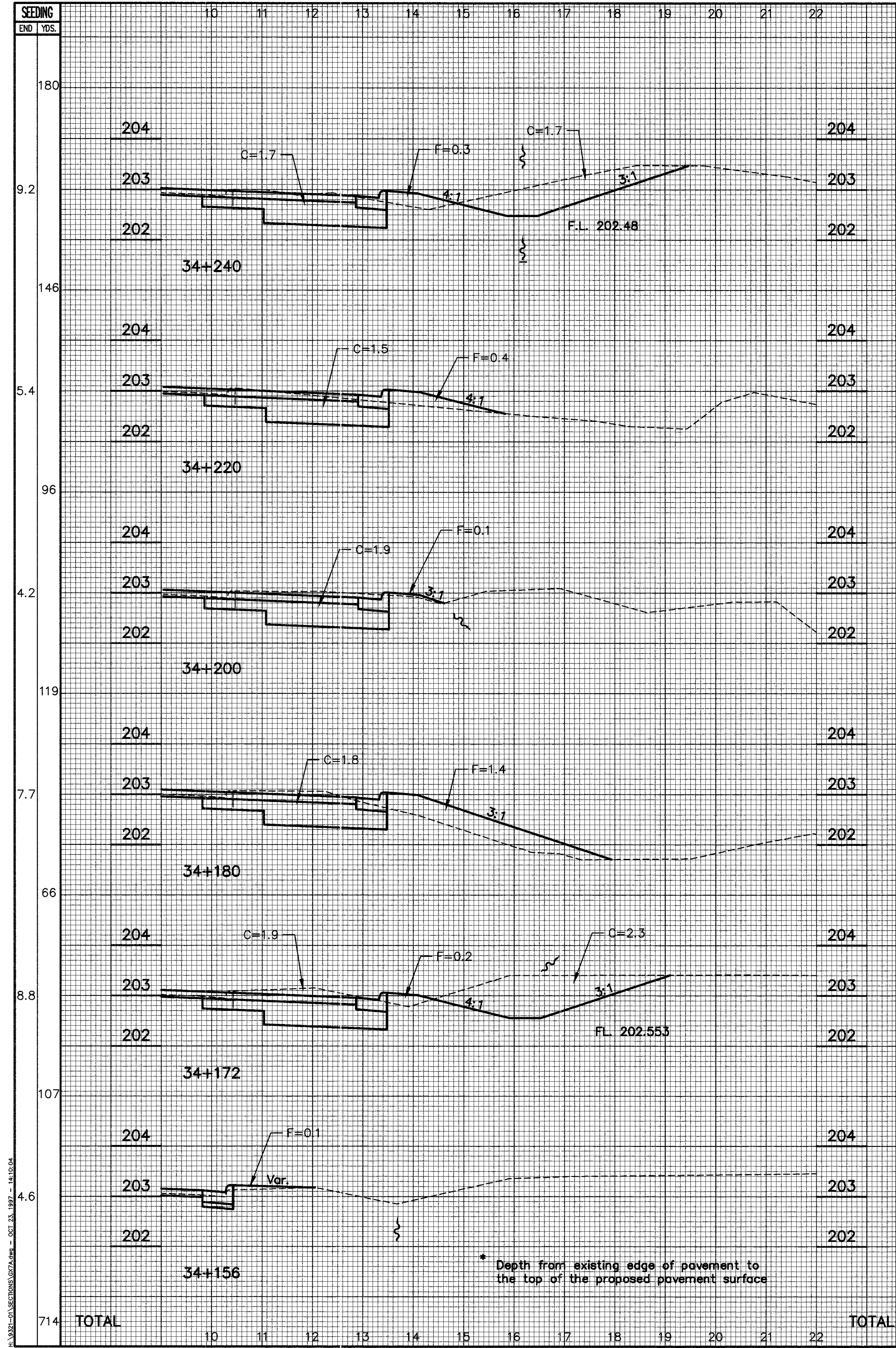
For Guardrail Quantities, See Sheet No. 54  
For Barrier Quantities, See Sheet No. 52  
For Attenuator Quantities, See Sheet No. 52  
For Drainage Quantities, See Sheet No. 111  
For Jeanette Ave. Intersection Detail, See Sheet No. 101  
For Hill St. Intersection Detail, See Sheet No. 102





For Guardrail Quantities, See Sheet No. 54  
For Barrier Quantities, See Sheet No. 52  
For Drainage Quantities, See Sheet No. 111

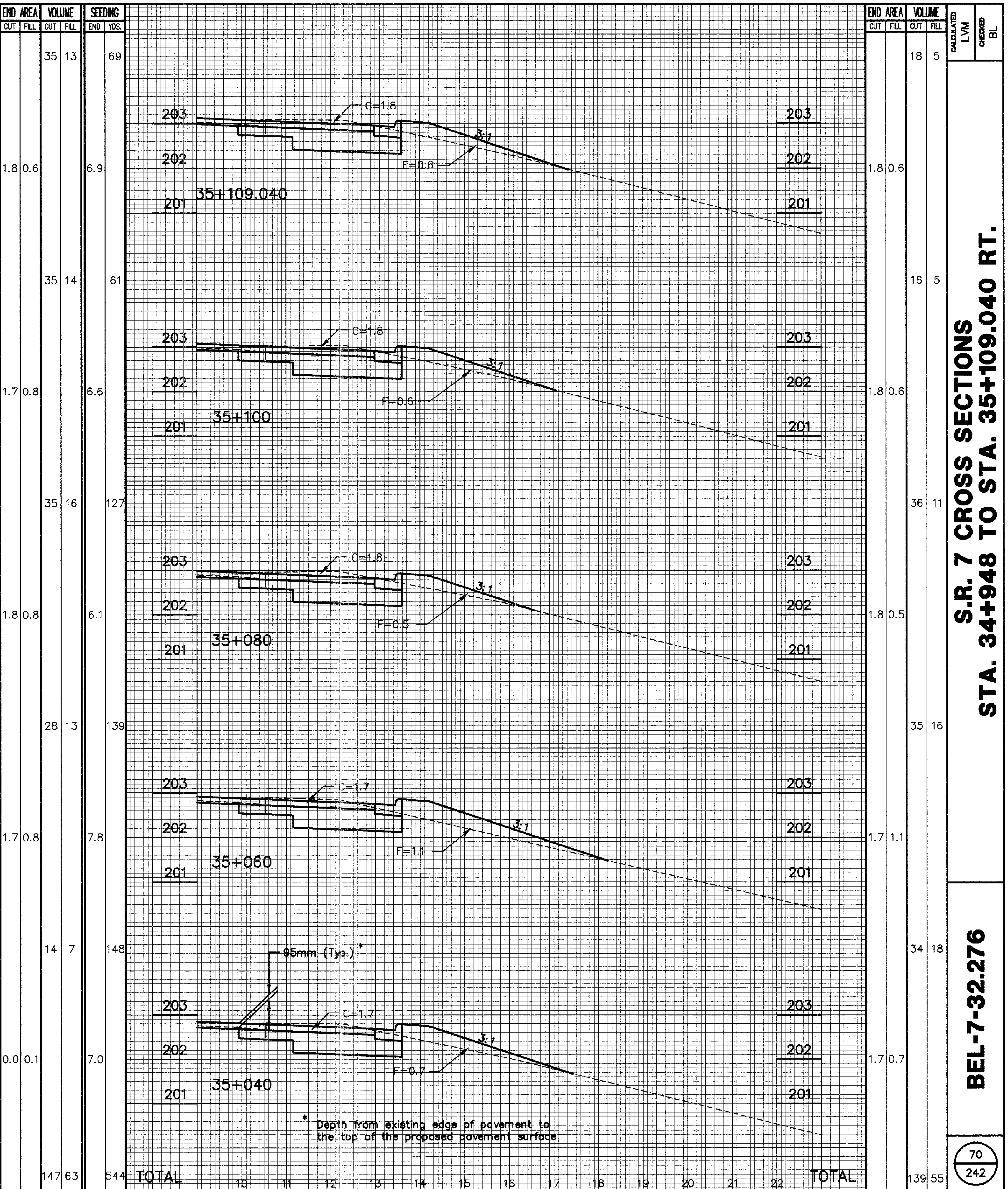
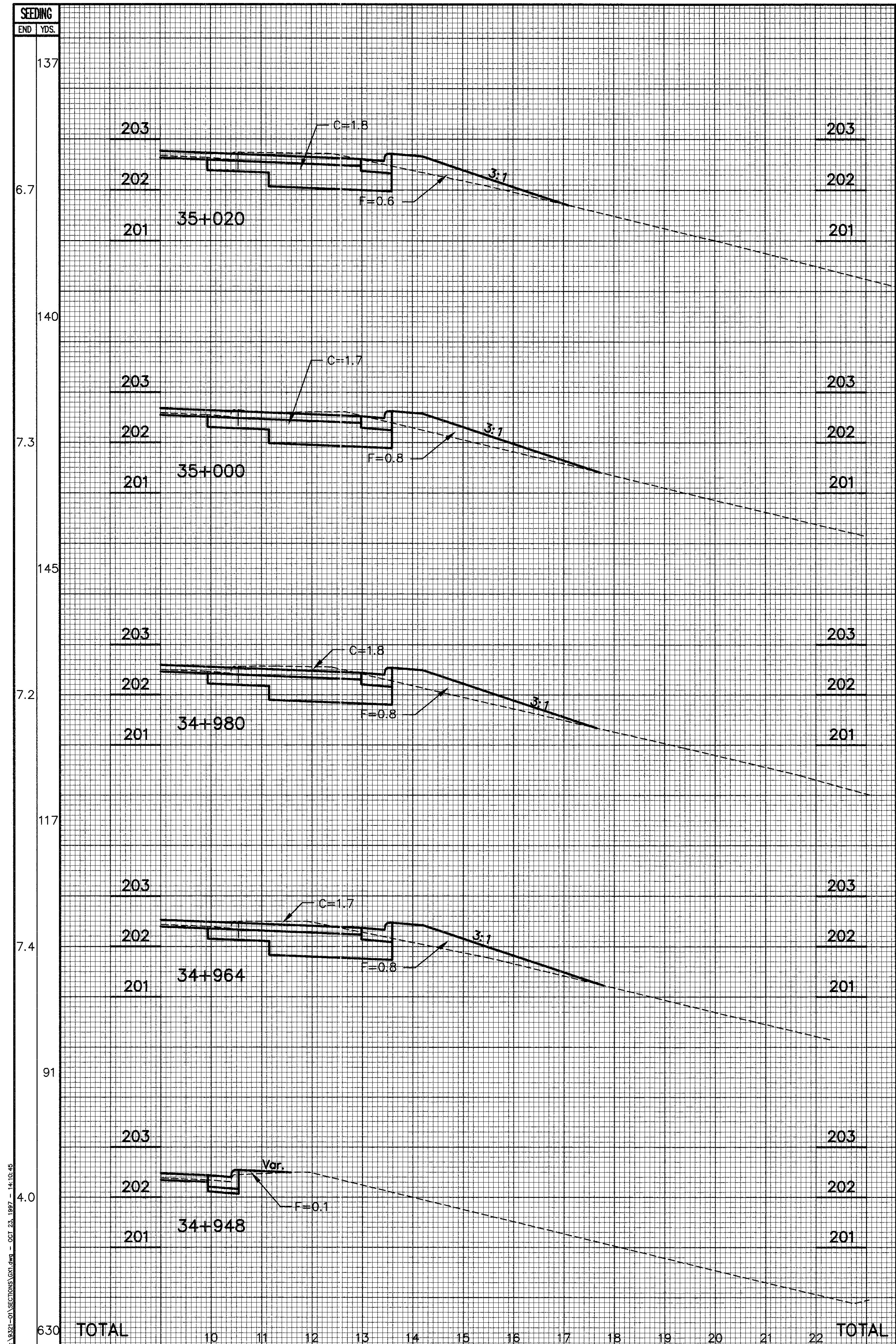




S.R. 7 CROSS SECTIONS  
STA. 34+156 TO STA. 34+337.040 RT.

BEL-7-32.276





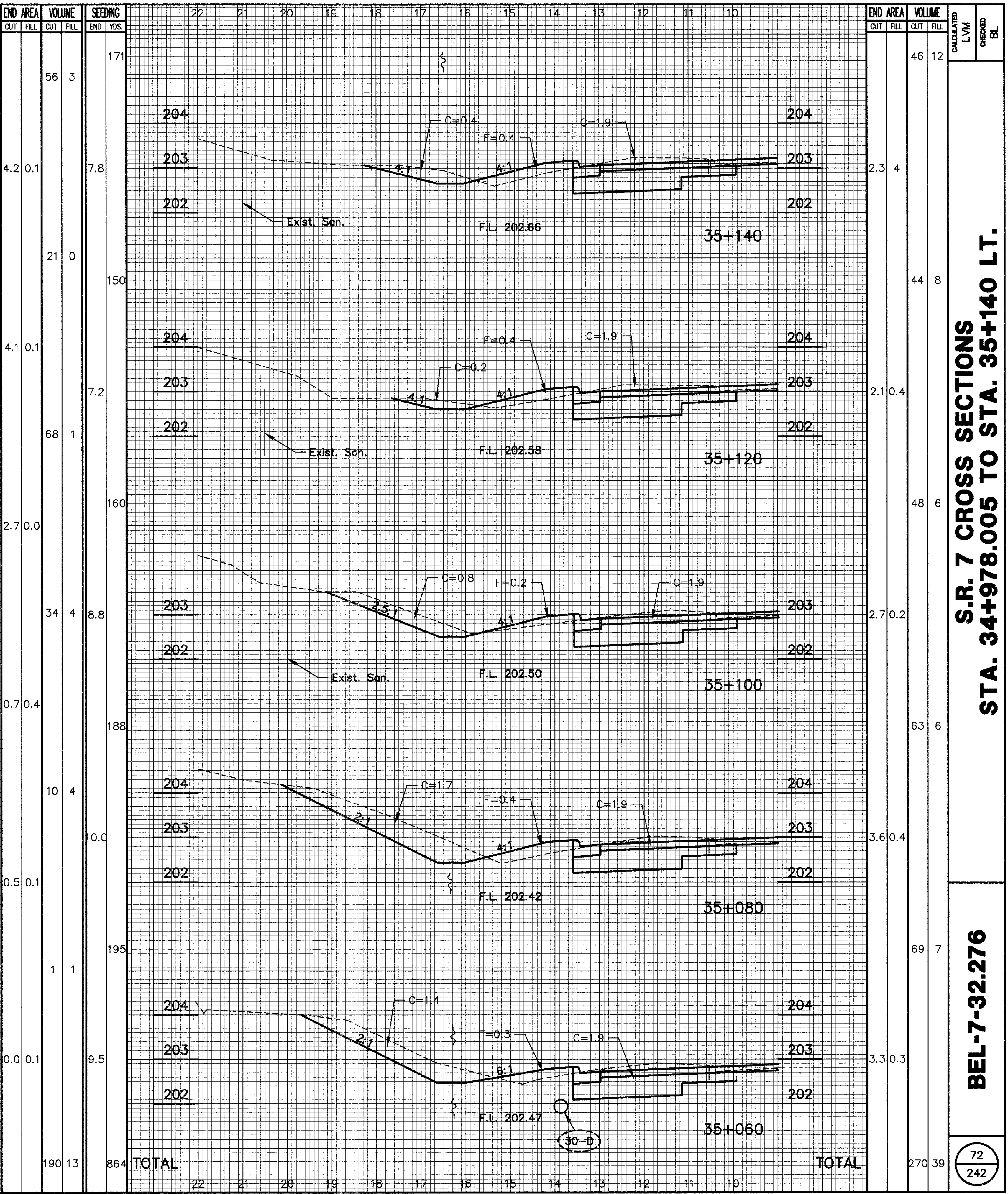
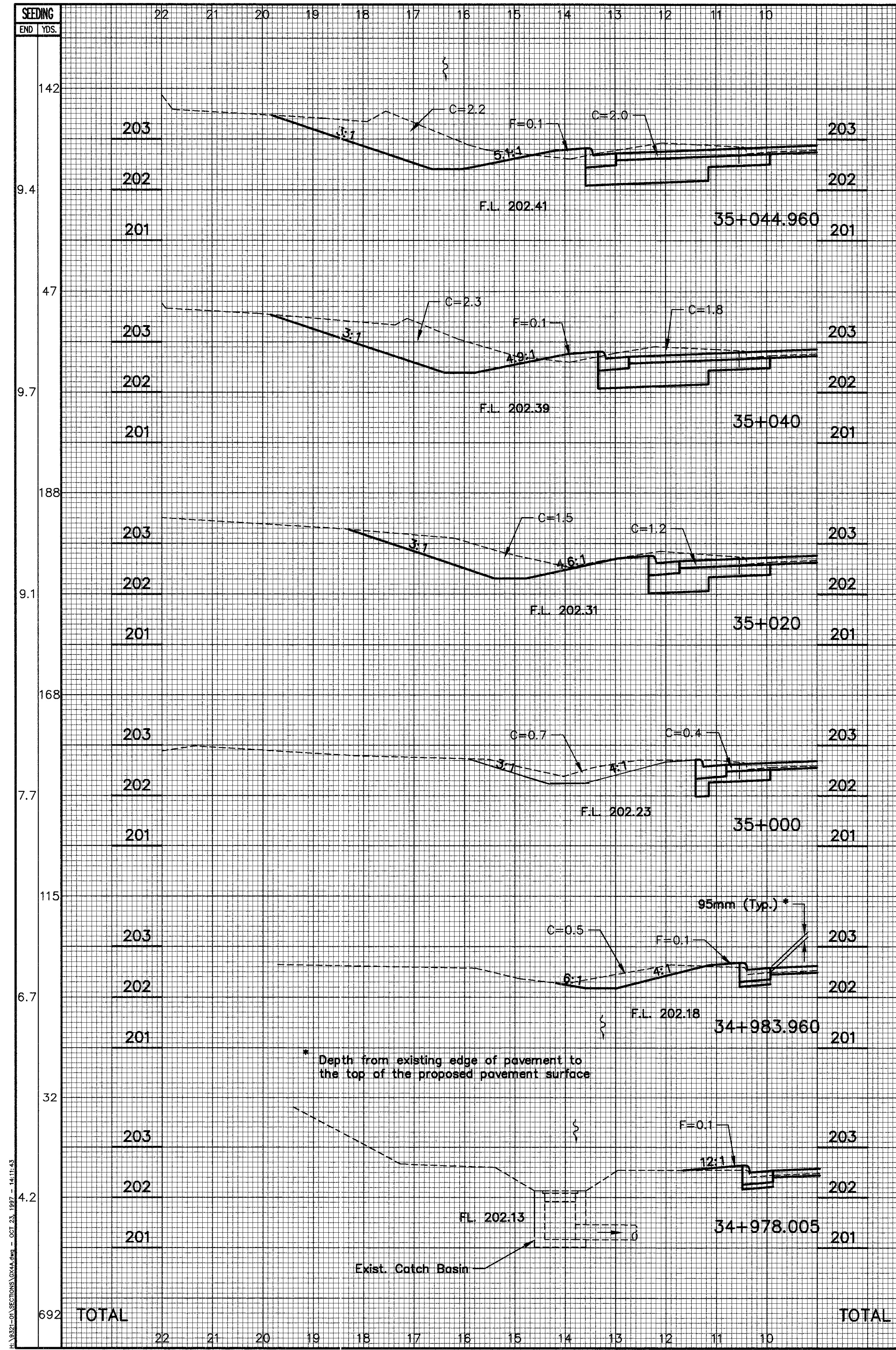
**S.R. 7 CROSS SECTIONS  
STA. 34+948 TO STA. 35+109.040 RT.**

**BEL-7-32.276**



[illegible]



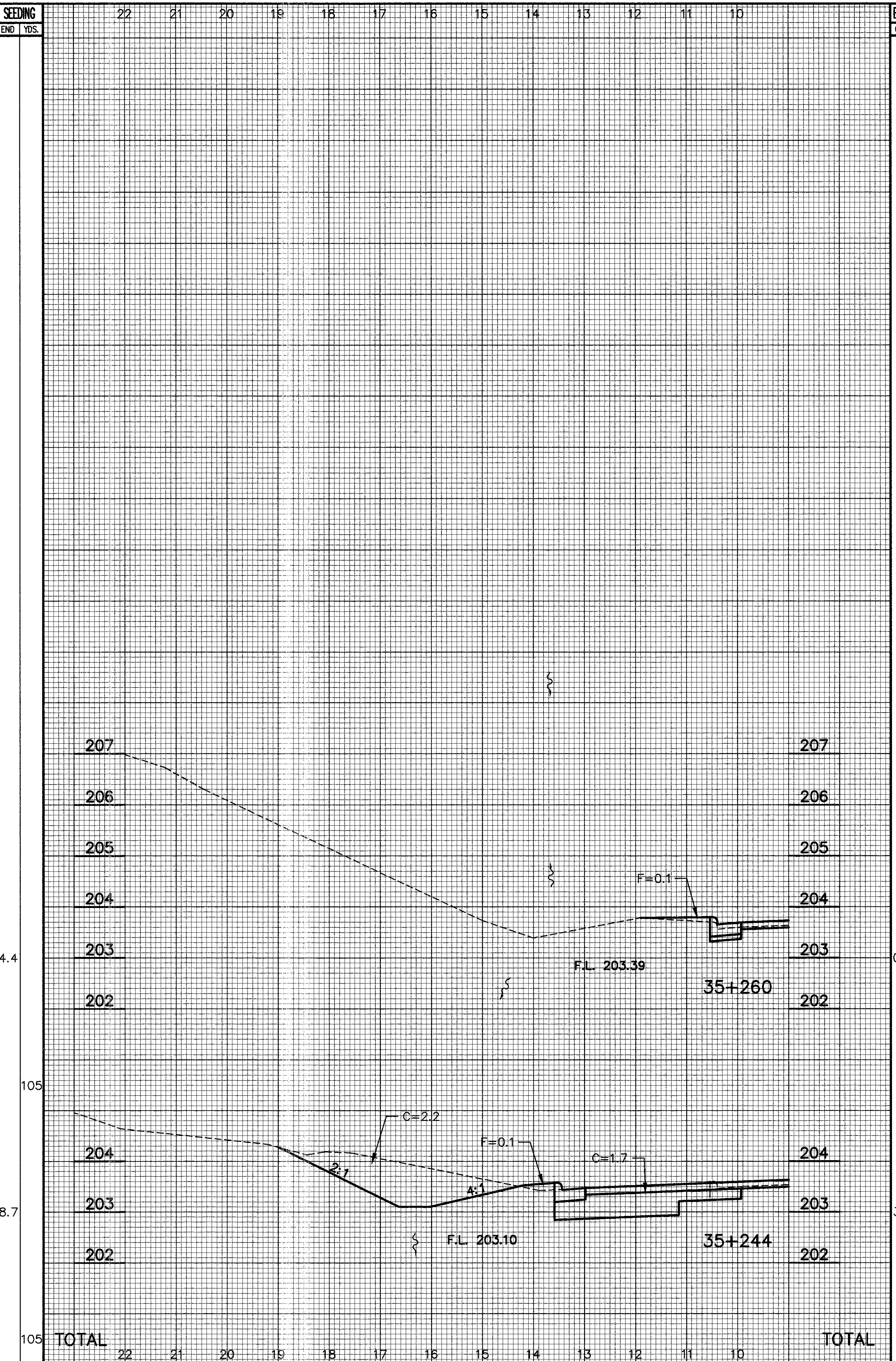
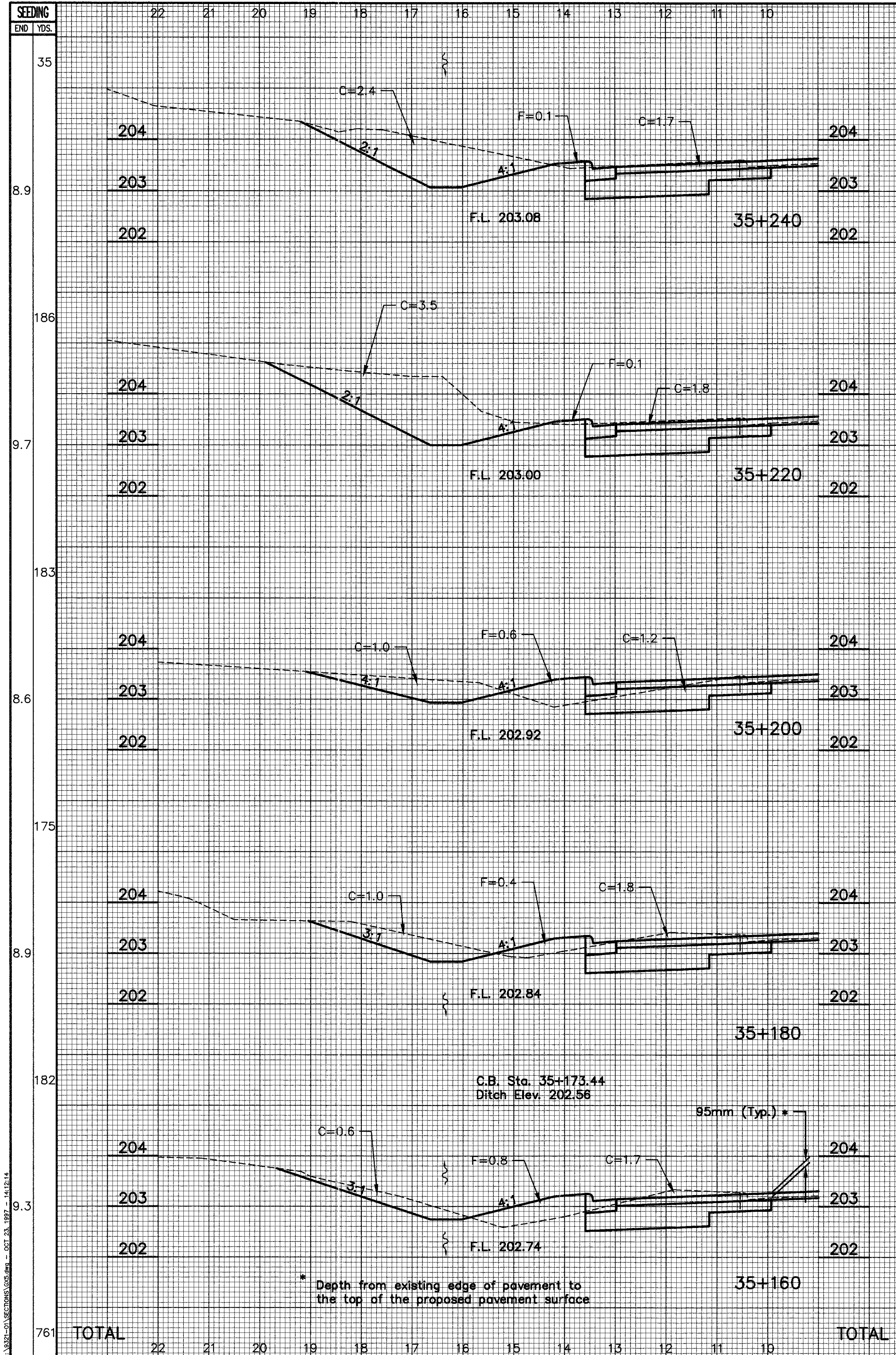


S.R. 7 CROSS SECTIONS  
STA. 34+978.005 TO STA. 35+140 LT.

BEL-7-32.276

72  
242



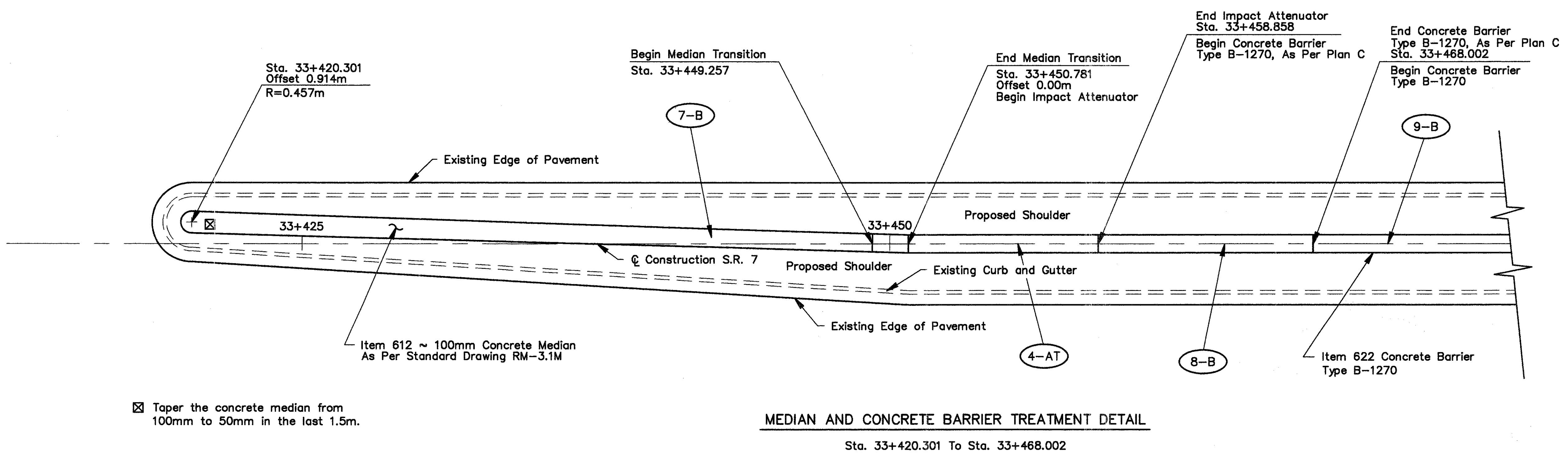
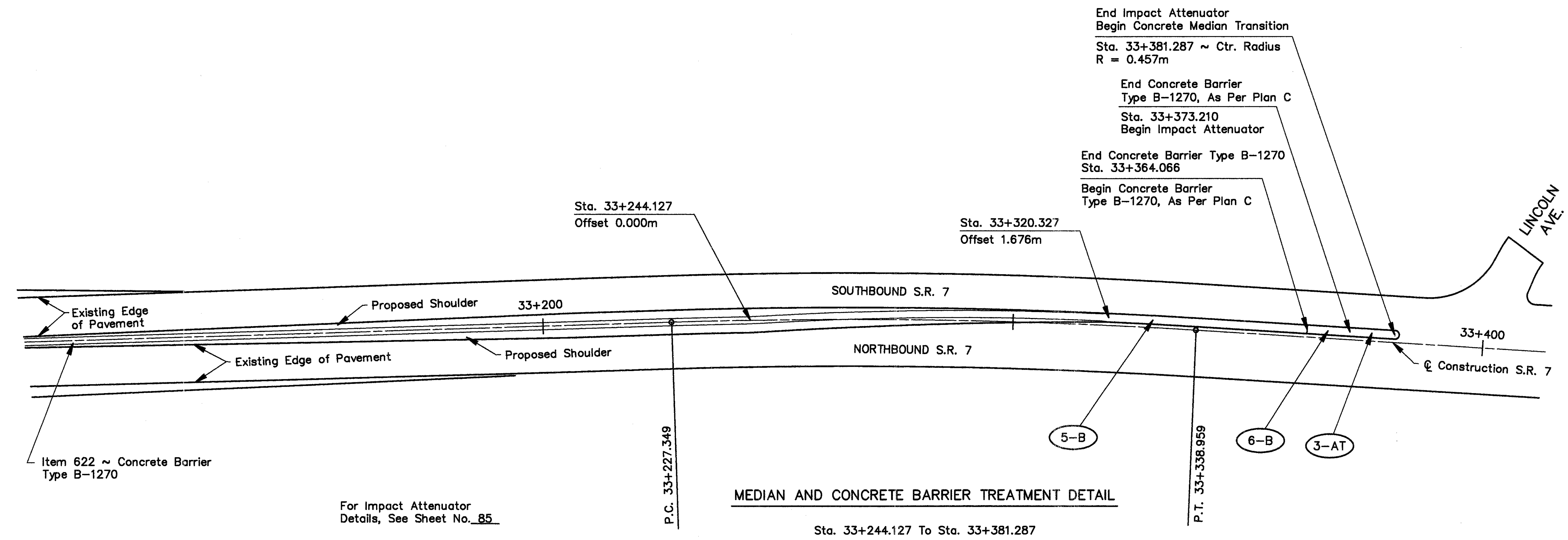


S.R. 7 CROSS SECTIONS  
STA. 35+160 TO STA. 35+260 LT.

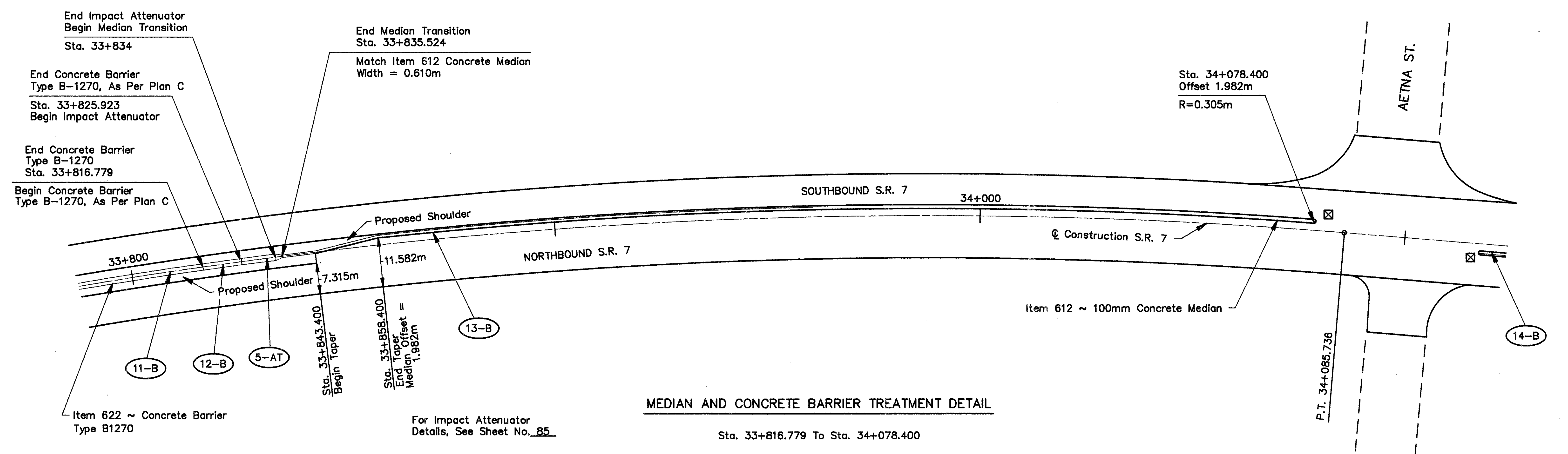
BEL-7-32.276

73  
242





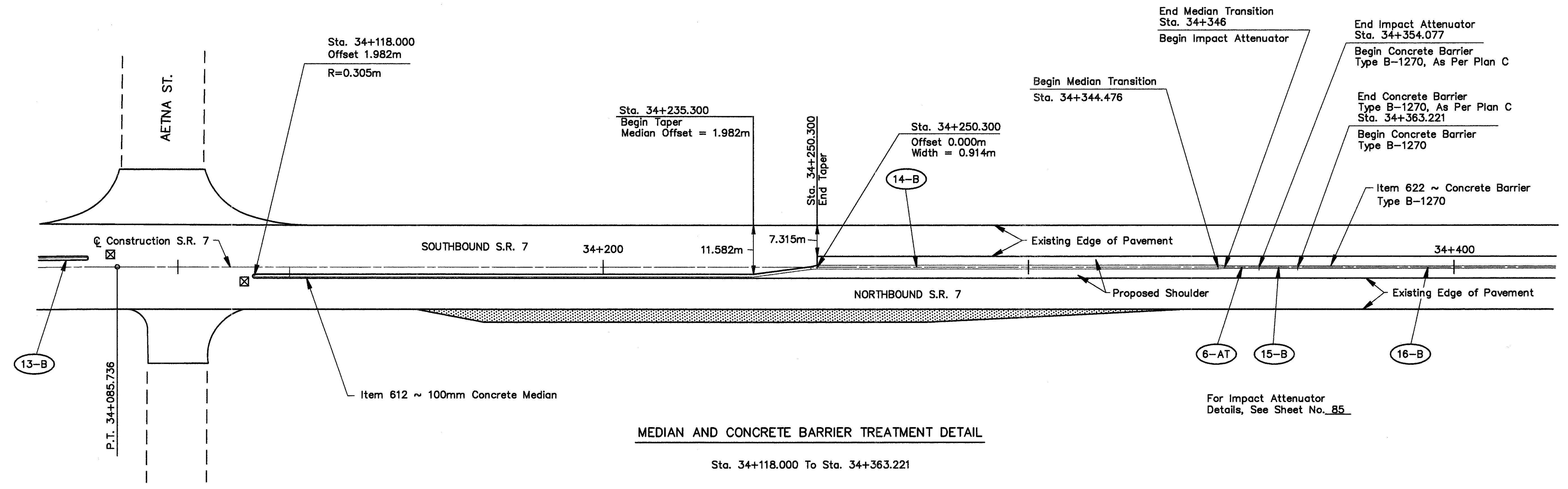




**MEDIAN AND CONCRETE BARRIER TREATMENT DETAIL**

Sta. 33+816.779 To Sta. 34+078.400

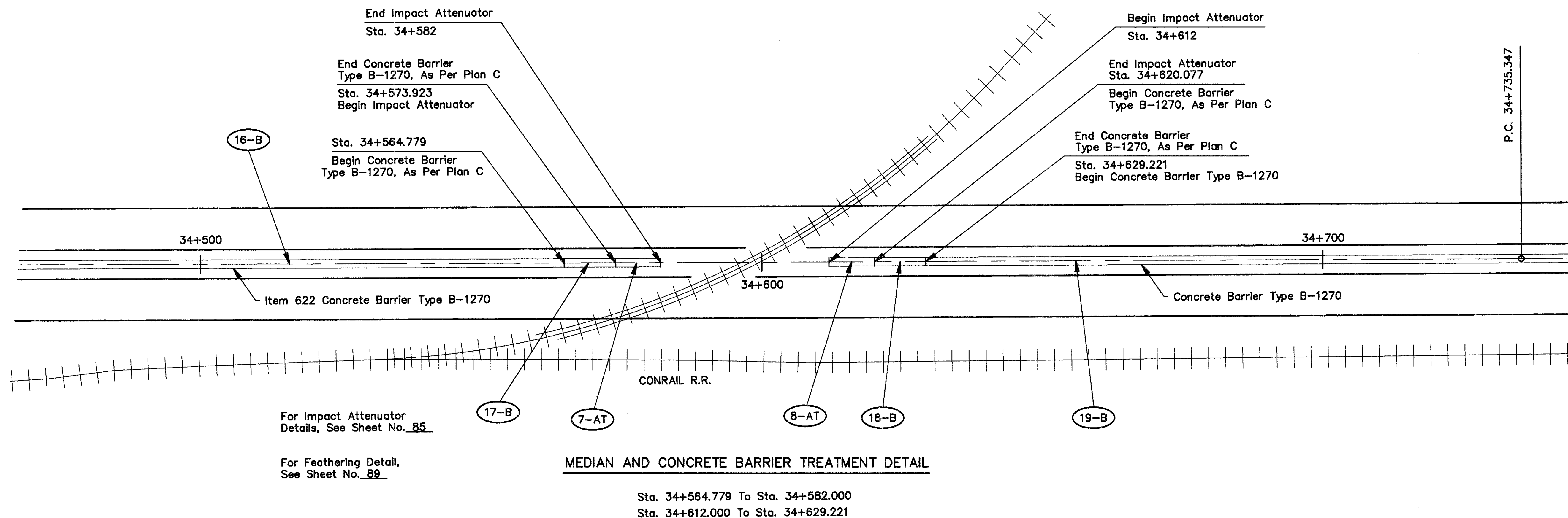
NOTE:  
All station and offsets shown are to the center of the 100mm Concrete Median or Concrete Barrier.



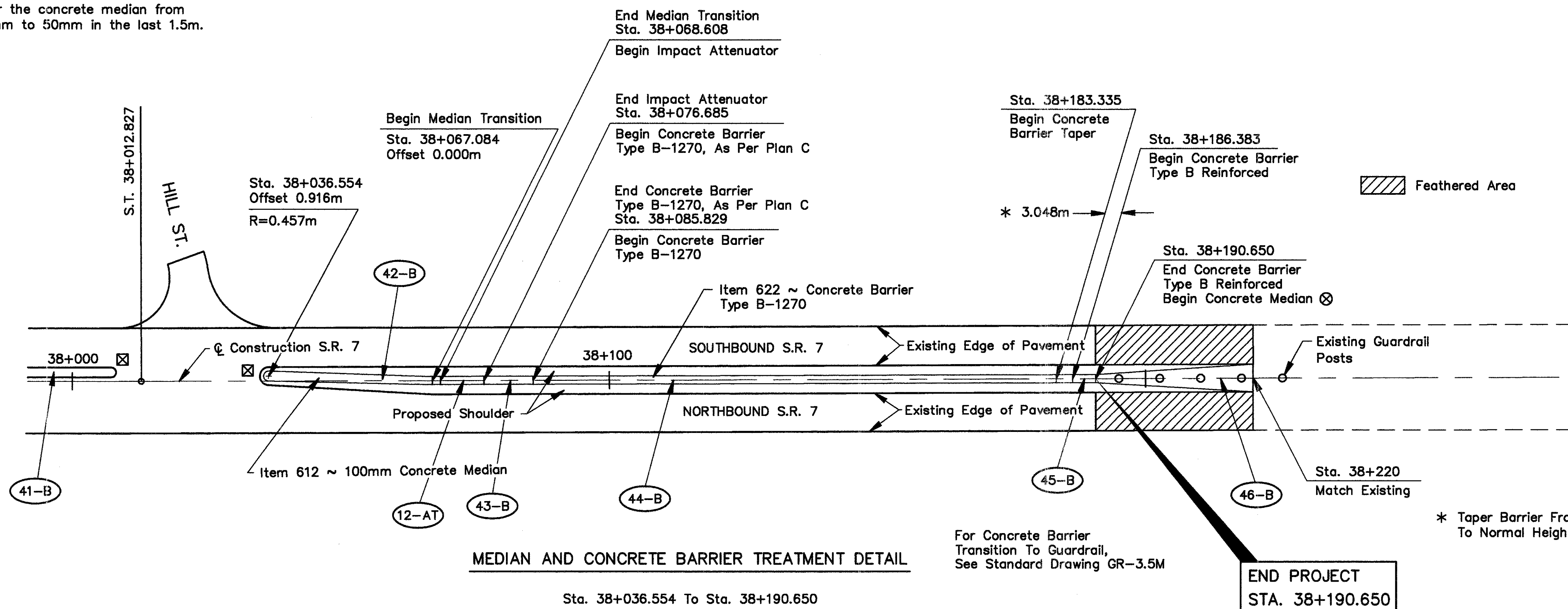
**MEDIAN AND CONCRETE BARRIER TREATMENT DETAIL**

Sta. 34+118.000 To Sta. 34+363.221

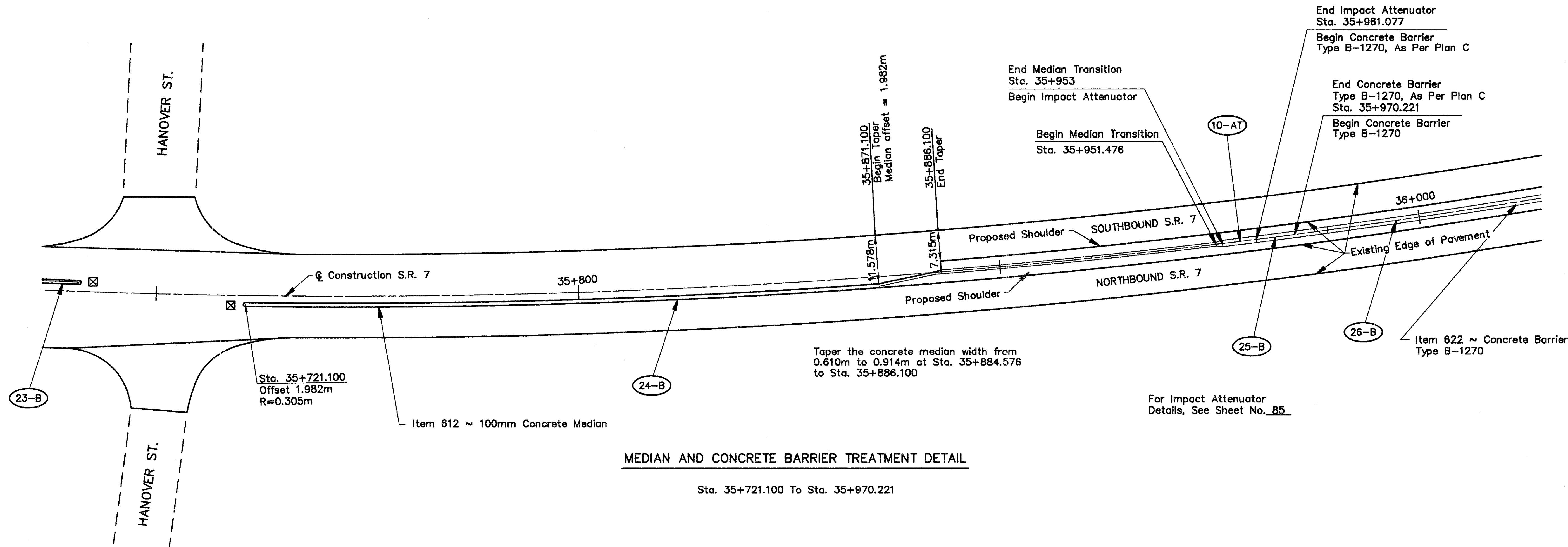
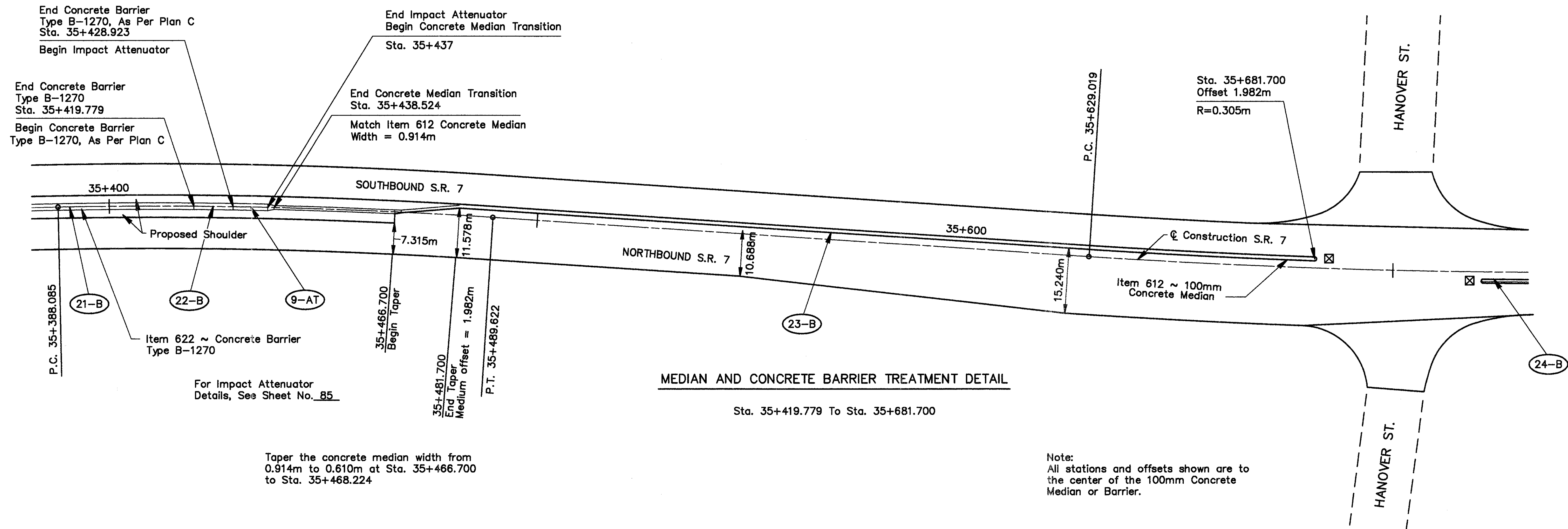




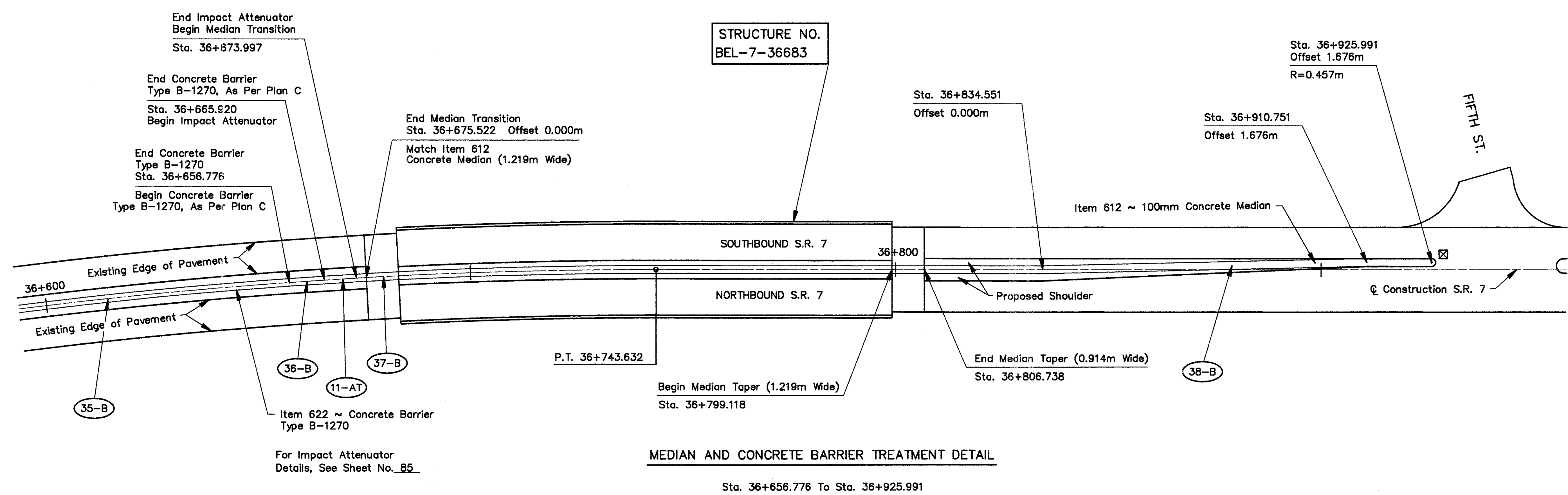
☒ Taper the concrete median from 100mm to 50mm in the last 1.5m.







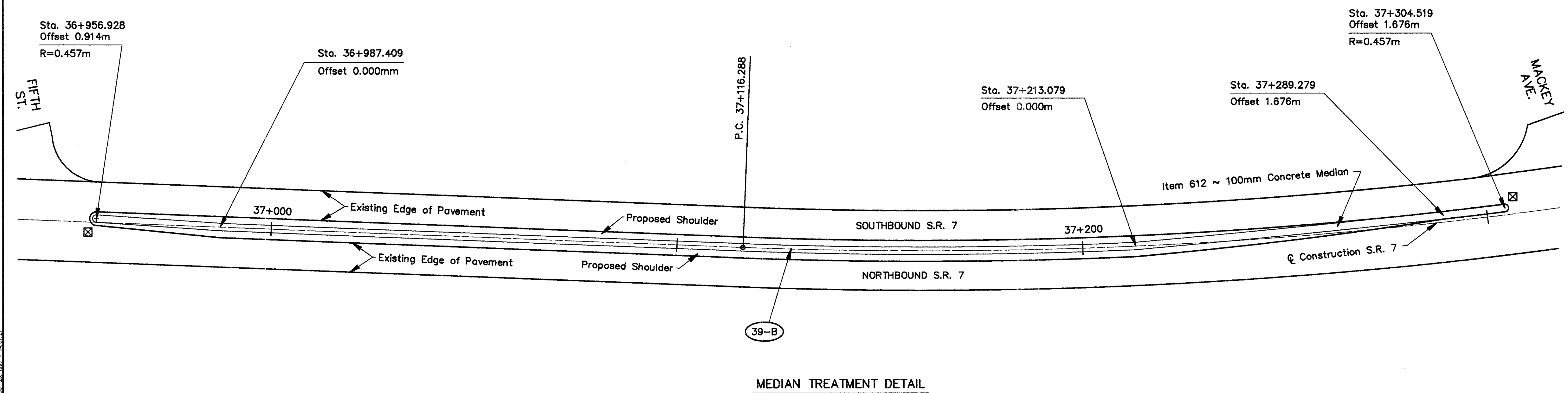




**MEDIAN AND CONCRETE BARRIER TREATMENT DETAIL**

Sta. 36+656.776 To Sta. 36+925.991

☒ Taper the concrete median from 100mm to 50mm in the last 1.5m.



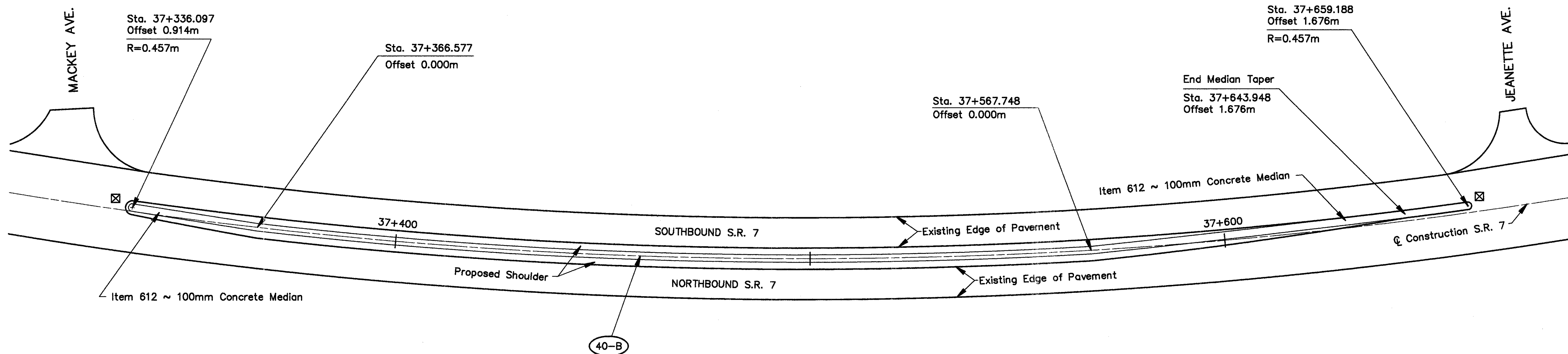
**MEDIAN TREATMENT DETAIL**

Sta. 36+956.928 To Sta. 37+304.519



# MEDIAN DETAILS

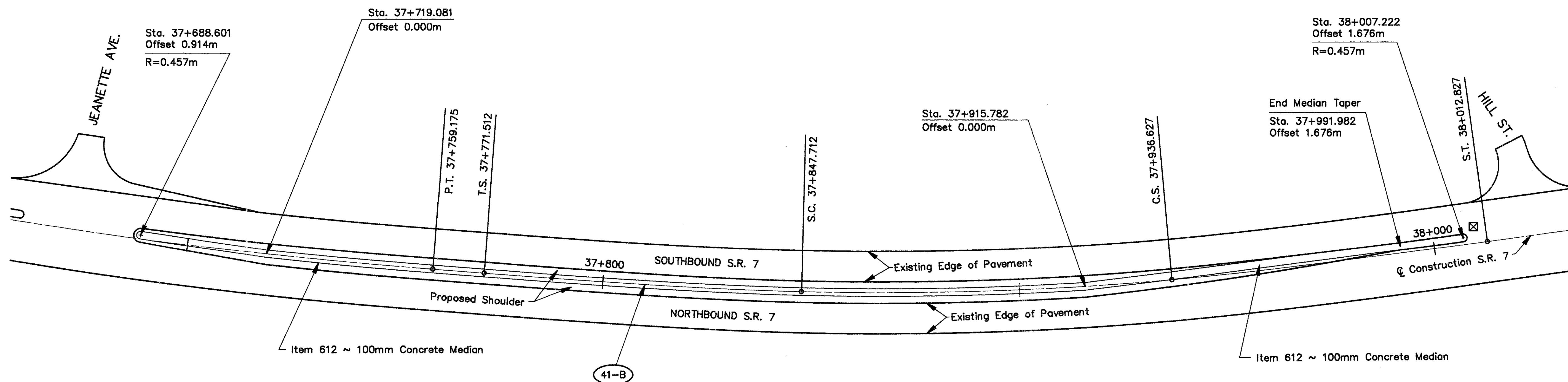
BEL-7-32.276



## MEDIAN TREATMENT DETAIL

Sta. 37+336.097 To Sta. 37+659.188

☒ Taper the concrete median from 100mm to 50mm in the last 1.5m.



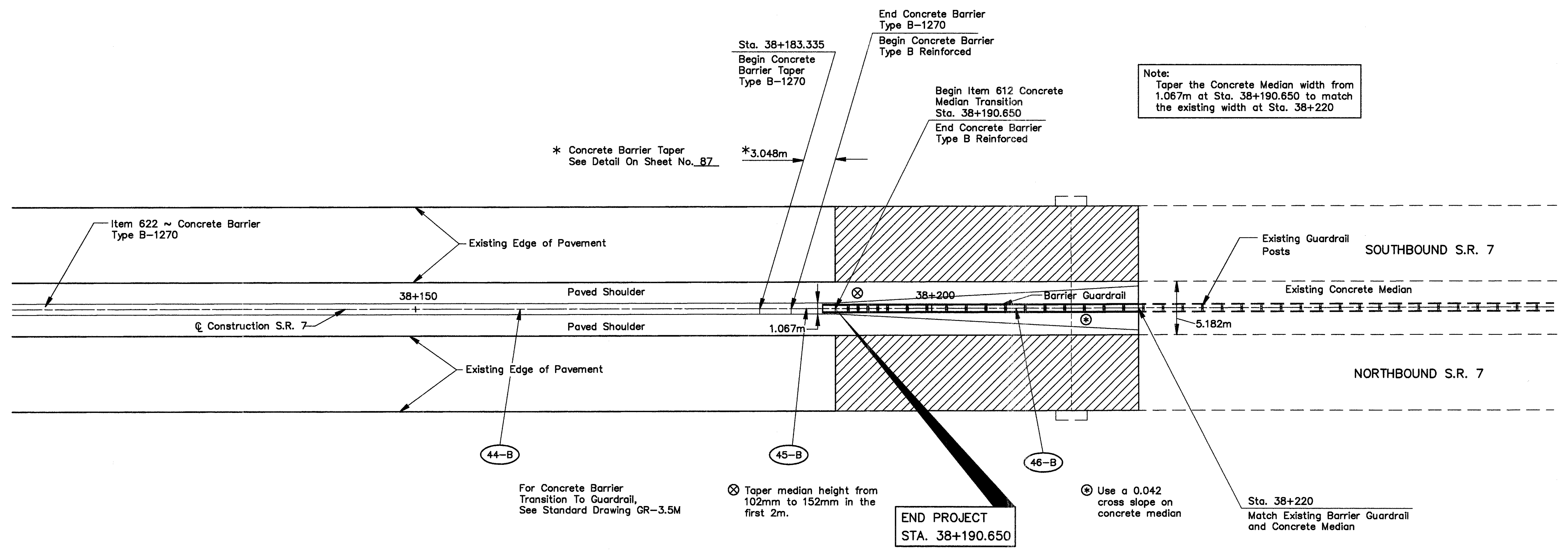
## MEDIAN TREATMENT DETAIL

Sta. 37+688.601 To Sta. 38+007.222



# MEDIAN DETAILS

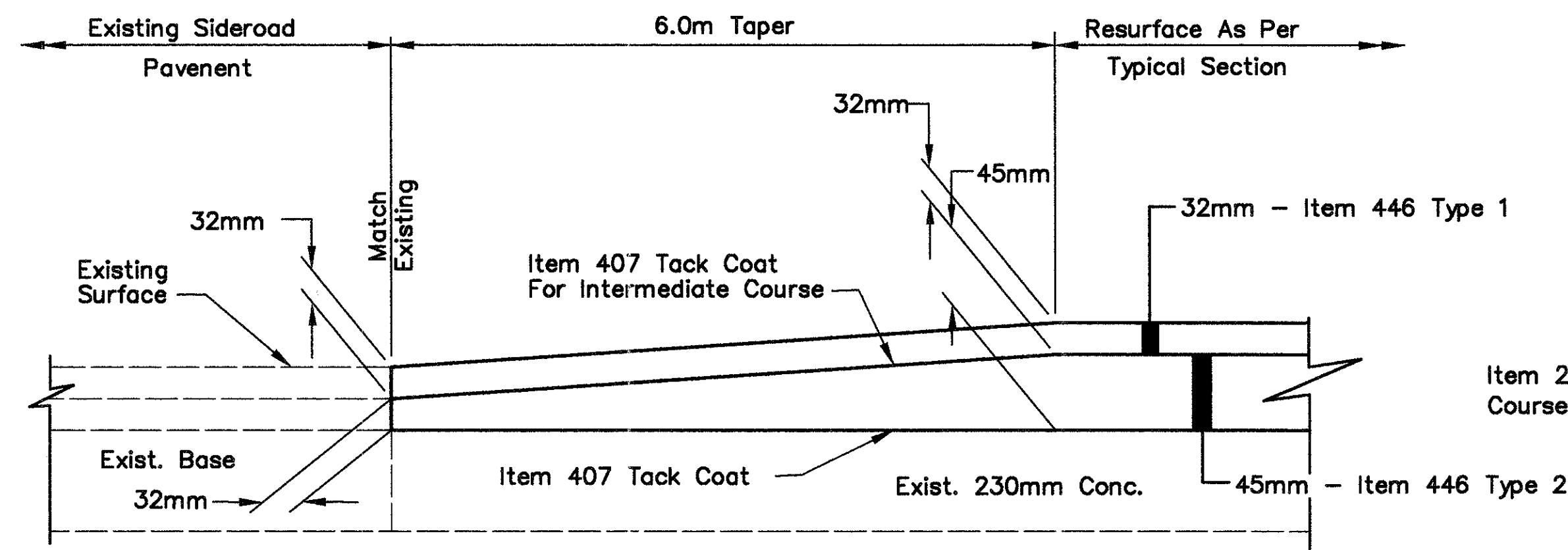
BEL-7-32.276



MEDIAN AND CONCRETE BARRIER TREATMENT DETAIL

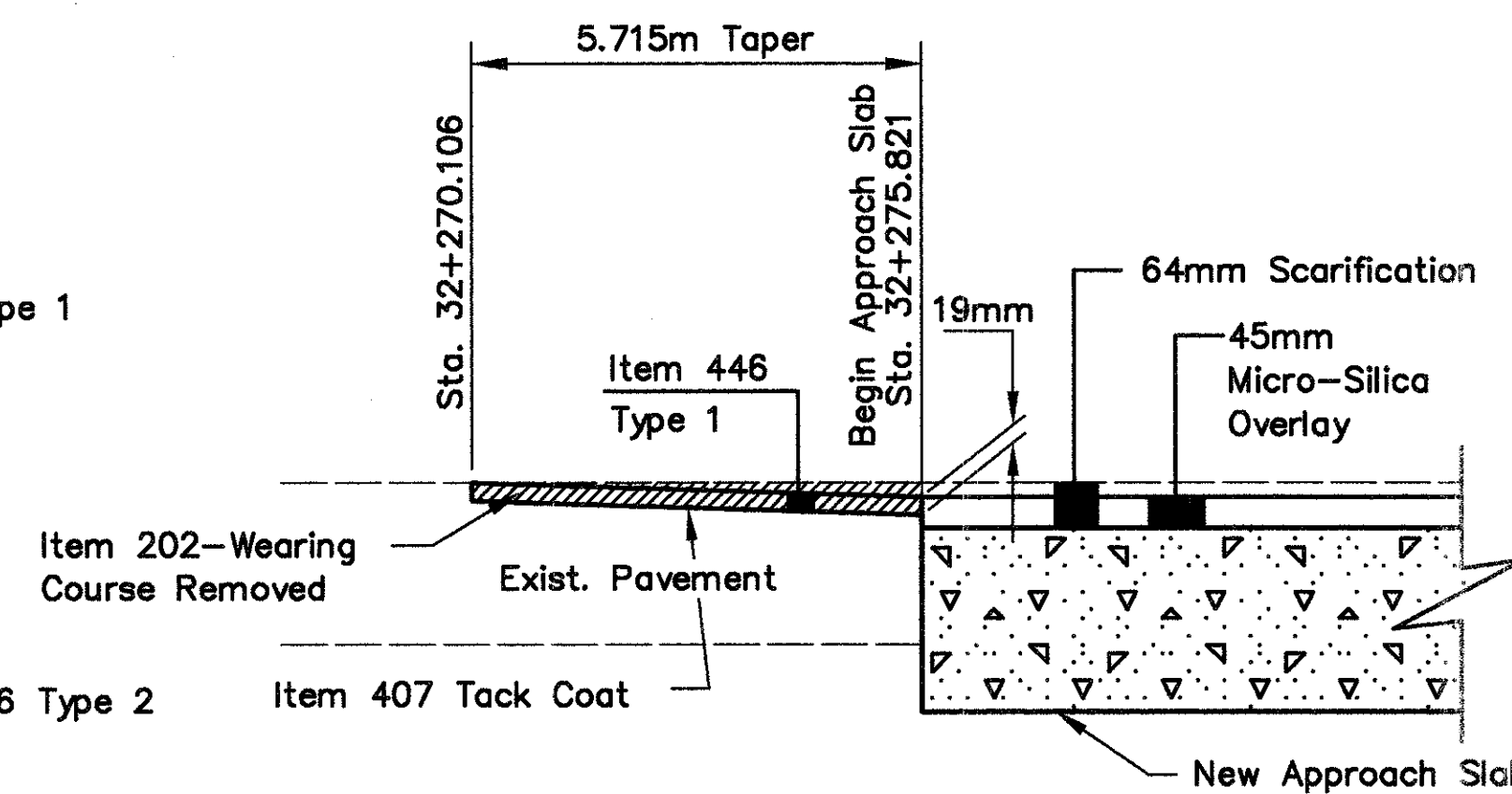
H:\322-01\322011.dwg - OCT 23, 1997 - 14:52:21





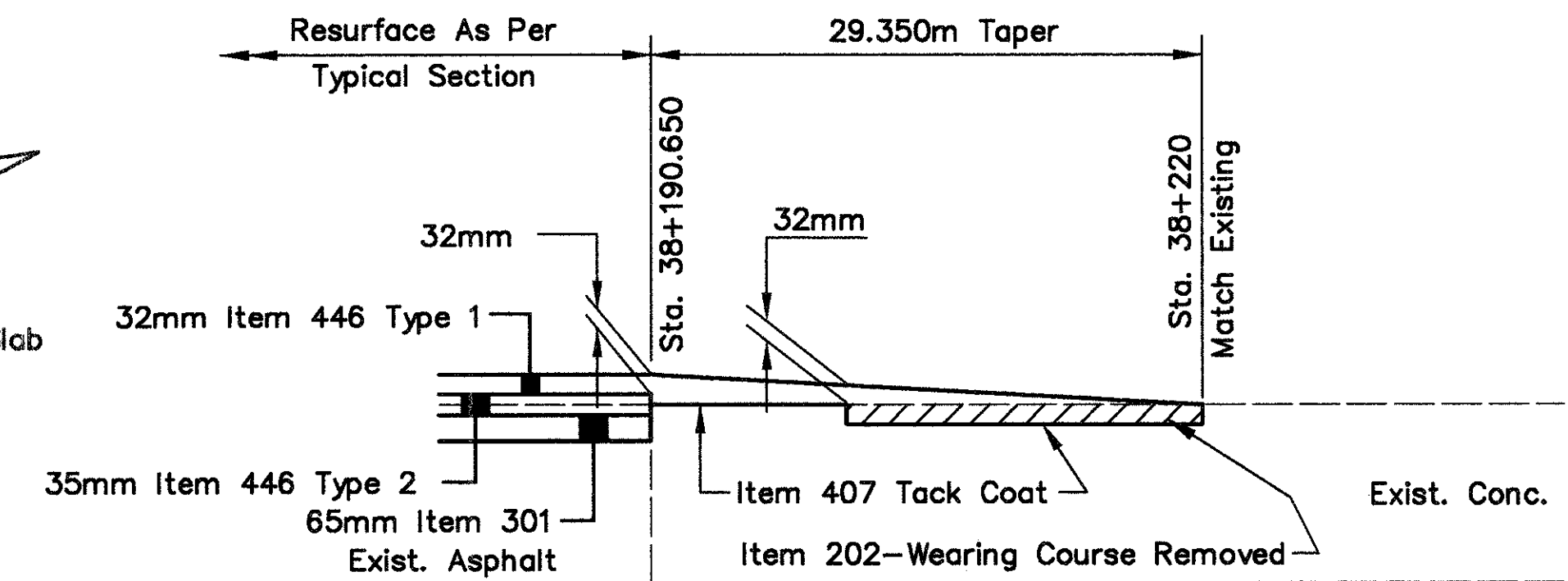
**RAMP INTERSECTION FEATHER DETAIL**

See Standard Drawing BP-3.1M



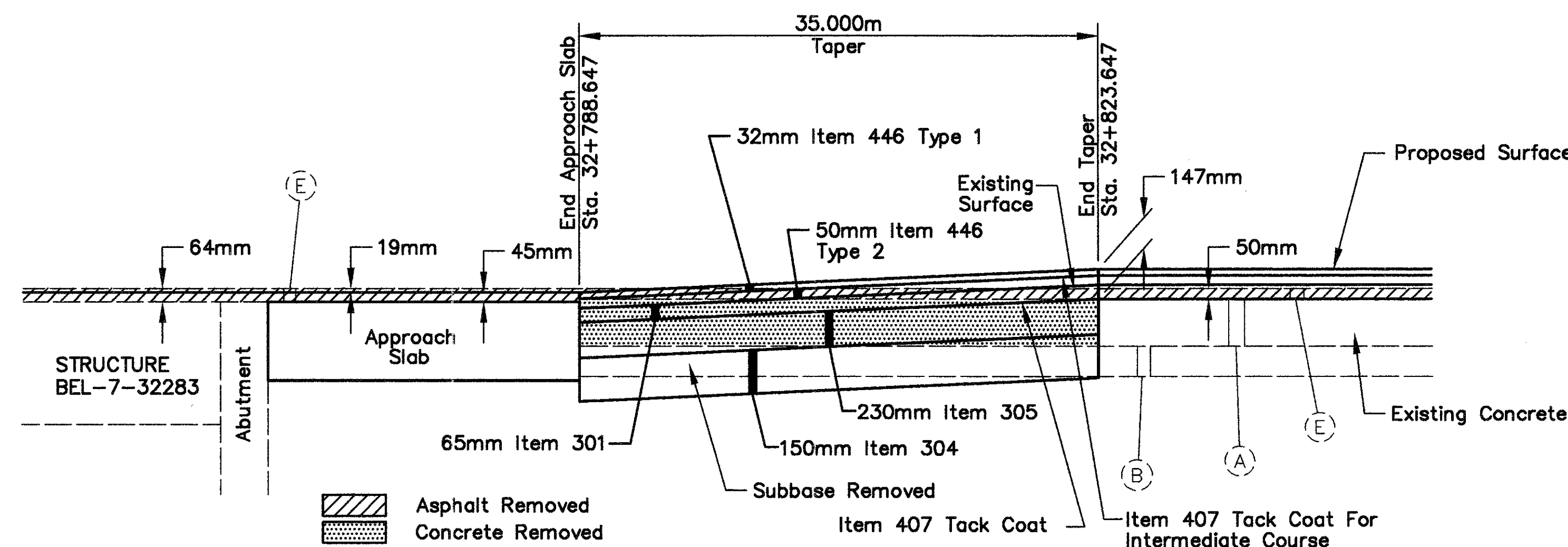
**PAVEMENT TRANSITION AT STRUCTURE BEL-7-32283**

See Standard Drawing BP-3.1M



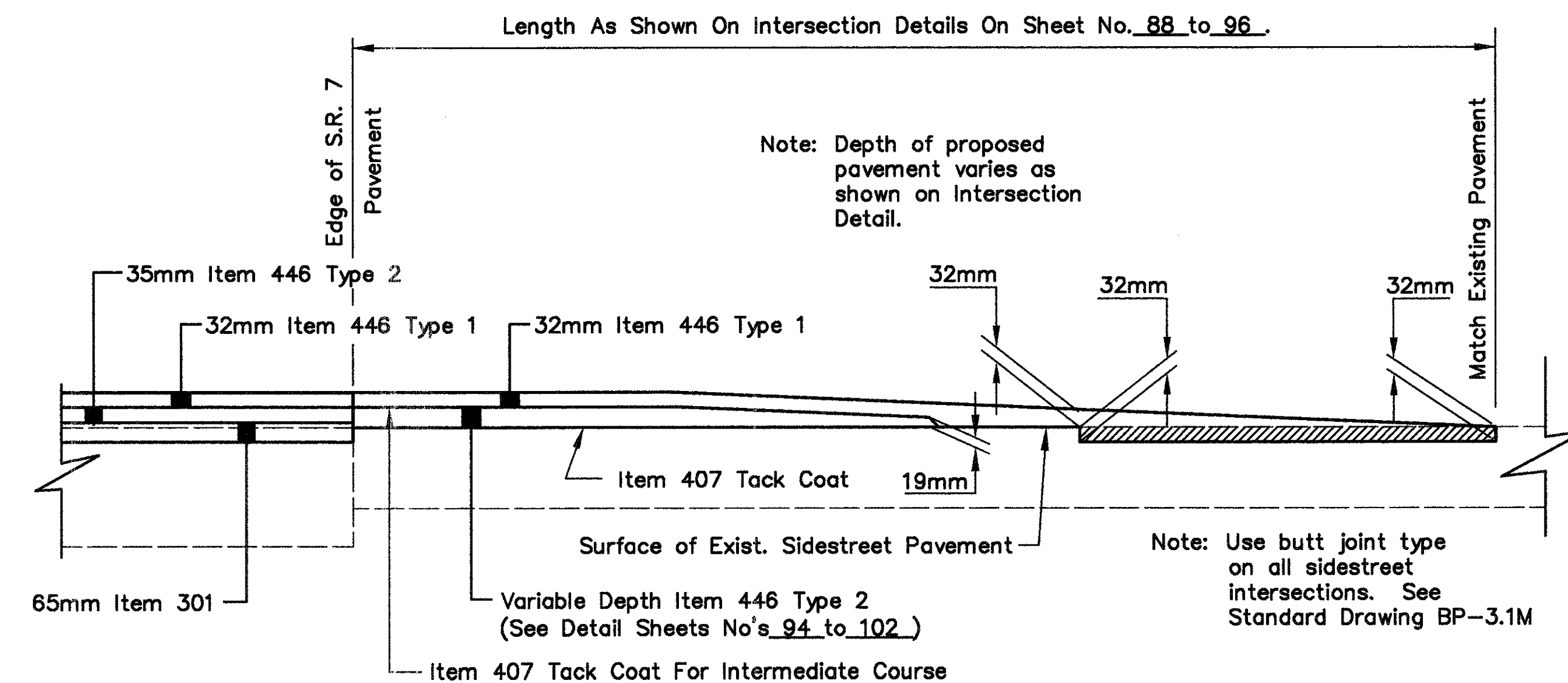
**PAVEMENT TRANSITION AT NORTH END OF S.R. 7**

See Standard Drawing BP-3.1M



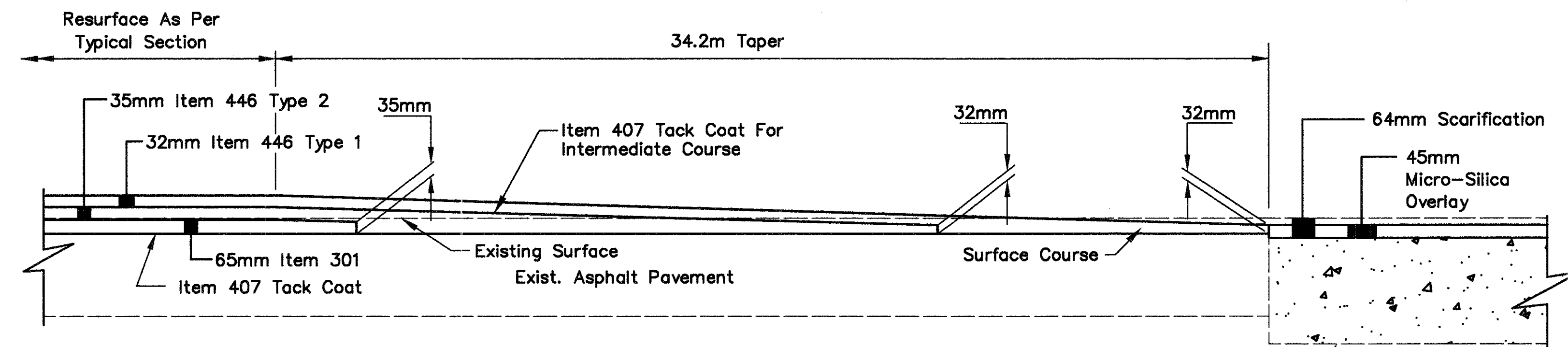
**S.R. 7 PAVEMENT PROFILE**

Not To Scale



**TYPICAL SIDESTREET FEATHER DETAIL**

See Standard Drawing BP-3.1M



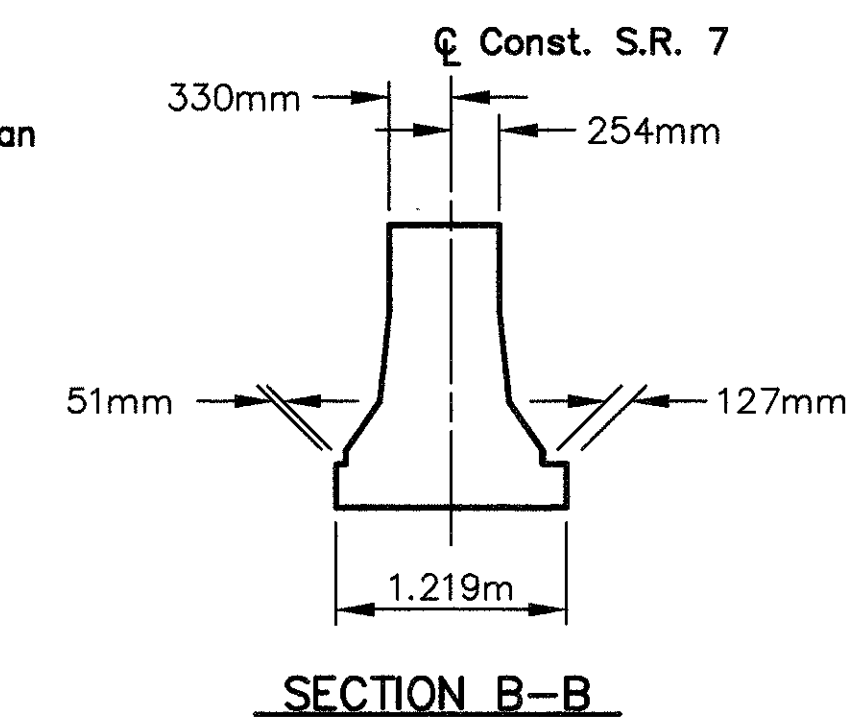
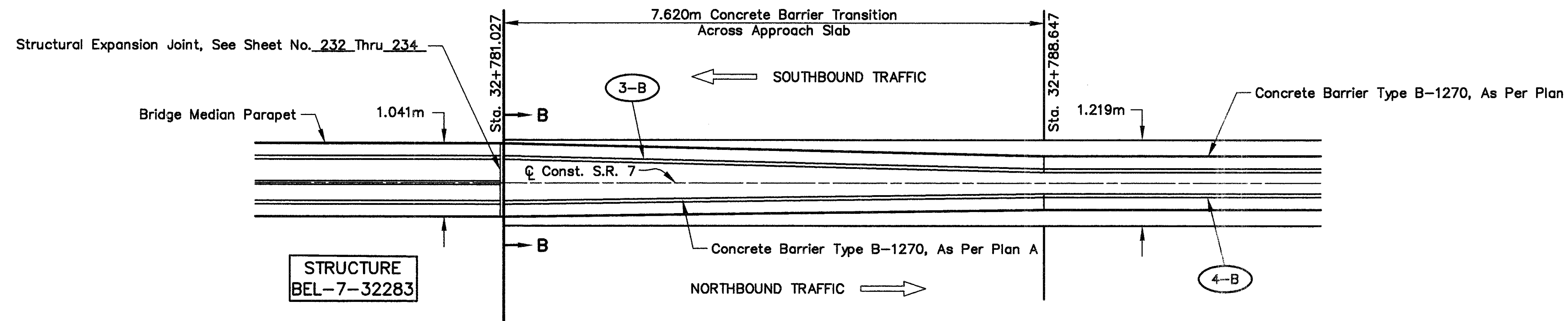
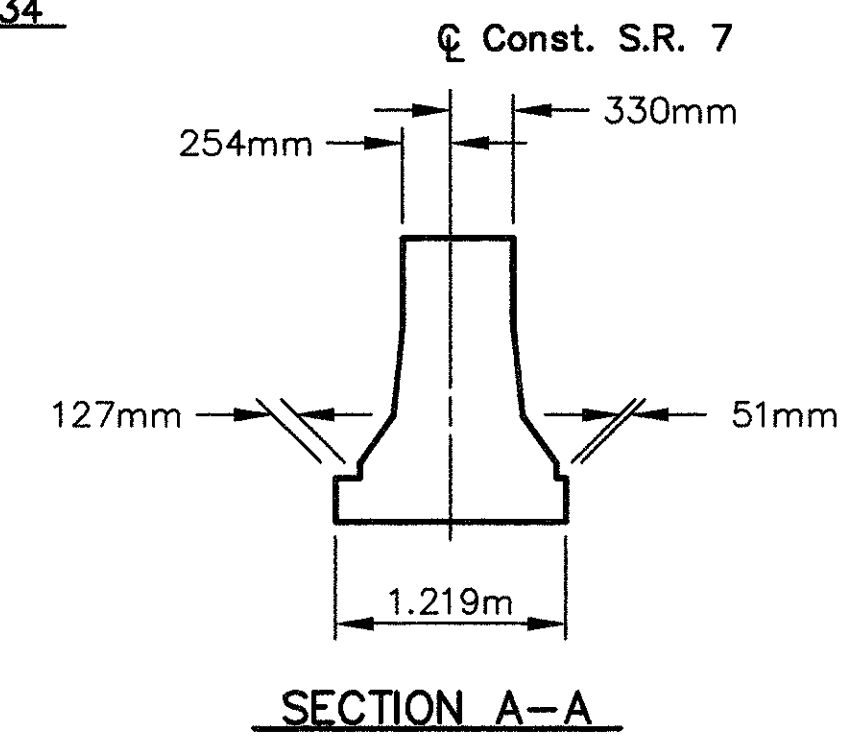
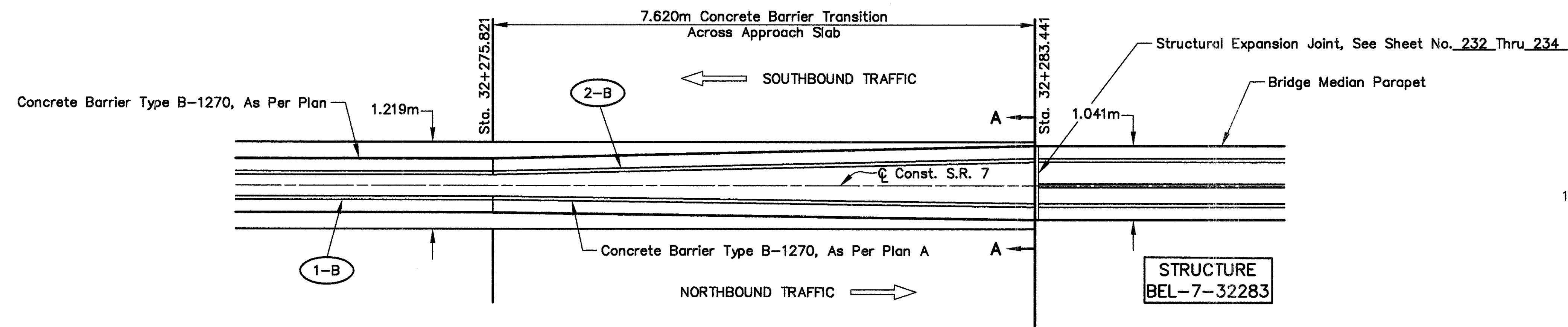
**PAVEMENT TRANSITION AT STRUCTURES**

See Standard Drawing BP-3.1M

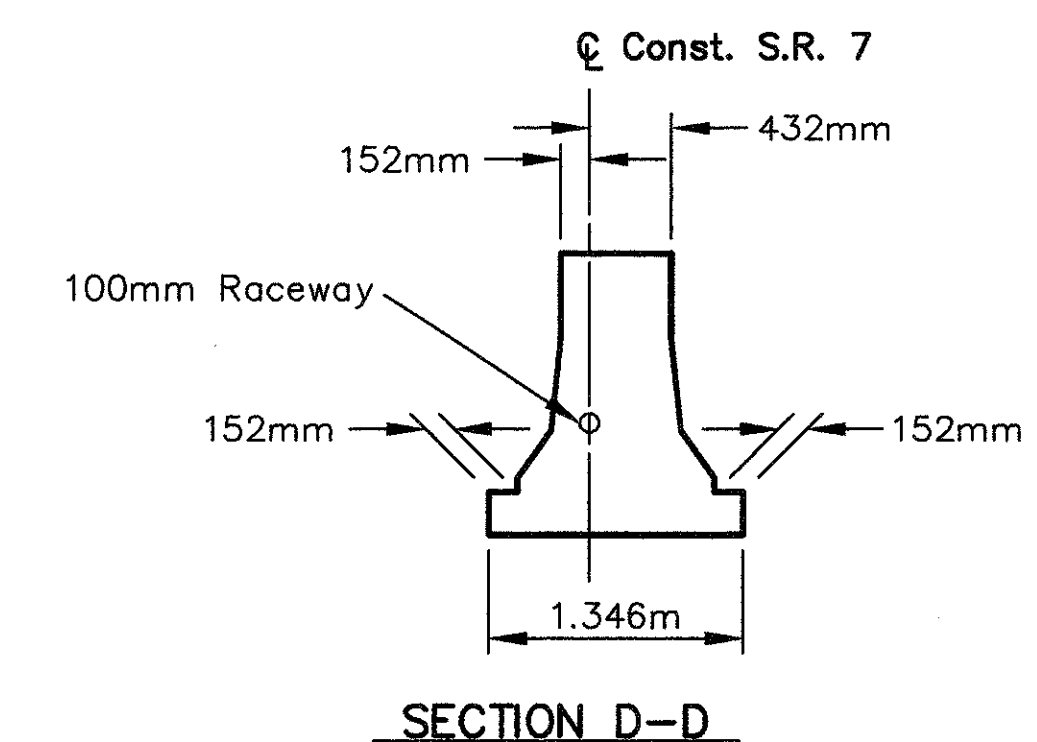
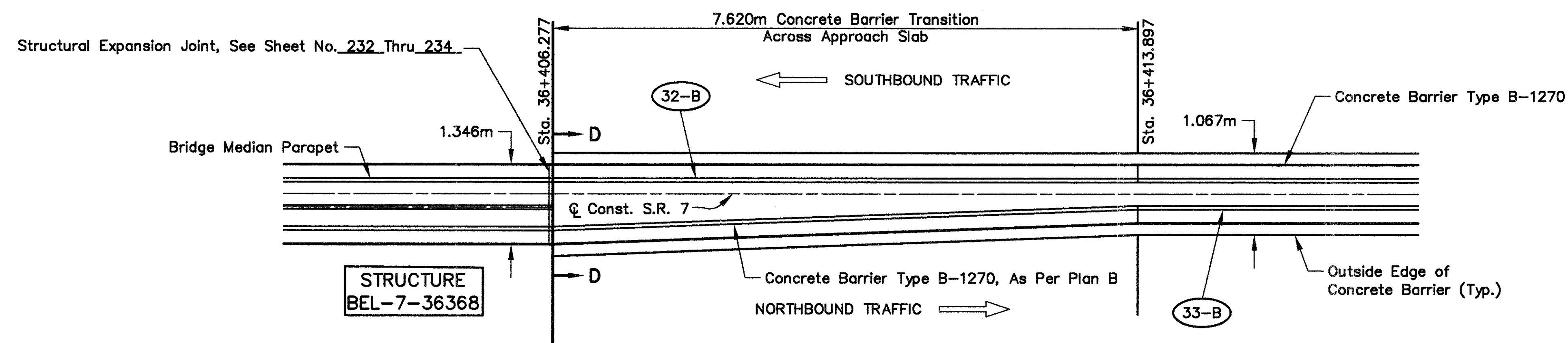
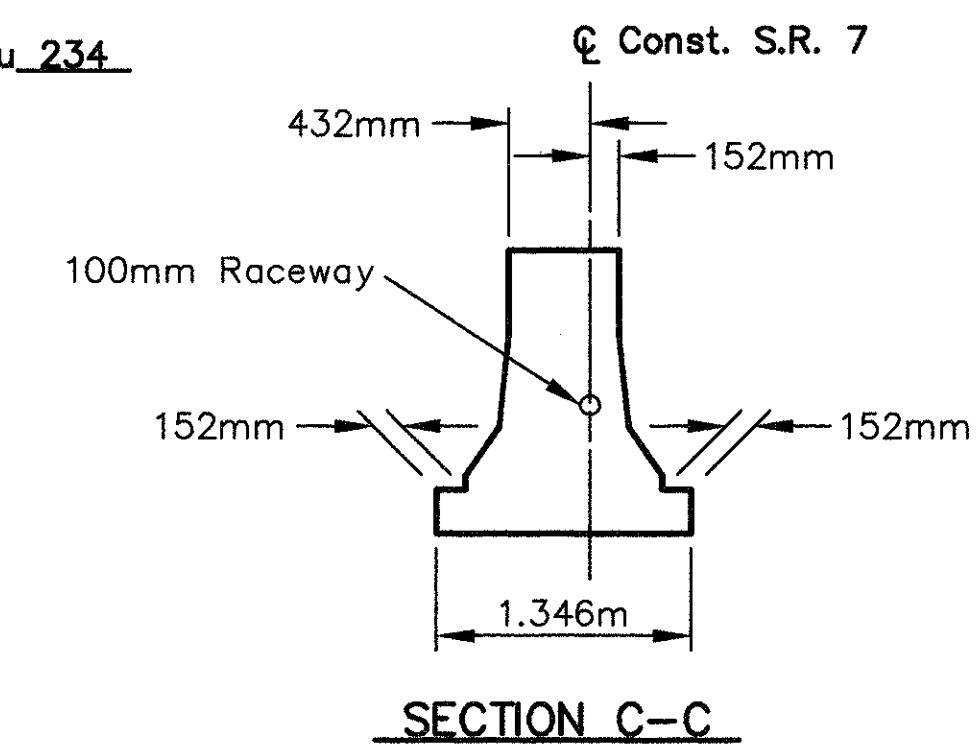
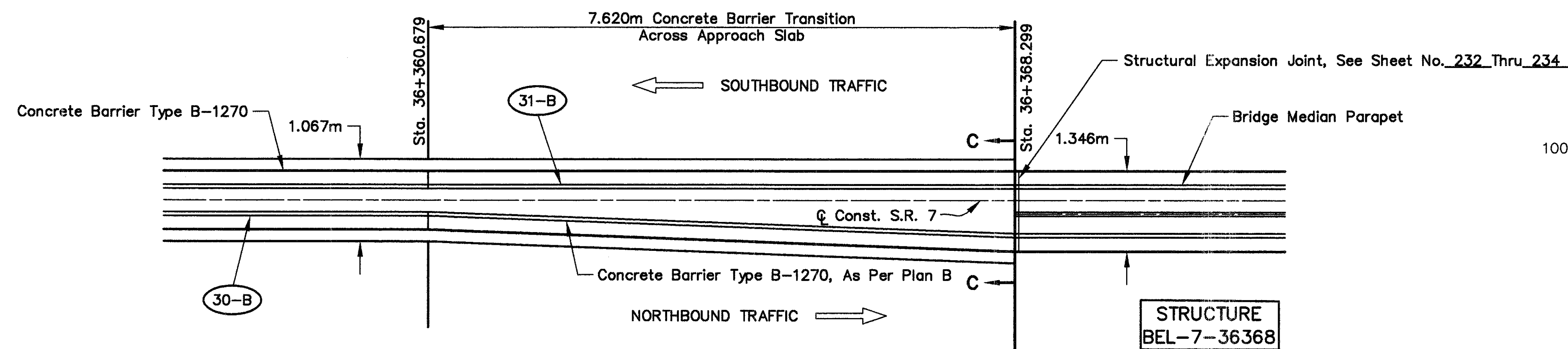
BEL-7-36368  
BEL-7-36683  
(Applies to Both Ends of the Structure)

Note: All Drawings Not To Scale





NOTE:  
All Concrete Barrier will  
retain the same safety  
shape as shown on  
Standard Drawing RM-4.3M



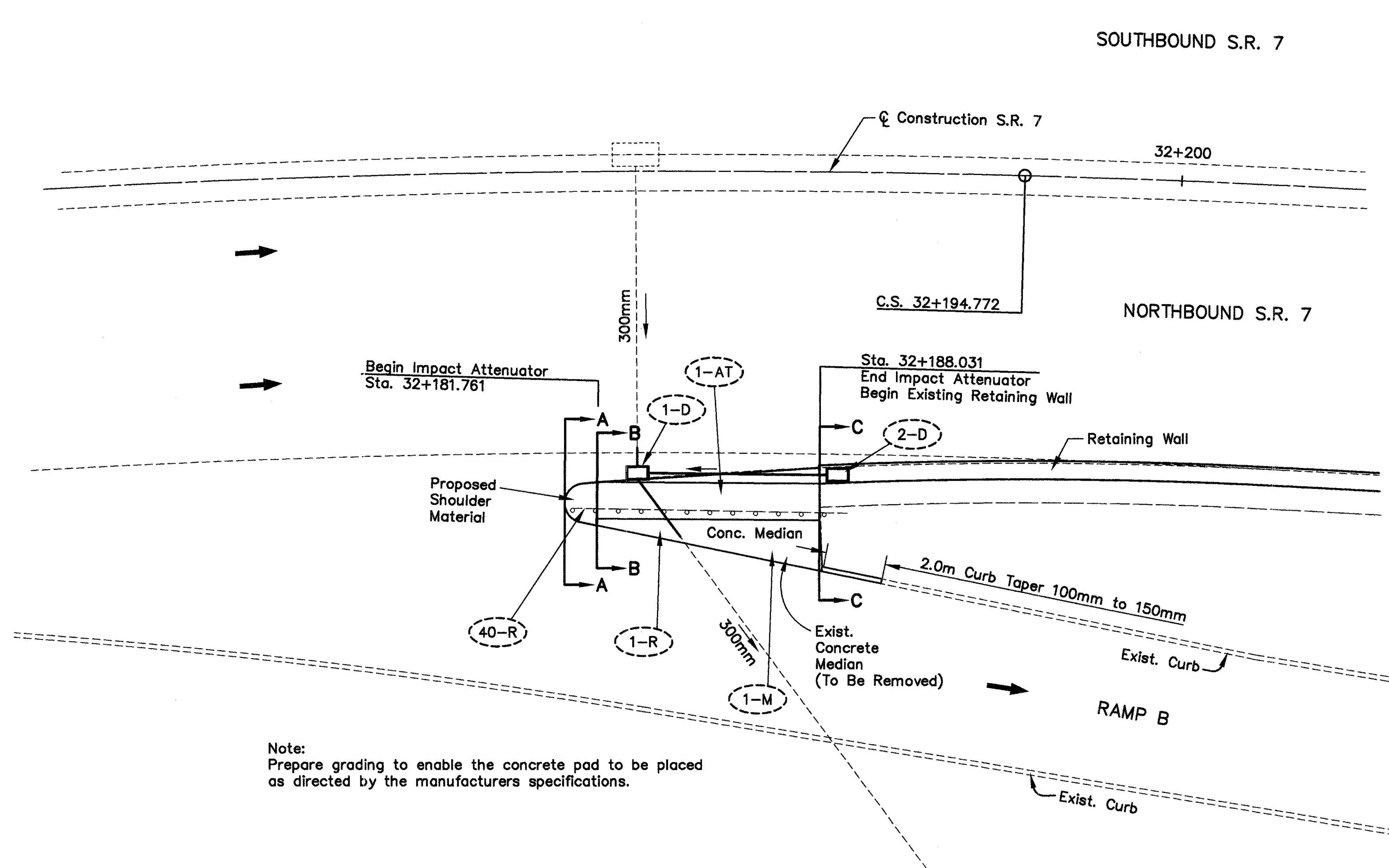
CALCULATED  
SAH  
CHECKED  
WCR

MISCELLANEOUS DETAILS:  
APPROACH SLAB BARRIER TRANSITION

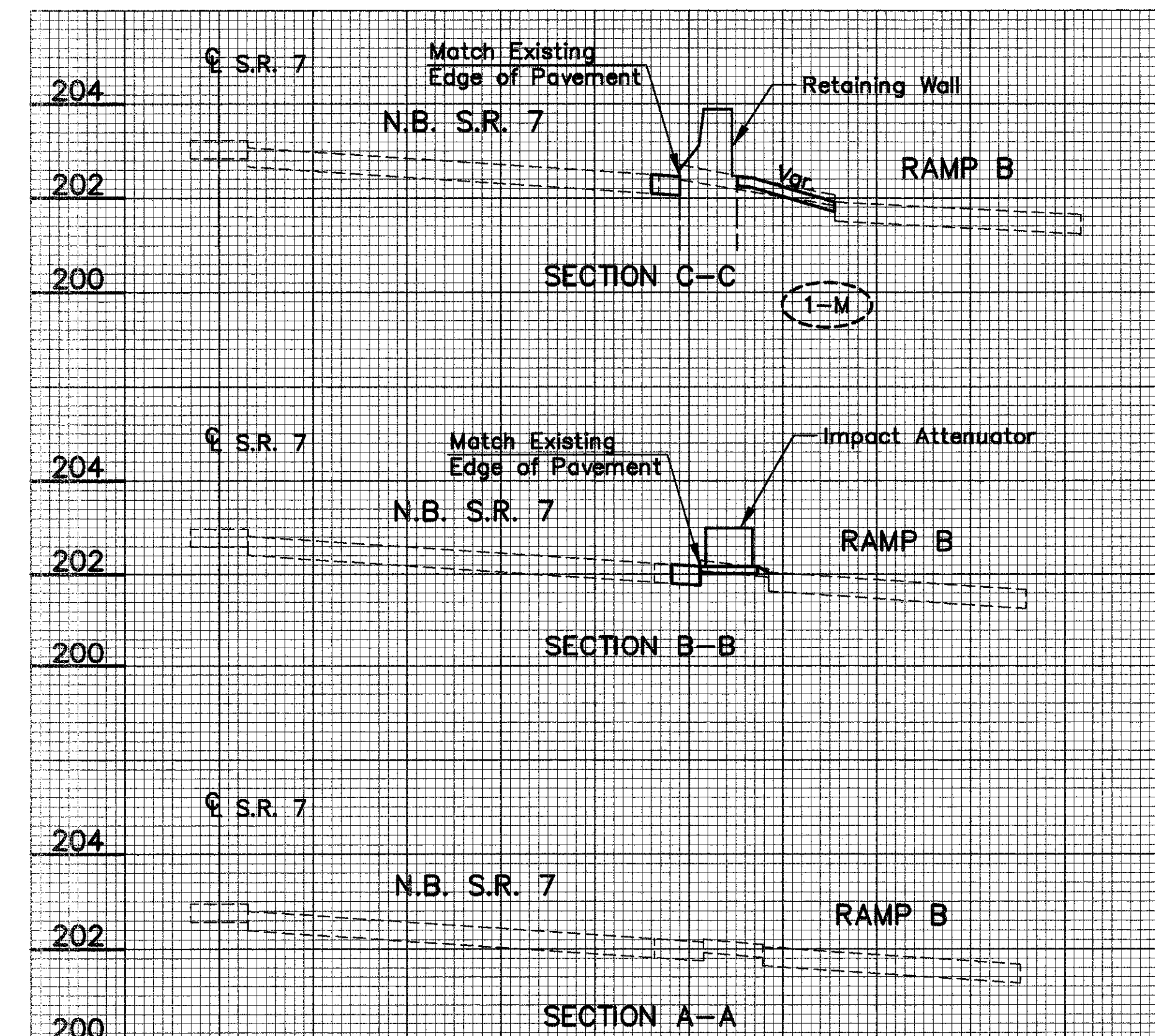
BEL-7-32.276

82  
242

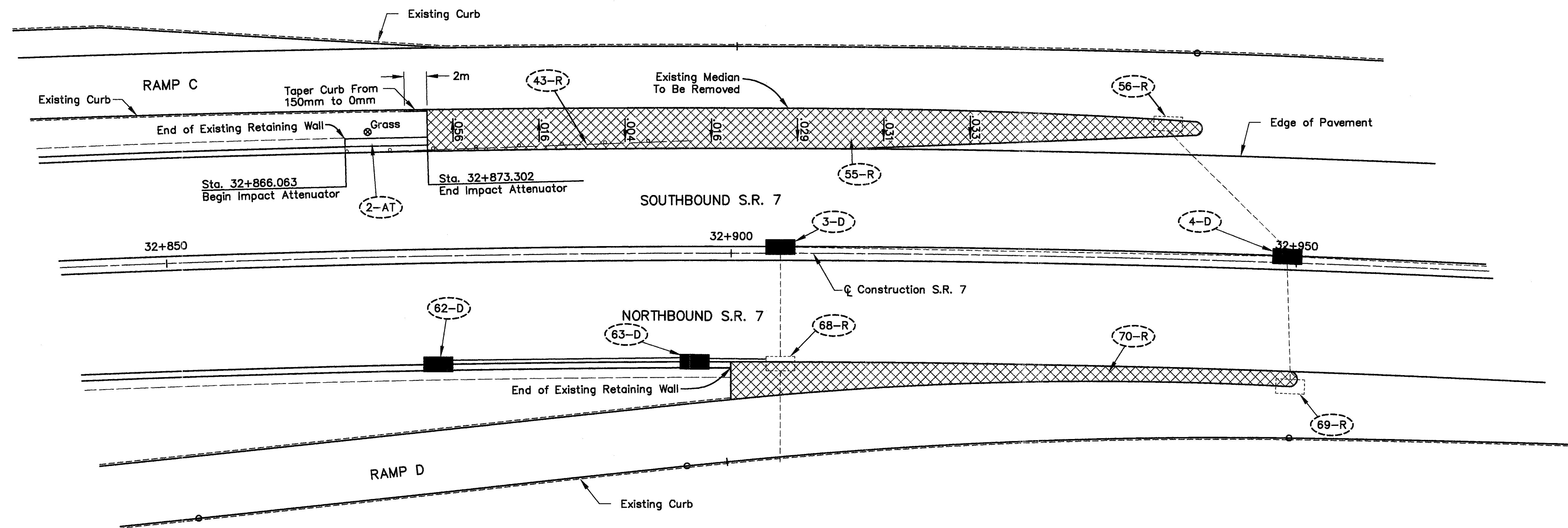
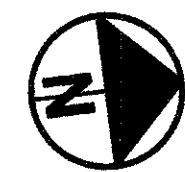




Note:  
Prepare grading to enable the concrete pad to be placed  
as directed by the manufacturers specifications.



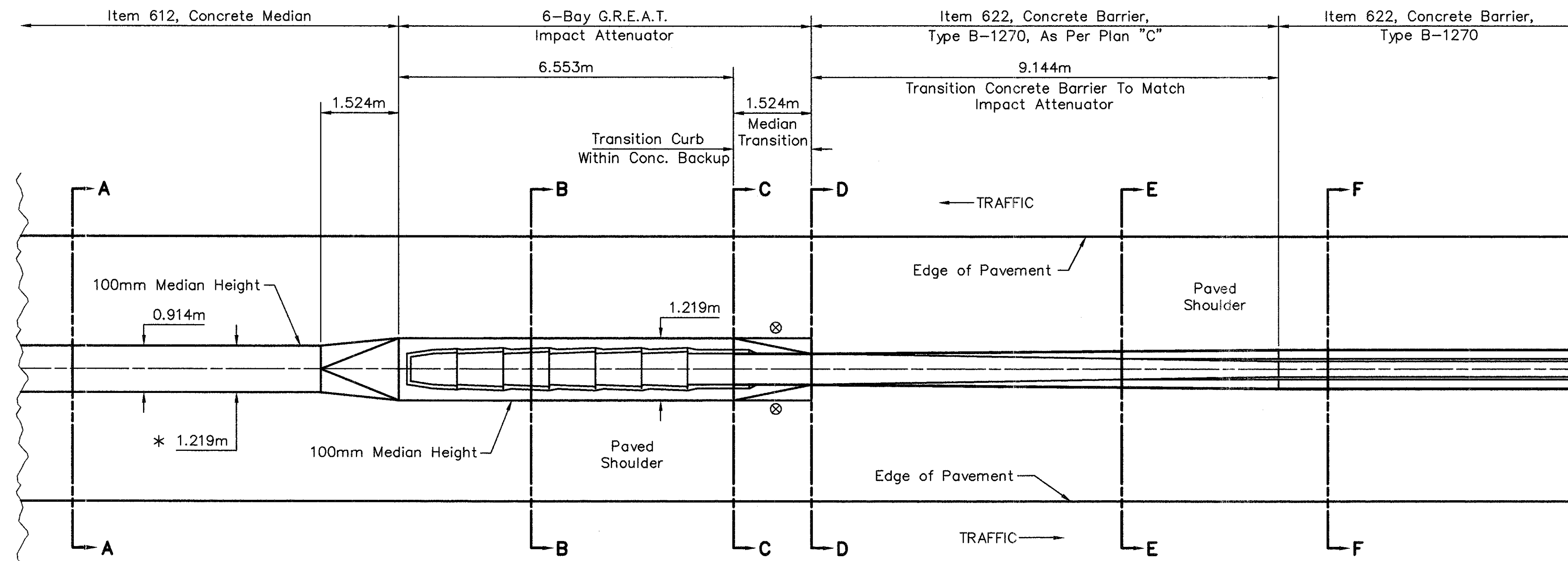




⊗ Prepare grading to enable the concrete pad to be placed as directed by the manufacturers specifications.

- |                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div style="border: 1px solid black; width: 15px; height: 10px; margin-bottom: 2px;"></div> <div style="border: 1px solid black; width: 15px; height: 10px; margin-bottom: 2px;"></div> <div style="border: 1px solid black; width: 15px; height: 10px; margin-bottom: 2px;"></div> <div style="border: 1px solid black; width: 15px; height: 10px; margin-bottom: 2px;"></div> | <p>32mm - Item 446 Asphalt Concrete Surface Course, Type 1, PG 64-28</p> <p>50mm - Item 446 Asphalt Concrete Intermediate Course, Type 2, PG 64-28</p> <p>65mm - Item 301 Bituminous Aggregate Base, PG 64-28</p> <p>150mm - Item 304 Aggregate Base</p> <p style="padding-left: 15px;">Item 407 Tack Coat For Intermediate Course</p> <p style="padding-left: 15px;">Item 408 Prime Coat</p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



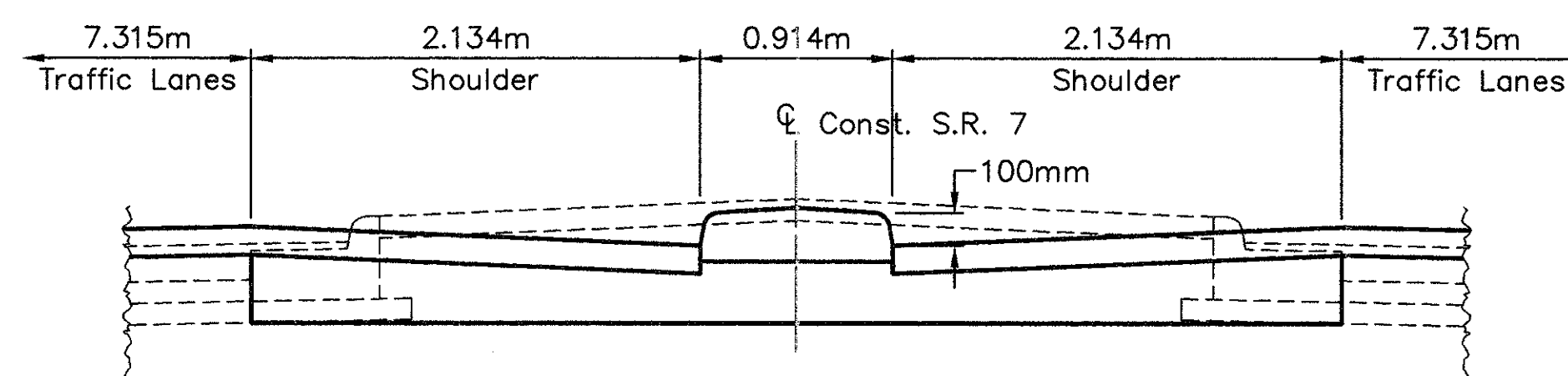


\* FOR STRUCTURE BEL-7-36683 (2280)

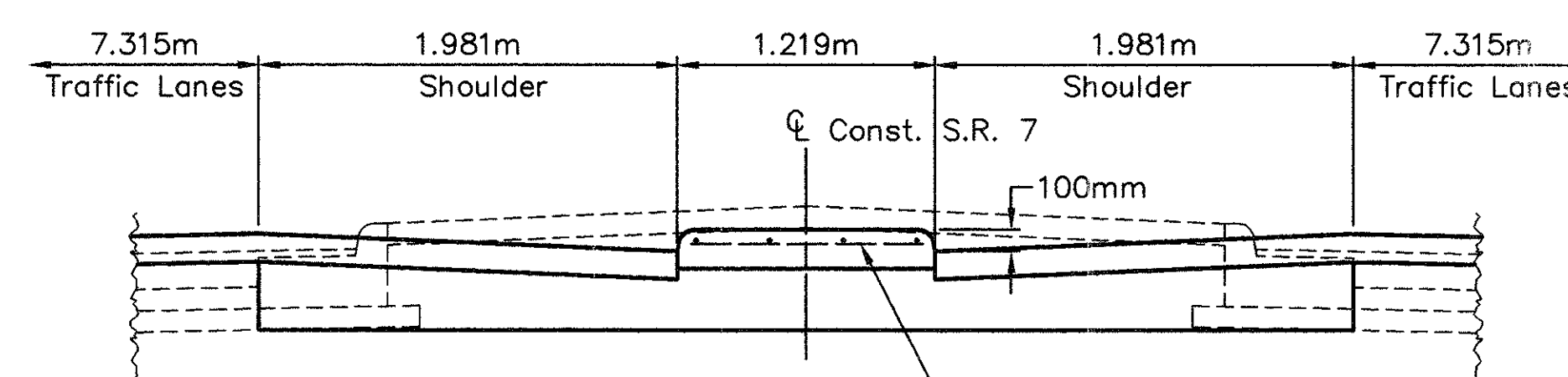
⊗ Taper to match proposed 0.610 width median at Sta. 33+834 to Sta. 33+835.524

#### TRANSITION DETAIL

|       |                                    |
|-------|------------------------------------|
| 3-AT  | Sta. 33+373.210 To Sta. 33+381.287 |
| 4-AT  | Sta. 33+450.781 To Sta. 33+458.858 |
| 5-AT  | Sta. 33+825.923 To Sta. 33+834.000 |
| 6-AT  | Sta. 34+346.000 To Sta. 34+354.077 |
| 7-AT  | Sta. 34+573.923 To Sta. 34+582.000 |
| 8-AT  | Sta. 34+612.000 To Sta. 34+620.077 |
| 9-AT  | Sta. 35+428.923 To Sta. 35+437.000 |
| 10-AT | Sta. 35+953.000 To Sta. 35+961.077 |
| 11-AT | Sta. 36+665.920 To Sta. 36+673.997 |
| 12-AT | Sta. 38+068.608 To Sta. 38+076.685 |

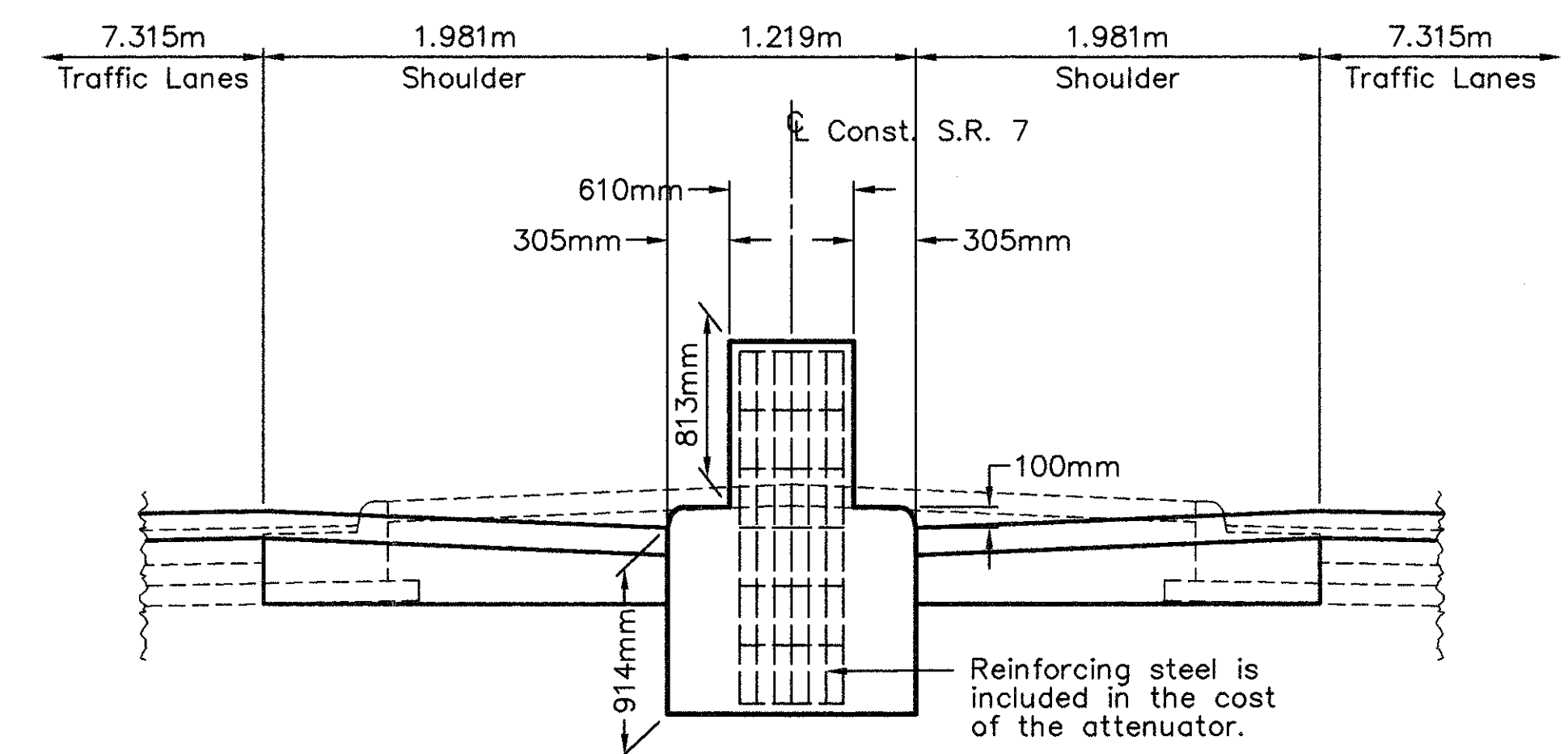


Sec A-A



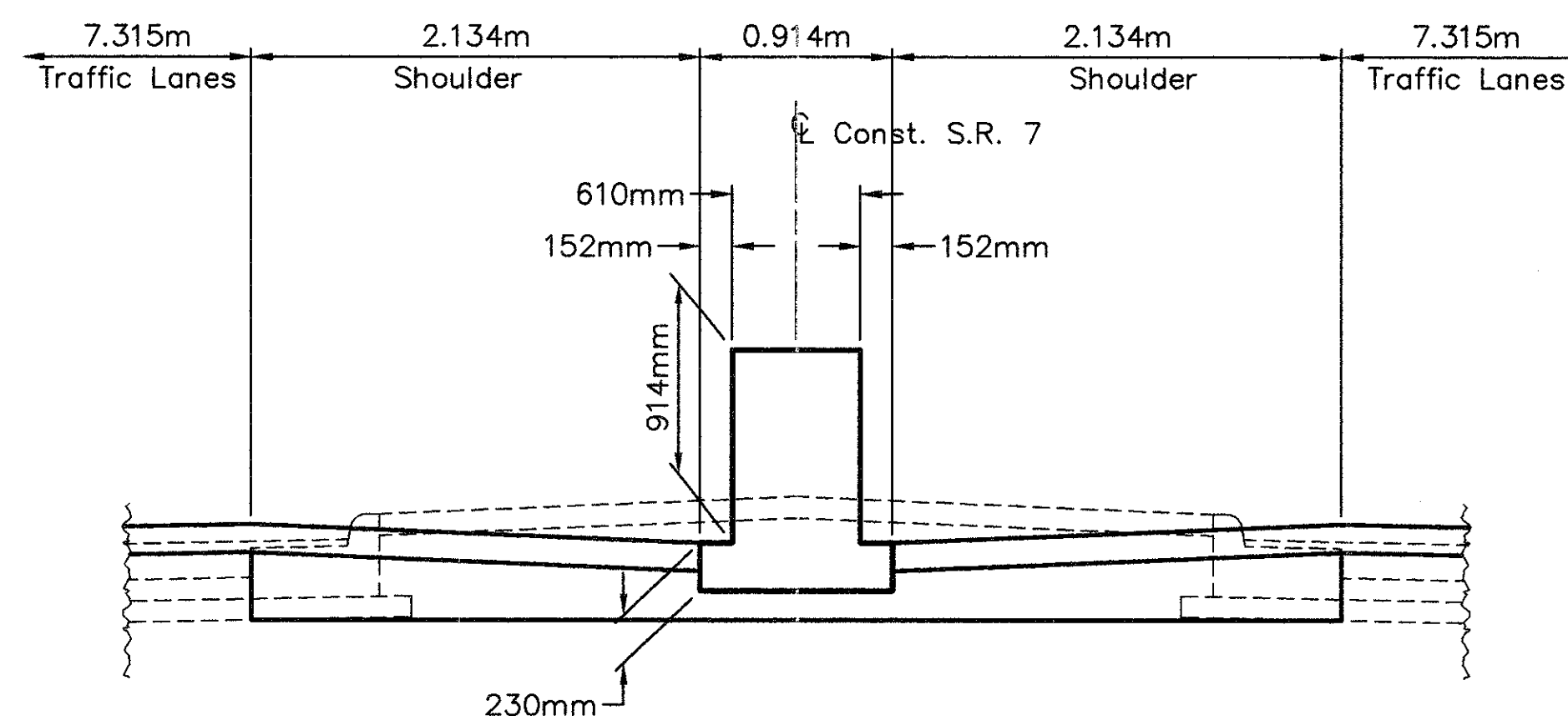
Sec B-B

Reinforcing steel is included in the cost of the attenuator.

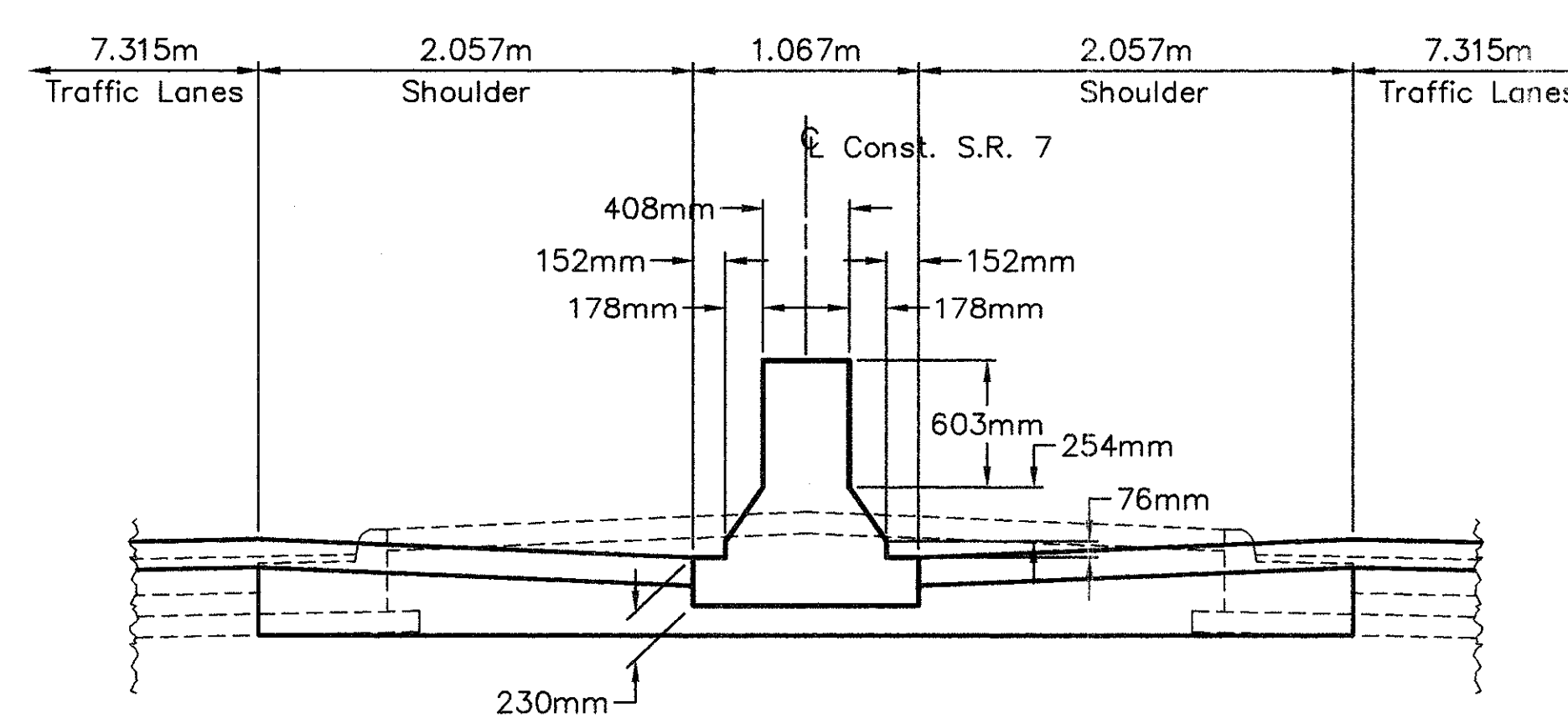


Sec C-C

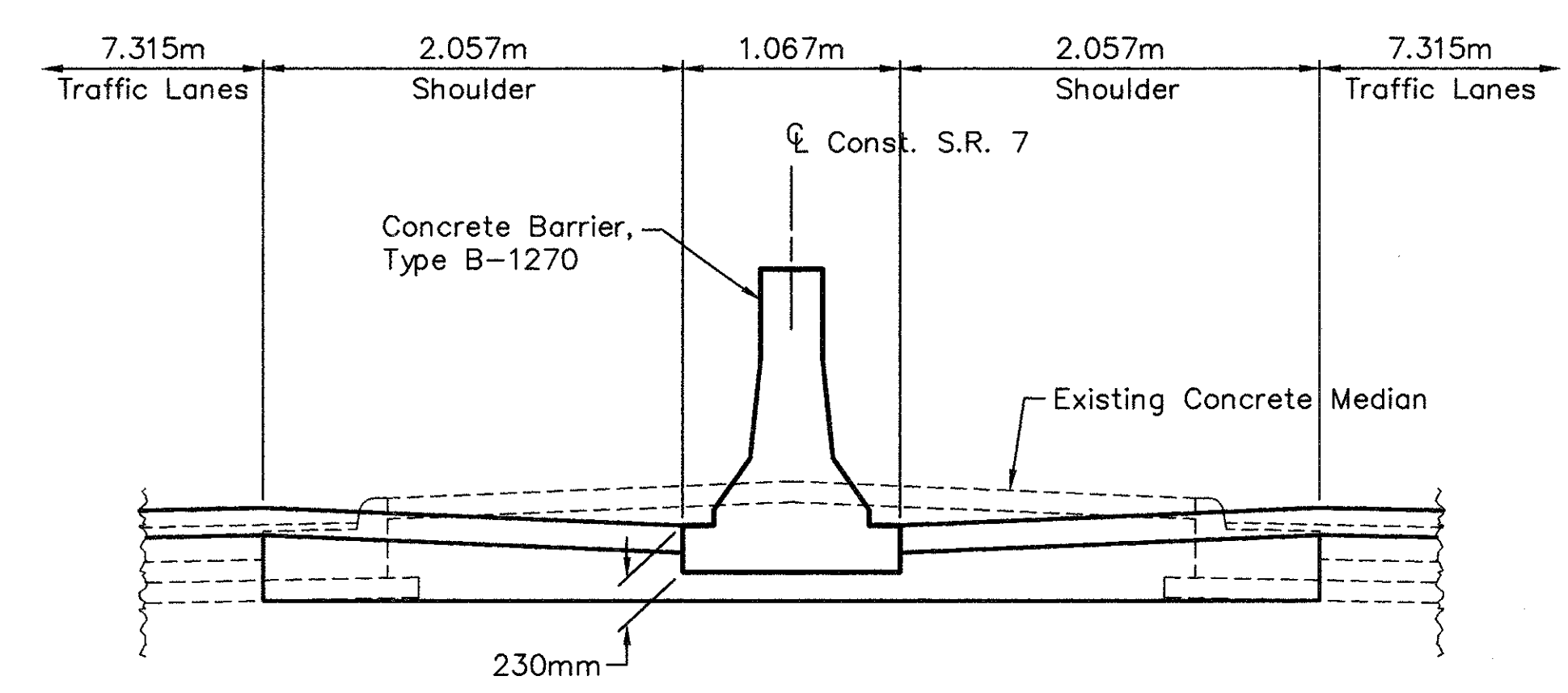
Reinforcing steel is included in the cost of the attenuator.



Sec D-D



Sec E-E



Sec F-F

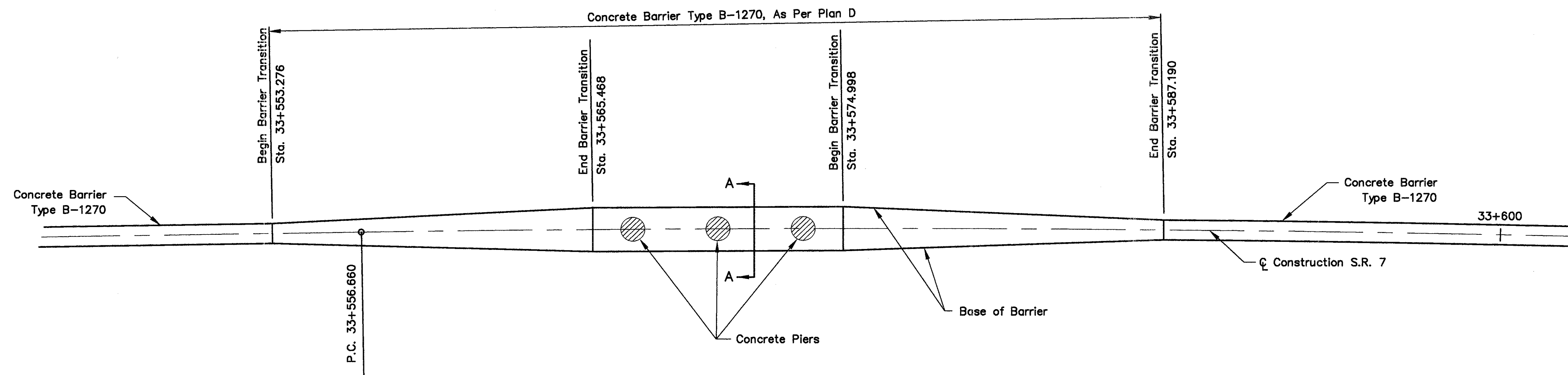
MISCELLANEOUS DETAILS:  
IMPACT ATTENUATOR

BEL-7-32.276

85  
242

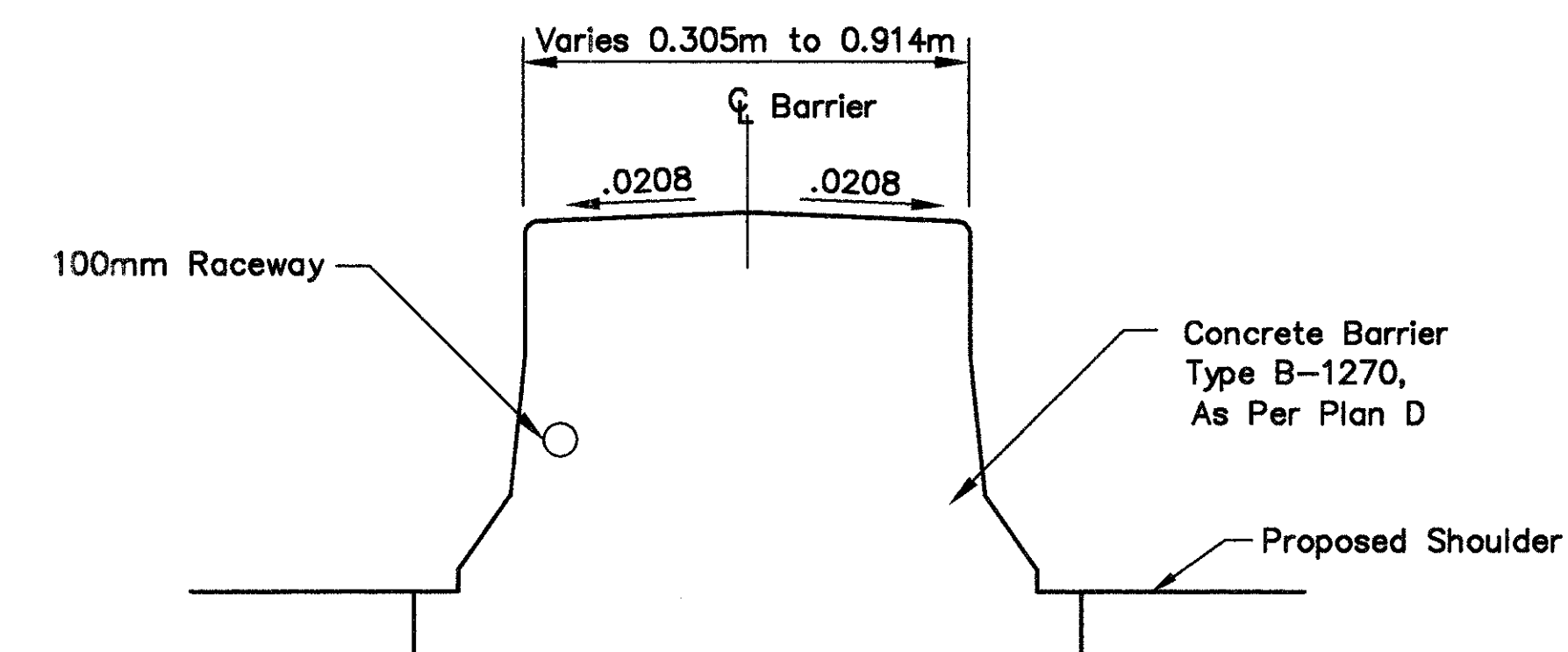


H:\3261-01\3261045.dwg - 02/24/1997 - 08:37:28

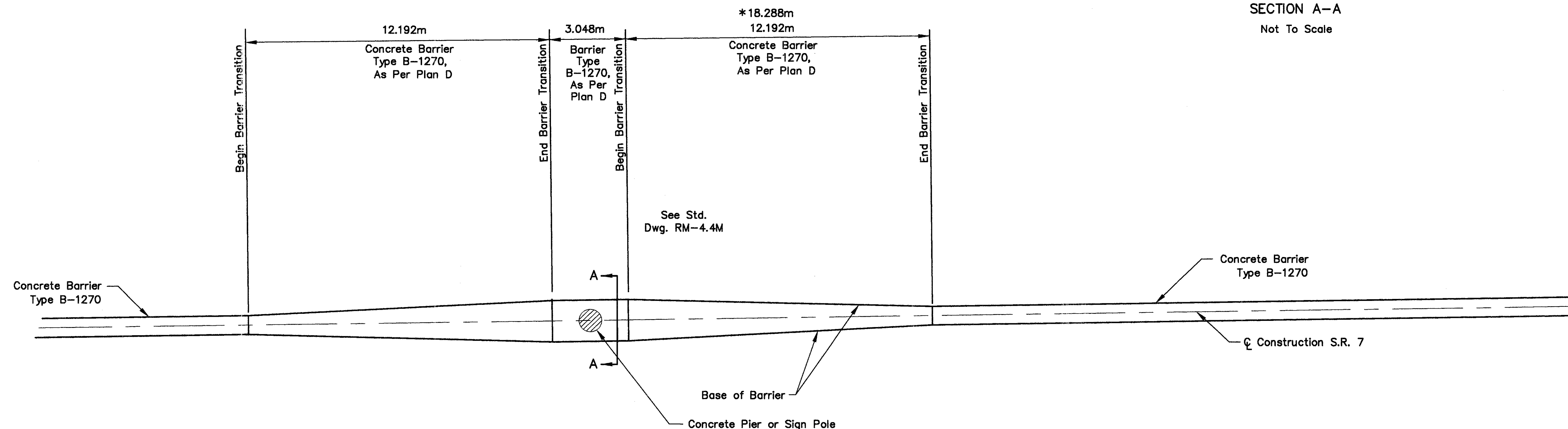


BRIDGE PIER TRANSITION  
10-B STA. 33+553.276 TO STA. 33+587.190

NOTE: For Additional Information  
on Concrete Barrier Transitions  
See Standard Drawing RM-4.4M



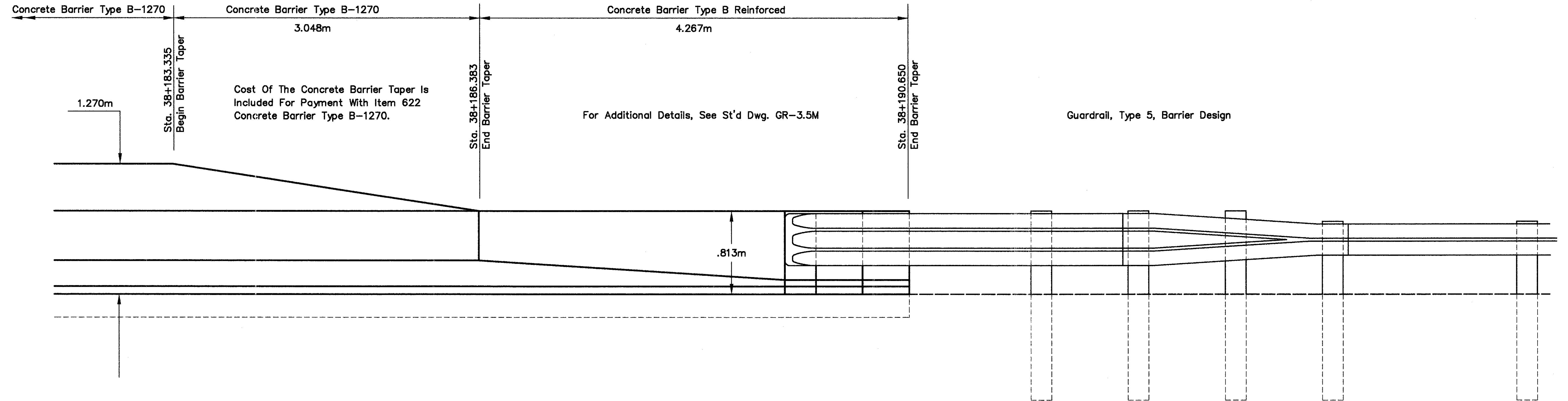
SECTION A-A  
Not To Scale



BRIDGE PIER OR SIGN TRANSITION  
20-B SIGN STA. 35+299.284 TO STA. 35+326.716  
27-B SIGN STA. 35+986.284 TO STA. 36+013.716  
29-B PIER STA. 36+144.249 TO STA. 36+183.873 \*  
34-B SIGN STA. 36+521.284 TO STA. 36+548.716

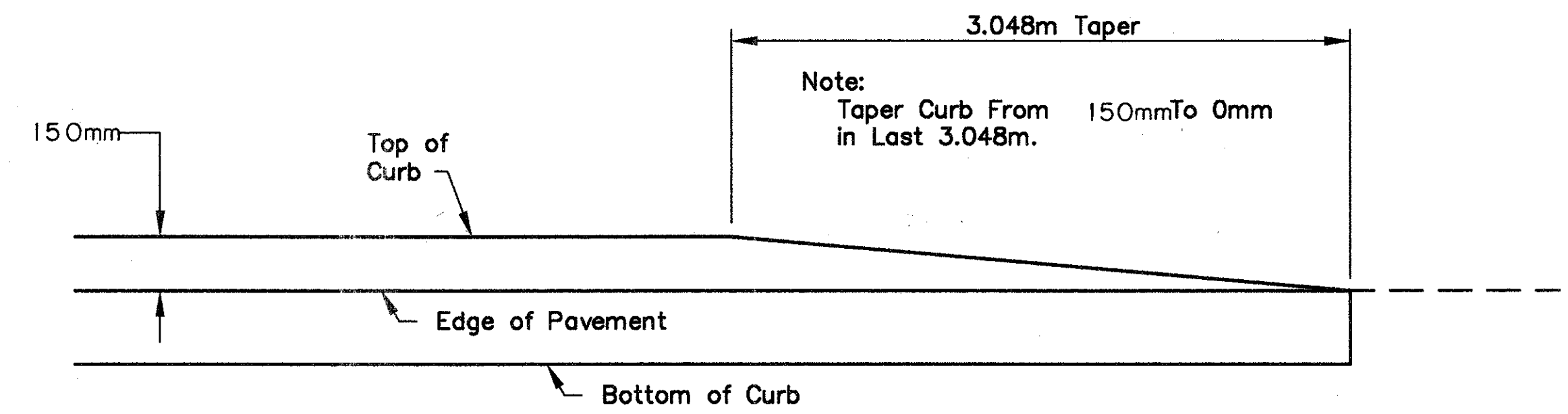


H:\9321-01\9321042.dwg - OCT 24, 1997 - 08:38:01

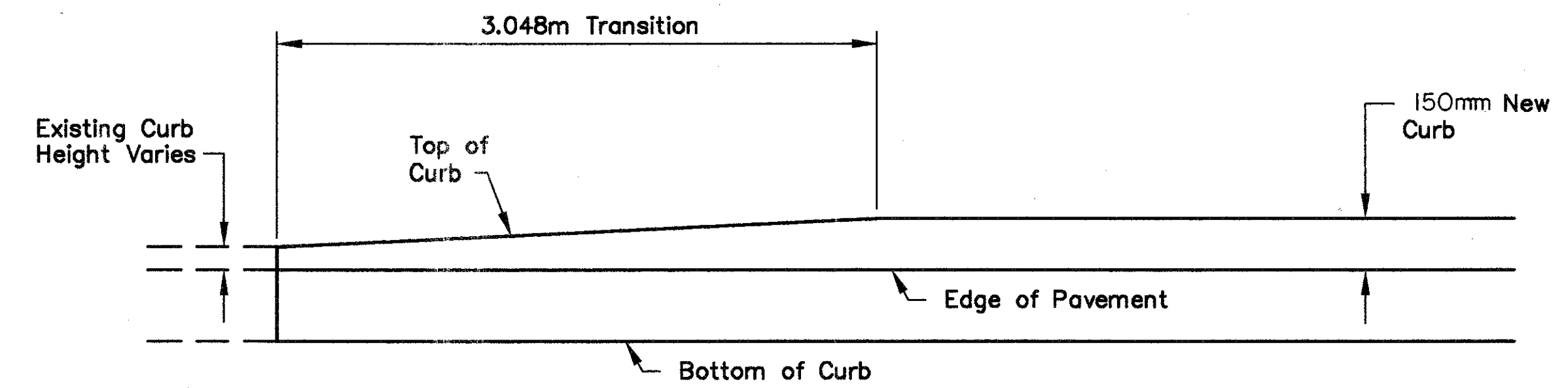


CONCRETE BARRIER TRANSITION TO BARRIER GUARDRAIL

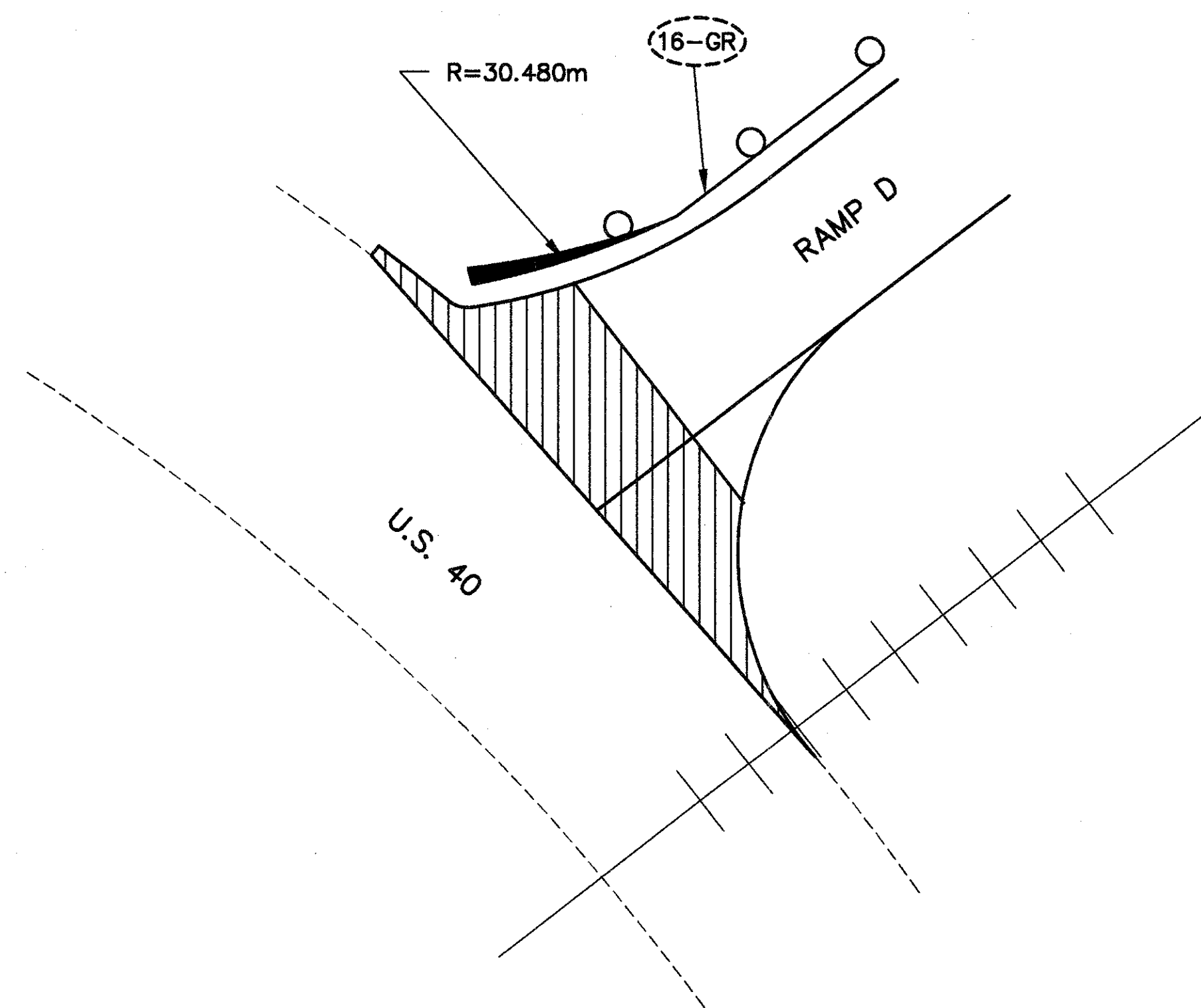




**CURB TAPER DETAIL**  
Not To Scale

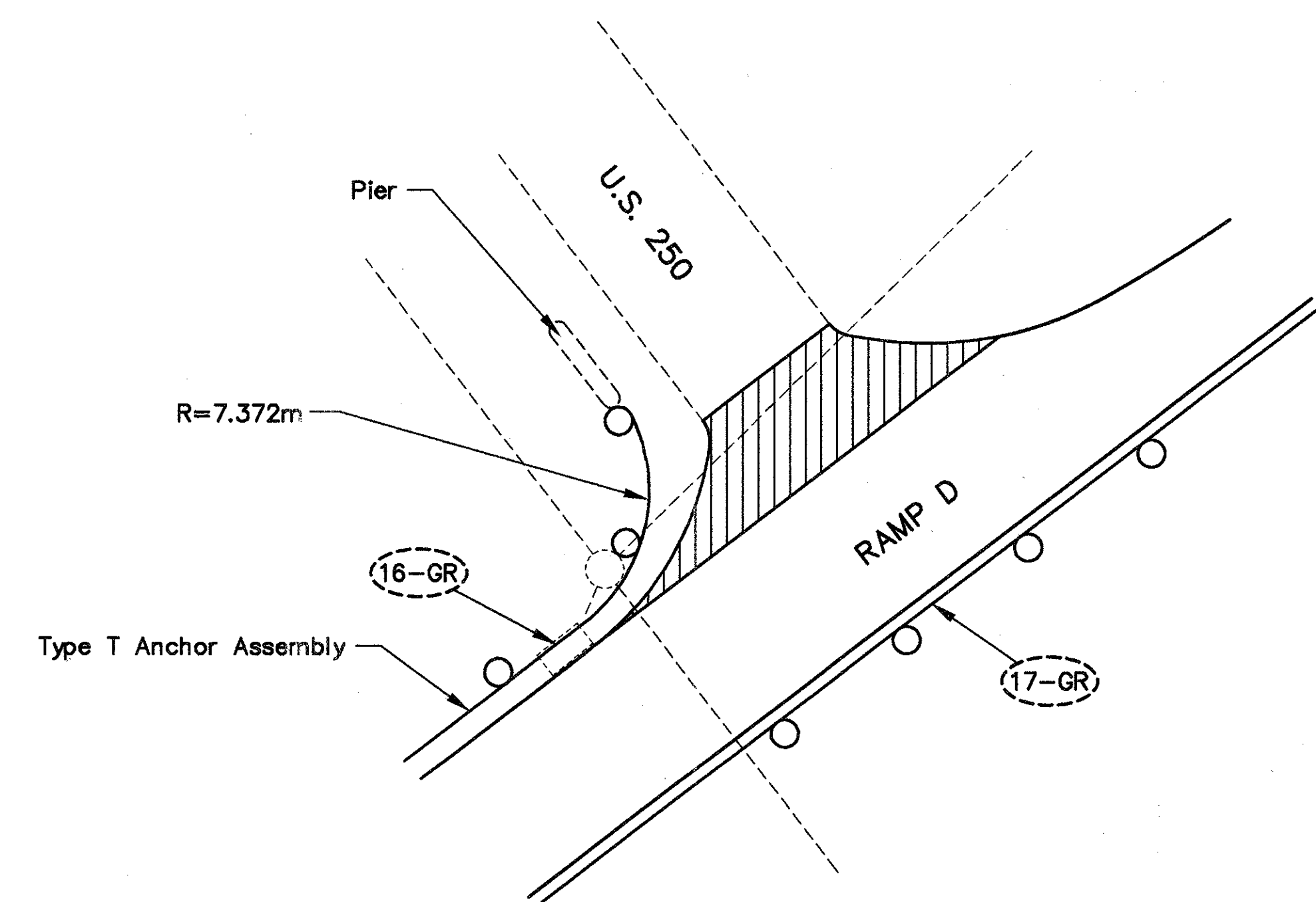


**CURB TRANSITION DETAIL**  
Not To Scale



For Plan, See Sheet No. 59

**GUARDRAIL DETAIL FOR RAMP D AT U.S. 40**

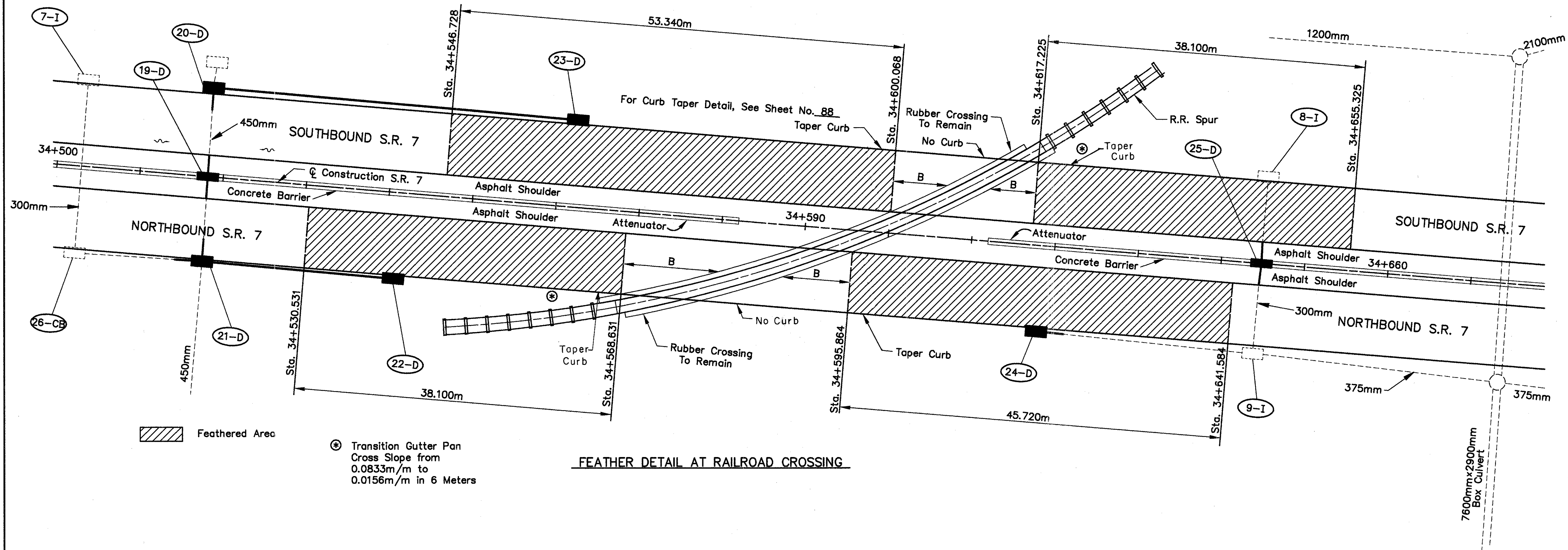


FEATHERED AREA 

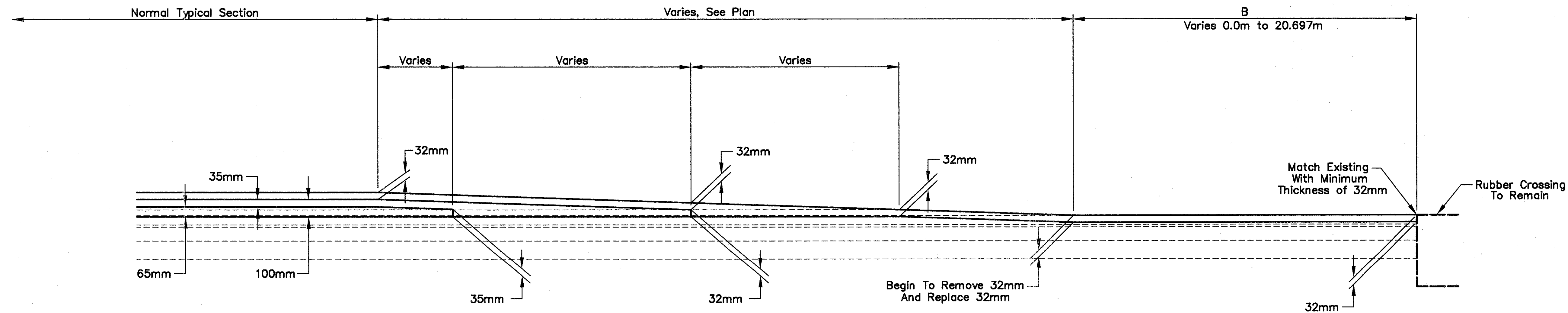
For Plan, See Sheet No. 59

**GUARDRAIL DETAIL FOR RAMP D AT U.S. 250**



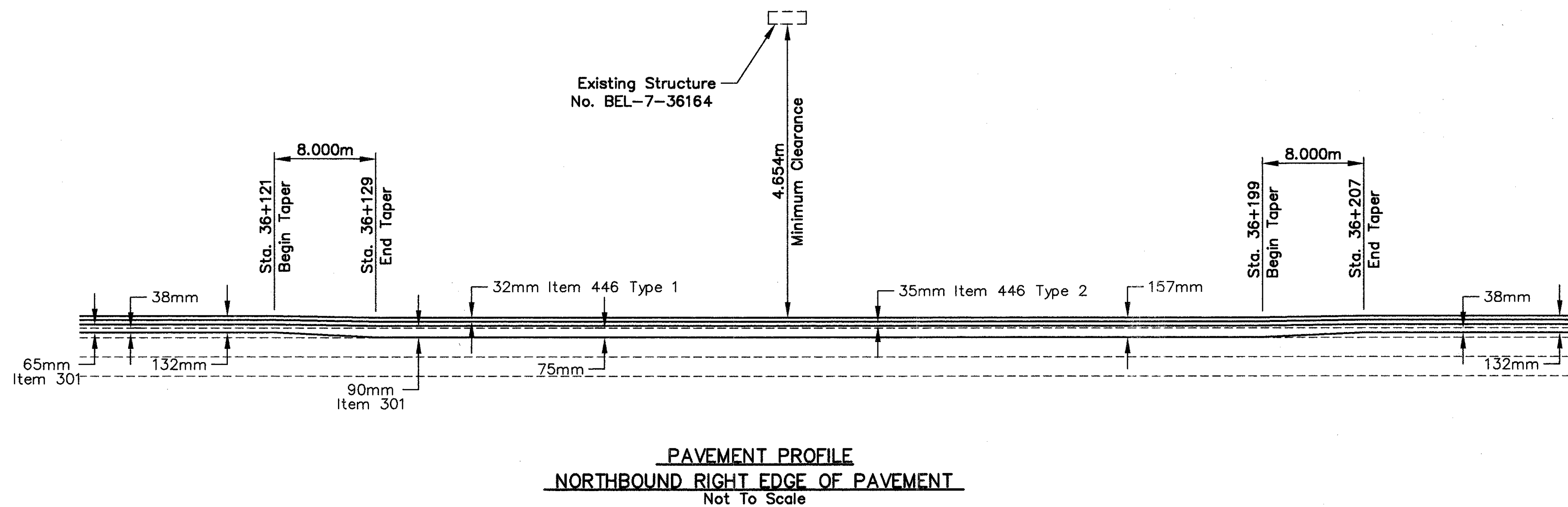
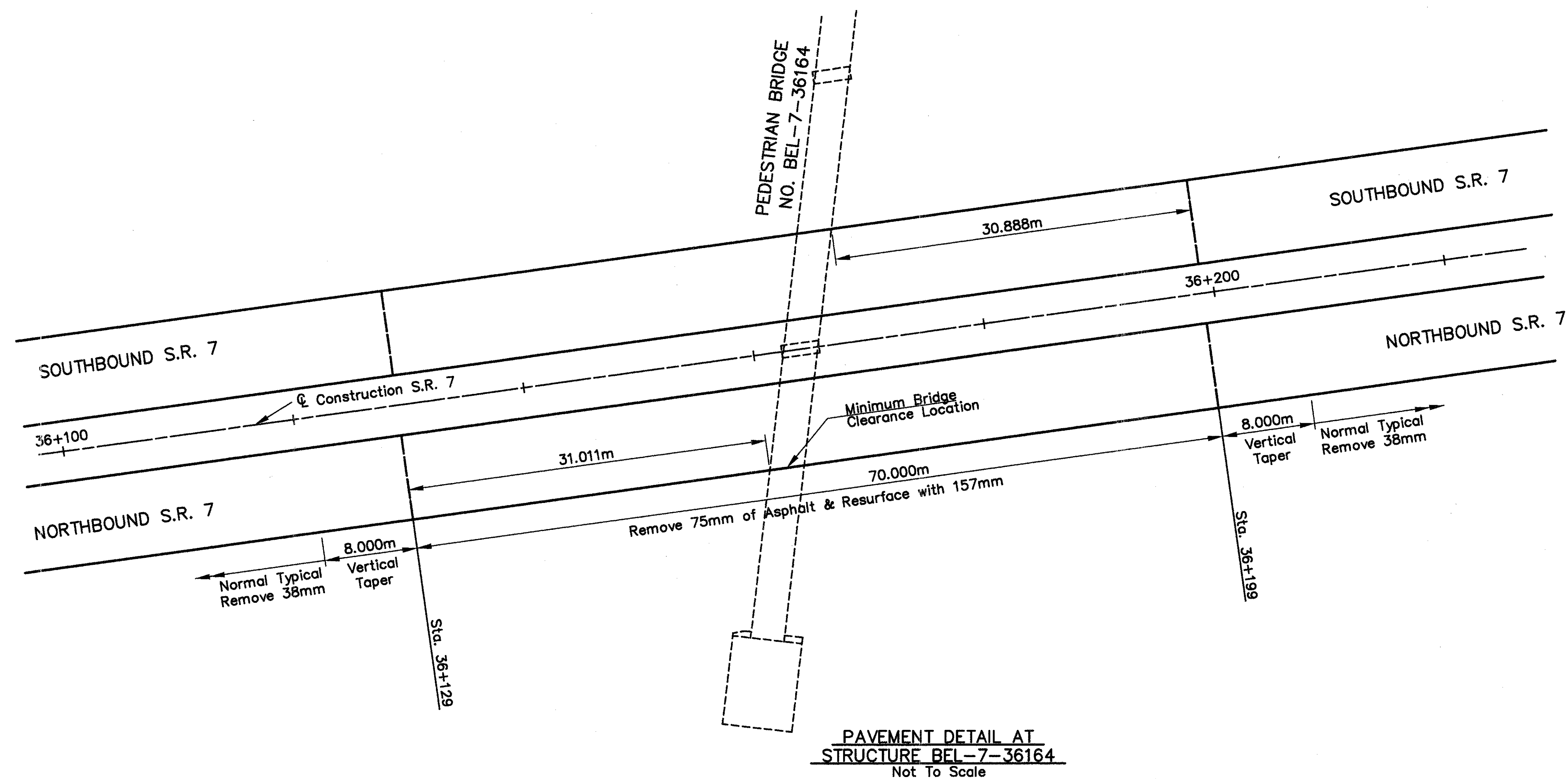


**FEATHER DETAIL AT RAILROAD CROSSING**



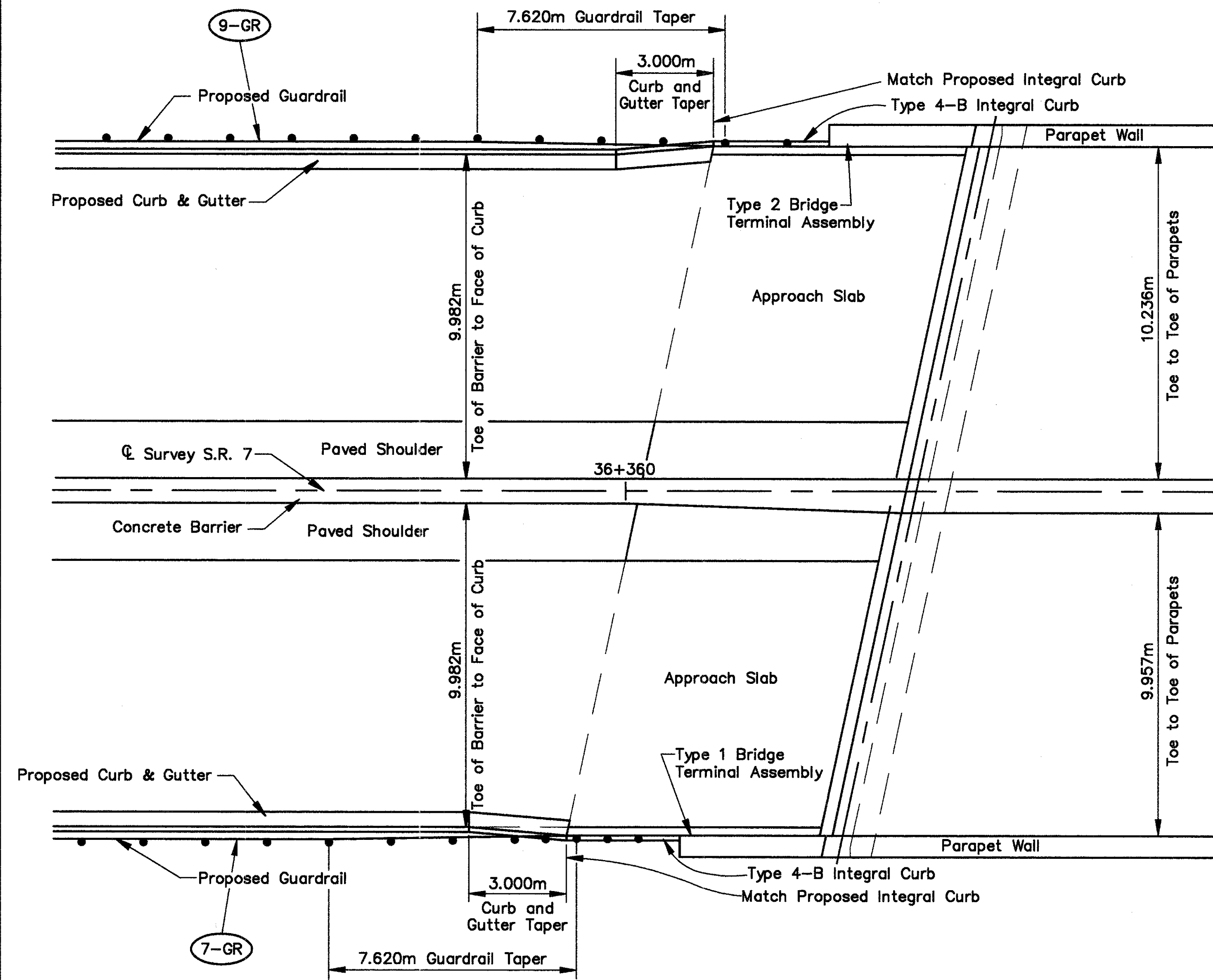
**TYPICAL PROFILE**  
Applies to both sides of Rubber Crossing



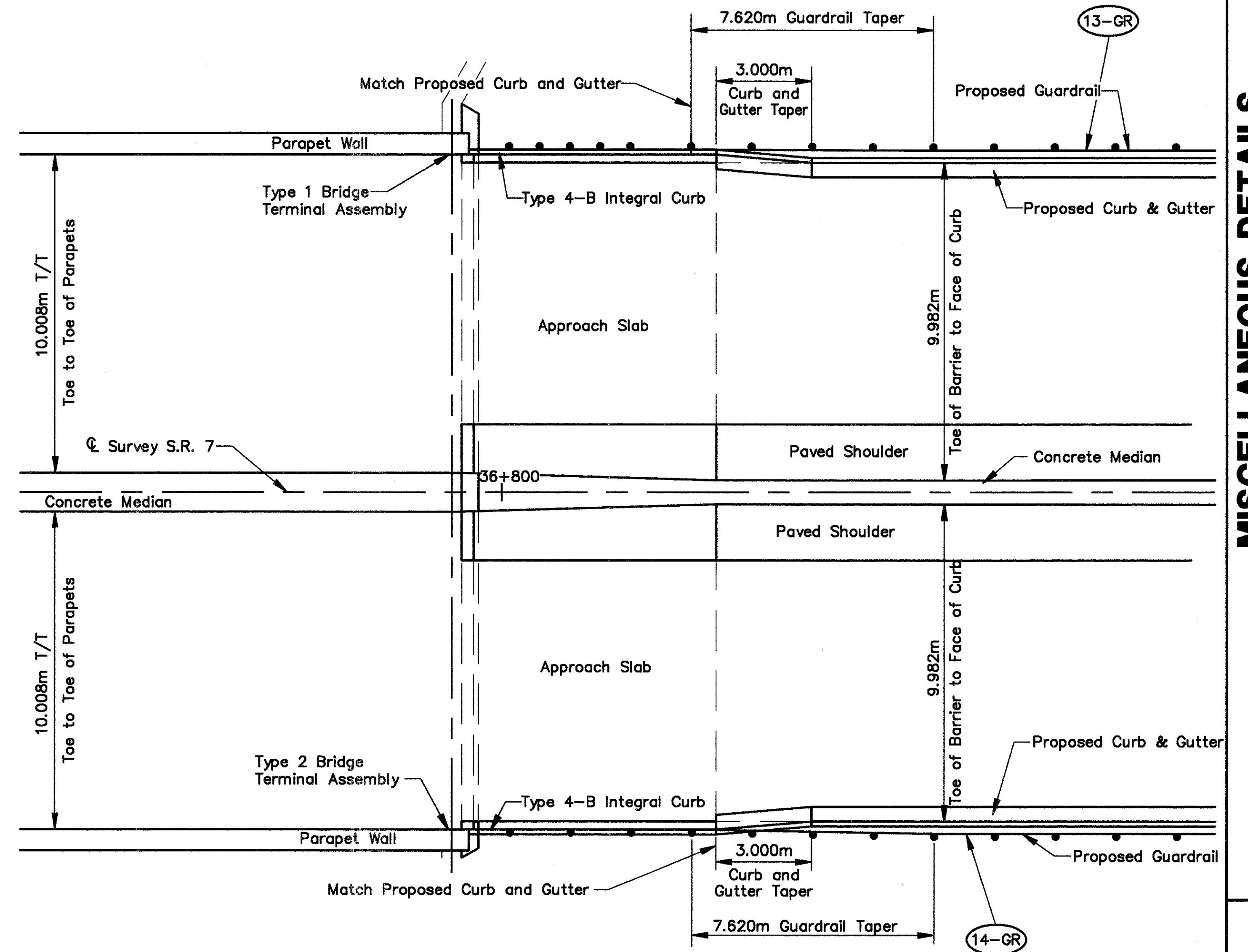




HA-332-01.1332112.dwg - OCT 24, 1997 - 108.41.34



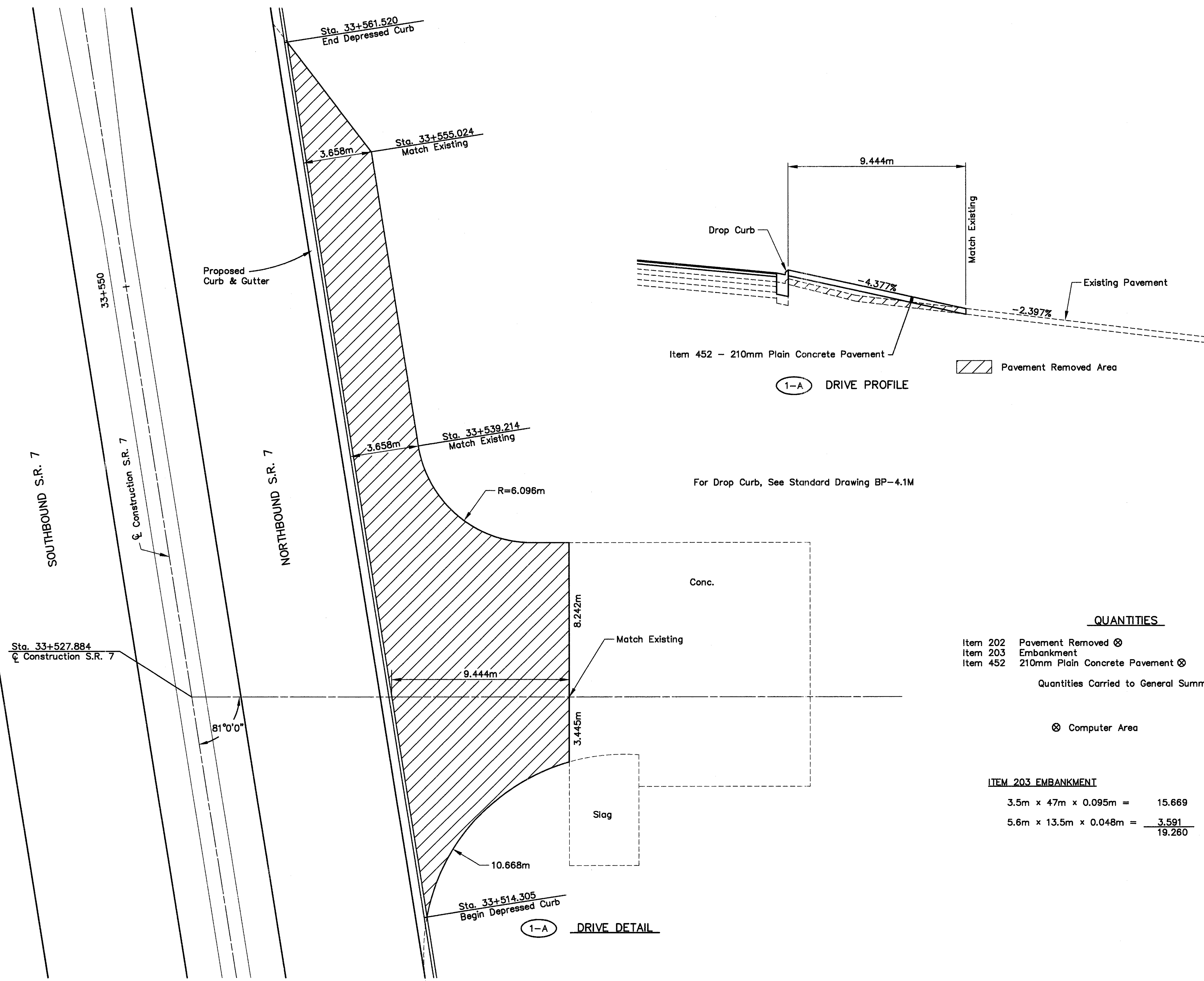
**TYPICAL CURB AND GUARDRAIL TRANSITION AT STRUCTURE BEL-7-36368**  
(DETAIL APPLIES TO BOTH ENDS OF THE STRUCTURE)



**TYPICAL CURB AND GUARDRAIL TRANSITION AT STRUCTURE BEL-7-36683**  
(DETAIL APPLIES TO BOTH ENDS OF THE STRUCTURE)



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QUANTITIES

|          |                                 |       |           |
|----------|---------------------------------|-------|-----------|
| Item 202 | Pavement Removed ⊗              | 236.0 | Sq. Meter |
| Item 203 | Embankment                      | 19.0  | Cu. Meter |
| Item 452 | 210mm Plain Concrete Pavement ⊗ | 236.0 | Sq. Meter |

Quantities Carried to General Summary

⊗ Computer Area

ITEM 203 EMBANKMENT

|                         |        |           |
|-------------------------|--------|-----------|
| 3.5m x 47m x 0.095m =   | 15.669 | Cu. Meter |
| 5.6m x 13.5m x 0.048m = | 3.591  | Cu. Meter |
|                         | 19.260 | Cu. Meter |

MISCELLANEOUS DETAIL  
DRIVE PLAN STA. 33+527.884

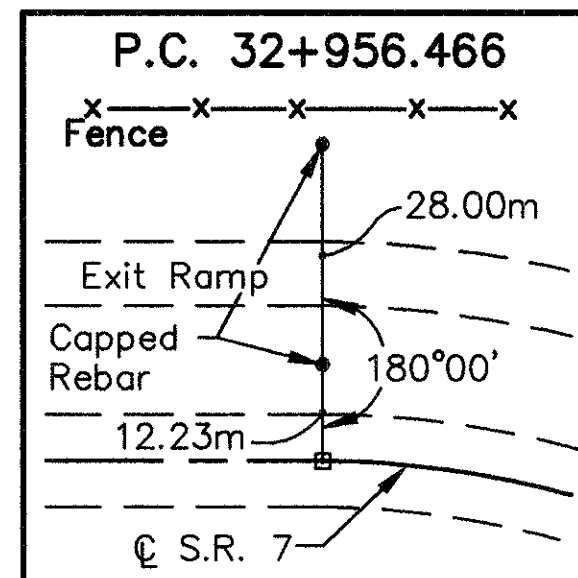
BEL-7-32.276

92  
242

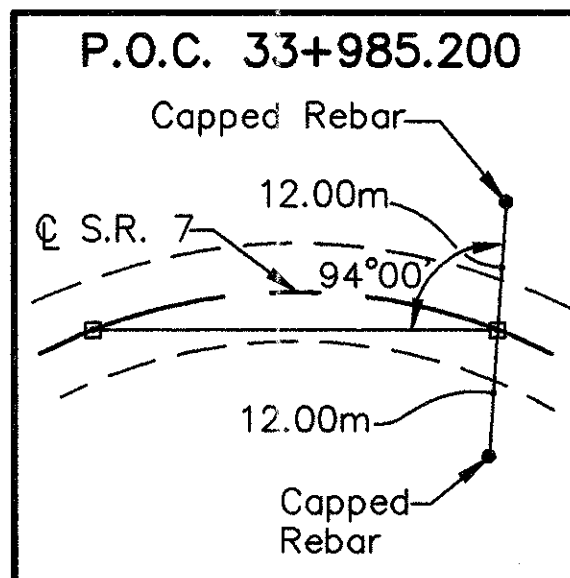
CALCULATED  
SAH  
CHECKED  
WCR



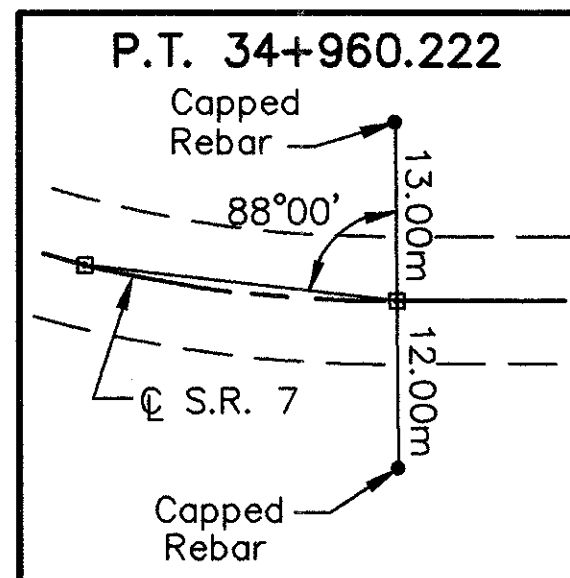
RELOC. S.R. 7



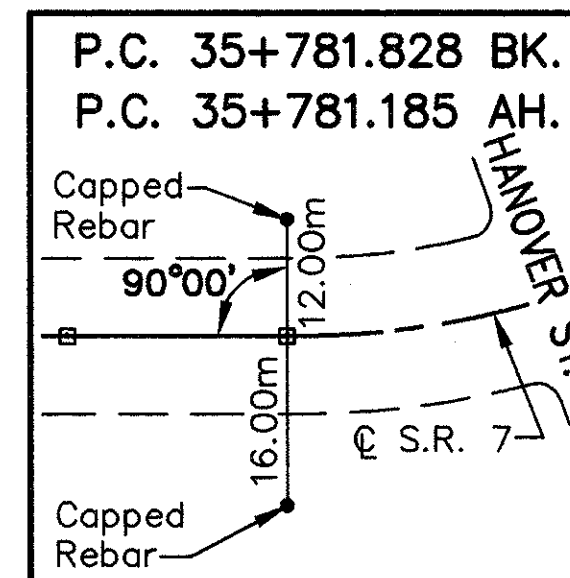
RELOC. S.R. 7



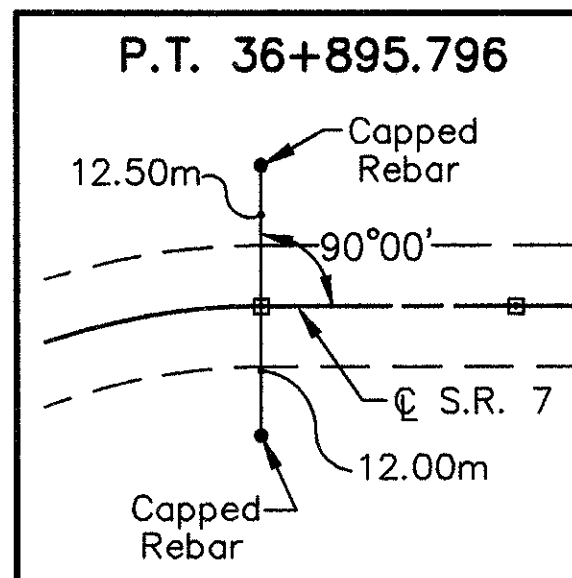
RELOC. S.R. 7



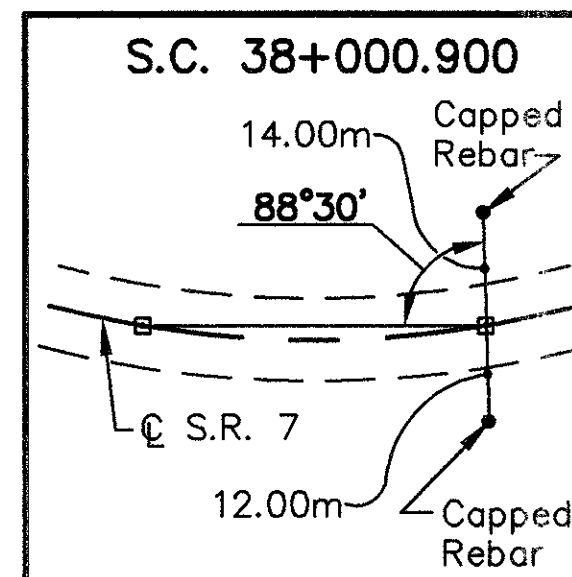
RELOC. S.R. 7



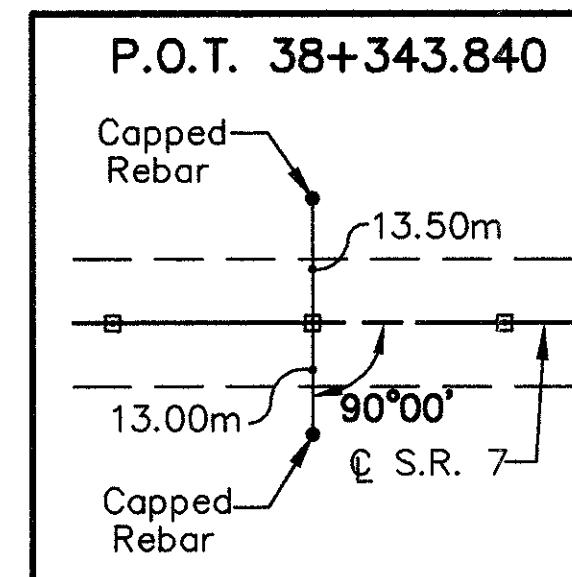
RELOC. S.R. 7



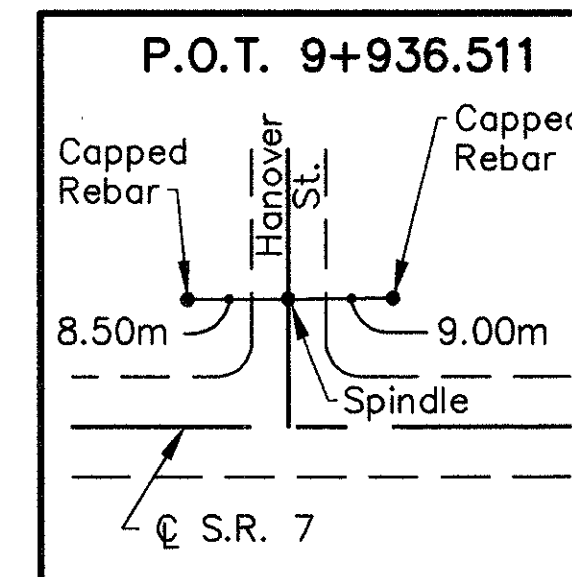
RELOC. S.R. 7



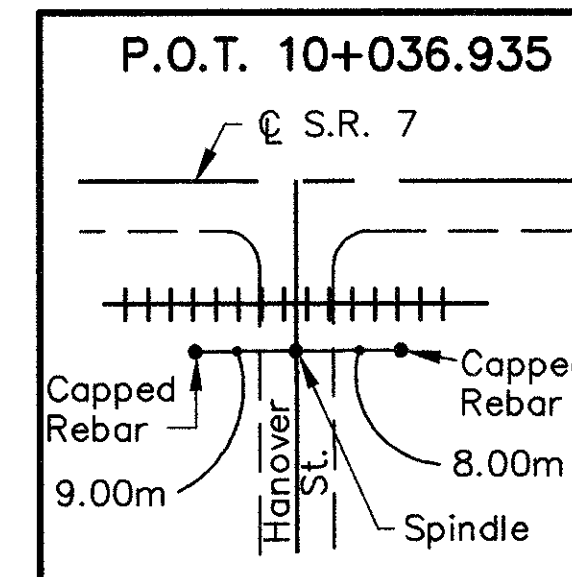
RELOC. S.R. 7



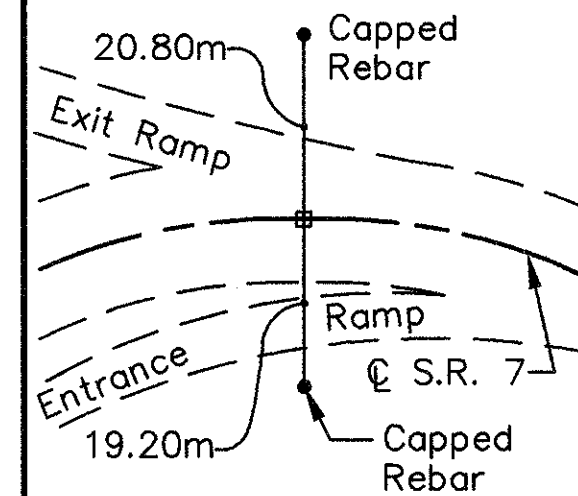
HANOVER ST.



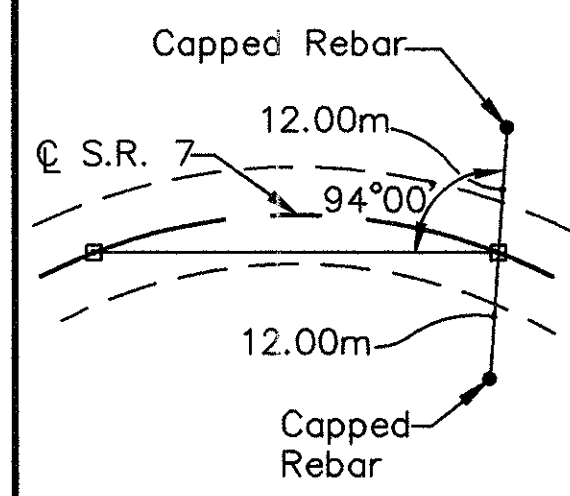
HANOVER ST.



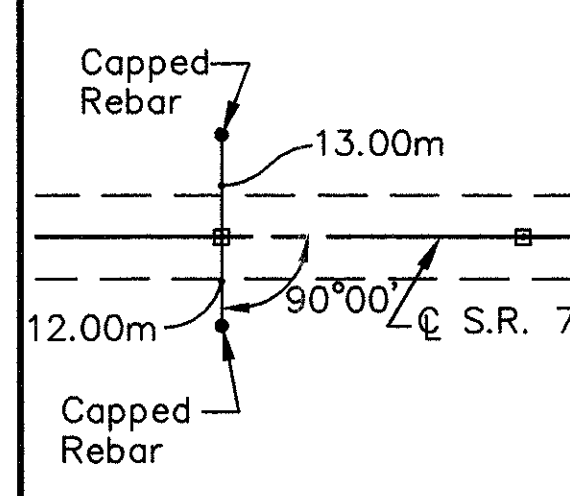
P.C.C. 33+054.905



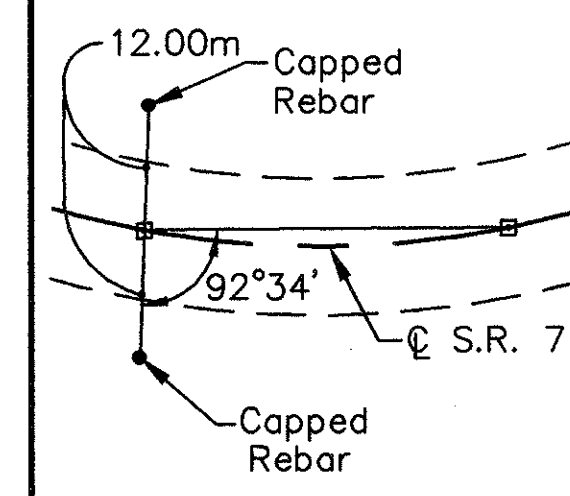
P.O.C. 34+137.600



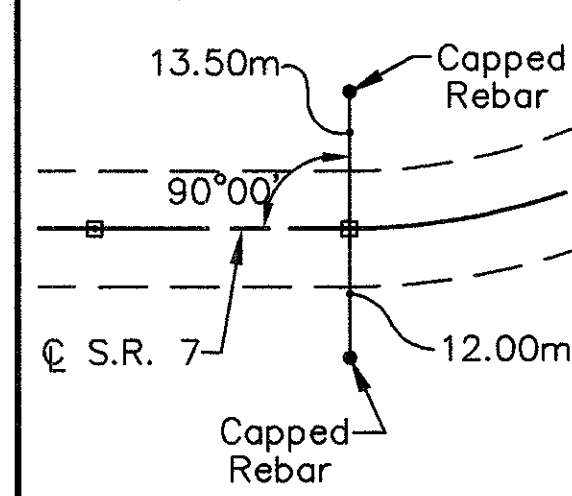
P.O.T. 35+112.960



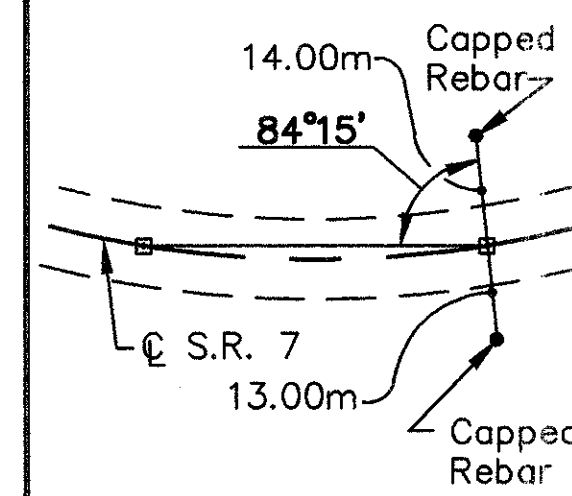
P.O.C. 36+088.320



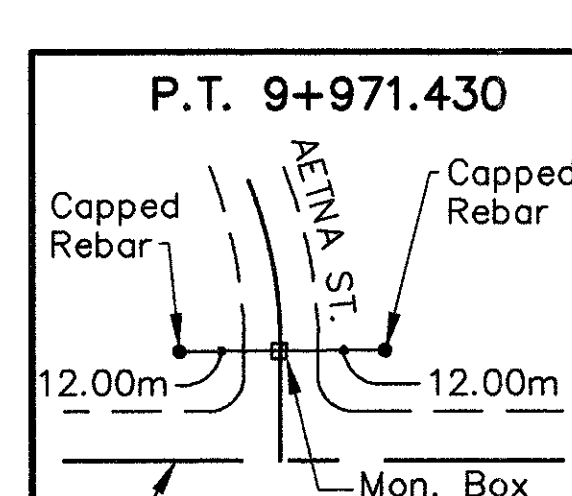
P.C. 37+267.975



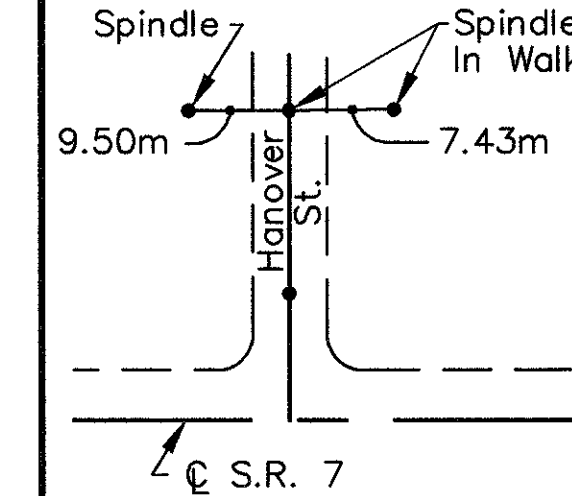
C.S. 38+089.817



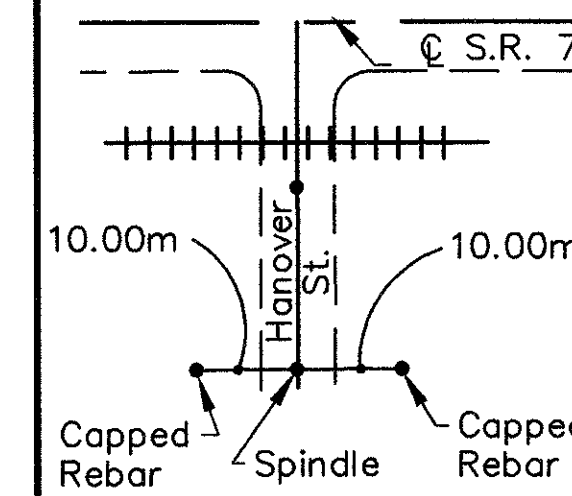
AETNA ST.



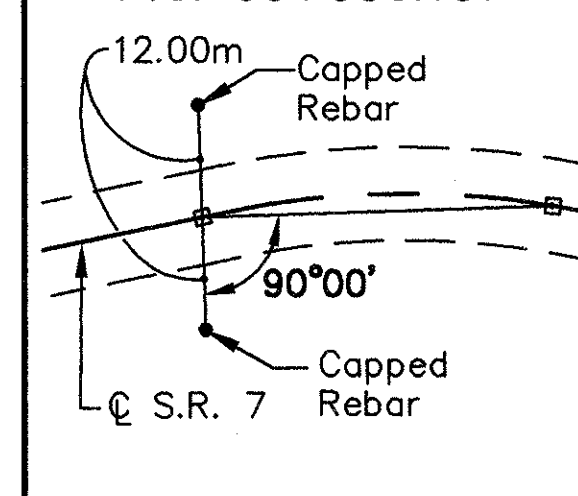
P.O.T. 9+905.650



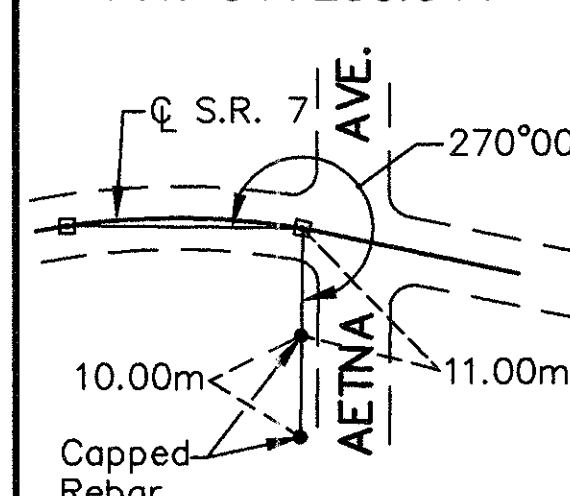
P.O.T. 10+073.145



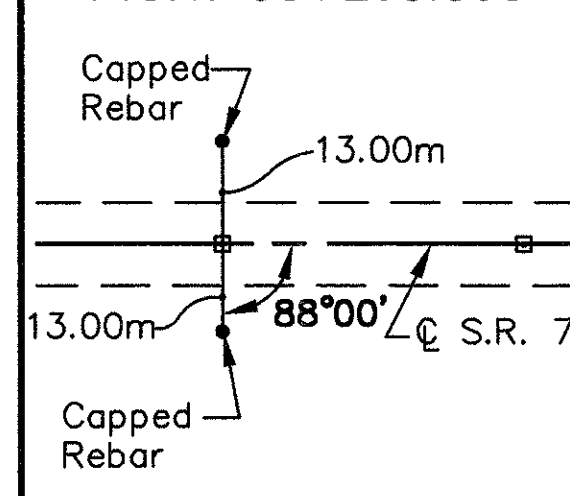
P.C. 33+380.157



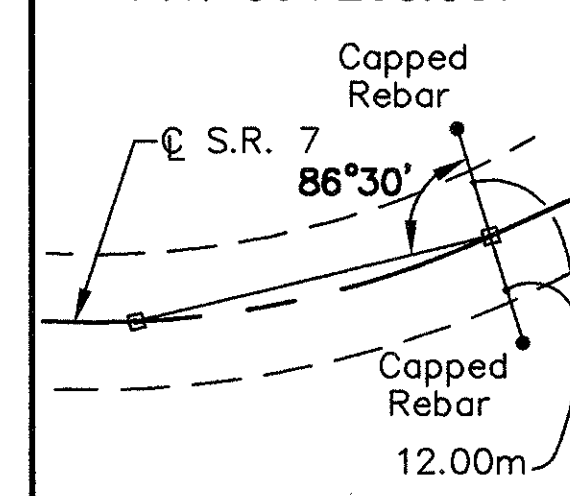
P.T. 34+238.544



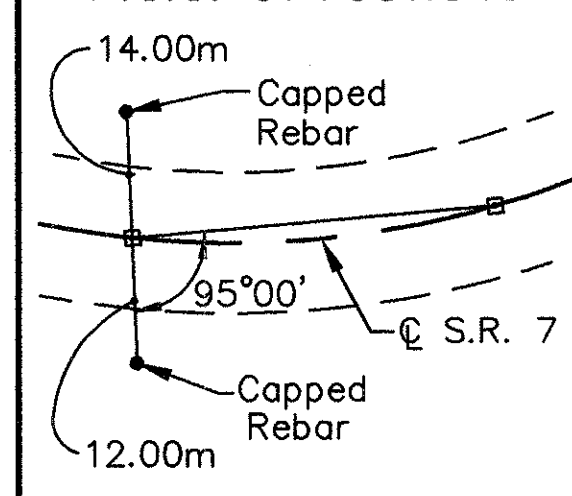
P.O.T. 35+265.360



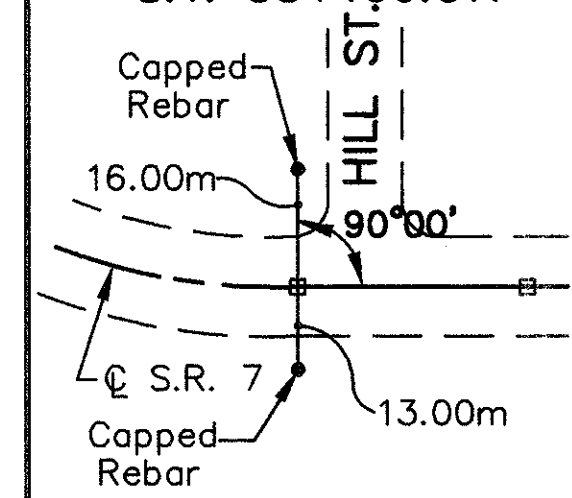
P.T. 36+208.801



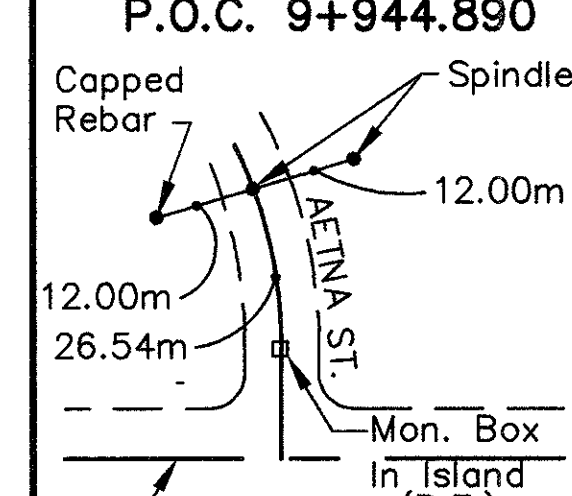
P.O.C. 37+581.840



S.T. 38+166.017



P.O.C. 9+944.890

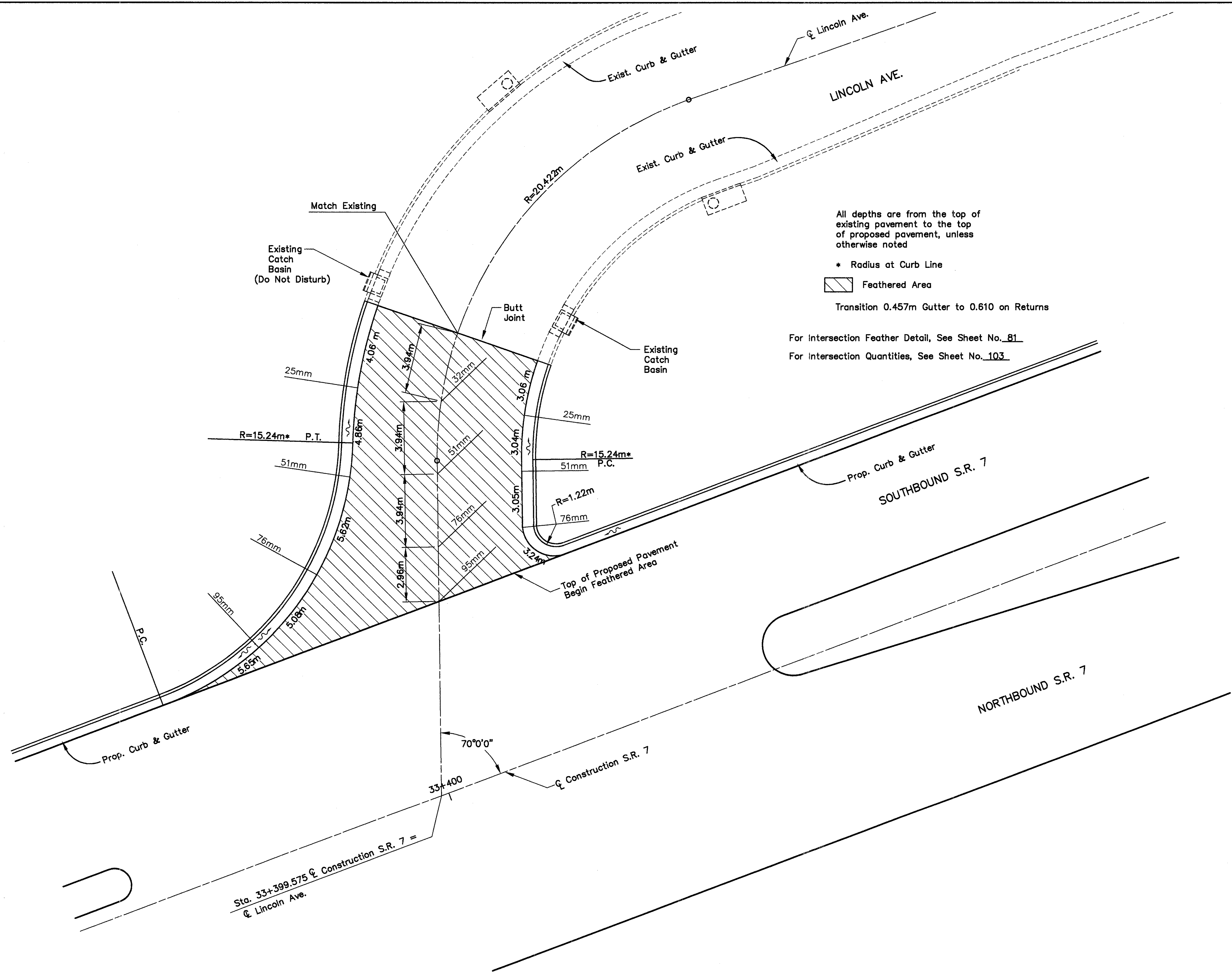


NOTE  
ALL REFERENCES SHOWN ON S.R. 7 ARE FOR EXISTING MONUMENTS ON THE CENTERLINE OF RIGHT OF WAY FOR S.R. 7.

\* Reset Existing Monument In Island at Aetna. St.  
⊗ Centerline of construction and centerline of right of way are at the same location.

| EXISTING RECORD LOCATIONS                 |                                 | EXISTING MONUMENT LOCATIONS |                           | ITEM 604 MONUMENTS     |                          |        |
|-------------------------------------------|---------------------------------|-----------------------------|---------------------------|------------------------|--------------------------|--------|
| ⊗ R/W METRIC STATION                      | ⊗ R/W ENGLISH STATION           | ⊗ CONSTRUCTION STATION      | OFFSET TO EXIST. MONUMENT | ⊗ CONSTRUCTION STATION | OFFSET TO REFERENCE MON. |        |
|                                           |                                 |                             | LT. RT.                   |                        | LT.                      | RT.    |
| P.C. 32+956.466                           | 176+20.20                       | 32+804.184                  |                           |                        |                          |        |
| P.C.C. 33+054.905                         | 179+43.16                       | 32+902.175                  |                           |                        |                          |        |
| P.C. 33+380.157                           | 1095+14.95                      | 33+227.319                  | 0.075                     | 33+227.319             | 11.075                   | 11.750 |
| P.T. 33+491.765                           | 1098+81.12                      | 33+338.978                  | 0.088                     | 33+338.978             | 11.088                   | 11.750 |
| P.C. 33+709.469                           | 1105+95.37                      | 33+556.627                  | 0.040                     | 33+556.627             | 11.040                   | 14.500 |
| P.O.C. 33+832.800                         | 1110+00.00                      | 33+679.933                  | 0.052                     | 33+679.933             | 11.052                   | 11.000 |
| P.O.C. 33+985.200                         | 1115+00.00                      | 33+832.348                  | 0.028                     | 33+832.348             | 11.028                   | 11.000 |
| P.O.C. 34+137.600                         | 1120+00.00                      | 33+984.766                  | 0.015                     | 33+984.766             | 11.015                   | 11.000 |
| P.T. 34+238.544                           | 1123+31.18                      | 34+085.736                  | ⊗                         | 34+085.736             |                          | 11.000 |
| P.O.T. 34+533.840                         | 1133+00.00                      | 34+380.938                  | 0.002                     | 34+380.938             | 11.002                   | 11.500 |
| P.O.T. 34+686.240                         | 1138+00.00                      | 34+533.349                  |                           | * 9+971.430            | 10.000                   | 11.500 |
| P.C. 34+888.155                           | 1144+62.45                      | 34+735.272                  | 0.034                     | 34+533.349             | 11.034                   | 11.784 |
| P.T. 34+960.222                           | 1146+98.89                      | 34+807.342                  | 0.046                     | 34+735.272             | 11.000                   | 11.750 |
| P.O.T. 35+112.960                         | 1152+00.00                      | 34+960.119                  | 0.060                     | 34+807.342             | 11.046                   | 11.796 |
| P.O.T. 35+265.360                         | 1157+00.00                      | 35+112.543                  | 0.054                     | 34+960.119             | 11.060                   | 13.060 |
| P.O.T. 35+417.760                         | 1162+00.00                      | 35+264.959                  | 0.034                     | 35+112.543             | 13.534                   | 13.554 |
| P.C. 35+540.893                           | 1166+03.98                      | 35+388.117                  | 0.044                     | 35+264.959             | 11.034                   | 11.784 |
| P.T. 35+642.431                           | 1169+37.11                      | 35+489.533                  | 0.042                     | 35+388.117             | 11.044                   | 11.794 |
| P.C. 35+781.828 BK. = 35+781.185 AH.      | 1173+94.45 BK. = 1173+92.34 AH. | 35+628.971                  | 0.046                     | 35+489.533             | 11.042                   | 11.792 |
| P.O.C. 36+088.320                         | 1184+00.00                      | 35+936.173                  | 0.008                     | 35+628.971             | 11.046                   | 11.796 |
| P.T. 36+208.801                           | 1187+95.28                      | 36+056.648                  | 0.015                     | 35+936.173             | 11.008                   | 11.750 |
| P.O.T. 36+393.120                         | 1194+00.00                      | 36+240.860                  | 0.011                     | 36+056.648             | 11.015                   | 11.750 |
| P.O.T. 36+576.000                         | 1200+00.00                      | 36+423.776                  | ⊗                         | 36+240.860             | 11.011                   | 11.750 |
| P.C. 36+743.603                           | 1205+49.88                      | 36+591.333                  | 0.034                     | 36+423.776             | 11.000                   | 11.784 |
| P.T. 36+895.796                           | 1210+49.20                      |                             |                           | 36+591.333             | 11.034                   | 11.750 |
| P.C. 37+267.975                           | 1222+70.26                      | 37+115.711                  | ⊗                         |                        |                          |        |
| P.O.C. 37+581.840                         | 1233+00.00                      | 37+429.533                  | 0.079                     | 37+115.711             | 11.000                   | 11.750 |
| P.O.C. 37+734.240                         | 1238+00.00                      | 37+582.010                  | 0.114                     | 37+429.533             | 11.079                   | 11.750 |
| P.T. 37+910.692 BK. = 37+911.576 AH.      | 1243+78.91 BK. = 1243+81.81 AH. | 37+758.371                  | 0.135                     | 37+582.010             | 11.114                   | 11.750 |
| T.S. 37+924.700                           | 1244+24.87                      | 37+771.505                  | 0.137                     | 37+758.371             | 11.135                   | 11.750 |
| S.C. 38+000.900                           | 1246+74.87                      | 37+847.718                  | 0.096                     |                        |                          |        |
| C.S. 38+089.817                           | 1249+66.59                      | 37+936.676                  | 0.054                     | 37+847.718             | 11.096                   | 11.750 |
| S.T. 38+166.017                           | 1252+16.59                      | 38+012.826                  | ⊗                         | 37+936.676             | 11.054                   | 11.750 |
| P.O.T. 38+343.840                         | 1258+00.00                      | 38+190.731                  | ⊗                         | 38+012.826             | 11.500                   | 11.750 |
|                                           |                                 |                             |                           | 38+190.731             | 11.000                   | 11.750 |
| TOTAL ITEM 604 CARRIED TO GENERAL SUMMARY |                                 |                             |                           |                        | 65                       |        |

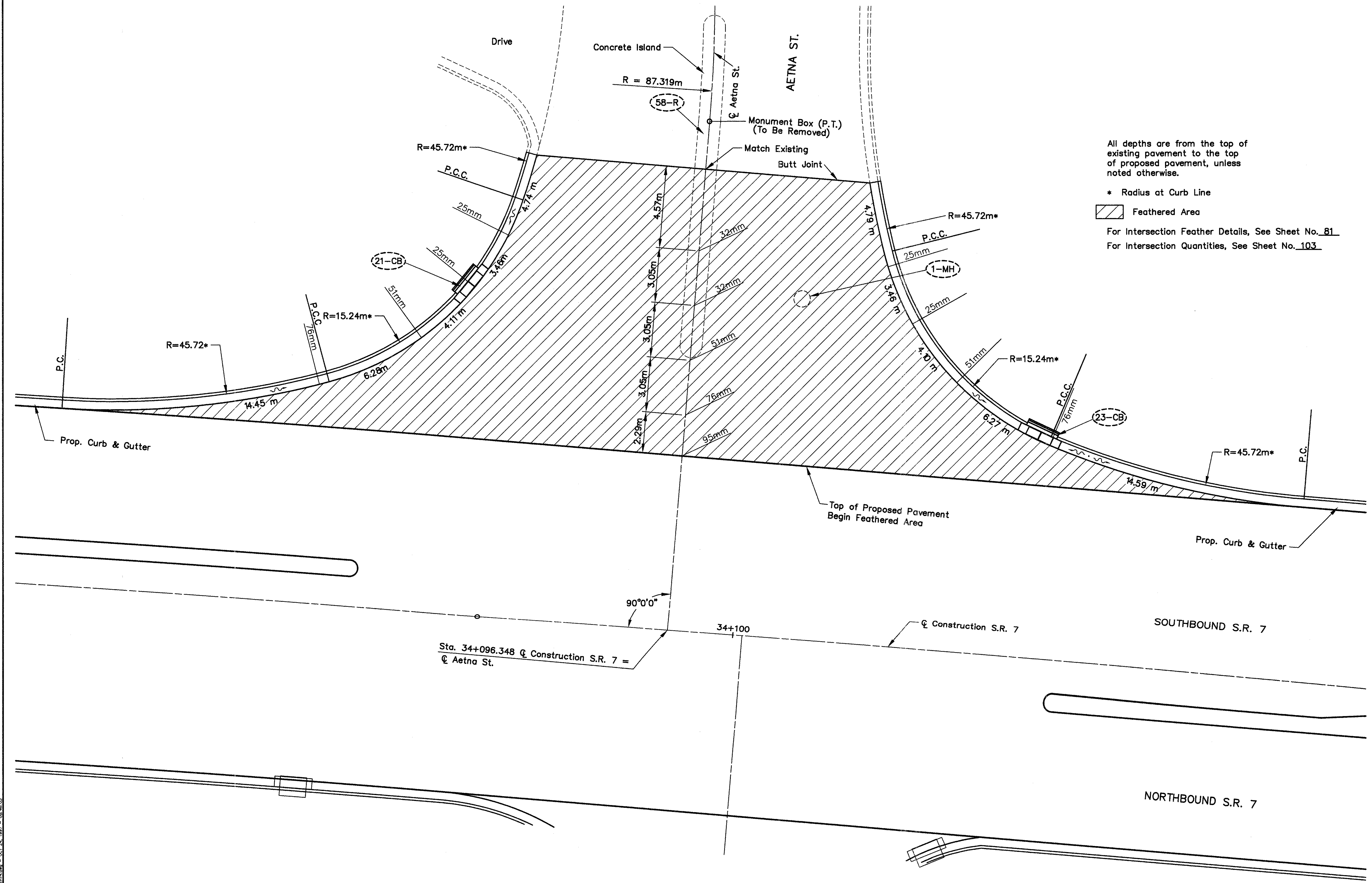






# AETNA ST. INTERSECTION DETAIL

**BEL-7-32.283**



All depths are from the top of existing pavement to the top of proposed pavement, unless noted otherwise.

\* Radius at Curb Line

Feathered Area

For Intersection Feather Details, See Sheet No. 81

For Intersection Quantities, See Sheet No. 103



# AETNA ST. INTERSECTION DETAIL

BEL-7-32.276

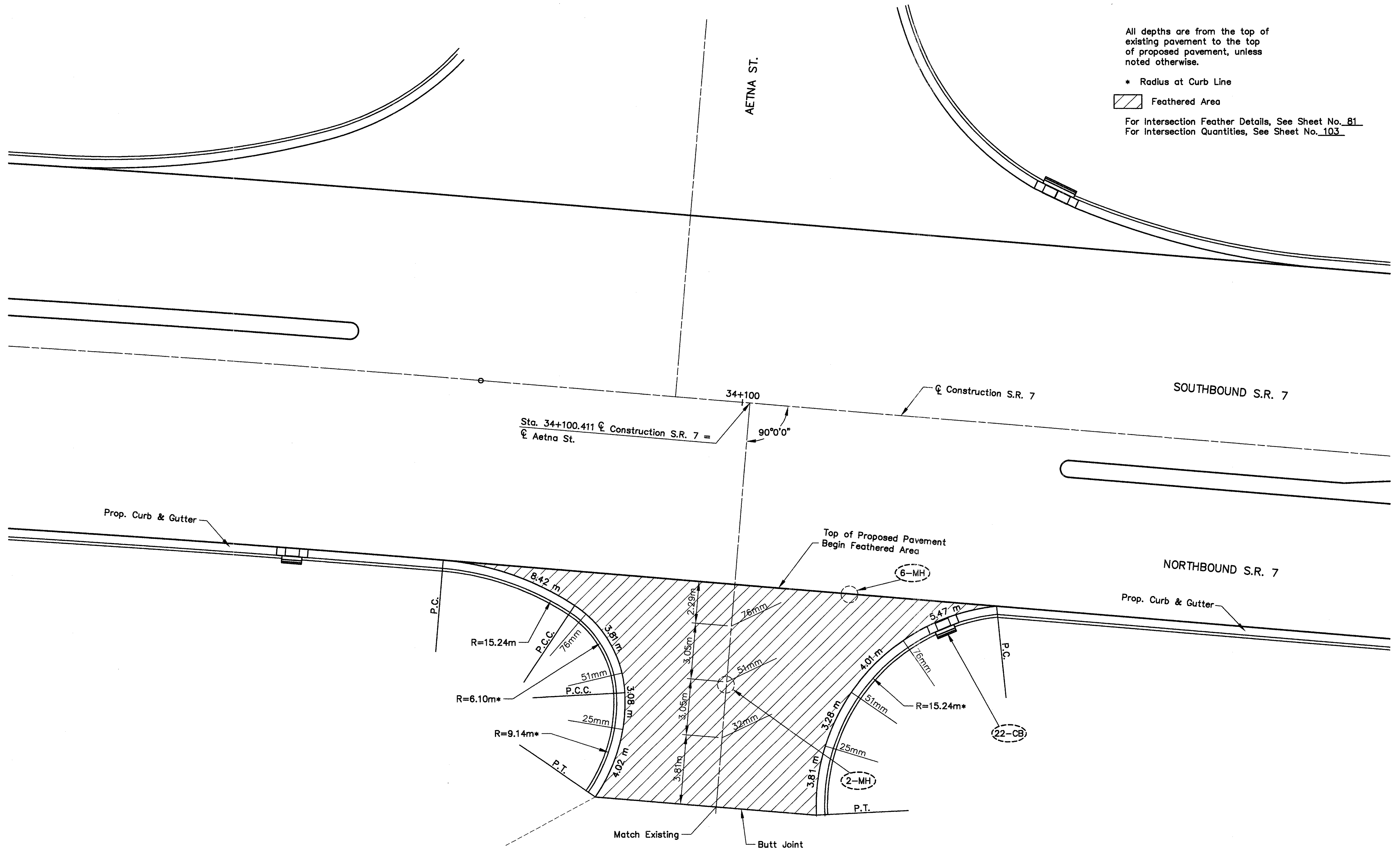
96  
242

All depths are from the top of existing pavement to the top of proposed pavement, unless noted otherwise.

\* Radius at Curb Line

 Feathered Area

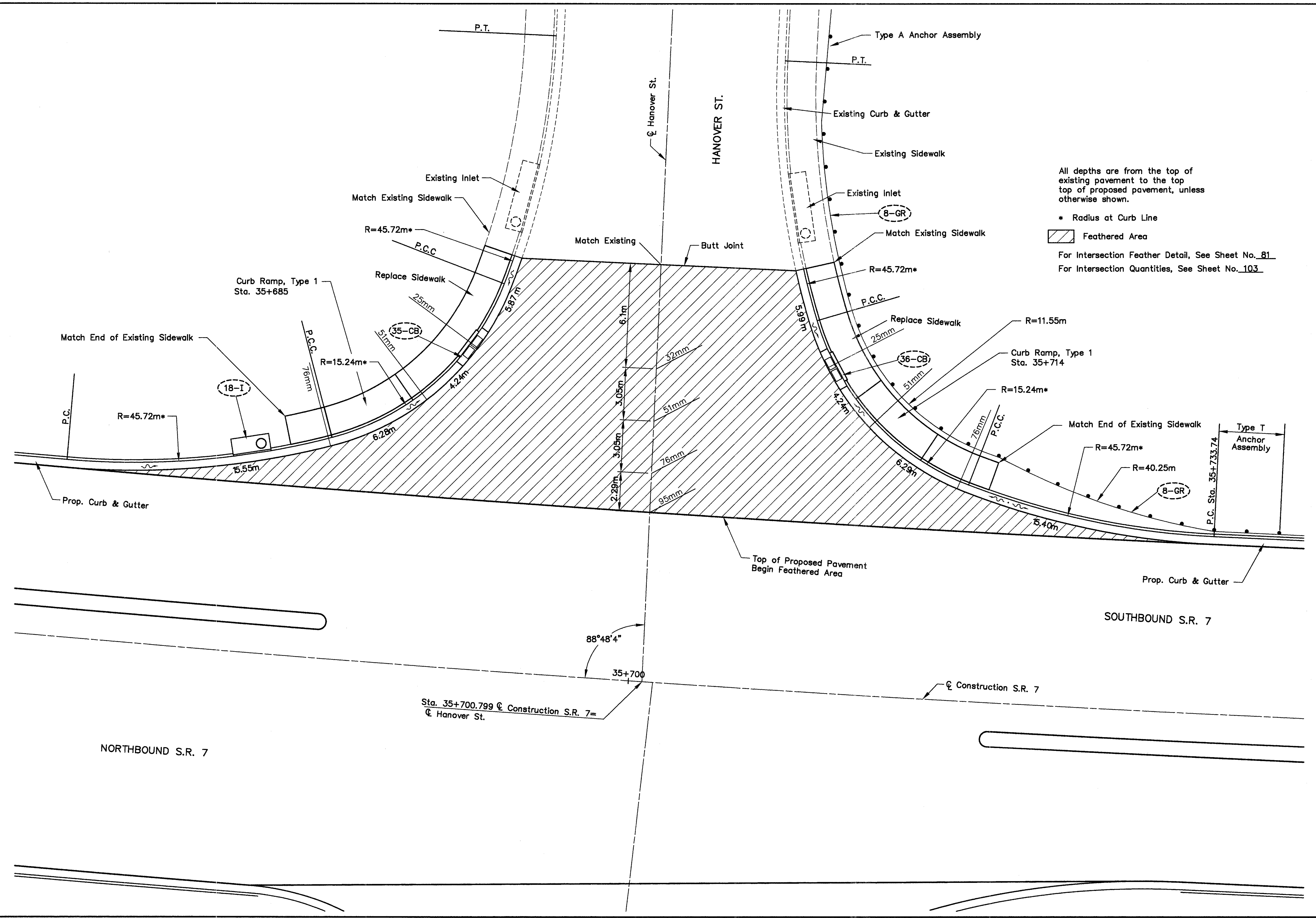
For Intersection Feather Details, See Sheet No. 81  
For Intersection Quantities, See Sheet No. 103





# HANOVER ST. INTERSECTION DETAIL

BEL-7-32.276



All depths are from the top of existing pavement to the top of proposed pavement, unless otherwise shown.

\* Radius at Curb Line

Feathered Area

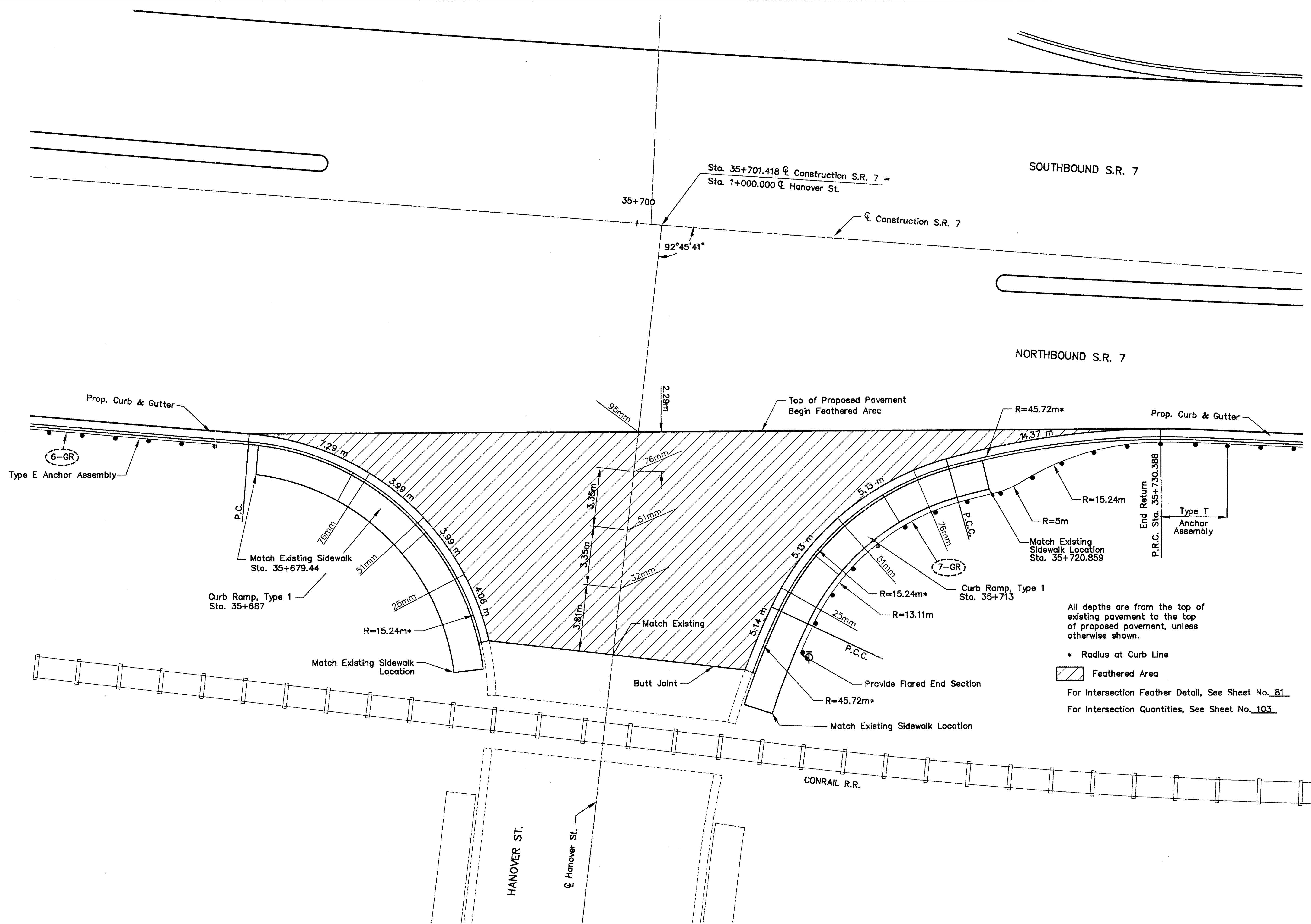
For Intersection Feather Detail, See Sheet No. 81

For Intersection Quantities, See Sheet No. 103



# **HANOVER ST. INTERSECTION DETAIL**

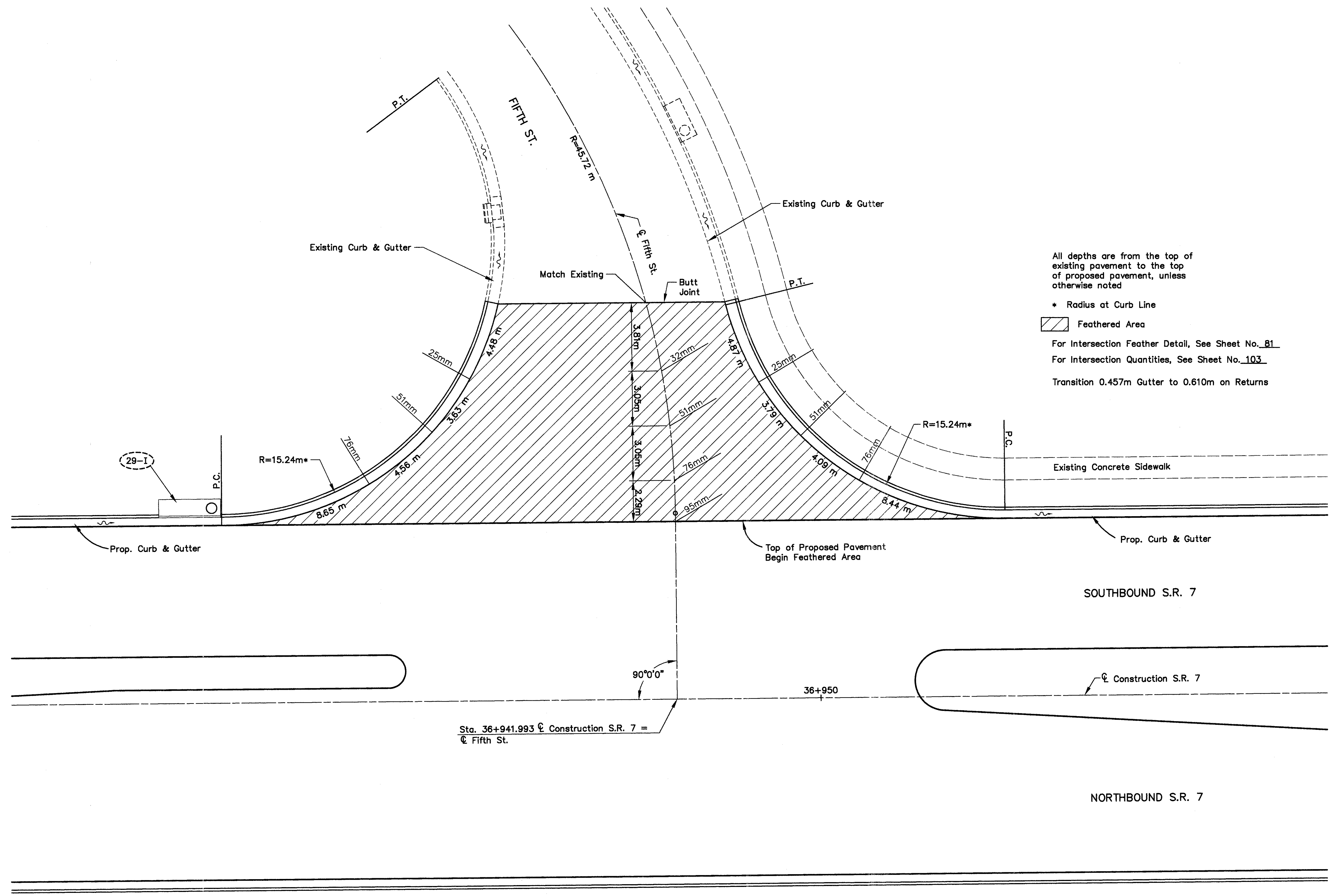
**BEL-7-32.276**





# FIFTH ST. INTERSECTION DETAIL

BEL-7-32.276



All depths are from the top of existing pavement to the top of proposed pavement, unless otherwise noted

\* Radius at Curb Line

Feathered Area

For Intersection Feather Detail, See Sheet No. B1

For Intersection Quantities, See Sheet No. 103

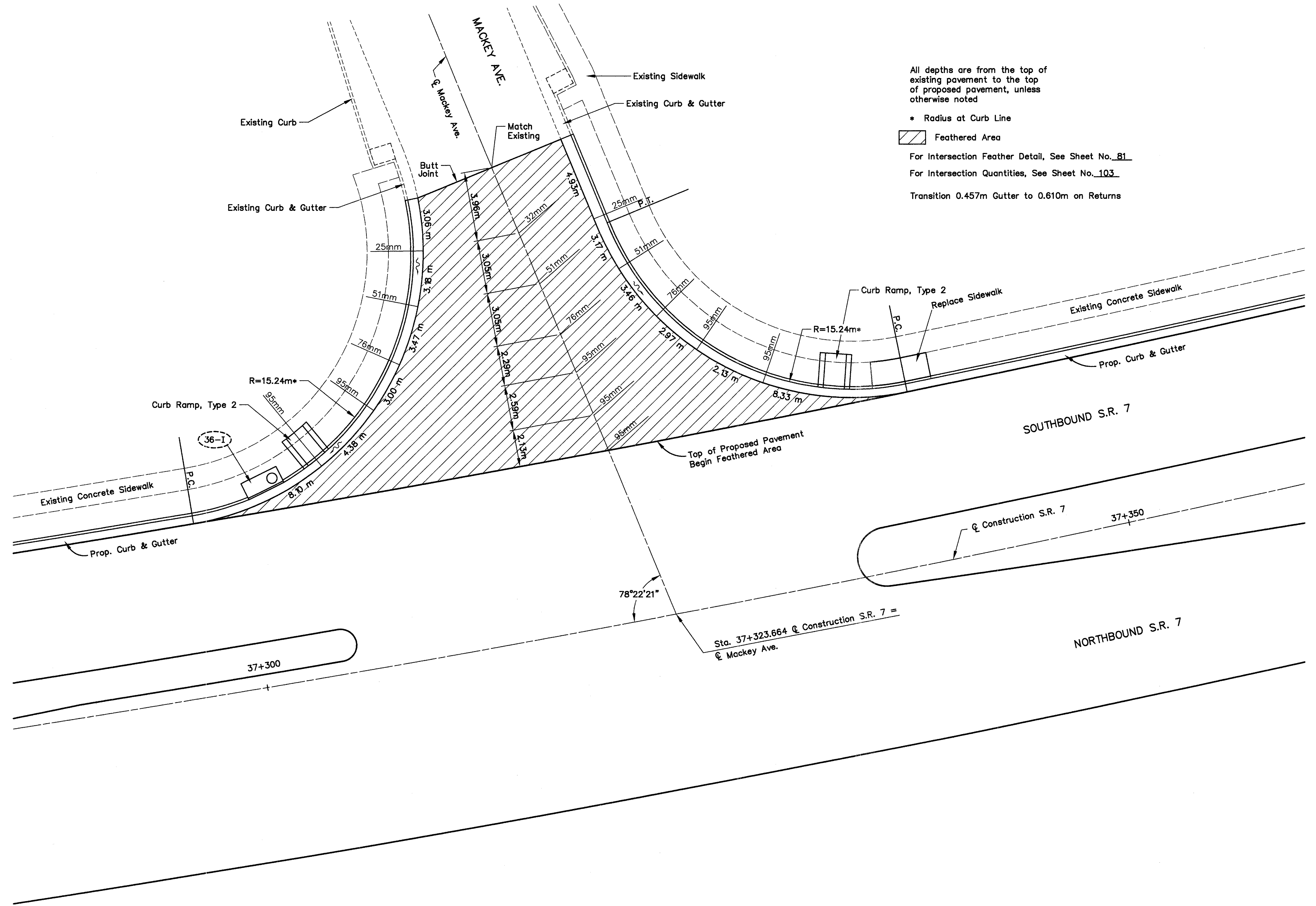
Transition 0.457m Gutter to 0.610m on Returns



# **MACKEY AVE. INTERSECTION DETAIL**

**BEL-7-32.276**

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All depths are from the top of existing pavement to the top of proposed pavement, unless otherwise noted

\* Radius at Curb Line

Feathered Area

For Intersection Feather Detail, See Sheet No. 81

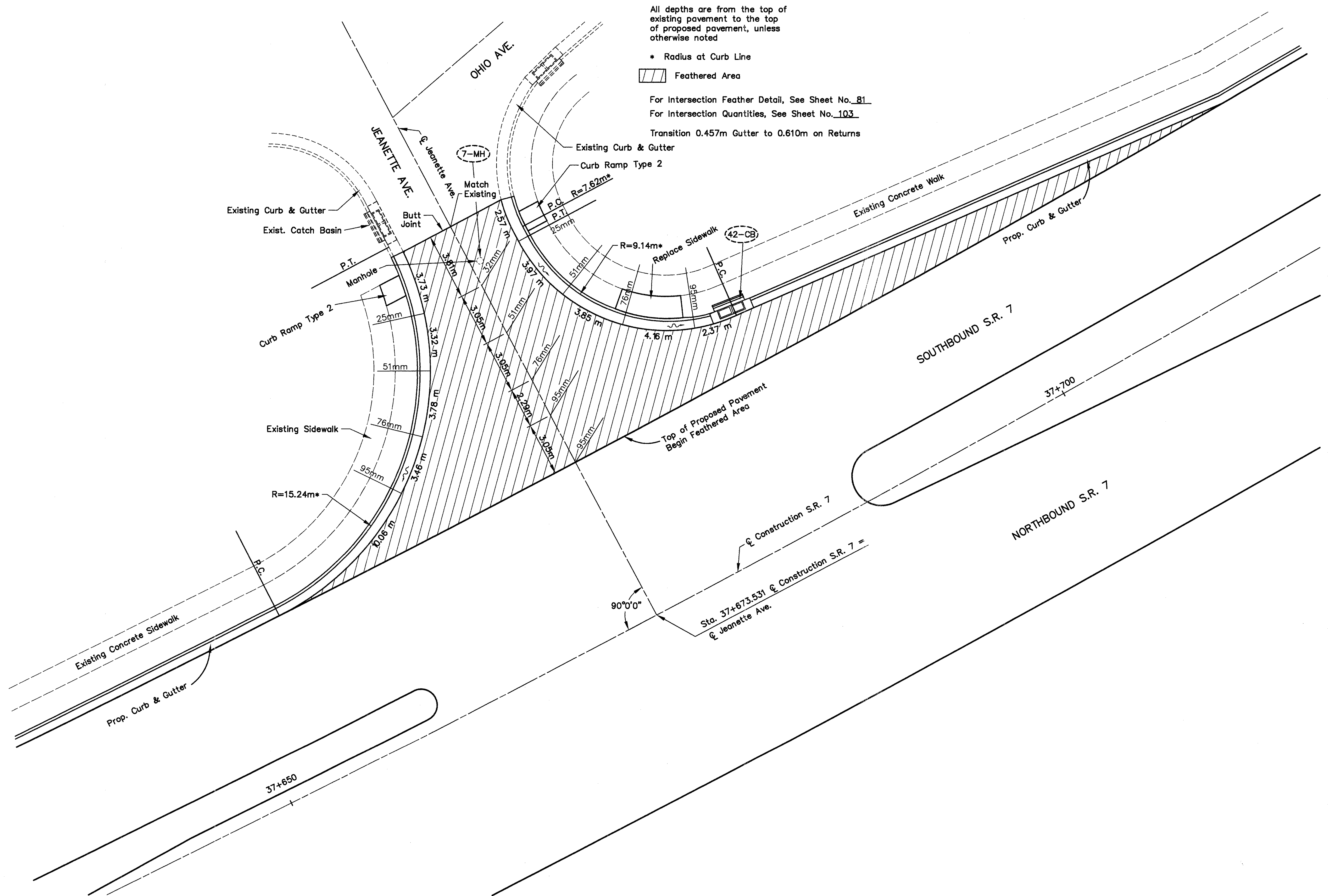
For Intersection Quantities, See Sheet No. 103

Transition 0.457m Gutter to 0.610m on Returns



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W. E. QUICKSALL AND ASSOCIATES INC. CONSULTING ENGINEERS



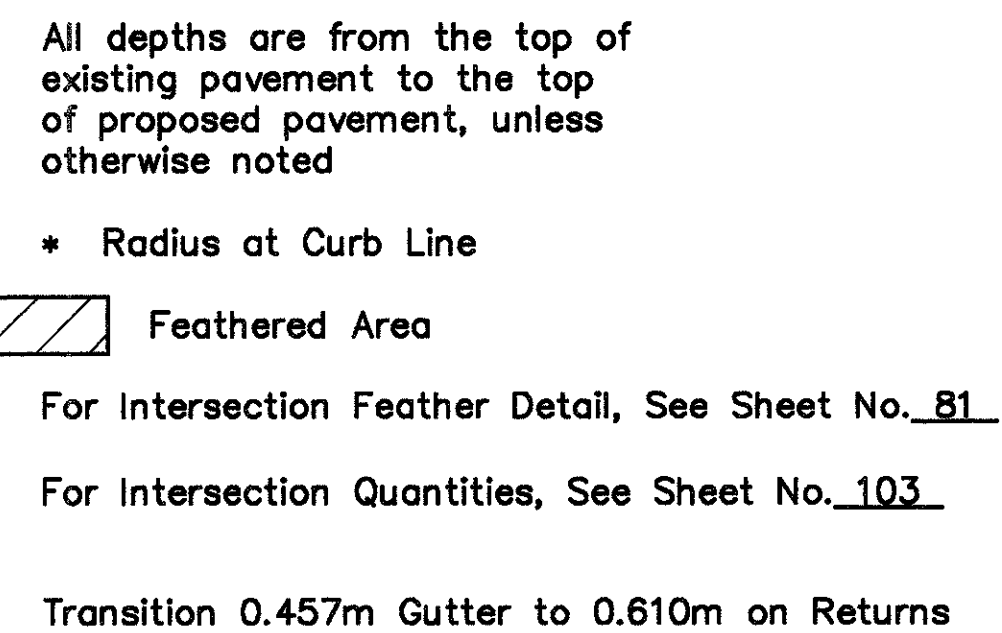
JEANETTE AVE.  
INTERSECTION DETAIL

BEL-7-32.276

101  
242

CALCULATED  
BL  
CHECKED  
WCR







INTERSECTION ROADWAY QUANTITIES

⊗ CALCULATED FROM COMPUTER AREA  
\* SEE DETAIL ON SHEET NO. 81

INTERSECTION ROADWAY QUANTITIES

CALCULATED  
WCR  
CHECKED  
SAH

| FROM<br>SHEET<br>NO. | LOCATION       | SIDE | PAVEMENT<br>AREA |  | 202                          |                                  |                 |  | 407       | 407                                        | 446                                                     |                                                                    |                                     |                                                                         | 608                     |                         |                           | 609                                          |  |  |  |  |  |  |
|----------------------|----------------|------|------------------|--|------------------------------|----------------------------------|-----------------|--|-----------|--------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------|-------------------------------------------------------------------------|-------------------------|-------------------------|---------------------------|----------------------------------------------|--|--|--|--|--|--|
|                      |                |      |                  |  | WEARING<br>COURSE<br>REMOVED | CURB<br>AND<br>GUTTER<br>REMOVED | WALK<br>REMOVED |  | TACK COAT | TACK COAT<br>FOR<br>INTERMEDIATE<br>COURSE | MINIMUM<br>THICKNESS<br>*<br>⊗ PG 64-28,<br>AS PER PLAN | ASPHALT<br>CONCRETE<br>SURFACE<br>COURSE,<br>TYPE 1,<br>⊗ PG 64-28 | AVERAGE<br>DEPTH<br>*<br>⊗ PG 64-28 | ASPHALT<br>CONCRETE<br>INTERMEDIATE<br>COURSE,<br>TYPE 2,<br>⊗ PG 64-28 | CURB<br>RAMP,<br>TYPE 1 | CURB<br>RAMP,<br>TYPE 2 | 100mm<br>CONCRETE<br>WALK | COMBINATION<br>CURB AND<br>GUTTER,<br>TYPE 2 |  |  |  |  |  |  |
|                      |                |      | Sq. Meter        |  | Sq. Meter                    | Meter                            | Sq. Meter       |  | Liter     | Liter                                      | mm                                                      | Cu. Meter                                                          | mm                                  | Cu. Meter                                                               | Each                    | Each                    | Sq. Meter                 | Meter                                        |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
| 88                   | Lincoln Ave.   | ℄    | 156.941          |  | 35.057                       | 38.204                           |                 |  | 53.360    | 53.360                                     | 32                                                      | 5.927                                                              | 41                                  | 3.154                                                                   |                         |                         |                           | 38.204                                       |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
| 89                   | Aetna St.      | LT.  | 461.807          |  | 159.538                      | 66.234                           |                 |  | 157.014   | 157.014                                    | 32                                                      | 18.111                                                             | 41                                  | 9.027                                                                   |                         |                         |                           | 66.234                                       |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
| 90                   | Aetna St.      | RT.  | 172.389          |  | 43.035                       | 35.941                           |                 |  | 58.612    | 58.612                                     | 32                                                      | 6.541                                                              | 41                                  | 3.853                                                                   |                         |                         |                           | 35.941                                       |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
| 91                   | Hanover St.    | LT.  | 387.439          |  | 104.386                      | 63.859                           | 56.952          |  | 131.729   | 131.729                                    | 32                                                      | 14.778                                                             | 41                                  | 8.543                                                                   | 2                       |                         | 56.952                    | 61.624                                       |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
| 92                   | Hanover St.    | RT.  | 301.094          |  | 65.110                       | 49.087                           | 63.638          |  | 102.372   | 102.372                                    | 32                                                      | 11.340                                                             | 41                                  | 6.893                                                                   | 2                       |                         | 63.638                    | 49.087                                       |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
| 93                   | Fifth St.      | ℄    | 249.886          |  | 56.392                       | 42.514                           |                 |  | 84.961    | 84.961                                     | 32                                                      | 9.404                                                              | 41                                  | 5.824                                                                   |                         |                         |                           | 42.514                                       |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
| 94                   | Mackey St.     | ℄    | 268.516          |  | 36.638                       | 52.277                           | 4.507           |  | 91.295    | 91.295                                     | 32                                                      | 9.488                                                              | 41                                  | 8.274                                                                   |                         | 2                       | 4.507                     | 50.042                                       |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
| 95                   | Jeannette Ave. | ℄    | 242.853          |  | 22.144                       | 71.770                           | 7.585           |  | 82.570    | 82.570                                     | 32                                                      | 8.360                                                              | 41                                  | 8.137                                                                   |                         | 2                       | 7.585                     | 71.770                                       |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
| 96                   | Hill St.       | ℄    | 141.622          |  | 28.803                       | 36.858                           | 15.390          |  | 48.151    | 48.151                                     | 32                                                      | 5.255                                                              | 41                                  | 3.540                                                                   |                         | 2                       | 15.390                    | 36.858                                       |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |
|                      |                |      |                  |  |                              |                                  |                 |  |           |                                            |                                                         |                                                                    |                                     |                                                                         |                         |                         |                           |                                              |  |  |  |  |  |  |

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- NOTES:
- EXISTING OUTLET LOCATION
  - CONNECT TO EXISTING UNDERDRAIN
  - OUTLET INTO CATCH BASIN
  - OUTLET INTO EXISTING STORM DRAIN

- \* 3.05m TO BE USED IN PLACE OF 605 UNDERDRAIN PIPE WHERE PROPOSED UNDERDRAIN SPANS AN EXISTING CULVERT OR ENCASEMENT PIPE.
- \*\* OUTSIDE EDGE OF PAVEMENT
- \*\*\* CONDUIT LENGTH TO BE USED IN PLACE OF 605 UNDERDRAIN PIPE WHERE UNDERDRAIN OUTLETS INTO A PROPOSED CATCH BASIN, INLET, MANHOLE, OR STORM DRAIN.

UNDERDRAIN QUANTITIES

|                                  | STATION    |            | PIPE SLOPE | SIDE  | 603                      |                          | 605                                                    |                                                   |                                                        | UNCLASSIFIED UNDERDRAINS |                               |             |                             | OUTLET STATION | PLUG STATION | OUTLET FITTINGS    |                    |                |               |     | SEE NOTE NO.                    | REMARKS |
|----------------------------------|------------|------------|------------|-------|--------------------------|--------------------------|--------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------|--------------------------|-------------------------------|-------------|-----------------------------|----------------|--------------|--------------------|--------------------|----------------|---------------|-----|---------------------------------|---------|
|                                  |            |            |            |       | 100mm *** CONDUIT TYPE F | 150mm *** CONDUIT TYPE F | 150mm UNCLASSIFIED PIPE UNDERDRAIN 707.31, AS PER PLAN | 100mm SHALLOW PIPE UNDERDRAIN 707.31, AS PER PLAN | 100mm UNCLASSIFIED PIPE UNDERDRAIN 707.31, AS PER PLAN | BEGIN STATION            | TRENCH DEPTH OF BEGIN STATION | END STATION | TRENCH DEPTH OF END STATION |                |              | 100mm 11 1/4° BEND | 100mm 22 1/2° BEND | 100mm 45° BEND | 100mm END CAP |     |                                 |         |
|                                  | FROM       | TO         | %          | Meter | Meter                    | Meter                    | Meter                                                  | Meter                                             | FROM                                                   | Meter                    | TO                            | Meter       | Each                        | Each           | Each         | Each               |                    |                |               |     |                                 |         |
|                                  | 32+791.000 | 32+904.348 |            | Lt.   | 3.05                     |                          |                                                        |                                                   |                                                        |                          |                               |             | 32+904.348                  | 32+791.000     | 1            |                    |                    | 1              |               | 3   |                                 |         |
|                                  | 32+905.618 | 32+949.198 |            | Lt.   | 3.05                     |                          |                                                        |                                                   |                                                        |                          |                               |             | 32+949.198                  | 32+905.618     | 1            |                    |                    | 1              |               | 3   |                                 |         |
|                                  | 32+950.468 | 32+995.955 | -0.30      | Lt.   | 3.05                     |                          |                                                        | 42.44                                             | 32+950.468                                             | 0.56                     | 32+995.955                    | 0.76        | 32+995.955                  | 32+950.468     | 1            |                    |                    | 1              |               | 3   |                                 |         |
|                                  | 32+995.955 | 33+017.850 | +0.31      | Lt.   | 3.05                     |                          |                                                        | 18.85                                             | 32+995.955                                             | 0.65                     | 33+017.850                    | 0.56        | 32+995.955                  | 33+017.850     | 1            |                    |                    | 1              |               | 3   |                                 |         |
|                                  | 33+019.120 | 33+085.419 |            | Lt.   | 3.05                     |                          |                                                        | 63.25                                             |                                                        |                          |                               |             | 33+019.120                  | 33+085.419     | 1            |                    |                    | 1              |               | 3   |                                 |         |
|                                  |            |            |            |       |                          |                          |                                                        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |     |                                 |         |
|                                  | 33+086.689 | 33+154.538 |            | Lt.   | 3.05                     |                          |                                                        | 64.80                                             |                                                        |                          |                               |             | 33+086.689                  | 33+154.538     | 1            |                    |                    | 1              |               | 3   |                                 |         |
|                                  | 33+155.808 | 33+191.033 |            | Lt.   | 3.05                     |                          |                                                        | 32.18                                             |                                                        |                          |                               |             | 33+155.808                  | 33+191.033     |              | 1                  |                    | 1              |               | 3   |                                 |         |
|                                  | 33+192.303 | 33+236.368 |            | Lt.   | 3.05                     |                          |                                                        | 41.02                                             |                                                        |                          |                               |             | 33+192.303                  | 33+236.368     |              | 1                  |                    | 1              |               | 3   |                                 |         |
|                                  | 33+237.638 | 33+381.287 |            | Lt.   | 3.05                     |                          |                                                        | 140.60                                            |                                                        |                          |                               |             | 33+237.638                  | 33+381.287     |              | 1                  |                    | 1              |               | 3   |                                 |         |
|                                  | 33+444.000 | 33+590.238 |            | Lt.   | 3.05                     |                          |                                                        | 140.14                                            |                                                        |                          |                               |             | 33+590.238                  | 33+444.000     |              | 1                  |                    | 1              |               | 3   |                                 |         |
|                                  |            |            |            |       | 33+497.144=3.05*         |                          |                                                        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |     |                                 |         |
|                                  | 33+591.508 | 33+687.750 |            | Lt.   | 3.05                     |                          |                                                        | 93.19                                             |                                                        |                          |                               |             | 33+687.750                  | 33+591.508     |              | 1                  |                    | 1              |               | 3   |                                 |         |
|                                  | 33+689.020 | 33+710.398 | -0.40      | Lt.   | 3.05                     |                          |                                                        |                                                   | 18.33                                                  | 33+689.020               | 0.56                          | 33+710.398  | 0.65                        | 33+710.398     | 33+689.020   |                    | 1                  |                | 1             |     | 3                               |         |
|                                  | 33+710.398 | 33+731.495 | +0.40      | Lt.   | 3.05                     |                          |                                                        |                                                   | 18.05                                                  | 33+710.398               | 0.65                          | 33+731.495  | 0.56                        | 33+710.398     | 33+731.495   |                    | 1                  |                | 1             |     | 3                               |         |
|                                  | 33+732.765 | 33+954.238 |            | Lt.   | 3.05                     |                          |                                                        | 218.42                                            |                                                        |                          |                               |             | 33+732.765                  |                |              | 1                  |                    |                |               | 3   |                                 |         |
|                                  | 33+954.238 | 33+984.718 | +0.32      | Lt.   |                          |                          |                                                        |                                                   | 30.48                                                  | 33+954.238               | 0.56                          | 33+984.718  | 0.56                        |                |              |                    |                    |                |               |     | HIGH POINT @ STA. 33+984.718    |         |
|                                  | 33+984.718 | 34+074.890 | -0.43      | Lt.   | 3.05                     |                          |                                                        |                                                   | 87.12                                                  | 33+984.718               | 0.56                          | 34+074.890  | 0.80                        | 34+074.890     |              | 1                  |                    |                |               | 3   | HIGH POINT @ STA. 33+984.718    |         |
|                                  | 34+117.989 | 34+183.108 | -1.36      | Lt.   | 3.05                     |                          |                                                        |                                                   | 62.07                                                  | 34+117.989               | 0.56                          | 34+183.108  | 1.34                        | 34+183.108     | 34+117.989   |                    |                    |                | 1             |     | 4                               |         |
|                                  | 34+151.335 | 34+182.308 | -0.87      | Rt.** |                          | 3.05                     | 27.92                                                  |                                                   |                                                        | 34+151.335               | 1.37                          | 34+182.308  | 1.28                        | 34+182.308     |              | 1                  |                    |                |               | 2&3 | CONNECT @ STA. 34+151.335 ~ RT. |         |
|                                  | 34+183.578 | 34+294.370 |            | Rt.** | 3.05                     |                          |                                                        | 107.74                                            |                                                        |                          |                               |             | 34+294.370                  | 34+183.578     | 1            |                    |                    | 1              |               | 3   |                                 |         |
|                                  | 34+184.327 | 34+472.471 |            | Lt.   | 34+396.275=3.05*         |                          |                                                        | 285.09                                            |                                                        |                          |                               |             |                             | 34+184.327     |              |                    |                    | 1              |               |     |                                 |         |
|                                  |            |            |            |       |                          |                          |                                                        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |     |                                 |         |
|                                  | 34+472.471 | 34+502.951 | -1.10      | Lt.   | 3.05                     |                          |                                                        |                                                   | 27.43                                                  | 34+472.471               | 0.56                          | 34+502.951  | 0.67                        | 34+502.951     |              |                    |                    |                |               | 4   |                                 |         |
|                                  | 34+504.170 | 34+518.149 |            | Lt.   | 3.05                     |                          |                                                        | 10.93                                             |                                                        |                          |                               |             | 34+518.149                  | 34+504.170     |              | 1                  |                    | 1              |               | 3   |                                 |         |
|                                  | 34+518.149 | 34+548.629 | +0.30      | Lt.   | 3.05                     |                          |                                                        |                                                   | 27.43                                                  | 34+518.149               | 0.61                          | 34+548.629  | 0.56                        | 34+518.149     |              |                    | 1                  |                |               | 3   |                                 |         |
|                                  | 34+548.629 | 34+582.000 |            | Lt.   |                          |                          |                                                        | 33.37                                             |                                                        |                          |                               |             |                             | 34+582.000     |              |                    |                    | 1              |               |     |                                 |         |
|                                  | 34+644.640 | 34+716.308 |            | Lt.   | 3.05                     |                          |                                                        | 68.62                                             |                                                        |                          |                               |             | 34+644.640                  | 34+716.308     |              | 1                  |                    | 1              |               | 3   |                                 |         |
|                                  |            |            |            |       |                          |                          |                                                        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |     |                                 |         |
|                                  | 34+716.308 | 34+745.319 |            | Rt.   | 3.05                     |                          |                                                        | 25.96                                             |                                                        |                          |                               |             | 34+716.308                  | 34+745.319     |              | 1                  |                    | 1              |               | 3   |                                 |         |
|                                  | 34+746.589 | 34+897.784 |            | Rt.   | 3.05                     |                          |                                                        | 148.15                                            |                                                        |                          |                               |             | 34+746.589                  | 34+897.784     |              | 1                  |                    | 1              |               | 3   |                                 |         |
|                                  | 34+899.003 | 34+973.888 | +0.55      | Lt.   | 3.05                     |                          |                                                        |                                                   | 71.84                                                  | 34+899.003               | 0.67                          | 34+973.888  | 0.56                        | 34+899.003     | 34+973.888   |                    |                    |                | 1             |     | 4                               |         |
|                                  | 34+948.000 | 34+975.834 | -0.40      | Rt.** | 3.05                     |                          |                                                        | 24.78                                             | 34+948.000                                             | 0.56                     | 34+975.834                    | 0.65        | 34+975.834                  | 34+948.000     | 1            |                    |                    | 1              |               | 3   |                                 |         |
|                                  | 34+975.158 | 35+065.382 |            | Lt.   | 3.05                     |                          |                                                        | 84.12                                             |                                                        |                          |                               |             | 34+975.158                  | 35+065.382     |              | 1                  |                    | 1              |               | 3   |                                 |         |
|                                  |            |            |            |       | 35+034.591=3.05*         |                          |                                                        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |     |                                 |         |
|                                  | 34+975.397 | 35+044.960 | +0.24      | Lt.** | 3.05                     |                          |                                                        |                                                   | 63.46                                                  | 34+975.397               | 0.57                          | 35+044.960  | 0.56                        | 34+975.397     | 35+044.960   | 1                  |                    |                | 1             |     | 3                               |         |
|                                  |            |            |            |       | 35+034.812=3.05*         |                          |                                                        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |     |                                 |         |
|                                  | 34+975.834 | 35+066.185 |            | Rt.** | 3.05                     |                          |                                                        | 84.25                                             |                                                        |                          |                               |             | 34+975.834                  | 35+066.185     | 1            |                    |                    | 1              |               | 3   |                                 |         |
|                                  |            |            |            |       | 35+034.360=3.05*         |                          |                                                        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |     |                                 |         |
|                                  | 35+066.601 | 35+172.003 | +0.67      | Lt.   | 3.05                     |                          |                                                        |                                                   | 102.35                                                 | 35+066.601               | 0.84                          | 35+172.003  | 0.56                        | 35+066.601     | 35+172.003   |                    |                    |                | 1             |     | 4                               |         |
|                                  | 35+067.455 | 35+170.040 |            | Rt.** | 3.05                     |                          |                                                        | 99.54                                             |                                                        |                          |                               |             | 35+067.455                  | 35+170.040     | 1            |                    |                    | 1              |               | 3   |                                 |         |
|                                  | 35+067.490 | 35+173.336 |            | Lt.** | 3.05                     |                          |                                                        | 102.80                                            |                                                        |                          |                               |             | 35+067.490                  | 35+173.336     | 1            |                    |                    | 1              |               | 3   |                                 |         |
|                                  |            |            |            |       |                          |                          |                                                        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |     |                                 |         |
|                                  | 35+173.273 | 35+333.368 |            | Lt.   | 3.05                     |                          |                                                        | 150.95                                            |                                                        |                          |                               |             | 35+173.273                  |                |              | 1                  |                    |                |               | 3   |                                 |         |
|                                  |            |            |            |       | 35+215.989=3.05*         |                          |                                                        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |     |                                 |         |
|                                  |            |            |            |       | 35+280.184=3.05*         |                          |                                                        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |     |                                 |         |
|                                  | 35+174.606 | 35+260.000 |            | Lt.** | 3.05                     |                          |                                                        | 79.29                                             |                                                        |                          |                               |             | 35+174.606                  | 35+260.000     | 1            |                    |                    | 1              |               | 3   |                                 |         |
|                                  |            |            |            |       | 35+216.887=3.05*         |                          |                                                        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |     |                                 |         |
|                                  | 35+333.368 | 35+413.226 | +0.25      | Lt.   |                          |                          |                                                        |                                                   | 79.86                                                  | 35+333.368               | 0.56                          | 35+413.226  | 0.56                        |                |              |                    |                    |                |               |     | HIGH POINT @ STA. 35+413.226    |         |
|                                  | 35+413.226 | 35+462.499 | -0.35      | Lt.   | 3.05                     |                          |                                                        | 46.22                                             | 35+413.226                                             | 0.56                     | 35+462.499                    | 0.64        | 35+462.499                  |                |              |                    | 1                  |                |               | 3   | HIGH POINT @ STA. 35+413.226    |         |
|                                  | 35+463.769 | 35+500.182 |            | Lt.   | 3.05                     |                          |                                                        | 33.36                                             |                                                        |                          |                               |             | 35+500.182                  | 35+463.769     |              |                    |                    | 1              | 1             | 3   |                                 |         |
|                                  |            |            |            |       |                          |                          |                                                        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |     |                                 |         |
|                                  | 35+501.452 | 35+584.806 |            | Lt.   | 3.05                     |                          |                                                        | 80.30                                             |                                                        |                          |                               |             | 35+584.806                  | 35+501.452     |              | 1                  |                    | 1              |               | 3   |                                 |         |
|                                  | 35+586.076 | 35+675.910 |            | Rt.   | 3.05                     |                          |                                                        | 86.78                                             |                                                        |                          |                               |             | 35+675.910                  | 35+586.076     | 1            |                    |                    | 1              |               | 3   |                                 |         |
|                                  | 35+725.000 | 35+746.178 | -0.24      | Rt.   | 3.05                     |                          |                                                        |                                                   | 18.13                                                  | 35+725.000               | 0.62                          | 35+746.178  | 0.56                        | 35+746.178     | 35+725.000   | 1                  |                    |                | 1             |     | 3                               |         |
|                                  | 35+746.178 | 35+767.797 | +0.24      | Rt.   | 3.05                     |                          |                                                        |                                                   | 18.57                                                  | 35+746.178               | 0.56                          | 35+767.797  | 0.62                        | 35+746.178     | 35+767.797   | 1                  |                    |                | 1             |     | 3                               |         |
|                                  | 35+769.067 | 35+829.608 |            | Rt.   | 3.05                     |                          |                                                        | 57.49                                             |                                                        |                          |                               |             | 35+769.067                  | 35+829.608     | 1            |                    |                    | 1              |               | 3   |                                 |         |
|                                  | 35+830.878 | 35+980.356 |            | Rt.   | 3.05                     |                          |                                                        | 146.43                                            |                                                        |                          |                               |             | 35+830.878                  | 35+980.356     |              | 1                  |                    | 1              |               | 3   |                                 |         |
|                                  | 35+981.626 | 36+087.321 |            | Rt.   | 3.05                     |                          |                                                        | 99.06                                             |                                                        |                          |                               |             | 35+981.626                  | 36+087.321     |              | 1                  |                    | 1              |               | 3   |                                 |         |
|                                  |            |            |            |       | 36+047.500=3.05*         |                          |                                                        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |     |                                 |         |
| TOTAL CARRIED TO GENERAL SUMMARY |            |            |            |       | 156                      | 3                        | 28                                                     | 2729                                              | 757.5                                                  |                          |                               |             |                             |                |              |                    |                    |                |               |     |                                 |         |

UNDERDRAIN QUANTITIES

BEL-7-32.276

|            |     |
|------------|-----|
| CALCULATED | BL  |
| CHECKED    | WCR |



- \* 3.05m TO BE USED IN PLACE OF 605 UNDERDRAIN PIPE WHERE PROPOSED UNDERDRAIN SPANS AN EXISTING CULVERT OR ENCASEMENT PIPE.
- \*\* OUTSIDE EDGE OF PAVEMENT
- \*\*\* CONDUIT LENGTH TO BE USED IN PLACE OF 605 UNDERDRAIN PIPE WHERE UNDERDRAIN OUTLETS INTO A PROPOSED CATCH BASIN, INLET, MANHOLE, OR STORM DRAIN.

|  | STATION    |            | PIPE SLOPE | SIDE | 603                      |  |        | 605                                               |                                                        | UNCLASSIFIED UNDERDRAINS |                               |             |                             | OUTLET STATION | PLUG STATION | OUTLET FITTINGS    |                    |                |               |   | SEE NOTE NO. | REMARKS                      |
|--|------------|------------|------------|------|--------------------------|--|--------|---------------------------------------------------|--------------------------------------------------------|--------------------------|-------------------------------|-------------|-----------------------------|----------------|--------------|--------------------|--------------------|----------------|---------------|---|--------------|------------------------------|
|  |            |            |            |      | 100mm *** CONDUIT TYPE F |  |        | 100mm SHALLOW PIPE UNDERDRAIN 707.31, AS PER PLAN | 100mm UNCLASSIFIED PIPE UNDERDRAIN 707.31, AS PER PLAN | BEGIN STATION            | TRENCH DEPTH OF BEGIN STATION | END STATION | TRENCH DEPTH OF END STATION |                |              | 100mm 11 1/4° BEND | 100mm 22 1/2° BEND | 100mm 45° BEND | 100mm END CAP |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  | FROM       | TO         | %          |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  | 36+088.540 | 36+119.020 | +0.94      | Lt.  | 3.05                     |  |        |                                                   | 27.43                                                  | 36+088.540               | 0.61                          | 36+119.020  | 0.56                        | 36+088.540     |              |                    |                    |                |               |   | 4            |                              |
|  | 36+119.020 | 36+238.039 |            | Lt.  |                          |  | 119.02 |                                                   |                                                        |                          |                               |             |                             | 36+238.039     |              |                    |                    |                | 1             |   |              |                              |
|  | 36+239.258 | 36+269.738 | +1.46      | Lt.  | 3.05                     |  |        |                                                   | 27.43                                                  | 36+239.258               | 0.69                          | 36+269.738  | 0.56                        | 36+239.258     |              |                    |                    |                |               |   | 4            |                              |
|  | 36+269.738 | 36+360.679 |            | Lt.  |                          |  | 90.94  |                                                   |                                                        |                          |                               |             |                             | 36+360.679     |              |                    |                    |                | 1             |   |              |                              |
|  | 36+423.277 | 36+559.608 |            | Lt.  | 3.05                     |  | 133.28 |                                                   |                                                        |                          |                               |             |                             | 36+423.277     | 36+559.608   |                    | 1                  |                | 1             |   | 3            |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  | 36+560.878 | 36+590.088 |            | Lt.  | 3.05                     |  | 26.16  |                                                   |                                                        |                          |                               |             |                             | 36+560.878     | 36+590.088   |                    | 1                  |                | 1             |   | 3            |                              |
|  | 36+591.358 | 36+675.522 |            | Lt.  | 3.05                     |  | 81.11  |                                                   |                                                        |                          |                               |             |                             | 36+591.358     | 36+675.522   |                    | 1                  |                | 1             |   | 3            |                              |
|  | 36+806.738 | 36+888.501 |            | Lt.  | 3.05                     |  | 78.71  |                                                   |                                                        |                          |                               |             |                             | 36+888.501     | 36+806.738   | 1                  |                    |                | 1             |   | 3            |                              |
|  | 36+889.771 | 36+912.881 |            | Lt.  | 3.05                     |  | 20.06  |                                                   |                                                        |                          |                               |             |                             | 36+912.881     | 36+889.771   | 1                  |                    |                | 1             |   | 3            |                              |
|  | 36+956.928 | 37+036.541 |            | Lt.  | 6.10                     |  | 75.07  |                                                   |                                                        |                          |                               |             |                             | 37+036.541     | 36+956.928   |                    |                    | 1              | 1             |   |              | OUTLET INTO MANHOLE          |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  | 37+037.541 | 37+073.521 |            | Lt.  |                          |  | 35.98  |                                                   |                                                        |                          |                               |             |                             |                | 37+037.541   |                    |                    |                | 1             |   |              |                              |
|  | 37+073.521 | 37+104.001 | -3.92      | Lt.  | 3.05                     |  |        |                                                   | 27.43                                                  | 37+073.521               | 0.56                          | 37+104.001  | 1.07                        | 37+104.001     |              |                    |                    |                |               |   | 4            |                              |
|  | 37+105.220 | 37+238.079 |            | Rt.  | 3.05                     |  | 129.81 |                                                   |                                                        |                          |                               |             |                             | 37+238.079     | 37+105.220   |                    |                    | 1              |               | 1 | 3            |                              |
|  | 37+239.349 | 37+300.511 |            | Rt.  | 3.05                     |  | 58.11  |                                                   |                                                        |                          |                               |             |                             | 37+300.511     | 37+239.349   | 1                  |                    |                | 1             |   | 3            |                              |
|  | 37+336.097 | 37+398.064 |            | Rt.  | 3.05                     |  | 58.92  |                                                   |                                                        |                          |                               |             |                             | 37+398.064     | 37+336.097   |                    |                    |                | 1             | 1 |              | 3                            |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  | 37+399.334 | 37+601.279 |            | Rt.  | 3.05                     |  | 198.90 |                                                   |                                                        |                          |                               |             |                             | 37+601.279     | 37+399.334   |                    |                    | 1              |               | 1 | 3            |                              |
|  | 37+602.549 | 37+641.805 | -0.45      | Rt.  | 3.05                     |  |        |                                                   | 36.21                                                  | 37+602.549               | 0.56                          | 37+641.805  | 0.56                        | 37+641.805     | 37+602.549   | 1                  |                    |                | 1             |   | 3            |                              |
|  | 37+689.845 | 37+718.748 |            | Rt.  | 3.05                     |  | 25.85  |                                                   |                                                        |                          |                               |             |                             | 37+689.845     | 37+718.748   | 1                  |                    |                | 1             |   | 3            |                              |
|  | 37+720.018 | 37+790.503 |            | Rt.  | 3.05                     |  | 67.45  |                                                   |                                                        |                          |                               |             |                             | 37+720.018     |              |                    |                    | 1              |               |   | 3            |                              |
|  | 37+790.503 | 37+836.223 | +0.27      | Rt.  |                          |  |        |                                                   | 45.72                                                  | 37+790.503               | 0.56                          | 37+836.223  | 0.56                        |                |              |                    |                    |                |               |   |              | HIGH POINT @ STA. 37+836.223 |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  | 37+836.223 | 37+881.943 | -0.27      | Rt.  |                          |  |        |                                                   | 45.72                                                  | 37+836.223               | 0.56                          | 37+881.943  | 0.56                        |                |              |                    |                    | 1              |               |   | 3            | HIGH POINT @ STA. 37+836.223 |
|  | 37+881.943 | 37+931.625 |            | Rt.  | 3.05                     |  | 46.63  |                                                   |                                                        |                          |                               |             |                             | 37+931.625     |              |                    |                    |                |               |   |              |                              |
|  | 37+932.895 | 37+961.191 |            | Rt.  | 3.05                     |  | 25.25  |                                                   |                                                        |                          |                               |             |                             | 37+961.191     | 37+932.895   | 1                  |                    |                | 1             |   | 3            |                              |
|  | 37+962.461 | 38+003.058 |            | Rt.  | 3.05                     |  | 37.55  |                                                   |                                                        |                          |                               |             |                             | 38+003.058     | 37+962.461   | 1                  |                    |                | 1             |   | 3            |                              |
|  | 38+036.554 | 38+084.097 |            | Lt.  |                          |  | 47.54  |                                                   |                                                        |                          |                               |             |                             |                | 38+036.554   |                    |                    |                | 1             |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  | 38+084.097 | 38+114.577 | -0.94      | Lt.  | 3.05                     |  |        |                                                   | 27.43                                                  | 38+084.097               | 0.56                          | 38+114.577  | 0.66                        |                |              |                    |                    |                |               |   | 4            |                              |
|  | 38+115.796 | 38+180.287 |            | Lt.  | 3.05                     |  | 61.44  |                                                   |                                                        |                          |                               |             |                             | 38+180.287     | 38+115.796   |                    | 1                  |                | 1             |   | 3            |                              |
|  | 38+181.557 | 38+213.500 |            | Lt.  | 6.10                     |  | 25.84  |                                                   |                                                        |                          |                               |             |                             | 38+213.500     | 38+181.557   |                    |                    | 1              | 1             |   |              | OUTLET INTO MANHOLE          |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |
|  |            |            |            |      |                          |  |        |                                                   |                                                        |                          |                               |             |                             |                |              |                    |                    |                |               |   |              |                              |



- NOTES:
1. EXISTING OUTLET LOCATION
  2. CONNECT TO EXISTING UNDERDRAIN
  3. OUTLET INTO CATCH BASIN
  4. OUTLET INTO EXISTING STORM DRAIN

\* 3.05m TO BE USED IN PLACE OF 605 UNDERDRAIN PIPE WHERE PROPOSED UNDERDRAIN SPANS AN EXISTING CULVERT OR ENCASEMENT PIPE.

\*\* OUTSIDE EDGE OF PAVEMENT

\*\*\* CONDUIT LENGTH TO BE USED IN PLACE OF  
605 UNDERDRAIN PIPE WHERE UNDERDRAIN  
OUTLETS INTO A PROPOSED CATCH BASIN,  
INLET, MANHOLE, OR STORM DRAIN.

## UNDERDRAIN QUANTITIES

|                                  | STATION    |            | PIPE SLOPE | SIDE  | 603                      |        |       | 605                                               |                                                        | UNCLASSIFIED UNDERDRAINS |                               |             |                             | OUTLET STATION | PLUG STATION | OUTLET FITTINGS   |  |   |               |  | SEE NOTE NO.                 | REMARKS |
|----------------------------------|------------|------------|------------|-------|--------------------------|--------|-------|---------------------------------------------------|--------------------------------------------------------|--------------------------|-------------------------------|-------------|-----------------------------|----------------|--------------|-------------------|--|---|---------------|--|------------------------------|---------|
|                                  |            |            |            |       | 100mm *** CONDUIT TYPE F |        |       | 100mm SHALLOW PIPE UNDERDRAIN 707.31, AS PER PLAN | 100mm UNCLASSIFIED PIPE UNDERDRAIN 707.31, AS PER PLAN | BEGIN STATION            | TRENCH DEPTH OF BEGIN STATION | END STATION | TRENCH DEPTH OF END STATION |                |              | 100mm 1 1/4° BEND |  |   | 100mm END CAP |  |                              |         |
|                                  | FROM       | TO         | %          | Meter |                          | Meter  | Meter | FROM                                              | Meter                                                  | TO                       | Meter                         | Each        |                             |                | Each         |                   |  |   |               |  |                              |         |
|                                  | 32+791.866 | 32+823.870 |            | Rt.** |                          | 32.00  |       |                                                   |                                                        |                          |                               |             | 32+791.866                  |                | 1            |                   |  |   |               |  |                              |         |
|                                  | 32+823.870 | 32+873.857 | -2.43      | Rt.** | 3.05                     |        |       | 46.94                                             | 32+823.870                                             | 0.83                     | 32+873.857                    | 0.60        | 32+875.686                  | 32+896.717     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 32+875.686 | 32+896.717 |            | Rt.** | 3.05                     | 17.98  |       |                                                   |                                                        |                          |                               |             | 32+875.686                  |                | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 32+949.889 | 32+991.037 | -0.40      | Rt.** | 3.05                     |        |       | 38.10                                             | 32+949.889                                             | 0.60                     | 32+991.037                    | 0.50        | 32+991.037                  | 32+949.889     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 33+006.396 | 33+062.878 | +0.24      | Rt.** | 3.05                     |        |       | 53.43                                             | 33+006.396                                             | 0.81                     | 33+062.878                    | 0.83        | 33+006.396                  |                | 1            |                   |  |   |               |  | 3                            |         |
|                                  | 33+062.878 | 33+084.120 |            | Rt.** |                          | 21.24  |       |                                                   |                                                        |                          |                               |             |                             | 33+084.120     |              |                   |  | 1 |               |  |                              |         |
|                                  | 33+086.020 | 33+154.072 |            | Rt.** | 3.05                     | 68.05  |       |                                                   |                                                        |                          |                               |             | 33+086.020                  | 33+154.072     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 33+155.901 | 33+236.178 | +0.72      | Rt.** | 3.05                     |        |       | 77.23                                             |                                                        | 0.83                     |                               | 0.68        | 33+155.901                  | 33+236.178     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 33+238.007 | 33+388.602 |            | Rt.** | 3.05                     | 147.55 |       |                                                   |                                                        |                          |                               |             | 33+238.007                  | 33+388.602     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 33+390.431 | 33+420.911 |            | Rt.** | 3.05                     | 30.48  |       |                                                   |                                                        |                          |                               |             | 33+390.431                  |                | 1            |                   |  |   |               |  | 3                            |         |
|                                  | 33+420.911 | 33+451.391 | +0.45      | Rt.** |                          |        |       | 30.48                                             | 33+420.911                                             | 0.83                     | 33+451.391                    | 0.76        |                             |                |              |                   |  |   |               |  | High Point @ Sta. 33+451.391 |         |
|                                  | 33+451.391 | 33+481.871 | -0.77      | Rt.** |                          |        |       | 30.48                                             | 33+451.391                                             | 0.76                     | 33+481.871                    | 0.83        |                             |                |              |                   |  |   |               |  | High Point @ Sta. 33+451.391 |         |
|                                  | 33+481.871 | 33+497.066 |            | Rt.** | 3.05                     | 15.20  |       |                                                   |                                                        |                          |                               |             | 33+497.066                  |                | 1            |                   |  |   |               |  | 3                            |         |
|                                  | 33+499.025 | 33+588.636 |            | Rt.** | 3.05                     | 89.61  |       |                                                   |                                                        |                          |                               |             | 33+588.636                  | 33+499.025     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 33+590.661 | 33+687.587 |            | Rt.** | 3.05                     | 96.93  |       |                                                   |                                                        |                          |                               |             | 33+687.587                  | 33+590.661     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 33+689.415 | 33+710.401 | -0.71      | Rt.** | 3.05                     |        |       | 17.94                                             | 33+689.415                                             | 0.75                     | 33+710.401                    | 0.83        | 33+710.401                  | 33+689.415     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 33+710.401 | 33+731.110 | +0.71      | Rt.** | 3.05                     |        |       | 17.66                                             | 33+710.401                                             | 0.83                     | 33+731.110                    | 0.75        | 33+710.401                  | 33+731.110     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 33+732.939 | 33+938.679 |            | Rt.** | 3.05                     | 205.74 |       |                                                   |                                                        |                          |                               |             | 33+732.939                  |                | 1            |                   |  |   |               |  | 3                            |         |
|                                  | 33+938.679 | 33+984.399 | +0.62      | Rt.** |                          |        |       | 45.72                                             | 33+938.679                                             | 0.83                     | 33+984.399                    | 0.76        |                             |                |              |                   |  |   |               |  | High Point @ Sta. 33+984.399 |         |
|                                  | 33+984.399 | 34+014.879 | -0.42      | Rt.** |                          |        |       | 30.48                                             | 33+984.399                                             | 0.76                     | 34+014.879                    | 0.83        |                             |                |              |                   |  |   |               |  | High Point @ Sta. 33+984.399 |         |
|                                  | 34+014.879 | 34+053.735 |            | Rt.** | 3.05                     | 38.86  |       |                                                   |                                                        |                          |                               |             | 34+053.735                  |                | 1            |                   |  |   |               |  | 3                            |         |
|                                  | 34+055.259 | 34+076.201 |            | Rt.** | 3.05                     | 17.89  |       |                                                   |                                                        |                          |                               |             | 34+076.201                  | 34+055.259     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 34+111.317 | 34+150.725 | +0.24      | Rt.** | 3.05                     |        |       | 36.36                                             | 34+111.317                                             | 1.05                     | 34+150.725                    | 0.83        | 34+111.317                  | 34+150.725     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 34+131.292 | 34+183.108 |            | Lt.** | 3.05                     | 48.77  |       |                                                   |                                                        |                          |                               |             |                             |                | 1            |                   |  |   |               |  |                              |         |
|                                  | 34+184.632 | 34+237.401 |            | Lt.** | 3.05                     | 49.72  |       |                                                   |                                                        |                          |                               |             | 34+237.401                  | 34+184.632     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 34+238.998 | 34+396.275 |            | Lt.** | 3.05                     | 154.23 |       |                                                   |                                                        |                          |                               |             | 34+396.275                  | 34+238.998     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 34+398.104 | 34+502.951 |            | Lt.** | 3.05                     | 101.80 |       |                                                   |                                                        |                          |                               |             | 34+502.951                  | 34+398.104     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 34+504.780 | 34+518.023 |            | Lt.** | 3.05                     | 10.19  |       |                                                   |                                                        |                          |                               |             | 34+518.023                  | 34+504.780     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 34+561.613 | 34+609.162 |            | Lt.** | 3.05                     | 44.50  |       |                                                   |                                                        |                          |                               |             | 34+561.613                  | 34+609.162     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 34+621.780 | 34+644.640 | -0.37      | Lt.** | 3.05                     |        |       | 19.81                                             | 34+621.780                                             | 0.83                     | 34+644.640                    | 1.01        | 34+644.640                  | 34+621.780     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 34+644.640 | 34+752.634 |            | Lt.** | 3.05                     | 104.94 |       |                                                   |                                                        |                          |                               |             | 34+644.640                  | 34+752.634     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 34+339.851 | 34+396.239 |            | Rt.** | 3.05                     | 53.34  |       |                                                   |                                                        |                          |                               |             | 34+396.239                  | 34+339.851     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 34+398.057 | 34+502.908 |            | Rt.** | 3.05                     | 101.80 |       |                                                   |                                                        |                          |                               |             | 34+502.908                  | 34+398.057     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 34+541.067 | 34+565.451 |            | Rt.** | 3.05                     | 21.33  |       |                                                   |                                                        |                          |                               |             | 34+541.067                  | 34+565.451     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 34+644.641 | 34+697.980 |            | Rt.** | 3.05                     | 50.29  |       |                                                   |                                                        |                          |                               |             | 34+644.641                  | 34+697.980     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 34+777.607 | 34+897.174 |            | Lt.** | 3.05                     | 116.52 |       |                                                   |                                                        |                          |                               |             | 34+777.607                  | 34+897.174     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 34+899.003 | 34+973.568 |            | Lt.** | 3.05                     | 71.52  |       |                                                   |                                                        |                          |                               |             | 34+899.003                  | 34+973.568     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 35+279.995 | 35+356.195 |            | Lt.** | 3.05                     | 73.15  |       |                                                   |                                                        |                          |                               |             | 35+279.995                  | 35+356.195     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 34+899.003 | 34+947.771 |            | Rt.** | 3.05                     | 45.72  |       |                                                   |                                                        |                          |                               |             | 34+899.003                  | 34+947.771     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 35+173.159 | 35+278.315 |            | Rt.** | 3.05                     | 102.11 |       |                                                   |                                                        |                          |                               |             | 35+173.159                  | 35+278.315     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 35+280.184 | 35+371.319 |            | Rt.** | 3.05                     | 88.09  |       |                                                   |                                                        |                          |                               |             | 35+280.184                  | 35+371.319     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 35+371.468 | 35+409.568 | +0.24      | Rt.** | 3.05                     |        |       | 35.05                                             | 35+371.468                                             | 0.99                     | 35+409.568                    | 0.83        | 35+371.468                  |                | 1            |                   |  |   |               |  | 3                            |         |
|                                  | 35+409.568 | 35+463.119 | -0.40      | Rt.** | 3.05                     |        |       | 50.50                                             | 35+409.568                                             | 0.83                     | 35+463.119                    | 0.95        | 35+463.119                  |                | 1            |                   |  |   |               |  | High Point @ Sta. 35+409.568 |         |
|                                  | 35+464.915 | 35+554.526 |            | Rt.** | 3.05                     | 86.56  |       |                                                   |                                                        |                          |                               |             | 35+554.526                  | 35+464.915     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 35+516.330 | 35+584.910 |            | Lt.** | 3.05                     | 65.53  |       |                                                   |                                                        |                          |                               |             | 35+584.910                  | 35+516.330     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 35+586.739 | 35+677.082 |            | Lt.** | 3.05                     | 87.29  |       |                                                   |                                                        |                          |                               |             | 35+677.082                  | 35+586.739     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 35+738.044 | 35+767.305 | +0.40      | Lt.** | 3.05                     |        |       | 26.21                                             | 35+738.044                                             | 0.91                     | 35+767.305                    | 0.83        | 35+738.044                  | 35+767.305     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 35+769.067 | 35+827.893 |            | Lt.** | 3.05                     | 55.78  |       |                                                   |                                                        |                          |                               |             | 35+769.067                  | 35+827.893     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 35+829.381 | 35+979.955 |            | Lt.** | 3.05                     | 147.52 |       |                                                   |                                                        |                          |                               |             | 35+829.381                  | 35+979.955     | 1            |                   |  | 1 |               |  | 3                            |         |
|                                  | 35+981.784 | 36+086.635 |            | Lt.** | 3.05                     | 101.80 |       |                                                   |                                                        |                          |                               |             | 35+981.784                  | 36+086.635     | 1            |                   |  | 1 |               |  | 3                            |         |
| TOTAL CARRIED TO GENERAL SUMMARY |            |            |            |       | 134.5                    |        |       | 2564                                              | 556.5                                                  |                          |                               |             |                             |                |              |                   |  |   |               |  |                              |         |



14-03261-00 UNDERDRAIN T321054.dwg - OCT 28, 1997 - 10:35:04

- NOTES:
- EXISTING OUTLET LOCATION
  - CONNECT TO EXISTING UNDERDRAIN
  - OUTLET INTO CATCH BASIN
  - OUTLET INTO EXISTING STORM DRAIN

- \* 3.05m TO BE USED IN PLACE OF 605 UNDERDRAIN PIPE WHERE PROPOSED UNDERDRAIN SPANS AN EXISTING CULVERT OR ENCASEMENT PIPE.
- \*\* OUTSIDE EDGE OF PAVEMENT
- \*\*\* CONDUIT LENGTH TO BE USED IN PLACE OF 605 UNDERDRAIN PIPE WHERE UNDERDRAIN OUTLETS INTO A PROPOSED CATCH BASIN, INLET, MANHOLE, OR STORM DRAIN.

UNDERDRAIN QUANTITIES

| STATION                          |            | PIPE SLOPE | SIDE  | 603                      |  |  | 605                                               |                                                        | UNCLASSIFIED UNDERDRAINS |                               |             |                             | OUTLET STATION | PLUG STATION | OUTLET FITTINGS    |  |  |               |  | SEE NOTE NO. | REMARKS                      |
|----------------------------------|------------|------------|-------|--------------------------|--|--|---------------------------------------------------|--------------------------------------------------------|--------------------------|-------------------------------|-------------|-----------------------------|----------------|--------------|--------------------|--|--|---------------|--|--------------|------------------------------|
|                                  |            |            |       | 100mm *** CONDUIT TYPE F |  |  | 100mm SHALLOW PIPE UNDERDRAIN 707.31, AS PER PLAN | 100mm UNCLASSIFIED PIPE UNDERDRAIN 707.31, AS PER PLAN | BEGIN STATION            | TRENCH DEPTH OF BEGIN STATION | END STATION | TRENCH DEPTH OF END STATION |                |              | 100mm 11 1/4° BEND |  |  | 100mm END CAP |  |              |                              |
|                                  |            |            |       | Meter                    |  |  | Meter                                             | Meter                                                  | FROM                     | Meter                         | TO          | Meter                       |                |              | Each               |  |  | Each          |  |              |                              |
| 36+088.540                       | 36+238.806 |            | Lt.** | 3.05                     |  |  | 147.22                                            |                                                        |                          |                               |             |                             | 36+088.540     | 36+238.806   | 1                  |  |  | 1             |  | 3            |                              |
| 36+240.782                       | 36+360.264 |            | Lt.** | 3.05                     |  |  | 116.43                                            |                                                        |                          |                               |             |                             | 36+240.782     | 36+360.264   | 1                  |  |  | 1             |  | 3            |                              |
| 36+423.828                       | 36+559.159 |            | Lt.** | 3.05                     |  |  | 132.28                                            |                                                        |                          |                               |             |                             | 36+423.828     | 36+559.159   | 1                  |  |  | 1             |  | 3            |                              |
| 36+118.986                       | 36+238.772 |            | Rt.** | 3.05                     |  |  | 116.74                                            |                                                        |                          |                               |             |                             | 36+118.986     | 36+238.772   | 1                  |  |  | 1             |  | 3            |                              |
| 36+240.782                       | 36+355.996 |            | Rt.** | 3.05                     |  |  | 112.16                                            |                                                        |                          |                               |             |                             | 36+240.782     | 36+355.996   | 1                  |  |  | 1             |  | 3            |                              |
| 36+423.429                       | 36+559.065 |            | Rt.** | 3.05                     |  |  | 132.59                                            |                                                        |                          |                               |             |                             | 36+423.429     | 36+560.894   | 1                  |  |  | 1             |  | 3            |                              |
| 36+560.878                       | 36+672.740 |            | Rt.** | 3.05                     |  |  | 108.81                                            |                                                        |                          |                               |             |                             | 36+560.878     | 36+672.740   | 1                  |  |  | 1             |  | 3            |                              |
| 36+809.122                       | 36+916.107 |            | Lt.** | 3.05                     |  |  | 103.94                                            |                                                        |                          |                               |             |                             | 36+916.107     | 36+809.122   | 1                  |  |  | 1             |  | 3            |                              |
| 36+961.204                       | 37+035.880 |            | Lt.** | 3.05                     |  |  | 71.63                                             |                                                        |                          |                               |             |                             | 37+035.880     | 36+961.204   | 1                  |  |  | 1             |  | 3            |                              |
| 37+037.555                       | 37+104.001 |            | Lt.** | 3.05                     |  |  | 63.40                                             |                                                        |                          |                               |             |                             | 37+104.001     | 37+037.555   | 1                  |  |  | 1             |  | 3            |                              |
| 37+105.660                       | 37+239.162 |            | Lt.** | 3.05                     |  |  | 130.45                                            |                                                        |                          |                               |             |                             | 37+239.162     | 37+105.660   | 1                  |  |  | 1             |  | 3            |                              |
| 37+241.075                       | 37+301.730 |            | Lt.** | 3.05                     |  |  | 57.60                                             |                                                        |                          |                               |             |                             | 37+301.730     | 37+241.075   | 1                  |  |  | 1             |  | 3            |                              |
| 37+342.296                       | 37+399.294 |            | Lt.** | 3.05                     |  |  | 53.95                                             |                                                        |                          |                               |             |                             | 37+399.294     | 37+342.296   | 1                  |  |  | 1             |  | 3            |                              |
| 37+401.376                       | 37+612.602 |            | Lt.** | 3.05                     |  |  | 208.18                                            |                                                        |                          |                               |             |                             | 37+612.602     | 37+401.376   | 1                  |  |  | 1             |  | 3            |                              |
| 36+809.220                       | 36+909.499 |            | Rt.** | 3.05                     |  |  | 97.23                                             |                                                        |                          |                               |             |                             | 36+909.499     | 36+809.220   | 1                  |  |  | 1             |  | 3            |                              |
| 36+911.196                       | 37+040.126 |            | Rt.** | 3.05                     |  |  | 125.88                                            |                                                        |                          |                               |             |                             | 37+040.126     | 36+911.196   | 1                  |  |  | 1             |  | 3            |                              |
| 37+041.935                       | 37+074.549 |            | Rt.** | 3.05                     |  |  | 29.56                                             |                                                        |                          |                               |             |                             | 37+074.549     | 37+041.935   | 1                  |  |  | 1             |  | 3            |                              |
| 37+614.640                       | 37+642.986 |            | Lt.** | 3.05                     |  |  | 25.30                                             |                                                        |                          |                               |             |                             | 37+642.986     | 37+614.640   | 1                  |  |  | 1             |  | 3            |                              |
| 37+719.247                       | 37+765.738 |            | Lt.** | 3.05                     |  |  | 43.44                                             |                                                        |                          |                               |             |                             | 37+719.247     |              | 1                  |  |  |               |  | 3            |                              |
| 37+765.738                       | 37+803.838 | +0.36      | Lt.** |                          |  |  |                                                   | 38.10                                                  | 37+765.738               | 0.83                          | 37+803.838  | 0.83                        |                |              |                    |  |  |               |  |              | High Point @ Sta. 37+803.838 |
| 37+803.838                       | 37+872.418 | -0.26      | Lt.** | 3.05                     |  |  |                                                   | 68.58                                                  | 37+803.838               | 0.83                          | 37+872.418  | 0.83                        |                |              |                    |  |  |               |  |              | High Point @ Sta. 37+803.838 |
| 37+872.418                       | 37+962.084 |            | Lt.** | 3.05                     |  |  | 86.62                                             |                                                        |                          |                               |             |                             | 37+962.084     |              | 1                  |  |  |               |  | 3            |                              |
| 37+963.982                       | 38+010.921 |            | Lt.** | 3.05                     |  |  | 43.89                                             |                                                        |                          |                               |             |                             | 38+010.921     | 37+963.982   | 1                  |  |  | 1             |  | 3            |                              |
| 38+039.291                       | 38+114.577 |            | Lt.** | 3.05                     |  |  | 72.24                                             |                                                        |                          |                               |             |                             | 38+114.577     | 38+039.291   | 1                  |  |  | 1             |  | 3            |                              |
| 38+015.379                       | 38+114.744 |            | Rt.** | 3.05                     |  |  | 96.32                                             |                                                        |                          |                               |             |                             | 38+114.744     | 38+015.379   | 1                  |  |  | 1             |  | 3            |                              |
| 38+116.589                       | 38+213.515 |            | Lt.** | 3.05                     |  |  | 93.88                                             |                                                        |                          |                               |             |                             | 38+213.515     | 38+112.931   | 1                  |  |  | 1             |  | 3            |                              |
| 38+116.573                       | 38+213.500 |            | Rt.** | 3.05                     |  |  | 93.88                                             |                                                        |                          |                               |             |                             | 38+213.500     | 38+116.573   | 1                  |  |  | 1             |  | 3            |                              |
| TOTAL CARRIED TO GENERAL SUMMARY |            |            |       | 79.5                     |  |  | 2364                                              | 107                                                    |                          |                               |             |                             |                |              |                    |  |  |               |  |              |                              |

UNDERDRAIN QUANTITIES

BEL-7-32.276

107  
242



# STORM SEWER DATA

|    |                |
|----|----------------|
| BL | CHECKED<br>SAH |
|----|----------------|

# STORM SEWER DATA AND QUANTITIES

**BEL-7-32.283**

$$\frac{108}{242}$$
[illegible]



# STORM SEWER DATA

|                                                                                                                                                      |                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <div><div><div>109</div><div>242</div></div><div><div><div><div>STORM SEWER DATA AND QUANTITIES</div><div>BEL-7-32.276</div></div></div></div></div> | <div><div><div>CALCULATED</div><div>SAH</div></div><div><div>CHECKED</div><div>BL</div></div></div> |
|                                                                                                                                                      |                                                                                                     |
|                                                                                                                                                      |                                                                                                     |



# STORM SEWER DATA

|    |                |
|----|----------------|
| BL | CHECKED<br>SAH |
|----|----------------|

## STORM SEWER DATA AND QUANTITIES

**BEL-7-32.276**



\* Invert elevations are approximate. Final elevations shall be determined at the time of construction.

STORM SEWER DATA

CALCULATED  
BL  
CHECKED  
SAH

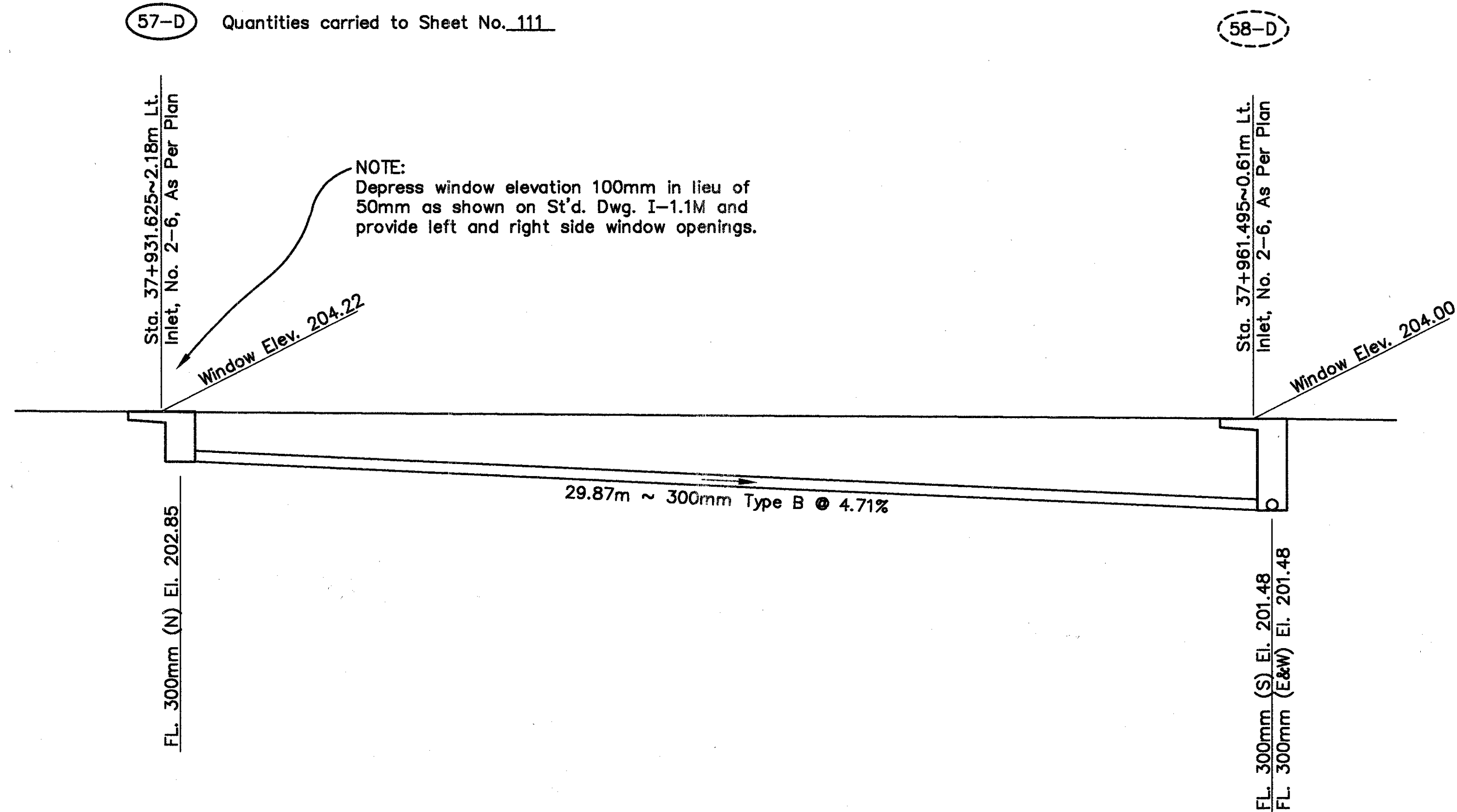
| PLAN SHEET NO.                   | REF. NO. | STATION    | OFFSET   | DETAIL | APPROX. DEPTH OF PROPOSED DRAINAGE STRUCTURE | PROPOSED CONDUIT SIZE AND INVERT ELEVATION |        |      |                | 603 ~ CONDUIT, TYPE B |       |       |       |                   | 604   |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
|----------------------------------|----------|------------|----------|--------|----------------------------------------------|--------------------------------------------|--------|------|----------------|-----------------------|-------|-------|-------|-------------------|-------|--|-------|---|----------------------------|----------------------------|-----------------------------|--|--|------|------|----------------|--|---|---|----|---------------------------------------------|-------------------------------------------|--------------------------------------|-------------------------------|---------------------------|------|------|------|
|                                  |          |            |          |        |                                              | DIRECTION                                  | LENGTH | SIZE | * INVERT ELEV. | 300mm                 | 375mm | 450mm | 600mm | INLET, NO. 3B1270 |       |  |       |   | INLET, NO. 2-6 AS PER PLAN | INLET, NO. 2-8 AS PER PLAN | INLET, NO. 2-10 AS PER PLAN |  |  |      |      | MANHOLE, NO. 3 |  |   |   |    | MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN | INLET RECONSTRUCTED TO GRADE, AS PER PLAN | INLET ADJUSTED TO GRADE, AS PER PLAN | CATCH BASIN ADJUSTED TO GRADE | MANHOLE ADJUSTED TO GRADE |      |      |      |
|                                  |          |            | Meter    |        |                                              |                                            |        |      |                | Meter                 | Meter | mm    | Meter | Meter             | Meter |  | Meter |   |                            |                            | Each                        |  |  | Each | Each | Each           |  |   |   |    | Each                                        |                                           |                                      |                               | Each                      | Each | Each | Each |
| 66                               | 48-D     | 36+888.501 | 0.74 LT. |        | For Detail, See Sheet No. 115                |                                            |        |      |                | 24.38                 |       |       |       |                   | 1     |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 66                               | 28-I     | 36+909.499 | RT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 66                               | 29-I     | 36+916.107 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 66                               | 49-D     | 36+912.881 | 1.22 LT. | D      | 3.41                                         | East                                       | 1.22   | 600  | 214.38         |                       |       |       | 1.22  |                   | 1     |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
|                                  |          |            |          | D      | 3.41                                         | West                                       | 1.22   | 600  | 214.38         |                       |       |       | 1.22  |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
|                                  |          |            |          | -      | 3.41                                         | South                                      | -      | 375  | 215.69         |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 66                               | 30-I     | 37+035.880 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 66                               | 4-MH     | 37+036.541 | RT.      |        | For Detail, See Sheet No. 122                |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 66                               | 31-I     | 37+040.126 | RT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 66                               | 32-I     | 37+074.549 | RT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 66                               | 33-I     | 37+104.001 | RT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 66                               | 34-I     | 37+104.001 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 66                               | 35-I     | 37+239.162 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 66                               | 50-D     | 37+238.079 | 0.50 LT. | D      | 1.33                                         | West                                       | 1.22   | 300  | 208.54         | 1.22                  |       |       |       |                   |       |  |       | 1 |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 66                               | 36-I     | 37+301.730 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 66                               | 51-D     | 37+300.511 | 1.22 LT. | F      |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 66                               | 52-D     | 37+398.064 | 0.46 RT. | D      | 1.21                                         | West                                       | 1.22   | 300  | 205.82         | 1.22                  |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 66                               | 37-I     | 37+399.294 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 53-D     | 37+601.279 | 0.70     |        | For Detail, See Sheet No. 117                |                                            |        |      |                | 40.54                 | 1.83  |       |       |                   |       |  |       | 1 |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 40-CB    | 37+612.602 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 54-D     | 37+641.805 | 1.22 LT. |        | For Detail, See Sheet No. 117                |                                            |        |      |                |                       | 1.22  |       |       |                   |       |  |       | 1 |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 41-CB    | 37+642.986 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 5-MH     | 37+685.096 | RT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 7-MH     | 37+674.135 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 42-CB    | 37+685.607 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 55-D     | 37+689.845 | 0.46 RT. | F      |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
|                                  |          |            |          | -      |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 38-I     | 37+719.247 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 56-D     | 37+720.018 | 0.46 RT. | D      | 2.16                                         | West                                       | 1.22   | 300  | 201.76         | 1.22                  |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
|                                  |          |            |          | B      | 2.32                                         | South                                      | 29.87  | 375  | 201.60         |                       | 29.87 |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 57-D     | 37+931.625 | 2.18 LT. |        | For Detail, See Sheet No. 112                |                                            |        |      |                | 29.87                 |       |       |       |                   |       |  |       | 1 |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 58-D     | 37+961.495 | 0.61 LT. | D      | 2.52                                         | East                                       | 2.44   | 300  | 201.48         | 2.44                  |       |       |       |                   |       |  |       | 1 |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
|                                  |          |            |          | D      | 2.52                                         | West                                       | 1.22   | 300  | 201.48         | 1.22                  |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 39-I     | 37+962.084 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 59-D     | 38+003.058 | 1.22 LT. | F      |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 43-CB    | 38+010.921 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 44-CB    | 38+017.395 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 45-CB    | 38+025.828 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 67                               | 46-CB    | 38+037.323 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 68                               | 40-I     | 38+114.577 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 68                               | 41-I     | 38+114.744 | RT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 68                               | 60-D     | 38+180.287 | CL       | -      | For Detail, See Sheet No. 117                |                                            |        |      |                | 33.21                 |       |       |       | 1                 |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 68                               | 61-D     | 38+213.500 | 1.01 RT. | -      | For Detail, See Sheet No. 117                |                                            |        |      |                | 2.44                  |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 68                               | 42-I     | 38+213.515 | LT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| 68                               | 43-I     | 38+213.500 | RT.      |        |                                              |                                            |        |      |                |                       |       |       |       |                   |       |  |       |   |                            |                            |                             |  |  |      |      |                |  |   |   |    |                                             |                                           |                                      |                               |                           |      |      |      |
| TOTAL CARRIED TO GENERAL SUMMARY |          |            |          |        |                                              |                                            |        |      |                | 73                    | 95    | 3     | 2.5   | 1                 |       |  | 4     | 1 | 4                          |                            |                             |  |  | 1    |      |                |  | 1 | 3 | 16 | 7                                           | 2                                         |                                      |                               |                           |      |      |      |

STORM SEWER DATA AND QUANTITIES

BEL-7-32.276

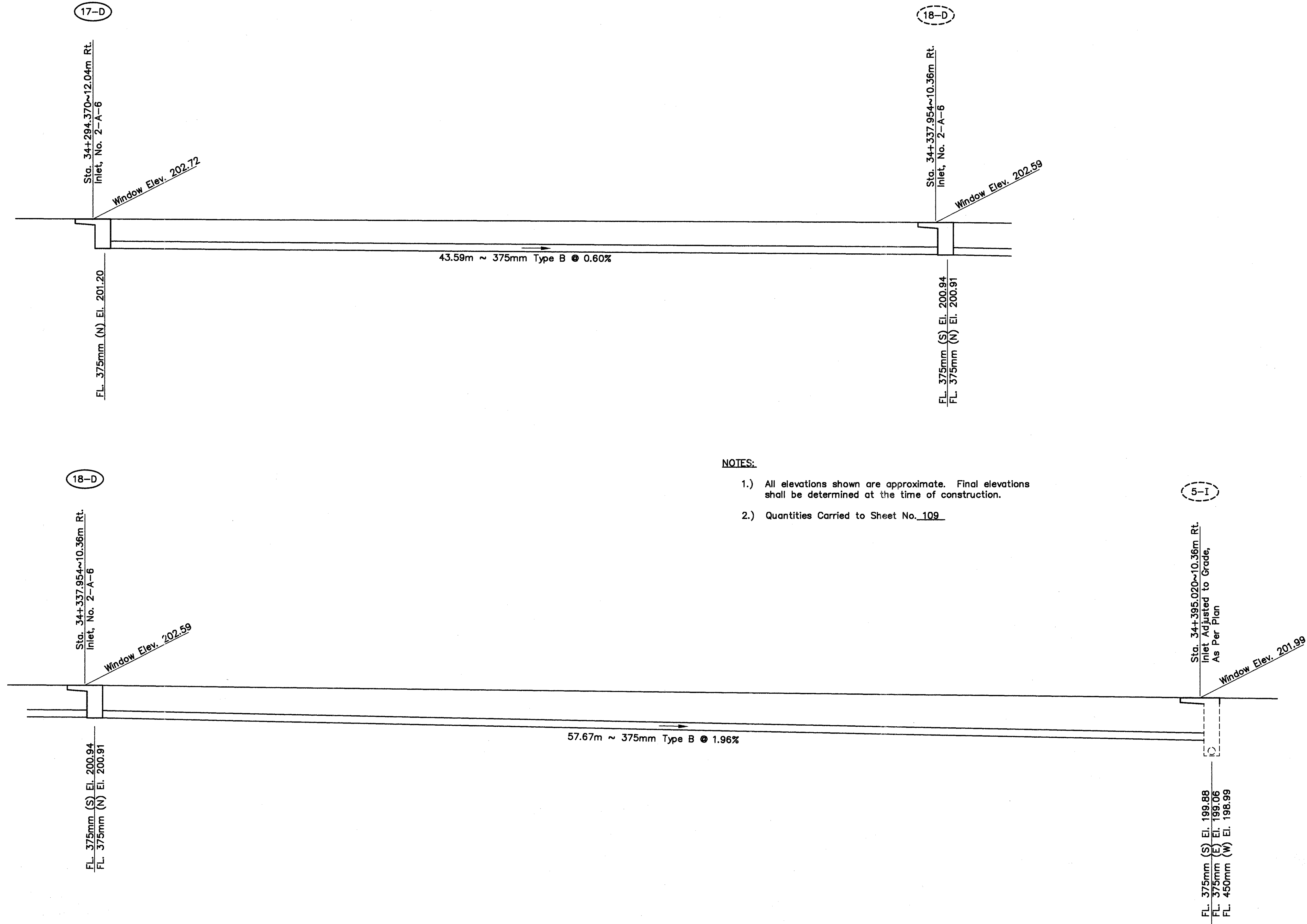


(58-D)



**NOTE:**  
Depress window elevation 100mm in lieu of 50mm as shown on St'd. Dwg. I-1.1M and provide left and right side window openings.





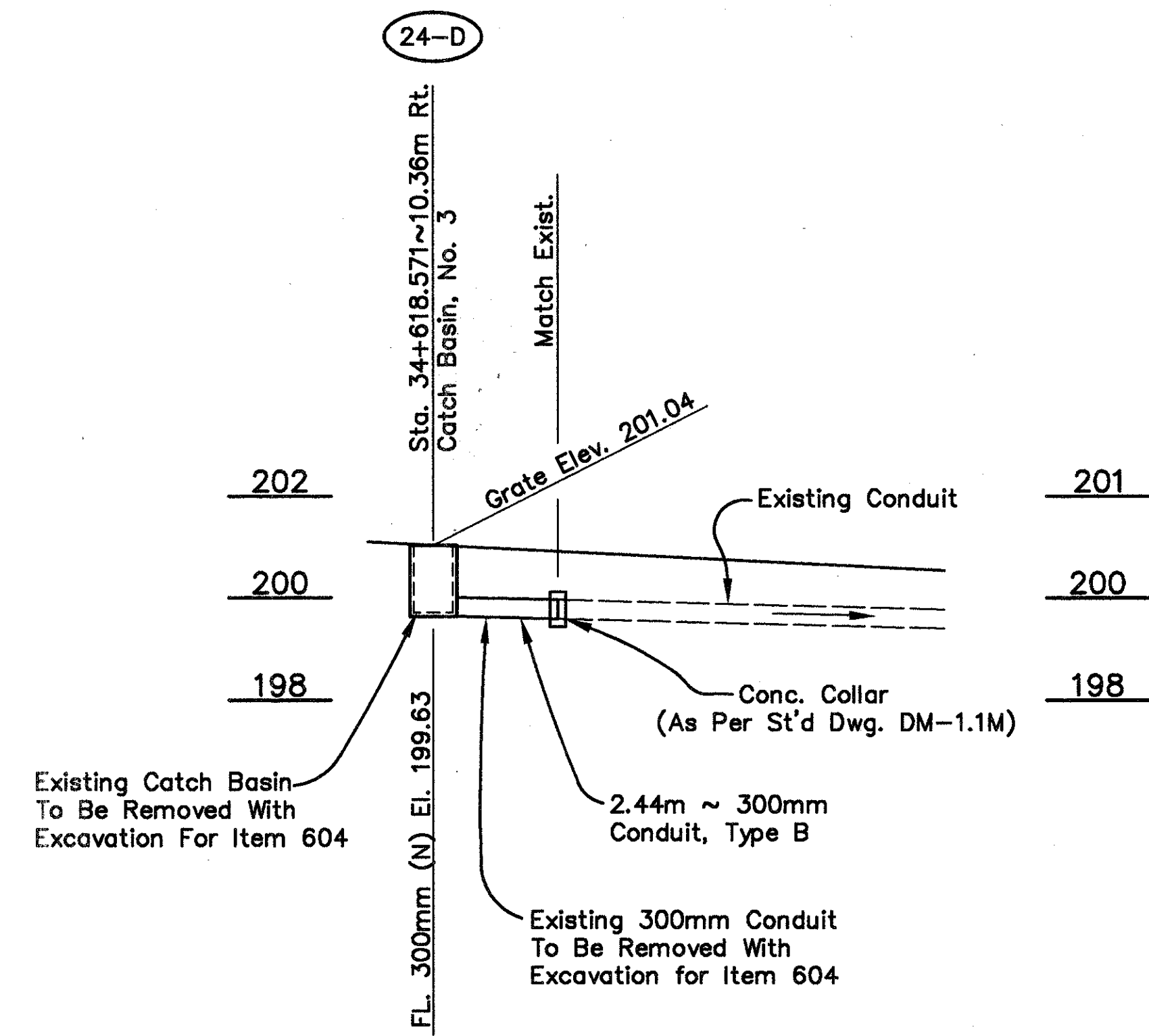
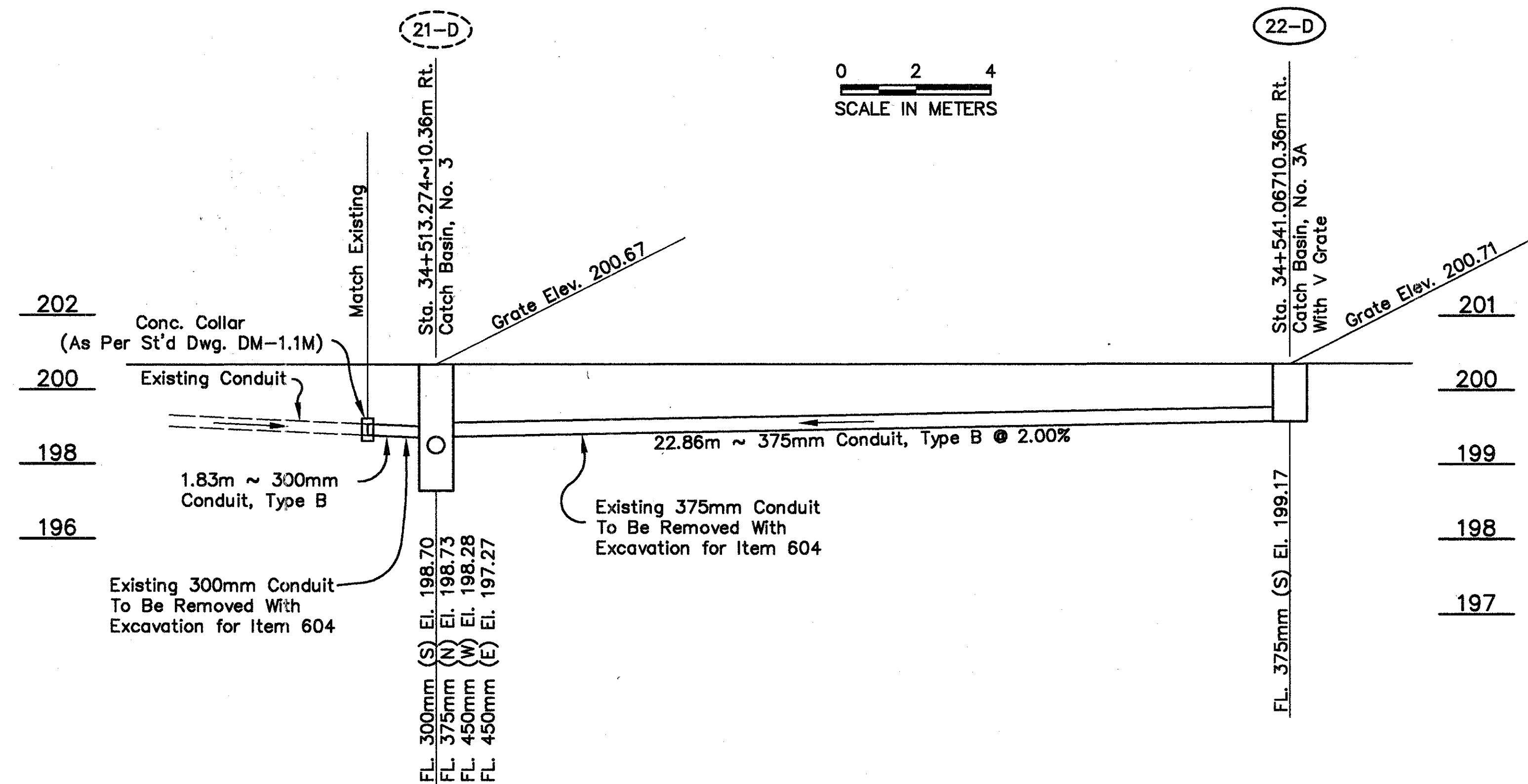
NOTES:

- 1.) All elevations shown are approximate. Final elevations shall be determined at the time of construction.
- 2.) Quantities Carried to Sheet No. 109



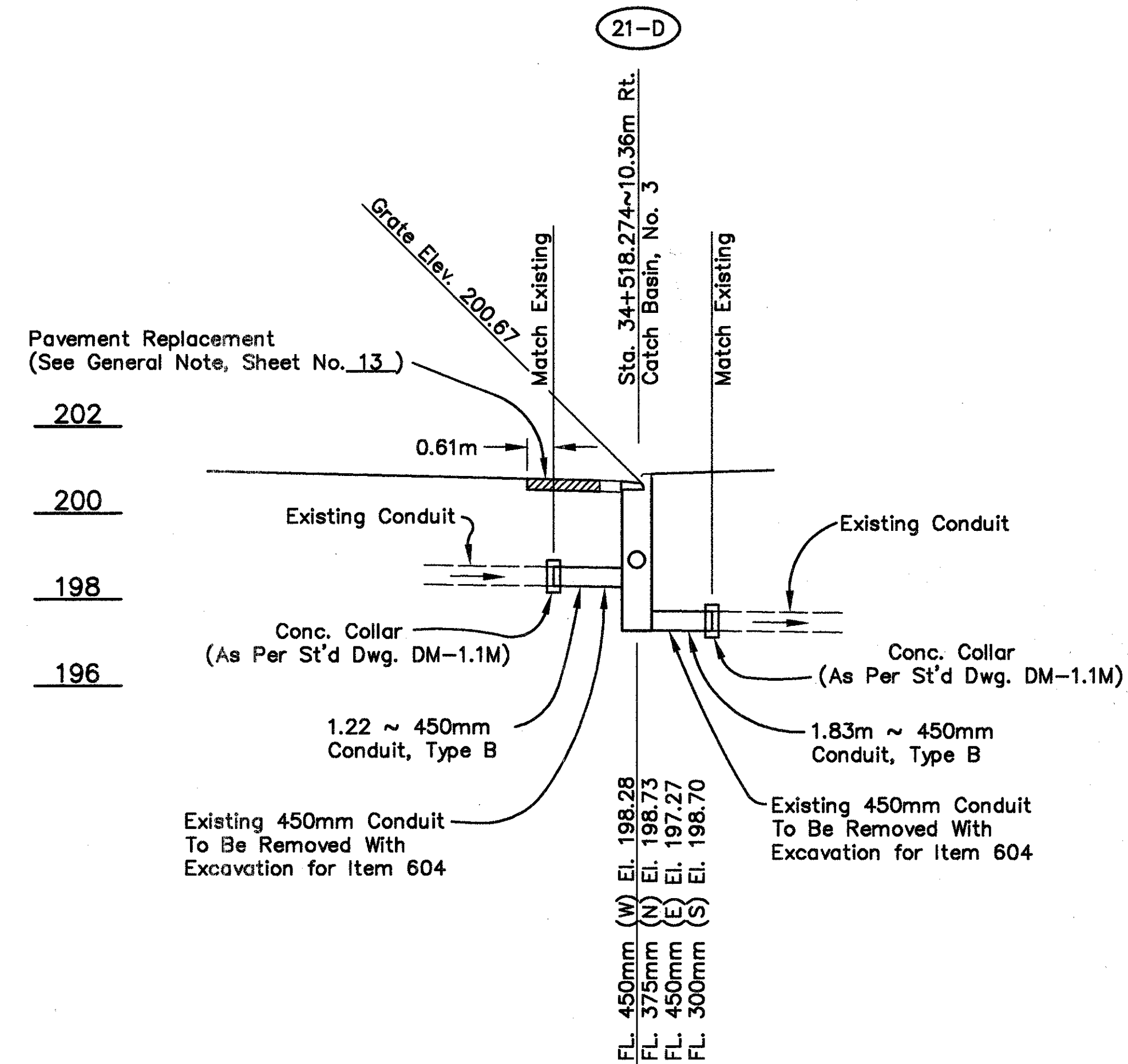
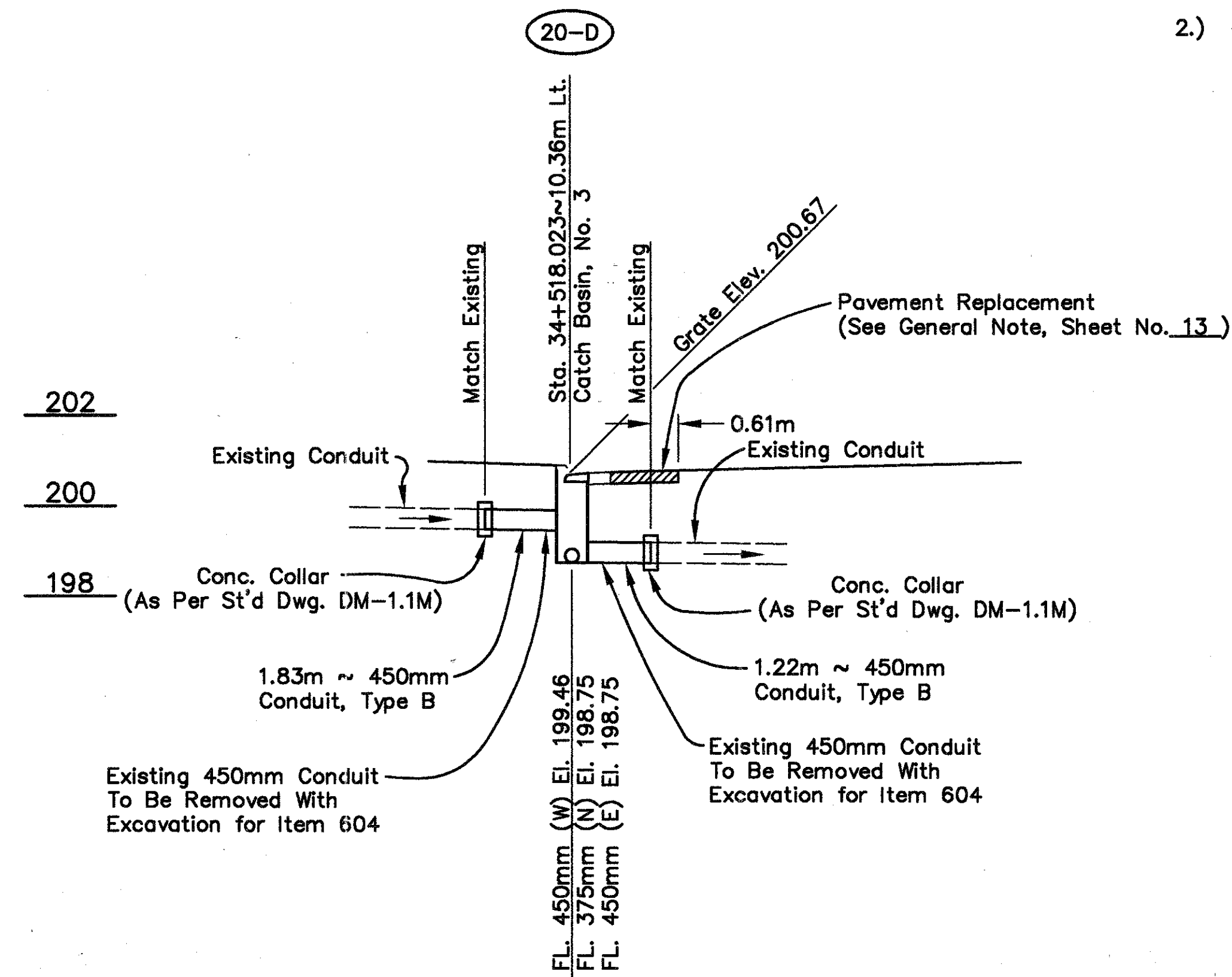
# STORM SEWER PROFILES

BEL-7-32.276



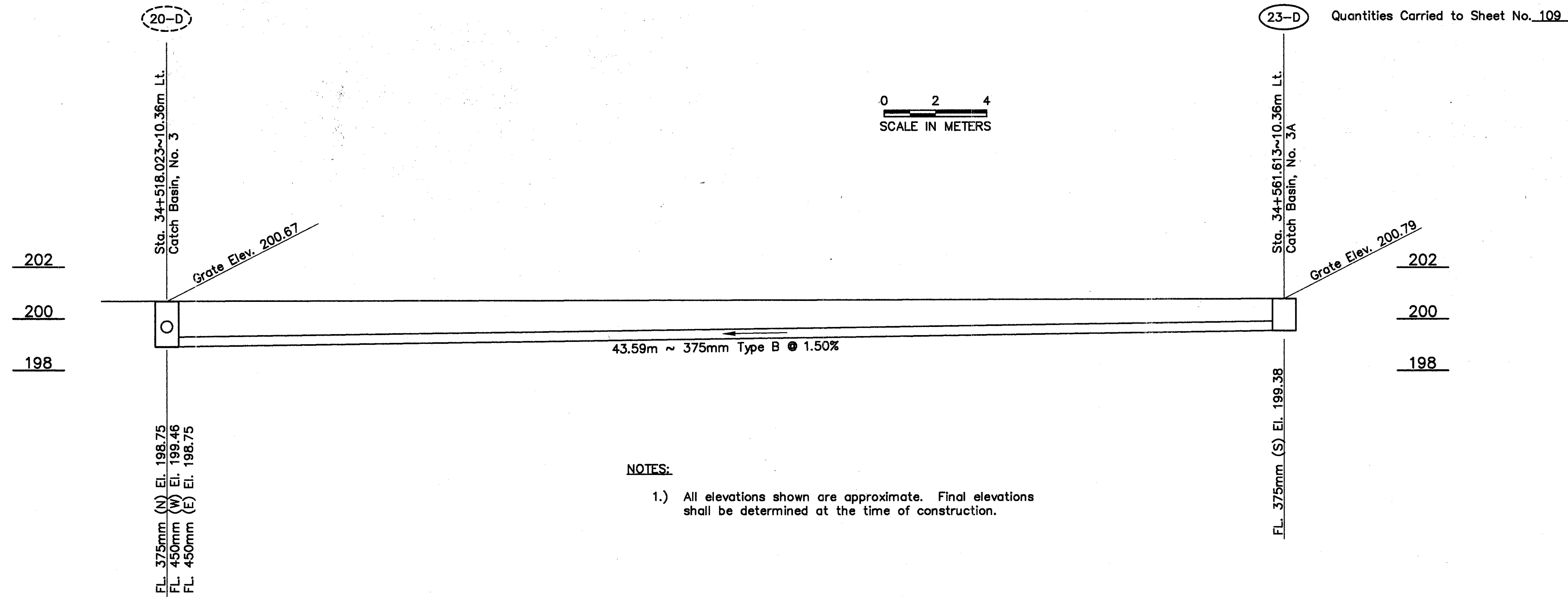
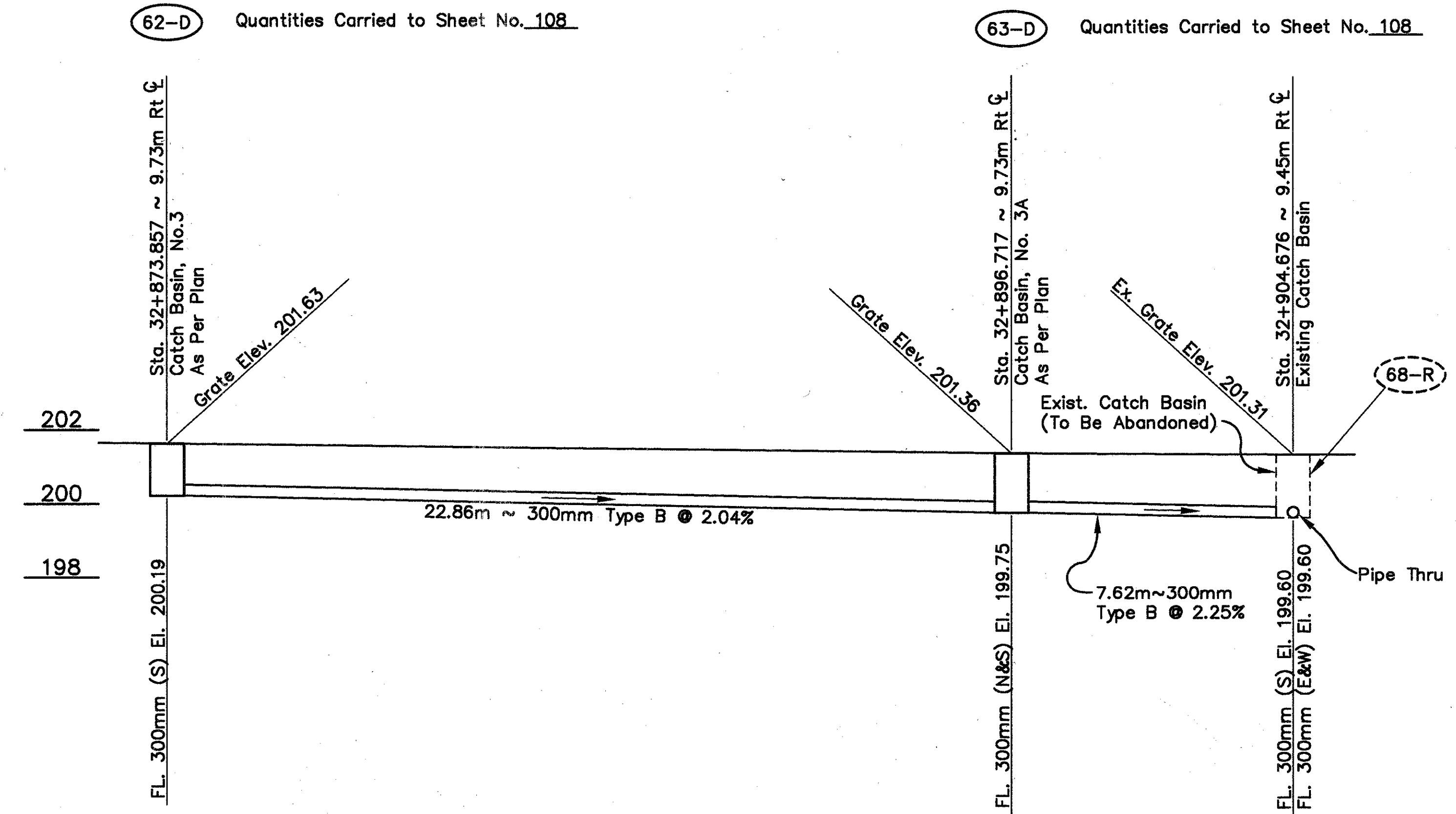
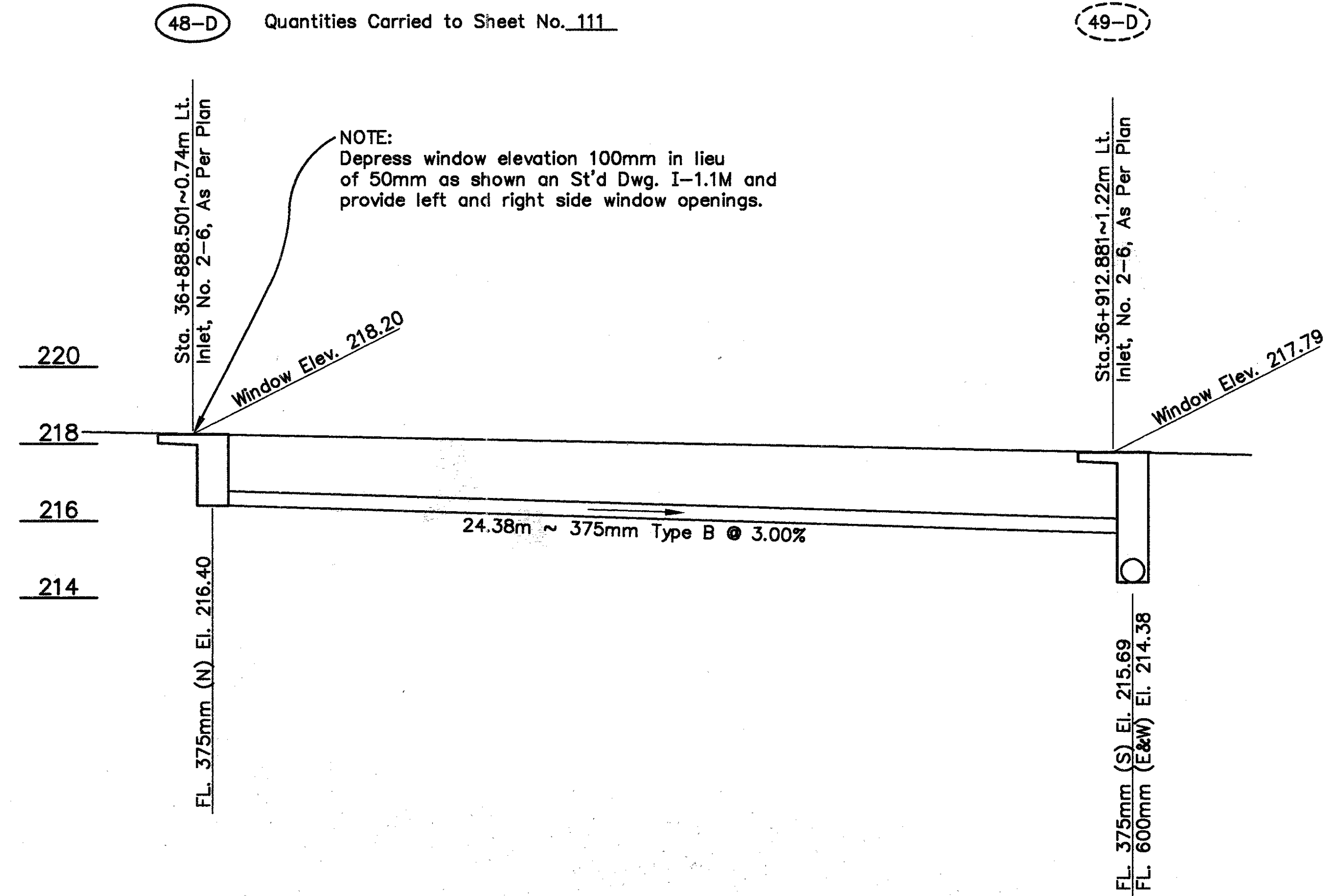
## NOTES:

- 1.) All elevations shown are approximate. Final elevations shall be determined at the time of construction.
- 2.) Quantities Carried to Sheet No. 109





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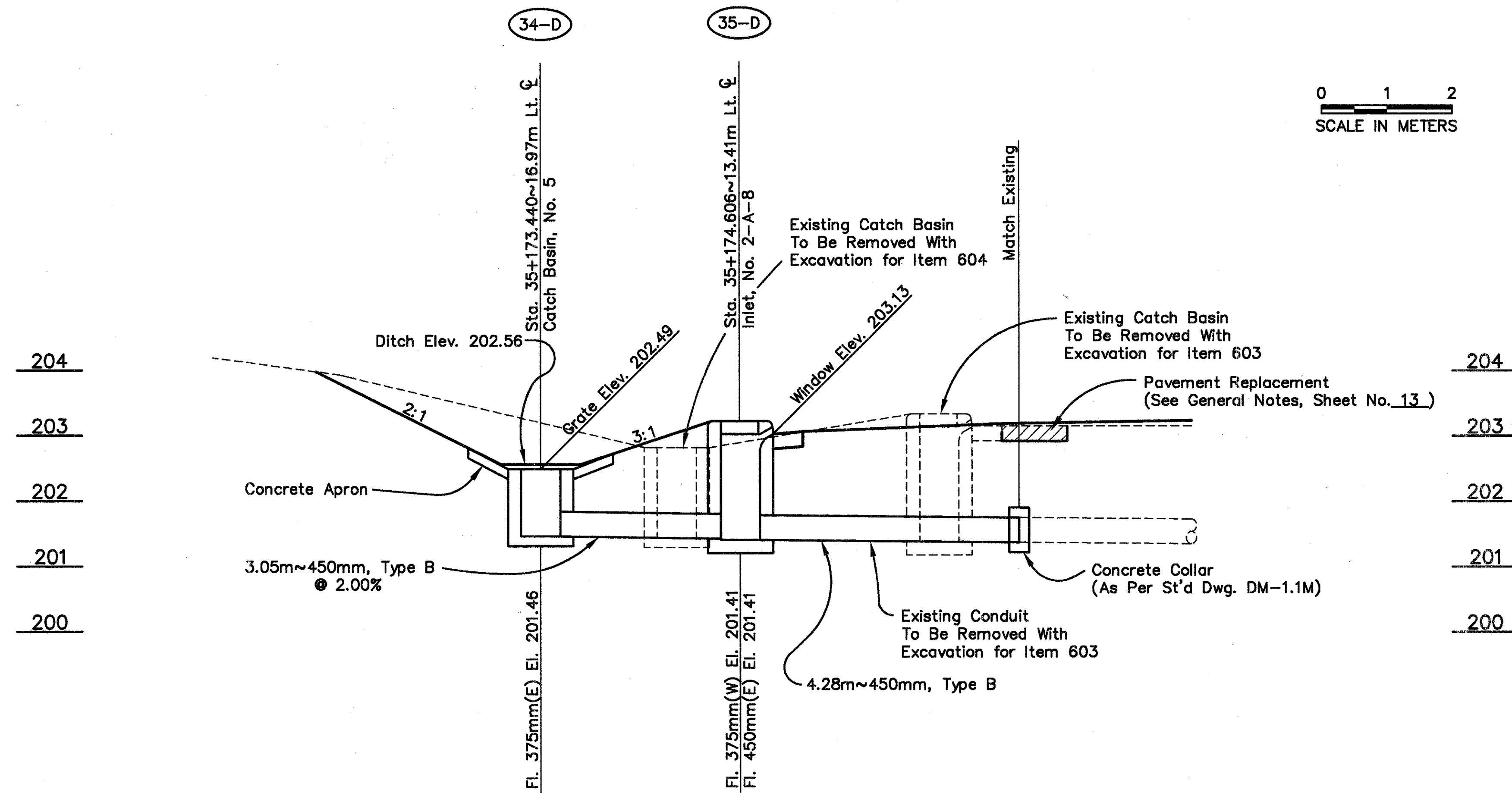
NOTES:

- 1.) All elevations shown are approximate. Final elevations shall be determined at the time of construction.



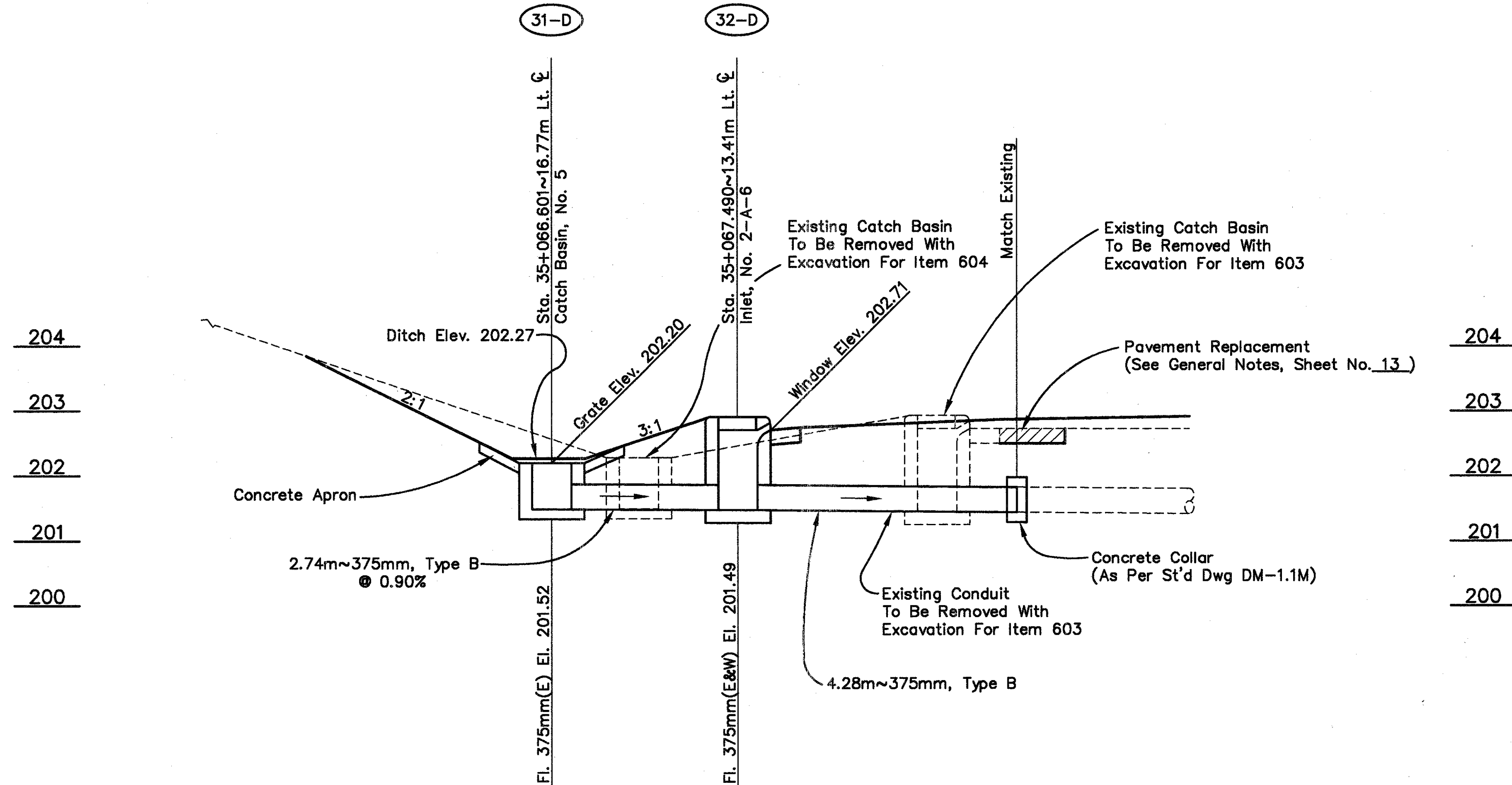
# STORM SEWER PROFILES

BEL-7-32.276



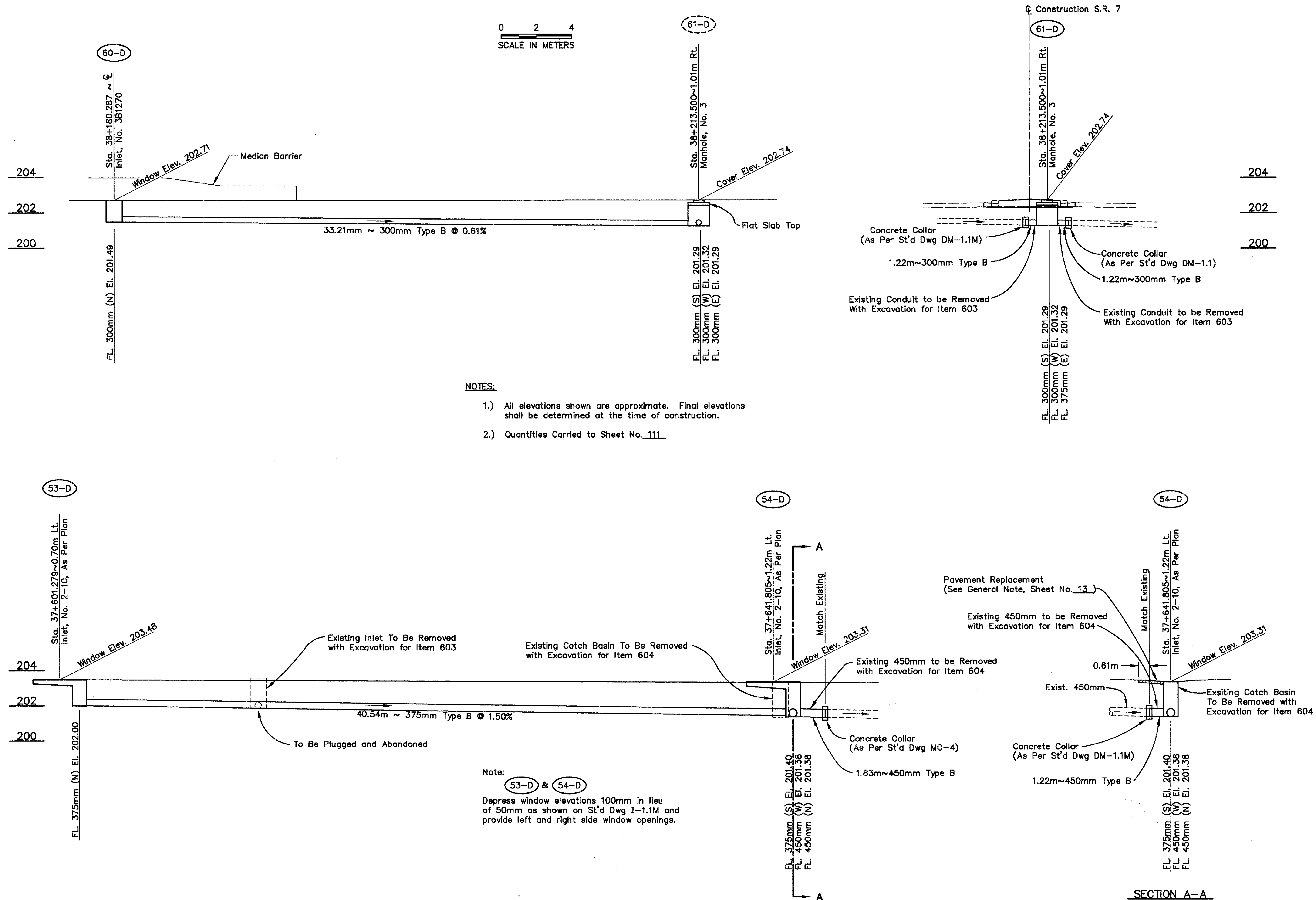
## NOTES:

- 1.) All elevations shown are approximate. Final elevations shall be determined at the time of construction.
- 2.) Quantities Carried to Sheet No. 110



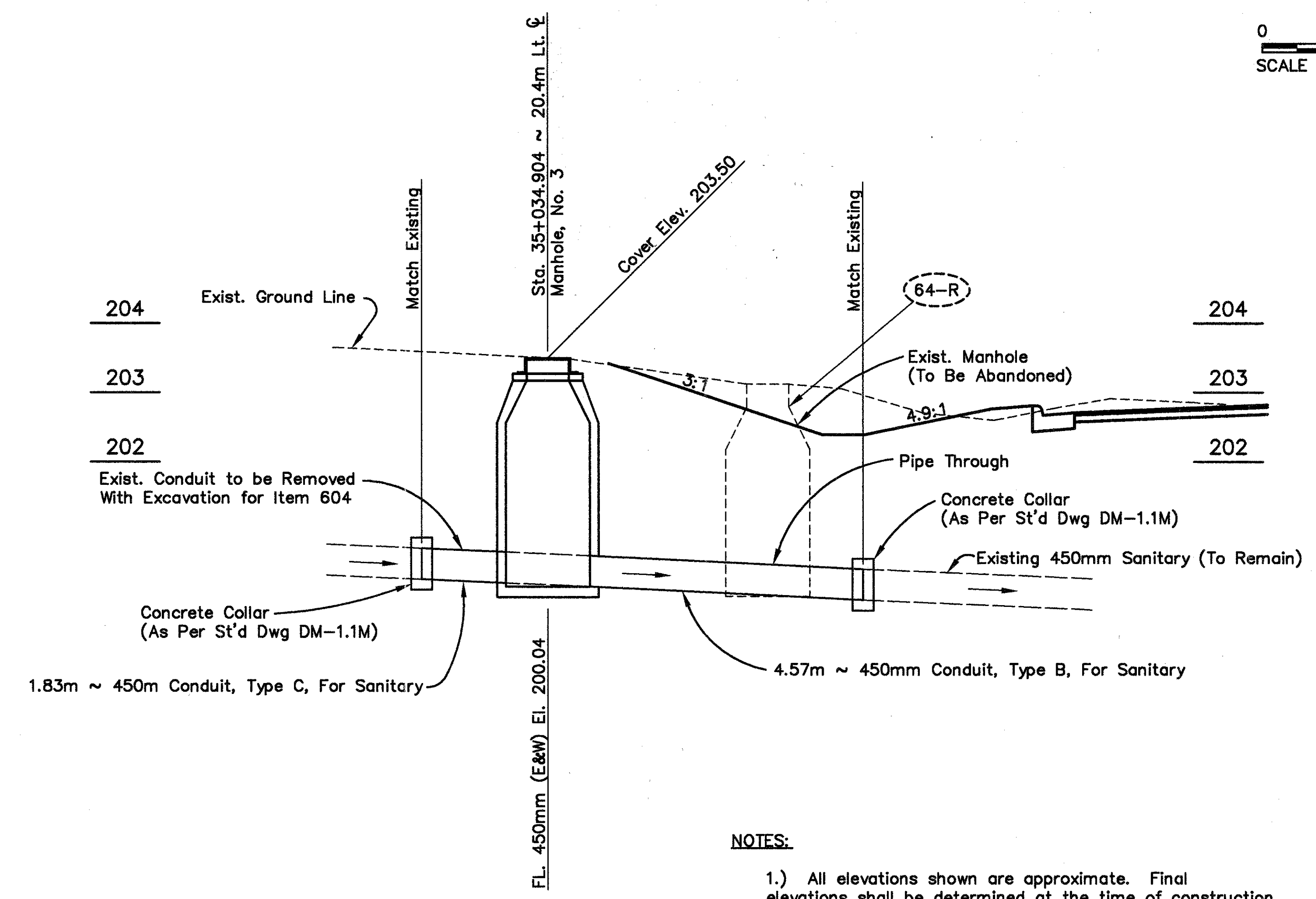
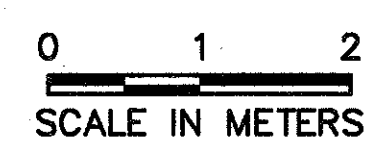


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1-SS Quantities Carried to Sheet No. 109



NOTES:

1.) All elevations shown are approximate. Final elevations shall be determined at the time of construction.

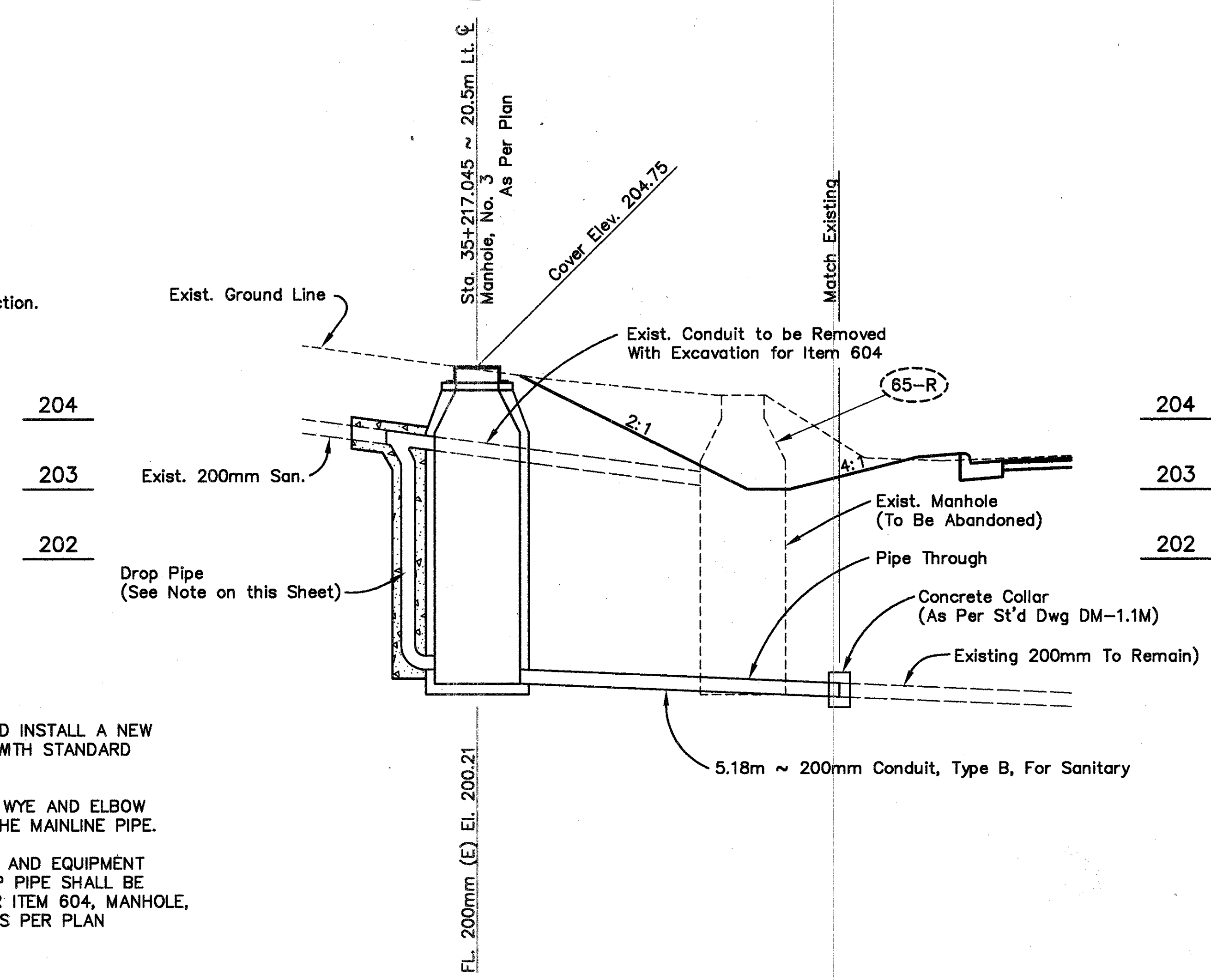
DROP PIPE

THE CONTRACTOR SHALL FURNISH AND INSTALL A NEW 200mm DROP PIPE IN ACCORDANCE WITH STANDARD DRAWING MH-1.2M.

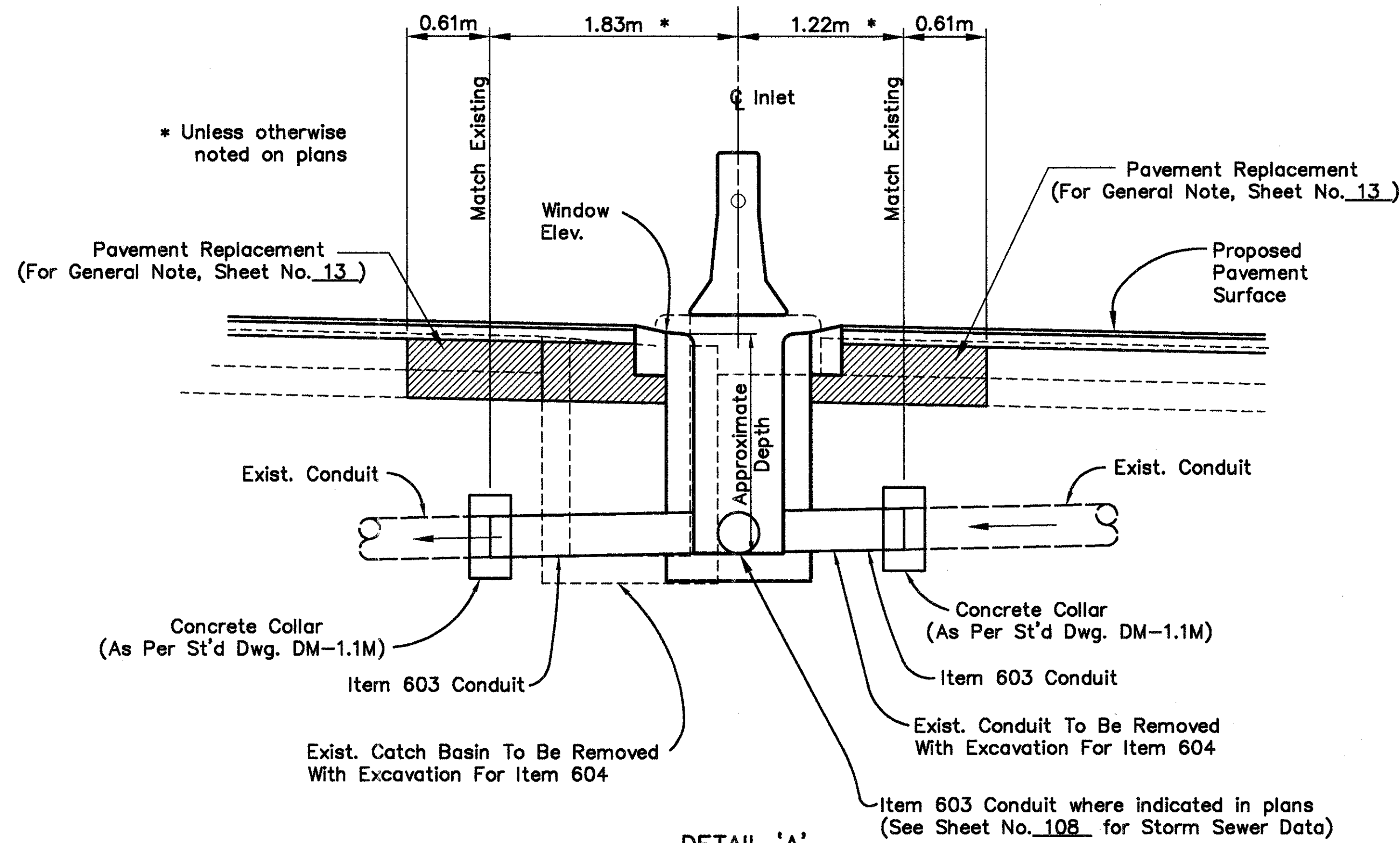
ALL MATERIALS FOR THE DROP PIPE, WYE AND ELBOW SHALL BE THE SAME AS USED FOR THE MAINLINE PIPE.

THE COST OF ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO CONSTRUCT THE DROP PIPE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 604, MANHOLE, No. 3 AS PER PLAN

2-SS Quantities Carried to Sheet No. 110





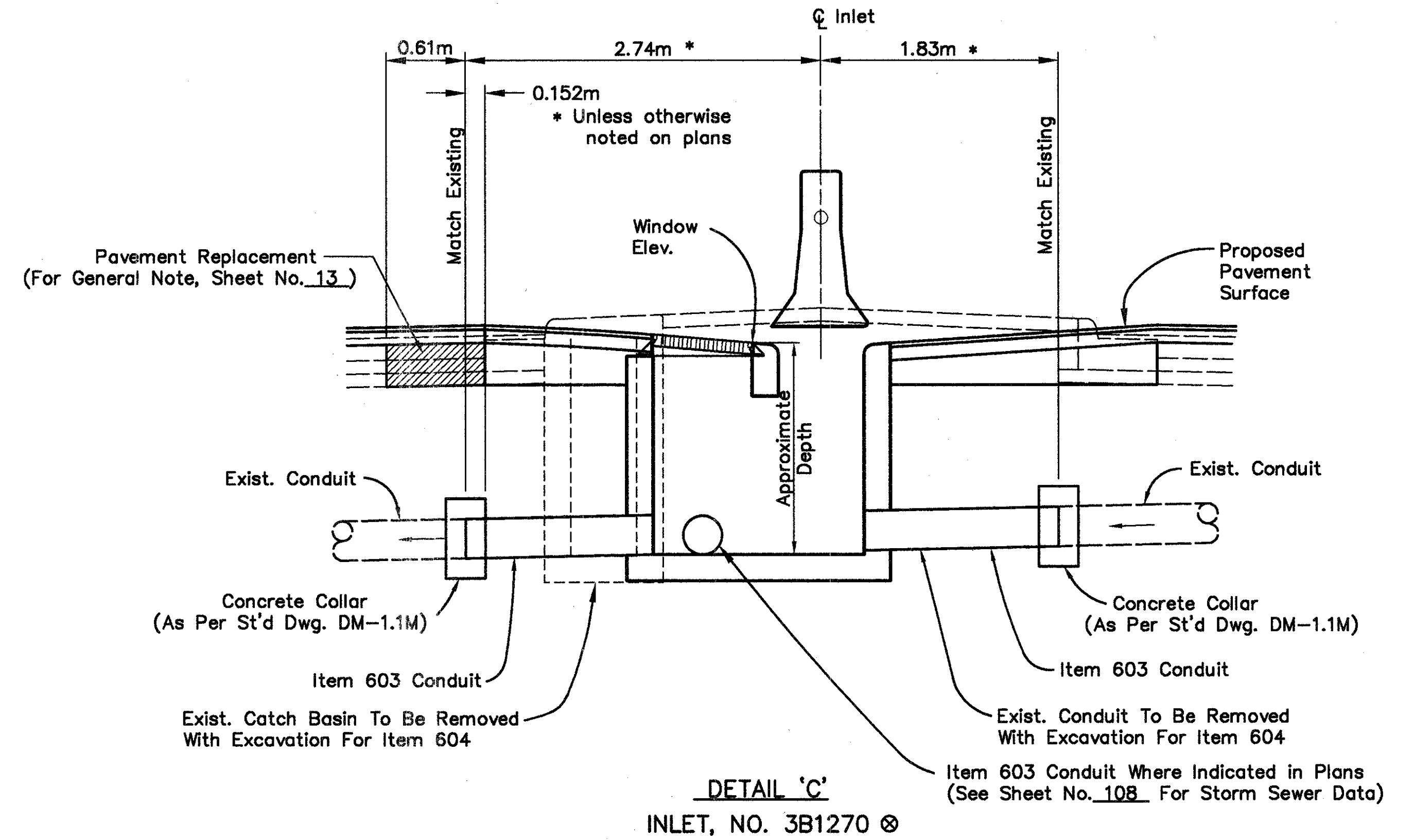


DETAIL 'A'  
7-D INLET, NO. 3D1270

The structures at the following locations shall be constructed using an INLET, NO. 3D1270, AS PER PLAN as shown on Sheet No. 121.

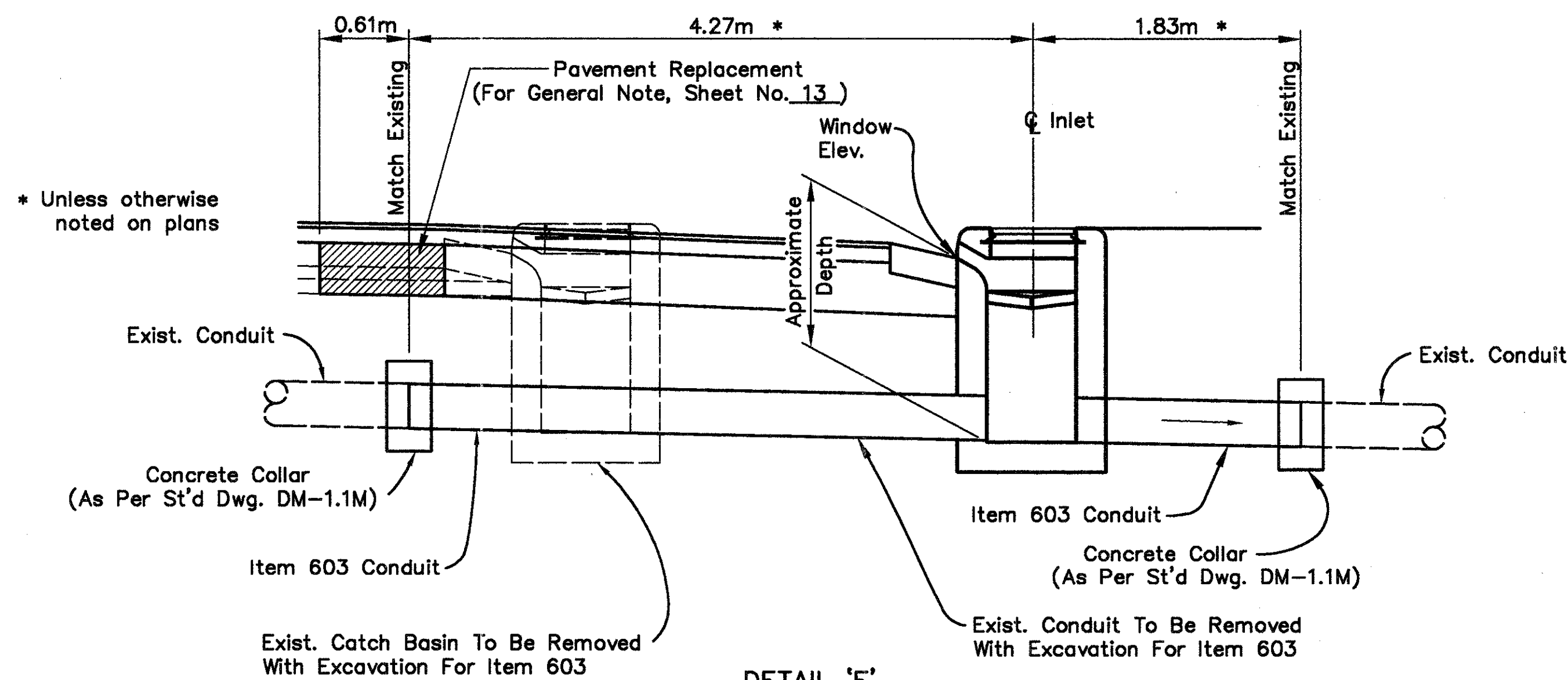
- 3-D Sta. 32+904.348  
4-D Sta. 32+949.198

- 5-D Sta. 32+995.955  
6-D Sta. 33+019.120

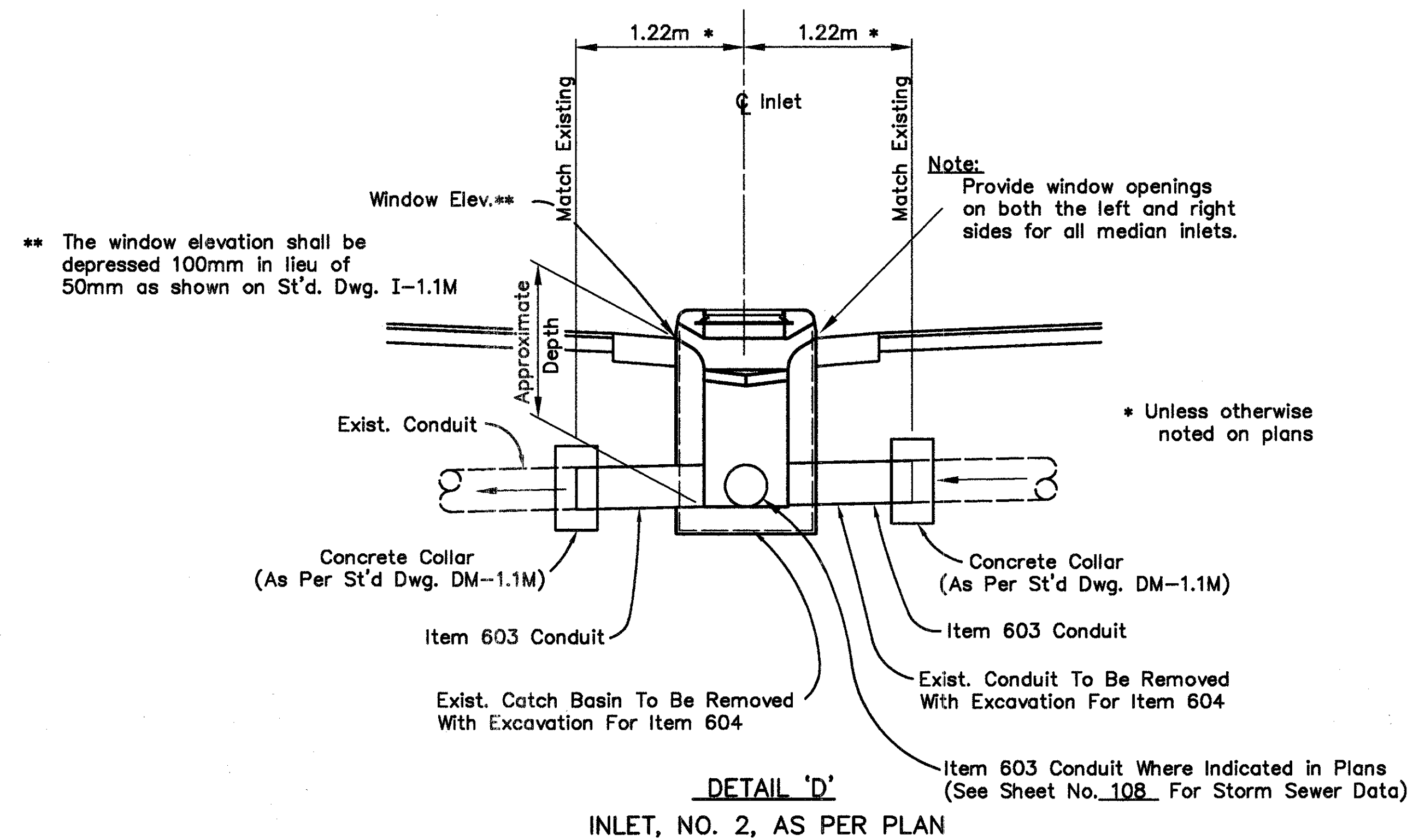


DETAIL 'C'  
INLET, NO. 3B1270

Structure 13-D at Sta. 33+710.398 shall be constructed to accept a 900mm diameter conduit. See Detail on Sheet No. 121.



DETAIL 'E'  
INLET, NO. 2A

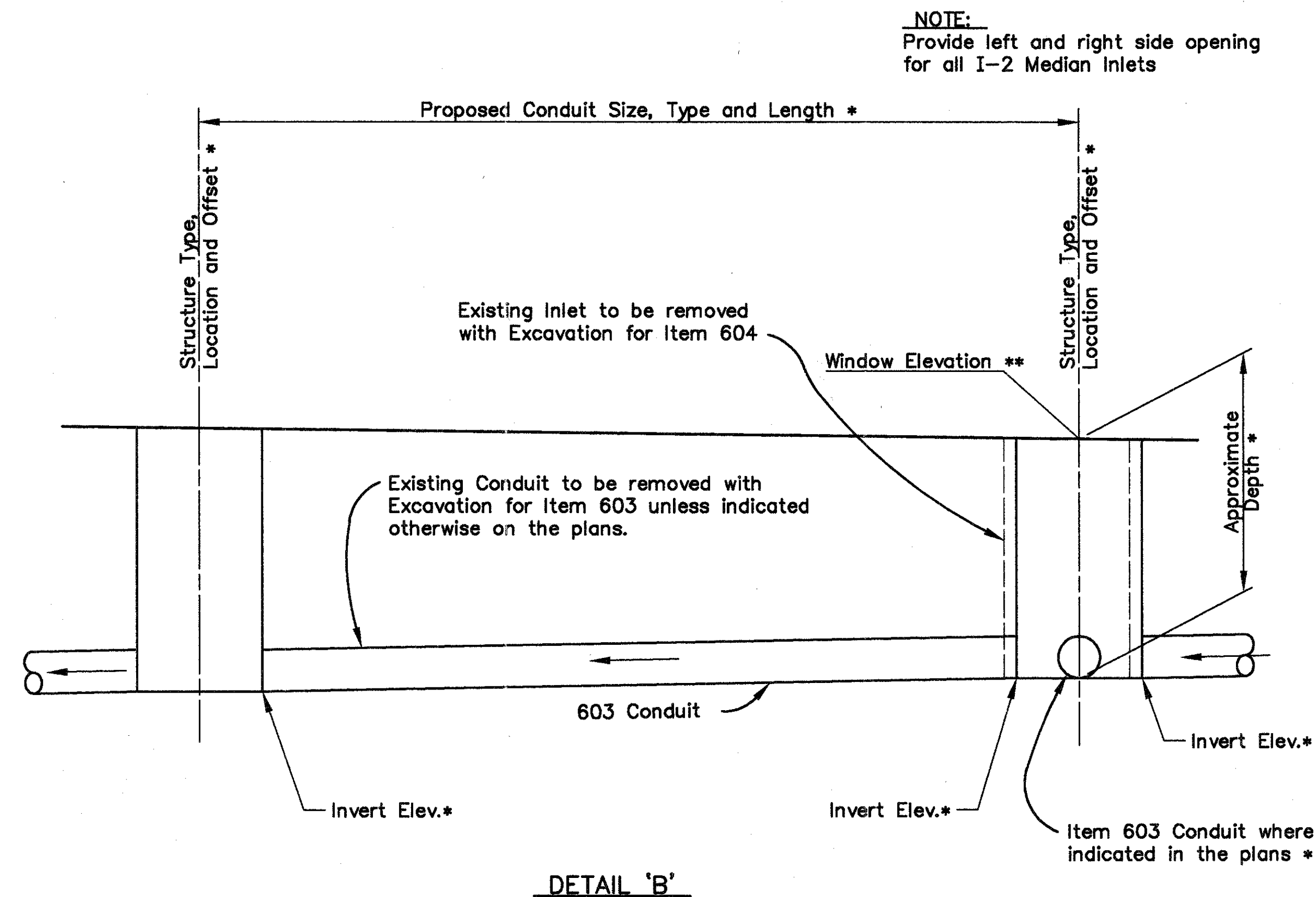


DETAIL 'D'  
INLET, NO. 2, AS PER PLAN

Note: Provide window openings on both the left and right sides for all median inlets.

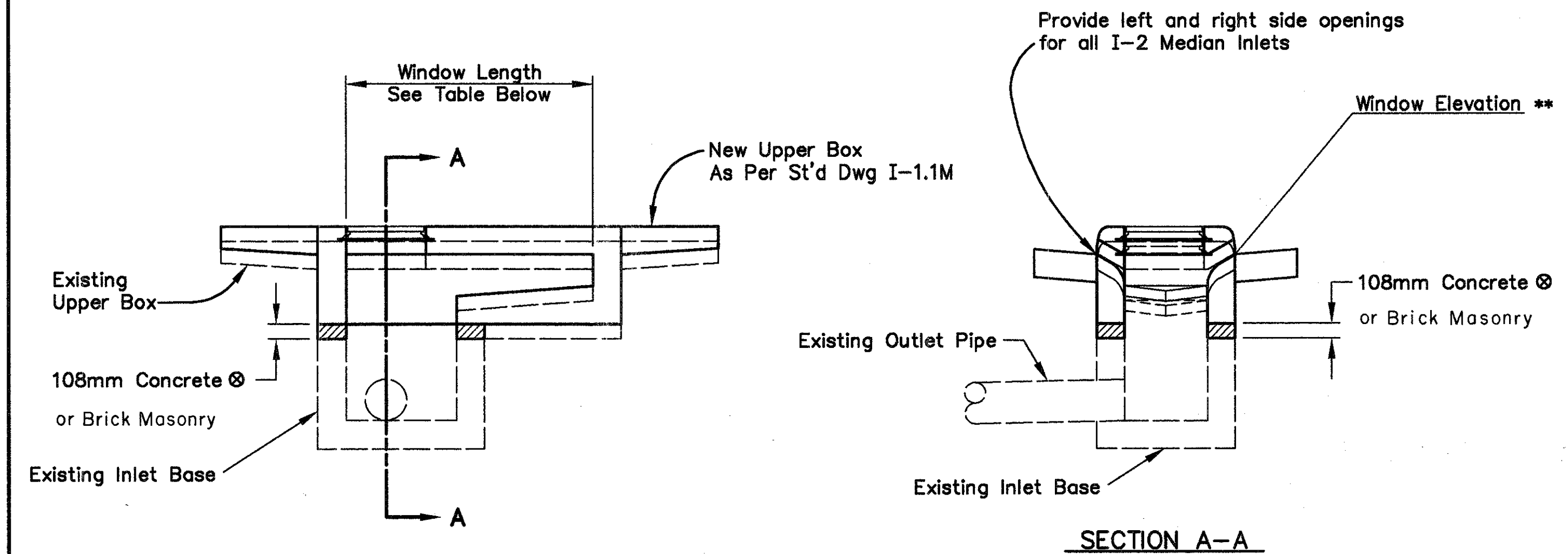
\*\* The window elevation shall be depressed 100mm in lieu of 50mm as shown on St'd. Dwg. I-1.1M





\* See Sheet No. 108 For Pertinent Storm Sewer Data

\*\* The Window elevation shall be depressed 100mm in lieu of 50mm as shown on St'd Dwg. I-1.1M



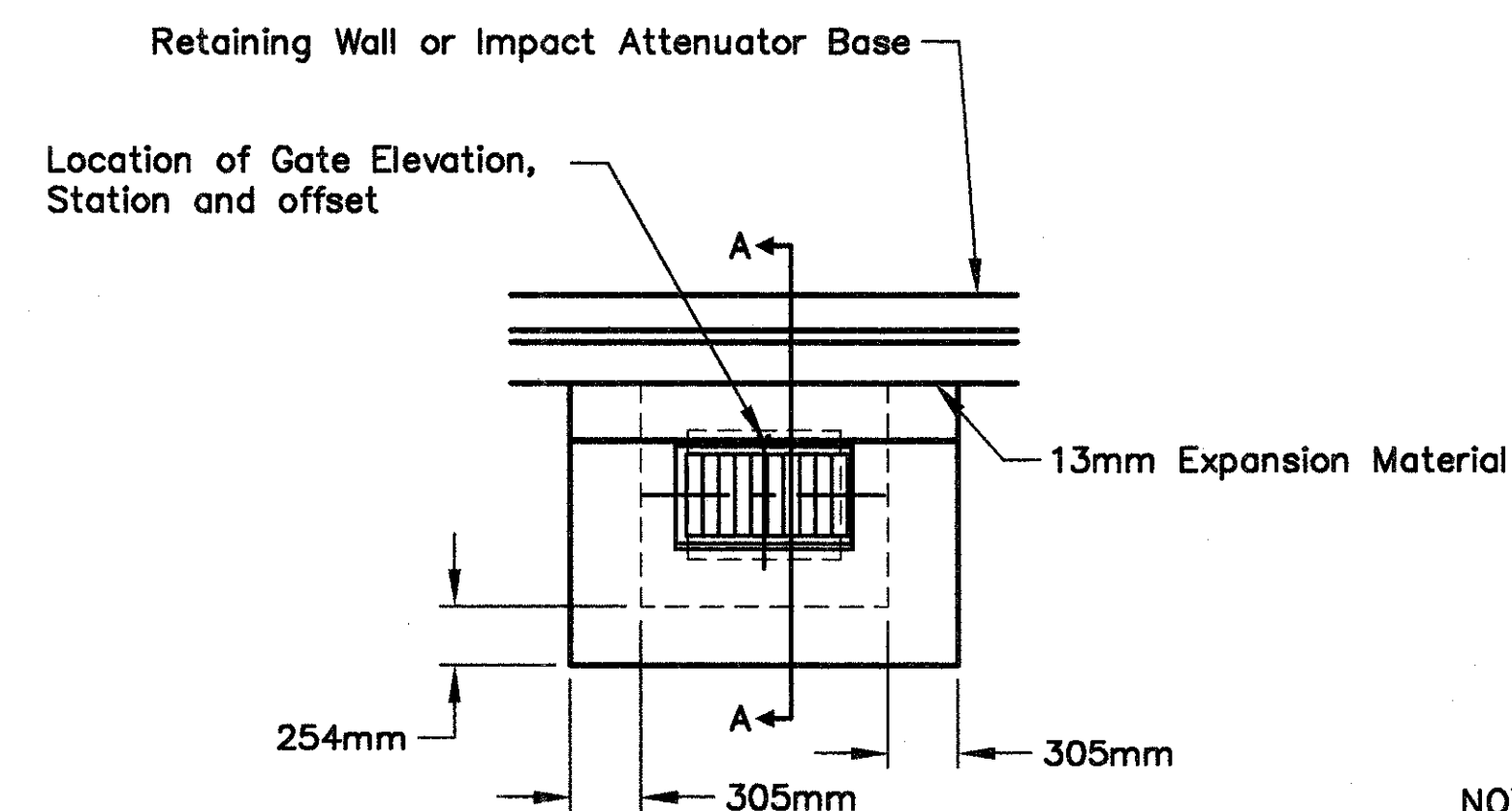
NOTE: For General Notes, See Sheet No. 13

⊗ Cast in place concrete shall be Class 'C'

\*\* The Window elevation shall be depressed 100mm in lieu of 50mm as shown on St'd Dwg. I-1.1M

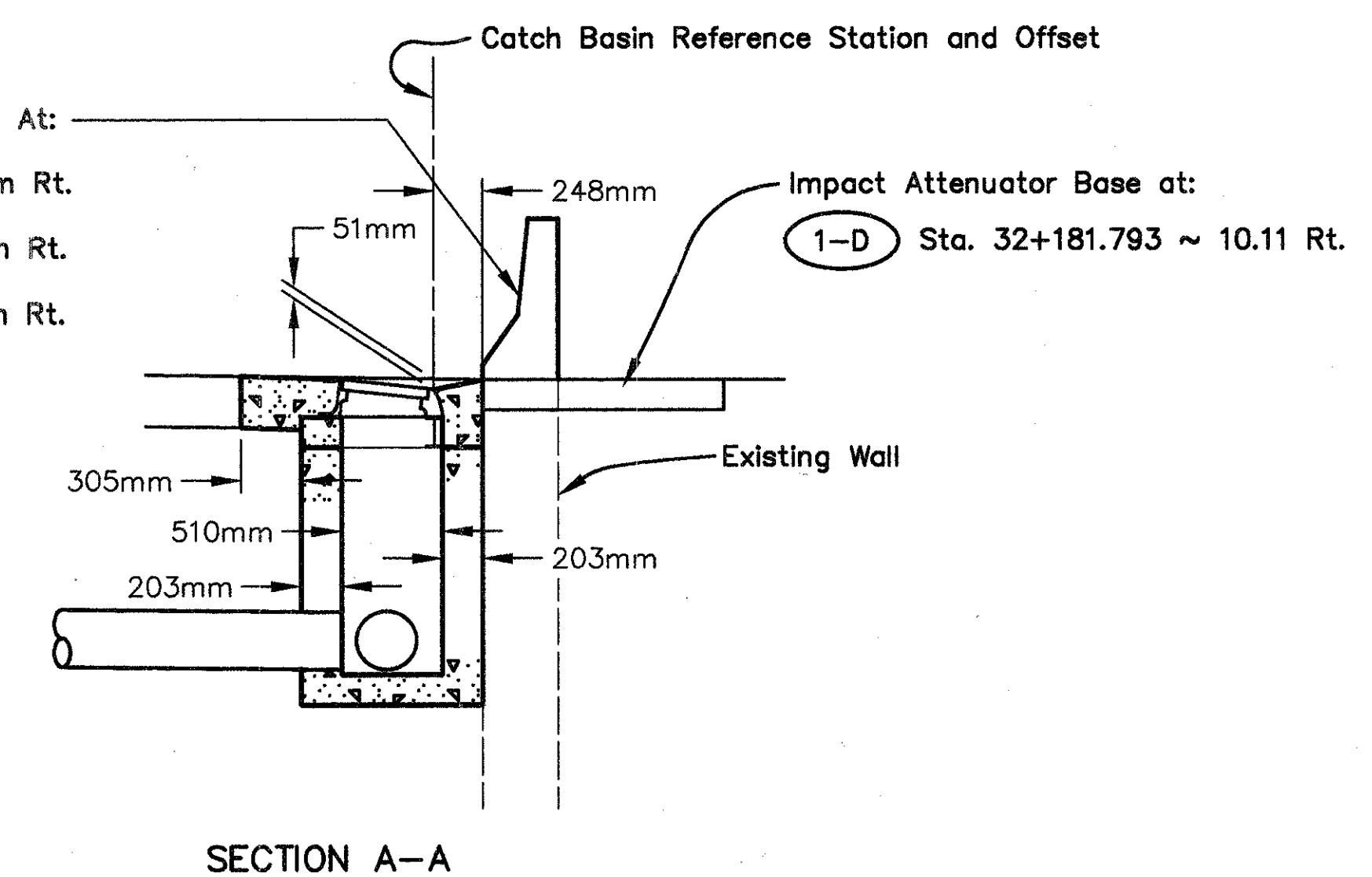
DETAIL 'F'  
INLET RECONSTRUCTED TO GRADE.  
AS PER PLAN

| Ref. No. | Location               | Window Length |
|----------|------------------------|---------------|
| 15-D     | 34+074.890 ~ 2.13m Lt. | 2.44m         |
| 40-D     | 35+675.910 ~ 1.22m Lt. | 3.05m         |
| 42-D     | 35+769.067 ~ 2.13m Rt. | 1.83m         |
| 51-D     | 37+300.511 ~ 1.22m Lt. | 3.05m         |
| 55-D     | 37+689.845 ~ 0.46m Rt. | 1.83m         |
| 59-D     | 38+003.058 ~ 1.22m Lt. | 1.83m         |



NOTE:  
SEE ST'D. DWG. NO. CB-2.1M AND  
CB-2.2M FOR FURTHER DETAILS.

CATCH BASIN, NO. 3, AS PER PLAN  
CATCH BASIN, NO. 3A, AS PER PLAN  
(Not To Scale)



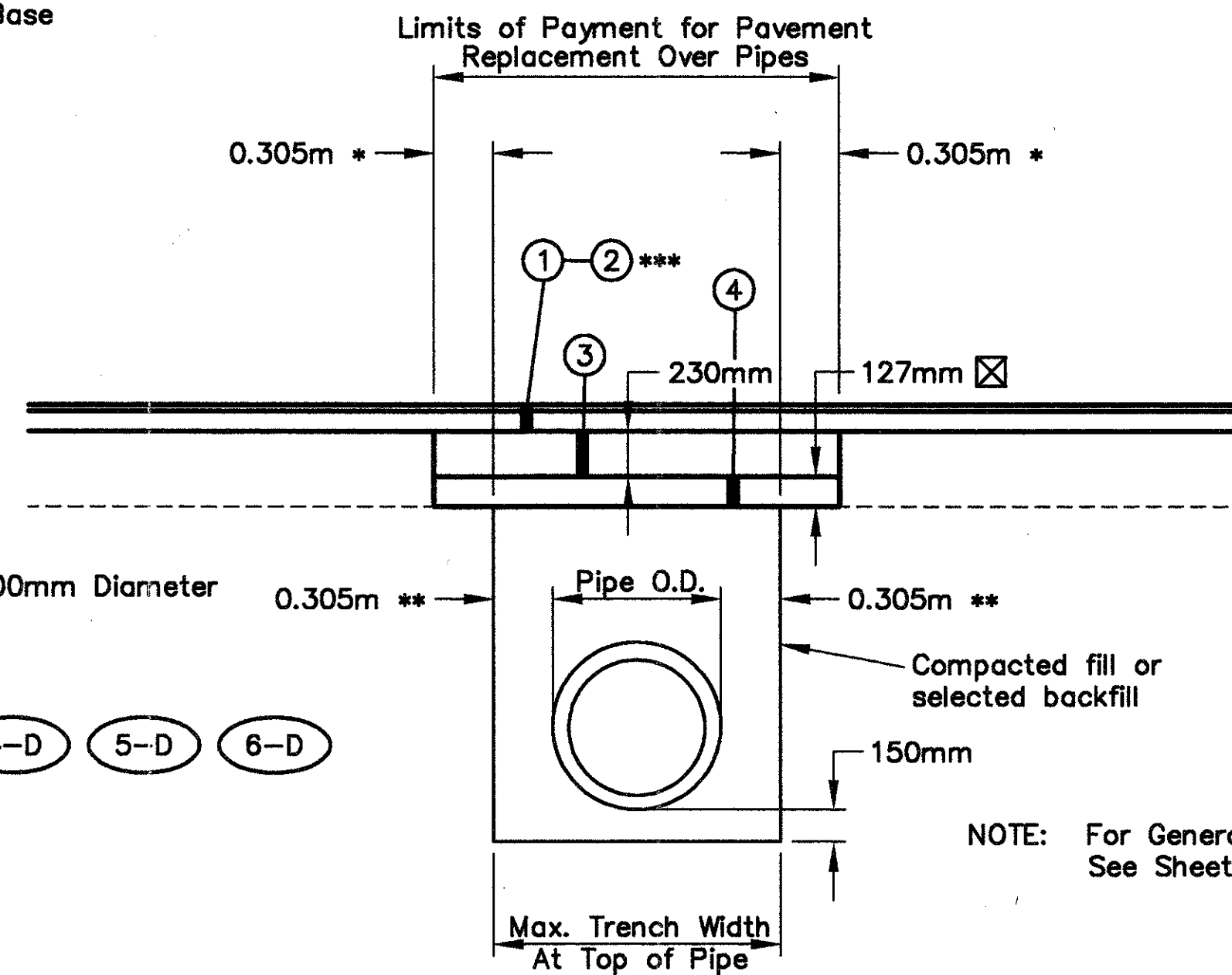


# LEGEND

- ① ITEM 446 - 32mm Asphalt Concrete Surface Course, Type 1, PG 64-28
- ② ITEM 446 - 50mm Asphalt Concrete Intermediate Course, Type 2, PG 64-28
- ③ Item 305 - 230mm Concrete Base
- ④ Item 304 - Aggregate Base

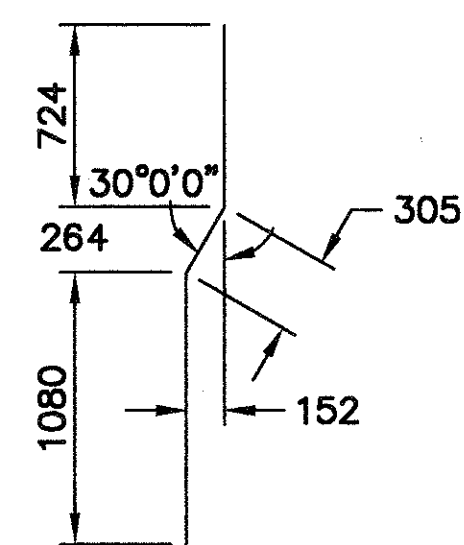
\* Bearing on undisturbed soil  
 \*\* 0.381m for Conduit larger than 600mm Diameter  
 \*\*\* ① ② Carried with Pavement

☒ Depth = 153mm for: ③-D ④-D ⑤-D ⑥-D



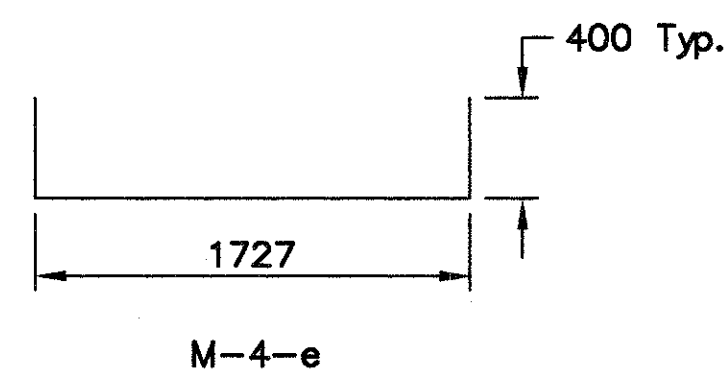
NOTE: For General Notes, See Sheet No. 13

PAVEMENT REPLACEMENT DETAIL  
 FOR STORM DRAINS  
 (No Scale)

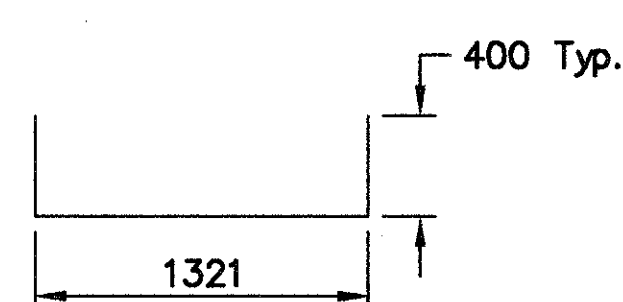


M-4-d

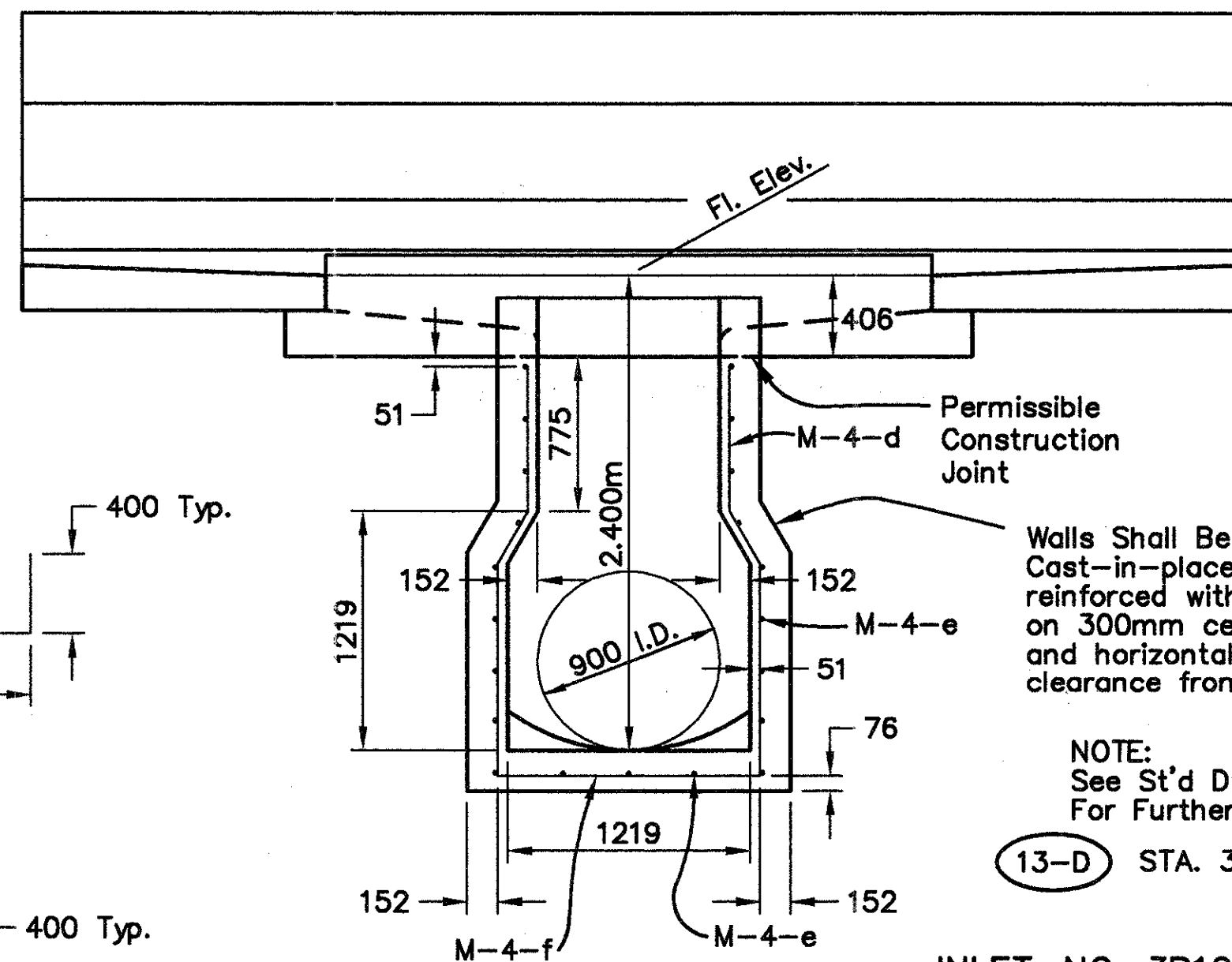
| M-4-d |       | M-4-e |       | M-4-f |       |
|-------|-------|-------|-------|-------|-------|
| No.   | Meter | No.   | Meter | No.   | Meter |
| 18    | 2104  | 21    | 2527  | 7     | 2121  |



M-4-e



M-4-f



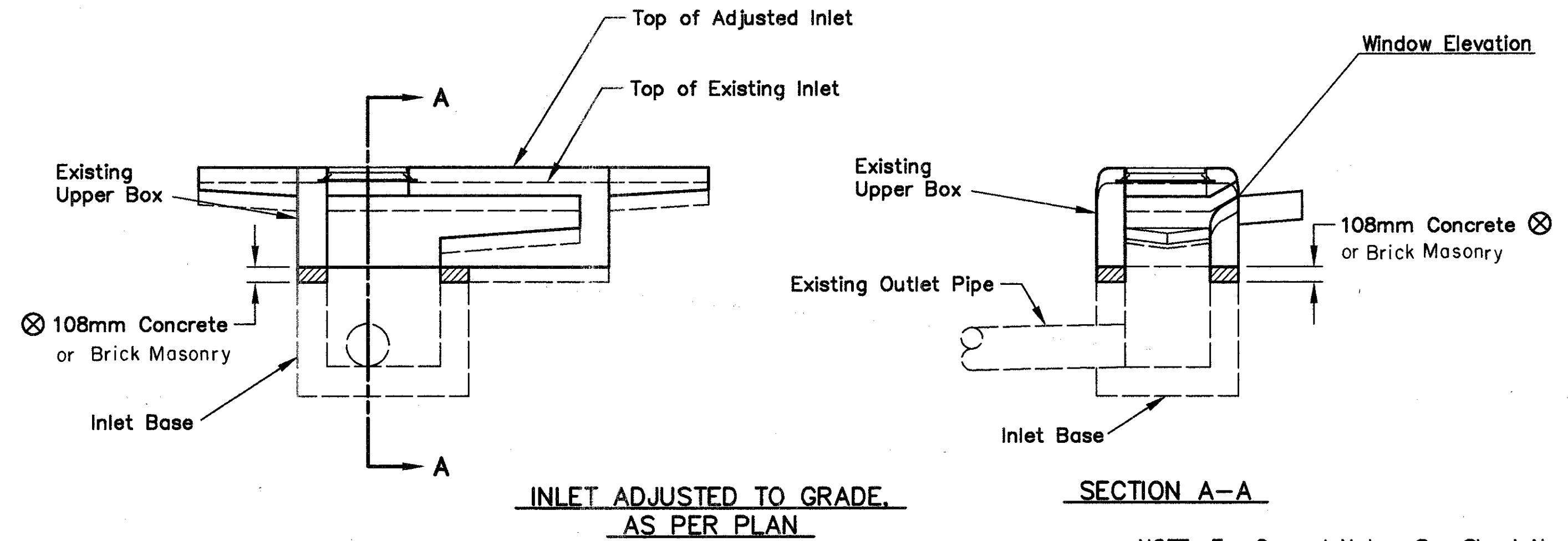
Walls Shall Be Precast or Cast-in-place concrete; reinforced with No. 15M bars on 300mm centers both vertically and horizontally with 50mm clearance from inside wall face.

NOTE: See St'd Dwg. No. I-2.1M For Further Details

⑬-D STA. 33+710.398

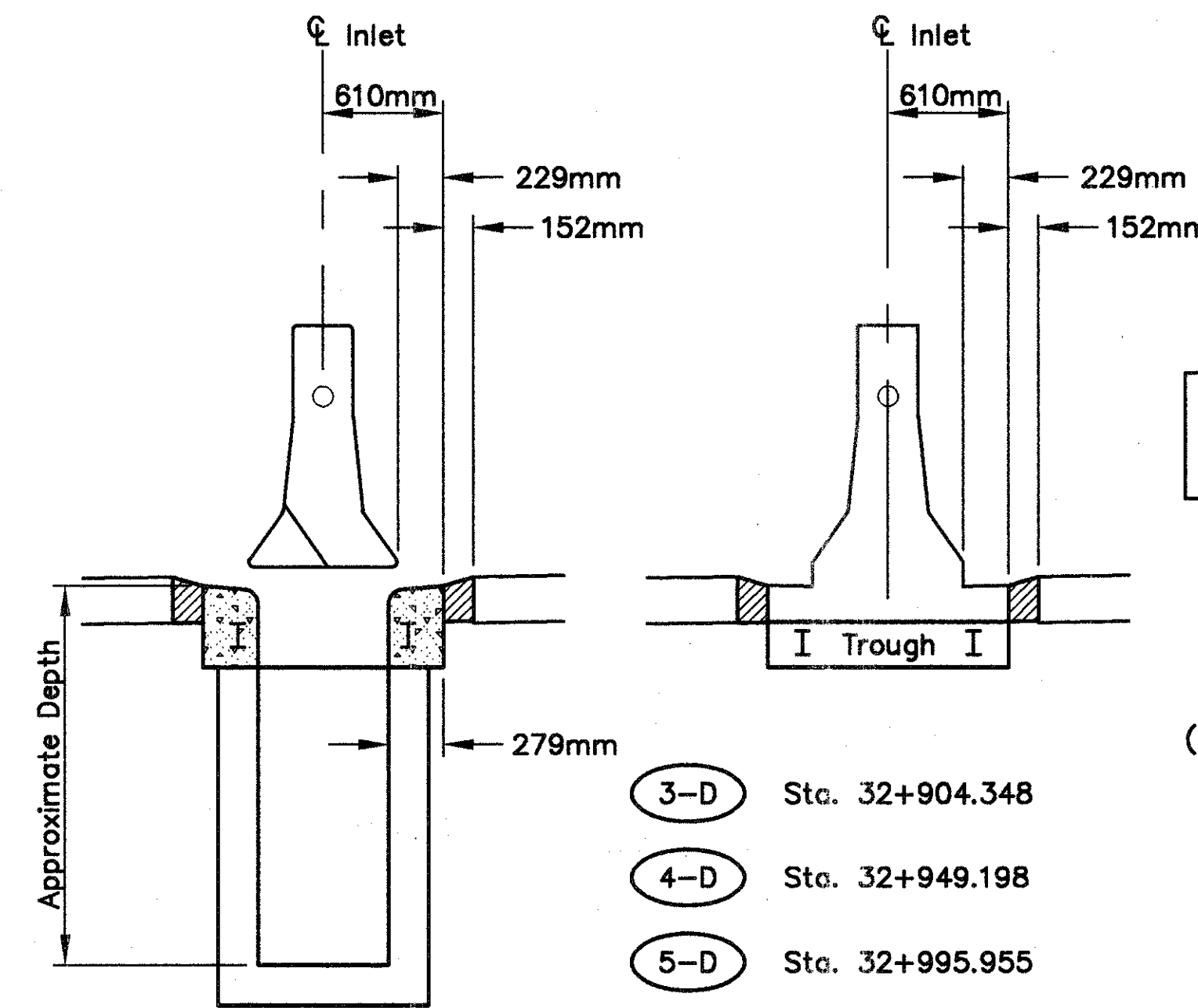
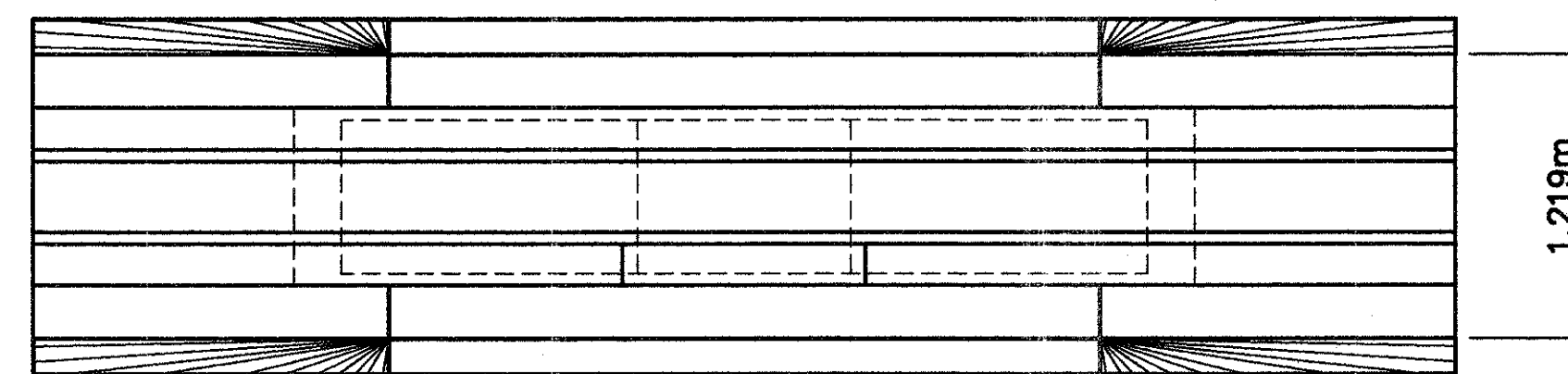
INLET NO. 3B1270.  
 AS PER PLAN  
 (Not To Scale)

Unless otherwise noted, all dimensions shown in millimeters (mm)



NOTE: For General Notes, See Sheet No. 13

☒ Cast in place concrete shall be Class 'C'

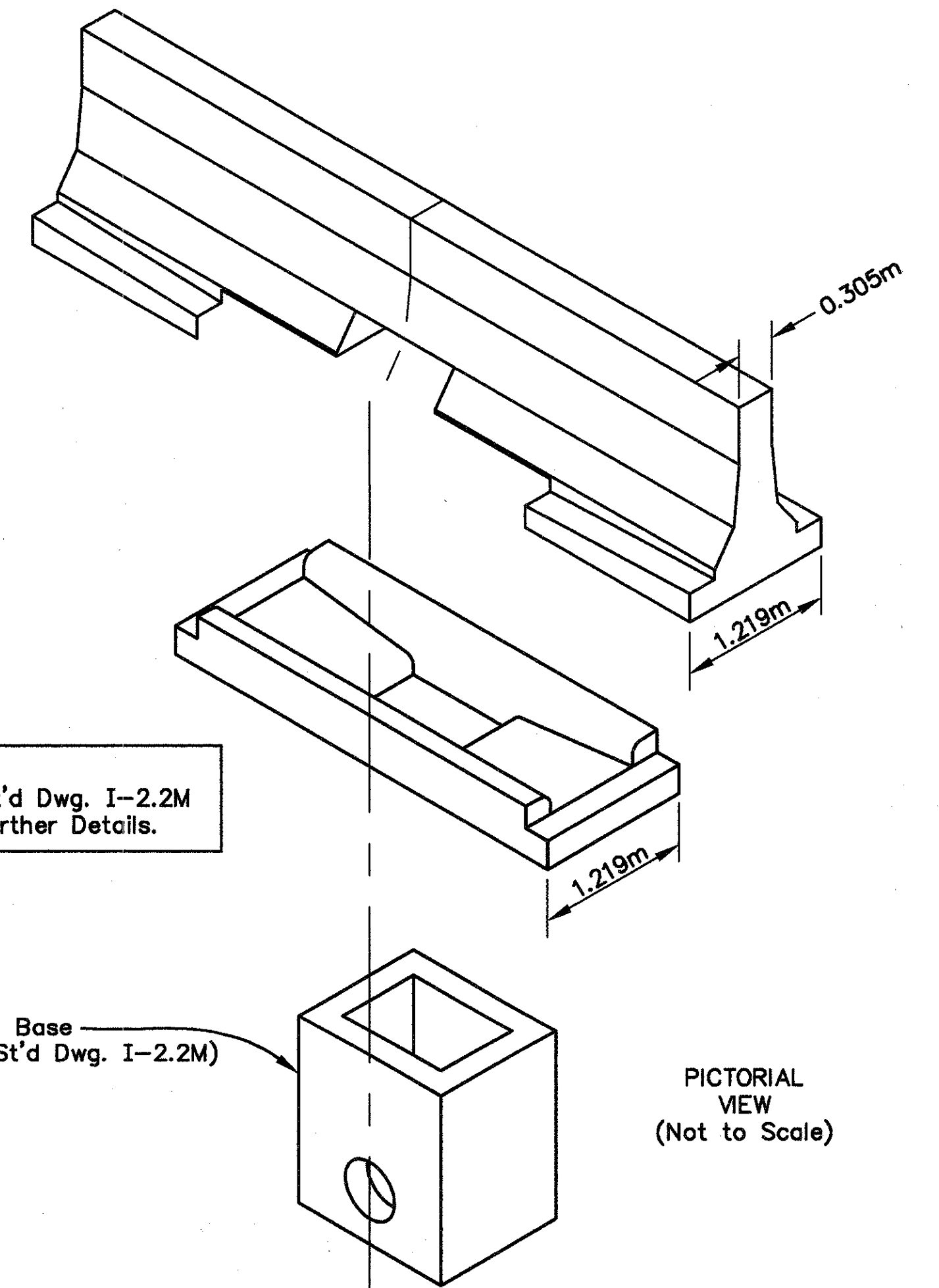


NOTE: See St'd Dwg. I-2.2M For Further Details.

Base (As Per St'd Dwg. I-2.2M)

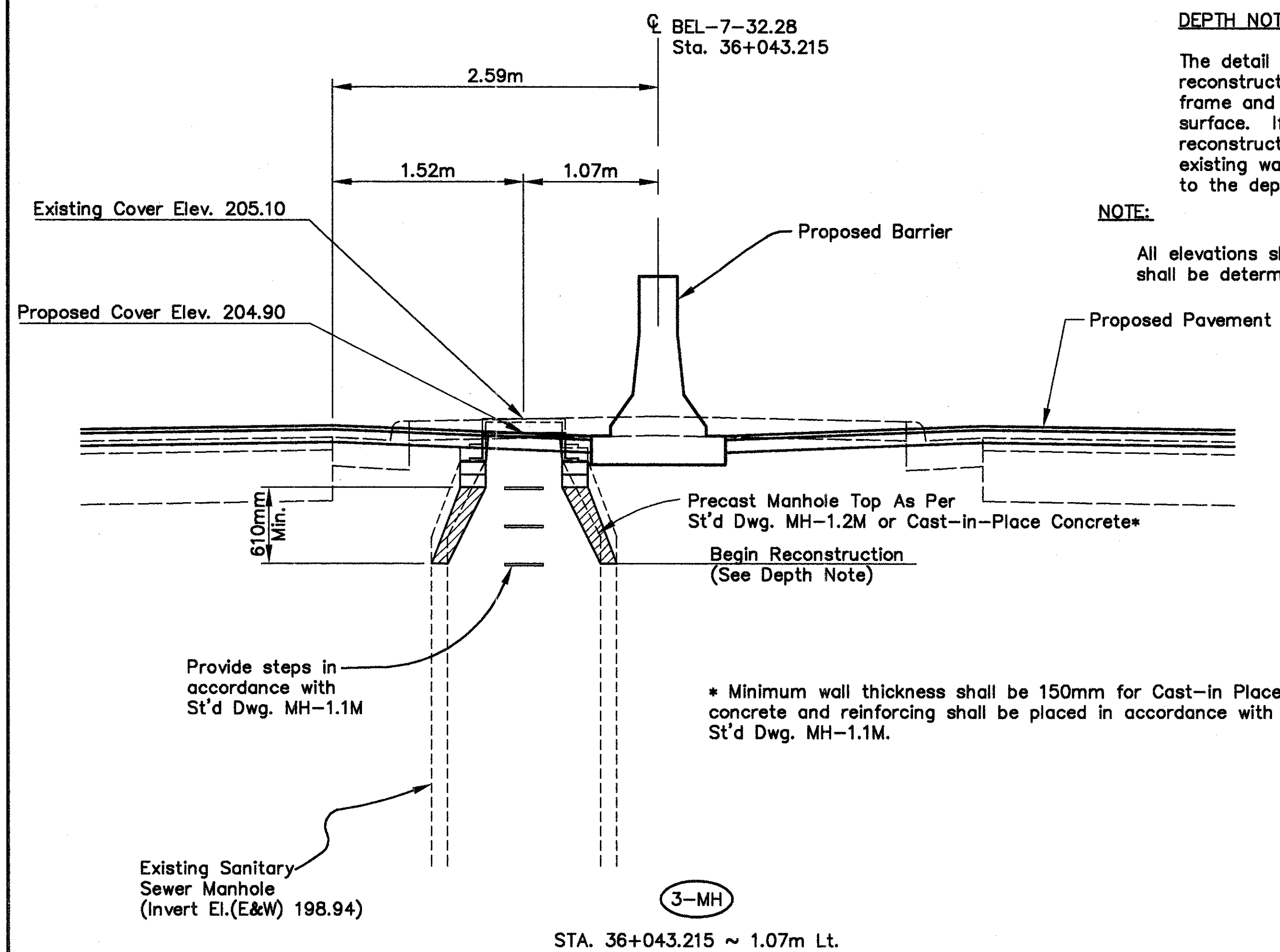
- ③-D Sta. 32+904.348
- ④-D Sta. 32+949.198
- ⑤-D Sta. 32+995.955
- ⑥-D Sta. 33+019.120

INLET NO. 3D1270, AS PER PLAN  
 (Not To Scale)



PICTORIAL VIEW  
 (Not to Scale)



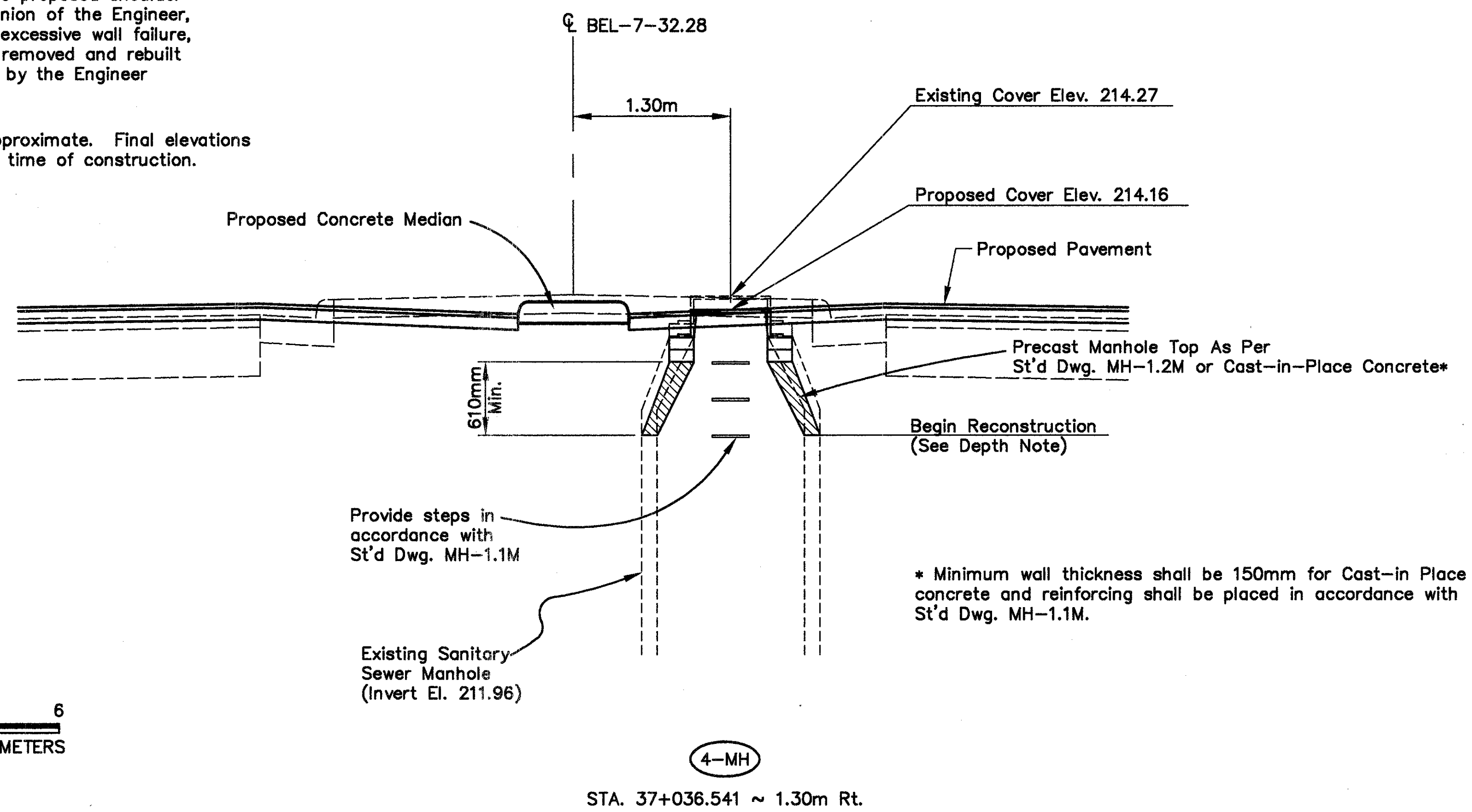


DEPTH NOTE

The detail as shown represents the minimum reconstruction necessary to lower the manhole frame and cover to the proposed shoulder surface. If, in the opinion of the Engineer, reconstruction reveals excessive wall failure, existing walls shall be removed and rebuilt to the depth specified by the Engineer

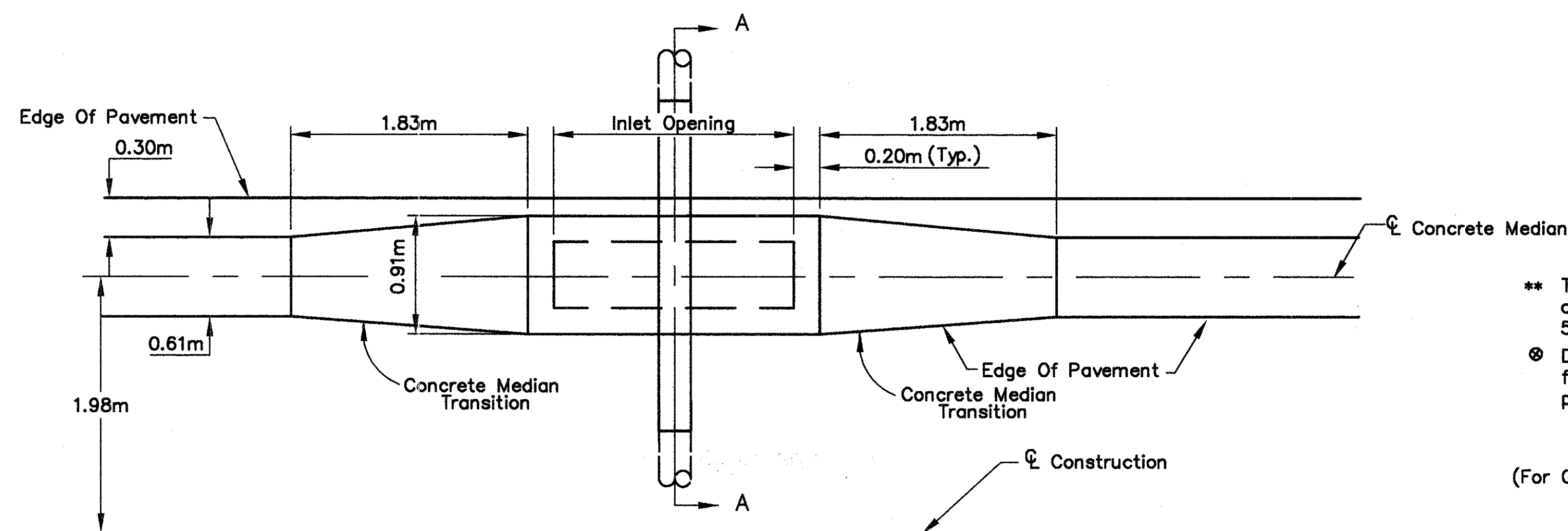
NOTE:

All elevations shown are approximate. Final elevations shall be determined at the time of construction.



MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN

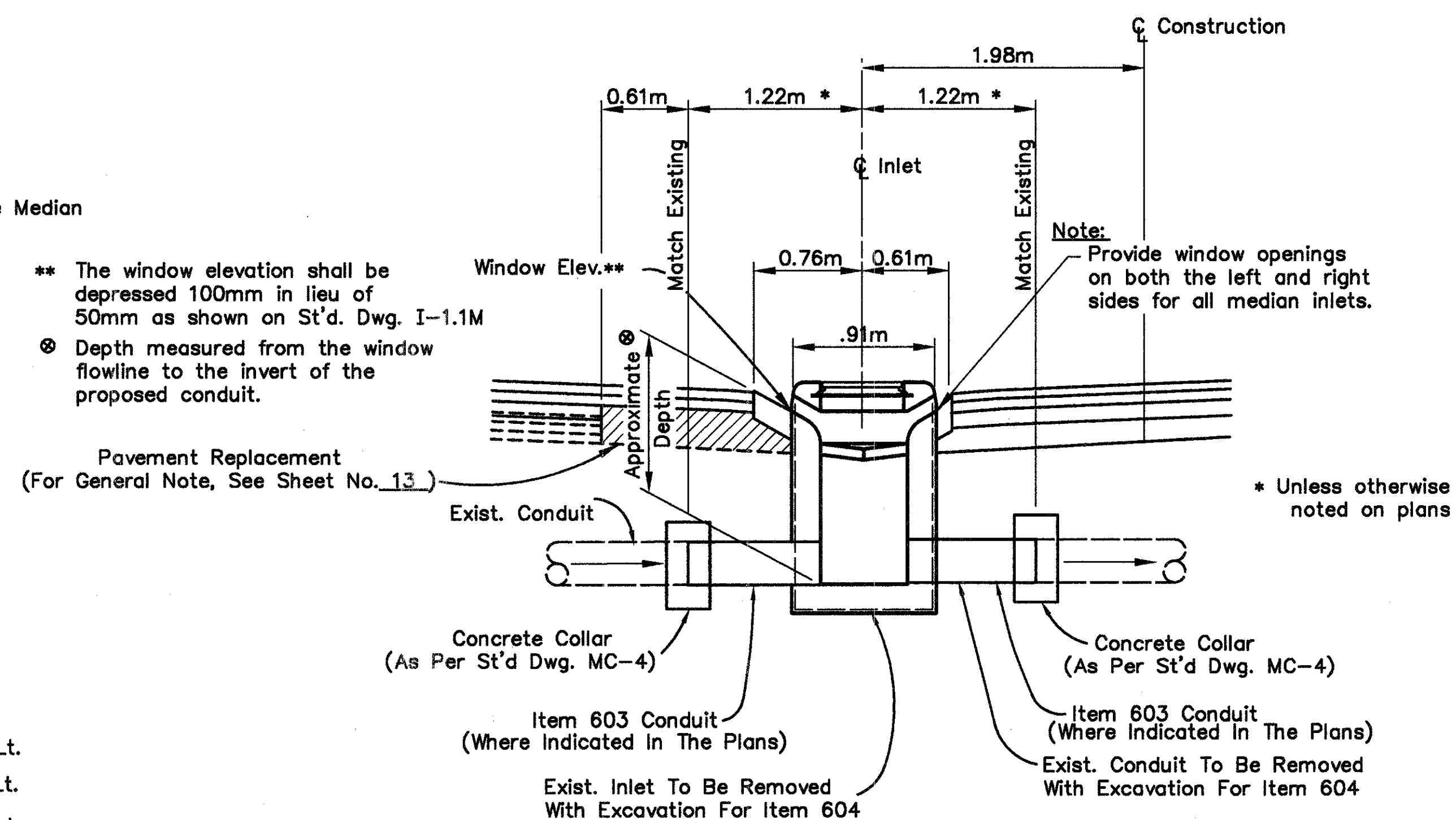
MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN



DETAIL 'G' - PLAN  
Not To Scale

Detail 'G' applies to the following structures:

- (15-D) Sta. 34+074.890 ~ 2.44m Lt.  
(38-D) Sta. 35+500.182 ~ 2.44m Lt.  
(39-D) Sta. 35+584.306 ~ 2.44m Lt.  
(40-D) Sta. 35+676.310 ~ 2.44m Lt.  
(41-D) Sta. 35+746.178 ~ 2.44m Lt.  
(42-D) Sta. 35+769.067 ~ 2.44m Lt.  
(43-D) Sta. 35+830.878 ~ 2.44m Lt.



Section A - A  
Not To Scale



STRAIN POLE FOUNDATION ELEVATIONS

ELEVATIONS SHOWN IN THE STRAIN POLE FABRICATION INFORMATION TABLE ARE FOR COMPUTATIONAL PURPOSES ONLY. THE ACTUAL ELEVATION OF THE FOUNDATION SHALL BE IN ACCORDANCE WITH TC-21.20M.

POWER SUPPLY FOR TRAFFIC SIGNALS

ELECTRIC POWER SHALL BE OBTAINED AT THE LOCATIONS INDICATED ON THE PLANS, FROM

AEP OHIO POWER COMPANY  
301 CLEVELAND AVE SW  
CANTON, OHIO 44701-4630  
PHONE 330-438-7721

POWER SUPPLY SHALL BE 120 VOLTS.

ITEM 632 - REMOVAL OF TRAFFIC SIGNAL INSTALLATION FOR STORAGE

TRAFFIC SIGNAL INSTALLATIONS, INCLUDING SIGNAL HEADS, CABLE, MESSENGER WIRE, STRAIN POLES, CABINET, CONTROLLER, ETC., SHALL BE REMOVED IN ACCORDANCE WITH 632.25 AND AS INDICATED ON THE PLANS. REMOVED ITEMS SHALL BE STORED ON THE PROJECT FOR SALVAGE BY STATE FORCES, IN ACCORDANCE WITH THE LISTING GIVEN HEREIN.

AT S.R. 7 / AETNA ST. STORE FOR SALVAGE BY STATE  
8 - SIGNAL HEADS  
1 - CONTROLLER WITH CABINET AND CONTENTS

IN THE EVENT THE ITEMS STORED ON THE PROJECT FOR SALVAGE ARE NOT REMOVED; THE CONTRACTOR SHALL, WHEN DIRECTED BY THE ENGINEER IN WRITING, REMOVE AND DISPOSE OF THE ITEMS AT NO ADDITIONAL COST TO THE PROJECT.

MILE MARKER LOCATION

THE LOCATION OF MILE MARKERS ON THE PLAN ARE APPROXIMATE AND A MORE PRECISE LOCATION WILL BE PROVIDED BY THE DEPARTMENT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 30 DAYS IN ADVANCE OF THE PLANNED DATE OF MARKER INSTALLATION. THE ENGINEER WILL CONTACT THE BUREAU OF TECHNICAL SERVICES WHICH WILL LOCATE THE LONGITUDINAL POSITION OF MILE MARKERS BY MEANS OF PAINT MARK ON THE PAVEMENT EDGE. ALTERNATE MARKS WILL NOT BE PROVIDED ON DIVIDED HIGHWAYS AND THE CONTRACTOR SHALL SET MARKERS FOR THE OPPOSITE ROADWAY ACROSS FROM THE PROVIDED MARKER. DELINEATORS WHOSE NORMAL POSITION FALLS WITHIN 15m OF A MILE MARKER SHALL BE OMITTED.

SIGNAL ERECTION PROCEDURE

UNLESS OTHER TEMPORARY SIGNAL ARRANGEMENTS HAVE BEEN APPROVED THE CONTRACTOR SHALL ADHERE TO THE FOLLOWING SEQUENCE:

1. LOWER THE ATTACHMENT(S) OF THE EXISTING MESSENGER CABLE TO BRING THE LOWEST HEAD TO 5m CLEARANCE FROM THE PAVEMENT.
2. ERECT THE PROPOSED MESSENGER CABLE WITH SIGNAL CABLE ATTACHED PLACING ATTACHMENT TO POLES AT THE "TEMPORARY SPAN WIRE ATTACHMENT HEIGHT" AS SHOWN IN THE TABLE OF STRAIN POLE DETAILS.
3. ERECT PROPOSED SIGNAL HEADS (COVERED; 632.24) KEEPING MESSENGER TAUT ENOUGH TO KEEP PROPOSED HEADS AT LEAST 0.3m CLEAR OF (ABOVE) THE EXISTING MESSENGER.
4. COMPLETE CONSTRUCTION OF THE PROPOSED INSTALLATION. TEST OPERATION IN ACCORDANCE WITH 632.27.
5. TRANSFER TRAFFIC CONTROL TO THE NEW INSTALLATION KEEPING COVERED EXISTING HEADS IN PLACE UNTIL THE 10 DAY PERFORMANCE TEST, INCLUDING MONITORING OF ANY REPLACEMENTS, IS COMPLETED AND APPROVED BY THE ENGINEER.
6. REMOVE EXISTING HEADS AND MESSENGER
7. LOWER MESSENGER ATTACHMENTS TO FINAL POSITION WITH TENSION ADJUSTED TO BRING SAG AT THE LOWEST HEAD TO 2.1m BELOW THE HIGHEST ATTACHMENT ELEVATION AT POLE. (SEE NOTE 6 TC-85.20M)

632 VEHICULAR SIGNAL HEAD, ...SECTION, 305mm LENS, ...WAY, AS PER PLAN

THIS ITEM SHALL CONFORM TO ITEM 632 EXCEPT THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SEPARATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.

TEMPORARY MAINTENANCE OF EXISTING SIGNALS

INCIDENTAL TO THE REQUIREMENTS FOR MAINTAINING TRAFFIC IN ACCORDANCE WITH 614.03, EXISTING TRAFFIC SIGNALS AT THE INTERSECTIONS OF AETNA ST. SHALL BE TEMPORARILY MAINTAINED UNTIL THE NEW TRAFFIC SIGNAL INSTALLATION IS IN OPERATION. SEE THE NOTE MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATIONS.

AT AETNA ST. AND AT HANOVER ST. IMMEDIATELY BEFORE TRAFFIC IS DIVERTED TO PHASE 1 INTERIM PATHS, ODOT WILL CONVERT SIGNAL TIMING TO PRETIMED AND DISCONNECT THE DETECTOR LEAD-IN CABLES AT THE CONTROLLER CABINET. TIMINGS WILL BE SET BY ODOT.

THE CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE ENGINEER, 7 CALENDAR DAYS OR MORE IN ADVANCE, OF ANY LANE USE SHIFT AT EITHER INTERSECTION. THIS IS TO ALLOW COORDINATION OF SIGNAL OPERATION CHANGE WHICH MAY BE NECESSARY OR DESIRABLE TO ACCOMMODATE CHANGES OF TRAFFIC PATTERN(S).

REMOVAL OF THE EXISTING SIGNALS SHALL CONFORM TO 632.25 AND THE PLAN NOTES 614 - MAINTAINING TRAFFIC AND SIGNAL ERECTION PROCEDURE.

632 LOOP DETECTOR UNITS, BY TYPE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 632 AND 732.07 OR 732.08, LOOP DETECTOR UNITS SHALL HAVE THE FOLLOWING REQUIREMENTS OR FEATURES:

THE OUTPUT DEVICE SHALL BE A RELAY, AND ALL CONTACTS SHALL BE IN THE WRING HARNESS.

THE UNIT SHALL BE SELF TUNING.

THE UNIT'S ELECTRICAL CONNECTION PLUGS OR WRING HARNESS SHALL ALLOW READY REPLACEMENT WITH A SINGLE CHANNEL AMPLIFIER AS DESCRIBED IN THE FINAL PARAGRAPH OF 732.07.

633 CONTROLLER, ACTUATED, 4 PHASE, SOLID STATE DIGITAL, AS PER PLAN

- AT AETNA ST.

THE OVERLAP PROGRAMMING SHALL BE BY USE OF AN INTERCHANGEABLE PLUGIN PRINTED CIRCUIT BOARD ASSEMBLY AS DESCRIBED IN PART 14 OF TS-1-1989. IN ADDITION TO NEMA REQUIREMENTS, THE CONFLICT MONITOR SHALL HAVE EXTENDED MONITORING IN ACCORDANCE WITH 733.04 PART 3B. THE MONITOR SHALL ALSO HAVE THE CAPABILITY OF MONITORING EACH LOAD SWITCH SEPARATELY. IN ADDITION TO THE REQUIREMENTS OF 733.04 THE CABINET SHALL BE WIRED SO THAT CONTROLLER PIN CONNECTIONS ASSOCIATED WITH A GIVEN PHASE NUMBER SHALL MATCH THE PHASE NUMBER ASSIGNED TO THE SPECIFIED TRAFFIC MOVEMENT AS SHOWN ON THE PLANS. CONTROLLER CABINET SHALL BE KEYED TO THE STATE MASTER. THE CONTROLLER CABINET SIZE SHALL COMPLY TO THE REQUIREMENTS OF NEMA TS-1 SECTION 14. PRINTED CIRCUIT BOARD TYPE BACK PANELS OF THE CONTROLLER CABINET WILL NOT BE ACCEPTABLE. SOLDERED CONNECTIONS WILL BE PERMITTED FOR WRING ON THE BACK SIDE OF THE BACK PANEL. ALL CONTROLLER MEMORIES SHALL BE NONVOLATILE AND SHALL NOT REQUIRE BATTERIES OR OTHER SOURCES OF ENERGY TO RETAIN DATA WHILE POWER IS REMOVED FROM THE CONTROLLER. THE DESIGN OF THE MONITOR SHALL USE MICROPROCESSOR ARCHITECTURE AND LIQUID CRYSTAL DISPLAYS. THE MONITOR SHALL INDICATE THE EXACT LOAD SWITCH CHANNEL IN WHICH THE FAILURE OCCURRED. THE CONFLICT MONITOR SHALL HAVE AN EVENT LOGGING MEMORY. A MINIMUM OF NINE (9) EVENTS SHALL BE LOGGED. EXAMPLES OF EVENTS INCLUDE: POWER OUTAGES, CONFLICTS, CONTROLLER VOLTAGE MONITOR ETC. EVENTS SHALL BE DISPLAYED ON THE CONFLICT MONITOR'S LIQUID CRYSTAL DISPLAY WHEN INTERROGATED. PAYMENT FOR ITEM 633 CONTROLLER, BY TYPE, SOLID STATE DIGITAL, MICROPROCESSOR AS PER PLAN WILL BE AT THE CONTRACT BID PRICE PER EACH COMPLETE AND IN PLACE INCLUDING ALL CONNECTIONS TESTED AND ACCEPTED.

MAINTENANCE OF EXISTING LOOP DETECTOR WIRE AT HANOVER ST.

THE CONTRACTOR SHALL EXERCISE CARE TO MAINTAIN THE EXISTING LOOP DETECTOR WIRE AT HANOVER ST.

THE CONTRACTOR IS RESPONSIBLE FOR REPAIR OF ANY DAMAGE TO THE LOOP DETECTOR WIRE THAT IS INCURRED, AND WILL RESTORE FULL OPERATION OF THE EXISTING LOOPS IN CONJUNCTION WITH THE PERFORMANCE TESTING OF ITEM 632 SIGNALIZATION, MISC.: PERFORMANCE TEST OF MODIFIED EXISTING TRAFFIC CONTROL SYSTEM.

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATIONS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

- A) EXISTING SIGNAL/FLASHER INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATION FIRST DISTURBS THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.
- B) NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CONTACT THE ODOT DISTRICT TRAFFIC ENGINEER A MINIMUM OF 7 DAYS PRIOR TO ASSUMING MAINTENANCE OF THE AETNA ST. SIGNAL.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE MAINTAINING AGENCY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION, THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE A DIRECT RESULT OF A VEHICLE ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO OR CANNOT RESPOND TO AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISION OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE STATE FOR POLICE SERVICES AND MAINTENANCE SERVICES BY VILLAGE FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE TO THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISION TO THE SIGNAL SYSTEM.

IF A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL BE ON A WEEKDAY ONLY AND BETWEEN THE HOURS OF 9:00 AND 11:30 AM OR 1:30 AND 3:30 PM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED BY OFF-DUTY VILLAGE OF BRIDGEPORT OR CITY OF MARTINS FERRY POLICE, HIRED BY THE CONTRACTOR:

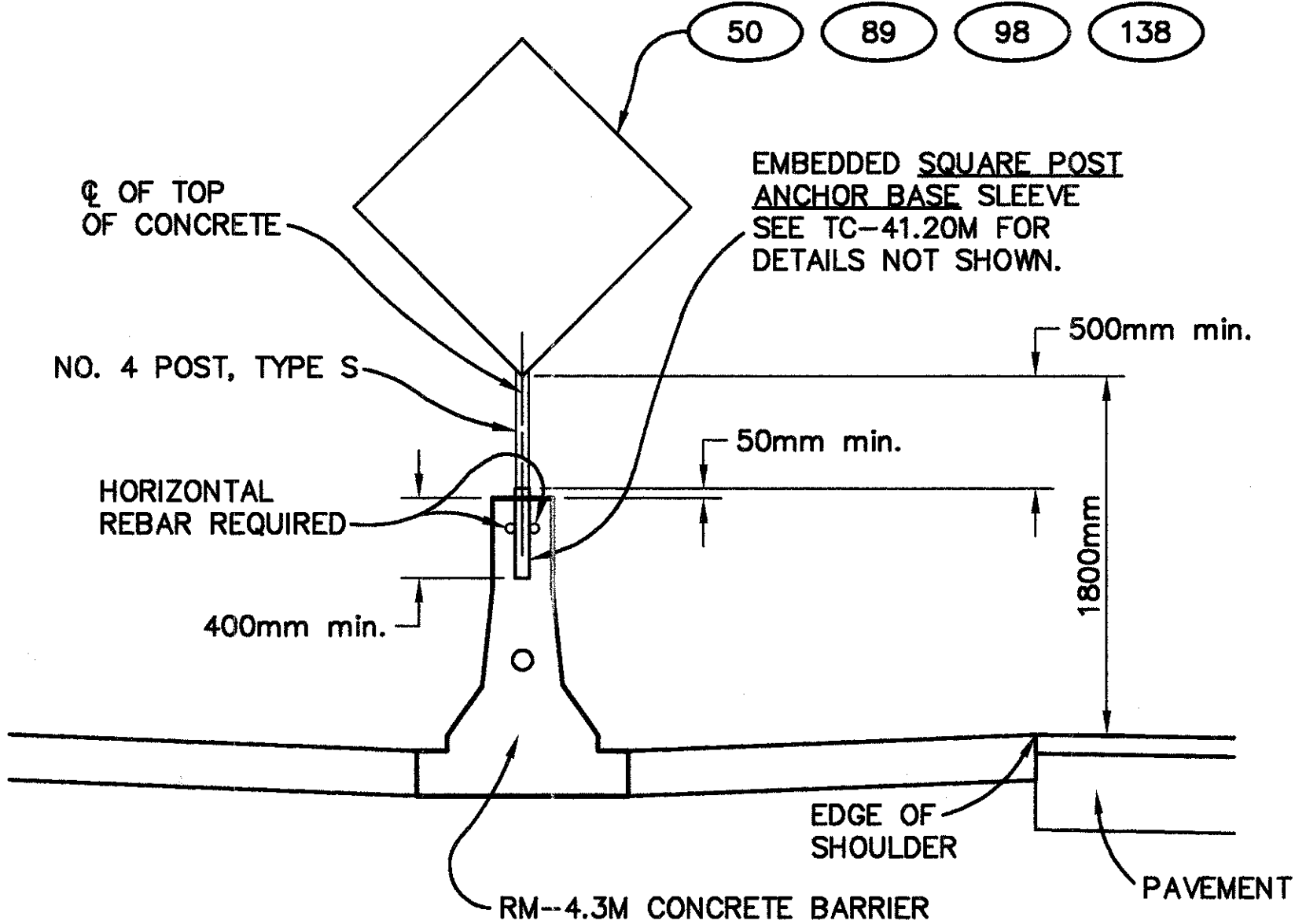
ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.24.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.



630 GROUND MOUNTED SUPPORT, NO. 4 POST, AS PER PLAN

THIS WORK SHALL CONSIST OF TYPE S YIELDING POST WITH SQUARE POST ANCHOR BASE EMBEDDED INTO RM-4.3M CONCRETE BARRIER IN ACCORDANCE WITH THE DETAIL BELOW.



NOTE:  
THE HORIZONTAL REBAR NEAR THE TOP OF THE BARRIER SHALL BE DEFLECTED JUST ENOUGH TO ALLOW PLACEMENT OF THE POST ANCHOR BASE ON THE CENTERLINE OF THE TOP OF CONCRETE SURFACE. A SUPPLEMENTAL REBAR OF MATCHING WEIGHT AND 1 METER LENGTH SHALL BE PLACED ON THE OTHER SIDE OF THE ANCHOR BASE, PARALLEL TO THE MAIN THROUGH REBAR WITH ENDS AT EQUAL DISTANCES FROM THE ANCHOR BASE.

BARRIER MOUNTING OF YIELDING POST SIGN SUPPORT

630 STREET NAME SIGN SUPPORT, AS PER PLAN

THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING THE SIGN-TO-POST BRACKET AS PORTRAYED ON TC-41.40M FOR STREET NAME SIGN SUPPORT. THE POST CAP SHALL BE MANUFACTURED TO FIT A TYPE S YIELDING POST (SEE TC-41.20M), OF THE SIZE SPECIFIED IN THE PLANS. NO POST OR CONCRETE FOUNDATION IS REQUIRED FOR THIS ITEM OF WORK.

632 SIGNALIZATION MISC.: PERFORMANCE TEST OF MODIFIED EXISTING TRAFFIC CONTROL SYSTEM

THE CONTRACTOR SHALL PERFORM A "PERFORMANCE TEST" [632.27(6)] OF THE ENTIRE TRAFFIC CONTROL SYSTEM AT HANOVER STREET AFTER LOOPS L-1 AND L-2 ARE INSTALLED, FINAL PAVEMENT WORK IS COMPLETED, AND TRAFFIC IS FLOWING IN THE FINAL PATTERN OF OPERATION. THE ENGINEER WILL PROVIDE TO THE CONTRACTOR A COPY OF "AS BUILT" HANOVER STREET SIGNAL DATA FROM PROJECT BEL-7-35.567 (DISPLAY, OPERATION, TIMING) FOR THE CONTRACTORS USE DURING THIS WORK.

BEFORE ANY WORK IS PERFORMED OR TRAFFIC PATTERN IS ALTERED AT HANOVER STREET THE CONTRACTOR SHALL, WITH THE ENGINEER, OBSERVE THE OPERATION OF THE EXISTING INSTALLATION, INCLUDING RAILROAD PREEMPTION OPERATION. THE CONTRACTOR SHALL PRESENT TO THE ENGINEER A WRITTEN DESCRIPTION OF ANY DAMAGE TO OR MALFUNCTION OF THE INSTALLATION, REQUESTING THAT CORRECTIONS OF OBSERVED FAULTS BE COMPLETED BY THE MAINTAINING AGENCY BEFORE THE SCHEDULE DATE OF THE PERFORMANCE TEST.

THE CONTRACTOR SHALL SATISFY HIMSELF THAT CORRECTIONS HE REQUESTED HAVE BEEN PROPERLY PERFORMED BEFORE HE COMMENCES THE PERFORMANCE TEST. THE CONTRACTOR SHALL CORRECT TO THE SATISFACTION OF THE ENGINEER ANY MALFUNCTION OF FAILURE OF ANY PART OF THE ENTIRE SYSTEM WHICH OCCURS DURING THE TEST.

THE FOLLOWING HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR PAYMENT OF THE ABOVE WORK.

632 LUMP SIGNALIZATION MISC.: PERFORMANCE TEST OF MODIFIED EXISTING TRAFFIC CONTROL SYSTEM.



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626 BARRIER REFLECTOR QUANTITIES

| LOCATION                         | S.R. 7 STATION |            | SIDE | 626                      |                          |  |  |  |  |
|----------------------------------|----------------|------------|------|--------------------------|--------------------------|--|--|--|--|
|                                  |                |            |      | BARRIER REFLECTOR TYPE A | BARRIER REFLECTOR TYPE B |  |  |  |  |
|                                  | FROM           | TO         |      | Each                     | Each                     |  |  |  |  |
| Southbound                       | 32+172.546     | 32+873.302 | Lt.  | 3                        | 22                       |  |  |  |  |
| Southbound                       | 34+011.663     | 34+068.813 | Lt.  | 3                        |                          |  |  |  |  |
| Southbound                       | 35+708.598     | 35+791.805 | Lt.  | 4                        |                          |  |  |  |  |
| Southbound                       | 36+252.676     | 36+451.079 | Lt.  | 6                        | 2                        |  |  |  |  |
| Southbound                       | 36+561.832     | 36+857.532 | Lt.  | 8                        | 3                        |  |  |  |  |
| Northbound                       | 32+181.761     | 32+899.939 | Rt.  | 1                        | 24                       |  |  |  |  |
| Ramp D Rt.                       |                |            |      |                          |                          |  |  |  |  |
| to Northbound                    | 32+664.058     | 33+376.528 | Rt.  | 25                       |                          |  |  |  |  |
| Northbound                       | 34+339.083     | 34+552.443 | Rt.  | 8                        |                          |  |  |  |  |
| Northbound                       | 34+580.334     | 34+946.094 | Rt.  | 13                       |                          |  |  |  |  |
| Northbound                       | 35+181.031     | 35+687.761 | Rt.  | 18                       |                          |  |  |  |  |
| Northbound                       | 35+711.571     | 38+190.650 | Rt.  | 178                      | 18                       |  |  |  |  |
| Ramp D Lt.                       | 32+637.612     | 32+741.195 | Lt.  | 13                       |                          |  |  |  |  |
| Median Barrier                   | 32+235.359     | 33+381.287 | ℄    |                          | 42                       |  |  |  |  |
| Median Barrier                   | 33+450.781     | 33+834     | ℄    |                          | 28                       |  |  |  |  |
| Median Barrier                   | 34+346         | 34+582     | ℄    |                          | 18                       |  |  |  |  |
| Median Barrier                   | 34+612         | 35+437     | ℄    |                          | 58                       |  |  |  |  |
| Median Barrier                   | 35+953         | 36+673.997 | ℄    |                          | 48                       |  |  |  |  |
| Median Barrier                   | 38+068.608     | 38+190.650 | ℄    |                          | 12                       |  |  |  |  |
| Median G.R.                      | 38+190.650     | 38+220     | ℄    | 2                        |                          |  |  |  |  |
| TOTAL CARRIED TO GENERAL SUMMARY |                |            |      | 282                      | 275                      |  |  |  |  |

CALC. BY: SAH DATE: 4-3-95  
CHKD. BY: WCR DATE: 4-4-95

621 RAISED PAVEMENT MARKERS

| STATION                          |                                |        |        | SPACING   | QUANTITY |      |
|----------------------------------|--------------------------------|--------|--------|-----------|----------|------|
| <u>2-WAY WHITE &amp; RED</u>     |                                |        |        |           |          |      |
| Northbound Lane<br>(Lane Line)   | 32+918                         | to     | 33+374 | 24m       | 20       | Each |
|                                  | 33+625                         | to     | 33+937 | 24m       | 14       | Each |
|                                  | 33+949                         | to     | 34+069 | 12m       | 11       | Each |
|                                  | 35+230                         | to     | 35+542 | 24m       | 14       | Each |
|                                  | 35+554                         | to     | 35+674 | 12m       | 11       | Each |
|                                  | 36+446                         | to     | 36+926 | 24m       | 21       | Each |
|                                  | 36+963                         | to     | 37+299 | 24m       | 15       | Each |
|                                  | 37+344                         | to     | 37+656 | 24m       | 14       | Each |
|                                  | 37+692                         | to     | 38+004 | 24m       | 14       | Each |
|                                  | Southbound Lane<br>(Lane Line) | 33+427 | to     | 33+883    | 24m      | 20   |
| 34+130                           |                                | to     | 34+262 | 12m       | 12       | Each |
| 34+286                           |                                | to     | 34+580 | 24m       | 14       | Each |
| 35+728                           |                                | to     | 35+741 | 12m       | 12       | Each |
| 36+169                           |                                | to     | 35+884 | 24m       | 14       | Each |
| 36+963                           |                                | to     | 37+299 | 24m       | 15       | Each |
| 37+344                           |                                | to     | 37+656 | 24m       | 14       | Each |
| 37+692                           |                                | to     | 38+004 | 24m       | 14       | Each |
| 38+049                           |                                | to     | 38+217 | 24m       | 8        | Each |
| SUB-TOTAL                        |                                |        |        |           | 257      | Each |
| <u>1-WAY YELLOW</u>              |                                |        |        |           |          |      |
| Ramp C                           | 32+887                         | to     | 32+899 | 12m       | 2        | Each |
| Ramp D                           | 32+870                         | to     | 32+894 | 12m       | 3        | Each |
| SUB-TOTAL                        |                                |        |        |           | 5        | Each |
| <u>1-WAY WHITE</u>               |                                |        |        |           |          |      |
| Northbound Lane                  | 32+270                         | to     | 32+894 | ⊗         | 24m      | 27   |
|                                  | 32+870                         | to     | 32+954 | (Rt)      | 12m      | 8    |
|                                  | 33+432                         | to     | 33+601 | ⊗         | 24m      | 8    |
|                                  | 33+841                         | to     | 33+937 | (Lt & Rt) | 24m      | 10   |
|                                  | 33+949                         | to     | 34+009 | (Lt & Rt) | 12m      | 12   |
|                                  | 34+021                         | to     | 34+075 | (Chnl)    | 6m       | 10   |
|                                  | 34+021                         | to     | 34+075 | (Lt & Rt) | 6m       | 20   |
|                                  | 34+121                         | to     | 34+175 | (Lt & Rt) | 6m       | 20   |
|                                  | 34+127                         | to     | 34+559 | ⊗         | 24m      | 19   |
|                                  | 34+606                         | to     | 35+206 | ⊗         | 24m      | 26   |
|                                  | 35+446                         | to     | 35+542 | (Lt & Rt) | 24m      | 10   |
|                                  | 35+554                         | to     | 35+614 | (Lt & Rt) | 12m      | 12   |
|                                  | 35+626                         | to     | 35+680 | (Lt & Rt) | 6m       | 20   |
|                                  | 35+626                         | to     | 35+680 | (Chnl)    | 6m       | 10   |
|                                  | 35+720                         | to     | 35+780 | (Lt & Rt) | 6m       | 22   |
|                                  | 35+726                         | to     | 36+422 | ⊗         | 24m      | 30   |
|                                  | 38+049                         | to     | 38+217 | ⊗         | 24m      | 8    |
| Ramp D                           | 32+906                         | to     | 32+942 |           | 12m      | 4    |
| Southbound Lane                  | 32+270                         | to     | 33+374 | ⊗         | 24m      | 47   |
|                                  | 32+887                         | to     | 32+911 | (Rt)      | 12m      | 3    |
|                                  | 32+917                         | to     | 33+025 | (Rt)      | 6m       | 19   |
|                                  | 33+907                         | to     | 33+075 | ⊗         | 24m      | 8    |
|                                  | 34+021                         | to     | 34+075 | (Lt & Rt) | 6m       | 20   |
|                                  | 34+118                         | to     | 34+166 | (Rt & Lt) | 6m       | 18   |
|                                  | 34+118                         | to     | 34+166 | (Chnl)    | 6m       | 9    |
|                                  | 34+178                         | to     | 34+250 | (Lt & Rt) | 12m      | 14   |
|                                  | 34+262                         | to     | 34+358 | (Lt & Rt) | 24m      | 10   |
|                                  | 34+624                         | to     | 35+680 | ⊗         | 24m      | 45   |
|                                  | 35+626                         | to     | 35+686 | (Lt & Rt) | 6m       | 22   |
|                                  | 35+722                         | to     | 35+776 | (Lt & Rt) | 6m       | 20   |
|                                  | 35+626                         | to     | 35+680 | (Chnl)    | 6m       | 10   |
|                                  | 35+788                         | to     | 35+848 | (Lt & Rt) | 12m      | 12   |
|                                  | 35+860                         | to     | 35+956 | (Lt & Rt) | 24m      | 10   |
|                                  | 36+916                         | to     | 36+220 | ⊗         | 24m      | 30   |
| Ramp C                           | 32+754                         | to     | 32+838 | (Lt & Rt) | 6m       | 30   |
|                                  | 32+754                         | to     | 32+838 | (Chnl)    | 6m       | 15   |
|                                  | 32+850                         | to     | 32+874 | (Lt)      | 12m      | 3    |
|                                  | 32+898                         | to     | 32+970 | (Lt)      | 24m      | 4    |
|                                  | 32+917                         | to     | 32+911 | (Rt)      | 6m       | 19   |
| SUB-TOTAL                        |                                |        |        |           | 644      | Each |
| ⊗ On Lane Line                   |                                |        |        |           |          |      |
| TOTAL CARRIED TO GENERAL SUMMARY |                                |        |        |           | 906      | Each |

TRAFFIC CONTROL QUANTITIES

BEL-7-32.276

125  
242



SIGN QUANTITIES

CALC. BY: SAH DATE: 4-4-95  
CHKD. BY: WCR DATE: 4-6-95

\* USE TYPE S YIELD POST ONLY, SEE STD DWG TC-41.20M

| REF. NO.                          | STATION<br>(S.R. 7 Unless<br>Otherwise Noted) | SIDE | CODE                                                                                  | SIZE                                                                                                   | 630 |  |                                          |                                          |                                          |  |      |                                   |                                   |              |  |                                                      |                     |                                |   |                          |    |                                                      |    |                                                              |  |   |                                                    |  |
|-----------------------------------|-----------------------------------------------|------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----|--|------------------------------------------|------------------------------------------|------------------------------------------|--|------|-----------------------------------|-----------------------------------|--------------|--|------------------------------------------------------|---------------------|--------------------------------|---|--------------------------|----|------------------------------------------------------|----|--------------------------------------------------------------|--|---|----------------------------------------------------|--|
|                                   |                                               |      |                                                                                       |                                                                                                        |     |  | GROUND MOUNTED<br>SUPPORT,<br>NO. 2 POST | GROUND MOUNTED<br>SUPPORT,<br>NO. 3 POST | GROUND MOUNTED<br>SUPPORT,<br>NO. 4 POST |  |      | ONE WAY<br>SUPPORT,<br>NO. 3 POST | ONE WAY<br>SUPPORT,<br>NO. 4 POST |              |  |                                                      | SIGN,<br>FLAT SHEET | SIGN,<br>FLAT SHEET,<br>TYPE G |   | SIGN BACKING<br>ASSEMBLY |    | REMOVAL OF<br>GROUND MOUNTED<br>SIGN AND<br>DISPOSAL |    | REMOVAL OF<br>GROUND MOUNTED<br>POST SUPPORT<br>AND DISPOSAL |  |   | REMOVAL OF<br>POLE MOUNTED<br>SIGN AND<br>DISPOSAL |  |
|                                   |                                               |      |                                                                                       |                                                                                                        |     |  | Meter                                    | Meter                                    | Meter                                    |  |      | Meter                             | Meter                             |              |  |                                                      | Sq. Meter           | Sq. Meter                      |   | Each                     |    | Each                                                 |    | Each                                                         |  |   | Each                                               |  |
| 1                                 | 32+639 Ramp D                                 | Lt.  | REMOVAL<br>IM-8-24<br>M-5-24<br>IM-26-21<br>M-40-24<br>M-1-24-3<br>M-19-21<br>M-50-66 | 600mmx300mm<br>600mmx600mm<br>525mmx375mm<br>600mmx300mm<br>750mmx600mm<br>525mmx375mm<br>1650mmx600mm |     |  | 9.8*                                     |                                          |                                          |  |      |                                   |                                   |              |  | 0.18<br>0.36<br>0.20<br>0.18<br>0.45<br>0.20<br>0.99 |                     | 2                              |   | 8                        |    | 2                                                    |    |                                                              |  |   |                                                    |  |
| 2                                 | 32+642 Ramp D                                 | Lt.  | REMOVAL<br>N-29-24<br>N-15-24                                                         | 600mmx600mm<br>600mmx150mm                                                                             |     |  | 3.8                                      |                                          |                                          |  |      |                                   |                                   | 0.36<br>0.09 |  |                                                      |                     |                                |   |                          | 2  |                                                      | 1  |                                                              |  |   |                                                    |  |
| 3                                 | 32+699 Ramp D                                 | Rt.  | M-37-24<br>M-2-24                                                                     | 600mmx300mm<br>600mmx600mm                                                                             |     |  | 3.9                                      |                                          |                                          |  |      |                                   |                                   |              |  | 0.18<br>0.36                                         |                     |                                |   |                          |    |                                                      |    |                                                              |  | 2 |                                                    |  |
| 4                                 | 32+702 Ramp D                                 | Rt.  | REMOVAL                                                                               |                                                                                                        |     |  |                                          |                                          |                                          |  |      |                                   |                                   |              |  |                                                      |                     |                                |   |                          |    |                                                      |    |                                                              |  |   |                                                    |  |
| 5                                 | 32+739 Ramp D                                 | Lt.  | REMOVAL<br>R-1-36<br>R-121-36                                                         | 900mmx900mm<br>900mmx900mm                                                                             |     |  |                                          | 4.8                                      |                                          |  |      |                                   |                                   |              |  | 0.81<br>0.81                                         |                     |                                |   |                          | 2  |                                                      | 2  |                                                              |  |   |                                                    |  |
| 6                                 | 32+740 Ramp D                                 | Rt.  | REMOVAL<br>R-1-36<br>R-121-36                                                         | 900mmx900mm<br>900mmx900mm                                                                             |     |  |                                          | 4.8                                      |                                          |  |      |                                   |                                   |              |  | 0.81<br>0.81                                         |                     |                                |   |                          | 1  |                                                      | 1  |                                                              |  |   |                                                    |  |
| 7                                 | 32+745 Ramp D                                 | Lt.  | REMOVAL<br>R-41B-36<br>R-120-36<br>R-43R-36                                           | 900mmx900mm<br>900mmx900mm<br>900mmx300mm                                                              |     |  |                                          |                                          |                                          |  | 4.1  |                                   |                                   |              |  | 0.81<br>0.81<br>0.27                                 |                     |                                |   |                          | 2  |                                                      | 1  |                                                              |  |   |                                                    |  |
| 8                                 | 32+752 Ramp D                                 | Rt.  | N-29-24<br>N-15-24                                                                    | 600mmx600mm<br>600mmx150mm                                                                             |     |  | 3.8                                      |                                          |                                          |  |      |                                   |                                   | 0.36<br>0.09 |  |                                                      |                     |                                |   |                          |    |                                                      |    |                                                              |  |   |                                                    |  |
| 9                                 | 32+753 Ramp D                                 | Rt.  | REMOVAL<br>M-37-24<br>M-2-24<br>M-24-21                                               | 600mmx300mm<br>600mmx600mm<br>525mmx375mm                                                              |     |  |                                          | 4.4                                      |                                          |  |      |                                   |                                   |              |  | 0.18<br>0.36<br>0.20                                 |                     |                                |   |                          | 5  |                                                      | 1  |                                                              |  |   |                                                    |  |
| 10                                | 32+756 Ramp C                                 | Rt.  | REMOVAL<br>N-29-24<br>N-15-24                                                         | 600mmx600mm<br>600mmx150mm                                                                             |     |  | 3.8                                      |                                          |                                          |  |      |                                   |                                   | 0.36<br>0.09 |  |                                                      |                     |                                |   |                          | 3  |                                                      | 1  |                                                              |  |   |                                                    |  |
| 11                                | 32+756 Ramp C                                 | Rt.  | REMOVAL<br>M-37-30<br>M-2-30<br>M-24-24                                               | 750mmx375mm<br>750mmx750mm<br>600mmx450mm                                                              |     |  |                                          | 4.6*                                     |                                          |  |      |                                   |                                   |              |  | 0.28<br>0.56<br>0.27                                 |                     |                                |   |                          | 3  |                                                      | 1  |                                                              |  |   |                                                    |  |
| 12                                | 32+756 Ramp C                                 | Rt.  | REMOVAL<br>M-40-30<br>M-1-30-3<br>M-24-24                                             | 750mmx375mm<br>937mmx750mm<br>600mmx450mm                                                              |     |  |                                          | 4.6*                                     |                                          |  |      |                                   |                                   |              |  | 0.28<br>0.70<br>0.27                                 |                     |                                |   |                          | 3  |                                                      | 1  |                                                              |  |   |                                                    |  |
| 13                                | 32+760 Ramp C                                 | Rt.  | REMOVAL                                                                               |                                                                                                        |     |  |                                          |                                          |                                          |  |      |                                   |                                   |              |  |                                                      |                     |                                |   |                          | 2  |                                                      | 1  |                                                              |  |   |                                                    |  |
| 14                                | 32+760 Ramp D                                 | Lt.  | REMOVAL<br>R-41B-36<br>R-43R-36                                                       | 900mmx900mm<br>900mmx300mm                                                                             |     |  |                                          | 4.2                                      |                                          |  | 4.2  |                                   |                                   |              |  | 0.81<br>0.27                                         |                     |                                |   |                          | 1  |                                                      | 1  |                                                              |  |   |                                                    |  |
| 15                                | 32+762 Ramp C                                 | Rt.  | REMOVAL<br>R-43L-48<br>R-43R-48<br>R-41B-36<br>R-1-48<br>R-22A-36                     | 1200mmx450mm<br>1200mmx450mm<br>900mmx900mm<br>1200mmx1200mm<br>900mmx900mm                            |     |  |                                          | 5.2*                                     |                                          |  | 5.3* |                                   |                                   |              |  | 0.54<br>0.54<br>0.81<br>1.44<br>0.81                 |                     |                                |   |                          | 2  |                                                      | 2  |                                                              |  |   |                                                    |  |
| 16                                | 32+766 Ramp C                                 | Lt.  | REMOVAL<br>R-43L-48<br>R-43R-48<br>R-41B-36<br>R-1-48<br>R-22A-36                     | 1200mmx450mm<br>1200mmx450mm<br>900mmx900mm<br>1200mmx1200mm<br>900mmx900mm                            |     |  |                                          | 5.3*                                     |                                          |  | 5.3* |                                   |                                   |              |  | 0.54<br>0.54<br>0.81<br>1.44<br>0.81                 |                     |                                |   |                          | 3  |                                                      | 2  |                                                              |  |   |                                                    |  |
| 17                                | 32+771 Ramp C                                 | Lt.  | REMOVAL                                                                               |                                                                                                        |     |  |                                          |                                          |                                          |  |      |                                   |                                   |              |  |                                                      |                     |                                |   |                          | 2  |                                                      | 1  |                                                              |  |   |                                                    |  |
| TOTALS CARRIED TO GENERAL SUMMARY |                                               |      |                                                                                       |                                                                                                        |     |  | 15.3                                     | 8.6                                      | 39.1                                     |  |      | 4.2                               | 14.7                              |              |  | 1.35                                                 | 20.69               |                                | 2 |                          | 39 |                                                      | 18 |                                                              |  | 2 |                                                    |  |

TRAFFIC CONTROL SIGN QUANTITIES

BEL-7-32.276

126  
242



SIGN QUANTITIES

\* USE TYPE S YIELD POST ONLY, SEE STD DWG TC-41.20M

| REF. NO.                          | STATION<br>(S.R. 7 Unless<br>Otherwise Noted) | SIDE       | CODE                                         | SIZE                                                     | 630                                          |                                          |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             |                              |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   | 631                                       |                                            |      |  |
|-----------------------------------|-----------------------------------------------|------------|----------------------------------------------|----------------------------------------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|----------------------------------------------------------|-----------------------------------|----------------------------------------------|----------------------------------------------|-----------------------------|---------------------------------|---------------------------------------------|------------------------------|--------------------------------|--------------------------------|--------------------------------------------------|--------------------------|------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------|----------------------------------------|---------------------------------------------------|-------------------------------------------|--------------------------------------------|------|--|
|                                   |                                               |            |                                              |                                                          | GROUND MOUNTED<br>BEAM SUPPORT<br>FOUNDATION | GROUND MOUNTED<br>SUPPORT,<br>NO. 2 POST | GROUND MOUNTED<br>SUPPORT,<br>NO. 3 POST | GROUND MOUNTED<br>SUPPORT,<br>NO. 4 POST | GROUND MOUNTED<br>SUPPORT,<br>NO. 4 POST,<br>AS PER PLAN | ONE WAY<br>SUPPORT,<br>NO. 3 POST | GROUND MOUNTED<br>SUPPORT,<br>S100x11.5 BEAM | GROUND MOUNTED<br>SUPPORT,<br>W250x32.7 BEAM | STREET NAME<br>SIGN SUPPORT | BREAKAWAY<br>BEAM<br>CONNECTION | SIGN SUPPORT<br>ASSEMBLY,<br>BRIDGE MOUNTED | SIGN,<br>FLAT SHEET          | SIGN,<br>FLAT SHEET,<br>TYPE G | SIGN,<br>EXTRUSHEET,<br>TYPE G | SIGN,<br>DOUBLE FACED,<br>STREET NAME,<br>TYPE G | SIGN BACKING<br>ASSEMBLY | REMOVAL OF<br>GROUND MOUNTED<br>SIGN AND<br>DISPOSAL | REMOVAL OF<br>GROUND MOUNTED<br>POST SUPPORT<br>AND DISPOSAL | REMOVAL OF<br>OVERHEAD<br>MOUNTED SIGN<br>AND STORAGE | REMOVAL OF<br>OVERHEAD SIGN<br>SUPPORT AND<br>STORAGE,<br>TYPE TC-9.30 | REMOVAL OF<br>OVERHEAD SIGN<br>SUPPORT AND<br>STORAGE,<br>TYPE TC-12.30 | REMOVAL OF<br>POLE MOUNTED<br>SIGN AND<br>DISPOSAL | REMOVAL OF<br>LUMINAIRE<br>AND STORAGE | REMOVAL OF<br>DISCONNECT<br>SWITCH AND<br>STORAGE | REMOVAL OF<br>SIGN WIRING<br>AND DISPOSAL | REMOVAL OF<br>SIGN SERVICE<br>AND DISPOSAL |      |  |
|                                   |                                               |            |                                              |                                                          | Each                                         | Meter                                    | Meter                                    | Meter                                    | Meter                                                    | Meter                             | Meter                                        | Meter                                        | Each                        | Each                            | Each                                        | Sq. Meter                    | Sq. Meter                      | Sq. Meter                      | Each                                             | Each                     | Each                                                 | Each                                                         | Each                                                  | Each                                                                   | Each                                                                    | Each                                               | Each                                   | Each                                              | Each                                      | Each                                       | Each |  |
| 18                                | 32+814 Ramp D                                 | Rt.        | M-37-24<br>M-2-24                            | 600mmx300mm<br>600mmx600mm                               |                                              | 3.9                                      |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 | 0.18<br>0.36                                |                              |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 19                                | 32+815 Ramp C                                 | Lt.&Rt.    | R-41A-36<br>R-31W-36<br>R-41A-36<br>R-31W-36 | 900mmx600mm<br>900mmx750mm<br>900mmx600mm<br>900mmx750mm |                                              | 7.6                                      |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             | 0.54<br>0.68<br>0.54<br>0.68 |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 20                                | 32+817 Ramp D                                 | Rt.        | REMOVAL                                      |                                                          |                                              |                                          |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             |                              |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        | 2                                                                       |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 21                                | 32+830 Ramp C                                 | Lt.        | REMOVAL                                      |                                                          |                                              |                                          |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             |                              |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        | 1                                                                       |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 22                                | 32+842 Ramp C                                 | Lt.<br>Rt. | REMOVAL<br>REMOVAL                           |                                                          |                                              |                                          |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             |                              |                                |                                | 1<br>1                                           | 1<br>1                   |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 23                                | 32+845 Ramp C                                 | Rt.        | M-50-66                                      | 1650mmx600mm                                             |                                              | 7.8                                      |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             | 0.99                         |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 24                                | 32+863                                        | Rt.        | REMOVAL<br>W-49R-48                          | 1200mmx1200mm                                            |                                              |                                          |                                          |                                          |                                                          |                                   |                                              |                                              |                             | 1                               |                                             | 1.44                         |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         | 1                                                  |                                        |                                                   |                                           |                                            |      |  |
| 25                                | 32+945 Ramp D                                 | Rt.        | R-2-48                                       | 1200x1200x1200                                           |                                              |                                          | 8.1                                      |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             | 0.62                         |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 26                                | 32+949 Ramp D                                 | Rt.        | REMOVAL                                      |                                                          |                                              |                                          |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             |                              |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 27                                | 32+975                                        | Lt.        | REMOVAL                                      |                                                          |                                              |                                          |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             |                              |                                |                                |                                                  |                          | 1                                                    |                                                              |                                                       |                                                                        | 1                                                                       |                                                    | 2                                      | 1                                                 | 1                                         |                                            |      |  |
| 28                                | 33+079                                        | Rt.        | REMOVAL<br>R-10-36                           | 900mmx1200mm                                             |                                              | 8.4                                      |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             | 1.08                         |                                |                                |                                                  | 1                        | 1                                                    |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 29                                | 33+125                                        | Lt.        | GE                                           | 4.800m x 3.150m                                          | 2                                            |                                          |                                          |                                          |                                                          |                                   | 15.2                                         |                                              | 2                           |                                 |                                             |                              | 15.12                          |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 30                                | 33+200                                        | Rt.        | N-29-24<br>IM-26-24                          | 600mmx600mm<br>600mmx450mm                               |                                              |                                          | 4.1                                      |                                          |                                                          |                                   |                                              |                                              |                             |                                 | 0.36<br>0.27                                |                              |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 31                                | 33+210                                        | Lt.        | R-10-36                                      | 900mmx1200mm                                             |                                              | 8.5                                      |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             | 1.08                         |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 32                                | 33+245                                        | Rt.        | REMOVAL                                      |                                                          |                                              |                                          |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             |                              |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        | 2                                                                       |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 33                                | 33+254                                        | Rt.        | GM                                           | 2.100m x 0.900m                                          | 2                                            |                                          |                                          |                                          |                                                          |                                   | 8.5                                          |                                              |                             |                                 |                                             |                              | 1.89                           |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 34                                | 33+285                                        | Lt.        | REMOVAL                                      |                                                          |                                              |                                          |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             |                              |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        | 2                                                                       |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 35                                | 33+325                                        | Rt.        | R-31FF-48                                    | 1200mm x 750mm                                           |                                              | 7.7                                      |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             | 0.90                         |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 36                                | 33+349                                        | Lt.        | REMOVAL                                      |                                                          |                                              |                                          |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             |                              |                                |                                | 1                                                | 2                        |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 37                                | 33+370                                        | Lt.        | M-38-30<br>M-2-30                            | 750mm x 375mm<br>750mm x 750mm                           |                                              |                                          | 4.3                                      |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             | 0.28<br>0.56                 |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 38                                | 33+380                                        | Rt.        | R-31FF-48                                    | 1200mm x 750mm                                           |                                              | 8.1                                      |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             | 0.90                         |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 39                                | 33+395                                        | Rt.        | D-14                                         |                                                          |                                              |                                          |                                          |                                          |                                                          |                                   |                                              | 1                                            |                             |                                 |                                             |                              |                                | 1                              |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 40                                | 33+398                                        | Lt.        | REMOVAL<br>R-1-48<br>R-121-36                | 1200mm x 1200mm<br>900mm x 900mm                         |                                              |                                          |                                          | 10.0*                                    |                                                          |                                   |                                              |                                              |                             |                                 |                                             | 1.44<br>0.81                 |                                |                                |                                                  | 2                        | 2                                                    |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 41                                | 33+406                                        | Rt.        | REMOVAL<br>M-45-42                           |                                                          |                                              |                                          | 9.6                                      |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             |                              | 1.58                           |                                |                                                  | 1                        | 2                                                    |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 42                                | 33+422                                        | Lt.        | R-43R-36<br>R-37R-24                         | 900mm x 300mm<br>600mm x 750mm                           |                                              |                                          |                                          |                                          | 4.1                                                      |                                   |                                              |                                              |                             |                                 |                                             | 0.27<br>0.45                 |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 43                                | 33+425                                        | Lt.        | R-120-36                                     | 900mm x 900mm                                            |                                              |                                          | 4.0                                      |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             | 0.81                         |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 44                                | 33+437                                        | Lt.        | REMOVAL                                      |                                                          |                                              |                                          |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             |                              |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        | 1                                                                       |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 45                                | 33+460                                        | Rt.        | M-37-30<br>M-2-30                            | 750mm x 375mm<br>750mm x 750mm                           |                                              |                                          | 4.3                                      |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             | 0.28<br>0.56                 |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 46                                | 33+473                                        | Rt.        | REMOVAL                                      |                                                          |                                              |                                          |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             |                              |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        | 2                                                                       |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 47                                | 33+475                                        | Lt.        | REMOVAL<br>R-120-36                          |                                                          |                                              |                                          | 4.0                                      |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             | 0.81                         |                                |                                |                                                  | 1                        | 1                                                    |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 48                                | 33+610                                        | Rt.        | R-10-36                                      | 900mm x 1200mm                                           |                                              | 8.4                                      |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             | 1.08                         |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 49                                | 33+751                                        | ☐          | REMOVAL                                      |                                                          |                                              |                                          |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             |                              |                                |                                |                                                  |                          | 1                                                    | 1                                                            |                                                       |                                                                        |                                                                         | 1                                                  | 1                                      | 1                                                 | 1                                         |                                            |      |  |
| 50                                | 33+753                                        | Rt.        | W-47-48<br>☐<br>W-47-48                      | 1200mm x 1200mm<br>1200mm x 1200mm                       |                                              |                                          | 9.4                                      |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             | 1.44<br>1.44                 |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 51                                | 33+755                                        | Lt.        | GB                                           | 4.800m x 3.150m                                          | 2                                            |                                          |                                          |                                          |                                                          |                                   |                                              | 14.9                                         |                             | 2                               |                                             |                              | 15.12                          |                                | 1                                                |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 52                                | 33+778                                        | Rt.        | REMOVAL                                      |                                                          |                                              |                                          |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             |                              |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        | 1                                                                       |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 53                                | 33+781                                        | Rt.        | N-45-12                                      | 300mm x 450mm                                            |                                              | 3.5                                      |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             | 0.14                         |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 54                                | 33+789                                        | Lt.        | REMOVAL<br>N-45-12                           |                                                          |                                              |                                          |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             | 0.14                         |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 55                                | 33+854                                        | Lt.        | R-10-36                                      | 900mm x 1200mm                                           |                                              | 8.6                                      |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             | 1.08                         |                                |                                |                                                  |                          |                                                      |                                                              |                                                       |                                                                        |                                                                         |                                                    |                                        |                                                   |                                           |                                            |      |  |
| 56                                | 33+855                                        | ☐<br>Rt.   | REMOVAL<br>REMOVAL                           |                                                          |                                              |                                          |                                          |                                          |                                                          |                                   |                                              |                                              |                             |                                 |                                             |                              |                                |                                |                                                  | 1                        | 1                                                    |                                                              |                                                       |                                                                        |                                                                         | 1                                                  |                                        |                                                   |                                           |                                            |      |  |
| TOTALS CARRIED TO GENERAL SUMMARY |                                               |            |                                              |                                                          | 6                                            | 83.2                                     | 47.8                                     | 10.0                                     | 2.7                                                      | 4.1                               | 8.5                                          | 30.1                                         | 1                           | 4                               | 1                                           | 1.45                         | 20.76                          | 33.71                          | 1                                                | 1                        | 10                                                   | 12                                                           | 2                                                     | 1                                                                      | 1                                                                       | 14                                                 | 3                                      | 2                                                 | 2                                         | 2                                          |      |  |

TRAFFIC CONTROL SIGN QUANTITIES

BEL-7-32.276

127  
242



SIGN QUANTITIES

\* USE TYPE S YIELD POST ONLY, SEE STD DWG TC-41.20M

| REF. NO.                          | STATION<br>(S.R. 7 Unless<br>Otherwise Noted) | SIDE | CODE                 | SIZE                       | 630                                          |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             | 631                                                   |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
|-----------------------------------|-----------------------------------------------|------|----------------------|----------------------------|----------------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|----------------------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|-----------------------------------|-----------------------------|---------------------------------|---------------------------------------|--------------------------------|--------------------------------|--------------------------------------------------|--------------------------|------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------|-------------------------------------------|--------------------------------------------|
|                                   |                                               |      |                      |                            | GROUND MOUNTED<br>BEAM SUPPORT<br>FOUNDATION | GROUND MOUNTED<br>SUPPORT,<br>NO. 2 POST | GROUND MOUNTED<br>SUPPORT,<br>NO. 3 POST | GROUND MOUNTED<br>SUPPORT,<br>NO. 4 POST | GROUND MOUNTED<br>SUPPORT,<br>NO. 4 POST,<br>AS PER PLAN | GROUND MOUNTED<br>SUPPORT,<br>S100x11.5 BEAM | GROUND MOUNTED<br>SUPPORT,<br>W200x26.6 BEAM | GROUND MOUNTED<br>SUPPORT,<br>W250x32.7 BEAM | ONE WAY<br>SUPPORT,<br>NO. 3 POST | STREET NAME<br>SIGN SUPPORT | BREAKAWAY<br>BEAM<br>CONNECTION | SIGN HANGER<br>ASSEMBLY,<br>SPAN WIRE | SIGN,<br>FLAT SHEET,<br>TYPE G | SIGN,<br>EXTRUSHEET,<br>TYPE G | SIGN,<br>DOUBLE FACED,<br>STREET NAME,<br>TYPE G | SIGN BACKING<br>ASSEMBLY | REMOVAL OF<br>GROUND MOUNTED<br>SIGN AND<br>DISPOSAL | REMOVAL OF<br>GROUND MOUNTED<br>MAJOR SIGN<br>AND STORAGE | REMOVAL OF<br>GROUND MOUNTED<br>POST SUPPORT<br>AND DISPOSAL | REMOVAL OF<br>GROUND MOUNTED<br>BEAM SUPPORT<br>AND STORAGE | REMOVAL OF<br>OVERHEAD<br>MOUNTED SIGN<br>AND STORAGE | REMOVAL OF<br>POLE MOUNTED<br>SIGN AND<br>DISPOSAL | REMOVAL OF<br>OVERHEAD SIGN<br>SUPPORT AND<br>STORAGE,<br>TYPE TC-12.30 | REMOVAL OF<br>LUMINAIRE<br>AND STORAGE | REMOVAL OF<br>DISCONNECT<br>SWITCH AND<br>STORAGE | REMOVAL OF<br>SIGN WIRING<br>AND DISPOSAL | REMOVAL OF<br>SIGN SERVICE<br>AND DISPOSAL |
|                                   |                                               |      |                      |                            | Each                                         | Meter                                    | Meter                                    | Meter                                    | Meter                                                    | Meter                                        | Meter                                        | Meter                                        | Meter                             | Each                        | Each                            | Each                                  | Sq. Meter                      | Sq. Meter                      | Each                                             | Each                     | Each                                                 | Each                                                      | Each                                                         | Each                                                        | Each                                                  | Each                                               | Each                                                                    | Each                                   | Each                                              | Each                                      | Each                                       |
| 57                                | 33+874                                        | Lt.  | REMOVAL              |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 58                                | 33+946                                        | Rt.  | GM-1                 | 2.100m×0.900m              | 2                                            |                                          |                                          |                                          |                                                          | 8.7                                          |                                              |                                              |                                   |                             | 2                               |                                       |                                | 1.89                           |                                                  |                          |                                                      | 1                                                         |                                                              | 2                                                           |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 59                                | 33+976                                        | Rt.  | R-31C-48             | 1200mm×750mm               |                                              | 7.6                                      |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       | 0.90                           |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 60                                | 34+034                                        | Lt.  | REMOVAL              |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 61                                | 34+038                                        | Lt.  | M-38-30<br>M-2-30    | 750mm×375mm<br>750mm×750mm |                                              |                                          | 4.2                                      |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       | 0.28<br>0.56                   |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             | 2                                                     |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 62                                | 34+062                                        | Lt.  | REMOVAL              |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 63                                | 34+075                                        | Lt.  | REMOVAL              |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          | 2<br>1                                               |                                                           | 1<br>2                                                       |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 64                                | 34+078                                        | Lt.  | R-37R-24<br>R-43R-36 | 600mm×750mm<br>900mm×300mm |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              | 4.1                               | 1                           |                                 |                                       | 0.45<br>0.27                   |                                |                                                  | 1                        |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 65                                | 34+080                                        | Lt.  | R-107A-24            | 600mm×450mm                |                                              | 3.5                                      |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       | 0.27                           |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 66                                | 34+081                                        | Rt.  | REMOVAL              |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
|                                   |                                               |      | R-31C-48             | 1200mm×750mm               |                                              | 7.6                                      |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       | 0.90                           |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 67                                | 0+982 Aetna St.                               | Rt.  | REMOVAL              |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          | 1                                                    |                                                           | 1                                                            |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 68                                | 34+085                                        | Rt.  | REMOVAL              |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          | 1                                                    |                                                           | 2                                                            |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
|                                   |                                               |      | M-50-66              | 1650mm×600mm               |                                              | 7.8                                      |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       | 0.99                           |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 69                                | 34+085                                        | Lt.  | REMOVAL              |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 70                                | 34+087                                        | Lt.  | R-25ER-24            | 600mm×750mm                |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 | 1                                     | 0.45                           |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 71                                | 34+089                                        | Lt.  | R-27A-30             | 750mm×900mm                |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 | 1                                     | 0.68                           |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 72                                | 34+090                                        | Rt.  | REMOVAL              |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 73                                | 34+094                                        | Rt.  | R-25F-24             | 600mm×750mm                |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 | 1                                     | 0.45                           |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 74                                | 34+099                                        | Lt.  | R-26A-30             | 750mm×900mm                |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 | 1                                     | 0.68                           |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 75                                | 34+100                                        | Lt.  | REMOVAL              |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 76                                | 34+109                                        | Lt.  | REMOVAL              |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          | 1                                                    |                                                           | 2                                                            |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 77                                | 34+115                                        | Rt.  | D-14                 |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   | 1                           |                                 |                                       |                                |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 78                                | 34+115                                        | Rt.  | R-107A-24            | 600mm×450mm                |                                              | 3.5                                      |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       | 0.27                           |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 79                                | 34+120                                        | Lt.  | R-31C-48             | 1200mm×750mm               |                                              | 8.3                                      |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       | 0.90                           |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 80                                | 34+121                                        | Rt.  | R-43R-36<br>R-37R-24 | 900mm×300mm<br>600mm×750mm |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              | 4.1                               |                             |                                 |                                       | 0.27<br>0.45                   |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 81                                | 34+137                                        | Lt.  | REMOVAL<br>GN        | 2.400m×0.900m              | 2                                            |                                          |                                          |                                          |                                                          | 8.0                                          |                                              |                                              |                                   |                             | 2                               |                                       |                                | 2.16                           |                                                  |                          |                                                      | 1                                                         |                                                              | 2                                                           |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 82                                | 34+137                                        | Rt.  | REMOVAL<br>GN        | 2.700m×0.900m              | 2                                            |                                          |                                          |                                          |                                                          | 8.9                                          |                                              |                                              |                                   |                             | 2                               |                                       |                                | 2.43                           |                                                  |                          |                                                      | 1                                                         |                                                              | 2                                                           |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 83                                | 34+170                                        | Lt.  | R-31C-48             | 1200mm×750mm               |                                              | 8.3                                      |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       | 0.90                           |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 84                                | 34+246                                        | Lt.  | GM                   | 2.100m×0.900m              | 2                                            |                                          |                                          |                                          |                                                          | 8.7                                          |                                              |                                              |                                   |                             | 2                               |                                       |                                | 1.89                           |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 85                                | 34+250                                        | Rt.  | M-37-30<br>M-2-30    | 750mm×375mm<br>750mm×750mm |                                              |                                          |                                          | 5.0*                                     |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       | 0.28<br>0.56                   |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 86                                | 34+350                                        | Rt.  | REMOVAL              |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          | 2                                                    |                                                           | 1                                                            |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 87                                | 34+359                                        | Rt.  | W-94-36              | 900mm×900mm                |                                              |                                          | 4.2                                      |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       | 0.81                           |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 88                                | 34+362                                        | Lt.  | REMOVAL              |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          | 1                                                    |                                                           | 1                                                            |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
|                                   |                                               | ℄    | REMOVAL              |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          | 1                                                    |                                                           | 1                                                            |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 89                                | 34+450                                        | ℄    | W-47-48              | 1200mm×1200mm              |                                              |                                          |                                          |                                          | 2.7                                                      |                                              |                                              |                                              |                                   |                             |                                 |                                       | 1.44                           |                                |                                                  | 1                        |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
|                                   |                                               | Lt.  | W-47-48              | 1200mm×1200mm              |                                              |                                          | 9.7                                      |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       | 1.44                           |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 90                                | 34+680                                        | Rt.  | R-10-36              | 900mm×1200mm               |                                              | 8.7                                      |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       | 1.08                           |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 91                                | 34+724                                        | Lt.  | GB                   | 4.800m×3.150m              | 2                                            |                                          |                                          |                                          |                                                          |                                              |                                              | 15.0                                         |                                   |                             | 2                               |                                       |                                | 15.12                          |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 92                                | 34+731                                        | Lt.  | REMOVAL              |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          |                                                      | 1                                                         |                                                              | 2                                                           |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 93                                | 34+820                                        | Lt.  | R-10-36              | 900mm×1200mm               |                                              | 8.5                                      |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       | 1.08                           |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 94                                | 34+838                                        | Lt.  | REMOVAL              |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          | 2                                                    |                                                           | 1                                                            |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 95                                | 34+870                                        | Rt.  | GL                   | 3.900m×2.550m              | 2                                            |                                          |                                          |                                          |                                                          |                                              | 13.0                                         |                                              |                                   |                             |                                 |                                       |                                | 9.95                           |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 96                                | 34+900                                        | Lt.  | W-94-36              | 900mm×900mm                |                                              |                                          | 3.9                                      |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       | 0.81                           |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 97                                | 34+911                                        | Rt.  | REMOVAL              |                            |                                              |                                          |                                          |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       |                                |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| 98                                | 35+220                                        | ℄    | W-47-48              | 1200mm×1200mm              |                                              |                                          |                                          |                                          | 2.7                                                      |                                              |                                              |                                              |                                   |                             |                                 |                                       | 1.44                           |                                |                                                  | 1                        |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    | 1                                                                       | 2                                      | 1                                                 | 1                                         | 1                                          |
|                                   |                                               | Rt.  | W-47-48              | 1200mm×1200mm              |                                              |                                          | 9.8                                      |                                          |                                                          |                                              |                                              |                                              |                                   |                             |                                 |                                       | 1.44                           |                                |                                                  |                          |                                                      |                                                           |                                                              |                                                             |                                                       |                                                    |                                                                         |                                        |                                                   |                                           |                                            |
| TOTALS CARRIED TO GENERAL SUMMARY |                                               |      |                      |                            | 12                                           | 63.8                                     | 31.8                                     | 5.0                                      | 5.4                                                      | 34.3                                         | 13.0                                         | 15.0                                         | 8.2                               | 2                           | 10                              | 4                                     | 20.05                          | 33.44                          | 2                                                | 2                        | 13                                                   | 4                                                         | 14                                                           | 8                                                           | 4                                                     | 2                                                  | 1                                                                       | 2                                      | 1                                                 | 1                                         | 1                                          |

TRAFFIC CONTROL SIGN QUANTITIES

BEL-7-32.276



SIGN QUANTITIES

| REF. NO. | STATION           | SIDE | CODE      | SIZE          | 630                                    |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       |                                             |                                                     |                                              |                                           | 625                                                        | 631        |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|----------|-------------------|------|-----------|---------------|----------------------------------------|----------------------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------|----------------------------------------|------------------------------------------------|---------------------------|-------------------------------------|------------------|--------------------------|--------------------------|-----------------------|---------------------------------------------|-----------------------------------------------------|----------------------------------------------|-------------------------------------------|------------------------------------------------------------|------------|--------------|------------|------------------------------------------|-----------------------------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------------------------------|----------------------------------|------------------------------------------|-------------------------------------|--------------------------------------|------|------|--|
|          |                   |      |           |               | GROUND MOUNTED BEAM SUPPORT FOUNDATION | RIGID OVERHEAD SIGN SUPPORT FOUNDATION | GROUND MOUNTED SUPPORT, NO. 2 POST | GROUND MOUNTED SUPPORT, NO. 3 POST | GROUND MOUNTED SUPPORT, NO. 4 POST | ONE WAY SUPPORT, NO. 3 POST | GROUND MOUNTED SUPPORT, S100x11.5 BEAM | OVERHEAD SIGN SUPPORT, TYPE TC-9.30M, DESIGN 2 | BREAKAWAY BEAM CONNECTION | SIGN SUPPORT ASSEMBLY, POLE MOUNTED | SIGN, FLAT SHEET | SIGN, FLAT SHEET, TYPE G | SIGN, EXTRUSHEET, TYPE G | SIGN BACKING ASSEMBLY | REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL | REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL | REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE | REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL | REMOVAL OF OVERHEAD SIGN SUPPORT AND STORAGE, TYPE TC-9.30 | GROUND ROD | SIGN SERVICE | SIGN WIRED | DISCONNECT SWITCH WITH ENCLOSURE, 15 AMP | MERCURY VAPOR LUMINAIRE TYPE TC-31.21M WITH 100 WATT LAMP | BALLAST TYPE CMRI-100-240, INTEGRAL | BALLAST TYPE CMRI-175-240, INTEGRAL | MERCURY VAPOR LUMINAIRE TYPE TC-31.21M WITH 175 WATT LAMP | REMOVAL OF LUMINAIRE AND STORAGE | REMOVAL OF DISCONNECT SWITCH AND STORAGE | REMOVAL OF SIGN WIRING AND DISPOSAL | REMOVAL OF SIGN SERVICE AND DISPOSAL |      |      |  |
|          |                   |      |           |               | Each                                   | Each                                   | Meter                              | Meter                              | Meter                              | Meter                       | Meter                                  | Each                                           | Each                      | Each                                | Sq. M            | Sq. M                    | Sq. M                    | Each                  | Each                                        | Each                                                | Each                                         | Each                                      | Each                                                       | Each       | Each         | Each       | Each                                     | Each                                                      | Each                                | Each                                | Each                                                      | Each                             | Each                                     | Each                                | Each                                 | Each | Each |  |
| 99       | 35+301            | ☐    | REMOVAL   |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 100      | 35+301            | ☐    | REMOVAL   |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 101      | 35+301            | ☐    | REMOVAL   |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 102      | 35+313            | ☐    | GB        | 3.900m×2.700m |                                        | 1                                      |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          | 10.53                    |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 103      | 35+313            | ☐    | GM        | 3.300m×1.650m |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          | 5.45                     |                       |                                             |                                                     |                                              |                                           |                                                            | 1          | 1            | 1          | 1                                        |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 104      | 35+367            | Rt.  | R-10-36   | 900mm×1200mm  |                                        |                                        | 8.6                                |                                    |                                    |                             |                                        |                                                |                           |                                     |                  | 1.08                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 105      | 35+370            | Rt.  | REMOVAL   |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 106      | 35+384            | Lt.  | REMOVAL   |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       | 1                                           | 1                                                   |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      | N-45-12   | 300mm×450mm   |                                        |                                        | 3.5                                |                                    |                                    |                             |                                        |                                                |                           |                                     |                  | 0.14                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 107      | 35+384            | Rt.  | REMOVAL   |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       | 2                                           | 1                                                   |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      | N-45-12   | 300mm×450mm   |                                        |                                        | 3.5                                |                                    |                                    |                             |                                        |                                                |                           |                                     |                  | 0.14                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 108      | 35+441            | Rt.  | N-29-24   | 600mm×600mm   |                                        |                                        |                                    | 4.2                                |                                    |                             |                                        |                                                |                           |                                     |                  | 0.36                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      | IM-21-24  | 600mm×450mm   |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  | 0.27                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 109      | 35+471            | Rt.  | R-31C-48  | 1200mm×750mm  |                                        |                                        | 8.0                                |                                    |                                    |                             |                                        |                                                |                           |                                     |                  | 0.90                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 110      | 35+475            | Lt.  | R-10-36   | 900mm×1200mm  |                                        |                                        | 8.3                                |                                    |                                    |                             |                                        |                                                |                           |                                     |                  | 1.08                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 111      | 35+487            | Lt.  | REMOVAL   |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 112      | 35+554            | Rt.  | REMOVAL   |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       | 1                                           | 2                                                   |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 113      | 35+639            | Lt.  | REMOVAL   |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      |           |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 114      | 35+655            | Lt.  | M-38-30   | 750mm×375mm   |                                        |                                        |                                    | 4.3                                |                                    |                             |                                        |                                                |                           |                                     |                  | 0.28                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      | M-2-30    | 750mm×750mm   |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  | 0.56                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 115      | 35+681            | Rt.  | REMOVAL   |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       | 1                                           | 2                                                   |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      | M-50-66   | 1650mm×600mm  |                                        |                                        | 7.8                                |                                    |                                    |                             |                                        |                                                |                           |                                     |                  | 0.99                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 116      | 35+681.700        | Lt.  | R-37R-24  | 600mm×750mm   |                                        |                                        |                                    |                                    |                                    | 4.1                         |                                        |                                                |                           |                                     |                  | 0.45                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      | R-43R-36  | 900mm×300mm   |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  | 0.27                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 117      | 35+682            | Lt.  | REMOVAL   |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 118      | 35+683            | Lt.  | REMOVAL   |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       | 1                                           | 2                                                   |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      | M-2-30-3  | 937mm×750mm   | 2                                      |                                        |                                    |                                    |                                    |                             | 10.2                                   |                                                | 2                         |                                     |                  | 0.70                     |                          | 2                     |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      | M-24-24   | 600mm×450mm   |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  | 0.27                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      | D-4D      | 2400mm×600mm  |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          | 1.44                     |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      | N-29-24   | 600mm×600mm   |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  | 0.36                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      | N-15-24   | 600mm×150mm   |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  | 0.09                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 119      | 35+686            | Lt.  | R-107A-24 | 600mm×450mm   |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           | 1                                   |                  | 0.27                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 120      | 0+977 Hanover St. | Rt.  | REMOVAL   |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       | 1                                           | 1                                                   |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      | R-55-12   | 300mm×450mm   |                                        |                                        | 3.8                                |                                    |                                    |                             |                                        |                                                |                           |                                     |                  | 0.14                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      |           |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      |           |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 121      | 0+965 Hanover St. | Lt.  | REMOVAL   |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       | 2                                           | 1                                                   |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      | M-37-30   | 750mm×375mm   |                                        |                                        |                                    |                                    | 4.5                                |                             |                                        |                                                |                           |                                     |                  | 0.28                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      | M-2-30-3  | 937mm×750mm   |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  | 0.70                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 122      | 0+971 Hanover St. | Lt.  | REMOVAL   |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       | 1                                           | 1                                                   |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      |           |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      |           |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 123      | 35+716            | Lt.  | REMOVAL   |               |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  |                          |                          |                       | 1                                           | 2                                                   |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      | M-50-66   | 1650mm×600mm  |                                        |                                        | 7.8                                |                                    |                                    |                             |                                        |                                                |                           |                                     |                  | 0.99                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 124      | 35+720            | Rt.  | R-43R-36  | 900mm×300mm   |                                        |                                        |                                    |                                    |                                    | 4.1                         |                                        |                                                |                           |                                     |                  | 0.27                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
|          |                   |      | R-37R-24  | 600mm×750mm   |                                        |                                        |                                    |                                    |                                    |                             |                                        |                                                |                           |                                     |                  | 0.45                     |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |
| 125      | 35+723            | Rt.  | M-2-30-3  | 937mm×750mm   |                                        |                                        |                                    |                                    | 10.5                               |                             |                                        |                                                |                           |                                     |                  | 0.70                     |                          | 2                     |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                                           |                                     |                                     |                                                           |                                  |                                          |                                     |                                      |      |      |  |

TRAFFIC CONTROL SIGN QUANTITIES

BEL-7-32.276



# SIGN QUANTITIES

| REF. NO. | STATION | SIDE | CODE                | SIZE                           | 630                                    |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            | 625        | 631          |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|----------|---------|------|---------------------|--------------------------------|----------------------------------------|------------------------------------|------------------------------------|--|-------------------------------------------------|------------------------------------------------|------------------------------------------------------------|------------------|--------------------------|--------------------------|-----------------------|---------------------------------------------|-----------------------------------------------------|----------------------------------------------|-------------------------------------------|------------------------------------------------------------|------------|--------------|------------|------------------------------------------|-------------------------------------|-------------------------------------|------------------------------------------------------------|------------------------------------------------------------|----------------------------------|------------------------------------------|-------------------------------------|--------------------------------------|------|
|          |         |      |                     |                                | RIGID OVERHEAD SIGN SUPPORT FOUNDATION | GROUND MOUNTED SUPPORT, NO. 2 POST | GROUND MOUNTED SUPPORT, NO. 3 POST |  | GROUND MOUNTED SUPPORT, NO. 4 POST, AS PER PLAN | OVERHEAD SIGN SUPPORT, TYPE TC-9.30M, DESIGN 3 | COMBINATION OVERHEAD SIGN SUPPORT, TYPE TC-9.30M, DESIGN 4 | SIGN, FLAT SHEET | SIGN, FLAT SHEET, TYPE G | SIGN, EXTRUSHEET, TYPE G | SIGN BACKING ASSEMBLY | REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL | REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL | REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE | REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL | REMOVAL OF OVERHEAD SIGN SUPPORT AND STORAGE, TYPE TC-9.30 | GROUND ROD | SIGN SERVICE | SIGN WIRED | DISCONNECT SWITCH WITH ENCLOSURE, 15 AMP | BALLAST TYPE CMRI 100-240, INTEGRAL | BALLAST TYPE CMRI 175-240, INTEGRAL | MERCURY VAPOR LUMINAIRE, TYPE TC-31.21M WITH 100 WATT LAMP | MERCURY VAPOR LUMINAIRE, TYPE TC-31.21M WITH 175 WATT LAMP | REMOVAL OF LUMINAIRE AND STORAGE | REMOVAL OF DISCONNECT SWITCH AND STORAGE | REMOVAL OF SIGN WIRING AND DISPOSAL | REMOVAL OF SIGN SERVICE AND DISPOSAL |      |
|          |         |      |                     |                                | Each                                   | Meter                              | Meter                              |  | Meter                                           | Each                                           | Each                                                       | Sq. Meter        | Sq. Meter                | Sq. Meter                | Each                  | Each                                        | Each                                                | Each                                         | Each                                      | Each                                                       | Each       | Each         | Each       | Each                                     | Each                                | Each                                | Each                                                       | Each                                                       | Each                             | Each                                     | Each                                | Each                                 | Each |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 127      | 35+752  | Rt.  | REMOVAL             |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 128      | 35+755  | Rt.  | M-2-30<br>M-37-30   | 750mmx750mm<br>750mmx375mm     |                                        |                                    | 4.3                                |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 129      | 35+828  | Rt.  | REMOVAL             |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 130      | 35+874  | Lt.  | REMOVAL             |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          | 1                        | 2                     |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 131      | 35+900  | Lt.  | N-29-24<br>IM-19-24 | 600mmx600mm<br>600mmx450mm     |                                        |                                    | 4.3                                |  |                                                 | 0.36<br>0.27                                   |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 132      | 35+908  | Rt.  | R-10-36             | 900mmx1200mm                   |                                        |                                    | 8.7                                |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 133      | 36+007  | ☐    | GD                  | 5.400m x 1.800m                | 1                                      |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           | 1                                                          | 1          | 1            | 1          |                                          | 2                                   |                                     |                                                            | 2                                                          |                                  |                                          |                                     |                                      |      |
| 134      | 36+007  | ☐    | GB                  | 3.900m x 2.700m                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          | 2                                   |                                     |                                                            | 2                                                          |                                  |                                          |                                     |                                      |      |
| 135      | 36+021  | Lt.  | REMOVAL             |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 136      | 36+058  | ☐    | REMOVAL             |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 137      | 36+058  | ☐    | REMOVAL             |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 138      | 36+120  | ☐    | W-47-48             | 1200mm x 1200mm                |                                        |                                    |                                    |  | 2.7                                             |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         | Lt.  | W-47-48             | 1200mm x 1200mm                |                                        |                                    | 9.9                                |  |                                                 |                                                |                                                            |                  | 1                        |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 139      | 36+478  | Lt.  | REMOVAL             |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 140      | 36+535  | ☐    | GM                  | 1.800m x 1.050m                | 1                                      |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            | 1          | 1            | 1          | 1                                        | 1                                   |                                     | 1                                                          |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 141      | 36+535  | ☐    | GB                  | 3.900m x 2.700m                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 142      | 36+546  | ☐    | REMOVAL             |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 143      | 36+546  | ☐    | REMOVAL             |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 144      | 36+650  | Lt.  | R-10-36             | 900mm x 1200mm                 |                                        |                                    | 8.7                                |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 145      | 36+665  | Rt.  | R-10-36             | 900mm x 1200mm                 |                                        |                                    | 8.7                                |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 146      | 36+819  | Rt.  | REMOVAL             |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 147      | 36+859  | Lt.  | REMOVAL             |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 148      | 36+885  | Lt.  | M-38-30<br>M-2-30   | 750mm x 375mm<br>750mm x 750mm |                                        |                                    | 4.6                                |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 149      | 36+909  | Lt.  | REMOVAL             |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
| 150      | 36+911  | Rt.  | R-31FF-48           | 1200mm x 750mm                 |                                        |                                    | 8.0                                |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |
|          |         |      |                     |                                |                                        |                                    |                                    |  |                                                 |                                                |                                                            |                  |                          |                          |                       |                                             |                                                     |                                              |                                           |                                                            |            |              |            |                                          |                                     |                                     |                                                            |                                                            |                                  |                                          |                                     |                                      |      |



SIGN QUANTITIES

\* USE TYPE S YIELD POST ONLY, SEE STD DWG TC-41.20M

| REF. NO.                         | STATION | SIDE | CODE                           | SIZE                                       | 630                                    |                                    |                                    |                                    |                                    |                                        |                             |                          |                                       |                           |                  |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            | 631                              |                                          |                                     |                                      |  |
|----------------------------------|---------|------|--------------------------------|--------------------------------------------|----------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------------------|-----------------------------|--------------------------|---------------------------------------|---------------------------|------------------|--------------------------|--------------------------|-----------------------------------------|-----------------------|---------------------------------------------|-----------------------------------------------------|----------------------------------------------|-------------------------------------------|------------------------------------------------------------|----------------------------------|------------------------------------------|-------------------------------------|--------------------------------------|--|
|                                  |         |      |                                |                                            | GROUND MOUNTED BEAM SUPPORT FOUNDATION | GROUND MOUNTED SUPPORT, NO. 2 POST | GROUND MOUNTED SUPPORT, NO. 3 POST | GROUND MOUNTED SUPPORT, NO. 4 POST | GROUND MOUNTED SUPPORT, NO. 6 POST | GROUND MOUNTED SUPPORT, S100x11.5 BEAM | ONE WAY SUPPORT, NO. 3 POST | STREET NAME SIGN SUPPORT | STREET NAME SIGN SUPPORT, AS PER PLAN | BREAKAWAY BEAM CONNECTION | SIGN, FLAT SHEET | SIGN, FLAT SHEET, TYPE G | SIGN, EXTRUSHEET, TYPE G | SIGN, DOUBLE FACED, STREET NAME, TYPE G | SIGN BACKING ASSEMBLY | REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL | REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL | REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE | REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL | REMOVAL OF OVERHEAD SIGN SUPPORT AND STORAGE, TYPE TC-9.30 | REMOVAL OF LUMINAIRE AND STORAGE | REMOVAL OF DISCONNECT SWITCH AND STORAGE | REMOVAL OF SIGN WIRING AND DISPOSAL | REMOVAL OF SIGN SERVICE AND DISPOSAL |  |
|                                  |         |      |                                |                                            | Each                                   | Meter                              | Meter                              | Meter                              | Meter                              | Meter                                  | Meter                       | Each                     | Each                                  | Each                      | Sq. Meter        | Sq. Meter                | Sq. Meter                | Each                                    | Each                  | Each                                        | Each                                                | Each                                         | Each                                      | Each                                                       | Each                             | Each                                     | Each                                | Each                                 |  |
|                                  |         |      |                                |                                            |                                        |                                    |                                    |                                    |                                    |                                        |                             |                          |                                       |                           |                  |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 151                              | 36+929  | Lt.  | R-1-48<br>D-14                 | 1200mmx1200mm                              |                                        |                                    | 9.5*                               |                                    |                                    |                                        |                             | 1                        |                                       | 1.44                      |                  | 1                        |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
|                                  |         |      | R-107B-24                      | 600mmx450mm                                |                                        |                                    |                                    |                                    |                                    |                                        |                             |                          | 0.27                                  |                           |                  |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 152                              | 36+939  | Rt.  | REMOVAL<br>D-14                |                                            |                                        |                                    |                                    |                                    |                                    |                                        |                             | 1                        |                                       |                           |                  | 1                        |                          | 1                                       | 1                     |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 153                              | 36+940  | Rt.  | REMOVAL<br>M-50-66             | 1650mmx600mm                               |                                        | 7.8                                |                                    |                                    |                                    |                                        |                             |                          |                                       | 0.99                      |                  |                          |                          | 1                                       | 2                     |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 154                              | 36+960  | Lt.  | R-43R-36                       | 900mmx300mm                                |                                        |                                    |                                    |                                    |                                    |                                        | 4.1                         |                          |                                       | 0.27                      |                  |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
|                                  |         |      | R-37R-24                       | 600mmx750mm                                |                                        |                                    |                                    |                                    |                                    |                                        |                             |                          | 0.45                                  |                           |                  |                          |                          |                                         |                       |                                             |                                                     | 2                                            |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 155                              | 36+971  | Rt.  | REMOVAL                        |                                            |                                        |                                    |                                    |                                    |                                    |                                        |                             |                          |                                       |                           |                  |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 156                              | 36+990  | Rt.  | N-45-12                        | 300mmx450mm                                |                                        | 3.5                                |                                    |                                    |                                    |                                        |                             |                          | 0.14                                  |                           |                  |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 157                              | 36+990  | Lt.  | REMOVAL<br>N-45-12             | 300mmx450mm                                |                                        | 3.5                                |                                    |                                    |                                    |                                        |                             |                          | 0.14                                  |                           |                  |                          |                          |                                         | 1                     | 1                                           |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
|                                  |         |      |                                |                                            |                                        |                                    |                                    |                                    |                                    |                                        |                             |                          |                                       |                           |                  |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
|                                  |         |      |                                |                                            |                                        |                                    |                                    |                                    |                                    |                                        |                             |                          |                                       |                           |                  |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
|                                  |         |      |                                |                                            |                                        |                                    |                                    |                                    |                                    |                                        |                             |                          |                                       |                           |                  |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 158                              | 36+992  | Rt.  | REMOVAL                        |                                            |                                        |                                    |                                    |                                    |                                    |                                        |                             |                          |                                       |                           |                  |                          |                          |                                         |                       |                                             |                                                     | 2                                            |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 159                              | 37+010  | Rt.  | M-37-30<br>M-2-30<br>R-10-36   | 750mmx375mm<br>750mmx750mm<br>900mmx1200mm |                                        |                                    | 9.5                                |                                    |                                    |                                        |                             |                          |                                       | 0.28<br>0.56<br>1.08      |                  |                          | 1                        |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 160                              | 37+028  | Rt.  | REMOVAL                        |                                            |                                        |                                    |                                    |                                    |                                    |                                        |                             |                          |                                       |                           |                  |                          |                          |                                         | 2                     | 1                                           |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 161                              | 37+113  | Rt.  | GM                             | 2.700m x 0.900m                            |                                        |                                    |                                    | 9.3                                |                                    |                                        |                             |                          |                                       |                           | 2.43             |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 162                              | 37+113  | Lt.  | GM                             | 1.800m x 0.900m                            |                                        |                                    | 8.5                                |                                    |                                    |                                        |                             |                          |                                       |                           | 1.62             |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 163                              | 37+125  | ☉    | REMOVAL                        |                                            |                                        |                                    |                                    |                                    |                                    |                                        |                             |                          |                                       |                           |                  |                          |                          |                                         |                       |                                             | 1                                                   |                                              |                                           | 2                                                          |                                  | 1                                        |                                     |                                      |  |
| 164                              | 37+125  | ☉    | REMOVAL                        |                                            |                                        |                                    |                                    |                                    |                                    |                                        |                             |                          |                                       |                           |                  |                          |                          |                                         |                       |                                             | 1                                                   |                                              | 1                                         | 1                                                          | 1                                | 1                                        | 1                                   |                                      |  |
| 165                              | 37+193  | Rt.  | REMOVAL                        |                                            |                                        |                                    |                                    |                                    |                                    |                                        |                             |                          |                                       |                           |                  |                          |                          |                                         |                       | 2                                           | 1                                                   |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 166                              | 37+200  | Lt.  | R-10-36                        | 900mmx1200mm                               |                                        |                                    | 9.2                                |                                    |                                    |                                        |                             |                          |                                       | 1.08                      |                  |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 167                              | 37+272  | Lt.  | M-38-30<br>M-2-30              | 750mmx375mm<br>750mmx750mm                 |                                        |                                    | 4.5                                |                                    |                                    |                                        |                             |                          |                                       | 0.28<br>0.56              |                  |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 168                              | 37+289  | Rt.  | R-31FF-48                      | 1200mmx750mm                               |                                        | 7.6                                |                                    |                                    |                                    |                                        |                             |                          |                                       | 0.90                      |                  |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 169                              | 37+307  | Lt.  | REMOVAL<br>D-14                |                                            |                                        |                                    |                                    |                                    |                                    |                                        |                             | 1                        |                                       |                           |                  | 1                        |                          | 1                                       | 2                     |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 170                              | 37+311  | Lt.  | REMOVAL<br>R-1-48<br>R-107B-24 | 1200mmx1200mm<br>600mmx450mm               |                                        |                                    | 10.0                               |                                    |                                    |                                        |                             |                          |                                       | 1.44<br>0.27              |                  |                          |                          | 1                                       | 1                     |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 171                              | 37+316  | Rt.  | REMOVAL<br>D-14                |                                            |                                        |                                    |                                    |                                    |                                    |                                        |                             | 1                        |                                       |                           |                  | 1                        |                          |                                         | 1                     | 2                                           |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 172                              | 37+326  | Rt.  | REMOVAL<br>M-50-66             | 1650mmx600mm                               |                                        | 7.8                                |                                    |                                    |                                    |                                        |                             |                          |                                       | 0.99                      |                  |                          |                          |                                         | 1                     | 2                                           |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 173                              | 37+339  | Lt.  | R-43R-36<br>R-37R-24           | 900mmx300mm<br>600mmx750mm                 |                                        |                                    |                                    |                                    |                                    |                                        | 4.1                         |                          |                                       | 0.27<br>0.45              |                  |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 174                              | 37+352  | Rt.  | REMOVAL                        |                                            |                                        |                                    |                                    |                                    |                                    |                                        |                             |                          |                                       |                           |                  |                          |                          |                                         |                       |                                             |                                                     | 2                                            |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 175                              | 37+380  | Rt.  | R-10-36<br>M-2-30<br>M-38-30   | 900mmx1200mm<br>750mmx750mm<br>750mmx375mm |                                        |                                    |                                    | 9.5                                |                                    |                                        |                             |                          |                                       | 1.08<br>0.56<br>0.28      |                  |                          | 1                        |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 176                              | 37+491  | ☉    | REMOVAL                        |                                            |                                        |                                    |                                    |                                    |                                    |                                        |                             |                          |                                       |                           |                  |                          |                          |                                         |                       |                                             | 1                                                   |                                              | 1                                         | 2                                                          | 1                                | 1                                        | 1                                   |                                      |  |
| 177                              | 37+500  | Rt.  | GM                             | 2.700m x 1.200m                            |                                        |                                    |                                    |                                    | 9.8                                |                                        |                             |                          |                                       |                           | 3.24             |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 178                              | 37+500  | Lt.  | R-10-36                        | 900mmx1200mm                               |                                        |                                    | 9.2                                |                                    |                                    |                                        |                             |                          |                                       | 1.08                      |                  |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 179                              | 37+500  | Lt.  | GM                             | 2.700m x 0.900m                            | 2                                      |                                    |                                    |                                    |                                    | 8.6                                    |                             |                          | 2                                     |                           | 2.43             |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 180                              | 37+545  | Lt.  | REMOVAL                        |                                            |                                        |                                    |                                    |                                    |                                    |                                        |                             |                          |                                       |                           |                  |                          |                          |                                         |                       |                                             |                                                     |                                              | 1                                         |                                                            |                                  |                                          |                                     |                                      |  |
| 181                              | 37+620  | Lt.  | REMOVAL                        |                                            |                                        |                                    |                                    |                                    |                                    |                                        |                             |                          |                                       |                           |                  |                          |                          |                                         |                       |                                             |                                                     | 2                                            |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| 182                              | 37+624  | Lt.  | M-38-30<br>M-2-30              | 750mmx375mm<br>750mmx750mm                 |                                        |                                    | 4.5                                |                                    |                                    |                                        |                             |                          |                                       | 0.28<br>0.56              |                  |                          |                          |                                         |                       |                                             |                                                     |                                              |                                           |                                                            |                                  |                                          |                                     |                                      |  |
| TOTAL CARRIED TO GENERAL SUMMARY |         |      |                                |                                            | 2                                      | 30.2                               | 45.9                               | 37.8                               | 9.8                                | 8.6                                    | 8.2                         | 3                        | 1                                     | 2                         | 0.28             | 15.42                    | 9.72                     | 4                                       | 2                     | 11                                          | 13                                                  | 3                                            | 9                                         | 2                                                          | 5                                | 2                                        | 3                                   | 2                                    |  |

TRAFFIC CONTROL SIGN QUANTITIES

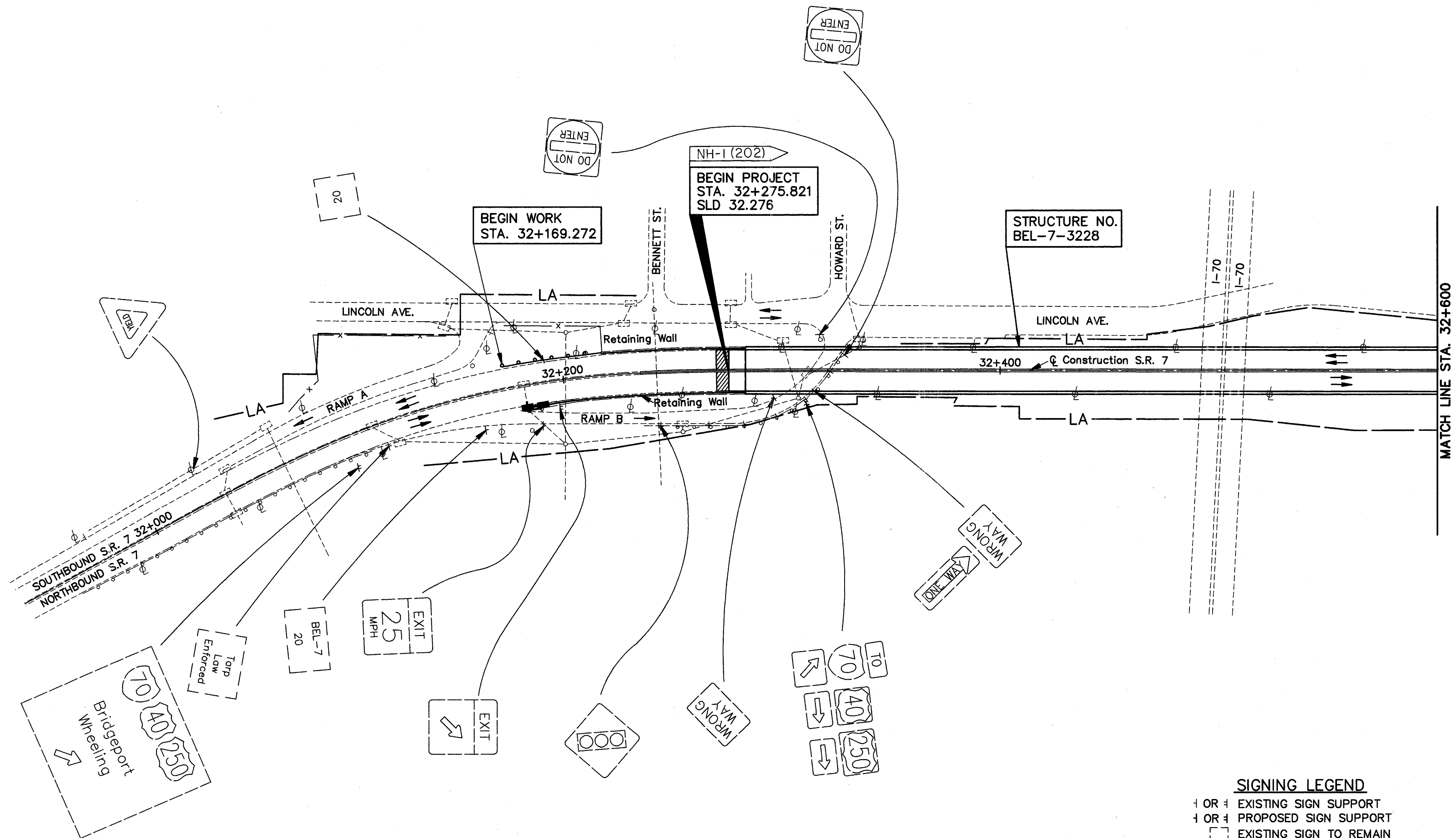
BEL-7-32.276

131  
242







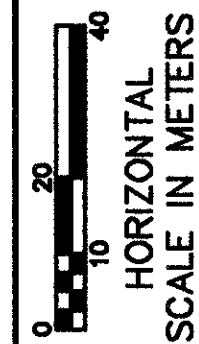


- SIGNING LEGEND**
- + OR + EXISTING SIGN SUPPORT
  - + OR + PROPOSED SIGN SUPPORT
  - EXISTING SIGN TO REMAIN
  - PROPOSED SIGN
  - ⊗ EXISTING SIGN REMOVED
  - PROPOSED OVERHEAD SIGN IN BARRIER
  - EXISTING OVERHEAD SIGN IN MEDIAN

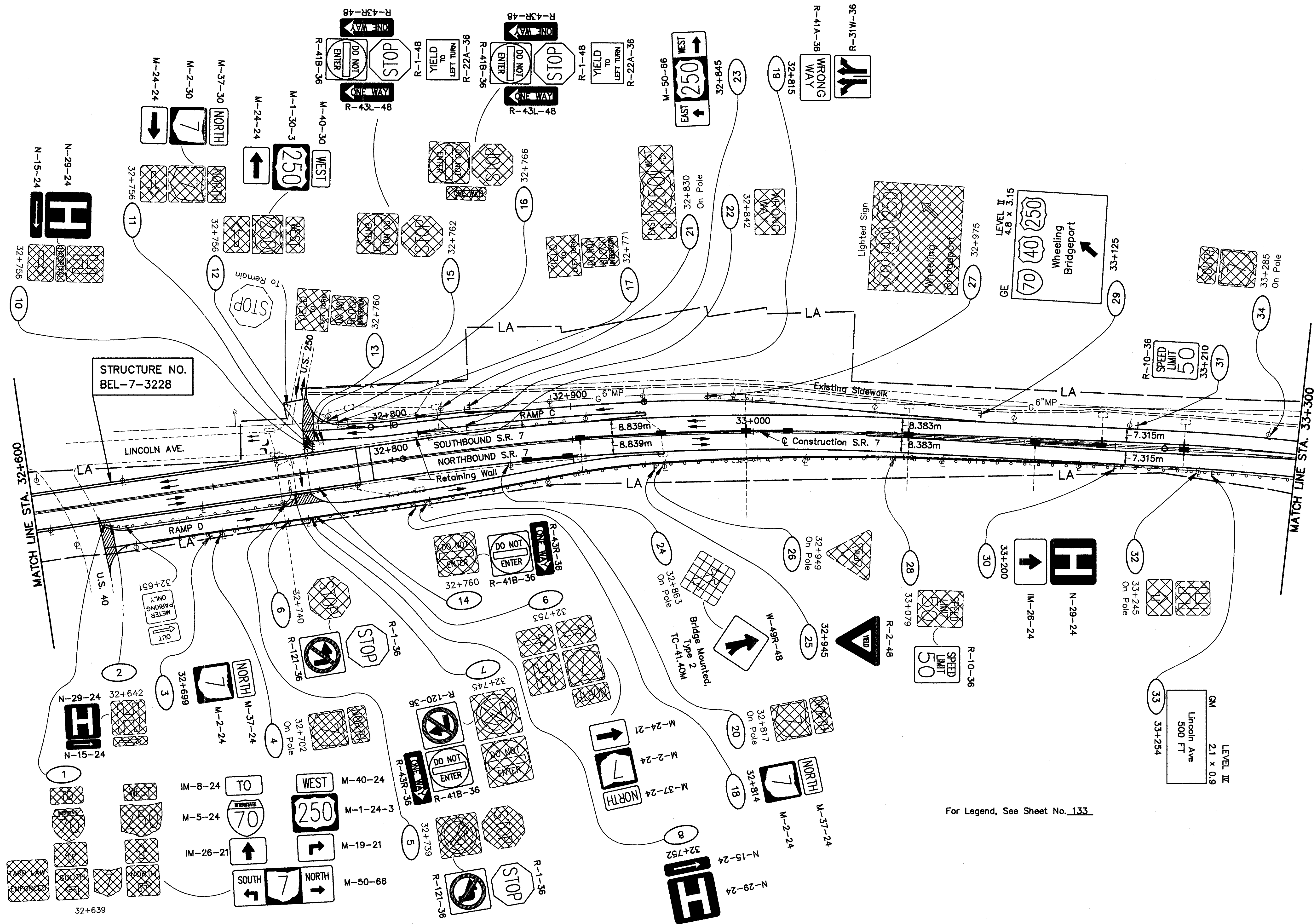
**SIGNING PLAN**  
**STA. 32+169.272 TO STA. 32+600**

**BEL-7-32.276**

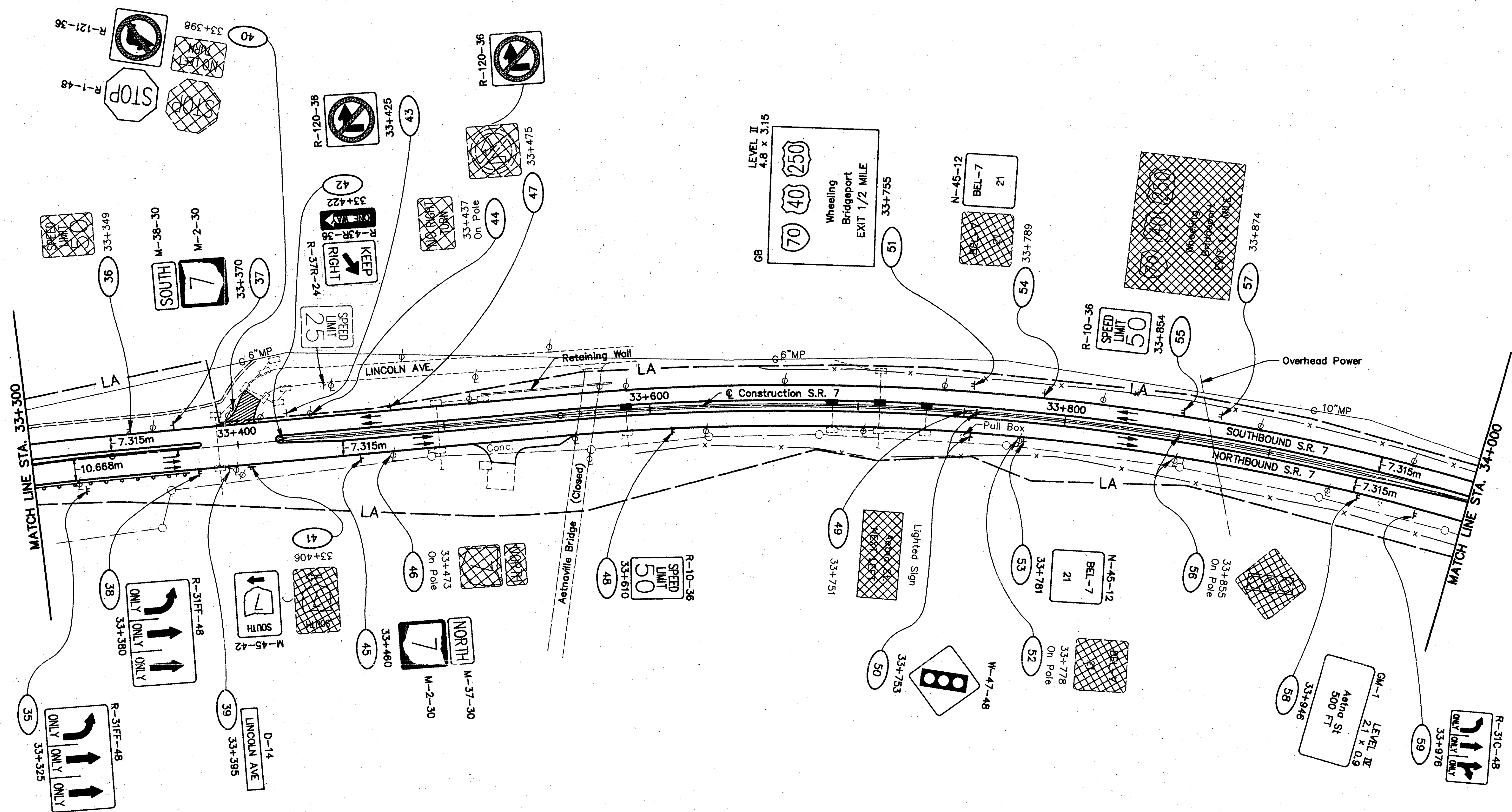
|            |     |         |     |
|------------|-----|---------|-----|
| CALCULATED | SAH | CHECKED | WCR |
|------------|-----|---------|-----|









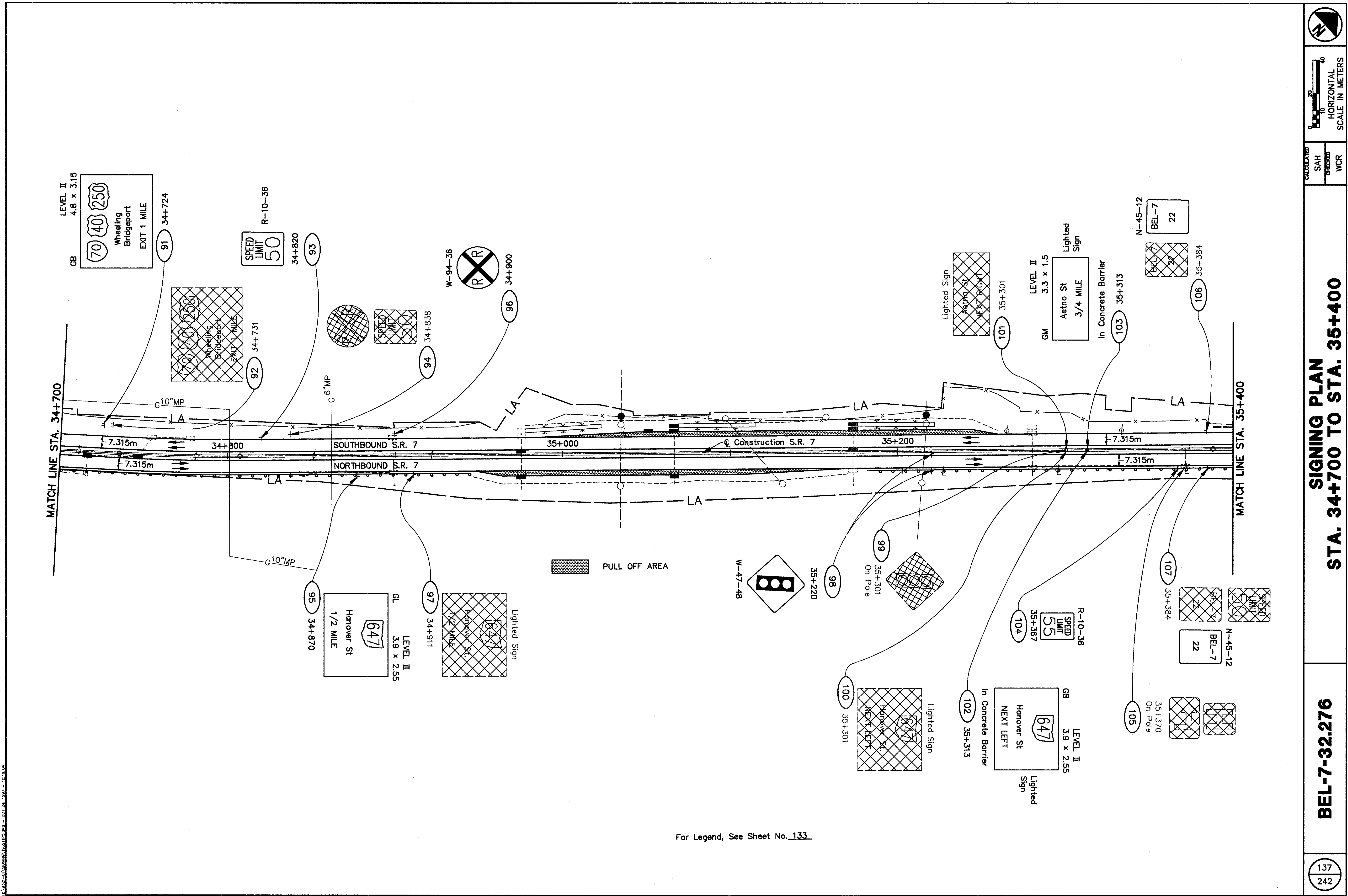


W. E. QUICKSALL AND ASSOCIATES INC. CONSULTING ENGINEERS





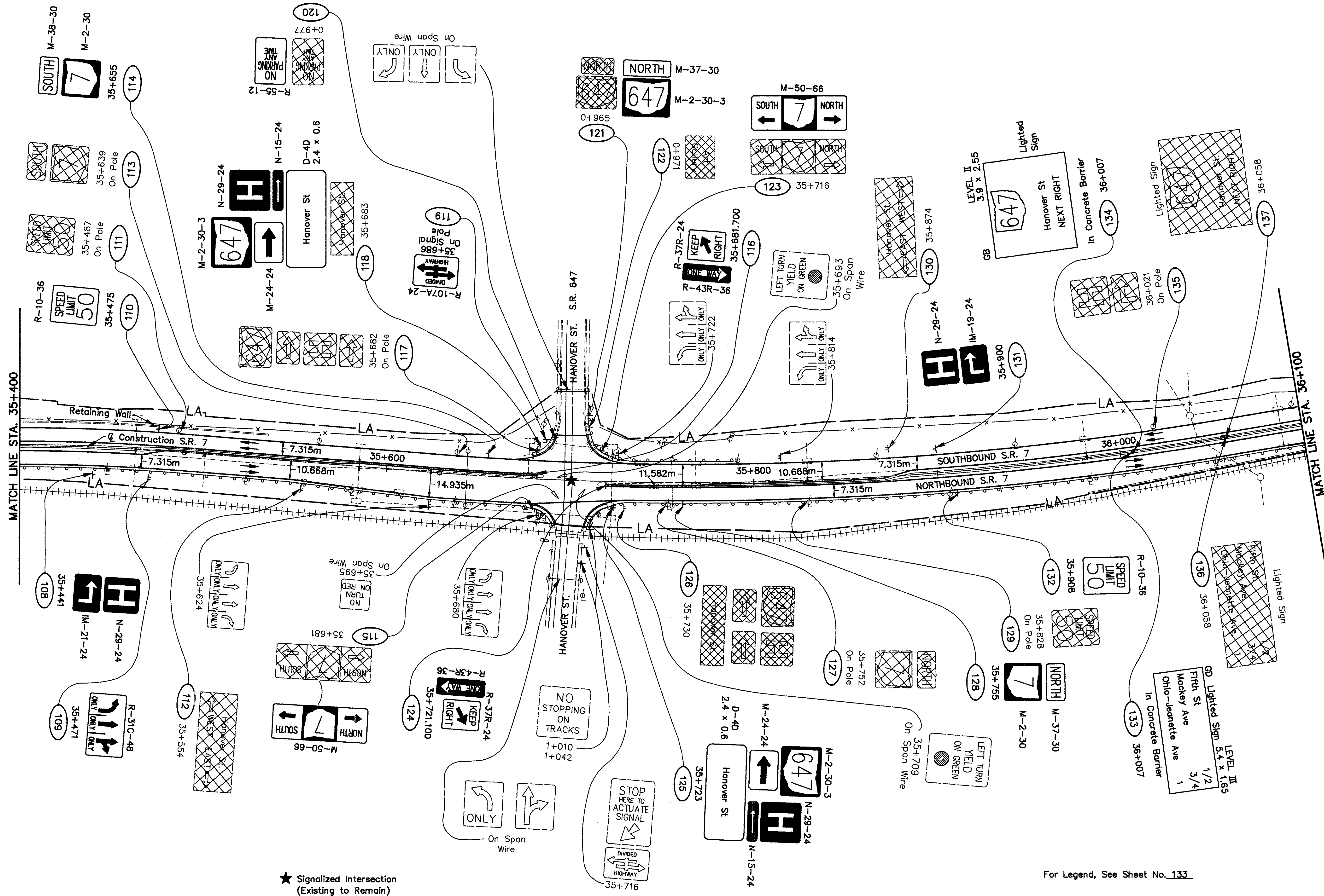




For Legend, See Sheet No. 133



13321-01 SIGNING PLAN 12/22/1997 - 03:13:18



★ Signalized Intersection  
(Existing to Remain)

For Legend, See Sheet No. 133



0 10 20 30 40  
HORIZONTAL  
SCALE IN METERS

CALCULATED  
SAH  
CHECKED  
WCR

**SIGNING PLAN**  
**STA. 35+400 TO STA. 36+100**

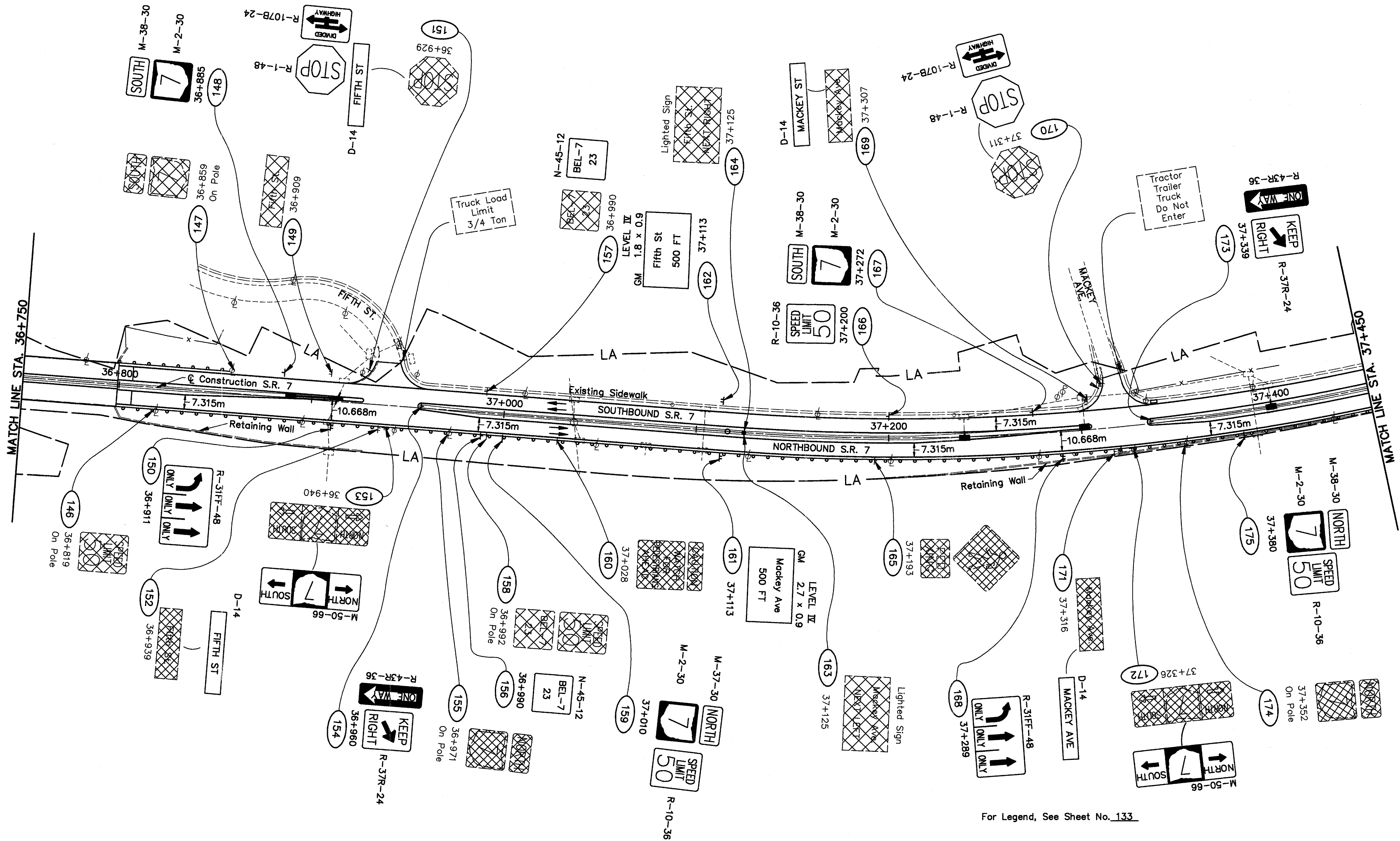
**BEL-7-32.276**

138  
242



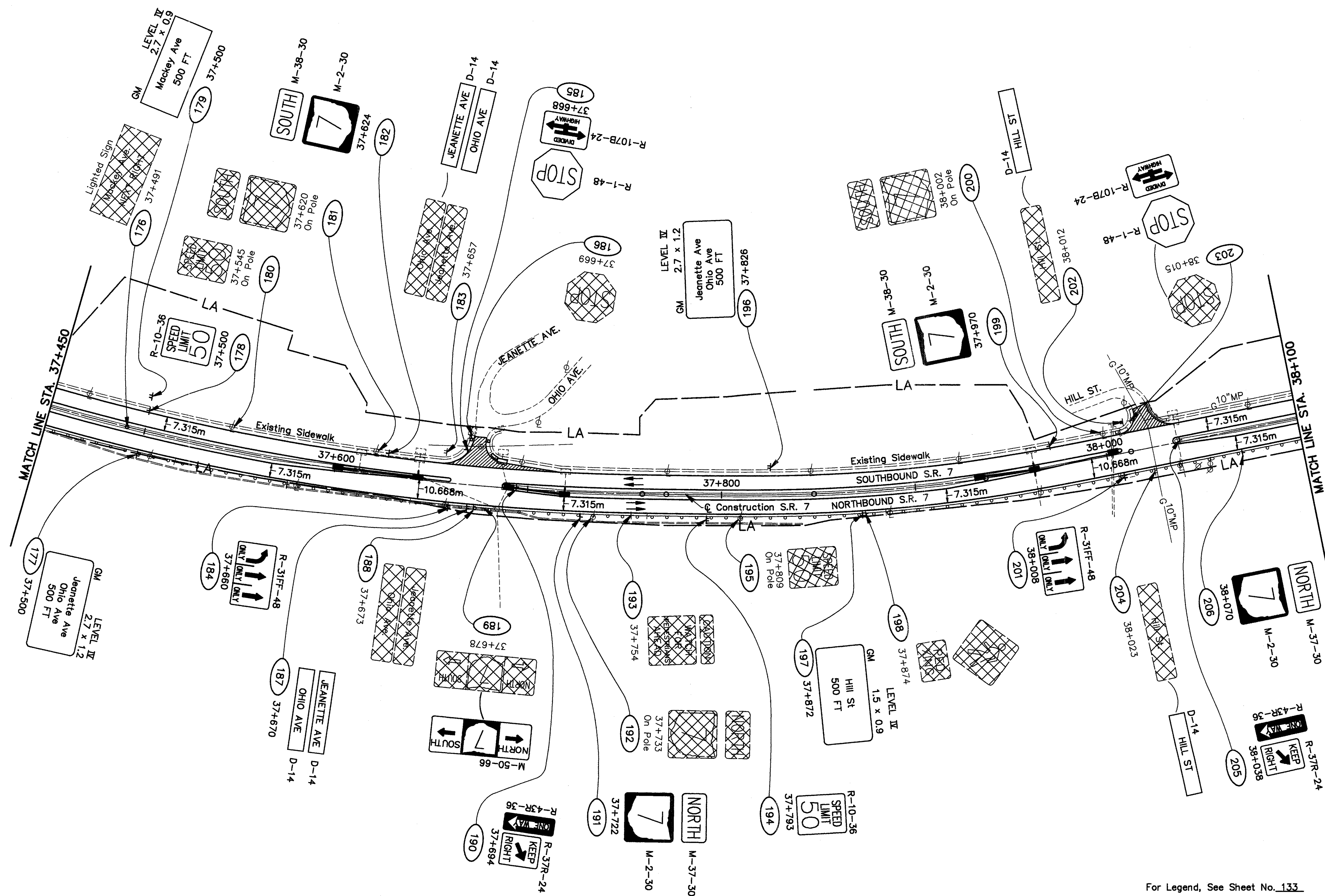






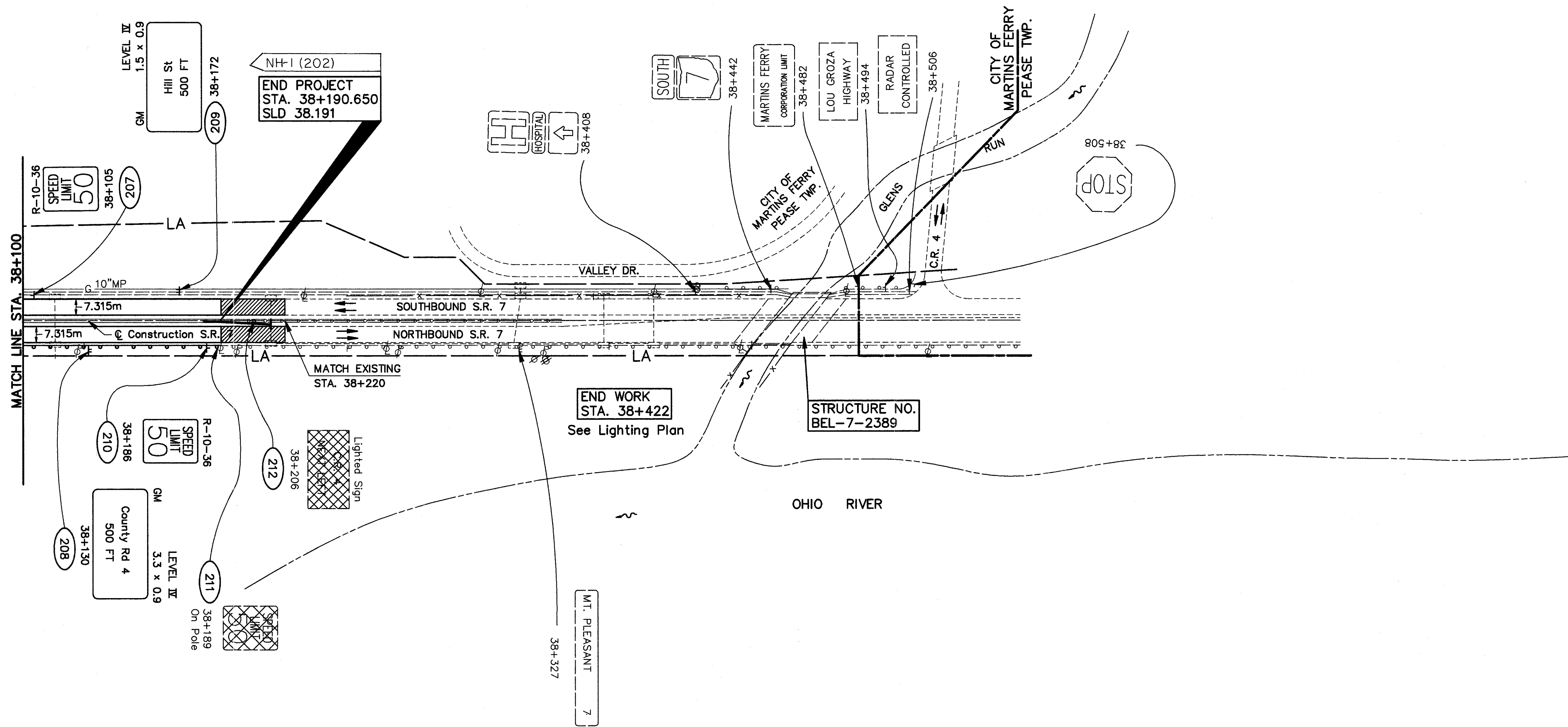
For Legend, See Sheet No. 133







H:\322-01\SIGNING\322176.dwg - 03/28/1997 - 15:24:28



For Legend, See Sheet No. 133



0 20 40  
HORIZONTAL  
SCALE IN METERS

CALCULATED  
SAH  
CHECKED  
WCR

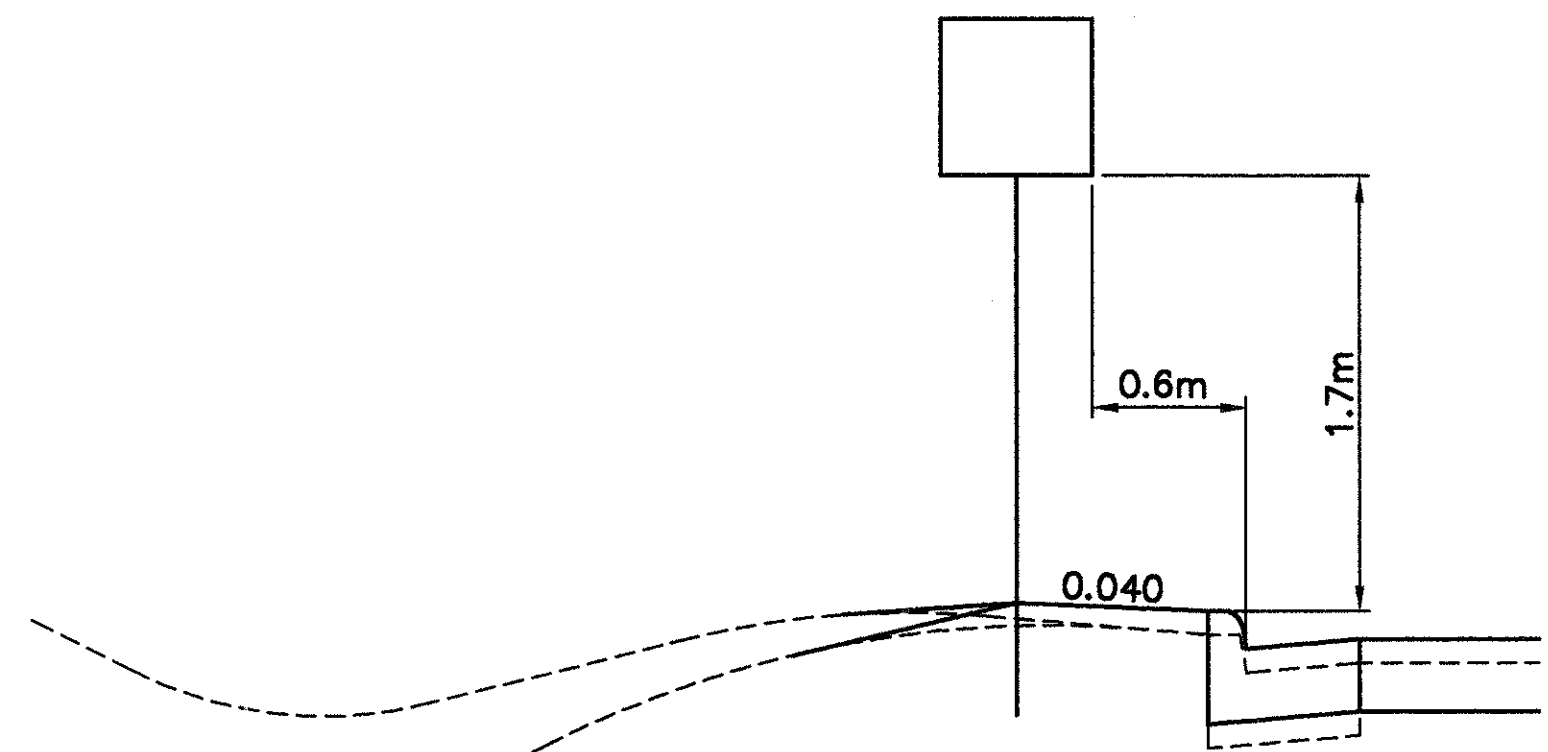
**SIGNING PLAN**  
**STA. 38+100 TO STA. 38+422**

**BEL-7-32.276**

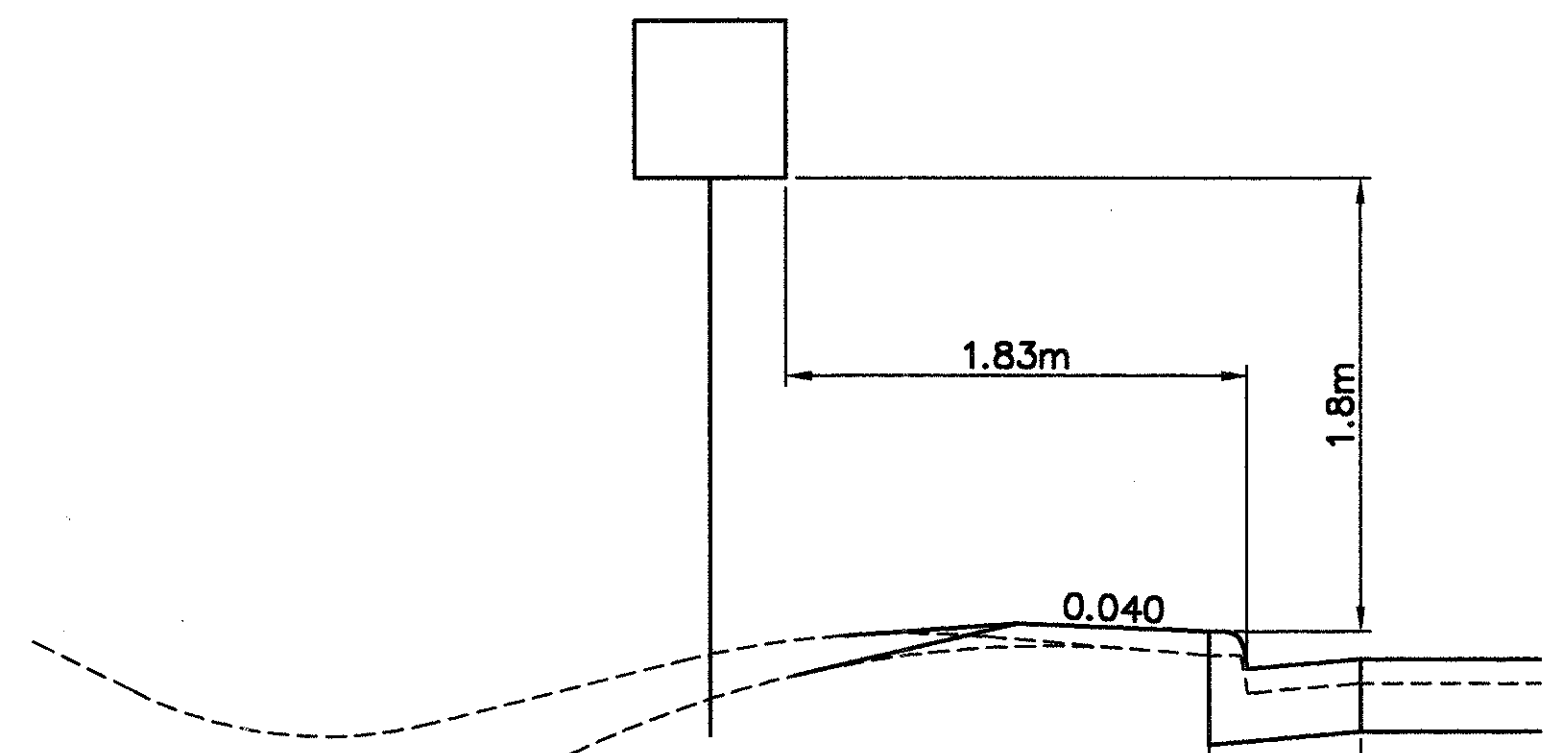
142  
242



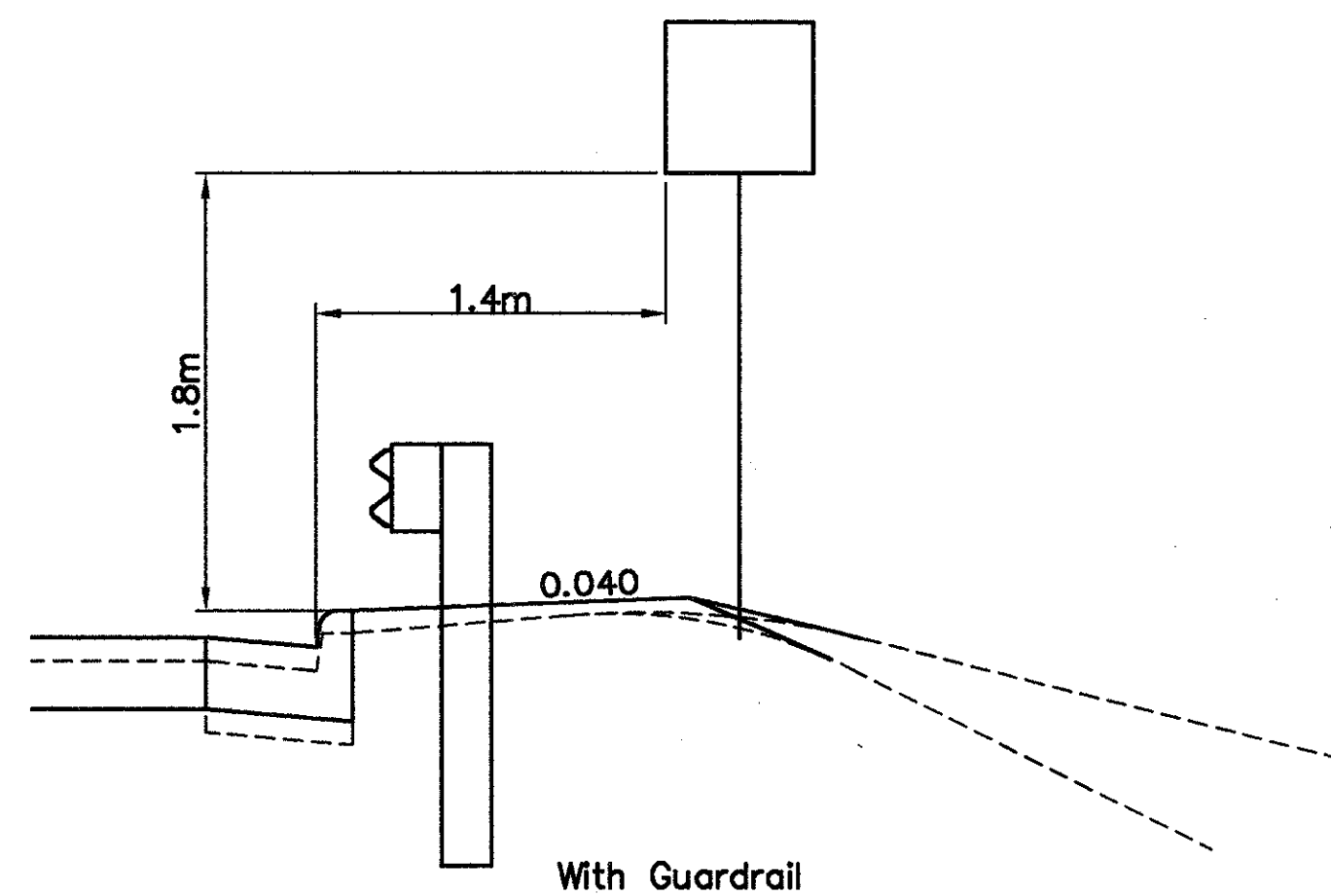
H:\321-01\32101\32101.dwg - OCT 27, 1997 - 11:28:18



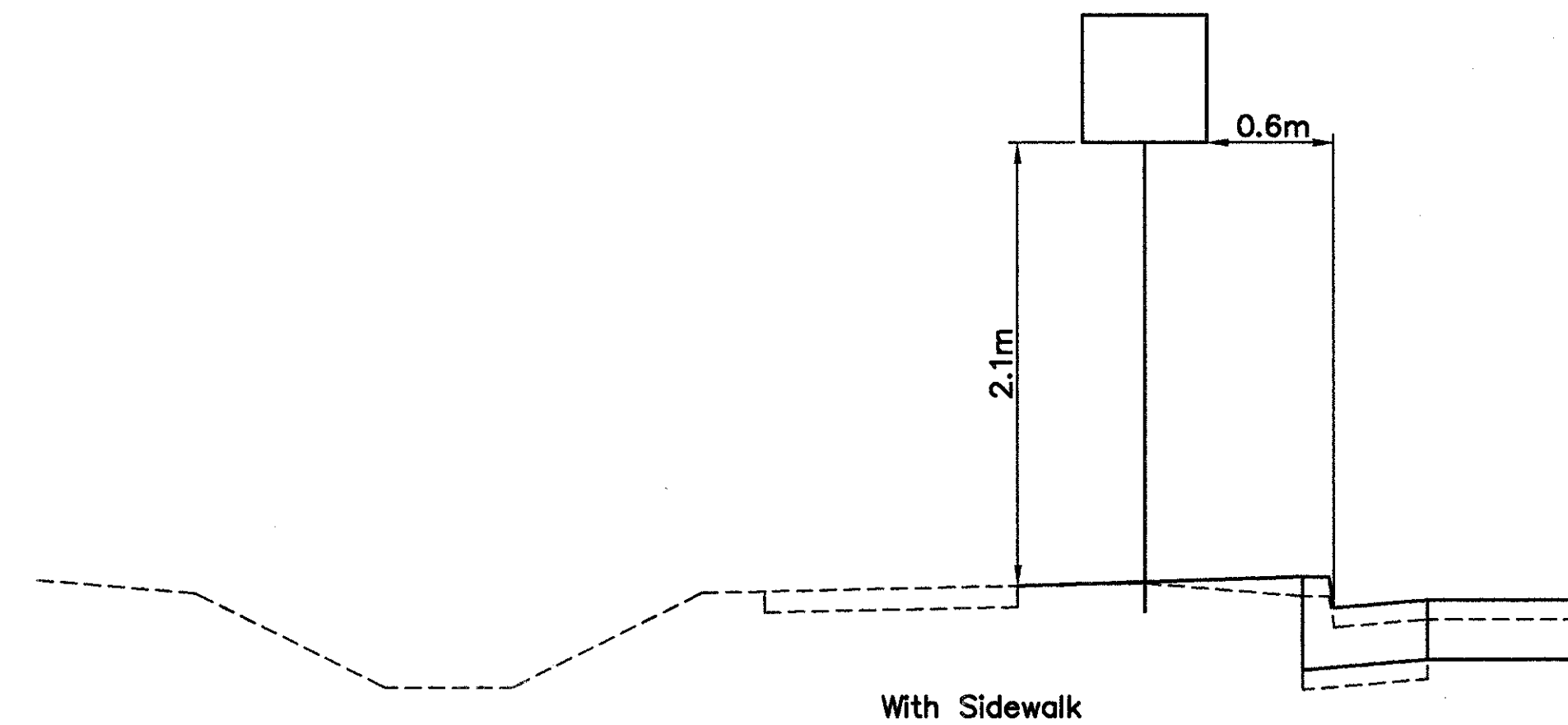
Without Guardrail  
To avoid ditch or obstructed view



Without Guardrail  
Preferred



With Guardrail



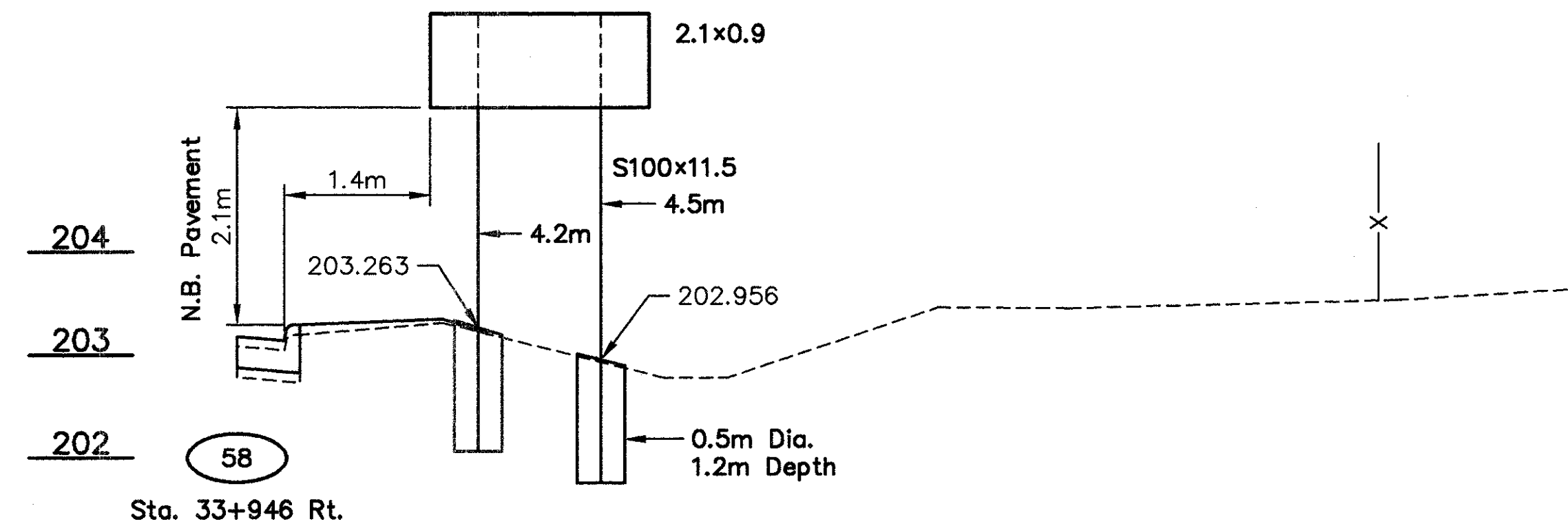
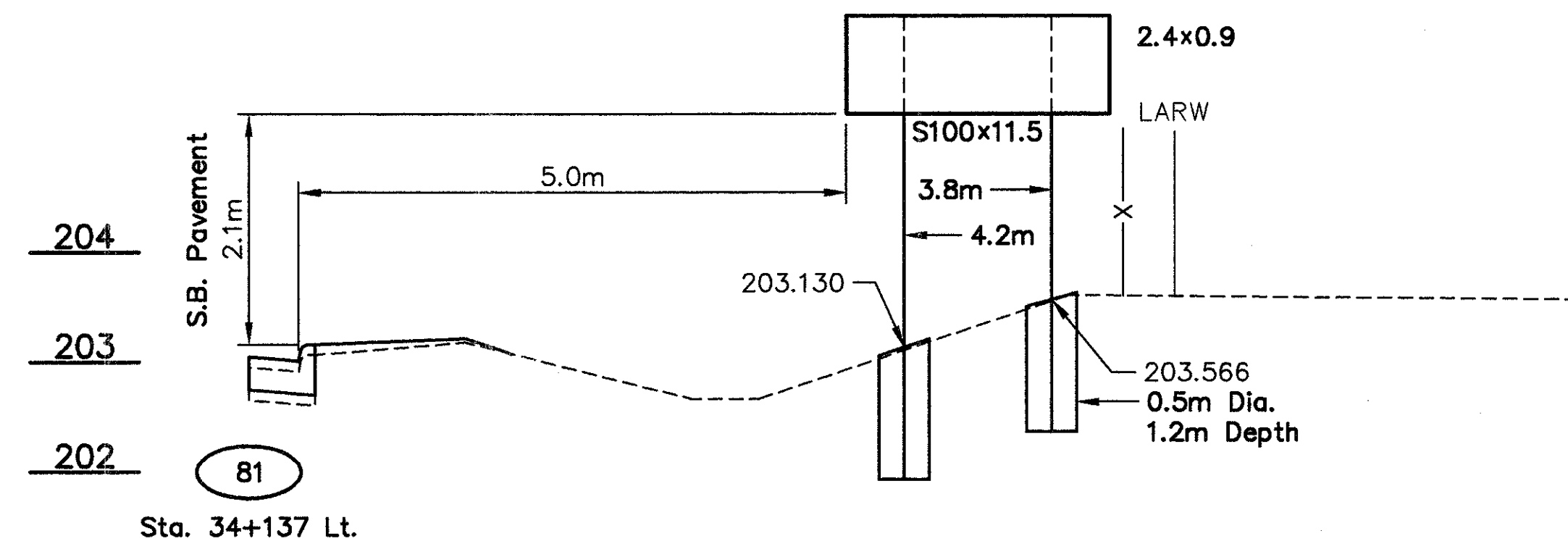
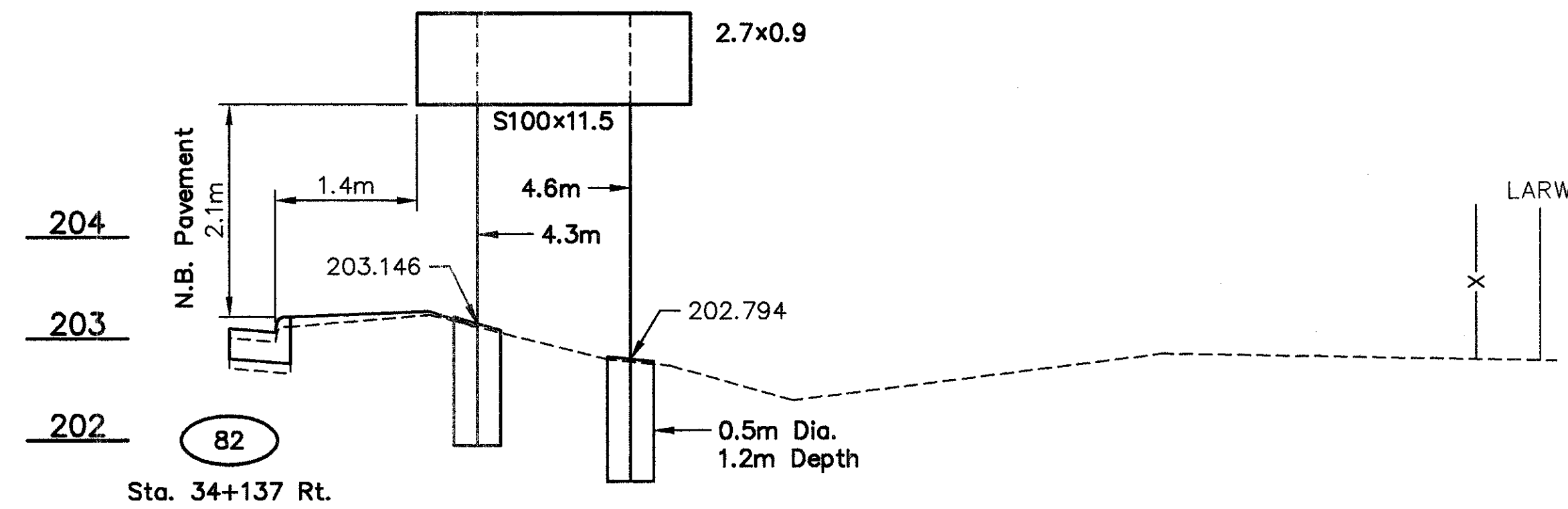
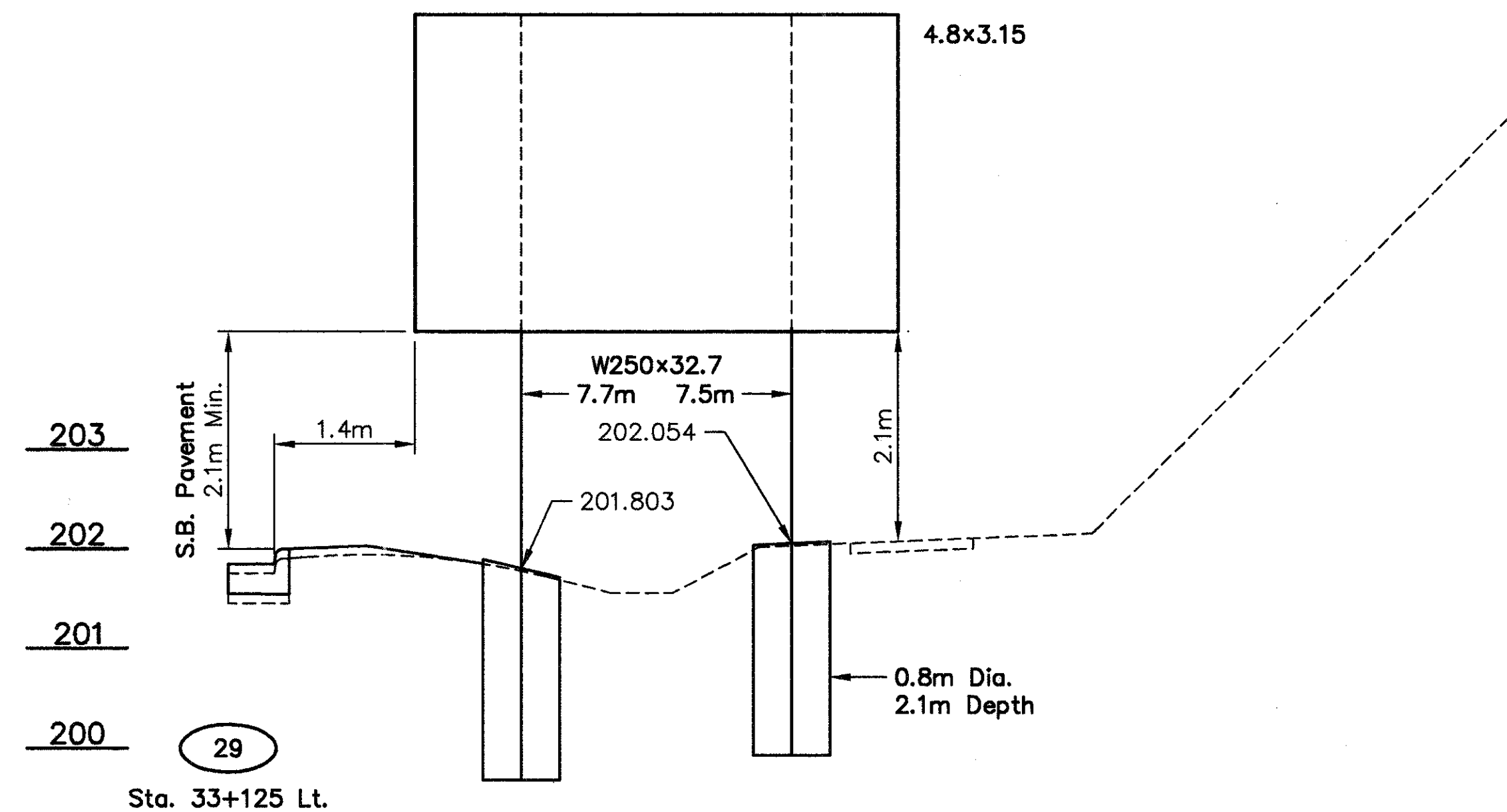
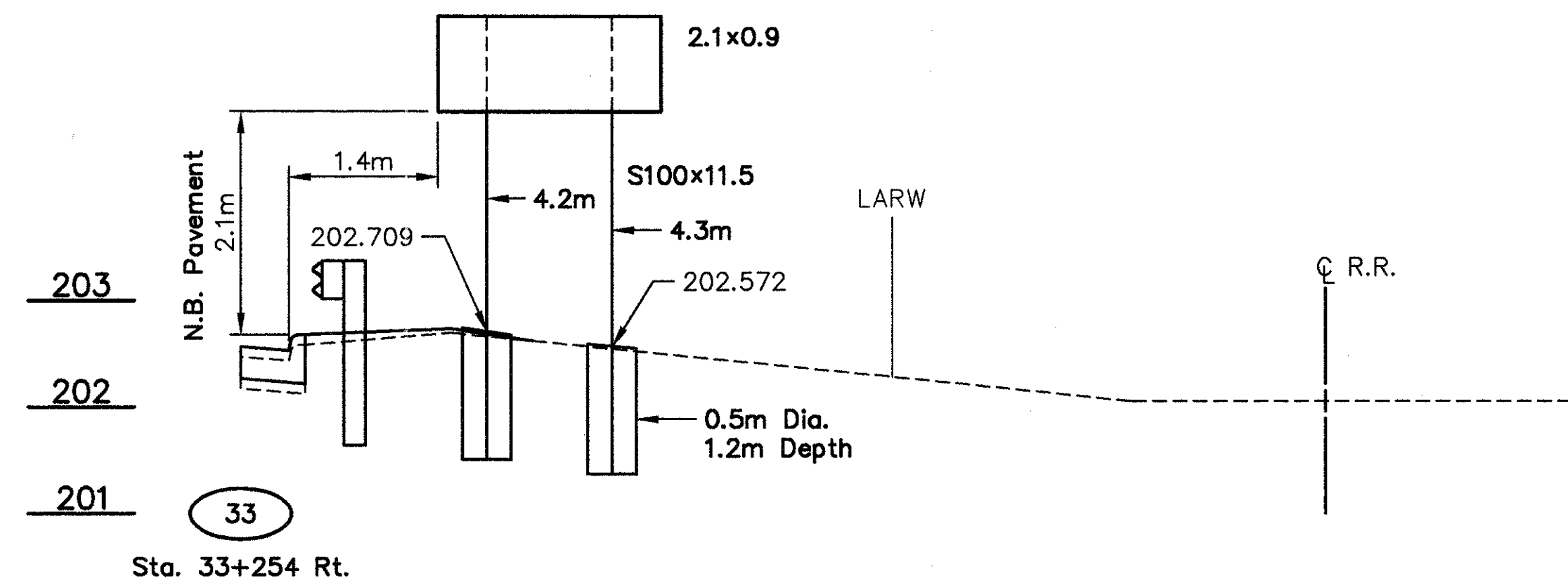
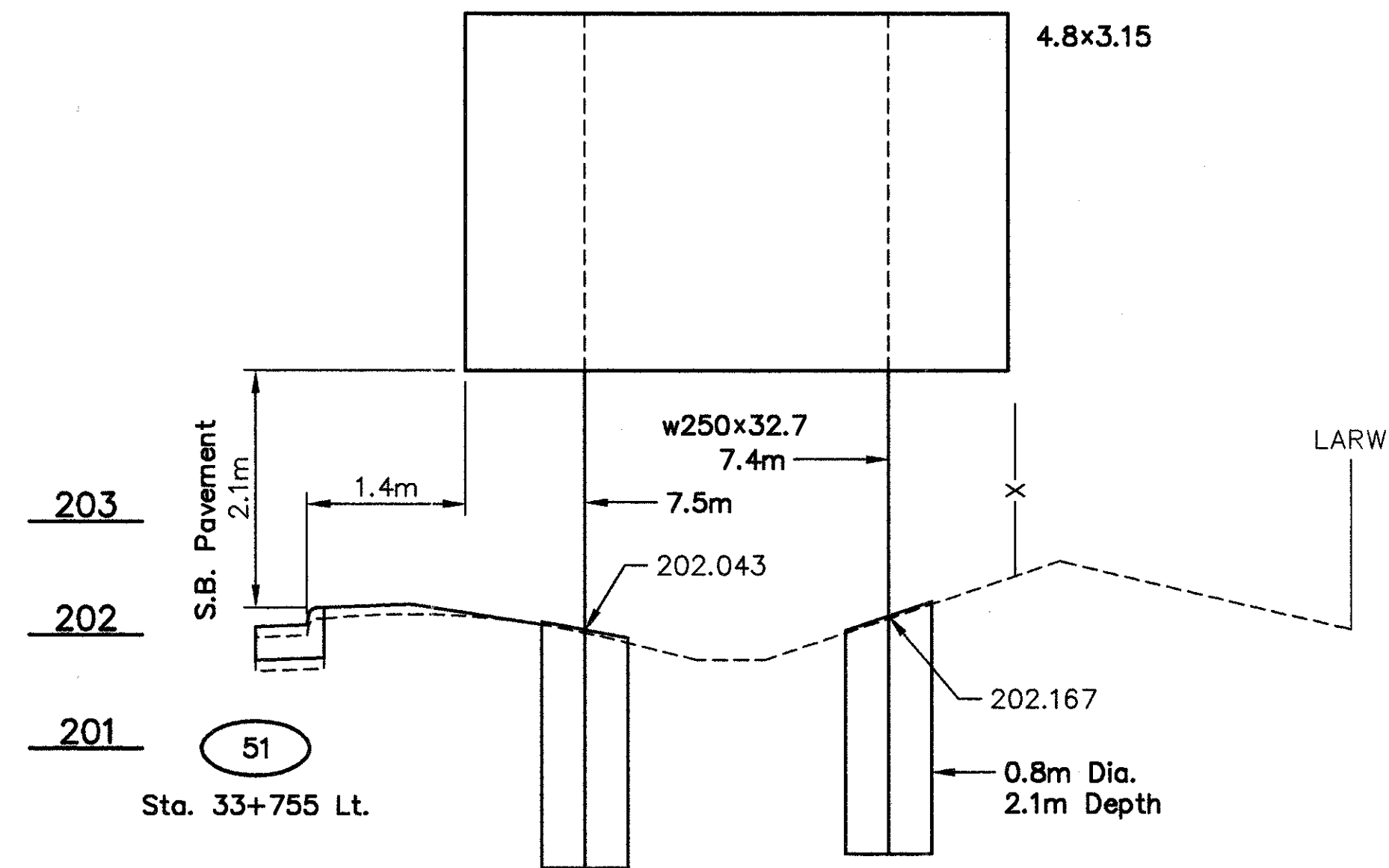
With Sidewalk

TYPICAL SIGN PLACEMENT  
REGULATORY, WARNING, AND ROUTE MARKER SIGNS



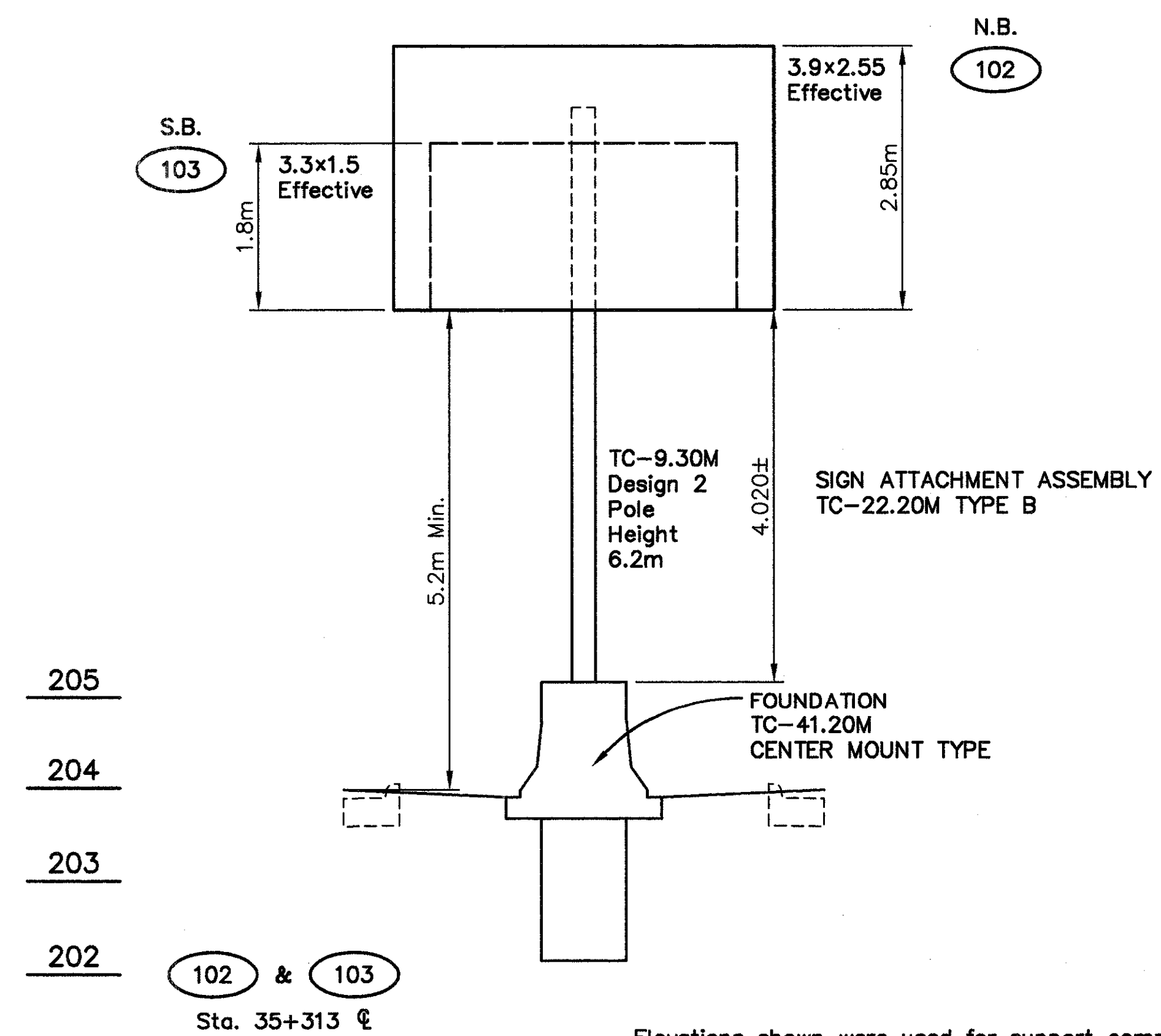
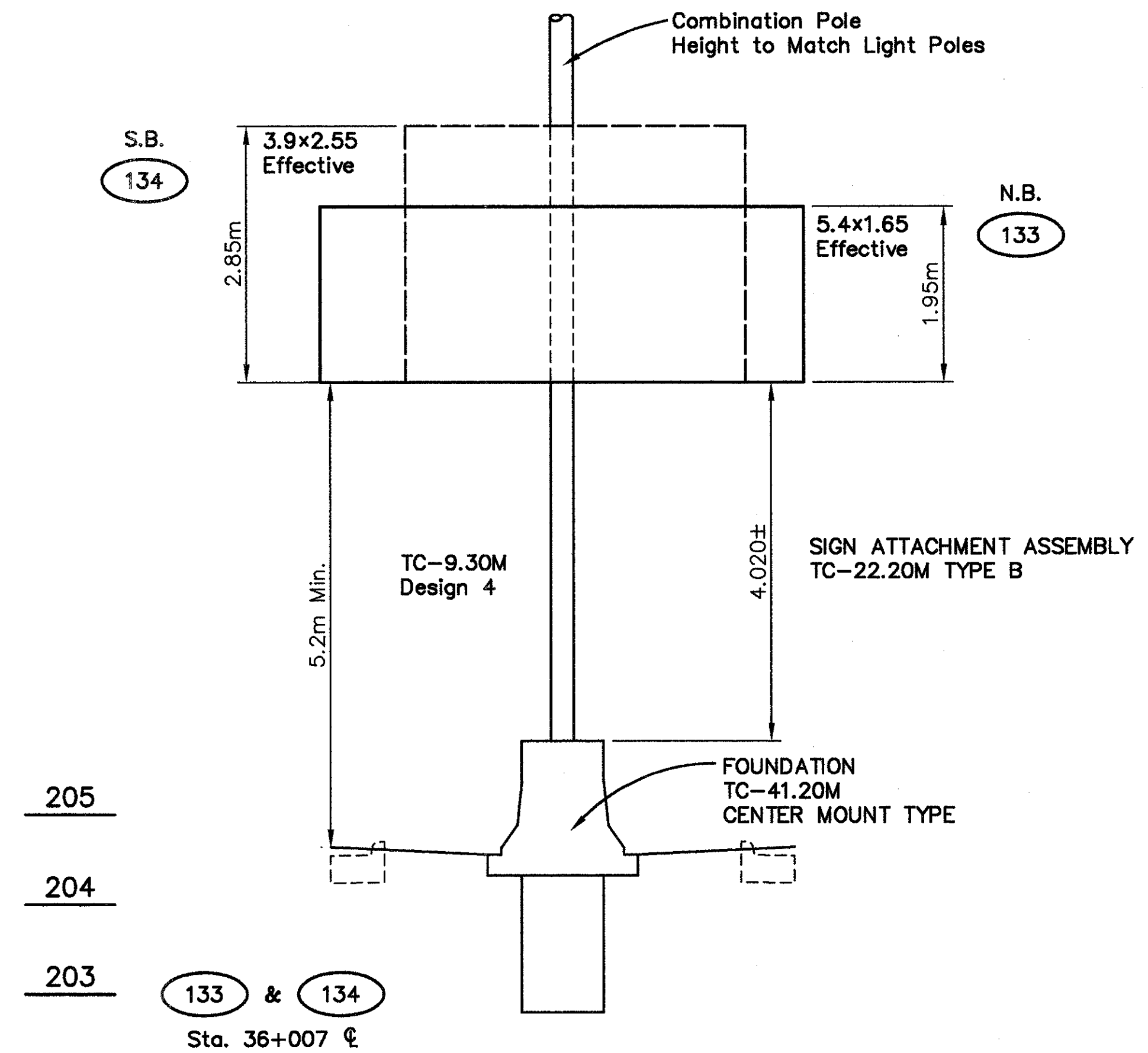
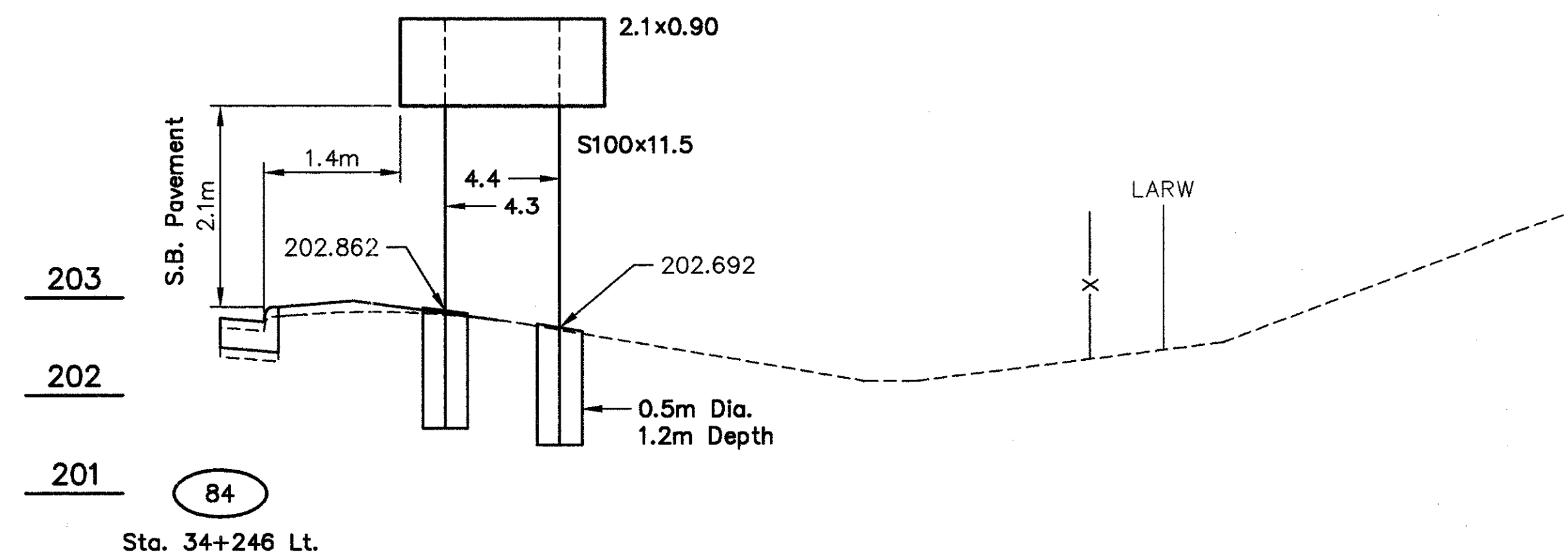
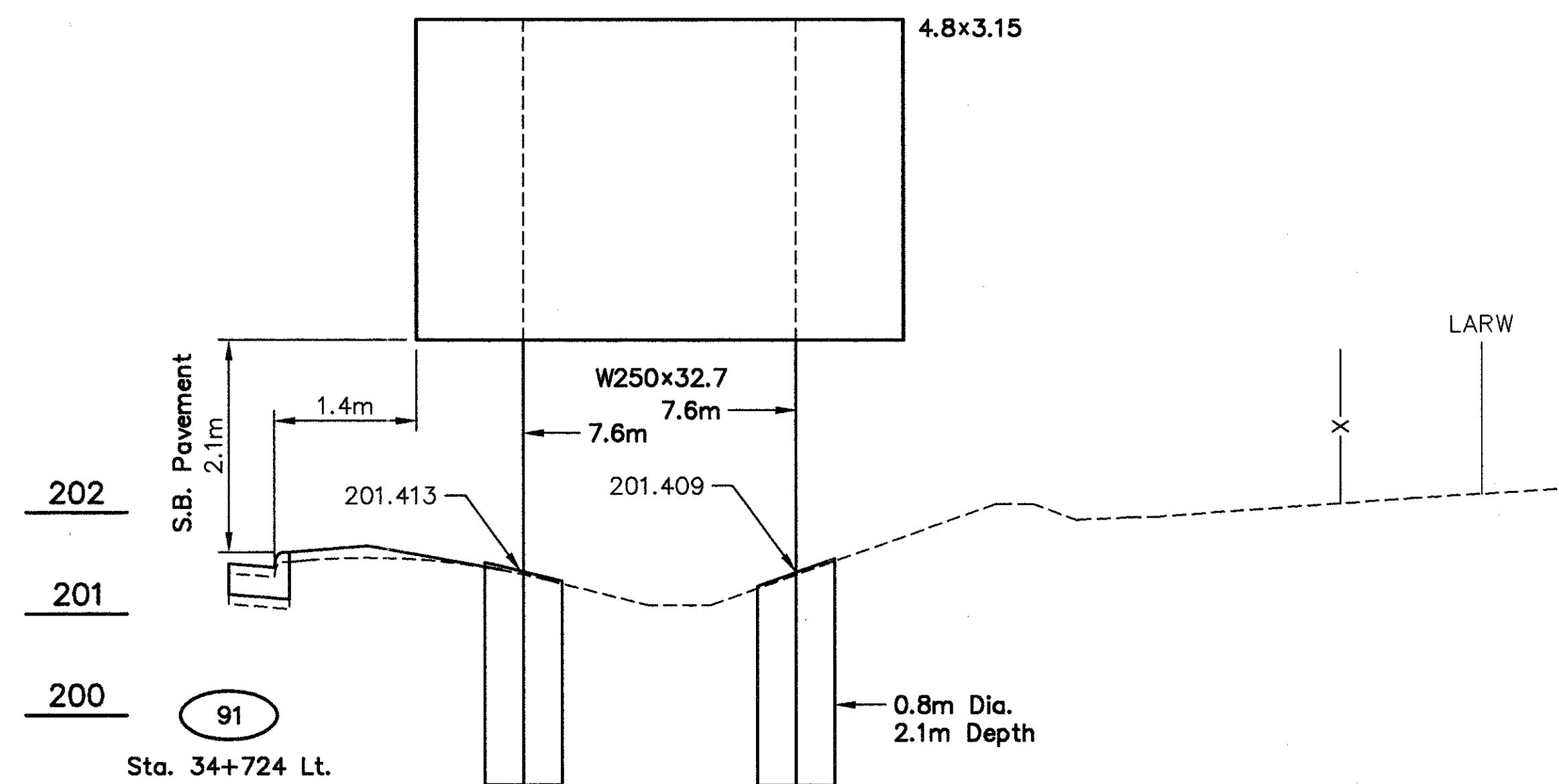
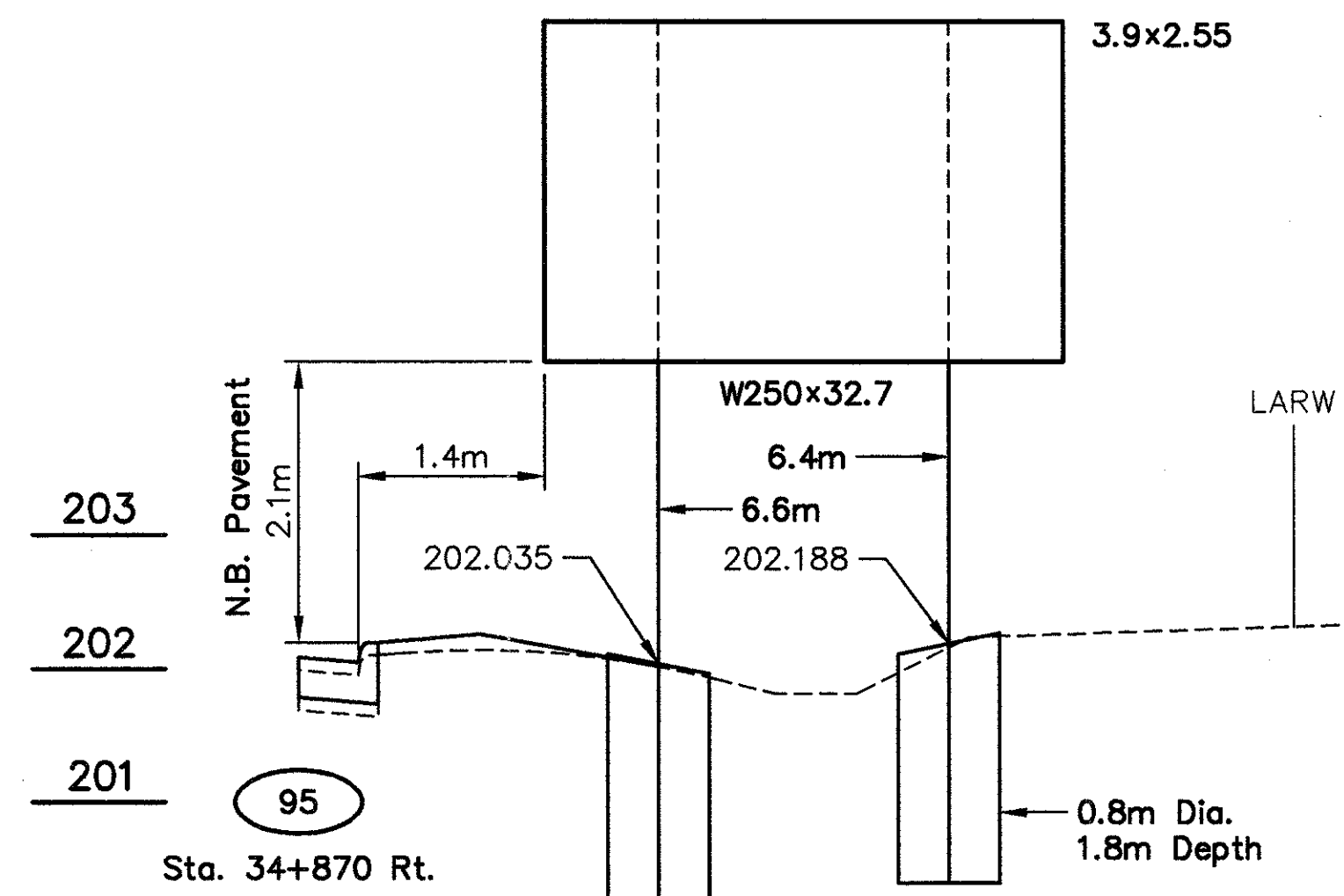
# ELEVATION DETAILS

**BEL-7-32.276**



Elevations shown were used for support computations. Actual elevations shall be adjusted if necessary to conform to Std. Dwg. TC-41.10M



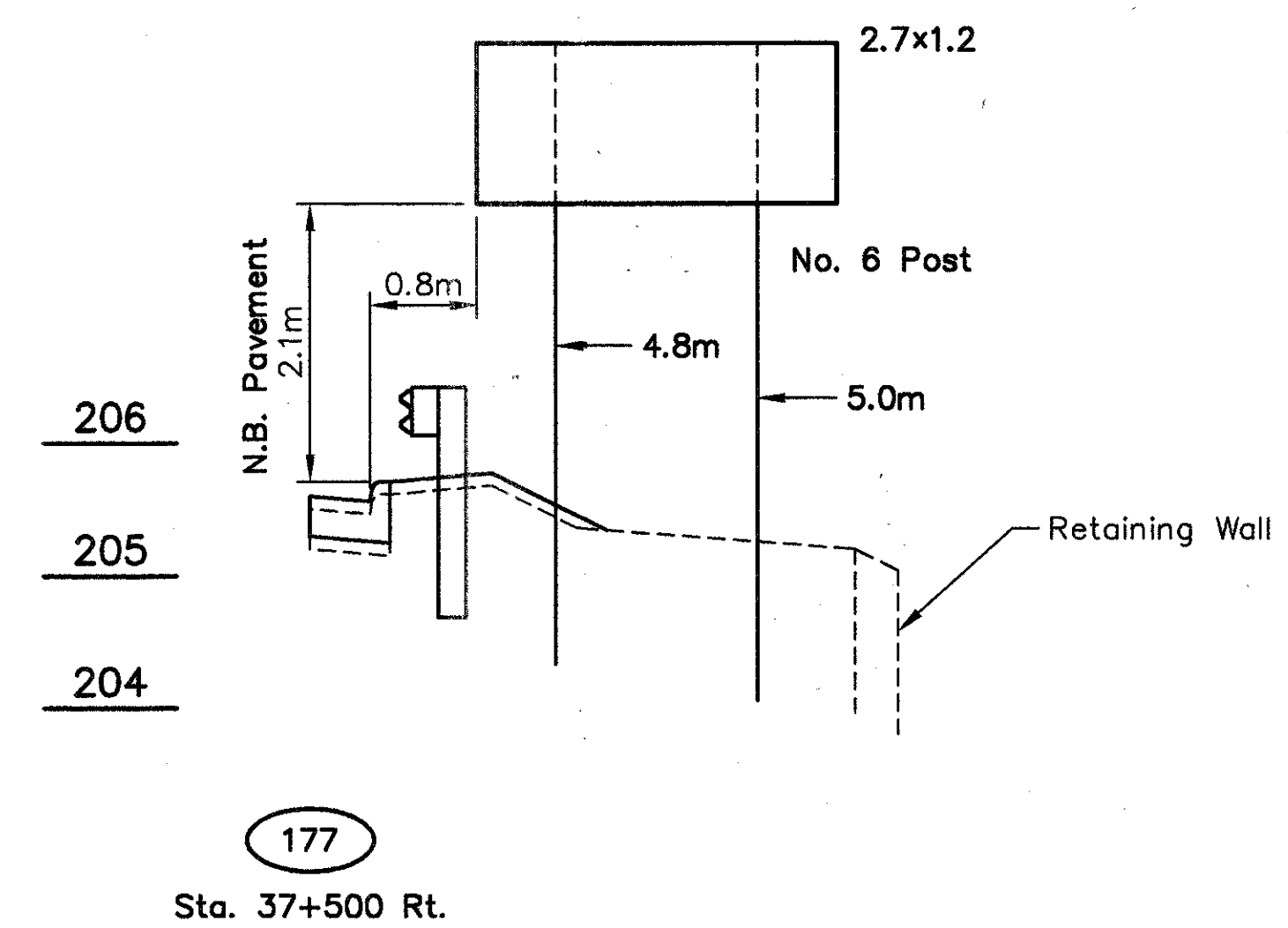
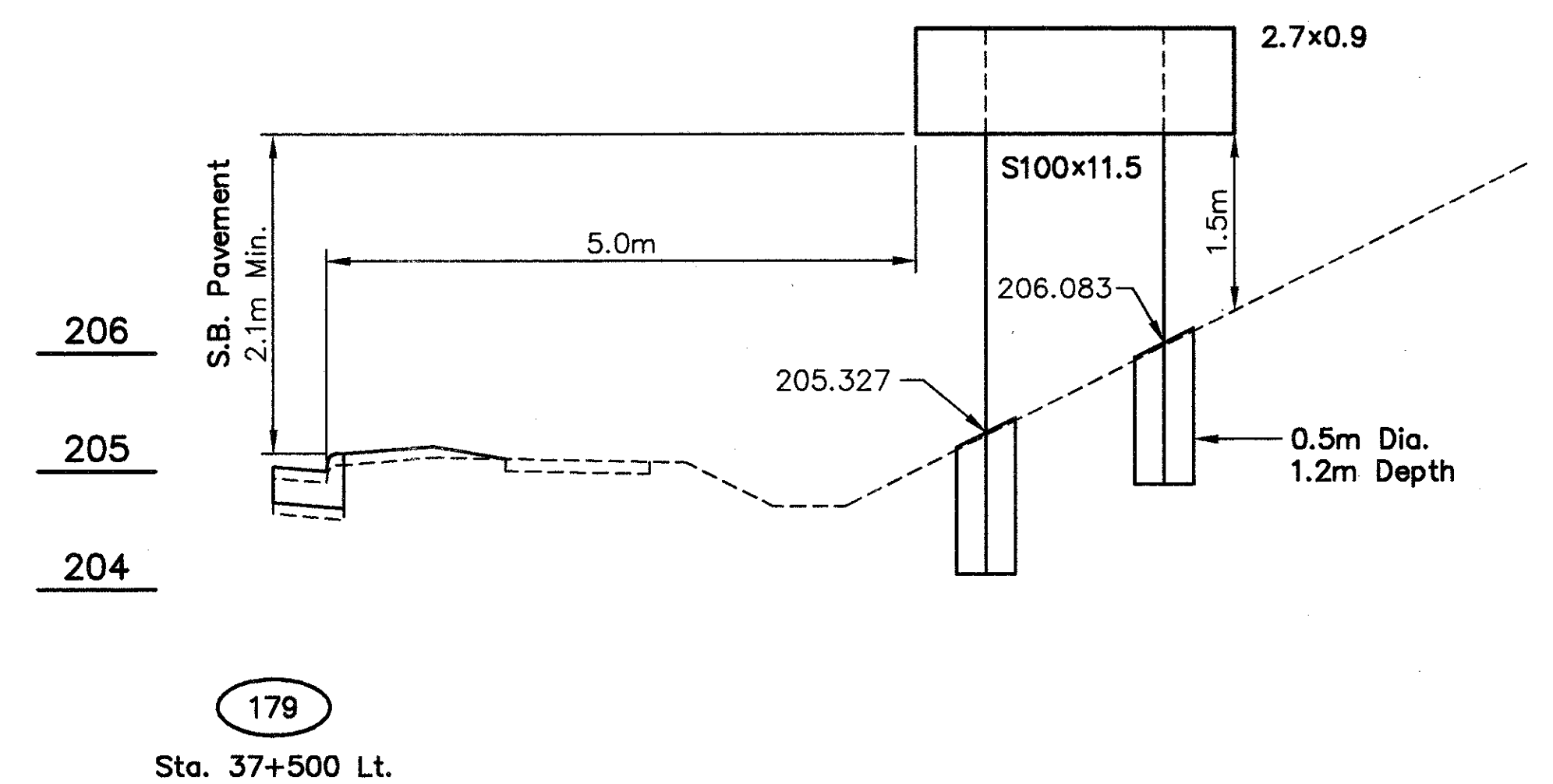
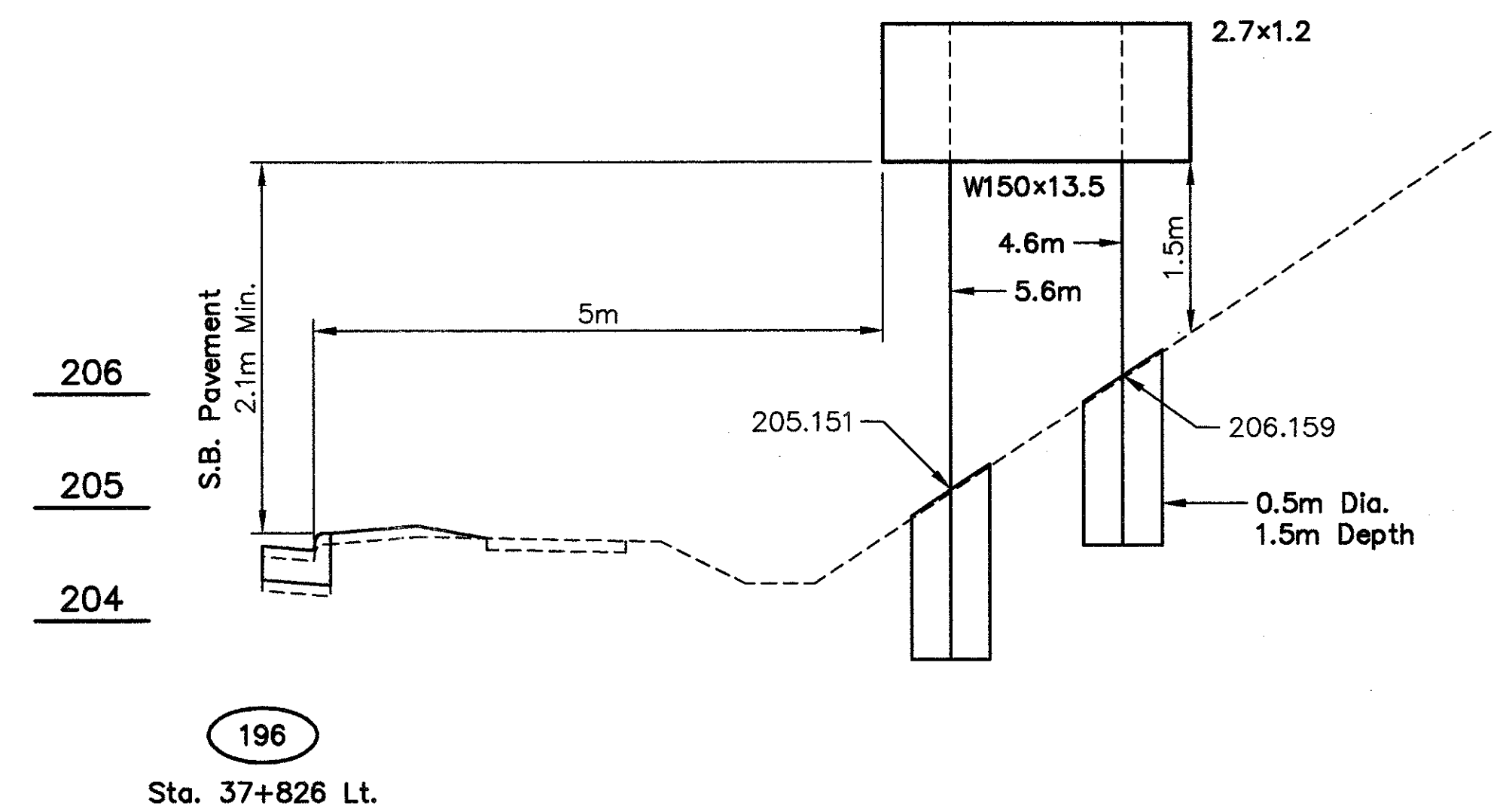
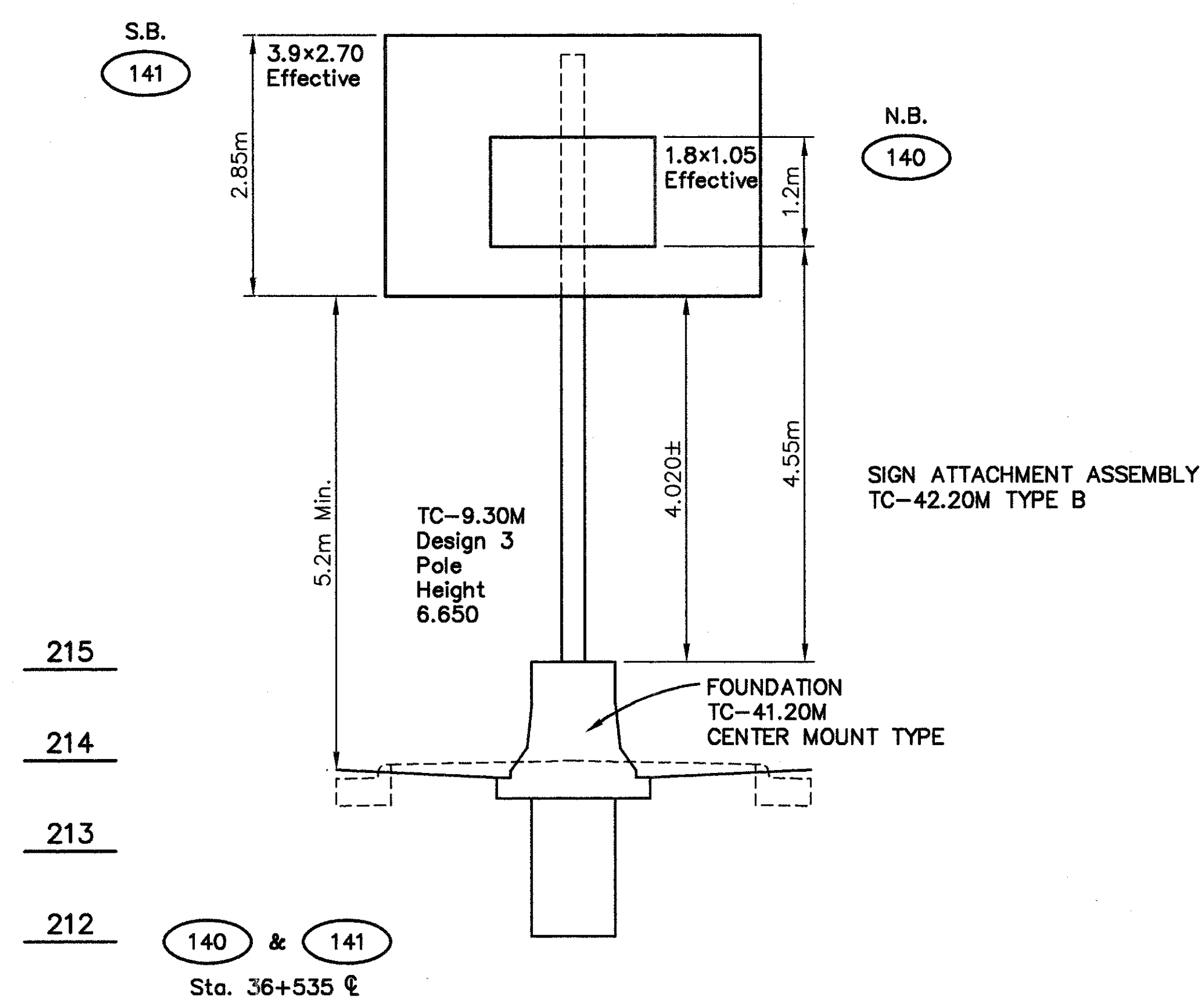


Elevations shown were used for support computations. Actual elevations shall be adjusted if necessary to conform to Std. Dwg. TC-41.10M

# ELEVATION DETAILS

BEL-7-32.276

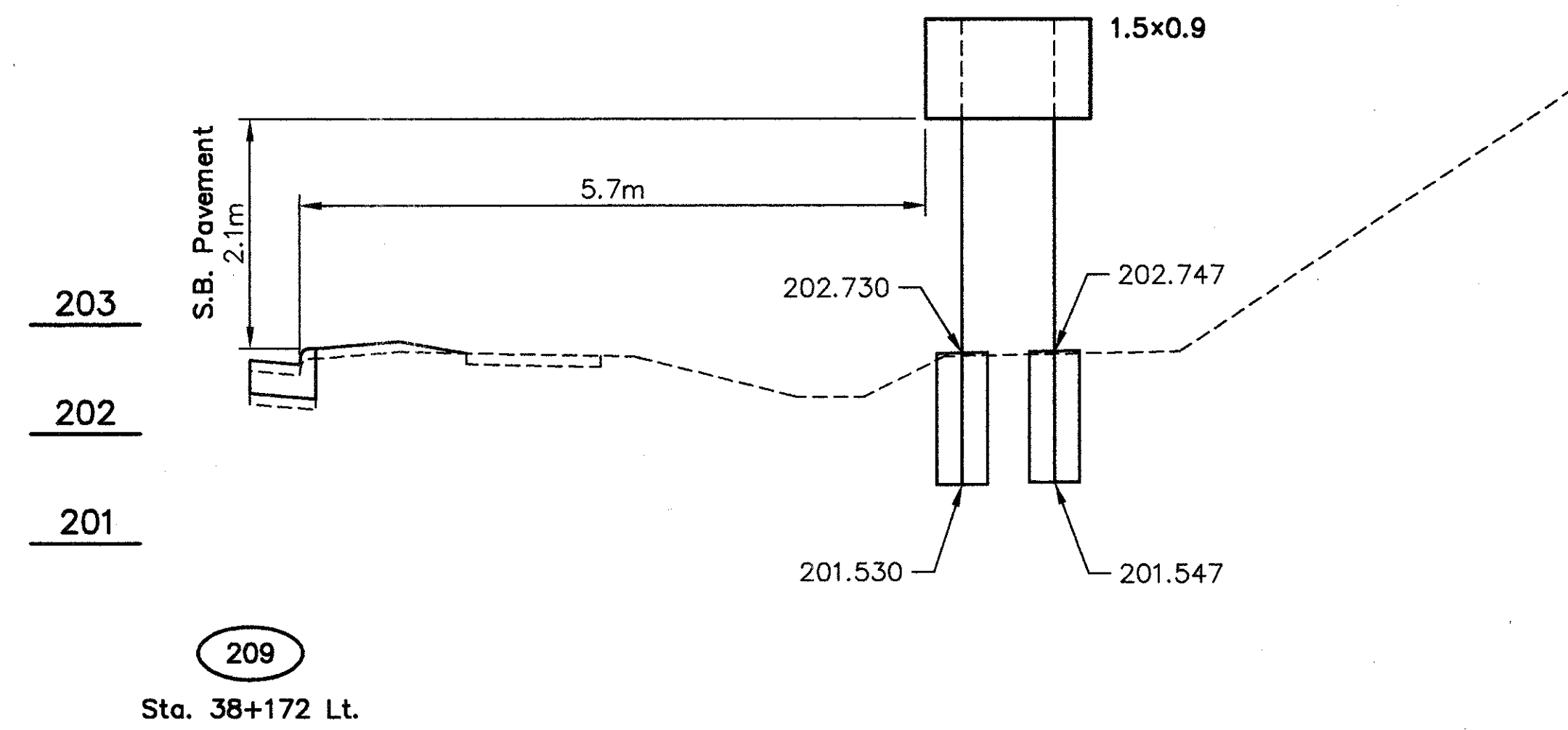
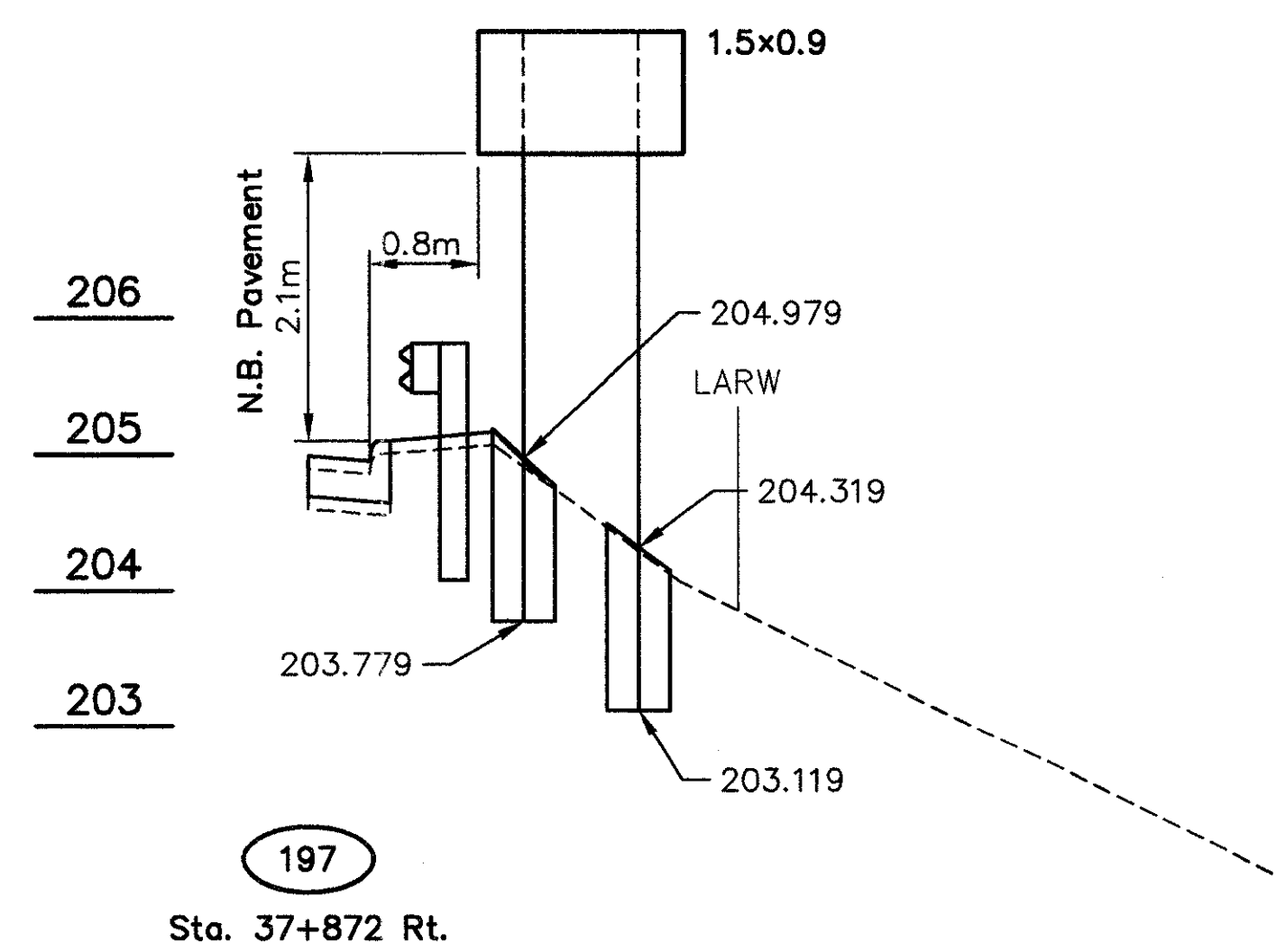
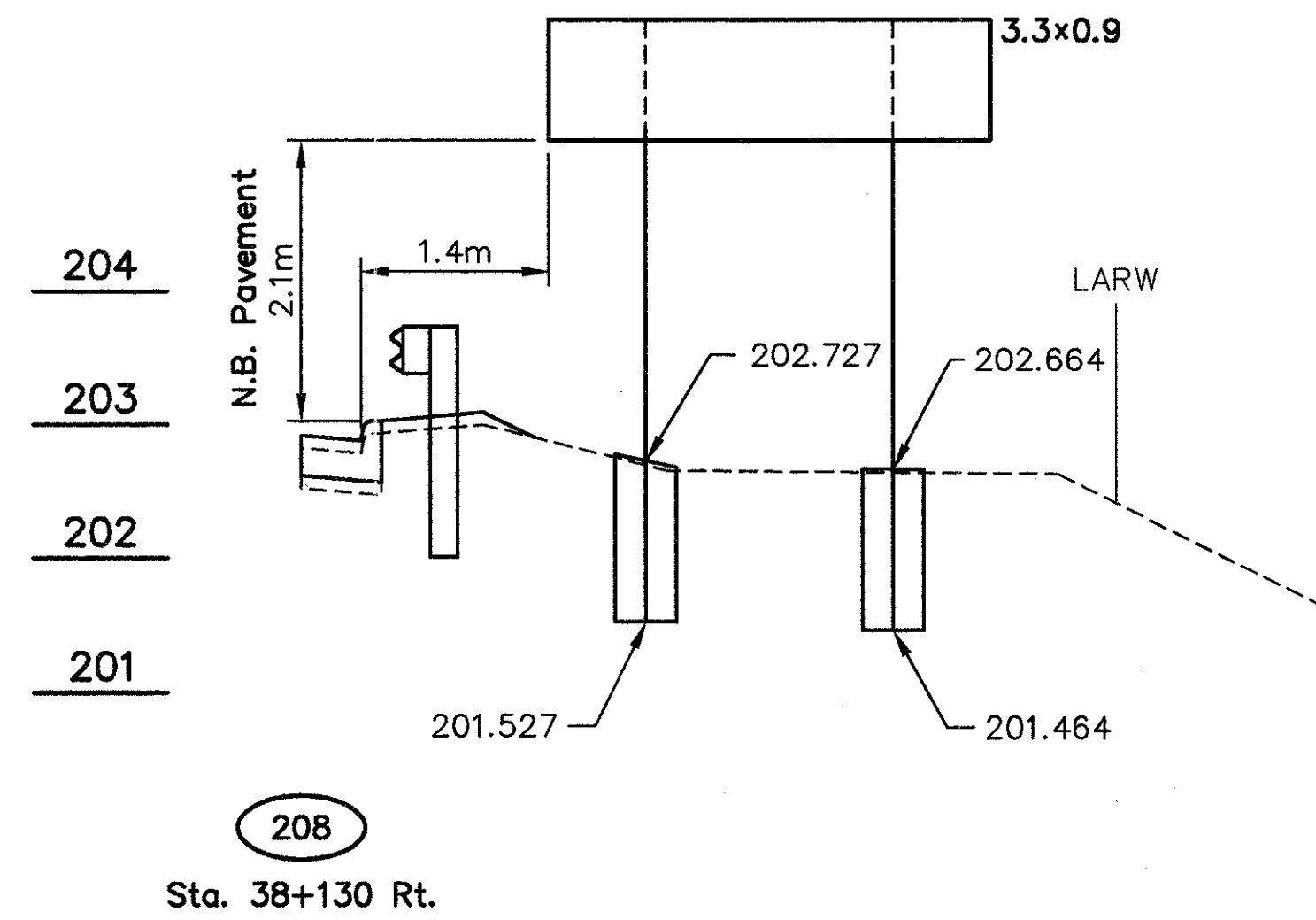




# ELEVATION DETAILS

BEL-7-32.276





# ELEVATION DETAILS

**BEL-7-32.276**

147  
242

CALCULATED  
SAH  
CHECKED  
AEH



| ITEM 643    |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               | ITEM 643    |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|-------------|------------|------------|----------------------|---------------------|-----------|----------------------|-----------|-------------------------------|---------------|-----------------|-----------|-------------------------------|-------------|------------|------------|----------------------|---------------------|-----------|----------------------|-----------|-------------------------------|---------------|-----------------|-------------------|-------------------------------|
| LOCATION    | STATION    |            | EDGE LINE,<br>YELLOW | EDGE LINE,<br>WHITE | LANE LINE | CHANNELIZING<br>LINE | STOP LINE | RAILROAD<br>SYMBOL<br>MARKING | LANE<br>ARROW | TRANSVERSE LINE |           | WORD ON<br>PAVEMENT<br>2500mm | LOCATION    | STATION    |            | EDGE LINE,<br>YELLOW | EDGE LINE,<br>WHITE | LANE LINE | CHANNELIZING<br>LINE | STOP LINE | RAILROAD<br>SYMBOL<br>MARKING | LANE<br>ARROW | TRANSVERSE LINE | ISLAND<br>MARKING | WORD ON<br>PAVEMENT<br>2500mm |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             | Kilometer  | Kilometer  | Kilometer            | Meter               | Meter     | Each                 | Each      | Meter                         |               | Each            | Kilometer | Kilometer                     |             | Kilometer  | Meter      | Meter                | Each                | Each      | Meter                | Sq Meter  | Each                          |               |                 |                   |                               |
| N.B. S.R. 7 | 32+270.106 | 33+381.287 | 1.111                |                     | 1.811     |                      |           |                               |               |                 |           |                               | S.B. S.R. 7 | 32+270.106 | 32+910.634 |                      | 0.641               | 1.111     |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 32+270.106 | 34+080.651 |                      | 0.680               |           |                      |           |                               |               |                 |           |                               | S.B. S.R. 7 | 32+270.106 | 33+381.287 | 1.111                |                     |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 32+270.106 | 32+950     |                      |                     |           |                      |           |                               |               |                 |           |                               | S.B. S.R. 7 | 32+910.634 | 33+023.876 |                      |                     | 113.242   |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 32+900     | 32+950     |                      |                     |           | 50.000               |           |                               |               |                 |           |                               | S.B. S.R. 7 | 33+023.876 | 33+123.884 |                      | 0.100               |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 32+900     | 33+193.741 |                      | 0.294               |           |                      |           |                               |               |                 |           |                               | S.B. S.R. 7 | 33+023.876 | 33+049.376 |                      |                     | 0.026     |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 33+193.741 | 34+077.790 |                      | 0.884               |           |                      |           |                               |               |                 |           |                               | S.B. S.R. 7 | 33+123.884 | 33+387.271 |                      | 0.263               |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 32+950     | 33+030     |                      |                     | 0.080     |                      |           |                               |               |                 |           |                               | S.B. S.R. 7 | 33+410.658 | 34+078.400 |                      | 0.668               |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 33+320.327 | 33+381.287 |                      |                     |           | 60.960               |           |                               |               |                 |           |                               | S.B. S.R. 7 | 33+420     | 34+078.400 |                      |                     | 0.658     |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 33+325     |            |                      |                     |           |                      |           |                               | 1             |                 |           |                               | S.B. S.R. 7 | 33+420     | 34+078.400 | 0.658                |                     |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 33+348     |            |                      |                     |           |                      |           |                               |               |                 |           | 1                             | S.B. S.R. 7 | 34+118.610 | 35+681.090 |                      |                     | 1.562     |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 33+371     |            |                      |                     |           |                      |           |                               | 1             |                 |           |                               | S.B. S.R. 7 | 34+118.610 | 35+681.090 | 1.562                |                     |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 33+420.302 | 34+077.790 | 0.657                |                     |           |                      |           |                               |               |                 |           |                               | S.B. S.R. 7 | 34+118.610 | 34+140     |                      |                     |           | 21.390               |           | 7.798                         |               |                 |                   |                               |
| N.B. S.R. 7 | 33+858.400 | 34+077.790 |                      |                     |           | 219.390              |           |                               |               |                 |           |                               | S.B. S.R. 7 | 34+118.610 | 34+235.300 |                      |                     |           | 116.690              |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 33+954     | 34+077.790 |                      |                     |           | 123.790              |           |                               |               | 44.170          |           |                               | S.B. S.R. 7 | 34+118     |            |                      |                     |           | 12.520               |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 34+022     |            |                      |                     |           |                      |           |                               | 1             |                 |           |                               | S.B. S.R. 7 | 34+127     |            |                      |                     |           |                      |           | 1                             |               |                 |                   |                               |
| N.B. S.R. 7 | 34+048     |            |                      |                     |           |                      |           |                               |               |                 |           | 1                             | S.B. S.R. 7 | 34+148     |            |                      |                     |           |                      |           |                               |               |                 | 1                 |                               |
| N.B. S.R. 7 | 34+072.000 |            |                      |                     |           |                      |           |                               | 1             |                 |           |                               | S.B. S.R. 7 | 34+168     |            |                      |                     |           |                      |           | 1                             |               |                 |                   |                               |
| N.B. S.R. 7 | 34+078.400 |            |                      |                     |           |                      | 10.666    |                               |               |                 |           |                               | S.B. S.R. 7 | 34+118.610 | 35+685.989 |                      | 1.567               |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 34+118     | 35+681.090 |                      | 1.563               |           |                      |           |                               |               |                 |           |                               | S.B. S.R. 7 | 34+629     |            |                      |                     |           | 7.315                |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 34+118     | 35+681.090 | 1.563                |                     |           |                      |           |                               |               |                 |           |                               | S.B. S.R. 7 | 34+877.600 |            |                      |                     |           | 7.315                |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 34+118     | 35+681.090 |                      |                     | 1.563     |                      |           |                               |               |                 |           |                               | S.B. S.R. 7 | 34+885     |            |                      |                     |           |                      | 2         |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 34+156     | 34+337.040 |                      | 0.181               |           |                      |           |                               |               |                 |           |                               | S.B. S.R. 7 | 34+892.400 |            |                      |                     |           | 7.315                |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 34+392.600 |            |                      |                     |           |                      | 7.135     |                               |               |                 |           |                               | S.B. S.R. 7 | 35+721.710 | 36+925.991 |                      |                     | 1.204     |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 34+400     |            |                      |                     |           |                      |           | 2                             |               |                 |           |                               | S.B. S.R. 7 | 35+721.710 | 36+926     | 1.204                |                     |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 34+407.400 |            |                      |                     |           |                      | 7.135     |                               |               |                 |           |                               | S.B. S.R. 7 | 35+721.100 |            |                      |                     |           | 14.573               |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 34+545     |            |                      |                     |           |                      | 7.135     |                               |               |                 |           |                               | S.B. S.R. 7 | 35+721.710 | 35+776.100 |                      |                     |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 35+481.700 | 35+681.090 |                      |                     |           | 199.390              |           |                               |               |                 |           |                               | S.B. S.R. 7 | 35+721.710 | 35+871.100 |                      |                     |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 35+619.600 | 35+681.090 |                      |                     |           | 61.490               |           |                               |               |                 |           |                               | S.B. S.R. 7 | 35+721.710 | 35+776.100 |                      |                     |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 35+576.700 | 35+681.090 |                      |                     |           | 104.390              |           |                               |               |                 |           |                               | S.B. S.R. 7 | 35+730.100 |            |                      |                     |           |                      |           | 1                             |               |                 |                   |                               |
| N.B. S.R. 7 | 35+576.700 | 35+681.090 |                      |                     |           |                      |           |                               |               | 35.627          |           |                               | S.B. S.R. 7 | 35+747.600 |            |                      |                     |           |                      |           |                               |               |                 | 1                 |                               |
| N.B. S.R. 7 | 35+623     |            |                      |                     |           |                      |           |                               | 2             |                 |           |                               | S.B. S.R. 7 | 35+765.100 |            |                      |                     |           |                      |           | 1                             |               |                 |                   |                               |
| N.B. S.R. 7 | 35+650     |            |                      |                     |           |                      |           |                               |               |                 |           | 2                             | S.B. S.R. 7 | 35+721.710 | 36+926     |                      | 1.204               |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 35+672.700 |            |                      |                     |           |                      |           |                               | 2             |                 |           |                               | S.B. S.R. 7 | 36+956.851 | 37+304.519 |                      |                     | 0.348     |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 35+681.700 |            |                      |                     |           |                      | 15.880    |                               |               |                 |           |                               | S.B. S.R. 7 | 36+957     | 37+304     | 0.347                |                     |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 35+721.100 | 36+926     | 1.205                |                     |           |                      |           |                               |               |                 |           |                               | S.B. S.R. 7 | 36+957     | 37+305     |                      | 0.348               |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 35+721.100 | 38+220     |                      |                     | 2.499     |                      |           |                               |               |                 |           |                               | S.B. S.R. 7 | 37+336     | 37+659     | 0.323                |                     |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 35+721.100 | 38+220     |                      | 2.499               |           |                      |           |                               |               |                 |           |                               | S.B. S.R. 7 | 37+339     | 37+660     |                      | 0.321               |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 36+910.751 | 36+926     |                      |                     |           | 15.249               |           |                               |               |                 |           |                               | S.B. S.R. 7 | 37+340     | 37+660     |                      |                     | 0.320     |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 36+913     |            |                      |                     |           |                      |           |                               |               |                 |           |                               | S.B. S.R. 7 | 37+685     | 38+009     |                      | 0.324               |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 36+926     |            |                      |                     |           |                      |           |                               | 1             |                 |           |                               | S.B. S.R. 7 | 37+688.601 | 38+007.222 |                      |                     | 0.319     |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 36+958.964 | 37+302.435 | 0.343                |                     |           |                      |           |                               |               |                 |           |                               | S.B. S.R. 7 | 37+689     | 38+006     | 0.317                |                     |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 37+289.279 | 37+304     |                      |                     |           | 14.721               |           |                               |               |                 |           |                               | S.B. S.R. 7 | 38+038     | 38+220     |                      | 0.182               |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 37+291     |            |                      |                     |           |                      |           |                               |               |                 |           | 1                             | S.B. S.R. 7 | 38+037     | 38+220     | 0.183                |                     |           |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 37+304     |            |                      |                     |           |                      |           |                               | 1             |                 |           |                               | S.B. S.R. 7 | 38+039.554 | 38+220     |                      |                     | 0.180     |                      |           |                               |               |                 |                   |                               |
| N.B. S.R. 7 | 37+338.500 | 37+659     | 0.321                |                     |           |                      |           |                               |               |                 |           |                               | S.R. 7      | 33+420     |            |                      |                     |           |                      |           |                               |               | 2.742           |                   |                               |
| N.B. S.R. 7 | 37+643.948 | 37+659     |                      |                     |           | 15.052               |           |                               |               |                 |           |                               | S.R. 7      | 34+078.400 |            |                      |                     |           |                      |           |                               |               | 1.830           |                   |                               |
| N.B. S.R. 7 | 37+646     |            |                      |                     |           |                      |           |                               |               |                 |           | 1                             | S.R. 7      | 34+118     |            |                      |                     |           |                      |           |                               |               | 1.830           |                   |                               |
| N.B. S.R. 7 | 37+659     |            |                      |                     |           |                      |           |                               | 1             |                 |           |                               | S.R. 7      | 35+681.700 |            |                      |                     |           |                      |           |                               |               | 1.830           |                   |                               |
| N.B. S.R. 7 | 37+689     | 38+006     | 0.317                |                     |           |                      |           |                               |               |                 |           |                               | S.R. 7      | 35+721.100 |            |                      |                     |           |                      |           |                               |               | 1.830           |                   |                               |
| N.B. S.R. 7 | 37+992     | 38+006     |                      |                     |           | 14.000               |           |                               |               |                 |           |                               | S.R. 7      | 36+926     |            |                      |                     |           |                      |           |                               |               | 2.742           |                   |                               |
| N.B. S.R. 7 | 37+994.438 |            |                      |                     |           |                      |           |                               |               |                 |           | 1                             | S.R. 7      | 36+956.851 |            |                      |                     |           |                      |           |                               |               | 2.742           |                   |                               |
| N.B. S.R. 7 | 38+006     |            |                      |                     |           |                      |           |                               | 1             |                 |           |                               | S.R. 7      | 37+304.519 |            |                      |                     |           |                      |           |                               |               | 2.742           |                   |                               |
| N.B. S.R. 7 | 38+037     | 38+220     | 0.183                |                     |           |                      |           |                               |               |                 |           |                               | S.R. 7      | 37+336     |            |                      |                     |           |                      |           |                               |               | 2.742           |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               | S.R. 7      | 37+659     |            |                      |                     |           |                      |           |                               |               | 2.742           |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               | S.R. 7      | 37+688.601 |            |                      |                     |           |                      |           |                               |               | 2.742           |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               | S.R. 7      | 38+007.222 |            |                      |                     |           |                      |           |                               |               | 2.742           |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               | S.R. 7      | 38+036.554 |            |                      |                     |           |                      |           |                               |               | 2.742           |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |
|             |            |            |                      |                     |           |                      |           |                               |               |                 |           |                               |             |            |            |                      |                     |           |                      |           |                               |               |                 |                   |                               |

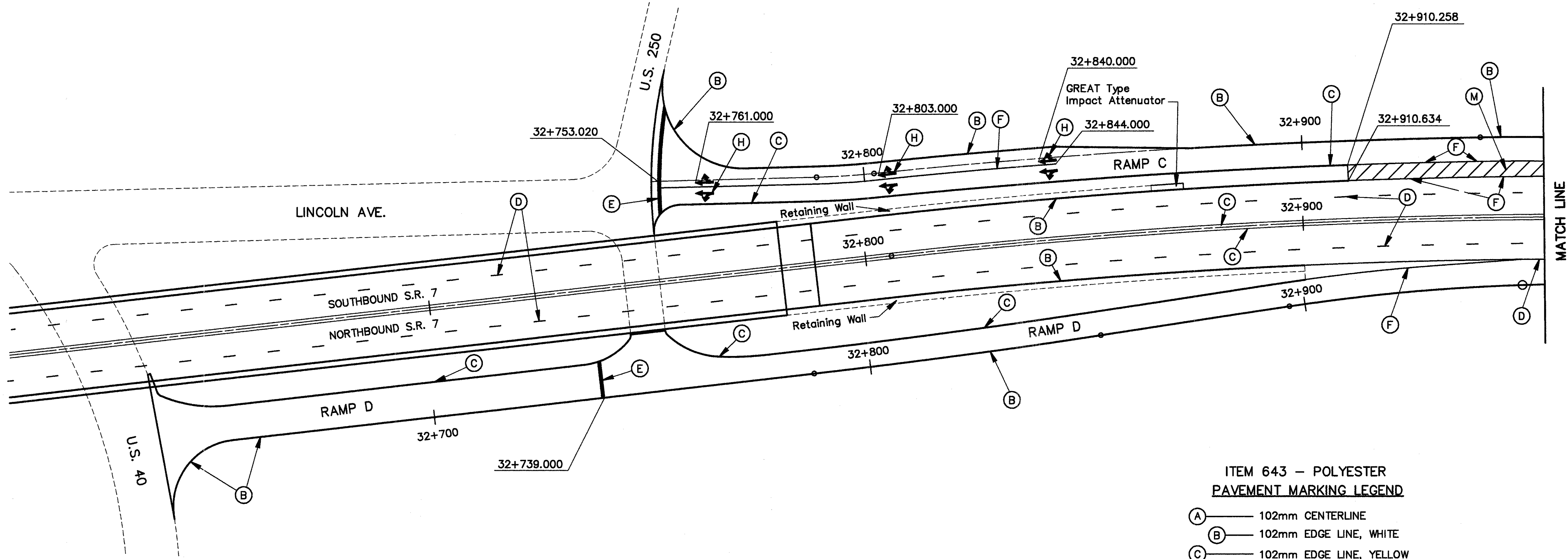


|                                  |       |  |         |         |  |    |         |       |   |
|----------------------------------|-------|--|---------|---------|--|----|---------|-------|---|
| TOTAL CARRIED TO GENERAL SUMMARY | 0.946 |  | 249.389 | 135.221 |  | 11 | 120.646 | 0.095 | 1 |
|----------------------------------|-------|--|---------|---------|--|----|---------|-------|---|

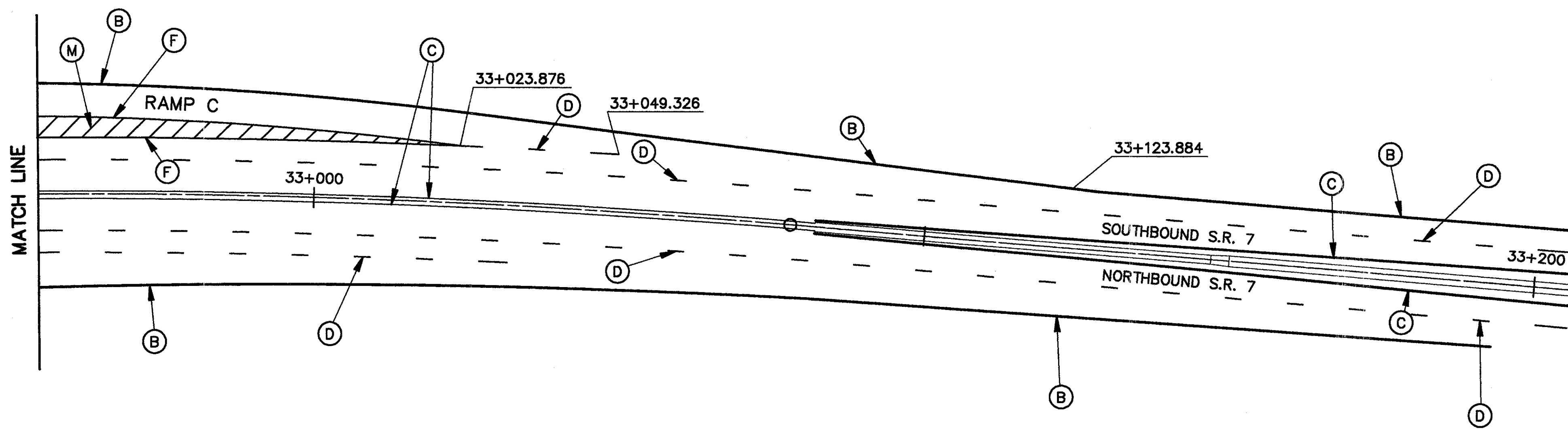


# PAVEMENT MARKING DETAILS

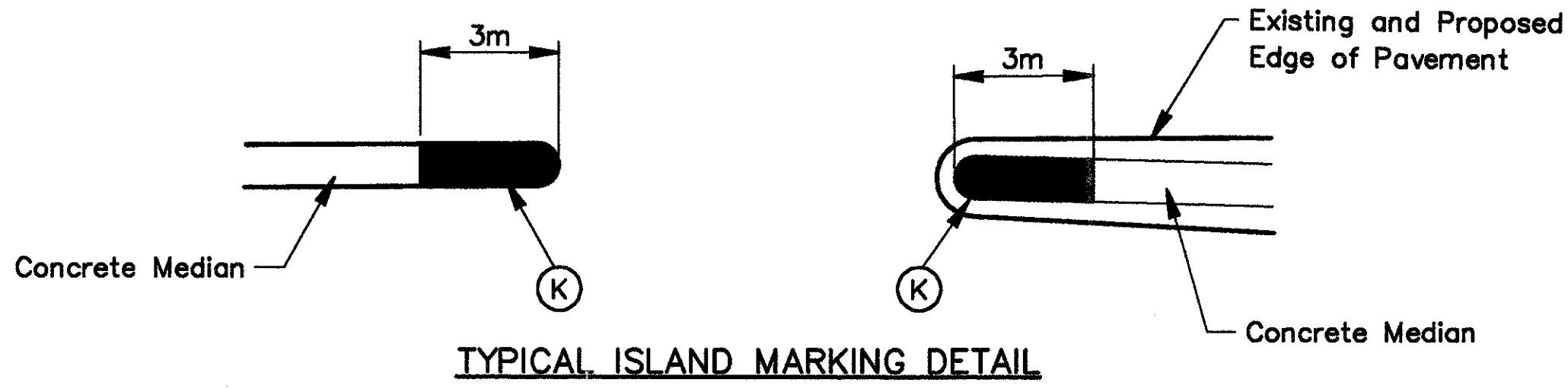
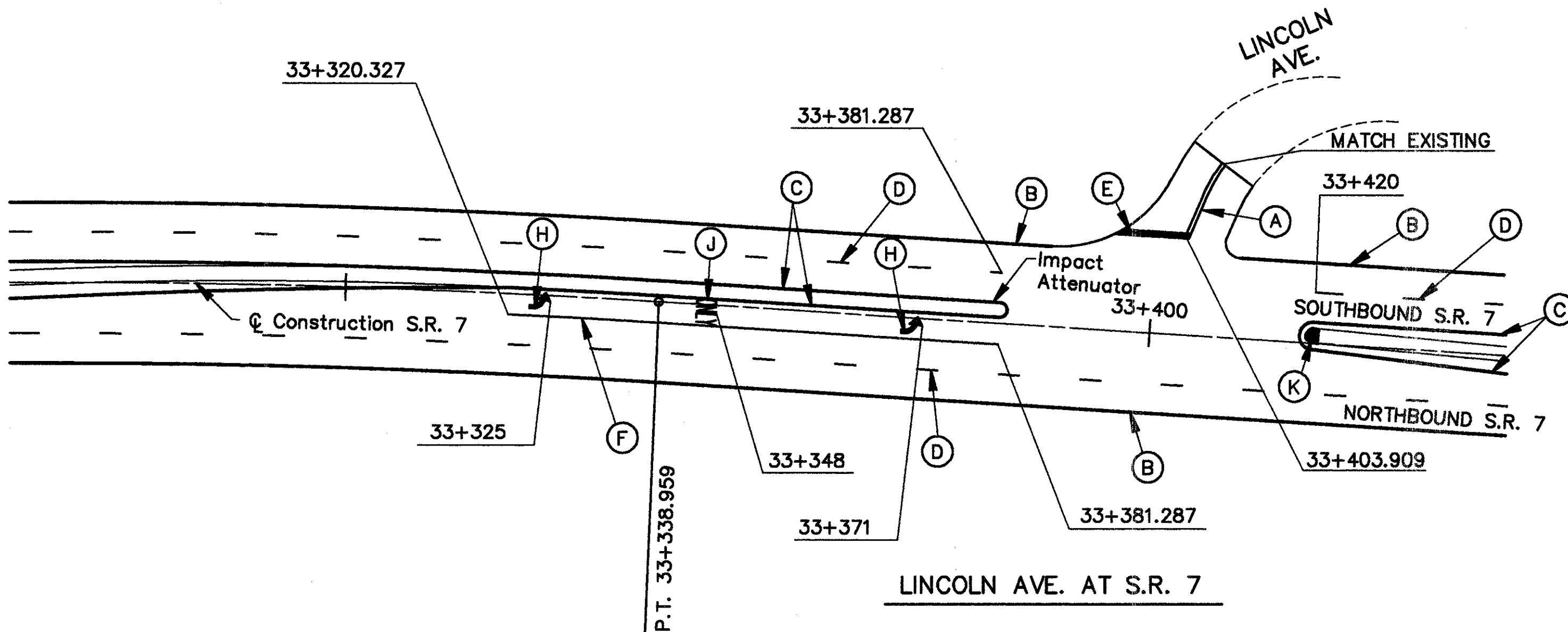
BEL-7-32.276



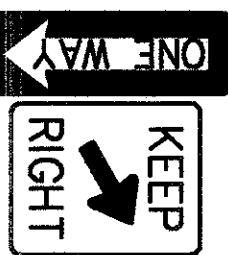
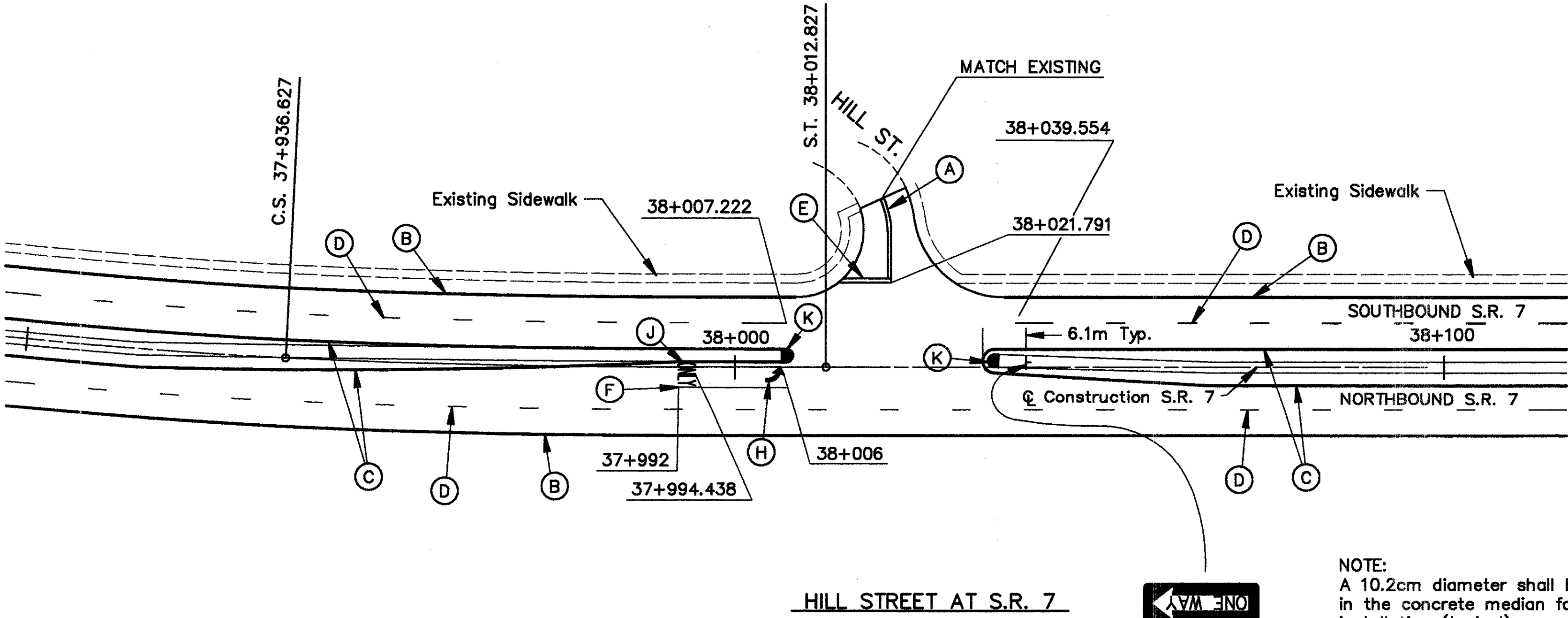
- ITEM 643 - POLYESTER  
PAVEMENT MARKING LEGEND
- (A) 102mm CENTERLINE
  - (B) 102mm EDGE LINE, WHITE
  - (C) 102mm EDGE LINE, YELLOW
  - (D) 102mm LANE LINE
  - (E) 610mm STOP LINE
  - (F) 203mm CHANNELIZING LINE
  - (G) 610mm TRANSVERSE LINES, 3.7m SPACING, YELLOW
  - (H) LANE ARROW
  - (J) WORD ON PAVEMENT, 2500mm
  - (K) ISLAND MARKING
  - (L) RAILROAD SYMBOL MARKING
  - (M) 610mm TRANSVERSE LINES, 3.7m SPACING, WHITE





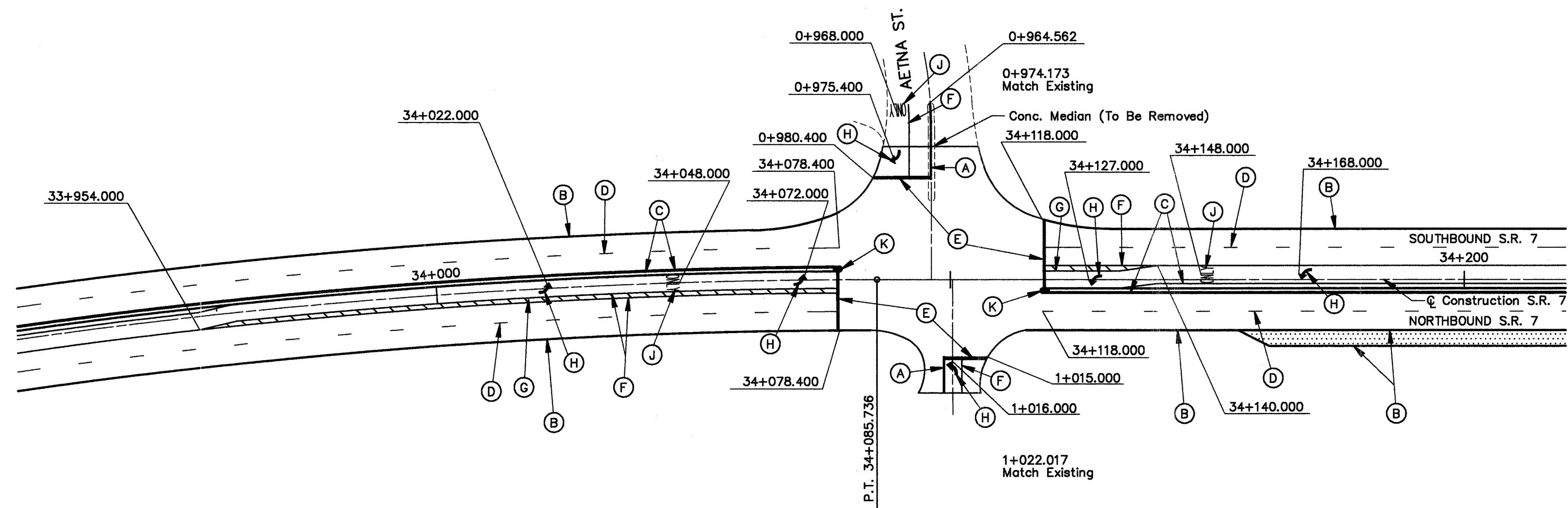


For Legend, See Sheet No. 150

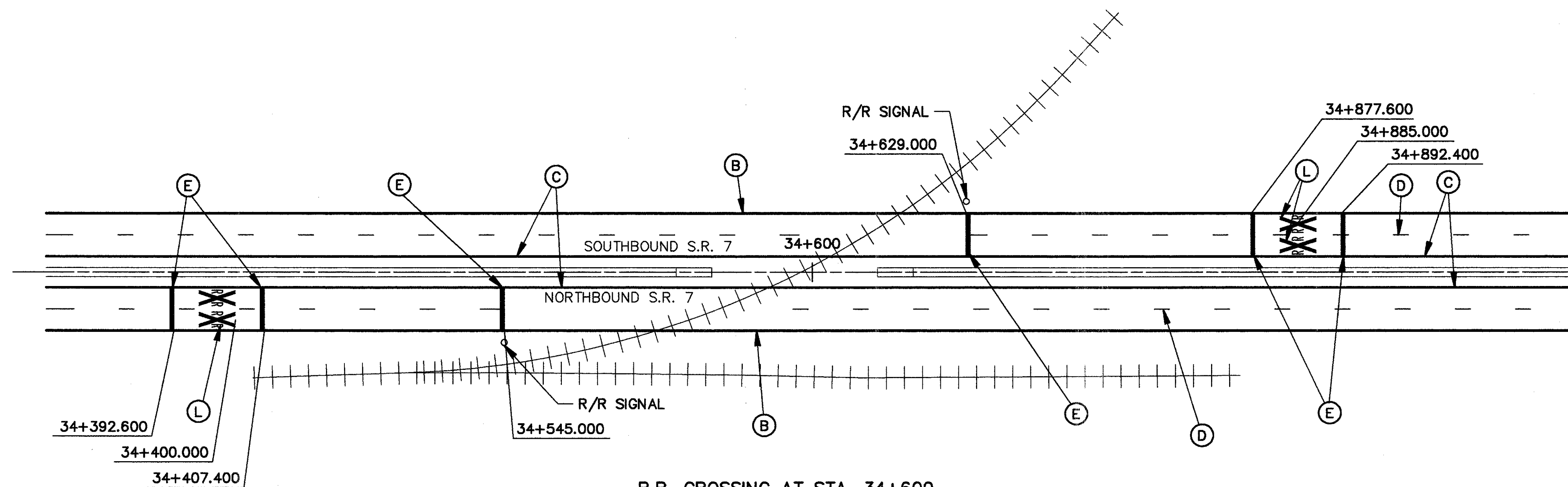


NOTE:  
A 10.2cm diameter shall be formed in the concrete median for sign post installation (typical)





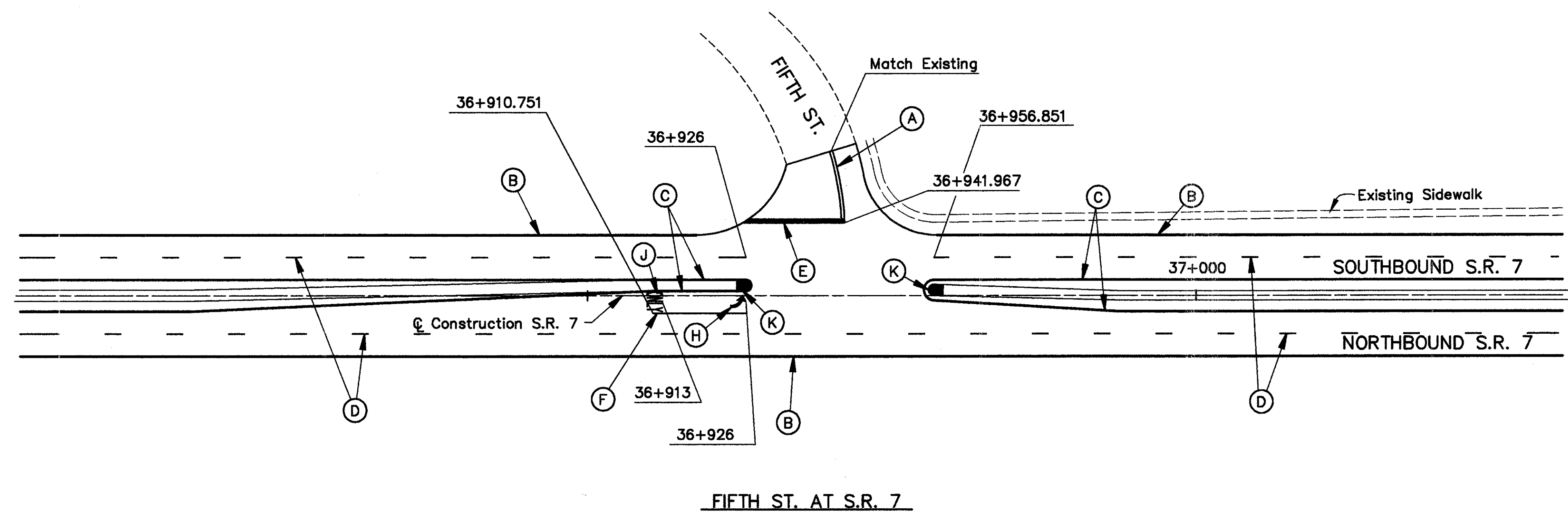
AETNA STREET AT S.R. 7



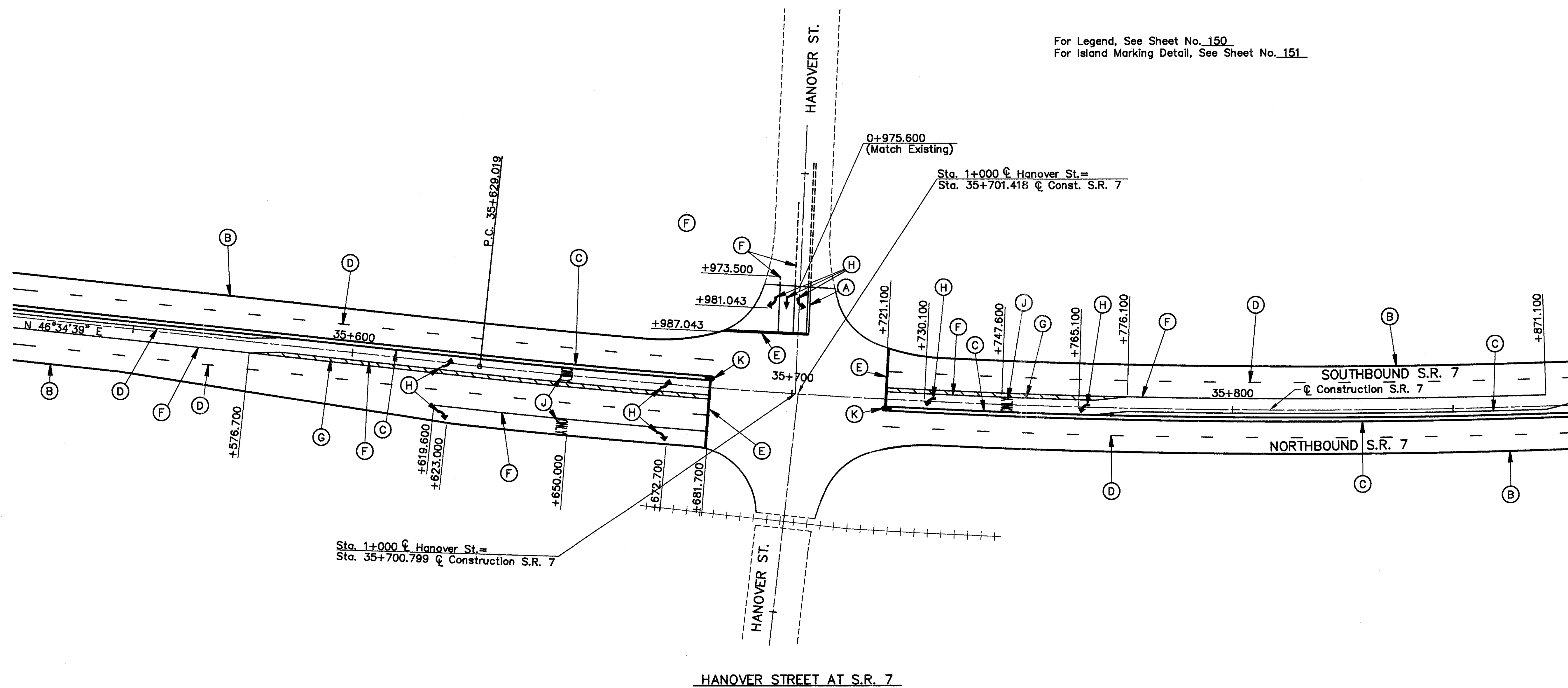
R.R. CROSSING AT STA. 34+600  
(NOT TO SCALE)

For Legend, See Sheet No. 150  
For Island Marking Detail, See Sheet No. 151

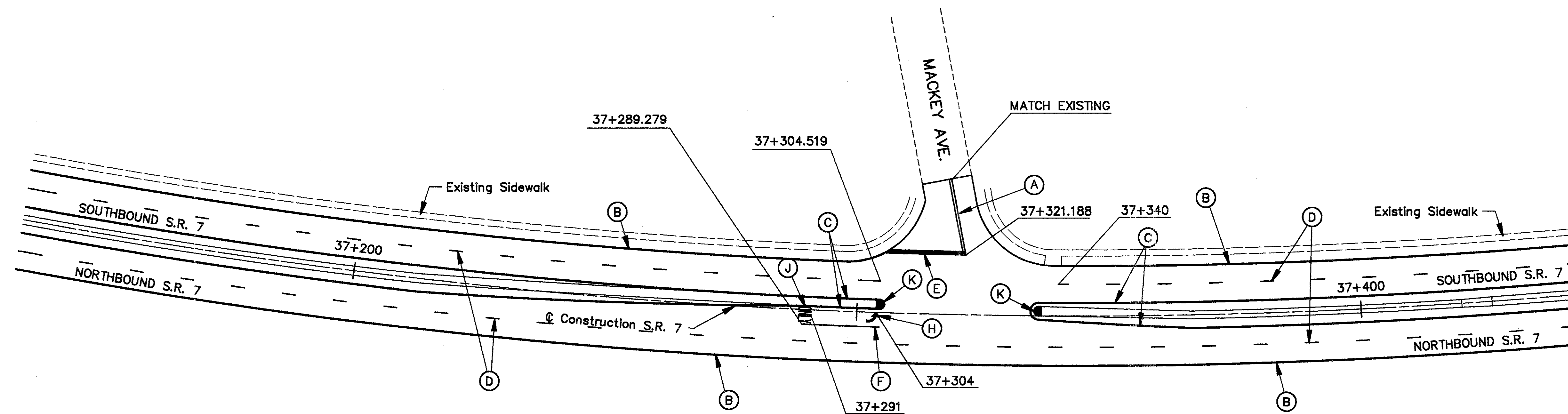




For Legend, See Sheet No. 150  
For Island Marking Detail, See Sheet No. 151



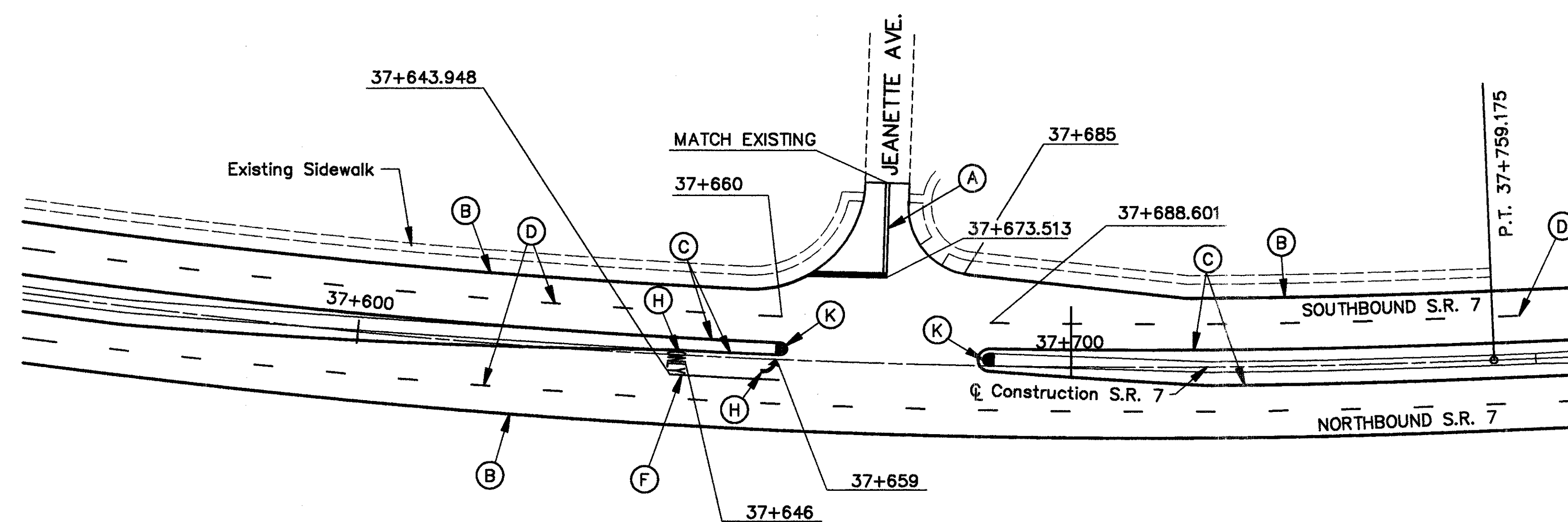




MACKEY AVE. AT S.R. 7

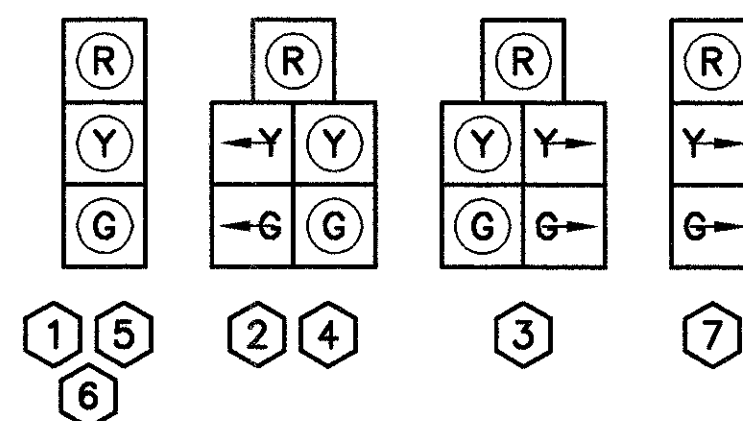
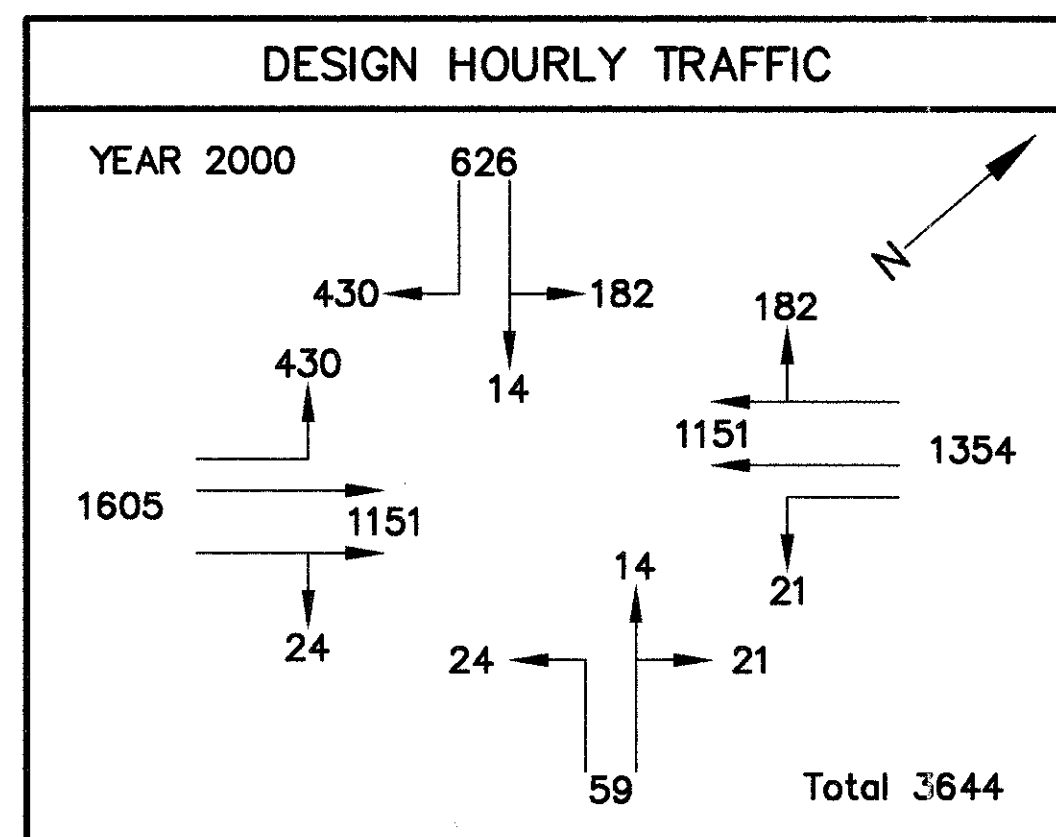
FOR LEGEND, SEE SHEET NO. 150

FOR ISLAND MARKING DETAIL, SEE SHEET NO. 151

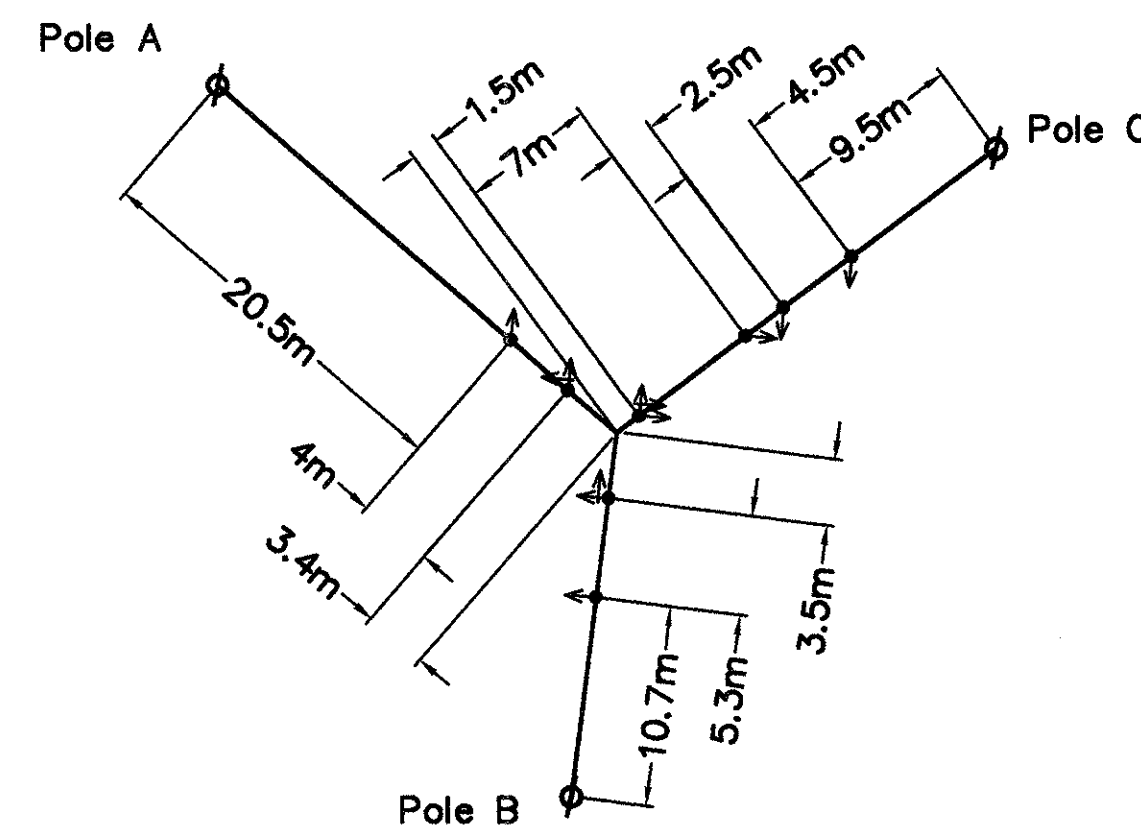


JEANETTE AVE. AT S.R. 7



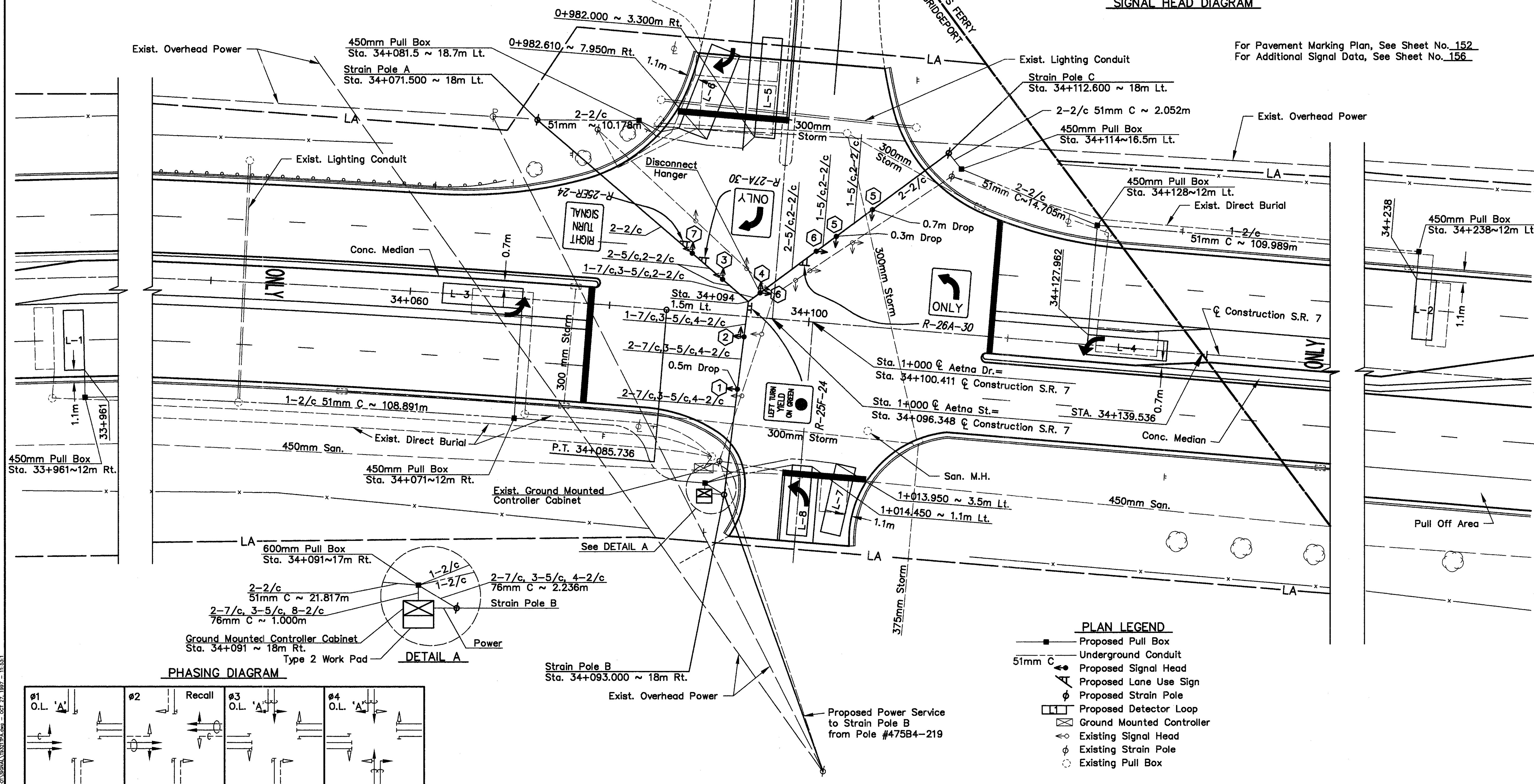


**SIGNAL FACES**  
All Signal Lens will be 305mm



**SIGNAL HEAD DIAGRAM**

For Pavement Marking Plan, See Sheet No. 152  
For Additional Signal Data, See Sheet No. 156



HORIZONTAL  
SCALE IN METERS

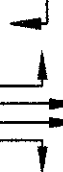
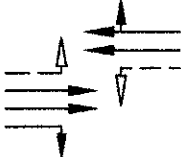
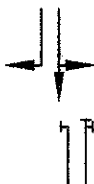
CALCULATED  
SAH  
CHECKED  
AEH

**AETNA ST.  
SIGNAL PLAN**

**BEL-7-32.276**

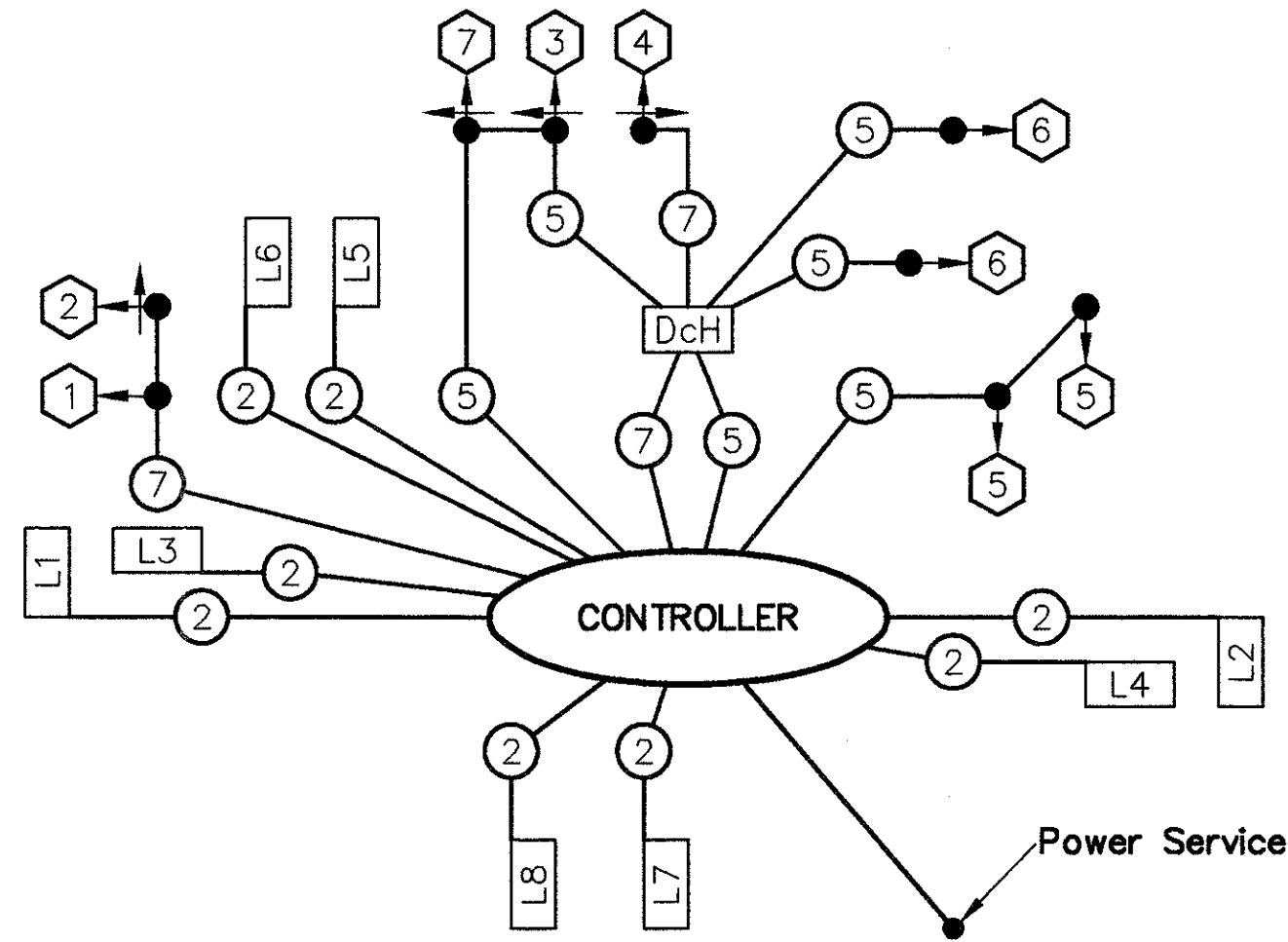
155  
242



| SIGNAL DISPLAY                                                                    |       |          |             |     |     |     |   |   |   |
|-----------------------------------------------------------------------------------|-------|----------|-------------|-----|-----|-----|---|---|---|
| Movement                                                                          | Phase | Interval | Signal Face |     |     |     |   |   |   |
|                                                                                   |       |          | 1           | 2   | 3   | 4   | 5 | 6 | 7 |
|  | ø1    | G        | G           | G/G | R/G | R   | R | R | G |
|                                                                                   |       | YC       | G           | G/Y | R/Y |     |   |   | Y |
|                                                                                   |       | RC       | G           | G   | R   |     |   | R | R |
|  | ø2    | G        | G           | G   |     |     |   | G |   |
|                                                                                   |       | YC       | Y           | Y   |     |     |   | Y |   |
|                                                                                   |       | RC       | R           | R   | R   | R   |   | R | R |
|  | ø3    | G        |             |     | G/G | G/G |   |   | G |
|                                                                                   |       | YC       |             |     |     | Y/G |   |   |   |
|                                                                                   |       | RC       |             |     |     | G   | R |   |   |
|  | ø4    | G        |             |     | G/G | G   | G |   |   |
|                                                                                   |       | YC       |             |     | Y/G | Y   | Y |   |   |
|                                                                                   |       | RC       | R           | R   | R/G | R   | R | R | G |
| Flash                                                                             |       |          | Y           | Y   | R   | R   | R | Y | R |

G - Green  
YC - Yellow Change  
RC - Red Clearance

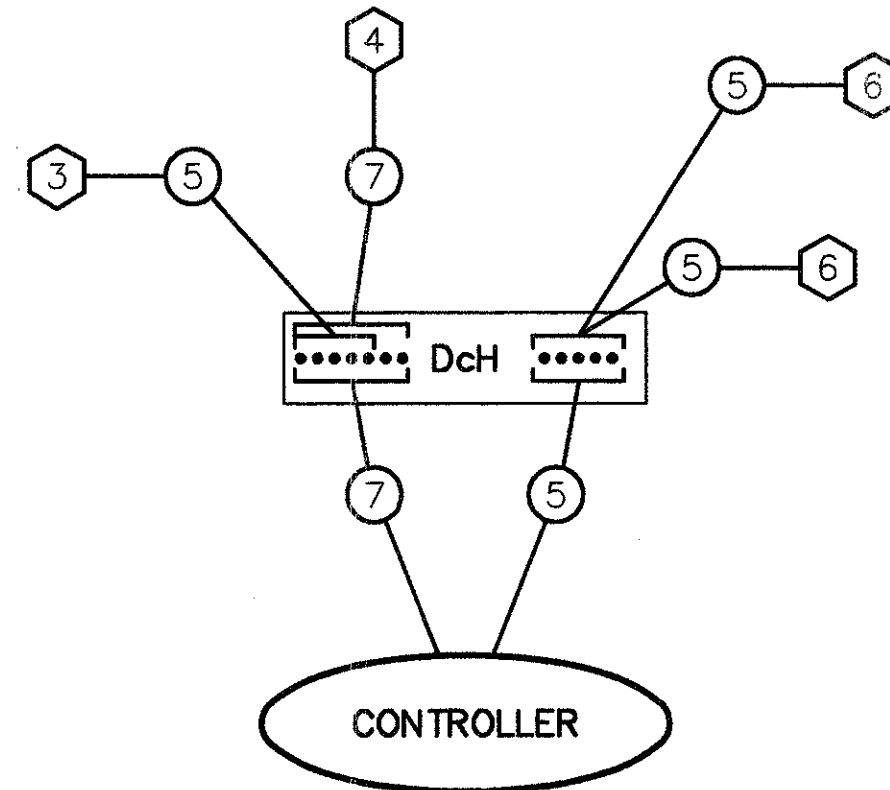
G - Circular Green  
G - Green Arrow  
Y - Circular Yellow  
Y - Yellow Arrow  
R - Circular Red



WIRING DIAGRAM

WIRING LEGEND

- Proposed Signal Head
- Signal Cable, No. of Conductors as Shown
- Loop Detector Lead in Cable
- #8 AWG Power Cable
- Disconnect Hanger
- Proposed Detector Loop



DISCONNECT HANGER WIRING DETAIL

| CONTROLLER TIMING CHART                                                                                                             |                     |  |  |  |                                            |               |               |               |   |
|-------------------------------------------------------------------------------------------------------------------------------------|---------------------|--|--|--|--------------------------------------------|---------------|---------------|---------------|---|
| START UP<br>START IN: Y/R FLASH ; ALL RED<br>TIME FOR FLASH 10 SEC.<br>FIRST PHASE $\emptyset 2$<br>COLOR DISPLAYED: GREEN ; YELLOW |                     |  |  |  | DUAL ENTRY<br>REST IN RED: RING 1 ; RING 2 |               |               |               |   |
|                                                                                                                                     |                     |  |  |  | OVERLAP<br>PHASES                          |               | A<br>3,4,1    |               | B |
| INTERVAL OR FEATURE                                                                                                                 |                     |  |  |  | CONTROLLER MOVEMENT NO.                    |               |               |               |   |
| INTERSECTION<br>MOVEMENT<br><br>N                                                                                                   |                     |  |  |  | $\emptyset 1$                              | $\emptyset 2$ | $\emptyset 3$ | $\emptyset 4$ |   |
|                                                                                                                                     |                     |  |  |  |                                            |               |               |               |   |
| Minimum Green (Sec.)                                                                                                                |                     |  |  |  | 7                                          | 15            | 7             | 10            |   |
| Added Initial  (Sec./Actuation)                                                                                                     |                     |  |  |  | —                                          | 1.5           | —             | —             |   |
| Passage Time (Preset Gap) (Sec.)                                                                                                    |                     |  |  |  | 2                                          | 5             | 2             | 2             |   |
| Time Before Reduction  (Sec.)                                                                                                       |                     |  |  |  | —                                          | 30            | —             | —             |   |
| Minimum Gap  (Sec.)                                                                                                                 |                     |  |  |  | —                                          | 2             | —             | —             |   |
| Time to Reduce  (Sec.)                                                                                                              |                     |  |  |  | —                                          | 30            | —             | —             |   |
| Maximum Green I (Sec.)                                                                                                              |                     |  |  |  | 35                                         | 60            | 15            | 20            |   |
| Maximum Green II (Sec.)                                                                                                             |                     |  |  |  | 35                                         | 60            | 15            | 20            |   |
| Yellow Change (Sec.)                                                                                                                |                     |  |  |  | 4                                          | 5             | 4             | 4             |   |
| All Red Clearance (Sec.)                                                                                                            |                     |  |  |  | 1.5                                        | 1.0           | 1.5           | 1.5           |   |
| Walk (Sec.)                                                                                                                         |                     |  |  |  | 1.0                                        | 1.0           | 1.0           | 5             |   |
| Pedestrian Clearance (Sec.)                                                                                                         |                     |  |  |  | 1.0                                        | 1.0           | 1.0           | 15            |   |
| Recall                                                                                                                              | Maximum (On/Off)    |  |  |  | Off                                        | Off           | Off           | Off           |   |
|                                                                                                                                     | Minimum (On/Off)    |  |  |  | Off                                        | On            | Off           | Off           |   |
|                                                                                                                                     | Pedestrian (On/Off) |  |  |  | Off                                        | Off           | Off           | Off           |   |
| Memory                                                                                                                              |                     |  |  |  | Off                                        | On            | Off           | Off           |   |
| Call to Non-Actuated                                                                                                                |                     |  |  |  | No. 1                                      |               |               |               |   |
|                                                                                                                                     |                     |  |  |  | No. 2                                      |               |               |               |   |

Volume Density Controls

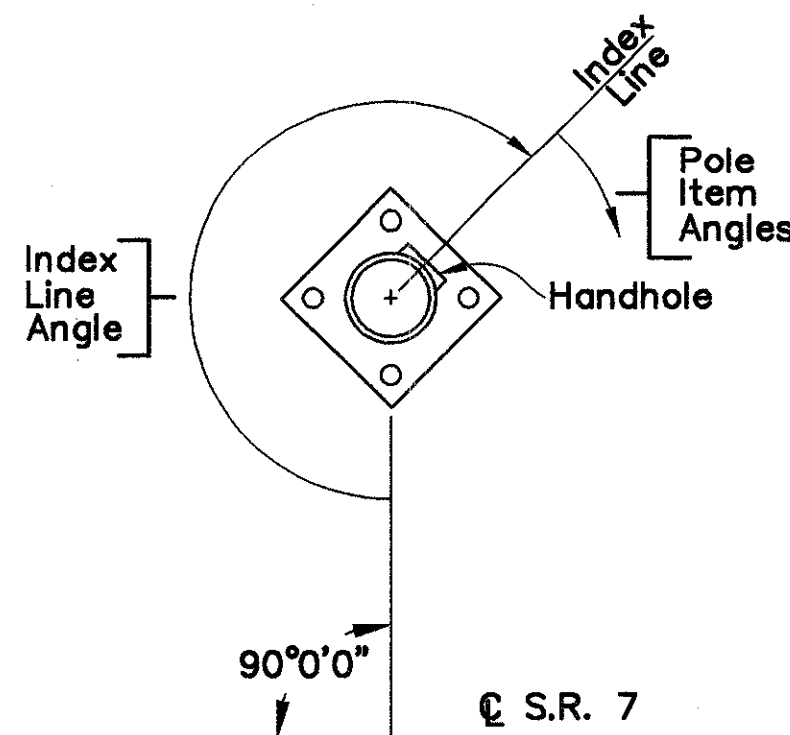
| QUANTITIES                            |           |                                                                                    |       |           |
|---------------------------------------|-----------|------------------------------------------------------------------------------------|-------|-----------|
| ITEM                                  | REF       | DESCRIPTION                                                                        | QUANT | UNIT      |
| 625                                   |           | Conduit, 51mm, 713.04                                                              | 270   | Meter     |
| 625                                   |           | Conduit, 76mm, 713.04                                                              | 3     | Meter     |
| 625                                   |           | Trench                                                                             | 273   | Meter     |
| 625                                   |           | Pull Box, 713.08, 450mm                                                            | 6     | Each      |
| 625                                   |           | Pull Box, 713.08, 600mm                                                            | 1     | Each      |
| 625                                   |           | Ground Rod                                                                         | 4     | Each      |
| 632                                   | 1,5,6,7   | Vehicular Signal Head, 3 Section, 300mm Lens, 1-Way, As Per Plan                   | 5     | Each      |
| 632                                   | 2,3       | Vehicular Signal Head, 5 Section, 300mm Lens, 1-Way, As Per Plan                   | 2     | Each      |
| 632                                   | 4/6       | Vehicular Signal Head, 3 Section, 300mm/ 5 Section, 300mm Lens, 2-Way, As Per Plan | 1     | Each      |
| 632                                   |           | Covering of Vehicular Signal Head                                                  | 8     | Each      |
| 632                                   | 1,2,3,4,7 | Loop Detector Unit, As Per Plan                                                    | 5     | Each      |
| 632                                   | 5,6       | Loop Detector Unit, Delay and Extension Type, As Per Plan                          | 2     | Each      |
| 632                                   |           | Messenger Wire, 7 Strand, 11mm Diameter With Accessories                           | 72    | Meter     |
| 632                                   |           | Signal Cable, 5 Conductor, No. 14 AWG                                              | 169   | Meter     |
| 632                                   |           | Signal Cable, 7 Conductor, No. 14 AWG                                              | 71    | Meter     |
| 632                                   |           | Detector Loop                                                                      | 8     | Each      |
| 632                                   |           | Loop Detector Lead-In Cable                                                        | 639   | Meter     |
| 632                                   |           | Power Cable, 2 Conductor, No. 8 AWG                                                | 22    | Meter     |
| 632                                   |           | Power Service                                                                      | 1     | Each      |
| 632                                   |           | Strain Pole Foundation                                                             | 3     | Each      |
| 632                                   | A         | Strain Pole, Type TC-81.10M, Design 7 (Pole Hgt. = 9.1m)                           | 1     | Each      |
| 632                                   | C         | Strain Pole, Type TC-81.10M, Design 8 (Pole Hgt. = 9.1m)                           | 1     | Each      |
| 632                                   | B         | Strain Pole, Type TC-81.10M, Design 9 (Pole Hgt. = 9.1m)                           | 1     | Each      |
| 632                                   |           | Removal of Traffic Signal Installation For Storage                                 | 1     | Each      |
| 633                                   |           | Controller, Actuated, 4 Phase, Solid State Digital Microprocessor, As Per Plan     | 1     | Each      |
| 633                                   | 5,6       | Relay, Calling                                                                     | 2     | Each      |
| 633                                   |           | Concrete For Cabinet Foundation                                                    | 1.40  | Cu. Meter |
| 633                                   |           | Controller Work Pad (Type 2 TC-83.20M)                                             | 1.04  | Sq. Meter |
| Quantities Carried To General Summary |           |                                                                                    |       |           |

| TRAFFIC DETECTORS |              |                                 |           |                   |               |                           |                |                            |                             |
|-------------------|--------------|---------------------------------|-----------|-------------------|---------------|---------------------------|----------------|----------------------------|-----------------------------|
| Loop Designation  | Size (Meter) | Number of Turns (See TC-82.10M) | Shape     | Pulse or Presence | Calling Relay | Delay or Extension (Sec.) | Override Phase | Connect to Detector Unit # | Associated Controller Phase |
|                   |              |                                 |           |                   |               |                           |                |                            |                             |
| L-1               | 2 x 6        | 2                               | Std.      | Pulse             | -             | -                         | -              | 1                          | ø2                          |
| L-2               | 2 x 6        | 2                               | Std.      | Pulse             | -             | -                         | -              | 1                          | ø2                          |
| L-3               | 8 x 2        | 2                               | Rectangle | Presence          | -             | -                         | -              | 2                          | ø1                          |
| L-4               | 8 x 2        | 2                               | Rectangle | Presence          | -             | -                         | -              | 3                          | ø2                          |
| L-5               | 8 x 2        | 2                               | Rectangle | Presence          | ✓             | -                         | -              | 4                          | ø3 *                        |
| L-6               | 9 x 3        | 2-4-2                           | Fig-8     | Presence          | ✓             | 10 delay                  | ø3&ø4          | 5                          | ø3 *                        |
| L-7               | 7 x 2        | 2                               | Rectangle | Presence          | -             | 10 delay                  | ø4             | 6                          | ø4                          |
| L-8               | 7 x 2        | 2                               | Rectangle | Presence          | -             | -                         | -              | 7                          | ø4                          |

\* Extend ø4 during ø4 Green

NOTES:

- All Angles Measured Clockwise
- Index Line Goes Through The Center Of The Handhole



| TYPE TC-81.10M STRAIN POLE |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|----------------------------|------------|-----------------|--------------------------------|----------------------|---------------------------------|----------|-------------------------|-------------------------------|---|-----------------------|-------------------|-----|--|--|
| Pole No.                   | Design No. | Pole Height (m) | ** Top of Foundation Elevation | 'd' (m) of TC-21.20M | Span Wire Attachment Height (m) |          | Index Line Angle (Deg.) | Angles (Deg.) From Index Line |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         | Disconnect Switch             |   | Signal Cable Entrance |                   |     |  |  |
|                            |            |                 |                                |                      | Temp.                           | ** Final |                         |                               |   | Angle                 | Distance From Top |     |  |  |
| A                          | 7          | 9.1             | 203.500                        | 3.1                  | 9.050                           | 8.550    | 270                     |                               | I |                       | 45                | 0.8 |  |  |
| B                          | 9          | 9.1             | 203.500                        | 3.1                  | 9.050                           | 8.550    | 240                     |                               | O |                       | 120               | 0.8 |  |  |
| C                          | 8          | 9.1             | 203.500                        | 3.1                  | 9.050                           | 8.550    | 315                     |                               | I |                       | 90                | 0.8 |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
|                            |            |                 |                                |                      |                                 |          |                         |                               |   |                       |                   |     |  |  |
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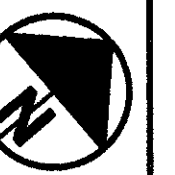
\*\* See Note "Strain Pole Foundation Elevations" In The Traffic Control General Notes Sheet No. 123

AETNA ST.  
SIGNAL DATA

BEL-7-32.276

156  
242





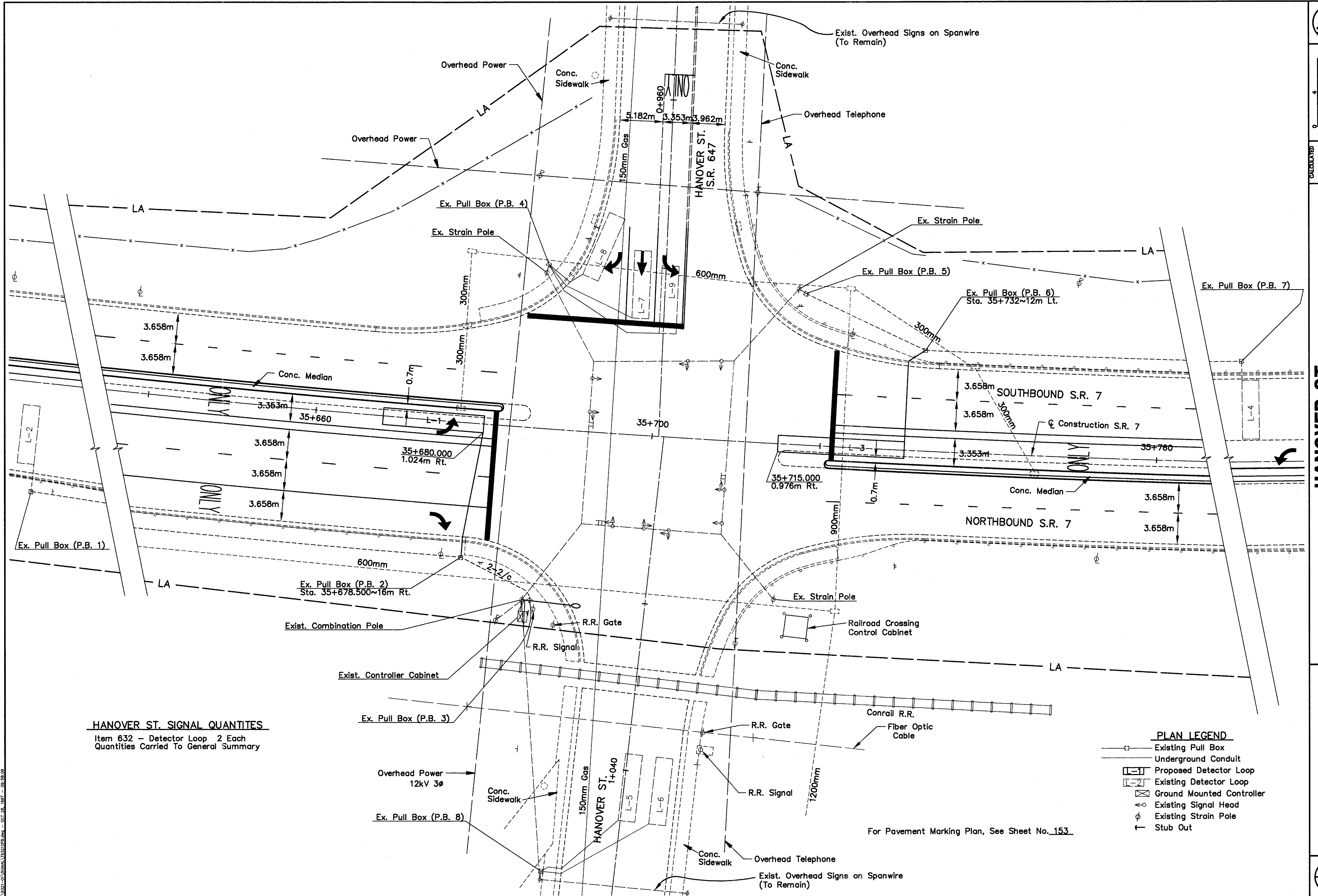
HORIZONTAL  
SCALE IN METERS

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# HANOVER ST. SIGNAL PLAN

BEL-7-35.567

156A  
242

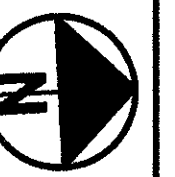


**HANOVER ST. SIGNAL QUANTITIES**  
Item 632 - Detector Loop 2 Each  
Quantities Carried To General Summary

- PLAN LEGEND**
- Existing Pull Box
  - Underground Conduit
  - Proposed Detector Loop
  - Existing Detector Loop
  - Ground Mounted Controller
  - Existing Signal Head
  - Existing Strain Pole
  - Stub Out

For Pavement Marking Plan, See Sheet No. 153





80  
40  
20  
0  
HORIZONTAL  
SCALE IN METERS

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**LIGHTING SCHEMATIC**  
**STA. 32+227 TO STA. 33+300**

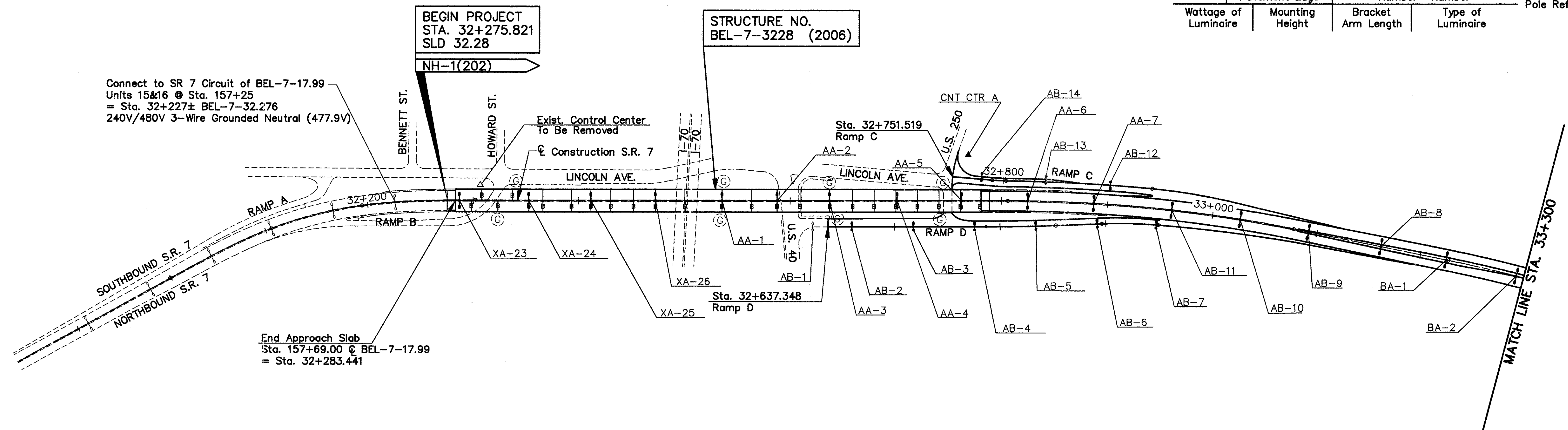
**BEL-7-32.276**

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242

**LEGEND**

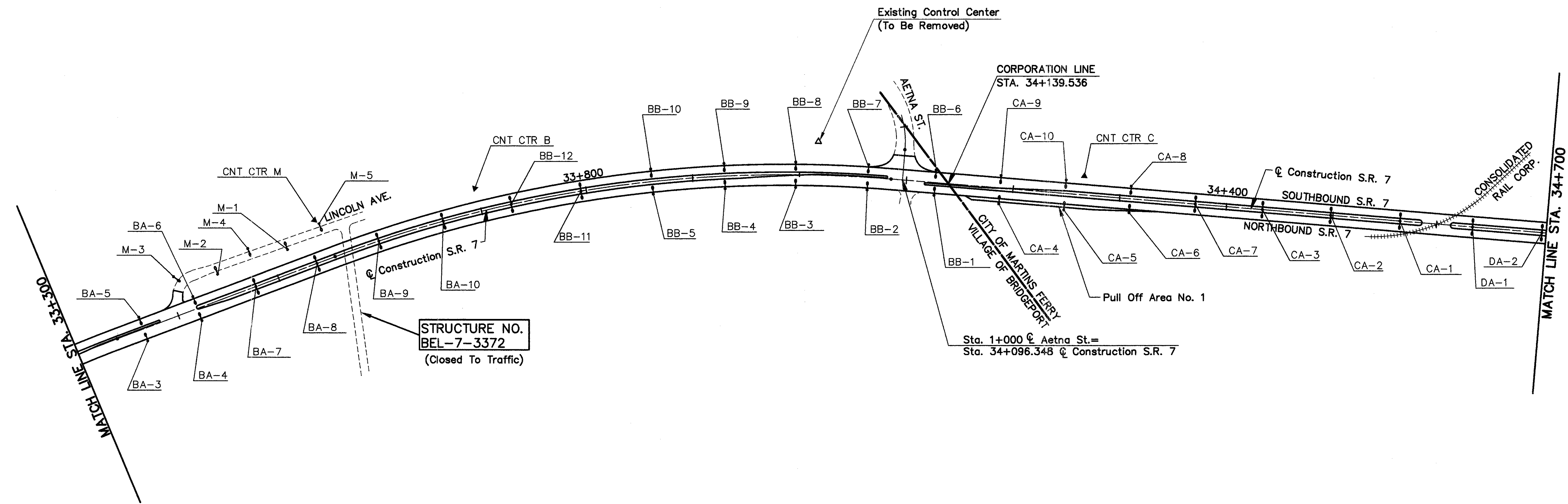
- Proposed 2 Arm Light Pole Atop B1270 Concrete Barrier
- Proposed Light Pole
- ▲— Control Center
- Pull Box/Junction Box
- Existing Light Pole (To Remain) W/Proposed Lamp
- Proposed Duct Cable
- Conduit (Size as Dimensioned)
- Distribution Cable in Median Raceway (3-Wire Shown)
- T— Circuit Stub and Cap
- Proposed Catch Basin, Pipe, and Headwall
- Underpass Lighting Unit
- Guardrail, Type 5
- XX---XX--- Existing Cable (To Be Abandoned)
- (G)— Existing Structure Ground  
( See Structure Grounding System, As Per Plan,  
General Notes Sheet No. )
- Existing Light Pole to Remain
- X— Existing Light Pole to be Removed
- φ— Existing Bridge Pier Bearing Line

| Station                 | Offset from<br>Pavement Edge | Circuit<br>Number     | Pole<br>Number       | Pole Ref No. |
|-------------------------|------------------------------|-----------------------|----------------------|--------------|
| Wattage of<br>Luminaire | Mounting<br>Height           | Bracket<br>Arm Length | Type of<br>Luminaire |              |





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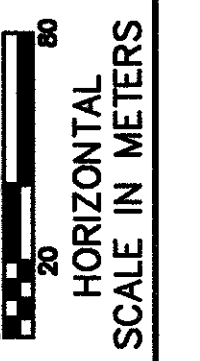
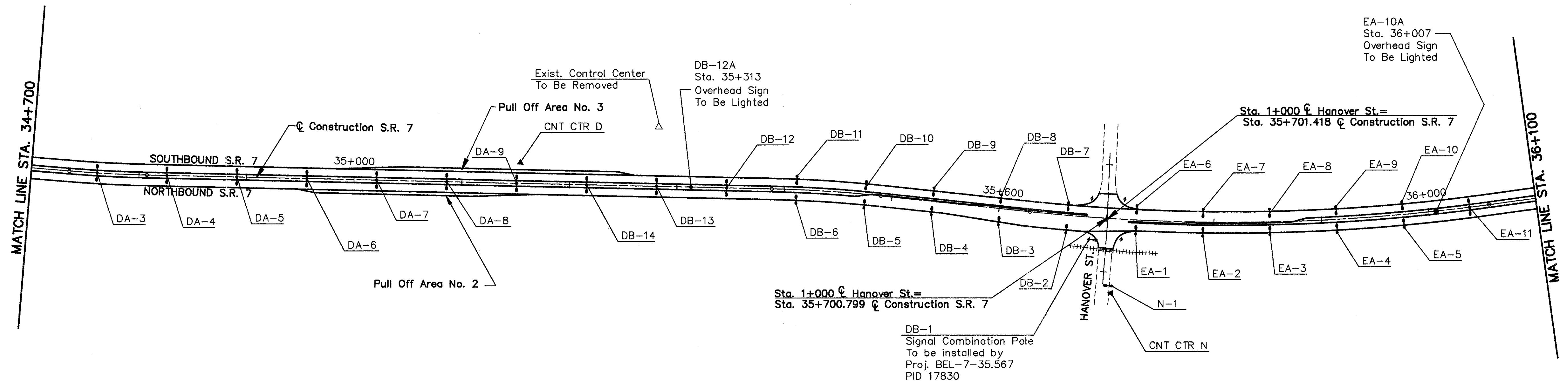


For Legend, See Sheet No. 157

|                                                                                                                                   |                   |                                                  |              |                               |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------|--------------|-------------------------------|
| <br>HORIZONTAL<br>SCALE IN METERS<br>0 20 40 80 | CALCULATED<br>AEH | LIGHTING SCHEMATIC<br>STA. 33+300 TO STA. 34+700 | BEL-7-32.276 | <div>158</div> <div>242</div> |
|                                                                                                                                   | CHECKED<br>SAH    |                                                  |              |                               |



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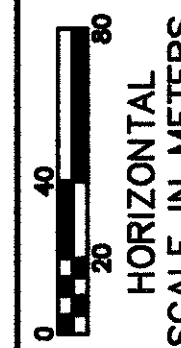
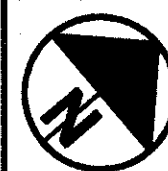
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**LIGHTING SCHEMATIC**  
**STA. 34+700 TO STA. 36+100**

**BEL-7-32.276**

For Legend, See Sheet No. 157



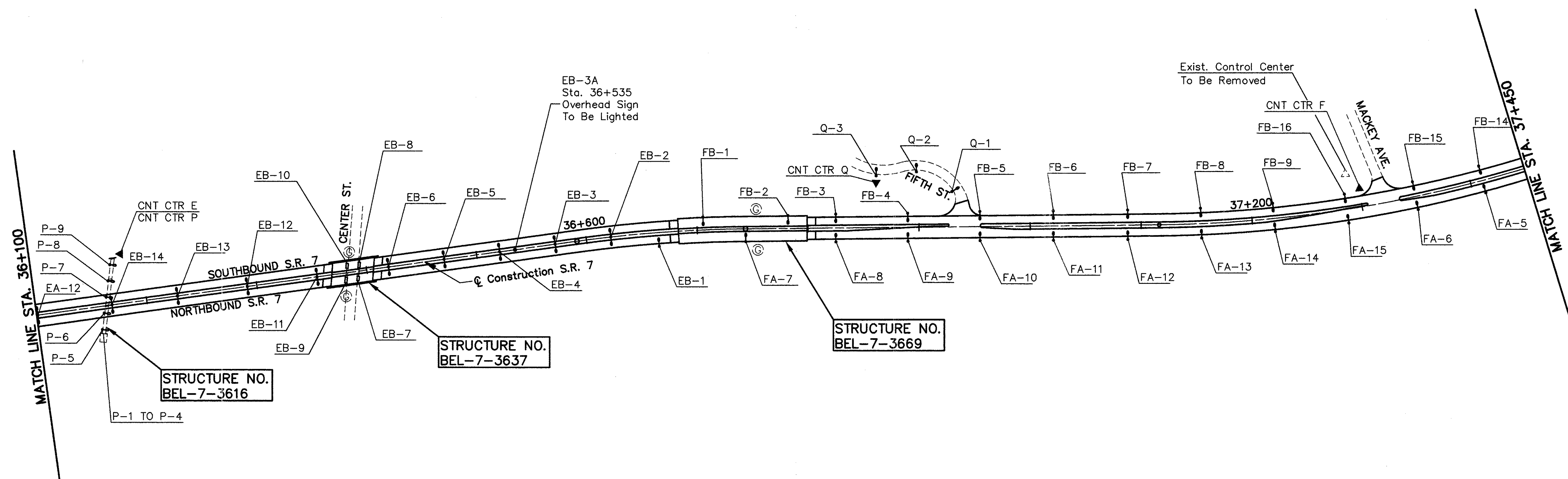


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**LIGHTING SCHEMATIC**  
**STA. 36+100 TO STA. 37+450**

**BEL-7-32.276**

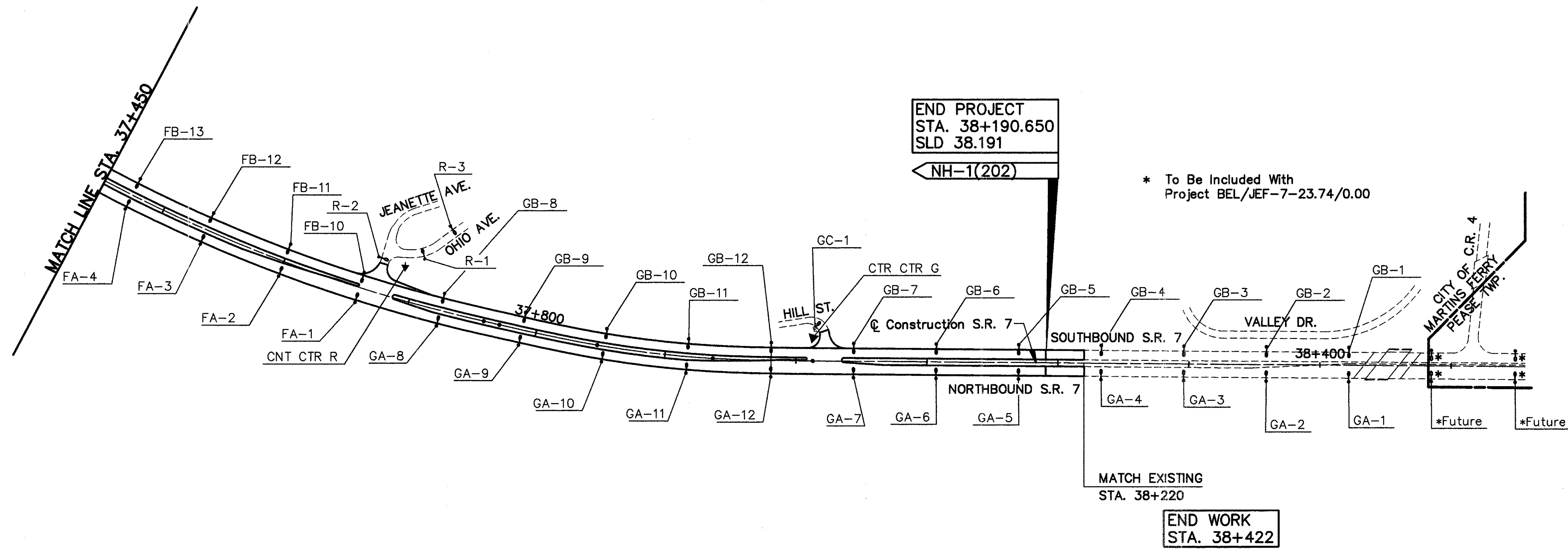
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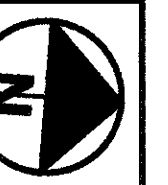
For Legend, See Sheet No. 157



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For Legend, See Sheet No. 157



0 20 40 60  
HORIZONTAL  
SCALE IN METERS

CALCULATED  
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**LIGHTING SCHEMATIC**  
**STA. 37+450 TO STA. 38+422**

**BEL-7-32.276**

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242



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# LIGHTING GENERAL NOTES

## 625.03 – POWER SERVICE

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

PUBLIC PROJECTS COORDINATOR  
AEP OHIO POWER COMPANY  
1 RIVERSIDE PLAZA  
COLUMBUS, OHIO 43215-2373  
PHONE (614) 223-1579

ELECTRICAL ENERGY FROM EXISTING POWER SERVICES SHALL CONTINUE TO BE CHARGED TO THE MAINTAINING AGENCY. THE CONTRACTOR SHALL PAY ELECTRICAL ENERGY CHARGES FOR NEW POWER SERVICE ESTABLISHED BY THIS PROJECT. UPON COMPLETION OF THIS PROJECT, POWER SERVICE ELECTRICAL ENERGY ACCOUNT SHALL BE TRANSFERRED TO THE MAINTAINING AGENCY. THE STATE OF OHIO SERVES AS THE MAINTAINING AGENCY FOR CONTROL CENTERS A, B, M, AND "SR7 CIRCUIT" ON PROJECT BEL-7-17.99 WHICH IS EXTENDED AS "XA" UNITS ON THIS PROJECT. THE VILLAGE OF BRIDGEPORT SERVES AS THE MAINTAINING AGENCY FOR CONTROL CENTER M. THE CITY OF MARTINS FERRY WILL SERVE AS THE MAINTAINING AGENCY FOR CONTROL CENTERS C, D, E, F, G, N, P, Q AND R.

THE PROJECT WILL RECEIVE 120/240 VOLT, 3-WIRE GROUNDED NEUTRAL SERVICE AT SOME LOCATIONS AND 480 VOLT 2-WIRE GROUNDED NEUTRAL AT OTHERS. (SEE THE PLANS AND HL-40.10M & HL-60.31M). EXISTING LIGHTING SERVICE IS 480 VOLT. THE CONTRACTOR SHALL CONTACT THE OHIO POWER CO. TO ASCERTAIN HOOK-UP FEES HE MUST PAY FOR THE PROPOSED SERVICE.

## 625.07 – 713.11 – LUMINAIRES

STYLE B LUMINAIRES SHALL HAVE SINGLE RATED 240 VOLT, 250 WATT, INTEGRAL REGULATOR BALLASTS FOR USE WITH HIGH PRESSURE SODIUM LAMPS EXCEPT UNITS OF CONTROL CENTERS A, B, & CIRCUIT XA SHALL HAVE SINGLE RATED 480 VOLT, 250 WATT. THE LUMINAIRES SHALL BE GENERAL ELECTRIC M400, COOPER OVV, AMERICAN 25/26 OR EQUAL APPROVED BY THE ENGINEER.

## POST TOP LUMINAIRES

POST TOP LUMINAIRES SHALL HAVE SINGLE RATED 240 VOLT, 100 WATT, INTEGRAL REGULATOR BALLASTS FOR USE WITH HIGH PRESSURE SODIUM, AND SHALL BE GENERAL ELECTRIC PM 17, COOPER TW, HOLOPHANE CRESTWOOD, OR EQUAL APPROVED BT THE ENGINEER. FOR DETAILS, SEE SHEET NO. 198

## 625.07 – 713.13 LUMINAIRES FOR UNDER PASSES

UNDER PASS LUMINAIRES SHALL HAVE SINGLE RATED 240 VOLT, 100 WATT, INTEGRAL REGULATOR BALLASTS FOR USE WITH HIGH PRESSURE SODIUM LAMP ON THE PEDESTRIAN BRIDGE STAIRS. FOR THE CENTER STREET UNDER PASS UNITS BALLASTS SHALL BE SINGLE RATED 240 VOLT, 150 WATT. UNDER PASS LUMINAIRES SHALL BE GENERAL ELECTRIC WALL MOUNT 175, COOPER WPK, HOLOPHANE WALLPACK II, OR EQUAL APPROVED BY THE ENGINEER. FOR DETAILS, SEE SHEET NO. 198

## 713.14 – LAMPS

HIGH PRESSURE SODIUM LAMPS SHALL BE SYLVANIA "LUMALUX", PHILIPS "CERAMALUX", GENERAL ELECTRIC "LUCALOX" OR EQUAL APPROVED BY THE ENGINEER.

## CONDUIT ON STRUCTURE

EXPANSION FITTINGS FOR CONDUIT ON STRUCTURES SHALL BE OZ TYPE AX, CROUSE-HINDS TYPE JX-4, APLETON XJ-4, OR EQUAL APPROVED BY THE ENGINEER. EACH EXPANSION FITTING SHALL HAVE A COPPER EXTERNAL BONDING JUMPER.

## UNDERDRAIN FOR PULL BOXES

REFERENCE IS MADE TO STANDARD DRAWINGS FOR DETAILS OF DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 6 METERS. AN ESTIMATED QUANTITY FOR ITEM 603, 100mm CONDUIT, TYPE E IS INCLUDED AT EACH PULL BOX IN THE LIGHTING QUANTITIES FOR THIS PURPOSE.

## PADLOCKS AND KEYS

PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE, EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNAN 660A, AND SHALL BE KEYED IN ACCORDANCE WITH SPECIFICATION 631.08, PARAGRAPH 3. PAYMENT SHALL BE INCLUDED IN THE BID FOR THE ITEM(S) BEING LOCKED.

## ITEM 202 – LIGHT POLE REMOVED FOR STORAGE

THIS ITEM OF WORK SHALL CONSIST OF CAREFULLY REMOVING AN EXISTING LIGHT POLE INCLUDING THE BRACKET ARM AND TRANSFORMER BASE (IF USED), AND STORING THE REMOVED MATERIALS ON THE PROJECT FOR SALVAGE BY THE CITY OF MARTINS FERRY.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH ITEM 202 LIGHT POLE REMOVED FOR STORAGE.

## ITEM 202 – LUMINAIRE REMOVED FOR STORAGE

THIS ITEM OF WORK SHALL CONSIST OF CAREFULLY REMOVING AN EXISTING LUMINAIRE AND STORING IT ON THE PROJECT FOR SALVAGE BY THE CITY OF MARTINS FERRY.

PAYMENT WILL BE MADE FOR EACH ITEM 202 LUMINAIRE REMOVED FOR STORAGE.

## ITEM 202 – POWER SERVICE REMOVED. AS PER PLAN

THIS ITEM OF WORK INCLUDES THE REMOVAL OF THOSE PORTIONS OF THE EXISTING POWER SERVICE NOT BEING REUSED. EXISTING UNDERGROUND CONDUIT AND WIRING MAY BE ABANDONED IN PLACE. POLES AND PULL BOXES SHALL BE REMOVED TO AT LEAST 0.3m BELOW GROUND LINE WITH BACKFILLING AND RESTORATION OF SURFACES IN ACCORDANCE WITH 603.09. REMOVED MATERIALS NOT CLAIMED BY THE POWER COMPANY SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT SITE.

THIS ITEM WILL ALSO COMPENSATE THE CONTRACTOR FOR COORDINATING WITH THE POWER COMPANY TO INSURE THAT THEY DISCONNECT AND REMOVE ANY OF THEIR ITEMS THAT ARE A PART OF THE POWER SERVICE. IT ALSO INCLUDES RETURNING TO THE POWER COMPANY ANY ITEM BELONGING TO THEM THAT WERE REMOVED BY THE CONTRACTOR, SUCH AS THE METER BASE.

THE CONTROL CENTERS AT CLAY AVE. (APPROX STA 35+290, LEFT) AND AT MACKEY AVE. INCLUDE A TRANSFORMER (37 1/2 KVA 4000V PRIMARY; 480V SECONDARY PER OLD PLAN) WHICH SHALL BE REMOVED AND DISPOSED OF BY AEP/OHIO POWER COMPANY. THE CONTROL CENTER NEAR AETNA ST. (APPROX STA 34+043, LEFT) IS THE PROPERTY OF AEP/OHIO POWER AND WILL BE REMOVED BY OHIO POWER COMPANY. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH AEP/OHIO POWER FOR REMOVAL OF ALL TRANSFORMERS.

AT THE OPTION OF THE POWER CO., THE EXISTING CONTROL CENTER POLE AT MACKEY AVE. MAY BE LEFT IN PLACE FOR USE BY THE POWER CO. FOR THEIR POWER DROP.

PAYMENT WILL BE MADE FOR EACH ITEM POWER SERVICE REMOVED, AS PER PLAN AND SHALL BE FULL COMPENSATION INCLUDING ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THE REMOVAL AND RESTORATION IN A SATISFACTORY WORKMAN-LIKE MANNER.

## ITEM 625 STRUCTURE GROUNDING SYSTEM. AS PER PLAN

A STRUCTURE GROUND PER 625.20 AND THE FOLLOWING INSTRUCTIONS SHALL BE PROVIDED FOR EACH OF THESE STRUCTURES:

|                        |                       |
|------------------------|-----------------------|
| VIADUCT                | STRUCTURE BEL-7-32283 |
| PEDESTRIAN BRIDGE      | STRUCTURE BEL-7-36164 |
| CENTER STREET OVERPASS | STRUCTURE BEL-7-36368 |
| FORMER R/R OVERPASS    | STRUCTURE BEL-7-36683 |

EACH EXISTING GROUNDING SYSTEM SHALL BE VISUALLY INSPECTED BY THE LIGHTING CONTRACTOR. ANY SIGNIFICANT DETERIORATION OBSERVED SHALL BE REVIEWED WITH THE ENGINEER AND FAULTY ELEMENTS SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER. EACH GROUNDING SYSTEM SHALL BE DISCONNECTED FROM THE EXISTING GROUND ROD AND LOW RESISTANCE CONTINUITY TO EACH LIGHTING UNIT GROUNDING CABLE DEMONSTRATED TO THE SATISFACTION OF THE ENGINEER. WHEREVER RESISTANCE OF 5 OHM OR MORE IS FOUND, THE CONTRACTOR SHALL DEVISE AND PROVIDE A REMEDY SATISFACTORY TO THE ENGINEER.

A NEW GROUND ROD (RODS OR GRID) SHALL BE INSTALLED IN ACCORDANCE WITH 625.10 AND 625.20 IN THE LOCATION INDICATED IN THE PLANS.

AT HIS OPTION, THE CONTRACTOR MAY ABANDON ANY OR ALL EXISTING GROUND SYSTEMS AND PROVIDE A NEW STRUCTURE GROUNDING SYSTEM APPROVED BY THE ENGINEER.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE DESCRIBED WORK:

ITEM 625 STRUCTURE GROUNDING SYSTEM, AS PER PLAN 4 EACH

## ITEM 625 HIGH VOLTAGE TEST

HIGH VOLTAGE TESTS SHALL BE PERFORMED AS PER 625.22.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE DESCRIBED WORK:

ITEM 625 HIGH VOLTAGE TEST ----- LUMP

## 625.04 625.05 LIGHT POLE. DESIGN AON4.6. AS PER PLAN

THE CONTRACTOR SHALL FIELD CHECK EXACT SIZE AND SPACING OF EXISTING ANCHOR BOLTS ON PILASTERS OF STRUCTURE NO. BEL-7-36164. WORKING DRAWINGS SHALL SHOW BASE PLATE HOLE SIZE AND LOCATION SPECIFICALLY FOR EACH POLE TO BE MOUNTED ONTO EXISTING PILASTERS. POLES SHALL BE FABRICATED TO FIT THE EXISTING ANCHOR BOLTS WITHOUT FIELD MODIFICATIONS. NEW LEVELING AND TOP NUTS SHALL BE FURNISHED. GALVANIZING OF ANCHOR BOLTS SHALL BE REPAIRED PER 711.02 IF DIRECTED BY ENGINEER. POLE FOR P-9 SHALL HAVE BLIND HALF COUPLING FOR CONDUIT AS DETAILED ON SHEET NO. 198.

## ITEM SPECIAL – MAINTAIN EXISTING LIGHTING

WHEREVER POSSIBLE THE EXISTING LIGHTING SHALL BE KEPT IN OPERATION UNTIL THE PROPOSED LIGHTING IS IN PLACE AND TESTED. WITH ONLY THESE EXCEPTIONS NOTED BELOW. THIS ITEM ALSO INCLUDES THE CONTRACTOR LOCATING THE EXISTING UNDERGROUND LIGHTING CABLE AS NEEDED TO CONSTRUCT THIS PROJECT. ODOT AND THE CITY OF MARTINS FERRY WILL PROVIDE WHATEVER ELECTRICAL INFORMATION IS AVAILABLE UPON REQUEST.

AT VARIOUS LOCATIONS THE PLACEMENT OF PROPOSED DUCT CABLE AND CONDUITS AS LOCATED ON THE PLANS WILL CROSS EXISTING DUCT CABLE. POLE FOUNDATIONS MAY BE OVER OR CLOSE TO EXISTING CIRCUIT CABLE. BEFORE ANY POLE FOUNDATION OR TRENCH EXCAVATION IS BEGUN, THE CONTRACTOR SHALL STAKE THE PROPOSED LOCATION OF POLES AND PULL BOXES AND OF EXISTING PULL BOXES. HE THEN SHALL REVIEW THE ENTIRE LIGHTING PROJECT ON THE GROUND WITH THE ENGINEER TO DETERMINE HOW TO MAINTAIN OPERATION OF THE EXISTING SYSTEM DURING CONSTRUCTION.

EXCEPTION 1: AT STRUCTURE BEL-7-36683 THE EXISTING STRUCTURE MOUNTED LIGHTING MUST BE REMOVED TO ALLOW THE PROPOSED LIGHTING TO BE MOUNTED ON THE EXISTING PILASTERS. A TEMPORARY CONNECTION BETWEEN EXISTING PULL BOXES OR BETWEEN EXISTING POLES MAY BE USED TO MAINTAIN EXISTING CIRCUITS.

EXCEPTION 2: MEDIAN UNITS IN MARTINS FERRY TO STA. 34+922 WILL BE REMOVED TO ALLOW MEDIAN RECONSTRUCTION. IF OPERATING PER ORIGINAL PLAN, THESE AND THE OUTSIDE UNITS NEAR STA. 34+160 AND STA. 34+225 CONSTITUTE THE ENTIRE LOAD OF CIRCUIT 'D' AT THE EXISTING CONTROL CENTER NEAR STA. 35+290 LT. AND NO TEMPORARY CONNECTION WILL BE REQUIRED FOR THIS CIRCUIT D.

THE LUMP SUM PRICE BID FOR ITEM SPECIAL "MAINTAIN EXISTING LIGHTING" SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO LOCATE THE EXISTING UNDERGROUND HIGHWAY LIGHTING CABLE, AND MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN. ALL WORK SHALL BE AT THE DIRECTION OF THE ENGINEER

## LOCATION OF POLES ON STRUCTURE BEL-7-32283L

THE LOCATION OF LIGHT POLES TO BE MOUNTED ON THE MEDIAN BARRIER OF STRUCTURE NO. BEL-7-32283L SHALL BE ADJUSTED, IF NECESSARY, TO PLACE THE CENTERLINE OF THE POLE AT LEAST 3.0m FROM AN EXPANSION JOINT AND 1.0m FROM A CRACK CONTROL JOINT IN THE BARRIER. WHEN FIRST LAYING OUT THE BARRIER CONSTRUCTION, THE CONTRACTORS SHALL MARK ON THE STRUCTURE HIS PROPOSED LOCATION OF BARRIER JOINTS AND SAW CUTS. HE SHALL ALSO MARK THE LIGHT POLE LOCATIONS AS SHOWN ON PLAN SHEET'S NO. 164 & 165. THE CONTRACTOR SHALL THEN REVIEW THE LOCATION MARKINGS WITH THE ENGINEER. BARRIER JOINT AND/OR POLE LOCATIONS SHALL BE ADJUSTED AS DIRECTED BY THE ENGINEER.

## ELECTRICAL SERVICE FOR ILLUMINATED SIGNS

THE PAY ITEMS IN THE LIGHTING GENERAL SUMMARY INCLUDE THE RACEWAY JUNCTION BOX ADJACENT TO EACH LIGHTED SIGN CONDUIT AND CABLE FOR ELECTRICAL SERVICE FROM THE CONNECTION IN THE PULL BOX OR JUNCTION BOX TO THE SIGN, INCLUDING THE CABLE CONNECTORS, ARE INCLUDED IN ITEM 625 SIGN SERVICE IN THE TRAFFIC CONTROL GENERAL SUMMARY.

## ITEM 625 LIGHTING MISC.: COORDINATION FOR CONNECTION OF CIRCUIT EXTENSION

THIS WORK SHALL CONSIST OF ALL NECESSARY ARRANGEMENTS WITH THE MAINTAINING AGENCY OF THE "S.R. 7 CC ODOT" CONTROL CENTER LIGHTING OF PROJECT BEL-7-19.99 TO ACHIEVE:

1. SECURE DE-ENERGIZING OF THE CONTROL CENTER OF THE EXISTING CIRCUIT WHILE MAKING CONNECTION OF THE PROPOSED "CIRCUIT XA" AT THE JUNCTION BOX FOR THE EXISTING POLE AT STA. 32+227±.
2. COOPERATION DURING APPLICABLE ELECTRICAL TESTS OF 625.22 FOR CIRCUIT XA.

THE PERIOD OF DE-ENERGIZING SHALL BEGIN AT LEAST ONE HOUR AFTER SUNRISE AND SHALL END AT LEAST TWO HOURS BEFORE SUNSET OF THE DAY THE CONNECTION IS PERFORMED.

THE OHIO DEPARTMENT OF TRANSPORTATION ACTS AS MAINTAINING AGENCY FOR THE S.R. 7 LIGHTING INVOLVED. THE CONTRACTOR MAY REQUEST THEIR COOPERATION BY WAY OF WRITTEN NOTICE TO THE ENGINEER AT LEAST 2 WEEKS BEFORE THE CIRCUIT CONNECTION.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE SUMMARY FOR THE ABOVE DESCRIBED WORK:

ITEM 625 – LIGHTING MISC.: COORDINATION FOR CONNECTION OF CIRCUIT EXTENSION --- LUMP



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# LIGHTING GENERAL NOTES

## REDUCTION OF CABLE SPLICES, PULL BOXES AND/OR CONDUIT

AT VARIOUS LOCATIONS IT IS PROPOSED TO AVOID CABLE SPLICES BY STRIPPING DUCT-CABLE AND USING THE CONDUCTORS IN LIEU OF DISTRIBUTION CABLE. GENERALLY THIS OCCURS AT CONTROL CENTERS WHERE CONDUIT CONNECTS THE CONTROL CENTER TO THE ADJACENT PULL BOX AND CIRCUITS ARE CARRIED AS DUCT-CABLE BEYOND THE PULL BOX. IN THESE SITUATIONS THE PLAN QUANTITIES PAY FOR DUCT CABLE TO THE CONTROL CENTER, INCLUDING SLACK AND CONNECTION ALLOWANCES, AND NO CABLE SPLICING OR DISTRIBUTION CABLE IS REQUIRED OR PAID.

DUCT-CABLE STRIPPING ALSO OCCURS ON CIRCUIT AA WHERE THE AB-12 TRANSFORMER BASE SERVES IN LIEU OF A PULL BOX FOR CIRCUIT AA. A SINGLE CONDUIT, JACKED UNDER PAVEMENT, CARRIES BOTH CIRCUIT AA AND CIRCUIT AB. THE DUCT CABLE OF CIRCUIT AA FROM THE CONTROL CENTER SHALL ENTER AB-12 FOUNDATION VIA A SEPARATE CONDUIT ELBOW AND SHALL CONTINUE, STRIPPED OF THE DUCT, FROM THE TRANSFORMER BASE THROUGH THE JACKED CONDUIT, THROUGH JUNCTION BOX NO. A2 TO POLE AA-7 WITHOUT SPLICE. CIRCUIT AA IS PAID AS DUCT CABLE FROM THE CONTROL CENTER TO POLE AA-7.

THE ADDITIONAL CONDUIT ELBOW REQUIRED IN FOUNDATION AB-12 IS COMPARABLE TO FOUNDATIONS WHERE CIRCUITS BRANCH IN A TRANSFORMER BASE; IT IS INCLUDED WITH THE FOUNDATION FOR PAYMENT. SEE NOTE 4 AND SECTION B-B OF ST'D. DWG. HL-20.11M. THREE CONDUIT ELBOWS ARE REQUIRED AT AB-12; CA-10; FA-15; FA-16; GA-12 AND GB-12.

## 625 - LIGHT POLE, DESIGN A2.4B9.1, AS PER PLAN

THE CONTRACTOR SHALL FIELD CHECK EXACT SIZE AND SPACING OF EXISTING ANCHOR BOLTS ON PILASTERS OF STRUCTURE BEL-7-36683. WORKING DRAWINGS SHALL SHOW BASE PLATE HOLE SIZE AND LOCATION SPECIFICALLY FOR EACH POLE TO BE MOUNTED ONTO EXISTING PILASTERS. POLES SHALL BE FABRICATED TO FIT THE EXISTING ANCHOR BOLTS WITHOUT FIELD MODIFICATIONS. NEW LEVELING AND TOP NUTS SHALL BE FURNISHED. GALVANIZING OF ANCHOR BOLTS SHALL BE REPAIRED PER 711.02 IF DIRECTED BY ENGINEER.

## 625 - LIGHT POLE, DESIGN A1.8B9.9, AS PER PLAN

THIS LIGHT POLE REPLACES THE POLE MISSING FROM THE EXISTING POLE FOUNDATION AT M-3 OF THE LINCOLN AVE. LIGHTING. THE CONTRACTOR SHALL VERIFY THE STYLE (HL-10.11M ANCHOR BASE STYLE), BRACKET ARM LENGTH AND SHAPE, UPSWEEP, SHAFT LENGTH, DIAMETER AND TAPER BY FIELD MEASURE OF EXISTING POLE M-2. THE M-3 POLE SHALL BE STEEL FABRICATED TO MATCH THE APPEARANCE OF POLE M-2 AS MEASURED AND THE ANCHOR BOLT SIZE AND LOCATION OF THE EXISTING FOUNDATION AT M-3. THE POLE SHALL BE GALVANIZED PER 713.01.8 AND FACTORY COATED WITH A PRIME COATING SUITABLE TO ACCEPT EPOXY INTERMEDIATE AND URETHANE FINISH COATINGS THAT ARE TO BE FIELD APPLIED WHEN THE EXISTING LINCOLN AVE. POLES ARE COATED.

## 625 - LIGHTING MISC.: FIELD PAINTING OF STEEL LIGHT POLE, AS PER PLAN

AT LINCOLN AVE. EXISTING POLES M-1, M-2, M-4, M-5 ARE TO BE REUSED IN PLACE FOR THE PROPOSED LIGHTING. EXISTING LUMINAIRES SHALL BE REMOVED FOR STORAGE UNDER SEPARATE PAYMENT. THE POLES, INCLUDING BRACKET ARMS, SHALL BE CLEANED AND COATED PER THE NOTE IN THE PROPOSAL. PROPOSED NEW POLE M-3 SHALL BE FACTORY PRIME COATED AND SHALL BE FIELD PAINTED WITH INTERMEDIATE AND FINISH COATS WITH THE SAME MATERIAL AND IN THE SAME MANNER AS THE REUSED POLES.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE WORK:

ITEM 625- LIGHTING MISC.: FIELD PAINTING OF STEEL LIGHT POLE, AS PER PLAN ----- 5 EACH

## ITEM 625 - DISCONNECT EXISTING CIRCUIT

THIS WORK CONSISTS OF LABOR, MATERIALS AND COORDINATION NECESSARY TO DISCONNECT EXISTING LIGHTING CIRCUITS AND REMOVE EXISTING CABLE AND CONNECTORS AT THE FOLLOWING LOCATIONS:

- POLE AB-1 AT RAMP D - REMOVE EXISTING CABLE THAT RUNS TO POLE THAT IS TO BE REMOVED NEAR STA. 32+648

- EXISTING CIRCUIT K BRANCH AT LINCOLN AVE. - REMOVE CABLE FROM S.R. 7 MAINLINE TO POLE K-8 ON THE CLOSED AETNAVILLE BRIDGE.

- EXISTING CIRCUIT D POLE D-23 TO BE REMOVED - AT AETNA. ST. REMOVE CABLE TO THE EXISTING S.R. 7 CIRCUIT.

- EXISTING POLE B-7 (PROPOSED N-1) AT HANOVER ST. - CURRENTLY DISCONNECTED; REMOVE ANY CABLE TO S.R. 7 LIGHTING.

- AT FIFTH ST. AND MACKEY AVE. - REMOVE CABLE BETWEEN ALL POLES BEING REMOVED AND CONNECTIONS AT S.R. 7

- AT JEANETTE AVE./OHIO AVE. - REMOVE CABLE BETWEEN EXISTING POLES (PROPOSED R-1, R-2, R-3) AND TO CONNECTION AT S.R. 7

- AT HILL ST. - REMOVE EXISTING CABLE BETWEEN PROPOSED POLE GC-1 AND EXISTING S.R. 7 MAINLINE CIRCUIT.

ALL EXISTING CABLE OF THE S.R. 7 LIGHTING SYSTEM THAT IS NOT REMOVED INCIDENTALLY WITH SEPARATELY PAID 202 OR 203 REMOVAL OR THE ABOVE LISTING SHALL BE REMOVED AND DISPOSED UNDER THIS ITEM UNLESS OTHERWISE APPROVED BY THE ENGINEER.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE WORK:

ITEM 625 - DISCONNECT EXISTING CIRCUIT ----- LUMP

## ITEM SPECIAL, PLASTIC CAUTION TAPE

THE LOCATION OF UNDERGROUND CONDUIT AND BURIED ELECTRICAL CABLES SHALL BE MARKED BY USING A CONTINUOUS IDENTIFYING TAPE BURIED IN THE TRENCH ABOVE THE CONDUIT AND CABLES. THE IDENTIFYING TAPE SHALL BE AN INERT MATERIAL, APPROXIMATELY 150mm WIDE, COMPOSED OF POLYETHYLENE PLASTIC HIGHLY RESISTANT TO ALKALIS, ACIDS, OR OTHER CHEMICAL COMPONENTS LIKELY TO BE ENCOUNTERED IN SOILS.

THE TAPE SHALL BE BRIGHT SAFETY RED WITH IDENTIFYING PRINTING "ELECTRIC" IN BLACK LETTERS, ONE SIDE ONLY. THE TAPE SHALL BE SUPPLIED IN CONTINUOUS ROLLS WITH THE IDENTIFYING LETTERING REPEATED THE ENTIRE LENGTH OF THE OF THE TAPE.

THE CONTRACTOR SHALL BURY THE IDENTIFYING TAPE ABOVE THE CONDUIT AND CABLES AT AN APPROXIMATE DEPTH OF 150mm TO 250mm BELOW THE FINISHED GRADE. THE TAPE SHALL BE PLACED WITH THE PRINTED SIDE UP, AND SHALL BE ESSENTIALLY PARALLEL WITH THE FINISHED SURFACE.

THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO NOT PULL, DISTORT, OR OTHERWISE MISPLACE THE TAPE WHEN COMPLETING THE BACKFILL. THE TAPE SHALL BE PAID FOR PER METER OF ITEM SPECIAL, PLASTIC CAUTION TAPE, COMPLETE IN PLACE.

| LIGHTING CONTROL CENTER DATA |                                 |                      |                                       |           |           |                     |                          |                    |          |
|------------------------------|---------------------------------|----------------------|---------------------------------------|-----------|-----------|---------------------|--------------------------|--------------------|----------|
| Control Center               | Service Type                    | Connected Load (KVA) | Service Entrance Conductor Size (AWG) | Enclosure | Circuit # | Circuit Load (Amps) | Circuit Fuse Size (Amps) | Maintaining Agency | Remarks  |
| A                            | 480 2-Wire Grounded Neutral     | 10.8                 | #4                                    | SC-60     | AA        | 9.8                 | 30                       | "ODOT"             |          |
|                              |                                 |                      |                                       |           | AB        | 12.6                | 30                       |                    |          |
| B                            | 480 2-Wire Grounded Neutral     | 10.1                 | #4                                    | SC-60     | BA        | 11.2                | 30                       | "ODOT"             |          |
|                              |                                 |                      |                                       |           | BB        | 9.8                 | 30                       |                    |          |
| C                            | 120/240 3-Wire Grounded Neutral | 4.6                  | #4                                    | SC-60     | CA        | 19.2                | 30                       | Martins Ferry      |          |
| D                            | 120/240 3-Wire Grounded Neutral | 12.1                 | #4                                    | SC-100    | DA        | 24.7                | 60                       | Martins Ferry      |          |
|                              |                                 |                      |                                       |           | DB        | 25.7                | 60                       |                    |          |
| E                            | 120/240 3-Wire Grounded Neutral | 13.8                 | #4                                    | SC-100    | EA        | 22.8                | 60                       | Martins Ferry      |          |
|                              |                                 |                      |                                       |           | EB        | 32.0                | 60                       |                    |          |
| F                            | 120/240 3-Wire Grounded Neutral | 10.2                 | #4                                    | SC-60     | FA        | 20.6                | 60                       | Martins Ferry      |          |
|                              |                                 |                      |                                       |           | FB        | 21.9                | 60                       |                    |          |
| G                            | 120/240 3-Wire Grounded Neutral | 8.2                  | #4                                    | SC-60     | GA        | 16.4                | 30                       | Martins Ferry      |          |
|                              |                                 |                      |                                       |           | GB        | 16.4                | 30                       |                    |          |
|                              |                                 |                      |                                       |           | GC        | 1.4                 | 30                       |                    |          |
|                              |                                 |                      |                                       |           |           |                     |                          |                    |          |
|                              |                                 |                      |                                       |           |           |                     |                          |                    |          |
| M                            | 120/240 3-Wire Grounded Neutral | 1.7                  | #4                                    | SC-60     | M         | 6.9                 | 30                       | Bridgeport         | Lincoln  |
| N                            | 120/240 3-Wire Grounded Neutral | 0.3                  | #4                                    | SC-60     | N         | 1.4                 | 30                       | Martins Ferry      | Hanover  |
|                              |                                 |                      |                                       |           |           |                     |                          |                    |          |
| P                            | 120/240 3-Wire Grounded Neutral | 1.3                  | #4                                    | SC-60     | P         | 5.6                 | 30                       | Martins Ferry      | Ped. Br. |
| Q                            | 120/240 3-Wire Grounded Neutral | 1.0                  | #4                                    | SC-60     | Q         | 4.1                 | 30                       | Martins Ferry      | Fifth    |
| R                            | 120/240 3-Wire Grounded Neutral | 1.0                  | #4                                    | SC-60     | R         | 4.1                 | 30                       | Martins Ferry      | Jeanette |
| Existing SR7 CC              | 240/480 3-Wire Grounded Neutral | 11.4                 | #4                                    | Existing  | XA        | 23.7                | 60                       | "ODOT"             | Existing |
|                              |                                 |                      |                                       |           |           |                     |                          |                    |          |

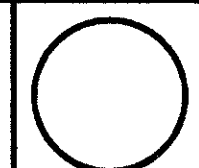
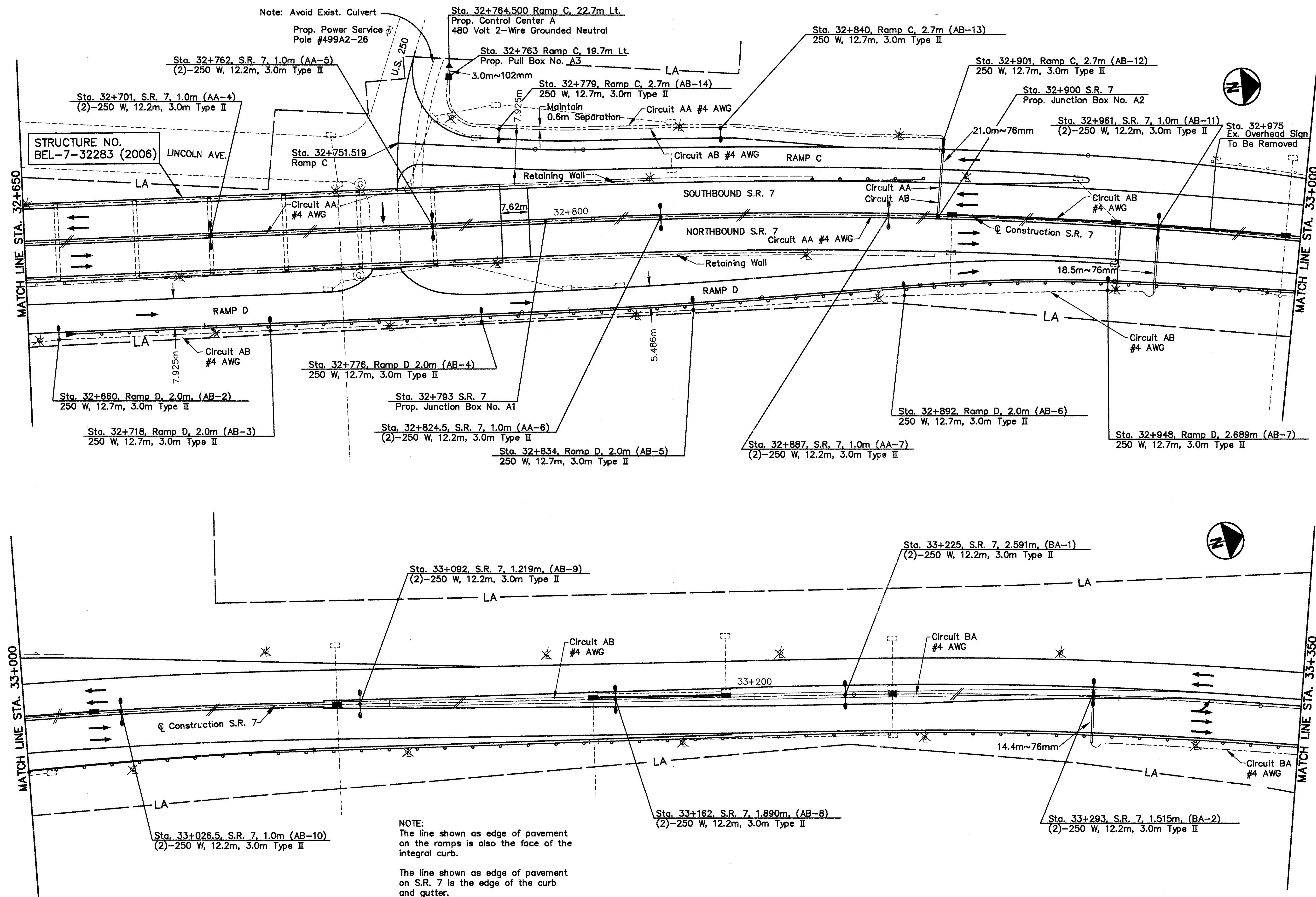






14-0321-01 LIGHTING PLAN - S.R. 7 - STA. 32+650 TO STA. 33+350 - OCT. 27, 1997 - 08.01.25

W. E. QUICKSALL AND ASSOCIATES INC. CONSULTING ENGINEERS



SCALE IN METERS  
HORIZONTAL  
1:1000  
VERTICAL  
1:100

CALCULATED  
SAH  
CHECKED  
AEH

LIGHTING PLAN - S.R. 7  
STA. 32+650 TO STA. 33+350

BEL-7-32.276

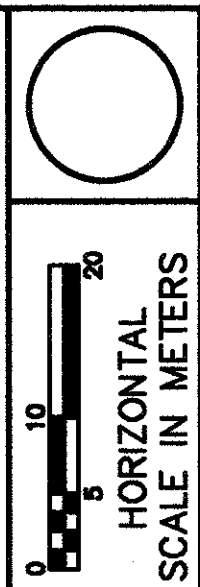
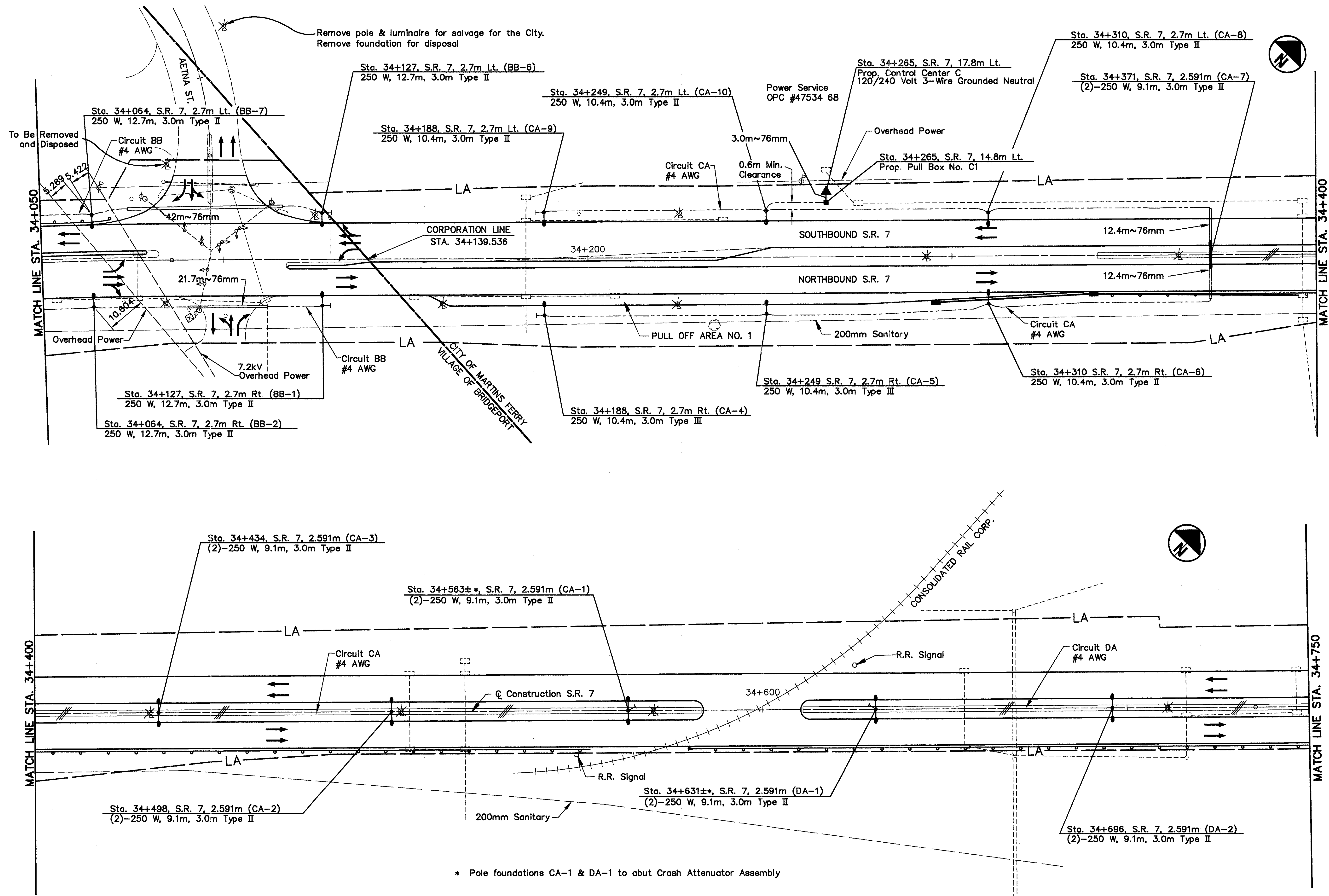
165  
242

For Legend, See Sheet No. 157  
For Quantities, See Sheet No. 182-185  
For Circuit Diagrams, See Sheet No. 175-176









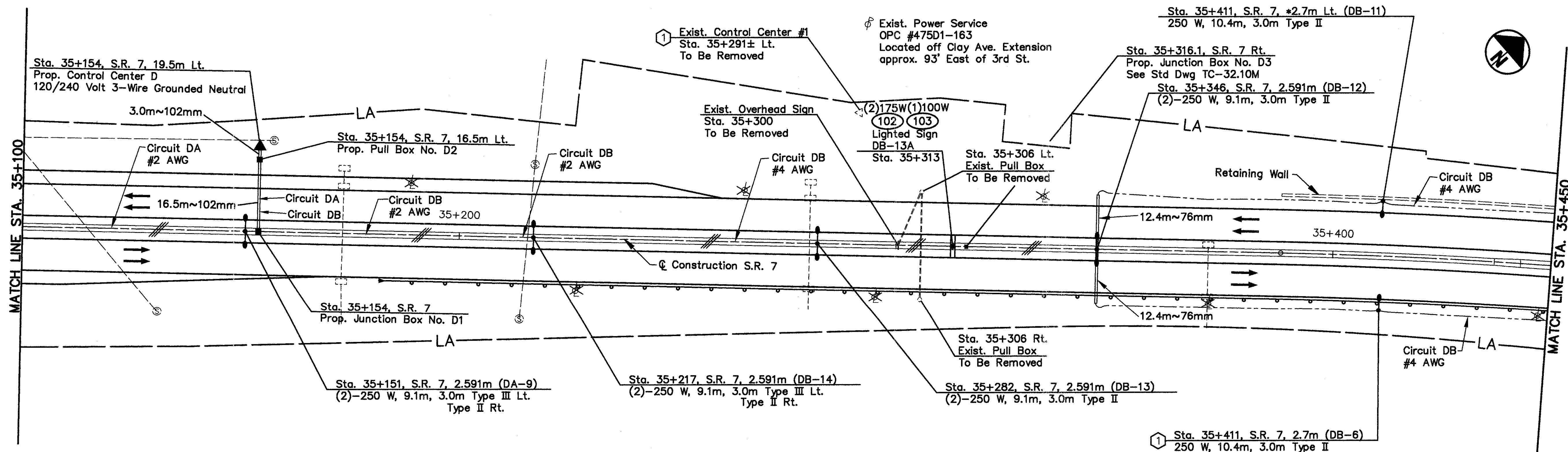
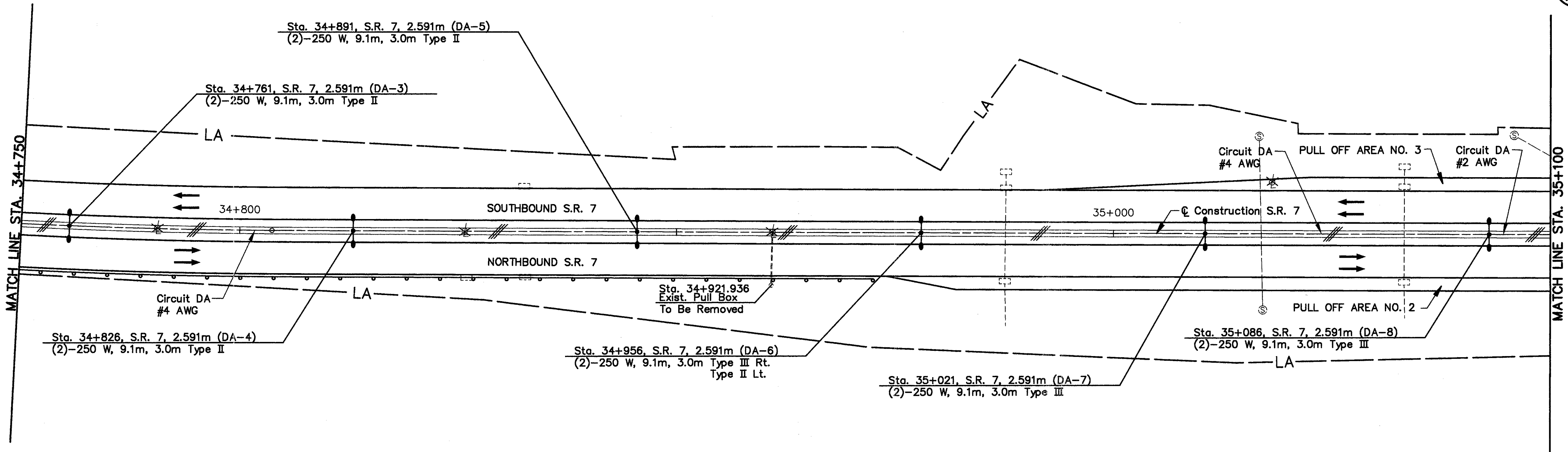
CALCULATED  
SAH  
CHECKED  
AEH

**LIGHTING PLAN - S.R. 7  
STA. 34+050 TO STA. 34+750**

**BEL-7-32.276**

For Legend, See Sheet No. 157.  
For Quantities, See Sheet No. 182, 186-187.  
For Circuit Diagrams, See Sheet No. 176-177.  
For Aetna St. Signal Plan, See Sheet No. 155.





\* If necessary adjust foundation offset to clear wall footing

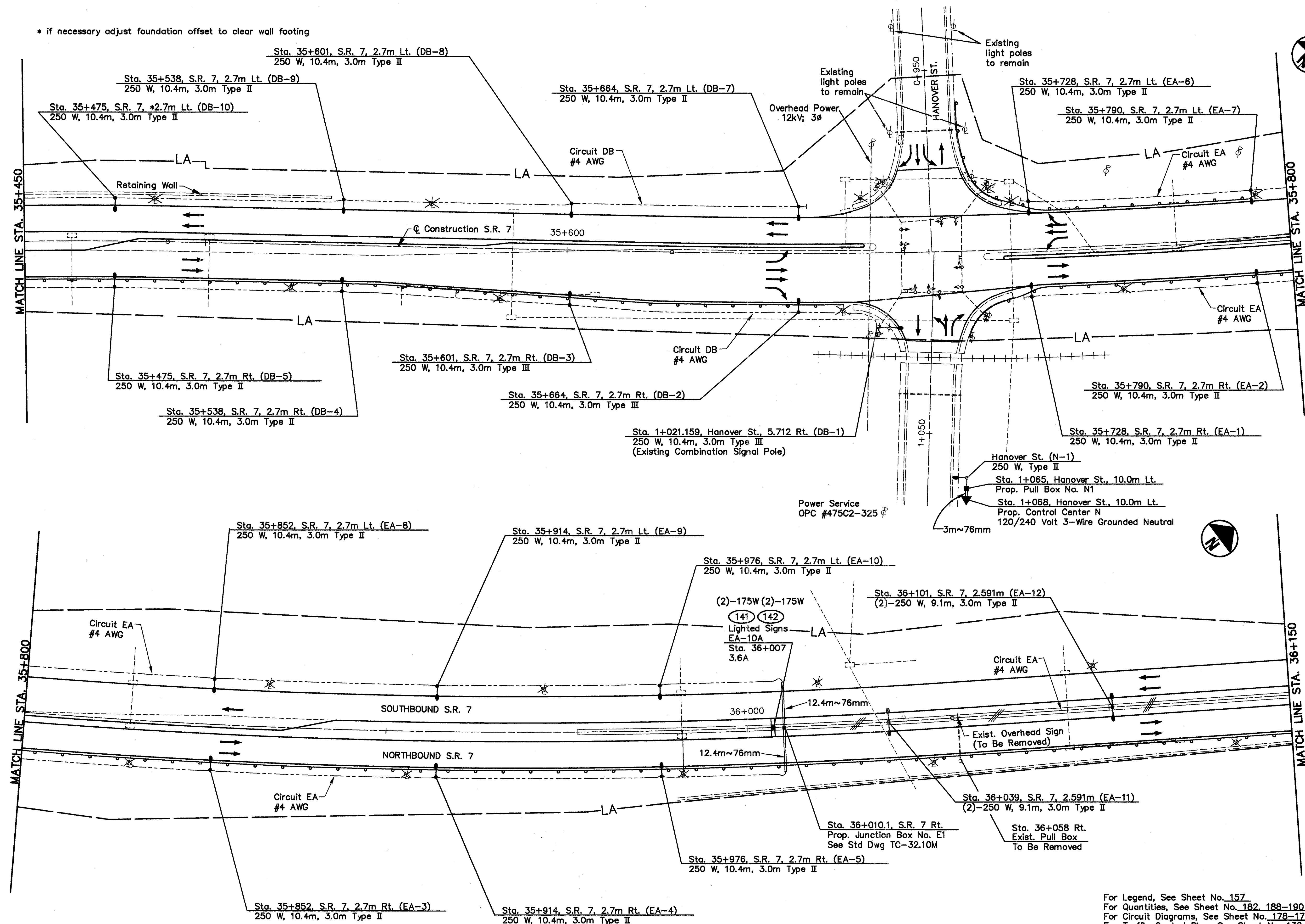
For Legend, See Sheet No. 157  
For Quantities, See Sheet No. 182, 188-189  
For Circuit Diagrams, See Sheet No. 178

**LIGHTING PLAN - S.R. 7  
STA. 34+750 TO STA. 35+450**

**BEL-7-32.276**

168  
242



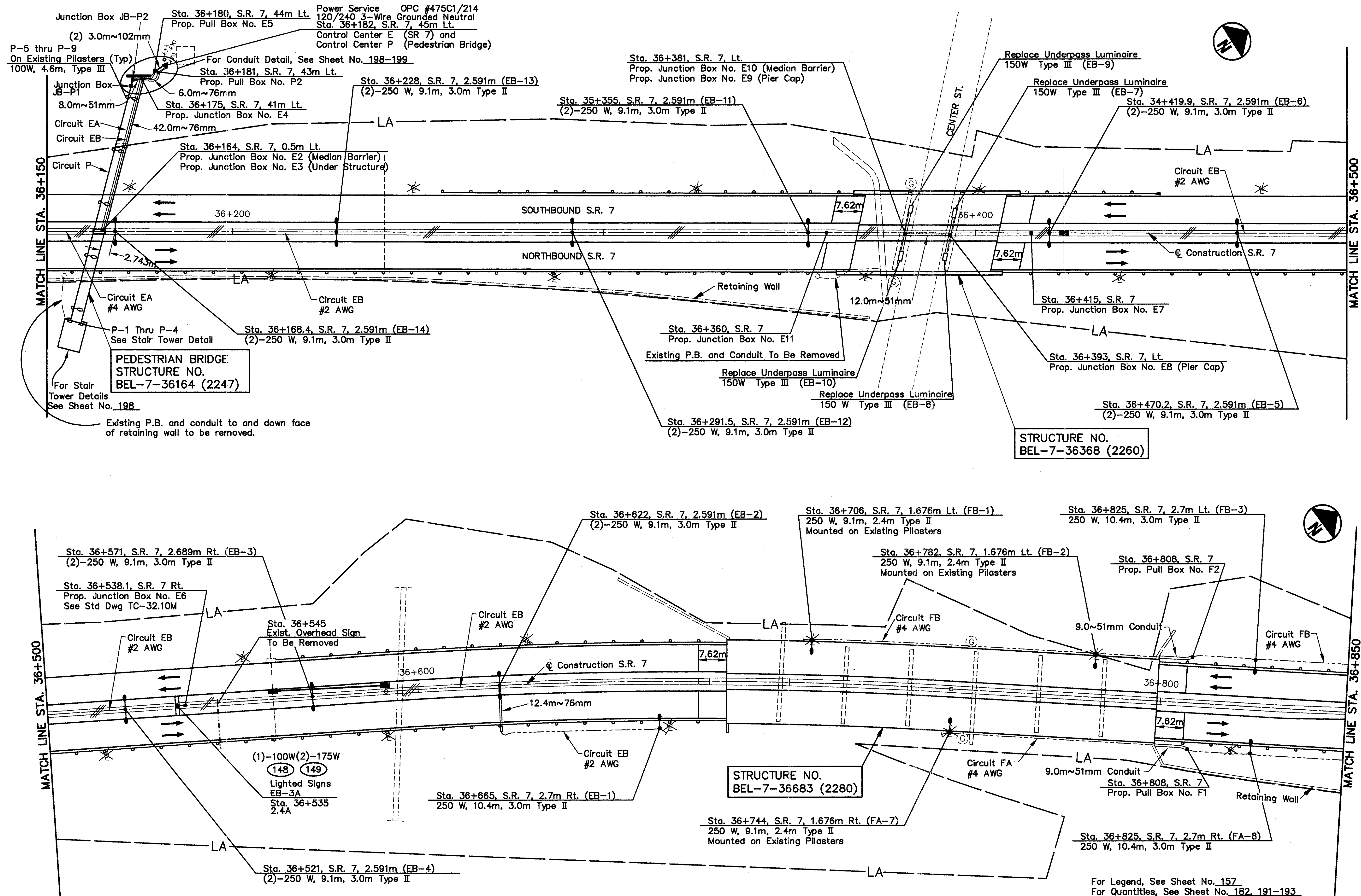


|            |     |
|------------|-----|
| CALCULATED | SAH |
| CHECKED    | AEH |

**BEL-7-32.276**

For Legend, See Sheet No. 157  
For Quantities, See Sheet No. 182, 188-190  
For Circuit Diagrams, See Sheet No. 178-179  
For Traffic Control Plan, See Sheet No. 138  
For Hanover St. Signal Plan, See Sheet No. 156A





**LIGHTING PLAN - S.R. 7**

**STA. 36+150 TO STA. 36+850**

**BEL-7-32.276**

170

242

SCALE IN METERS

0 5 10 20

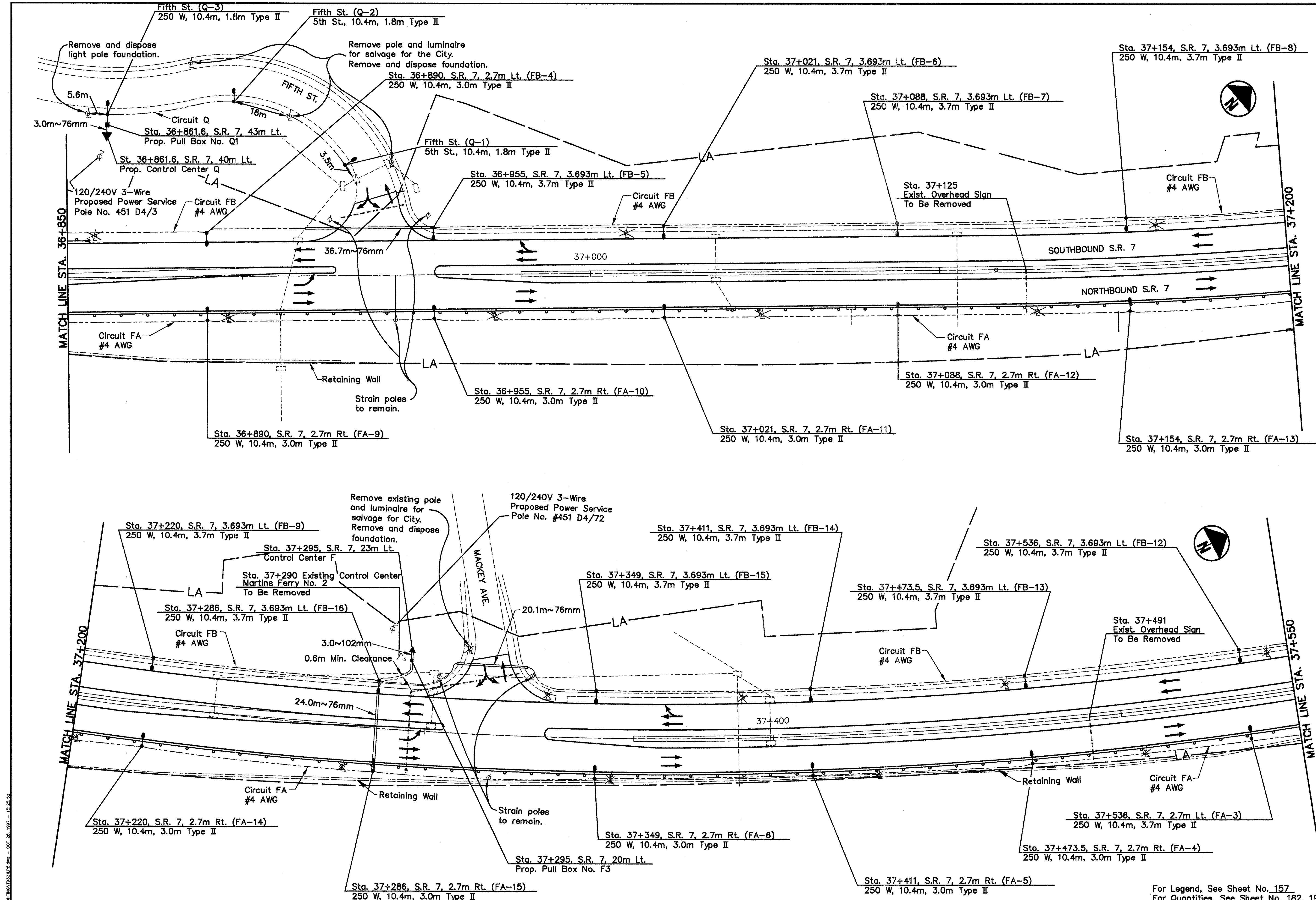
HORIZONTAL

VERTICAL

SAH

AEH

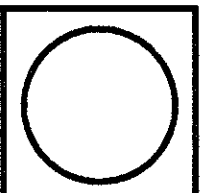
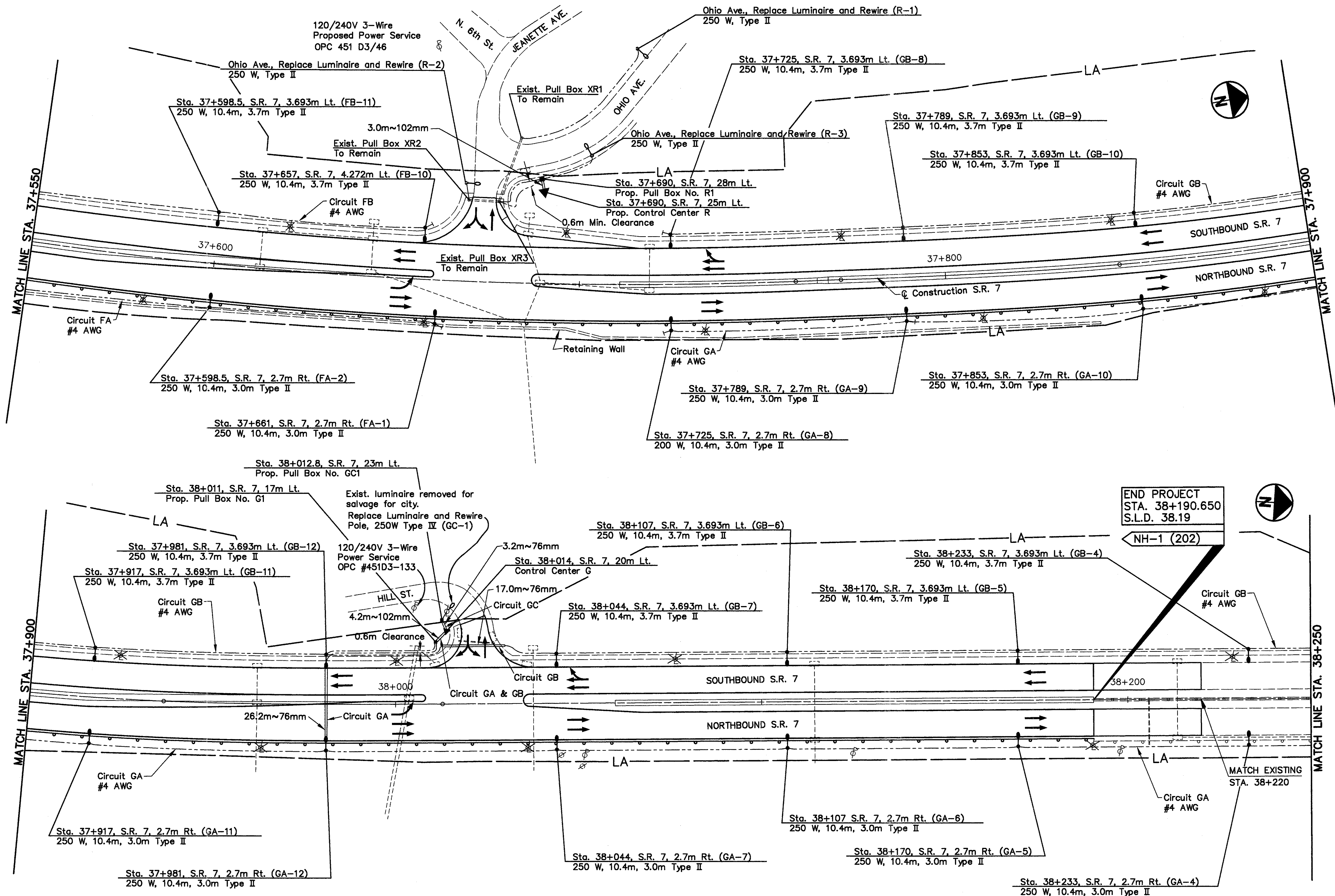




|                                                                                                                        |                |
|------------------------------------------------------------------------------------------------------------------------|----------------|
|                                                                                                                        |                |
|                                                                                                                        |                |
| CALCULATED<br>SAH                                                                                                      | CHECKED<br>AEH |
| <b>BEL-7-32.276</b>                                                                                                    |                |
| <b>LIGHTING PLAN - S.R. 7</b><br><b>STA. 36+850 TO STA. 37+550</b>                                                     |                |
| For Legend, See Sheet No. 157<br>For Quantities, See Sheet No. 182, 193-195<br>For Circuit Diagrams, See Sheet No. 180 |                |
| 171<br>242                                                                                                             |                |



PL 3821-01 LIGHTING (3/23/21) P. 266 - OCT 21, 1997 - 06:17:55



0 10 20  
HORIZONTAL  
SCALE IN METERS

CALCULATED  
SAH  
CHECKED  
AEH

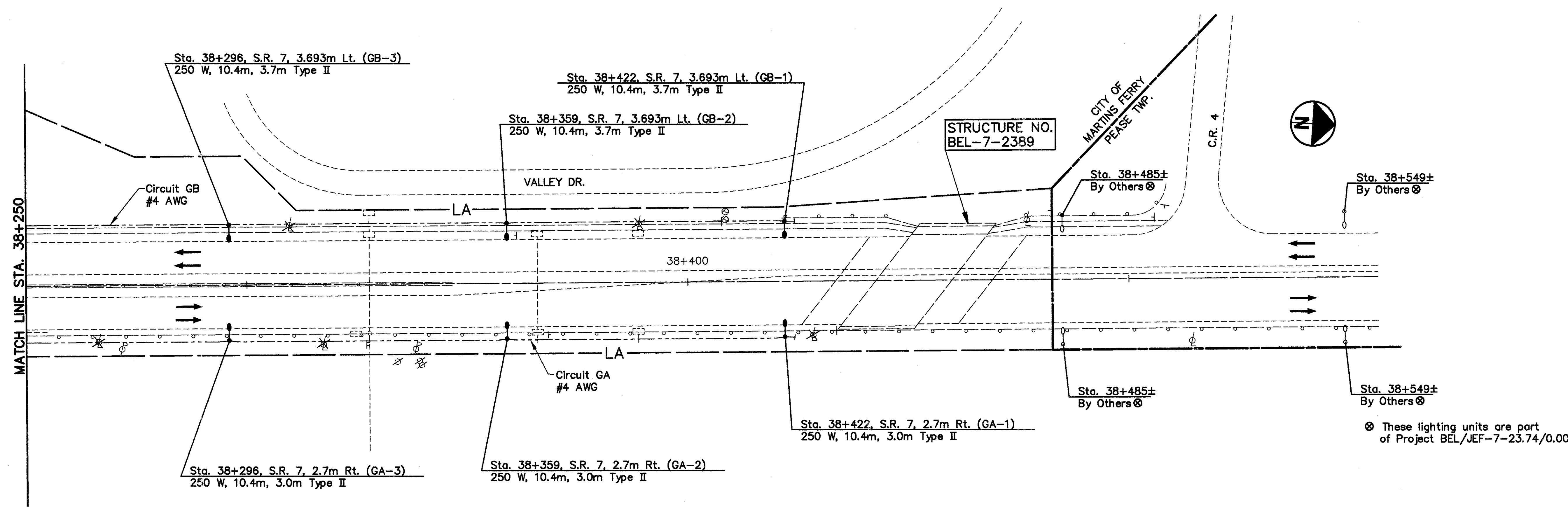
**LIGHTING PLAN - S.R. 7  
STA. 37+550 TO STA. 38+250**

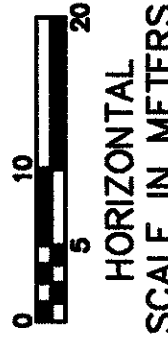
**BEL-7-32.276**

172  
242

For Legend, See Sheet No. 157  
For Quantities, See Sheet No. 182, 193-197  
For Circuit Diagrams, See Sheet No. 180-181

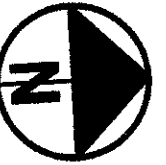




|                                                                                                                                                                                                                                                                                                                     |         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
|                                                                                                                                                                                                                                  |         |
|                                                                                                                                                                                                                                  |         |
| CALCULATED                                                                                                                                                                                                                                                                                                          | CHECKED |
| SAH                                                                                                                                                                                                                                                                                                                 | AEH     |
| <b>BEL-7-32.276</b>                                                                                                                                                                                                                                                                                                 |         |
| <b>LIGHTING PLAN - S.R. 7</b><br><b>STA. 38+250 TO STA. 38+422</b>                                                                                                                                                                                                                                                  |         |
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For Legend See Sheet No. 157  
 For Quantities, See Sheet No. 182, 196-197  
 For Circuit Diagrams, See Sheet No. 181





**TABULATION OF CIRCUIT LOADS**

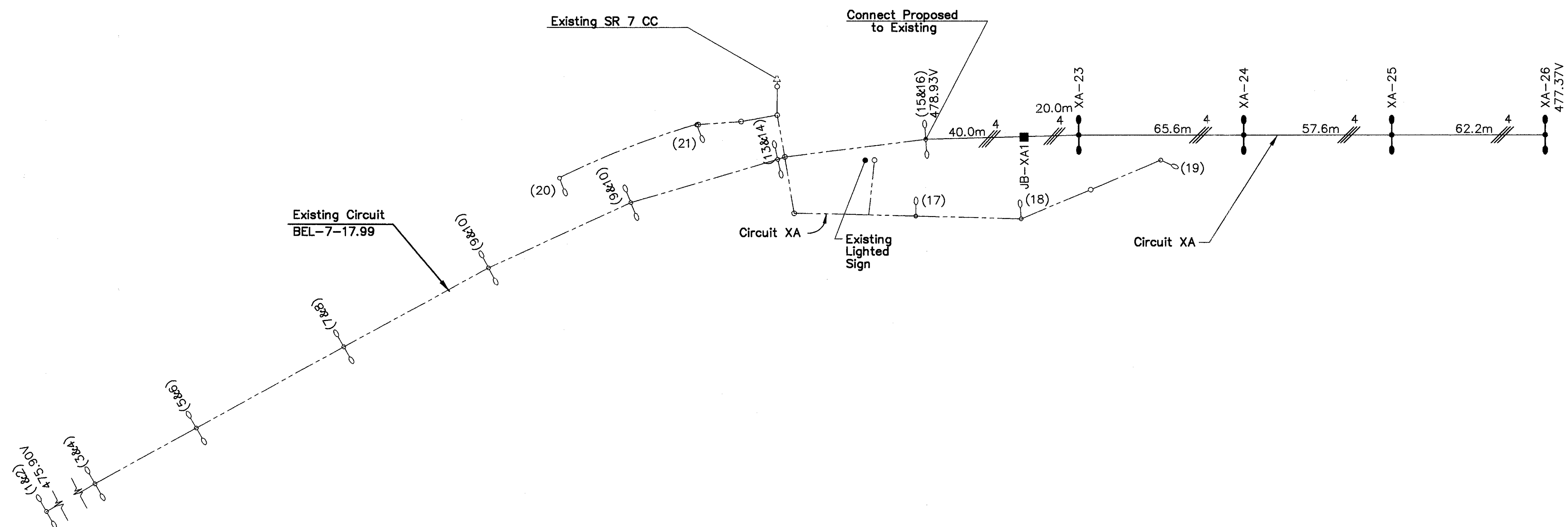
POWER: 240/480 3-Wire Grounded Neutral

CIRCUIT XA:

Extension 8 - 250W HPS Lamps @ 0.7A = 5.6A  
Existing 21 - 250W HPS @ 0.7A = 14.7A  
Existing Sign = 3.4A  
23.7A

% Drop = 0.55% at XA-26

% Drop = 0.85% at Existing 1&2



**CIRCUIT DIAGRAM**  
**EXIST. CONTROL CENTER SR 7**  
**CIRCUIT XA**

**CIRCUIT DIAGRAM**  
**CIRCUIT XA**

**BEL-7-32.276**

For Additional Conduit Details  
And Circuitry Information  
Refer To Plan BEL-7-17.99, Project 412(96)

174

242

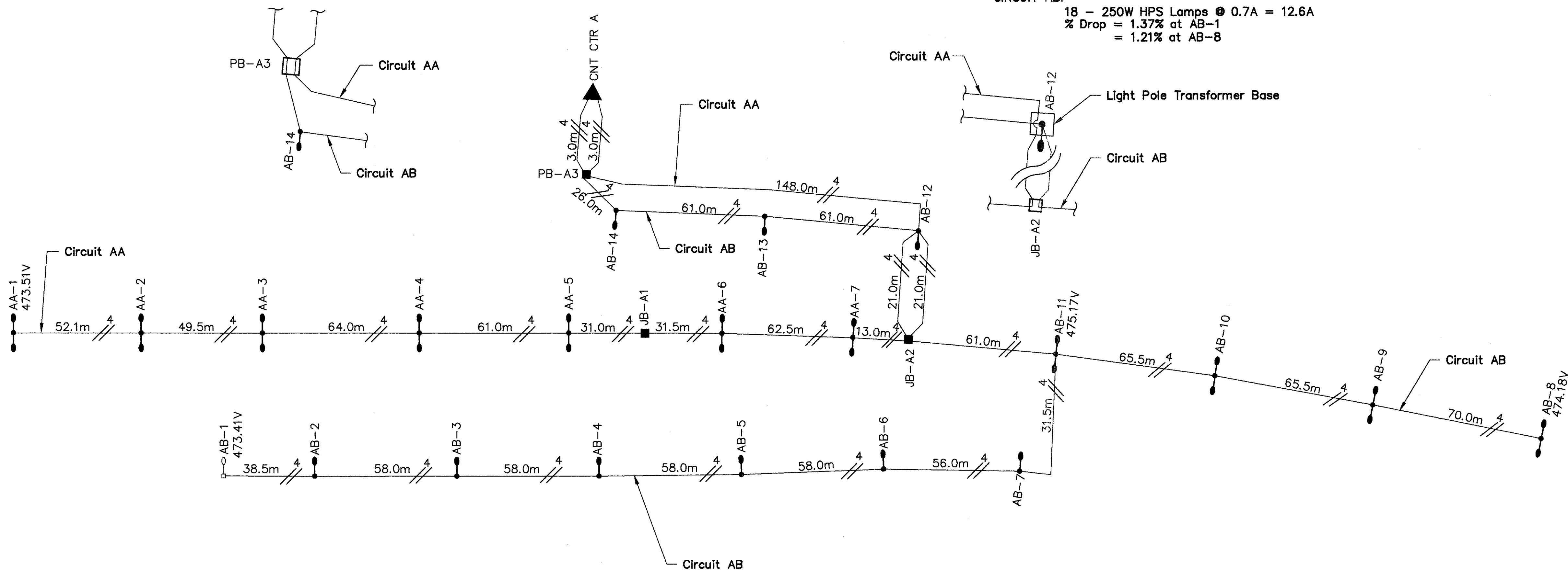


**TABULATION OF CIRCUIT LOADS**

POWER: 480 Volt 2-Wire Grounded Neutral

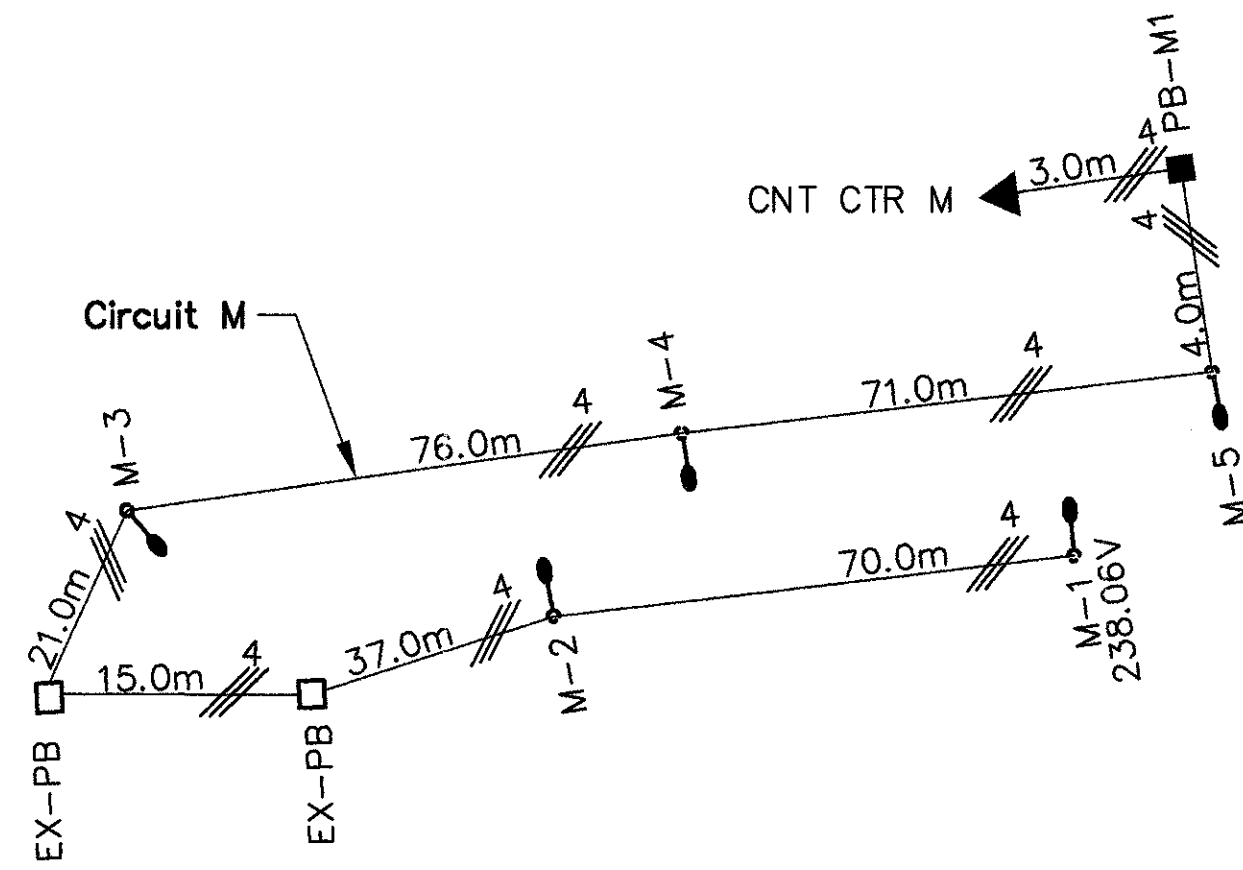
CIRCUIT AA:  
14 - 250W HPS Lamps @ 0.7A = 9.8A  
% Drop = 1.35% at AA-1

CIRCUIT AB:  
18 - 250W HPS Lamps @ 0.7A = 12.6A  
% Drop = 1.37% at AB-1  
= 1.21% at AB-8

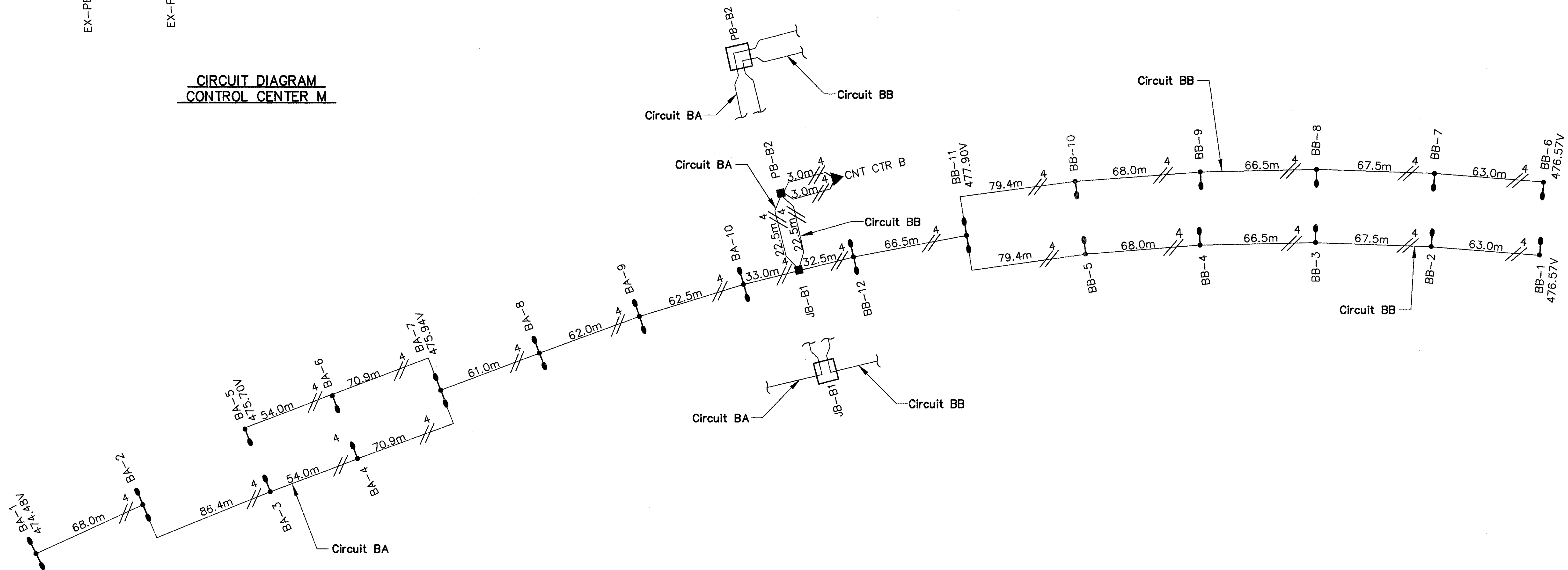


**CIRCUIT DIAGRAM  
CONTROL CENTER A**





CIRCUIT DIAGRAM  
CONTROL CENTER M



CIRCUIT DIAGRAM  
CONTROL CENTER B

TABULATION OF CIRCUIT LOADS

POWER: 480V 2-Wire Grounded Neutral

CIRCUIT BA:

- 16 - 250W HPS Lamps @ 0.7A = 11.2A
- % Drop = 1.15% at BA-1
- % Drop = 0.90% at BA-5

CIRCUIT BB:

- 14 - 250W HPS Lamps @ 0.7A = 9.8A
- % Drop = 0.71% at BB-1 & BB-6

POWER: 120/240V 3-Wire Grounded Neutral

CIRCUIT M:

- 5 - 250W HPS Lamps @ 1.37A = 6.9A
- % Drop = 0.81 at M1

CALCULATED  
SAH  
CHECKED  
AEH

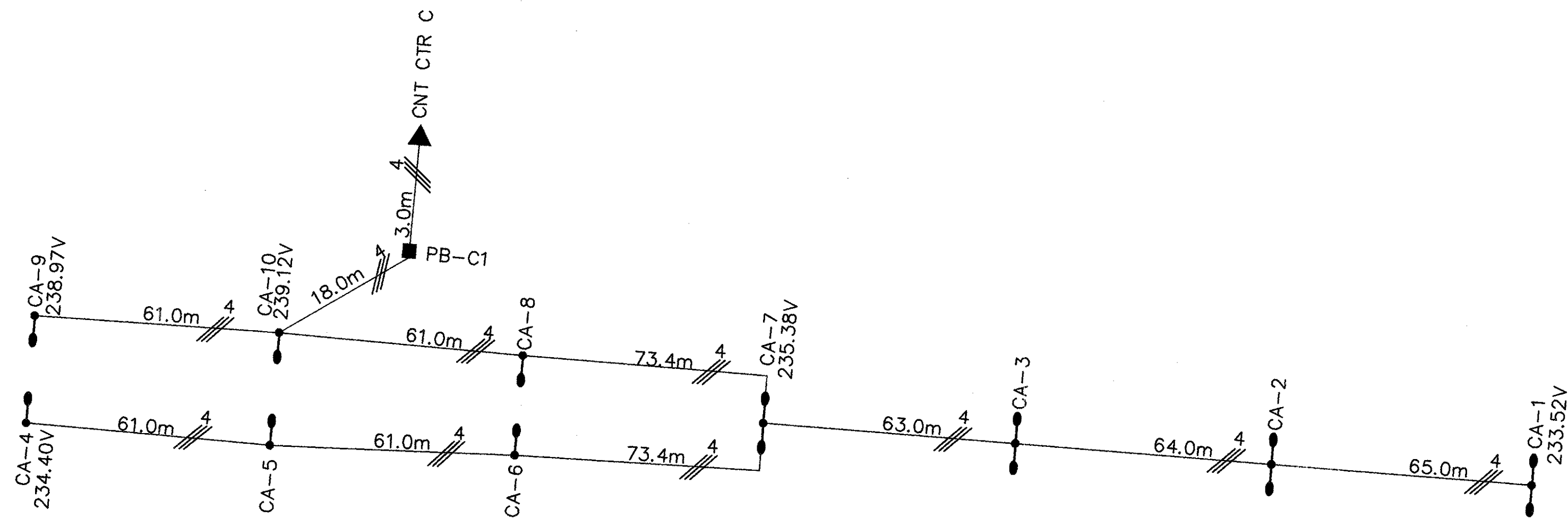
**CIRCUIT DIAGRAM**  
**CONTROL CENTER B & CONTROL CENTER M**

**BEL-7-32.276**

176  
242



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CIRCUIT DIAGRAM  
CONTROL CENTER C

TABULATION OF CIRCUIT LOADS

POWER: 120/240V 3-Wire Grounded Neutral

CIRCUIT CA:

14 - 250W HPS Lamps @ 1.37A = 19.2A  
% Drop = 2.70% at CA-1  
= 2.33% at CA-4  
= 0.43% at CA-9



TABULATION OF CIRCUIT LOADS

POWER: 120/240V 3-Wire Grounded Neutral

CIRCUIT DA:

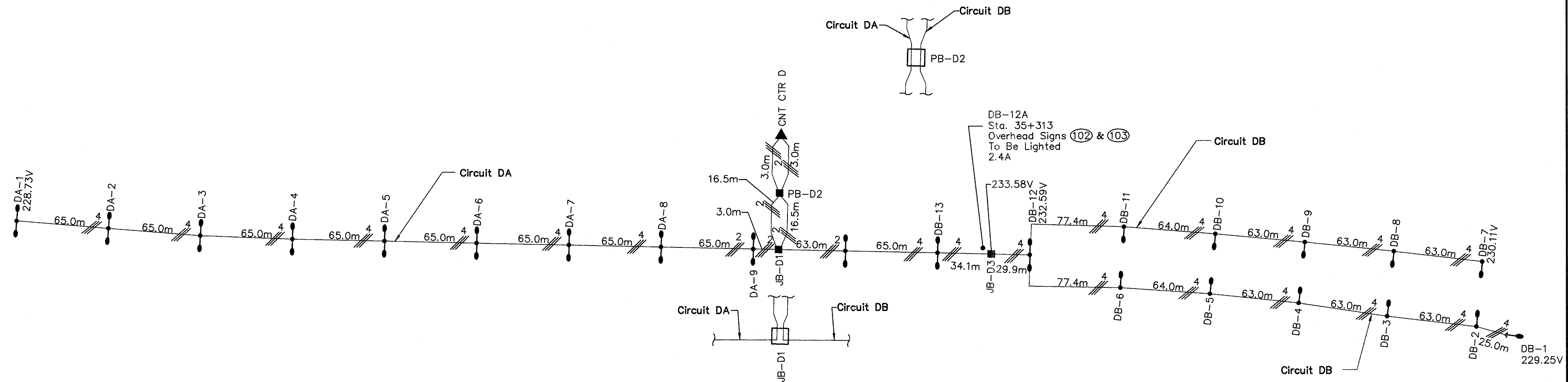
18 - 250W HPS @ 1.37A = 24.7A  
% Drop = 4.70% at DA-1

CIRCUIT DB:

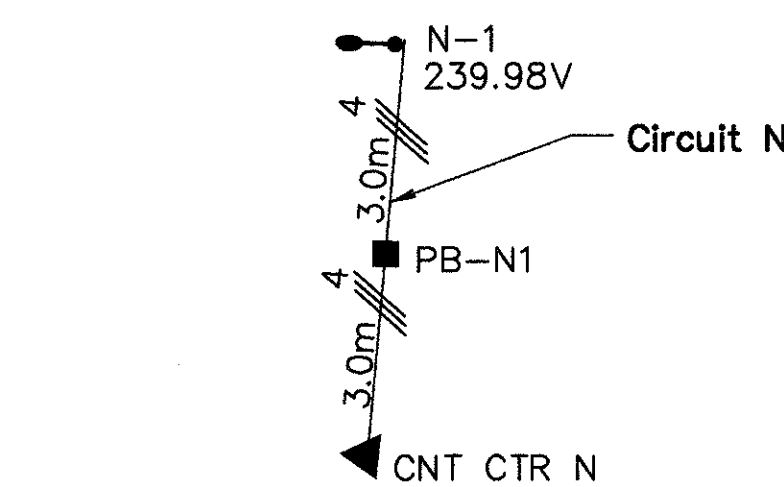
17 - 250W HPS @ 1.37A = 23.3A  
Sign (102) (2) - 175W Hg @ 0.9A = 1.8A  
Sign (103) (1) - 100W Hg @ 0.6A = 0.6A  
25.7A  
% Drop = 4.48% at DB-1  
= 4.12% at DB-7

CIRCUIT N:

1 - 250W HPS @ 1.37A = 1.4A  
% Drop = 0.01%



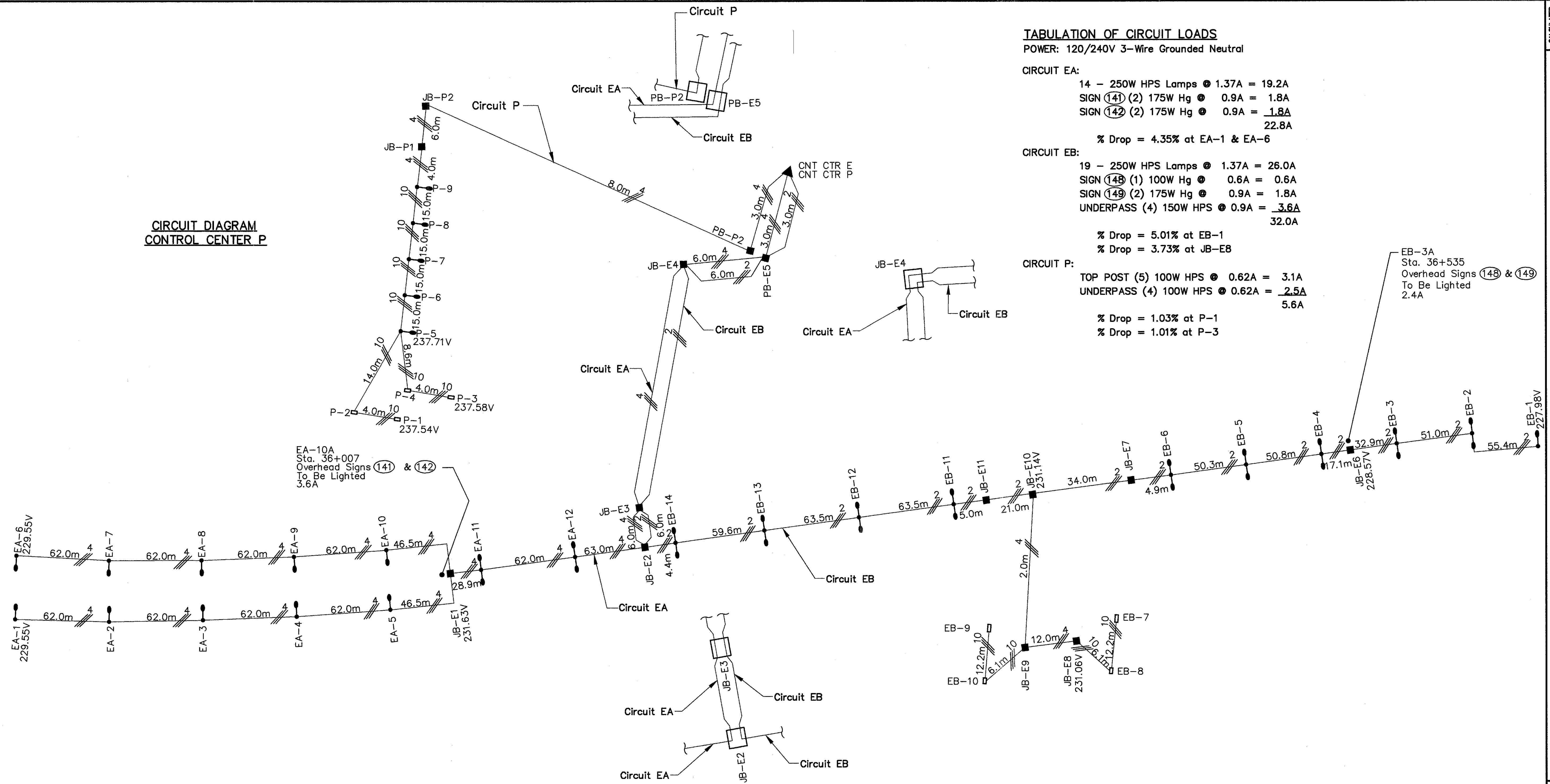
CIRCUIT DIAGRAM  
CONTROL CENTER D



CIRCUIT DIAGRAM  
CONTROL CENTER N



CIRCUIT DIAGRAM  
CONTROL CENTER P



TABULATION OF CIRCUIT LOADS  
POWER: 120/240V 3-Wire Grounded Neutral

CIRCUIT EA:

14 - 250W HPS Lamps @ 1.37A = 19.2A  
SIGN (141) (2) 175W Hg @ 0.9A = 1.8A  
SIGN (142) (2) 175W Hg @ 0.9A = 1.8A  
22.8A

% Drop = 4.35% at EA-1 & EA-6

CIRCUIT EB:

19 - 250W HPS Lamps @ 1.37A = 26.0A  
SIGN (148) (1) 100W Hg @ 0.6A = 0.6A  
SIGN (149) (2) 175W Hg @ 0.9A = 1.8A  
UNDERPASS (4) 150W HPS @ 0.9A = 3.6A  
32.0A

% Drop = 5.01% at EB-1

% Drop = 3.73% at JB-E8

CIRCUIT P:

TOP POST (5) 100W HPS @ 0.62A = 3.1A  
UNDERPASS (4) 100W HPS @ 0.62A = 2.5A  
5.6A

% Drop = 1.03% at P-1

% Drop = 1.01% at P-3

EB-3A  
Sta. 36+535  
Overhead Signs (148) & (149)  
To Be Lighted  
2.4A

CIRCUIT DIAGRAM  
CONTROL CENTER E

CIRCUIT DIAGRAM  
CONTROL CENTER E & CONTROL CENTER P

BEL-7-32.276

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242



TABULATION OF CIRCUIT LOADS

POWER: 120/240 Volt 3-Wire Grounded-Neutral

CIRCUIT FA:

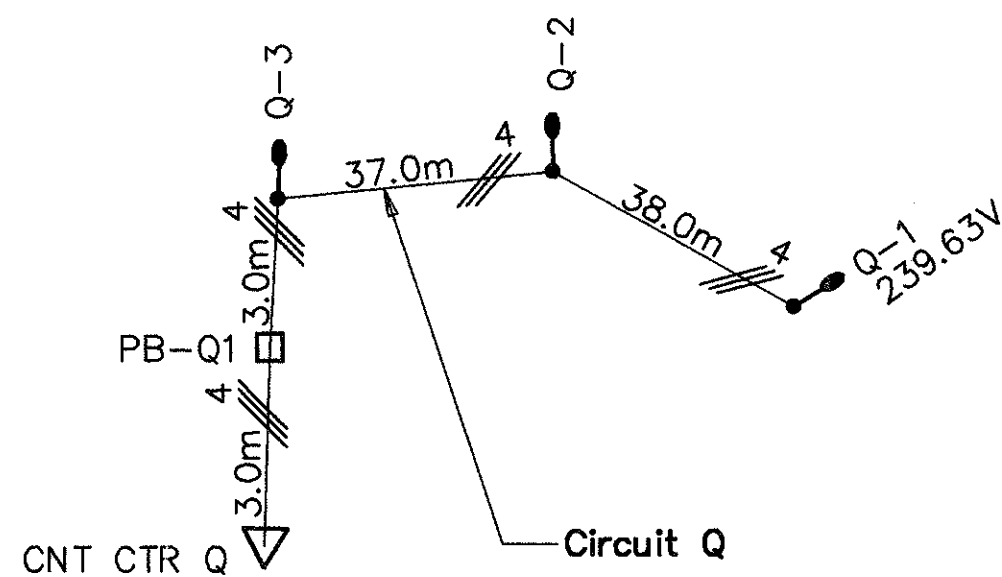
15 - 250W HPS Lamps @ 1.37A = 20.6A  
% Drop = 3.09% at FA-7  
= 2.00% at FA-1

CIRCUIT FB:

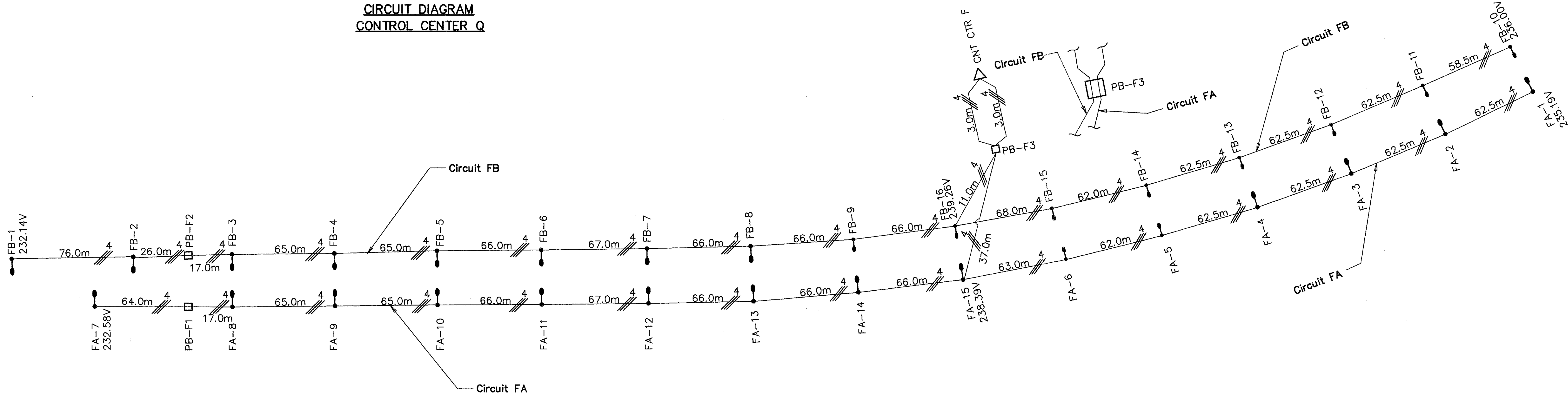
16 - 250W HPS Lamps @ 1.37A = 21.9A  
% Drop = 3.28% at FB-1  
= 1.67% at FB-10

CIRCUIT Q:

3 - 250W HPS Lamps @ 1.37A = 4.1A  
% Drop = 0.15% at Q-1



CIRCUIT DIAGRAM  
CONTROL CENTER Q



CIRCUIT DIAGRAM  
CONTROL CENTER F



TABULATION OF CIRCUIT LOADS

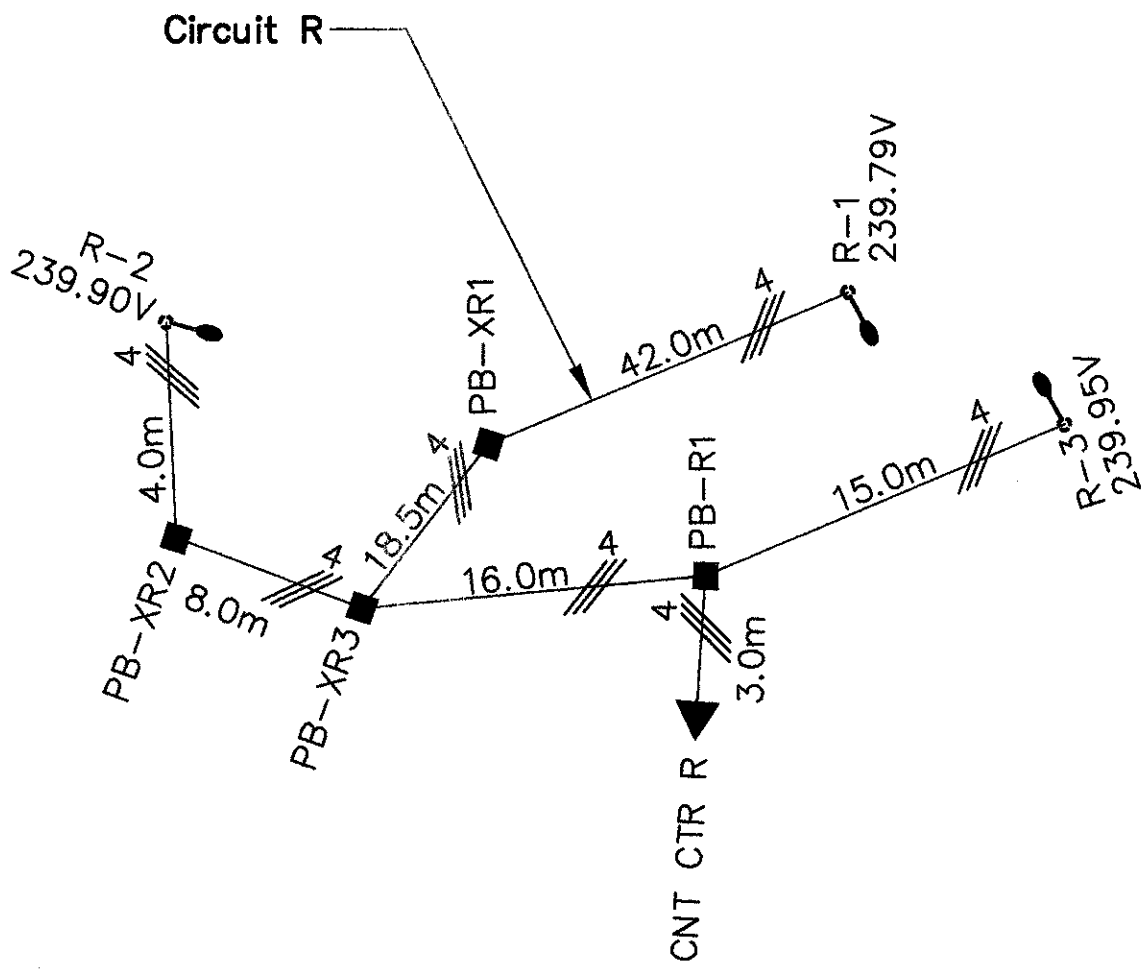
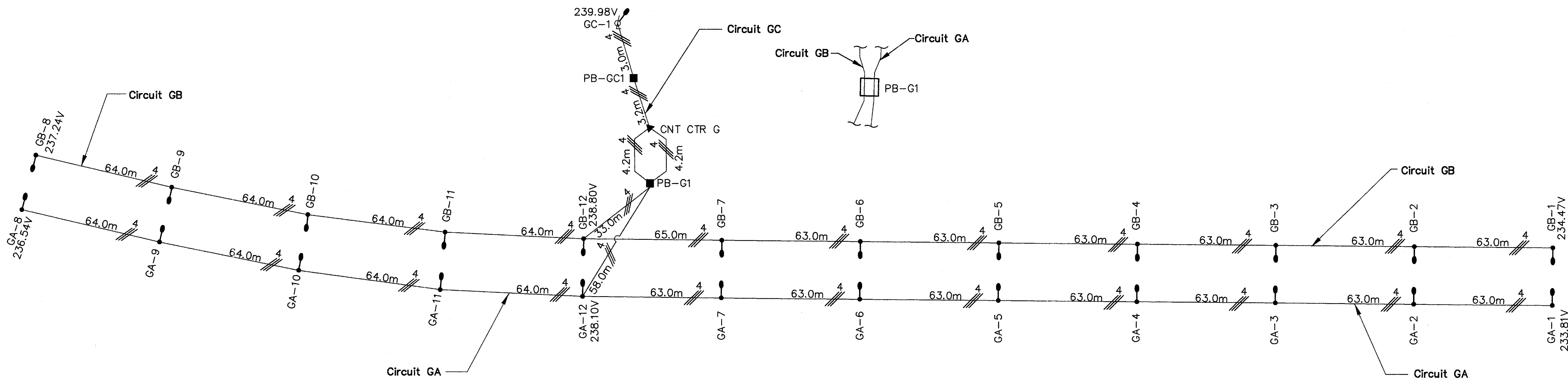
POWER: 120/240V 3-Wire Grounded Neutral

CIRCUIT GA:  
12 - 250W HPS @ 1.37A = 16.4A  
% Drop = 2.58% at GA-1  
= 1.44% at GA-8

CIRCUIT GB:  
12 - 250W HPS @ 1.37A = 16.4A  
% Drop = 2.30% at GB-1  
= 1.15% at GB-8

CIRCUIT GC:  
1 - 250W HPS @ 1.37A = 1.4A  
% Drop = 0.01% at GC-1

CIRCUIT R:  
3 - 250W HPS @ 1.37A = 4.1A  
% Drop = 0.09% at R-1  
= 0.04% at R-2  
= 0.02% at R-3









[illegible]



| REFERENCE NUMBER | SHEET NO. | SIDE | ROADWAY | STATION    |          | 625                       |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 | SPECIAL |
|------------------|-----------|------|---------|------------|----------|---------------------------|----------------------------|------------------------------|------------------------------|---------------------------------|----------------------------------|-----------------------------------------|----------------------------------------------|-----------------------------------------------------------|------|-------------------------------------------------------|------------------------------------------------------------------------------------|----------------------|---|---|---------------|---------------------------------------------|-----------------------------------------------|-----------------|---------|
|                  |           |      |         |            |          | CONNECTOR KIT,<br>TYPE II | CONNECTOR KIT,<br>TYPE III | CONNECTOR KIT,<br>TYPE VII B | CONNECTOR KIT,<br>TYPE VII C | LIGHT POLE,<br>DESIGN A3.OB12.2 | LIGHT POLE,<br>DESIGN AT3.OB12.7 | NO. 10 AWG<br>POLE AND BRACKET<br>CABLE | NO. 4 AWG<br>5000 VOLT<br>DISTRIBUTION CABLE | 38mm DUCT CABLE<br>WITH TWO NO. 4 AWG<br>5000 VOLT CABLES |      | CONDUIT, JACKED OR<br>DRILLED UNDER PAVEMENT,<br>76mm | LUMINAIRE, CONVENTIONAL<br>STYLE B, TYPE II,<br>250 WATT HPS, 713.11,<br>480 VOLTS | TRENCH,<br>0.6m DEEP |   |   | GROUND<br>ROD | LIGHT POLE FOUNDATION,<br>610mm x 2.4m DEEP | MEDIAN LIGHT POLE<br>FOUNDATION,<br>3.0m DEEP | JUNCTION<br>BOX |         |
|                  |           |      |         | FROM       | TO       | EACH                      | EACH                       | EACH                         | EACH                         | EACH                            | EACH                             | METER                                   | METER                                        | METER                                                     |      | METER                                                 | EACH                                                                               | METER                |   |   | EACH          | EACH                                        | EACH                                          | EACH            |         |
|                  |           |      |         | CIRCUIT AB |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
| AB-1             | 17        | RT.  | SR7     | 32+621.5   |          | 1                         | 1                          |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
| AB-1/2           | 17/18     | RT.  | SR7     | 32+621.5   | 32+660   |                           |                            |                              |                              |                                 |                                  |                                         |                                              | 42                                                        |      |                                                       |                                                                                    | 38.5                 |   |   |               |                                             |                                               | 38.5            |         |
| AB-2             | 18        | RT.  | SR7     | 32+660     |          | 1                         | 1                          |                              |                              | 1                               | 35                               |                                         |                                              |                                                           |      | 1                                                     |                                                                                    |                      | 1 | 1 |               |                                             |                                               |                 |         |
| AB-2/3           | 18        | RT.  | SR7     | 32+660     | 32+718   |                           |                            |                              |                              |                                 |                                  |                                         |                                              | 61                                                        |      |                                                       |                                                                                    | 58                   |   |   |               |                                             |                                               | 58              |         |
| AB-3             | 18        | RT.  | SR7     | 32+718     |          | 1                         | 1                          |                              |                              | 1                               | 35                               |                                         |                                              |                                                           |      | 1                                                     |                                                                                    |                      | 1 | 1 |               |                                             |                                               |                 |         |
| AB-3/4           | 18        | RT.  | SR7     | 32+718     | 32+776   |                           |                            |                              |                              |                                 |                                  |                                         |                                              | 61                                                        |      |                                                       |                                                                                    | 58                   |   |   |               |                                             |                                               | 58              |         |
| AB-4             | 18        | RT.  | SR7     | 32+776     |          | 1                         | 1                          |                              |                              | 1                               | 35                               |                                         |                                              |                                                           |      | 1                                                     |                                                                                    |                      | 1 | 1 |               |                                             |                                               |                 |         |
| AB-4/5           | 18        | RT.  | SR7     | 32+776     | 32+834   |                           |                            |                              |                              |                                 |                                  |                                         |                                              | 61                                                        |      |                                                       |                                                                                    | 58                   |   |   |               |                                             |                                               | 58              |         |
| AB-5             | 18        | RT.  | SR7     | 32+834     |          | 1                         | 1                          |                              |                              | 1                               | 35                               |                                         |                                              |                                                           |      | 1                                                     |                                                                                    |                      | 1 | 1 |               |                                             |                                               |                 |         |
| AB-5/6           | 18        | RT.  | SR7     | 32+834     | 32+892   |                           |                            |                              |                              |                                 |                                  |                                         |                                              | 61                                                        |      |                                                       |                                                                                    | 58                   |   |   |               |                                             |                                               | 58              |         |
| AB-6             | 18        | RT.  | SR7     | 32+892     |          | 1                         | 1                          |                              |                              | 1                               | 35                               |                                         |                                              |                                                           |      | 1                                                     |                                                                                    |                      | 1 | 1 |               |                                             |                                               |                 |         |
| AB-6/7           | 18        | RT.  | SR7     | 32+892     | 32+948   |                           |                            |                              |                              |                                 |                                  |                                         |                                              | 59                                                        |      |                                                       |                                                                                    | 56                   |   |   |               |                                             |                                               | 56              |         |
| AB-7             | 18        | RT.  | SR7     | 32+948     |          | 1                         | 1                          |                              |                              | 1                               | 35                               |                                         |                                              |                                                           |      | 1                                                     |                                                                                    |                      | 1 | 1 |               |                                             |                                               |                 |         |
| AB-7/11          | 18        | RT.  | SR7     | 32+948     | 32+961   |                           |                            |                              |                              |                                 |                                  |                                         |                                              | 34                                                        | 18.5 |                                                       | 12.5                                                                               |                      |   |   |               |                                             |                                               | 12.5            |         |
| AB-8             | 18        | CL   | SR7     | 33+162     |          | 1                         | 1                          |                              | 1                            |                                 | 48                               |                                         |                                              |                                                           |      | 2                                                     |                                                                                    |                      | 1 |   | 1             | 1                                           |                                               |                 |         |
| AB-8/9           | 18        | CL   | SR7     | 33+162     | 33+092   |                           |                            |                              |                              |                                 |                                  |                                         | 146                                          |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
| AB-9             | 18        | CL   | SR7     | 33+092     |          | 1                         | 1                          |                              | 1                            |                                 | 48                               |                                         |                                              |                                                           |      | 2                                                     |                                                                                    |                      | 1 |   | 1             | 1                                           |                                               |                 |         |
| AB-9/10          | 18        | CL   | SR7     | 33+092     | 33+026.5 |                           |                            |                              |                              |                                 |                                  | 137                                     |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
| AB-10            | 18        | CL   | SR7     | 33+026.5   |          | 1                         | 1                          |                              | 1                            |                                 | 48                               |                                         |                                              |                                                           |      | 2                                                     |                                                                                    |                      | 1 |   | 1             | 1                                           |                                               |                 |         |
| AB-10/11         | 18        | CL   | SR7     | 33+026.5   | 32+961   |                           |                            |                              |                              |                                 |                                  | 137                                     |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
| AB-11            | 18        | CL   | SR7     | 32+961     |          | 1                         | 1                          | 1                            | 1                            | 1                               | 48                               |                                         |                                              |                                                           |      | 2                                                     |                                                                                    |                      | 1 |   | 1             | 1                                           |                                               |                 |         |
| AB-11/JB-A2      | 18        | CL   | SR7     | 32+961     | 32+900   |                           |                            |                              |                              |                                 |                                  | 128                                     |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
| (JB-A2           | 18        | CL   | SR7     | 32+900)    |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
| JB-A2/AB-12      | 18        | LT.  | SR7     | 32+900     | 32+901   |                           |                            |                              |                              |                                 |                                  |                                         | 24                                           |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
| AB-12            | 18        | LT.  | SR7     | 32+901     |          | 1                         | 1                          |                              |                              | 1                               | 35                               |                                         |                                              |                                                           |      | 1                                                     |                                                                                    |                      | 1 | 1 |               |                                             |                                               |                 |         |
| AB-12/13         | 18        | LT.  | SR7     | 32+901     | 32+840   |                           |                            |                              |                              |                                 |                                  |                                         | 64                                           |                                                           |      |                                                       | 61                                                                                 |                      |   |   |               |                                             |                                               | 61              |         |
| AB-13            | 18        | LT.  | SR7     | 32+840     |          | 1                         | 1                          |                              |                              | 1                               | 35                               |                                         |                                              |                                                           |      | 1                                                     |                                                                                    |                      | 1 | 1 |               |                                             |                                               |                 |         |
| AB-13/14         | 18        | LT.  | SR7     | 32+840     | 32+779   |                           |                            |                              |                              |                                 |                                  |                                         | 64                                           |                                                           |      |                                                       | 61                                                                                 |                      |   |   |               |                                             |                                               | 61              |         |
| AB-14            | 18        | LT.  | SR7     | 32+779     |          | 1                         | 1                          |                              |                              | 1                               | 35                               |                                         |                                              |                                                           |      | 1                                                     |                                                                                    |                      | 1 | 1 |               |                                             |                                               |                 |         |
| AB-14/PB-A3      | 18        | LT.  | SR7     | 32+779     | 32+763   |                           |                            |                              |                              |                                 |                                  |                                         | 29                                           |                                                           |      |                                                       | 26                                                                                 |                      |   |   |               |                                             |                                               | 26              |         |
| (PB-A3           | 18        | LT.  | SR7     | 32+763)    |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
| PB-A3/CC A       | 18        | LT.  | SR7     | 32+763     | 32+764.5 |                           |                            |                              |                              |                                 |                                  |                                         | 6                                            |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
| (CCA             | 18        | LT.  | SR7     | 32+764.5)  |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |
|                  |           |      |         |            |          |                           |                            |                              |                              |                                 |                                  |                                         |                                              |                                                           |      |                                                       |                                                                                    |                      |   |   |               |                                             |                                               |                 |         |



| REFERENCE NUMBER | SHEET NO. | SIDE   | ROADWAY | STATION    |          | 202               |                                                     | 603                      | 625                       |                            |                              |                              |                                  |                                  |                                                |                                         |                                              |                                                           |                                                             |                           |                                                       |                                                                                    |                      |                            |                          |                                                                                    |            | SPECIAL                                     | CALCULATED<br>FDH | CHECKED<br>SAH |                                               |                                        |              |                                 |
|------------------|-----------|--------|---------|------------|----------|-------------------|-----------------------------------------------------|--------------------------|---------------------------|----------------------------|------------------------------|------------------------------|----------------------------------|----------------------------------|------------------------------------------------|-----------------------------------------|----------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------|---------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------|----------------------|----------------------------|--------------------------|------------------------------------------------------------------------------------|------------|---------------------------------------------|-------------------|----------------|-----------------------------------------------|----------------------------------------|--------------|---------------------------------|
|                  |           |        |         |            |          | LUMINAIRE REMOVED | REMOVAL MISC.:<br>POLE AND BRACKET<br>CABLE REMOVED | 100mm CONDUIT,<br>TYPE E | CONNECTOR KIT,<br>TYPE II | CONNECTOR KIT,<br>TYPE III | CONNECTOR KIT,<br>TYPE VII B | CONNECTOR KIT,<br>TYPE VII C | LIGHT POLE,<br>DESIGN A3.OBB12.2 | LIGHT POLE,<br>DESIGN AT3.OB12.7 | LIGHT POLE,<br>DESIGN A1.8B9.9,<br>AS PER PLAN | NO. 10 AWG<br>POLE AND BRACKET<br>CABLE | NO. 4 AWG<br>5000 VOLT<br>DISTRIBUTION CABLE | 38mm DUCT CABLE<br>WITH TWO NO. 4 AWG<br>5000 VOLT CABLES | 38mm DUCT CABLE<br>WITH THREE NO. 4 AWG<br>5000 VOLT CABLES | CONDUIT, 102mm,<br>713.04 | CONDUIT, JACKED OR<br>DRILLED UNDER PAVEMENT,<br>76mm | LUMINAIRE, CONVENTIONAL<br>STYLE B, TYPE II,<br>250 WATT HPS, 713.11,<br>480 VOLTS | TRENCH,<br>0.6m DEEP | PULL BOX,<br>713.08, 600mm | CONDUIT, 76mm,<br>713.04 | LUMINAIRE, CONVENTIONAL<br>STYLE B, TYPE II,<br>250 WATT HPS, 713.11,<br>240 VOLTS | GROUND ROD | LIGHT POLE FOUNDATION,<br>610mm x 2.4m DEEP |                   |                | MEDIAN LIGHT POLE<br>FOUNDATION,<br>3.0m DEEP | CONDUIT, CLEANED AND<br>CABLES REMOVED | JUNCTION BOX | TRENCH IN PAVED<br>AREA, TYPE A |
|                  |           |        |         | FROM       | TO       | EACH              | METER                                               | METER                    | EACH                      | EACH                       | EACH                         | EACH                         | EACH                             | EACH                             | EACH                                           | METER                                   | METER                                        | METER                                                     | METER                                                       | METER                     | METER                                                 | EACH                                                                               | METER                | EACH                       | METER                    | EACH                                                                               | EA.        | EACH                                        |                   |                | EACH                                          | METER                                  | EACH         | EACH                            |
|                  |           |        |         | CIRCUIT BA |          |                   |                                                     |                          |                           |                            |                              |                              |                                  |                                  |                                                |                                         |                                              |                                                           |                                                             |                           |                                                       |                                                                                    |                      |                            |                          |                                                                                    |            |                                             |                   |                |                                               |                                        |              |                                 |
| BA-1             | 18        | CL     | SR7     | 33+225     |          |                   |                                                     |                          | 1                         | 1                          |                              |                              |                                  | 48                               |                                                |                                         |                                              |                                                           |                                                             | 2                         |                                                       |                                                                                    |                      |                            | 1                        |                                                                                    |            | 1                                           |                   | 1              |                                               |                                        |              |                                 |
| BA-1/2           | 18        | CL     | SR7     | 33+225     | 33+293   |                   |                                                     |                          |                           |                            |                              |                              |                                  |                                  | 142                                            |                                         |                                              |                                                           |                                                             |                           |                                                       |                                                                                    |                      |                            |                          |                                                                                    |            |                                             |                   |                |                                               |                                        |              |                                 |
| BA-2             | 18        | CL     | SR7     | 33+293     |          |                   |                                                     |                          | 1                         | 1                          |                              |                              | 1                                | 48                               |                                                |                                         |                                              |                                                           |                                                             | 2                         |                                                       |                                                                                    |                      |                            | 1                        |                                                                                    |            | 1                                           |                   |                |                                               |                                        |              |                                 |
| BA-2/3           | 18/19     | CL/RT. | SR7     | 33+293     | 33+365   |                   |                                                     |                          |                           |                            |                              |                              |                                  |                                  |                                                | 90                                      |                                              | 14.4                                                      |                                                             | 72                        |                                                       |                                                                                    |                      |                            | 1                        |                                                                                    |            | 1                                           |                   |                |                                               | 72                                     |              |                                 |
| BA-3             | 19        | RT.    | SR7     | 33+365     |          |                   |                                                     |                          | 1                         | 1                          |                              |                              | 1                                | 35                               |                                                |                                         |                                              |                                                           |                                                             | 1                         |                                                       |                                                                                    |                      |                            | 1                        | 1                                                                                  |            |                                             |                   |                |                                               | 54                                     |              |                                 |
| BA-3/4           | 19        | RT.    | SR7     | 33+365     | 33+419   |                   |                                                     |                          |                           |                            |                              |                              |                                  |                                  |                                                |                                         | 57                                           |                                                           |                                                             |                           | 54                                                    |                                                                                    |                      |                            |                          |                                                                                    |            |                                             |                   |                |                                               | 58.5                                   |              |                                 |
| BA-4             | 19        | RT.    | SR7     | 33+419     |          |                   |                                                     |                          | 1                         | 1                          |                              |                              | 1                                | 35                               |                                                |                                         |                                              |                                                           |                                                             | 1                         |                                                       |                                                                                    |                      |                            | 1                        | 1                                                                                  |            |                                             |                   |                |                                               |                                        |              |                                 |
| BA-4/7           | 19        | RT./CL | SR7     | 33+419     | 33+477.5 |                   |                                                     |                          |                           |                            |                              |                              |                                  |                                  |                                                |                                         | 74                                           |                                                           | 12.4                                                        |                           | 58.5                                                  |                                                                                    |                      |                            |                          |                                                                                    |            |                                             |                   |                |                                               | 35.5                                   |              |                                 |
| BA-5             | 19        | LT.    | SR7     | 33+365     |          |                   |                                                     |                          | 1                         | 1                          |                              |                              | 1                                | 35                               |                                                |                                         |                                              |                                                           |                                                             | 1                         |                                                       |                                                                                    |                      |                            | 1                        | 1                                                                                  |            |                                             |                   |                |                                               |                                        |              |                                 |
| BA-5/6           | 19        | LT.    | SR7     | 33+365     | 33+419   |                   |                                                     |                          |                           |                            |                              |                              |                                  |                                  |                                                |                                         | 57                                           |                                                           | 18.5                                                        |                           | 35.5                                                  |                                                                                    |                      |                            |                          |                                                                                    |            |                                             |                   |                |                                               |                                        |              |                                 |
| BA-6             | 19        | LT.    | SR7     | 33+419     |          |                   |                                                     |                          | 1                         | 1                          |                              |                              | 1                                | 35                               |                                                |                                         |                                              |                                                           |                                                             | 1                         |                                                       |                                                                                    |                      |                            | 1                        | 1                                                                                  |            |                                             |                   |                |                                               | 58.5                                   |              |                                 |
| BA-6/7           | 19        | LT./CL | SR7     | 33+419     | 33+477.5 |                   |                                                     |                          |                           |                            |                              |                              |                                  |                                  |                                                |                                         | 74                                           |                                                           | 12.4                                                        |                           | 58.5                                                  |                                                                                    |                      |                            |                          |                                                                                    |            |                                             |                   |                |                                               |                                        |              |                                 |
| BA-7             | 19        | CL     | SR7     | 33+477.5   |          |                   |                                                     |                          | 1                         | 1                          | 1                            | 1                            | 1                                | 48                               |                                                |                                         |                                              |                                                           |                                                             | 2                         |                                                       |                                                                                    |                      |                            | 1                        |                                                                                    |            | 1                                           |                   |                |                                               |                                        |              |                                 |
| BA-7/8           | 19        | CL     | SR7     | 33+477.5   | 33+538.5 |                   |                                                     |                          |                           |                            |                              |                              |                                  |                                  | 128                                            |                                         |                                              |                                                           |                                                             |                           |                                                       |                                                                                    |                      |                            |                          |                                                                                    |            |                                             |                   |                |                                               |                                        |              |                                 |
| BA-8             | 19        | CL     | SR7     | 33+538.5   |          |                   |                                                     |                          | 1                         | 1                          |                              |                              | 1                                | 48                               |                                                |                                         |                                              |                                                           |                                                             | 2                         |                                                       |                                                                                    |                      |                            | 1                        |                                                                                    |            | 1                                           |                   |                |                                               |                                        |              |                                 |
| BA-8/9           | 19        | CL     | SR7     | 33+538.5   | 33+600.5 |                   |                                                     |                          |                           |                            |                              |                              |                                  |                                  |                                                | 130                                     |                                              |                                                           |                                                             |                           |                                                       |                                                                                    |                      |                            |                          |                                                                                    |            |                                             |                   |                |                                               |                                        |              |                                 |
| BA-9             | 19        | CL     | SR7     | 33+600.5   |          |                   |                                                     |                          | 1                         | 1                          |                              |                              | 1                                | 48                               |                                                |                                         |                                              |                                                           |                                                             | 2                         |                                                       |                                                                                    |                      |                            | 1                        |                                                                                    |            | 1                                           |                   |                |                                               |                                        |              |                                 |
| BA-9/10          | 19        | CL     | SR7     | 33+600.5   | 33+      |                   |                                                     |                          |                           |                            |                              |                              |                                  |                                  |                                                |                                         |                                              |                                                           |                                                             |                           |                                                       |                                                                                    |                      |                            |                          |                                                                                    |            |                                             |                   |                |                                               |                                        |              |                                 |



[illegible]



| REFERENCE NUMBER | SHEET NO. | SIDE   | ROADWAY | STATION    |        | 603                   |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       | 625                                             |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               | SPECIAL              |  |
|------------------|-----------|--------|---------|------------|--------|-----------------------|-----------------------|---------------------------|---------------------------|-------------------------------------|-------------------------------|-----------------------------------|----------------------------------------|-------------------------------------------------------|-----------------------|-------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------|-------------------------|------------|------------------------------------------|-----------------------------------------|--------------|---------------|----------------------|--|
|                  |           |        |         |            |        | 100mm CONDUIT, TYPE E | CONNECTOR KIT, TYPE I | CONNECTOR KIT, TYPE VII B | CONNECTOR KIT, TYPE VII C | LIGHT POLE, MISC.: DESIGN A3.0BB9.1 | LIGHT POLE, DESIGN AT3.0BT0.4 | NO. 10 AWG POLE AND BRACKET CABLE | NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE | 38mm DUCT CABLE WITH THREE NO. 4 AWG 5000 VOLT CABLES | CONDUIT, 76mm, 713.04 | CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 76mm | LUMINAIRE, CONVENTIONAL STYLE B, TYPE II, 250 WATT HPS, 713.11, 240 VOLTS | LUMINAIRE, CONVENTIONAL STYLE B, TYPE III, 250 WATT HPS, 713.11, 240 VOLTS | TRENCH, 0.6m DEEP | PULL BOX, 713.08, 600mm | GROUND ROD | LIGHT POLE FOUNDATION, 610mm x 1.8m DEEP | MEDIAN LIGHT POLE FOUNDATION, 3.0m DEEP | JUNCTION BOX | POWER SERVICE | PLASTIC CAUTION TAPE |  |
|                  |           |        |         | FROM       | TO     | EACH                  | EACH                  | EACH                      | EACH                      | EACH                                | EACH                          | METER                             | METER                                  | METER                                                 | METER                 | METER                                           | EACH                                                                      | EACH                                                                       | METER             | EACH                    | EACH       | EACH                                     | EACH                                    | EACH         | EACH          | METER                |  |
|                  |           |        |         | CIRCUIT CA |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
| CA-1             | 20        | ℄      | SR7     | 34+563     |        |                       | 2                     |                           | 1                         |                                     | 41                            |                                   |                                        |                                                       |                       | 2                                               |                                                                           |                                                                            |                   | 1                       |            | 1                                        | 1                                       |              |               |                      |  |
| CA-1/2           | 20        | ℄      | SR7     | 34+563     | 34+498 |                       |                       |                           |                           |                                     |                               | 204                               |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
| CA-2             | 20        | ℄      | SR7     | 34+498     |        |                       | 2                     |                           | 1                         |                                     | 41                            |                                   |                                        |                                                       |                       | 2                                               |                                                                           |                                                                            |                   | 1                       |            | 1                                        | 1                                       |              |               |                      |  |
| CA-2/3           | 20        | ℄      | SR7     | 34+498     | 34+434 |                       |                       |                           |                           |                                     |                               | 201                               |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
| CA-3             | 20        | ℄      | SR7     | 34+434     |        |                       | 2                     |                           | 1                         |                                     | 41                            |                                   |                                        |                                                       |                       | 2                                               |                                                                           |                                                                            |                   | 1                       |            | 1                                        | 1                                       |              |               |                      |  |
| CA-3/7           | 20        | ℄      | SR7     | 34+434     | 34+371 |                       |                       |                           |                           |                                     |                               | 198                               |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
| CA-4             | 20        | RT.    | SR7     | 34+188     |        |                       | 2                     |                           |                           | 1                                   | 30                            |                                   |                                        |                                                       |                       |                                                 | 1                                                                         |                                                                            |                   | 1                       | 1          |                                          |                                         |              | 61            |                      |  |
| CA-4/5           | 20        | RT.    | SR7     | 34+188     | 34+249 |                       |                       |                           |                           |                                     |                               |                                   | 64                                     |                                                       |                       |                                                 |                                                                           | 61                                                                         |                   |                         |            |                                          |                                         |              |               |                      |  |
| CA-5             | 20        | RT.    | SR7     | 34+249     |        |                       | 2                     |                           |                           | 1                                   | 30                            |                                   |                                        |                                                       |                       |                                                 | 1                                                                         |                                                                            |                   | 1                       | 1          |                                          |                                         |              | 61            |                      |  |
| CA-5/6           | 20        | RT.    | SR7     | 34+249     | 34+310 |                       |                       |                           |                           |                                     |                               |                                   | 64                                     |                                                       |                       |                                                 |                                                                           | 61                                                                         |                   |                         |            |                                          |                                         |              | 61            |                      |  |
| CA-6             | 20        | RT.    | SR7     | 34+310     |        |                       | 2                     |                           |                           | 1                                   | 30                            |                                   |                                        |                                                       |                       | 1                                               |                                                                           |                                                                            |                   | 1                       | 1          |                                          |                                         |              |               |                      |  |
| CA-6/7           | 20        | RT./ ℄ | SR7     | 34+310     | 34+371 |                       |                       |                           |                           |                                     |                               |                                   | 77                                     |                                                       | 12.4                  |                                                 |                                                                           | 61                                                                         |                   |                         | 1          |                                          |                                         |              | 61            |                      |  |
| CA-7             | 20        | ℄      | SR7     | 34+371     |        |                       | 2                     | 2                         | 1                         | 1                                   | 41                            |                                   |                                        |                                                       |                       | 2                                               |                                                                           |                                                                            |                   | 1                       |            | 1                                        | 1                                       |              |               |                      |  |
| CA-7/8           | 20        | ℄/LT.  | SR7     | 34+371     | 34+310 |                       |                       |                           |                           |                                     |                               |                                   | 77                                     |                                                       | 12.4                  |                                                 |                                                                           | 61                                                                         |                   |                         | 1          | 1                                        |                                         |              | 61            |                      |  |
| CA-8             | 20        | LT.    | SR7     | 34+310     |        |                       | 2                     |                           |                           | 1                                   | 30                            |                                   |                                        |                                                       |                       | 1                                               |                                                                           |                                                                            |                   | 1                       | 1          |                                          |                                         |              |               |                      |  |
| CA-8/10          | 20        | LT.    | SR7     | 34+310     | 34+249 |                       |                       |                           |                           |                                     |                               |                                   | 64                                     |                                                       |                       |                                                 |                                                                           | 61                                                                         |                   |                         |            |                                          |                                         |              | 61            |                      |  |
| CA-9             | 20        | LT.    | SR7     | 34+188     |        |                       | 2                     |                           |                           | 1                                   | 30                            |                                   |                                        |                                                       |                       | 1                                               |                                                                           |                                                                            |                   | 1                       | 1          |                                          |                                         |              | 61            |                      |  |
| CA-9/10          | 20        | LT.    | SR7     | 34+188     | 34+249 |                       |                       |                           |                           |                                     |                               |                                   | 64                                     |                                                       |                       |                                                 |                                                                           | 61                                                                         |                   |                         |            |                                          |                                         |              | 61            |                      |  |
| CA-10            | 20        | LT.    | SR7     | 34+249     |        |                       | 2                     | 2                         | 1                         | 1                                   | 30                            |                                   |                                        |                                                       |                       | 1                                               |                                                                           |                                                                            |                   | 1                       | 1          |                                          |                                         |              |               |                      |  |
| CA-10/PB-C1      | 20        | LT.    | SR7     | 34+249     | 34+265 |                       |                       |                           |                           |                                     |                               |                                   | 21                                     |                                                       |                       |                                                 |                                                                           | 18                                                                         |                   |                         |            |                                          |                                         |              | 18            |                      |  |
| PB-C1            | 20        | LT.    | SR7     | 34+265     |        | 6                     |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
| PB-C1/CC-C       | 20        | LT.    | SR7     | 34+265     | 34+265 |                       |                       |                           |                           |                                     |                               |                                   | 6                                      | 3                                                     |                       |                                                 |                                                                           | 3                                                                          | 1                 |                         |            |                                          |                                         |              | 3             |                      |  |
| CC-C             | 20        | LT.    | SR7     | 34+265     |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   | 1                       |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          | 1                                       |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |
|                  |           |        |         |            |        |                       |                       |                           |                           |                                     |                               |                                   |                                        |                                                       |                       |                                                 |                                                                           |                                                                            |                   |                         |            |                                          |                                         |              |               |                      |  |



HA-V3321-01 LIGHTING 0324158.dwg OCT 28, 1997 - 09:55:57

| REFERENCE NUMBER                  | SHEET NO. | SIDE  | ROADWAY | STATION    |        | 202                               | 603                      | 625                       |                                        |                                         |                                                             |                                           |                                           |                          |                           |                                                        |                                                                                    |                                                                                     |                      |                            |                            |               |                                               |                 | SPECIAL          |                         | CALCULATED<br>FDH | CHECKED<br>SAH |
|-----------------------------------|-----------|-------|---------|------------|--------|-----------------------------------|--------------------------|---------------------------|----------------------------------------|-----------------------------------------|-------------------------------------------------------------|-------------------------------------------|-------------------------------------------|--------------------------|---------------------------|--------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------|----------------------------|----------------------------|---------------|-----------------------------------------------|-----------------|------------------|-------------------------|-------------------|----------------|
|                                   |           |       |         |            |        | LUMINAIRE REMOVED,<br>FOR STORAGE | 100mm CONDUIT,<br>TYPE E | CONNECTOR KIT,<br>TYPE II | LIGHT POLE, MISC.:<br>DESIGN A3.0BB9.1 | NO. 10 AWG<br>POLE AND BRACKET<br>CABLE | 38mm DUCT CABLE<br>WITH THREE NO. 4 AWG<br>5000 VOLT CABLES | NO. 4 AWG 5000 VOLT<br>DISTRIBUTION CABLE | NO. 2 AWG 5000 VOLT<br>DISTRIBUTION CABLE | CONDUIT, 76mm,<br>713.04 | CONDUIT, 102mm,<br>713.04 | CONDUIT, JACKED OR<br>DRILLED UNDER PAVEMENT,<br>102mm | LUMINAIRE, CONVENTIONAL<br>STYLE B, TYPE II,<br>250 WATT HPS, 713.11,<br>240 VOLTS | LUMINAIRE, CONVENTIONAL<br>STYLE B, TYPE III,<br>250 WATT HPS, 713.11,<br>240 VOLTS | TRENCH,<br>0.6m DEEP | PULL BOX,<br>713.08, 600mm | PULL BOX,<br>713.08, 450mm | GROUND<br>ROD | MEDIAN LIGHT POLE<br>FOUNDATION,<br>3.0m DEEP | JUNCTION<br>BOX | POWER<br>SERVICE | PLASTIC<br>CAUTION TAPE |                   |                |
|                                   |           |       |         | FROM       | TO     | EACH                              | METER                    | EACH                      | EACH                                   | METER                                   | METER                                                       | METER                                     | METER                                     | METER                    | METER                     | METER                                                  | EACH                                                                               | EACH                                                                                | METER                | EACH                       | EACH                       | EACH          | EACH                                          | EACH            | METER            | METER                   |                   |                |
|                                   |           |       |         | CIRCUIT DA |        |                                   |                          |                           |                                        |                                         |                                                             |                                           |                                           |                          |                           |                                                        |                                                                                    |                                                                                     |                      |                            |                            |               |                                               |                 |                  |                         |                   |                |
| DA-1                              | 20        | ☺     | SR7     | 34+631     |        |                                   |                          | 2                         | 1                                      | 41                                      |                                                             |                                           |                                           |                          |                           |                                                        | 2                                                                                  |                                                                                     |                      |                            |                            | 1             | 1                                             | 1               |                  |                         |                   |                |
| DA-1/2                            | 20        | ☺     | SR7     | 34+631     | 34+696 |                                   |                          |                           |                                        |                                         |                                                             | 204                                       |                                           |                          |                           |                                                        |                                                                                    |                                                                                     |                      |                            |                            |               |                                               |                 |                  |                         |                   |                |
| DA-2                              | 20        | ☺     | SR7     | 34+696     |        |                                   |                          | 2                         | 1                                      | 41                                      |                                                             |                                           |                                           |                          |                           |                                                        | 2                                                                                  |                                                                                     |                      |                            |                            | 1             | 1                                             | 1               |                  |                         |                   |                |
| DA-2/3                            | 20/21     | ☺     | SR7     | 34+696     | 34+761 |                                   |                          |                           |                                        |                                         |                                                             | 204                                       |                                           |                          |                           |                                                        |                                                                                    |                                                                                     |                      |                            |                            |               |                                               |                 |                  |                         |                   |                |
| DA-3                              | 21        | ☺     | SR7     | 34+761     |        |                                   |                          | 2                         | 1                                      | 41                                      |                                                             |                                           |                                           |                          |                           |                                                        | 2                                                                                  |                                                                                     |                      |                            |                            | 1             | 1                                             | 1               |                  |                         |                   |                |
| DA-3/4                            | 21        | ☺     | SR7     | 34+761     | 34+826 |                                   |                          |                           |                                        |                                         |                                                             | 204                                       |                                           |                          |                           |                                                        |                                                                                    |                                                                                     |                      |                            |                            |               |                                               |                 |                  |                         |                   |                |
| DA-4                              | 21        | ☺     | SR7     | 34+826     |        |                                   |                          | 2                         | 1                                      | 41                                      |                                                             |                                           |                                           |                          |                           |                                                        | 2                                                                                  |                                                                                     |                      |                            |                            | 1             | 1                                             | 1               |                  |                         |                   |                |
| DA-4/5                            | 21        | ☺     | SR7     | 34+826     | 34+891 |                                   |                          |                           |                                        |                                         |                                                             | 204                                       |                                           |                          |                           |                                                        |                                                                                    |                                                                                     |                      |                            |                            |               |                                               |                 |                  |                         |                   |                |
| DA-5                              | 21        | ☺     | SR7     | 34+891     |        |                                   |                          | 2                         | 1                                      | 41                                      |                                                             |                                           |                                           |                          |                           |                                                        | 2                                                                                  |                                                                                     |                      |                            |                            | 1             | 1                                             | 1               |                  |                         |                   |                |
| DA-5/6                            | 21        | ☺     | SR7     | 34+891     | 34+956 |                                   |                          |                           |                                        |                                         |                                                             | 204                                       |                                           |                          |                           |                                                        |                                                                                    |                                                                                     |                      |                            |                            |               |                                               |                 |                  |                         |                   |                |
| DA-6                              | 21        | ☺     | SR7     | 34+956     |        |                                   |                          | 2                         | 1                                      | 41                                      |                                                             |                                           |                                           |                          |                           |                                                        | 1                                                                                  | 1                                                                                   |                      |                            |                            | 1             | 1                                             | 1               |                  |                         |                   |                |
| DA-6/7                            | 21        | ☺     | SR7     | 34+956     | 35+021 |                                   |                          |                           |                                        |                                         |                                                             | 204                                       |                                           |                          |                           |                                                        |                                                                                    |                                                                                     |                      |                            |                            |               |                                               |                 |                  |                         |                   |                |
| DA-7                              | 21        | ☺     | SR7     | 35+021     |        |                                   |                          | 2                         | 1                                      | 41                                      |                                                             |                                           |                                           |                          |                           |                                                        |                                                                                    | 2                                                                                   |                      |                            |                            | 1             | 1                                             | 1               |                  |                         |                   |                |
| DA-7/8                            | 21        | ☺     | SR7     | 35+021     | 35+086 |                                   |                          |                           |                                        |                                         |                                                             | 204                                       |                                           |                          |                           |                                                        |                                                                                    |                                                                                     |                      |                            |                            |               |                                               |                 |                  |                         |                   |                |
| DA-8                              | 21        | ☺     | SR7     | 35+086     |        |                                   |                          | 2                         | 1                                      | 41                                      |                                                             |                                           |                                           |                          |                           |                                                        |                                                                                    | 2                                                                                   |                      |                            |                            | 1             | 1                                             | 1               |                  |                         |                   |                |
| DA-8/9                            | 21        | ☺     | SR7     | 35+086     | 35+151 |                                   |                          |                           |                                        |                                         |                                                             |                                           | 204                                       |                          |                           |                                                        |                                                                                    |                                                                                     |                      |                            |                            |               |                                               |                 |                  |                         |                   |                |
| DA-9                              | 21        | ☺     | SR7     | 35+151     |        |                                   |                          | 2                         | 1                                      | 41                                      |                                                             |                                           |                                           |                          |                           |                                                        | 1                                                                                  | 1                                                                                   |                      |                            |                            | 1             | 1                                             | 1               |                  |                         |                   |                |
| DA-9/JB-D1                        | 21        | ☺     | SR7     | 35+151     | 35+154 |                                   |                          |                           |                                        |                                         |                                                             |                                           | 18                                        |                          |                           |                                                        |                                                                                    |                                                                                     |                      |                            |                            |               |                                               |                 |                  |                         |                   |                |
| JB-D1                             | 21        | ☺     | SR7     | 35+154     |        |                                   |                          |                           |                                        |                                         |                                                             |                                           |                                           |                          |                           |                                                        |                                                                                    |                                                                                     |                      |                            |                            |               |                                               |                 |                  | 1                       |                   |                |
| JB-B1/PB-D2                       | 21        | ☺/LT. | SR7     | 35+154     | 35+154 |                                   |                          |                           |                                        |                                         |                                                             |                                           | 59                                        |                          |                           | 16.5                                                   |                                                                                    |                                                                                     |                      |                            |                            |               |                                               |                 |                  |                         |                   |                |
| PB-D2                             | 21        | LT.   | SR7     | 35+154     |        |                                   | 6                        |                           |                                        |                                         |                                                             |                                           |                                           |                          |                           |                                                        |                                                                                    |                                                                                     |                      | 1                          |                            |               |                                               |                 |                  |                         |                   |                |
| PB-D2/CC-D                        | 21        | LT.   | SR7     | 35+154     | 35+154 |                                   |                          |                           |                                        |                                         |                                                             |                                           | 18                                        |                          | 3                         |                                                        |                                                                                    |                                                                                     | 3                    |                            |                            |               |                                               |                 |                  | 1                       | 3                 |                |
| CC-D                              | 21        | LT.   | SR7     | 35+154     |        |                                   |                          |                           |                                        |                                         |                                                             |                                           |                                           |                          |                           |                                                        |                                                                                    |                                                                                     |                      |                            |                            | 1             |                                               |                 | 1                |                         |                   |                |
|                                   |           |       |         | CIRCUIT N  |        |                                   |                          |                           |                                        |                                         |                                                             |                                           |                                           |                          |                           |                                                        |                                                                                    |                                                                                     |                      |                            |                            |               |                                               |                 |                  |                         |                   |                |
| N-1                               | 22        | RT.   | SR7     |            |        | 1                                 |                          | 2                         |                                        | 28                                      |                                                             |                                           |                                           |                          |                           |                                                        | 1                                                                                  |                                                                                     |                      |                            |                            |               |                                               |                 |                  |                         |                   |                |
| N-1/PB-N1                         | 22        | RT.   | SR7     |            |        |                                   |                          |                           |                                        |                                         | 6                                                           |                                           |                                           |                          |                           |                                                        |                                                                                    |                                                                                     | 3                    |                            |                            |               |                                               |                 |                  |                         | 3                 |                |
| PB-N1                             | 22        | RT.   | SR7     |            |        |                                   | 6                        |                           |                                        |                                         |                                                             |                                           |                                           |                          |                           |                                                        |                                                                                    |                                                                                     |                      | 1                          |                            |               |                                               |                 |                  |                         |                   |                |
| PB-N1/CC-N                        | 22        | RT.   | SR7     |            |        |                                   |                          |                           |                                        |                                         | 6                                                           |                                           |                                           | 3                        |                           |                                                        |                                                                                    |                                                                                     | 3                    |                            |                            |               |                                               |                 |                  |                         | 3                 |                |
| CC-N                              | 22        | RT.   | SR7     |            |        |                                   |                          |                           |                                        |                                         |                                                             |                                           |                                           |                          |                           |                                                        |                                                                                    |                                                                                     |                      |                            |                            | 1             |                                               |                 | 1                |                         |                   |                |
| TOTALS CARRIED TO GENERAL SUMMARY |           |       |         |            |        | 1                                 | 12                       | 20                        | 9                                      | 397                                     | 12                                                          | 1428                                      | 299                                       | 3                        | 3                         | 16.5                                                   | 13                                                                                 | 6                                                                                   | 9                    | 1                          | 1                          | 11            | 9                                             | 10              | 2                | 9                       |                   |                |

LIGHTING QUANTITIES

BEL-7-32.276

188  
242







| REFERENCE NUMBER | SHEET NO. | SIDE    | ROADWAY | STATION    |          | 603                   |                        |                           |                                     |                               | 625                               |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       | SPECIAL |  |
|------------------|-----------|---------|---------|------------|----------|-----------------------|------------------------|---------------------------|-------------------------------------|-------------------------------|-----------------------------------|----------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------|-------------------|-------------------------|-------------------------------------------------|-----------------------|------------------------|------------|------------------------------------------|-----------------------------------------|--------------|---------------|------|----------------------|-------|---------|--|
|                  |           |         |         |            |          | 100mm CONDUIT, TYPE E | CONNECTOR KIT, TYPE II | CONNECTOR KIT, TYPE VII C | LIGHT POLE, MISC.: DESIGN A3.0BB9.1 | LIGHT POLE, DESIGN AT3.0BT0.4 | NO. 10 AWG POLE AND BRACKET CABLE | NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE | 38mm DUCT CABLE WITH THREE NO. 4 AWG 5000 VOLT CABLES | LUMINAIRE, CONVENTIONAL STYLE B, TYPE II, 250 WATT HPS, 713.11, 240 VOLTS | TRENCH, 0.6m DEEP | PULL BOX, 713.08, 600mm | CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 76mm | CONDUIT, 76mm, 713.04 | CONDUIT, 102mm, 713.04 | GROUND ROD | LIGHT POLE FOUNDATION, 610mm x 1.8m DEEP | MEDIAN LIGHT POLE FOUNDATION, 3.0m DEEP | JUNCTION BOX | POWER SERVICE |      | PLASTIC CAUTION TAPE |       |         |  |
|                  |           |         |         | FROM       | TO       | METER                 | EACH                   | EACH                      | EACH                                | EACH                          | METER                             | METER                                  | METER                                                 | EACH                                                                      | METER             | EACH                    | METER                                           | METER                 | METER                  | EACH       | EACH                                     | EACH                                    | EACH         | EACH          | EACH | METER                | METER |         |  |
|                  |           |         |         | CIRCUIT EA |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
| EA-1             | 22        | RT.     | SR7     | 35+728     |          |                       | 2                      |                           |                                     | 1                             | 30                                |                                        |                                                       | 1                                                                         |                   |                         |                                                 |                       |                        | 1          | 1                                        |                                         |              |               |      |                      |       |         |  |
| EA-1/2           | 22        | RT.     | SR7     | 35+728     | 35+790   |                       |                        |                           |                                     |                               |                                   |                                        | 65                                                    | 62                                                                        |                   |                         |                                                 |                       |                        | 1          | 1                                        |                                         |              |               | 62   |                      |       |         |  |
| EA-2             | 22        | RT.     | SR7     | 35+790     |          |                       | 2                      |                           |                                     | 1                             | 30                                |                                        |                                                       | 1                                                                         |                   |                         |                                                 |                       |                        | 1          | 1                                        |                                         |              |               |      |                      |       |         |  |
| EA-2/3           | 22        | RT.     | SR7     | 35+790     | 35+852   |                       |                        |                           |                                     |                               |                                   |                                        | 65                                                    | 62                                                                        |                   |                         |                                                 |                       |                        | 1          | 1                                        |                                         |              |               | 62   |                      |       |         |  |
| EA-3             | 22        | RT.     | SR7     | 35+852     |          |                       | 2                      |                           |                                     | 1                             | 30                                |                                        |                                                       | 1                                                                         |                   |                         |                                                 |                       |                        | 1          | 1                                        |                                         |              |               |      |                      |       |         |  |
| EA-3/4           | 22        | RT.     | SR7     | 35+852     | 35+914   |                       |                        |                           |                                     |                               |                                   |                                        | 65                                                    | 62                                                                        |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               | 62   |                      |       |         |  |
| EA-4             | 22        | RT.     | SR7     | 35+914     |          |                       | 2                      |                           |                                     | 1                             | 30                                |                                        |                                                       | 1                                                                         |                   |                         |                                                 |                       |                        | 1          | 1                                        |                                         |              |               | 62   |                      |       |         |  |
| EA-4/5           | 22        | RT.     | SR7     | 35+914     | 35+976   |                       |                        |                           |                                     |                               |                                   |                                        | 65                                                    | 62                                                                        |                   |                         |                                                 |                       |                        | 1          | 1                                        |                                         |              |               | 62   |                      |       |         |  |
| EA-5             | 22        | RT.     | SR7     | 35+976     |          |                       | 2                      |                           |                                     | 1                             | 30                                |                                        |                                                       | 1                                                                         |                   |                         |                                                 |                       |                        | 1          | 1                                        |                                         |              |               |      |                      |       |         |  |
| EA-5/JB-E1       | 22        | RT./LT. | SR7     | 35+976     | 36+010.1 |                       |                        |                           |                                     |                               |                                   |                                        | 50                                                    | 35                                                                        |                   | 12.4                    |                                                 |                       |                        |            |                                          |                                         |              |               | 35   |                      |       |         |  |
| EA-6             | 22        | LT.     | SR7     | 35+728     |          |                       | 2                      |                           |                                     | 1                             | 30                                |                                        |                                                       | 1                                                                         |                   |                         |                                                 |                       |                        | 1          | 1                                        |                                         |              |               |      |                      |       |         |  |
| EA-6/7           | 22        | LT.     | SR7     | 35+728     | 35+790   |                       |                        |                           |                                     |                               |                                   |                                        | 65                                                    | 62                                                                        |                   |                         |                                                 |                       |                        | 1          | 1                                        |                                         |              |               | 62   |                      |       |         |  |
| EA-7             | 22        | LT.     | SR7     | 35+790     |          |                       | 2                      |                           |                                     | 1                             | 30                                |                                        |                                                       | 1                                                                         |                   |                         |                                                 |                       |                        | 1          | 1                                        |                                         |              |               |      |                      |       |         |  |
| EA-7/8           | 22        | LT.     | SR7     | 35+790     | 35+852   |                       |                        |                           |                                     |                               |                                   |                                        | 65                                                    | 62                                                                        |                   |                         |                                                 |                       |                        | 1          | 1                                        |                                         |              |               | 62   |                      |       |         |  |
| EA-8             | 22        | LT.     | SR7     | 35+852     |          |                       | 2                      |                           |                                     | 1                             | 30                                |                                        |                                                       | 1                                                                         |                   |                         |                                                 |                       |                        | 1          | 1                                        |                                         |              |               |      |                      |       |         |  |
| EA-8/9           | 22        | LT.     | SR7     | 35+852     | 35+914   |                       |                        |                           |                                     |                               |                                   |                                        | 65                                                    | 62                                                                        |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               | 62   |                      |       |         |  |
| EA-9             | 22        | LT.     | SR7     | 35+914     |          |                       | 2                      |                           |                                     | 1                             | 30                                |                                        |                                                       | 1                                                                         |                   |                         |                                                 |                       |                        | 1          | 1                                        |                                         |              |               |      |                      |       |         |  |
| EA-9/10          | 22        | LT.     | SR7     | 35+914     | 35+976   |                       |                        |                           |                                     |                               |                                   |                                        | 65                                                    | 62                                                                        |                   |                         |                                                 |                       |                        | 1          | 1                                        |                                         |              |               | 62   |                      |       |         |  |
| EA-10            | 22        | LT.     | SR7     | 35+976     |          |                       | 2                      |                           |                                     | 1                             | 30                                |                                        |                                                       | 1                                                                         |                   |                         |                                                 |                       |                        | 1          | 1                                        |                                         |              |               |      |                      |       |         |  |
| EA-10/JB-E1      | 22        | LT.     | SR7     | 35+976     | 36+010.1 |                       |                        |                           |                                     |                               |                                   |                                        | 50                                                    | 35                                                                        |                   | 12.4                    |                                                 |                       |                        |            |                                          |                                         |              |               | 35   |                      |       |         |  |
| JB-E1            | 22        | RT.     | SR7     | 36+010.1   |          |                       |                        | 3                         |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          | 1                                       |              |               |      |                      |       |         |  |
| JB-E1/EA-11      | 22        | RT./LT. | SR7     | 36+010.1   | 36+039   |                       |                        |                           |                                     |                               |                                   | 96                                     |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
| EA-11            | 22        | LT.     | SR7     | 36+039     |          |                       | 2                      |                           | 1                                   |                               | 41                                |                                        |                                                       | 2                                                                         |                   |                         |                                                 |                       |                        | 1          |                                          | 1                                       |              |               |      |                      |       |         |  |
| EA-11/12         | 22        | LT.     | SR7     | 36+039     | 36+101   |                       |                        |                           |                                     |                               |                                   | 195                                    |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
| EA-12            | 22        | LT.     | SR7     | 36+101     |          |                       | 2                      |                           | 1                                   |                               | 41                                |                                        |                                                       | 2                                                                         |                   |                         |                                                 |                       |                        | 1          |                                          | 1                                       |              |               |      |                      |       |         |  |
| EA-12/JB-E2      | 22/23     | LT.     | SR7     | 36+101     | 36+164   |                       |                        |                           |                                     |                               |                                   | 198                                    |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
| JB-E2            | 23        | LT.     | SR7     | 36+164     |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          | 1                                       |              |               |      |                      |       |         |  |
| JB-E2/E3         | 23        | LT.     | SR7     | 36+164     | 36+164   |                       |                        |                           |                                     |                               |                                   | 27                                     |                                                       |                                                                           |                   |                         | 6                                               |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
| JB-E3            | 23        | LT.     | SR7     | 36+164     |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          | 1                                       |              |               |      |                      |       |         |  |
| JB-E3/E4         | 23        | LT.     | SR7     | 36+164     | 36+175   |                       |                        |                           |                                     |                               |                                   | 135                                    |                                                       |                                                                           |                   |                         | 42                                              |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
| JB-E4            | 23        | RT.     | SR7     | 36+175     |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          | 1                                       |              |               |      |                      |       |         |  |
| JB-E4/PB-E5      | 23        | RT./LT. | SR7     | 36+175     | 36+180   |                       |                        |                           |                                     |                               |                                   | 27                                     |                                                       | 6                                                                         |                   |                         | 6                                               |                       |                        |            |                                          |                                         |              |               | 6    |                      |       |         |  |
| PB-E5            | 23        | LT.     | SR7     | 36+180     |          | 6                     |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           | 1                 |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
| PB-E5/CC-E       | 23        | LT.     | SR7     | 36+180     | 36+182   |                       |                        |                           |                                     |                               |                                   | 18                                     |                                                       | 3                                                                         |                   |                         |                                                 |                       | 3                      |            |                                          |                                         |              |               | 3    |                      |       |         |  |
| CC-E             | 23        | LT.     | SR7     | 36+182     |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        | 1          |                                          |                                         | 1            |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       |                        |            |                                          |                                         |              |               |      |                      |       |         |  |
|                  |           |         |         |            |          |                       |                        |                           |                                     |                               |                                   |                                        |                                                       |                                                                           |                   |                         |                                                 |                       | </                     |            |                                          |                                         |              |               |      |                      |       |         |  |



| REFERENCE NUMBER                  | SHEET NO. | SIDE    | ROADWAY | STATION   |    | 603                   |  |                       |                           |                        |                                               |                                   |                                        |                                        |   |                                                       | 625               |                              |                                                                |                       |               |            |                         |              |    |                      |  | SPECIAL |  |
|-----------------------------------|-----------|---------|---------|-----------|----|-----------------------|--|-----------------------|---------------------------|------------------------|-----------------------------------------------|-----------------------------------|----------------------------------------|----------------------------------------|---|-------------------------------------------------------|-------------------|------------------------------|----------------------------------------------------------------|-----------------------|---------------|------------|-------------------------|--------------|----|----------------------|--|---------|--|
|                                   |           |         |         |           |    | 100mm CONDUIT, TYPE E |  | CONNECTOR KIT, TYPE I | CONNECTOR KIT, TYPE XII B | CONNECTOR KIT, TYPE XI | LIGHT POLE, MISC.: DESIGN AON4.6, AS PER PLAN | NO. 10 AWG POLE AND BRACKET CABLE | NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE | NO. 10 AWG 600 VOLT DISTRIBUTION CABLE |   | LUMINAIRE, POST TOP TYPE III, 100 WATT HPS, 240 VOLTS | TRENCH, 0.6m DEEP | TRENCH IN PAVED AREA, TYPE A | LUMINAIRE, UNDERPASS TYPE III, 100 WATT HPS, 713.13, 240 VOLTS | CONDUIT, 51mm, 713.04 | POWER SERVICE | GROUND ROD | PULL BOX, 713.08, 450mm | JUNCTION BOX |    | PLASTIC CAUTION TAPE |  |         |  |
|                                   |           |         |         | FROM      | TO | METER                 |  | EACH                  | EACH                      | EACH                   | EACH                                          | METER                             | METER                                  | METER                                  |   | EACH                                                  | METER             | METER                        | EACH                                                           | METER                 | EACH          | EACH       | EACH                    | EACH         |    | METER                |  |         |  |
|                                   |           |         |         | CIRCUIT P |    |                       |  |                       |                           |                        |                                               |                                   |                                        |                                        |   |                                                       |                   |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-1                               | 23        | RT.     | SR7     |           |    |                       |  | 2                     |                           |                        |                                               |                                   |                                        |                                        |   |                                                       | 1                 |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-1/2                             | 23        | RT.     | SR7     |           |    |                       |  |                       |                           |                        |                                               | 21                                |                                        |                                        |   |                                                       |                   |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-2                               | 23        | RT.     | SR7     |           |    |                       |  | 2                     |                           |                        |                                               |                                   |                                        |                                        |   |                                                       | 1                 |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-2/5                             | 23        | RT.     | SR7     |           |    |                       |  |                       |                           |                        |                                               | 51                                |                                        |                                        |   |                                                       |                   |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-3                               | 23        | RT.     | SR7     |           |    |                       |  | 2                     |                           |                        |                                               |                                   |                                        |                                        |   |                                                       | 1                 |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-3/4                             | 23        | RT.     | SR7     |           |    |                       |  |                       |                           |                        |                                               |                                   |                                        |                                        |   |                                                       |                   |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-4                               | 23        | RT.     | SR7     |           |    |                       |  | 2                     |                           |                        |                                               |                                   |                                        |                                        |   |                                                       | 1                 |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-4/5                             | 23        | RT.     | SR7     |           |    |                       |  |                       |                           |                        |                                               | 35                                |                                        |                                        |   |                                                       |                   |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-5                               | 23        | RT.     | SR7     |           |    |                       |  | 2                     | 3                         | 4                      | 1                                             | 13                                |                                        | 1                                      |   |                                                       |                   |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-5/6                             | 23        | RT./LT. | SR7     |           |    |                       |  |                       |                           |                        |                                               | 54                                |                                        |                                        |   |                                                       |                   |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-6                               | 23        | LT.     | SR7     |           |    |                       |  | 2                     |                           |                        | 1                                             | 13                                |                                        | 1                                      |   |                                                       |                   |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-6/7                             | 23        | LT.     | SR7     |           |    |                       |  |                       |                           |                        |                                               | 54                                |                                        |                                        |   |                                                       |                   |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-7                               | 23        | LT.     | SR7     |           |    |                       |  | 2                     |                           |                        | 1                                             | 13                                |                                        | 1                                      |   |                                                       |                   |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-7/8                             | 23        | LT.     | SR7     |           |    |                       |  |                       |                           |                        |                                               | 54                                |                                        |                                        |   |                                                       |                   |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-8                               | 23        | LT.     | SR7     |           |    |                       |  | 2                     |                           |                        | 1                                             | 13                                |                                        | 1                                      |   |                                                       |                   |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-8/9                             | 23        | LT.     | SR7     |           |    |                       |  |                       |                           |                        |                                               |                                   |                                        |                                        |   |                                                       |                   |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-9                               | 23        | LT.     | SR7     |           |    |                       |  | 2                     |                           |                        | 1                                             | 13                                |                                        | 1                                      |   |                                                       |                   |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| P-9/JB-P1                         | 23        | LT.     | SR7     |           |    |                       |  |                       |                           |                        |                                               | 21                                |                                        |                                        |   |                                                       | 4                 |                              |                                                                |                       |               | 1          |                         |              |    |                      |  |         |  |
| JB-P1                             | 23        | LT.     | SR7     |           |    |                       |  |                       |                           |                        |                                               | 27                                |                                        |                                        |   |                                                       | 6                 |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| JB-P1/P2                          | 23        | LT.     | SR7     |           |    |                       |  |                       |                           |                        |                                               |                                   |                                        |                                        |   |                                                       |                   |                              |                                                                |                       |               |            |                         |              |    |                      |  |         |  |
| JB-P2                             | 23        | LT.     | SR7     |           |    |                       |  |                       |                           |                        |                                               |                                   |                                        |                                        |   |                                                       |                   |                              |                                                                |                       |               | 1          |                         |              |    |                      |  |         |  |
| JB-P2/PB-P2                       | 23        | LT.     | SR7     |           |    |                       |  |                       |                           |                        |                                               | 33                                |                                        |                                        | 8 |                                                       | 8                 |                              |                                                                |                       |               |            |                         | 8            |    |                      |  |         |  |
| PB-P2                             | 23        | LT.     | SR7     |           |    | 6                     |  |                       |                           |                        |                                               |                                   |                                        |                                        |   |                                                       |                   |                              |                                                                | 1                     |               |            |                         |              |    |                      |  |         |  |
| PB-P2/CC P                        | 23        | LT.     | SR7     |           |    |                       |  |                       |                           |                        |                                               | 18                                |                                        |                                        |   | 3                                                     |                   | 3                            |                                                                |                       |               |            |                         | 3            |    |                      |  |         |  |
| CC P                              | 23        | LT.     | SR7     |           |    |                       |  |                       |                           |                        |                                               |                                   |                                        |                                        |   |                                                       |                   | 1                            | 1                                                              |                       |               |            |                         |              |    |                      |  |         |  |
| TOTALS CARRIED TO GENERAL SUMMARY |           |         |         |           |    | 6                     |  | 18                    | 3                         | 4                      | 5                                             | 65                                | 99                                     | 344                                    |   | 5                                                     | 8                 | 3                            | 4                                                              | 21                    | 1             | 1          | 1                       | 2            | 11 |                      |  |         |  |

191

242

BEL-7-32.276

LIGHTING QUANTITIES

CALCULATED

FDH

CHECKED

SAH



| REFERENCE NUMBER                  | SHEET NO. | SIDE    | ROADWAY | STATION    |          | 625                       |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            | SPECIAL                 | LIGHTING QUANTITIES |    |  |
|-----------------------------------|-----------|---------|---------|------------|----------|---------------------------|----------------------------|------------------------------|------------------------------|---------------------------|---------------------------|----------------------------------------|----------------------------------|----------------------------------------------|--------------------------------------|----------------------------------------------|----------------------------------------------|-------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------|-------------------------------------------------------|--------------------------|--------------------------|---------------|---------------------------------------------|-----------------------------------------------|-----------------|----------------------------|-------------------------|---------------------|----|--|
|                                   |           |         |         |            |          | CONNECTOR KIT,<br>TYPE II | CONNECTOR KIT,<br>TYPE III | CONNECTOR KIT,<br>TYPE VII B | CONNECTOR KIT,<br>TYPE VII C | CONNECTOR KIT,<br>TYPE IX | CONNECTOR KIT,<br>TYPE XI | LIGHT POLE, MISC.:<br>DESIGN A3.0BB9.1 | LIGHT POLE,<br>DESIGN AT3.0B10.4 | NO. 10 AWG<br>600 VOLT<br>DISTRIBUTION CABLE | NO. 10 AWG<br>POLE AND BRACKET CABLE | NO. 4 AWG<br>5000 VOLT<br>DISTRIBUTION CABLE | NO. 2 AWG<br>5000 VOLT<br>DISTRIBUTION CABLE | 38mm DUCT CABLE<br>WITH THREE NO. 2 AWG<br>5000 VOLT CABLES | LUMINAIRE, CONVENTIONAL<br>STYLE B, TYPE II,<br>250 WATT HPS, 713.11,<br>240 VOLTS | LUMINAIRE, UNDERPASS,<br>TYPE III, 713.13,<br>150 WATT HPS, 713.13,<br>240 VOLTS | TRENCH,<br>0.6m DEEP | CONDUIT, JACKED OR<br>DRILLED UNDER PAVEMENT,<br>76mm | CONDUIT, 51mm,<br>713.04 | CONDUIT, 38mm,<br>713.04 | GROUND<br>ROD | LIGHT POLE FOUNDATION,<br>610mm x 1.8m DEEP | MEDIAN LIGHT POLE<br>FOUNDATION,<br>3.0m DEEP | JUNCTION<br>BOX | TRANSITION<br>JUNCTION BOX | PLASTIC<br>CAUTION TAPE |                     |    |  |
|                                   |           |         |         | FROM       | TO       | EACH                      | EACH                       | EACH                         | EACH                         | EACH                      | EACH                      | EACH                                   | EACH                             | METER                                        | METER                                | METER                                        | METER                                        | METER                                                       | EACH                                                                               | EACH                                                                             | METER                | METER                                                 | METER                    | METER                    | EACH          | EACH                                        | EACH                                          | EACH            | EACH                       | EACH                    |                     |    |  |
|                                   |           |         |         | CIRCUIT EB |          |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-1                              | 23        | LT.     | SR7     | 36+665     |          | 2                         |                            |                              |                              |                           |                           | 1                                      |                                  | 30                                           |                                      |                                              |                                              | 1                                                           |                                                                                    |                                                                                  |                      |                                                       |                          | 1                        | 1             |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-1/2                            | 23        | LT.     | SR7     | 36+665     | 36+622   |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     | 43 |  |
| EB-2                              | 23        | LT.     | SR7     | 36+622     |          | 2                         |                            |                              |                              |                           |                           |                                        | 1                                |                                              | 41                                   |                                              |                                              | 2                                                           |                                                                                    |                                                                                  |                      |                                                       |                          | 1                        |               |                                             | 1                                             |                 |                            |                         |                     |    |  |
| EB-2/3                            | 23        | LT.     | SR7     | 36+622     | 36+571   |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              | 162                                          |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             | 1                                             |                 |                            |                         |                     |    |  |
| EB-3                              | 23        | LT.     | SR7     | 36+571     |          | 2                         |                            |                              |                              |                           |                           |                                        | 1                                |                                              | 41                                   |                                              |                                              | 2                                                           |                                                                                    |                                                                                  |                      |                                                       |                          | 1                        |               |                                             | 1                                             |                 |                            |                         |                     |    |  |
| EB-3/JB-E6                        | 23        | LT.     | SR7     | 36+571     | 36+538.1 |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| JB-E6                             | 23        | LT.     | SR7     | 36+538.1   |          |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            | 1                       |                     |    |  |
| JB-E6/EB-4                        | 23        | LT.     | SR7     | 36+538.1   | 36+521   |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              | 61                                                          |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-4                              | 23        | LT.     | SR7     | 36+521     |          | 2                         |                            |                              |                              |                           |                           |                                        | 1                                |                                              | 41                                   |                                              |                                              |                                                             | 2                                                                                  |                                                                                  |                      |                                                       |                          |                          | 1             |                                             |                                               | 1               |                            |                         |                     |    |  |
| EB-4/5                            | 23        | LT.     | SR7     | 36+521     | 36+470.2 |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              | 162                                                         |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-5                              | 23        | LT.     | SR7     | 36+470.2   |          | 2                         |                            |                              |                              |                           |                           |                                        | 1                                |                                              | 41                                   |                                              |                                              |                                                             | 2                                                                                  |                                                                                  |                      |                                                       |                          |                          | 1             |                                             |                                               | 1               |                            |                         |                     |    |  |
| EB-5/6                            | 23        | LT.     | SR7     | 36+470.2   | 34+419.9 |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              | 160                                                         |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-6                              | 23        | LT.     | SR7     | 34+419.9   |          | 2                         |                            |                              |                              |                           |                           |                                        | 1                                |                                              | 41                                   |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          | 1             |                                             |                                               | 1               |                            |                         |                     |    |  |
| EB-6/JB-E7                        | 23        | LT.     | SR7     | 34+419.9   | 36+415   |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              | 24                                                          |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| JB-E7                             | 23        | LT.     | SR7     | 36+415     |          |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            | 1                       |                     |    |  |
| JB-E7/E10                         | 23        | LT.     | SR7     | 36+415     | 36+381   |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              | 111                                                         |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-7                              | 23        | LT.     | SR7     |            |          |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    | 1                                                                                |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-7/8                            | 23        | LT.     | SR7     |            |          |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              | 46                                   |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-8                              | 23        | LT.     | SR7     |            |          |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    | 1                                                                                |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-8/JB-E8                        | 23        | LT.     | SR7     |            | 36+393   |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| JB-E8                             | 23        | RT.     | SR7     | 36+393     |          |                           |                            |                              |                              |                           |                           | 1                                      | 2                                |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            | 1                       |                     |    |  |
| JB-E8/E9                          | 23        | RT./LT. | SR7     | 36+393     | 36+381   |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              | 45                                           |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          | 12                       |               |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-9                              | 23        | LT.     | SR7     |            |          |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    | 1                                                                                |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-9/10                           | 23        | LT.     | SR7     |            |          |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-10                             | 23        | LT.     | SR7     |            |          |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    | 1                                                                                |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-10/JB-E9                       | 23        | LT.     | SR7     |            | 36+381   |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| JB-E9                             | 23        | LT.     | SR7     | 36+381     |          | 2                         | 1                          |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            | 1                       |                     |    |  |
| JB-E9/E10                         | 23        | LT.     | SR7     | 36+381     | 36+381   |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              | 15                                                          |                                                                                    |                                                                                  |                      |                                                       |                          | 2                        |               |                                             |                                               |                 |                            |                         |                     |    |  |
| JB-E10                            | 23        | LT.     | SR7     | 36+381     |          |                           |                            | 2                            | 1                            |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            | 1                       |                     |    |  |
| JB-E10/E11                        | 23        | LT.     | SR7     | 36+381     | 36+360   |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             | 72                                                                                 |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| JB-E11                            | 23        | RT.     | SR7     | 36+360     |          |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         | 1                   |    |  |
| JB-E11/EB-11                      | 23        | RT./LT. | SR7     | 36+360     | 36+355   |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             | 24                                                                                 |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-11                             | 23        | LT.     | SR7     | 36+355     |          | 2                         |                            |                              |                              |                           |                           |                                        |                                  |                                              | 41                                   |                                              |                                              |                                                             |                                                                                    | 2                                                                                |                      |                                                       |                          |                          | 1             |                                             |                                               | 1               |                            |                         |                     |    |  |
| EB-11/12                          | 23        | LT.     | SR7     | 36+355     | 36+291.5 |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             | 200                                                                                |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-12                             | 23        | LT.     | SR7     | 36+291.5   |          | 2                         |                            |                              |                              |                           |                           |                                        |                                  |                                              | 41                                   |                                              |                                              |                                                             |                                                                                    | 2                                                                                |                      |                                                       |                          |                          | 1             |                                             |                                               | 1               |                            |                         |                     |    |  |
| EB-12/13                          | 23        | LT.     | SR7     | 36+291.5   | 36+228   |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             | 200                                                                                |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-13                             | 23        | LT.     | SR7     | 36+228     |          | 2                         |                            |                              |                              |                           |                           |                                        |                                  |                                              | 41                                   |                                              |                                              |                                                             |                                                                                    | 2                                                                                |                      |                                                       |                          |                          | 1             |                                             |                                               | 1               |                            |                         |                     |    |  |
| EB-13/14                          | 23        | LT.     | SR7     | 36+228     | 36+168.4 |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             | 188                                                                                |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-14                             | 23        | LT.     | SR7     | 36+168.4   |          | 2                         |                            |                              |                              |                           |                           |                                        |                                  |                                              | 41                                   |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| EB-14/JB-E2                       | 23        | LT.     | SR7     | 36+168.4   | 36+164   |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             | 23                                                                                 |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| (JB-E2                            | 23        | RT.     | SR7     | 36+164)    |          |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| JB-E2/E3                          | 23        | RT./LT. | SR7     | 36+164     | 36+164   |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             | 27                                                                                 |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| (JB-E3                            | 23        | LT.     | SR7     | 36+164)    |          |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| JB-E3/E4                          | 23        | LT.     | SR7     | 36+164     | 36+175   |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             | 137                                                                                |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| (JB-E4                            | 23        | LT.     | SR7     | 36+175)    |          |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| JB-E4/E5                          | 23        | LT.     | SR7     | 36+175     | 36+180   |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             | 27                                                                                 |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| (JB-E5                            | 23        | LT.     | SR7     | 36+180)    |          |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| JB-E5/CC E                        | 23        | LT.     | SR7     | 36+180     | 36+182   |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             | 18                                                                                 |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| (CC E                             | 23        | LT.     | SR7     | 36+182)    |          |                           |                            |                              |                              |                           |                           |                                        |                                  |                                              |                                      |                                              |                                              |                                                             |                                                                                    |                                                                                  |                      |                                                       |                          |                          |               |                                             |                                               |                 |                            |                         |                     |    |  |
| TOTALS CARRIED TO GENERAL SUMMARY |           |         |         |            |          | 22                        | 1                          | 2                            | 1                            | 1                         | 2                         | 9                                      | 1                                | 148                                          | 399                                  | 60                                           | 1704                                         | 59                                                          | 19                                                                                 | 4                                                                                | 43                   | 12.4                                                  | 14.0                     | 36.6                     | 10            | 1                                           | 9                                             | 13              | 2                          | 43                      |                     |    |  |

192

242

LIGHTING QUANTITIES

BEL-7-32.276

192  
242



| REFERENCE NUMBER | SHEET NO. | SIDE    | ROADWAY | STATION    |          | 603                   | 625 |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              | SPECIAL |
|------------------|-----------|---------|---------|------------|----------|-----------------------|-----|------------------------|---------------------------|---------------------------|-------------------------------|------------------------------------------|-----------------------------------|-------------------------------------------------------|-----------------------|-------------------------------------------------|---------------------------------------------------------------------------|-------------------|-------------------------|-------------------------|------------|------------------------------------------|---------------|------------------------------|---------|
|                  |           |         |         |            |          | 100mm CONDUIT, TYPE E |     | CONNECTOR KIT, TYPE II | CONNECTOR KIT, TYPE VII B | CONNECTOR KIT, TYPE VII C | LIGHT POLE, DESIGN AT3.0B10.4 | LIGHT POLE, DESIGN A2.4B9.1, AS PER PLAN | NO. 10 AWG POLE AND BRACKET CABLE | 38mm DUCT CABLE WITH THREE NO. 4 AWG 5000 VOLT CABLES | CONDUIT, 51mm, 713.04 | CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 76mm | LUMINAIRE, CONVENTIONAL STYLE B, TYPE II, 250 WATT HPS, 713.11, 240 VOLTS | TRENCH, 0.6m DEEP | PULL BOX, 713.08, 600mm | PULL BOX, 713.08, 450mm | GROUND ROD | LIGHT POLE FOUNDATION, 610mm x 1.8m DEEP | POWER SERVICE | TRENCH IN PAVED AREA, TYPE A |         |
|                  |           |         |         | FROM       | TO       | METER                 |     | EACH                   | EACH                      | EACH                      | EACH                          | EACH                                     | METER                             | METER                                                 | METER                 | METER                                           | EACH                                                                      | METER             | EACH                    | EACH                    | EACH       | EACH                                     | EACH          | METER                        |         |
|                  |           |         |         | CIRCUIT FA |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
| FA-1             | 25        | RT.     | SR7     | 37+661     |          |                       |     | 2                      |                           |                           | 1                             |                                          | 30                                |                                                       |                       | 1                                               |                                                                           |                   | 1                       | 1                       |            |                                          |               |                              |         |
| FA-1/2           | 25        | RT.     | SR7     | 37+661     | 37+598.5 |                       |     |                        |                           |                           |                               |                                          | 66                                |                                                       |                       | 62.5                                            |                                                                           |                   |                         |                         |            |                                          | 62.5          |                              |         |
| FA-2             | 25        | RT.     | SR7     | 37+598.5   |          |                       |     | 2                      |                           |                           | 1                             |                                          | 30                                |                                                       |                       | 1                                               |                                                                           |                   | 1                       | 1                       |            |                                          | 62.5          |                              |         |
| FA-2/3           | 25        | RT.     | SR7     | 37+598.5   | 37+536   |                       |     |                        |                           |                           |                               |                                          | 66                                |                                                       |                       | 62.5                                            |                                                                           |                   | 1                       | 1                       |            |                                          | 62.5          |                              |         |
| FA-3             | 24        | RT.     | SR7     | 37+536     |          |                       |     | 2                      |                           |                           | 1                             |                                          | 30                                |                                                       |                       | 1                                               |                                                                           |                   | 1                       | 1                       |            |                                          |               |                              |         |
| FA-3/4           | 24        | RT.     | SR7     | 37+536     | 37+473.5 |                       |     |                        |                           |                           |                               |                                          | 66                                |                                                       |                       | 62.5                                            |                                                                           |                   |                         |                         |            |                                          | 62.5          |                              |         |
| FA-4             | 24        | RT.     | SR7     | 37+473.5   |          |                       |     | 2                      |                           |                           | 1                             |                                          | 30                                |                                                       |                       | 1                                               |                                                                           |                   | 1                       | 1                       |            |                                          | 62.5          |                              |         |
| FA-4/5           | 24        | RT.     | SR7     | 37+473.5   | 37+411   |                       |     |                        |                           |                           |                               |                                          | 66                                |                                                       |                       | 62.5                                            |                                                                           |                   | 1                       | 1                       |            |                                          | 62.5          |                              |         |
| FA-5             | 24        | RT.     | SR7     | 37+411     |          |                       |     | 2                      |                           |                           | 1                             |                                          | 30                                |                                                       |                       | 1                                               |                                                                           |                   | 1                       | 1                       |            |                                          | 62            |                              |         |
| FA-5/6           | 24        | RT.     | SR7     | 37+411     | 37+349   |                       |     |                        |                           |                           |                               |                                          | 65                                |                                                       |                       | 62                                              |                                                                           |                   |                         |                         |            |                                          | 62            |                              |         |
| FA-6             | 24        | RT.     | SR7     | 37+349     |          |                       |     | 2                      |                           |                           | 1                             |                                          | 30                                |                                                       |                       | 1                                               |                                                                           |                   | 1                       | 1                       |            |                                          |               |                              |         |
| FA-6/15          | 24        | RT.     | SR7     | 37+349     | 37+286   |                       |     |                        |                           |                           |                               |                                          | 66                                |                                                       |                       | 63                                              |                                                                           |                   |                         |                         |            |                                          | 63            |                              |         |
| FA-7             | 23        | RT.     | SR7     | 36+744     |          |                       |     | 2                      |                           |                           |                               | 1                                        | 26                                |                                                       |                       | 1                                               |                                                                           |                   |                         |                         |            |                                          | 9             |                              |         |
| FA-7/PB-F1       | 23        | RT.     | SR7     | 36+744     | 36+808   |                       |     |                        |                           |                           |                               |                                          | 67                                | 9                                                     |                       |                                                 | 9                                                                         |                   |                         |                         |            |                                          | 9             |                              |         |
| PB-F1            | 23        | RT.     | SR7     | 36+808     |          | 6                     |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           | 1                 |                         |                         |            |                                          |               |                              |         |
| PB-F1/FA-8       | 23        | RT.     | SR7     | 36+808     | 36+825   |                       |     |                        |                           |                           |                               |                                          | 20                                |                                                       |                       | 17                                              |                                                                           |                   |                         |                         |            |                                          | 17            |                              |         |
| FA-8             | 23        | RT.     | SR7     | 36+825     |          |                       |     | 2                      |                           |                           | 1                             |                                          | 30                                |                                                       |                       | 1                                               |                                                                           |                   | 1                       | 1                       |            |                                          |               |                              |         |
| FA-8/9           | 24        | RT.     | SR7     | 36+825     | 36+890   |                       |     |                        |                           |                           |                               |                                          | 68                                |                                                       |                       | 65                                              |                                                                           |                   |                         |                         |            |                                          | 65            |                              |         |
| FA-9             | 24        | RT.     | SR7     | 36+890     |          |                       |     | 2                      |                           |                           | 1                             |                                          | 30                                |                                                       |                       | 1                                               |                                                                           |                   | 1                       | 1                       |            |                                          |               |                              |         |
| FA-9/10          | 24        | RT.     | SR7     | 36+890     | 36+955   |                       |     |                        |                           |                           |                               |                                          | 68                                |                                                       |                       | 65                                              |                                                                           |                   |                         |                         |            |                                          | 65            |                              |         |
| FA-10            | 24        | RT.     | SR7     | 36+955     |          |                       |     | 2                      |                           |                           | 1                             |                                          | 30                                |                                                       |                       | 1                                               |                                                                           |                   | 1                       | 1                       |            |                                          |               |                              |         |
| FA-10/11         | 24        | RT.     | SR7     | 36+955     | 37+021   |                       |     |                        |                           |                           |                               |                                          | 69                                |                                                       |                       | 66                                              |                                                                           |                   |                         |                         |            |                                          | 66            |                              |         |
| FA-11            | 24        | RT.     | SR7     | 37+021     |          |                       |     | 2                      |                           |                           | 1                             |                                          | 30                                |                                                       |                       | 1                                               |                                                                           |                   | 1                       | 1                       |            |                                          |               |                              |         |
| FA-11/12         | 24        | RT.     | SR7     | 37+021     | 37+088   |                       |     |                        |                           |                           |                               |                                          | 70                                |                                                       |                       | 67                                              |                                                                           |                   |                         |                         |            |                                          | 67            |                              |         |
| FA-12            | 24        | RT.     | SR7     | 37+088     |          |                       |     | 2                      |                           |                           | 1                             |                                          | 30                                |                                                       |                       | 1                                               |                                                                           |                   | 1                       | 1                       |            |                                          | 66            |                              |         |
| FA-12/13         | 24        | RT.     | SR7     | 37+088     | 37+154   |                       |     |                        |                           |                           |                               |                                          | 69                                |                                                       |                       | 66                                              |                                                                           |                   |                         |                         |            |                                          | 66            |                              |         |
| FA-13            | 24        | RT.     | SR7     | 37+154     |          |                       |     | 2                      |                           |                           | 1                             |                                          | 30                                |                                                       |                       | 1                                               |                                                                           |                   | 1                       | 1                       |            |                                          |               |                              |         |
| FA-13/14         | 24        | RT.     | SR7     | 37+154     | 37+220   |                       |     |                        |                           |                           |                               |                                          | 69                                |                                                       |                       | 66                                              |                                                                           |                   |                         |                         |            |                                          | 66            |                              |         |
| FA-14            | 24        | RT.     | SR7     | 37+220     |          |                       |     | 2                      |                           |                           | 1                             |                                          | 30                                |                                                       |                       | 1                                               |                                                                           |                   | 1                       | 1                       |            |                                          | 66            |                              |         |
| FA-14/15         | 24        | RT.     | SR7     | 37+220     | 37+286   |                       |     |                        |                           |                           |                               |                                          | 69                                |                                                       |                       | 66                                              |                                                                           |                   |                         |                         |            |                                          | 66            |                              |         |
| FA-15            | 24        | RT.     | SR7     | 37+286     |          |                       |     | 2                      | 2                         | 1                         | 1                             |                                          | 30                                |                                                       |                       | 1                                               |                                                                           |                   | 1                       | 1                       |            |                                          |               |                              |         |
| FA-15/PB-F3      | 24        | RT./LT. | SR7     | 37+286     | 37+295   |                       |     |                        |                           |                           |                               |                                          | 40                                |                                                       | 24                    | 11                                              |                                                                           |                   |                         |                         | 2          |                                          | 13            |                              |         |
| PB-F3            | 24        | LT.     | SR7     | 37+295     |          | 6                     |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 | 1                                                                         |                   |                         |                         |            |                                          |               |                              |         |
| PB-F3/CC-F       | 24        | LT.     | SR7     | 37+295     | 37+295   |                       |     |                        |                           |                           |                               |                                          | 6                                 |                                                       |                       | 3                                               |                                                                           |                   |                         |                         |            |                                          | 3             |                              |         |
| CC-F             | 24        | LT.     | SR7     | 37+295     |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           | 1                 |                         | 1                       |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |
|                  |           |         |         |            |          |                       |     |                        |                           |                           |                               |                                          |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |                         |            |                                          |               |                              |         |



| REFERENCE NUMBER | SHEET NO. | SIDE | ROADWAY | STATION    |          | 603   | 625                   |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          | SPECIAL |
|------------------|-----------|------|---------|------------|----------|-------|-----------------------|--|------|------------------------|---------------------------|---------------------------|-------------------------------|-------------------------------|------------------------------------------|----------------------------------------|-----------------------------------|-------------------------------------------------------|-----------------------|-------------------------------------------------|---------------------------------------------------------------------------|-------------------|-------------------------|------------|------------------------------------------|---------|
|                  |           |      |         |            |          |       | 100mm CONDUIT, TYPE E |  |      | CONNECTOR KIT, TYPE II | CONNECTOR KIT, TYPE VII B | CONNECTOR KIT, TYPE VII C | LIGHT POLE, DESIGN AT3.7B10.4 | LIGHT POLE, DESIGN AT3.0B10.4 | LIGHT POLE, DESIGN A2.4B9.1, AS PER PLAN | NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE | NO. 10 AWG POLE AND BRACKET CABLE | 38mm DUCT CABLE WITH THREE NO. 4 AWG 5000 VOLT CABLES | CONDUIT, 51mm, 713.04 | CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 76mm | LUMINAIRE, CONVENTIONAL STYLE B, TYPE II, 250 WATT HPS, 713.11, 240 VOLTS | TRENCH, 0.6m DEEP | PULL BOX, 713.06, 450mm | GROUND ROD | LIGHT POLE FOUNDATION, 610mm x 1.8m DEEP |         |
|                  |           |      |         | FROM       | TO       | METER |                       |  | EACH | EACH                   | EACH                      | EACH                      | EACH                          | EACH                          | METER                                    | METER                                  | METER                             | METER                                                 | METER                 | EACH                                            | METER                                                                     | EACH              | EACH                    | EACH       |                                          |         |
|                  |           |      |         | CIRCUIT FB |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
| FB-1             | 23        | LT.  | SR7     | 36+706     |          |       |                       |  | 2    |                        |                           |                           | 1                             |                               | 26                                       |                                        |                                   |                                                       | 1                     |                                                 |                                                                           |                   |                         |            |                                          |         |
| FB-1/2           | 23        | LT.  | SR7     | 36+706     | 36+782   |       |                       |  |      |                        |                           |                           |                               | 237                           |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
| FB-2             | 23        | LT.  | SR7     | 36+782     |          |       |                       |  | 2    |                        |                           |                           | 1                             |                               | 26                                       |                                        |                                   |                                                       | 1                     |                                                 |                                                                           |                   |                         |            |                                          |         |
| FB-2/PB-F2       | 23        | LT.  | SR7     | 36+782     | 36+808   |       |                       |  |      |                        |                           |                           |                               |                               |                                          | 29                                     | 9                                 |                                                       | 9                     |                                                 |                                                                           |                   |                         |            | 9                                        |         |
| PB-F2            | 23        | LT.  | SR7     | 36+808     |          | 6     |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       | 1                     |                                                 |                                                                           |                   |                         |            |                                          |         |
| PB-F2/FB-3       | 23        | LT.  | SR7     | 36+808     | 36+825   |       |                       |  |      |                        |                           |                           |                               |                               |                                          | 20                                     |                                   | 17                                                    |                       |                                                 |                                                                           |                   |                         |            | 17                                       |         |
| FB-3             | 23        | LT.  | SR7     | 36+825     |          |       |                       |  | 2    |                        |                           | 1                         |                               |                               | 30                                       |                                        |                                   | 1                                                     |                       |                                                 | 1                                                                         | 1                 |                         |            |                                          |         |
| FB-3/4           | 24        | LT.  | SR7     | 36+825     | 36+890   |       |                       |  |      |                        |                           |                           |                               |                               | 68                                       |                                        |                                   | 65                                                    |                       |                                                 |                                                                           |                   |                         |            | 65                                       |         |
| FB-4             | 24        | LT.  | SR7     | 36+890     |          |       |                       |  | 2    |                        |                           | 1                         |                               |                               | 30                                       |                                        |                                   | 1                                                     |                       |                                                 | 1                                                                         | 1                 |                         |            |                                          |         |
| FB-4/5           | 24        | LT.  | SR7     | 36+890     | 36+955   |       |                       |  |      |                        |                           |                           |                               |                               | 68                                       |                                        | 36.7                              | 28.3                                                  |                       |                                                 |                                                                           |                   |                         |            | 28.3                                     |         |
| FB-5             | 24        | LT.  | SR7     | 36+955     |          |       |                       |  | 2    |                        |                           | 1                         |                               |                               | 32                                       |                                        |                                   | 1                                                     |                       |                                                 | 1                                                                         | 1                 |                         |            |                                          |         |
| FB-5/6           | 24        | LT.  | SR7     | 36+955     | 37+021   |       |                       |  |      |                        |                           |                           |                               |                               | 69                                       |                                        |                                   | 66                                                    |                       |                                                 |                                                                           |                   |                         |            | 66                                       |         |
| FB-6             | 24        | LT.  | SR7     | 37+021     |          |       |                       |  | 2    |                        |                           | 1                         |                               |                               | 32                                       |                                        |                                   | 1                                                     |                       |                                                 | 1                                                                         | 1                 |                         |            |                                          |         |
| FB-6/7           | 24        | LT.  | SR7     | 37+021     | 37+088   |       |                       |  |      |                        |                           |                           |                               |                               | 70                                       |                                        |                                   | 67                                                    |                       |                                                 |                                                                           |                   |                         |            | 67                                       |         |
| FB-7             | 24        | LT.  | SR7     | 37+088     |          |       |                       |  | 2    |                        |                           | 1                         |                               |                               | 32                                       |                                        |                                   | 1                                                     |                       |                                                 | 1                                                                         | 1                 |                         |            |                                          |         |
| FB-7/8           | 24        | LT.  | SR7     | 37+088     | 37+154   |       |                       |  |      |                        |                           |                           |                               |                               |                                          | 69                                     |                                   | 66                                                    |                       |                                                 |                                                                           |                   |                         |            | 66                                       |         |
| FB-8             | 24        | LT.  | SR7     | 37+154     |          |       |                       |  | 2    |                        |                           | 1                         |                               |                               | 32                                       |                                        |                                   | 1                                                     |                       |                                                 | 1                                                                         | 1                 |                         |            |                                          |         |
| FB-8/9           | 24        | LT.  | SR7     | 37+154     | 37+220   |       |                       |  |      |                        |                           |                           |                               |                               | 69                                       |                                        |                                   | 66                                                    |                       |                                                 |                                                                           |                   |                         |            | 66                                       |         |
| FB-9             | 24        | LT.  | SR7     | 37+220     |          |       |                       |  | 2    |                        |                           | 1                         |                               |                               | 32                                       |                                        |                                   | 1                                                     |                       |                                                 | 1                                                                         | 1                 |                         |            |                                          |         |
| FB-9/16          | 24        | LT.  | SR7     | 37+220     | 37+286   |       |                       |  |      |                        |                           |                           |                               |                               | 69                                       |                                        |                                   | 66                                                    |                       |                                                 |                                                                           |                   |                         |            | 66                                       |         |
| FB-10            | 24        | LT.  | SR7     | 37+657     |          |       |                       |  | 2    |                        |                           | 1                         |                               |                               | 32                                       |                                        |                                   | 1                                                     |                       |                                                 | 1                                                                         | 1                 |                         |            |                                          |         |
| FB-10/11         | 24        | LT.  | SR7     | 37+657     | 37+598.5 |       |                       |  |      |                        |                           |                           |                               |                               | 62                                       |                                        |                                   | 58.5                                                  |                       |                                                 |                                                                           |                   |                         |            | 58.5                                     |         |
| FB-11            | 24        | LT.  | SR7     | 37+598.5   |          |       |                       |  | 2    |                        |                           | 1                         |                               |                               | 32                                       |                                        |                                   | 1                                                     |                       |                                                 | 1                                                                         | 1                 |                         |            |                                          |         |
| FB-11/12         | 24        | LT.  | SR7     | 37+598.5   | 37+536   |       |                       |  |      |                        |                           |                           |                               |                               | 66                                       |                                        |                                   | 62.5                                                  |                       |                                                 |                                                                           |                   |                         |            | 62.5                                     |         |
| FB-12            | 24        | LT.  | SR7     | 37+536     |          |       |                       |  | 2    |                        |                           | 1                         |                               |                               | 32                                       |                                        |                                   | 1                                                     |                       |                                                 | 1                                                                         | 1                 |                         |            |                                          |         |
| FB-12/13         | 24        | LT.  | SR7     | 37+536     | 37+473.5 |       |                       |  |      |                        |                           |                           |                               |                               | 66                                       |                                        |                                   | 62.5                                                  |                       |                                                 |                                                                           |                   |                         |            | 62.5                                     |         |
| FB-13            | 24        | LT.  | SR7     | 37+473.5   |          |       |                       |  | 2    |                        |                           | 1                         |                               |                               | 32                                       |                                        |                                   | 1                                                     |                       |                                                 | 1                                                                         | 1                 |                         |            |                                          |         |
| FB-13/14         | 24        | LT.  | SR7     | 37+473.5   | 37+411   |       |                       |  |      |                        |                           |                           |                               |                               | 66                                       |                                        |                                   | 62.5                                                  |                       |                                                 |                                                                           |                   |                         |            | 62.5                                     |         |
| FB-14            | 24        | LT.  | SR7     | 37+411     |          |       |                       |  | 2    |                        |                           | 1                         |                               |                               | 32                                       |                                        |                                   | 1                                                     |                       |                                                 | 1                                                                         | 1                 |                         |            |                                          |         |
| FB-14/15         | 24        | LT.  | SR7     | 37+411     | 37+349   |       |                       |  |      |                        |                           |                           |                               |                               | 65                                       |                                        |                                   | 62                                                    |                       |                                                 |                                                                           |                   |                         |            | 62                                       |         |
| FB-15            | 24        | LT.  | SR7     | 37+349     |          |       |                       |  | 2    |                        |                           | 1                         |                               |                               | 32                                       |                                        |                                   | 1                                                     |                       |                                                 | 1                                                                         | 1                 |                         |            |                                          |         |
| FB-15/16         | 24        | LT.  | SR7     | 37+349     | 37+286   |       |                       |  |      |                        |                           |                           |                               |                               | 71                                       |                                        | 20.1                              | 47.9                                                  |                       |                                                 |                                                                           |                   |                         |            | 47.9                                     |         |
| FB-16            | 24        | LT.  | SR7     | 37+286     |          |       |                       |  | 2    | 2                      | 1                         | 1                         |                               |                               | 32                                       |                                        |                                   | 1                                                     |                       |                                                 | 1                                                                         | 1                 |                         |            |                                          |         |
| FB-16/PB-F3      | 24        | LT.  | SR7     | 37+286     | 37+295   |       |                       |  |      |                        |                           |                           |                               |                               | 14                                       |                                        |                                   | 11                                                    |                       |                                                 |                                                                           |                   |                         |            | 11                                       |         |
| (PB-F3           | 24        | LT.  | SR7     | 37+295)    |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
| PB-F3/CC-F       | 24        | LT.  | SR7     | 37+295     | 37+295   |       |                       |  |      |                        |                           |                           |                               |                               | 6                                        |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
| (CC-F            | 24        | LT.  | SR7     | 37+295)    |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |
|                  |           |      |         |            |          |       |                       |  |      |                        |                           |                           |                               |                               |                                          |                                        |                                   |                                                       |                       |                                                 |                                                                           |                   |                         |            |                                          |         |





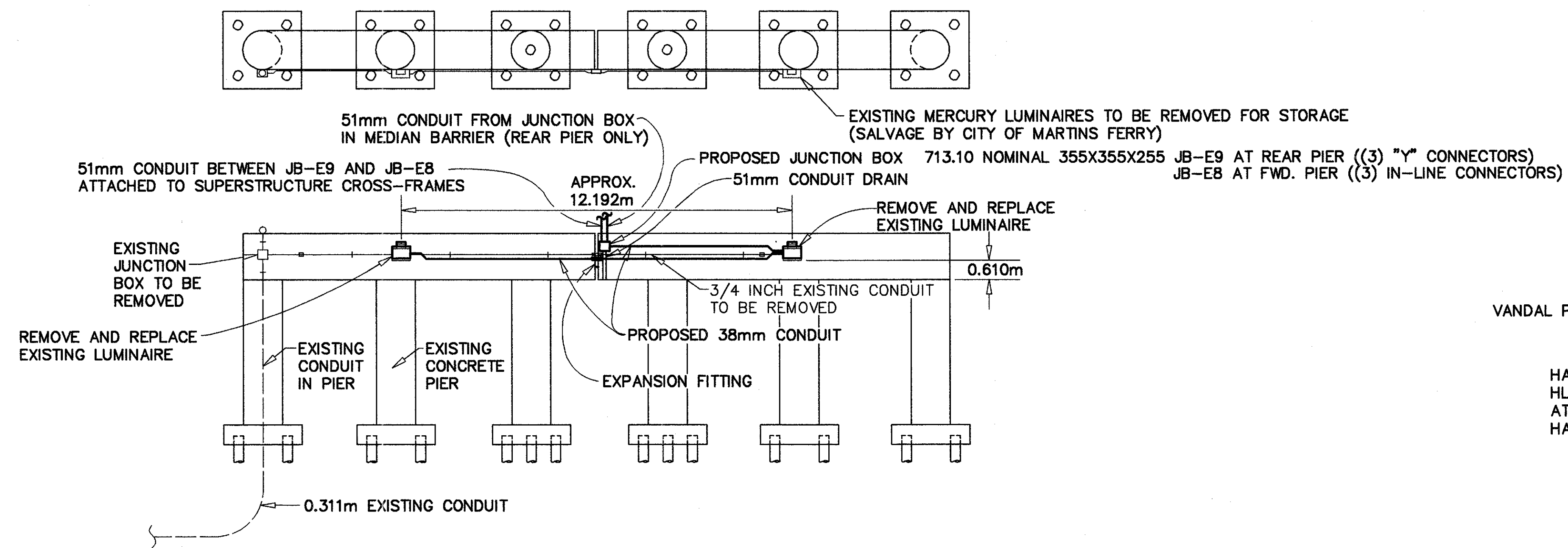




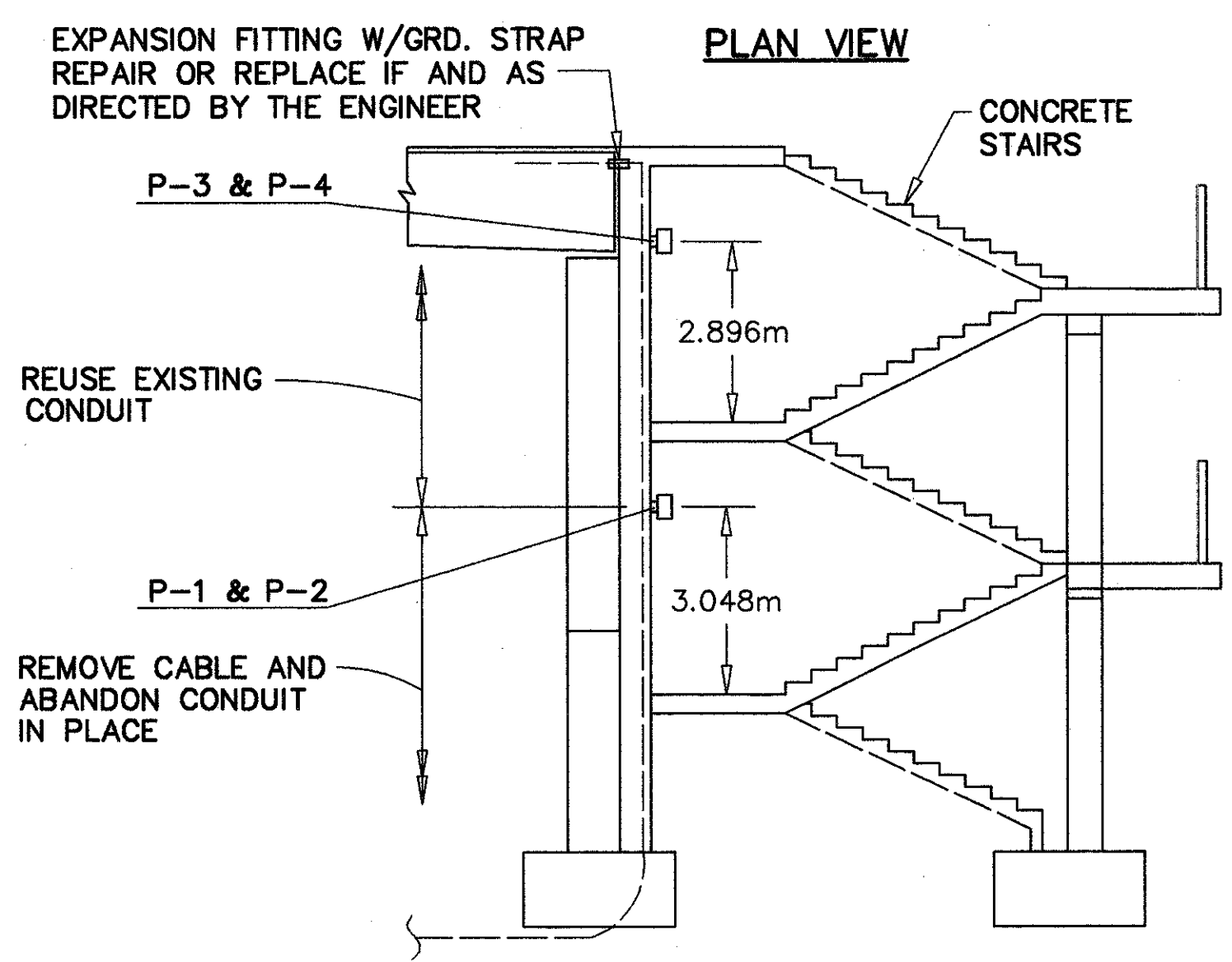
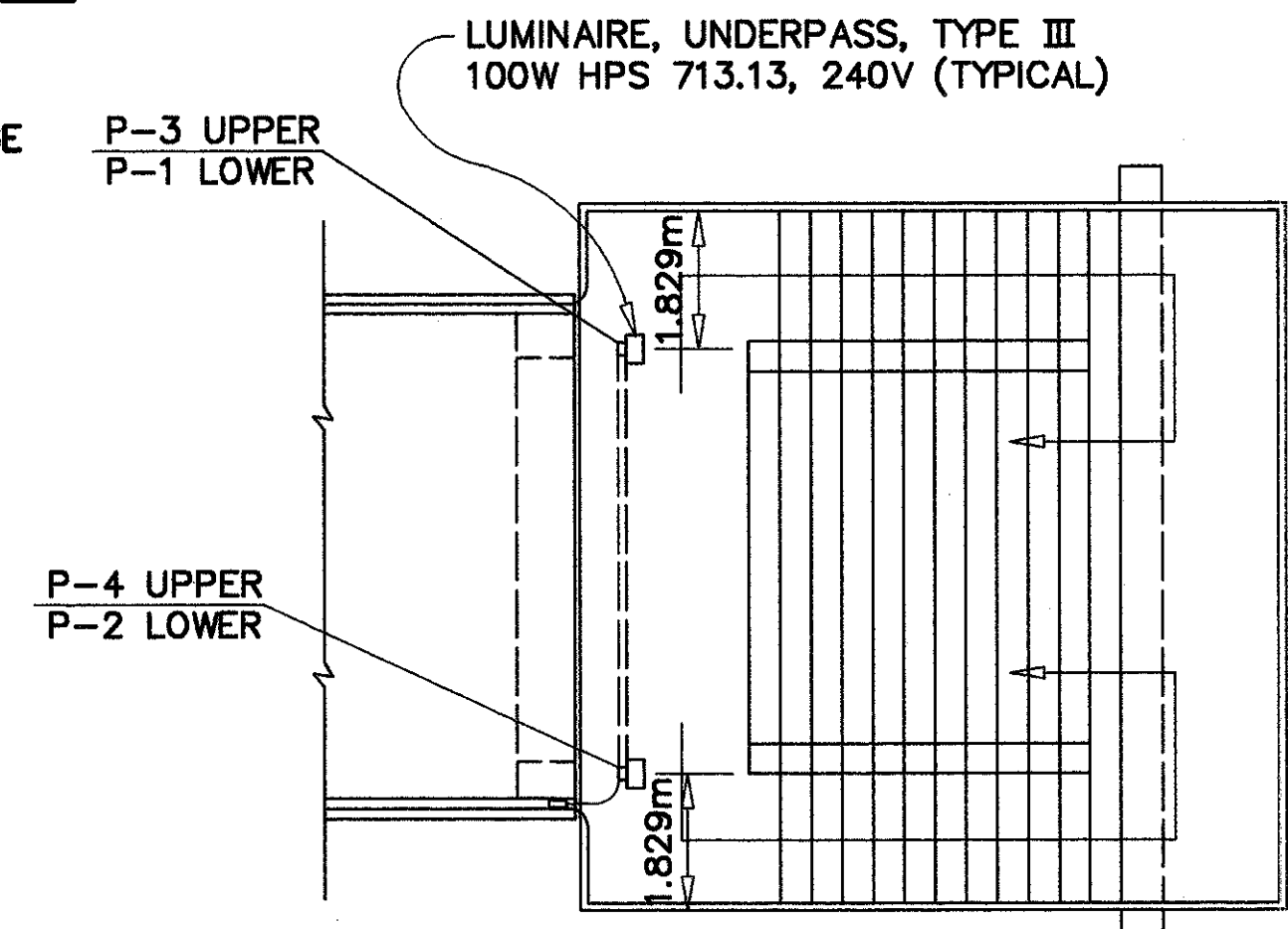


| REFERENCE NUMBER | SHEET NO. | SIDE | ROADWAY | STATION    |        | 202                           |                                               | 603                   | 625                    |                           |                           |                               |                                   |                                                       |                       |                                                 |                                                                           |                                                                           |                   |                         |            |                                          |                              |                      | SPECIAL |
|------------------|-----------|------|---------|------------|--------|-------------------------------|-----------------------------------------------|-----------------------|------------------------|---------------------------|---------------------------|-------------------------------|-----------------------------------|-------------------------------------------------------|-----------------------|-------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------|-------------------|-------------------------|------------|------------------------------------------|------------------------------|----------------------|---------|
|                  |           |      |         |            |        | LUMINAIRE REMOVED FOR STORAGE | REMOVAL MISC.: POLE AND BRACKET CABLE REMOVED | 100mm CONDUIT, TYPE E | CONNECTOR KIT, TYPE II | CONNECTOR KIT, TYPE VII B | CONNECTOR KIT, TYPE VII C | LIGHT POLE, DESIGN AT3.7B10.4 | NO. 10 AWG POLE AND BRACKET CABLE | 38mm DUCT CABLE WITH THREE NO. 4 AWG 5000 VOLT CABLES | CONDUIT, 76mm, 713.04 | CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 76mm | LUMINAIRE, CONVENTIONAL STYLE B, TYPE II, 250 WATT HPS, 713.11, 240 VOLTS | LUMINAIRE, CONVENTIONAL STYLE B, TYPE II, 250 WATT HPS, 713.11, 240 VOLTS | TRENCH, 0.6m DEEP | PULL BOX, 713.08, 450mm | GROUND ROD | LIGHT POLE FOUNDATION, 610mm x 1.8m DEEP | TRENCH IN PAVED AREA, TYPE A | PLASTIC CAUTION TAPE |         |
|                  |           |      |         | FROM       | TO     | EACH                          | METER                                         | METER                 |                        | EACH                      | EACH                      | EACH                          | EACH                              | METER                                                 | METER                 | METER                                           | METER                                                                     | EACH                                                                      | EACH              | METER                   | EACH       | EACH                                     | EACH                         | EACH                 | METER   |
|                  |           |      |         | CIRCUIT GB |        |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       |                       |                                                 |                                                                           |                                                                           |                   |                         |            |                                          |                              |                      |         |
| GB-1             | 26        | LT.  | SR7     | 38+422     |        |                               |                                               |                       |                        | 2                         |                           |                               | 1                                 | 32                                                    |                       |                                                 |                                                                           | 1                                                                         |                   |                         |            | 1                                        | 1                            |                      |         |
| GB-1/2           | 26        | LT.  | SR7     | 38+422     | 38+359 |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       |                       |                                                 |                                                                           |                                                                           | 63                |                         |            |                                          |                              |                      | 63      |
| GB-2             | 26        | LT.  | SR7     | 38+359     |        |                               |                                               |                       |                        | 2                         |                           |                               | 1                                 | 32                                                    |                       |                                                 |                                                                           | 1                                                                         |                   |                         |            | 1                                        | 1                            |                      |         |
| GB-2/3           | 26        | LT.  | SR7     | 38+359     | 38+296 |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       |                       |                                                 |                                                                           |                                                                           | 63                |                         |            |                                          |                              |                      | 63      |
| GB-3             | 26        | LT.  | SR7     | 38+296     |        |                               |                                               |                       |                        | 2                         |                           |                               | 1                                 | 32                                                    |                       |                                                 |                                                                           | 1                                                                         |                   |                         |            | 1                                        | 1                            |                      |         |
| GB-3/4           | 25        | LT.  | SR7     | 38+296     | 38+233 |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       |                       |                                                 |                                                                           |                                                                           | 63                |                         |            |                                          |                              |                      | 63      |
| GB-4             | 25        | LT.  | SR7     | 38+233     |        |                               |                                               |                       |                        | 2                         |                           |                               | 1                                 | 32                                                    |                       |                                                 |                                                                           | 1                                                                         |                   |                         |            | 1                                        | 1                            |                      |         |
| GB-4/5           | 25        | LT.  | SR7     | 38+233     | 38+170 |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       |                       |                                                 |                                                                           |                                                                           | 63                |                         |            |                                          |                              |                      | 63      |
| GB-5             | 25        | LT.  | SR7     | 38+170     |        |                               |                                               |                       |                        | 2                         |                           |                               | 1                                 | 32                                                    |                       |                                                 |                                                                           | 1                                                                         |                   |                         |            | 1                                        | 1                            |                      |         |
| GB-5/6           | 25        | LT.  | SR7     | 38+170     | 38+107 |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       |                       |                                                 |                                                                           |                                                                           | 63                |                         |            |                                          |                              |                      | 63      |
| GB-6             | 25        | LT.  | SR7     | 38+107     |        |                               |                                               |                       |                        | 2                         |                           |                               | 1                                 | 32                                                    |                       |                                                 |                                                                           | 1                                                                         |                   |                         |            | 1                                        | 1                            |                      |         |
| GB-6/7           | 25        | LT.  | SR7     | 38+107     | 38+044 |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       |                       |                                                 |                                                                           |                                                                           | 63                |                         |            |                                          |                              |                      | 63      |
| GB-7             | 25        | LT.  | SR7     | 38+044     |        |                               |                                               |                       |                        | 2                         |                           |                               | 1                                 | 32                                                    |                       |                                                 |                                                                           | 1                                                                         |                   |                         |            | 1                                        | 1                            |                      |         |
| GB-7/12          | 25        | LT.  | SR7     | 38+044     | 37+981 |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       | 68                    | 17                                              |                                                                           |                                                                           | 44                |                         |            |                                          | 4                            |                      | 48      |
| GB-8             | 25        | LT.  | SR7     | 37+725     |        |                               |                                               |                       |                        | 2                         |                           |                               | 1                                 | 32                                                    |                       |                                                 |                                                                           | 1                                                                         |                   |                         |            | 1                                        | 1                            |                      |         |
| GB-8/9           | 25        | LT.  | SR7     | 37+725     | 37+789 |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       |                       |                                                 |                                                                           |                                                                           | 64                |                         |            |                                          |                              |                      | 64      |
| GB-9             | 25        | LT.  | SR7     | 37+789     |        |                               |                                               |                       |                        | 2                         |                           |                               | 1                                 | 32                                                    |                       |                                                 |                                                                           | 1                                                                         |                   |                         |            | 1                                        | 1                            |                      |         |
| GB-9/10          | 25        | LT.  | SR7     | 37+789     | 37+853 |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       |                       |                                                 |                                                                           |                                                                           | 64                |                         |            |                                          |                              |                      | 64      |
| GB-10            | 25        | LT.  | SR7     | 37+853     |        |                               |                                               |                       |                        | 2                         |                           |                               | 1                                 | 32                                                    |                       |                                                 |                                                                           | 1                                                                         |                   |                         |            | 1                                        | 1                            |                      |         |
| GB-10/11         | 25        | LT.  | SR7     | 37+853     | 37+917 |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       |                       |                                                 |                                                                           |                                                                           | 64                |                         |            |                                          |                              |                      | 64      |
| GB-11            | 25        | LT.  | SR7     | 37+917     |        |                               |                                               |                       |                        | 2                         |                           |                               | 1                                 | 32                                                    |                       |                                                 |                                                                           | 1                                                                         |                   |                         |            | 1                                        | 1                            |                      |         |
| GB-11/12         | 25        | LT.  | SR7     | 37+917     | 37+981 |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       |                       |                                                 |                                                                           |                                                                           | 64                |                         |            |                                          |                              |                      | 64      |
| GB-12            | 25        | LT.  | SR7     | 37+981     |        |                               |                                               |                       |                        | 2                         | 2                         | 1                             | 1                                 | 32                                                    |                       |                                                 |                                                                           | 1                                                                         |                   |                         |            | 1                                        | 1                            |                      |         |
| GB-12/PB-G1      | 25        | LT.  | SR7     | 37+981     | 38+011 |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       | 36                    |                                                 |                                                                           |                                                                           | 33                |                         |            |                                          |                              |                      | 33      |
| (PB-G1           | 25        | LT.  | SR7     | 38+011)    |        |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       |                       |                                                 |                                                                           |                                                                           |                   |                         |            |                                          |                              |                      |         |
| PB-G1/CC-G       | 25        | LT.  | SR7     | 38+011     | 38+014 |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       | 8                     |                                                 |                                                                           |                                                                           |                   |                         |            |                                          |                              |                      |         |
| (CC-G            | 25        | LT.  | SR7     | 38+014)    |        |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       |                       |                                                 |                                                                           |                                                                           |                   |                         |            |                                          |                              |                      |         |
|                  |           |      |         |            |        |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       |                       |                                                 |                                                                           |                                                                           |                   |                         |            |                                          |                              |                      |         |
|                  |           |      |         |            |        |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       |                       |                                                 |                                                                           |                                                                           |                   |                         |            |                                          |                              |                      |         |
|                  |           |      |         |            |        |                               |                                               |                       |                        |                           |                           |                               |                                   |                                                       |                       |                                                 |                                                                           |                                                                           |                   |                         |            |                                          |                              |                      |         |
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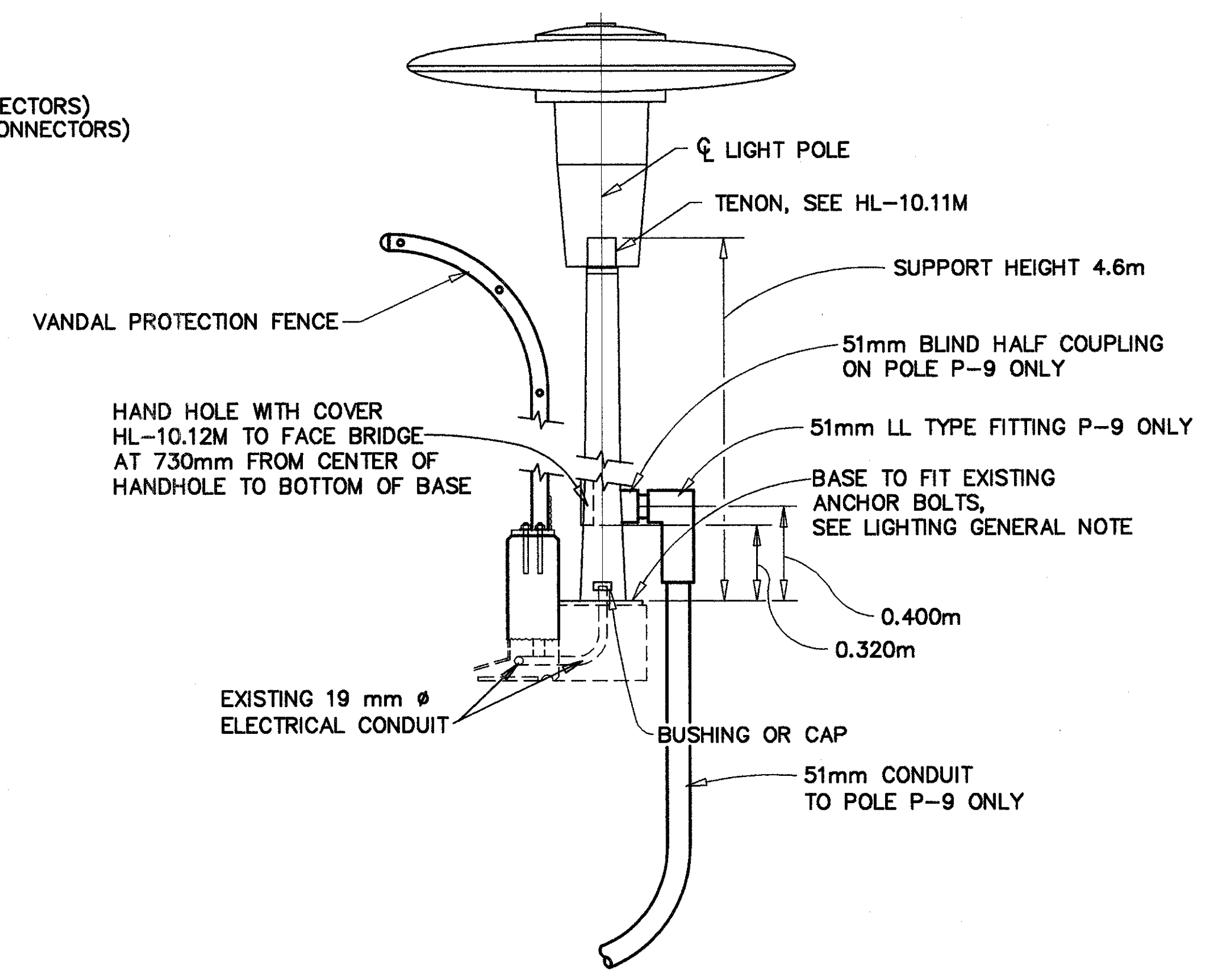




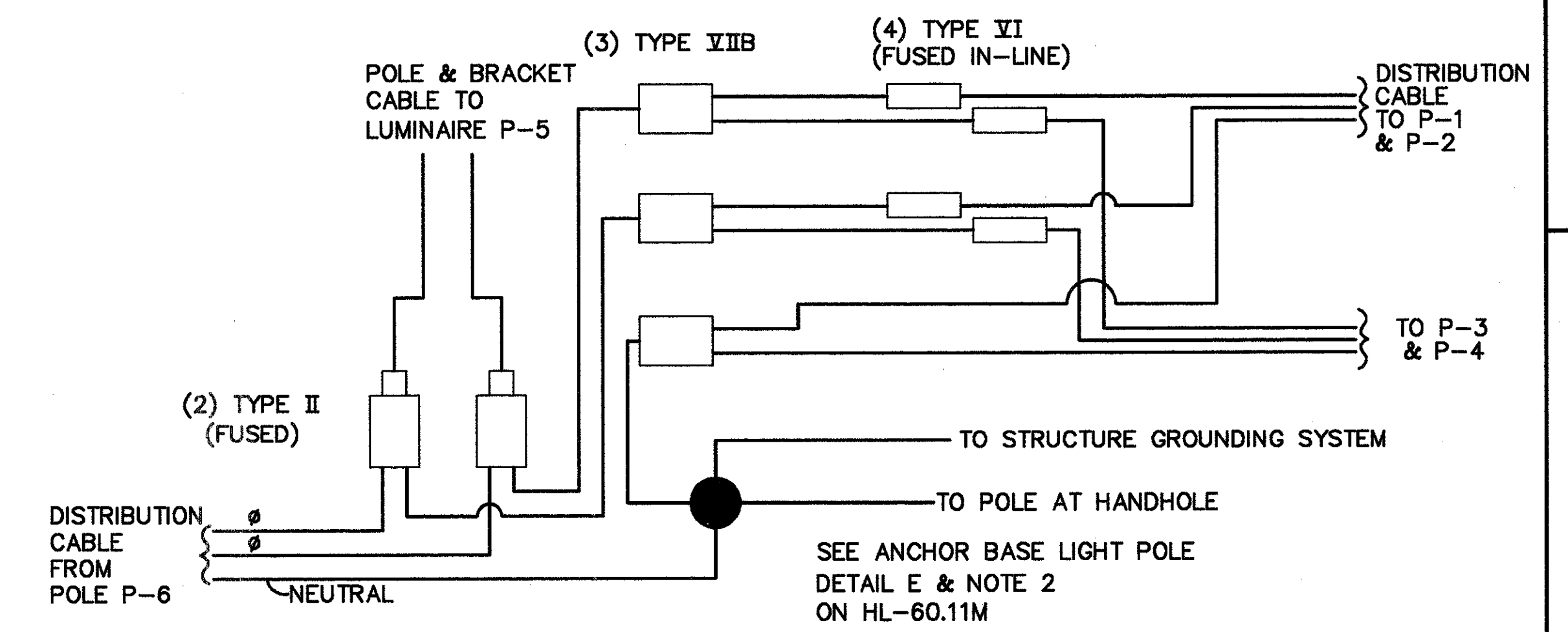
**DETAIL UNDERPASS LIGHTING**  
STRUCT. NO. BEL-7-36368 OVER CENTER ST.  
NOT TO SCALE  
REAR PIER SHOWN, LOOKING SOUTH  
FORWARD PIER LOOKING FORWARD IS MIRROR IMAGE



**PEDESTRIAN OVER-PASS STAIR TOWER LIGHTING**  
NOT TO SCALE



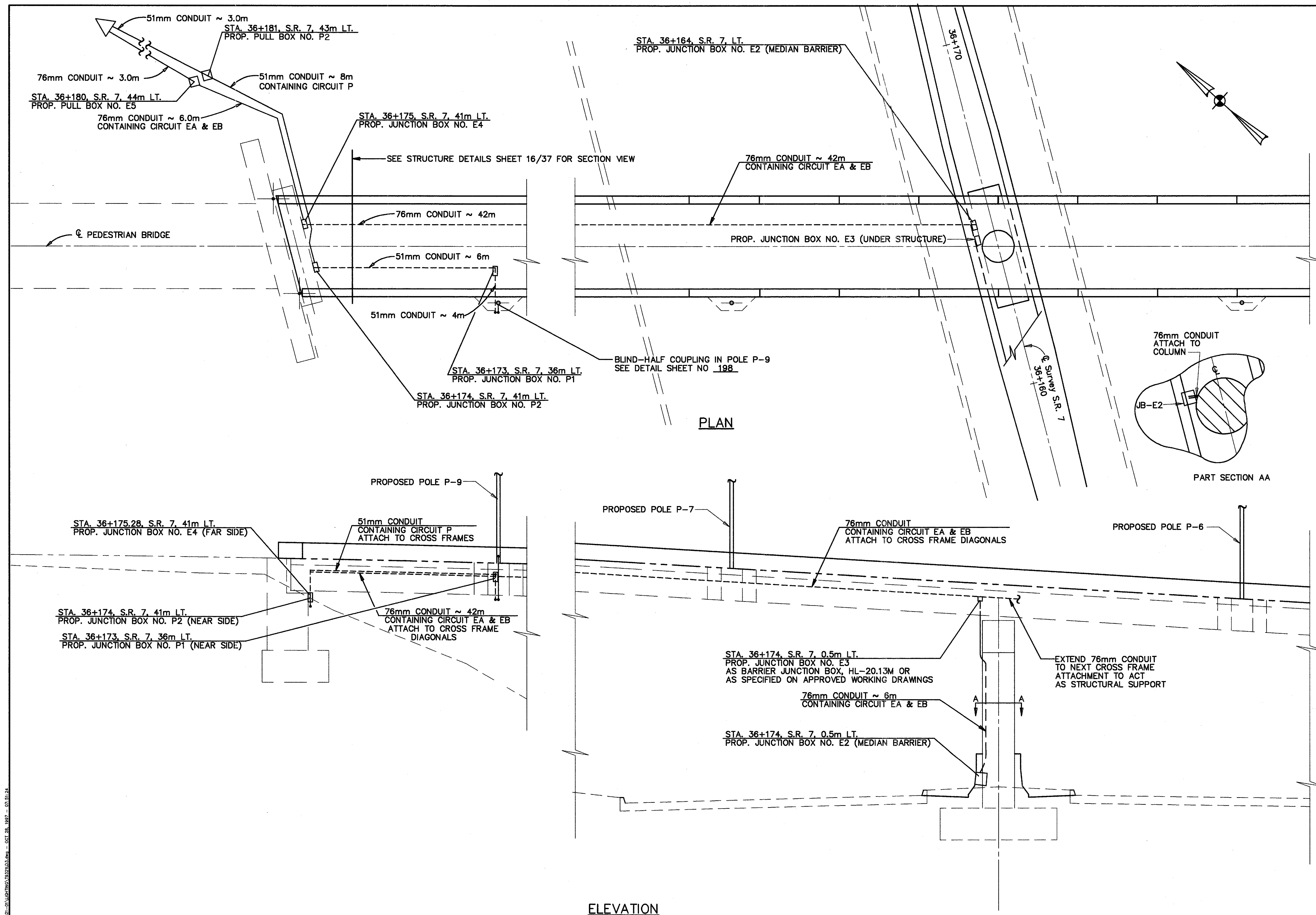
**LIGHT POLE MISC.:**  
DESIGN AON4.6, AS PER PLAN  
ANCHOR BASE LIGHT POLE  
FOR PEDESTRIAN BRIDGE  
STYLE V HL-10.11M  
NOT TO SCALE



**WIRING AT POLE P-5**  
ALL NO. 10 AWG  
NOT TO SCALE

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BRIDGE GENERAL NOTES

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA

HIGH PERFORMANCE CONCRETE: COMPRESSIVE STRENGTH 31.0 MPa (SUPERSTRUCTURE ENDS AND PARAPETS)  
CONCRETE CLASS 'C': COMPRESSIVE STRENGTH 28.0 MPa (SUBSTRUCTURE)  
REINFORCING STEEL: ASTM A615M, A616M, OR A617M - GRADE 400 MINIMUM YIELD STRENGTH 400 MPa  
STRUCTURAL STEEL: ASTM A36M - YIELD STRENGTH 250 MPa

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL WITH 64 mm CONCRETE COVER, WHERE APPLICABLE.  
45 mm MICRO-SILICA MODIFIED CONCRETE OVERLAY (BRIDGE NOS. BEL-7-32283L/R, BEL-7-36368L/R, & BEL-7-36683L/R.)  
6 mm EPOXY OVERLAY (BRIDGE NO. BEL-7-36164 ONLY).

REFERENCE SHALL BE MADE TO:

| STANDARD DRAWINGS |         |          | SUPPLEMENTAL SPECIFICATIONS |       |         |
|-------------------|---------|----------|-----------------------------|-------|---------|
| AS-1-81M          | DATED   | 10-25-94 | 815                         | DATED | 5-30-96 |
| VPF-1-90M         | DATED   | 3-20-95  | 910                         | DATED | 4-21-97 |
| EXJ-4-87M         | REVISED | 2-18-97  |                             |       |         |
| SD-1-69           | DATED   | 6-12-69  |                             |       |         |

REINFORCING STEEL SPLICES

SUPPLEMENTAL TO 509.08, UNLESS SHOWN OTHERWISE, SPLICES SHOWN ON THE PLAN SHALL BE MADE BY OVERLAPPING THE ENDS OF THE BARS NOT LESS THAN SHOWN IN THE FOLLOWING TABLE:

| BAR SIZE | LAP LENGTH |
|----------|------------|
| #15M     | 480        |
| #20M     | 730        |
| #25M     | 1180       |

DIMENSIONS

ALL DIMENSIONS ARE GIVEN IN MILLIMETERS AND ALL ELEVATIONS ARE GIVEN IN METERS UNLESS SHOWN OTHERWISE.

REPLACEMENT OF EXISTING REINFORCING STEEL

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE MADE UNUSABLE BY THE CONTRACTOR'S CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL AT HIS COST. ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW STEEL. AN ALLOWANCE OF 170 kg IS INCLUDED FOR THIS PURPOSE, LISTED IN THE REINFORCING BAR SCHEDULE. PAYMENT SHALL BE INCLUDED IN THE BID PRICE FOR THE CORRESPONDING 511 ITEM.

MECHANICAL CONNECTORS

AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER'S RECOMMENDED PROCEDURES. IF A DOWEL BAR SPlice TYPE OF CONNECTOR IS FURNISHED, UNLESS SHOWN OTHERWISE ON THE PLAN, THE MINIMUM DOWEL BAR LENGTH TO BE INCLUDED WITH THE CONNECTOR SHALL BE ADEQUATE TO PROVIDE THE FOLLOWING MINIMUM LAP LENGTHS:

| BAR SIZE | LAP LENGTH |
|----------|------------|
| 15M      | 630 mm     |
| 20M      | 950 mm     |
| 25M      | 1540 mm    |

CONNECTORS AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY AND UNIFORMITY MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEETS THE SPECIFICATIONS.

CONNECTORS AND DOWEL BAR EXTENSIONS SHALL CONFORM WITH ITEM 509 AND BE INCLUDED IN THE BID PRICE FOR THE CORRESPONDING 511 ITEM.

EXISTING STRUCTURE PLANS

THE ORIGINAL DESIGN PLANS MAY BE EXAMINED BY PROSPECTIVE BIDDERS AT THE DEPARTMENT OF TRANSPORTATION, DISTRICT 11 OFFICE, 2201 REISER AVE., NEW PHILADELPHIA, OHIO. PHONE: (330) 339-6633. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE DRAWNGS.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURES AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURES BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

REMOVED MATERIALS

ALL REMOVED MATERIALS EXCEPT AS NOTED ELSEWHERE IN THE PLANS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY HIM FROM THE JOB SITE.

CAUTION

ELECTRICAL CONDUIT AND/OR SIGNAL CABLE MAY BE PRESENT IN EXISTING DECKS, SAFETY CURBS, OR PARAPETS. IF ELECTRICAL OR SIGNAL CABLE IS PRESENT IN ELECTRICAL CONDUIT OR DUCT, THE CONTRACTOR SHALL MAKE PROVISIONS WITH THE OHIO DEPARTMENT OF TRANSPORTATION AND THE UTILITY FOR TEMPORARY CONTINUANCE OF ELECTRICAL AND SIGNAL POWER DURING REPAIR, REMOVAL OR REPLACEMENT OF ELECTRICAL AND/OR SIGNAL CABLE AND DURING CONSTRUCTION OF PARAPETS AND MEDIAN AS CALLED FOR IN THESE PLANS.

STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN

THE INTERMEDIATE JOINTS ONLY ON BRIDGE BEL-7-32283 L/R AND ALL JOINTS ON BRIDGE NOS. BEL-7-36368 L/R AND BEL-7-36683 L/R SHALL CONFORM TO THE NON-STANDARD DETAILS AND INSTALLATION PROCEDURES NOTED ON SHEETS 34/37 & 35/37.

STRUCTURAL STEEL, REPLACEMENT OF DETERIORATED END CROSS FRAMES, AS PER PLAN

STEEL MEMBERS TO BE FABRICATED UNDER THIS ITEM WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. THE CONTRACTOR SHALL MAKE NECESSARY MEASUREMENTS AND PREPARE SKETCHES, DRAWINGS, TABLES, ETC. THE ENGINEER SHALL HAVE AUTHORITY AND RESPONSIBILITY FOR ENSURING THAT THE FABRICATED STEEL IS ACCEPTABLE. TECHNICAL ASSISTANCE WILL BE PROVIDED ON REQUEST BY THE OFFICE OF STRUCTURAL ENGINEERING. MILL TEST REPORTS AND SHIPPING DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INCORPORATING STEEL ITEMS INTO THE WORK, AS REQUIRED BY 501.07. AFTER FABRICATION, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL TO ENSURE THAT THE DRAWINGS DEPICT THE STEEL AS ACTUALLY INCORPORATED INTO THE WORK. THE ENGINEER WILL THEN SEND ONE APPROVED SET TO THE OFFICE OF STRUCTURAL ENGINEERING FOR INFORMATION. PAY WEIGHTS SHALL BE COMPUTED IN COMPLIANCE WITH 513 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND SUBMITTED TO THE ENGINEER FOR HIS REVIEW AND APPROVAL. THE FABRICATOR SHALL FURNISH A 35 MILLIMETER MICROFILM COPY OF EACH SHOP DRAWING, WHICH SHALL BE MOUNTED ON AN APERTURE CARD AS SPECIFIED IN 501.05.

LOCATION OF POLES ON STRUCTURE BEL-7-32283L

THE LOCATION OF LIGHT POLES TO BE MOUNTED ON THE MEDIAN BARRIER OF STRUCTURE NO. BEL-7-32283L SHALL BE ADJUSTED, IF NECESSARY, TO PLACE THE CENTERLINE OF THE POLE AT LEAST 3.0m FROM AN EXPANSION JOINT AND 1.0m FROM A CRACK CONTROL JOINT IN THE BARRIER. WHEN FIRST LAYING OUT THE BARRIER CONSTRUCTION, THE CONTRACTOR SHALL MARK ON THE STRUCTURE HIS PROPOSED LOCATION OF BARRIER JOINTS AND SAW CUTS. HE SHALL ALSO MARK THE LIGHT POLE LOCATIONS AS SHOWN ON LIGHTING PLAN SHEETS. THE CONTRACTOR SHALL THEN REVIEW THE LOCATION MARKINGS WITH THE ENGINEER. BARRIER JOINT AND/OR POLE LOCATIONS SHALL BE ADJUSTED AS DIRECTED BY THE ENGINEER.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE THE REMOVAL OF CONCRETE DECK, CONCRETE CURB, CURB PLATES, BULB ANGLE VERTICAL LEG DOWN TO CONCRETE DECK, RAILINGS AND POSTS, WHICH ARE NOT INCLUDED WITH ITEM 517 RAILING FACED, AS PER PLAN. ONE OF THE FOLLOWING METHODS SHALL BE USED TO REMOVE THE MEDIAN CURB OR OUTSIDE CURB AND RAILING.

METHOD A: (PLAN DETAILED)

THE CONCRETE SHALL BE REMOVED BY A HYDRAULIC SPLITTING METHOD. A LINE OF HOLES SHALL BE DRILLED ALONG THE REMOVAL LINE AND A HYDRAULIC SPLITTER USED PER MANUFACTURER'S RECOMMENDATIONS.

CONCRETE SHALL BE REMOVED IN A MANNER THAT PREVENTS CUTTING, ELONGATION OR DAMAGING OF EXISTING REINFORCING STEEL TO BE PRESERVED. IF EXISTING REINFORCING STEEL DESIGNATED FOR PRESERVATION IS DAMAGED DURING THE REMOVAL OPERATION, DOWELED REINFORCING STEEL SHALL BE ADDED AT THE CONTRACTOR'S EXPENSE. THE LENGTH INTO THE DECK SHALL BE 150 mm. ALL DOWEL HOLES SHALL BE PER CMS SECTION 510 USING NONSHRINK, NONMETALIC GROUT, AND BE INCLUDED IN THE BID PRICE FOR THE CORRESPONDING 511 OR 517 ITEM.

METHOD B: (OPTIONAL)

THE CONCRETE SHALL BE REMOVED BY SAW CUTTING. THE WATER FROM THE SAW CUTTING OPERATION SHALL BE IMMEDIATELY WASHED FROM THE STRUCTURE. FOR THE REINFORCING STEEL MARKED FOR PRESERVATION THAT IS CUT OFF, THE CONTRACTOR SHALL PROVIDE EXTRA DOWEL BARS ADDED AT THE CONTRACTOR'S EXPENSE. THESE BARS SHALL BE DOWELED INTO THE DECK 150 mm DEEP. ALL DOWEL HOLES SHALL BE PER CMS SECTION 510 USING NONSHRINK, NONMETALIC GROUT, AND BE INCLUDED IN THE BID PRICE FOR THE CORRESPONDING 511 OR 517 ITEM.

BOTH METHODS:

THE FINAL REMOVAL SHALL BE PERFORMED USING 16 kg AND 7 kg JACK HAMMERS. A HOE RAM, CONCRETE CRUSHER OR SIMILAR TYPE IMPACTIVE DEVICE WILL NOT BE PERMITTED FOR ANY OF THE REMOVAL WORK. EXISTING SMOOTH CONSTRUCTION JOINTS OR SAW CUTS SHALL BE MECHANICALLY SCARIFIED 6 mm DEEP TO INSURE BONDING OF THE NEW CONCRETE.

EXISTING BULB ANGLES:

- WHERE THERE ARE EXISTING BULB ANGLES INVOLVED WITH THE REMOVAL OF EXISTING CURB, THE EXISTING BULB ANGLES ARE TO REMAIN IN PLACE AND SHALL HAVE THE VERTICAL LEG IN THE CURB CUT 45 mm BELOW THE PROPOSED PAVEMENT SURFACE.
- WHERE DECK ENDS ARE REMOVED FOR EXPANSION JOINT REPLACEMENT THE BULB ANGLE SHALL ALSO BE REMOVED THRU THIS AREA.

PAINTING OF STRUCTURAL STEEL

NEW STEEL SHALL BE PROVIDED WITH PRIME COAT ONLY, AS PAID FOR WITH ITEM 513. FOR PURPOSES OF FIELD PAINTING, NEWLY ERECTED STEEL SHALL BE CONSIDERED EXISTING STEEL AND SHALL BE PREPARED AND PAINTED IN CONFORMANCE WITH SUPPLEMENTAL SPECIFICATION 815 ~ "FIELD PAINTING OF EXISTING STEEL, SYSTEM OZEU." COST OF CLEANING AND PAINTING OF NEW AND EXISTING STEEL WITH THE OZEU PAINT SYSTEM SHALL BE INCLUDED IN THE SEVERAL OZEU ITEMS.

UTILITY LINES

ALL EXPENSE INVOLVED IN RELOCATING THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY. THE CONTRACTOR AND UTILITY ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

STRUCTURE EXCAVATION

STRUCTURE EXCAVATION IN ADDITION TO THAT NECESSARY TO REMOVE PORTIONS OF THE EXISTING STRUCTURE AND ALL NECESSARY BACKFILL IS INCLUDED IN THE LUMP SUM BID ITEM, "UNCLASSIFIED EXCAVATION," FOR PAYMENT.

For Continuation of General Notes,  
See Sheet 2/37.

GENERAL NOTES

BRIDGE REPAIR  
STATE ROUTE 7 BELMONT COUNTY

BEL-7-32.276

1/37

200  
242

DESIGN AGENCY  
W.E. QUICKSALL & ASSOCIATES INC.  
554 WEST HIGH AVE.  
NEW PHILADELPHIA, OHIO  
CONSULTING ENGINEERS

|                       |       |
|-----------------------|-------|
| DATE                  | 10/97 |
| REVIEWED              | wda   |
| DRAWN                 | CFD   |
| DESIGNED              | FDH   |
| CHECKED               | ZRD   |
| STRUCTURE FILE NUMBER |       |



BRIDGE GENERAL NOTES

ITEM 202 – PORTIONS OF STRUCTURE REMOVED, ABUTMENTS, AS PER PLAN

SHALL BE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE MASS OF THE HAMMER SHALL NOT BE MORE THAN 16 kg FOR REMOVAL WITHIN 450 mm OF PORTIONS TO BE PRESERVED. OUTSIDE THE 450 mm LIMIT, A HAMMER HEAVIER THAN 16 kg, BUT NOT TO EXCEED 41 kg, MAY BE USED AT THE APPROVAL OF THE ENGINEER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

ITEM 517 – RAILING FACED, AS PER PLAN (OUTSIDE RAILING)

THIS ITEM OF WORK SHALL CONSIST OF FACING CURB STYLE PARAPETS, USING CAST IN PLACE CONCRETE, TO OBTAIN THE DEFLECTOR SHAPE AS SHOWN IN THE PLANS.

REMOVAL:  
THE CONTRACTOR SHALL CAREFULLY REMOVE THE EXISTING ALUMINUM RAILING, POSTS, CURB PLATES, EXISTING CONCRETE CURB AND BULB ANGLE GUTTER. ALL LOOSE OR UNSOUND CONCRETE SHALL BE REMOVED. ALSO TO BE REMOVED SHALL BE ANY SOUND CONCRETE NECESSARY TO OBTAIN A MINIMUM 100 mm THICKNESS OF NEW CONCRETE.

COMPLETE REMOVAL OF EXISTING OUTSIDE RAILING CURB-STYLE PARAPETS WITHIN THE LIMITS OF THE EXPANSION JOINT REMOVALS SHALL BE PAID FOR PER METER OF ITEM 202 ~ BRIDGE RAILING REMOVED.

DOWEL HOLES AND REINFORCING STEEL:  
DOWEL HOLES SHALL BE DRILLED WHERE SHOWN IN THE PLANS. ALL DOWELS SHALL BE PER CMS SECTION 509, ALL DOWEL HOLES SHALL BE PER CMS SECTION 510 USING NONSHRINK NONMETALIC GROUT.  
ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE DOWEL HOLE SHALL BE LOCATED WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER) PRIOR TO DRILLING THE HOLES. IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, THE DOWEL HOLE SHALL BE MOVED TO EITHER SIDE OF THE EXISTING BAR. ALL REINFORCING STEEL, DOWEL HOLES AND GROUTING SHALL BE INCLUDED WITH THIS ITEM 517 FOR PAYMENT.

SURFACE PREPARATION:  
THE PARAPET SURFACE NEXT TO THE REFACING SHALL BE THOROUGHLY CLEANED BY ABRASIVE BLASTING FOLLOWED BY AN AIR BLAST. USE OF HAND TOOLS MAY BE NECESSARY TO REMOVE SCALE FROM ANY EXPOSED REINFORCING STEEL. THE SURFACE SHALL BE MADE FREE FROM SPALLS, LAITENCE, AND ALL TRACES OF FOREIGN MATERIAL. DETERGENT CLEANING SHALL PRECEDE BLAST CLEANING AS NECESSARY TO ENSURE REMOVAL OF CONTAMINANTS THAT ARE DETRIMENTAL TO ACHIEVING AN ADEQUATE BOND.

MATERIALS:  
REINFORCING STEEL – CMS 509, GRADE 400, EPOXY COATED; CONCRETE: SPECIAL – HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET).

SHRINKAGE CRACK CONTROL JOINTS:  
AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, 25 mm DEEP CONTROL JOINTS SHALL BE SAWED INTO THE PERIMETER OF THE CONCRETE PARAPET. THE SAW CUT SHALL BE MADE INTO THE COMPLETE PERIMETER OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK. THE CONTROL JOINT SAW CUTS SHALL BE PLACED IN THE NEW CONCRETE AT THE SAME LOCATION AS THE EXISTING DEFLECTION JOINTS AND SHALL BE MADE AT RIGHT ANGLES TO THE DECK BY SAWING TO MATCH ALIGNMENT OF EXISTING DEFLECTION JOINTS. THE USE OF AN EDGE GUIDE, FENCE OR JIG IS REQUIRED TO ENSURE THAT THE CUT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 6 mm. THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED TO A MINIMUM DEPTH OF 25 mm WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT-S-00227E.

METHOD OF MEASUREMENT:  
THE QUANTITY SHALL BE THE ACTUAL LENGTH OF RAILING FACED AS MEASURED FROM END OF WINGWALL TO END OF WINGWALL, INCLUDING ALL SHORT, COMPLETE-REPLACEMENT PARAPET END SECTIONS. THIS ITEM SHALL INCLUDE THE FURNISHING OF ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THIS WORK. ALL COSTS OF REMOVAL, DOWEL HOLES, REINFORCING STEEL, CONCRETE AND SHRINKAGE CONTROL JOINTS COMPLETE AND IN PLACE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 517 – RAILING FACED, AS PER PLAN.

CUT LINE CONSTRUCTION JOINT PREPARATION

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 25 mm DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. WHERE PRACTICABLE, THE EXISTING REINFORCING STEEL WHERE REQUIRED IN THE PLANS SHALL BE LEFT IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THEN, THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

ITEM SPECIAL – MICRO-SILICA MODIFIED CONCRETE OVERLAY (45 mm THICK)

THIS ITEM SHALL INCLUDE THE 6 mm SCARIFICATION AND THE 45 mm MICRO-SILICA MODIFIED CONCRETE OVERLAY ON THE DECK ONLY ON BRIDGE NO. BEL-7-32283L/R.

THIS ITEM SHALL INCLUDE THE 6 mm SCARIFICATION AND THE 45 mm MICRO-SILICA MODIFIED CONCRETE OVERLAY ON THE DECK AND THE APPROACH SLABS ON BRIDGE NOS. BEL-7-36368L/R AND BEL-7-36683L/R.

PAYMENT FOR THE ABOVE SHALL BE PER SQUARE METERS FOR ITEM SPECIAL – MICRO-SILICA MODIFIED CONCRETE OVERLAY (45 mm THICK).

ESTIMATED QUANTITIES

AN ESTIMATED AMOUNT OF MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS) HAS BEEN INCLUDED IN THE ESTIMATED QUANTITIES SUMMARY FOR BIDDING PURPOSES, BUT FINAL QUANTITIES SHALL BE DETERMINED BY ACTUAL FIELD MEASUREMENTS AT THE COMPLETION OF THE WORK.

CONCRETE PARAPETS (MEDIAN BARRIER AND BEL-7-36164 PARAPET)

AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, 25mm DEEP CONTROL JOINTS SHALL BE SAWED INTO THE PERIMETER OF THE CONCRETE PARAPET. THE SAW CUT SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK. THE SAWCUTS SHALL BE PLACED AT A MINIMUM OF 2000mm AND A MAXIMUM OF 3000mm (MEDIAN BARRIER), OR AS DETAILED ON THE PLANS (BEL-7-36164 PARAPET). THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO INSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 6mm. THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED TO A MINIMUM DEPTH OF 25mm WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT-S-00227E TO A MINIMUM DEPTH OF 25mm. INCLUDE WITH THE UNIT PRICE BID FOR ITEM SPECIAL--HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET).

DECK EXPANSION JOINTS

THE DECK EXPANSION JOINTS WHICH ARE TO BE REPLACED OR RETROFITTED SHALL BE SEALED WITH ELASTOMERIC STRIP SEALS. SEE SHEETS 34/37 & 35/37.

ELASTOMERIC STRIP SEALS FOR EACH JOINT TO BE REPLACED OR RETROFITTED SHALL BE INSTALLED IN ONE CONTINUOUS PIECE.

HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (DECK)

THIS ITEM SHALL BE IN ACCORDANCE WITH THE PROPOSAL NOTE EXCEPT THAT THE CONCRETE SHALL CONSIST OF MIX 4.

HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPETS)

THIS ITEM SHALL BE IN ACCORDANCE WITH THE PROPOSAL NOTE EXCEPT THAT THE CONCRETE SHALL CONSIST OF MIX 4.

RAISED CONCRETE MEDIAN BARRIER SEAL

DESCRIPTION: THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING ELASTOMERIC SHEETING AT THE BRIDGE MEDIAN JOINT IN THE FORM OF A SEAL FOR DRAINAGE PROTECTION.

SHEETING SHALL BE FURNISHED IN ONE CONTINUOUS PIECE UNLESS A VULCANIZED (WITH HEAT AND PRESSURE) SHOP OR FIELD SPlice, OR AN UNBONDED FIELD BUTT JOINT IS INDICATED ON THE PLANS OR APPROVED BY THE DIRECTOR.

MATERIALS: ELASTOMERIC SHEETING SHALL BE 2.4 mm THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003" AS MANUFACTURED BY E.I. DUPONT DE NEMOURS AND COMPANY, INCORPORATED, "WINGPRENE" AS MANUFACTURED BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED EQUAL. SHEETING SHALL CONFORM TO THE FOLLOWING:

| DESCRIPTION OF TEST                                                    | ASTM METHOD | REQUIREMENT            |
|------------------------------------------------------------------------|-------------|------------------------|
| THICKNESS, MILLIMETERS                                                 | D751        | 2.4± 0.2               |
| BREAKING STRENGTH, GRAB WXF kg, MINIMUM                                | D751        | 318 x 318              |
| ADHESIVE, 25 mm STRIP 50 mm MINIMUM, kg MINIMUM                        | D751        | 4                      |
| BURST STRENGTH (MULLEN) kPa, MINIMUM                                   | D751        | 9650 kPa MINIMUM       |
| HEAT AGING 70 HOURS AT 100° C, 180 BEND                                | D2136       | NO CRACKING OF COATING |
| LOW TEMPERATURE BRITTLENESS 1 HOUR AT -40° C. BEND AROUND 6 mm MANDREL | D2136       | NO CRACKING OF COATING |

CONNECTIONS FOR SHEETING INCLUDING ALL CLAMP BARS AND NAILS SHALL BE GALVANIZED ACCORDING TO 711.02. FIELD HOLES IN SHEETING SHALL BE DRILLED AND ALL CUTS MADE IN THE FIELD SHALL BE SAWN. ANY GALVANIZED COATING WHICH HAS BEEN CUT OR DAMAGED IN ANY WAY SUCH THAT BASE METAL IS EXPOSED SHALL BE REPLACED WITH A COLD GALVANIZING COMPOUND SUCH AS THAT MANUFACTURED BY Z.R.C. PRODUCT COMPANY OF QUINCY, MASSACHUSETTS, "GALVICON" BY KENCO DIVISION OF SOUTHERN COATING, INCORPORATED OF SUMTER, SOUTH CAROLINA, OR AN APPROVED EQUAL, APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

SAMPLING AND TESTING: EACH LOT OF SHEETING SHALL BE TESTED BY AN INDEPENDENT LABORATORY TO ENSURE COMPLIANCE WITH THESE PROVISIONS. TWO CERTIFIED COPIES OF THE QUALIFICATION TEST DATA INDICATING THAT THE TESTED MATERIALS COMPLY WITH THESE PROVISIONS SHALL BE SUBMITTED TO THE ODOT TESTING LABORATORY. SAMPLING, WHEN REQUESTED, SHALL BE IN ACCORDANCE WITH 106.03 EXCEPT THAT WHERE SHEETING IS TO BE FABRICATED ACCORDING TO PLAN REQUIREMENTS, SAMPLES SHALL BE MADE AVAILABLE PRIOR TO FABRICATION. THE SAMPLE FROM EACH LOT AND FOR EACH PROJECT SHALL BE ONE PIECE, 1 METER LONG.

MATERIAL ACCEPTANCE WILL BE BASED UPON ODOT TESTING LABORATORY EVALUATION OF CERTIFIED TEST DATA, LABORATORY TESTS OF SAMPLED MATERIAL, OR THE EVALUATION OF BOTH CERTIFIED TEST DATA AND TESTED SAMPLES.

BASIS OF PAYMENT: UNLESS OTHERWISE SPECIFIED ON THE PROJECT PLANS, PAYMENT FOR ALL MATERIAL AND LABOR FOR THE JOINT SEAL INCLUDING GALVANIZED CLAMP BARS AND NAILS SHALL BE MADE AT THE CONTRACT PRICE FOR:

| ITEM | EXTENSION | UNIT  | DESCRIPTION                                                           |
|------|-----------|-------|-----------------------------------------------------------------------|
| 516  | 14600     | METER | STRUCTURAL JOINT OR JOINT SEALER, MISC.: CONCRETE MEDIAN BARRIER SEAL |

For Phase Construction Sequence, Notes and Details, See Roadway Sheets 14 Thru 34

DESIGN AGENCY  
W.E. QUICKSALL & ASSOCIATES INC.  
554 WEST HIGH AVE.  
NEW PHILADELPHIA, OHIO  
CONSULTING ENGINEERS

DATE  
10/97

REVIEWED  
wde

DRAWN  
CFD

DESIGNED  
FDH

CHECKED  
ZRD

STRUCTURE FILE NUMBER

GENERAL NOTES  
BRIDGE REPAIR  
STATE ROUTE 7 BELMONT COUNTY

BEL-7-32.276

2 / 37

201  
242



| ESTIMATED QUANTITIES           |         |         |         |                               |  |       |  |         |         |  |         |                                       | CALC. BY:FDH, PMZ, CFD, JMG, ZRD<br>CHKD. BY: ZRD, FDH, WDA |      |              |                | DATE 6/94 |              | REV. BY: DIST. II/SAL<br>DATE 12/5/97                                        |         |
|--------------------------------|---------|---------|---------|-------------------------------|--|-------|--|---------|---------|--|---------|---------------------------------------|-------------------------------------------------------------|------|--------------|----------------|-----------|--------------|------------------------------------------------------------------------------|---------|
| MAJOR BRIDGE FUNDING - NH-4BU7 |         |         |         | RESURFACING FUNDING - NH-4BH7 |  |       |  |         |         |  |         | MAJOR<br>BRIDGE<br>FUNDING<br>NH-4BU7 | RESURFACING<br>FUNDING<br>NH-4BH7                           | ITEM | ITEM<br>EXT. | GRAND<br>TOTAL | UNIT      | DESCRIPTION  | SEE<br>SHEET<br>NO.                                                          |         |
| RETAINING WALLS                |         | BRIDGES |         | BRIDGES                       |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |
| 32283 L                        | 32283 R |         | 32283 L | 32283 R                       |  | 36164 |  | 36368 L | 36368 R |  | 36683 L | 36683 R                               |                                                             |      |              |                |           |              |                                                                              |         |
|                                |         |         | 4390    | 4390                          |  |       |  | 304     | 304     |  | 946     | 946                                   | 8780                                                        | 2500 | 202          | 23500          | 11 280    | SQUARE METER | WEARING COURSE REMOVED                                                       |         |
|                                |         |         |         |                               |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |
|                                |         |         | 67      | 67                            |  |       |  | 14      | 12      |  | 37      | 44                                    | 134                                                         | 107  | 202          | 11301          | 241       | CUBIC METER  | PORTIONS OF STRUCTURE REMOVED, AS PER PLAN                                   | 1 / 37  |
|                                |         |         | 4       | 4                             |  |       |  | 5       | 5       |  |         |                                       | 8                                                           | 10   | 202          | 38500          | 18        | METER        | BRIDGE RAILING REMOVED                                                       |         |
|                                |         |         |         |                               |  | 137   |  |         |         |  |         |                                       | --                                                          | 137  | 202          | 75000          | 137       | METER        | FENCE REMOVED                                                                |         |
|                                |         |         | 21      | 21                            |  |       |  |         |         |  |         |                                       | 42                                                          | --   | 202          | 98200          | 42        | METER        | REMOVAL MISCELLANEOUS: EXPANSION JOINT REMOVED                               |         |
|                                |         |         |         |                               |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |
|                                |         |         |         |                               |  | 4     |  |         |         |  |         |                                       | --                                                          | 4    | 202          | 98500          | 4         | CUBIC METER  | REMOVAL MISCELLANEOUS: PORTIONS OF STRUCTURE REMOVED, CURB                   |         |
|                                |         |         | 19      | 18                            |  |       |  | 6       | 6       |  | 3       | 2                                     | 37                                                          | 17   | 202          | 98500          | 54        | CUBIC METER  | REMOVAL MISCELLANEOUS: PORTIONS OF STRUCTURE REMOVED, ABUTMENTS, AS PER PLAN | 2 / 37  |
|                                |         |         |         |                               |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |
|                                |         |         | LUMP    | LUMP                          |  |       |  | LUMP    | LUMP    |  |         |                                       | LUMP                                                        | LUMP | 503          | 21300          | LUMP      |              | UNCLASSIFIED EXCAVATION                                                      |         |
|                                |         |         |         |                               |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |
|                                |         |         |         |                               |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |
|                                |         |         |         |                               |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |
|                                |         |         |         |                               |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |
|                                |         |         | 18      | 18                            |  |       |  | 9       | 8       |  | 3       | 2                                     | 36                                                          | 22   | 511          | 45700          | 58        | CUBIC METER  | CLASS C CONCRETE, ABUTMENT                                                   |         |
|                                |         |         | 3       | 3                             |  |       |  |         |         |  |         |                                       | 6                                                           | --   | SPECIAL      | 51148000       | 6         | CUBIC METER  | HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (DECK) *                           |         |
|                                |         |         | 236     | 187                           |  | 14    |  | 18      | 14      |  | 9       | 18                                    | 423                                                         | 73   | SPECIAL      | 51148020       | 496       | CUBIC METER  | HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET) *                        |         |
|                                |         |         | LUMP    | LUMP                          |  | LUMP  |  | LUMP    | LUMP    |  | LUMP    | LUMP                                  | LUMP                                                        | LUMP | SPECIAL      | 51149000       | LUMP      |              | HIGH PERFORMANCE CONCRETE, TRIAL MIX *                                       |         |
|                                |         |         | LUMP    | LUMP                          |  | LUMP  |  | LUMP    | LUMP    |  | LUMP    | LUMP                                  | LUMP                                                        | LUMP | SPECIAL      | 51149010       | LUMP      |              | HIGH PERFORMANCE CONCRETE TESTING *                                          |         |
|                                |         |         |         |                               |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |
|                                |         |         | 2       | 2                             |  |       |  |         |         |  |         |                                       | 4                                                           | --   | 512          | 44400          | 4         | SQUARE METER | TYPE B WATERPROOFING                                                         |         |
| 492                            | 693     |         | 4393    | 4432                          |  | 219   |  | 275     | 273     |  | 617     | 663                                   | 10010                                                       | 2047 | SPECIAL      | 51267502       | 12 057    | SQUARE METER | SEALING OF CONCRETE SURFACES (EPOXY) *                                       |         |
|                                |         |         |         |                               |  | 166   |  |         |         |  |         |                                       | --                                                          | 166  | SPECIAL      | 51272000       | 166       | SQUARE METER | EPOXY WATERPROOFING OVERLAY (6 mm THICK) *                                   |         |
|                                |         |         |         |                               |  | LUMP  |  |         |         |  |         |                                       | --                                                          | LUMP | SPECIAL      | 51272500       | LUMP      |              | TEST PATCH *                                                                 |         |
|                                |         |         | 854     | 853                           |  |       |  |         |         |  |         |                                       | 1707                                                        | --   | 513          | 15901          | 1707      | KILOGRAM     | STRUCTURAL STEEL, REPLACEMENT OF DETERIORATED END CROSS FRAMES, AS PER PLAN  | 1 / 37  |
|                                |         |         | 854     | 853                           |  |       |  |         |         |  |         |                                       | 1707                                                        | --   | 513          | 16590          | 1707      | KILOGRAM     | STRUCTURAL STEEL MISCELLANEOUS: STRUCTURAL STEEL REMOVED FOR RE-USE          |         |
|                                |         |         | LUMP    | LUMP                          |  |       |  |         |         |  |         |                                       | LUMP                                                        | --   | 513          | 21200          | LUMP      |              | TRIMMING OF BEAM END                                                         |         |
|                                |         |         |         |                               |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |
|                                |         |         |         |                               |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |
|                                |         |         | 21      | 21                            |  |       |  |         |         |  |         |                                       | 42                                                          | --   | 516          | 11210          | 42        | METER        | STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL                  |         |
|                                |         |         | 42      | 42                            |  |       |  | 23      | 22      |  | 23      | 23                                    | 84                                                          | 91   | 516          | 11211          | 175       | METER        | STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN     | 1 / 37  |
|                                |         |         | 1       | 1                             |  |       |  |         |         |  |         |                                       | 2                                                           | --   | 516          | 13600          | 2         | SQUARE METER | 25 mm PREFORMED EXPANSION JOINT FILLER                                       |         |
|                                |         |         | 498     |                               |  |       |  | 37      |         |  | 115     |                                       | 498                                                         | 152  | 516          | 14600          | 650       | METER        | STRUCTURAL JOINT OR JOINT SEALER, MISC.: CONCRETE MEDIAN BARRIER SEAL        |         |
|                                |         |         |         |                               |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |
| 149                            | 209     |         | 497     | 497                           |  |       |  | 37      | 37      |  | 115     | 115                                   | 1352                                                        | 304  | 517          | 76201          | 1656      | METER        | RAILING FACED, AS PER PLAN                                                   | 2 / 37  |
|                                |         |         | 19      | 15                            |  | 6     |  | 3       | 3       |  | 10      | 10                                    | 34                                                          | 32   | 518          | 12801          | 66        | EACH         | SCUPPER MODIFICATION, AS PER PLAN                                            | 33 / 37 |
|                                |         |         | 7       | 8                             |  |       |  | 3       | 3       |  | 10      | 10                                    | 15                                                          | 26   | 518          | 12900          | 41        | EACH         | SCUPPER, LENGTHENING                                                         |         |
|                                |         |         | 18      | 18                            |  |       |  | 1       | 1       |  |         |                                       | 36                                                          | 2    | 518          | 21200          | 38        | CUBIC METER  | POROUS BACKFILL WITH FILTER FABRIC                                           |         |
|                                |         |         |         |                               |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |
|                                |         |         | 4872    | 4911                          |  |       |  | 545     | 530     |  | 1313    | 1313                                  | 9783                                                        | 3701 | SPECIAL      | 51922006       | 13 484    | SQUARE METER | MICRO-SILICA MODIFIED CONCRETE OVERLAY (45 mm THICK) *                       |         |
|                                |         |         | 63      | 99                            |  |       |  | 8       | 10      |  | 18      | 20                                    | 162                                                         | 56   | SPECIAL      | 51922100       | 218       | CUBIC METER  | MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS) *                |         |
|                                |         |         | LUMP    | LUMP                          |  |       |  | LUMP    | LUMP    |  | LUMP    | LUMP                                  | LUMP                                                        | LUMP | SPECIAL      | 51922300       | LUMP      |              | TEST SLAB *                                                                  |         |
|                                |         |         |         |                               |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |
|                                |         |         |         |                               |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |
|                                |         |         |         |                               |  | 135   |  |         |         |  |         |                                       | --                                                          | 135  | SPECIAL      | 60739920       | 135       | METER        | VANDAL PROTECTION FENCE, 3.0 m CURVED, COATED FABRIC                         |         |
|                                |         |         |         |                               |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |
|                                |         |         | LUMP    | LUMP                          |  |       |  | LUMP    | LUMP    |  | LUMP    | LUMP                                  | LUMP                                                        | LUMP | 815          | 00100          | LUMP      |              | SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU                           |         |
|                                |         |         | LUMP    | LUMP                          |  |       |  | LUMP    | LUMP    |  | LUMP    | LUMP                                  | LUMP                                                        | LUMP | 815          | 00200          | LUMP      |              | FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU                    |         |
|                                |         |         | LUMP    | LUMP                          |  |       |  | LUMP    | LUMP    |  | LUMP    | LUMP                                  | LUMP                                                        | LUMP | 815          | 00300          | LUMP      |              | FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU             |         |
|                                |         |         | LUMP    | LUMP                          |  |       |  | LUMP    | LUMP    |  | LUMP    | LUMP                                  | LUMP                                                        | LUMP | 815          | 00400          | LUMP      |              | FIELD PAINTING OF EXISTING STEEL, FINISH COAT, SYSTEM OZEU                   |         |
|                                |         |         | 25      | 26                            |  |       |  | 3       | 3       |  | 9       | 9                                     | 51                                                          | 24   | 815          | 00500          | 75        | METER        | CAULKING                                                                     |         |
|                                |         |         |         |                               |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |
|                                |         |         | 244     | 244                           |  |       |  | 18      | 18      |  | 62      | 62                                    | 488                                                         | 160  | 815          | 00504          | 648       | MAN HOUR     | GRINDING FINS, TEARS, SLIVERS                                                |         |
|                                |         |         |         |                               |  |       |  |         |         |  |         |                                       |                                                             |      |              |                |           |              |                                                                              |         |

\* SEE PROPOSAL NOTE.

For General Notes, See Sheets 1 / 37 & 2 / 37

DESIGN AGENCY  
W.E. QUICKSALL & ASSOCIATES INC.  
554 WEST HIGH AVE.  
NEW PHILADELPHIA, OHIO  
CONSULTING ENGINEERS

DATE  
REVIEWED  
STRUCTURE FILE NUMBER

DRAWN  
CFD  
REVISED

DESIGNED  
CHECKED

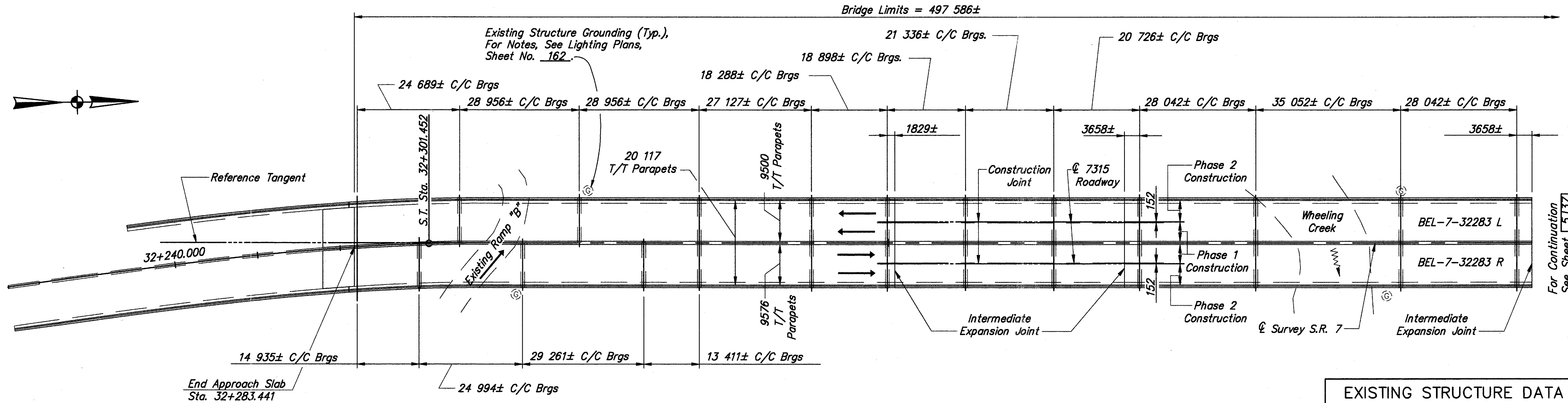
ESTIMATED QUANTITIES  
BRIDGE REPAIR  
STATE ROUTE 7 BELMONT COUNTY

BEL-7-32.276

3 / 37

202  
242





PLAN

S.R. 7  
CURVE DATA

|                        |               |
|------------------------|---------------|
| P.I. = Sta. 32+152.826 | ST = 35.624m  |
| Δ = 32°50'36" Rt.      | Lc = 88.686m  |
| R = 388.084m           | Ts = 163.420m |
| Ls = 168.680m          | Ec = 13.888m  |
| θc = 7°52'30"          | emax = .074   |
| LT = 71.190m           |               |

PROPOSED WORK

- REPLACE EXISTING ASPHALT CONCRETE WEARING SURFACE WITH 45 mm THICKNESS OF MICRO-SILICA OVERLAY.
- REFACE OUTSIDE RAILING WITH DEFLECTOR-TYPE SHAPE. REPLACE CURB IN MEDIAN WITH DEFLECTOR-TYPE BARRIER.
- REPLACE BACKWALLS TO BEAM SEATS AND PROVIDE ELASTOMERIC STRIP SEAL JOINTS.
- PROVIDE ELASTOMERIC STRIP SEAL JOINTS WITH EXTENSIONS AT THE INTERMEDIATE EXPANSION JOINTS.
- REPLACE APPROACH SLABS AND PROVIDE PRESSURE RELIEF JOINTS.
- CLEAN AND PAINT STRUCTURAL STEEL, USING SYSTEM OZEU.
- EXTEND SCUPPERS 200 mm MINIMUM BELOW BEAMS.
- EPOXY SEAL PIERS, PARAPETS, MEDIAN BARRIER, ABUTMENTS AND WALLS.
- REMOVE EXISTING LIGHTING, PROVIDE MEDIAN LIGHTING. (SEE HIGHWAY PLANS)

FOR QUANTITIES, SEE SHEET NO. 3137

EXISTING STRUCTURE DATA

TYPE: CONTINUOUS ROLLED BEAM AND WELDED GIRDERS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE  
SPANS: VARY, SEE PLAN  
ROADWAY: 18 898± mm F/F CURB  
LOADING: C.F. 2000 (57)  
SKEW: NONE  
WEARING SURFACE: 74± mm ASPHALT CONC. ON 25 mm MONOLITHIC CONC.  
APPROACH SLABS: AS-1-54, 7620± mm LG.  
ALIGNMENT: VARIES  
SUPERELEVATION: VARIES

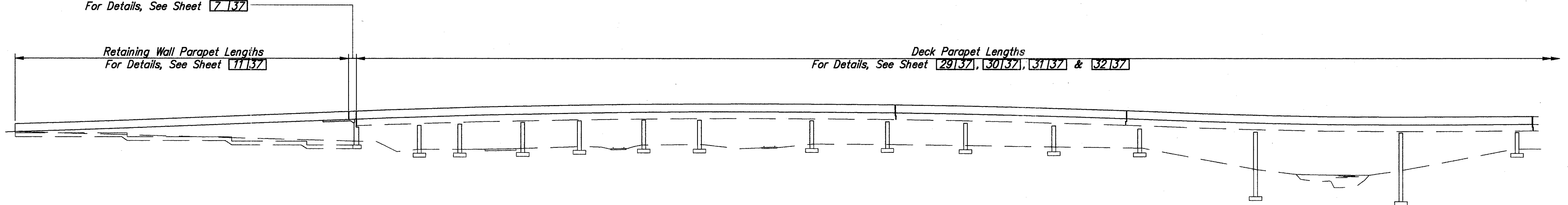
REHABILITATED STRUCTURE

ROADWAY: 20 117 mm T/T PARAPETS  
WEARING SURFACE: 45 mm MICRO-SILICA MODIFIED CONCRETE OVERLAY  
APPROACH SLABS: AS-1-81M, 7620 mm LONG

Abutment Wing Parapet Lengths  
For Details, See Sheet 7137

Retaining Wall Parapet Lengths  
For Details, See Sheet 7137

Deck Parapet Lengths  
For Details, See Sheet 29137, 30137, 31137 & 32137



ELEVATION

For Continuation  
See Sheet 3137

DESIGN AGENCY  
W.E. QUICKSALL & ASSOCIATES INC.  
554 WEST HIGH AVE.  
NEW PHILADELPHIA, OHIO  
CONSULTING ENGINEERS

DATE  
10/19/97  
REVIEWED  
wda  
STRUCTURE FILE NUMBER  
0700541

DRAWN  
PMZ  
CHECKED  
ZRP

BELMONT COUNTY  
STA. 32+283.441  
STA. 32+781.027

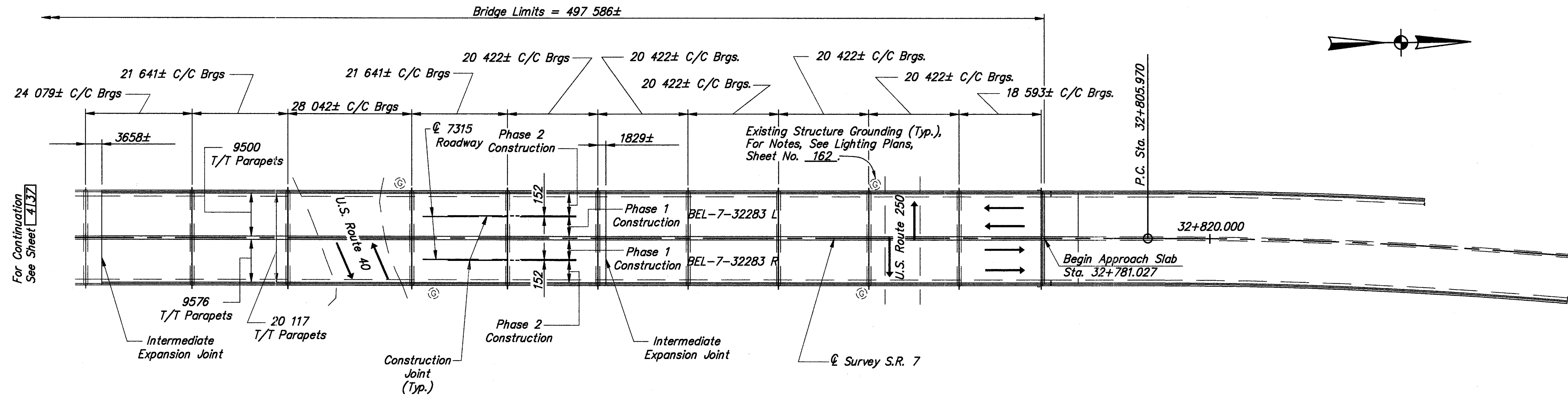
GENERAL PLAN & ELEVATION  
BRIDGE NO. BEL-7-32283 L/R  
S.R. 7 OVER U.S. 40, U.S. 250,  
WHEELING CREEK AND UNDER I.R. 70

BEL-7-32.276

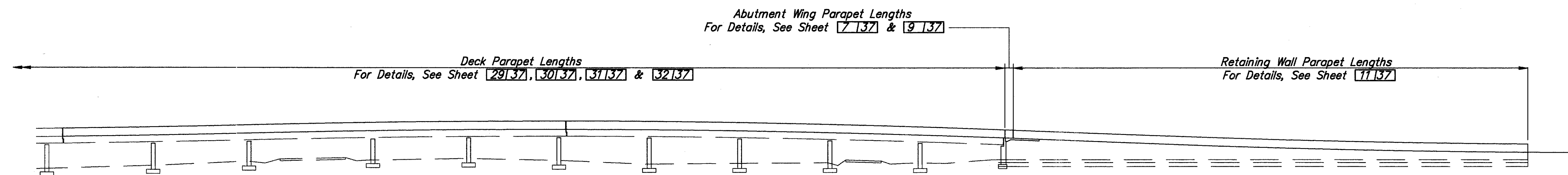
4 / 37

203  
242





PLAN

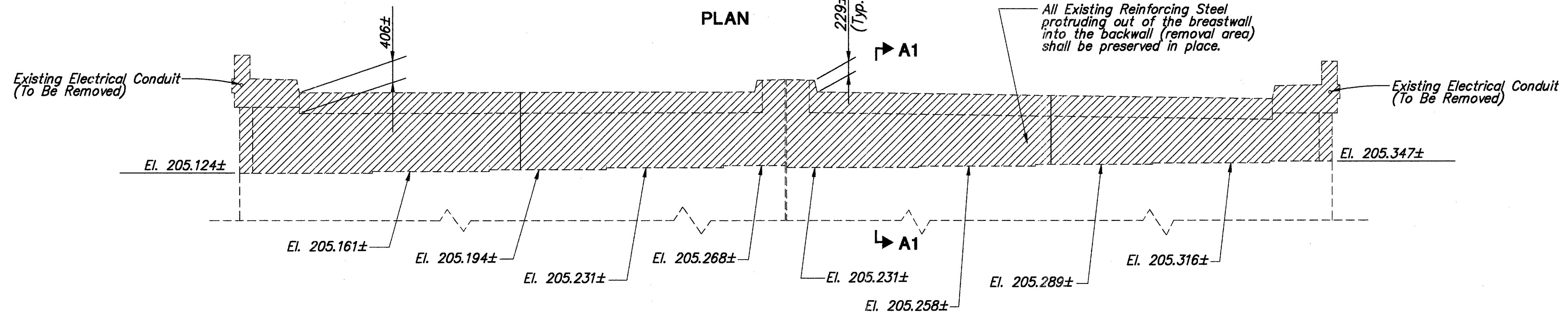
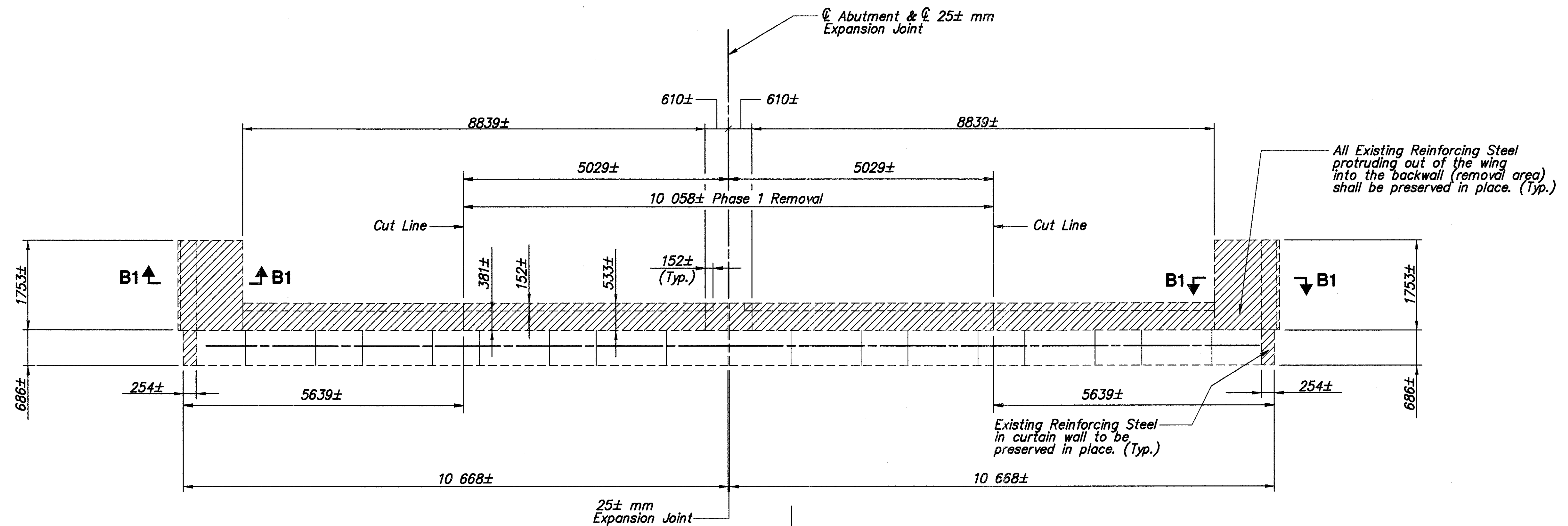


ELEVATION

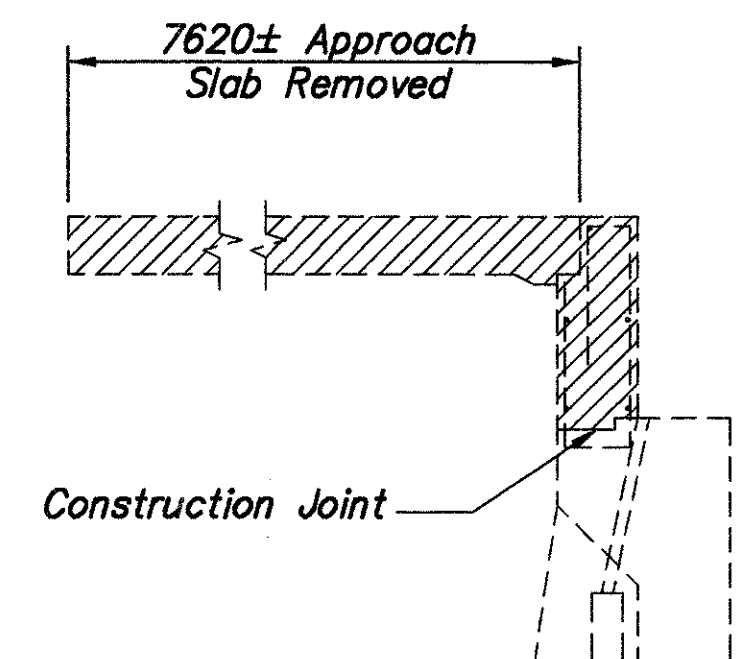
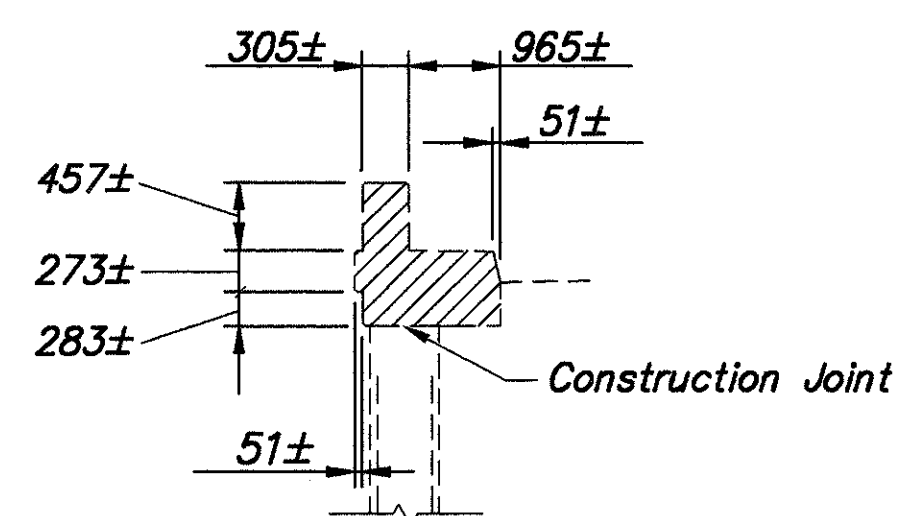
13321-01.3201P1.dwg - OCT 22, 1997 - 08:16:31

|                                         |               |                                                                                                                                                                            |                                                                                 |          |                                                                                                          |         |     |
|-----------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------------------------|---------|-----|
| <div><div>204</div><div>242</div></div> | 5 / 37        | <div><div>GENERAL PLAN &amp; ELEVATION</div><div>BRIDGE NO. BEL-7-32283 L/R</div><div>S.R 7 OVER U.S. 40, U.S. 250,</div><div>WHEELING CREEK AND UNDER I.R. 70</div></div> | <div>BELMONT COUNTY</div> <div>STA. 32+283.441</div> <div>STA. 32+781.027</div> | DESIGNED | FDH                                                                                                      | CHECKED | ZRP |
|                                         | DRAWN         |                                                                                                                                                                            |                                                                                 | PMZ      | REVIEWED                                                                                                 |         |     |
|                                         | DATE          |                                                                                                                                                                            |                                                                                 | 10/19/97 | STRUCTURE FILE NUMBER                                                                                    | 0700541 |     |
|                                         | DESIGN AGENCY |                                                                                                                                                                            |                                                                                 |          | W.E. QUICKSALL & ASSOCIATES INC.<br>554 WEST HIGH AVE.<br>NEW PHILADELPHIA, OHIO<br>CONSULTING ENGINEERS |         |     |





Railing removal to be included with Item 202 Removal Miscellaneous: Portions of Structure Removed, Abutments, As Per Plan. (Typ.) (Railing not shown)



Note:

Reinforcing Steel to be removed to the Construction Joint, unless noted otherwise.

All Existing Expansion Joint Anchors embedded in the backwall shall be removed and paid for with Item 202 Removal Miscellaneous: Portions of Structure Removed, Abutments, As Per Plan.



DESIGN AGENCY  
W.E. QUICKSALL & ASSOCIATES INC.  
554 WEST HIGH AVE  
NEW PHILADELPHIA, OHIO  
CONSULTING ENGINEERS

DATE 10/97  
REVIEWED Wda  
STRUCTURE FILE NUMBER 0700541

DRAWN PMZ  
DESIGNED FDH  
CHECKED ZRP

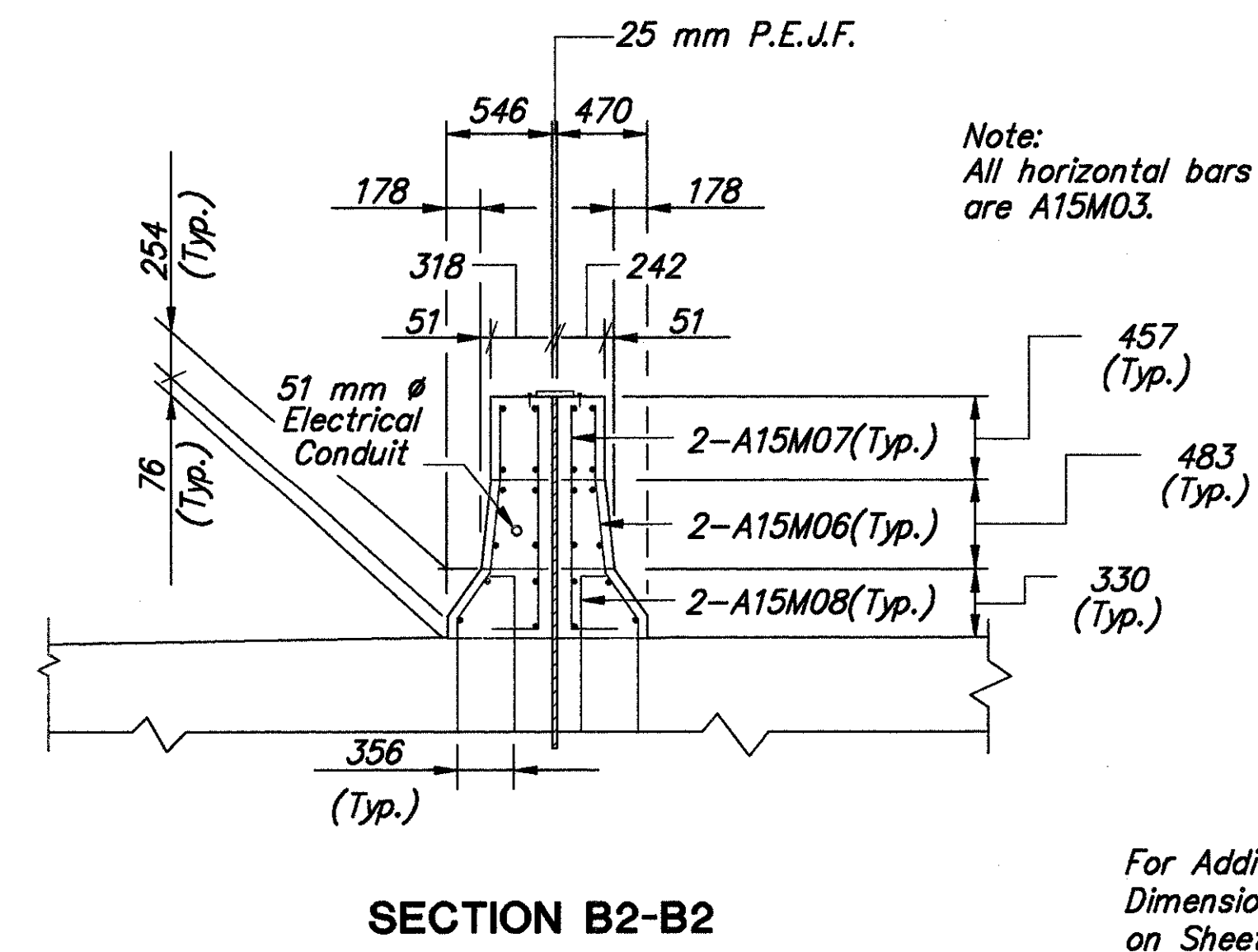
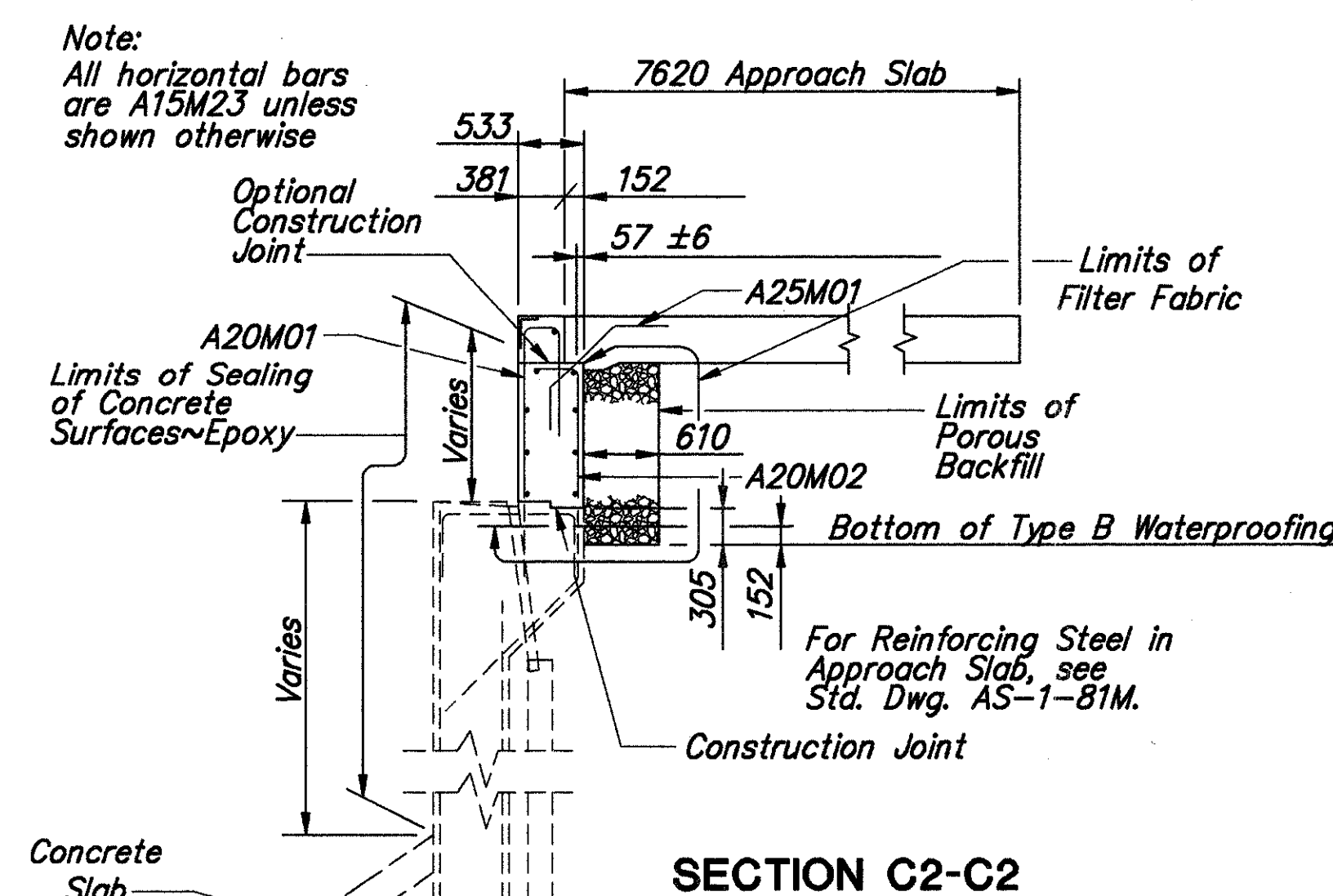
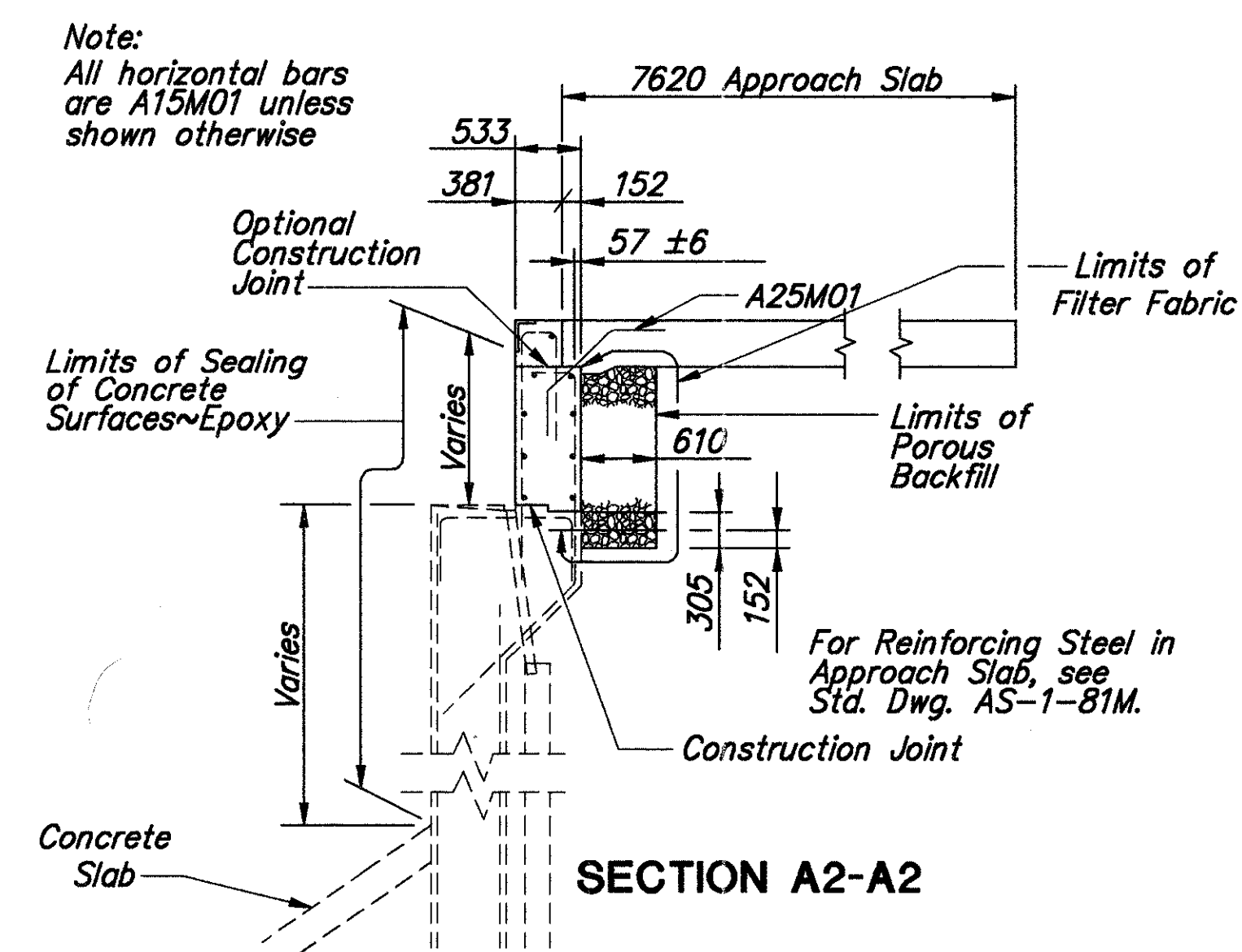
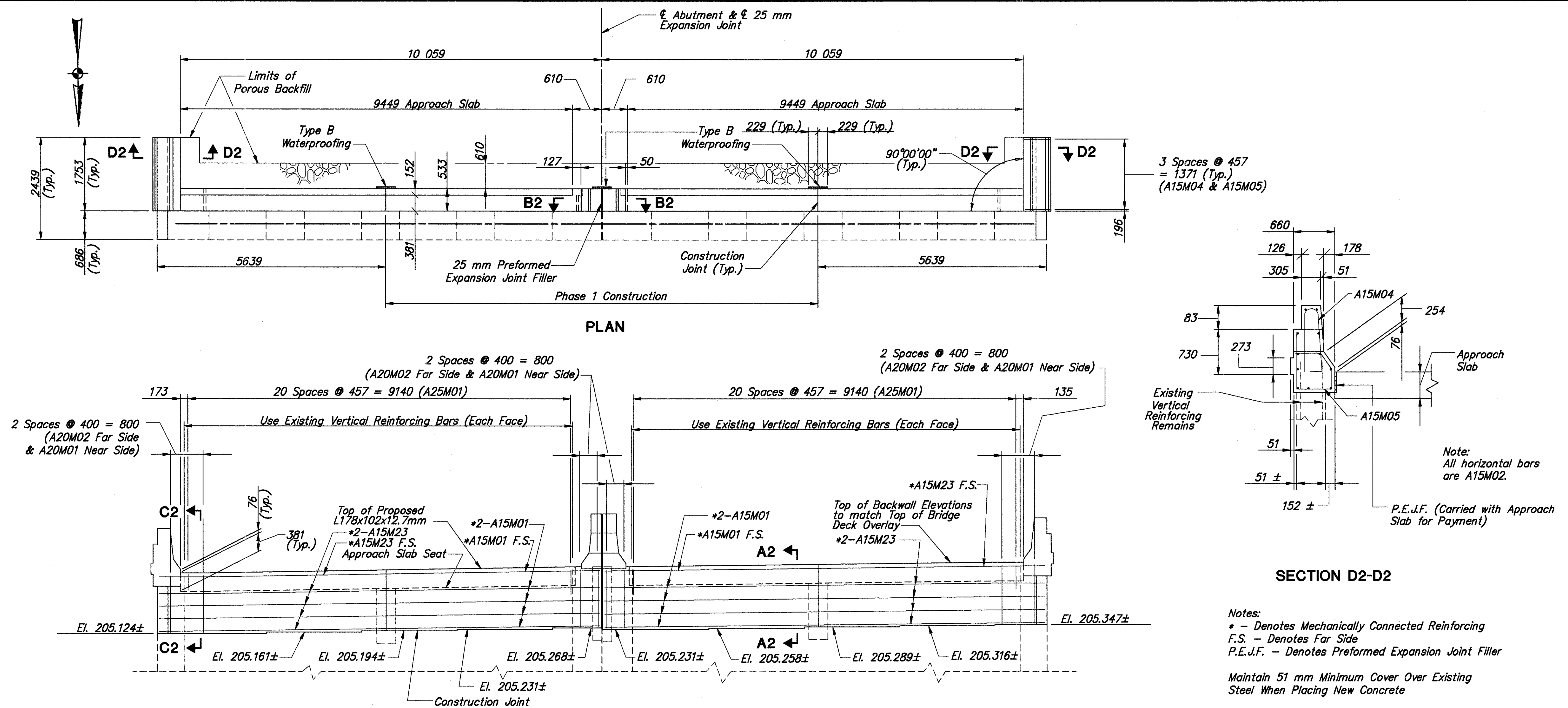
REAR ABUTMENT DETAILS  
BRIDGE NO. BEL-7-32283 L/R  
S.R. 7 OVER U.S. 40, U.S. 250, WHEELING CREEK AND UNDER I.R. 70

BEL-7-32.276

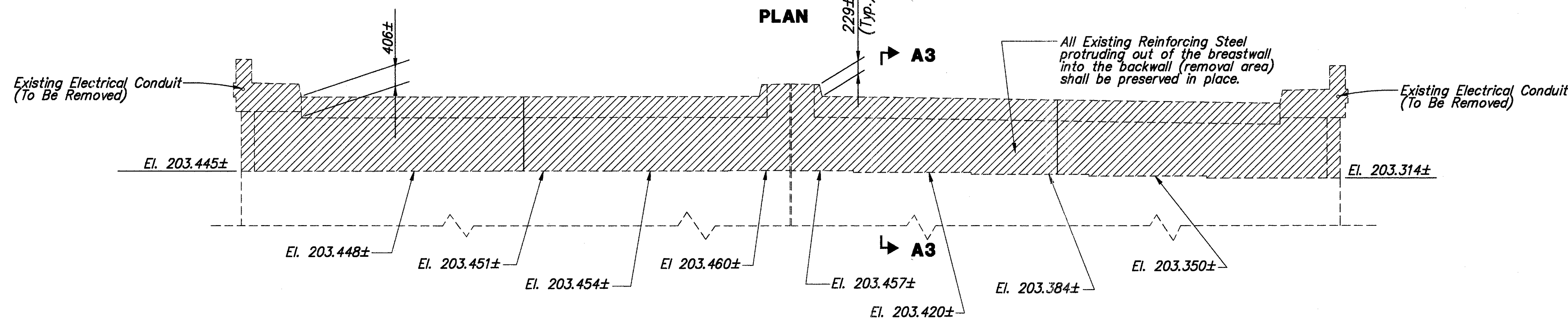
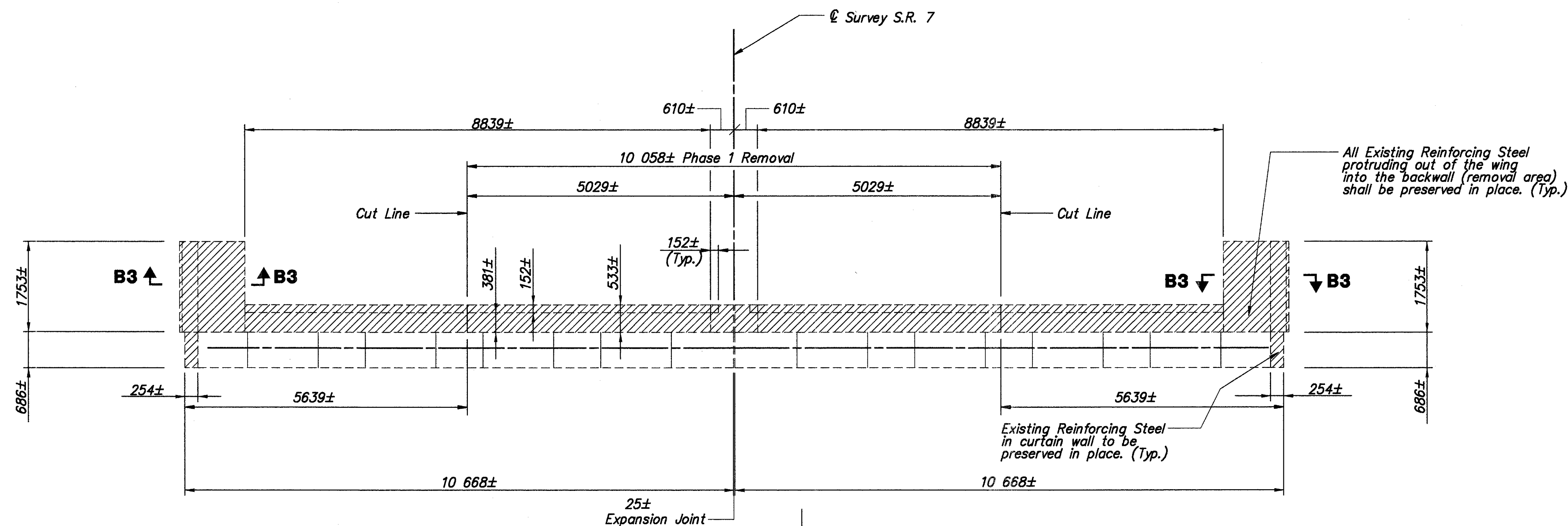
6 / 37

205  
242

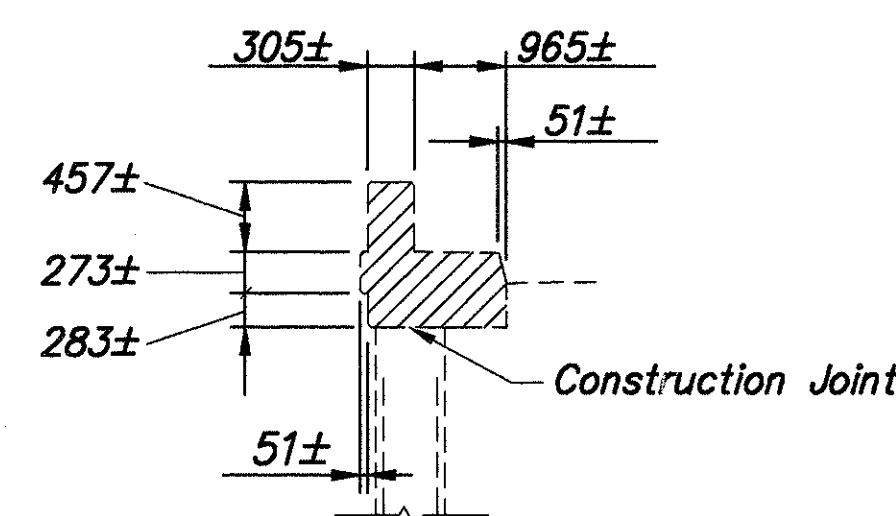




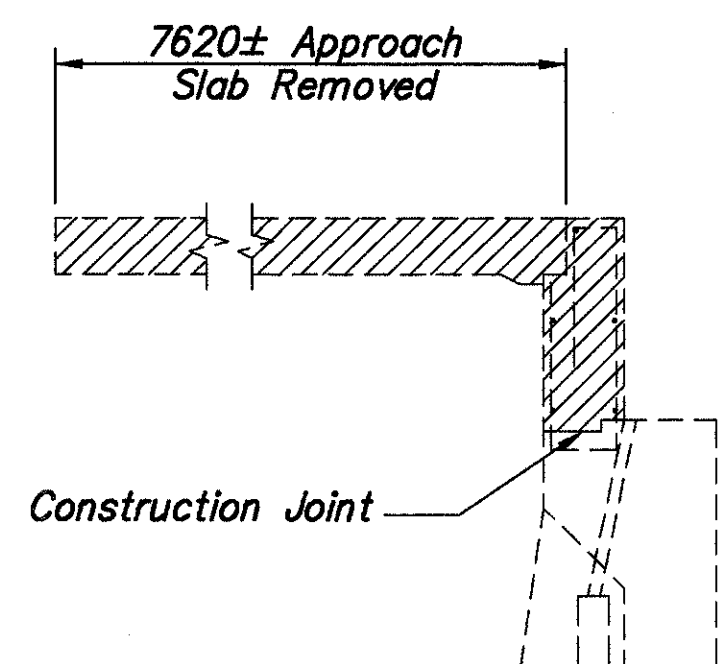




Railing removal to be included  
with Item 202 Removal Miscellaneous:  
Portions of Structure Removed,  
Abutments, As Per Plan. (Typ.) (Railing not shown)



SECTION B3-B3

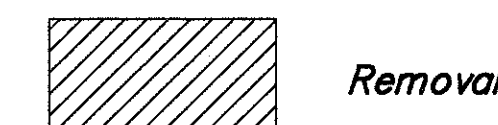


SECTION A3-A3

Note:

Reinforcing Steel to be removed  
to the Construction Joint, unless  
noted otherwise.

All Existing Expansion Joint Anchors  
embedded in the backwall shall be  
removed and paid for with Item 202  
Removal Miscellaneous: Portions of  
Structure Removed, Abutments, As  
Per Plan.



DESIGN AGENCY  
W.E. QUICKSALL & ASSOCIATES INC.  
554 WEST HIGH AVE  
NEW PHILADELPHIA, OHIO  
CONSULTING ENGINEERS

DATE 10/1/97  
REVIEWED wda  
STRUCTURE FILE NUMBER 0700541

DRAWN PMZ  
CHECKED ZRP  
DESIGNED FDH

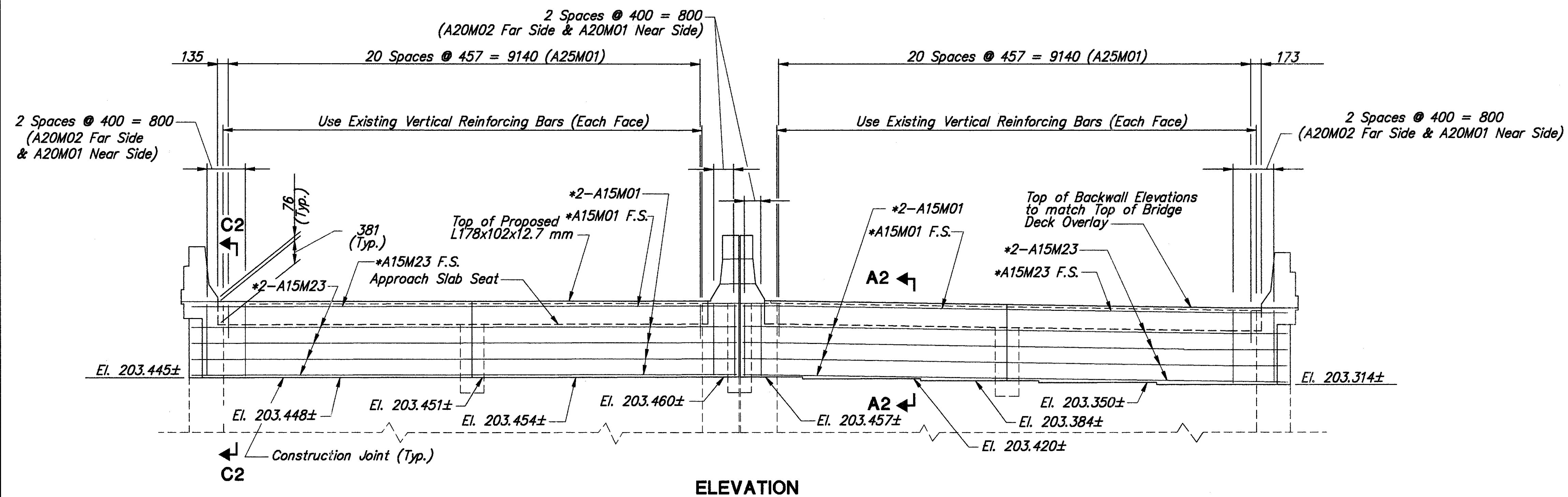
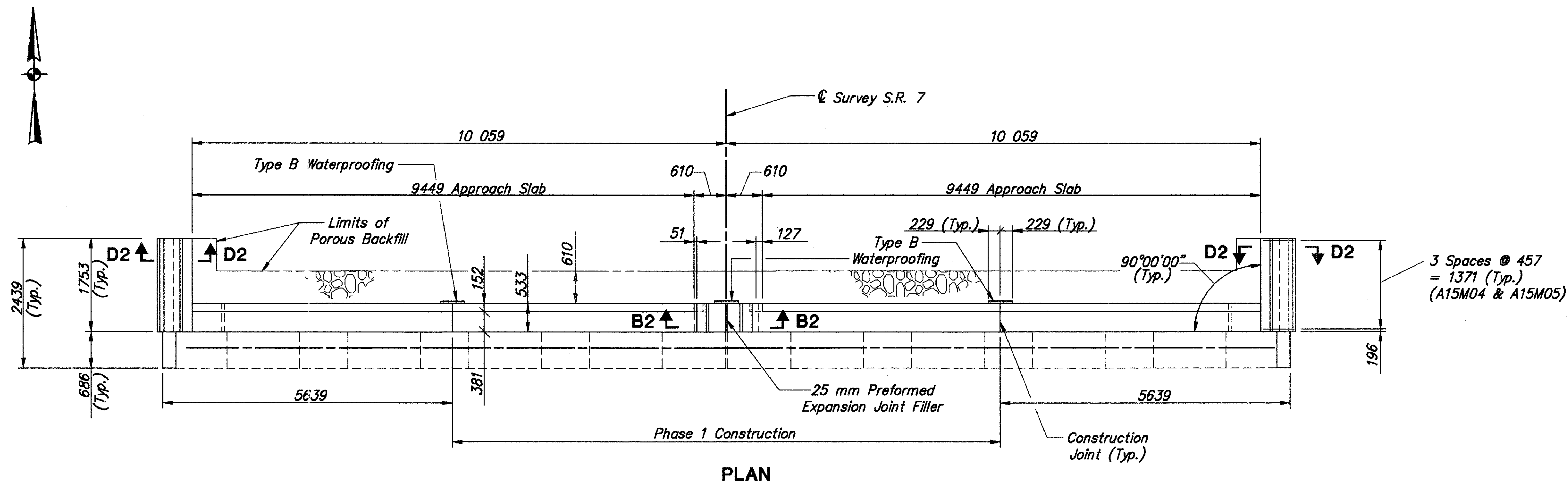
FORWARD ABUTMENT DETAILS  
BRIDGE NO. BEL-7-32283 L/R  
S.R. 7 OVER U.S. 40, U.S. 250, WHEELING CREEK AND UNDER I.R. 70

BEL-7-32.276

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207  
242





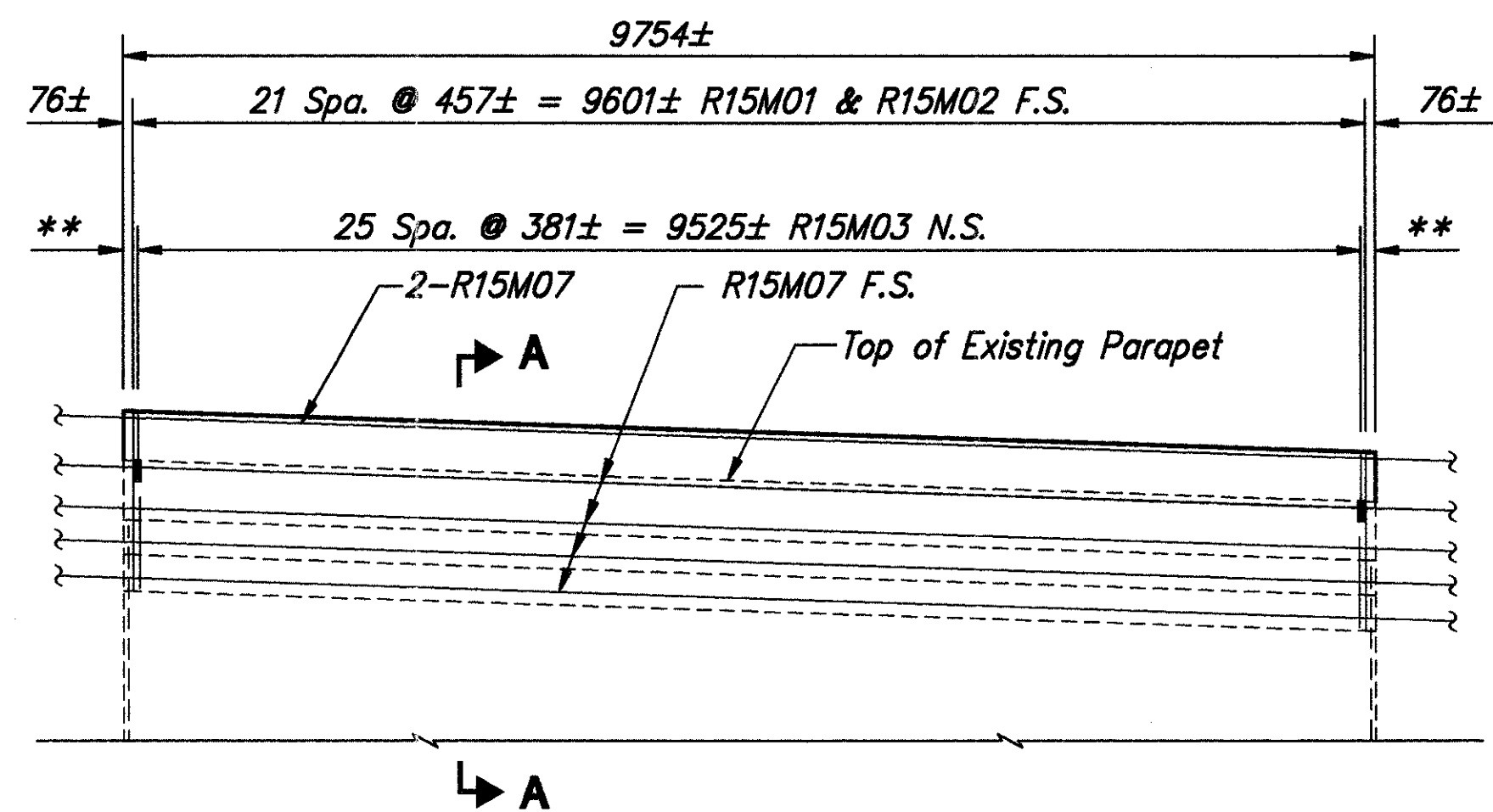
Notes:

\* - Denotes Mechanically Connected Reinforcing  
F.S. - Denotes Far Side

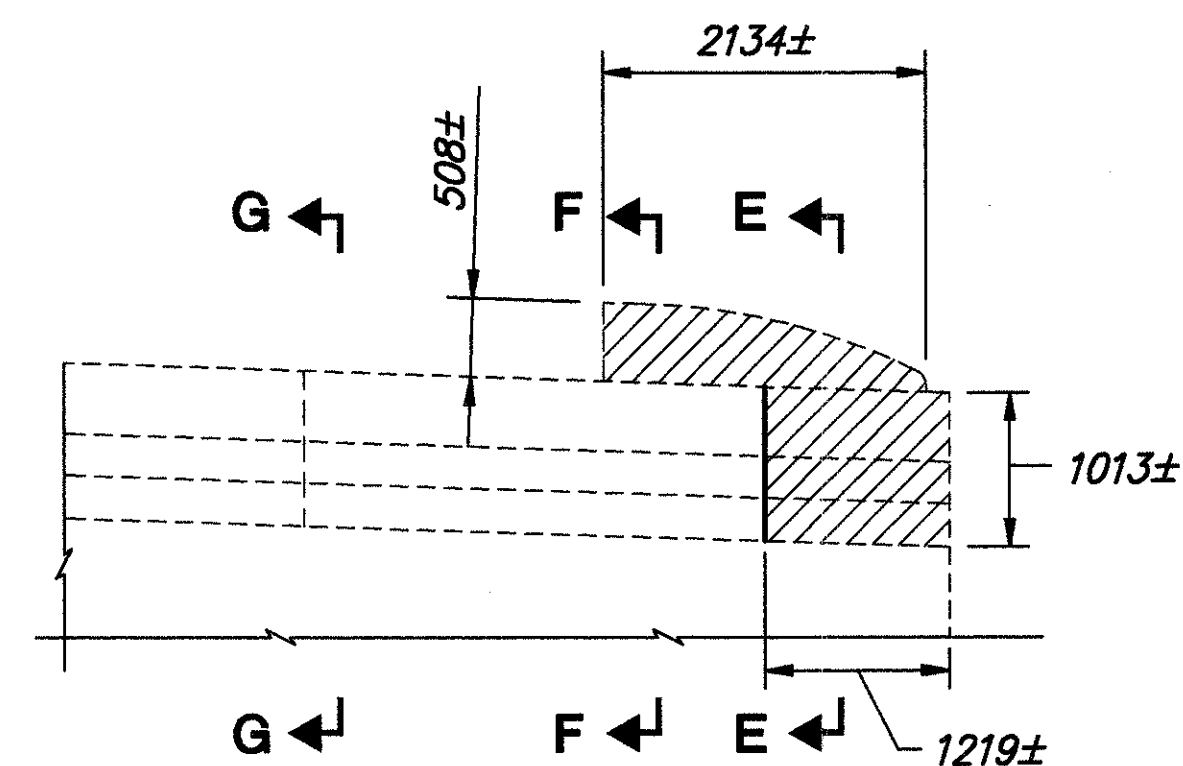
Maintain 51 mm Minimum Cover Over Existing Steel When Placing New Concrete.

For Sections A2-A2, B2-B2, C2-C2  
& D2-D2, See Sheet 7137

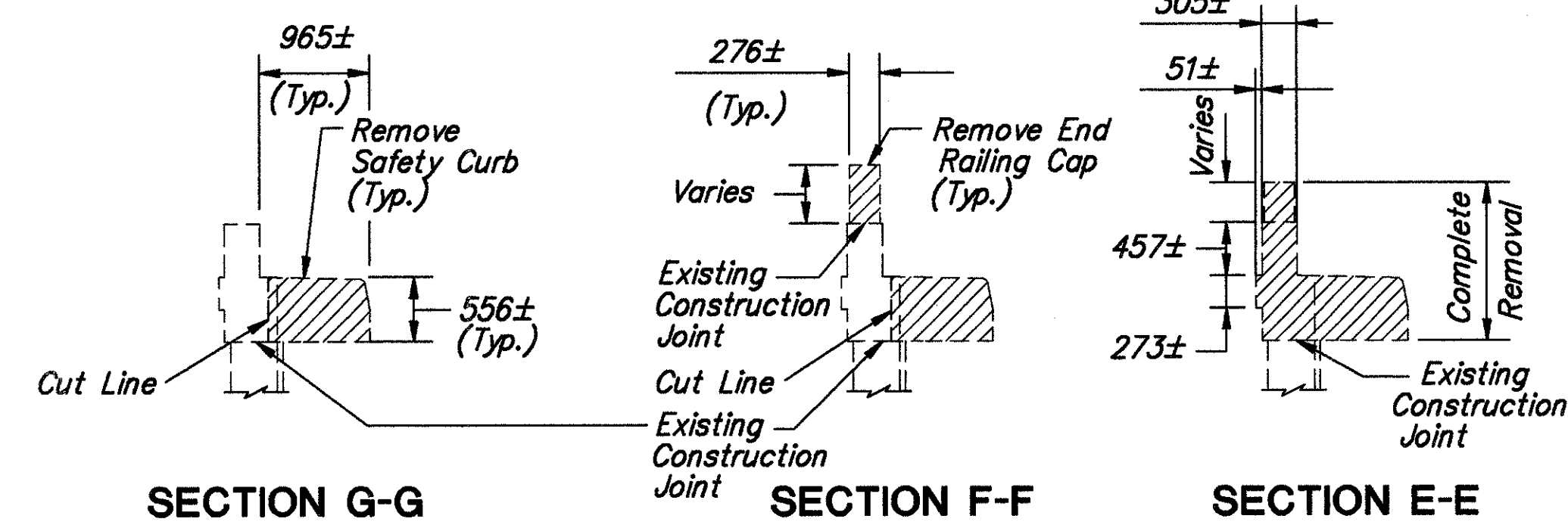




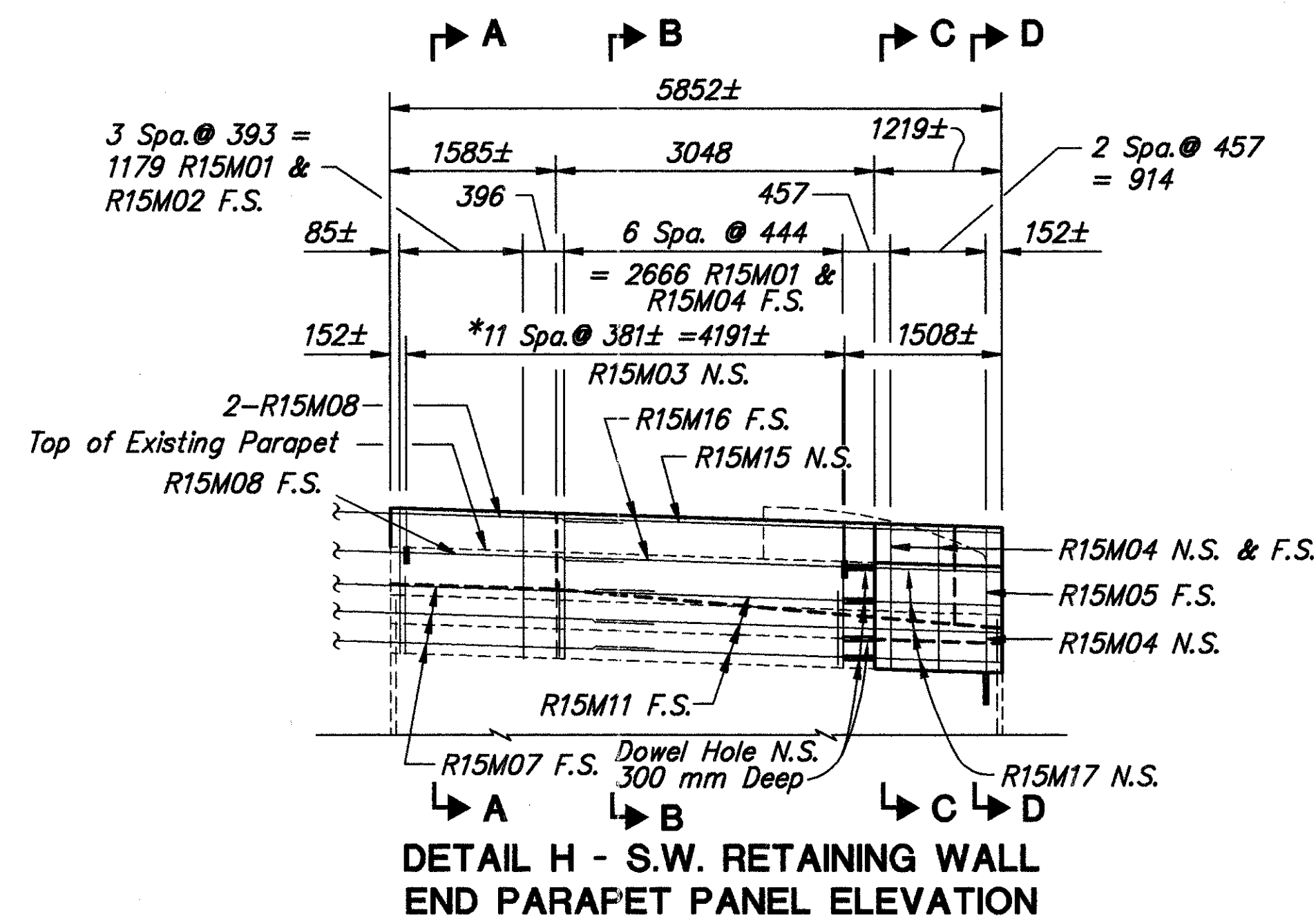
TYPICAL RETAINING WALL DETAIL G  
9754 PARAPET PANEL ELEVATION



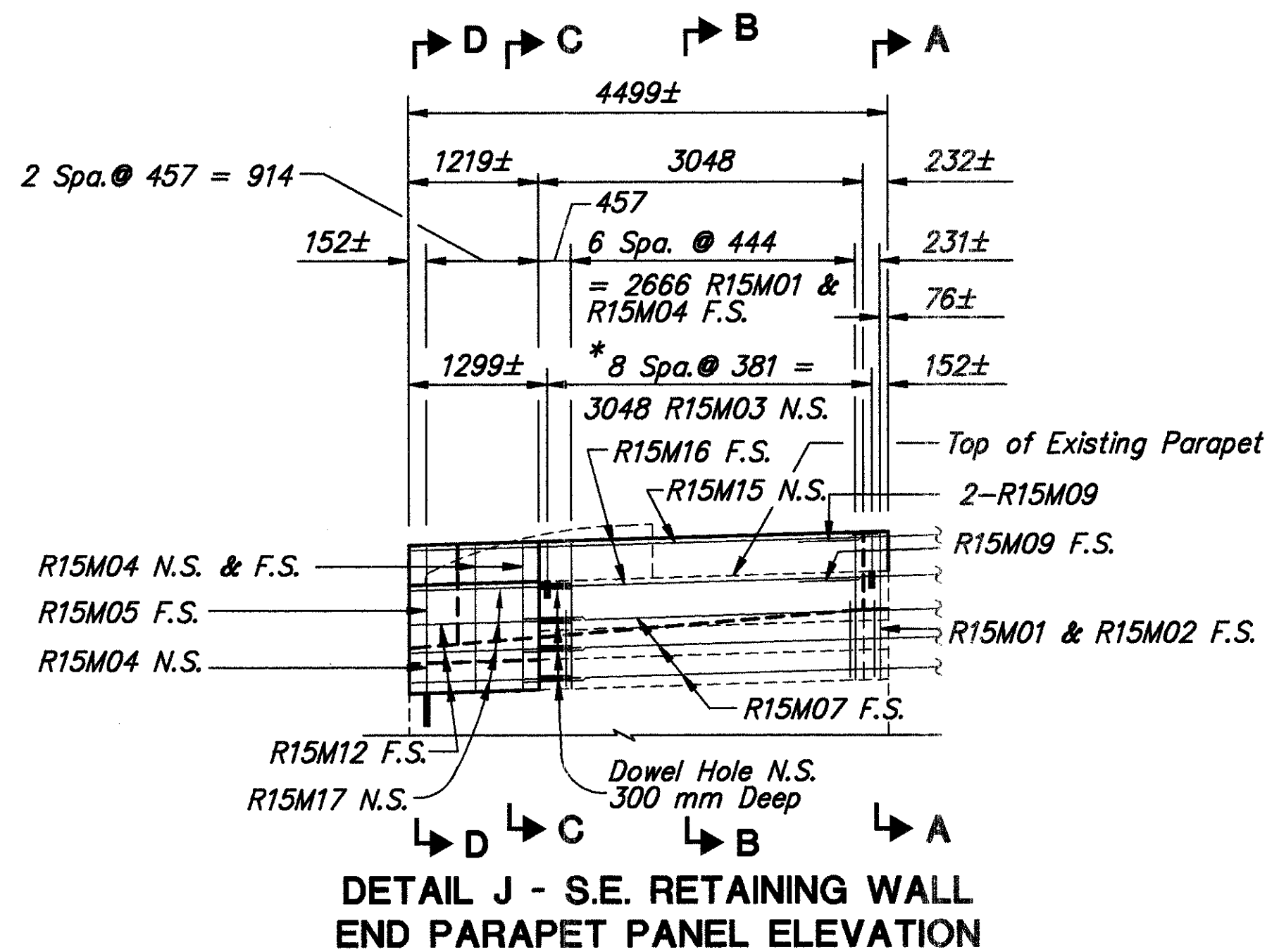
TYPICAL RETAINING WALL  
PARAPET END PANEL REMOVAL



TYPICAL RETAINING WALL  
PARAPET REMOVAL AREAS



DETAIL H - S.W. RETAINING WALL  
END PARAPET PANEL ELEVATION



DETAIL J - S.E. RETAINING WALL  
END PARAPET PANEL ELEVATION

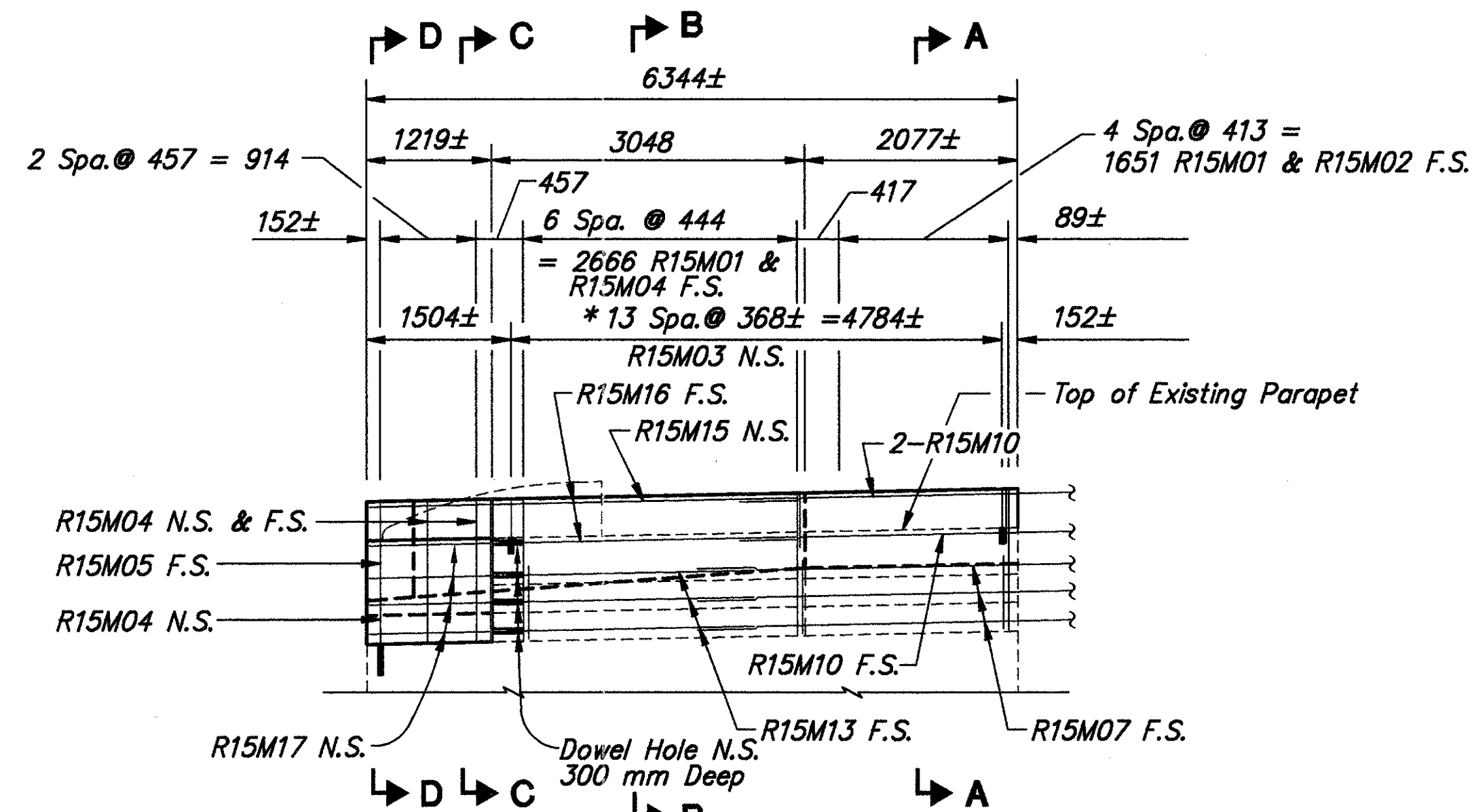
Note:  
\* Horizontal placement of vertical reinforcing may be adjusted where necessary to clear existing reinforcing where doweling occurs, and to clear existing or new parapet joints by 76 mm minimum.

\*\* All vertical doweled reinforcing to clear parapet joints by 76 mm (Min.). Spacing to be adjusted as required to clear joints.

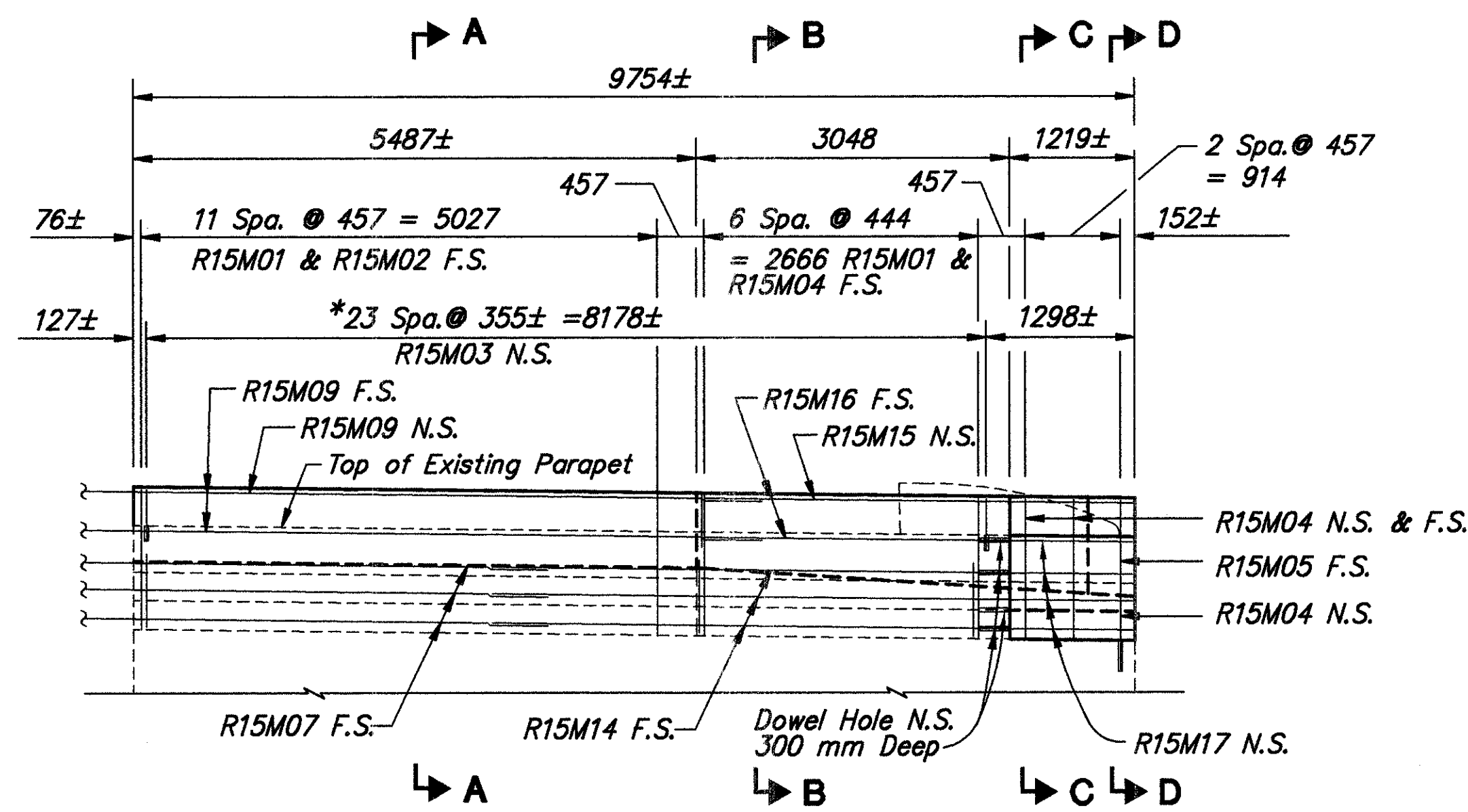
For Parapet Details, See Sheets 31/37 & 32/37

For Location of Retaining Wall Parapet Details, See Sheet 11/37

N.S. ~ denotes Near Side  
F.S. ~ denotes Far Side

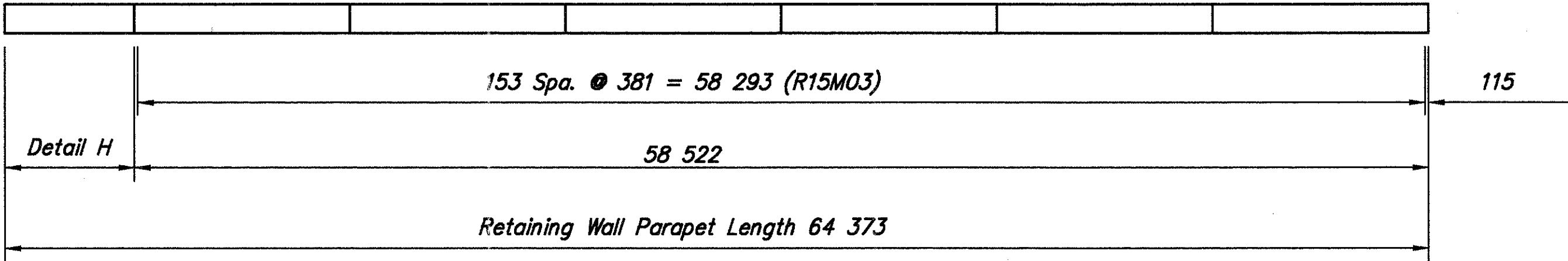


DETAIL K - N.W. RETAINING WALL  
END PARAPET PANEL ELEVATION

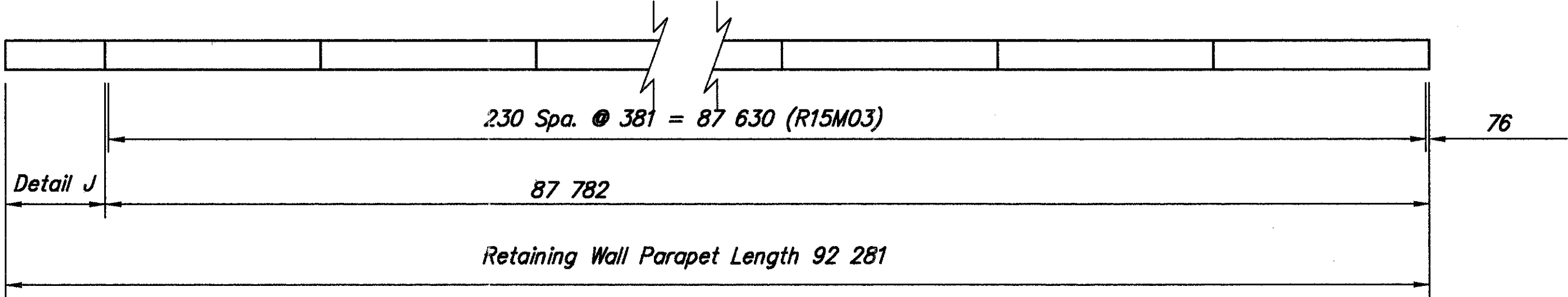


DETAIL L - N.E. RETAINING WALL  
END PARAPET PANEL ELEVATION

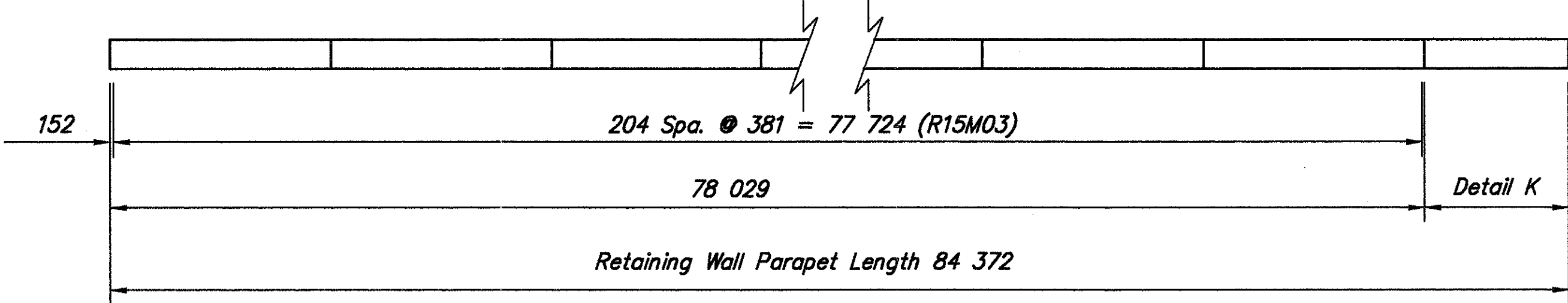




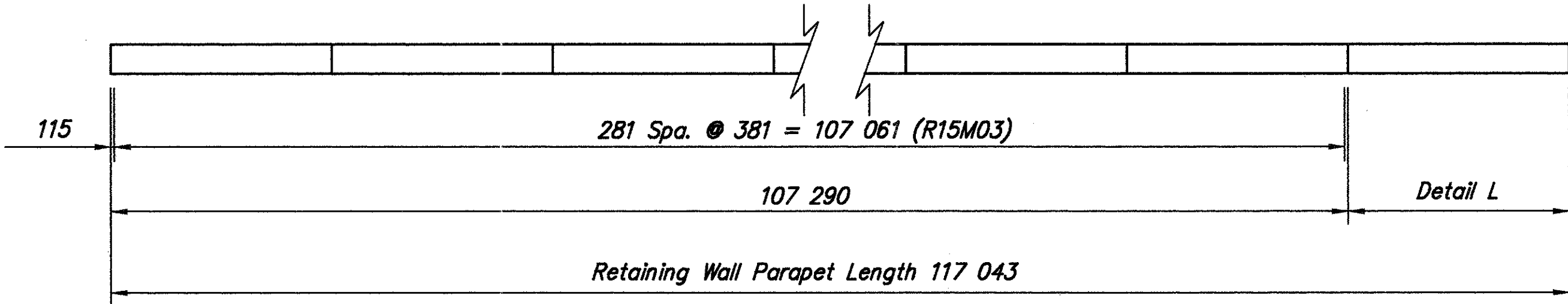
SOUTHWEST RETAINING WALL PARAPET



SOUTHEAST RETAINING WALL PARAPET



NORTHWEST RETAINING WALL PARAPET



NORTHEAST RETAINING WALL PARAPET

BEL-7-32283 RETAINING WALL PARAPET ELEVATIONS

RETAINING WALL PARAPET LENGTHS BEL-7-32283

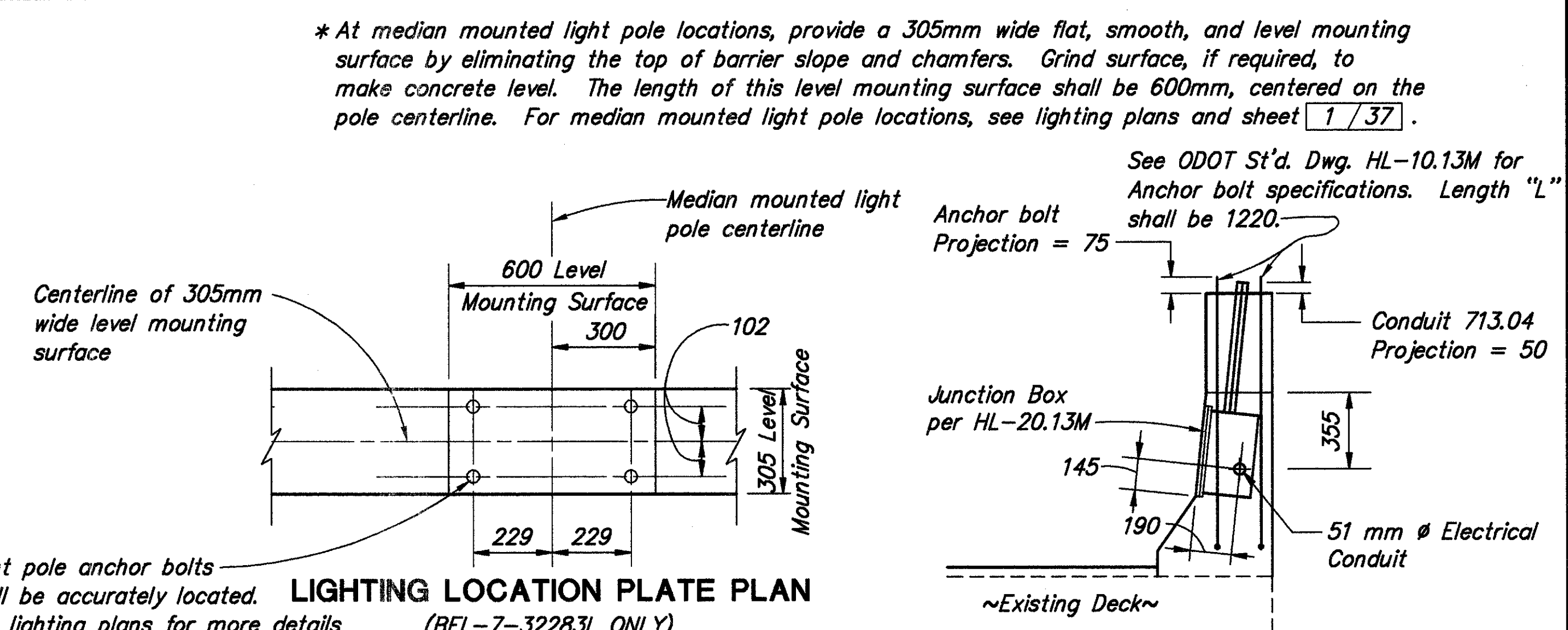
| PARAPET LOCATION | DETAIL H | DETAIL J | DETAIL K | DETAIL L |
|------------------|----------|----------|----------|----------|
| SOUTHWEST        | 5852     |          |          |          |
| SOUTHEAST        |          | 4499     |          |          |
| NORTHWEST        |          |          | 6344     |          |
| NORTHEAST        |          |          |          | 9754     |
|                  |          |          |          |          |
|                  |          |          |          |          |

For Detail H, J, K & L, See Sheet 10 / 37

Notes:  
Spacing as noted for R15M03 doweled bars only.  
All vertical doweled reinforcing to clear parapet joints by 76 mm (Min.). Spacing to be adjusted as required to clear joints.

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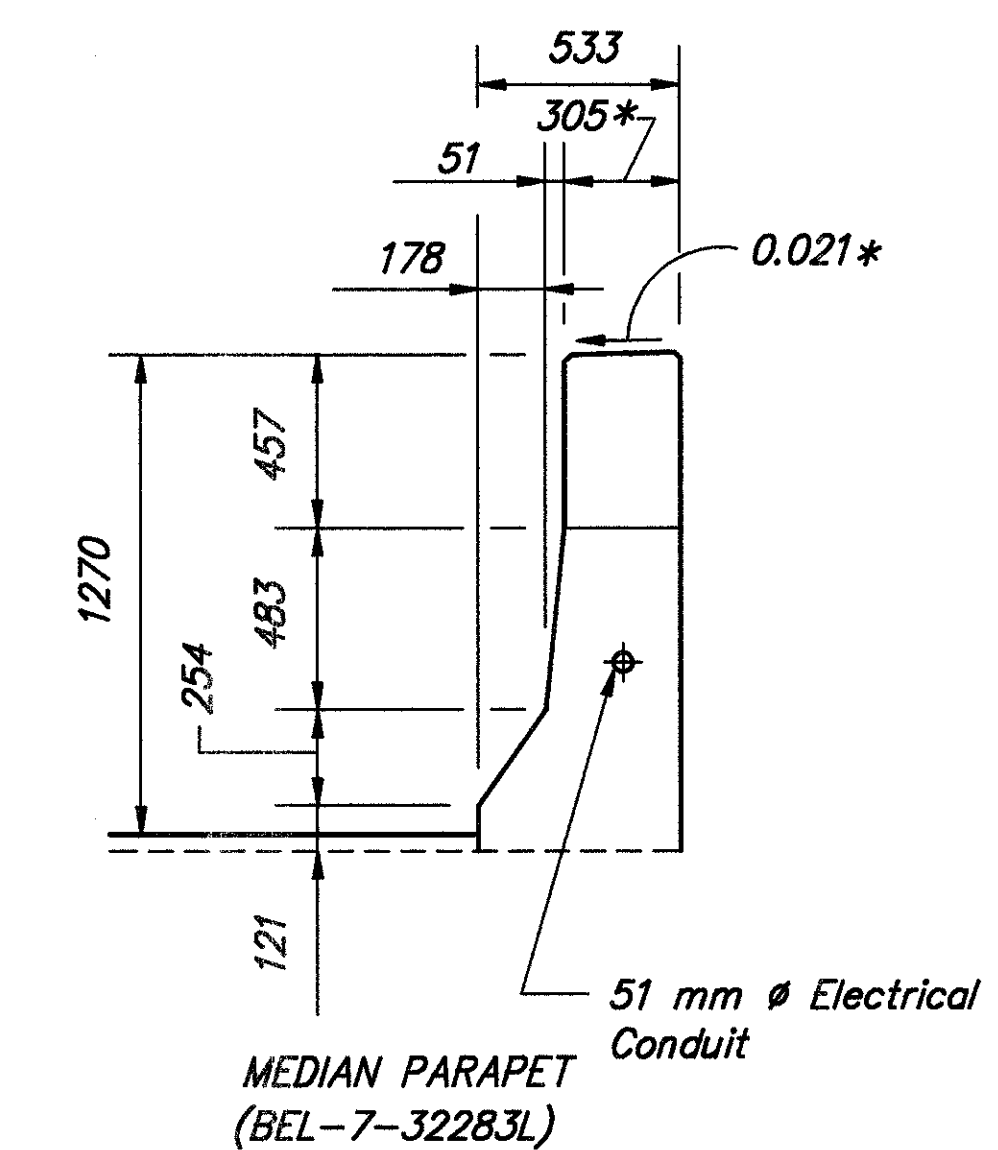


### LIGHTING LOCATION PLATE PLAN

*details (BEL-7-32283L ONLY)*

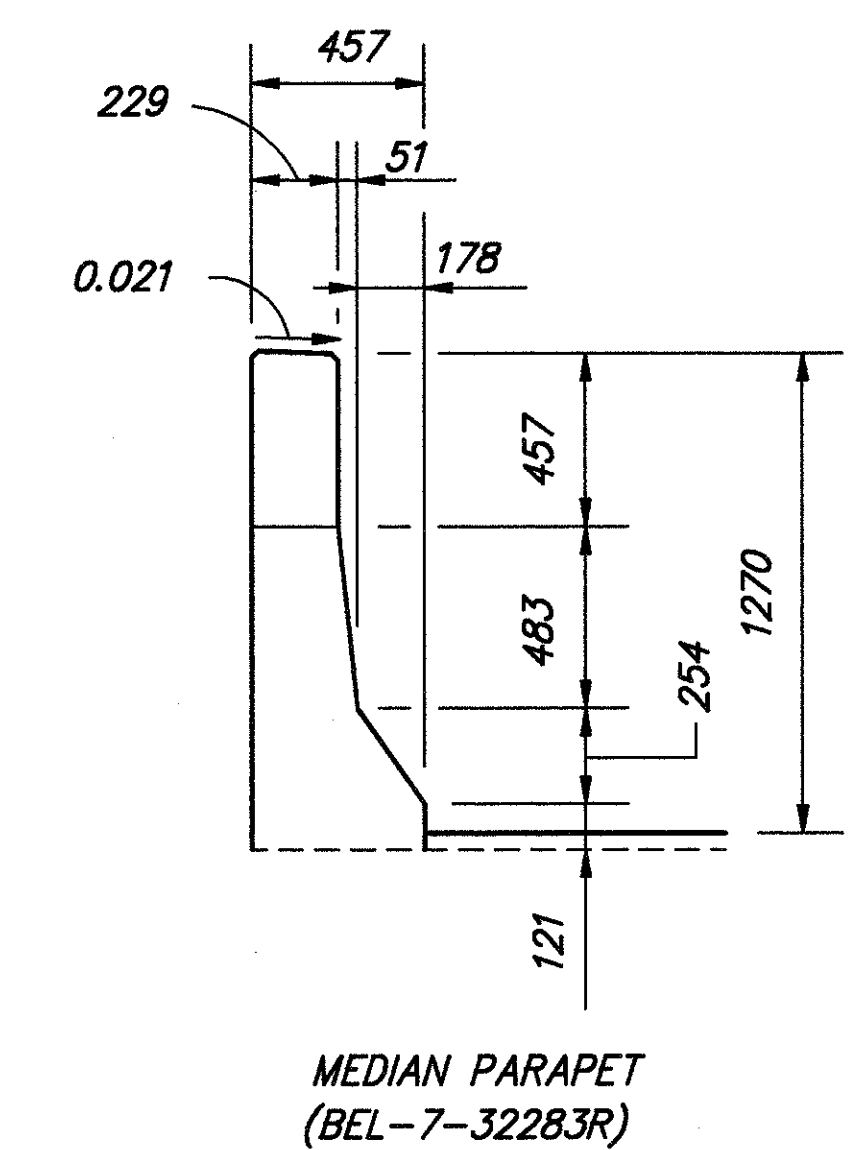


**SECTION AT MEDIAN  
MOUNTED LIGHT POLE**  
(BEL-7-32283L ONLY)

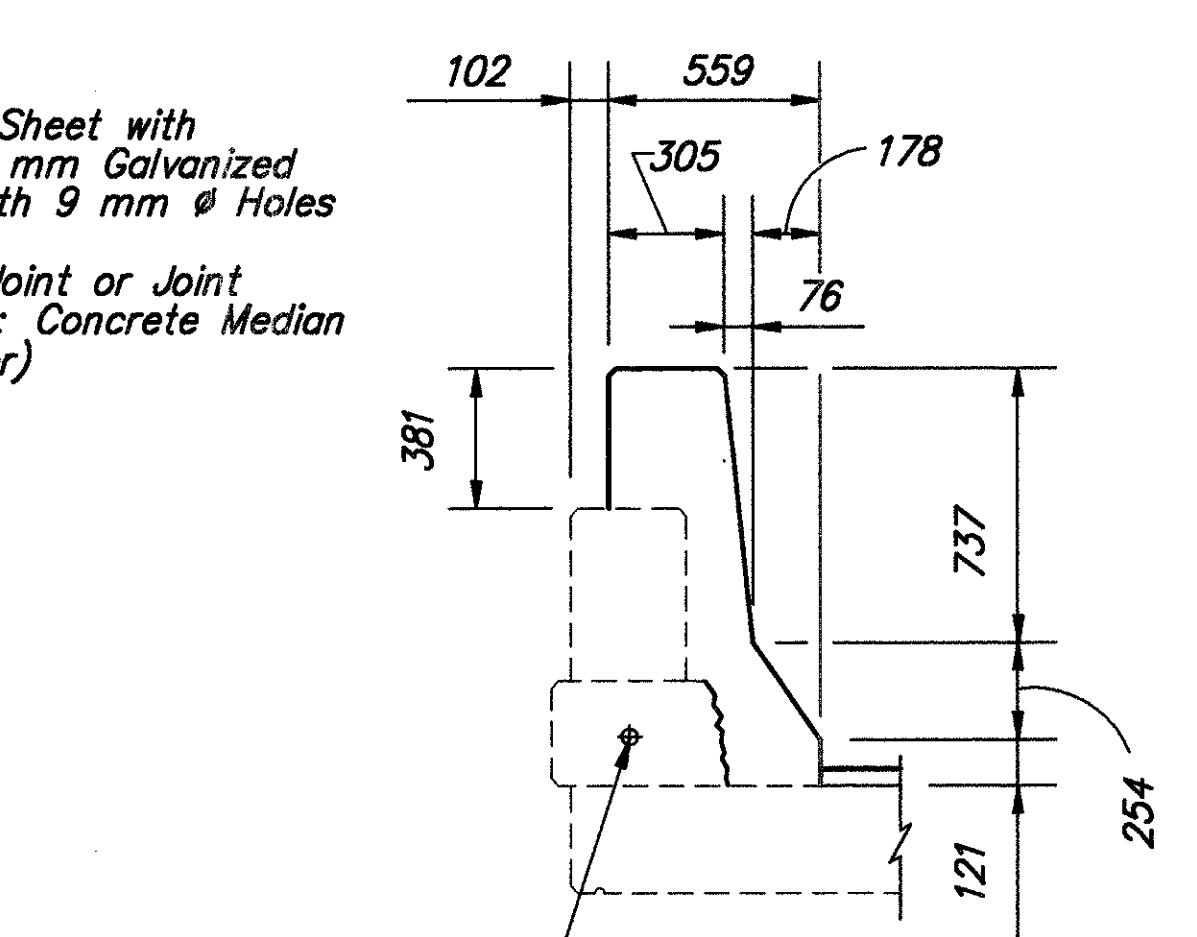


### BRIDGE MEDIAN PARAPET DETAILS

*Note: Transition from regular roadway median parapet to bridge median parapets occurs thru the approach slab area.  
(Typical for BEL-7-32283 & BEL-7-36368)*



*MEDIAN PARAPET  
(BEL-7-32283R)*



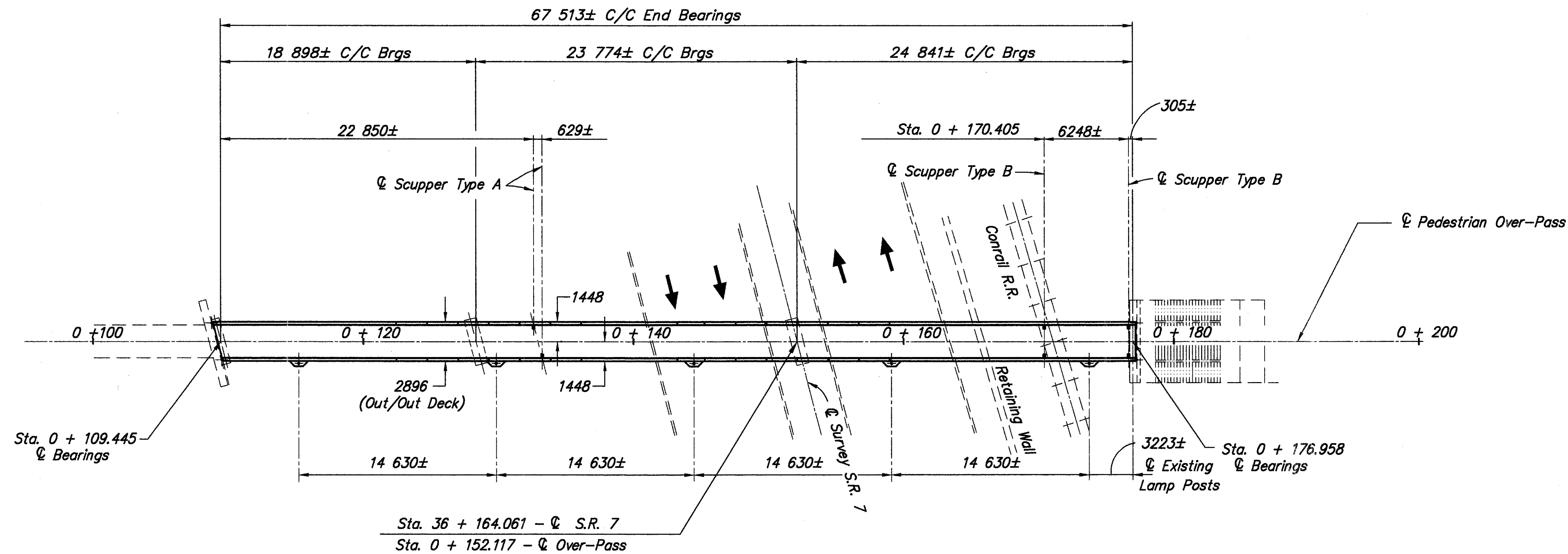
**TYPICAL  
OUTSIDE RAILING REFACING**

### PROPOSED NORMAL TRANSVERSE SECTION

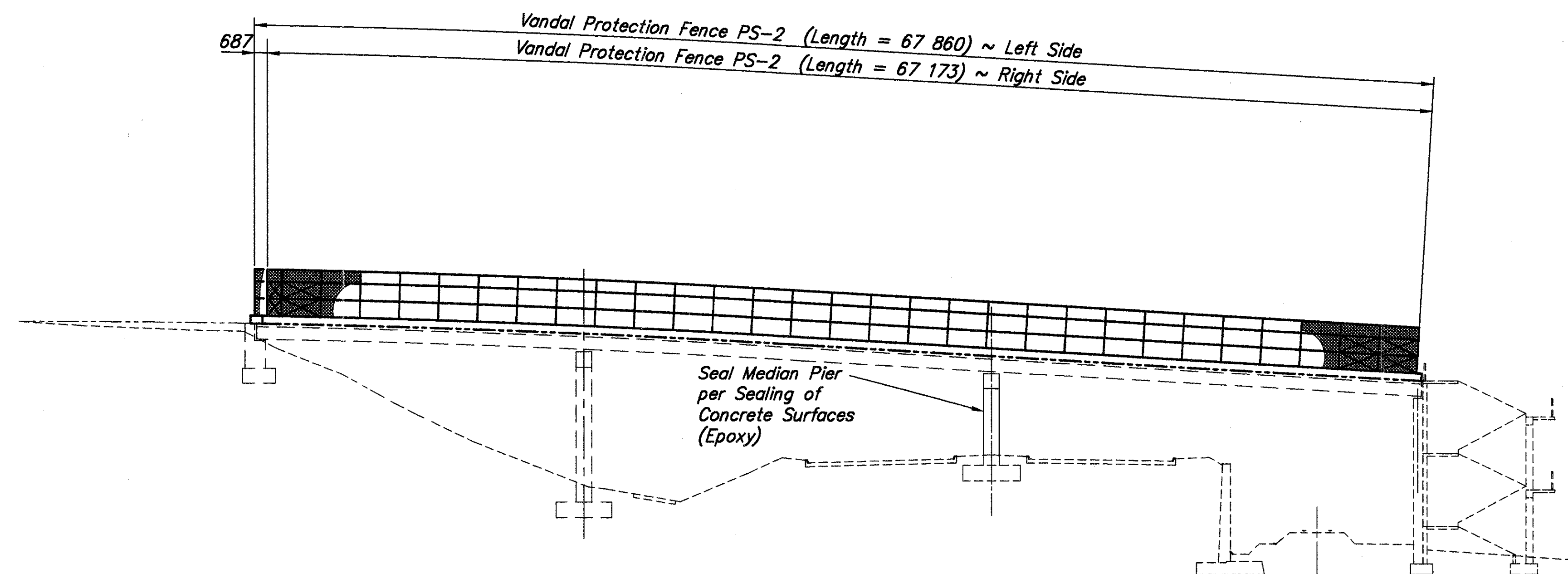
For Scupper Details And Notes,  
See Sheet 33 / 37

For Parapet and Median Barrier Reinforcing  
Details, See Sheets **29/37** , **30/37** ,  
**31/37** & **32/37**





PLAN



ELEVATION

For Left Side Parapet & Fence details  
see sheet 14/37  
For Right Side Parapet & Fence details  
see sheet 15/37  
For Existing and Proposed Transverse  
Section details see sheet 16/37  
For General Notes see sheet 1/37 & 2/37

#### EXISTING STRUCTURE DATA

TYPE: CONTINUOUS STEEL BEAM WITH REINF.  
CONCRETE DECK AND SUBSTRUCTURE  
SPANS: 1890 mm±, 2377 mm±  
AND 2484 mm± C/C Brgs.  
WALKWAY: 2438 mm± Face/Face Curbs  
LOADING: 415 kg/m²  
SKEW: 14°28'00"± R.F.  
WEARING SURFACE: 13 mm± MONOLITHIC  
CONCRETE  
ALIGNMENT: TANGENT

#### PROPOSED WORK

- EPOXY OVERLAY DECK, 6 mm THICK.
- REPLACE DECK CURB WITH NEW PARAPET.
- REPLACE FENCING WITH VANDAL PROTECTION FENCE.
- CLEAN AND PAINT STRUCTURAL STEEL, USING SYSTEM OZEU.
- REPAIR SCUPPERS AND REPLACE DRAINAGE SYSTEM.
- EPOXY SEAL MEDIAN PIER, DECK EDGE, AND NEW PARAPETS.

FOR QUANTITIES, SEE SHEET NO. 3/37

DESIGN AGENCY  
W.E. QUICKSALL & ASSOCIATES INC.  
534 WEST HIGH AVE.  
NEW PHILADELPHIA, OHIO  
CONSULTING ENGINEERS

DATE  
10/97  
REVIEWED  
Wda  
STRUCTURE FILE NUMBER  
0700630  
DRAWN  
JMG  
CHECKED  
ZRD

BELMONT COUNTY  
STA. 36+164.061  
STA. 36+164.061

GENERAL PLAN & ELEVATION  
BRIDGE NO. BEL-7-36164  
PEDESTRIAN BRIDGE OVER S.R. 7

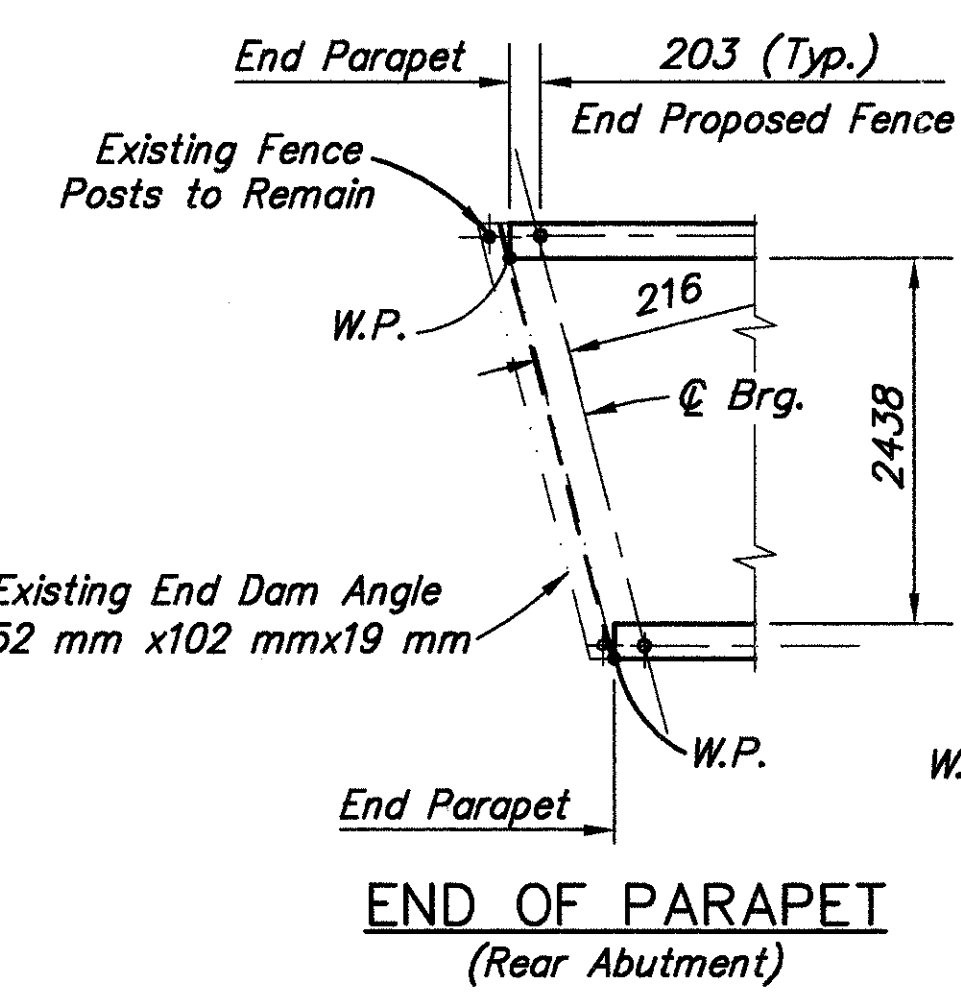
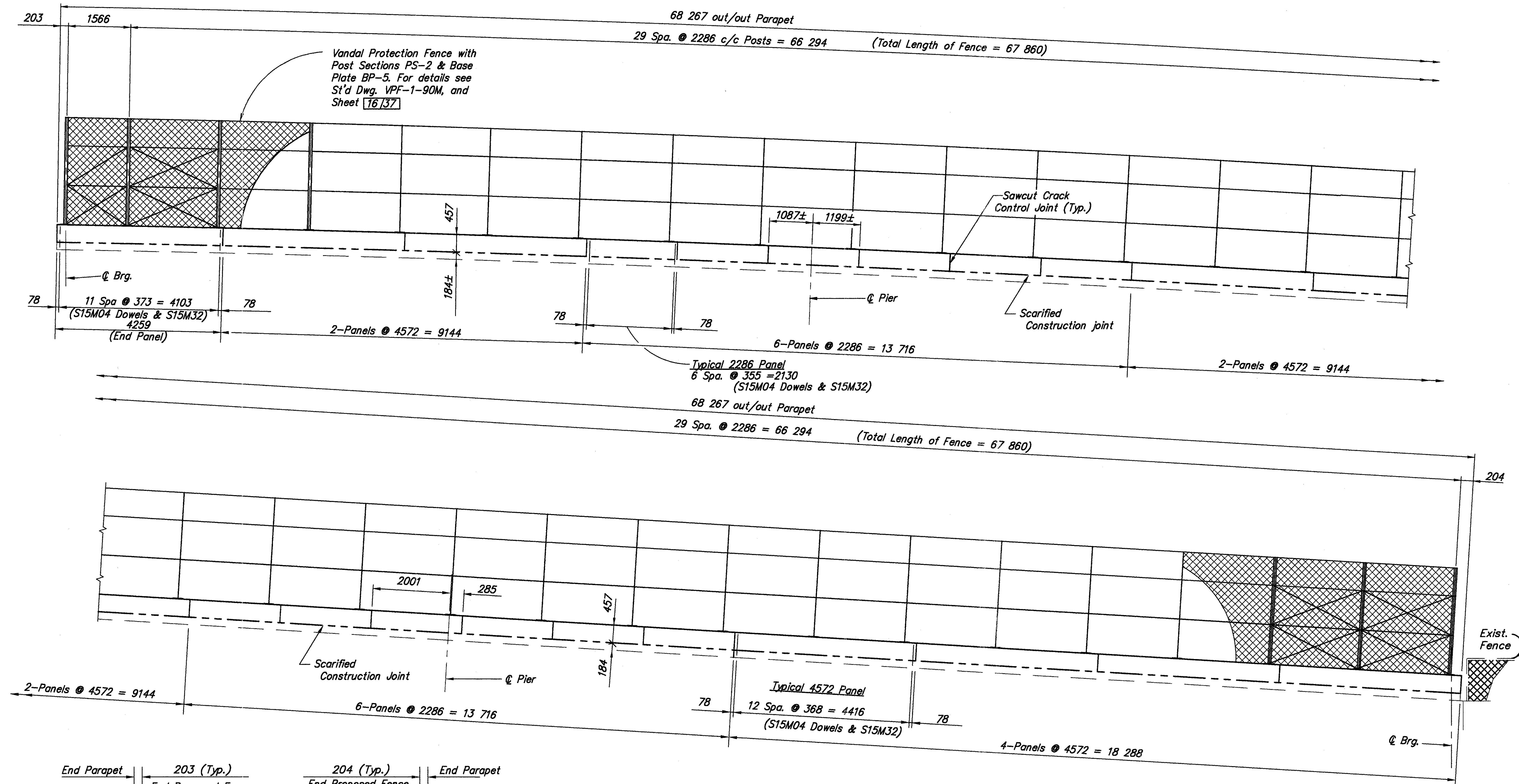
BEL-7-32.276

13/37

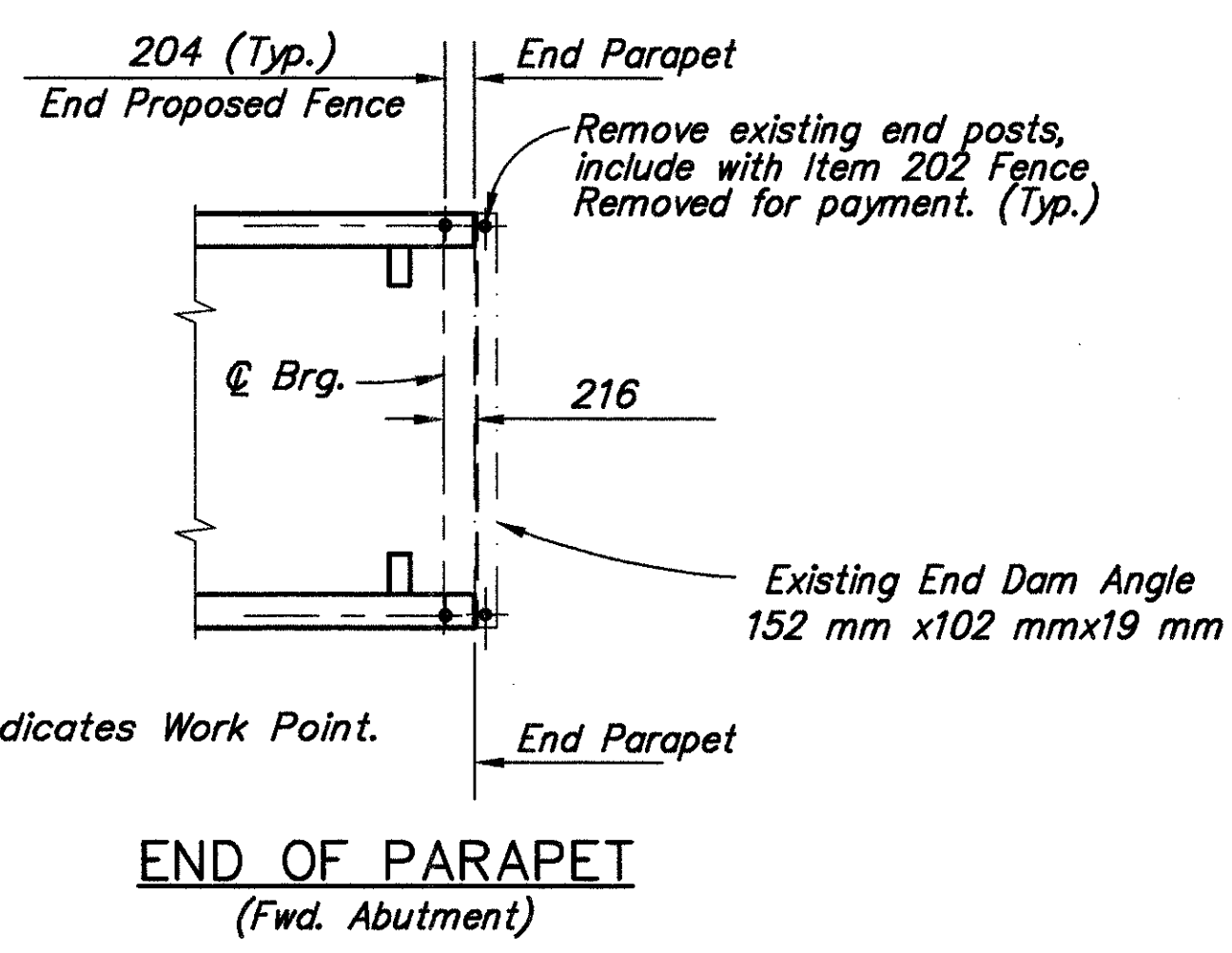
212  
242



13/37-01/3832185.dwg - OCT 22, 1997 - 09:34:00



END OF PARAPET  
(Rear Abutment)



END OF PARAPET  
(Fwd. Abutment)

LEFT SIDE PARAPET & FENCE

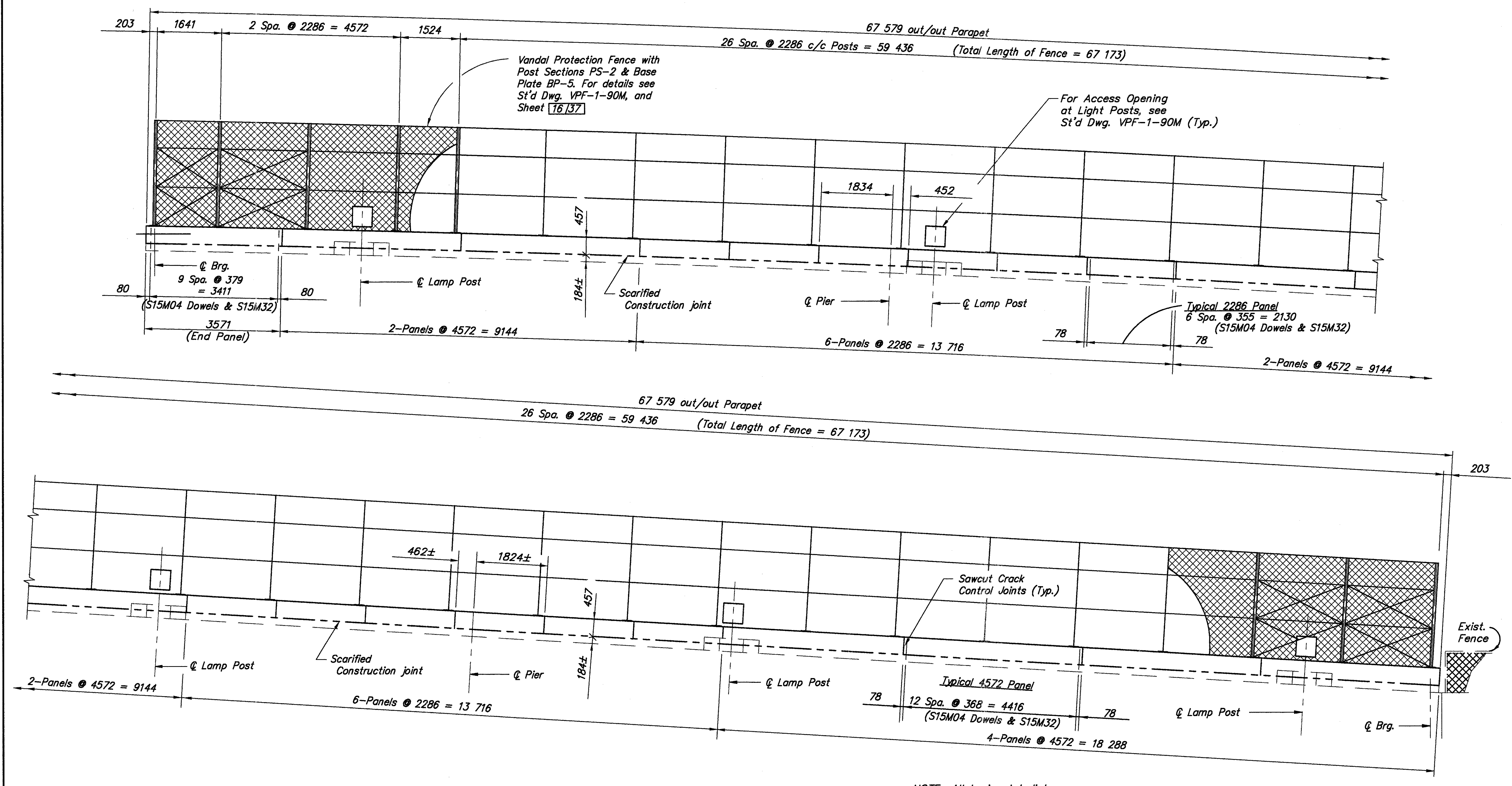
NOTE: All horizontal distances measured along deck fascia.  
Spacing of S15M04 & S15M32 bars shall be adjusted to clear fence post anchor bolts.

For General Plan see sheet 13/37  
For Existing and Proposed Transverse Section details see sheet 16/37  
For General Notes see sheet 1/37 & 2/37  
For Sawcut Crack Control Joint notes, see Concrete Parapets note on sheet 2/37

|                                                                                                                          |                 |
|--------------------------------------------------------------------------------------------------------------------------|-----------------|
| DESIGN AGENCY<br>W.E. QUICKSALL & ASSOCIATES INC.<br>554 WEST HIGH AVE<br>NEW PHILADELPHIA, OHIO<br>CONSULTING ENGINEERS |                 |
| DATE<br>10/1/97                                                                                                          | REVIEWED<br>wdg |
| STRUCTURE FILE NUMBER<br>0700630                                                                                         | DRAWN<br>JMG    |
| DESIGNED<br>FDH                                                                                                          | CHECKED<br>ZRD  |
| PARAPET & FENCE DETAILS<br>BRIDGE NO. BEL-7-36164<br>PEDESTRIAN BRIDGE OVER S.R. 7                                       |                 |
| BEL-7-32.276                                                                                                             |                 |
| 14/37                                                                                                                    |                 |
| 213<br>242                                                                                                               |                 |



13321-01.03(2)BPR.dwg - OCT 22, 1997 - 14:30:12



RIGHT SIDE PARAPET & FENCE

NOTE: All horizontal distances measured along deck fascia.  
Spacing of S15M04 & S15M32 bars shall be adjusted to clear fence post anchor bolts.

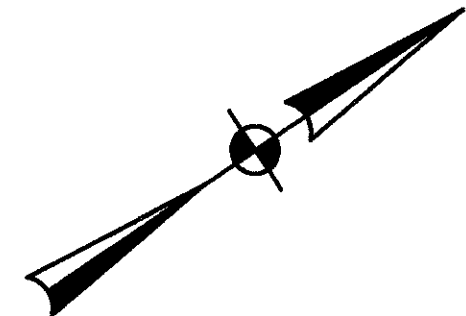
For General Plan see sheet 13/37  
For End of Parapet Details see sheet 14/37  
For Existing and Proposed Transverse Section details see sheet 16/37  
For General Notes see sheet 1/37 & 2/37  
For Sawcut Crack Control Joint notes, see Concrete Parapets note on sheet 2/37

|                                                                                                                           |                 |
|---------------------------------------------------------------------------------------------------------------------------|-----------------|
| DESIGN AGENCY<br>W.E. QUICKSALL & ASSOCIATES INC.<br>554 WEST HIGH AVE.<br>NEW PHILADELPHIA, OHIO<br>CONSULTING ENGINEERS |                 |
| DATE<br>10/97                                                                                                             | REVIEWED<br>wda |
| STRUCTURE FILE NUMBER<br>0700630                                                                                          | DRAWN<br>JMG    |
| CHECKED<br>JRP                                                                                                            | DESIGNED<br>FDH |
| PARAPET & FENCE DETAILS<br>BRIDGE NO. BEL-7-36164<br>PEDESTRIAN BRIDGE OVER S.R. 7                                        |                 |
| BEL-7-32.276                                                                                                              |                 |
| 15/37                                                                                                                     |                 |
| 214<br>242                                                                                                                |                 |

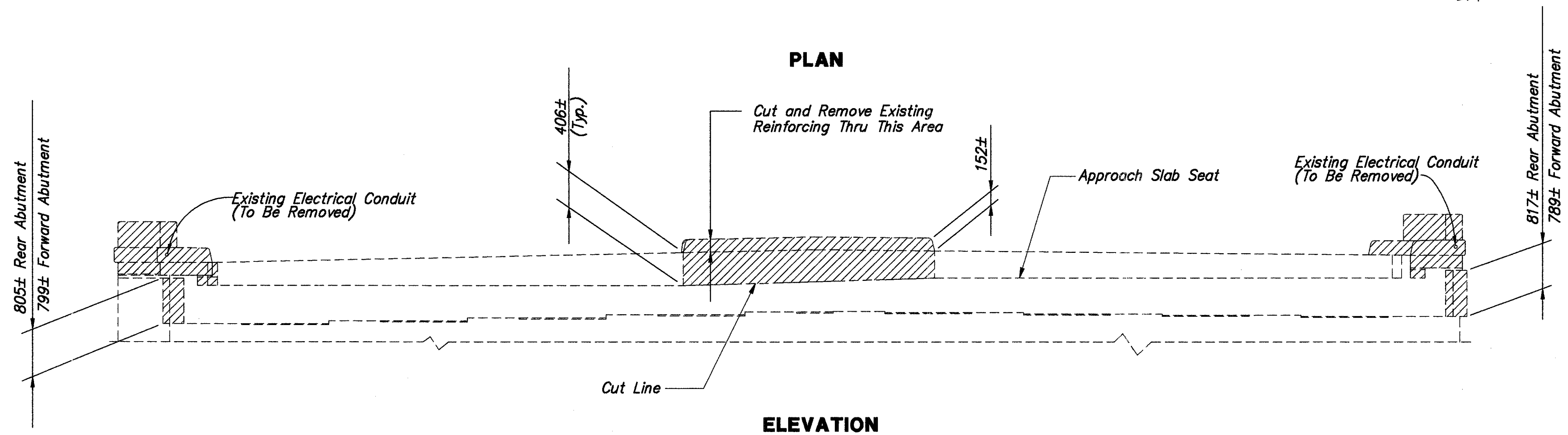
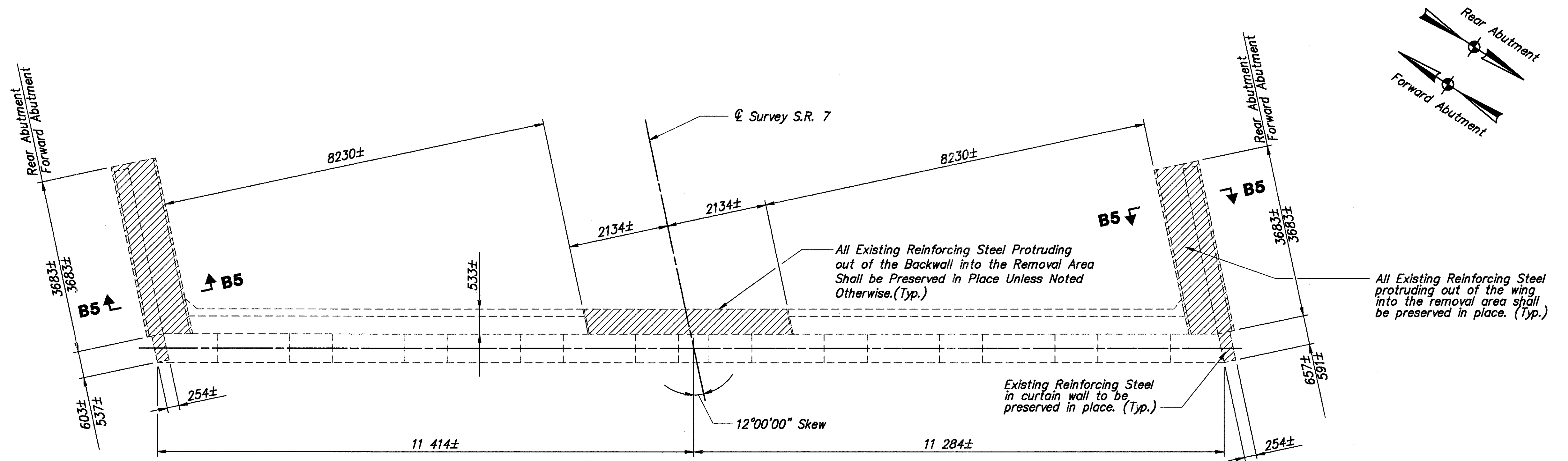




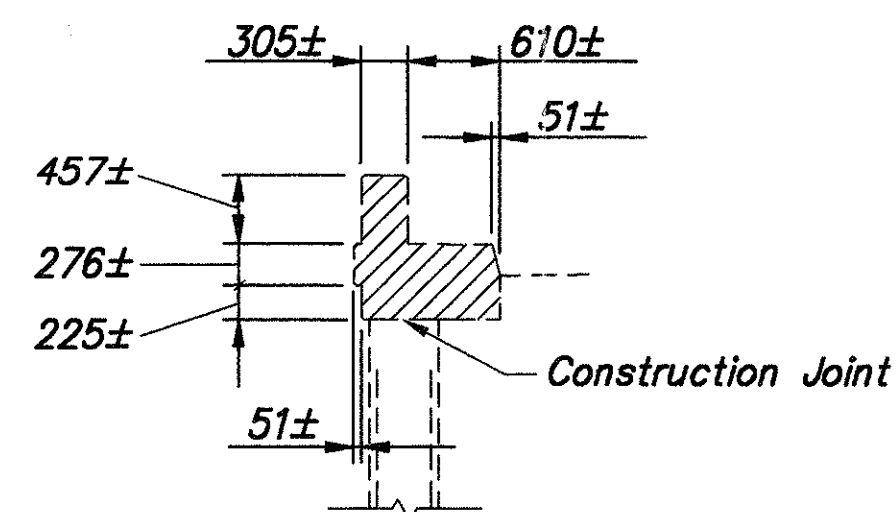








Railing removal to be included with Item 202 Removal Miscellaneous: Portions of Structure Removed, Abutments, As Per Plan. (Railing not shown)



Note:  
Reinforcing Steel to be removed to the Construction Joint, unless noted otherwise.



DESIGN AGENCY  
W.E. QUICKSALL & ASSOCIATES INC.  
554 WEST HIGH AVE  
NEW PHILADELPHIA, OHIO  
CONSULTING ENGINEERS

DATE 10/19/97  
REVIEWED Wda  
DRAWN PMZ  
DESIGNED FDH  
CHECKED ZRP

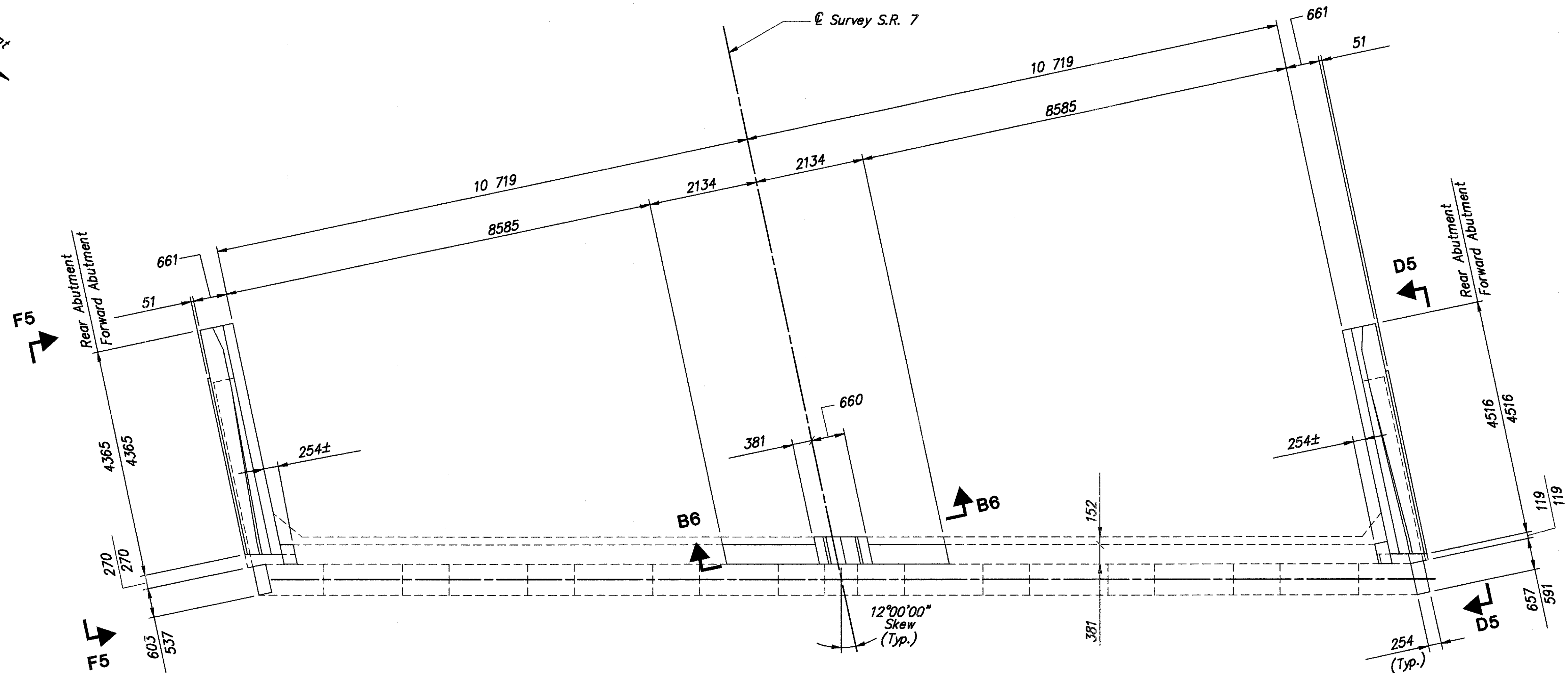
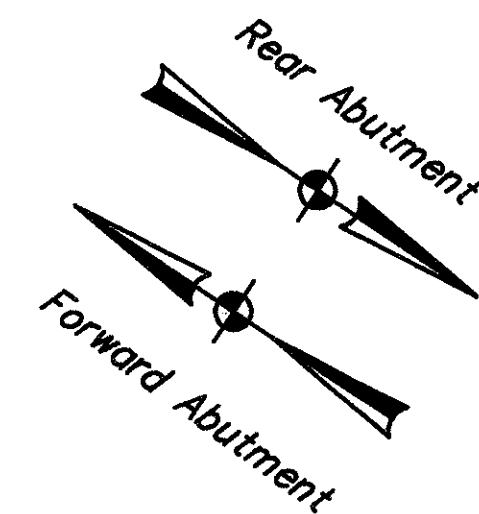
REAR & FORWARD ABUTMENT DETAILS  
BRIDGE NO. BEL-7-36368 L/R  
S.R. 7 OVER CENTER STREET

BEL-7-32.276

18/37

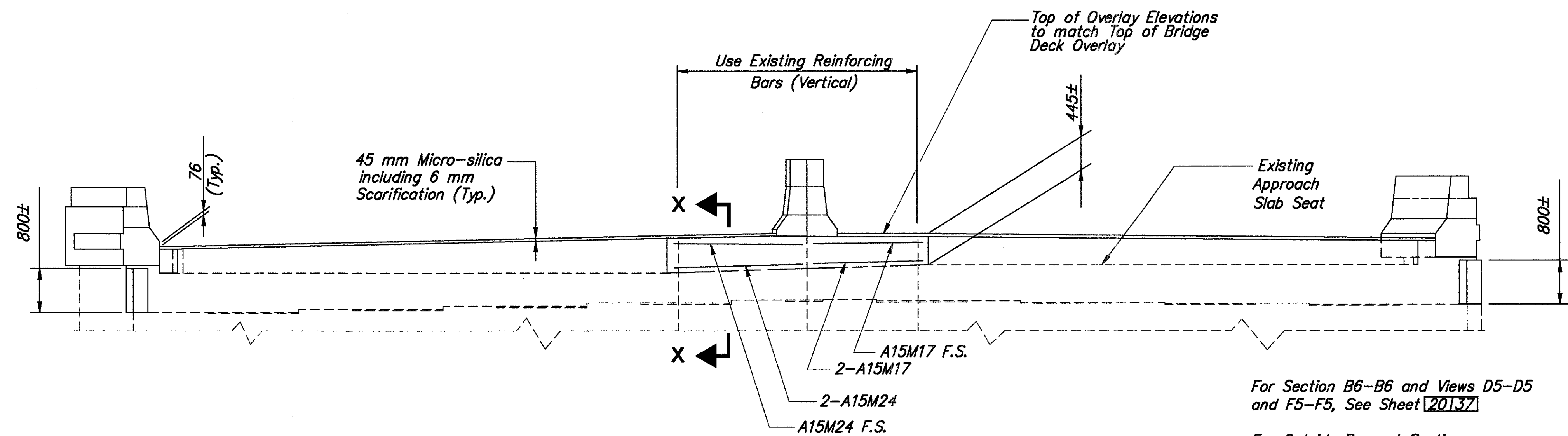
217  
242





### FORWARD ABUTMENT PLAN

(Rear Abutment Similar)



### FORWARD ABUTMENT ELEVATION

(Rear Abutment Similar)

For Section B6-B6 and Views D5-D5 and F5-F5, See Sheet **20137**

For Outside Parapet Sections, See Sheet **31137**

For Section X-X, See Sheet **20137**

DESIGN AGENCY  
W.E. QUICKSALL & ASSOCIATES INC.  
554 WEST HIGH AVE.  
NEW PHILADELPHIA, OHIO  
CONSULTING ENGINEERS

DATE  
10/97  
REVIEWED  
Wda  
STRUCTURE FILE NUMBER  
0700665

DRAWN  
PMZ  
REVIEWED

DESIGNED  
FDH  
CHECKED  
ZRD

REAR & FORWARD ABUTMENT DETAILS

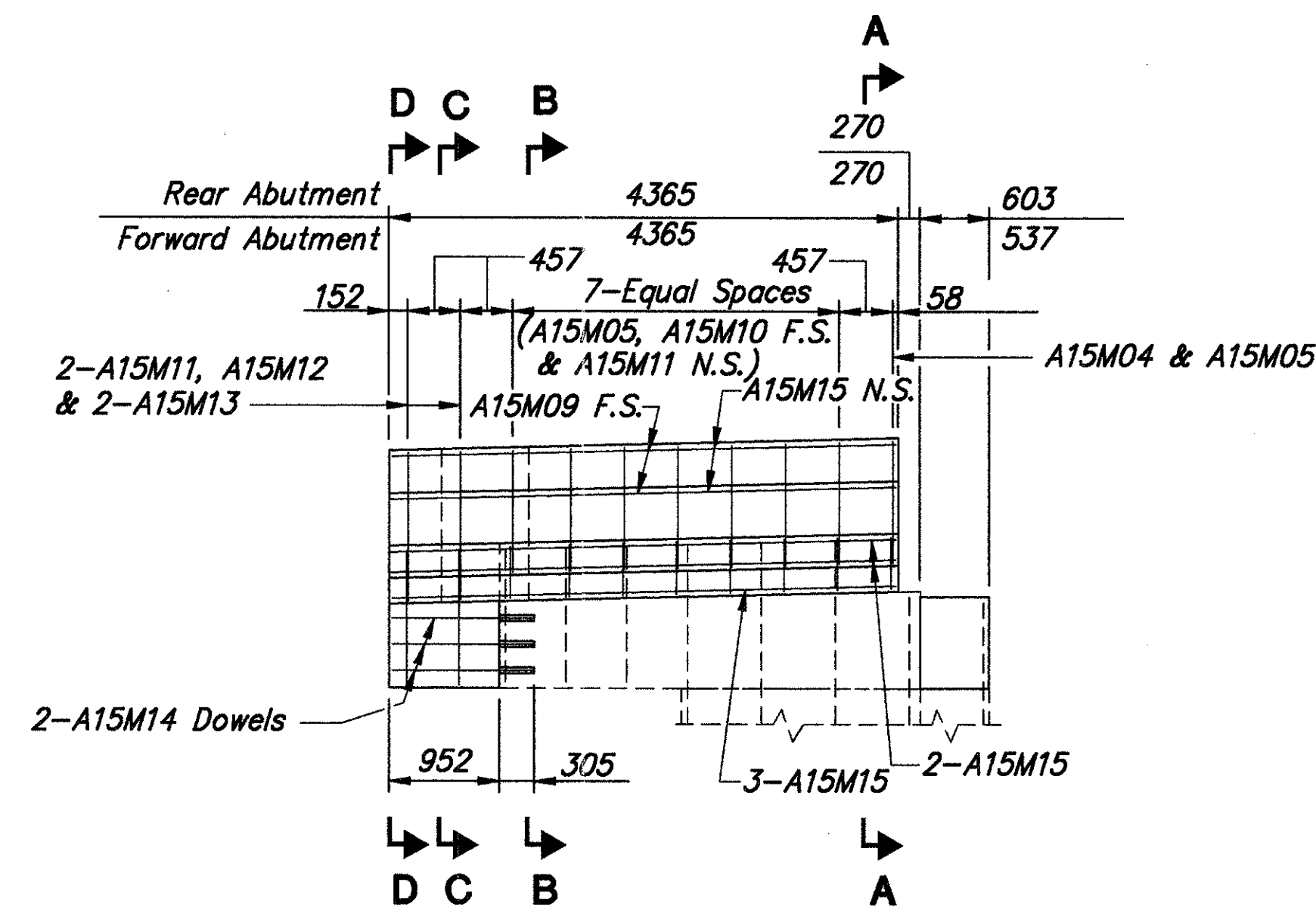
BRIDGE NO. BEL-7-36368 L/R  
S.R. 7 OVER CENTER STREET

BEL-7-32.276

19/37

218  
242

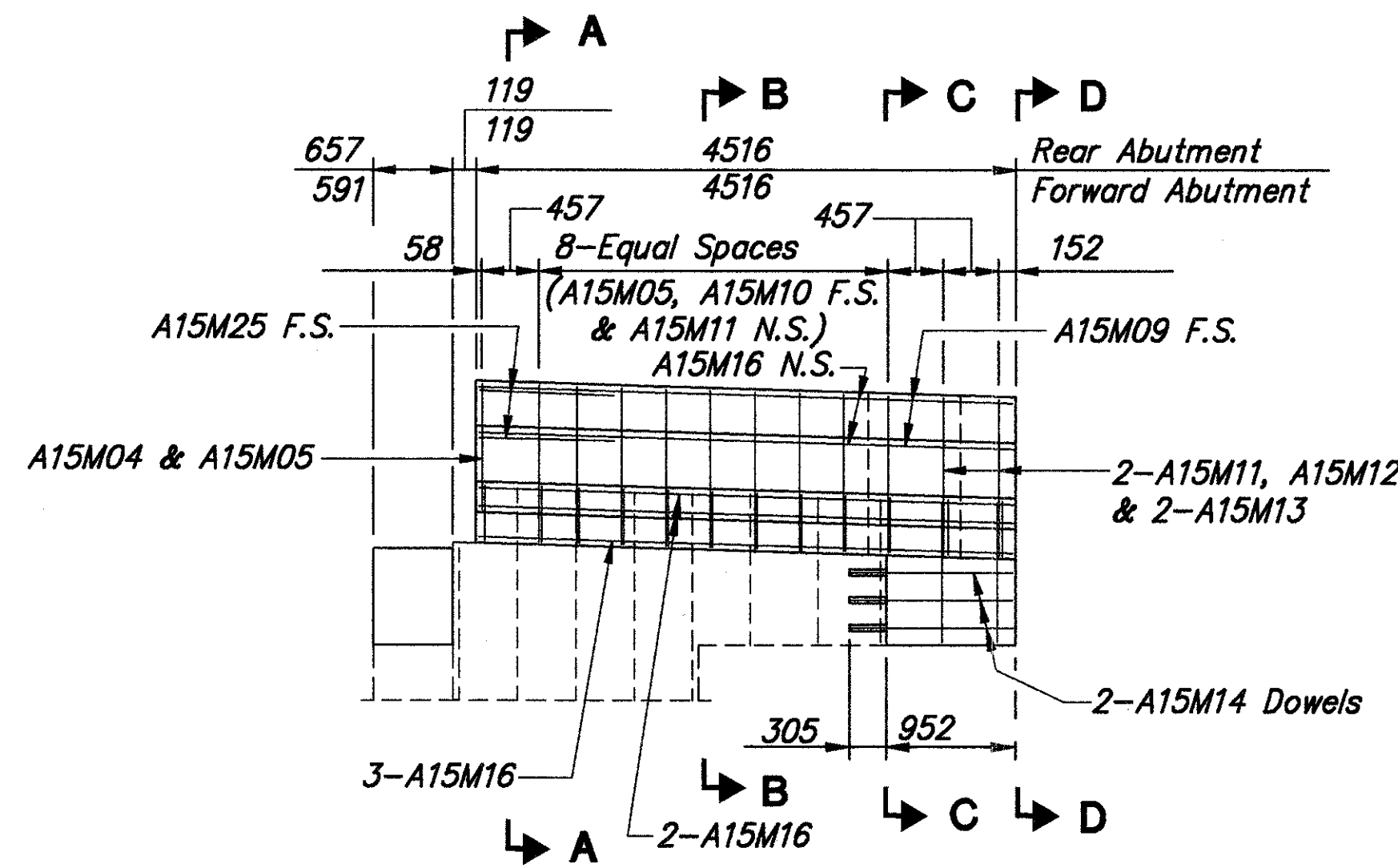




**VIEW F5-F5**  
(Left Forward & Right Rear)

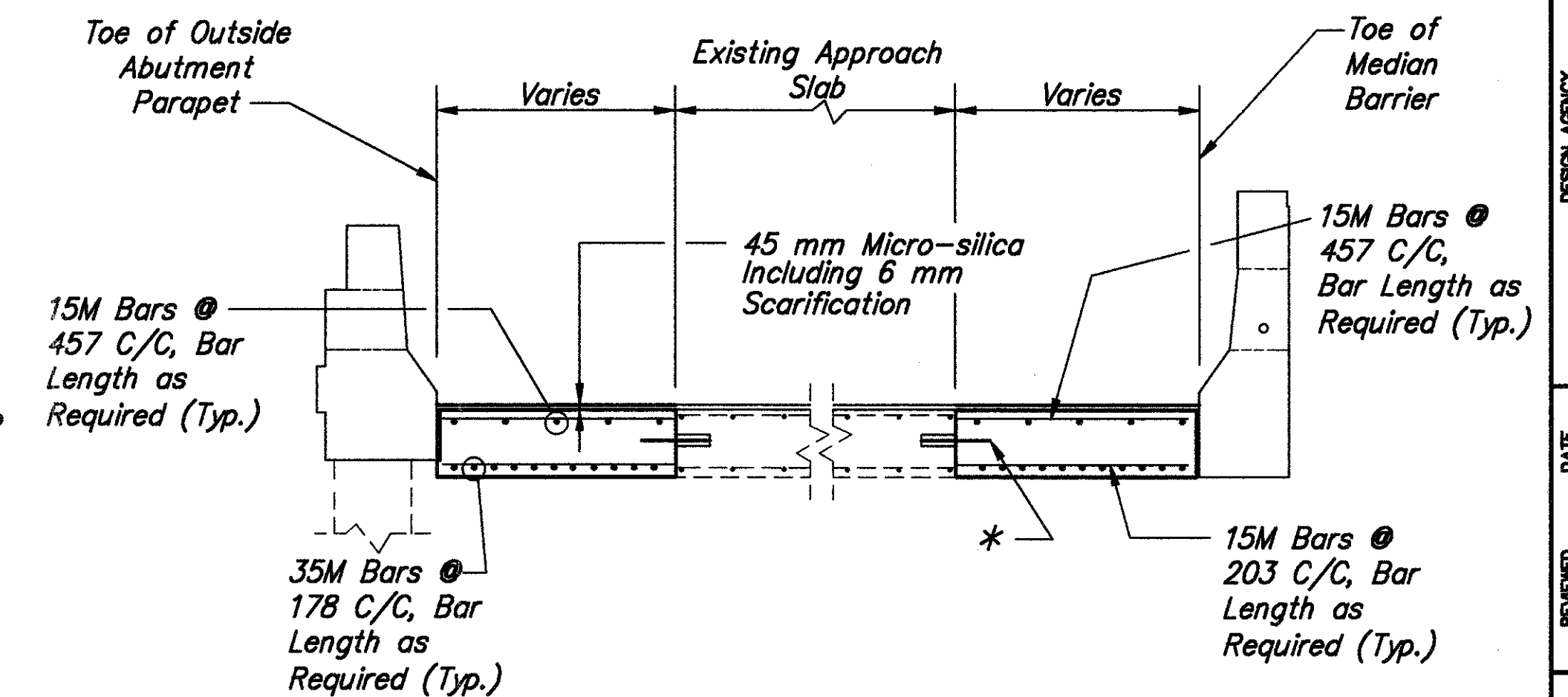
For Details not Shown,  
See Sheet **31.37**

See Normal Parapet Ending  
Detail on Sheet **32.37**



**VIEW D5-D5**  
(Right Forward & Left Rear)

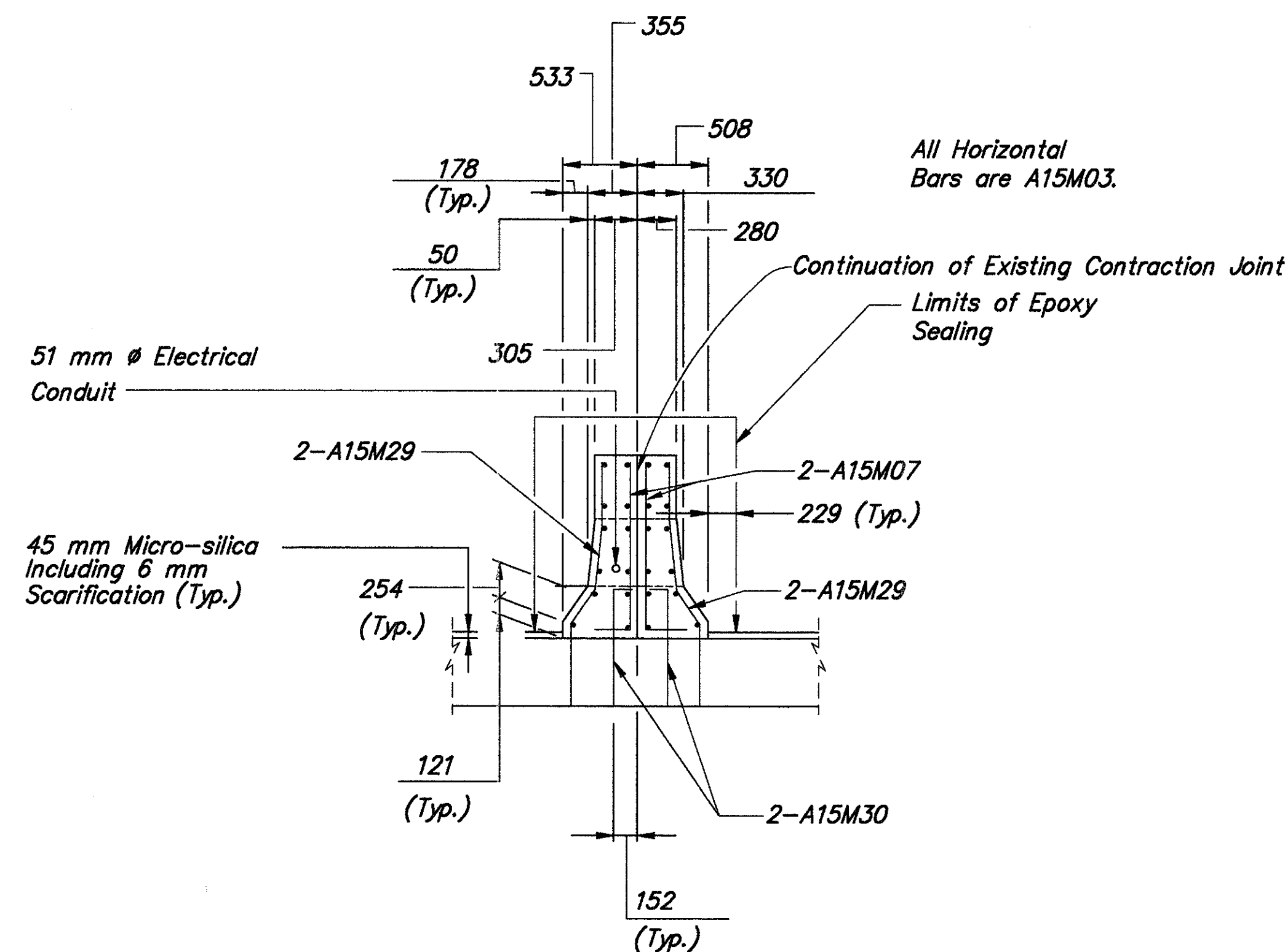
For Outside Parapet Sections,  
See Sheet **31.37**



**APPROACH SLAB WIDENING  
DETAIL AT ABUTMENT**

(Left Structure Shown,  
Right Structure Similar)

For details and notes not shown,  
see St'd Dwg. AS-1-81M

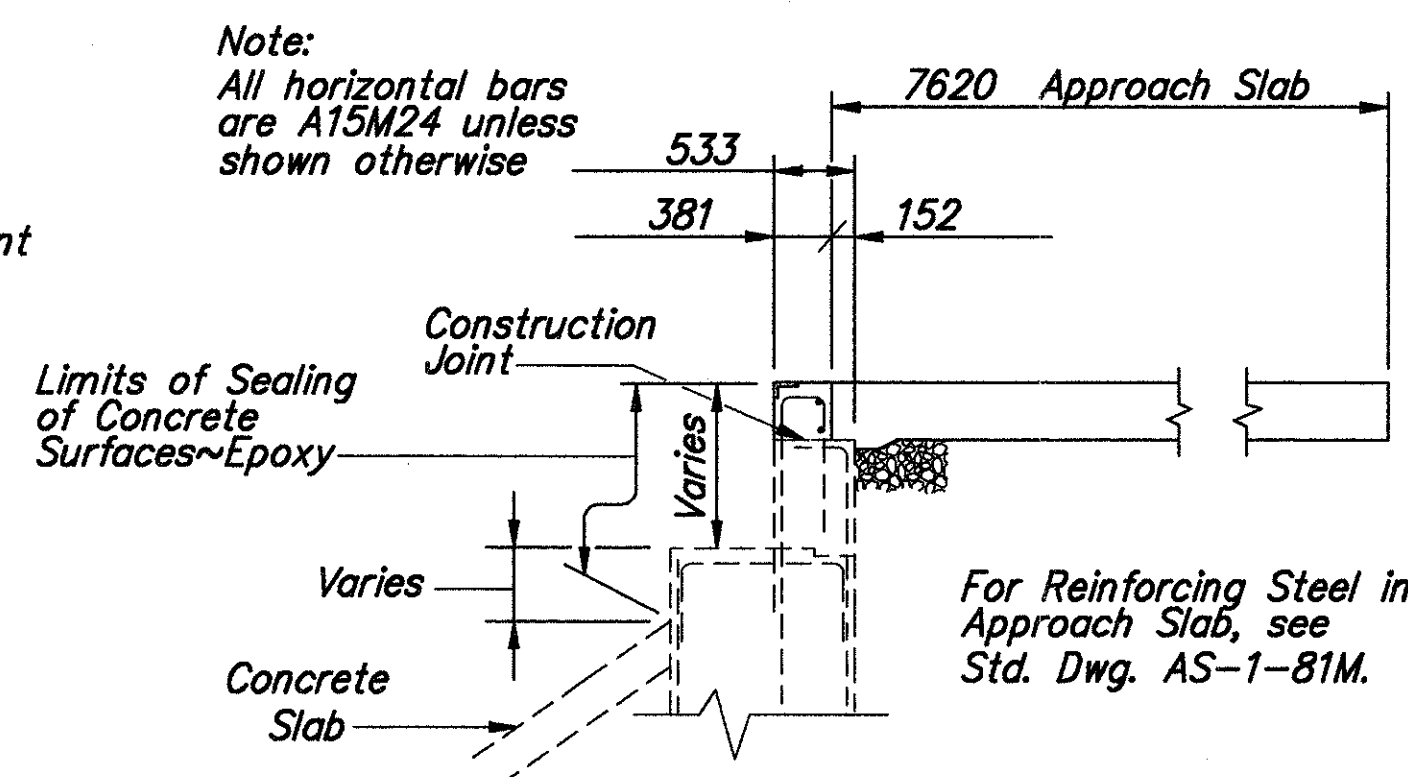


**SECTION B6-B6**  
(Looking Upstation)

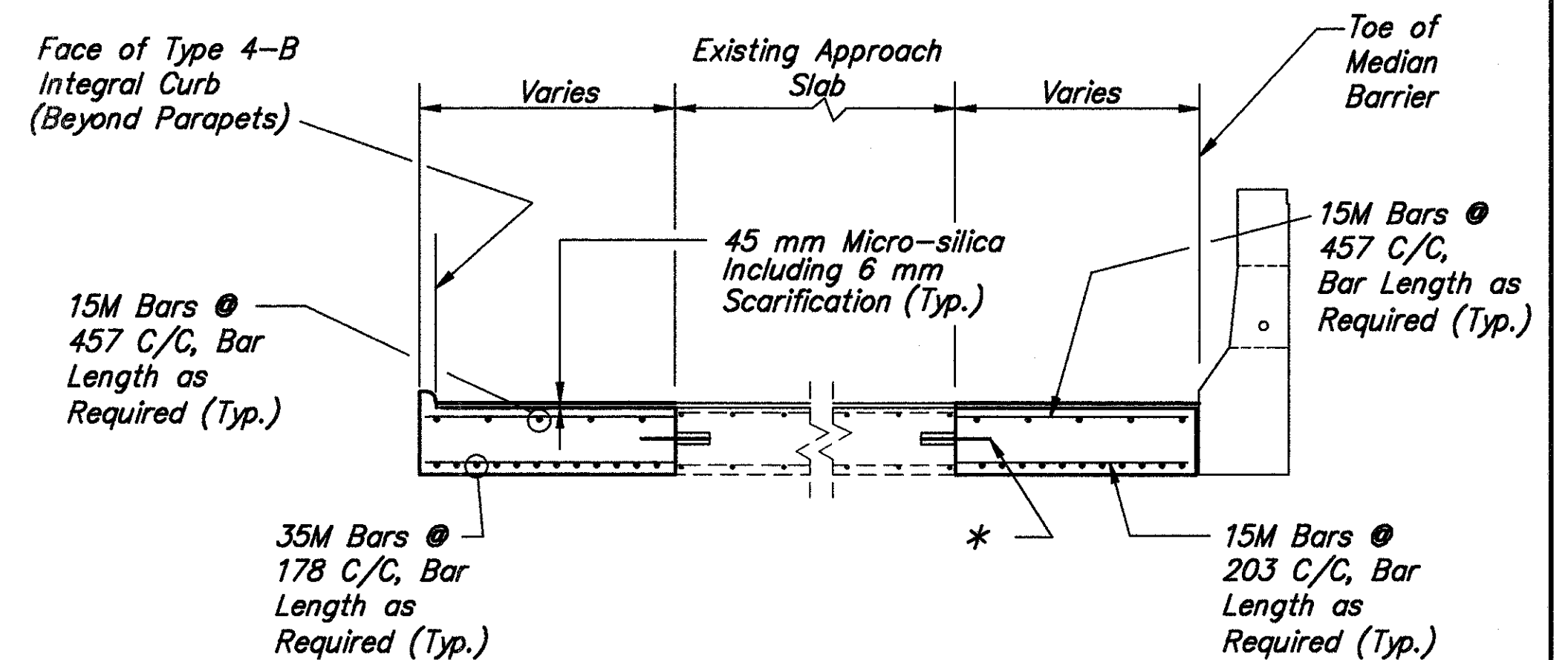
Note:

See Sheet **21.37** for  
Location of  $\phi$  Survey S.R. 7.

For Additional Median Barrier Dimensions,  
See Sheet **32.37**



**SECTION X-X**  
(Section Thru Widened Approach Slab)



**APPROACH SLAB WIDENING  
DETAIL AT CURBED APPROACH SLAB**

(Left Structure Shown,  
Right Structure Similar)

For details and notes not shown,  
see St'd Dwg. AS-1-81M

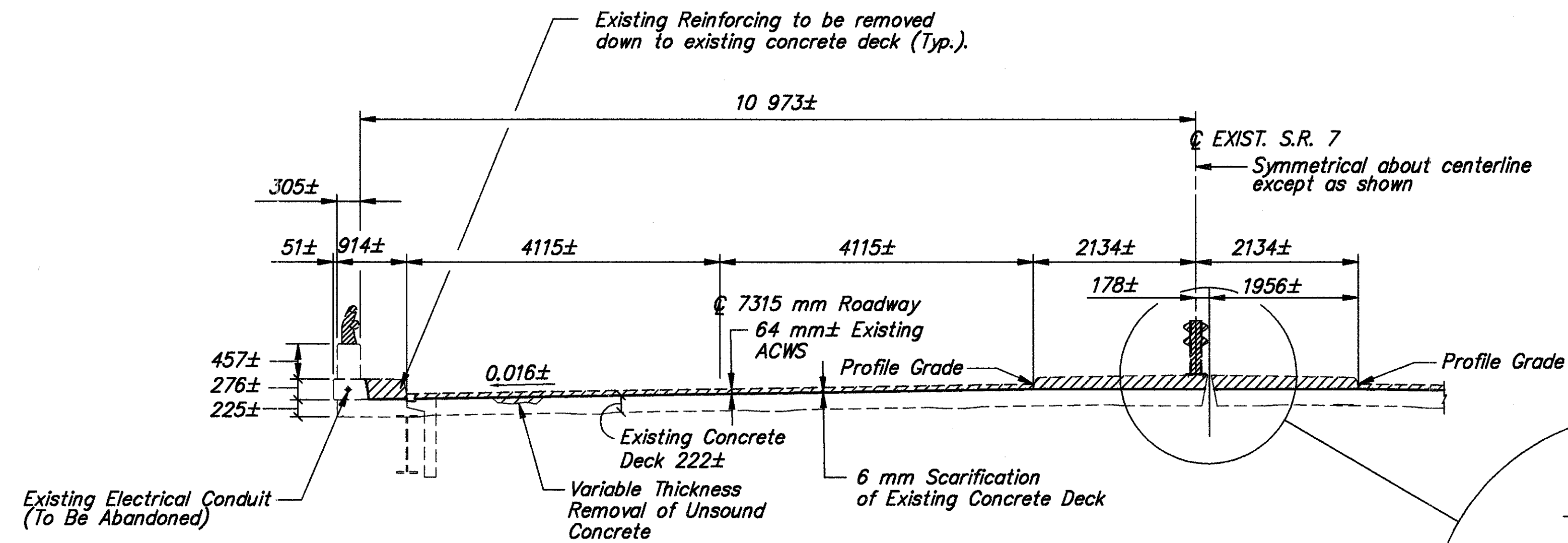
\* Longitudinal Joint shall be constructed per  
Standard Drawing BP-2.1M. Spacing of the tie bars  
or hook bolts shall be no more than 762 nor  
less than 610.

Notes:

N.S. Denotes Near Side  
F.S. Denotes Far Side

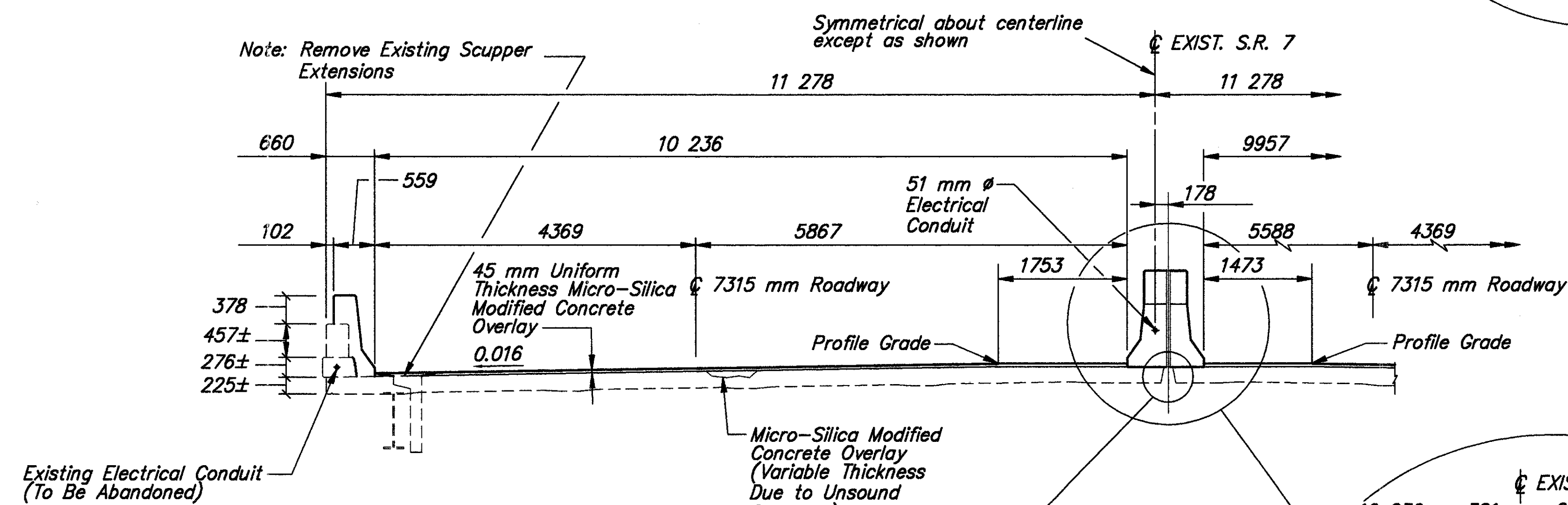
For Abutment Plan and Elevation,  
See Sheet **19.37**



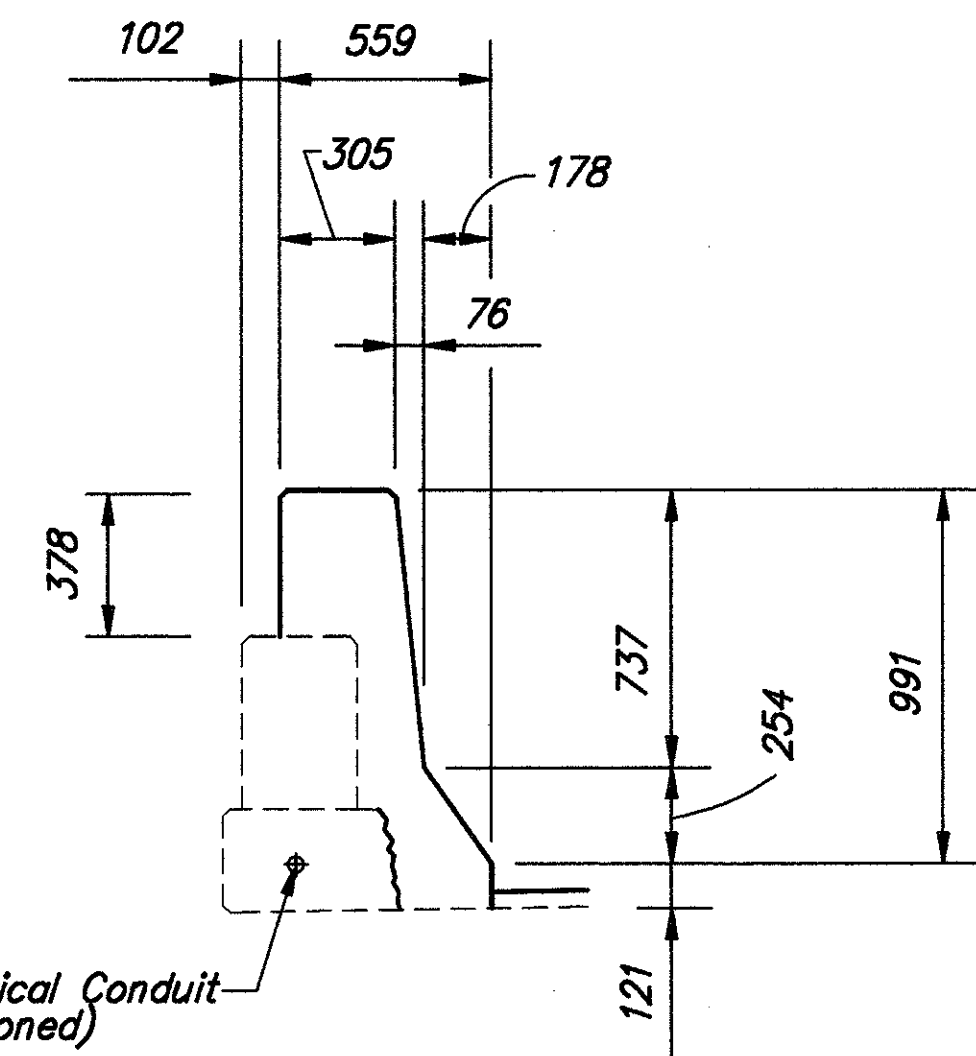


EXISTING NORMAL TRANSVERSE SECTION

Denotes Removal

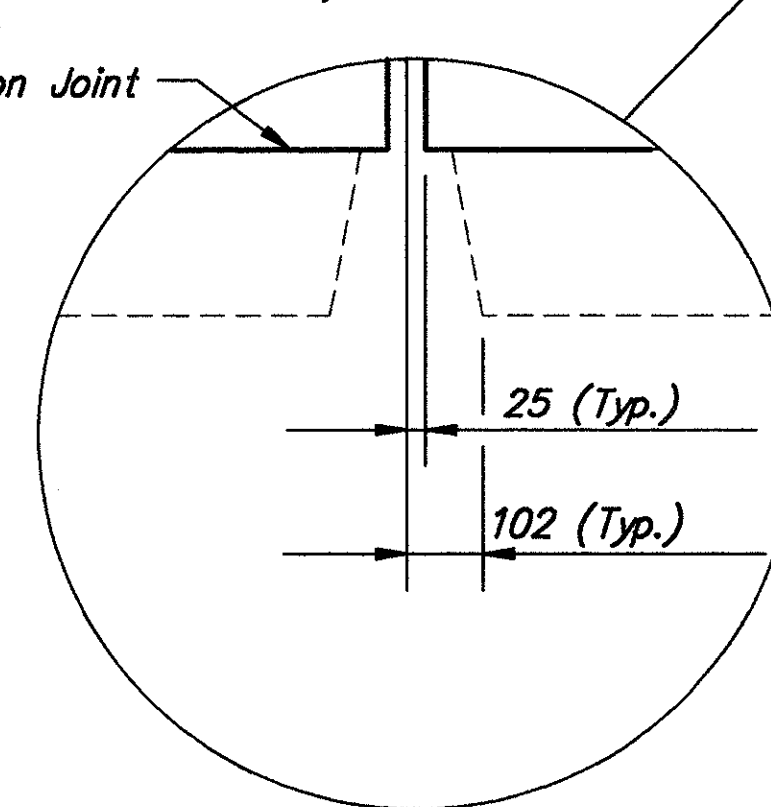


PROPOSED NORMAL TRANSVERSE SECTION

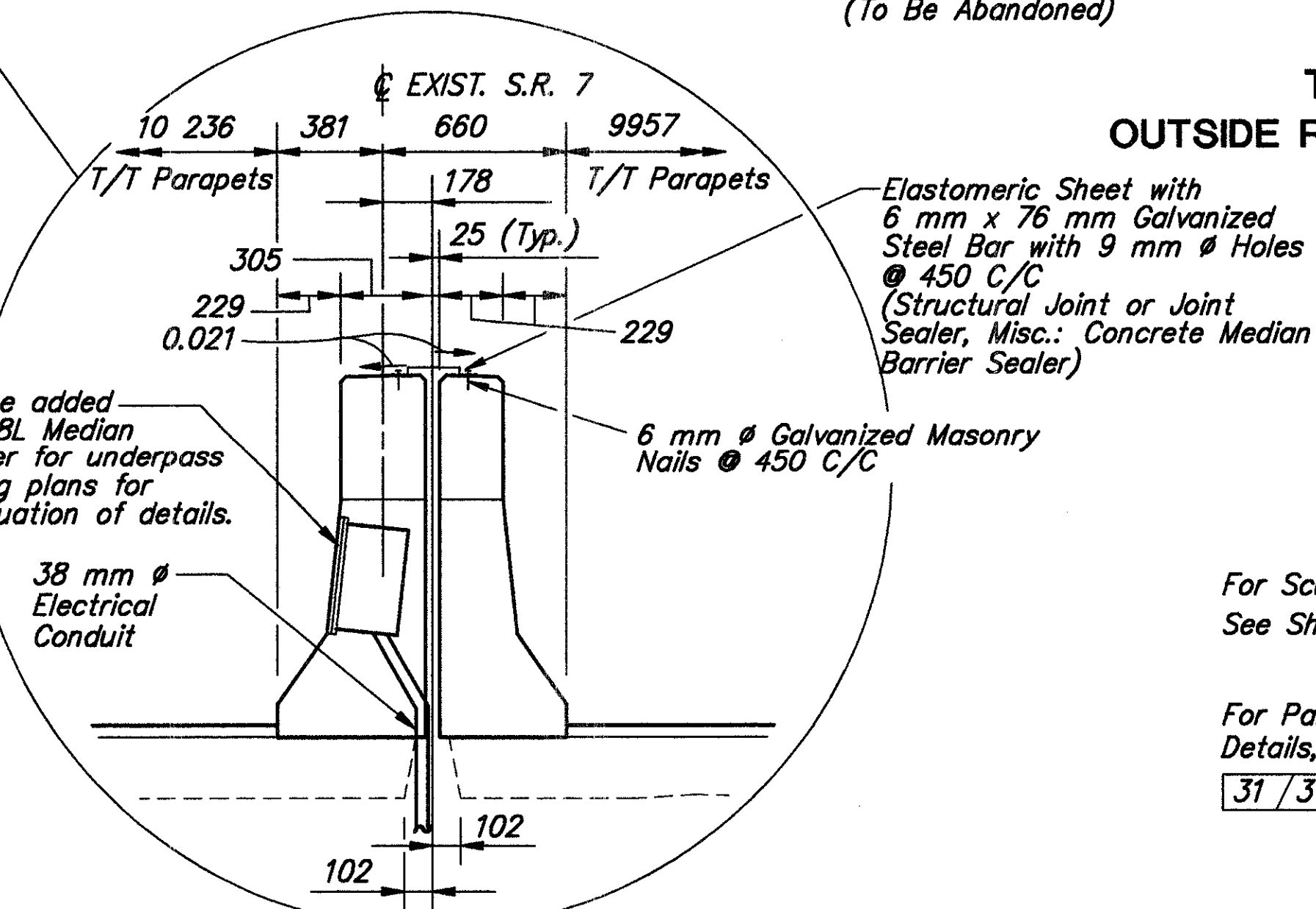


TYPICAL OUTSIDE RAILING REFACING

Existing Electrical Conduit (To Be Abandoned)



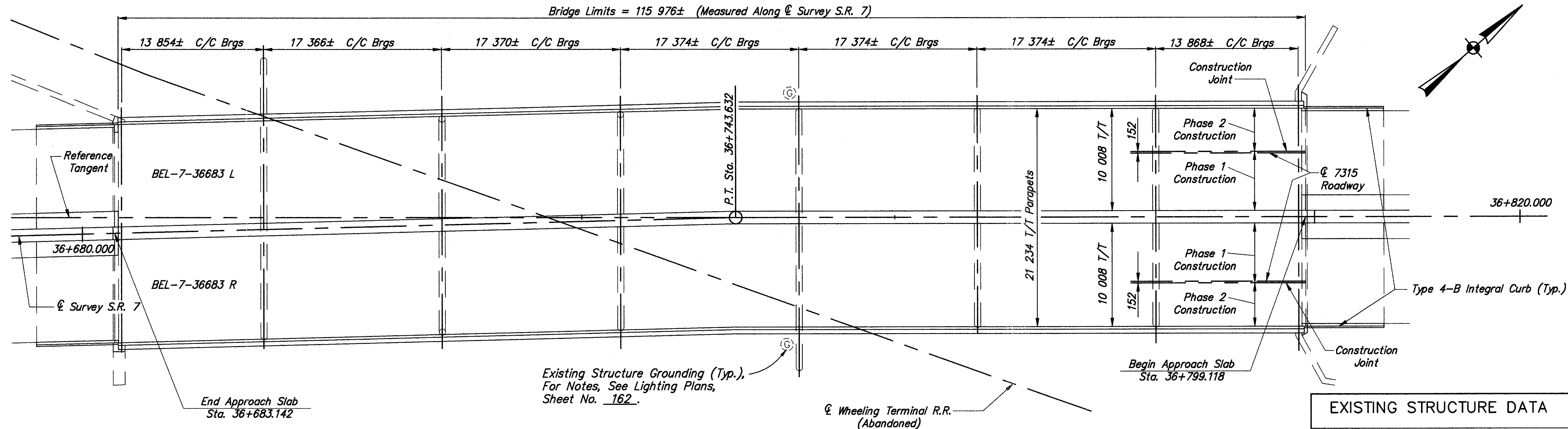
Junction Box shall be added to the BEL-7-36368L Median Barrier to drop power for underpass lighting. See lighting plans for locations and continuation of details.



For Scupper Details And Notes, See Sheet 33/37

For Parapet and Median Barrier Reinforcing Details, See Sheets 29/37, 30/37, 31/37 & 32/37





# PLAN

## S.R. 7 CURVE DATA

P.I. = Sta. 36+667.639  
 $\Delta$  = 07°18'16" Rt.  
R = 1193.801m  
T = 76.200m  
L = 152.193m  
E = 2.429m  
 $e_{max}$  = .035m

## PROPOSED WORK

- REPLACE EXISTING ASPHALT CONCRETE WEARING SURFACE WITH 45 mm THICKNESS OF MICRO-SILICA OVERLAY.
- REFACE OUTSIDE RAILING WITH DEFLECTOR-TYPE SHAPE.
- REPLACE EXISTING CURBED MEDIAN WITH NEW CURBED MEDIAN.
- PROVIDE ELASTOMERIC STRIP SEAL JOINTS WITH EXTENSIONS AT ABUTMENTS.
- CLEAN AND PAINT STRUCTURAL STEEL, USING SYSTEM OZEU.
- EXTEND SCUPPERS 200 mm MINIMUM BELOW BEAMS.
- EPOXY SEAL ABUTMENT BACKWALLS AND SEATS, MEDIAN CURB AND PARAPETS.
- REPLACE EXISTING LIGHTING. (SEE HIGHWAY PLANS)

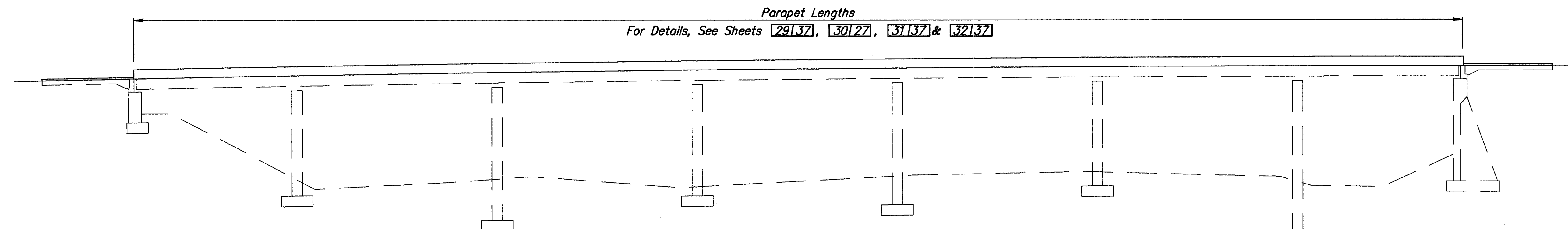
FOR QUANTITIES, SEE SHEET NO. 3137

## EXISTING STRUCTURE DATA

TYPE: CONTINUOUS STEEL BEAM WITH REINF. CONCRETE DECK AND SUBSTRUCTURE  
SPANS: 13 854± mm, 5 SPANS @ 17 370± mm AND 13 868± mm C/C BRGS ALONG  $\mathcal{C}$   
ROADWAY: 20 726± mm T/T CURBS  
LOADING: C.F. 2000 (57)  
SKEW: NONE TO REFERENCE TANGENT  
WEARING SURFACE: 72± mm ASPHALT CONC. ON 25± mm MONOLITHIC CONCRETE  
APPROACH SLABS: AS-1-54, 7620± mm LG  
ALIGNMENT: 1°28' CURVE RT. & TANGENT  
SUPERELEVATION: VARIES

## REHABILITATED STRUCTURE

ROADWAY: 21 234 mm T/T PARAPETS  
WEARING SURFACE: 45mm MICRO-SILICA MODIFIED CONCRETE OVERLAY



# ELEVATION

DESIGN AGENCY  
W.E. QUICKSALL & ASSOCIATES INC.  
554 WEST HIGH AVE.  
NEW PHILADELPHIA, OHIO  
CONSULTING ENGINEERS

DATE  
10/97  
REVIEWED  
wde  
STRUCTURE FILE NUMBER  
0700754

DRAWN  
PMZ  
CHECKED  
ZRP

BELMONT COUNTY  
STA. 36+683.142  
STA. 36+799.118

GENERAL PLAN & ELEVATION  
BRIDGE NO. BEL-7-36683 L/R  
S.R. 7 OVER WHEELING TERMINAL R.R.

BEL-7-32.276

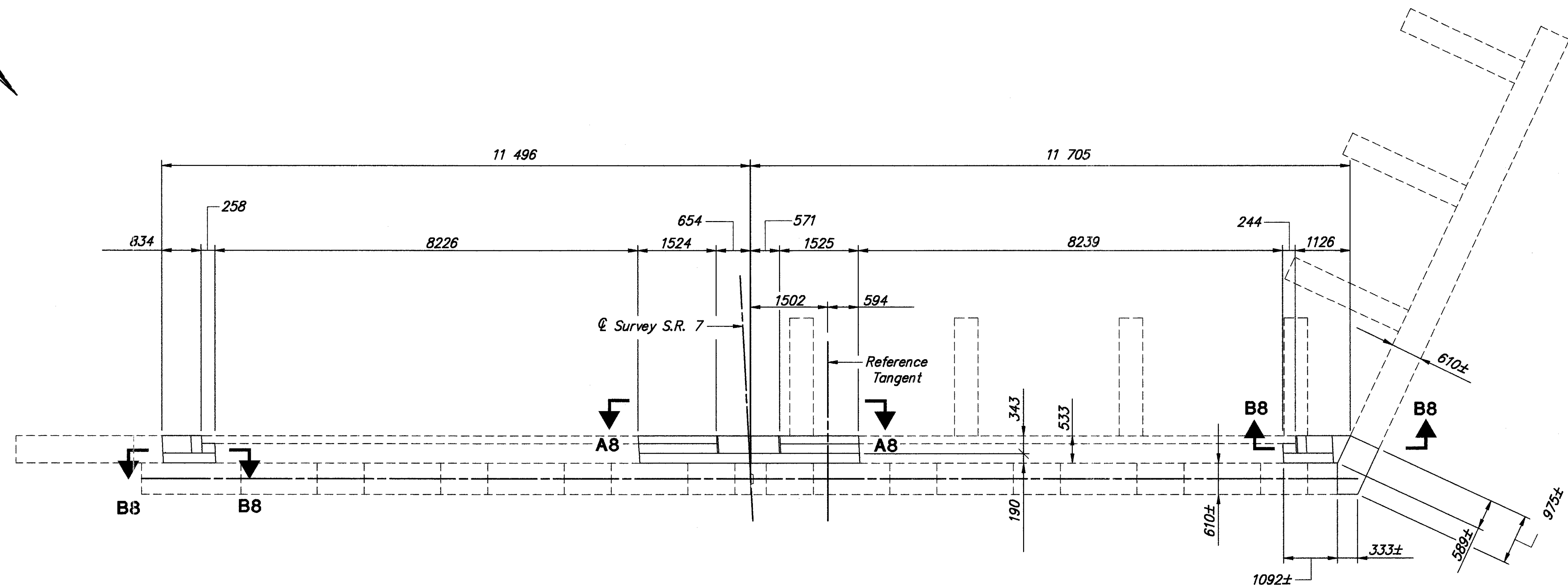
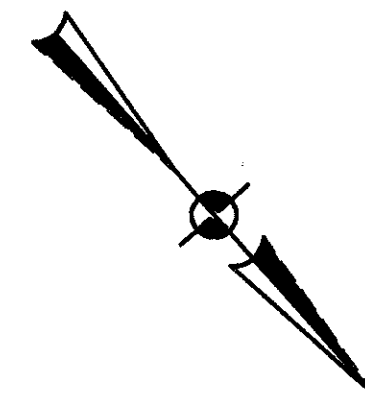
22/37

221  
242

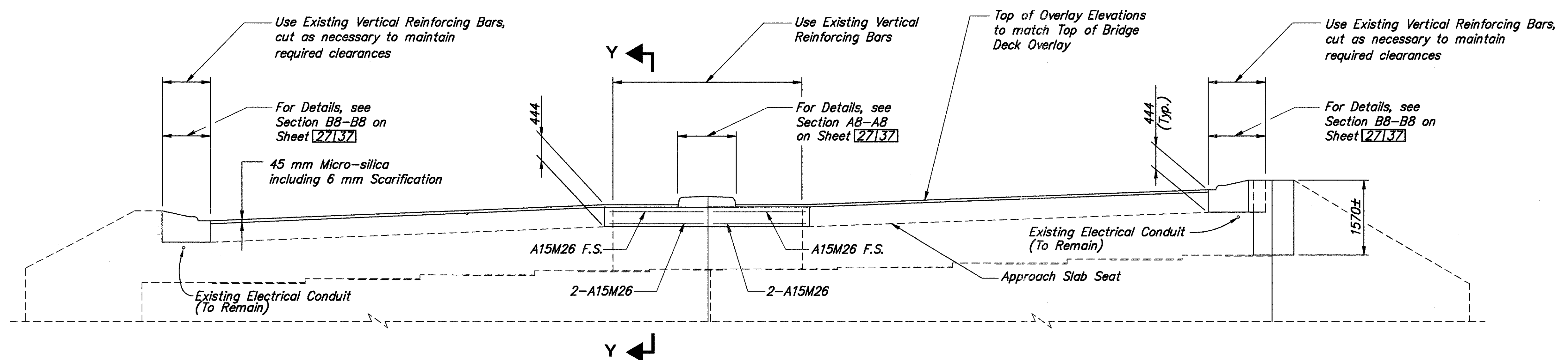








PLAN



ELEVATION

DESIGN AGENCY  
W.E. QUICKSALL & ASSOCIATES INC.  
554 WEST HIGH AVE.  
NEW PHILADELPHIA, OHIO  
CONSULTING ENGINEERS

DATE  
10/19/97  
REVIEWED  
wda  
STRUCTURE FILE NUMBER  
0700754

DRAWN  
PMZ  
REVISED

DESIGNED  
FDH  
CHECKED  
ZRP

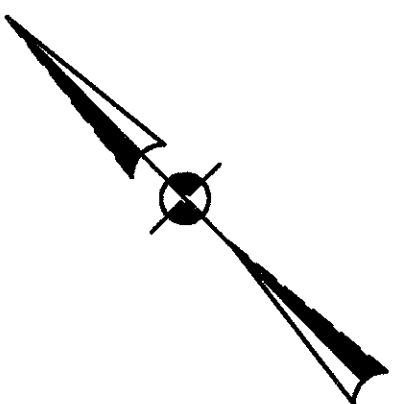
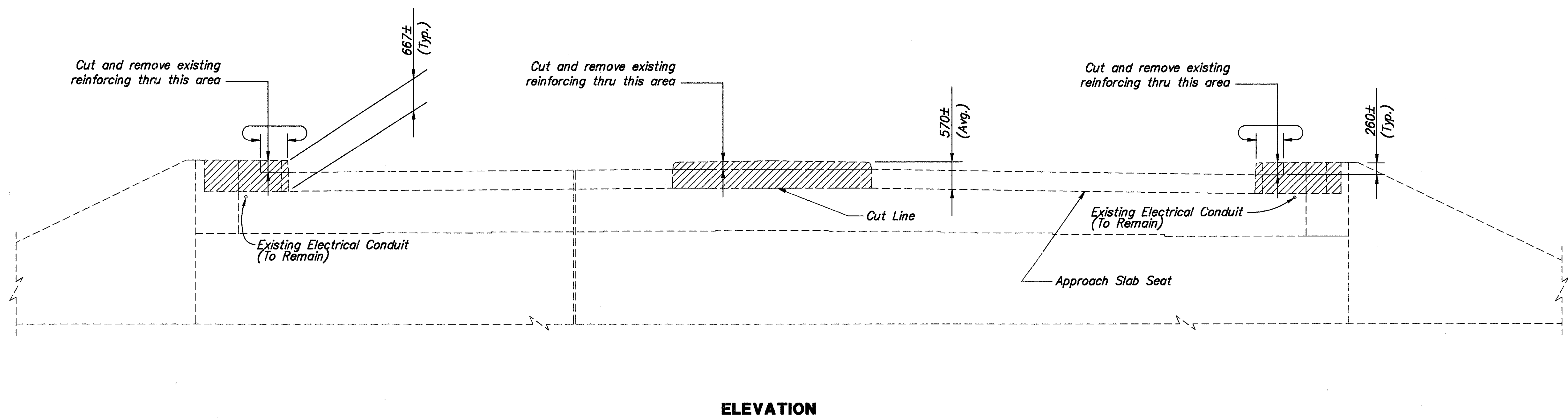
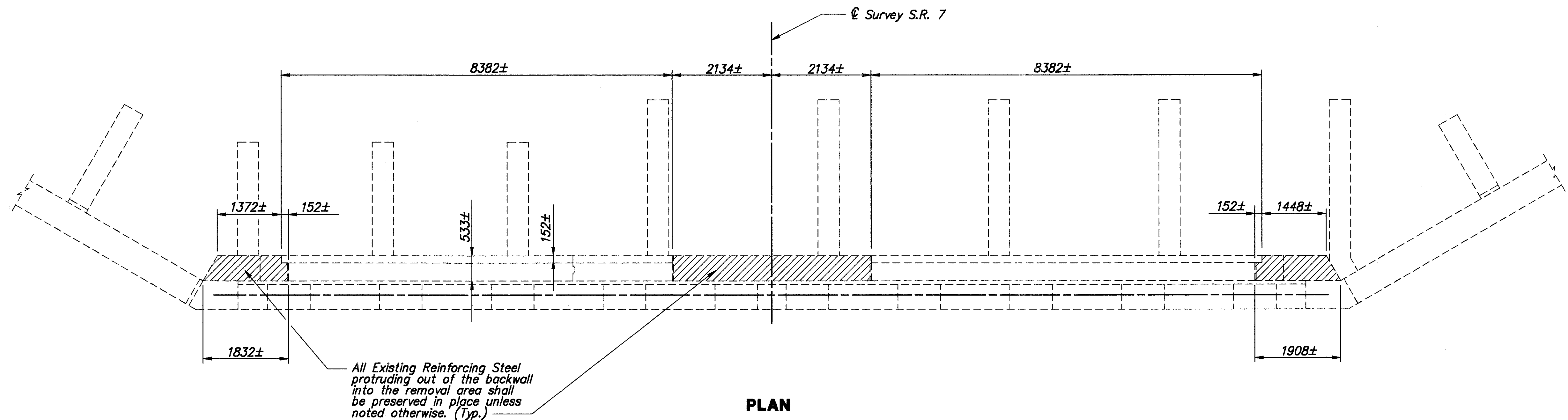
REAR ABUTMENT DETAILS  
BRIDGE NO. BEL-7-3683 L/R  
S.R. 7 OVER WHEELING TERMINAL R.R.

BEL-7-32.276

24 / 37

223  
242





DESIGN AGENCY  
W.E. QUICKSALL & ASSOCIATES INC.  
554 WEST HIGH AVE.  
NEW PHILADELPHIA, OHIO  
CONSULTING ENGINEERS

DATE 10/19/77  
REVIEWED WJC  
STRUCTURE FILE NUMBER 0700754

DRAWN PMZ  
REVIEWED

DESIGNED FDH  
CHECKED ZRD

FORWARD ABUTMENT DETAILS  
BRIDGE NO. BEL-7-3683 L/R  
S.R. 7 OVER WHEELING TERMINAL R.R.

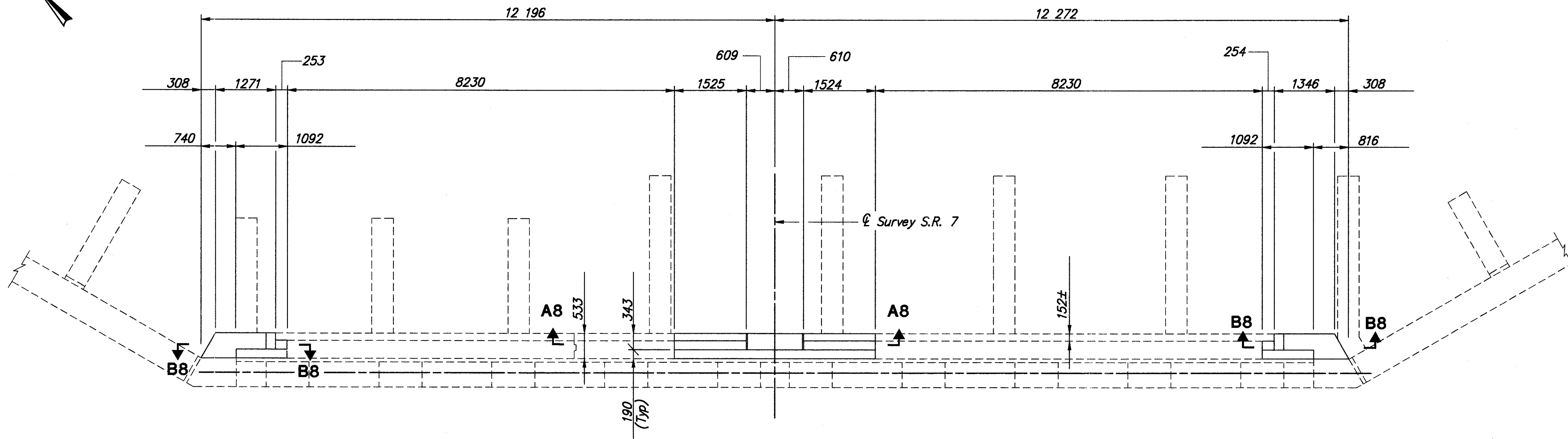
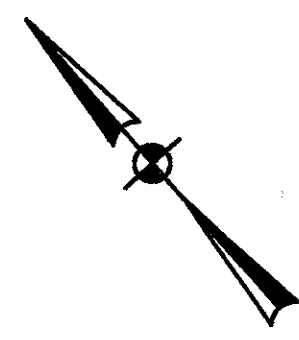
BEL-7-32.276

25/37

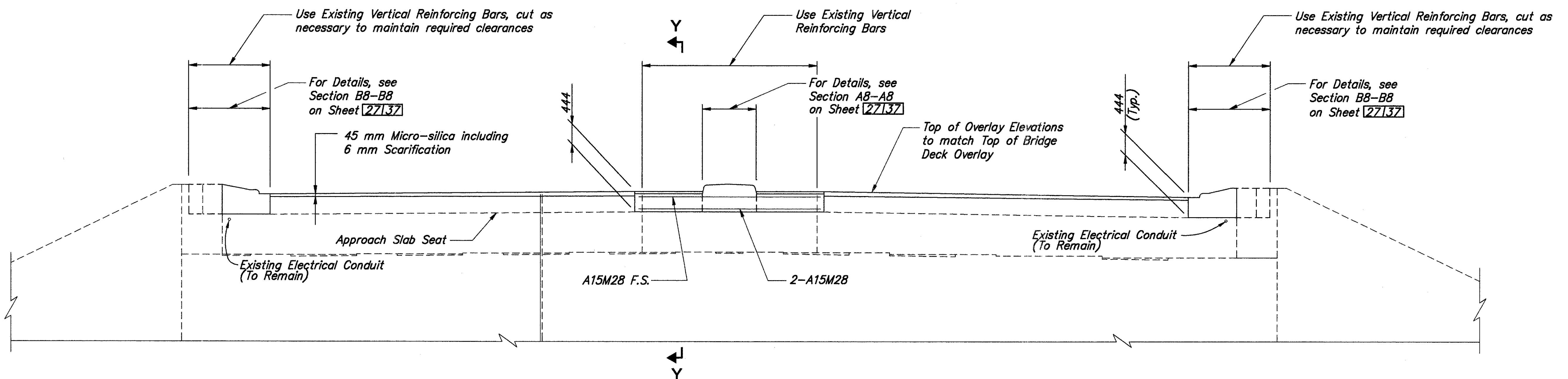
224  
242

13321-013214688.dwg - OCT 22, 1997 - 10:13:18





PLAN



ELEVATION

DESIGN AGENCY  
W.E. QUICKSALL & ASSOCIATES INC.  
554 WEST HIGH AVE.  
NEW PHILADELPHIA, OHIO  
CONSULTING ENGINEERS

|                       |         |
|-----------------------|---------|
| DATE                  | 10/97   |
| REVIEWED              | WJG     |
| STRUCTURE FILE NUMBER | 0700754 |
| DRAWN                 | PMZ     |
| CHECKED               | ZRP     |

FORWARD ABUTMENT DETAILS  
BRIDGE NO. BEL-7-36683 L/R  
S.R. 7 OVER WHEELING TERMINAL R.R.

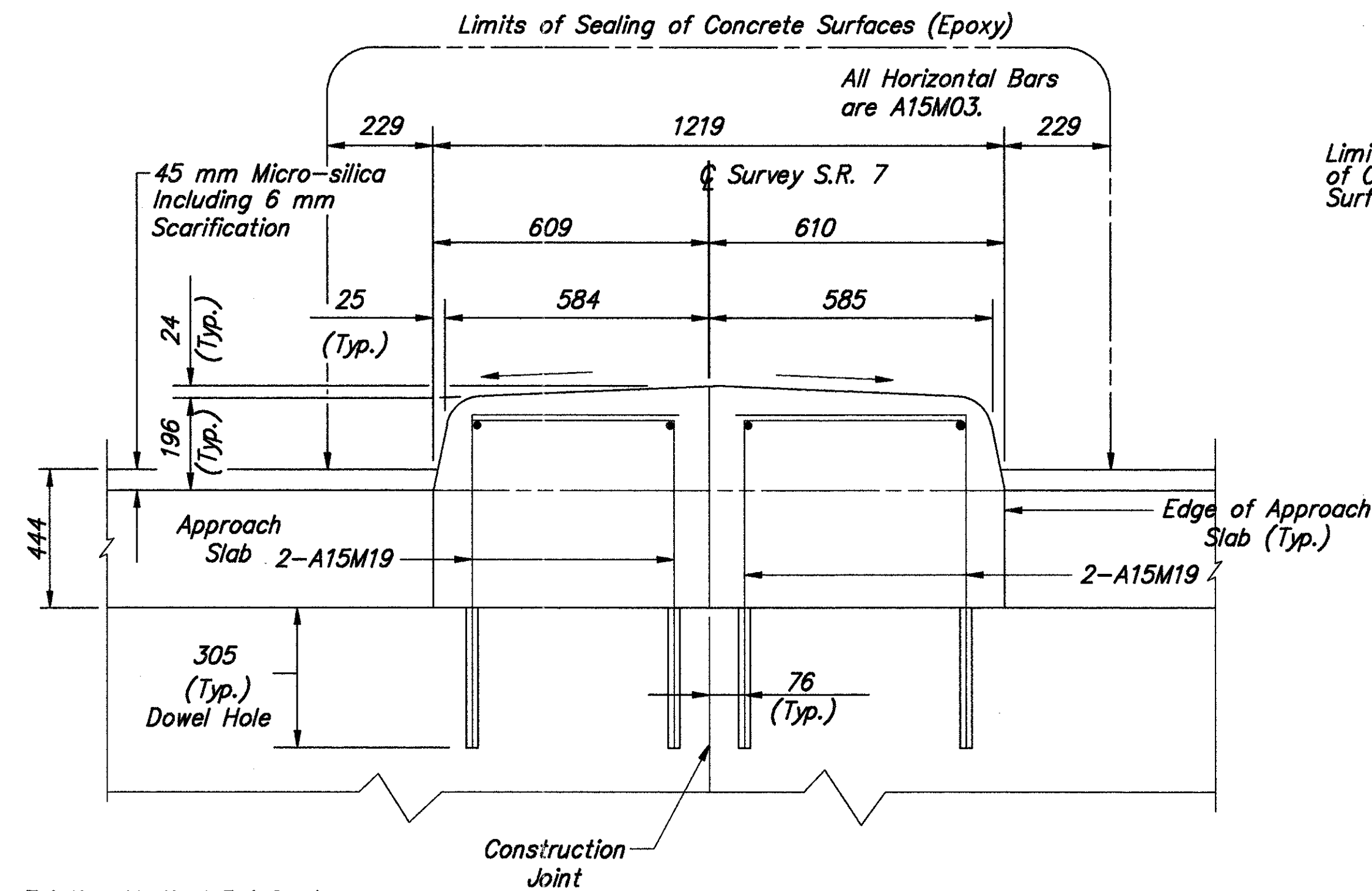
BEL-7-32.276

26 / 37

225  
242

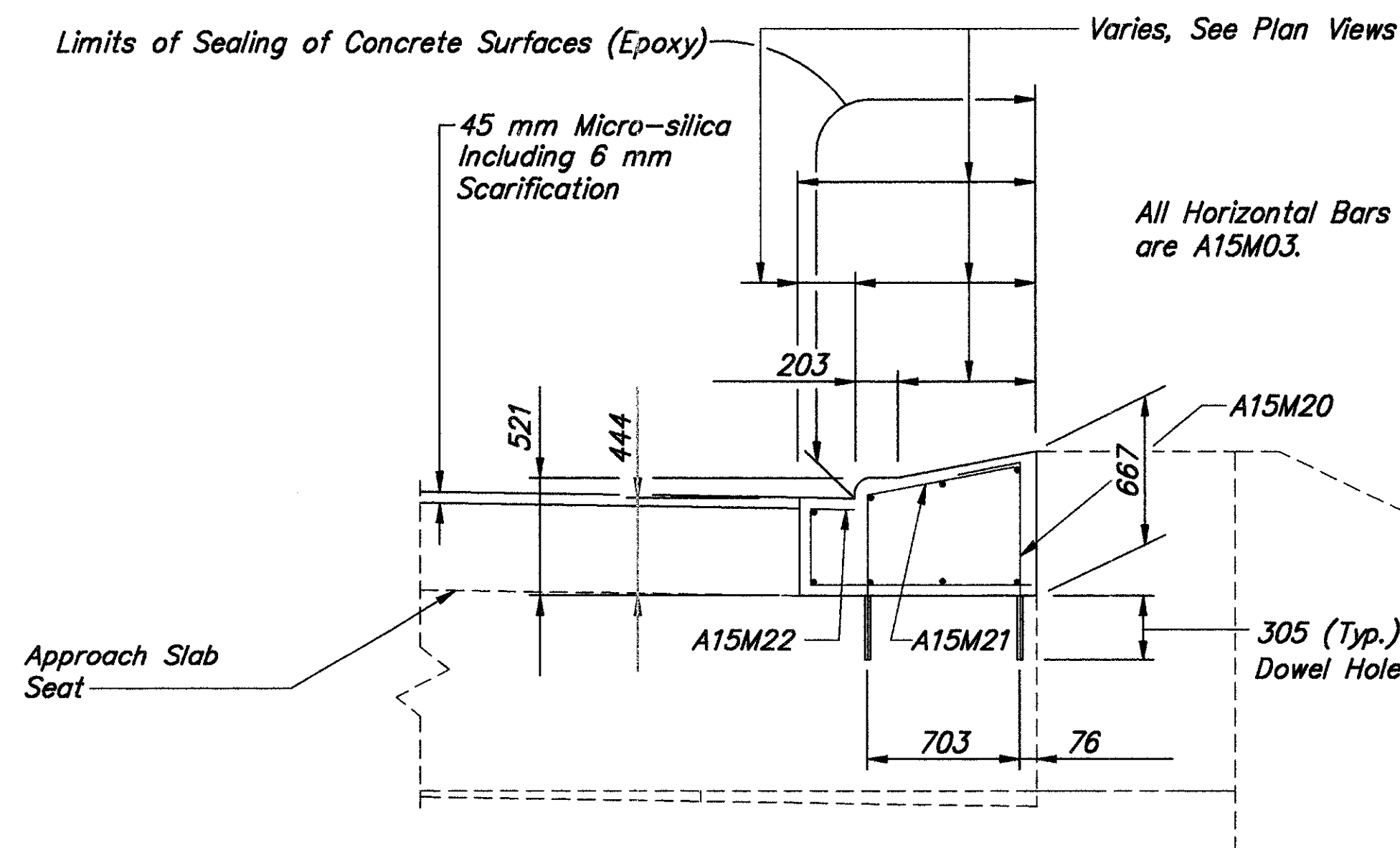
1/25/2003 10:00 AM - 02/22/2003 - 10:00 AM





Existing Vertical Reinforcing to Remain in Place, Cut as Required to Maintain Clearances

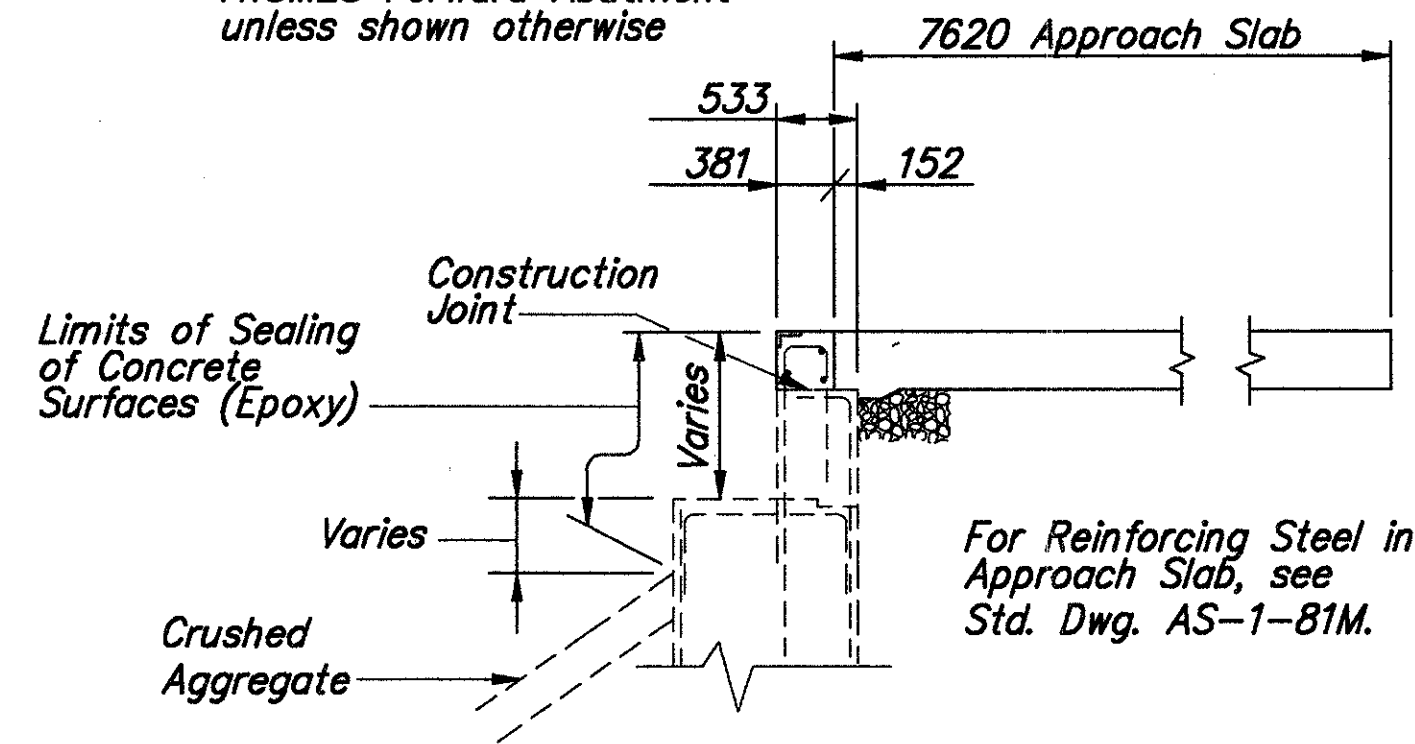
LEFT STRUCTURE RIGHT STRUCTURE  
SAFETY TYPE CURB MEDIAN  
NORMAL SECTION A8-A8



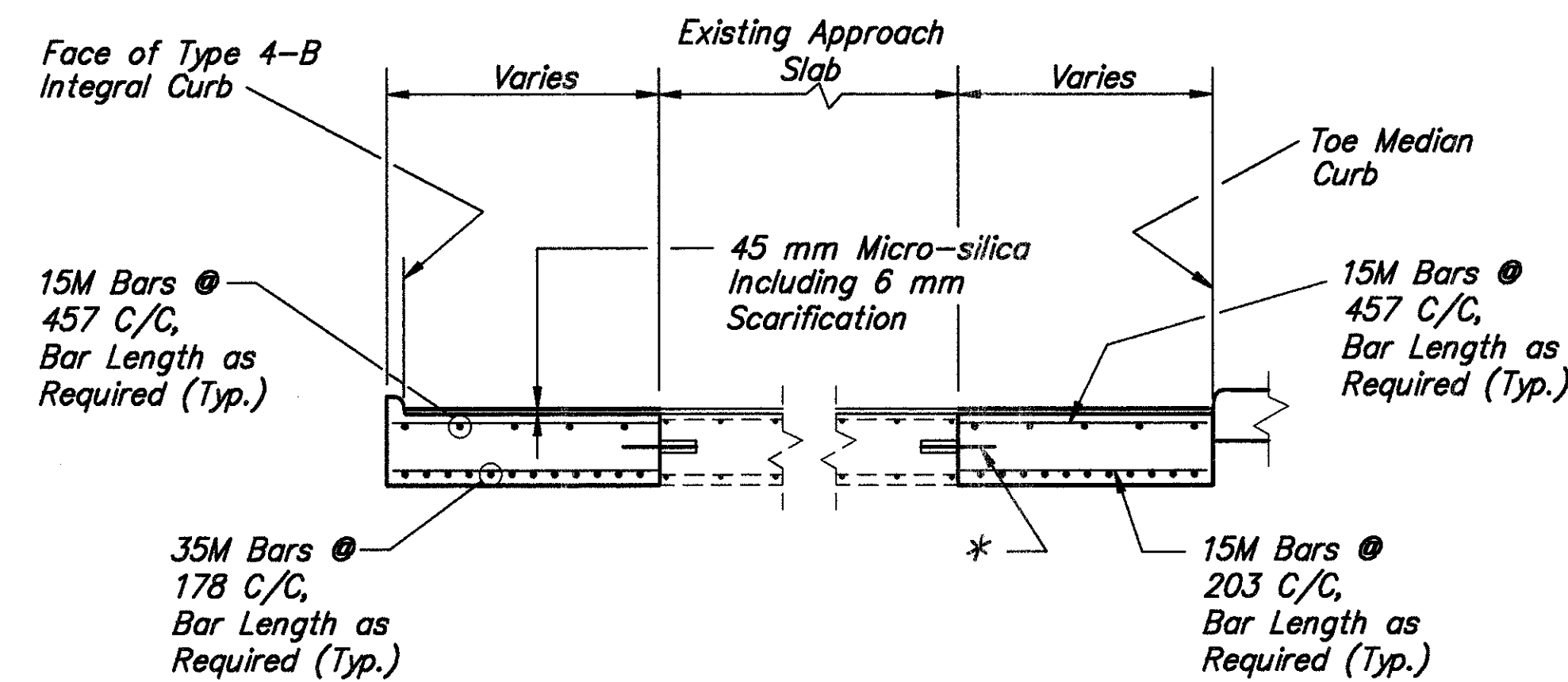
Existing Vertical Reinforcing to Remain in Place, Cut as Required to Maintain Clearances

SECTION B8-B8

Note:  
All horizontal bars are  
A15M26 Rear Abutment &  
A15M28 Forward Abutment  
unless shown otherwise



SECTION Y-Y  
(Section Thru Widened Approach Slab)



APPROACH SLAB WIDENING  
DETAIL AT CURBED APPROACH SLAB

(Left Structure Shown,  
Right Structure Similar)

For details and notes not shown,  
see St'd Dwg. AS-1-81M

\* Longitudinal Joint shall be constructed per  
Standard Drawing BP-2.1M. Spacing of the tie bars  
or hook bolts shall be no more than 762 nor  
less than 610.

For Rear Abutment Plan and Elevation,  
See Sheet 241.37

For Forward Abutment Plan and Elevation,  
See Sheet 261.37

DESIGN AGENCY  
W.E. QUICKSALL & ASSOCIATES INC.  
554 WEST HIGH AVE.  
NEW PHILADELPHIA, OHIO  
CONSULTING ENGINEERS

DATE 10/97  
REVIEWED wda  
STRUCTURE FILE NUMBER 0700754

DRAWN PMZ  
CHECKED ZED

ABUTMENT DETAILS  
BRIDGE NO. BEL-7-36883 L/R  
S.R. 7 OVER WHEELING TERMINAL R.R.

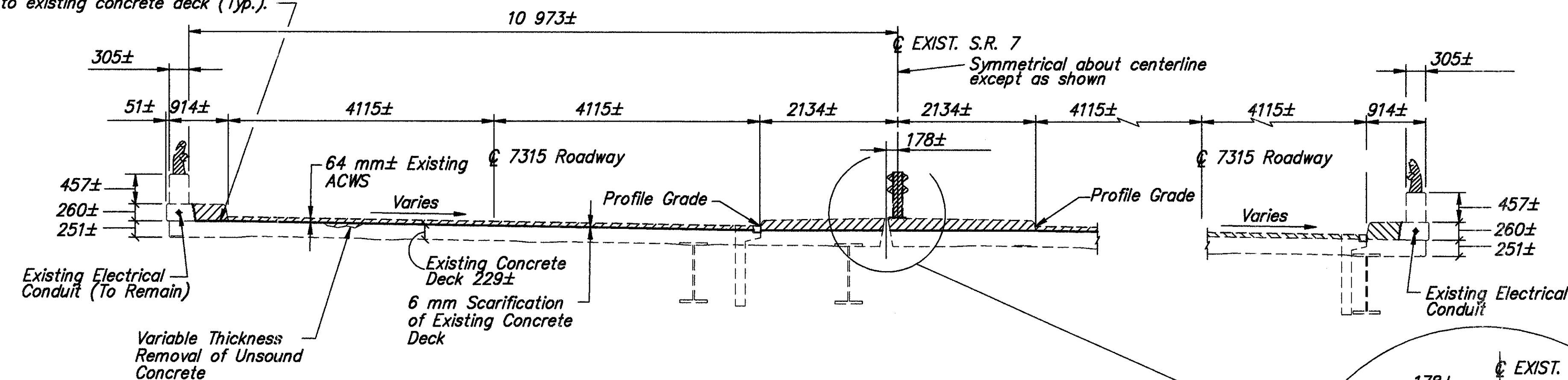
BEL-7-32.276

27/37

226  
242

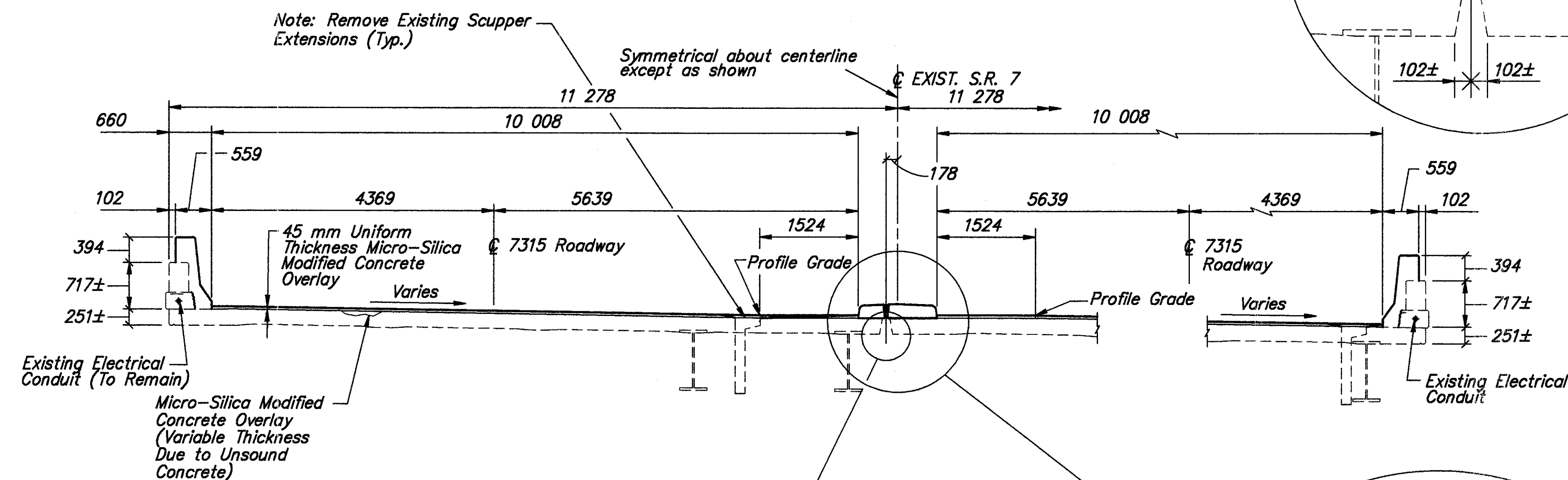


Existing Reinforcing to be removed down to existing concrete deck (Typ.).



EXISTING TRANSVERSE SECTION

Denotes Removal

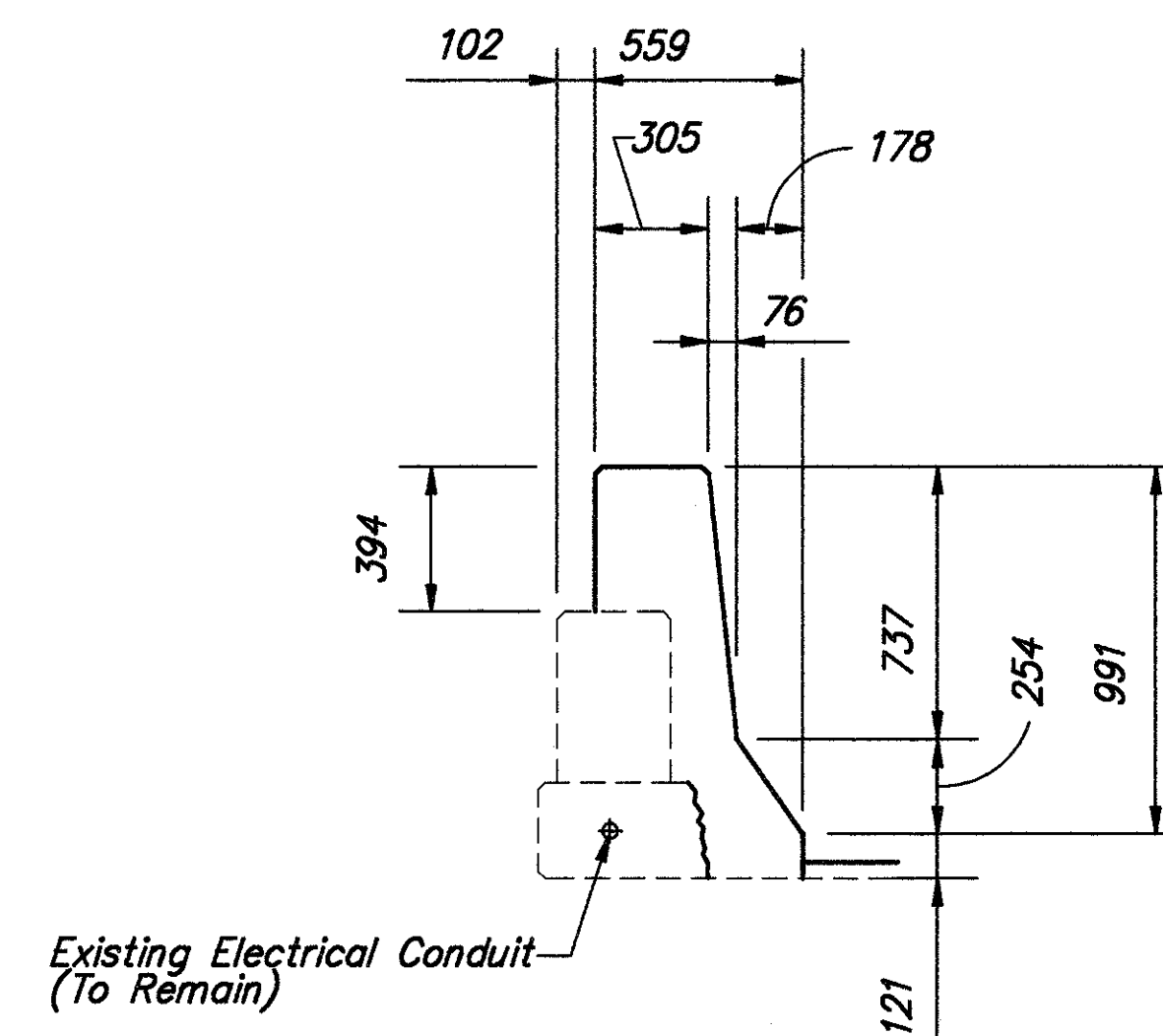


PROPOSED TRANSVERSE SECTION

Roughened Construction Joint

Elastomeric Sheet with 6 mm x 76 mm Galvanized Steel Bar with 9 mm Ø Holes @ 450 C/C (Structural Joint or Joint Sealer, Misc.: Concrete Median Barrier Sealer)

6 mm Ø Galvanized Masonry Nails @ 450 C/C



TYPICAL OUTSIDE RAILING REFACING

For Scupper Details And Notes, See Sheet 33/37

For Parapet & Median Curb Reinforcing Details, See Sheets 29/37, 30/37, 31/37 & 32/37

DESIGN AGENCY  
W.E. QUICKSALL & ASSOCIATES INC.  
554 WEST HIGH AVE  
NEW PHILADELPHIA, OHIO  
CONSULTING ENGINEERS

DATE  
10/97  
REVIEWED  
wda  
STRUCTURE FILE NUMBER  
0700754

DRAWN  
CFD  
REVIEWED

DESIGNED  
FDH  
CHECKED  
ZRP

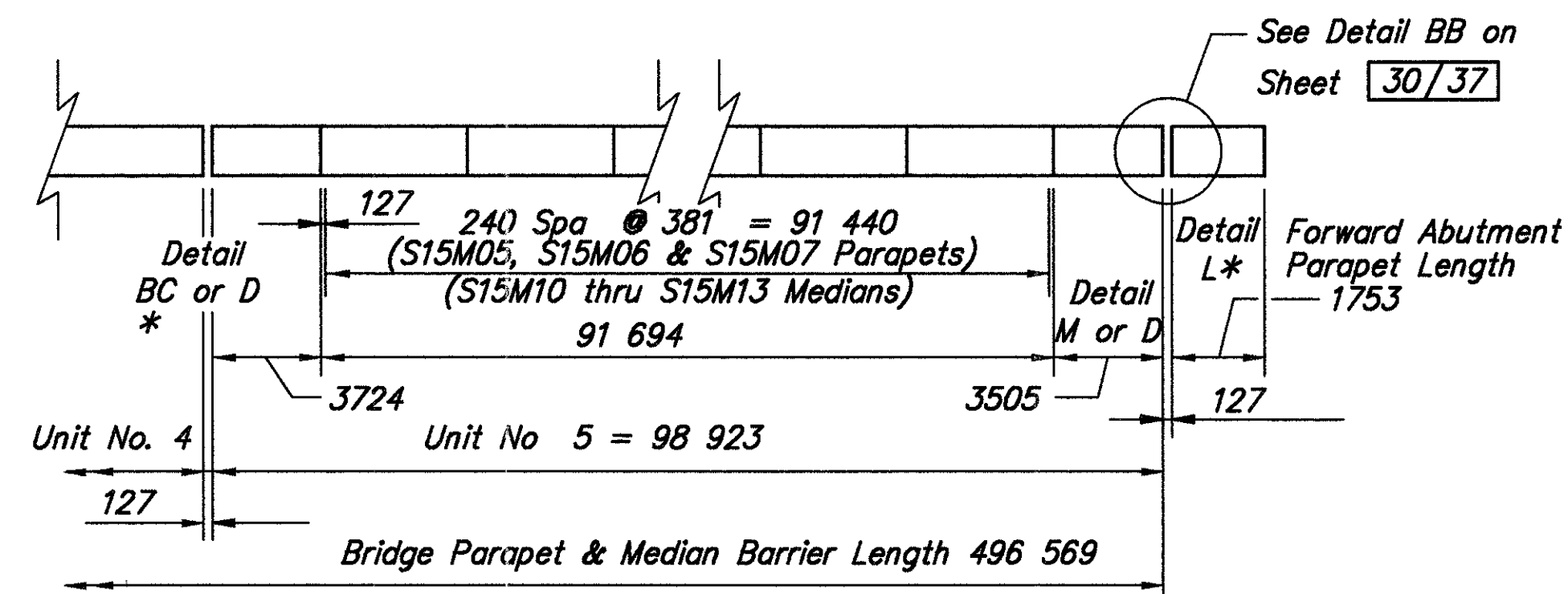
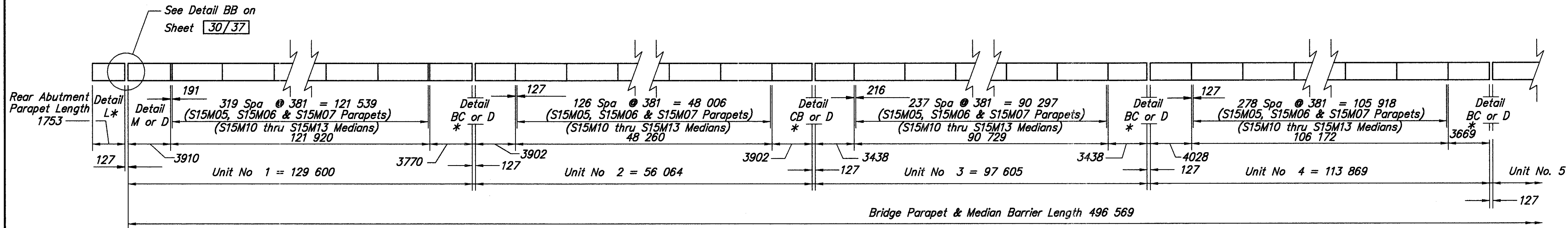
SUPERSTRUCTURE DETAILS  
BRIDGE NO. BEL-7-36883 L/R  
S.R. 7 OVER WHEELING TERMINAL R.R.

BEL-7-32.276

28/37

227  
242





### BEL-7-32283 L/R

(Exterior Parapets & Center Median Barrier)

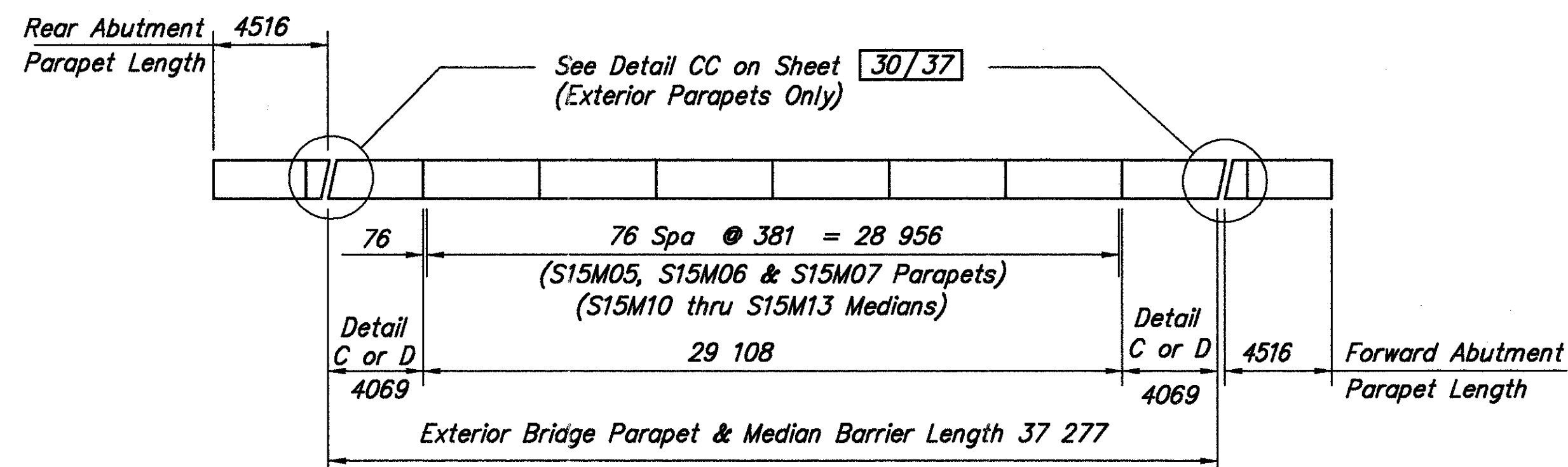
For Abutment Details, See Sheets 7/37 & 9/37

For Light Pole Anchor Locations, See Sheet 1/37

\*(Exterior Parapets Only)

Shrinkage Control Joints shall be placed in the new concrete at the same location as the existing deflection joints and shall be made at right angles to the deck by sawing to match alignment of existing deflection joints.

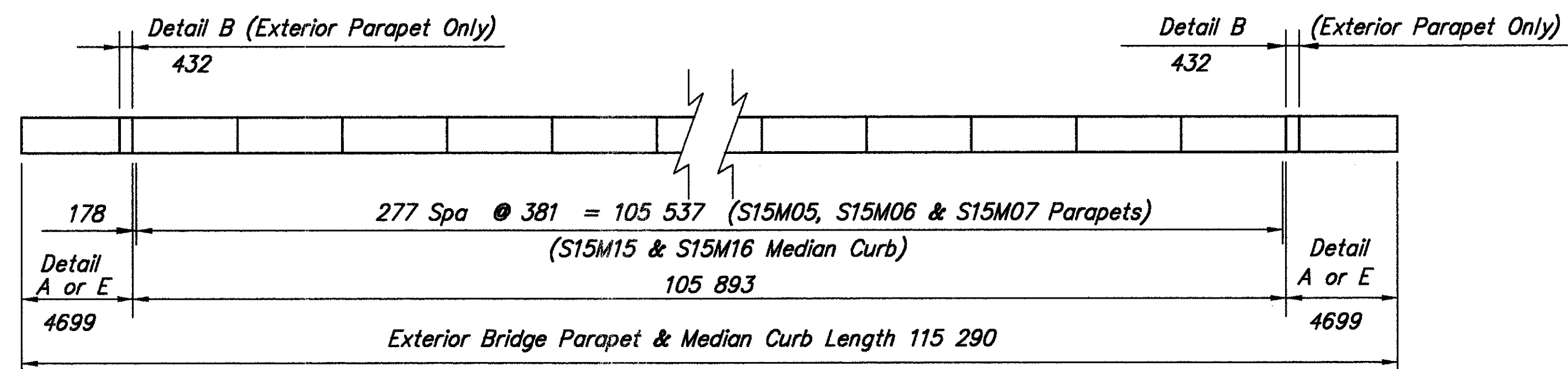
For BEL-7-36164 Parapet Details and Notes,  
See Sheets 14/37, 15/37, 16/37 & 32/37



### BEL-7-36368 L/R

(Exterior Parapets & Center Median Barrier)

For Abutment Details, See Sheets 19/37 & 20/37



### BEL-7-36683 L/R

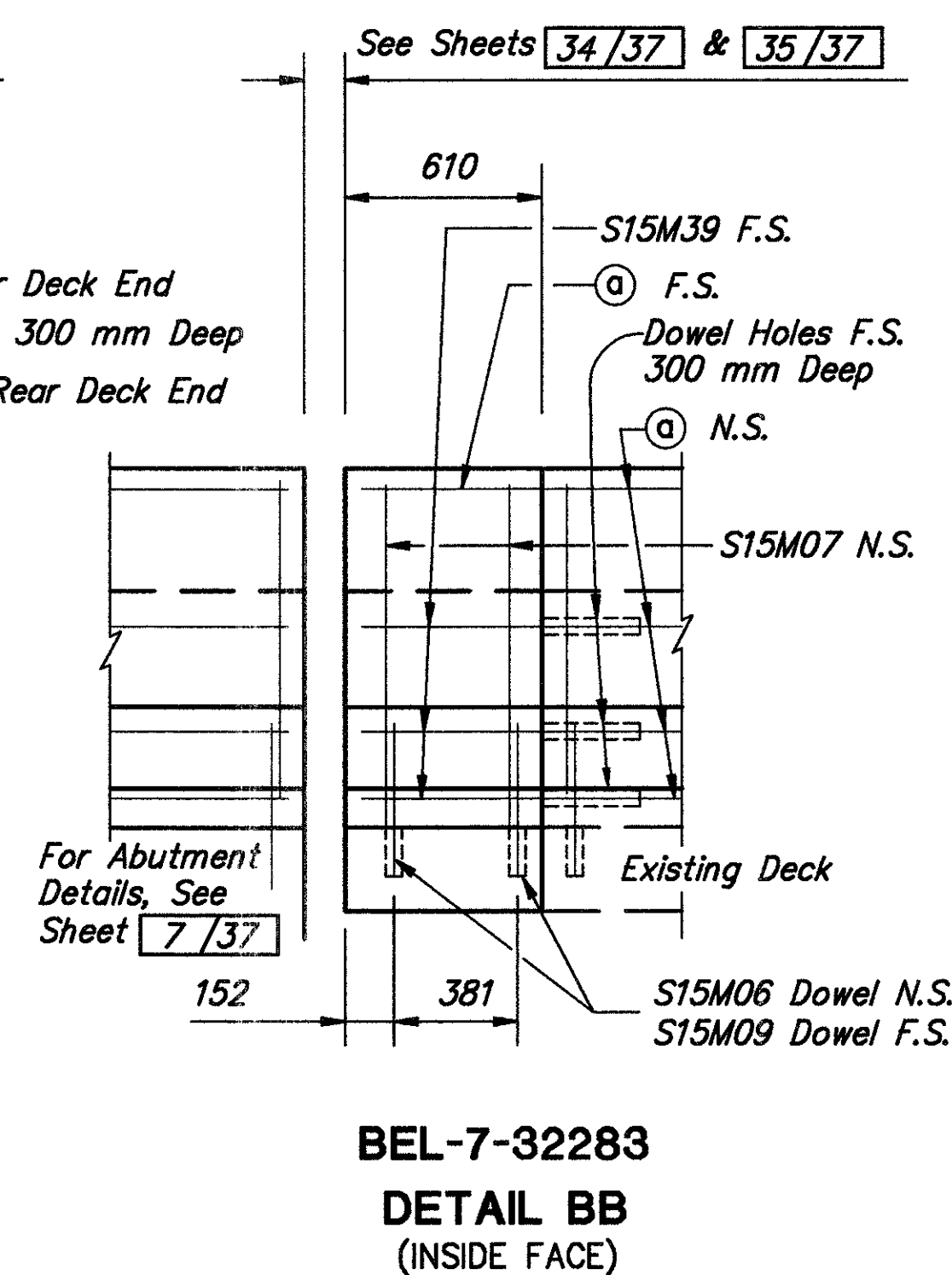
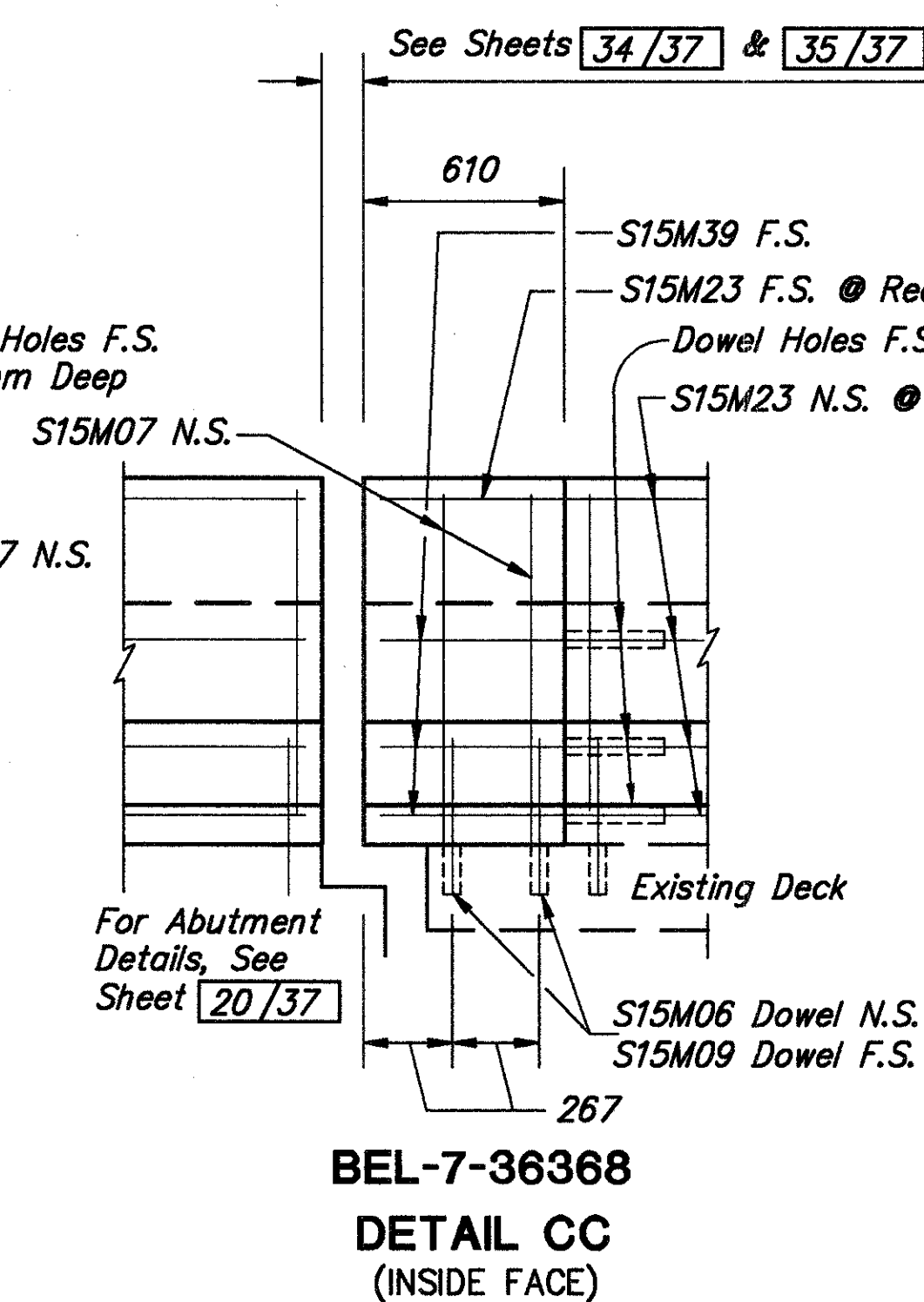
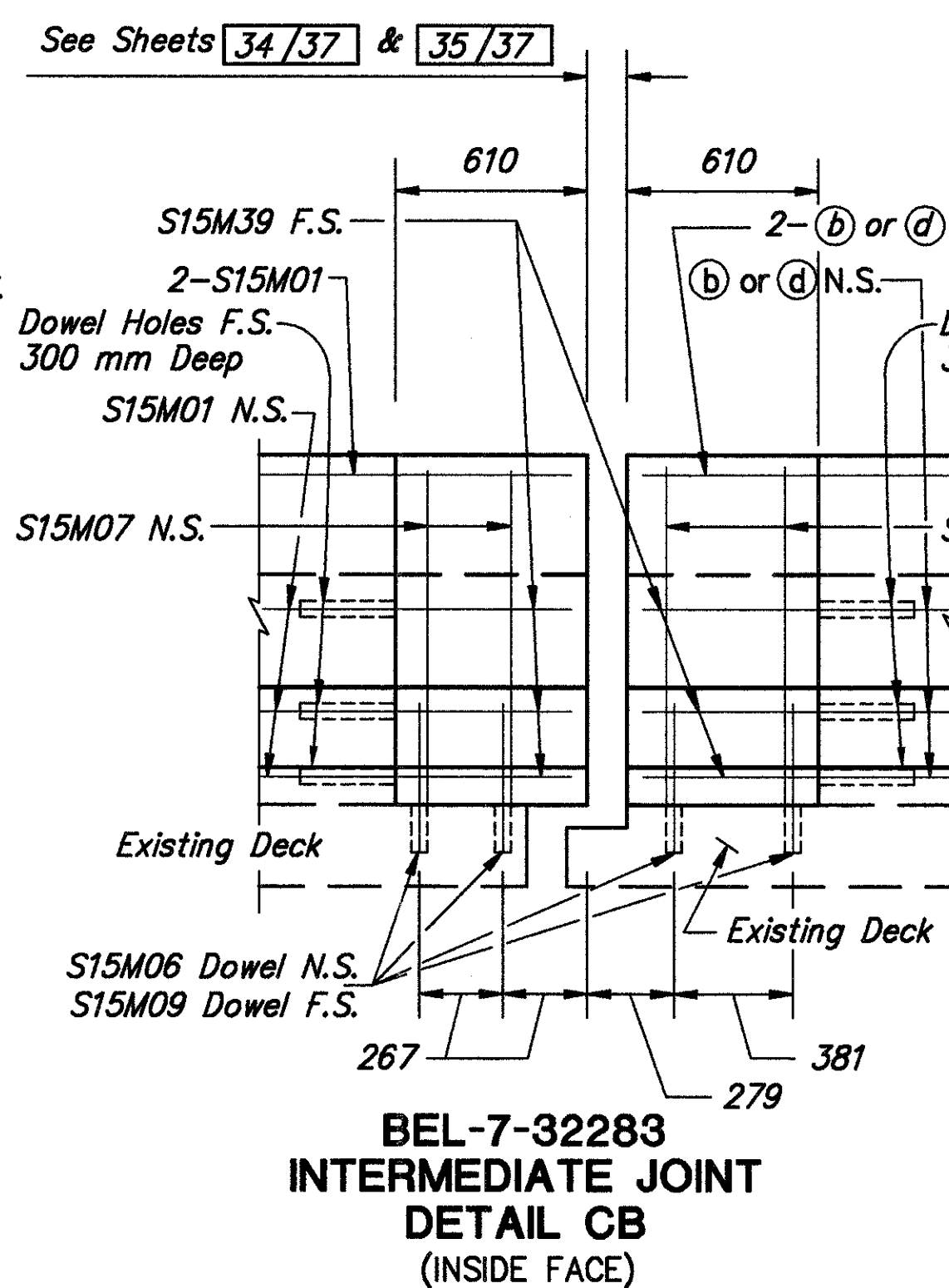
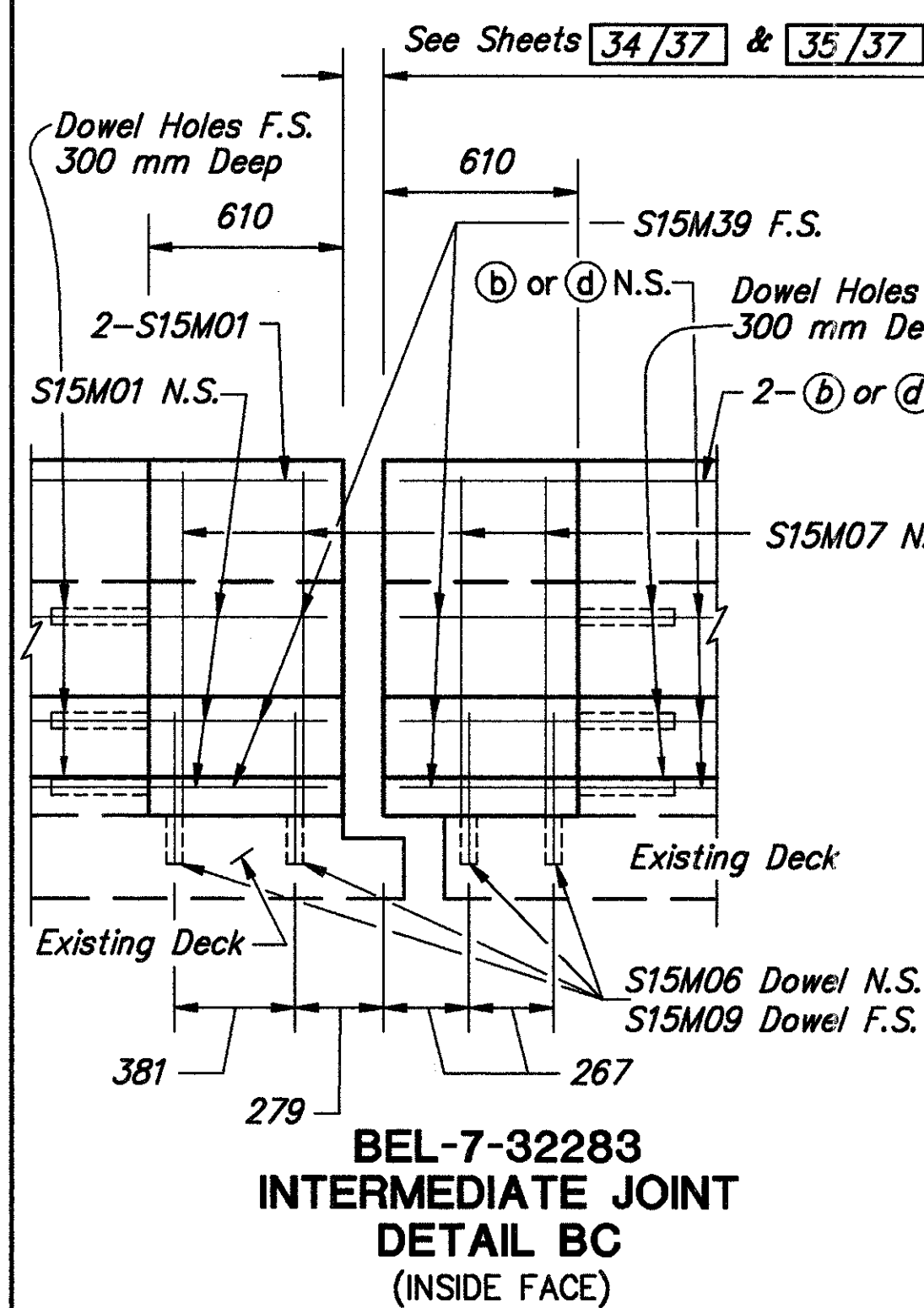
(Exterior Parapets & Center Median Curb)

For Median Details, See Sheet 32/37

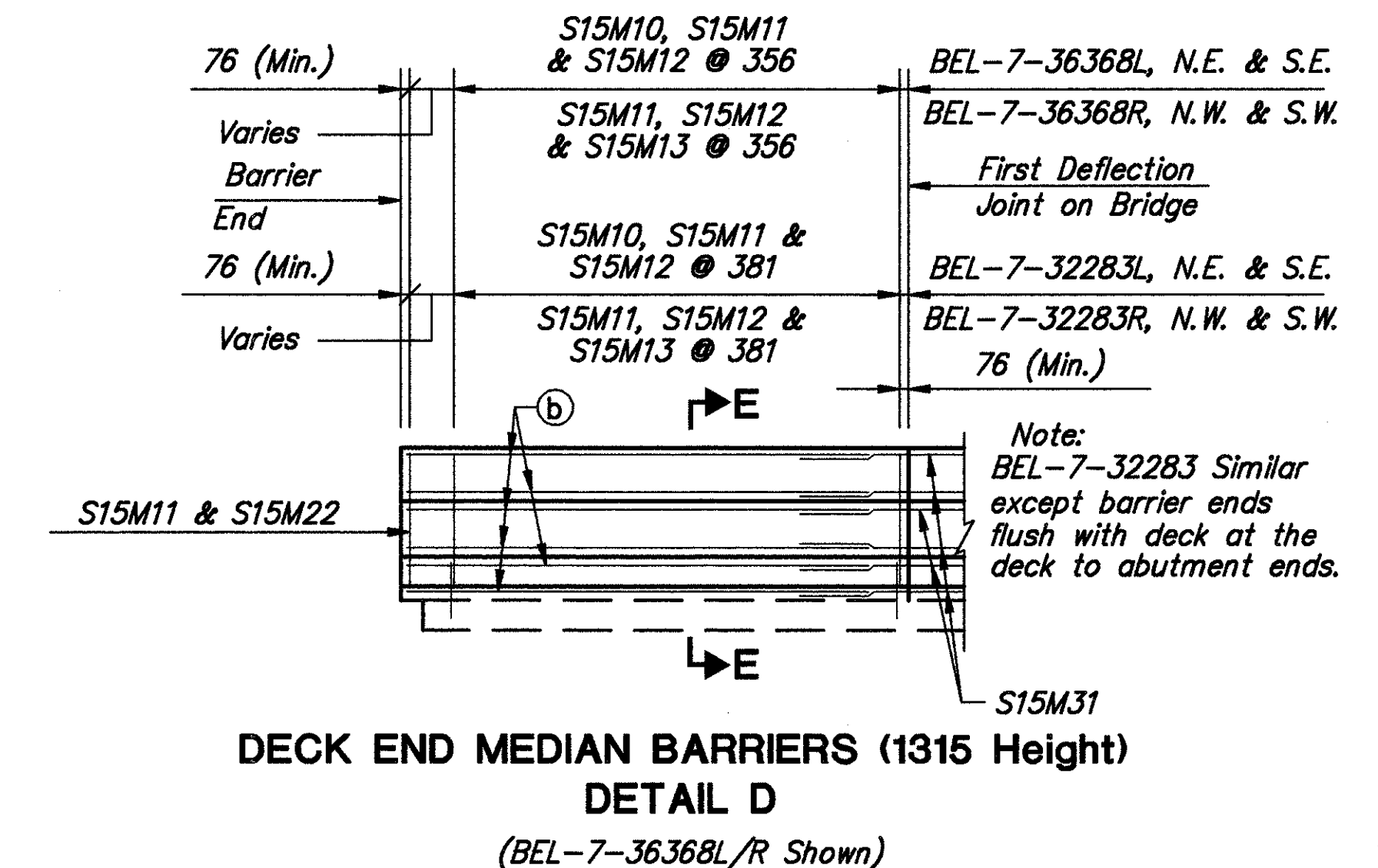
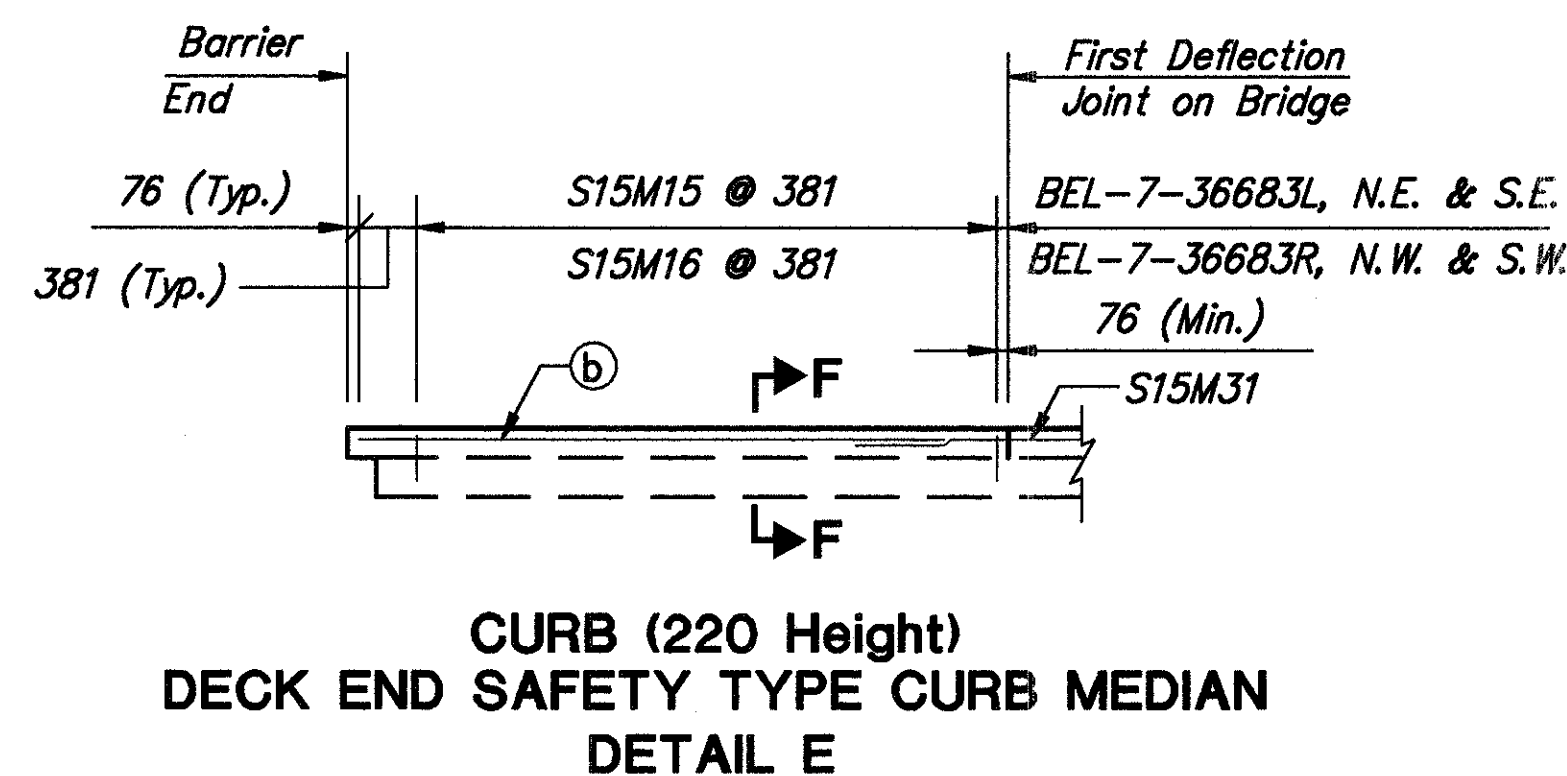
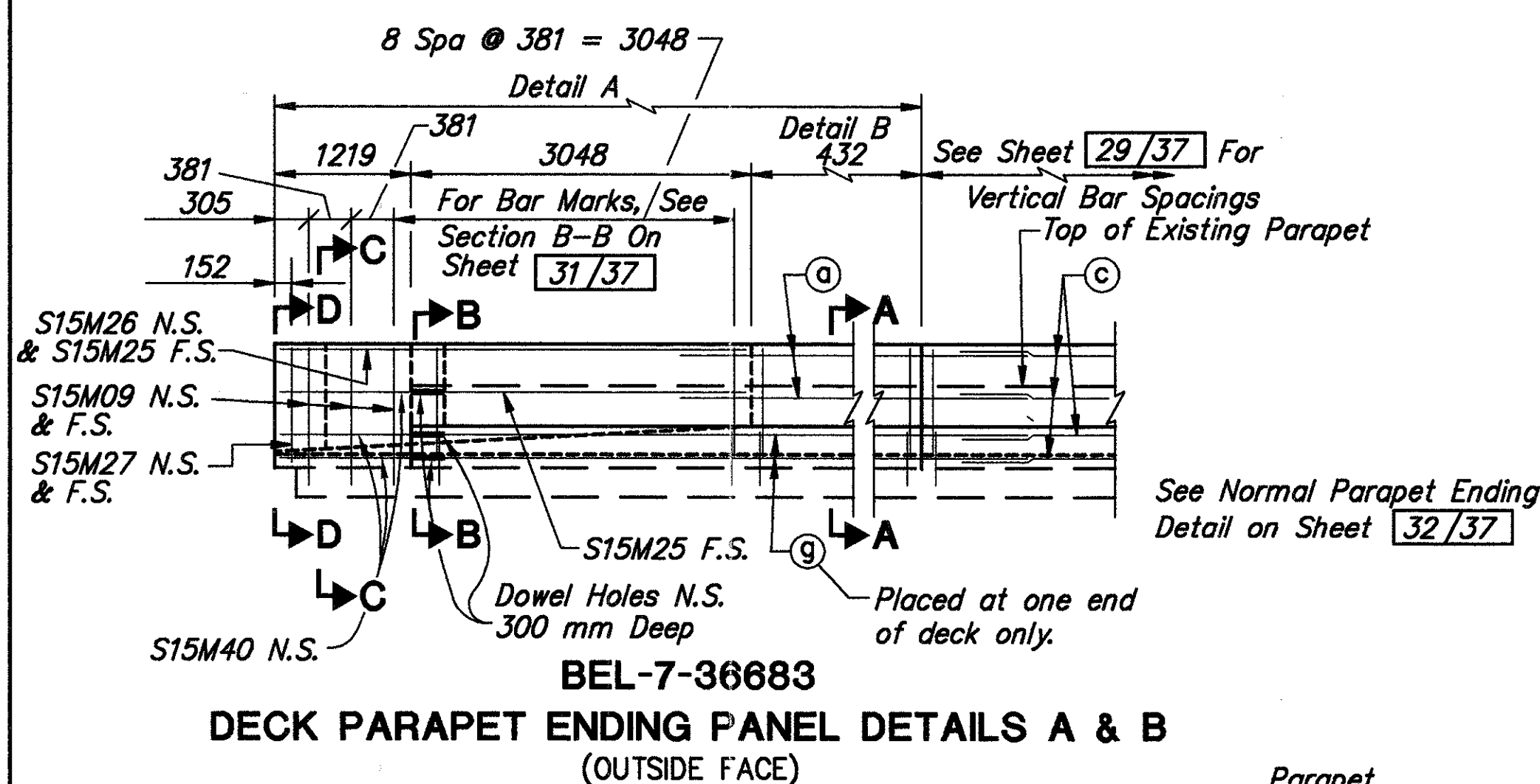
For Parapet Sections, See Sheets 31/37 & 32/37

For Detail A, B, C, M, BC, & CB,  
See Sheet 30/37

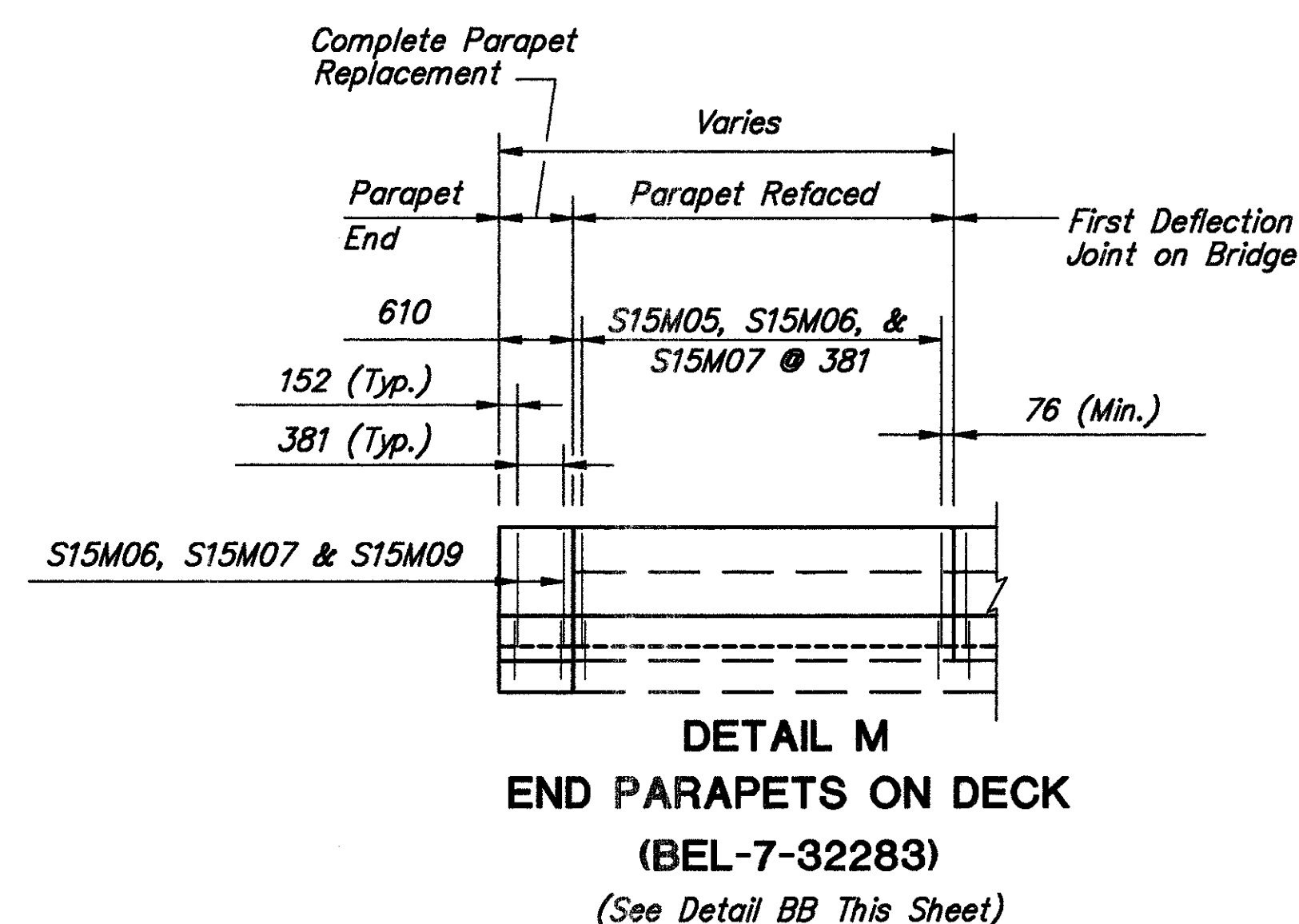
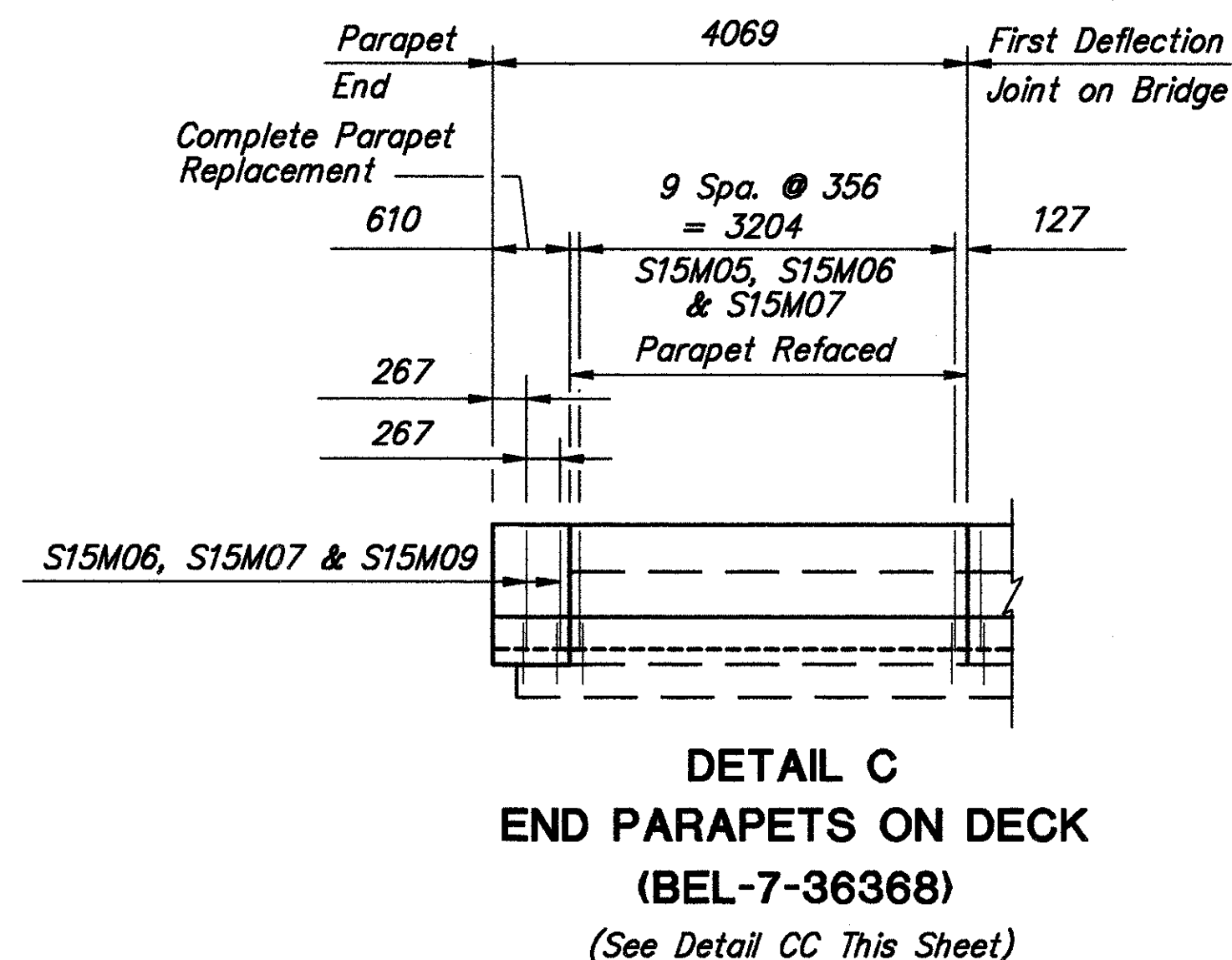
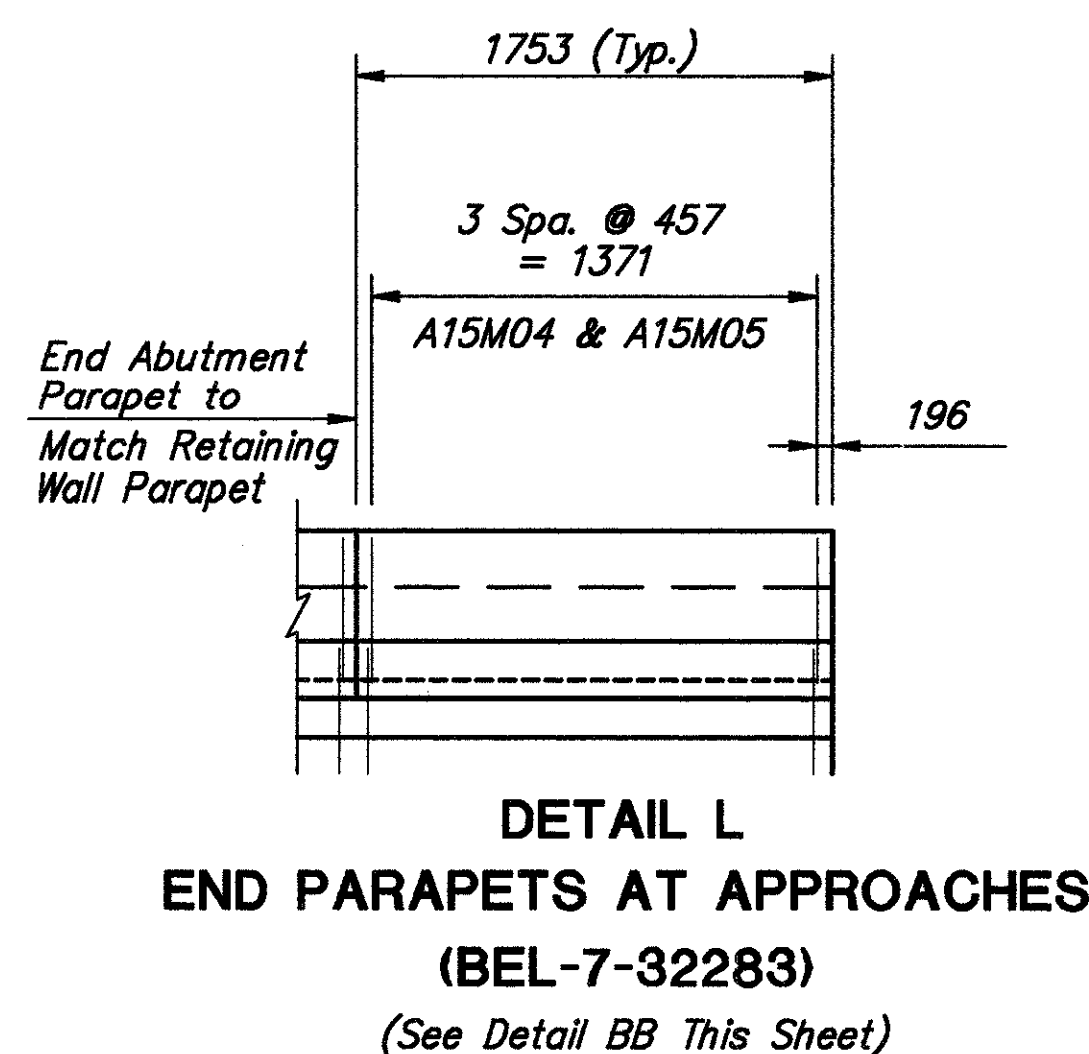




**Note:**  
All deck parapet and median barrier longitudinal reinforcing are S15M01 bars unless noted otherwise.



*Note:*  
*All horizontal reinforcing to be 15M bars unless noted otherwise.*  
*All vertical doweled reinforcing to clear parapet joints by 76 (Min.).*  
*Spacing to be adjusted as required to clear joints.*  
*F.S. ~ Denotes far side.*  
*N.S. ~ Denotes near side.*



For (a) (b) (c) (d) (g) Bars,  
See Table on Sheet 32/37

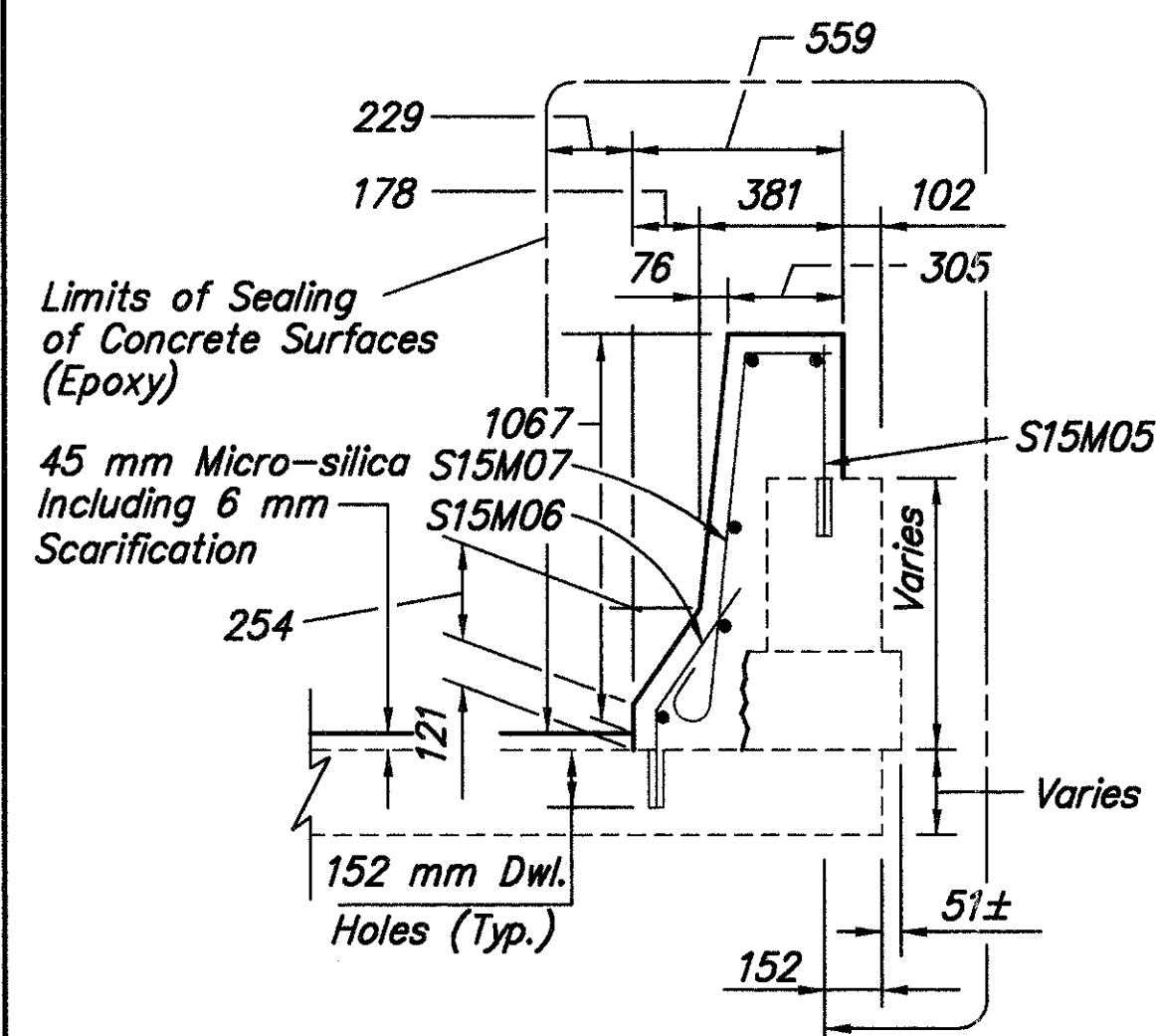
For Parapet Sections, See Sheets  
31/37 & 32/37

For Location of Reinforcing Steel See  
Sheets 29/37 , 31/37 & 32/37

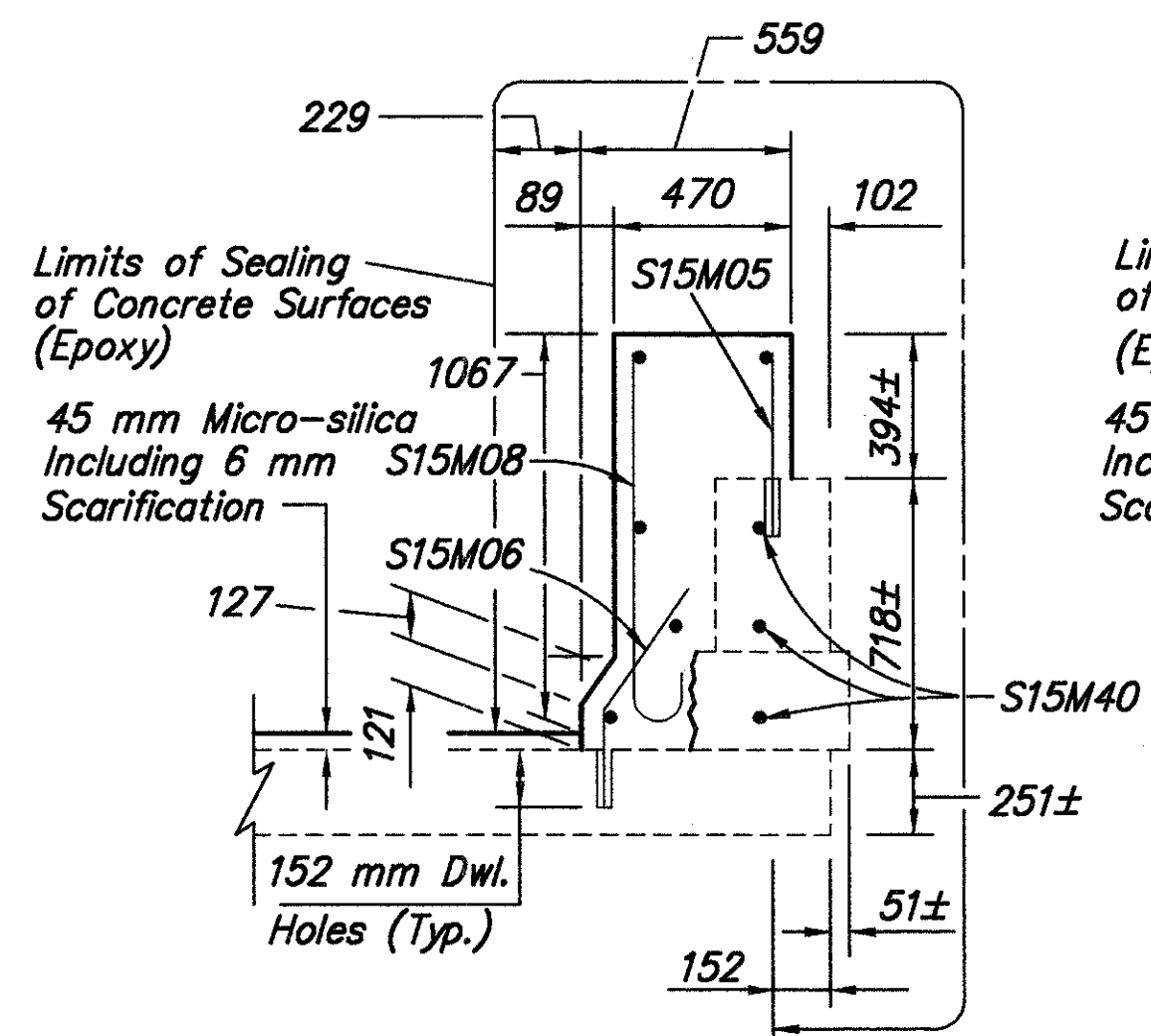
For Retaining Wall Details, See  
Sheets 10/37, 11/37 & 31/37



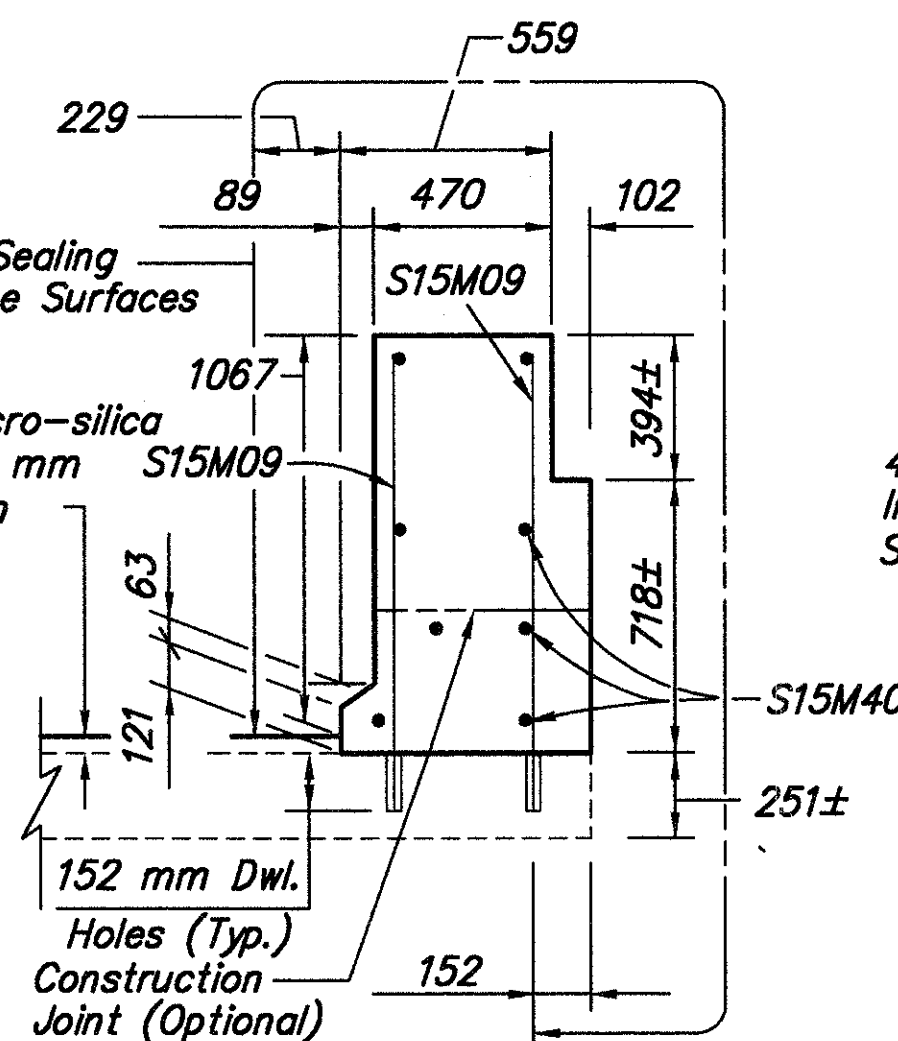
13321-01(32)PP2.dwg - OCT 22, 1987 - 10:34:07



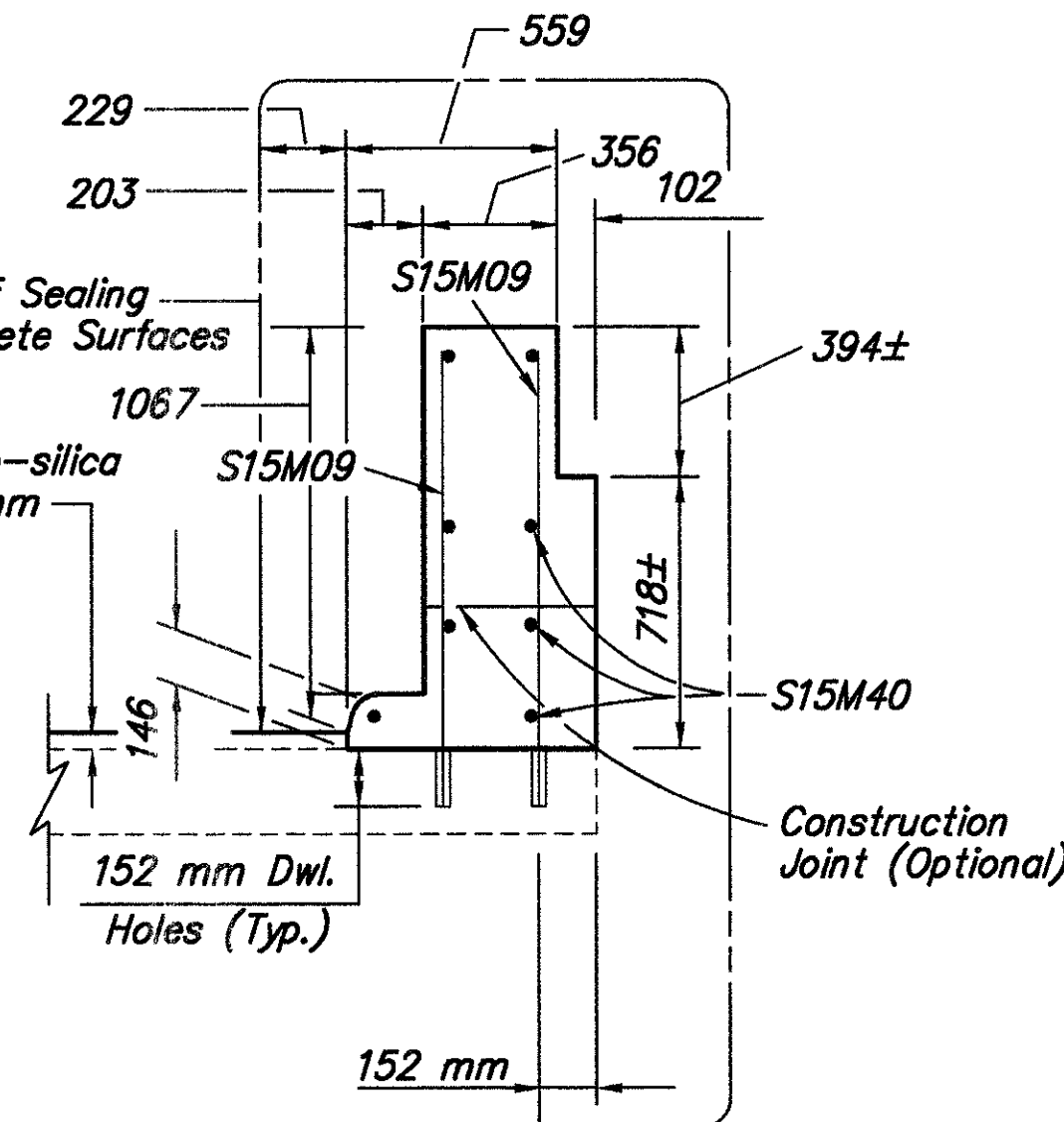
**SECTION A-A**  
(Typical Refacing Section)



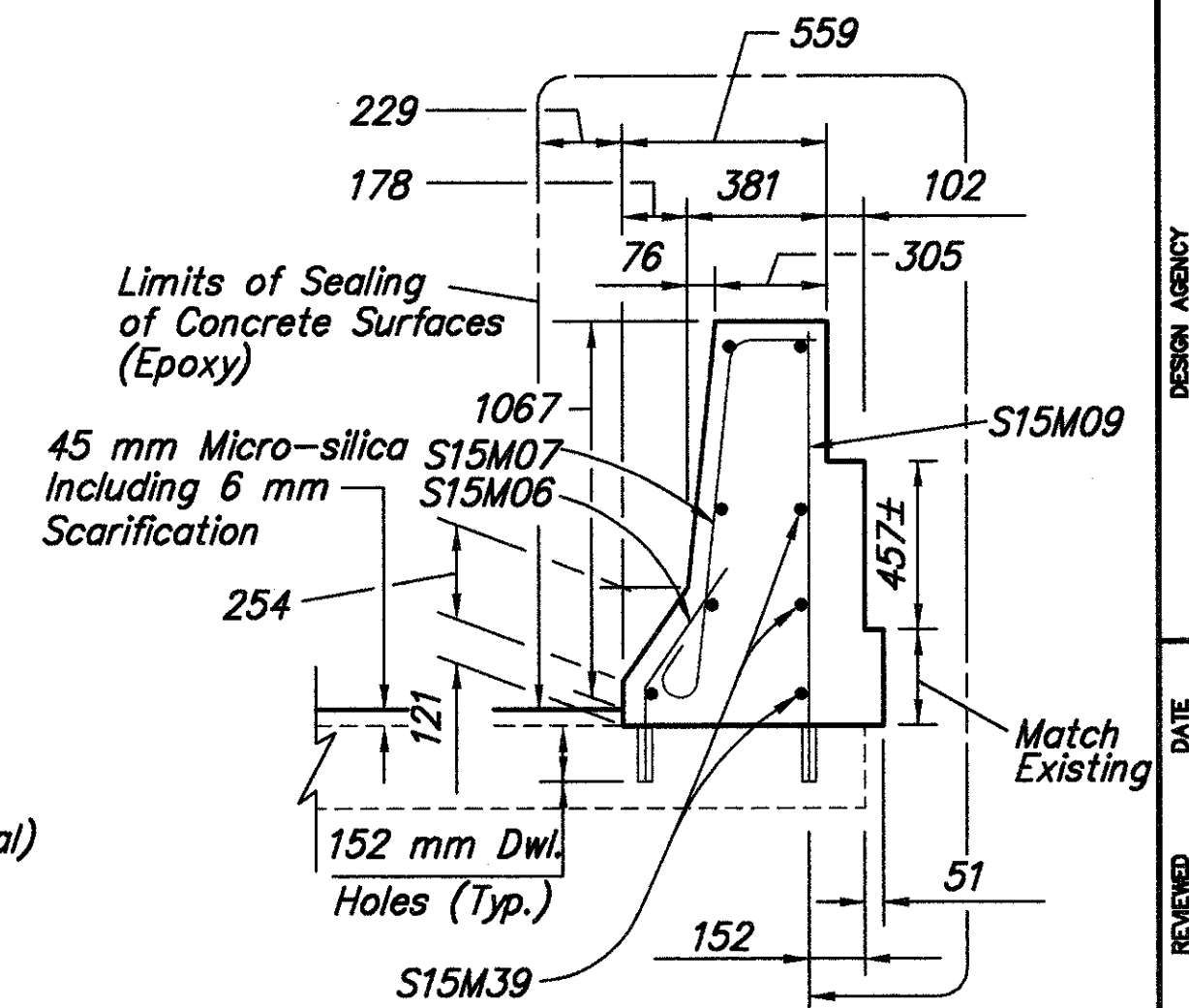
**SECTION B-B**  
(BEL-7-36683 Only)



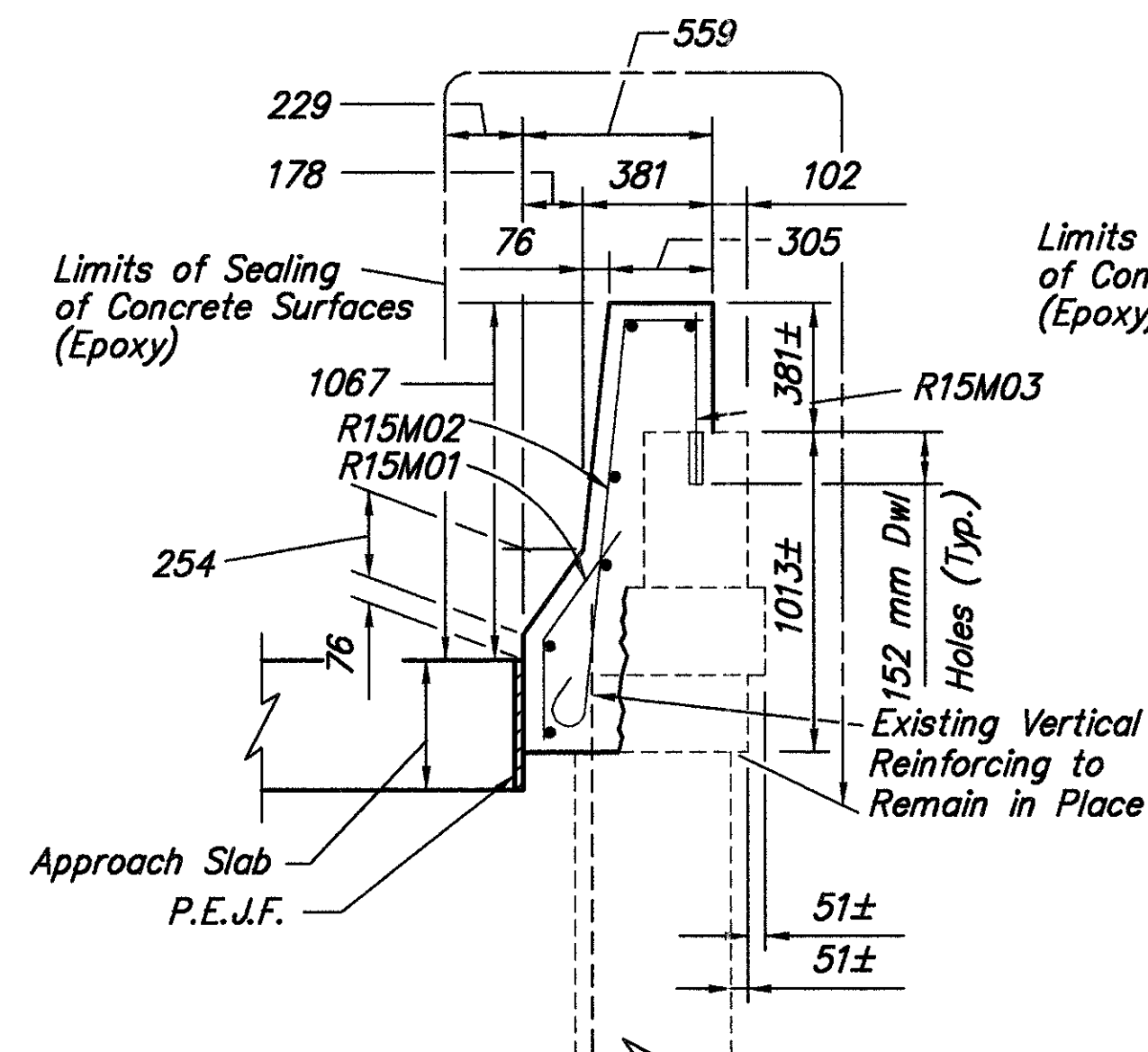
**\*\* SECTION C-C**  
(BEL-7-36683 Only)



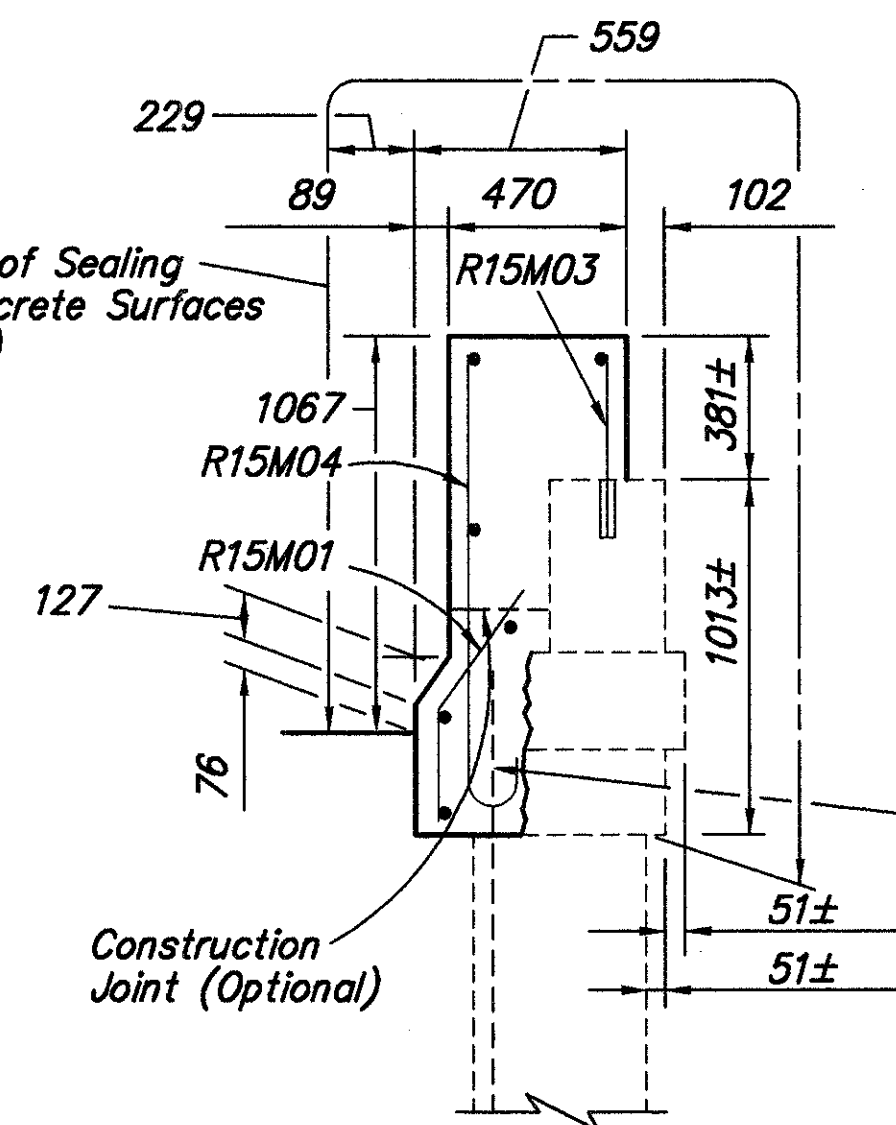
**\*\* SECTION D-D**  
(BEL-7-36683 Only)



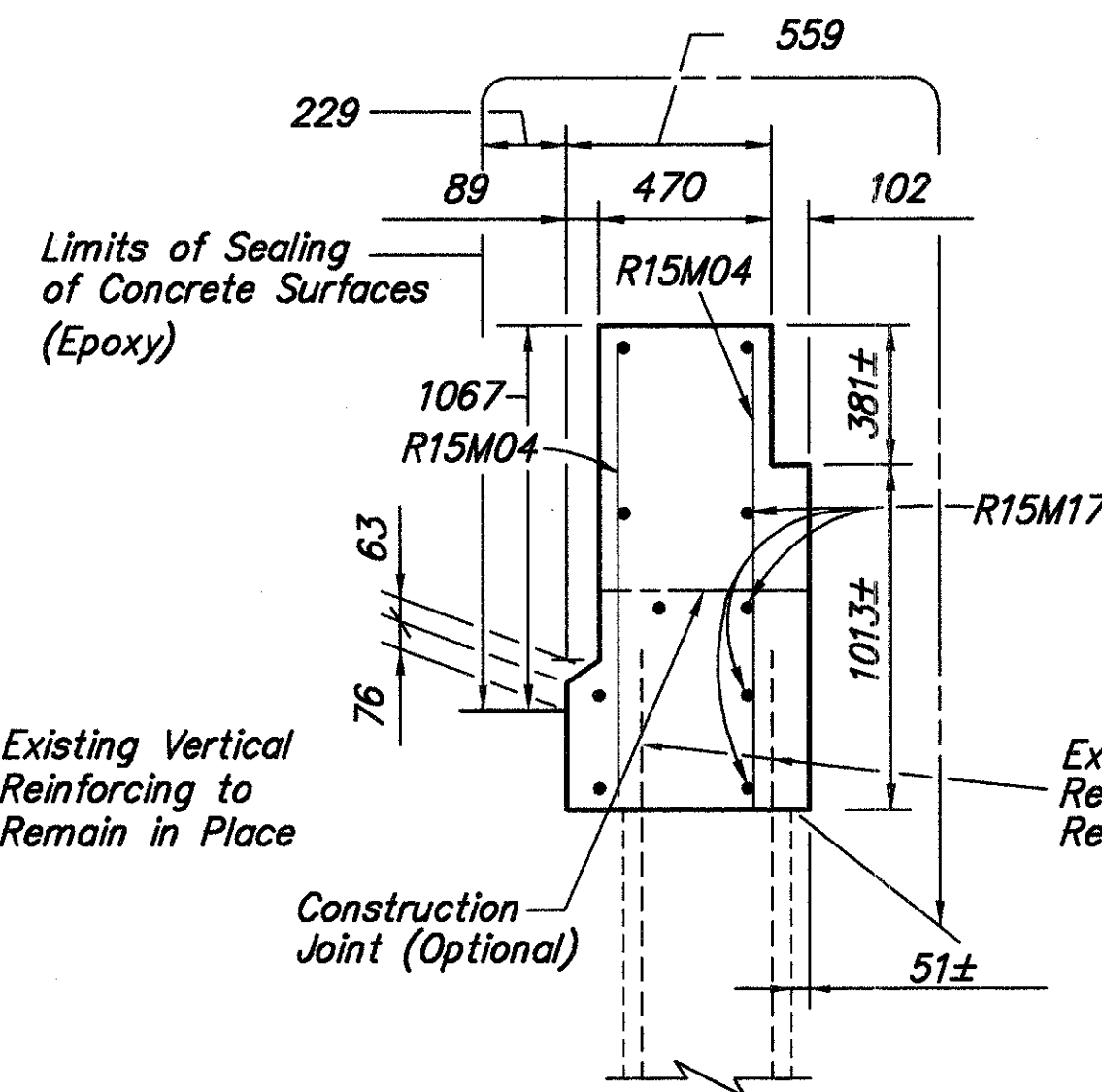
**(610 mm) REPLACEMENT SECTION AT DECK ENDS**  
(BEL-7-32283 & BEL-7-36368)



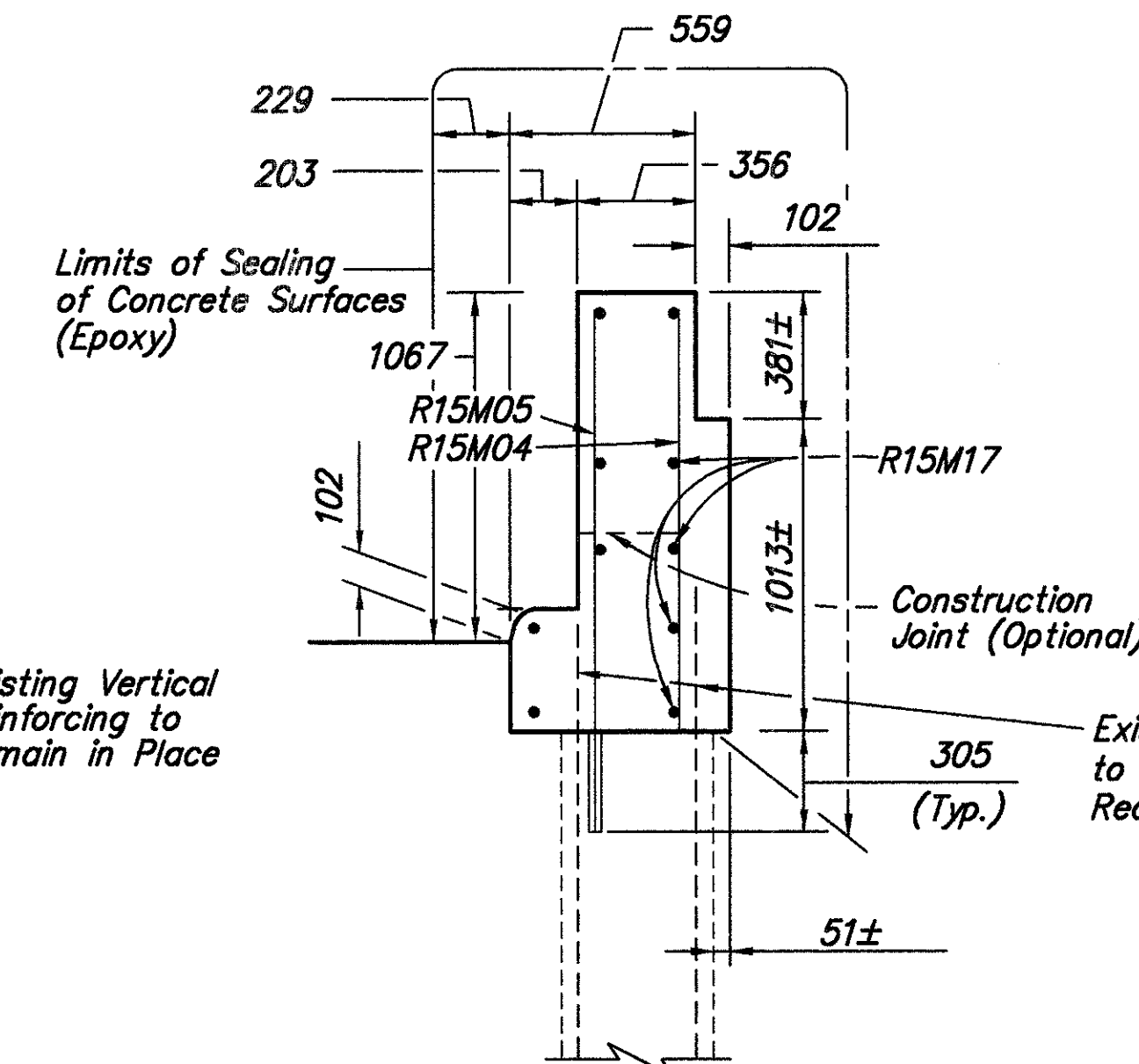
**SECTION A-A**



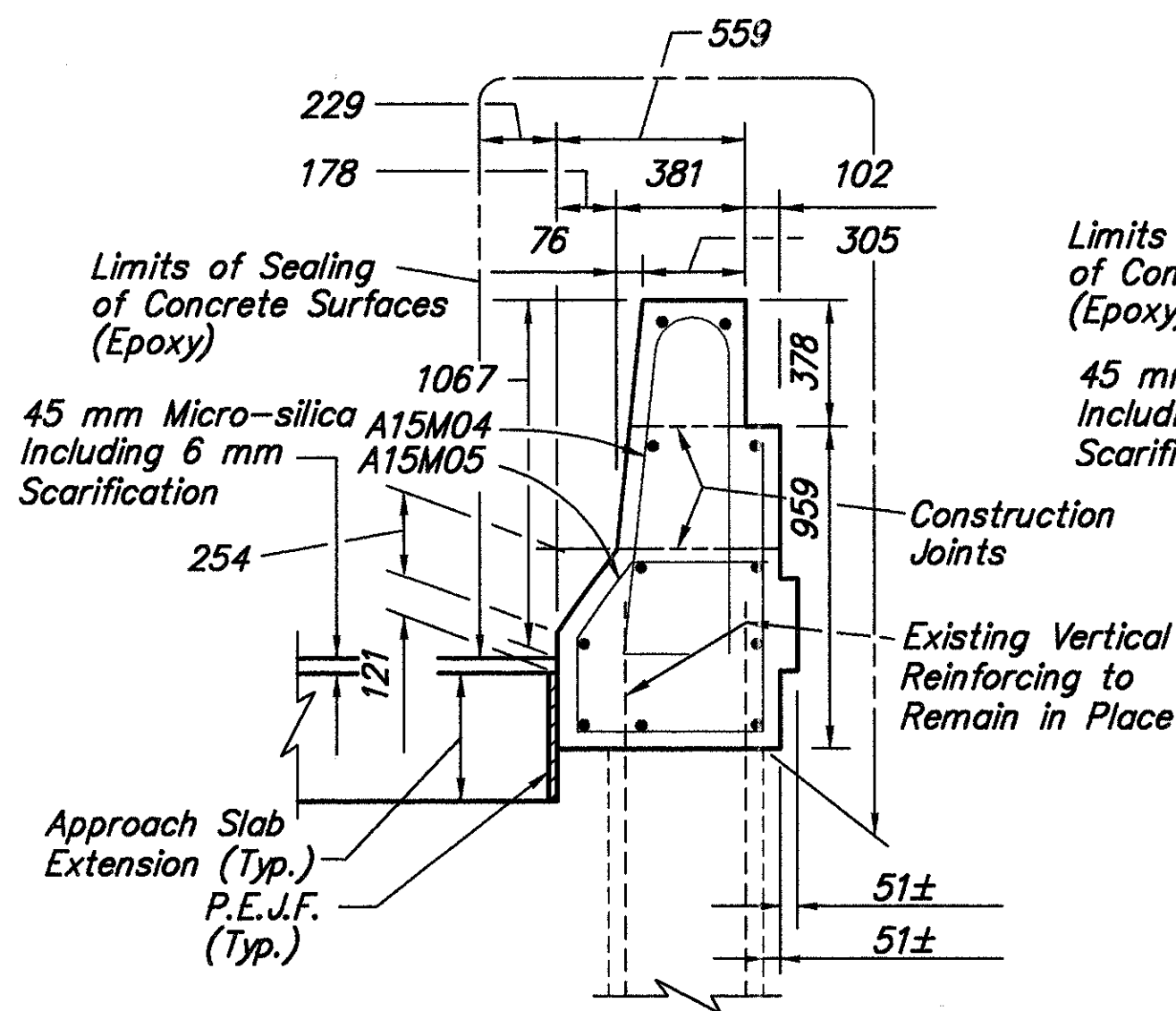
**SECTION B-B**  
**RETAINING WALL OUTSIDE PARAPET REFACING (BEL-7-32283 ONLY)**



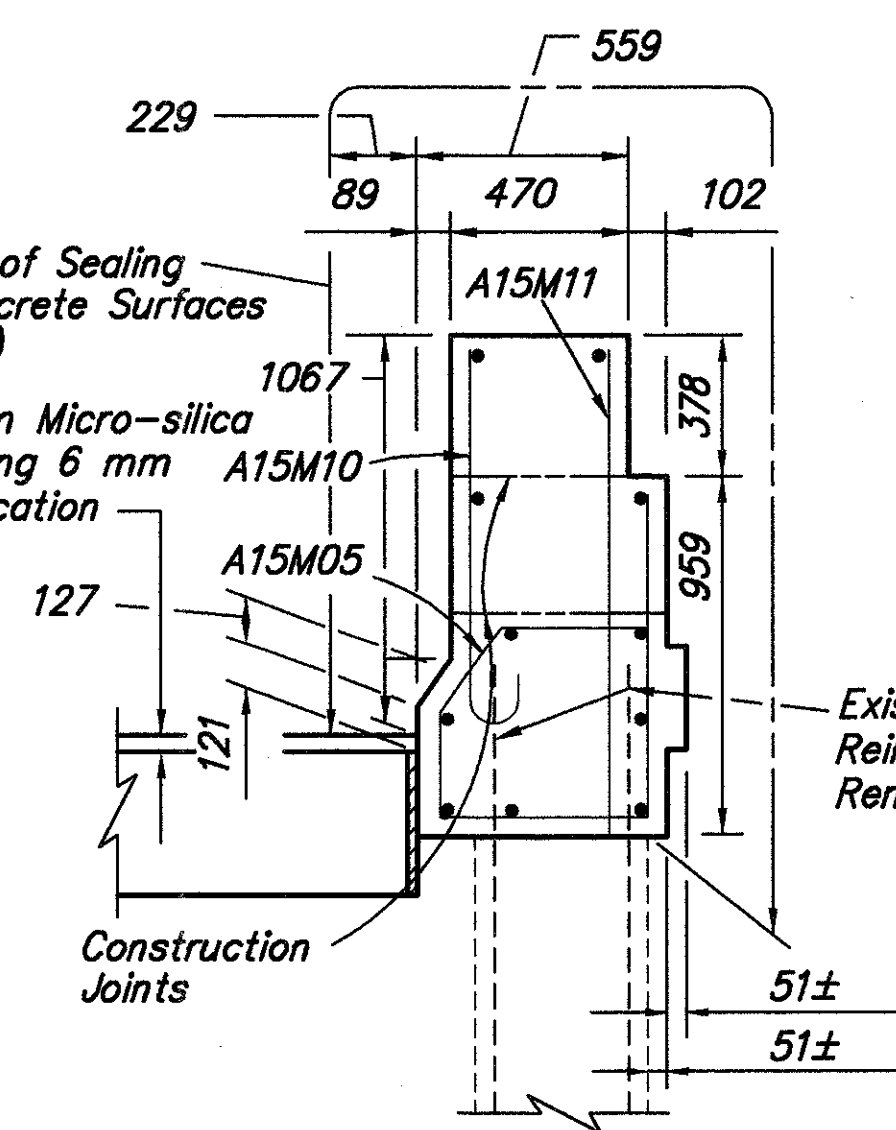
**\*\* SECTION C-C**



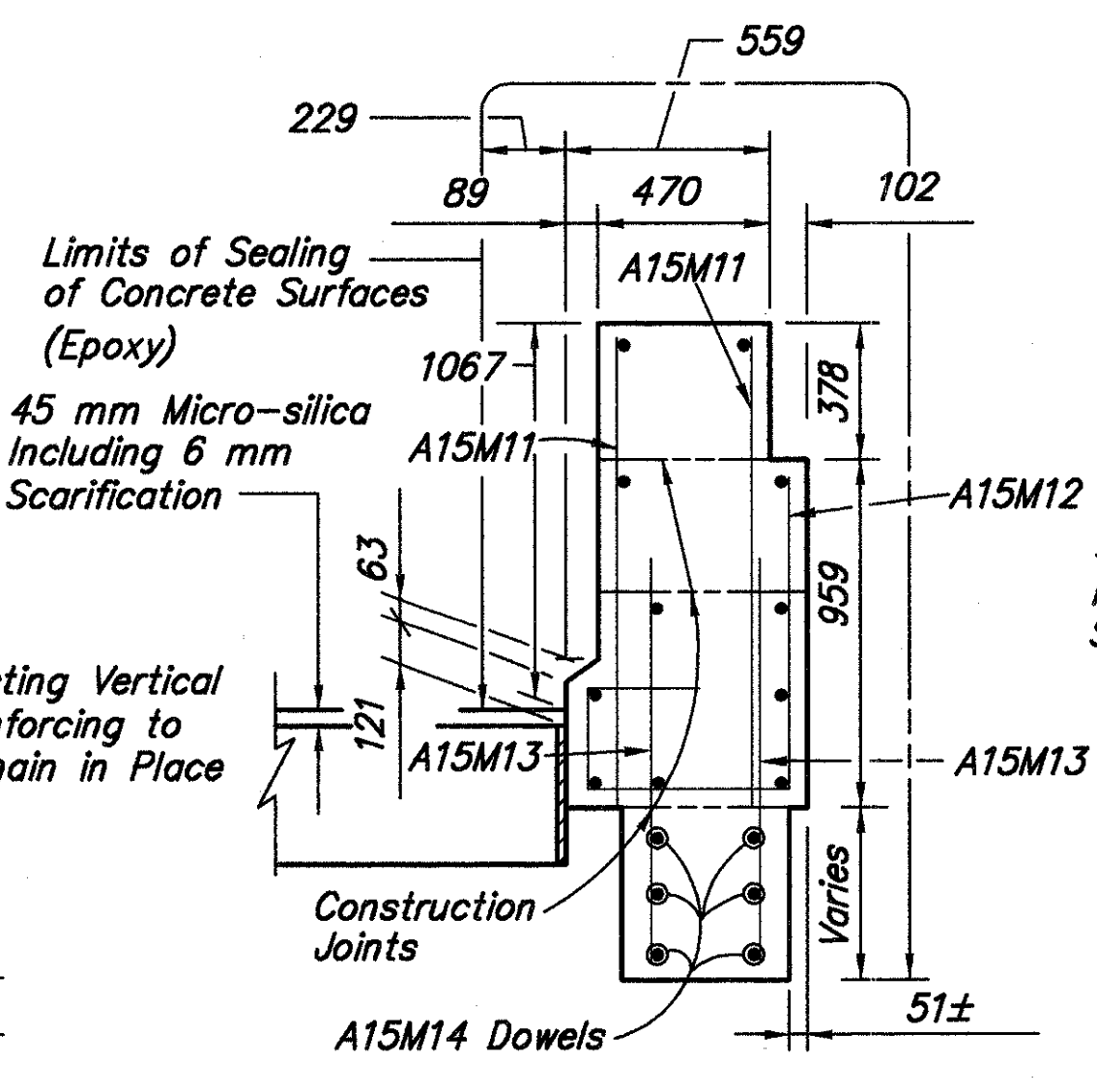
**\*\* SECTION D-D**



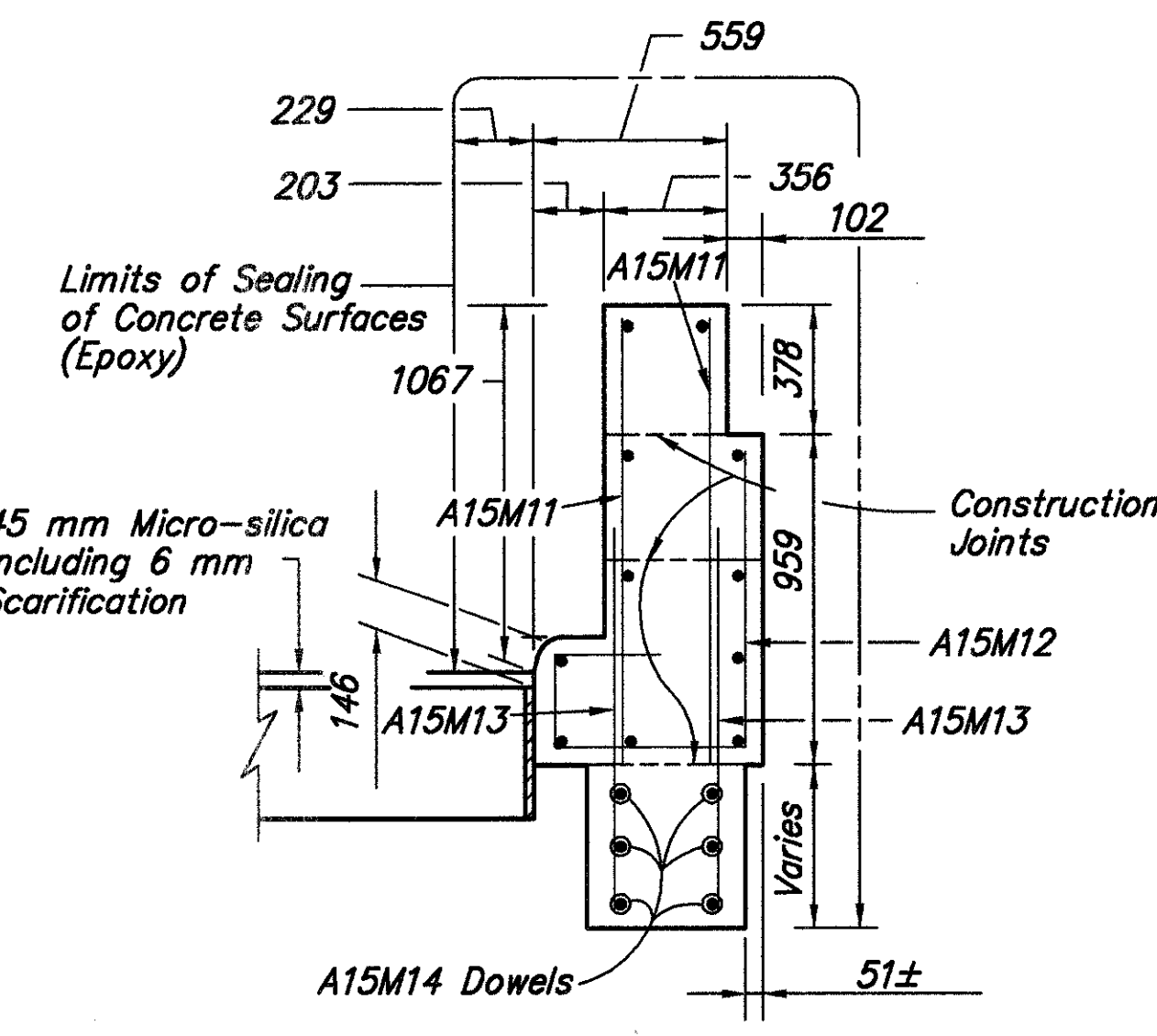
**SECTION A-A**  
(BEL-7-32283 & BEL-7-36368)



**SECTION B-B**  
(BEL-7-36368 Only)



**SECTION C-C**  
(BEL-7-36368 Only)



**SECTION D-D**  
(BEL-7-36368 Only)

Note:  
All horizontal reinforcing bars to be 15M bars unless noted otherwise.  
For Additional Retaining Wall parapet Details, See Sheets 10/37, 11/37 & 32/37

BEL-7-32283:  
For Additional Parapet Details, See Sheets 7/37, 9/37, 29/37, 30/37 & 32/37

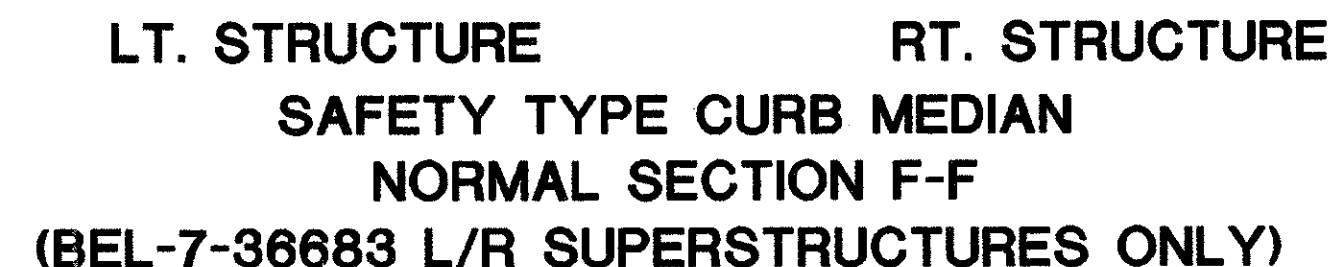
BEL-7-36368:  
For Additional Parapet Details, See Sheets 19/37, 20/37, 29/37, 30/37 & 32/37

BEL-7-36683:  
For Additional Parapet Details, See Sheets 29/37, 30/37 & 32/37

For Median Barrier & Median Curb Sections, See Sheets 32/37

Dwl. Denotes Dowel Bars.  
\*\* Denotes complete parapet replacement, not refacing.





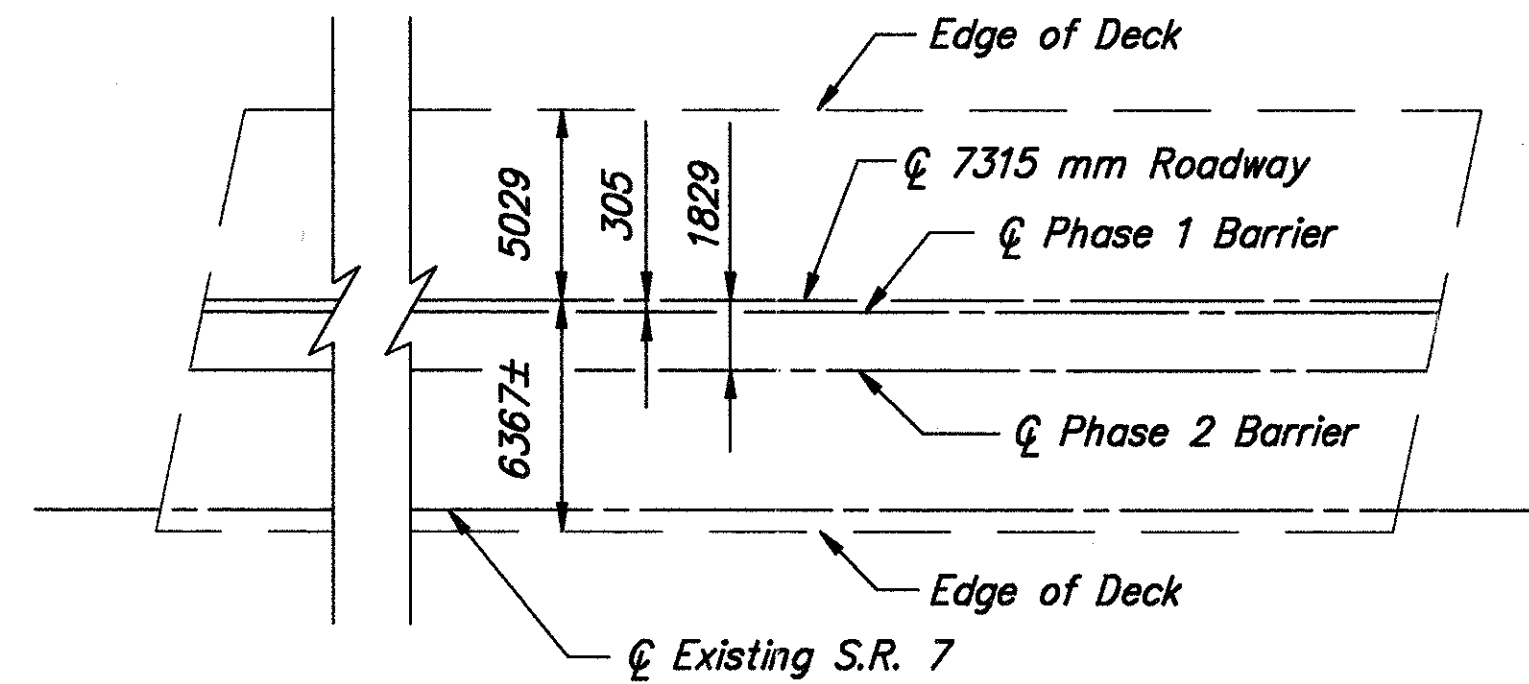
**PARAPET AND MEDIAN BARRIER DETAILS**  
BRIDGE REPAIR  
STATE ROUTE 7 BELMONT COUNTY



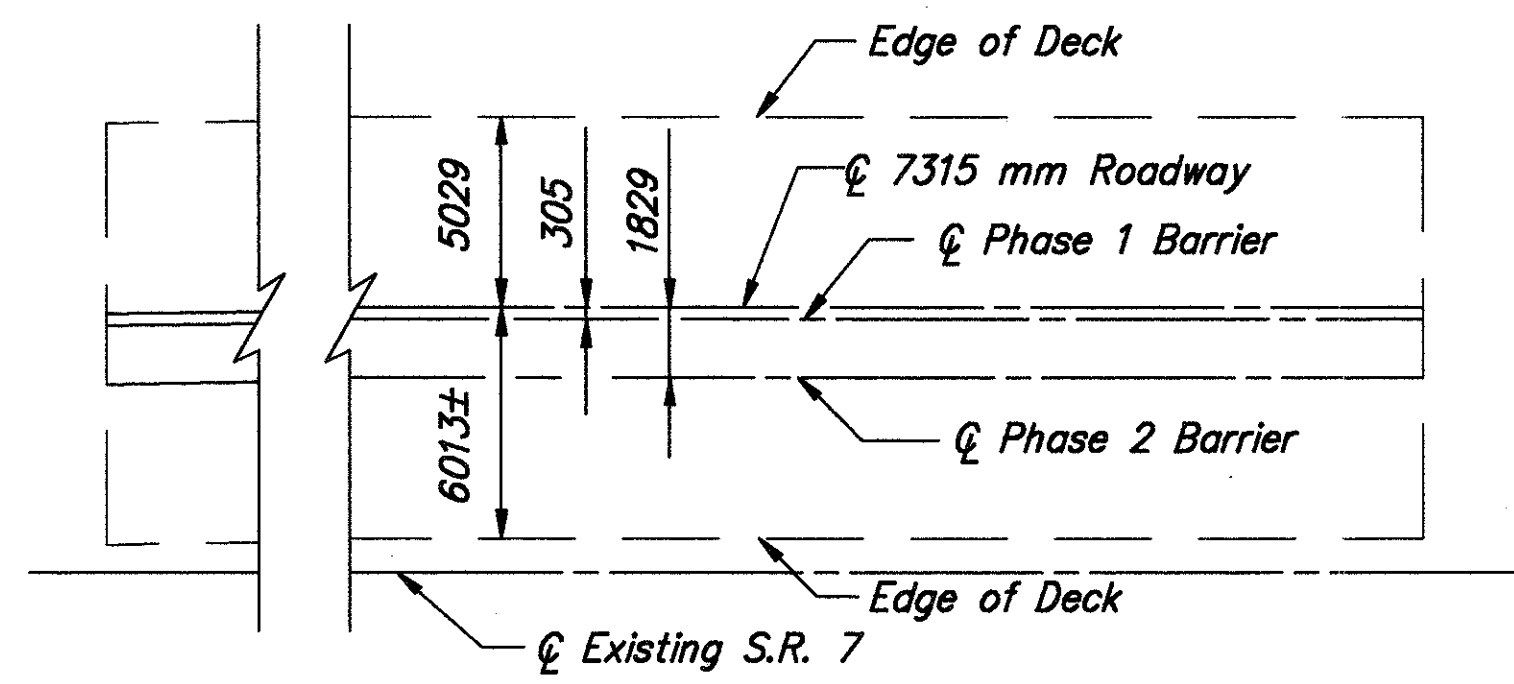
**\*\* To be complete railing replacement, not refacing.**

*Caution, electrical conduit and/or signal cable present in existing parapets. Check for live cable before removal of safety curbs and other portions of parapets. See General Notes.*

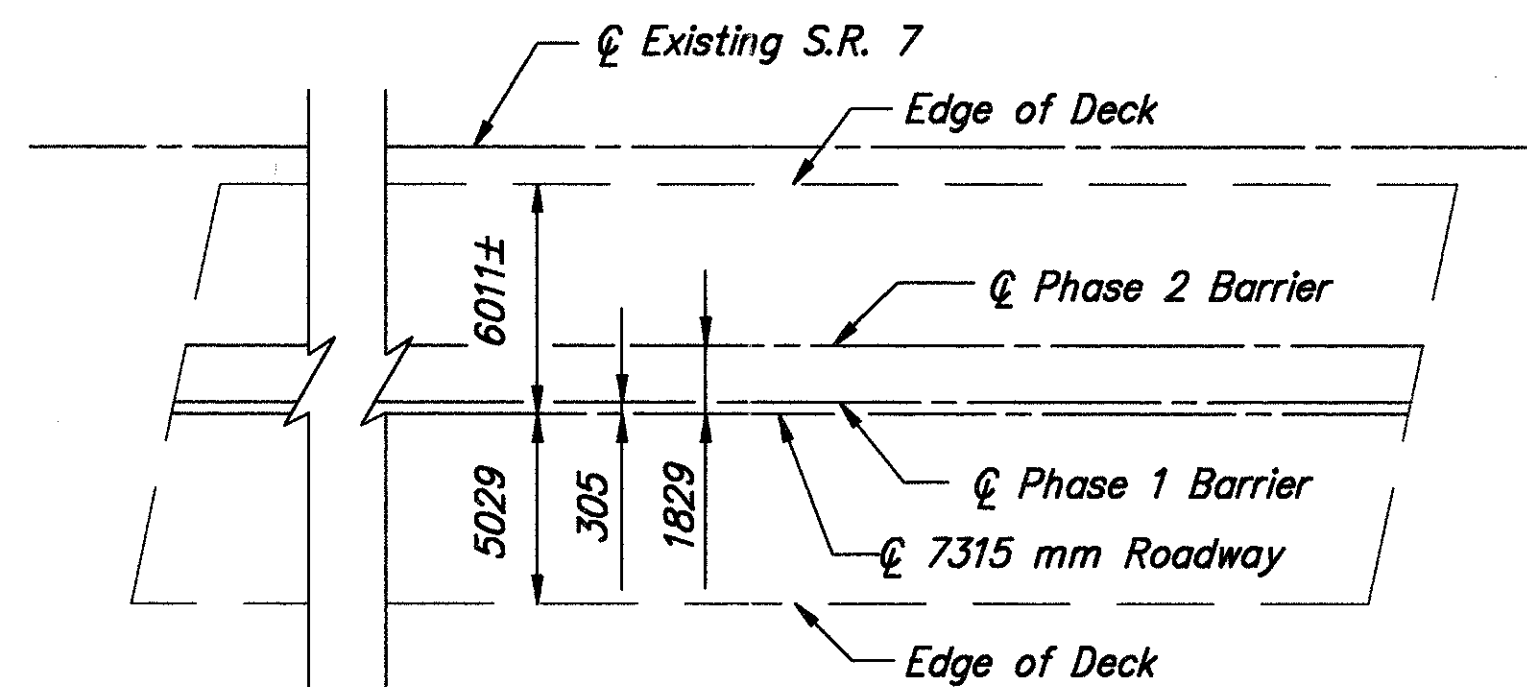




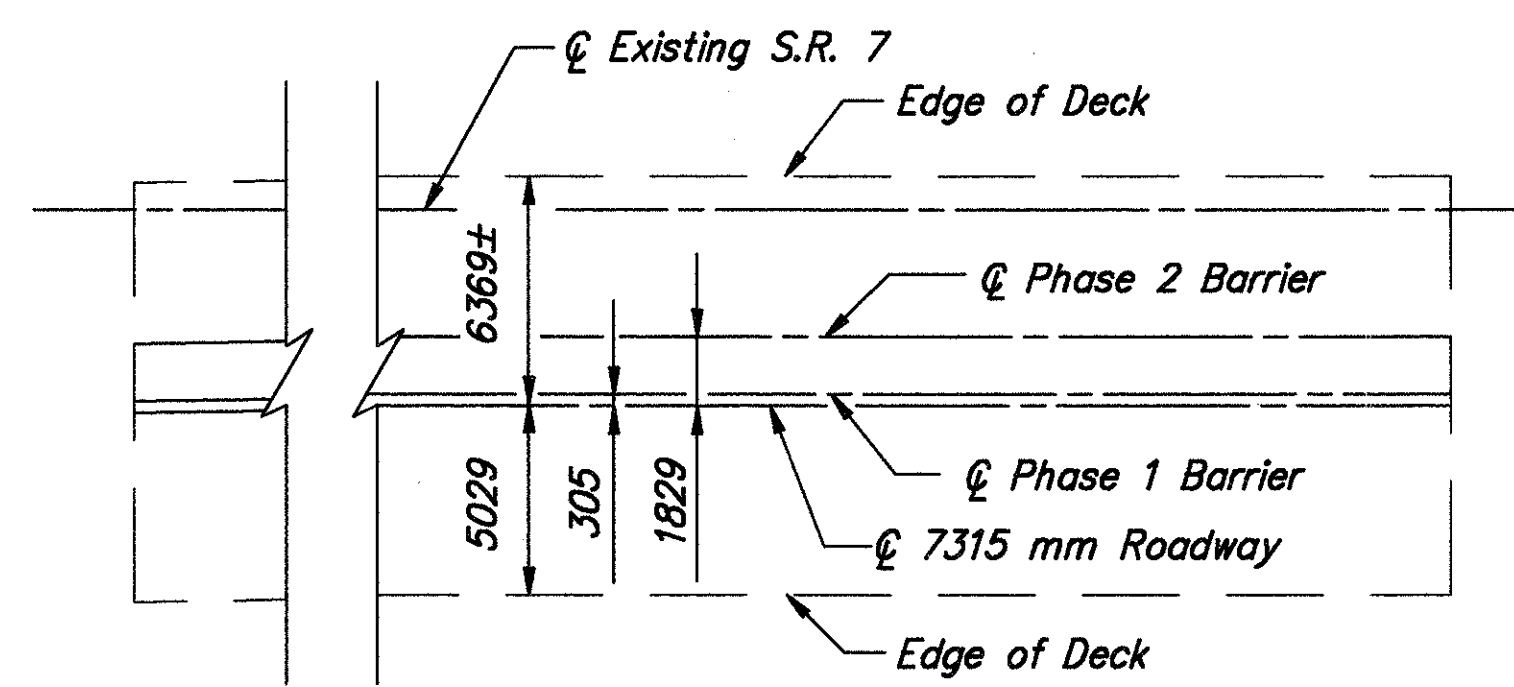
BEL-7-36368 L



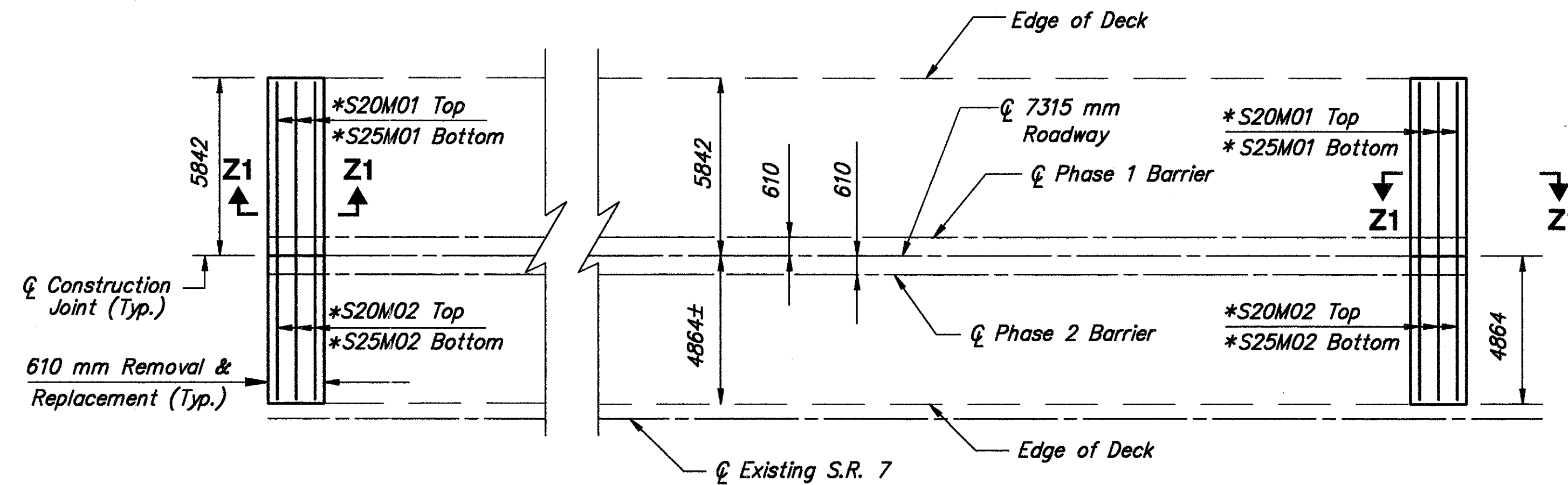
BEL-7-36683 L



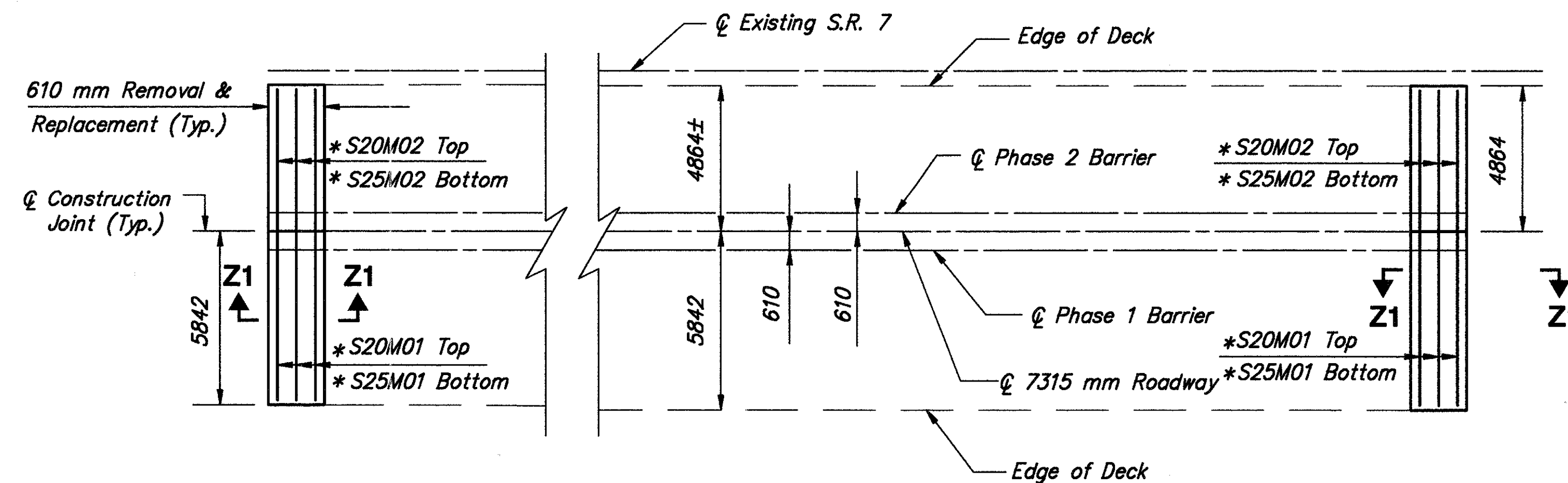
BEL-7-36368 R



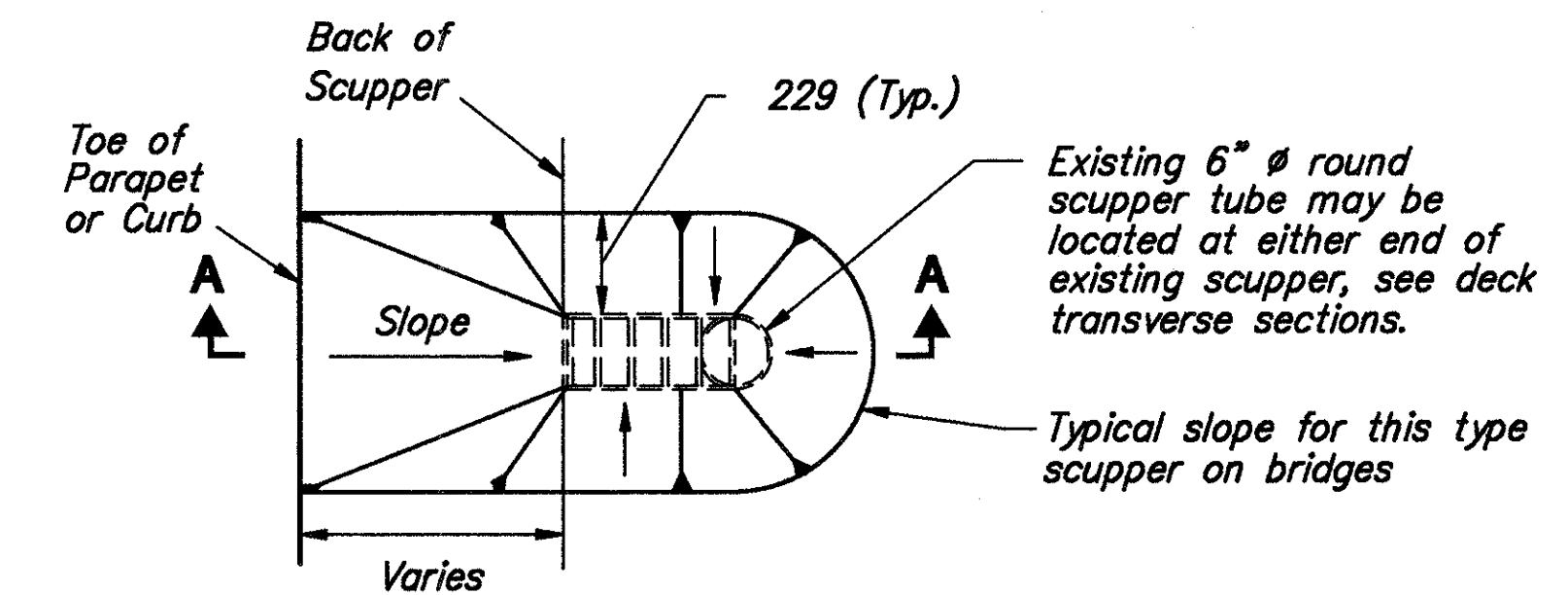
BEL-7-36683 R



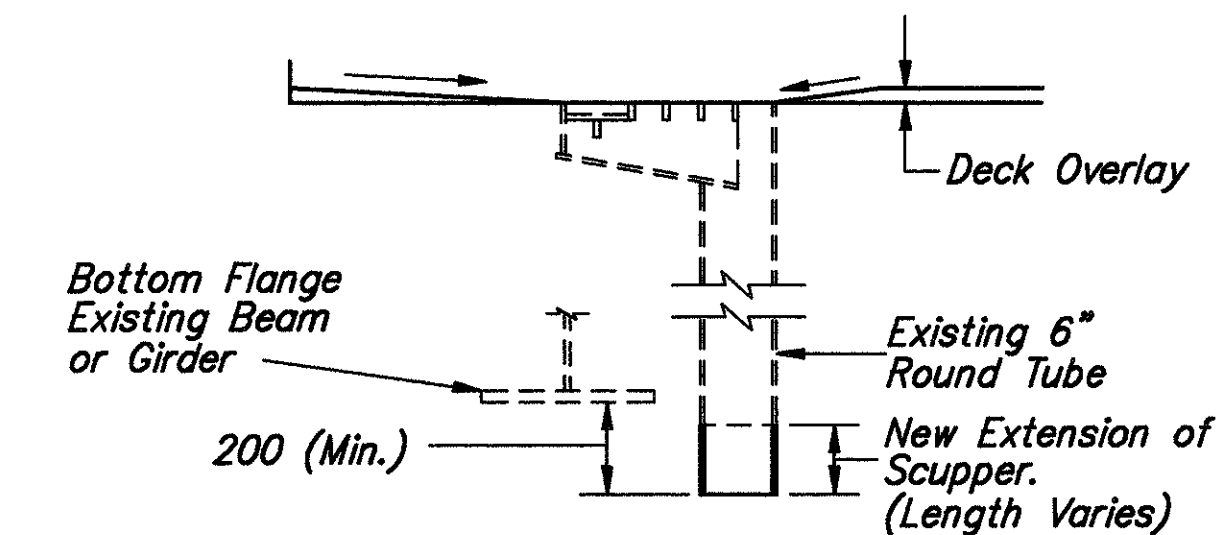
BEL-7-32283 L



BEL-7-32283 R



TYPICAL PLAN VIEW OF OVERLAY TREATMENT AT SCUPPERS



SECTION A-A

| BRIDGE NO.    | SCUPPER LENGTHENING | SCUPPER MODIFICATION |
|---------------|---------------------|----------------------|
| BEL-7-32283 L | 7                   | 19                   |
| BEL-7-32283 R | 8                   | 15                   |
| BEL-7-36164   | —                   | **                   |
| BEL-7-36368 L | 3                   | 3                    |
| BEL-7-36368 R | 3                   | 3                    |
| BEL-7-36683 L | 10                  | 10                   |
| BEL-7-36683 R | 10                  | 10                   |
| TOTAL         | 41                  | 60                   |

\*\* Modification of scuppers & drain system. For plans and details, see sheets 13/37 & 16/37.

For Details not shown, See St'd Dwg. SD-1-69.

### SCUPPER NOTES

THE FOLLOWING WORK SHALL BE PERFORMED ON THE BRIDGES SPECIFIED IN THE TABLE ON THIS SHEET.

#### ITEM 518 - SCUPPER, LENGTHENING

THE CONTRACTOR SHALL REMOVE A MINIMUM OF 152 mm OF THE BOTTOM OF EACH SCUPPER DOWNSPOUT, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL THEN WELD AN EXTENSION TO THE EXISTING SCUPPER DOWNSPOUT. THE DOWNSPOUT EXTENSION SHALL BE IN ACCORDANCE WITH 518 AND SHALL EXTEND A MINIMUM OF 200 mm BELOW THE BOTTOM FLANGE OF THE ADJACENT BEAM OR GIRDER. THE MATERIAL AND SIZE OF THE EXTENSION SHALL BE THE SAME AS THAT OF THE EXISTING SCUPPER DOWNSPOUT. THE COST FOR ALL MATERIAL, LABOR AND INCIDENTALS NECESSARY FOR THE ABOVE WORK SHALL BE INCLUDED UNDER ITEM 518 - SCUPPER, LENGTHENING.

#### ITEM 518 - SCUPPER MODIFICATION, AS PER PLAN

THE CONTRACTOR SHALL REMOVE EXISTING SCUPPER TOP EXTENSIONS AS REQUIRED TO MATCH EXISTING CONCRETE DECK SURFACE. THE COST FOR ALL MATERIAL, LABOR AND INCIDENTALS NECESSARY FOR THE ABOVE WORK SHALL BE INCLUDED UNDER ITEM 518 - SCUPPER MODIFICATION, AS PER PLAN.

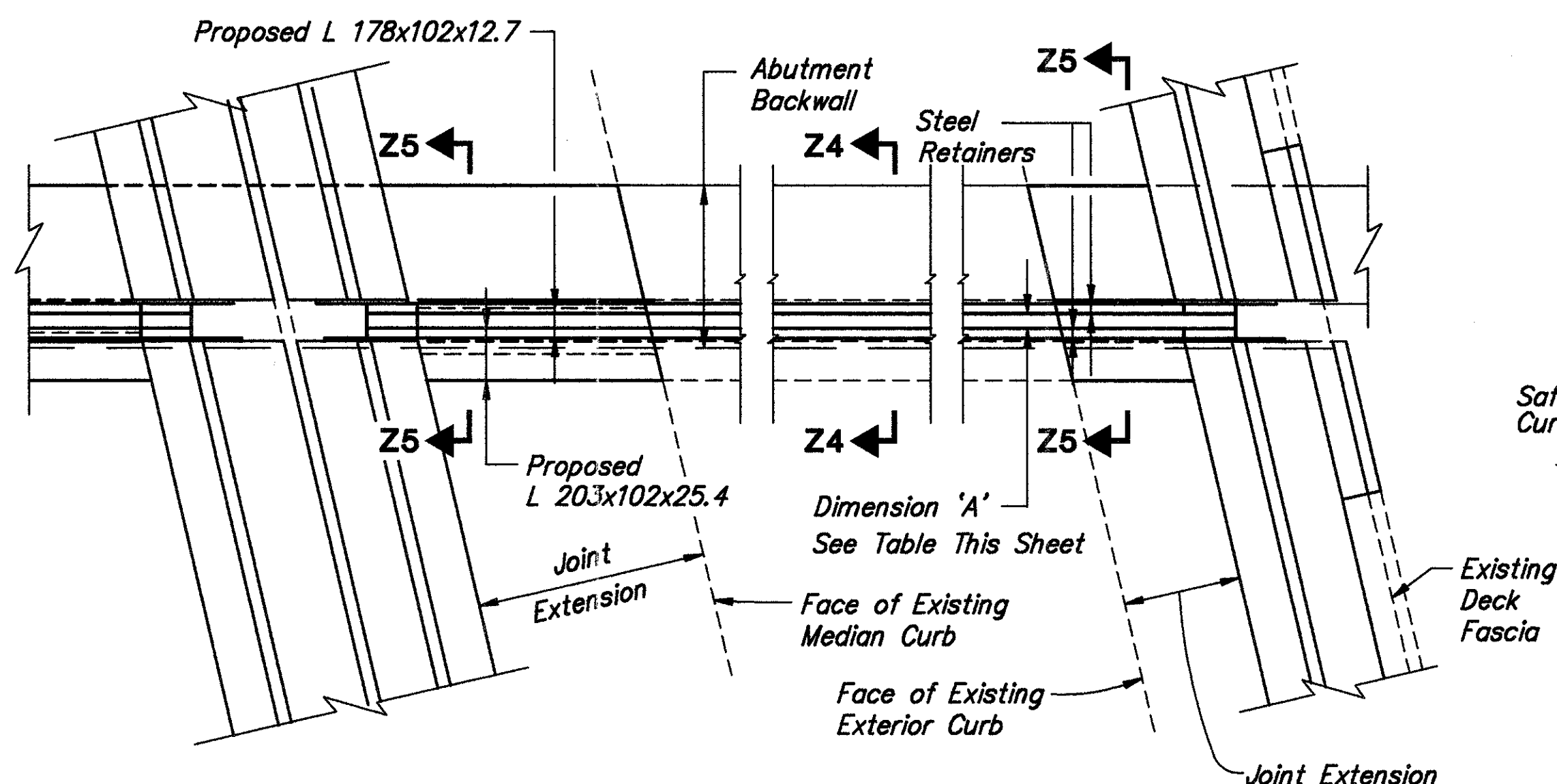
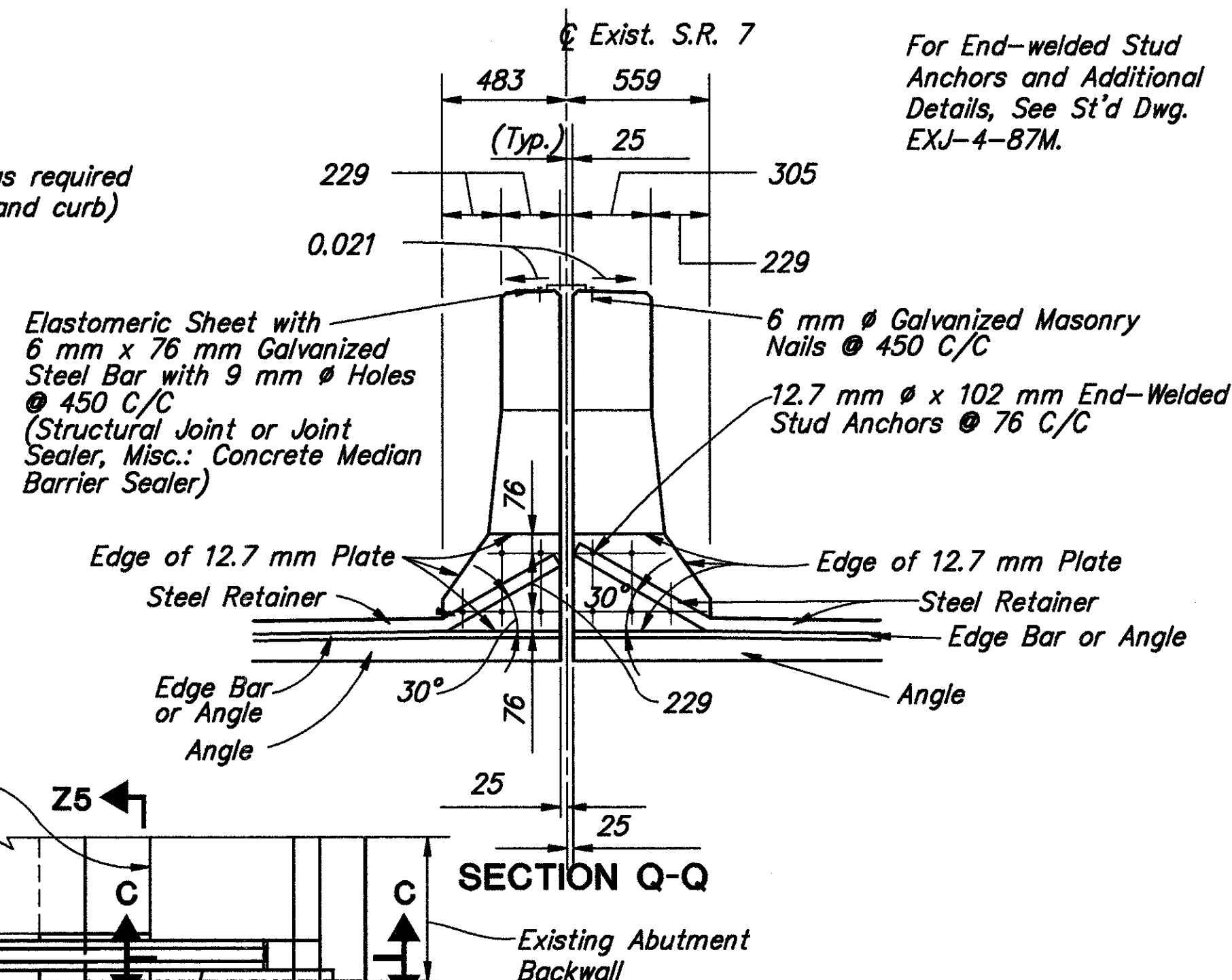
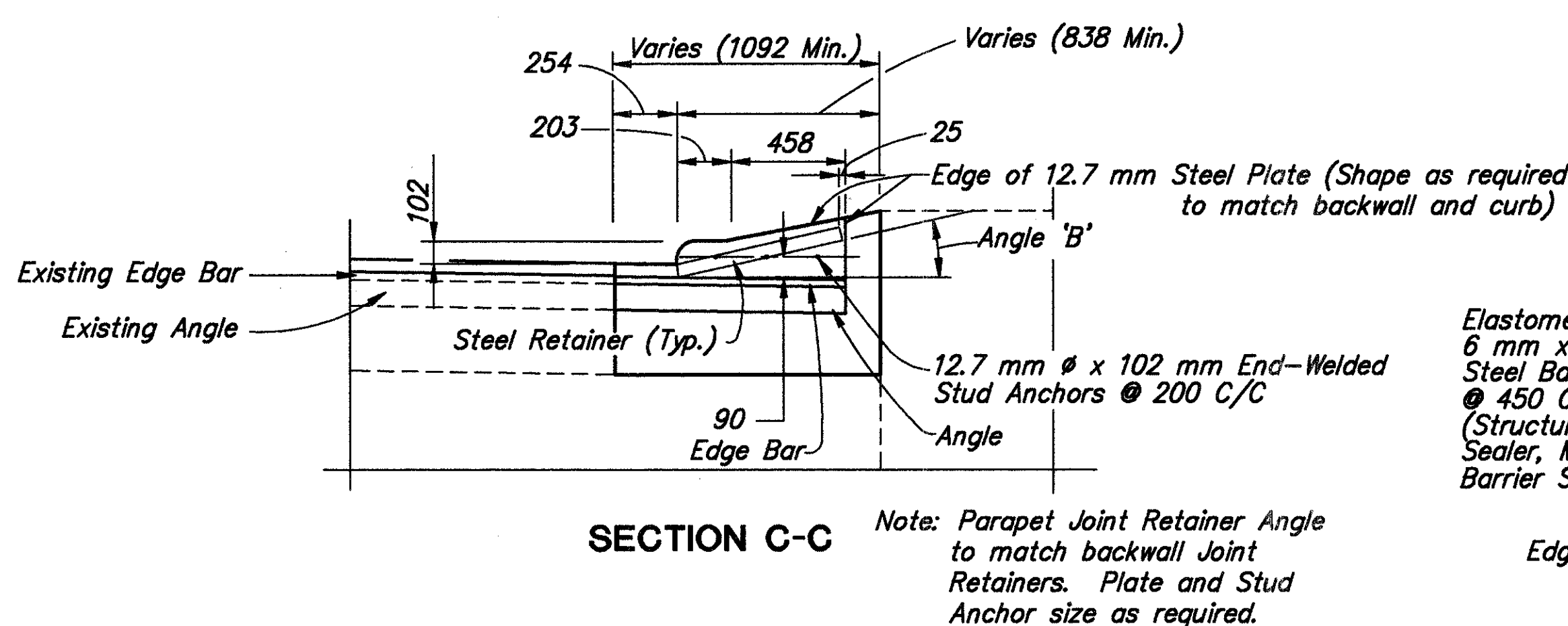
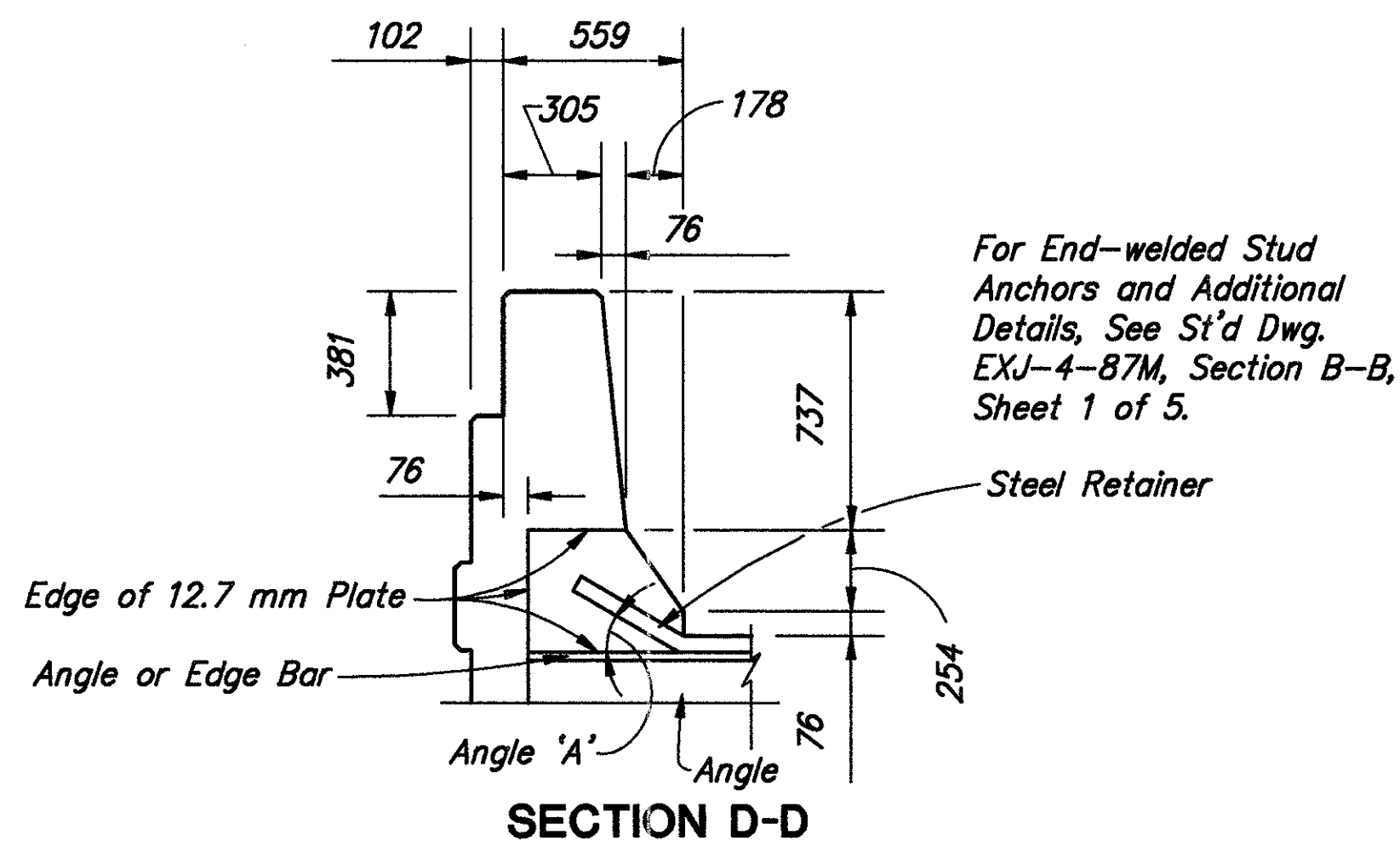
BEL-7-36164: THE CONTRACTOR SHALL MODIFY EXISTING SCUPPERS AND THEIR DRAIN SYSTEM AS NOTED AND SHOWN IN THE PLANS FOR THIS BRIDGE. SEE SHEET 16/37.

BEL-7-32283L/R, BEL-7-36368L/R AND BEL-7-36683L/R: AFTER REMOVAL OF EXISTING SCUPPER EXTENSION, THE CONTRACTOR SHALL INSTALL NEW SCUPPER BARS AT EXISTING CONCRETE DECK SURFACE. PLACEMENT AND SIZE OF BARS SHALL BE PER ST'D DWG. SD-1-69.

For Strip Seal Expansion Joint Details,  
See Sheets 34/37 & 35/37

For Section Z1-Z1, See Sheet 35/37





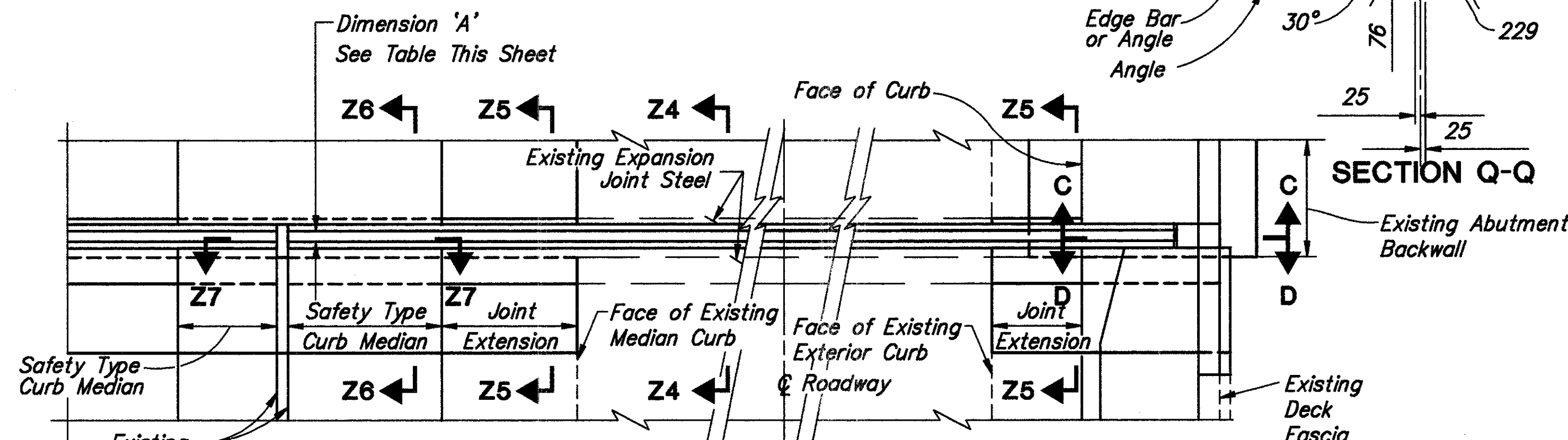
**BEL-7-36368 R EXPANSION JOINT EXTENSION PLAN  
(LEFT STRUCTURE SIMILAR ABOUT CENTERLINE)**

| BRIDGE NO.      | ANGLE REAR ABUTMENT | ANGLE INTERMEDIATE EXP. JOINT | ANGLE FORWARD ABUTMENT | ANGLE 'A'   | ANGLE 'B'   | EXPANSION JOINT PAY LENGTH LT. STRUCTURE | EXPANSION JOINT PAY LENGTH RT. STRUCTURE |
|-----------------|---------------------|-------------------------------|------------------------|-------------|-------------|------------------------------------------|------------------------------------------|
| BEL-7-32283 L/R | 0°                  | 0°                            | 0°                     | 30°         |             | 63 156 mm                                | 63 156 mm                                |
| BEL-7-36368 L/R | 12°-00'-00"         | -                             | 12°-00'-00"            | 30°         |             | 23 009 mm                                | 22 281 mm                                |
| BEL-7-36683 L/R | 2°-54'-38"          | -                             | 0°                     |             |             |                                          |                                          |
| LEFT REAR       | -                   | -                             | -                      | 12°-16'-25" | 12°-16'-25" | 22 660 mm                                | 23 372 mm                                |
| RIGHT REAR      | -                   | -                             | -                      | 12°-35'-19" | 12°-35'-19" | -                                        | -                                        |
| LEFT FWD.       | -                   | -                             | -                      | 10°-39'-44" | 10°-39'-44" | -                                        | -                                        |
| RIGHT FWD.      | -                   | -                             | -                      | 14°-30'-00" | 14°-30'-00" | -                                        | -                                        |
| TOTAL           |                     |                               |                        |             |             | 108 825 mm                               | 108 809 mm                               |

Estimated lengths: Contractor shall verify actual lengths needed in the field as directed by the Engineer.  
Quantities Carried to Sheet **3/37**

| AMBIENT TEMP. °C | DIMENSION 'A'                   |      |                                      |          |          |          |                                 |      |                                  |      |
|------------------|---------------------------------|------|--------------------------------------|----------|----------|----------|---------------------------------|------|----------------------------------|------|
|                  | BEL-7-32283L/R                  |      | BEL-7-32283L/R                       |          |          |          | BEL-7-36368L/R                  |      | BEL-7-36683L/R                   |      |
|                  | 75 mm ABUTMENT STRIP SEAL GLAND |      | 125 mm INTERMEDIATE STRIP SEAL GLAND |          |          |          | 75 mm ABUTMENT STRIP SEAL GLAND |      | 100 mm ABUTMENT STRIP SEAL GLAND |      |
|                  | REAR                            | FWD. | UNIT 1-2                             | UNIT 2-3 | UNIT 3-4 | UNIT 4-5 | REAR                            | FWD. | REAR                             | FWD. |
| -1.1 °C          | 60                              | 58   | 83                                   | 84       | 83       | 84       | 53                              | 56   | 64                               | 60   |
| 4.4 °C           | 57                              | 56   | 77                                   | 77       | 77       | 77       | 52                              | 54   | 59                               | 57   |
| 10.0 °C          | 54                              | 53   | 70                                   | 70       | 70       | 70       | 52                              | 52   | 55                               | 54   |
| 15.6 °C          | 51                              | 51   | 64                                   | 64       | 64       | 64       | 51                              | 51   | 51                               | 51   |
| 21.1 °C          | 48                              | 48   | 57                                   | 57       | 57       | 57       | 50                              | 49   | 47                               | 48   |
| 26.7 °C          | 45                              | 46   | 51                                   | 50       | 50       | 50       | 49                              | 48   | 42                               | 44   |
| 32.2 °C          | 42                              | 43   | 44                                   | 43       | 44       | 43       | 49                              | 46   | 38                               | 41   |

Dimension 'A' measured normal to Q Bearings.

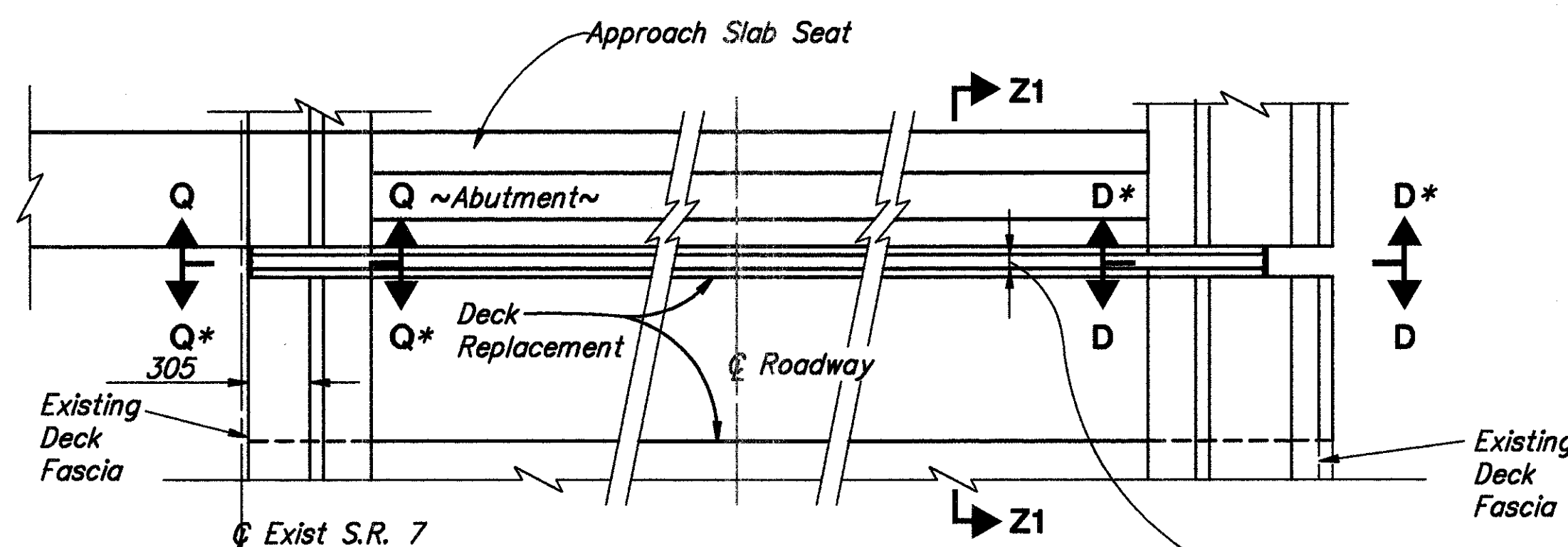


**BEL-7-36683 R EXPANSION JOINT EXTENSION PLAN  
(LEFT STRUCTURE SIMILAR ABOUT CENTERLINE)**

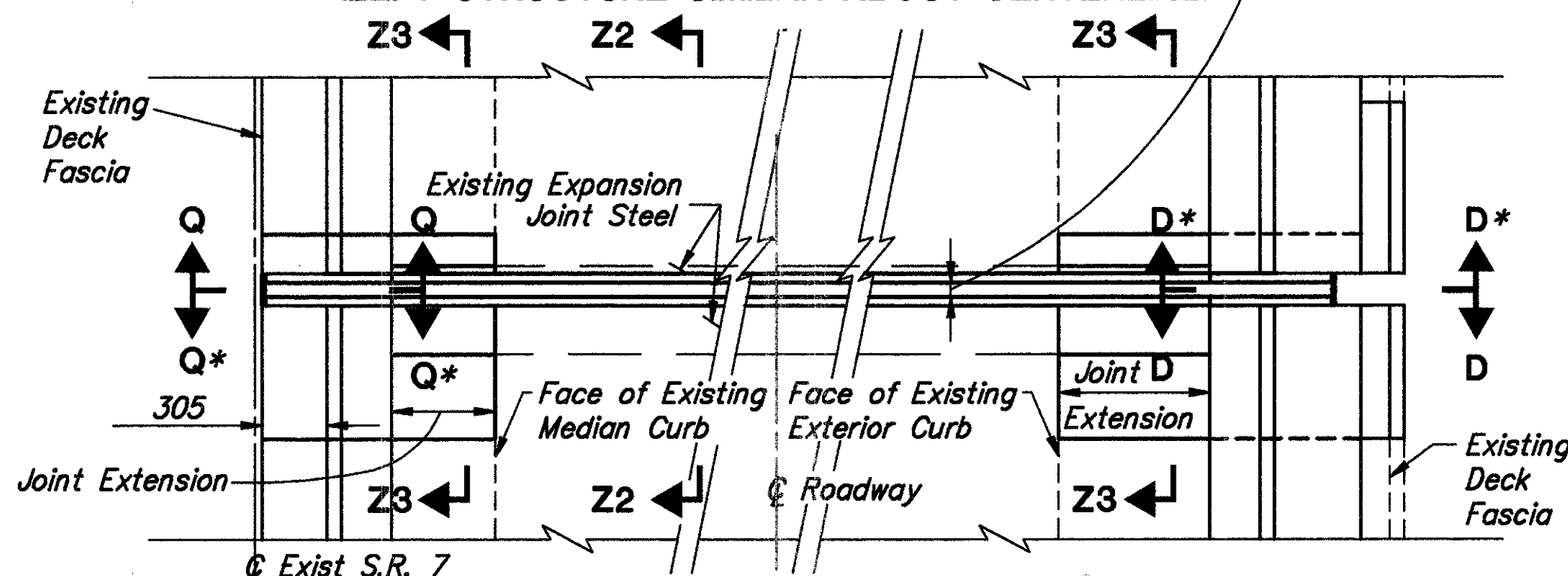
Notes: For Strip Seal Expansion Joint Notes and Construction Procedures, See St'd Dwg. EXJ-4-87M.

For Additional Details & Welds, See St'd Dwg. EXJ-4-87M.

Where required, expansion joints shall be constructed in phases which correspond with phase construction work on the decks and abutments. The Contractor shall verify the actual lengths of expansion joint required for each phase of construction, as well as the actual total length.



**BEL-7-32283 R EXPANSION JOINT AT ABUTMENTS  
(LEFT STRUCTURE SIMILAR ABOUT CENTERLINE)**

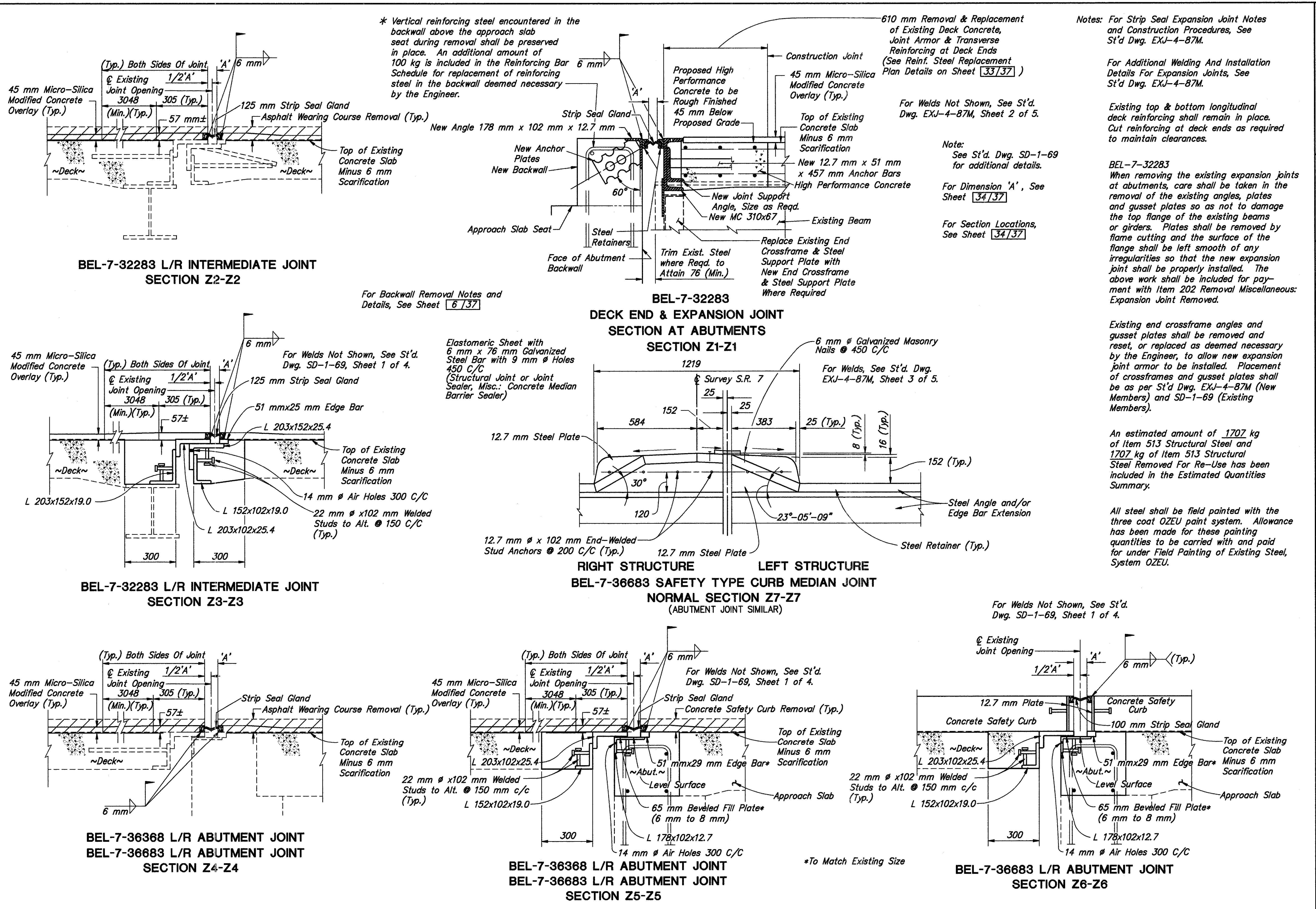


**BEL-7-32283 R EXPANSION JOINT  
EXTENSION PLAN AT INTERMEDIATE JOINTS  
(LEFT STRUCTURE SIMILAR ABOUT CENTERLINE)**

\* Opposite Hand

For Sections Z1-Z1 thru Z7-Z7, See Sheet **35/37**.





Notes: For Strip Seal Expansion Joint Notes and Construction Procedures, See St'd Dwg. EXJ-4-87M.

For Additional Welding And Installation Details For Expansion Joints, See St'd Dwg. EXJ-4-87M.

Existing top & bottom longitudinal deck reinforcing shall remain in place. Cut reinforcing at deck ends as required to maintain clearances.

BEL-7-32283  
When removing the existing expansion joints at abutments, care shall be taken in the removal of the existing angles, plates and gusset plates so as not to damage the top flange of the existing beams or girders. Plates shall be removed by flame cutting and the surface of the flange shall be left smooth of any irregularities so that the new expansion joint shall be properly installed. The above work shall be included for payment with Item 202 Removal Miscellaneous: Expansion Joint Removed.

Existing end crossframe angles and gusset plates shall be removed and reset, or replaced as deemed necessary by the Engineer, to allow new expansion joint armor to be installed. Placement of crossframes and gusset plates shall be as per St'd Dwg. EXJ-4-87M (New Members) and SD-1-69 (Existing Members).

An estimated amount of 1707 kg of Item 513 Structural Steel and 1707 kg of Item 513 Structural Steel Removed For Re-Use has been included in the Estimated Quantities Summary.

All steel shall be field painted with the three coat OZEU paint system. Allowance has been made for these painting quantities to be carried with and paid for under Field Painting of Existing Steel, System OZEU.

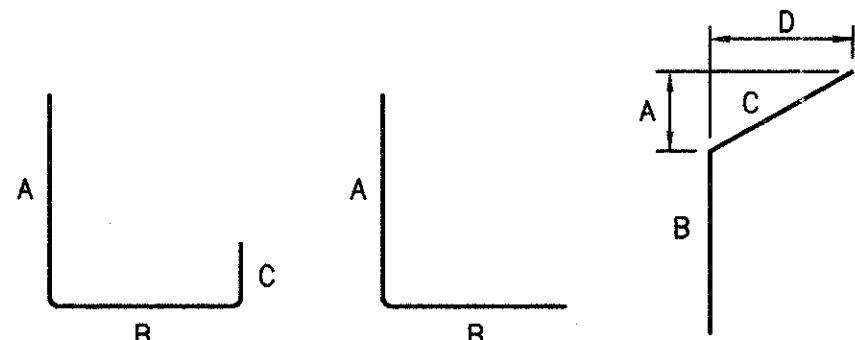
For Welds Not Shown, See St'd. Dwg. SD-1-69, Sheet 1 of 4.

\*To Match Existing Size

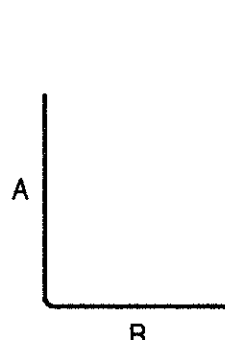
DESIGN AGENCY: W.E. QUICKSALL & ASSOCIATES INC., 554 WEST HIGH AVE., NEW PHILADELPHIA, OHIO 44662  
DATE: 10/97  
REVIEWED: Luda  
DRAWN: FDH  
DESIGNED: FDH  
CHECKED: ZRD  
EXPANSION JOINT DETAILS  
BRIDGE REPAIR  
STATE ROUTE 7 BELMONT COUNTY  
BEL-7-32.276  
35/37  
234  
242



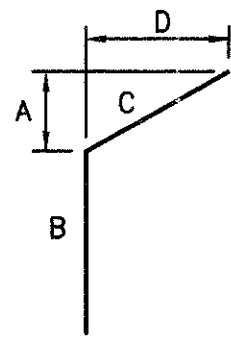
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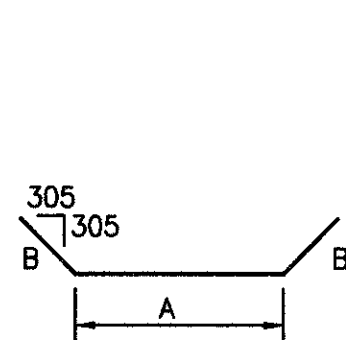
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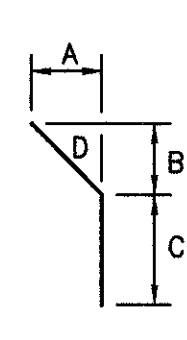
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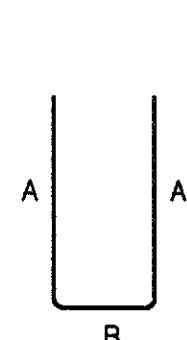
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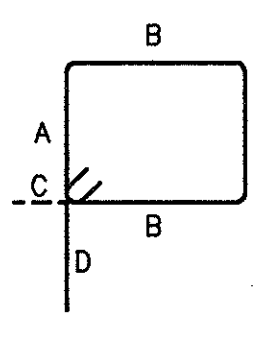
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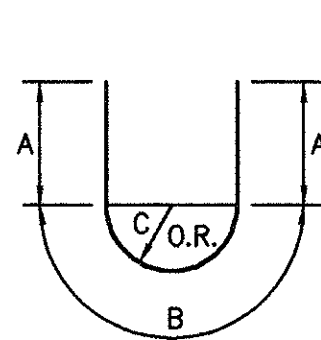
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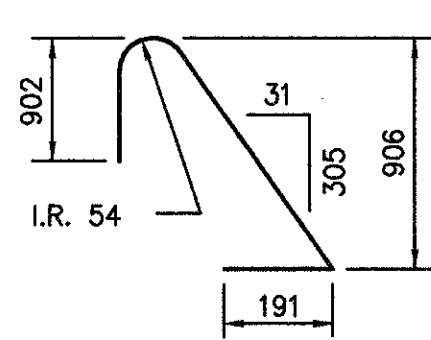
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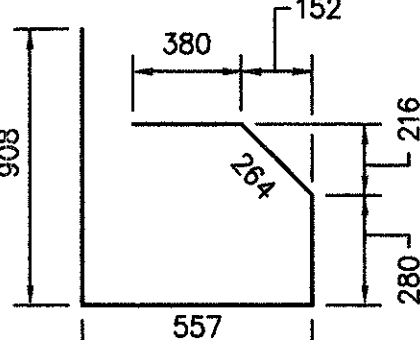
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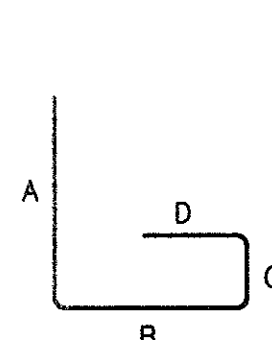
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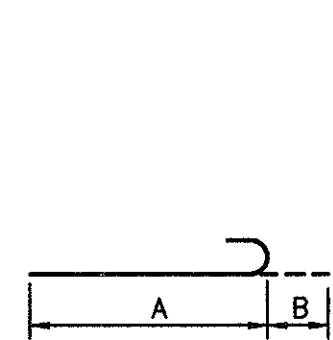
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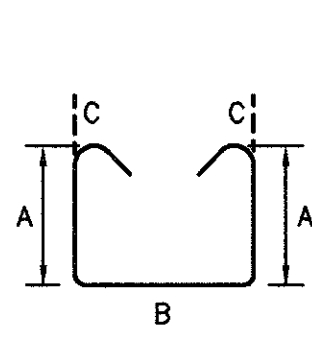
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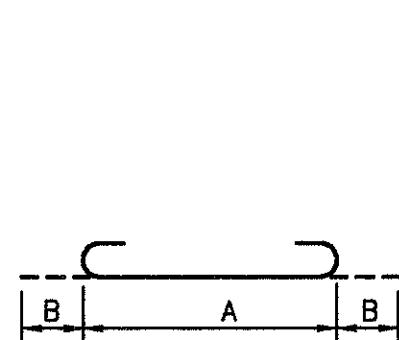
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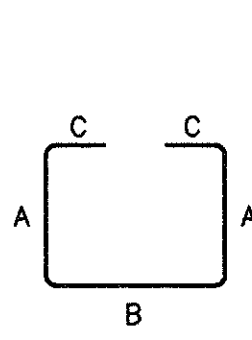
TYPE 12



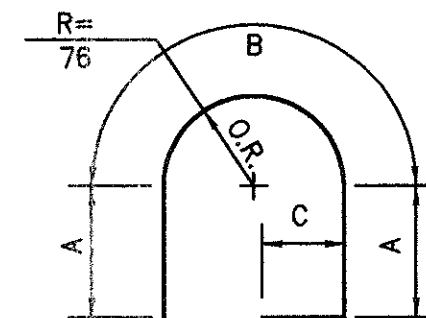
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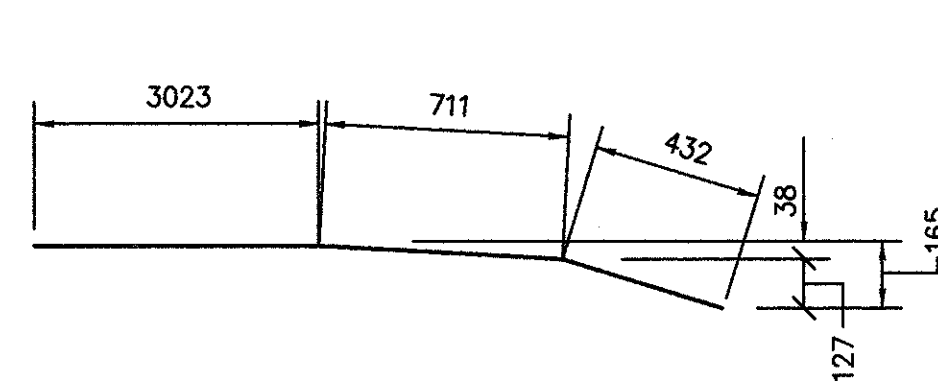
TYPE 14



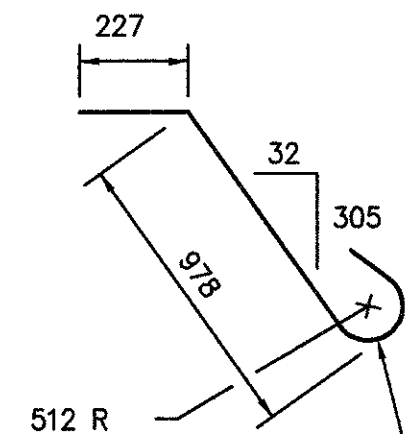
TYPE 15



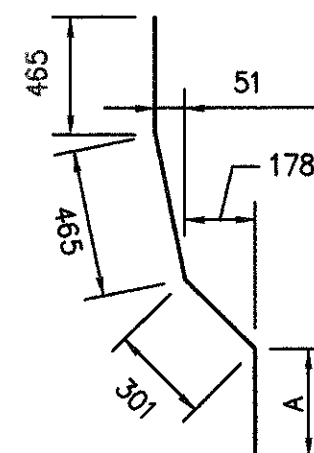
TYPE 17



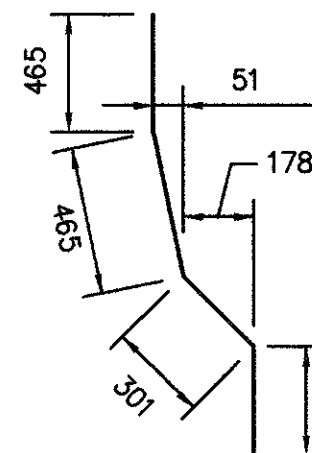
TYPE 18



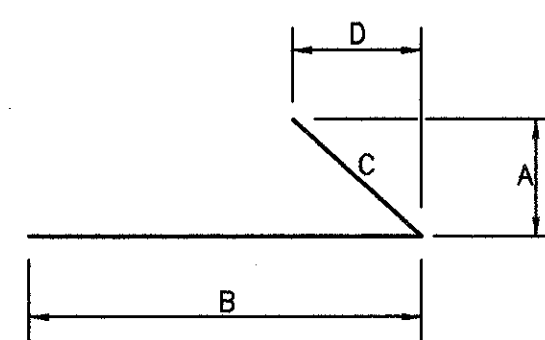
TYPE 19



TYPE 20



TYPE 21



TYPE 22

## NOTES

THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST TWO DIGITS INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, A15M01 IS A 15M BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

UNLESS NOTED OTHERWISE, PAYMENT SHALL BE INCLUDED IN THE CONTRACT BID PRICES FOR THE CORRESPONDING 511 ITEMS.

ALL LENGTHS ARE IN mm.

FOR ABUTMENT & RETAINING WALL REINFORCING BAR SCHEDULE, SEE SHEET 37/37

ALL REINFORCING STEEL TO BE EPOXY COATED.

ST IN THE TYPE COLUMN INDICATES A STRAIGHT BAR.

\*\* REINFORCING MECHANICALLY CONNECTED, SEE GENERAL NOTE.

\*\*\* INCLUDED WITH ITEM 517 - RAILING FACED, AS PER PLAN FOR PAYMENT.

## SUPERSTRUCTURE

## NUMBER

## TOTAL

## LENGTH

## WEIGHT

| MARK       | TYPE | A          | B          | C   | D   | E | BEL-7-32283L/R |       | BEL-7-36164 |  | BEL-7-36368L/R |       | BEL-7-36683L/R |       |      | mm       | kg     |
|------------|------|------------|------------|-----|-----|---|----------------|-------|-------------|--|----------------|-------|----------------|-------|------|----------|--------|
|            |      |            |            |     |     |   | LEFT           | RIGHT |             |  | LEFT           | RIGHT | LEFT           | RIGHT |      |          |        |
| ** S25M01  | ST   |            |            |     |     |   | 6              | 6     |             |  |                |       |                |       | 12   | 5791     | 273    |
| ** S25M02  | ST   |            |            |     |     |   | 6              | 6     |             |  |                |       |                |       | 12   | 4813     | 227    |
|            |      |            |            |     |     |   |                |       |             |  |                |       |                |       |      | SUBTOTAL | 500    |
| ** S20M01  | ST   |            |            |     |     |   | 6              | 6     |             |  |                |       |                |       | 12   | 5791     | 164    |
| ** S20M02  | ST   |            |            |     |     |   | 6              | 6     |             |  |                |       |                |       | 12   | 4813     | 136    |
|            |      |            |            |     |     |   |                |       |             |  |                |       |                |       |      | SUBTOTAL | 300    |
| *** S15M01 | ST   |            |            |     |     |   | 230            | 230   |             |  | 15             | 15    | 53             | 53    | 596  | 10 668   | 9982   |
| S15M02     | ST   |            |            |     |     |   |                |       | 4           |  |                |       |                |       | 4    | 6900     | 43     |
| S15M03     | ST   |            |            |     |     |   |                |       | 4           |  |                |       |                |       | 4    | 6212     | 39     |
| S15M04     | ST   |            |            |     |     |   |                |       | 398         |  |                |       |                |       | 398  | 546      | 341    |
| *** S15M05 | ST   |            |            |     |     |   | 1292           | 1292  |             |  | 97             | 97    | 296            | 296   | 3370 | 501      | 2651   |
| *** S15M06 | 5    | 225        | 321        | 257 | 392 |   | 1312           | 1312  |             |  | 101            | 101   | 298            | 298   | 3422 | 649      | 3487   |
| *** S15M07 | 19   | See Detail |            |     |     |   | 1312           | 1312  |             |  | 101            | 101   | 280            | 280   | 3386 | 1343     | 7139   |
| *** S15M08 | 12   | 968        | 178        |     |     |   |                |       |             |  |                |       | 18             | 18    | 36   | 1146     | 65     |
| *** S15M09 | ST   |            |            |     |     |   | 20             | 20    |             |  | 4              | 4     | 12             | 12    | 72   | 1197     | 135    |
| S15M10     | 2    | 505        | 152        |     |     |   | 1312           | -     |             |  | 101            | -     |                |       | 1413 | 616      | 1367   |
| S15M11     | 2    | 1213       | 245        |     |     |   | 1312           | 1312  |             |  | 101            | 101   |                |       | 2826 | 1417     | 6287   |
| S15M12     | 20   | 257        | See Detail |     |     |   | 1312           | 1312  |             |  | 101            | 101   |                |       | 2826 | 1488     | 6602   |
| S15M13     | 2    | 505        | 127        |     |     |   | -              | 1312  |             |  | -              | 101   |                |       | 1413 | 591      | 1311   |
| S15M15     | 2    | 314        | 273        |     |     |   |                |       |             |  |                |       | 303            | -     | 303  | 545      | 259    |
| S15M16     | 2    | 314        | 629        |     |     |   |                |       |             |  |                |       | -              | 303   | 303  | 901      | 429    |
| *** S15M17 | ST   |            |            |     |     |   | 5              | 5     |             |  |                |       |                |       | 10   | 8802     | 138    |
| *** S15M18 | ST   |            |            |     |     |   | 5              | 5     |             |  |                |       |                |       | 10   | 5672     | 89     |
| *** S15M19 | ST   |            |            |     |     |   | 5              | 5     |             |  |                |       |                |       | 10   | 6981     | 110    |
| *** S15M20 | ST   |            |            |     |     |   | 5              | 5     |             |  |                |       |                |       | 10   | 3129     | 49     |
| *** S15M21 | ST   |            |            |     |     |   | 5              | 5     |             |  |                |       |                |       | 10   | 8299     | 130    |
| *** S15M22 | 21   | See Detail |            |     |     |   | 4              | 4     |             |  |                |       |                |       | 8    | 1285     | 16     |
| *** S15M23 | ST   |            |            |     |     |   |                |       |             |  | 5              | 5     |                |       | 10   | 7072     | 111    |
| *** S15M25 | 18   | See Detail |            |     |     |   |                |       |             |  |                |       | 4              | 4     | 8    | 4166     | 52     |
| *** S15M26 | ST   |            |            |     |     |   |                |       |             |  |                |       | 2              | 2     | 4    | 4166     | 26     |
| *** S15M27 | ST   |            |            |     |     |   |                |       |             |  |                |       | 4              | 4     | 8    | 994      | 12     |
| *** S15M28 | ST   |            |            |     |     |   |                |       |             |  |                |       | 5              | 6     | 11   | 4447     | 77     |
| *** S15M29 | ST   |            |            |     |     |   |                |       |             |  |                |       | 3              | 3     | 6    | 891      | 8      |
| *** S15M30 | ST   |            |            |     |     |   |                |       |             |  |                |       | 3              | 3     | 6    | 7112     | 67     |
| S15M31     | ST   |            |            |     |     |   | 552            | 552   | 48          |  | 36             | 36    | 22             | 33    | 1279 | 10 668   | 21 422 |
| S15M32     | 17   | 318        | 239        | 102 |     |   |                |       | 398         |  |                |       |                |       | 398  | 939      | 587    |
| S15M33     | ST   |            |            |     |     |   | 12             | 12    |             |  |                |       |                |       | 24   | 5672     | 214    |
| S15M34     | ST   |            |            |     |     |   | 12             | 12    |             |  |                |       |                |       | 24   | 6981     | 263    |
| S15M35     | ST   |            |            |     |     |   | 12             | 12    |             |  |                |       |                |       | 24   | 3129     | 118    |
| S15M36     | ST   |            |            |     |     |   | 12             | 12    |             |  |                |       |                |       | 24   | 8802     | 332    |
| S15M37     | ST   |            |            |     |     |   | 12             | 12    |             |  |                |       |                |       | 24   | 8299     | 313    |
| S15M38     | ST   |            |            |     |     |   | 12             | 12    |             |  |                |       |                |       | 24   | 7072     | 266    |
| *** S15M39 | ST   |            |            |     |     |   | 30             | 30    |             |  | 6              | 6     |                |       | 72   | 860      | 97     |
| *** S15M40 | ST   |            |            |     |     |   |                |       |             |  |                |       | 6              | 6     | 12   | 1470     | 28     |
|            |      |            |            |     |     |   |                |       |             |  |                |       |                |       |      | SUBTOTAL | 64 662 |

DESIGN AGENCY  
W.E. QUICKSALL & ASSOCIATES INC.  
554 WEST HIGH AVE.  
NEW PHILADELPHIA, OHIO  
CONSULTING ENGINEERS

DATE  
10/97  
REVIEWED  
WEL  
STRUCTURE FILE NUMBER

DRAWN  
CFD  
DESIGNED  
FDH  
CHECKED  
ZRD

REINFORCING BAR SCHEDULE  
BRIDGE REPAIR  
STATE ROUTE 7 BELMONT COUNTY

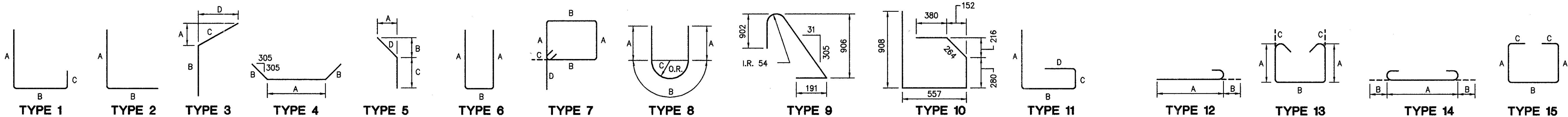
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36/37

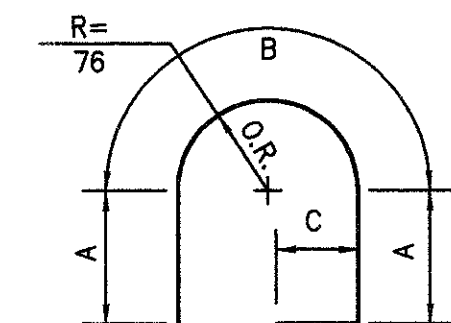
235  
242



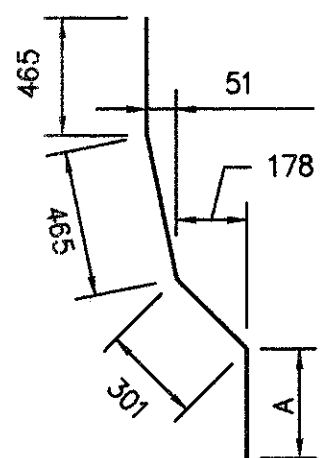
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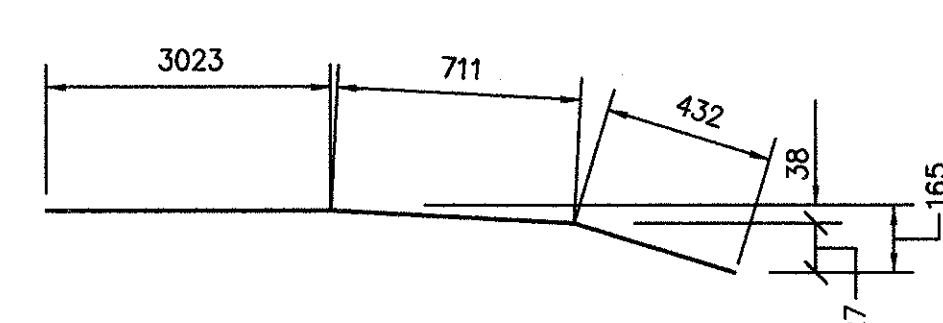
| ABUTMENTS               |      |            |            |     |     |   | NUMBER         |       |  |                |       |                |       |  |  |     | TOTAL    | LENGTH | WEIGHT |
|-------------------------|------|------------|------------|-----|-----|---|----------------|-------|--|----------------|-------|----------------|-------|--|--|-----|----------|--------|--------|
| MARK                    | TYPE | A          | B          | C   | D   | E | BEL-7-32283L/R |       |  | BEL-7-36368L/R |       | BEL-7-36683L/R |       |  |  | mm  |          | kg     |        |
|                         |      |            |            |     |     |   | LEFT           | RIGHT |  | LEFT           | RIGHT | LEFT           | RIGHT |  |  |     |          |        |        |
| A25M01                  | 4    | 712        | 431        |     |     |   | 42             | 42    |  |                |       |                |       |  |  | 84  | 1511     | 498    |        |
|                         |      |            |            |     |     |   |                |       |  |                |       |                |       |  |  |     | SUBTOTAL | 498    |        |
| A20M01                  | 1    | 1394       | 279        | 894 |     |   | 10             | 10    |  |                |       |                |       |  |  | 20  | 2472     | 116    |        |
| A20M02                  | 2    | 1059       | 348        |     |     |   | 10             | 10    |  |                |       |                |       |  |  | 20  | 1360     | 64     |        |
|                         |      |            |            |     |     |   |                |       |  |                |       |                |       |  |  |     | SUBTOTAL | 180    |        |
| *A15M01                 | ST   |            |            |     |     |   | 18             | 18    |  |                |       |                |       |  |  | 36  | 5126     | 290    |        |
| A15M02                  | ST   |            |            |     |     |   | 22             | 22    |  |                |       |                |       |  |  | 44  | 1662     | 115    |        |
| A15M03                  | ST   |            |            |     |     |   | 24             | 24    |  | 24             | 24    | 22             | 22    |  |  | 140 | 432      | 95     |        |
| A15M04                  | 9    | See Detail |            |     |     |   | 8              | 8     |  | 2              | 2     |                |       |  |  | 20  | 2158     | 68     |        |
| A15M05                  | 10   | See Detail |            |     |     |   | 8              | 8     |  | 19             | 19    |                |       |  |  | 54  | 2269     | 192    |        |
| A15M06                  | 20   | 508        | See Detail |     |     |   | 4              | 4     |  |                |       |                |       |  |  | 8   | 1739     | 22     |        |
| A15M07                  | 2    | 1168       | 246        |     |     |   | 4              | 4     |  | 4              | 4     |                |       |  |  | 16  | 1373     | 34     |        |
| A15M08                  | 2    | 793        | 126        |     |     |   | 4              | 4     |  |                |       |                |       |  |  | 8   | 878      | 11     |        |
| A15M09                  | 18   | See Detail |            |     |     |   |                |       |  | 4              | 4     |                |       |  |  | 8   | 4166     | 52     |        |
| A15M10                  | 12   | 984        | 203        |     |     |   |                |       |  | 17             | 17    |                |       |  |  | 34  | 1187     | 63     |        |
| A15M11                  | ST   |            |            |     |     |   |                |       |  | 25             | 25    |                |       |  |  | 50  | 1286     | 101    |        |
| A15M12                  | 11   | 856        | 559        | 272 | 305 |   |                |       |  | 4              | 4     |                |       |  |  | 8   | 1869     | 23     |        |
| A15M13                  | ST   |            |            |     |     |   |                |       |  | 8              | 8     |                |       |  |  | 16  | 1270     | 32     |        |
| A15M14                  | ST   |            |            |     |     |   |                |       |  | 12             | 12    |                |       |  |  | 24  | 1206     | 45     |        |
| A15M15                  | ST   |            |            |     |     |   |                |       |  | 9              | 9     |                |       |  |  | 18  | 4264     | 121    |        |
| A15M16                  | ST   |            |            |     |     |   |                |       |  | 9              | 9     |                |       |  |  | 18  | 4415     | 125    |        |
| A15M17                  | ST   |            |            |     |     |   |                |       |  | -              | 8     |                |       |  |  | 8   | 1871     | 23     |        |
| A15M18                  | 2    | 895        | 279        |     |     |   |                |       |  |                |       | 4              | 4     |  |  | 8   | 1133     | 14     |        |
| A15M19                  | 2    | 895        | 508        |     |     |   |                |       |  |                |       | -              | 4     |  |  | 4   | 1362     | 9      |        |
| A15M20                  | 22   | 286        | 901        | 291 | 54  |   |                |       |  |                |       | 4              | 4     |  |  | 8   | 1182     | 15     |        |
| A15M21                  | 3    | 127        | 771        | 684 | 673 |   |                |       |  |                |       | 4              | 4     |  |  | 8   | 1414     | 18     |        |
| A15M22                  | 1    | 991        | 343        | 153 |     |   |                |       |  |                |       | 4              | 4     |  |  | 8   | 1405     | 18     |        |
| *A15M23                 | ST   |            |            |     |     |   | 18             | 18    |  |                |       |                |       |  |  | 36  | 5429     | 307    |        |
| A15M24                  | ST   |            |            |     |     |   |                |       |  | 4              | -     |                |       |  |  | 4   | 2130     | 13     |        |
| A15M25                  | ST   |            |            |     |     |   |                |       |  | 2              | 2     |                |       |  |  | 4   | 1219     | 8      |        |
| A15M26                  | ST   |            |            |     |     |   |                |       |  |                |       | 6              | 3     |  |  | 9   | 2077     | 29     |        |
| A15M27                  | 2    | 895        | 432        |     |     |   |                |       |  |                |       | 4              | -     |  |  | 4   | 1286     | 8      |        |
| A15M28                  | ST   |            |            |     |     |   |                |       |  |                |       | -              | 3     |  |  | 3   | 4165     | 20     |        |
| A15M29                  | 20   | 393        | See Detail |     |     |   |                |       |  | 4              | 4     |                |       |  |  | 8   | 1624     | 20     |        |
| A15M30                  | 2    | 796        | 126        |     |     |   |                |       |  | 4              | 4     |                |       |  |  | 8   | 881      | 11     |        |
|                         |      |            |            |     |     |   |                |       |  |                |       |                |       |  |  |     | SUBTOTAL | 1902   |        |
| RETAINING WALL PARAPETS |      |            |            |     |     |   |                |       |  |                |       |                |       |  |  |     |          |        |        |
| R15M01                  | 5    | 225        | 321        | 293 | 392 |   | 331            | 467   |  |                |       |                |       |  |  | 798 | 685      | 858    |        |
| R15M02                  | 19   | See Detail |            |     |     |   | 317            | 453   |  |                |       |                |       |  |  | 770 | 1343     | 1624   |        |
| R15M03                  | ST   |            |            |     |     |   | 390            | 553   |  |                |       |                |       |  |  | 943 | 483      | 715    |        |
| R15M04                  | 12   | 1242       | 178        |     |     |   | 24             | 24    |  |                |       |                |       |  |  | 48  | 1420     | 107    |        |
| R15M05                  | ST   |            |            |     |     |   | 2              | 2     |  |                |       |                |       |  |  | 4   | 1623     | 10     |        |
| R15M07                  | ST   |            |            |     |     |   | 84             | 120   |  |                |       |                |       |  |  | 204 | 10 668   | 3417   |        |
| R15M08                  | ST   |            |            |     |     |   | 3              | -     |  |                |       |                |       |  |  | 3   | 9765     | 46     |        |
| R15M09                  | ST   |            |            |     |     |   | -              | 6     |  |                |       |                |       |  |  | 6   | 6452     | 61     |        |
| R15M10                  | ST   |            |            |     |     |   | 3              | -     |  |                |       |                |       |  |  | 3   | 10 258   | 48     |        |
| R15M11                  | ST   |            |            |     |     |   | 3              | -     |  |                |       |                |       |  |  | 3   | 3923     | 18     |        |
| R15M12                  | ST   |            |            |     |     |   | -              | 3     |  |                |       |                |       |  |  | 3   | 1657     | 8      |        |
| R15M13                  | ST   |            |            |     |     |   | 3              | -     |  |                |       |                |       |  |  | 3   | 3806     | 18     |        |
| R15M14                  | ST   |            |            |     |     |   | -              | 3     |  |                |       |                |       |  |  | 3   | 6303     | 30     |        |
| R15M15                  | ST   |            |            |     |     |   | 2              | 2     |  |                |       |                |       |  |  | 4   | 4166     | 26     |        |
| R15M16                  | 18   | See Detail |            |     |     |   | 4              | 4     |  |                |       |                |       |  |  | 8   | 4166     | 52     |        |
| R15M17                  | ST   |            |            |     |     |   | 8              | 8     |  |                |       |                |       |  |  | 16  | 1470     | 37     |        |
|                         |      |            |            |     |     |   |                |       |  |                |       |                |       |  |  |     | SUBTOTAL | 7075   |        |
|                         |      |            |            |     |     |   |                |       |  |                |       |                |       |  |  |     | *TOTAL   | 75 117 |        |



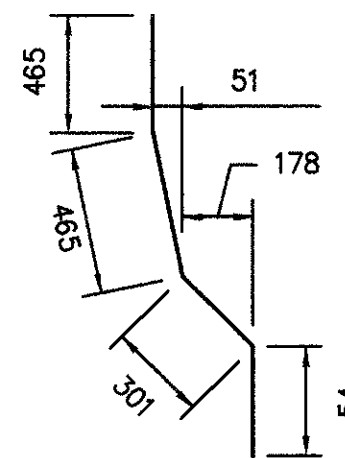
TYPE 17



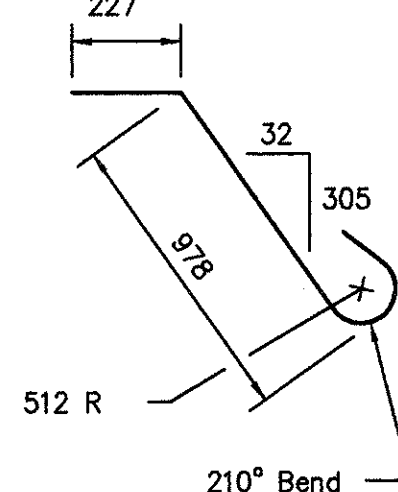
TYPE 20



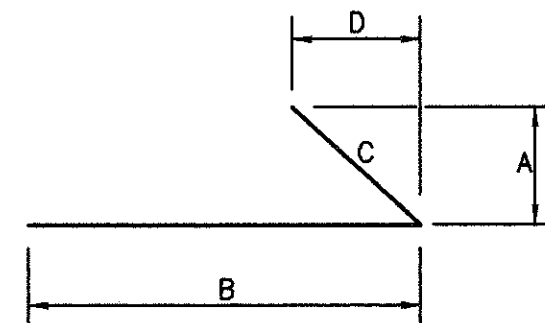
TYPE 18



TYPE 21



TYPE 19



TYPE 22

### NOTES

THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST TWO DIGITS INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, A15M01 IS A 15M BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

UNLESS NOTED OTHERWISE, PAYMENT SHALL BE INCLUDED IN THE CONTRACT BID PRICES FOR THE CORRESPONDING 511 ITEMS.

ALL LENGTHS ARE IN mm.

FOR SUPERSTRUCTURE REINFORCING BAR SCHEDULE, SEE SHEET 36/37

ALL REINFORCING STEEL TO BE EPOXY COATED.

ST IN THE TYPE COLUMN INDICATES A STRAIGHT BAR.

\* THIS TOTAL REPRESENTS THE TOTAL REINFORCING QUANTITY WHICH SHALL BE PAID FOR WITH THE VARIOUS 511 & 517 ITEMS. THIS TOTAL INCLUDES 170 kg FROM SHEET 27/37 AND 100 kg FROM SHEET 35/37.

\*\* REINFORCING MECHANICALLY CONNECTED, SEE GENERAL NOTE.

\*\*\* INCLUDED WITH ITEM 517 - RAILING FACED, AS PER PLAN FOR PAYMENT.

DESIGN AGENCY  
W.E. QUICKSALL & ASSOCIATES INC.  
554 WEST HIGH AVE.  
NEW PHILADELPHIA, OHIO  
CONSULTING ENGINEERS

DATE  
10/97  
REVIEWED  
WJA  
STRUCTURE FILE NUMBER  
DESIGNED  
FDH  
CHECKED  
ZRD

REINFORCING BAR SCHEDULE  
BRIDGE REPAIR  
STATE ROUTE 7 BELMONT COUNTY

BEL-7-32.276  
37/37  
236  
242



### FENCE LEGEND

- (C) - CORNER POST ASSEMBLY  
 (E) - END POST ASSEMBLY  
 (I) - INTERMEDIATE ANCHOR POST ASSEMBLY  
 (A) - ABUTMENT CONNECTION  
 ↑ - GROUND ROD

FOR DETAILS, SEE STANDARD DRAWINGS F-1.1M,  
F-3.1M, and F-3.3M

[illegible]



**S.R. 7  
SPIRAL DATA**

|              |                 |             |          |
|--------------|-----------------|-------------|----------|
| P.I. =       | Sta. 32+152.826 | ST =        | 35.624m  |
| $\Delta$ =   | 32°50'36" Rt.   | Lc =        | 88.686m  |
| R =          | 388.084m        | Ts =        | 163.420m |
| Ls =         | 168.680m        | Es =        | 13.888m  |
| $\theta_c$ = | 7°52'30"        | $e_{max}$ = | .074     |
| LT =         | 71.190m         |             |          |

**RAMP C  
CURVE DATA**

|             |                 |
|-------------|-----------------|
| P.I. =      | Sta. 32+795.762 |
| $\Delta$ =  | 4°22'05" Lt.    |
| R =         | 172.361m        |
| T =         | 6.573m          |
| L =         | 13.140m         |
| E =         | 0.125m          |
| $e_{max}$ = | None            |

**RAMP C  
CURVE DATA**

|             |                 |
|-------------|-----------------|
| P.I. =      | Sta. 32+871.571 |
| $\Delta$ =  | 4°55'09" Rt.    |
| R =         | 1612.038m       |
| T =         | 69.242m         |
| L =         | 138.400m        |
| E =         | 1.486m          |
| $e_{max}$ = | .021            |

**RAMP D  
CURVE DATA**

|             |                 |
|-------------|-----------------|
| P.I. =      | Sta. 32+820.044 |
| $\Delta$ =  | 2°09'41" Lt.    |
| R =         | 1746.376m       |
| T =         | 32.944m         |
| L =         | 65.880m         |
| E =         | 0.311m          |
| $e_{max}$ = | None            |

**S.R. 7  
CURVE DATA**

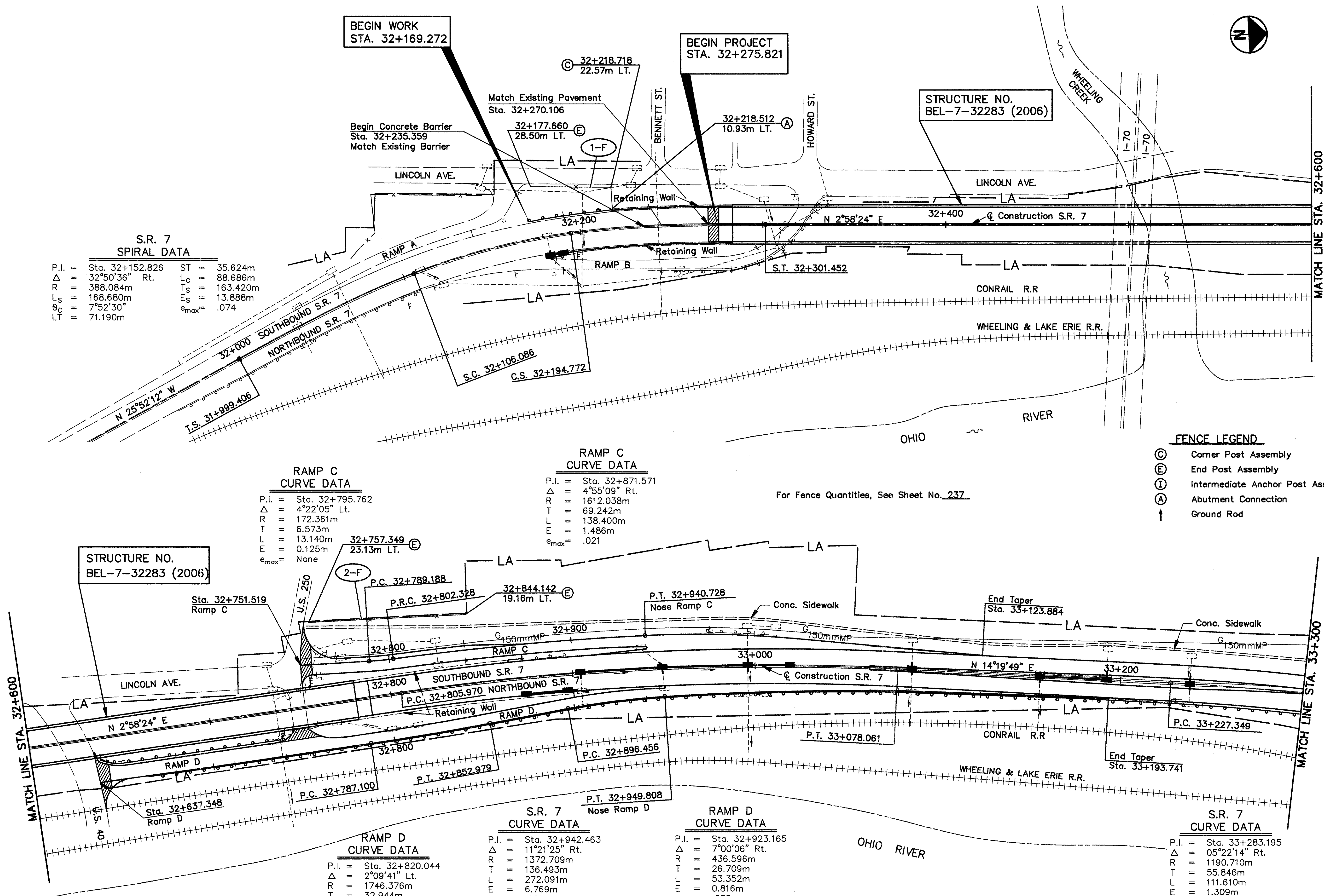
|             |                 |
|-------------|-----------------|
| P.I. =      | Sta. 32+942.463 |
| $\Delta$ =  | 11°21'25" Rt.   |
| R =         | 1372.709m       |
| T =         | 136.493m        |
| L =         | 272.091m        |
| E =         | 6.769m          |
| $e_{max}$ = | .021            |

**RAMP D  
CURVE DATA**

|             |                 |
|-------------|-----------------|
| P.I. =      | Sta. 32+923.165 |
| $\Delta$ =  | 7°00'06" Rt.    |
| R =         | 436.596m        |
| T =         | 26.709m         |
| L =         | 53.352m         |
| E =         | 0.816m          |
| $e_{max}$ = | .032            |

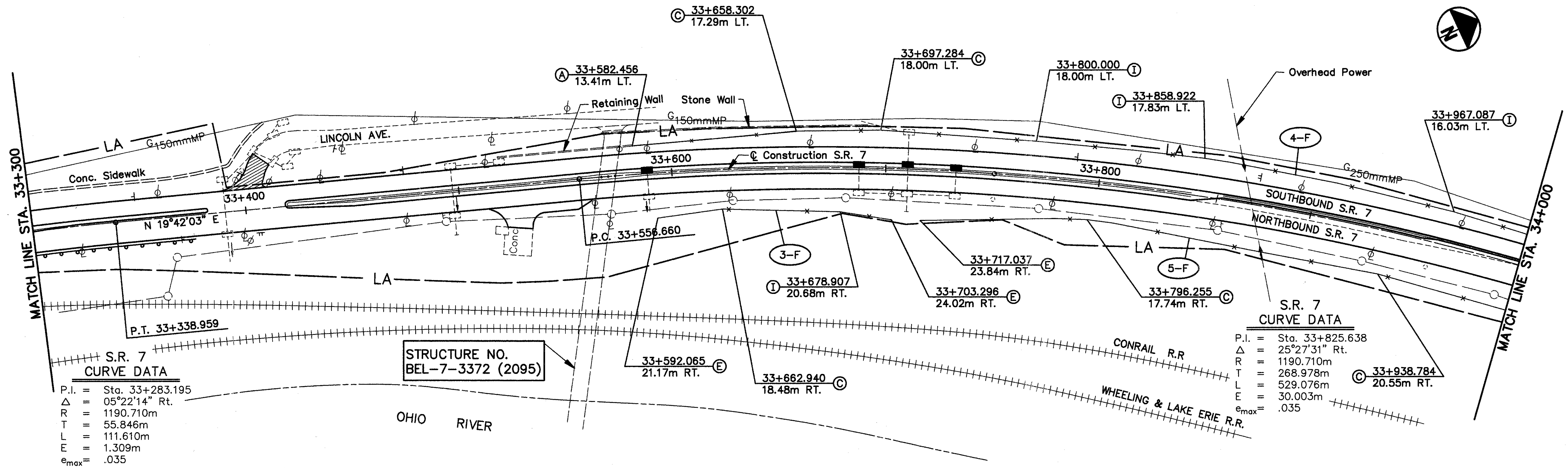
**S.R. 7  
CURVE DATA**

|             |                 |
|-------------|-----------------|
| P.I. =      | Sta. 33+283.195 |
| $\Delta$ =  | 05°22'14" Rt.   |
| R =         | 1190.710m       |
| T =         | 55.846m         |
| L =         | 111.610m        |
| E =         | 1.309m          |
| $e_{max}$ = | .035            |

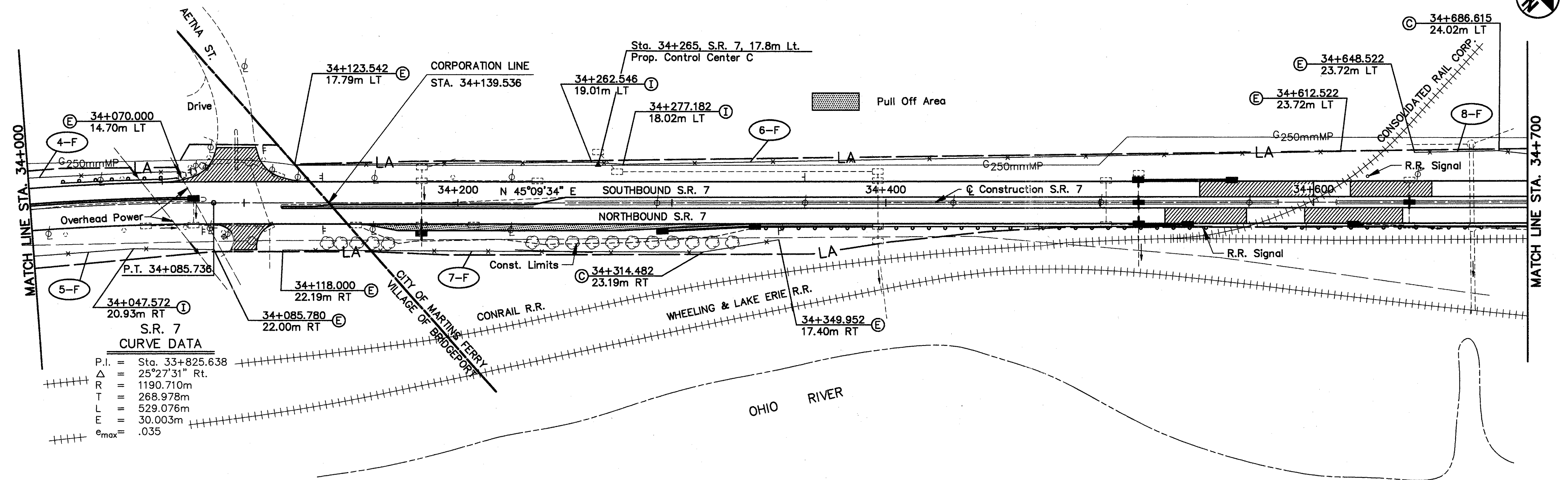




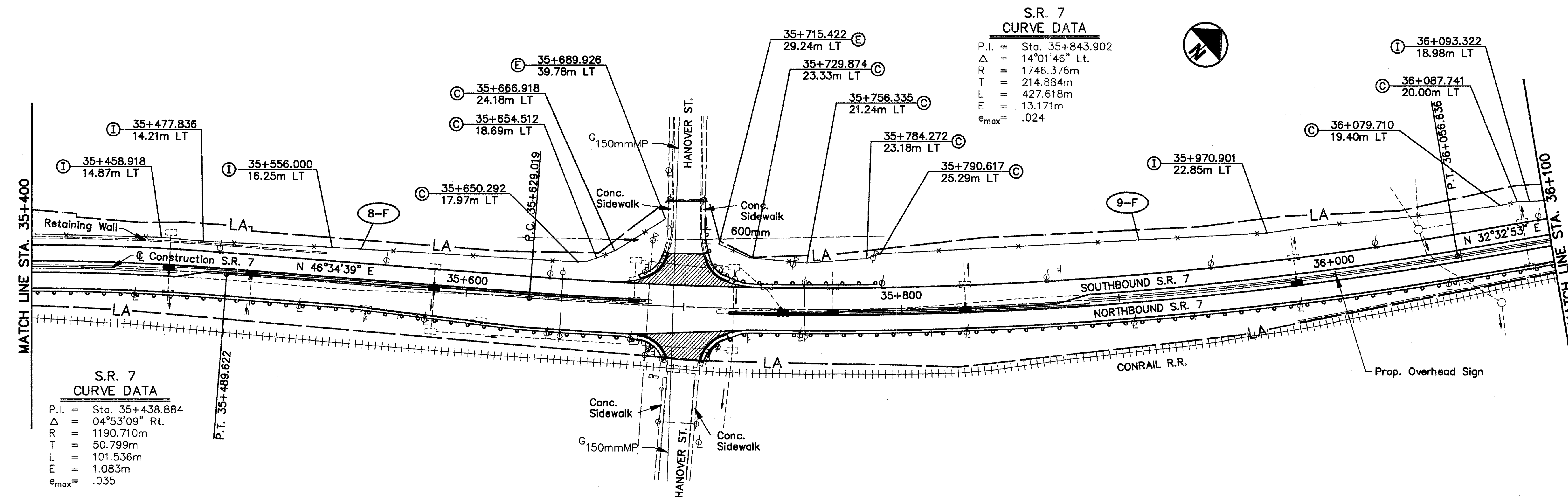
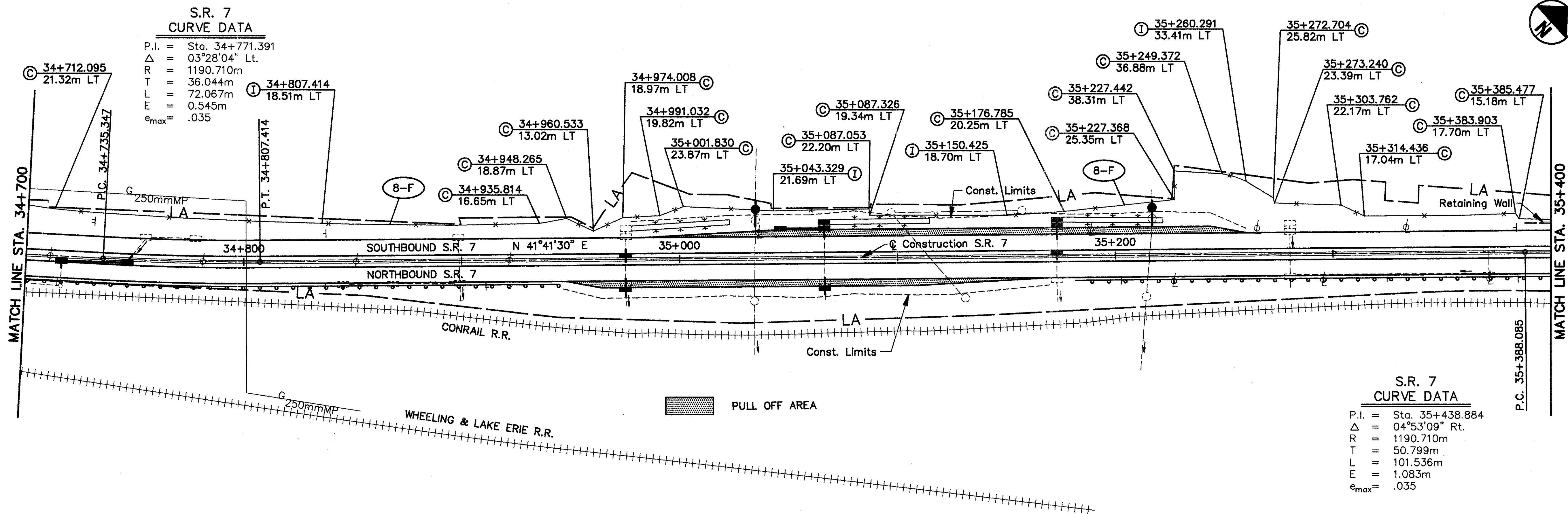
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For Fence Legend and Quantities, See Sheet No. 237





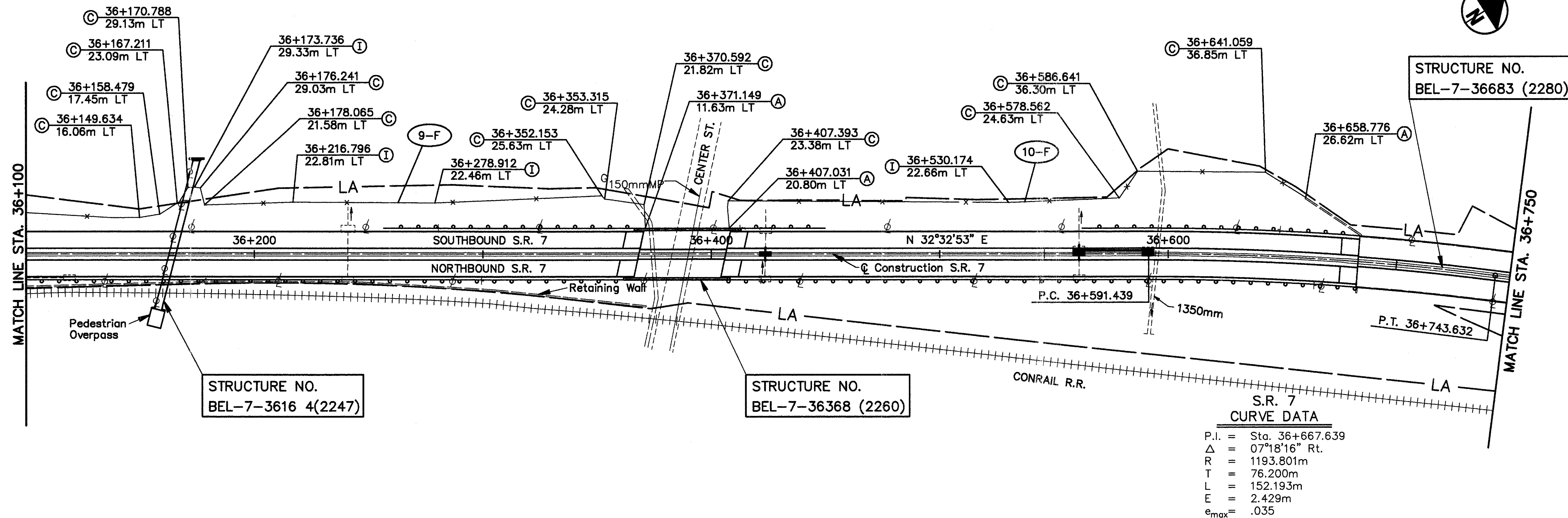


**FENCING PLAN  
STA. 34+700 TO 36+100**

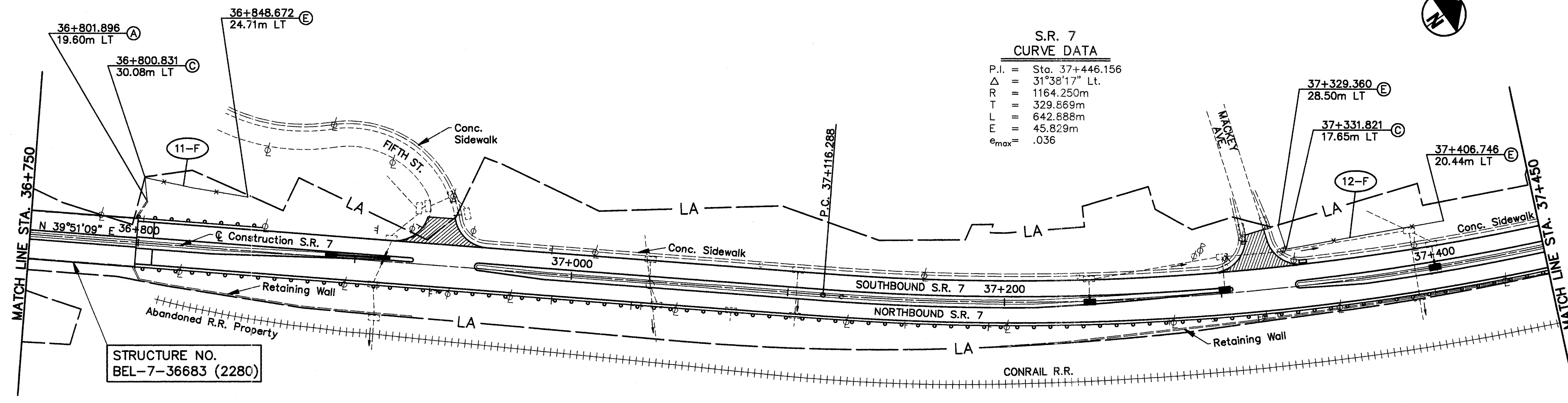
**BEL-7-32.276**

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242

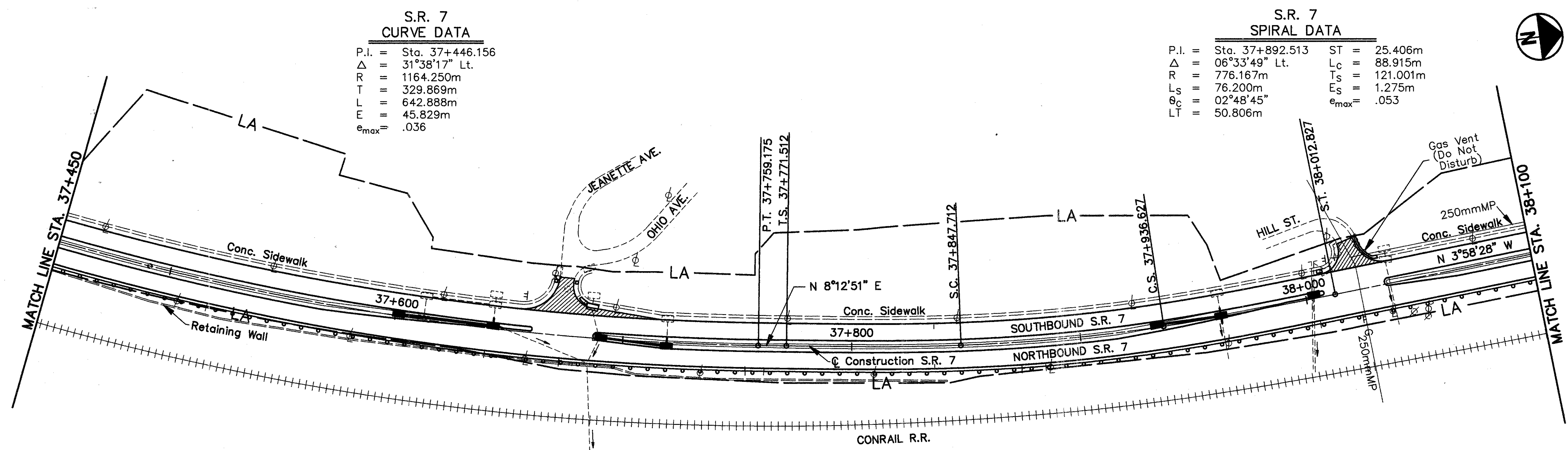




For Fence Legend and Quantities, See Sheet No. 237





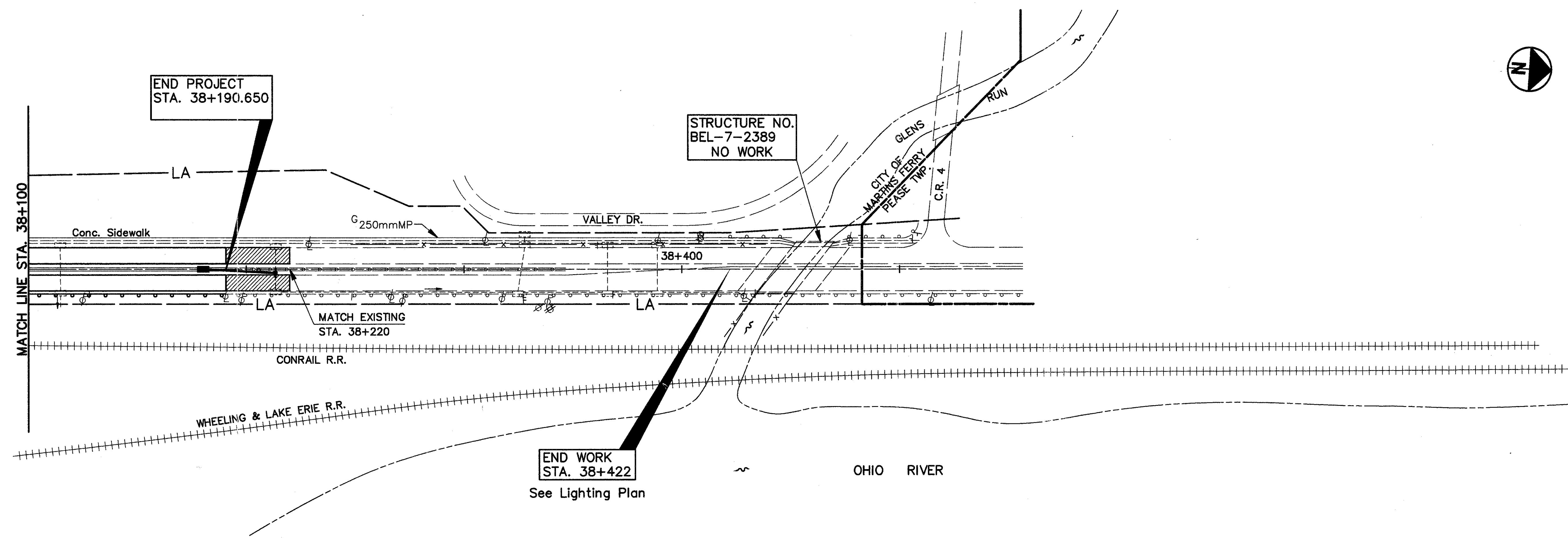


**S.R. 7  
CURVE DATA**

|           |   |                 |
|-----------|---|-----------------|
| P.I.      | = | Sta. 37+446.156 |
| $\Delta$  | = | 31°38'17" Lt.   |
| R         | = | 1164.250m       |
| T         | = | 329.869m        |
| L         | = | 642.888m        |
| E         | = | 45.829m         |
| $e_{max}$ | = | .036            |

**S.R. 7  
SPIRAL DATA**

|            |   |                 |           |   |          |
|------------|---|-----------------|-----------|---|----------|
| P.I.       | = | Sta. 37+892.513 | ST        | = | 25.406m  |
| $\Delta$   | = | 06°33'49" Lt.   | Lc        | = | 88.915m  |
| R          | = | 776.167m        | Ts        | = | 121.001m |
| Ls         | = | 76.200m         | Es        | = | 1.275m   |
| $\theta_c$ | = | 02°48'45"       | $e_{max}$ | = | .053     |
| LT         | = | 50.806m         |           |   |          |



END PROJECT  
STA. 38+190.650

STRUCTURE NO.  
BEL-7-2389  
NO WORK

MATCH EXISTING  
STA. 38+220

END WORK  
STA. 38+422  
See Lighting Plan

HORIZONTAL SCALE IN METERS

|            |     |         |     |
|------------|-----|---------|-----|
| CALCULATED | WCR | CHECKED | SAH |
|------------|-----|---------|-----|

**FENCING PLAN**

**STA. 37+450 TO 38+422**

**BEL-7-32.276**

|     |
|-----|
| 242 |
| 242 |