

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
MED - 18 - 15.13

PROJECT DESCRIPTION

WIDENING AND RECONSTRUCTION OF 1.04 MILES OF STATE ROUTE 18 INCLUDING NEW PAVEMENT, CURB, DRAINAGE, UTILITY ADJUSTMENTS, NEW TRAFFIC SIGNALS, SIGNING AND PAVEMENT MARKINGS. THE PROJECT ALSO INCLUDES LIGHTING FOR THE INTERSTATE 71 INTERCHANGE AND THE WIDENING AND RECONSTRUCTION OF THE NB AND SB EXIT RAMP AND THE SB ENTRANCE RAMP TO SR 18.

2002 SPECIFICATIONS

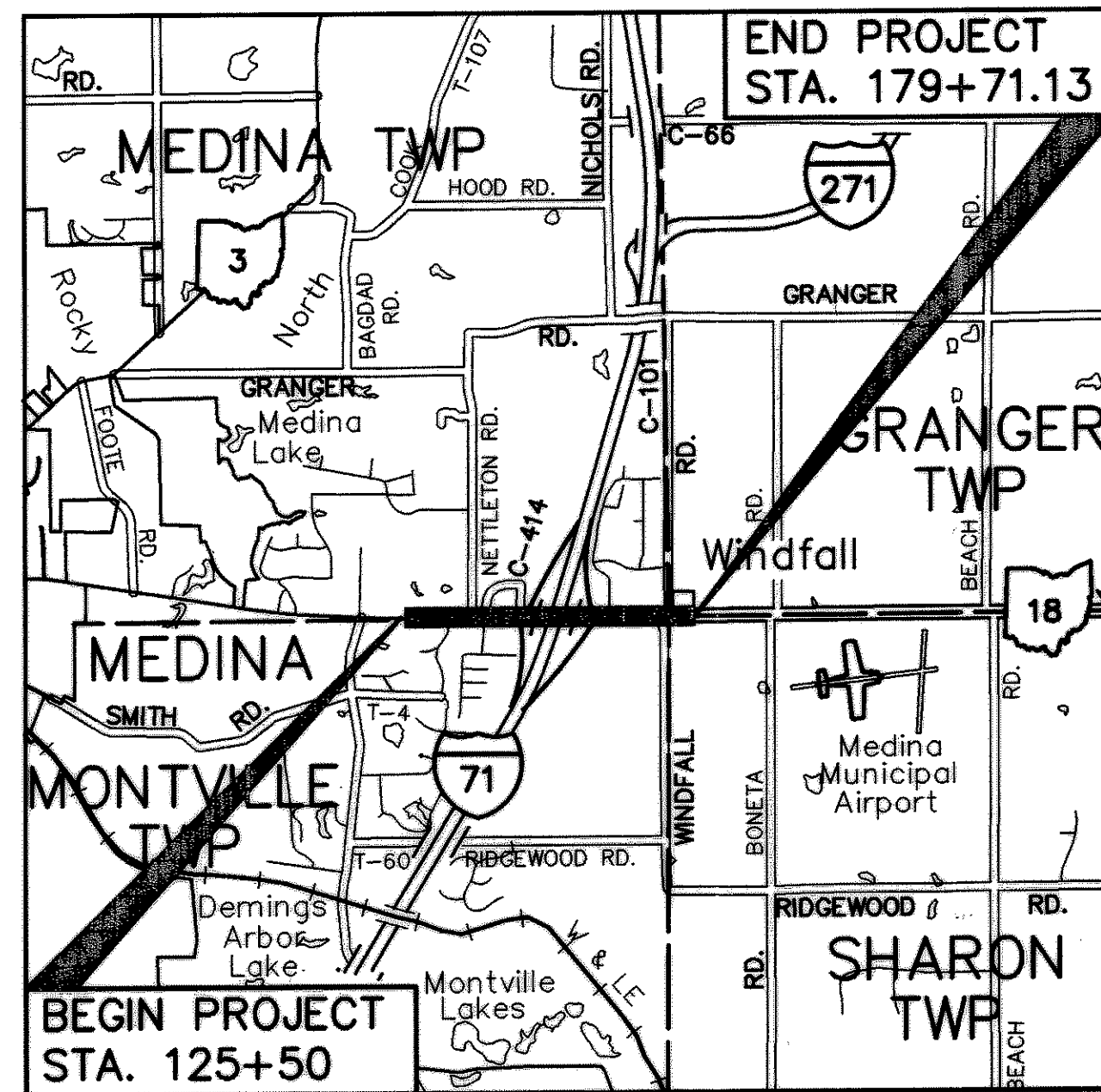
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

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.

GRANGER TOWNSHIP
MEDINA TOWNSHIP
MONTVILLE TOWNSHIP
SHARON TOWNSHIP
MEDINA COUNTY

INDEX OF SHEETS

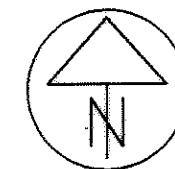
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LOCATION MAP

LAT. N 41° 08' 10" LONG. W 81° 47' 40"

SCALE IN MILES



- Portion to be Improved
- Other Roads
- Interstate or Divided Highway
- Undivided State

DESIGN DESIGNATION

| | | |
|----------------------------------|---|--------------------------|
| CURRENT A.D.T. (2004) | = | 38,600 |
| DESIGN YEAR A.D.T. (2025) | = | 47,360 |
| D.H.V. | = | 4,805 |
| | = | 55% |
| T24 | = | 10.8% |
| DESIGN SPEED | = | 40 mph |
| LEGAL SPEED | = | 40 mph |
| DESIGN FUNCTIONAL CLASSIFICATION | = | URBAN PRINCIPAL ARTERIAL |

DESIGN EXCEPTIONS

NONE

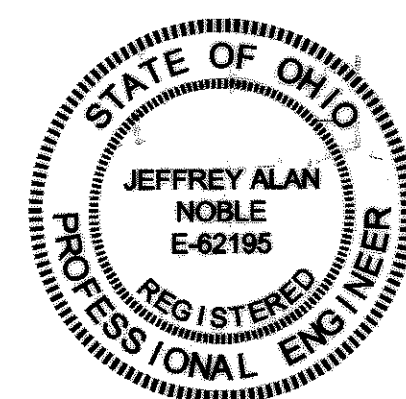
EARTH DISTURBED AREAS

| | |
|-------------------------------------|----------|
| PROJECT DISTURBED AREA | 26 ACRES |
| ESTIMATED CONTRACTOR DISTURBED AREA | 6 ACRES |
| NOTICE OF INTENT DISTURBED AREA | 32 ACRES |

UNDERGROUND UTILITIES

2 WORKING DAYS BEFORE YOU DIG

Call...800-362-2764 (Toll Free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY



PLANS PREPARED BY
URS
Akron Cleveland Columbus
564 White Pond Drive
Akron, Ohio 44320-1100
(330) 836-9111

Jeffrey A. Noble 6/27/03
Jeffrey A. Noble Reg. Engineer No. 62195 Date

STANDARD CONSTRUCTION DRAWINGS

| STANDARD CONSTRUCTION DRAWINGS | | | | | | | | | | | | SUPPLEMENTAL SPECIFICATIONS | | | |
|--------------------------------|---------|--------|---------|--------|---------|-----------|----------|----------|----------|----------|----------|-----------------------------|----------|-----|----------|
| BP-1.1 | 7/28/00 | RM-1.1 | 4/18/03 | HW-1.1 | 7/20/01 | MT-35.10 | 4/20/01 | TC-9.10 | 01/19/01 | TC-52.10 | 4/20/01 | HL-10.11 | 4/19/02 | 802 | 7/19/02 |
| BP-2.1 | 7/28/00 | RM-3.1 | 4/18/03 | HW-2.1 | 7/19/02 | MT-95.32 | 4/19/02 | TC-17.10 | 01/19/01 | TC-52.20 | 4/20/01 | HL-10.12 | 4/19/02 | 832 | 02/12/03 |
| BP-2.2 | 7/28/00 | RM-4.2 | 4/18/03 | HW-2.2 | 7/19/02 | MT-97.10 | 4/19/02 | TC-21.20 | 01/19/01 | TC-61.10 | 01/19/01 | HL-10.13 | 01/17/03 | 833 | 5/27/03 |
| BP-2.5 | 7/28/00 | RM-4.3 | 4/18/03 | | | MT-98.12 | 4/19/02 | TC-22.10 | 01/19/01 | TC-65.10 | 10/19/01 | HL-20.11 | 4/19/02 | 864 | 7/11/00 |
| BP-3.1 | 7/28/00 | RM-4.4 | 4/18/03 | | | MT-98.17 | | TC-22.20 | 01/19/01 | TC-65.11 | 10/19/01 | HL-30.11 | 4/19/02 | 908 | 4/18/03 |
| BP-4.1 | 7/28/00 | RM-4.5 | 4/18/03 | I-2.1 | 7/19/02 | MT-98.18 | 10/18/02 | TC-31.21 | 4/20/01 | TC-65.12 | 10/19/01 | HL-30.21 | 4/19/02 | | |
| BP-5.1 | 7/28/00 | RM-4.6 | 4/18/03 | | | MT-99.20M | 01/30/95 | TC-32.10 | 4/19/02 | TC-71.10 | 4/19/02 | HL-30.22 | 4/19/02 | | |
| | | | | MH-1.1 | 7/19/02 | MT-101.70 | 10/18/02 | TC-32.11 | 10/19/01 | TC-73.10 | 01/19/01 | HL-40.10 | 4/19/02 | | |
| GR-1.1 | 4/18/03 | CB-1.1 | 7/19/02 | MH-1.2 | 7/19/02 | MT-105.10 | 10/18/02 | TC-41.10 | 01/19/01 | TC-81.10 | 5/01/00 | HL-50.11 | 7/20/01 | | |
| | | CB-1.2 | 7/19/02 | MH-1.3 | 7/20/01 | MT-105.11 | 10/18/02 | TC-41.20 | 01/19/01 | TC-82.10 | 4/19/02 | HL-60.11 | 7/20/01 | | |
| | | CB-1.3 | 7/19/02 | | | | | TC-41.40 | 01/18/02 | TC-83.10 | 5/01/00 | HL-60.12 | 7/20/01 | | |
| GR-2.1 | 4/18/03 | CB-2.1 | 7/19/02 | DM-1.1 | 7/19/02 | | | TC-41.41 | 01/19/01 | TC-83.20 | 5/01/00 | HL-60.31 | 7/20/01 | | |
| GR-3.1 | 4/18/03 | CB-2.2 | 7/19/02 | DM-1.2 | 7/19/02 | | | TC-41.50 | 01/19/01 | TC-84.20 | 5/01/00 | | | | |
| GR-3.2 | 4/18/03 | CB-3.1 | 7/19/02 | DM-4.3 | 7/19/02 | | | TC-42.10 | 01/19/01 | TC-85.20 | 5/01/00 | | | | |
| GR-4.2 | 4/18/03 | CB-3.2 | 7/19/02 | DM-4.4 | 7/19/02 | | | TC-42.20 | 4/20/01 | | | | | | |
| | | | | | | | | TC-51.11 | 4/20/01 | | | | | | |
| | | | | | | | | TC-51.12 | 4/20/01 | | | | | | |

SPECIAL PROVISION
Nationwide Permit #3 01-28-03

FEDERAL PROJECT NO.
E 032 (891)

PID NO.
20397

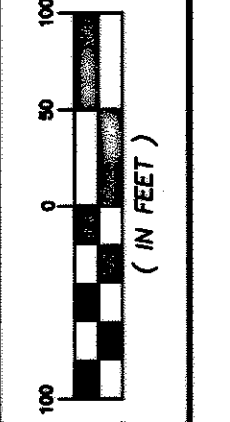
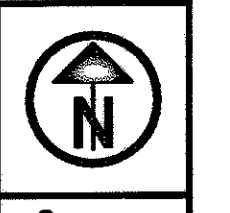
CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NONE

MED - 18 - 15.13

MED-18-15.13
030508 PID #20397
DIST 03 11-05-03

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CALCULATED
JAN
CHECKED

SCHEMATIC PLAN

MED - 18 - 15.13
2
362

| ITEM 604 MONUMENT ASSEMBLY | | | |
|----------------------------------|---------------------------|----------------|----------|
| STATION | DIST. FROM ϵ R/W | | NO. |
| | LT. ϵ | RT. ϵ | |
| P.C. 777+55.09 | 50.00 | 35.00 | 2 |
| P.T. 783+08.56 | 60.00 | | 1 |
| P.O.T. 783+50.00 | | 35.00 | 1 |
| P.O.T. 792+00.00 | 80.00 | 70.00 | 2 |
| P.I. 798+87.08 | 91.46 | | EX. MON. |
| P.O.T. 807+00.00 | 80.00 | 50.00 | 2 |
| P.O.T. 814+50.00 | 110.00 | 100.00 | 2 |
| P.O.T. 823+00.00 | 130.00 | | 1 |
| P.O.T. 823+73.30 | | 84.93 | EX. MON. |
| P.O.T. 832+00.09 | 150.09 | | EX. MON. |
| P.O.T. 834+20.31 | | 40.64 | EX. MON. |
| P.O.T. 839+00.00 | 90.00 | | 1 |
| P.O.T. 842+00.00 | | 40.00 | 1 |
| P.O.T. 845+00.00 | 100.00 | | 1 |
| TOTAL PROPOSED MONUMENTS | | | 14 |
| TOTAL EXISTING MONUMENTS | | | 4 |
| TOTAL CARRIED TO GENERAL SUMMARY | | | 18 |

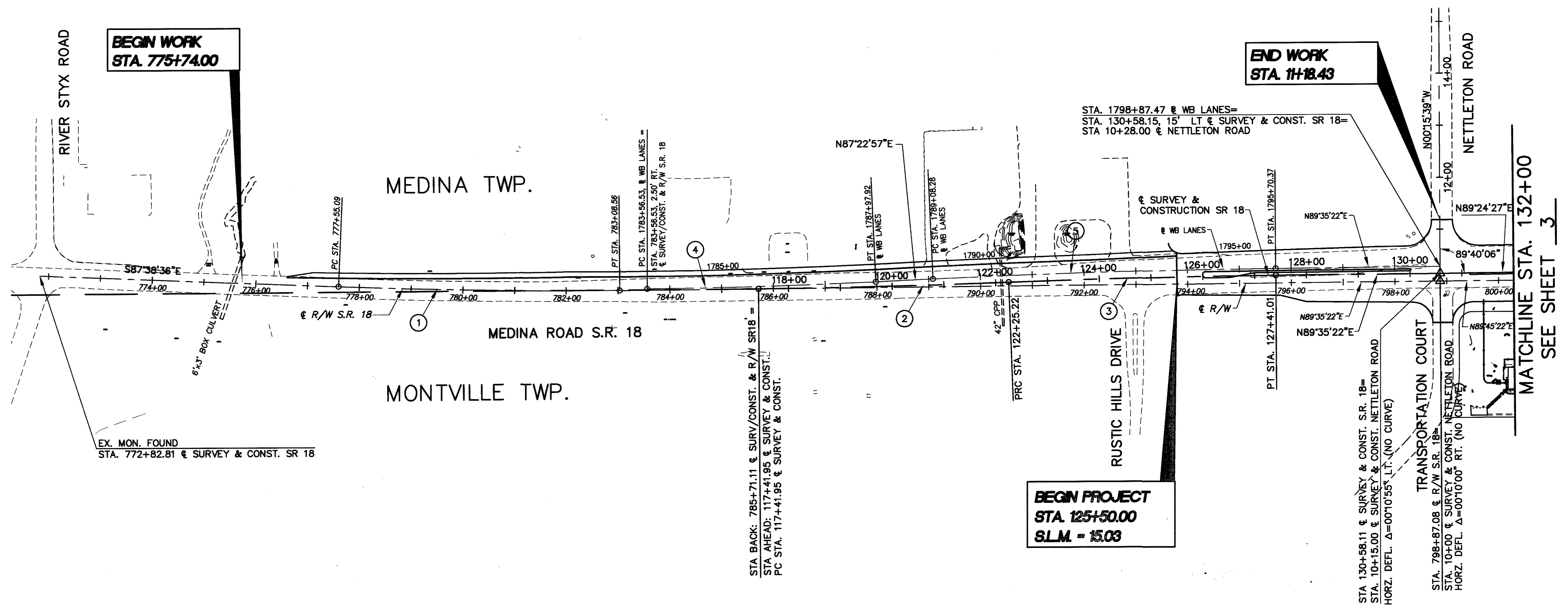
① ϵ SURVEY/CONST. & R/W S.R. 18
CURVE DATA
P.I. = 780+31.88
 Δ = 2'46'03" LT.
Dc = 0'30'00"
R = 11459.16'
T = 276.79'
L = 553.47'
E = 3.34'
eMAX = n/a
P.C. = STA. 777+55.09
P.T. = STA. 783+08.56

② ϵ SURVEY & CONST. S.R. 18
CURVE DATA
P.I. = 119+83.60
 Δ = 1'43'14" RT.
Dc = 0'21'22"
R = 16092.78'
T = 241.65'
L = 483.27'
E = 1.81'
eMAX = NC
P.C. = STA. 117+41.95
P.T. = STA. 122+25.22

③ ϵ SURVEY & CONST. S.R. 18
CURVE DATA
P.I. = 124+83.14
 Δ = 1'43'14" RT.
Dc = 0'20'01"
R = 17175.73'
T = 257.92'
L = 515.79'
E = 1.94'
eMAX = NC
P.C. = STA. 122+25.22
P.T. = STA. 127+41.01

④ ϵ WB LANES
CURVE DATA
P.I. = 1785+77.25
 Δ = 2'12'25"
Dc = 0'30'00"
R = 11459.16'
T = 220.72'
L = 441.39'
E = 2.13'
eMAX = NC

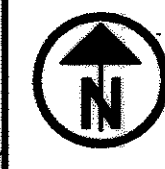
⑤ ϵ WB LANES
CURVE DATA
P.I. = 1792+39.37
 Δ = 2'12'25"
Dc = 0'20'00"
R = 17188.73'
T = 331.09'
L = 662.09'
E = 3.19'
eMAX = NC



DESIGN DESIGNATION

| STREET | POSTED SPEED | DESIGN SPEED |
|----------------|--------------|--------------|
| NETTLETON ROAD | 45MPH | 45MPH |

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CALCULATED
JAN
CHECKED

SCHEMATIC PLAN

MED - 18 - 15.18

**END WORK
STA. 12+00**

**BEGIN WORK
STA. 8+80**

SEE SHEET 2
MATCHLINE STA. 132+00

SEE SHEET 4
MATCHLINE STA. 162+00

DESIGN DESIGNATION

| STREET | POSTED SPEED | DESIGN SPEED |
|------------------|--------------|--------------|
| EASTPOINTE DRIVE | 25MPH | 25MPH |
| NORMANDY DRIVE | 25MPH | 25MPH |
| MONTVILLE DRIVE | 25MPH | 25MPH |

**EASTPOINTE DR. W.
CURVE DATA**
P.I. STA. 13+42.40
 $\Delta = 40^\circ 46' 35''$
Dc = 1032'26"
R = 543.57'
T = 202.03'
L = 386.85'
E = 36.33'
eMAX = NC

**RAMP B
CURVE DATA**
P.I. STA. 2+76.65
 $\Delta = 46^\circ 31' 22''$
Dc = 2000'00"
R = 286.48'

Ls1 = 100.00' Ls2 = 150.00'
 $\theta 1 = 10^\circ 00' 00''$ $\theta 2 = 15^\circ 00' 00''$
LT1 = 66.77' LT2 = 100.36'
ST1 = 33.43' ST2 = 50.33'

$\Delta c = 21^\circ 31' 22''$
Lc = 107.61'
Ts1 = 176.22'
Ts2 = 196.88'
Es = 27.92'

**RAMP B
CURVE DATA**
P.I. STA. 8+07.60
 $\Delta = 12^\circ 35' 50''$
Dc = 730'00"
R = 763.94'

Ls = 150.00' $\Delta c = 6^\circ 58' 20''$
 $\theta = 5^\circ 37' 30''$ Lc = 92.96'
LT = 100.05' T1 = 153.81'
ST = 50.05' T2 = 89.95'

**RAMP B
COMPOUND SPIRAL**
P.I. STA. 9+74.72
 $\Delta = 9^\circ 00' 00''$
Dc1 = 730'00"
R1 = 763.94'
Dc2 = 130'00"
R2 = 3819.72'
Ls = 200.00'
 $\theta 1 = 9^\circ 00' 00''$
P = 2.79'
 $\Delta 1 = 7^\circ 30' 02''$
 $\Delta 2 = 1^\circ 29' 58''$
T1 = 77.96'
T2 = 122.42'

**RAMP B
CURVE DATA**
P.I. = 13+44.15
 $\Delta = 72^\circ 4' 41''$
Dc = 130'00"
R = 3819.72'
T = 247.39'
L = 494.09'
E = 8.00'

**RAMP D
CURVE DATA**
P.I. STA. 9+48.48
 $\Delta = 10^\circ 00' 01''$
Dc = 400'00"
R = 1432.39'
Ls = 200.00'
 $\theta = 4^\circ 00' 00''$
LT = 133.37'
ST = 66.70'
 $\Delta c = 2^\circ 00' 01''$
Lc = 50.01'
Ts = 225.41'
Es = 6.64'

**RAMP A
CURVE DATA**
P.I. STA. 18+81.17
 $\Delta = 21^\circ 55' 34''$
Dc = 356'21"
R = 1454.52'
Ls = 200.00'
 $\theta = 3^\circ 56' 21''$
LT = 133.37'
ST = 66.70'
 $\Delta c = 14^\circ 02' 52''$
Lc = 356.62'
Ts = 381.96'
Es = 28.21'

**I-71
CURVE DATA**
P.I. = 961+75.34
 $\Delta = 13^\circ 36' 15''$
Dc = 028'00"
R = 12277.67'
T = 1464.48'
L = 2915.18'
E = 87.03'

**RAMP C
CURVE DATA**
P.I. = 9+36.13
 $\Delta = 4^\circ 48' 44''$
Dc = 106'25"
R = 5176.03'
T = 217.49'
L = 434.72'
E = 4.57'

**RAMP C
COMPOUND SPIRAL**
P.I. STA. 12+78.29
 $\Delta = 8^\circ 36' 25''$
Dc1 = 106'25"
R1 = 5176.03'
Dc2 = 730'00"
R2 = 763.94'
Ls = 200.00'
 $\theta 1 = 8^\circ 36' 25''$
P = 2.68'
 $\Delta 1 = 1^\circ 06' 23''$
T1 = 124.93'
T2 = 75.40'

**RAMP C
CURVE DATA**
P.I. STA. 14+43.88
 $\Delta = 12^\circ 41' 19''$
Dc = 730'00"
R = 763.94'

$\Delta c = 7^\circ 03' 49''$ Ls = 150.00'
Lc = 94.18' $\theta = 5^\circ 37' 30''$
T1 = 90.52' LT = 100.05'
T2 = 154.47' ST = 50.05'

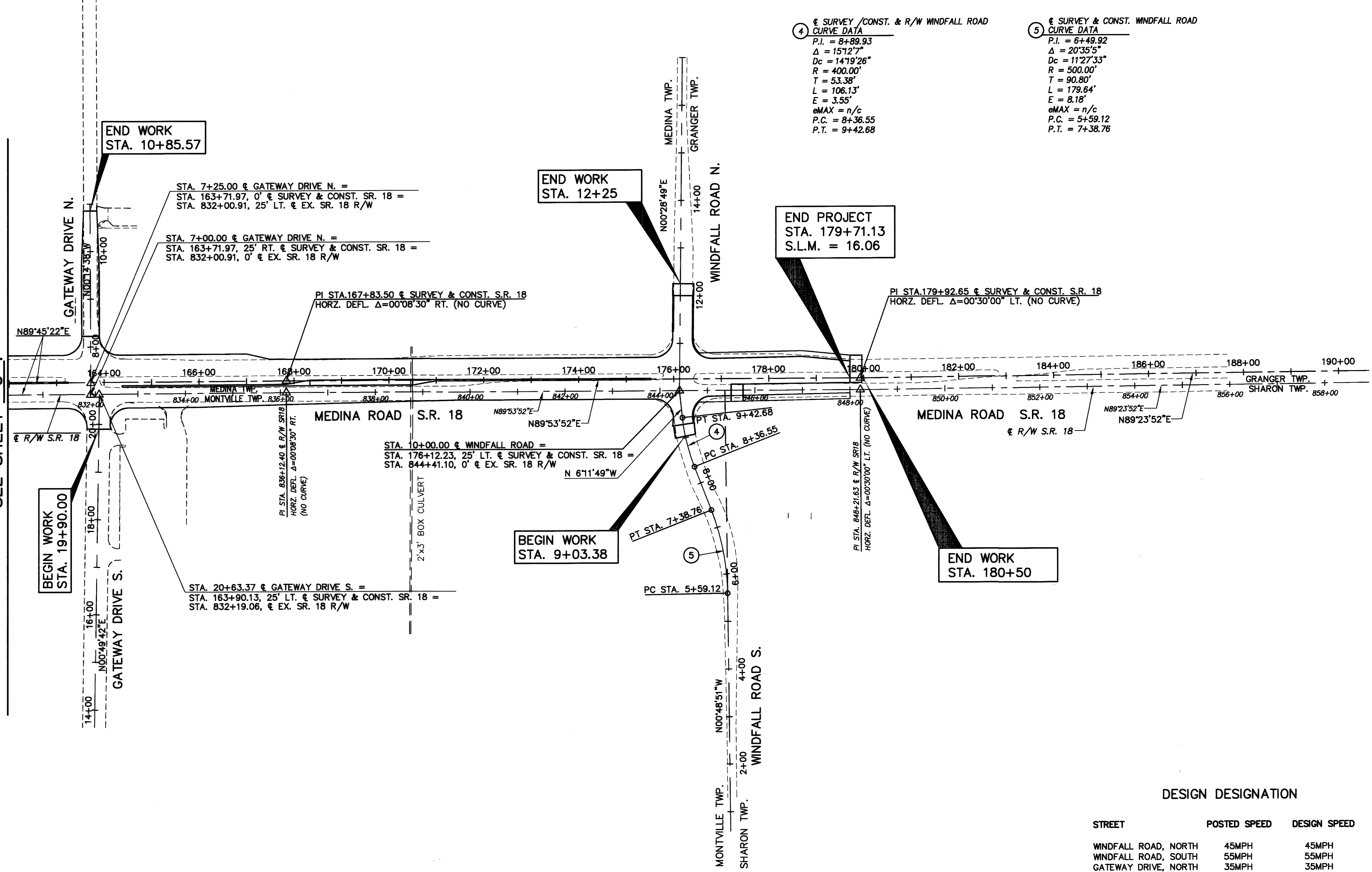
**RAMP C
CURVE DATA**
P.I. STA. 18+25.95
 $\Delta = 48^\circ 00' 08''$
Dc = 2400'00"
R = 238.73'

Ls1 = 150.00' Ls2 = 100.00'
 $\theta 1 = 18^\circ 00' 00''$ $\theta 2 = 12^\circ 00' 00''$
LT1 = 100.52' LT2 = 66.82'
ST1 = 50.47' ST2 = 33.47'

$\Delta c = 18^\circ 00' 08''$
Lc = 75.01'
Ts1 = 179.87'
Ts2 = 159.92'
Es = 25.70'

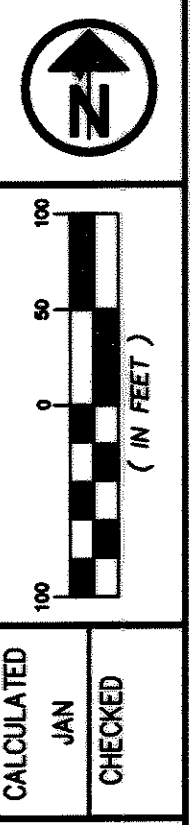
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MATCHLINE STA. 162+00
SEE SHEET 3



④ SURVEY /CONST. & R/W WINDFALL ROAD
CURVE DATA
P.I. = 8+89.93
 $\Delta = 151'27''$
 $Dc = 141'9'26''$
 $R = 400.00'$
 $T = 53.38'$
 $L = 106.13'$
 $E = 3.55'$
 $eMAX = n/c$
P.C. = 8+36.55
P.T. = 9+42.68

⑤ SURVEY & CONST. WINDFALL ROAD
CURVE DATA
P.I. = 6+49.92
 $\Delta = 20'35'5''$
 $Dc = 11'27'33''$
 $R = 500.00'$
 $T = 90.80'$
 $L = 179.64'$
 $E = 8.18'$
 $eMAX = n/c$
P.C. = 5+59.12
P.T. = 7+38.76



CALCULATED
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MED - 18 - 15.13

DESIGN DESIGNATION

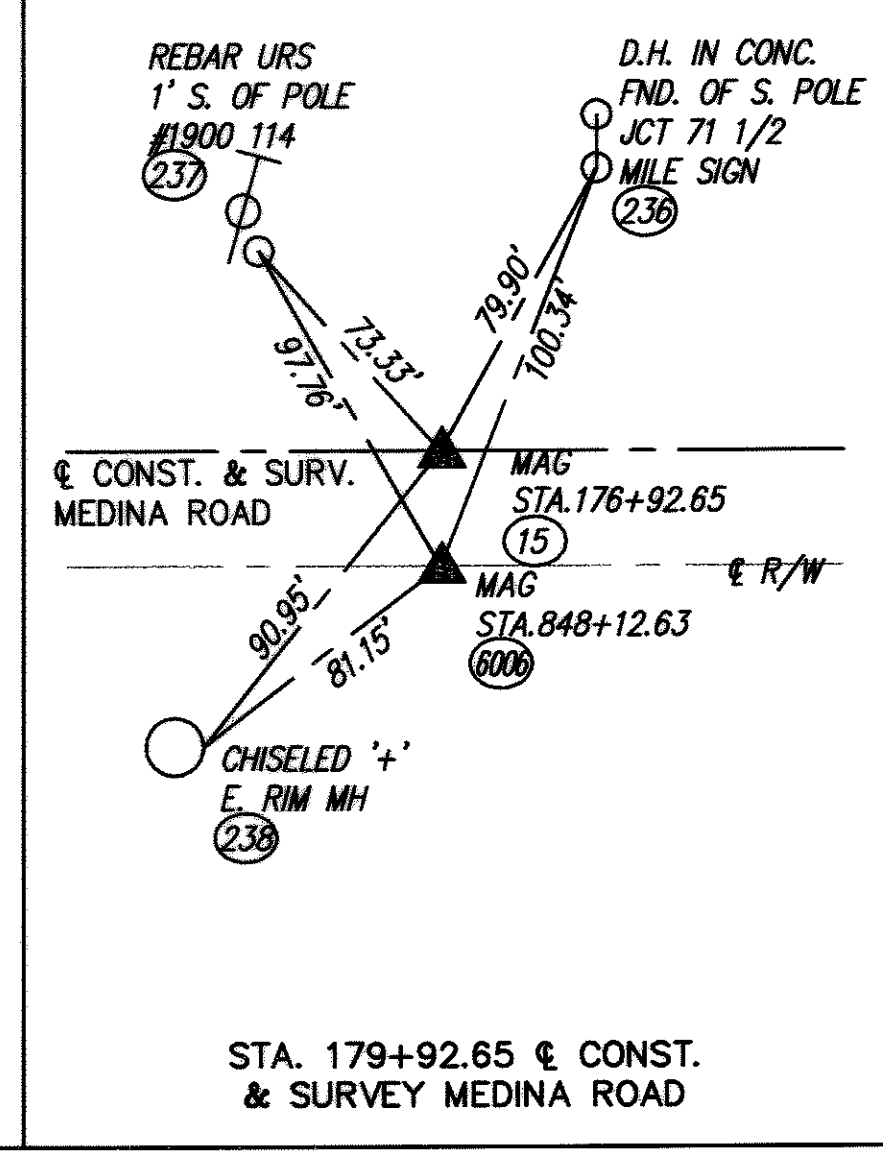
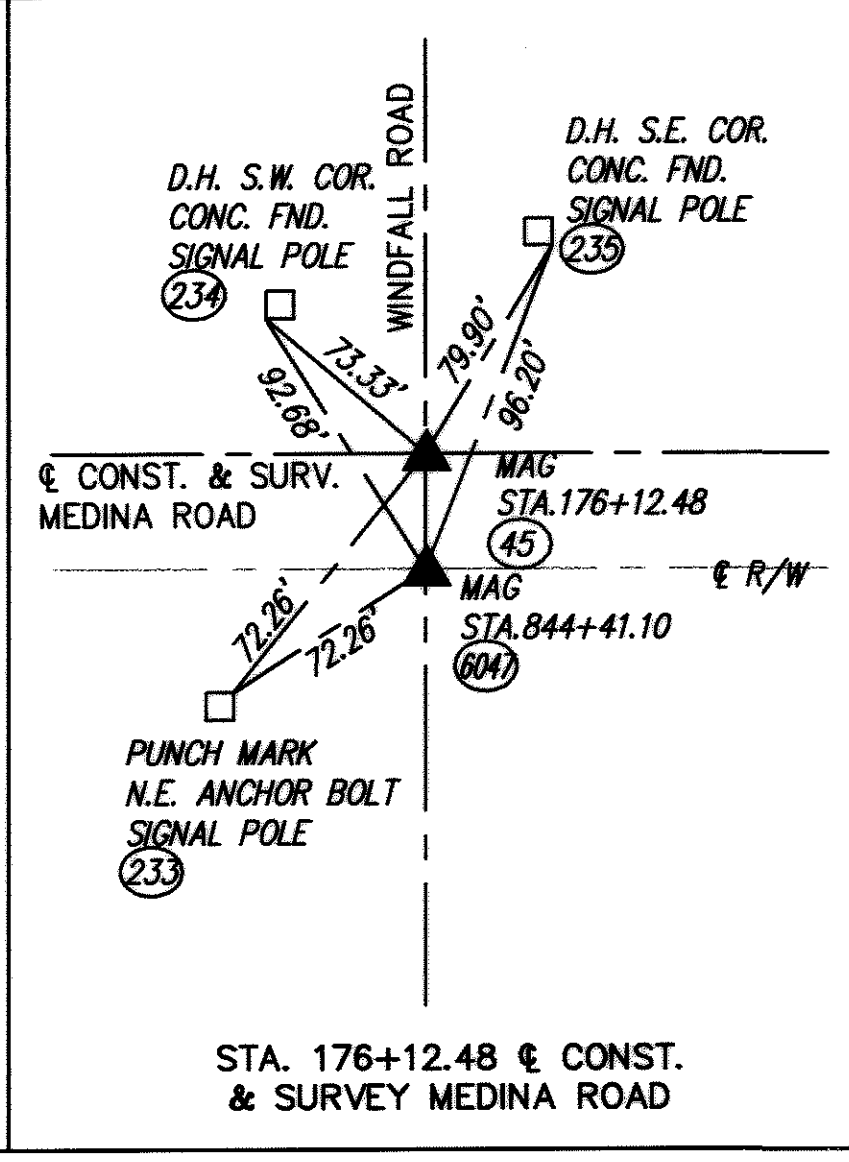
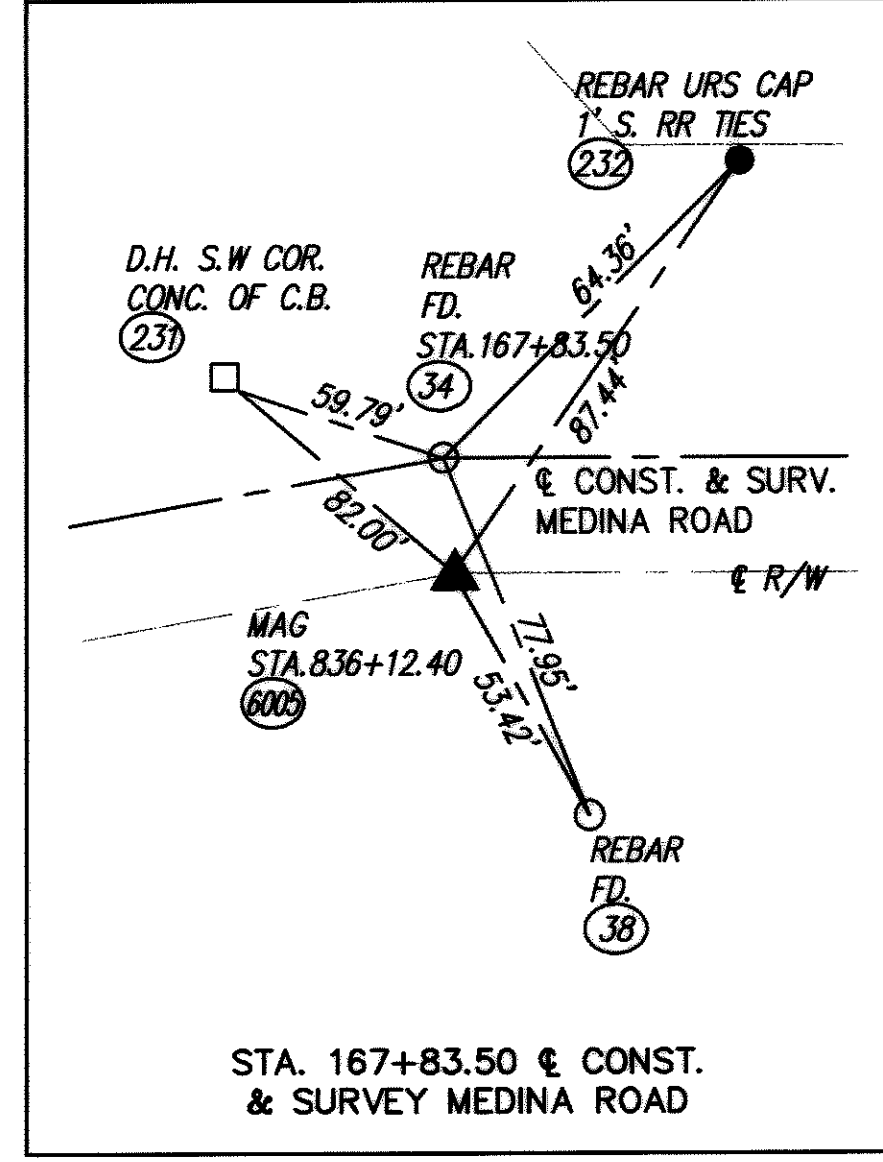
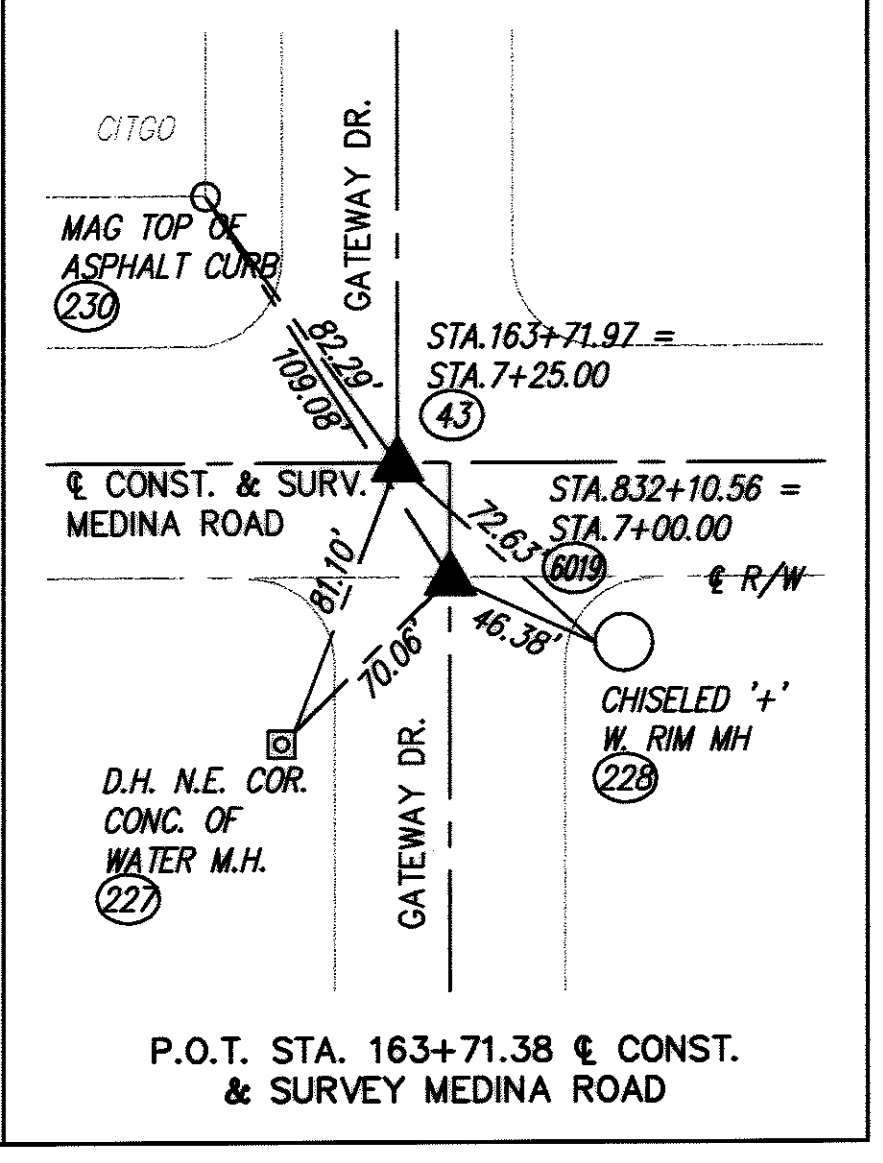
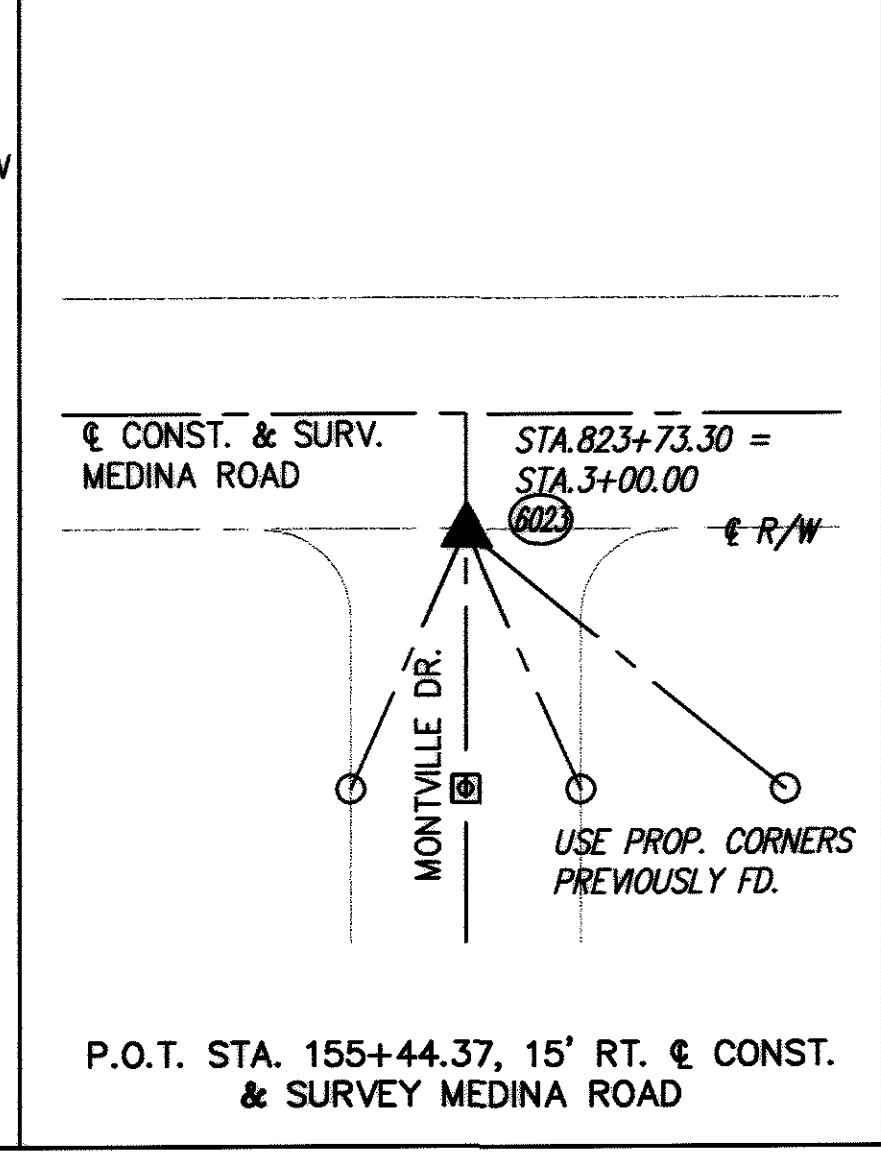
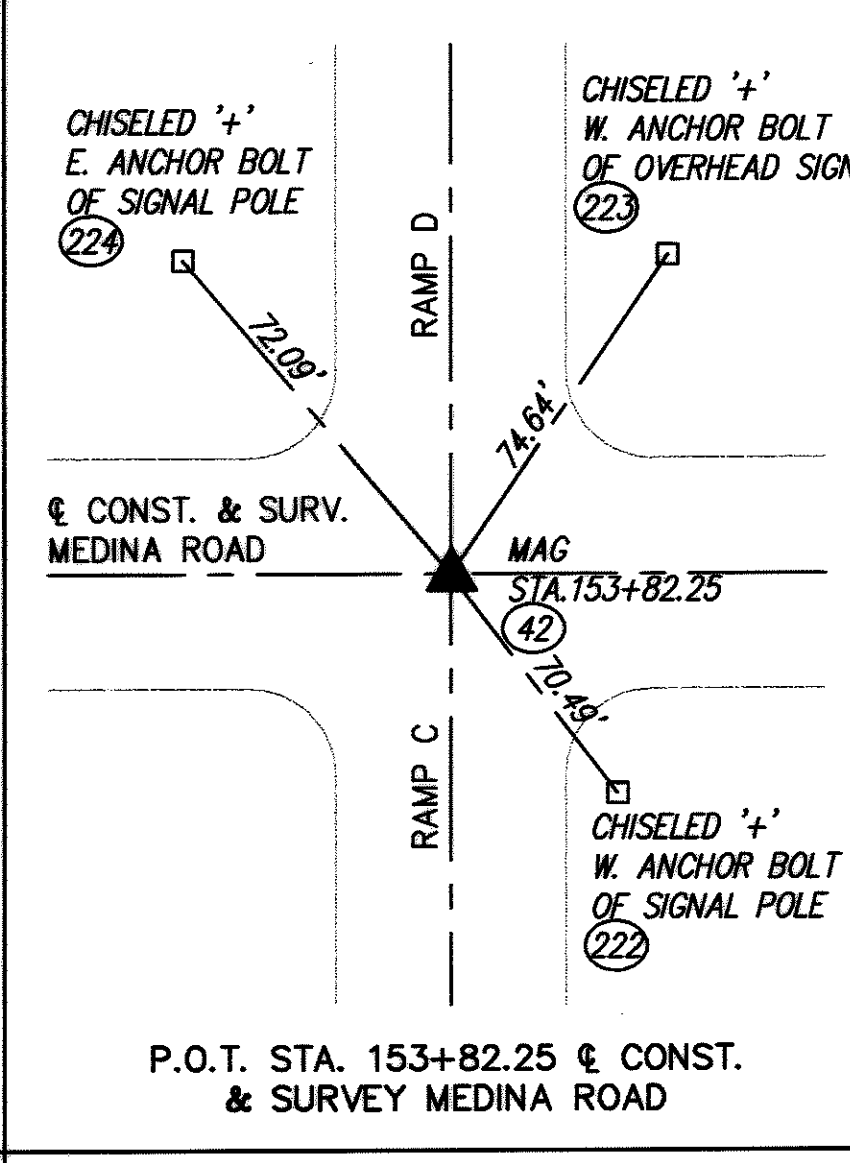
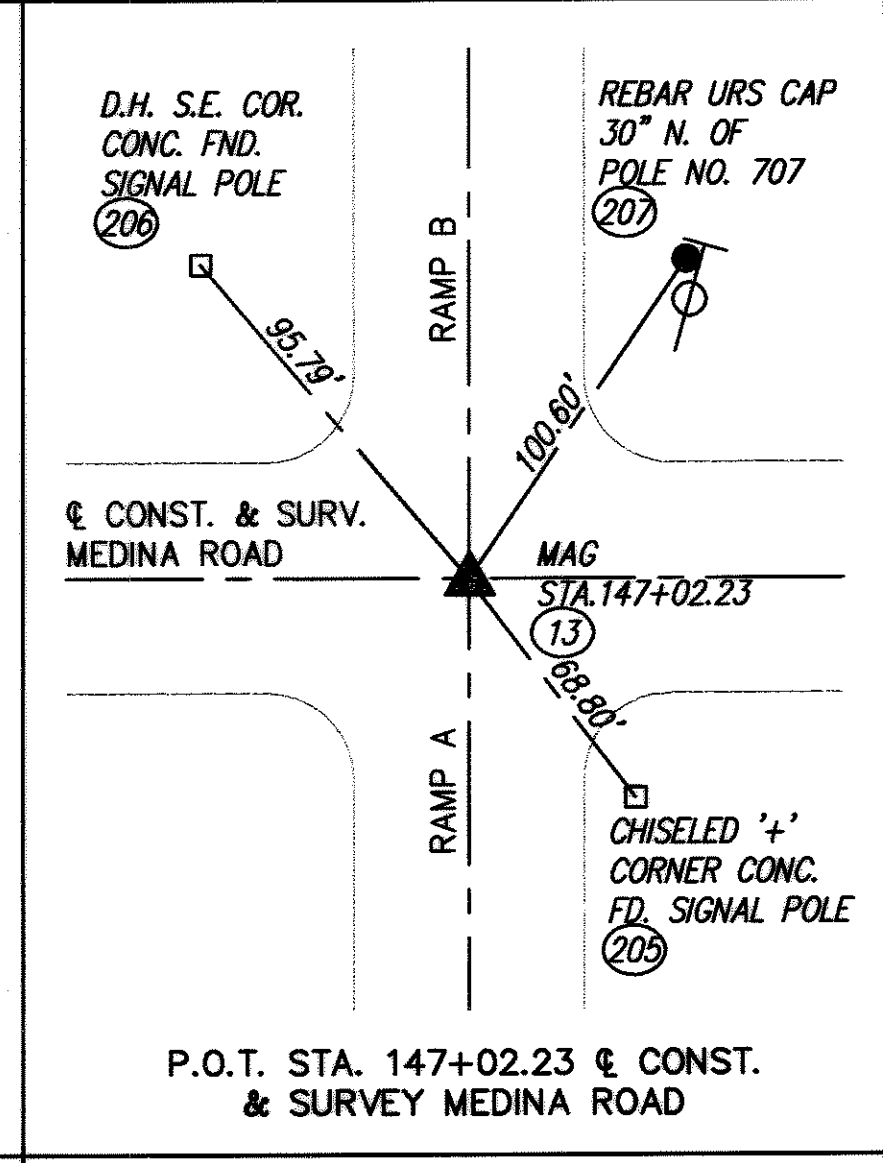
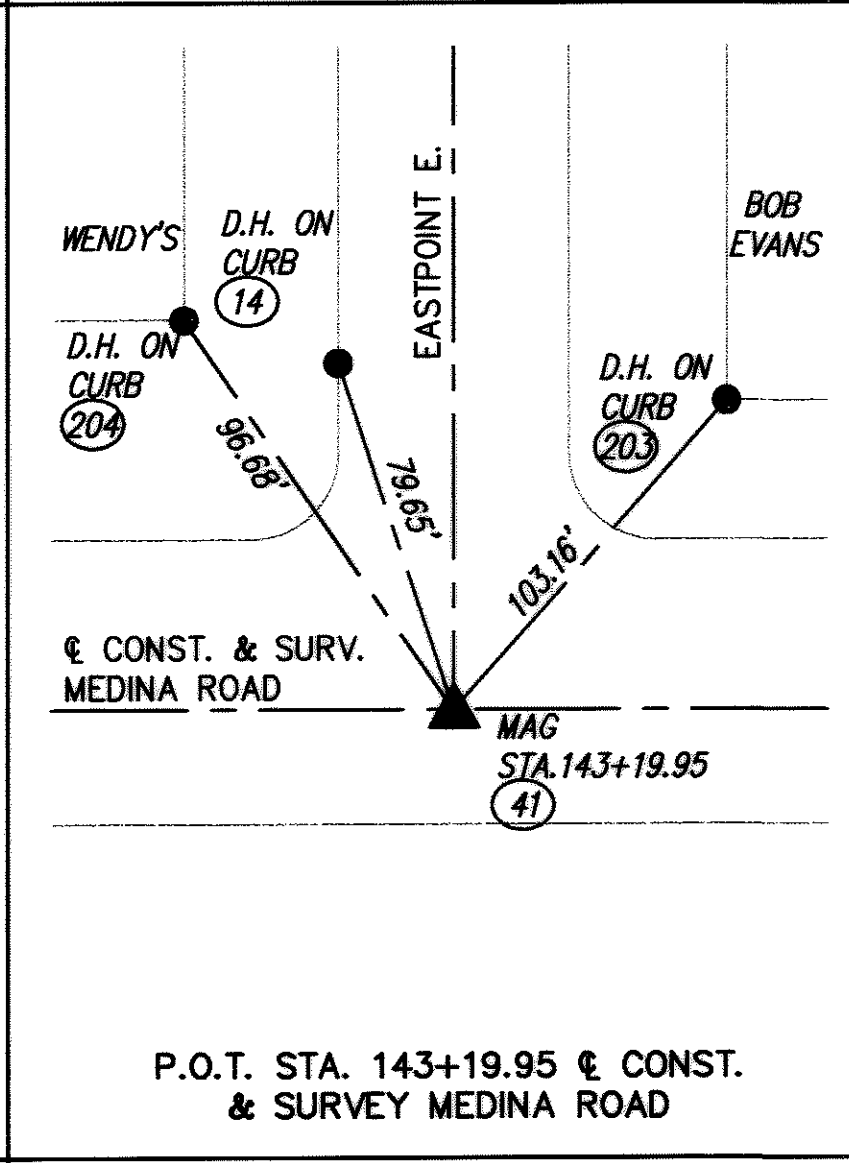
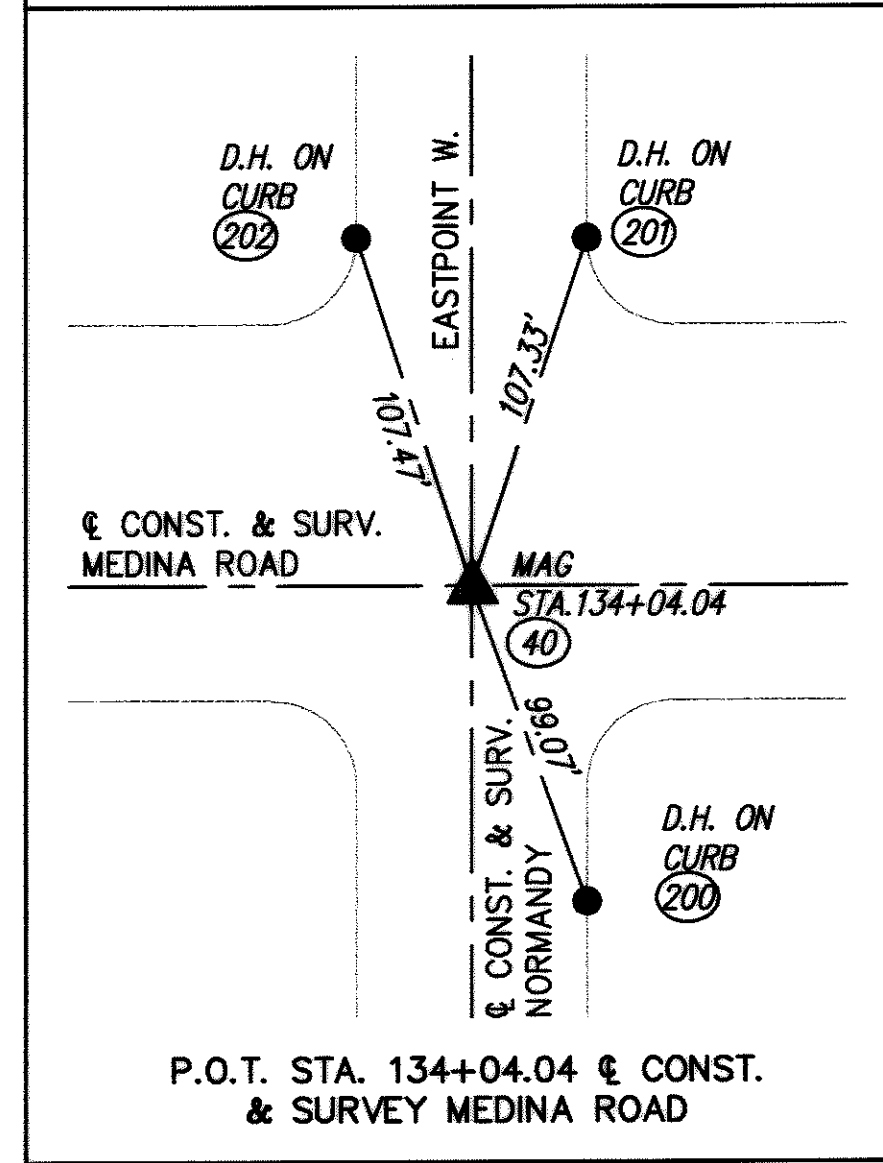
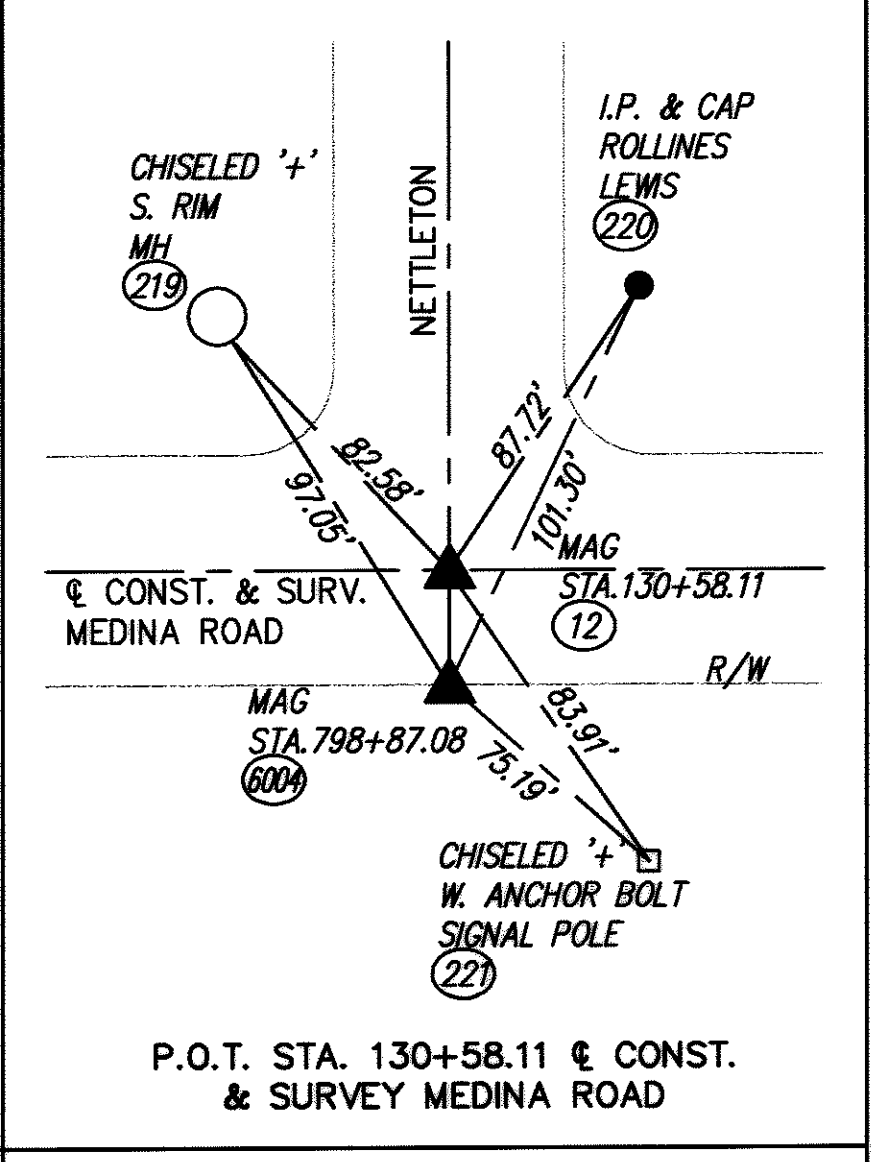
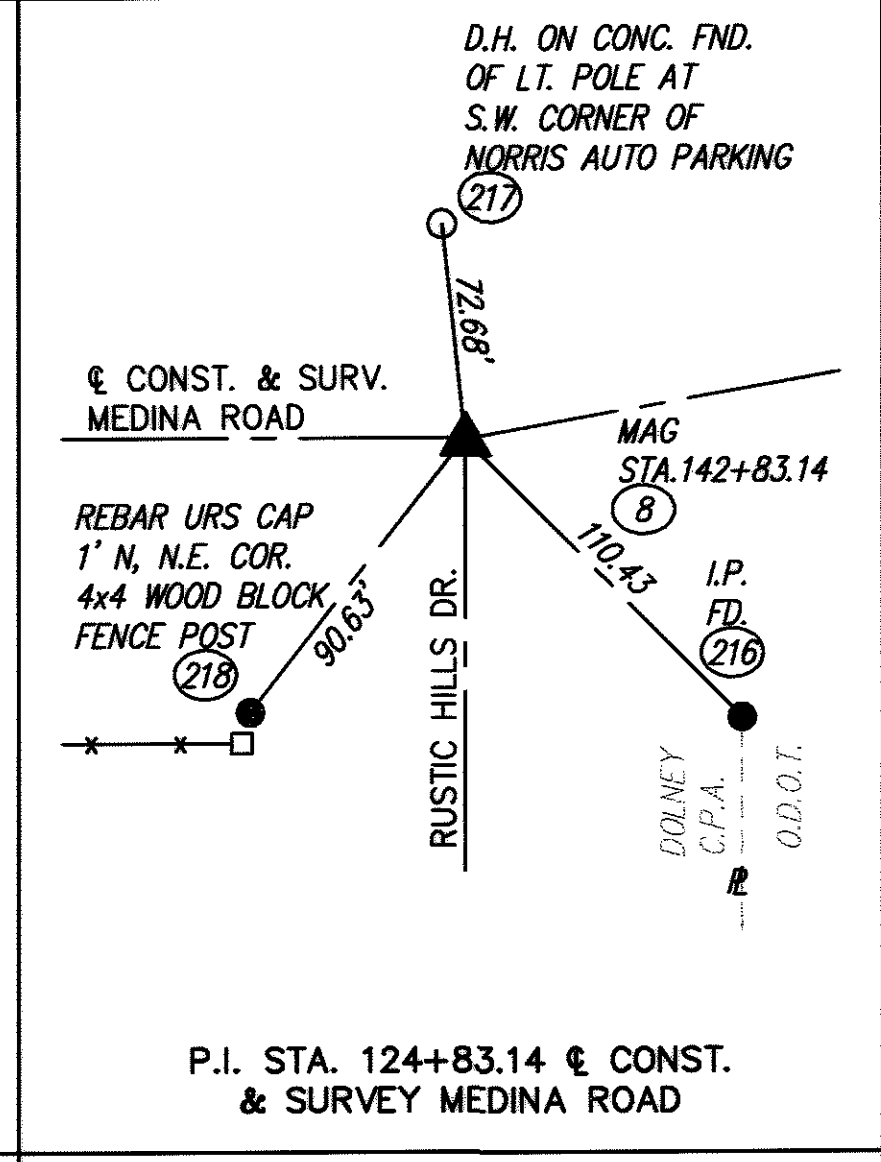
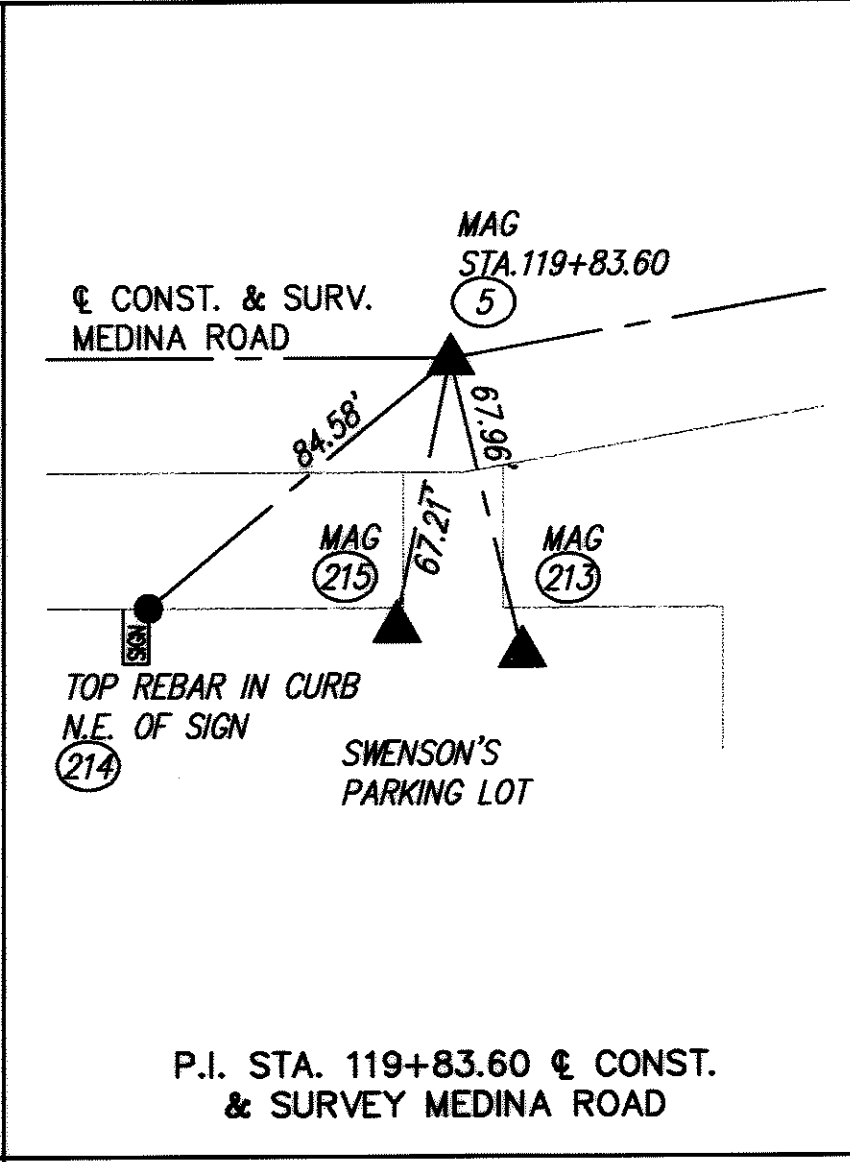
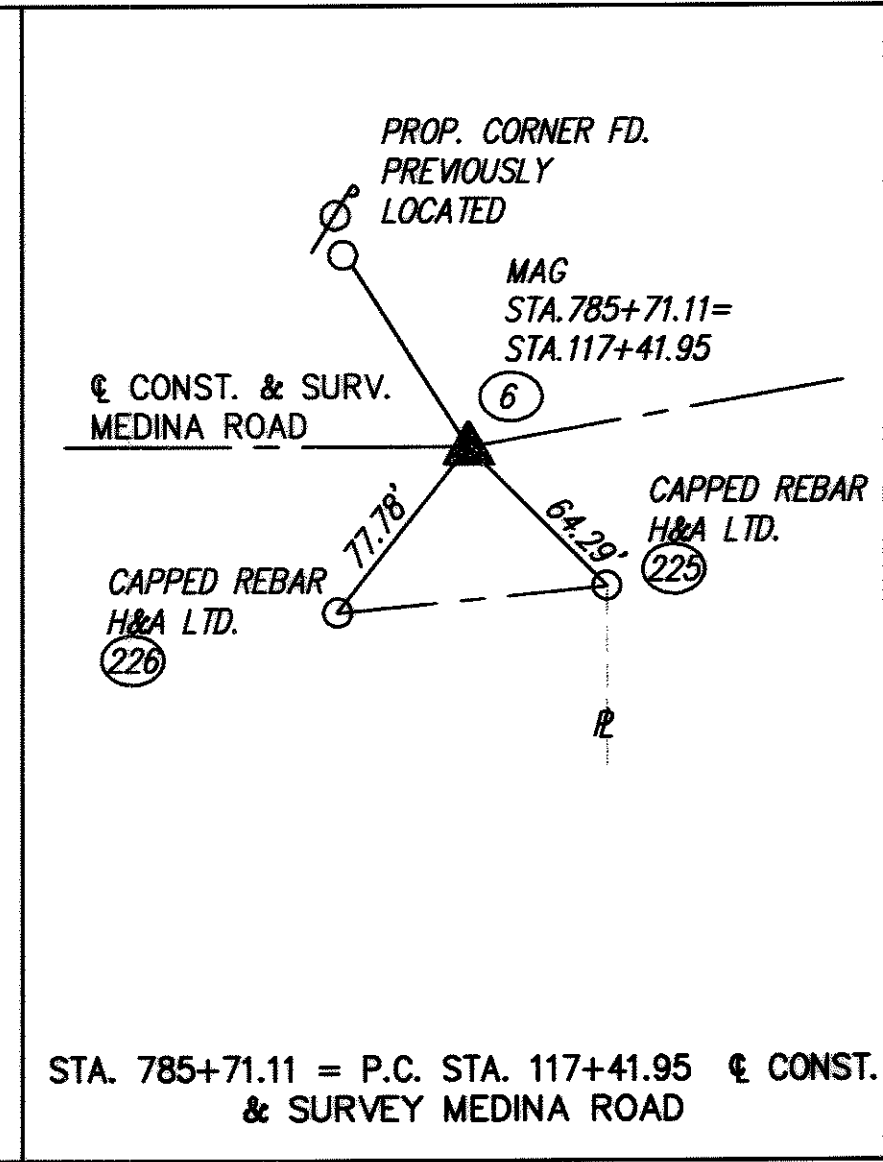
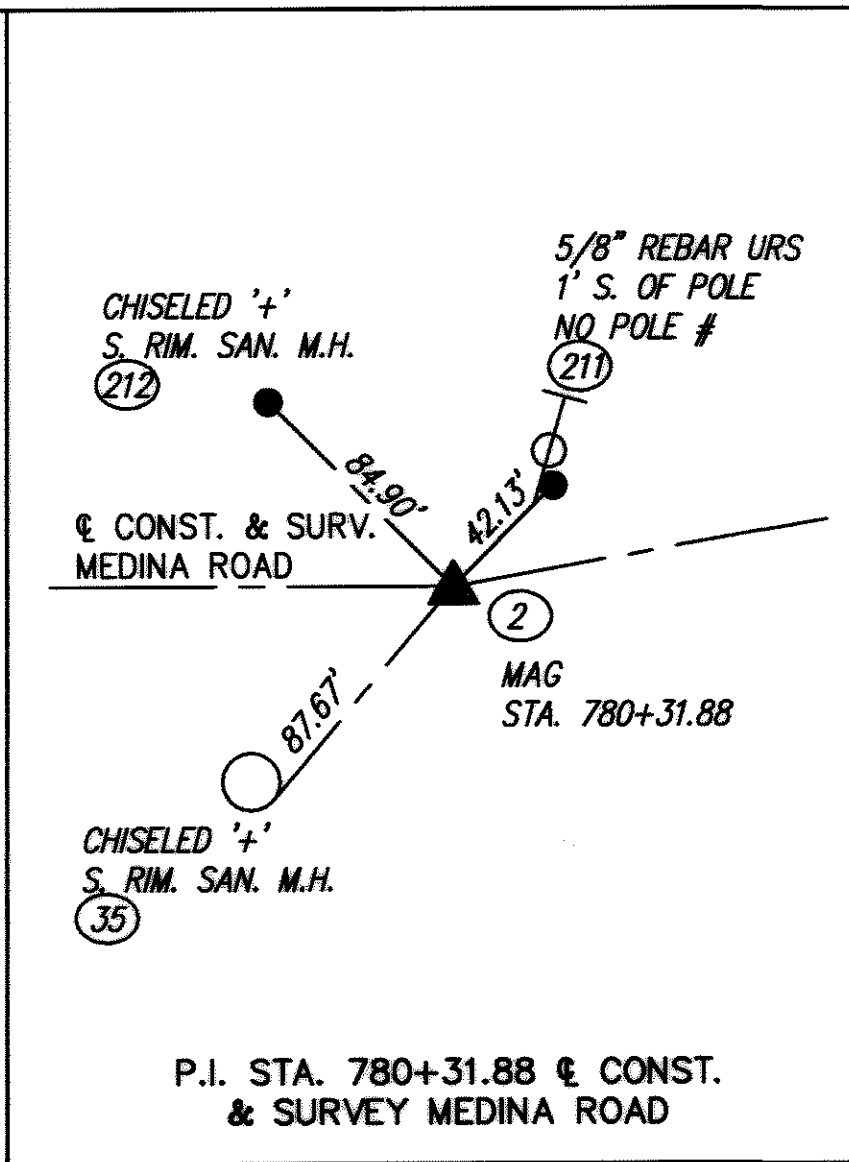
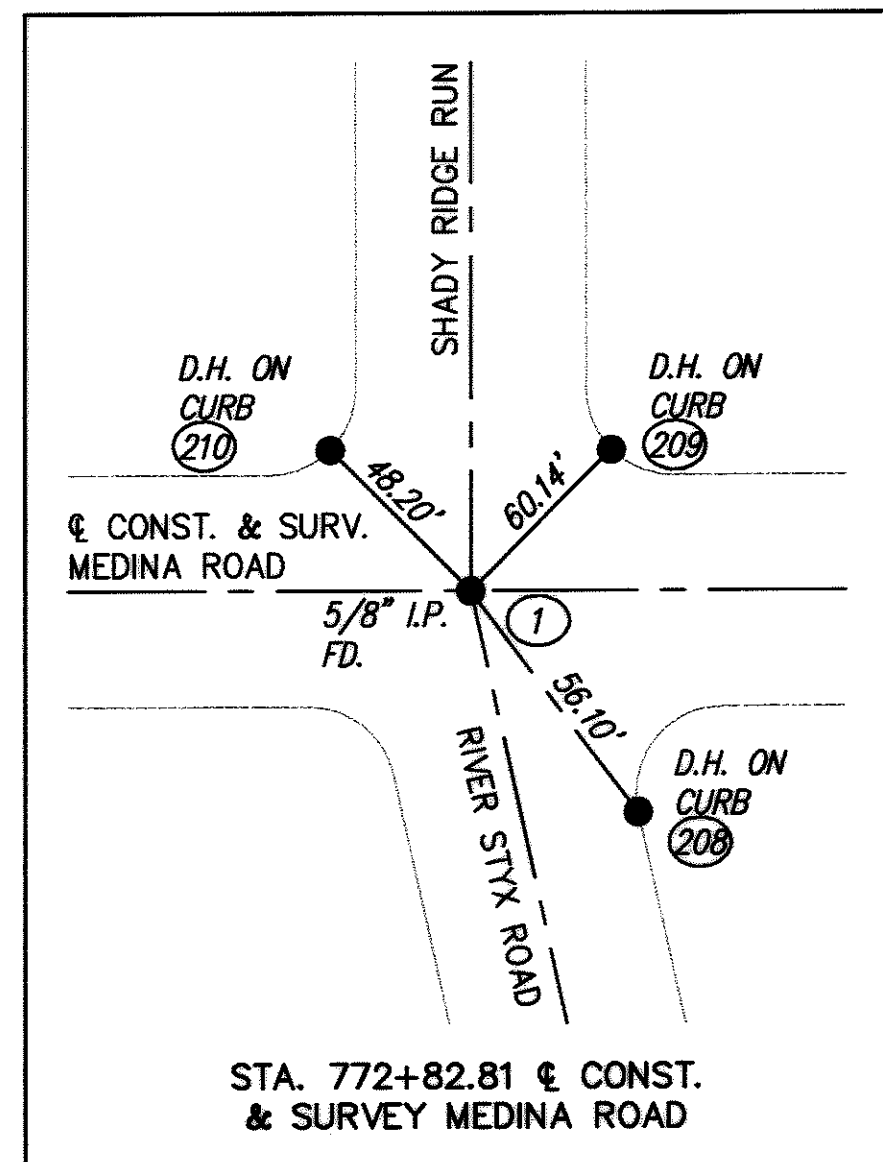
| STREET | POSTED SPEED | DESIGN SPEED |
|----------------------|--------------|--------------|
| WINDFALL ROAD, NORTH | 45MPH | 45MPH |
| WINDFALL ROAD, SOUTH | 55MPH | 55MPH |
| GATEWAY DRIVE, NORTH | 35MPH | 35MPH |
| GATEWAY DRIVE, SOUTH | 35MPH | 35MPH |



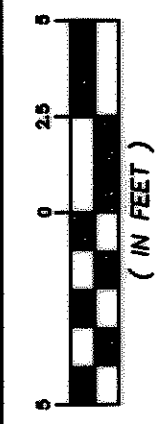
CALCULATED
CHECKED

SURVEY REFERENCE TIES

MED - 18 - 15.13



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CALCULATED
CHECKED

EXISTING TYPICAL SECTIONS

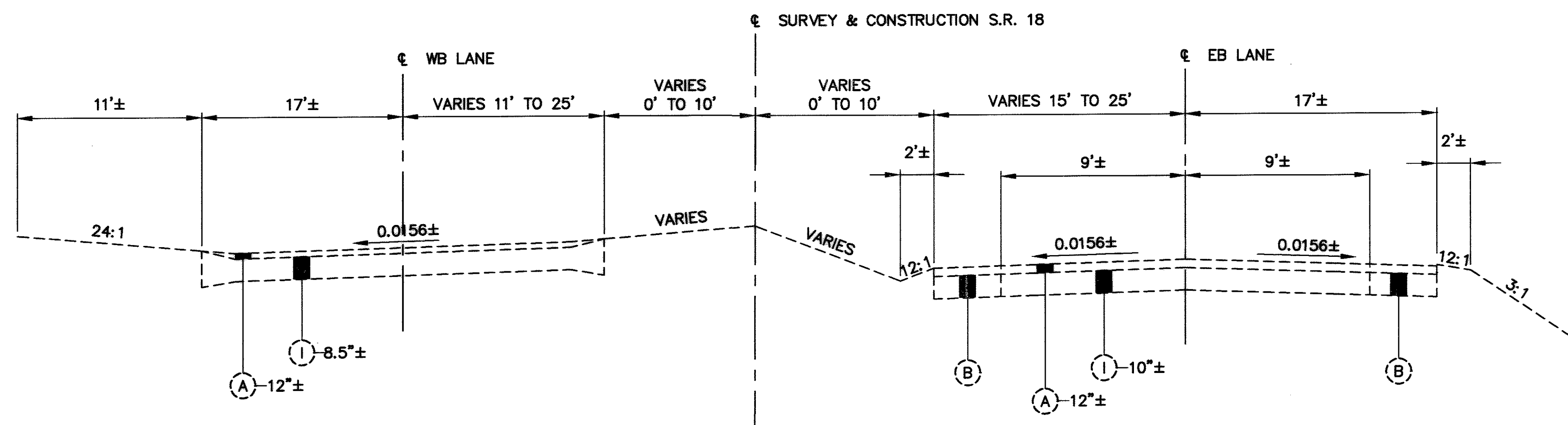
MED - 18 - 15.13

EXISTING LEGEND

- (A) ASPHALT CONCRETE
- (B) ASPHALT CONCRETE BASE (8"±)
- (C) ASPHALT CONCRETE BASE (11"±)
- (D) AGGREGATE BASE
- (E) SHALLOW PIPE UNDERDRAIN
- (F) GUARDRAIL, TYPE 5
- (G) BRICK (3"±)
- (H) MASTIC CUSHION (3/4"±)
- (I) CONCRETE PAVEMENT
- (J) CONCRETE BARRIER

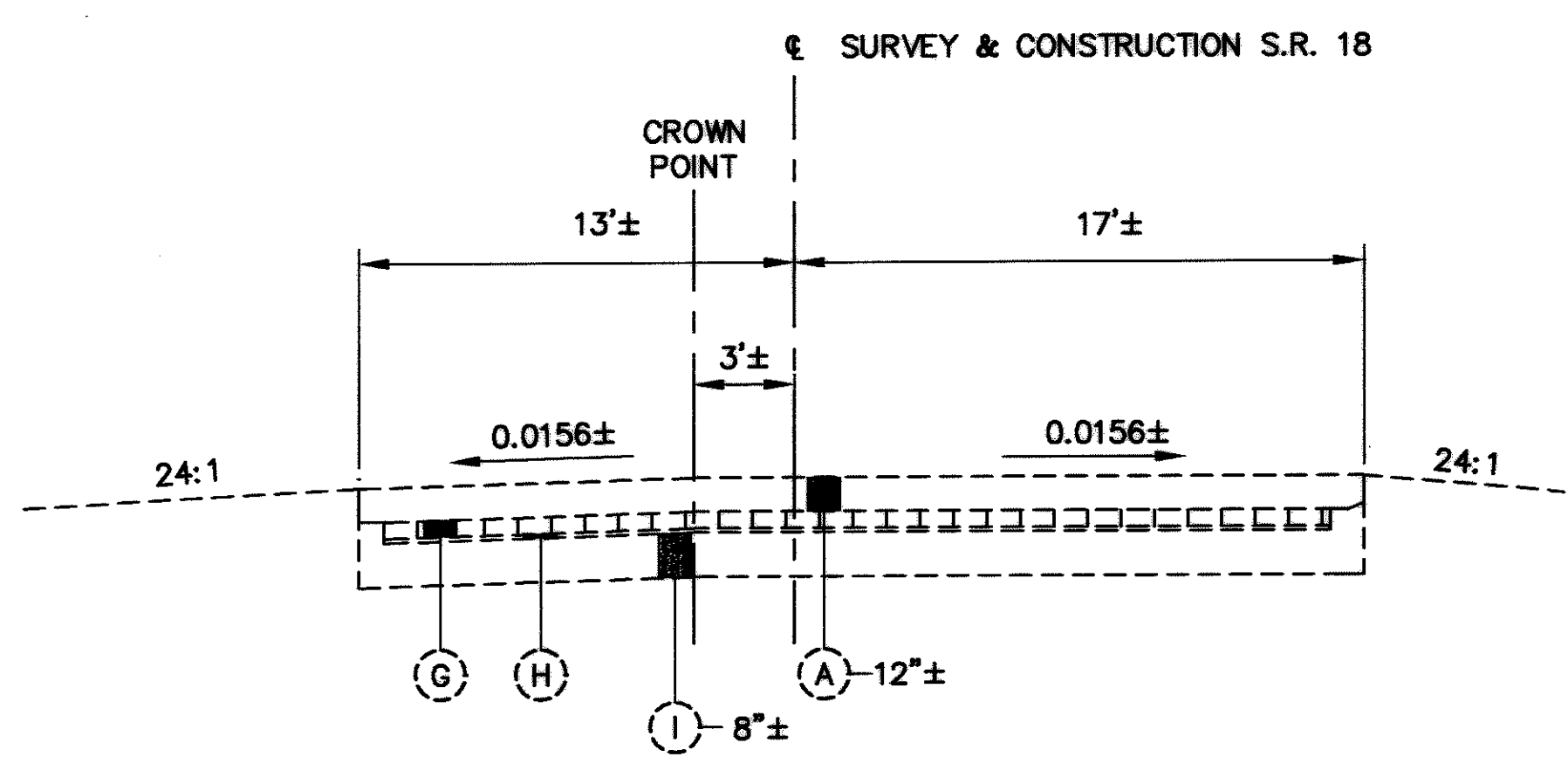
EXISTING PAVEMENT COMPOSITION

THE EXISTING PAVEMENT COMPOSITIONS HAVE BEEN DETERMINED USING SELECT PAVEMENT CORINGS AND EXISTING RECORDS. THE CONTRACTOR WILL BE PERMITTED TO TAKE PAVEMENT CORINGS WITH THE APPROVAL OF THE OHIO DEPARTMENT OF TRANSPORTATION TO CONFIRM THE BUILD-UP. THE CONTRACTOR WILL BE REQUIRED TO REMOVE ANY PAVEMENT SPECIFIED FOR REMOVAL UNDER ITEM 202 - PAVEMENT REMOVED REGARDLESS OF THE COMPOSITION WITHOUT ADDITIONAL COMPENSATION.

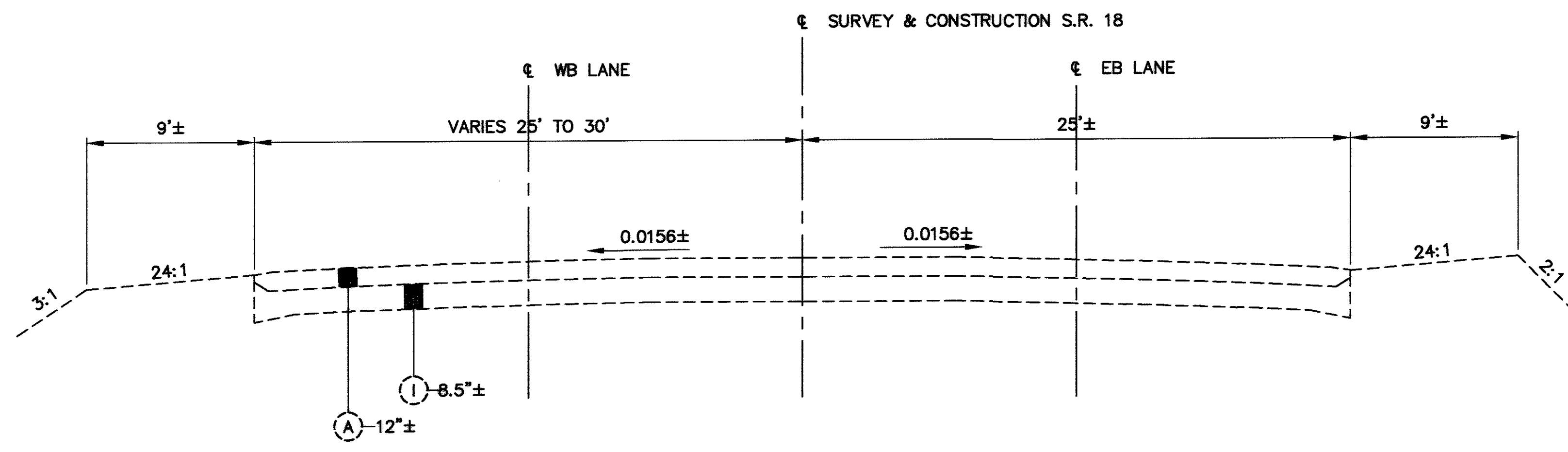


S.R. 18 - STA. 122+50 TO 147+00, STA. 153+50 TO 180+00

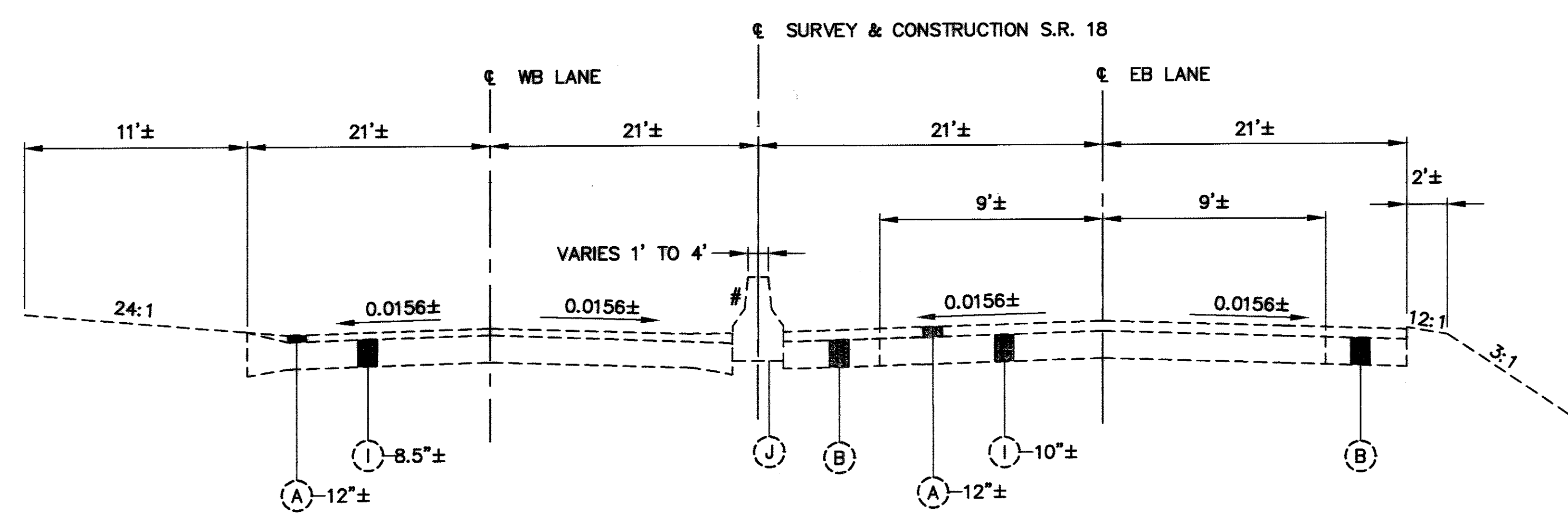
SEE ODOT PROJECT MED-18-16.08 FOR PROPOSED ADJACENT TYPICAL SECTION



S.R. 18 - STA. 102+00 TO 117+00



S.R. 18 - STA. 117+00 TO 122+50

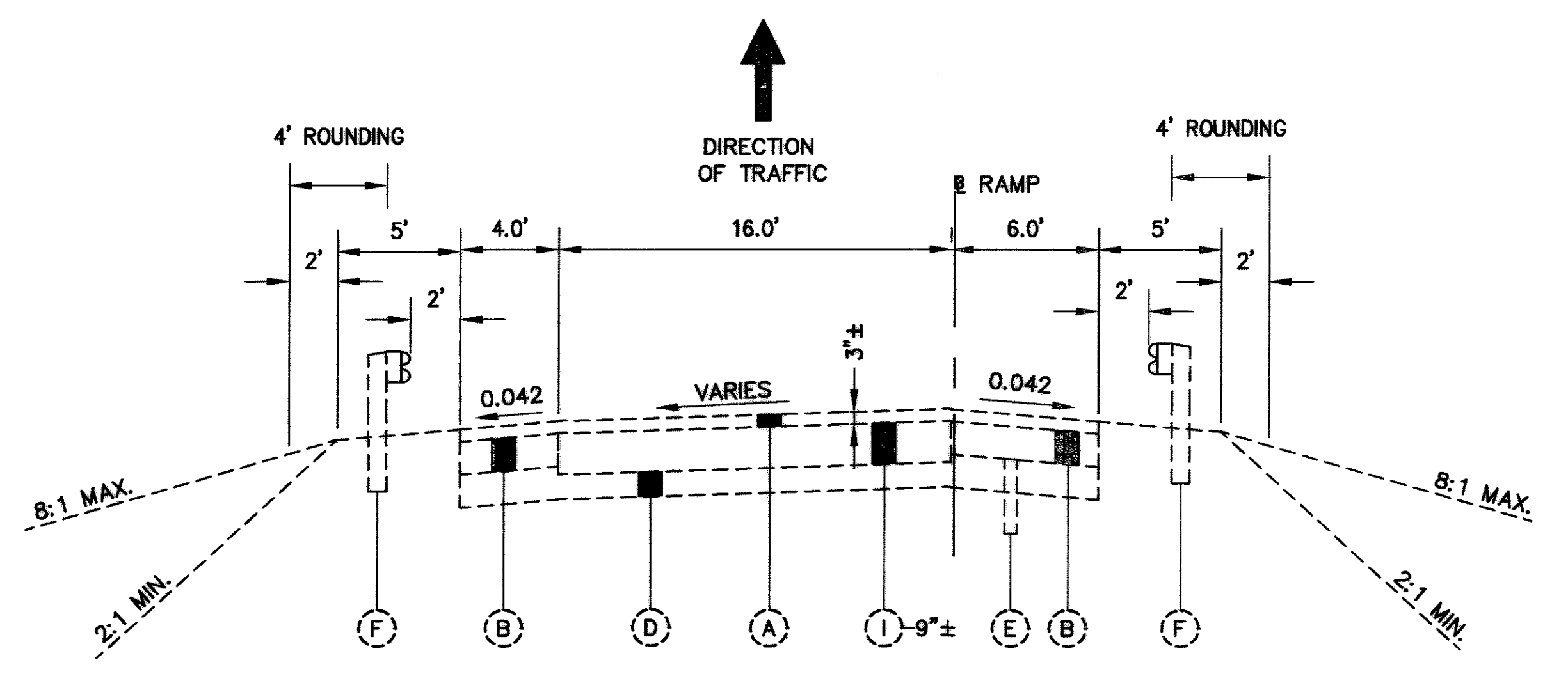


S.R. 18 - STA. 147+00 TO 153+50

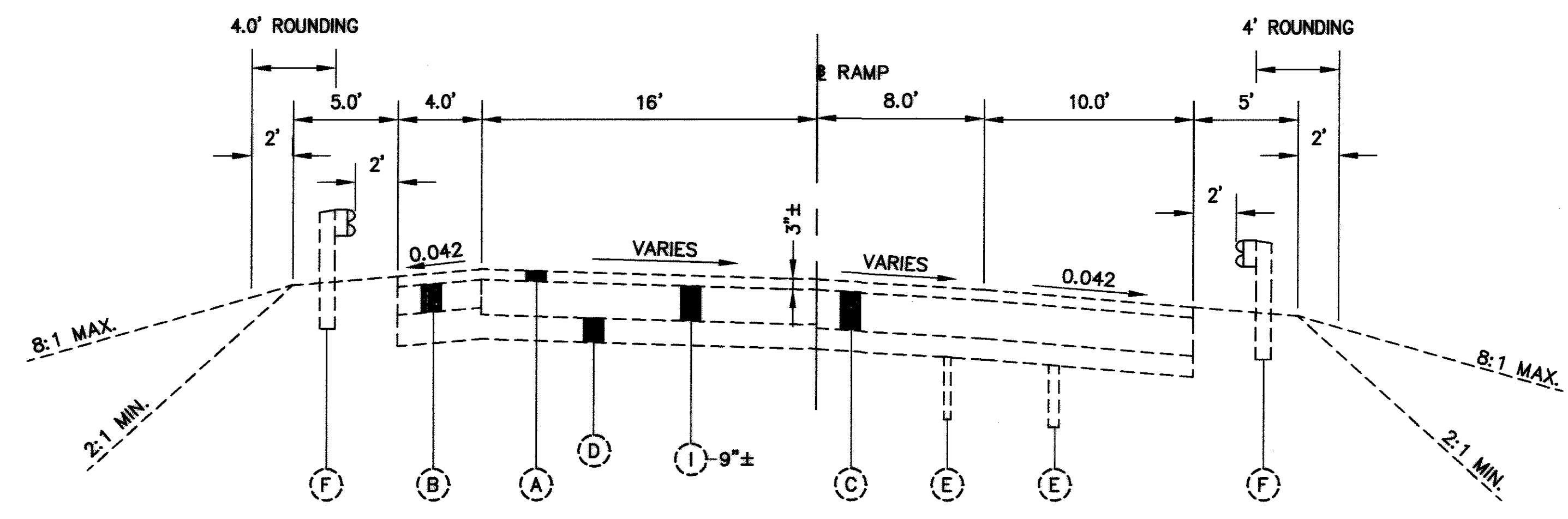
SEE ODOT PROJECT MED-18-16.08 FOR PROPOSED ADJACENT TYPICAL SECTION

MEDIAN BARRIER TAPERS FROM 2'± RT. TO 6'± LT. @ SURVEY & CONSTRUCTION

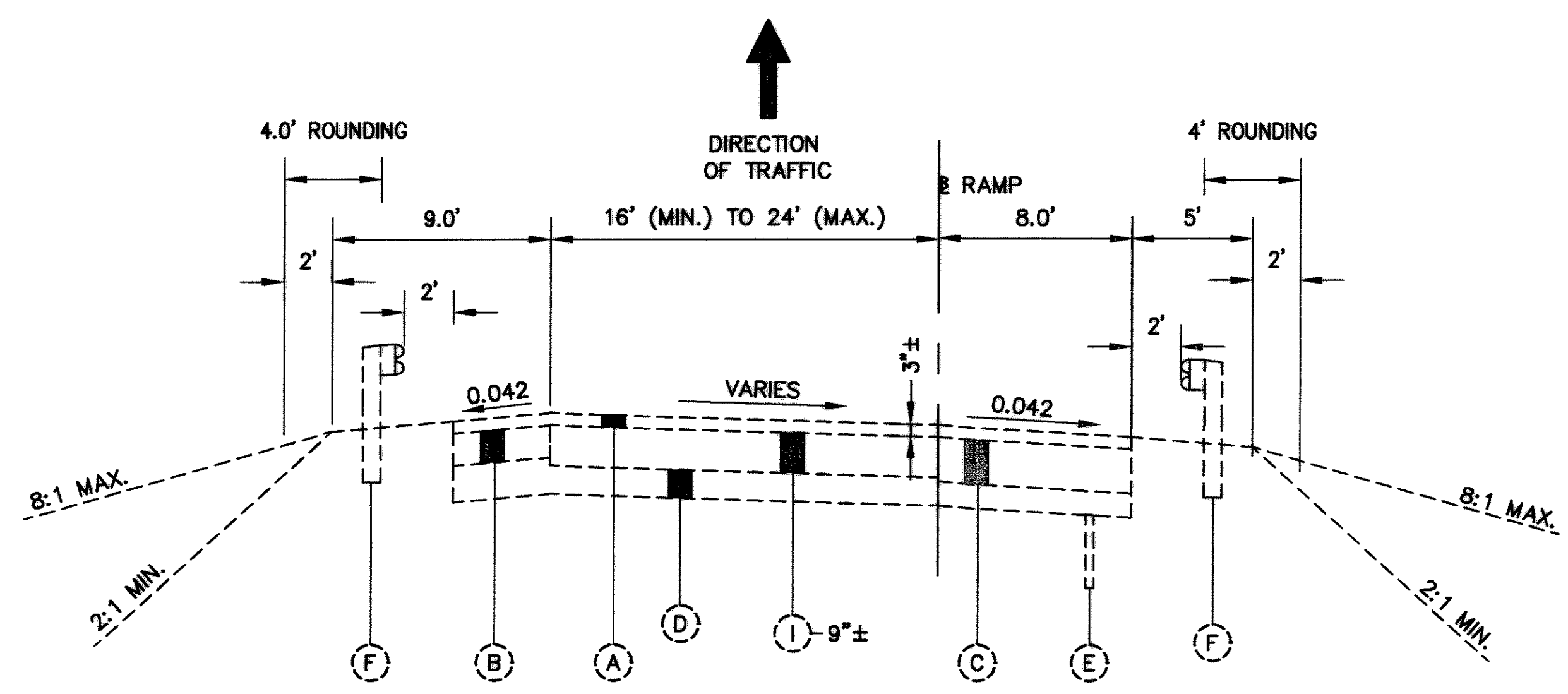
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I.R. 71 AND S.R. 18 RAMPS A AND C



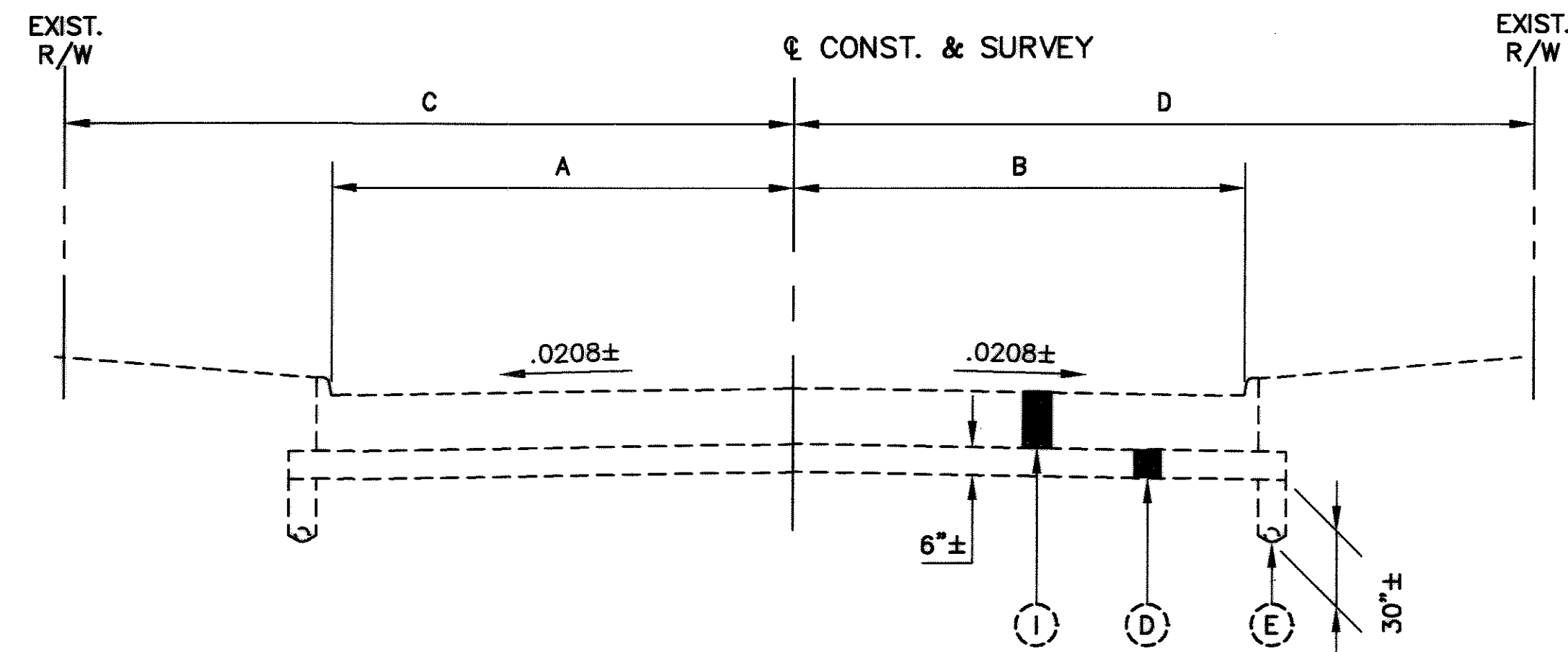
I.R. 71 AND S.R. 18 RAMP D
STA. 0+00 TO STA. 9+85.26



I.R. 71 AND S.R. 18 RAMP B
STA. 0+25.04 TO STA. 11+13.19

- EXISTING LEGEND**
- (A) ASPHALT CONCRETE (3"±)
 - (B) ASPHALT CONCRETE BASE (8"±)
 - (C) ASPHALT CONCRETE BASE (11"±)
 - (D) AGGREGATE BASE (6"±)
 - (E) SHALLOW PIPE UNDERDRAIN
 - (F) GUARDRAIL, TYPE 5
 - (G) BRICK (3"±)
 - (H) MASTIC CUSHION (3/4"±)
 - (I) CONCRETE PAVEMENT (9"±)

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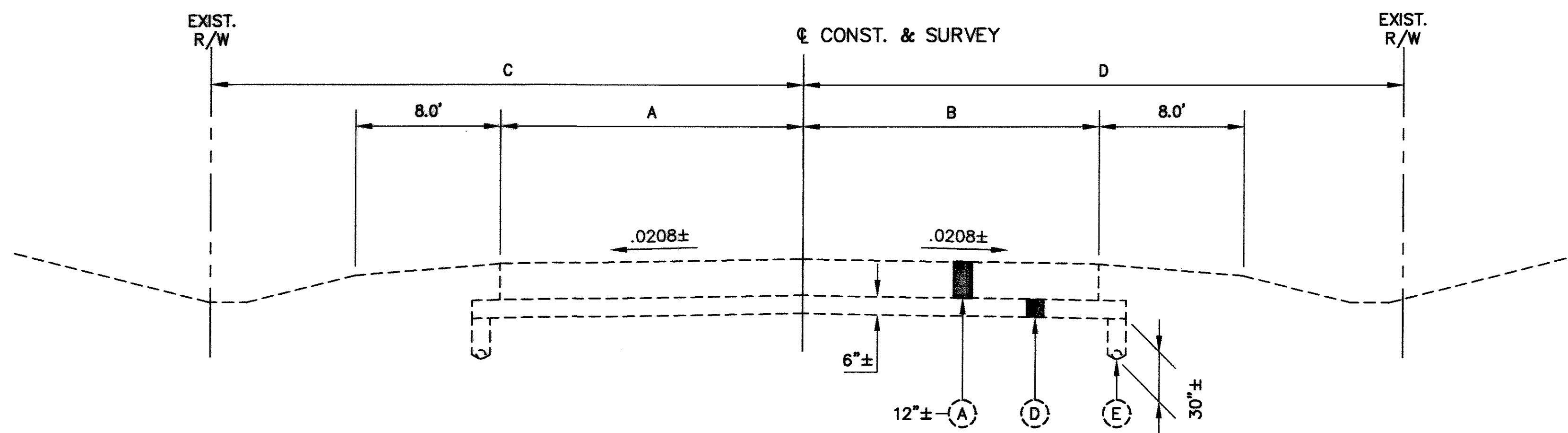


CONCRETE SIDE STREETS

- NORMANDY PARK DRIVE - A = 17.5', B = 17.5', C = 42', D = 43'
- EAST POINTE DRIVE (EAST) - A = 16.5', B = 16.5', C = 29', D = 36'
- EAST POINTE DRIVE (WEST) - A = 16.5', B = 16.5', C = 40', D = 40'
- MONTVILLE DRIVE - A = 16.5', B = 16.5', C = 30', D = 30'
- NETTLETON ROAD - A = 16.0', B = 24.0', C = 35', D = 40'
- GATEWAY DRIVE (SOUTH) - A = 25.0', B = 23.0', C = 43', D = 35'
- GATEWAY DRIVE (NORTH) - A = 14.0', B = 14.0', C = 30', D = 30'
- TRANSPORTATION COURT - A = 14.0', B = 24.0', C = 30', D = 30'

EXISTING LEGEND

- (A) ASPHALT CONCRETE (12"±)
- (B) ASPHALT CONCRETE BASE (8"±)
- (C) ASPHALT CONCRETE BASE (11"±)
- (D) AGGREGATE BASE (6"±)
- (E) SHALLOW PIPE UNDERDRAIN
- (F) GUARDRAIL, TYPE 5
- (G) BRICK (3"±)
- (H) MASTIC CUSHION (3/4"±)
- (I) 9" CONCRETE PAVEMENT

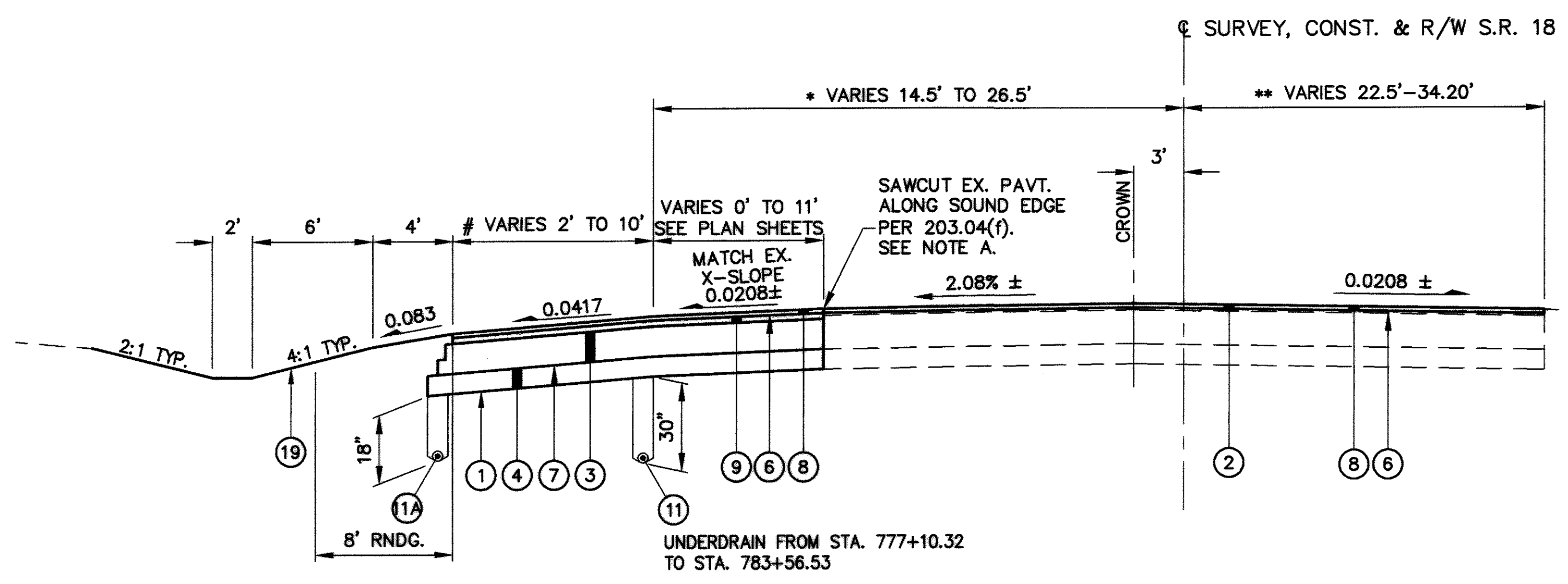


ASPHALT SIDE STREETS

- WINDFALL ROAD (NORTH) - A = 14', B = 26', C = 35', D = 40'
- WINDFALL ROAD (SOUTH) - A = VARIES, B = VARIES, (TOTAL PAVEMENT WIDTH = 40'), R/W VARIES SEE PLAN SHEETS

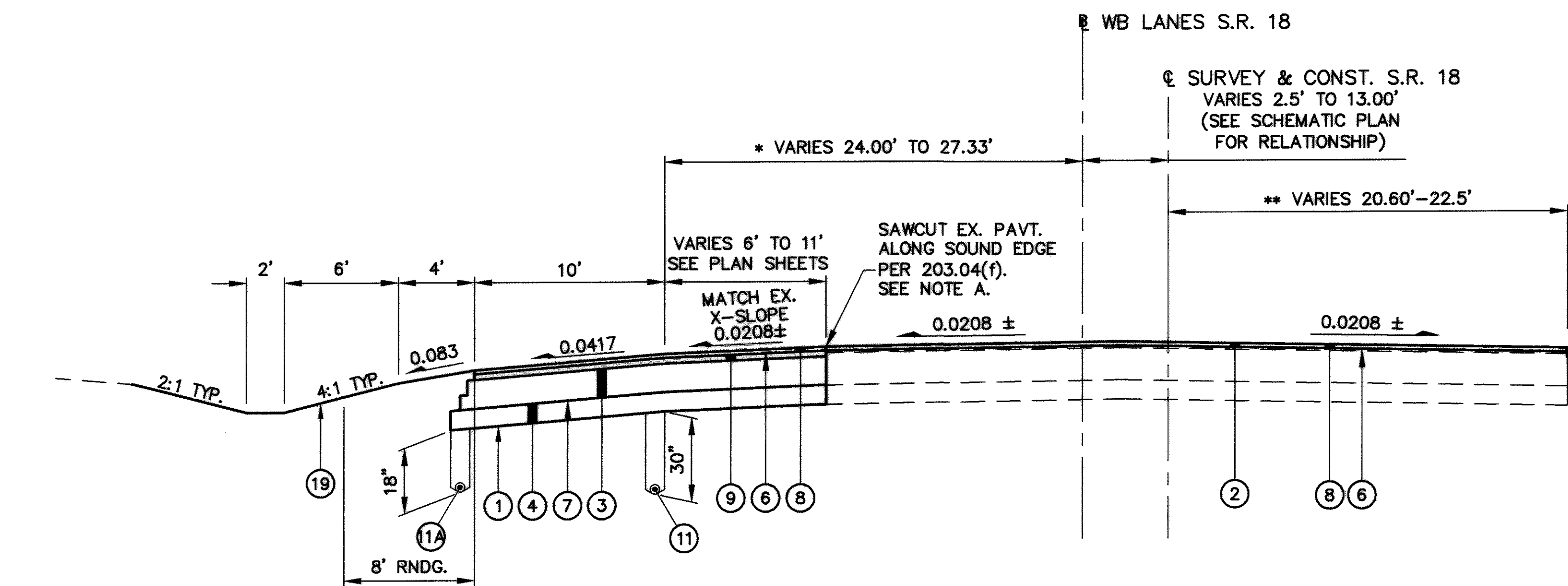
PROPOSED PAVEMENT LEGEND

- ① SEE UNSUITABLE SUBGRADE NOTE ON SHEET 23.
- ② ITEM 254 - PAVEMENT PLANING, ASPHALT (t = 1 1/2" AVG.)
- ③ ITEM 301 - 10" ASPHALT CONCRETE BASE, PG 64-22
- ④ ITEM 304 - 6" AGGREGATE BASE
- ⑤ ITEM 407 - TACK COAT (APPLIED @ 0.10 GAL./S.Y.) (SEE GENERAL NOTE)
- ⑥ ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (APPLIED @ 0.050 GAL./S.Y.) (SEE GENERAL NOTE)
- ⑦ ITEM 408 - PRIME COAT (APPLIED @ 0.40 GAL./S.Y.)
- ⑧ ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)
- ⑨ ITEM 442 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)
- ⑩ ITEM 451 - 9" REINFORCED CONCRETE PAVEMENT
- ⑪ ITEM 605 - 6" SHALLOW OR UNCLASSIFIED PIPE UNDERDRAINS WITH FABRIC WRAP
- ⑪A ITEM 605 - 4" SHALLOW OR UNCLASSIFIED PIPE UNDERDRAINS WITH FABRIC WRAP
- ⑫ ITEM 606 - GUARDRAIL, TYPE 5
- ⑬ ITEM 609 - CONCRETE MEDIAN
- ⑬A ITEM 609 - 6" CONCRETE TRAFFIC ISLAND
- ⑭ ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE A1, AS PER PLAN
- ⑭A ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN
- ⑮ ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN
- ⑯ ITEM 609 - CURB, TYPE 6
- ⑰ ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
- ⑱ ITEM 609 - CURB, TYPE 2A
- ⑲ ITEM 659 - SEEDING AND MULCHING (SEE GENERAL NOTES)



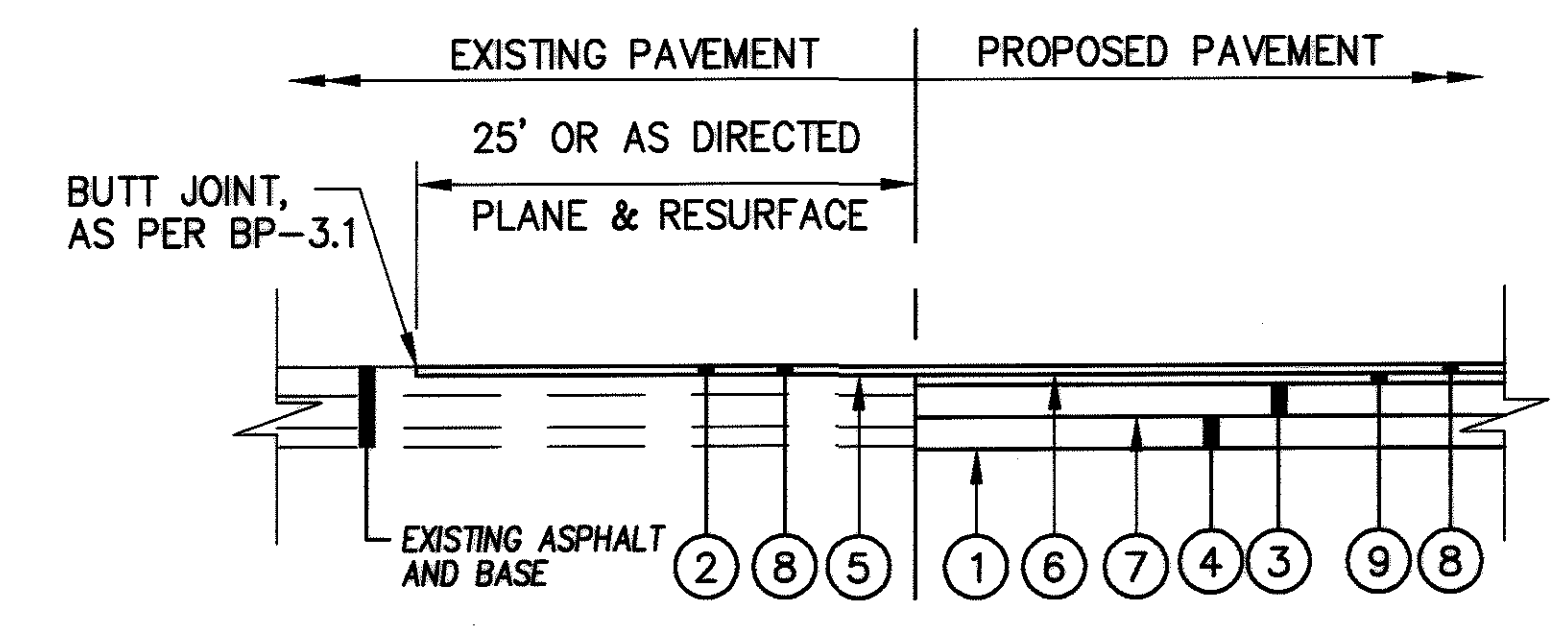
RESURFACING & LANE REDUCTION SECTION W/ TAPERS

STA. 783+56.53 TO STA. 792+29.10 (* 24.00', ** VARIES 22.5' TO 31.85') = 872.57 FT.
 STA. 792+29.10 TO STA. 793+79.23 (* VARIES 24.00 TO 27.33', ** VARIES 31.85' TO 34.20') = 150.13 FT.
 STA. 125+50, ☉ SURV. & CONST. S.R. 18 =
 STA. 793+79.23, ☉ W.B. LANES S.R. 18



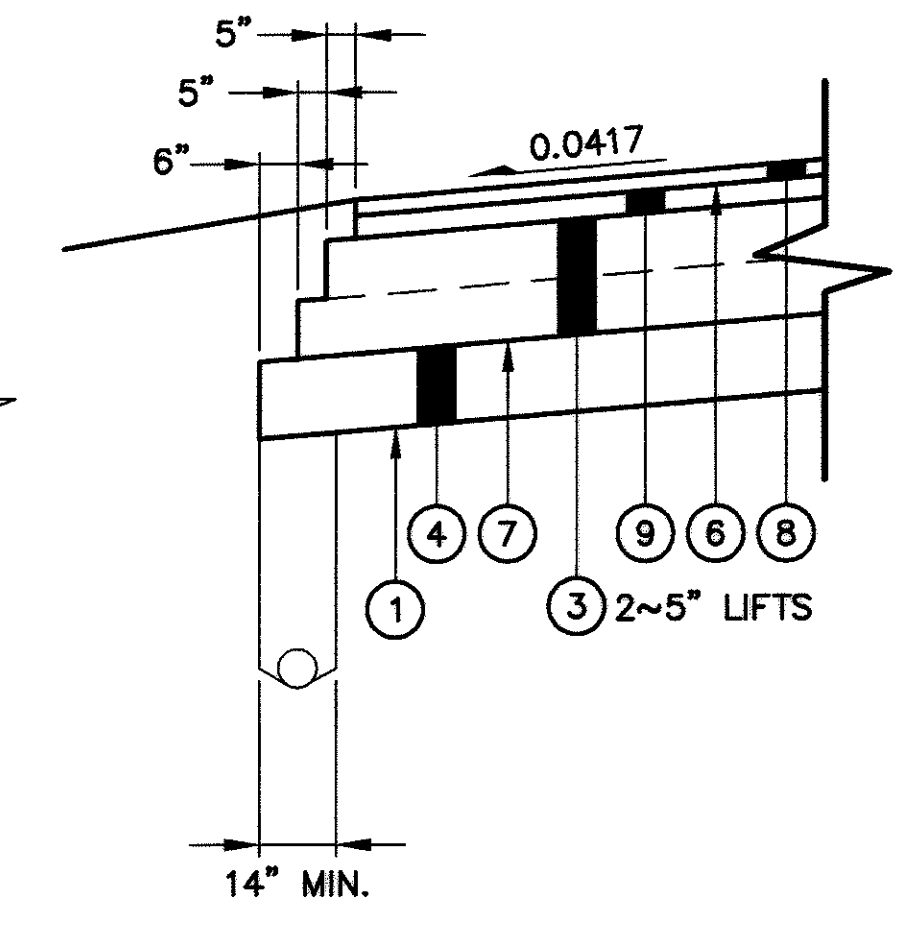
RESURFACING & LANE REDUCTION SECTION W/ TAPERS

STA. 776+60.32 TO STA. 777+10.32 (# VARIES 2.00' TO 10.00', * VARIES 14.50' TO 26.50', ** 22.00') = 50.00 FT.
 STA. 777+10.32 TO STA. 782+00.00 (# 10.00', * VARIES 14.50' TO 26.50', ** VARIES 22.00' TO 20.60') = 489.68 FT.
 STA. 782+00.00 TO STA. 783+56.53 (# 10.00', * 26.50', ** VARIES 20.60' TO 22.50') = 156.53 FT.
 STA. 783+56.53, 2.50' RT. ☉ SURV. & CONST. S.R. 18 =
 PC STA. 1783+56.53, ☉ W.B. LANES S.R. 18



PAVEMENT TRANSITION DETAIL

STA. 17+13.20 TO STA. 17+38.20 RAMP A = 25.00 FT.
 STA. 2+60.00 TO STA. 2+85.00 RAMP D = 25.00 FT.
 STA. 177+29.19 TO STA. 177+54.19 S.R. 18 EB = 25.00 FT.
 STA. 179+71.13 TO STA. 179+96.13 S.R. 18 WB = 25.00 FT.
 STA. 11+00.00 TO STA. 11+25.00 WINDFALL = 25.00 FT.
 STA. 11+52.00 TO STA. 11+77.00 RAMP C = 25.00 FT.
 STA. 11+13.20 TO STA. 11+38.20 RAMP B = 25.00 FT.
 175.00 FT.



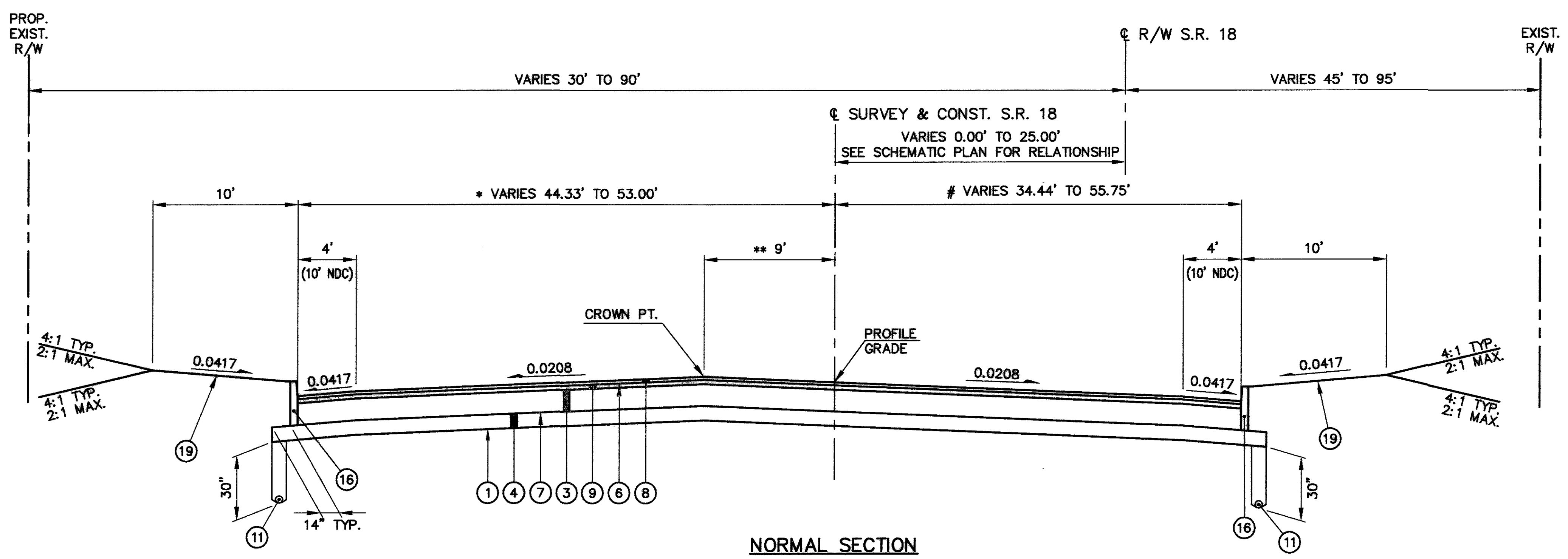
EDGE COURSE DETAIL

NOTES:

THE EXISTING PAVEMENT EDGES SHALL BE SAW CUT TO LOCATE A SOUND PAVEMENT EDGE PER SECTION 203.04(e) OF THE CMS. FOR ESTIMATING PURPOSES, PAVEMENT CALCULATIONS INCLUDED IN THE PLANS INDICATE AN AVERAGE WIDTH OF ONE (1) FOOT OF EXISTING PAVEMENT BEING REPLACED.
 FOR GLOBAL SUBGRADE TREATMENT, SEE SHEET 23.

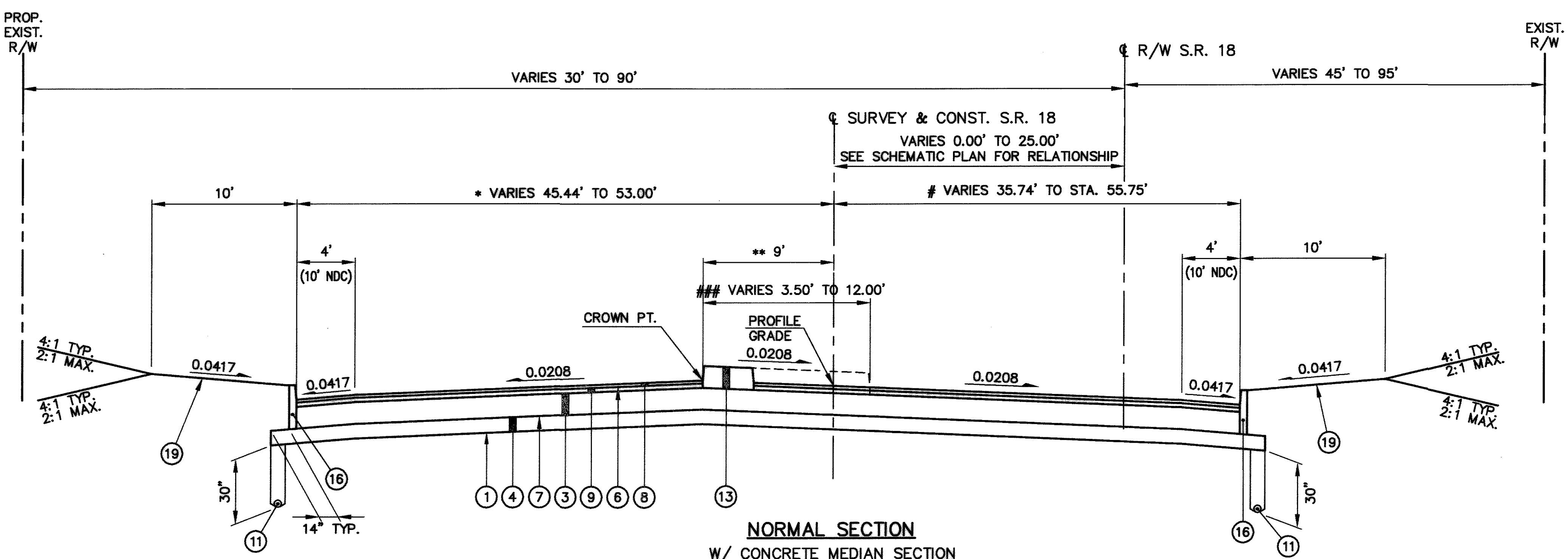
TYPICAL SECTIONS

MED - 18 - 15.13



NORMAL SECTION

STA. 125+50.00 TO STA. 126+00.00 (* VARIES 44.33' TO 45.44', # VARIES 34.44 TO 35.74') = 50.00 FT.
 STA. 130+00.00 TO STA. 131+15.00 (* 53.00', # VARIES 54.81' TO 55.75') = 115.00 FT.
 STA. 133+50.00 TO STA. 134+90.00 (* 53.00', # 55.75') = 140.00 FT.
 (** SEE INTERSECTION DETAILS FOR ROUNDING/TRANSITIONING OF CROWN THROUGH INTERSECTIONS)

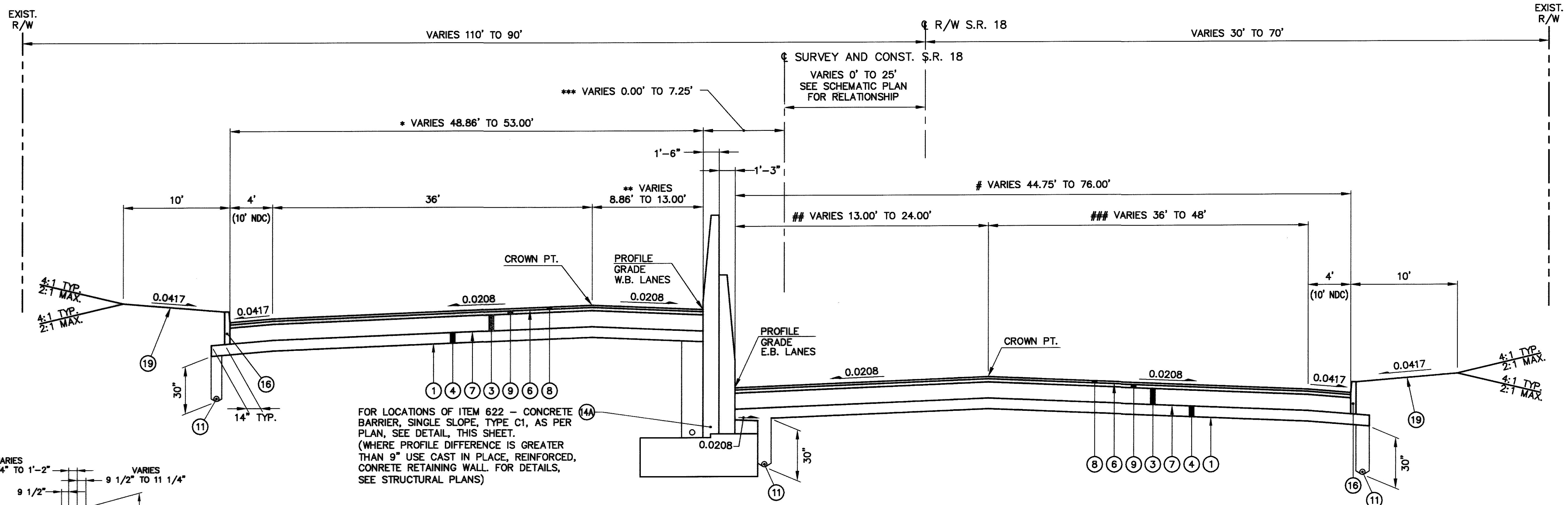


**NORMAL SECTION
W/ CONCRETE MEDIAN SECTION**

STA. 126+00.00 TO STA. 126+50.00 (* VARIES 45.44' TO 46.55', # VARIES 35.74' TO 36.89', ### 12.00') = 50.00 FT.
 STA. 126+50.00 TO STA. 127+00.00 (* VARIES 46.55' TO 47.67', # VARIES 36.89' TO 37.89', ### VARIES 12.00' TO 3.50') = 50.00 FT.
 STA. 127+00.00 TO STA. 127+50.00 (* VARIES 47.67' TO 48.78', # VARIES 37.89' TO 38.75', ### 3.50') = 50.00 FT.
 STA. 127+50.00 TO STA. 128+00.00 (* VARIES 48.78' TO 49.89', # VARIES 38.75' TO 51.56', ### 3.50') = 50.00 FT.
 STA. 128+00.00 TO STA. 129+40.00 (* VARIES 49.89' TO 53.00', # VARIES 51.56 TO 53.84', ### 3.50') = 140.00 FT.
 STA. 129+40.00 TO STA. 130+00.00 (* 53.00', # VARIES 53.84' TO 54.81, ### 3.50') = 60.00 FT.
 STA. 131+15.00 TO STA. 133+50.00 (* 53.00', ** 0.00', # 55.75', ### 2.75') = 235.00 FT.

NOTE:
 FOR GLOBAL SUBGRADE TREATMENT, SEE SHEET 23.
 FOR LEGEND SEE SHEET 10.

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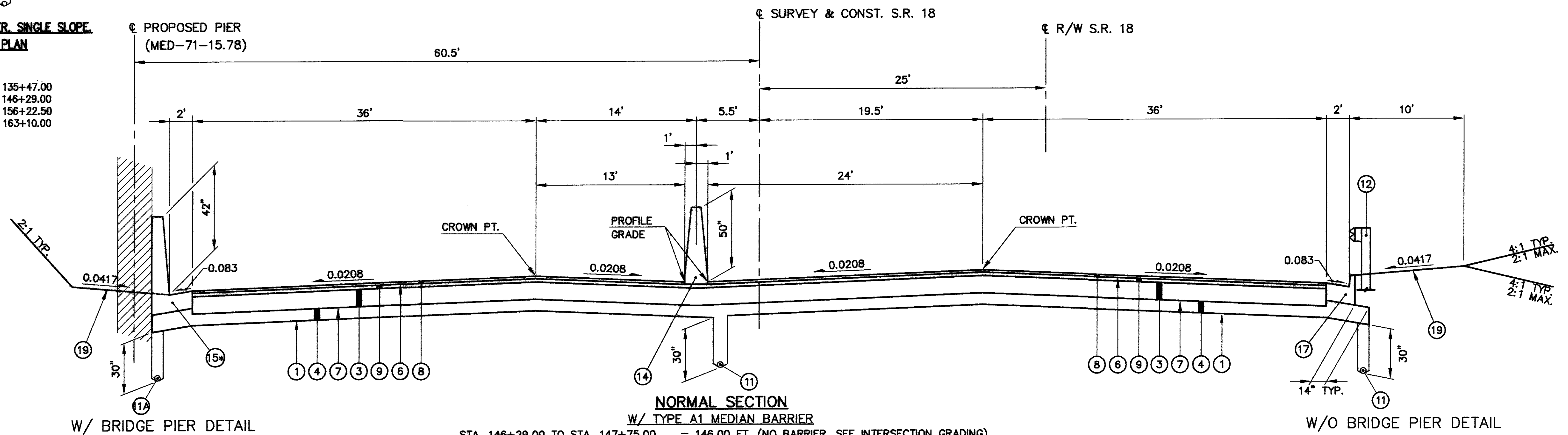


**NORMAL SECTION
W/ RETAINING WALL**

| | | |
|----------------------------------|--|--------------|
| STA. 134+90.00 TO STA. 139+00.00 | (* 53.00', ** 13.00', *** 0.00, # 53.00', ## 13.00', ### 36.00') | = 410.00 FT. |
| STA. 139+00.00 TO STA. 142+00.00 | (* VARIES 53.00' TO 48.86', ** VARIES 13.00' TO 8.86', *** VARIES 0.00 TO 7.25', # VARIES 53.00' TO 64.00', ## VARIES 13.00' TO 24.00, ### 36.00') | = 300.00 FT. |
| STA. 142+00.00 TO STA. 142+75.00 | (* VARIES 48.86' TO 49.63', ** VARIES 8.86' TO 9.63', *** 7.25', # 64.00', ## 24.00, ### 36.00') | = 75.00 FT. |
| STA. 142+75.00 TO STA. 143+25.00 | (* VARIES 49.63' TO 50.15', ** VARIES 9.63' TO 10.15', *** 7.25', # VARIES 64.00' TO 76.00', ## 24.00, ### VARIES 36.00' TO 48.00') | = 50.00 FT. |
| STA. 143+25.00 TO STA. 146+00.00 | (* VARIES 50.15' TO 53.00', ** VARIES 10.15' TO 13.00', *** 7.25', # 76.00', ## 24.00, ### 48.00') | = 275.00 FT. |
| STA. 146+00.00 TO STA. 146+29.00 | (* 53.00', ** 13.00', *** 7.25', # 76.00', ## 24.00, ### 48.00') | = 29.00 FT. |

**ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE.
TYPE C1, AS PER PLAN
S.R. 18**

| |
|----------------------------------|
| STA. 134+90.00 TO STA. 135+47.00 |
| STA. 144+84.91 TO STA. 146+29.00 |
| STA. 154+40.00 TO STA. 156+22.50 |
| STA. 162+38.50 TO STA. 163+10.00 |



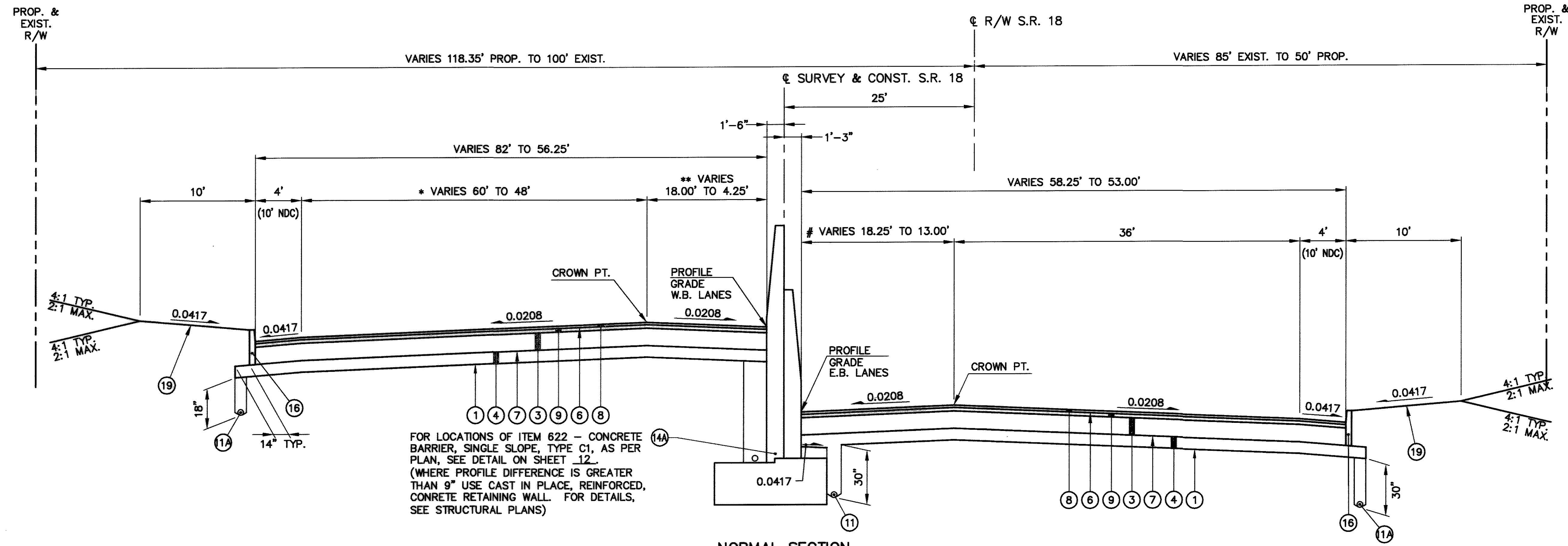
**NORMAL SECTION
W/ TYPE A1 MEDIAN BARRIER**

| | |
|----------------------------------|---|
| STA. 146+29.00 TO STA. 147+75.00 | = 146.00 FT. (NO BARRIER, SEE INTERSECTION GRADING) |
| STA. 147+75.00 TO STA. 152+70.00 | = 495.00 FT. |
| STA. 152+70.00 TO STA. 154+40.00 | = 170.00 FT. (NO BARRIER, SEE INTERSECTION GRADING) |

* STA. 149+94.00 TO STA. 152+08.00 LT. = 214.00 FT. (BRIDGE PIERS)
STA. 149+57.00 TO STA. 151+70.00 RT. = 213.00 FT. (BRIDGE PIERS)

NOTE:
FOR GLOBAL SUBGRADE TREATMENT, SEE SHEET 23.
FOR LEGEND SEE SHEET 10

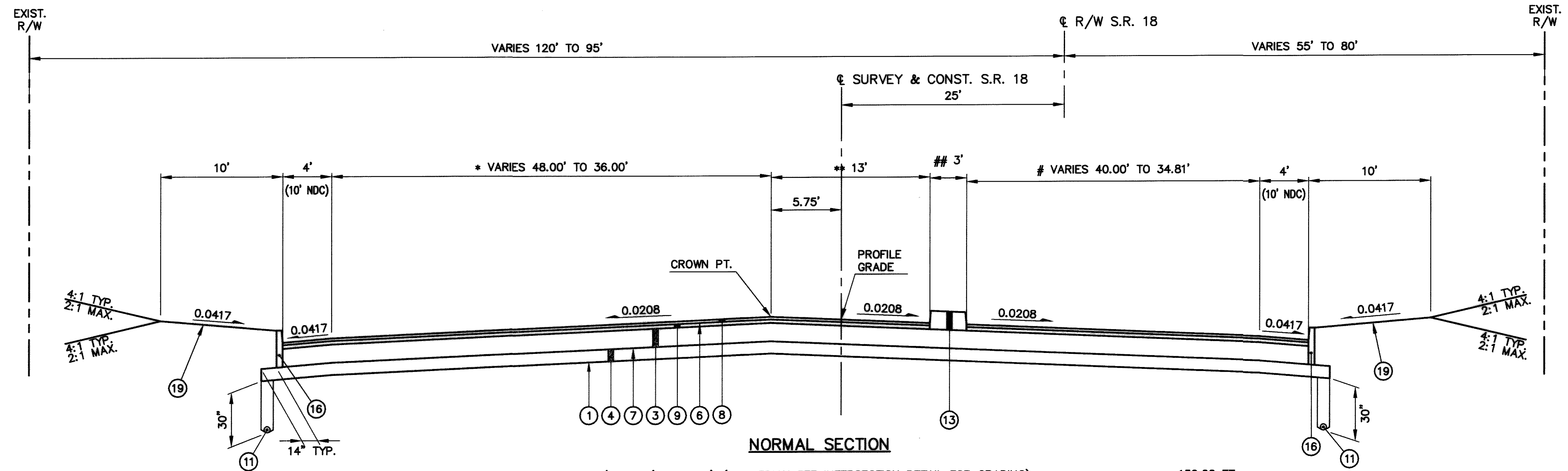
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FOR LOCATIONS OF ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN, SEE DETAIL ON SHEET 12. (WHERE PROFILE DIFFERENCE IS GREATER THAN 9" USE CAST IN PLACE, REINFORCED, CONCRETE RETAINING WALL. FOR DETAILS, SEE STRUCTURAL PLANS)

**NORMAL SECTION
W/ RETAINING WALL**

| | |
|---|--------------|
| STA. 154+40.00 TO STA. 154+50.00 (* 60.00', ** 18.00', # 18.25') | = 10.00 FT. |
| STA. 154+50.00 TO STA. 156+00.00 (* 60.00', ** VARIES 18.00' TO 15.18', # VARIES 18.25' TO 15.34') | = 150.00 FT. |
| STA. 156+00.00 TO STA. 157+00.00 (* VARIES 60.00' TO 48.00', ** VARIES 15.18' TO 13.30', # VARIES 15.34' TO 13.40') | = 100.00 FT. |
| STA. 157+00.00 TO STA. 157+21.36 (* 48.00', ** VARIES 13.30' TO 12.90', # VARIES 13.40' TO 13.00') | = 21.36 FT. |
| STA. 157+21.36 TO STA. 161+82.73 (* 48.00', ** VARIES 12.90' TO 4.25', # 13.00') | = 461.37 FT. |
| STA. 161+82.73 TO STA. 163+10.00 (* 48.00', ** 4.25', # 13.00') | = 127.27 FT. |

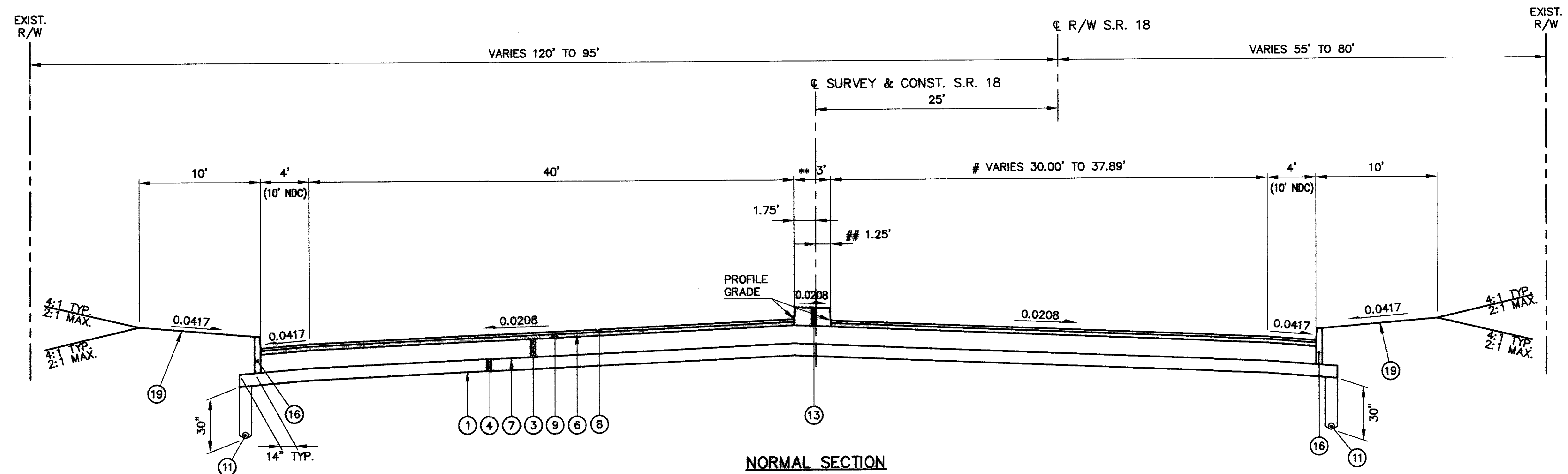


NORMAL SECTION

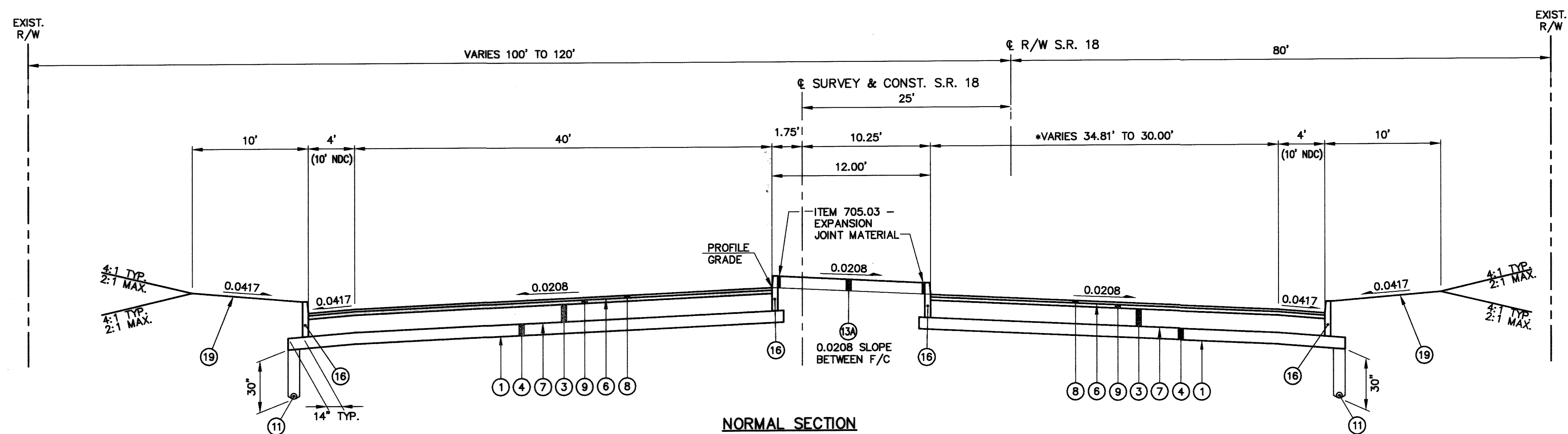
| | |
|--|--------------|
| STA. 163+10.00 TO STA. 164+40.00 (* 48.00', # 40.00', (NO MEDIAN SEE INTERSECTION DETAIL FOR GRADING)) | = 130.00 FT. |
| STA. 164+40.00 TO STA. 166+00.00 (* 48.00', # 40.00') | = 160.00 FT. |
| STA. 166+00.00 TO STA. 167+00.00 (* 48.00', # VARIES 40.00' TO 37.78') | = 100.00 FT. |
| STA. 167+00.00 TO STA. 167+50.00 (* VARIES 48.00' TO 36.00', # VARIES 37.78' TO 36.67') | = 50.00 FT. |
| STA. 167+50.00 TO STA. 167+83.50 (* 36.00', # VARIES 36.67' TO 35.92') | = 33.50 FT. |
| STA. 167+83.50 TO STA. 168+33.50 (* 36.00', ## VARIES 3.00' TO 12.00', # VARIES 35.92' TO 34.81', ** VARIES 13.00' TO 4.00') | = 50.00 FT. |

NOTE:
FOR GLOBAL SUBGRADE TREATMENT, SEE SHEET 23.
FOR LEGEND SEE SHEET 10.

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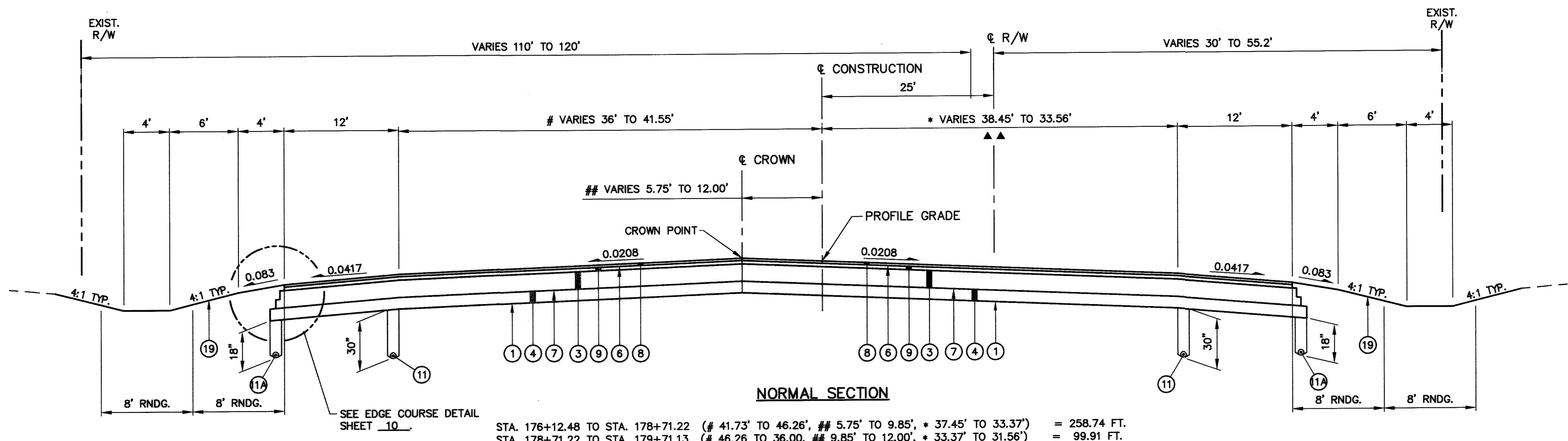
STA. 170+50.00 TO STA. 171+00.00 (** VARIES 12.00' TO 3.00', # VARIES 30.00' TO 37.89', ## VARIES 10.25' TO 1.25') = 50.00 FT.
 STA. 171+00.00 TO STA. 171+40.00 (** 3.00', # VARIES 37.89' TO 37.00', ## 1.25') = 40.00 FT.
 STA. 171+40.00 TO STA. 175+50.00 (** 3.00', # 37.00', ## 1.25') = 410.00 FT.
 STA. 175+50.00 TO STA. 176+12.48 (# 37.00', NO MEDIAN SEE INTERSECTION DETAIL) = 62.48 FT.



STA. 168+33.50 TO STA. 170+50 (*VARIES 34.81' TO 30.00') = 216.50 FT.

NOTE:
 FOR GLOBAL SUBGRADE TREATMENT, SEE SHEET 23.
 FOR LEGEND SEE SHEET 10.

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NORMAL SECTION

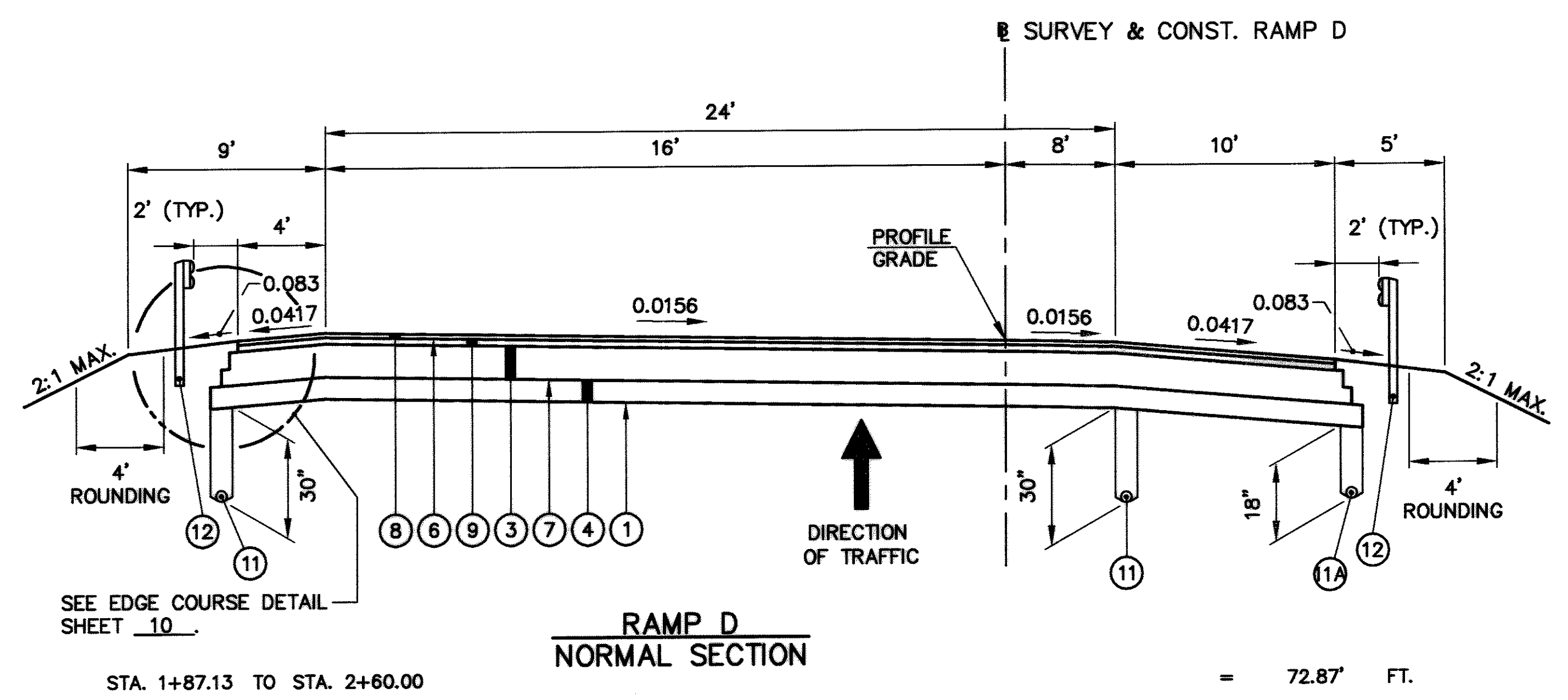
STA. 176+12.48 TO STA. 178+71.22 (# 41.73' TO 46.26', ## 5.75' TO 9.85', * 37.45' TO 33.37') = 258.74 FT.
 STA. 178+71.22 TO STA. 179+71.13 (# 46.26 TO 36.00, ## 9.85' TO 12.00', * 33.37' TO 31.56') = 99.91 FT.

▲▲ STA. 177+21.13 TO STA. 179+71.13 - IN THIS LOCATION THE EB PAVEMENT IS BEING REPLACED UNDER PROJECT MED-18-16.08. SEE PLAN SHEETS FOR LIMITS OF WORK.

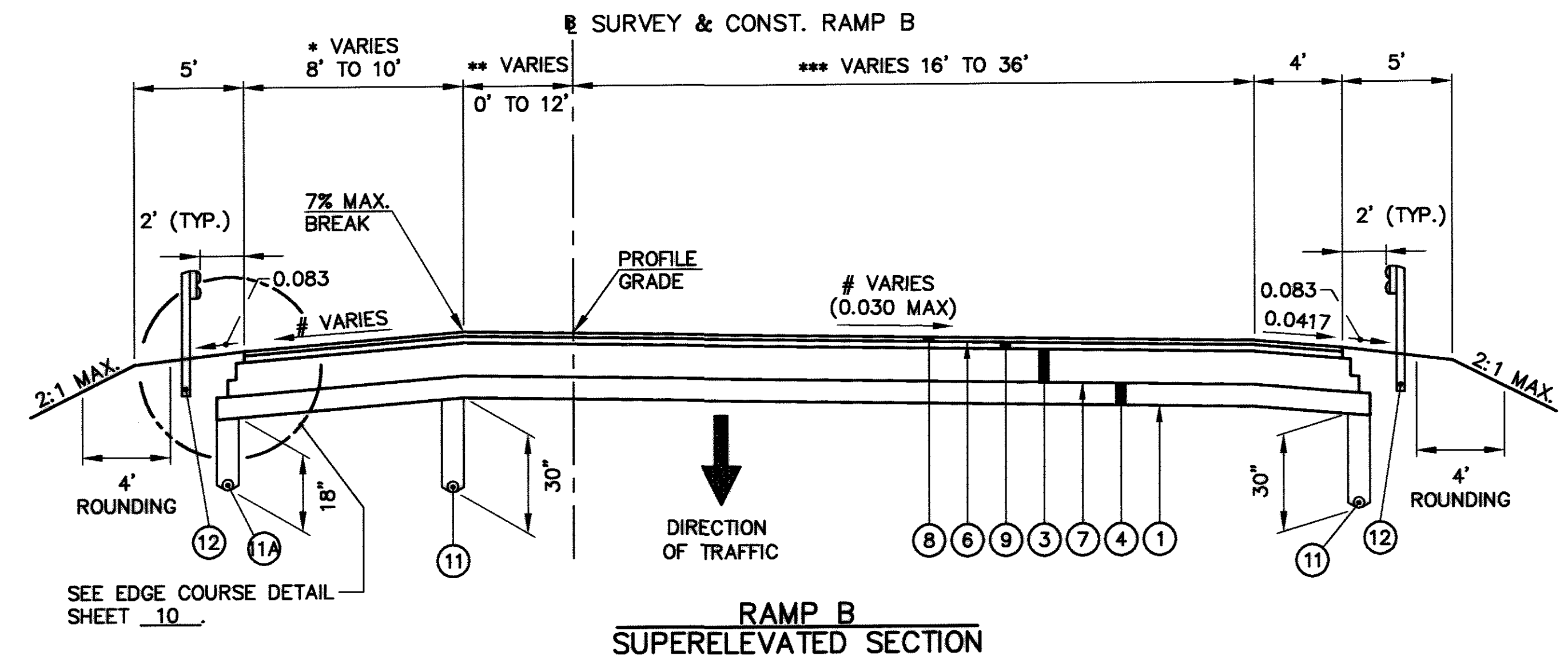
TYPICAL SECTIONS

MED - 18 - 15.13

NOTE:
 FOR GLOBAL SUBGRADE TREATMENT, SEE SHEET 23.
 FOR LEGEND SEE SHEET 10.



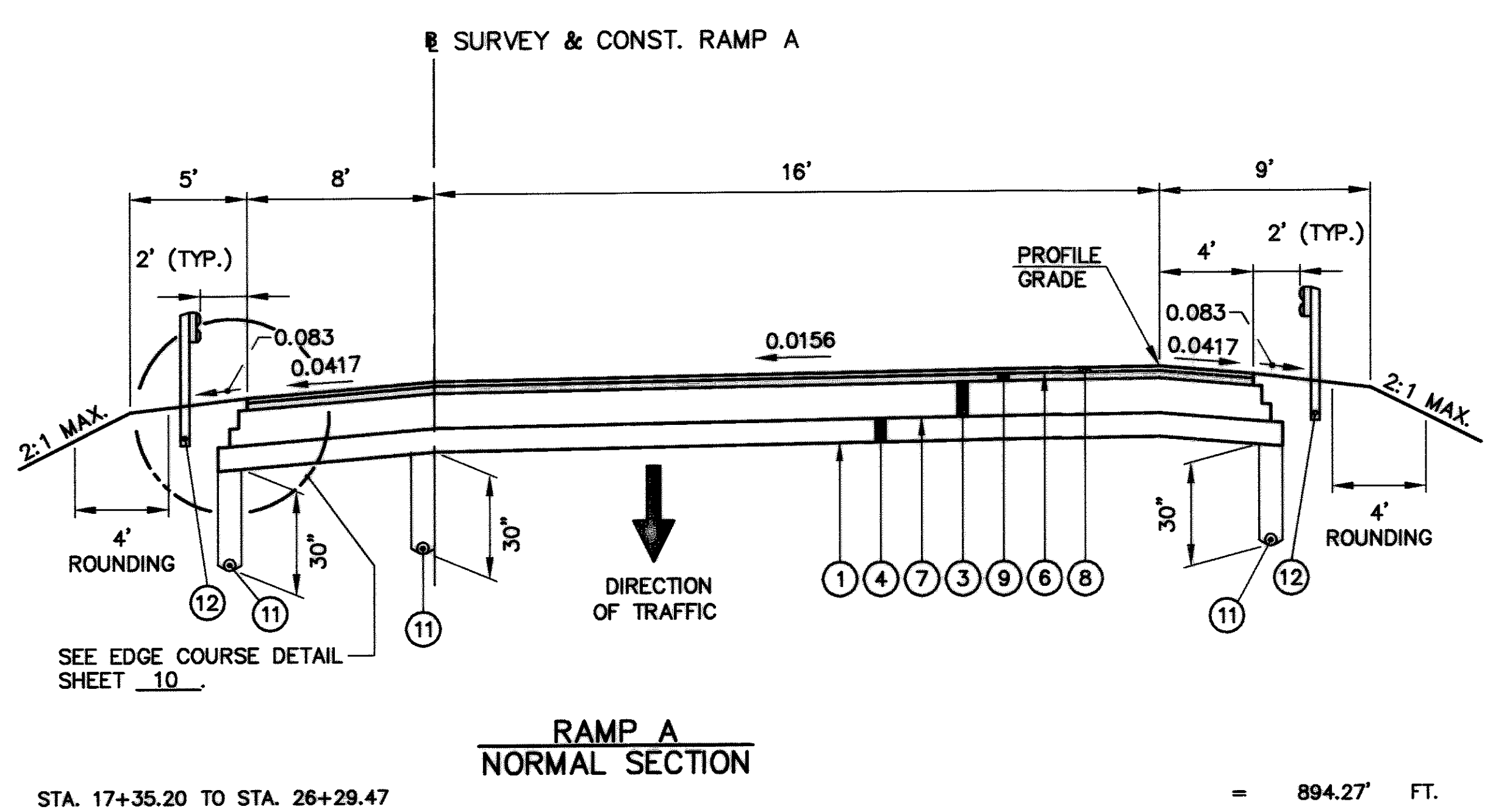
**RAMP D
NORMAL SECTION**
STA. 1+87.13 TO STA. 2+60.00 = 72.87' FT.



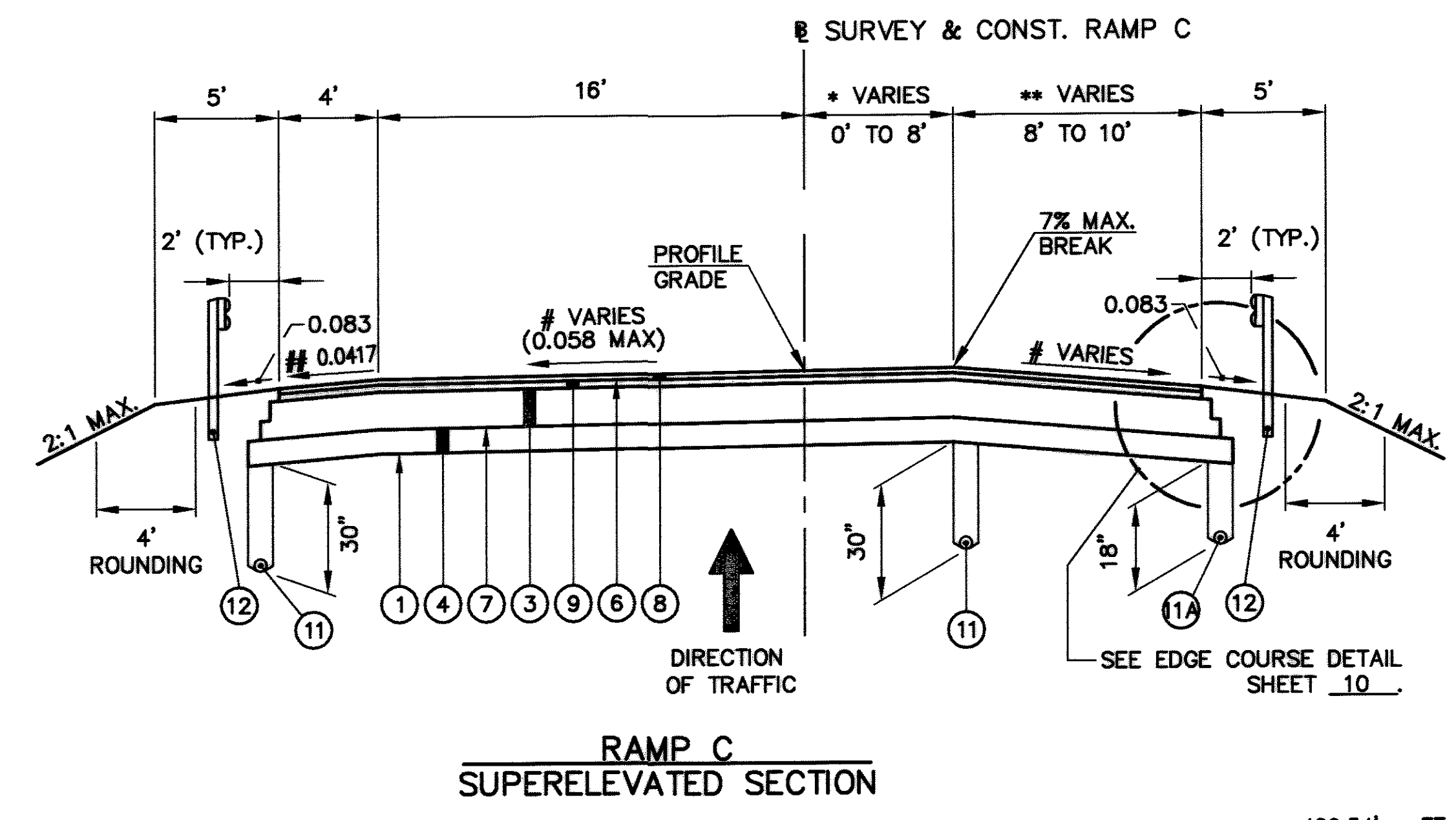
**RAMP B
SUPERELEVATED SECTION**

| | | | | |
|--------------------------------|--|---|---------|-----|
| STA. 1+62.06 TO STA. 6+53.79 | (* 10.0, ** 12.0', *** 36.0') | = | 491.73' | FT. |
| STA. 6+53.79 TO STA. 7+03.79 | (* VARIES 10.0' TO 8.0', ** VARIES 12.0' TO 0', *** 36.0') | = | 50.00' | FT. |
| STA. 7+03.79 TO STA. 8+03.79 | (* 8.0', ** 0', *** VARIES 36.0' TO 16.0') | = | 100.00' | FT. |
| STA. 8+03.79 TO STA. 10+63.20 | (* 8.0', ** 0', *** 16.0') | = | 259.41' | FT. |
| STA. 10+63.20 TO STA. 11+13.20 | (* VARIES 8.0' TO 10.0', ** 0', *** 16.0') | = | 50.00' | FT. |

FOR RAMP B PAVEMENT AND SHOULDER SUPERELEVATION RATES, SEE PAVEMENT ELEVATION TABLE, SHEET 20



**RAMP A
NORMAL SECTION**
STA. 17+35.20 TO STA. 26+29.47 = 894.27' FT.



**RAMP C
SUPERELEVATED SECTION**

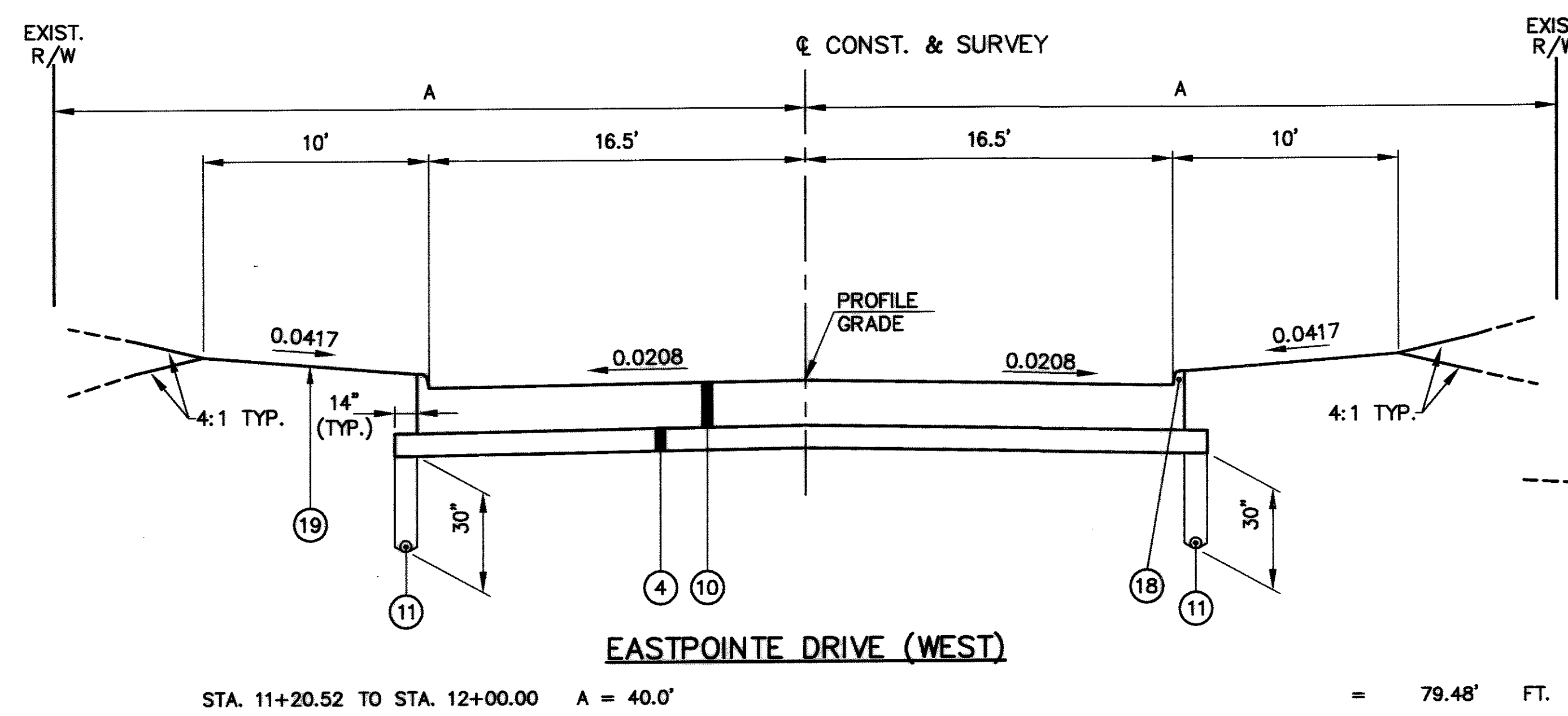
| | | | | |
|--------------------------------|--|---|---------|-----|
| STA. 11+77.00 TO STA. 15+97.54 | (* 0', ** 8.0') | = | 420.54' | FT. |
| STA. 15+97.54 TO STA. 16+47.54 | (* VARIES 0' TO 8', ** VARIES 8' TO 10') | = | 50.00' | FT. |
| STA. 16+47.54 TO STA. 19+12.91 | (* VARIES 8.0' TO 0', ** VARIES 10.0' TO 8.0') | = | 50.00' | FT. |
| | (* 8.0', ** 10.0') | = | 265.37' | FT. |

FOR RAMP C PAVEMENT AND SHOULDER SUPERELEVATION RATES, SEE PAVEMENT ELEVATION TABLE, SHEET 18
CROSS SLOPE EQUAL TO 0.0417 OR RATE OF SUPERELEVATION, WHICH EVER IS GREATER

NOTE: PAVEMENT BUILD UP FOR ALL CURB RETURN AREAS ON RAMPS SHALL MATCH THE BUILD UP OF S.R. 18 MAINLINE PAVEMENT.
SEE INTERSECTION DETAILS FOR CURB RETURN GEOMETRICS.
FOR GLOBAL SUBGRADE TREATMENT, SEE SHEET 23.

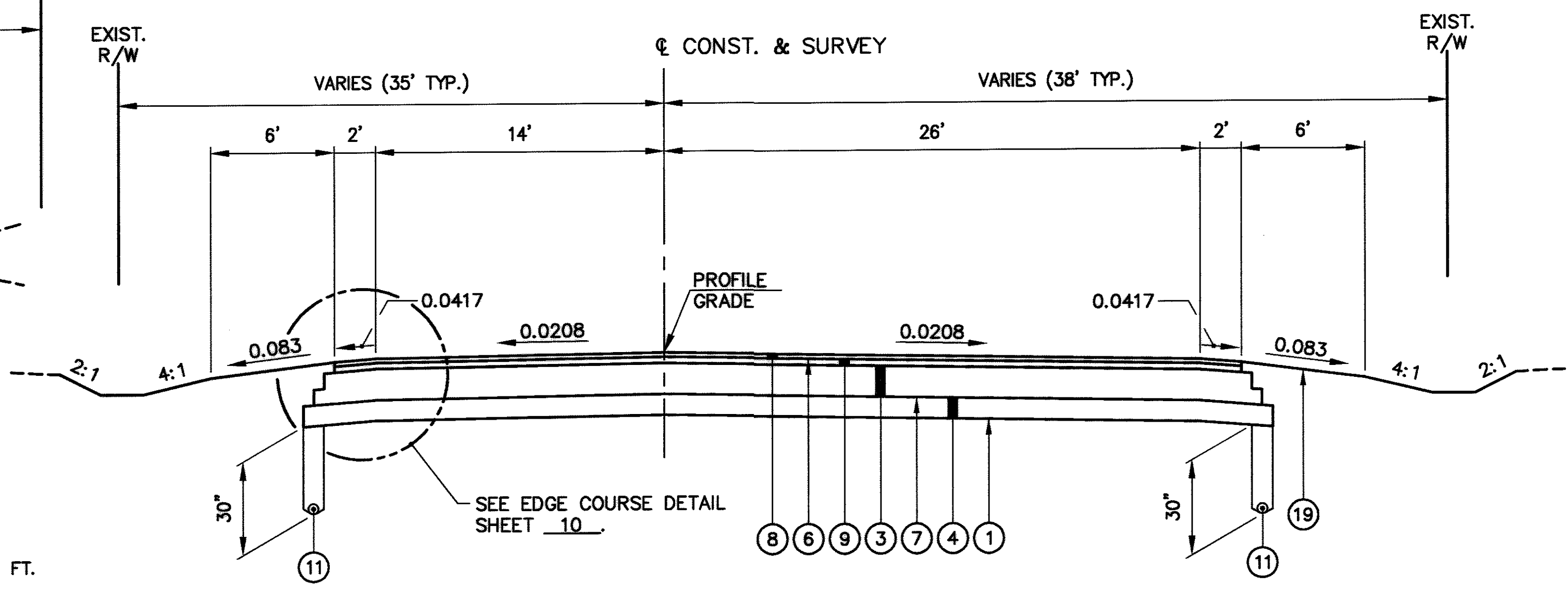
FOR LEGEND SEE SHEET 10

J:\Proj3\7050600\ROADWAY\70506gym.dwg User: jmn81152 Jun 05, 2003 10:44am

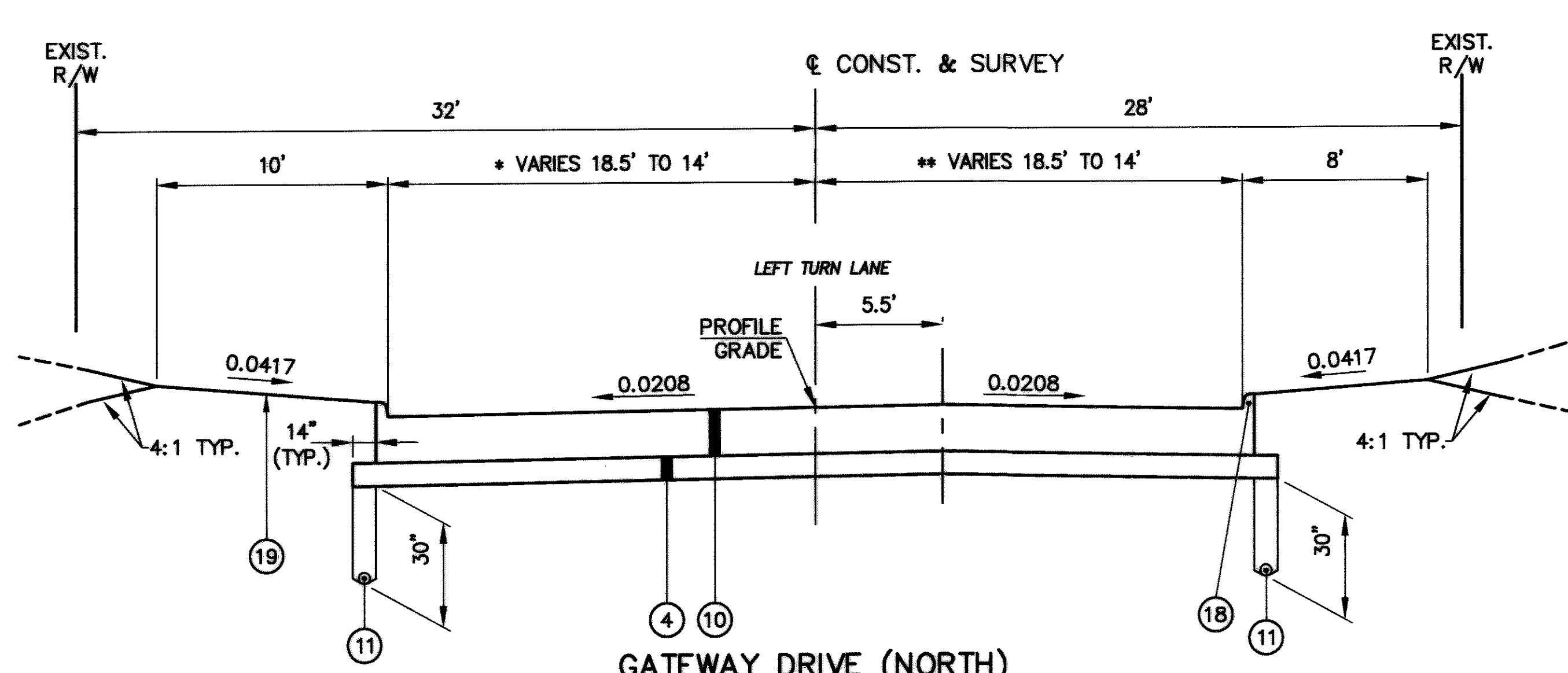


EASTPOINTE DRIVE (WEST)
STA. 11+20.52 TO STA. 12+00.00 A = 40.0' = 79.48' FT.

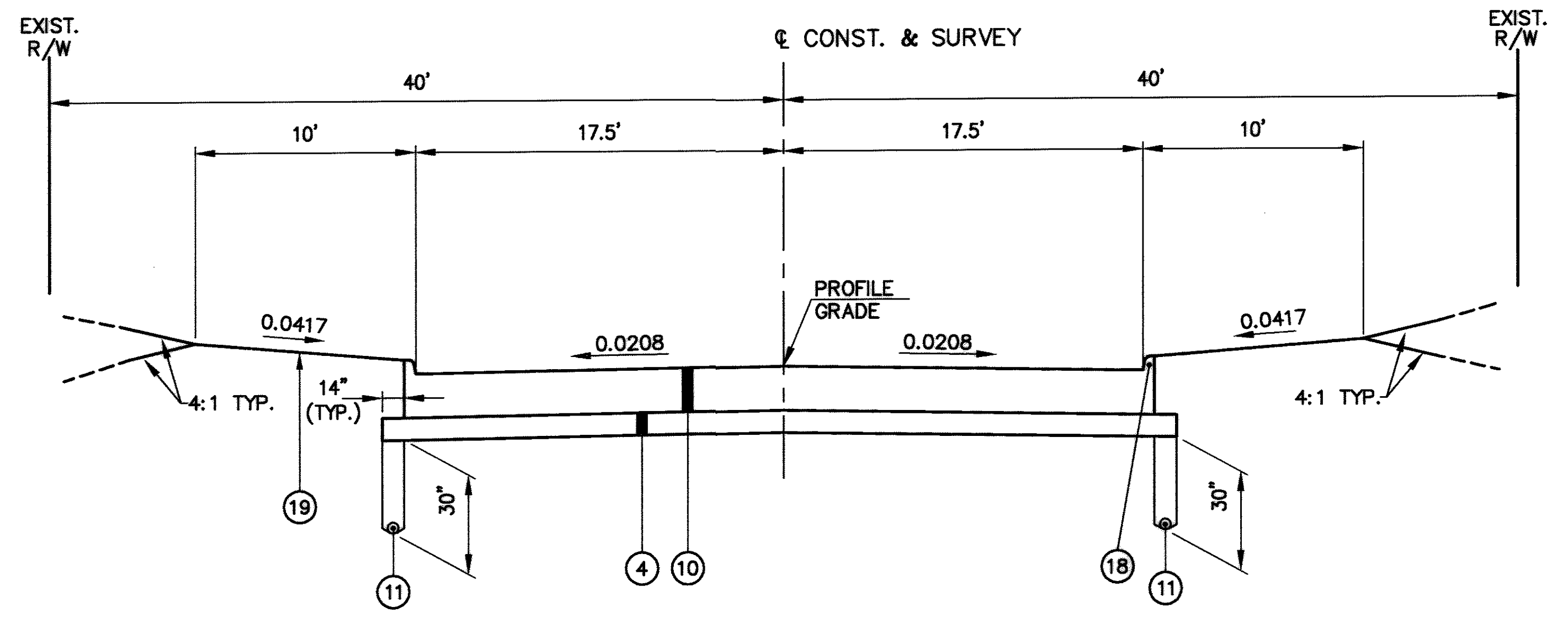
MONTVILLE DRIVE
STA. 1+60.00 TO STA. 2+26.22 A = 30.0' = 66.22' FT.



WINDFALL ROAD (NORTH)
STA. 11+10.20 TO STA. 12+00.00 = 73.79' FT.



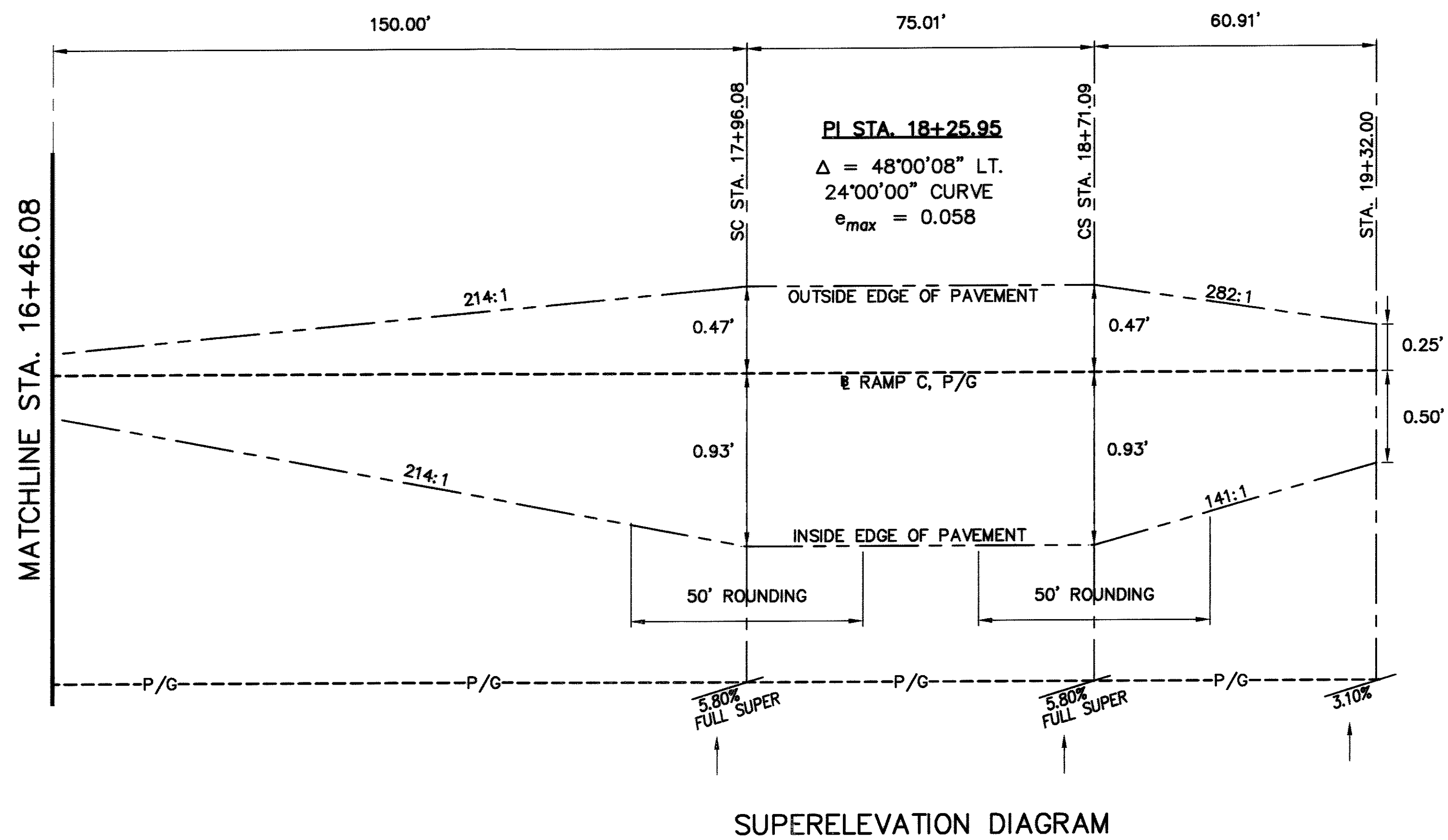
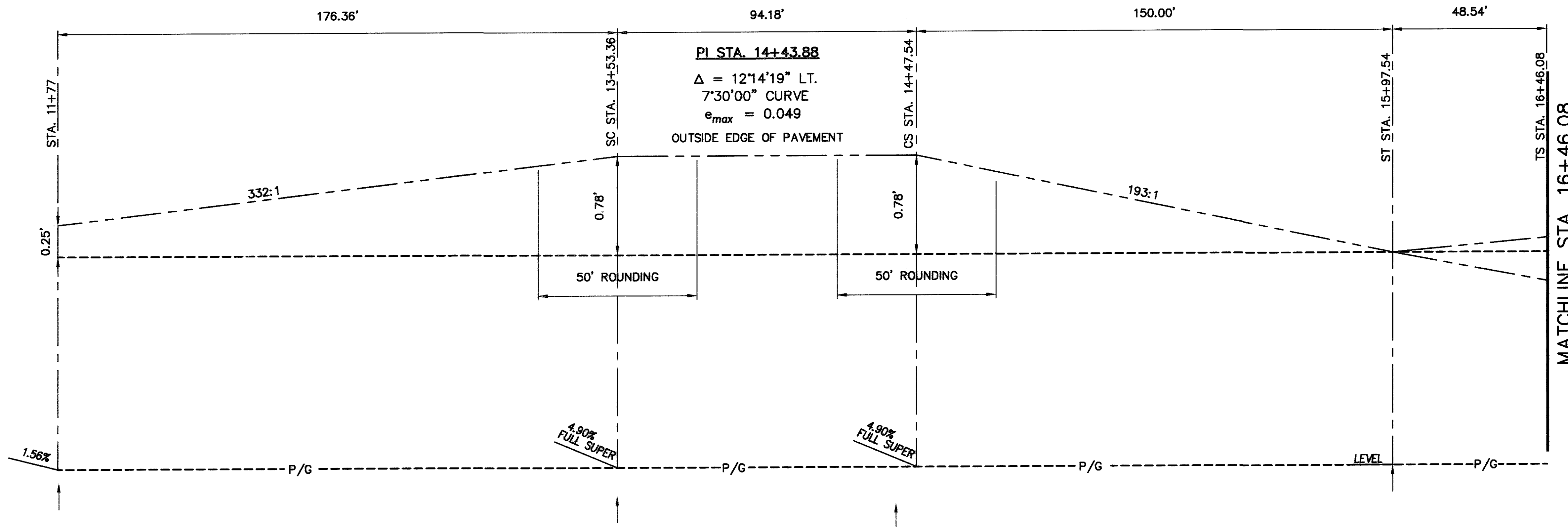
GATEWAY DRIVE (NORTH)
STA. 8+22.75 TO STA. 9+70.57 (* 18.5', ** 18.5') = 147.82' FT.
STA. 9+70.57 TO STA. 10+85.57 (* VARIES 18.5' TO 14.0', ** VARIES 18.5' TO 14.0') = 115.00' FT.



NORMANDY PARK DRIVE
STA. 8+80.00 TO STA. 9+20.85 = 40.85' FT.

NOTE: PAVEMENT BUILD UP FOR ALL CURB RETURN AREAS ON SIDE ROADS SHALL MATCH THE BUILD UP OF S.R. 18 MAINLINE PAVEMENT. SEE INTERSECTION DETAILS FOR CURB RETURN GEOMETRICS.
FOR GLOBAL SUBGRADE TREATMENT, SEE SHEET 23.
FOR LEGEND SEE SHEET 10

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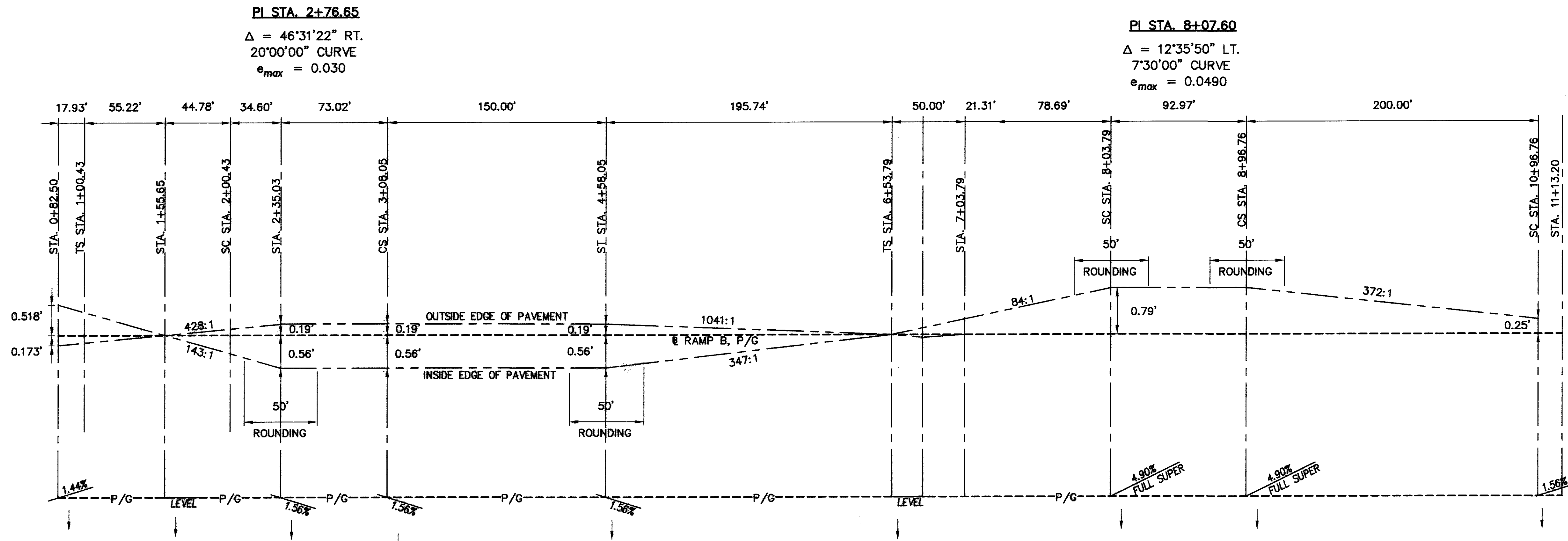


CALCULATED
JMS
CHECKED
RAM

SUPER ELEVATION DIAGRAM - RAMP C

RAMP C PAVEMENT ELEVATION TABLE

| SHOULDER | | | PAVEMENT | | | RAMP | | | PAVEMENT | | | SHOULDER | | | REMARKS |
|-------------------------|-------------------------------------|-------------------------------|-------------------------|-------------------------------------|-------------------------------|-------------------------|-------------------------|--------------------|-------------------------------|-------------------------------------|-------------------------|-------------------------------|-------------------------------------|-------------------------|------------|
| PROPOSED SHOULDER WIDTH | PROPOSED EDGE OF SHOULDER ELEVATION | PROPOSED SHOULDER CROSS-SLOPE | PROPOSED PAVEMENT WIDTH | PROPOSED EDGE OF PAVEMENT ELEVATION | PROPOSED PAVEMENT CROSS-SLOPE | RAMP C BASELINE STATION | PROFILE GRADE ELEVATION | LONGITUDINAL SLOPE | PROPOSED PAVEMENT CROSS-SLOPE | PROPOSED EDGE OF PAVEMENT ELEVATION | PROPOSED PAVEMENT WIDTH | PROPOSED SHOULDER CROSS-SLOPE | PROPOSED EDGE OF SHOULDER ELEVATION | PROPOSED SHOULDER WIDTH | |
| 4.00 | 1099.31 | -4.17% | 16.00 | 1099.48 | 1.56% | 11+77.00 | 1099.23 | | -1.56% | 1099.23 | 0.00 | -4.17% | 1098.90 | 8.00 | |
| 4.00 | 1099.85 | -4.17% | 16.00 | 1100.02 | 2.00% | 12+00.00 | 1099.70 | 2.04% | -2.00% | 1099.70 | 0.00 | -4.17% | 1099.37 | 8.00 | |
| 4.00 | 1100.17 | -4.17% | 16.00 | 1100.33 | 2.25% | 12+13.42 | 1099.97 | 2.04% | -2.25% | 1099.97 | 0.00 | -4.17% | 1099.64 | 8.00 | |
| 4.00 | 1100.44 | -4.17% | 16.00 | 1100.60 | 2.47% | 12+25.00 | 1100.21 | 2.04% | -2.47% | 1100.21 | 0.00 | -4.17% | 1099.88 | 8.00 | |
| 4.00 | 1101.02 | -4.17% | 16.00 | 1101.19 | 2.94% | 12+50.00 | 1100.72 | 2.04% | -2.94% | 1100.72 | 0.00 | -4.17% | 1100.39 | 8.00 | |
| 4.00 | 1101.58 | -4.17% | 16.00 | 1101.75 | 3.42% | 12+75.00 | 1101.20 | 1.94% | -3.42% | 1101.20 | 0.00 | -4.17% | 1100.87 | 8.00 | |
| 4.00 | 1102.15 | -4.17% | 16.00 | 1102.31 | 3.89% | 13+00.00 | 1101.69 | 1.94% | -3.89% | 1101.69 | 0.00 | -4.17% | 1101.36 | 8.00 | |
| 4.00 | 1102.69 | -4.17% | 16.00 | 1102.85 | 4.36% | 13+25.00 | 1102.15 | 1.86% | -4.36% | 1102.15 | 0.00 | -4.17% | 1101.82 | 8.00 | |
| 4.00 | 1103.17 | -4.17% | 16.00 | 1103.33 | 4.84% | 13+50.00 | 1102.56 | 1.62% | -4.84% | 1102.56 | 0.00 | -4.17% | 1102.23 | 8.00 | |
| 4.00 | 1103.23 | -4.17% | 16.00 | 1103.39 | 4.90% | 13+53.36 | 1102.61 | 1.48% | -4.90% | 1102.61 | 0.00 | -4.17% | 1102.28 | 8.00 | SC STATION |
| 4.00 | 1103.52 | -4.17% | 16.00 | 1103.69 | 4.90% | 13+75.00 | 1102.90 | 1.38% | -4.90% | 1102.90 | 0.00 | -4.17% | 1102.57 | 8.00 | |
| 4.00 | 1103.80 | -4.17% | 16.00 | 1103.97 | 4.90% | 14+00.00 | 1103.19 | 1.13% | -4.90% | 1103.19 | 0.00 | -4.17% | 1102.85 | 8.00 | |
| 4.00 | 1104.03 | -4.17% | 16.00 | 1104.19 | 4.90% | 14+25.00 | 1103.41 | 0.89% | -4.90% | 1103.41 | 0.00 | -4.17% | 1103.08 | 8.00 | |
| 4.00 | 1104.17 | -4.17% | 16.00 | 1104.34 | 4.90% | 14+47.54 | 1103.56 | 0.65% | -4.90% | 1103.56 | 0.00 | -4.17% | 1103.22 | 8.00 | CS STATION |
| 4.00 | 1104.17 | -4.17% | 16.00 | 1104.34 | 4.82% | 14+50.00 | 1103.57 | 0.64% | -4.82% | 1103.57 | 0.00 | -4.17% | 1103.24 | 8.00 | |
| 4.00 | 1104.14 | -4.17% | 16.00 | 1104.31 | 4.00% | 14+75.00 | 1103.67 | 0.41% | -4.00% | 1103.67 | 0.00 | -4.17% | 1103.33 | 8.00 | |
| 4.00 | 1104.05 | -4.17% | 16.00 | 1104.22 | 3.19% | 15+00.00 | 1103.71 | 0.15% | -3.19% | 1103.71 | 0.00 | -4.17% | 1103.37 | 8.00 | |
| 4.00 | 1103.90 | -4.17% | 16.00 | 1104.06 | 2.37% | 15+25.00 | 1103.68 | -0.09% | -2.37% | 1103.68 | 0.00 | -4.17% | 1103.35 | 8.00 | |
| 4.00 | 1103.68 | -4.17% | 16.00 | 1103.85 | 1.55% | 15+50.00 | 1103.60 | -0.34% | -1.55% | 1103.60 | 0.00 | -4.17% | 1103.27 | 8.00 | |
| 4.00 | 1103.40 | -4.17% | 16.00 | 1103.57 | 0.74% | 15+75.00 | 1103.45 | -0.58% | -0.74% | 1103.45 | 0.00 | -4.17% | 1103.12 | 8.00 | |
| 4.00 | 1103.10 | -4.17% | 16.00 | 1103.27 | 0.00% | 15+97.54 | 1103.27 | -0.81% | 0.00% | 1103.27 | 0.00 | -4.17% | 1102.94 | 8.00 | ST STATION |
| 4.00 | 1103.07 | -4.17% | 16.00 | 1103.24 | -0.07% | 16+00.00 | 1103.25 | -0.94% | 0.07% | 1103.25 | 0.39 | -4.17% | 1102.91 | 8.10 | |
| 4.00 | 1102.68 | -4.17% | 16.00 | 1102.85 | -0.80% | 16+25.00 | 1102.98 | -1.07% | 0.80% | 1103.01 | 4.39 | -4.17% | 1102.64 | 9.10 | |
| 4.00 | 1102.31 | -4.17% | 16.00 | 1102.48 | -1.42% | 16+46.08 | 1102.71 | -1.30% | 1.42% | 1102.82 | 7.77 | -4.17% | 1102.40 | 9.94 | TS STATION |
| 4.00 | 1102.28 | -4.17% | 16.00 | 1102.45 | -1.46% | 16+47.54 | 1102.69 | -1.41% | 1.46% | 1102.80 | 8.00 | -4.17% | 1102.39 | 10.00 | |
| 4.00 | 1102.24 | -4.17% | 16.00 | 1102.40 | -1.53% | 16+50.00 | 1102.65 | -1.32% | 1.53% | 1102.77 | 8.00 | -4.17% | 1102.36 | 10.00 | |
| 4.00 | 1101.75 | -4.17% | 16.00 | 1101.92 | -2.26% | 16+75.00 | 1102.28 | -1.48% | 2.26% | 1102.46 | 8.00 | -4.17% | 1102.04 | 10.00 | |
| 4.00 | 1101.26 | -4.17% | 16.00 | 1101.43 | -2.99% | 17+00.00 | 1101.91 | -1.49% | 2.99% | 1102.15 | 8.00 | -4.17% | 1101.73 | 10.00 | |
| 4.00 | 1100.77 | -4.17% | 16.00 | 1100.94 | -3.72% | 17+25.00 | 1101.54 | -1.49% | 3.72% | 1101.83 | 8.00 | -3.28% | 1101.51 | 10.00 | |
| 4.00 | 1100.28 | -4.17% | 16.00 | 1100.45 | -4.45% | 17+50.00 | 1101.16 | -1.49% | 4.45% | 1101.52 | 8.00 | -2.55% | 1101.27 | 10.00 | |
| 4.00 | 1099.76 | -5.18% | 16.00 | 1099.96 | -5.18% | 17+75.00 | 1100.79 | -1.49% | 5.18% | 1101.21 | 8.00 | -1.82% | 1101.03 | 10.00 | |
| 4.00 | 1099.34 | -5.80% | 16.00 | 1099.57 | -5.80% | 17+96.08 | 1100.50 | -1.38% | 5.80% | 1100.96 | 8.00 | -1.20% | 1100.84 | 10.00 | SC STATION |
| 4.00 | 1099.29 | -5.80% | 16.00 | 1099.53 | -5.80% | 18+00.00 | 1100.45 | -1.17% | 5.80% | 1100.92 | 8.00 | -1.20% | 1100.80 | 10.00 | |
| 4.00 | 1099.06 | -5.80% | 16.00 | 1099.30 | -5.80% | 18+25.00 | 1100.22 | -0.92% | 5.80% | 1100.69 | 8.00 | -1.20% | 1100.57 | 10.00 | |
| 4.00 | 1098.94 | -5.80% | 16.00 | 1099.18 | -5.80% | 18+50.00 | 1100.10 | -0.49% | 5.80% | 1100.57 | 8.00 | -1.20% | 1100.45 | 10.00 | |
| 4.00 | 1098.93 | -5.80% | 16.00 | 1099.16 | -5.80% | 18+71.09 | 1100.09 | -0.08% | 5.80% | 1100.55 | 8.00 | -1.20% | 1100.43 | 10.00 | CS STATION |
| 4.00 | 1098.97 | -5.63% | 16.00 | 1099.19 | -5.63% | 18+75.00 | 1100.09 | -0.05% | 5.63% | 1100.54 | 8.00 | -1.37% | 1100.40 | 10.00 | |
| 4.00 | 1099.28 | -4.52% | 16.00 | 1099.46 | -4.52% | 19+00.00 | 1100.19 | 0.17% | 4.52% | 1100.55 | 8.00 | -2.48% | 1100.30 | 10.00 | |
| 4.00 | 1099.68 | -4.17% | 16.00 | 1099.85 | -3.41% | 19+25.00 | 1100.39 | 0.82% | 3.41% | 1100.66 | 8.00 | -3.59% | 1100.31 | 10.00 | |
| 4.00 | 1099.81 | -4.17% | 16.00 | 1099.97 | -3.10% | 19+32.00 | 1100.47 | 1.10% | 3.10% | 1100.73 | 8.51 | -3.90% | 1100.34 | 10.00 | |



SUPERELEVATION DIAGRAM

RAMP B PAVEMENT ELEVATION TABLE

| SHOULDER | | | PAVEMENT | | | RAMP | | | PAVEMENT | | | SHOULDER | | | REMARKS |
|-------------------------|-------------------------------------|-------------------------------|-------------------------|-------------------------------------|-------------------------------|-------------------------|-------------------------|--------------------|-------------------------------|-------------------------------------|-------------------------|-------------------------------|-------------------------------------|-------------------------|------------|
| PROPOSED SHOULDER WIDTH | PROPOSED EDGE OF SHOULDER ELEVATION | PROPOSED SHOULDER CROSS-SLOPE | PROPOSED PAVEMENT WIDTH | PROPOSED EDGE OF PAVEMENT ELEVATION | PROPOSED PAVEMENT CROSS-SLOPE | RAMP B BASELINE STATION | PROFILE GRADE ELEVATION | LONGITUDINAL SLOPE | PROPOSED PAVEMENT CROSS-SLOPE | PROPOSED EDGE OF PAVEMENT ELEVATION | PROPOSED PAVEMENT WIDTH | PROPOSED SHOULDER CROSS-SLOPE | PROPOSED EDGE OF SHOULDER ELEVATION | PROPOSED SHOULDER WIDTH | |
| | | | | | | 0+82.50 | 1087.80 | | 1.44% | 1088.54 | 51.00 | | | | |
| 12.27 | 1086.66 | -4.17% | 32.62 | 1087.17 | -1.21% | 1+00.00 | 1087.57 | -1.34% | 1.21% | 1088.00 | 36.00 | -4.17% | 1087.84 | 4.00 | |
| 12.18 | 1086.67 | -4.17% | 32.18 | 1087.18 | -1.20% | 1+00.43 | 1087.56 | -0.97% | 1.20% | 1088.00 | 36.00 | -4.17% | 1087.83 | 4.00 | TS STATION |
| 10.23 | 1086.92 | -4.17% | 17.91 | 1087.34 | -0.60% | 1+25.00 | 1087.45 | -0.46% | 0.60% | 1087.67 | 36.00 | -4.17% | 1087.50 | 4.00 | |
| 10.12 | 1087.15 | -4.17% | 12.62 | 1087.58 | -0.11% | 1+50.00 | 1087.59 | 0.55% | 0.11% | 1087.63 | 36.00 | -4.17% | 1087.46 | 4.00 | |
| 10.00 | 1087.35 | -4.17% | 12.00 | 1087.76 | 0.13% | 1+62.06 | 1087.75 | 1.31% | -0.13% | 1087.70 | 36.00 | -4.17% | 1087.54 | 4.00 | |
| 10.00 | 1087.61 | -4.17% | 12.00 | 1088.03 | 0.38% | 1+75.00 | 1087.98 | 1.58% | -0.38% | 1087.85 | 36.00 | -4.17% | 1087.68 | 4.00 | |
| 10.00 | 1088.32 | -4.17% | 12.00 | 1088.74 | 0.87% | 2+00.00 | 1088.63 | 2.60% | -0.87% | 1088.32 | 36.00 | -4.17% | 1088.15 | 4.00 | |
| 10.00 | 1088.34 | -4.17% | 12.00 | 1088.75 | 0.88% | 2+00.43 | 1088.65 | 3.12% | -0.88% | 1088.33 | 36.00 | -4.17% | 1088.16 | 4.00 | SC STATION |
| 10.00 | 1089.28 | -4.17% | 12.00 | 1089.70 | 1.37% | 2+25.00 | 1089.54 | 3.63% | -1.37% | 1089.05 | 36.00 | -4.17% | 1088.88 | 4.00 | |
| 10.00 | 1089.72 | -4.17% | 12.00 | 1090.14 | 1.56% | 2+35.03 | 1089.95 | 4.13% | -1.56% | 1089.39 | 36.00 | -4.17% | 1089.22 | 4.00 | |
| 10.00 | 1090.34 | -4.17% | 12.00 | 1090.76 | 1.56% | 2+50.00 | 1090.57 | 3.88% | -1.56% | 1090.01 | 36.00 | -4.17% | 1089.84 | 4.00 | |
| 10.00 | 1091.38 | -4.17% | 12.00 | 1091.80 | 1.56% | 2+75.00 | 1091.61 | 4.16% | -1.56% | 1091.05 | 36.00 | -4.17% | 1090.88 | 4.00 | |
| 10.00 | 1092.43 | -4.17% | 12.00 | 1092.85 | 1.56% | 3+00.00 | 1092.66 | 4.21% | -1.56% | 1092.10 | 36.00 | -4.17% | 1091.93 | 4.00 | |
| 10.00 | 1092.77 | -4.17% | 12.00 | 1093.19 | 1.56% | 3+08.05 | 1093.00 | 4.24% | -1.56% | 1092.44 | 36.00 | -4.17% | 1092.27 | 4.00 | CS STATION |
| 10.00 | 1093.50 | -4.17% | 12.00 | 1093.91 | 1.56% | 3+25.00 | 1093.73 | 4.27% | -1.56% | 1093.16 | 36.00 | -4.17% | 1093.00 | 4.00 | |
| 10.00 | 1094.58 | -4.17% | 12.00 | 1094.99 | 1.56% | 3+50.00 | 1094.81 | 4.29% | -1.56% | 1094.24 | 36.00 | -4.17% | 1094.08 | 4.00 | |
| 10.00 | 1095.67 | -4.17% | 12.00 | 1096.08 | 1.56% | 3+75.00 | 1095.90 | 4.37% | -1.56% | 1095.33 | 36.00 | -4.17% | 1095.17 | 4.00 | |
| 10.00 | 1096.77 | -4.17% | 12.00 | 1097.19 | 1.56% | 4+00.00 | 1097.00 | 4.34% | -1.56% | 1096.44 | 36.00 | -4.17% | 1096.27 | 4.00 | |
| 10.00 | 1097.89 | -4.17% | 12.00 | 1098.31 | 1.56% | 4+25.00 | 1098.12 | 4.47% | -1.56% | 1097.56 | 36.00 | -4.17% | 1097.39 | 4.00 | |
| 10.00 | 1099.02 | -4.17% | 12.00 | 1099.44 | 1.56% | 4+50.00 | 1099.25 | 4.53% | -1.56% | 1098.69 | 36.00 | -4.17% | 1098.52 | 4.00 | |
| 10.00 | 1099.39 | -4.17% | 12.00 | 1099.81 | 1.56% | 4+58.05 | 1099.62 | 4.55% | -1.56% | 1099.06 | 36.00 | -4.17% | 1098.89 | 4.00 | ST STATION |
| 10.00 | 1100.14 | -4.17% | 12.00 | 1100.56 | 1.43% | 4+75.00 | 1100.39 | 4.55% | -1.43% | 1099.88 | 36.00 | -4.17% | 1099.71 | 4.00 | |
| 10.00 | 1101.26 | -4.17% | 12.00 | 1101.67 | 1.23% | 5+00.00 | 1101.53 | 4.55% | -1.23% | 1101.09 | 36.00 | -4.17% | 1100.92 | 4.00 | |
| 10.00 | 1101.62 | -4.17% | 12.00 | 1102.03 | 1.16% | 5+08.05 | 1101.89 | 4.55% | -1.16% | 1101.47 | 36.00 | -4.17% | 1101.31 | 4.00 | |
| 10.00 | 1102.37 | -4.17% | 12.00 | 1102.79 | 1.03% | 5+25.00 | 1102.67 | 4.55% | -1.03% | 1102.29 | 36.00 | -4.17% | 1102.13 | 4.00 | |
| 10.00 | 1103.49 | -4.17% | 12.00 | 1103.90 | 0.83% | 5+50.00 | 1103.80 | 4.55% | -0.83% | 1103.50 | 36.00 | -4.17% | 1103.34 | 4.00 | |
| 10.00 | 1104.60 | -4.17% | 12.00 | 1105.02 | 0.63% | 5+75.00 | 1104.94 | 4.55% | -0.63% | 1104.71 | 36.00 | -4.17% | 1104.55 | 4.00 | |
| 10.00 | 1105.71 | -4.17% | 12.00 | 1106.13 | 0.43% | 6+00.00 | 1106.08 | 4.55% | -0.43% | 1105.92 | 36.00 | -4.17% | 1105.76 | 4.00 | |
| 10.00 | 1106.83 | -4.17% | 12.00 | 1107.24 | 0.23% | 6+25.00 | 1107.22 | 4.55% | -0.23% | 1107.13 | 36.00 | -4.17% | 1106.97 | 4.00 | |
| 10.00 | 1107.93 | -4.17% | 12.00 | 1108.34 | 0.03% | 6+50.00 | 1108.34 | 4.50% | -0.03% | 1108.33 | 36.00 | -4.17% | 1108.16 | 4.00 | |
| 10.00 | 1108.09 | -4.17% | 12.00 | 1108.51 | 0.00% | 6+53.79 | 1108.51 | 4.44% | 0.00% | 1108.51 | 36.00 | -4.17% | 1108.34 | 4.00 | TS STATION |
| 9.15 | 1109.01 | -4.17% | 6.91 | 1109.39 | -0.69% | 6+75.00 | 1109.44 | 4.39% | 0.69% | 1109.69 | 36.00 | -4.17% | 1109.52 | 4.00 | |
| 8.15 | 1110.16 | -4.17% | 0.91 | 1110.50 | -1.51% | 7+00.00 | 1110.51 | 4.29% | 1.51% | 1111.06 | 36.00 | -4.17% | 1110.89 | 4.00 | |
| 8.00 | 1110.34 | -4.17% | 0.00 | 1110.67 | -1.63% | 7+03.79 | 1110.67 | 4.23% | 1.63% | 1111.26 | 36.00 | -4.17% | 1111.09 | 4.00 | |
| 8.00 | 1111.23 | -4.17% | 0.00 | 1111.56 | -2.33% | 7+25.00 | 1111.56 | 4.18% | 2.33% | 1112.30 | 31.76 | -4.17% | 1112.13 | 4.00 | |
| 8.00 | 1112.25 | -4.17% | 0.00 | 1112.58 | -3.14% | 7+50.00 | 1112.58 | 4.08% | 3.14% | 1113.42 | 26.76 | -4.17% | 1113.25 | 4.00 | |
| 8.00 | 1113.24 | -4.17% | 0.00 | 1113.57 | -3.96% | 7+75.00 | 1113.57 | 3.98% | 3.96% | 1114.43 | 21.76 | -4.17% | 1114.27 | 4.00 | |
| 8.00 | 1114.22 | -4.17% | 0.00 | 1114.55 | -4.78% | 8+00.00 | 1114.55 | 3.92% | 4.78% | 1115.35 | 16.76 | -4.17% | 1115.19 | 4.00 | |
| 8.00 | 1114.37 | -4.17% | 0.00 | 1114.70 | -4.90% | 8+03.79 | 1114.70 | 3.92% | 4.90% | 1115.49 | 16.00 | -4.17% | 1115.32 | 4.00 | SC STATION |
| 8.00 | 1115.20 | -4.17% | 0.00 | 1115.53 | -4.90% | 8+25.00 | 1115.53 | 3.92% | 4.90% | 1116.32 | 16.00 | -4.17% | 1116.15 | 4.00 | |
| 8.00 | 1116.14 | -4.17% | 0.00 | 1116.47 | -4.90% | 8+50.00 | 1116.47 | 3.76% | 4.90% | 1117.26 | 16.00 | -4.17% | 1117.09 | 4.00 | |
| 8.00 | 1117.02 | -4.17% | 0.00 | 1117.35 | -4.90% | 8+75.00 | 1117.35 | 3.50% | 4.90% | 1118.13 | 16.00 | -4.17% | 1117.97 | 4.00 | |
| 8.00 | 1117.73 | -4.17% | 0.00 | 1118.06 | -4.90% | 8+96.76 | 1118.06 | 3.26% | 4.90% | 1118.84 | 16.00 | -4.17% | 1118.68 | 4.00 | CS STATION |
| 8.00 | 1117.83 | -4.17% | 0.00 | 1118.16 | -4.85% | 9+00.00 | 1118.16 | 3.24% | 4.85% | 1118.93 | 16.00 | -4.17% | 1118.77 | 4.00 | |
| 8.00 | 1118.57 | -4.17% | 0.00 | 1118.90 | -4.43% | 9+25.00 | 1118.90 | 2.97% | 4.43% | 1119.61 | 16.00 | -4.17% | 1119.45 | 4.00 | |
| 8.00 | 1119.25 | -4.17% | 0.00 | 1119.58 | -4.01% | 9+50.00 | 1119.58 | 2.71% | 4.01% | 1120.22 | 16.00 | -4.17% | 1120.06 | 4.00 | |
| 8.00 | 1119.86 | -4.17% | 0.00 | 1120.19 | -3.59% | 9+75.00 | 1120.19 | 2.45% | 3.59% | 1120.77 | 16.00 | -4.17% | 1120.60 | 4.00 | |
| 8.00 | 1120.41 | -4.17% | 0.00 | 1120.74 | -3.18% | 10+00.00 | 1120.74 | 2.18% | 3.18% | 1121.25 | 16.00 | -4.17% | 1121.08 | 4.00 | |
| 8.00 | 1120.89 | -4.17% | 0.00 | 1121.22 | -2.76% | 10+25.00 | 1121.22 | 1.92% | 2.76% | 1121.66 | 16.00 | -4.17% | 1121.49 | 4.00 | |
| 8.00 | 1121.30 | -4.17% | 0.00 | 1121.63 | -2.34% | 10+50.00 | 1121.63 | 1.66% | 2.34% | 1122.01 | 16.00 | -4.17% | 1121.84 | 4.00 | |
| 8.00 | 1121.49 | -4.17% | 0.00 | 1121.83 | -2.12% | 10+63.20 | 1121.83 | 1.46% | 2.12% | 1122.16 | 16.00 | -4.17% | 1122.00 | 4.00 | |
| 8.55 | 1121.63 | -4.17% | 0.00 | 1121.98 | -1.92% | 10+75.00 | 1121.98 | 1.39% | 1.92% | 1122.29 | 16.00 | -4.17% | 1122.12 | 4.00 | |
| 8.64 | 1121.65 | -4.17% | 0.00 | 1122.01 | -1.89% | 10+77.00 | 1122.01 | 1.25% | 1.89% | 1122.31 | 16.00 | -4.17% | 1122.14 | 4.00 | |
| 9.42 | 1121.84 | -4.17% | 0.00 | 1122.23 | -1.56% | 10+96.76 | 1122.23 | 1.15% | 1.56% | 1122.48 | 16.00 | -4.17% | 1122.31 | 4.00 | ST STATION |
| 9.56 | 1121.87 | -4.17% | 0.00 | 1122.26 | -1.56% | 11+00.00 | 1122.26 | 1.13% | 1.56% | 1122.51 | 16.00 | -4.17% | 1122.35 | 4.00 | |
| 10.00 | 1121.98 | -4.17% | 0.00 | 1122.40 | -1.56% | 11+13.20 | 1122.40 | 1.02% | 1.56% | 1122.65 | 16.00 | -4.17% | 1122.48 | 4.00 | |

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PAVEMENT ELEVATION TABLE - RAMP B

MED - 18 - 15.13

RAMP A PAVEMENT ELEVATION TABLE

| SHOULDER | | | PAVEMENT | | | RAMP | | | PAVEMENT | | | SHOULDER | | | REMARKS |
|-------------------------|-------------------------------------|-------------------------------|-------------------------|-------------------------------------|-------------------------------|-------------------------|-------------------------|--------------------|-------------------------------|-------------------------------------|-------------------------|-------------------------------|-------------------------------------|-------------------------|---------------|
| PROPOSED SHOULDER WIDTH | PROPOSED EDGE OF SHOULDER ELEVATION | PROPOSED SHOULDER CROSS-SLOPE | PROPOSED PAVEMENT WIDTH | PROPOSED EDGE OF PAVEMENT ELEVATION | PROPOSED PAVEMENT CROSS-SLOPE | RAMP A BASELINE STATION | PROFILE GRADE ELEVATION | LONGITUDINAL SLOPE | PROPOSED PAVEMENT CROSS-SLOPE | PROPOSED EDGE OF PAVEMENT ELEVATION | PROPOSED PAVEMENT WIDTH | PROPOSED SHOULDER CROSS-SLOPE | PROPOSED EDGE OF SHOULDER ELEVATION | PROPOSED SHOULDER WIDTH | |
| | | | | | | 17+35.20 | 1091.65 | | 1.56% | 1091.90 | 16.00 | | | | |
| 8.00 | 1091.61 | -4.17% | 0.00 | 1091.94 | -1.56% | 17+50.00 | 1091.94 | 1.96% | 1.56% | 1092.19 | 16.00 | -4.17% | 1092.02 | 4.00 | |
| 8.00 | 1092.06 | -4.17% | 0.00 | 1092.39 | -1.56% | 17+75.00 | 1092.39 | 1.82% | 1.56% | 1092.64 | 16.00 | -4.17% | 1092.48 | 4.00 | TS STATION |
| 8.00 | 1092.47 | -4.17% | 0.00 | 1092.80 | -1.56% | 18+00.00 | 1092.80 | 1.64% | 1.56% | 1093.05 | 16.00 | -4.17% | 1092.89 | 4.00 | |
| 8.00 | 1092.84 | -4.17% | 0.00 | 1093.17 | -1.56% | 18+25.00 | 1093.17 | 1.46% | 1.56% | 1093.42 | 16.00 | -4.17% | 1093.25 | 4.00 | |
| 8.00 | 1093.15 | -4.17% | 0.00 | 1093.49 | -1.56% | 18+50.00 | 1093.49 | 1.28% | 1.56% | 1093.74 | 16.00 | -4.17% | 1093.57 | 4.00 | |
| 8.00 | 1093.43 | -4.17% | 0.00 | 1093.76 | -1.56% | 18+75.00 | 1093.76 | 1.19% | 1.56% | 1094.01 | 16.00 | -4.17% | 1093.85 | 4.00 | |
| 8.00 | 1093.66 | -4.17% | 0.00 | 1093.99 | -1.56% | 19+00.00 | 1093.99 | 0.91% | 1.56% | 1094.24 | 16.00 | -4.17% | 1094.07 | 4.00 | |
| 8.00 | 1093.84 | -4.17% | 0.00 | 1094.17 | -1.56% | 19+25.00 | 1094.17 | 0.73% | 1.56% | 1094.42 | 16.00 | -4.17% | 1094.26 | 4.00 | SC STATION |
| 8.00 | 1093.98 | -4.17% | 0.00 | 1094.31 | -1.56% | 19+50.00 | 1094.31 | 0.55% | 1.56% | 1094.56 | 16.00 | -4.17% | 1094.39 | 4.00 | |
| 8.00 | 1094.07 | -4.17% | 0.00 | 1094.40 | -1.56% | 19+75.00 | 1094.40 | 0.37% | 1.56% | 1094.65 | 16.00 | -4.17% | 1094.49 | 4.00 | |
| 8.00 | 1094.12 | -4.17% | 0.00 | 1094.45 | -1.56% | 20+00.00 | 1094.45 | 0.37% | 1.56% | 1094.70 | 16.00 | -4.17% | 1094.53 | 4.00 | |
| 8.00 | 1094.12 | -4.17% | 0.00 | 1094.45 | -1.56% | 20+25.00 | 1094.45 | 0.01% | 1.56% | 1094.70 | 16.00 | -4.17% | 1094.54 | 4.00 | |
| 8.00 | 1094.08 | -4.17% | 0.00 | 1094.41 | -1.56% | 20+50.00 | 1094.41 | -0.17% | 1.56% | 1094.66 | 16.00 | -4.17% | 1094.49 | 4.00 | |
| 8.00 | 1094.06 | -4.17% | 0.00 | 1094.39 | -1.56% | 20+55.83 | 1094.39 | -0.29% | 1.56% | 1094.64 | 16.00 | -4.17% | 1094.48 | 4.00 | CS STATION |
| 8.00 | 1093.99 | -4.17% | 0.00 | 1094.32 | -1.56% | 20+75.00 | 1094.32 | -0.38% | 1.56% | 1094.57 | 16.00 | -4.17% | 1094.40 | 4.00 | |
| 8.00 | 1093.85 | -4.17% | 0.00 | 1094.19 | -1.56% | 21+00.00 | 1094.19 | -0.45% | 1.56% | 1094.44 | 16.00 | -4.17% | 1094.27 | 4.00 | |
| 8.00 | 1093.67 | -4.17% | 0.00 | 1094.01 | -1.56% | 21+25.00 | 1094.01 | -0.72% | 1.56% | 1094.26 | 16.00 | -4.17% | 1094.09 | 4.00 | |
| 8.00 | 1093.45 | -4.17% | 0.00 | 1093.78 | -1.56% | 21+50.00 | 1093.78 | -0.63% | 1.56% | 1094.03 | 16.00 | -4.17% | 1093.86 | 4.00 | |
| 8.00 | 1093.18 | -4.17% | 0.00 | 1093.51 | -1.56% | 21+75.00 | 1093.51 | -1.08% | 1.56% | 1093.76 | 16.00 | -4.17% | 1093.59 | 4.00 | |
| 8.00 | 1092.86 | -4.17% | 0.00 | 1093.20 | -1.56% | 22+00.00 | 1093.20 | -1.26% | 1.56% | 1093.45 | 16.00 | -4.17% | 1093.28 | 4.00 | |
| 8.00 | 1092.50 | -4.17% | 0.00 | 1092.84 | -1.56% | 22+25.00 | 1092.84 | -1.44% | 1.56% | 1093.09 | 16.00 | -4.17% | 1092.92 | 4.00 | ST STATION |
| 8.00 | 1092.10 | -4.17% | 0.00 | 1092.43 | -1.56% | 22+50.00 | 1092.43 | -1.62% | 1.56% | 1092.68 | 16.00 | -4.17% | 1092.51 | 4.00 | |
| 8.00 | 1091.99 | -4.17% | 0.00 | 1092.33 | -1.56% | 22+55.83 | 1092.33 | -1.74% | 1.56% | 1092.58 | 16.00 | -4.17% | 1092.41 | 4.00 | |
| 8.00 | 1091.64 | -4.17% | 0.00 | 1091.98 | -1.56% | 22+75.00 | 1091.98 | -1.83% | 1.56% | 1092.23 | 16.00 | -4.17% | 1092.06 | 4.00 | |
| 8.00 | 1091.16 | -4.17% | 0.00 | 1091.50 | -1.56% | 23+00.00 | 1091.50 | -1.88% | 1.56% | 1091.75 | 16.00 | -4.17% | 1091.58 | 4.00 | |
| 8.00 | 1090.68 | -4.17% | 0.00 | 1091.01 | -1.56% | 23+25.00 | 1091.01 | -1.93% | 1.56% | 1091.26 | 16.00 | -4.17% | 1091.10 | 4.00 | |
| 8.00 | 1090.20 | -4.17% | 0.00 | 1090.53 | -1.56% | 23+50.00 | 1090.53 | -1.93% | 1.56% | 1090.78 | 16.00 | -4.17% | 1090.61 | 4.00 | |
| 8.00 | 1089.71 | -4.17% | 0.00 | 1090.05 | -1.56% | 23+75.00 | 1090.05 | -1.93% | 1.56% | 1090.30 | 16.00 | -4.17% | 1090.13 | 4.00 | |
| 8.00 | 1089.23 | -4.17% | 0.00 | 1089.56 | -1.56% | 24+00.00 | 1089.56 | -1.93% | 1.56% | 1089.81 | 16.00 | -4.17% | 1089.65 | 4.00 | |
| 8.00 | 1088.75 | -4.17% | 0.00 | 1089.08 | -1.56% | 24+25.00 | 1089.08 | -1.93% | 1.56% | 1089.33 | 16.00 | -4.17% | 1089.16 | 4.00 | |
| 8.00 | 1088.26 | -4.17% | 0.00 | 1088.60 | -1.56% | 24+50.00 | 1088.60 | -1.93% | 1.56% | 1088.85 | 16.00 | -4.17% | 1088.68 | 4.00 | TS STATION |
| 8.00 | 1087.78 | -4.17% | 0.00 | 1088.11 | -1.56% | 24+75.00 | 1088.11 | -1.93% | 1.56% | 1088.36 | 16.00 | -4.17% | 1088.20 | 4.00 | |
| 8.00 | 1087.30 | -4.17% | 0.00 | 1087.63 | -1.56% | 25+00.00 | 1087.63 | -1.93% | 1.56% | 1087.88 | 16.00 | -4.17% | 1087.71 | 4.00 | |
| 8.00 | 1086.96 | -4.17% | 0.00 | 1087.29 | -1.56% | 25+25.00 | 1087.29 | -1.36% | 1.56% | 1087.54 | 16.00 | -4.17% | 1087.37 | 4.00 | |
| 0.00 | 1086.75 | -3.95% | 8.00 | 1086.75 | -4.00% | 25+47.30 | 1087.07 | -1.44% | 1.56% | 1087.32 | 16.00 | -4.17% | 1087.16 | 4.00 | SHOULDER ENDS |
| 0.00 | 1086.74 | -3.95% | 8.02 | 1086.74 | -3.95% | 25+50.00 | 1087.06 | -1.14% | 1.56% | 1087.31 | 16.00 | -4.17% | 1087.14 | 4.00 | |
| 0.00 | 1086.65 | -3.70% | 10.58 | 1086.65 | -3.70% | 25+75.00 | 1087.04 | -0.06% | 1.56% | 1087.29 | 16.00 | -4.17% | 1087.13 | 4.00 | |
| 0.00 | 1086.57 | -3.70% | 18.31 | 1086.57 | -3.70% | 26+00.00 | 1087.24 | 0.80% | 1.56% | 1087.49 | 16.00 | -4.17% | 1087.33 | 4.00 | |

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PAVEMENT ELEVATION TABLE - RAMP A

MED - 18 - 15.13

20A
362

GENERAL

ROUNDING

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

UTILITIES

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

| | |
|---|--|
| CABLE | CABLE |
| ARMSTRONG UTILITIES INC. 1141 WEST LAFAYETTE ROAD MEDINA, OH 44256 800-589-3536 ATTN: BOB BARNETT | CABLEVISION INC. 14300 SOUTH INDUSTRIAL AVE. MAPLE HEIGHTS, OH 44137 216-663-4004 ATTN: MARK HOEFFLE |

| | |
|---|--|
| GAS | PHONE |
| COLUMBIA GAS OF OHIO 7080 FRY ROAD MIDDLEBURG HEIGHTS, OH 44130 PHONE: 440-891-2455 ATTN: DAVE GULYAS | VERIZON COMMUNICATIONS 6223 NORWALK ROAD MEDINA, OH 44256 PHONE: 330-722-9586 ATTN: RANDY HOWARD |

| | |
|---|--|
| ELECTRIC | WATER & SANITARY |
| OHIO EDISON COMPANY 6326 LAKE AVENUE ELYRIA, OH 44305 PHONE: 440-324-0231 ATTN: CHUCK BLAZINA | MEDINA COUNTY SANITARY ENGINEER 791 WEST SMITH ROAD MEDINA, OH 44256 330-723-9575 ATTN: DALE CLARK |

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 OF O.R.C.

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.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM (NAV 1988).

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.

CONVERSION OF STANDARD CONSTRUCTION DRAWINGS

THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.02 OF THE 2002 CONSTRUCTION AND MATERIALS SPECIFICATIONS. THE APPENDIX OF ASTM E 380 SHALL BE UTILIZED FOR ANY ADDITIONAL CONVERSION FACTORS REQUIRED. CONVERSIONS SHALL BE APPROPRIATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

STREAM CHANNEL EXCAVATION

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE EXCAVATION AND HAULING OF MATERIAL FROM THE STREAM CHANNEL. THIS PERTAINS TO ANY EXCAVATION OPERATIONS, SUCH AS FOUNDATION PIER OR ABUTMENT EXCAVATION, CHANNEL CLEAN OUT, EXCAVATION FOR ROCK CHANNEL PROTECTION AND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS.

ROADWAY

CLEARING AND GRUBBING, AS PER PLAN

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN. IN ADDITION TO ALL THE PROVISIONS AS SET FORTH IN THE SPECIFICATIONS FOR ITEM 201, CLEARING AND GRUBBING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL LANDSCAPE STRUCTURES (TIMBERS, RAILROAD TIES, ROCKS, ORNAMENTAL LIGHT POLES, STEEL BOLLARDS, ETC.) WITHIN THE LIMITS OF CONSTRUCTION. ALL WORK ASSOCIATED WITH THE REMOVAL OF LANDSCAPE STRUCTURES SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR 201, CLEARING AND GRUBBING, AS PER PLAN, UNLESS SEPARATELY ITEMIZED. ADDITIONALLY, THIS ITEM SHALL INCLUDE ALL SAW CUTTING OF PAVEMENT TO REMOVE CONCRETE WITHIN RIGHT-OF-WAY LIMITS.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATION IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. ALL OTHER SLOPED EMBANKMENT AREAS SHALL BE BENCHED AS SET FORTH IN 203.05. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING UNDER THE PROVISIONS OF 203.05.

MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. 2.

ADDITIONAL SOIL INFORMATION

THE SOIL PROFILE AND/OR STRUCTURE FOUNDATION INVESTIGATION SHEETS CONTAIN ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN. ADDITIONAL SUBSURFACE INVESTIGATIONS HAVE BEEN MADE TO STUDY SOME ASPECT OF THE PROJECT. MORE INFORMATION MAY BE OBTAINED AT THE DISTRICT 3 OFFICE, 906 NORTH CLARK STREET, ASHLAND, OHIO 44805.

CONNECTION BETWEEN EXISTING 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 IN AASHTO M180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

- 1) THE ET-2000 (1997) MANUFACTURED BY SYRO, INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF TWO 25'-0" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

| DWG. NO. | DRAWING NAME | DWG./REV. DATE | ODOT APPROVAL DATE |
|----------|---|----------------|--------------------|
| SSS265M | ET-2000 (1997) PLAN, ELEVATION AND SECTIONS | 6/20/97 | 3/6/98 |
| SS142 | ET2000 PLUS 50'-0" PLAN, ELEVATION AND SECTION 25'-0" RAIL, SLEEVE W/PL POSTS 1-4 | 4/12/00 | 7/31/00 |
| SS141 | ET2000 PLUS PLAN, ELEVATION AND SECTION 25'-0" RAIL, HBA POSTS 1-4 | 2/29/00 | 7/31/00 |
| SS158 | ET2000 PLUS 50'-0" WITH 12'-6" PANELS & HBA POSTS 1-4 PLAN, ELEVATION AND SECTION | 5/22/00 | 7/31/00 |

- 2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OH 44224 (TELEPHONE: 330-346-0721).

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF FOUR 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

| DWG. NO. | DRAWING NAME | DWG./REV. DATE | ODOT APPROVAL DATE |
|----------|--|----------------|--------------------|
| SKT-4M | SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES | 12/11/97 | 3/6/98 |

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" X 18".

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4-INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27-3/4-INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4-INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

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GENERAL NOTES

MED - 18 - 15.13

ROADWAY (CONT.)

ITEM 606 - IMPACT ATTENUATOR, TYPE 2-98 LS MODEL QS2404Y (BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A QUADGUARD IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750).

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

| DWG. NO. | DRAWING NAME | DWG./REV. | ODOT APPROVAL DATE |
|----------------------|---|------------------------------------|--------------------|
| QSTSCVR-U | QUADGUARD SYSTEM WITH TENSION STRUT BACKUP | 7/10/96 Rev. A | 3/6/98 |
| QSCBCVR-U | QUADGUARD SYSTEM WITH CONCRETE BACKUP | 4/28/97 Rev. E | 3/6/98 |
| QFTSCVR-U | QUADGUARD SYSTEM W 69" & 90" TENSION STRUT BACKUPS | 9/5/97 Rev. C | 3/6/98 |
| QFCBCVR-U | QUADGUARD SYSTEM W 69" & 90" CONCRETE BACKUPS | 9/4/97 Rev. D | 3/6/98 |
| 35-40-20 | DEFLECTOR ASSEMBLY, CONCRETE BACKUP RETROFIT, QG | 11/14/97 Rev. B | 7/31/98 |
| 35-40-03 | QUADGUARD SYSTEM BACKUP ASSEMBLY, TS, QG | 3/19/99 Rev. F | 8/27/99 |
| 35-40-08 2 SHEETS | QUADGUARD SYSTEM CONCRETE BACKUP, QG ON GRADE & EXISTING CONCRETE STRUCTURE | 10/14/97 Rev. F 10/14/97 Rev. F | 8/27/99 |
| 35-40-21 2 SHEETS | TRANSITION ASSEMBLY QUAD-BEAM TO W-BEAM | 11/6/97 Rev. B 7/14/97 Rev. A | 8/27/99 |
| 35-40-22 2 SHEETS | TRANSITION ASSEMBLY QUAD-BEAM TO THRIE-BEAM | 7/15/97 Rev. A 7/11/97 Rev. A | 8/27/99 |
| 35-40-15 | QUADGUARD SYSTEM END SHOE ASSEMBLY, QG | 9/11/98 Rev. F | 8/27/99 |
| 3540211 2 SHEETS | QG TRANSITION ASSEMBLY QUAD-BEAM TO W-BEAM-WIDE | 8/29/97 Rev. A 8/29/97 Rev. A | 8/27/99 |
| 3540221 2 SHEETS | QG TRANSITION ASSEMBLY QUAD-BEAM TO THRIE-BEAM-WIDE | 8/29/97 Rev. A 8/29/97 Rev. A | 8/27/99 |
| 3540498 | QG SYSTEM NOSE ASSEMBLY, QG, 24, 30, 36, W/BELTING | 12/30/98 | 8/27/99 |
| 3540150 | QUADGUARD TRANSITION TO VERTICAL CONCRETE BARRIER | 9/96 | 8/27/99 |

WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 2-98 LS MODEL QS2404Y (BIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, TRANSITIONS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. THE QUADGUARD SHALL BE ATTACHED DIRECTLY TO THE CONCRETE MEDIAN BARRIER, WITHOUT THE USE OF A SEPARATE BACKUP SYSTEM.

SPECIAL - MAIL BOXES SUPPORT SYSTEM

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS ON THIS SHEET, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4" x 4" OR 4.5" DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2" AND CONFORM TO AASHTO M 181.

HARDWARE (PLATES, SCREWS, BOLTS, ETC.) SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAIL BOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION AND NOTIFYING THE PROPERTY OWNERS PRIOR TO WORK.

GROUP MAILBOX SUPPORTS SHALL BE PLACED ON 3 FT. CENTERS AND THE TURNOUT LENGTHENED TO ACCOMMODATE THE GROUPING.

WHERE GUARDRAIL EXISTS, MAILBOXES AND THEIR SUPPORTS SHALL BE PLACED BEHIND THE GUARDRAIL. SUPPORTS MUST STILL MEET THE BREAKAWAY REQUIREMENTS LISTED ABOVE.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10, HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

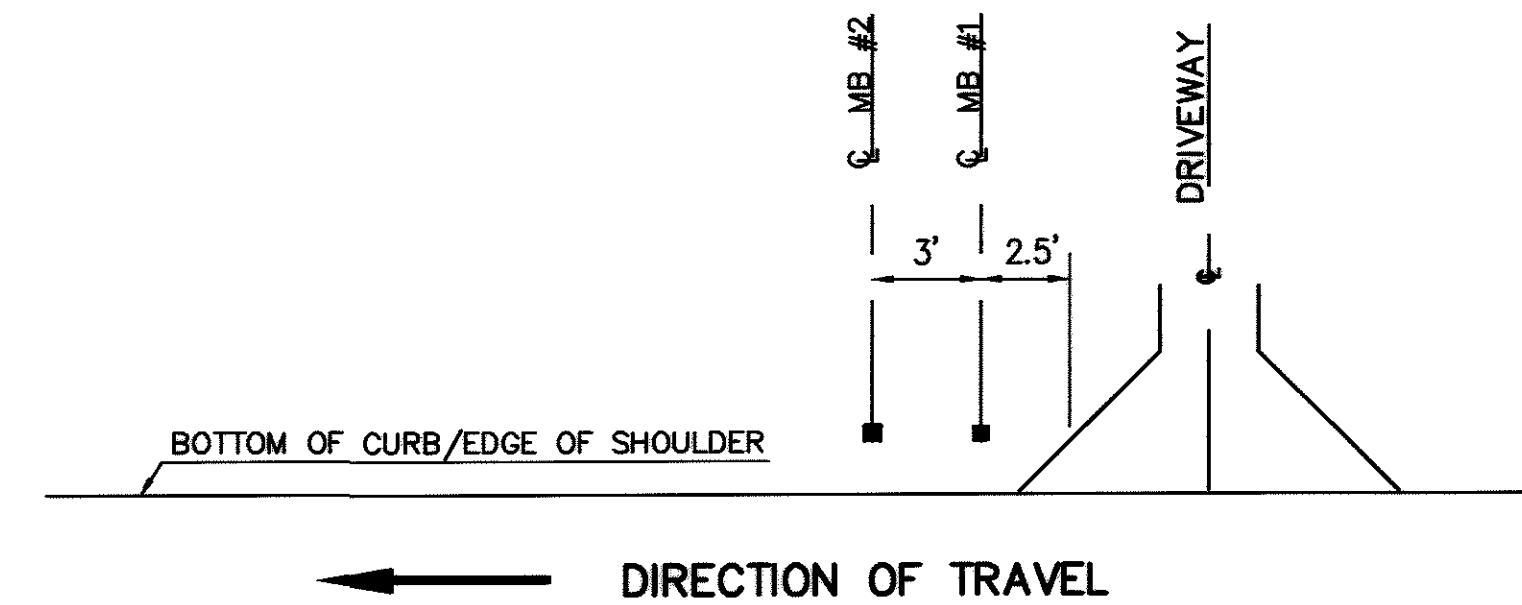
MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT SYSTEM, SINGLE OR DOUBLE.

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER FOR MAILBOX SUPPORT WORK:

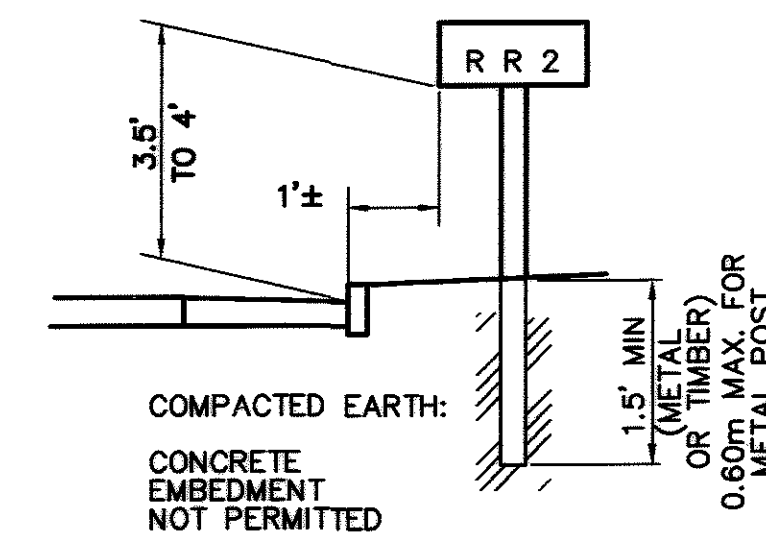
| ITEM | QUANTITY | UNIT | DESCRIPTION |
|---------|----------|------|--------------------------------|
| SPECIAL | 10 | EACH | MAILBOX SUPPORT SYSTEM, DOUBLE |
| SPECIAL | 18 | EACH | MAILBOX SUPPORT SYSTEM, SINGLE |

MAILBOX DETAILS

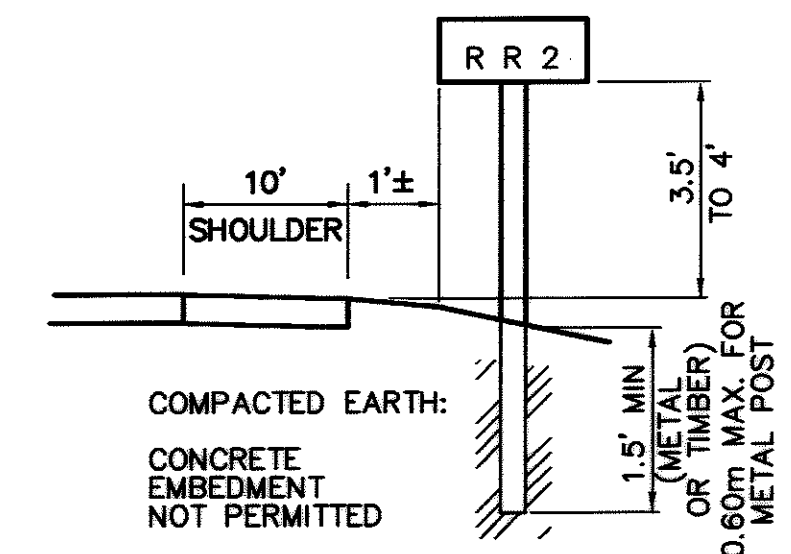
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DIRECTION OF TRAVEL

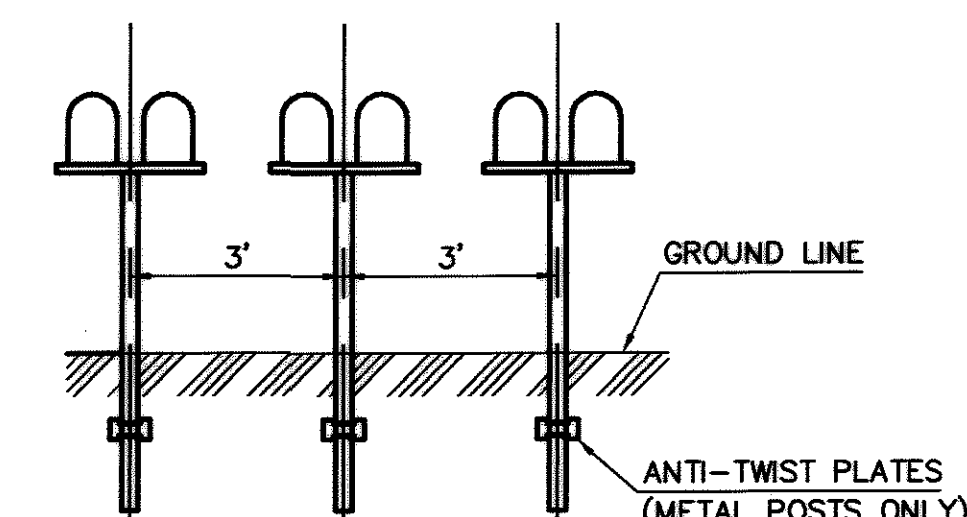


CURBED INSTALLATION

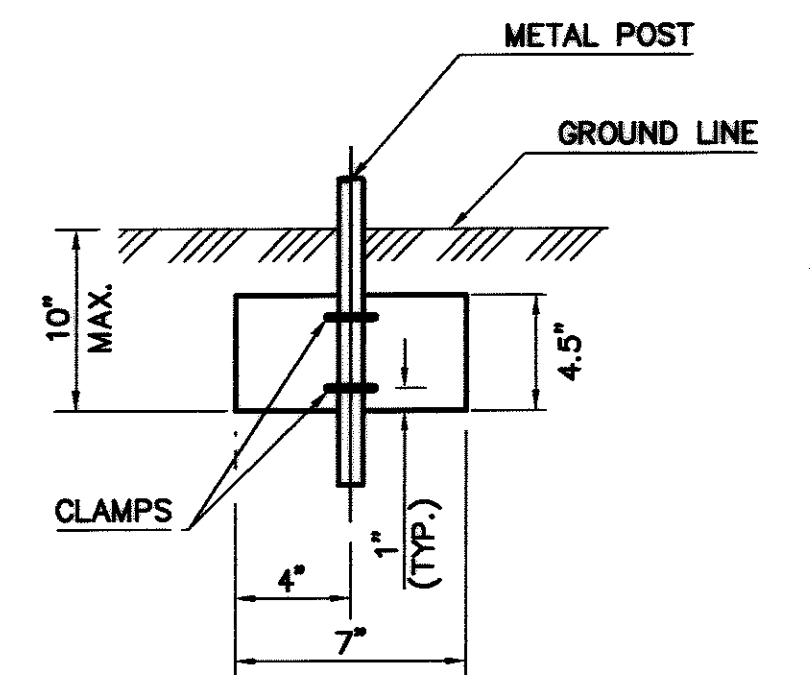


UNCURBED INSTALLATION

GROUP MAILBOX INSTALLATION



ANTI-TWIST PLATE



ROADWAY (CONT.)

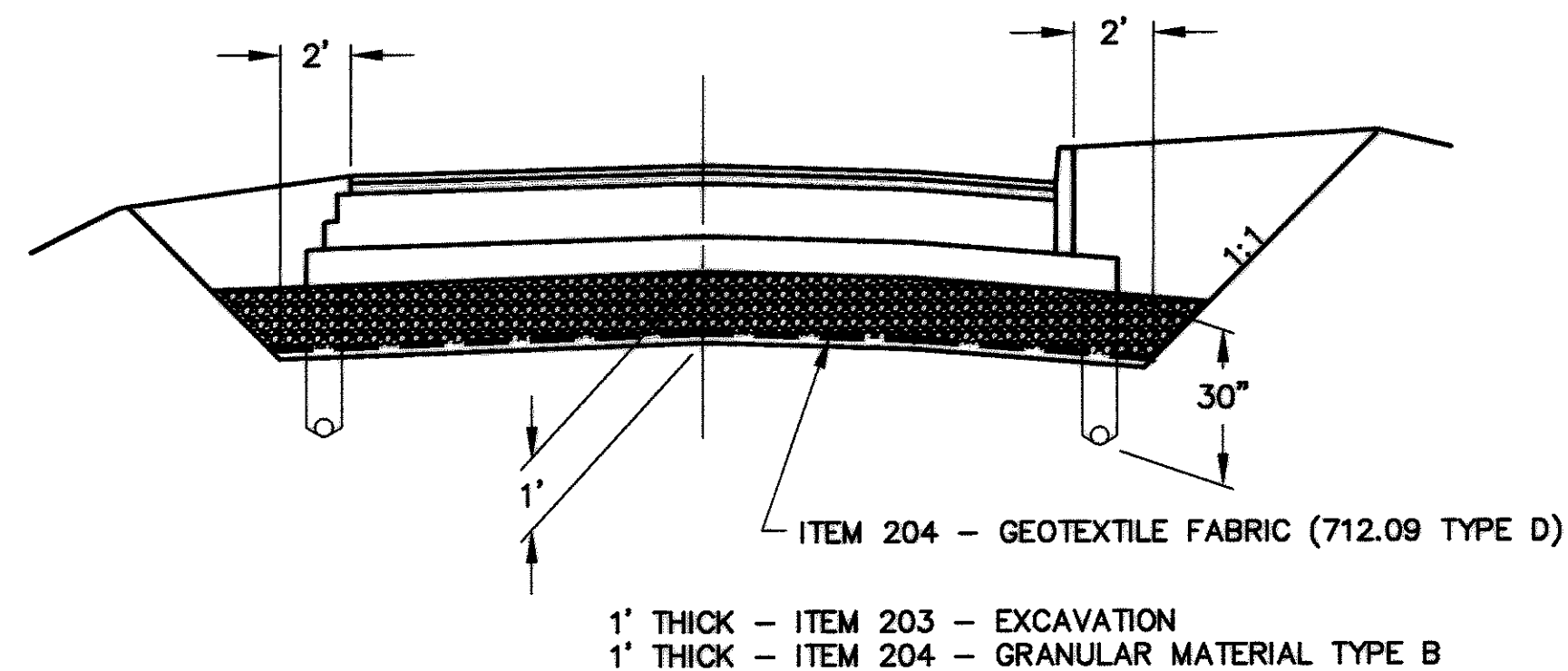
UNSUITABLE SUBGRADE SOIL

A GLOBAL SUBGRADE TREATMENT IS BEING USED ON THIS PROJECT. THE CONTRACTOR SHALL EXCAVATE BENEATH THE PLAN ELEVATION OF THE ITEM 304 A DEPTH OF ONE FOOT. ITEM 204 GEOTEXTILE FABRIC (TYPE D) SHALL BE PLACED AND THE ONE FOOT EXCAVATION REPLACED WITH ITEM 204 GRANULAR MATERIAL, TYPE B, AS DETAILED BELOW. ITEM 204 SUBGRADE COMPACTION AND ITEM 204 PROOFROLLING WILL NOT BE REQUIRED.

QUANTITIES FOR:

ITEM 203 EXCAVATION;
ITEM 204 GRANULAR MATERIAL TYPE B; and
ITEM 204 GEOTEXTILE FABRIC

HAVE BEEN QUANTIFIED IN THE PAVEMENT CALCULATIONS.



ADDITIONALLY, ALTHOUGH SOIL CLASSIFIED AS ODOT A-4B WAS SCARCELY ENCOUNTERED IN THE TEST BORINGS, SEVERAL OF THE BOREHOLES EXHIBITED SUBSURFACE SOIL THAT CONTAINED A LARGE PERCENTAGE OF SILT (BORING LOCATIONS 787+65 LT., 135+72 RT., 142+72 RT., 154+72 LT., AND 156+72 LT.). VERY FINE-GRAINED SAND AND SILT INDICATE THE POTENTIAL FOR A FROST-SUSCEPTIBLE SUBGRADE. DURING CONSTRUCTION, IF SUBGRADE SOIL APPEARS FINE-GRAINED WITH VERY LOW PLASTICITY, IT SHOULD BE CONSIDERED TO BE FROST-SUSCEPTIBLE SILT AND BE OVER-EXCAVATED TO A DEPTH OF 24.0 INCHES FROM TOP OF SUBGRADE AND REPLACED WITH AN ENGINEERED FILL MATERIAL.

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER FOR ADDITIONAL SUBGRADE OVER-EXCAVATION AND REPLACEMENT BEYOND WHAT IS SHOWN IN THE PLANS:

| | |
|-----------------------------------|---------------|
| ITEM 204 - EMBANKMENT | 3000 CU. YDS. |
| ITEM 204 - EXCAVATION OF SUBGRADE | 3000 CU. YDS. |

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR IS ADVISED OF THE PRESENCE OF TWO (2) OTHER CONSTRUCTION CONTRACTS WITHIN OR IN THE VICINITY OF THE WORK LIMITS OF THIS PROJECT AND 105.08 COOPERATION BETWEEN CONTRACTORS IS REQUIRED.

1. THE MEDINA COUNTY ENGINEER'S OFFICE IS REPLACING WATER AND SEWER LINES WITHIN THE CONTRACT LIMITS. THE PROJECT WILL BE UNDER CONSTRUCTION AT THE SAME TIME AS THIS PROJECT. THE CONTRACTOR CAN CONTACT DALE CLARK, MEDINA COUNTY SANITARY ENGINEERS OFFICE, 791 WEST SMITH ROAD, MEDINA, OH 44256, FOR CONSTRUCTION PLANS, SCHEDULE, AND PROJECT STATUS:

2. MED-18-0.00 PID 18311 (RESURFACING PROJECT--TRAFFIC IS MAINTAINED) IS ADJACENT TO THIS PROJECT. THE SCHEDULED COMPLETION DATE IS JUNE 4, 2004.

THE CONTRACTOR WILL BE REQUIRED TO HAVE ONGOING COORDINATION BETWEEN THE CONTRACTORS OF THE AFOREMENTIONED PROJECTS IN ORDER TO MINIMIZE WORK CONFLICTS. SCHEDULING OF WORK MUST BE DONE SO AS TO MINIMIZE DISRUPTION TO EACH OF THE CONTRACTORS.

EXISTING BRICK WALL AT GATEWAY SOUTH

THE EXISTING BRICK/CONCRETE WALL LOCATED AT GATEWAY SOUTH AND PARCEL NO. 37 SHALL REMAIN. PROPOSED GRADING SHALL COVER AND EXTEND AGAINST PORTIONS OF THE WALL. THE CONTRACTOR SHALL USE DUE CARE TO NOT DAMAGE THE WALL. ANY DAMAGES TO THE WALL BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE ENGINEER. ALL GRADING AS DESCRIBED ABOVE SHALL BE INCLUDED UNDER ITEM 203 AND NO ADDITIONAL PAYMENT WILL BE MADE FOR THE WORK DESCRIBED ABOVE.

ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN

THIS ITEM SHALL CONSIST OF THE REMOVAL AND DISPOSAL OF THE EXISTING CONCRETE BARRIER IN THE ROADWAY MEDIAN FROM STATION 147+83 TO STATION 153+20. THE CONTRACTOR SHALL REMOVE THE CONCRETE BARRIER AND ITS FOUNDATION, AND SHALL BACKFILL AND REGRADE THE DISTURBED AREA TO THE SATISFACTION OF THE ENGINEER. ALL WORK, INCLUDING ANY BACKFILLING, REGRADING, OR REPAIR WORK, SHALL BE INCLUDED IN ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN.

ITEM 604 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN AND ITEM 604 - MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN

WHEN THE CONTRACTOR ENCOUNTERS EXISTING MANHOLES THAT HAVE BEEN PAVED OVER OR COVERED BY EMBANKMENT MATERIAL, AND IF THE MANHOLE(S) ARE TO REMAIN IN PLACE, THE CONTRACTOR SHALL ADJUST OR RECONSTRUCT THE MANHOLE(S) TO GRADE. THE FOLLOWING ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

| | |
|--|--------|
| ITEM 604 - MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN | 6 EACH |
| ITEM 604 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN | 6 EACH |

ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN

THIS ITEM SHALL INCLUDE A TWO FOOT PAVED GUTTER, WHICH SHALL BE IN ACCORDANCE WITH 609.

PAVEMENT

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT 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-3.1.

ITEM 407 - TACK COAT AND 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. FOR ESTIMATING PURPOSES ONLY, THE PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF:

| | |
|--|----------------|
| ITEM 407 - TACK COAT | 0.10 GAL./S.Y. |
| ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE | 0.05 GAL./S.Y. |

DRAINAGE

CROSSING 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.

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 OPERATION SHALL BE CORRECTED BY AND AT THE EXPENSE OF 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.

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GENERAL NOTES

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EROSION CONTROL

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

| | | |
|----------------------------------|--------------|------------|
| ITEM 659 - SEEDING AND MULCHING | <u>41340</u> | SQ. YD. |
| ITEM 659 - SOIL ANALYSIS TEST | <u>2</u> | EACH |
| ITEM 659 - TOPSOIL | <u>4594</u> | CU. YD. |
| ITEM 659 - COMMERCIAL FERTILIZER | <u>5.58</u> | TON |
| ITEM 659 - AGRICULTURAL LIME | <u>17.12</u> | TON |
| ITEM 659 - WATER | <u>112</u> | M. GAL. |
| ITEM 659 - MOWING | <u>93</u> | M. SQ. FT. |

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING, ARE BASED ON THESE LIMITS.

SEEDING AND MULCHING OF LAWNS

IN ADDITION TO "AREAS IN FRONT OF RESIDENCES" REFERRED TO IN 659.10.A, THE SPECIAL PREPARATION SHALL BE EXTENDED TO ENCOMPASS ALL LAWNS AND/OR LAWN-LIKE AREAS AS DETERMINED BY THE ENGINEER.

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ITEM 614 MAINTAINING TRAFFIC

TWO-LANE-TWO-WAY TRAFFIC WILL BE MAINTAINED ON S.R. 18 AT ALL TIMES EXCEPT FOR MINIMUM PERIODS, AS NOTED BELOW ONE-LANE-TWO-WAY TRAFFIC WILL BE PERMITTED.

ONE-LANE-TWO-WAY TRAFFIC WILL BE MAINTAINED ON ALL CROSSROADS AT ALL TIMES EXCEPT FOR MINIMUM PERIODS, AS NOTED BELOW. ONE-LANE-ONE-WAY TRAFFIC WILL BE PERMITTED UNDER FLAGGER CONTROLLED OPERATIONS. NO CROSSROAD CLOSURES ARE PROJECTED AND ACCESS AND INGRESS TO ALL COMMERCIAL AND RESIDENTIAL PROPERTIES SHALL BE MAINTAINED AT ALL TIMES. AFTER BUSINESS-HOUR ACCESS CAN BE LIMITED WITH THE CONSENT OF OWNERS.

TWO LANE TRAFFIC WIDTH REQUIREMENTS

UNLESS SPECIFICALLY STATED OR SHOWN IN THE PLANS, TWO LANES OF TRAFFIC SHALL CONSIST OF A MINIMUM OF TWO 11 FOOT WIDE LANES PLUS 1 FOOT MINIMUM BUFFER ON EACH SIDE TO THE GUARDRAIL, PARAPETS, DRUMS, BARRIER OR EDGES OF PAVED SURFACES.

ONE LANE REQUIREMENTS

ONE LANE TRAFFIC OPERATIONS SHALL BE LIMITED TO THE NIGHT TIME HOURS (9:00PM AND 6:00AM) SUNDAY THROUGH THURSDAY NIGHTS. ALL ONE LANE TRAFFIC ZONES SHALL BE AT THE APPROVAL OF THE ENGINEER.

S.R. 18 TRAFFIC MAY BE REDUCED TO ONE (1) DIRECTIONAL LANE DURING THE FOLLOWING WORK OPERATIONS:

- 1. FOR PLACEMENT OF THE TEMPORARY PAVEMENT ON THE OUTSIDE SHOULDER.
2. FOR THE APPROACH INSTALLATION OF THE PORTABLE CONCRETE BARRIER (PCB) AND WORK ZONE PAVEMENT MARKINGS AND REMOVAL OF EXISTING PAVEMENT MARKINGS IN PREPARATION FOR THE NEXT MAINTENANCE OF TRAFFIC OPERATION.
3. FOR THE APPROACH TRANSITION OF THE PCB AND WORK ZONE PAVEMENT MARKINGS FROM ONE PHASE TO THE NEXT PHASE.

THE CONTRACTOR SHALL NOTIFY IN WRITING THE PROJECT ENGINEER AND THE LOCAL OFFICIALS LISTED BELOW AT LEAST 14 DAYS PRIOR TO IMPLEMENTING EACH PHASE OF CONSTRUCTION.

OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 3
906 N. CLARK STREET
ASHLAND, OHIO 44805
(419) 281-0513

MEDINA COUNTY ENGINEER
791 WEST SMITH ROAD
P.O. BOX 825
MEDINA, OHIO 44256-0825
(330) 723-9561

THE STATE HIGHWAY PATROL MEDINA OUTPOST
3149 FRANTZ ROAD
MEDINA, OHIO 44256-9023
(330) 725-4921

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

Table with 3 columns: Item ID, Description, and Quantity. Includes items 410 (Traffic compacted surface), 614 (Asphalt concrete), and 616 (Water).

GENERAL PROVISIONS

ALL MAINTENANCE OF TRAFFIC DEVICES, DRUMS, SIGNS, FLASHING ARROW PANELS, FLAGGERS, ETC. AS SHOWN AND LOCATED ON THE MAINTENANCE OF TRAFFIC PLANS SHALL BE INCORPORATED FOR THE VARIOUS PHASES AND STAGES OF WORK AREAS UNDER NORMAL TRAFFIC CONDITIONS. IF SPECIAL TRAFFIC CONDITIONS EXIST, THESE MAINTENANCE OF TRAFFIC PLANS MAY HAVE TO BE MODIFIED. HOWEVER, NO MODIFICATIONS TO THE LAYOUT OF THE DEVICES SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS IS TO BE MADE UNLESS APPROVED BY THE ENGINEER.

- 1. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS. THE CONTRACTOR SHALL SET-UP AND OPERATE HIS EQUIPMENT IN SUCH A MANNER AS TO MINIMIZE ENCROACHMENT UPON THE TRAVELED WIDTH OF PAVEMENT.
2. DURING OVERHEAD CONSTRUCTION THE CONTRACTOR SHALL PROVIDE, IF DEEMED NECESSARY BY THE ENGINEER, FALSEWORK, SAFETY NETS AND/OR OTHER SAFETY DEVICES UNDER THE STRUCTURES TO PROTECT TRAFFIC IN THE AREA OF CONSTRUCTION. ALL MATERIAL, LABOR AND EQUIPMENT IS TO BE INCLUDED IN BID ITEM 614 MAINTAINING TRAFFIC.
3. EXISTING REGULATORY, WARNING AND INFORMATION SIGNS LOCATED WITHIN THE ROAD WORK AREAS WHICH ARE NECESSARY FOR INTERIM OR PERMANENT TRAFFIC CONTROL SHALL BE REMOVED AND ERECTED IN LOCATIONS AS APPROVED BY THE ENGINEER. FOR RELOCATION OF "OHIO LOGO" SIGNS CONTACT OHIO LOGO INC., 1-800-860-5646.
4. IT IS ANTICIPATED THAT THE SAME BARRIER WILL BE USED IN VARIOUS PHSES OF CONSTRUCTION. MOVEMENT OF THE CONCRETE BARRIER BETWEEN PHASES SHALL BE ACCOMPLISHED IN ONE WORKING DAY. FLAGGERS SHALL BE UTILIZED FOR THE PROTECTION OF VEHICLUAR TRAFFIC UNTIL THE MOVEMENT OF THE BARRIER IS COMPLETE.
5. ALL WORK ZONE PAVEMENT MARKINGS AND SIGNS REQUIRED FOR A PARTICULAR LANE CLOSURE OR TRAFFIC PATTERN SHALL BE INSTALLED ON A SINGLE WORK DAY, AND THE CORRESPONDING TRAFFIC PATTERN, AS DETAILED ON THE PLANS IMMEDIATELY IMPLEMENTED.
6. THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN ALL WARNING AND INFORMATION SIGNS NECESSARY FOR MAINTAINING TRAFFIC AS DETAILED IN THE PLANS.

7. TRAFFIC CONTROL DEVICES SHALL BE SET UP PRIOR TO THE START OF CONSTRUCTION AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH SPECIAL CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS THEY ARE NEEDED AND SHALL BE IMMEDIATELY REMOVED THEREAFTER. ALL SIGNS WITH MESSAGES WHICH DO NOT APPLY DURING A CERTAIN PERIOD SHALL BE COVERED OR SET ASIDE OUT OF THE VIEW OF TRAFFIC.

8. ALL CONSTRUCTION TRAFFIC CONTROL DEVICES USED FOR THIS PROJECT SHALL CONFORM TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AND SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR.

SEQUENCE OF CONSTRUCTION

THE CONSTRUCTION OF THIS PROJECT IS CONTEMPLATED TO PROCEED IN FIVE PHASES AS DETAILED ELSEWHERE IN THESE PLANS.

PRECEDING THE START OF CONSTRUCTION PHASE 1 THE INITIATION OF THE FOLLOWING TASKS COULD BE CONSIDERED.

- RELOCATE, REMOVE OR ADJUST TO GRADE PUBLIC UTILITIES WHERE IN CONFLICT WITH PHASE 1 CONSTRUCTION OF PAVEMENT FOR MAINTAINING TRAFFIC;
- CLEAR THE PROPOSED SHOULDERS TO THE PROPOSED RIGHT-OF-WAY FROM ALL OBSTRUCTIONS;
- RELOCATE EXISTING SIGNAL POLES AND APPURTENANCES WHERE REQUIRED AND RESTORE SIGNAL OPERATIONS;
- CONSTRUCT EARTHWORK REQUIRED FOR ROADS FOR MAINTAINING TRAFFIC;
- PROVIDE POSITIVE DRAINAGE FOR THE ROAD FOR MAINTAINING TRAFFIC, RELOCATE DITCHES WHERE NECESSARY AND REDIRECT FLOW INTO THE EXISTING STORM DRAIN SYSTEM;
- CONSTRUCT PROPOSED DRAINAGE SYSTEM, PROPOSED CATCH BASINS, MANHOLES WHICH WILL BE UNDER THE PAVEMENT FOR MAINTAINING TRAFFIC SHALL BE PROVIDED WITH REMOVABLE CONCRETE CAPS AS DETAILED ON SHEET 179G;
- RELOCATE EXISTING SIGNS WHEN IN CONFLICT WITH PROPOSED PHASE 1 CONSTRUCTION;
- RELOCATE DRIVE PIPES TO TEMPORARY LOCATION IF IT FALLS WITHIN THE TEMPORARY ROAD LIMITS.

ALL WORK IN A GIVEN PHASE, INCLUDING SUCH ITEMS AS SUBGRADE REPAIR, ASPHALT CONCRETE COURSES, ADJUSTMENTS OF CASTINGS, DRIVEWAY REPAIRS, GUARDRAIL, AND TRAFFIC SIGNS AND SIGNALS SHALL BE COMPLETED PRIOR TO BEGINNING THE NEXT PHASE, WITH THE EXCEPTION OF ITEM 448 SURFACE COURSE, FINAL PAVEMENT MARKINGS, AND ANY SIGNS OR SIGNALS WHICH CONFLICT WITH THE MAINTENANCE OF TRAFFIC PLANS.

AT THE END OF PHASE 5, THE 407 TACK COAT FOR INTERMEDIATE COURSE AND THE 448 SURFACE COURSE SHALL BE INSTALLED ACROSS THE ENTIRE PAVEMENT WIDTH, AND LANDSCAPING, FINAL PAVEMENT MARKINGS, AND THE BALANCE OF THE SIGNS AND SIGNALS SHALL BE INSTALLED. DURING THIS PHASE, TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING MT-95.30, MT-95.31, MT-95.32, MT-97.10, OR MT-97.11, AS APPROPRIATE.

PHASE 1 CONSTRUCTION

- A) CONSTRUCT THE ROAD FOR MAINTAINING TRAFFIC AND APPURTENANCES ON THE OUTSIDE SHOULDERS OF S.R. 18. MAINTAIN TRAFFIC ON THE EXISTING PAVEMENT. PAVEMENT FOR MAINTAINING TRAFFIC CROSSING AT APRONS SHALL BE TAPERED ON 1" PER 10' RATE OR OVERLAID WITH PAVEMENT FOR MAINTAINING TRAFFIC. DRIVE GRADES HAVE TO BE READJUSTED TO MEET EDGE OF PAVEMENT ELEVATIONS OF THE ROAD FOR MAINTAINING TRAFFIC.
B) CONSTRUCT THE PROPOSED PAVEMENT WIDENING, DRAINAGE, AND DRIVE WORK FROM STA. 776+60.32 LT. TO STA. 125+50.
C) PROTECTED LEFT TURNS WILL BE PROVIDED ONLY AT THE I-71 INTERCHANGE SIGNALS. THE EXISTING TRAFFIC PATTERNS SHALL BE MAINTAINED WHENEVER POSSIBLE.

PHASE 2 CONSTRUCTION

CONSTRUCT THE PROPOSED S.R. 18 PAVEMENT AND RETAINING WALLS ±30' ON EACH SIDE OF THE CENTERLINE. DELAY THE CONSTRUCTION OF CONCRETE BARRIERS OR CONCRETE RAISED MEDIANS AT THE FOLLOWING LOCATIONS:

- STA. 126+00 TO STA. 130+00
STA. 131+25 TO STA. 133+50
STA. 145+40 TO STA. 146+43
STA. 147+60 TO STA. 152+85
STA. 154+25 TO STA. 155+50
STA. 164+40 TO STA. 175+50

VOIDS AT CONCRETE BARRIER LOCATIONS SHALL BE TEMPORARILY FILLED WITH ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC.

MEDIAN CATCH BASINS WHICH CARRY TRAFFIC THROUGH LANE SHIFTS WILL BE CONSTRUCTED TO 1 FT. BELOW GRADE AND CAPPED WITH REMOVABLE COVERS, AS DETAILED ON SHEET NO. 230.

TWO LANE-TWO WAY TRAFFIC WILL BE CARRIED ON THE NEWLY CONSTRUCTED SHOULDERS.

WORK THROUGH THE INTERSECTIONS SHOULD BE RESTRICTED TO NIGHT-TIME HOURS, CONSTRUCTING NOT MORE THAN ONE QUADRANT OF INTERSECTION PAVEMENT AT A TIME, MAINTAINING ONE LANE-TWO WAY TRAFFIC, WITH FLAGGERS.

CONSTRUCT THE PAVEMENT THROUGH THE ASPHALT CONCRETE INTERMEDIATE COURSE. THE FINAL ASPHALT SURFACE COURSE WILL BE PLACED AFTER COMPLETION OF PHASE 5.

PHASE 3 CONSTRUCTION

CONSTRUCT THE REMAINING PROPOSED CONSTRUCTION ITEMS ON THE SHOULDERS.

DIVERT TRAFFIC TO THE NEWLY CONSTRUCTED MEDIAN LANES. MAINTAIN TWO LANE-TWO WAY TRAFFIC. PROTECTED LEFT TURNS WILL BE AVAILABLE ONLY AT THE SR-18, I-71 INTERCHANGE.

WORK THROUGH THE INTERSECTIONS SHOULD BE RESTRICTED TO NIGHT-TIME HOURS USING HALF-WIDTH CONSTRUCTION.

THE EXISTING TRAFFIC PATTERN WILL BE MAINTAINED THROUGH THIS PHASE ALSO, PROVIDING THE SAME TURNING MOVE POSSIBILITIES THAT WERE AVAILABLE BEFORE CONSTRUCTION PROCEEDED.

PHASE 4 CONSTRUCTION

RAISED MEDIANS WILL BE CONSTRUCTED UNDER THIS PHASE BETWEEN THE FOLLOWING LIMITS:

- STA. 126+00 TO STA. 130+00
STA. 131+25 TO STA. 133+50
STA. 164+40 TO STA. 175+50

THE REMAINING 23.5' WIDE STRIP OF PAVEMENT ON THE RIGHT SIDE OF THE CENTERLINE WILL BE CONSTRUCTED FROM STA. 147+00 TO STA. 153+50 UNDERNEATH THE I-71 STRUCTURE.

TRAFFIC WILL RESTRICTED TO TWO LANE-TWO WAY OPERATION ON THE NEW PAVEMENT.

PHASE 5 CONSTRUCTION

CONCRETE BARRIER INSTALLATION WILL BE COMPLETED BETWEEN THE FOLLOWING LIMITS:

- STA. 145+50 TO STA. 146+43
STA. 147+00 TO STA. 153+50
STA. 154+00 TO STA. 155+50

THE REMAINING CONSTRUCTION ITEMS, INCLUDING THE FINAL ASPHALT CONCRETE SURFACE COURSE, WILL BE COMPLETED UNDER TWO LANE-TWO WAY TRAFFIC.

SEQUENCE OF CONSTRUCTION - RAMPS "A", "B", "C" AND "D"

TRAFFIC ON ALL RAMPS SHALL BE MAINTAINED AT ALL TIMES.

PHASE 1 CONSTRUCTION

RAMP "A" - CONSTRUCT 8 FT. OF PAVEMENT LEFT OF THE CENTERLINE MAINTAINING TRAFFIC ON THE EXISTING RAMP PAVEMENT.

RAMP "B" - CONSTRUCT 8 FT. TO 22 FT. OF PAVEMENT LEFT OF THE CENTERLINE MAINTAINING TRAFFIC ON THE EXISTING RAMP PAVEMENT.

RAMP "C" - CONSTRUCT 8 FT. TO 18 FT. OF PAVEMENT RIGHT OF THE CENTERLINE MAINTAINING TRAFFIC ON THE EXISTING RAMP PAVEMENT.

NORMAL TRAFFIC WILL BE MAINTAINED ON RAMP "D".

PHASE 2 CONSTRUCTION

RAMP "A" - CONSTRUCT 14 FT. OF PAVEMENT RIGHT OF THE CENTERLINE MAINTAINING TRAFFIC ON THE COMPLETED 8 FT. PAVEMENT AND 3 FT. OF EXISTING PAVEMENT, FORMING AN 11 FT. LANE.

RAMP "B" - CONSTRUCT 14 FT. TO 34 FT. OF PAVEMENT RIGHT OF THE CENTERLINE MAINTAINING TRAFFIC ON THE COMPLETED 8 FT. TO 22 FT. AND ON THE EXISTING PAVEMENT, FORMING ONE AND TWO LANE OPERATIONS.

RAMP "C" - CONSTRUCT 14 FT. PAVEMENT LEFT OF THE CENTERLINE MAINTAINING ONE LANE TRAFFIC RIGHT OF THE CENTERLINE.

NORMAL TRAFFIC WILL BE MAINTAINED ON RAMP "D".

PHASE 3 CONSTRUCTION

RAMP "A" - CONSTRUCT THE REMAINING 6 FT. OF PAVEMENT IN THE CENTER MAINTAINING TRAFFIC RIGHT OF THE CENTERLINE.

RAMP "B" - CONSTRUCT THE REMAINING 6 FT. OF PAVEMENT IN THE CENTER MAINTAINING ONE AND TWO LANE TRAFFIC RIGHT OF THE CENTERLINE.

RAMP "C" - CONSTRUCT THE REMAINING 6 FT. OF PAVEMENT IN THE CENTER MAINTAINING TRAFFIC LEFT OF THE CENTERLINE.

NORMAL TRAFFIC WILL BE MAINTAINED ON RAMP "D".

PHASE 4 AND 5 CONSTRUCTION

ALL RAMPS - COMPLETE THE REMAINING CONSTRUCTION ITEMS INCLUDING THE FINAL ASPHALT CONCRETE SURFACE COURSE AND PERMANENT PAVEMENT MARKINGS.

SEQUENCE OF CONSTRUCTION - GATEWAY DRIVE

PHASE 1 CONSTRUCTION - GATEWAY DRIVE

CONSTRUCT TEMPORARY PAVEMENT ON BOTH SIDELINES, MAINTAINING TRAFFIC ON THE EXISTING PAVEMENT.

PHASE 2 CONSTRUCTION - GATEWAY DRIVE

SHIFT TRAFFIC TO THE SIDELINES AND CONSTRUCT 28 FT. OF PROPOSED PAVEMENT.

PHASE 3, 4 & 5 CONSTRUCTION - GATEWAY DRIVE

TRANSFER TRAFFIC TO THE NEWLY CONSTRUCTED CENTER LANES AND COMPLETE THE REMAINING CONSTRUCTION ITEMS.

SEQUENCE OF CONSTRUCTION - CROSS ROADS

CROSS ROAD INTERSECTION CONCRETE PAVEMENTS SHALL BE CONSTRUCTED DURING NIGHT-TIME HOURS USING HALF-WIDTH CONSTRUCTION AND HIGH-EARLY STRENGTH CONCRETE AS PER CMS 499.032 CLASS FS. INTERSECTION TRAFFIC SHALL BE OPENED WITHIN 24 HOURS. ALL ADDITIONAL MATERIAL AND CONSTRUCTION COSTS WILL BE PAID UNDER ITEM 614, MAINTAINING TRAFFIC.

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CALCULATED CHECKED

MAINTENANCE OF TRAFFIC GENERAL NOTES

MED - 18 - 15.13

MAINTENANCE OF TRAFFIC SIGNAL 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 OPERATIONS FIRST DISTURB 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.

C) 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 OUT- AGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MAL- FUNCTIONS 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.

D) 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 THE 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.

E) 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 PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE STATE OR THE OHIO STATE PATROL FOR POLICE SERVICES AND MAINTENANCE SERVICES BY STATE FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

F) 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.

G) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM, WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 6 HOURS AND SHALL NOT INCLUDE THE HOURS OF 6:00 AM TO 9:00 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 THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS,

H) 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.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

1. TIME OF NOTIFICATION OF MALFUNCTION;
2. TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;
3. ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED;
4. A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURANCE;
5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

I) PROPOSED TRAFFIC SIGNALS SHALL BE INSTALLED TO THE DEGREE NECESSARY TO OPERATE AS OUTLINED IN THE TIMING CHARTS PROVIDED PRIOR TO ROADWAY CONSTRUCTION BEGINNING. SIGNALS SHALL BE COMPLETE AND OPERATIVE AS SHOWN IN THE PLANS, EXCEPT FOR CONTROLLER SETTINGS AND SIGNAL HEAD LOCATIONS. ALL SIGNALS SHALL OPERATE AS PRETIMED SIGNALS DURING CONSTRUCTION.

CONTRACTOR SHALL INITIALLY SET CONTROLLERS WITH THE TIMING PLANS PROVIDED, BUT SHALL MONITOR TRAFFIC CONDITIONS AT THE BEGINNING OF CONSTRUCTION AND ADJUST GREEN TIMES AS NEEDED. ALL TIMING ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER.

PRIOR TO THE BEGINNING OF EACH CONSTRUCTION PHASE THE CONTRACTOR SHALL REALIGN THE SIGNAL HEADS AS NEEDED OVER THE CENTER OF THE TRAVELED LANES. ALL UNUSED SIGNAL HEADS AND SIGNS SHALL BE COVERED (I.E. SIGNALS WITH TURN ARROWS, "LEFT TURN SIGNAL" SIGNS, ETC.). THE CONTRACTOR MUST HAVE APPROVAL OF THE ENGINEER FOR ALL SIGNAL HEAD LOCATIONS PRIOR TO OPENING LANES TO TRAFFIC.

THE SIGNAL AT GATEWAY DRIVE SHALL NOT BE PUT INTO OPERATION UNTIL ALL ROADWAY WORK IS COMPLETE AND OTHER SIGNALS ARE SET TO BEGIN OPERATION AS A CLOSED LOOP SYSTEM.

**SR 18 / NETTLETON DRIVE
TIMING CHART**

| INTERVAL OR FEATURE | NEMA PHASE NO. | | | | | | | |
|--------------------------|----------------|-----|-------|-----|-------|-----|-------|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| INTERSECTION MOVEMENT | WB/LT | EB | NB/LT | SB | EB/LT | WB | SB/LT | NB |
| GREEN (SEC.) | | 80 | | 28 | | 80 | | 28 |
| YELLOW CHANGE (SEC.) | | 4.0 | | 3.0 | | 4.0 | | 3.0 |
| ALL RED CLEARANCE (SEC.) | | 2.0 | | 3.0 | | 2.0 | | 3.0 |

**SR 18 / EASTPOINTE DRIVE / NORMANDY DRIVE
TIMING CHART**

| INTERVAL OR FEATURE | NEMA PHASE NO. | | | | | | | |
|--------------------------|----------------|-----|-------|-----|-------|-----|-------|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| INTERSECTION MOVEMENT | WB/LT | EB | NB/LT | SB | EB/LT | WB | SB/LT | NB |
| GREEN (SEC.) | | 79 | | 30 | | 79 | | 30 |
| YELLOW CHANGE (SEC.) | | 4.0 | | 4.0 | | 4.0 | | 4.0 |
| ALL RED CLEARANCE (SEC.) | | 2.0 | | 1.0 | | 2.0 | | 1.0 |

**SR 18 / I-71 SB RAMPS (A & B)
TIMING CHART**

| INTERVAL OR FEATURE | NEMA PHASE NO. | | | | | | | |
|--------------------------|----------------|-----|-------|-----|-------|-----|-------|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| INTERSECTION MOVEMENT | WB/LT | EB | NB/LT | SB | EB/LT | WB | SB/LT | NB |
| GREEN (SEC.) | 15 | 62 | | 26 | | 62 | | |
| YELLOW CHANGE (SEC.) | 4.0 | 4.0 | | 3.0 | | 4.0 | | |
| ALL RED CLEARANCE (SEC.) | 2.0 | 2.0 | | 2.0 | | 2.0 | | |

**SR 18 / I-71 NB RAMPS (C & D)
TIMING CHART**

| INTERVAL OR FEATURE | NEMA PHASE NO. | | | | | | | |
|--------------------------|----------------|-----|-------|----|-------|-----|-------|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| INTERSECTION MOVEMENT | WB/LT | EB | NB/LT | SB | EB/LT | WB | SB/LT | NB |
| GREEN (SEC.) | | 50 | | | 15 | 50 | | 39 |
| YELLOW CHANGE (SEC.) | | 4.0 | | | 4.0 | 4.0 | | 3.0 |
| ALL RED CLEARANCE (SEC.) | | 2.0 | | | 2.0 | 2.0 | | 1.0 |

**SR 18 / WINDFALL ROAD
TIMING CHART**

| INTERVAL OR FEATURE | NEMA PHASE NO. | | | | | | | |
|--------------------------|----------------|-----|-------|-----|-------|-----|-------|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| INTERSECTION MOVEMENT | WB/LT | EB | NB/LT | SB | EB/LT | WB | SB/LT | NB |
| GREEN (SEC.) | | 80 | | 30 | | 80 | | 30 |
| YELLOW CHANGE (SEC.) | | 4.0 | | 3.0 | | 4.0 | | 3.0 |
| ALL RED CLEARANCE (SEC.) | | 2.0 | | 1.0 | | 2.0 | | 1.0 |

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

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 4" MAX BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

UTILITY WORK

EXCAVATIONS MADE FOR CONDUIT OR UTILITIES RESULTING IN OPEN TRENCHES SHALL BE ADEQUATELY MAINTAINED AND PROTECTED AT ALL TIMES. THE USE OF METAL PLATES OVER OPEN TRENCHES IS ONLY PERMITTED IMMEDIATELY AFTER THE EXCAVATION IN ORDER TO MAINTAIN THE ROADWAY LANES TO TRAFFIC. UPON COMPLETING THE SUBSURFACE CONNECTIONS, THE OPENING SHALL BE RETURNED TO THE ROADWAY SURFACE LEVEL WITH APPROVED MATERIAL.

TEMPORARY DRAINAGE

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ADEQUATE DRAINAGE OF THE TRAVELED ROADWAYS DURING ALL PHASES OF CONSTRUCTION BY USING DITCHES, EXISTING DRAINAGE FACILITIES, TEMPORARY DRAINAGE FACILITIES, AND PERMANENT DRAINAGE FACILITIES.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL VEHICLE WITH TOP MOUNTED 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 ARRANGEMENTS ARE INITIATED.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING TRAFFIC SIGNAL INSTALLATIONS.

LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE L.E.O.'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND 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 L.E.O.'S SERVICES FROM:

THE STATE HIGHWAY PATROL MEDINA OUTPOST
 3149 FRANTZ ROAD
 MEDINA, OHIO 44256-9023
 (330) 725-4921

IF AFTER CONTACTING THE OHIO HIGHWAY PATROL, IT IS DETERMINED THAT THEY CANNOT SUPPLY THE L.E.O., THEN AN AUTHORIZED MUNICIPAL OR COUNTY POLICE OFFICER WITH A MARKED AND FLASHING LIGHT EQUIPPED OFFICIAL POLICE OR PATROL VEHICLE SHALL BE PROVIDED.

LAW ENFORCEMENT OFFICER WITH PATROL VEHICLE 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 300 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED. IF THE CONTRACTOR USES L.E.O.'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614 - MAINTAINING TRAFFIC.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR DUST CONTROL PURPOSES:

ITEM 616 - WATER 415 M. GAL.

EXISTING SIGNS

WHERE THE PLANS CALL FOR A PERMANENT SIGN TO BE TEMPORARILY COVERED, THE CONTRACTOR SHALL DO SO IN SUCH A MANNER AS TO AVOID DAMAGING THE SIGN WHEN THE COVER IS REMOVED. THE COVER SHALL BE TOTALLY OPAQUE. THE USE OF ADHESIVE TAPE APPLIED DIRECTLY TO A SIGN IS STRICTLY PROHIBITED.

NO SIGNS ARE TO BE REMOVED, INSTALLED OR COVERED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

ALL COSTS FOR MODIFYING, COVERING, REMOVING AND/OR REINSTALLING EXISTING SIGNS AND SHALL BE INCLUDED FOR PAYMENT WITH ITEM 614 MAINTAINING TRAFFIC.

ITEM 614 - REPLACEMENT SIGN

FLAT SHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD, CONDITION SUBJECT TO APPROVAL BY THE ENGINEER. PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614 - REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE AND SUPPORTS.

AN ESTIMATED QUANTITY OF 5 EACH OF ITEM 614 - REPLACEMENT SIGN HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614 - REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENT OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE BID PRICE PER EACH FOR ITEM 614 - 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.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY.

ITEM 614 - REPLACEMENT DRUM 100 EACH

ITEM 614 - BARRIER REFLECTORS AND OBJECT MARKERS

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE CONCRETE BARRIERS USED FOR MAINTENANCE OF TRAFFIC. BARRIER REFLECTORS, OBJECT MARKERS, AND THEIR INSTALLATION SHALL CONFORM TO CMS 626 EXCEPT THAT THE SPACING SHALL BE 25'.

CONSTRUCTION ZONES/ FINES DOUBLED

R-180-48 SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SIGNS SHALL BE MOUNTED AT THE APPROPRIATE OFFSETS AND ELEVATIONS AS PRESCRIBED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE MAINTAINED ON SUPPORTS MEETING CURRENT SAFETY CRITERIA.

THE SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE CONSECUTIVE CALENDAR DAYS, SUCH AS DURING WINTER SHUT-DOWNS.

THE SIGNS SHALL BE DUAL MOUNTED AS SHOWN ON THE PLANS.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF CMS 614.03.

CONSTRUCTION ZONE/ FINES DOUBLED SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK AND REMOVAL OF THE SIGN AND SUPPORT.

ITEM 614 - CONSTRUCTION ZONE/ FINES DOUBLED SIGN 5 EACH

CONSTRUCTION ZONE/ FINES DOUBLED SIGN ZONE SIGNS WILL BE PLACED WHERE SHOWN IN THE PLANS.

EARTHWORK FOR MAINTAINING TRAFFIC

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY:

EXCAVATION FOR MAINTAINING TRAFFIC 100 CU.YD.
EMBANKMENT FOR MAINTAINING TRAFFIC 200 CU.YD.

FLOOD LIGHTING

THE CONTRACTOR SHALL SUBMIT A LIGHTING PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING ANY NIGHT TIME OPERATIONS.

FLOOD LIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHT TIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614-MAINTAINING TRAFFIC.

WORK ZONE IMPACT ATTENUATORS, QUADGUARD CZ, MODEL QZ24064Y (BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING THE QUADGUARD CZ, (24" WIDE 6-BAY) WORK ZONE IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750).

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS: (THE LENGTH OF THE 6-BAY QUADGUARD CZ IS 20'-9")

| DWG. NO. | DRAWING NAME | DWG./REV. DATE | ODOT APPROVAL DATE |
|------------|---|-----------------|--------------------|
| QSCZCVR-T4 | QUADGUARD CZ SYSTEM FOR CONSTRUCTION ZONES | 5/13/99 Rev. J | 8/27/99 |
| 35-40-10 | QUADGUARD SYSTEM CONCRETE PAD, CZ, QG | 11/19/97 Rev. D | 8/27/99 |
| 35-40-16 | QUADGUARD SYSTEM BACKUP ASSEMBLY, CZ, QG | 7/30/99 Rev. F | 8/27/99 |
| 354051Z | QUADGUARD CZ SYSTEM NOSE ASSEMBLY, CZ, QG, 24,30,36 | 5/17/99 | 8/27/99 |
| 35-40-18 | TRANSITION ASSEMBLY, 4 OFFSET, QG | 6/25/99 Rev. F | 8/27/99 |
| 3540260 | QUADGUARD SYSTEM PCMB ANCHOR ASSEMBLY | 11/19/97 Rev. C | 8/27/99 |

THE CONTRACTOR SHALL PROVIDE A REPLACEMENT UNIT WHEN AN IMPACT IS SEVERE ENOUGH TO REQUIRE COMPLETE REPLACEMENT OF THE ATTENUATOR. THE CONTRACTOR SHALL HAVE A SPARE PARTS PACKAGE AVAILABLE ON THE PROJECT SITE AT ALL TIMES WHEN AN ATTENUATOR IS IN PLACE. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF ONE COMPLETE SPARE PARTS PACKAGE FOR EVERY 1 TO 6 UNITS INSTALLED ON THE PROJECT SITE. FOR EXAMPLE, 5 INSTALLED UNITS REQUIRE 1 SPARE PARTS PACKAGE AND 7 INSTALLED UNITS REQUIRE 2 SPARE PARTS PACKAGES.

WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 614, WORK ZONE IMPACT ATTENUATOR, QUADGUARD CZ, MODEL QZ24064Y, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT, MAINTAIN, REPAIR, REPLACE OR RELOCATE A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 614 - WORK ZONE PAVEMENT MARKINGS

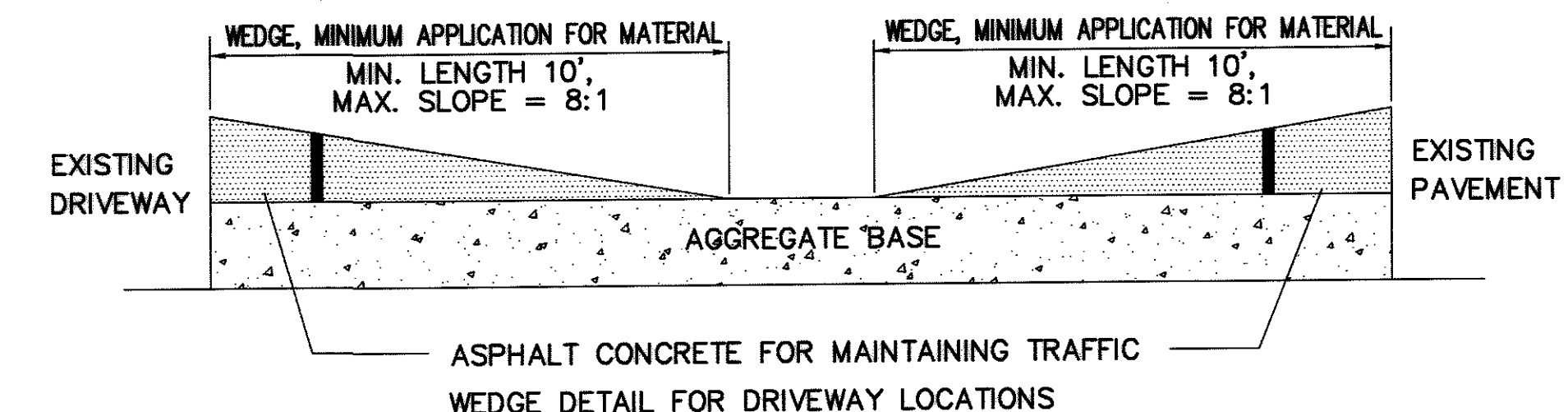
ALL WORK ZONE PAVEMENT MARKINGS APPLIED TO INTERMEDIATE SURFACE COURSES SHALL BE CLASS I, ITEM 642 - PAINT. ANY WORK ZONE PAVEMENT MARKINGS TO BE APPLIED TO FINAL SURFACES SHALL BE CLASS 1, 740.06, TYPE 1, ONLY. ALL CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED IN ACCORDANCE WITH 614.11. WORK ZONE LINES SHALL BE A MINIMUM OF FOUR (4) INCHES IN WIDTH AND STOP LINES TWELVE (12) INCHES IN WIDTH.

TEMPORARY RAMPING OF VERTICAL SURFACES AT DRIVEWAYS

IN ORDER TO PROVIDE FOR LOCAL ACCESS, LONGITUDINAL VERTICAL FACES ABUTTING DRIVES SHALL BE TEMPORARILY RAMPED AS DETAILED BELOW. TRANSVERSE VERTICAL FACES SHALL BE TEMPORARILY RAMPED A MINIMUM OF TEN FEET IN LENGTH AND TRAFFIC SHALL BE WARNED WITH OW-62 "BUMP" SIGNS IN ADVANCE OF THE RAMPED AREAS.

ALL CASTINGS ENCOUNTERED SHALL BE SET TO GRADE AND PAID FOR UNDER VARIOUS ITEMS DESCRIBED ELSEWHERE IN THE ROADWAY GENERAL NOTES OR SPECIFICATIONS. THE CASTING ELEVATION DIFFERENTIAL SHALL NOT BE GREATER THEN ONE (1) INCH WHEN EXPOSED TO TRAFFIC.

ALL TEMPORARY RAMPING SHALL BE INSTALLED, AT THE DIRECTION OF THE ENGINEER, USING ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC.



ITEM 606 - GUARDRAIL, TYPE 5, AS PER PLAN

GUARDRAIL UNDER THIS ITEM SHALL MEET THE REQUIREMENTS OF CMS ITEM 606, TYPE 5 GUARDRAIL EXCEPT USED MATERIAL WHEN IN SOUND CONDITION CAN BE USED, WHEN APPROVED BY THE ENGINEER. ADDITIONALLY, AT THE COMPLETION OF THE MAINTENANCE OF TRAFFIC PHASE, WHICH REQUIRES THE GUARDRAIL INSTALLATION, THE GUARDRAIL SHALL BE REMOVED AT NO ADDITIONAL COST.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE AT CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING AND THE SUBSEQUENT REMOVAL FOR ITEM 606 - GUARDRAIL, TYPE 5, AS PER PLAN.

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98, AS PER PLAN

ANCHOR ASSEMBLIES UNDER THIS ITEM SHALL MEET THE REQUIREMENTS OF ITEM 606, EXCEPT USED MATERIAL WHEN IN SOUND CONDITION CAN BE USED, WHEN APPROVED BY THE ENGINEER.

THE CONTRACTOR SHALL FURNISH THE FOLLOWING NEW MATERIALS: POSTS, SPACER BLOCKS, BOLTS, WASHERS, AND SUCH INCIDENTAL HARDWARE AS MAY BE NECESSARY TO COMPLETE THE ANCHOR ASSEMBLY. ADDITIONALLY, AT THE COMPLETION OF THE MAINTENANCE OF TRAFFIC PHASE, WHICH REQUIRES THE GUARDRAIL INSTALLATION, THE ANCHOR ASSEMBLY SHALL BE REMOVED AT NO ADDITIONAL COST.

WHEN TRAFFIC IS PLACED NEXT TO THE GUARDRAIL THE CONTRACTOR SHALL INSTALL AND MAINTAIN TWO DRUMS IN ADVANCE OF EACH GUARDRAIL ANCHOR ASSEMBLY. THE FIRST DRUM SHALL BE PLACED DIRECTLY IN FRONT OF THE TERMINAL ASSEMBLY AND THE SECOND DRUM 25 FEET IN ADVANCE OF THE FIRST DRUM.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING AND THE SUBSEQUENT REMOVAL FOR ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98, AS PER PLAN.

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ACCESS TO ABUTTING COMMERCIAL PROPERTIES.

THE CONTRACTOR SHALL MAINTAIN SAFE AND SATISFACTORY ACCESS TO ABUTTING PROPERTIES AS DIRECTED BY THE ENGINEER. PART-WIDTH CONSTRUCTION SHALL BE USED FOR DRIVEWAYS WHERE THERE IS A SINGLE POINT OF INGRESS/EGRESS DIRECTLY FROM S.R. 18 TO AN ABUTTING PROPERTY. FULL WIDTH CONSTRUCTION MAY BE USED FOR DRIVEWAYS WHERE THERE ARE TWO OR MORE POINTS OF INGRESS/EGRESS TO AN ABUTTING PROPERTY HOWEVER, NOT MORE THAN ONE DRIVEWAY MAY BE CLOSED AT A TIME. THE CONTRACTOR SHALL SCHEDULE THE DRIVEWAY CONSTRUCTION SUCH THAT ACCESS IS MAINTAINED BY MEANS OF THE EXISTING DRIVE, A TEMPORARY ASPHALT DRIVE OR PROPOSED CONCRETE DRIVE. THE CONTRACTOR SHALL REFER TO THE PLANS FOR ADDITIONAL DIRECTION ON SPECIFIC DRIVEWAYS. ALL CONCRETE APRONS WILL BE CONSTRUCTED USING TYPE FS CONCRETE.

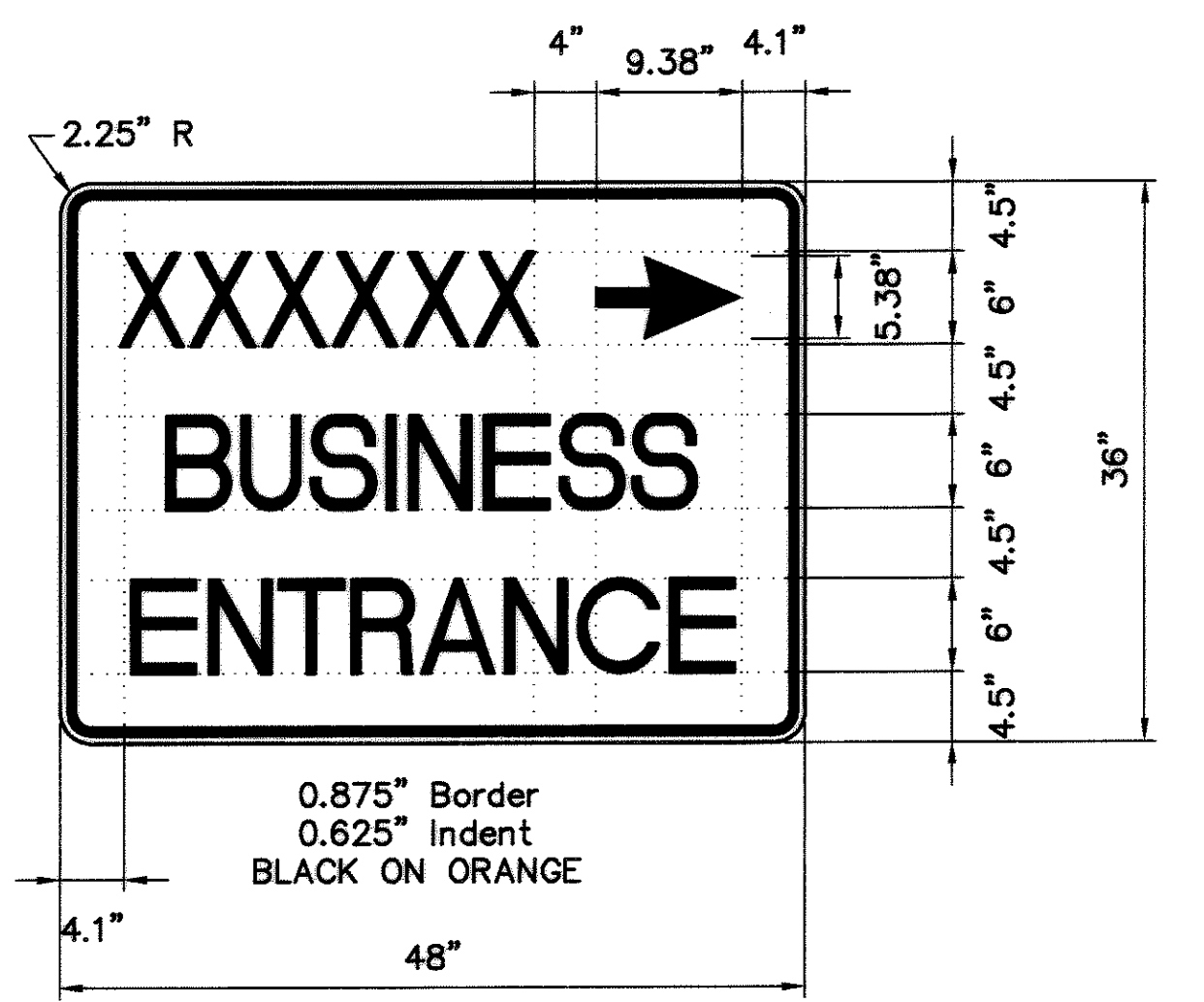
ITEM 614 - MAINTAINING TRAFFIC MISC.; LOCAL BUSINESS SIGNING

EACH COMMERCIAL DRIVEWAY SHALL HAVE A GROUND MOUNTED SIGN WHICH IDENTIFIES THE BUSINESSES. ONLY ONE SIGN PER BUSINESS IS PERMITTED. THE SIGN SHALL BE 36"x48" IN SIZE WITH TYPE G OR TYPE H ORANGE REFLECTIVE SHEETING. THE SIGN SHALL BE AS DETAILED BELOW. IT IS THE RESPONSIBILITY OF EACH BUSINESS TO FURNISH THE MESSAGE, EITHER BY NAME OF LOGO (NOT BOTH) TO THE CONTRACTOR TO PLACE ON THE SIGN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT EACH EFFECTED BUSINESSES TO REQUEST THE MESSAGE. THE SIGN SHALL BE MOUNTED ON TWO #3 POSTS OR ON TEMPORARY POSTS IN ACCORDANCE WITH SCD'S MT-105.10 AND MT-105.11, AND IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTRL DEVICES. THE SIGNS SHALL BE CLEARLY VISIBLE AND CLEARLY IDENTIFY THE LOCATION OF EACH DRIVE. THE SIGNS MAY NEED MOVED FOR EACH PHASE OF THE MAINTENANCE OF TRAFFIC OPERATIONS.

PAYMENT FOR ALL COSTS ASSOCIATED WITH THE MANUFACTURING, MOUNTING, RELOCATING, AND REMOVING THE SIGNS, INCLUDING ALL LABOR, MATERIALS AND EQUIPMENT SHALL BE INCLUDED IN THE EACH CONTRACT PRICE FOR ITEM FOR ITEM 614 - MAINTAINING TRAFFIC MISC.; LOCAL BUSINESS SIGNING.

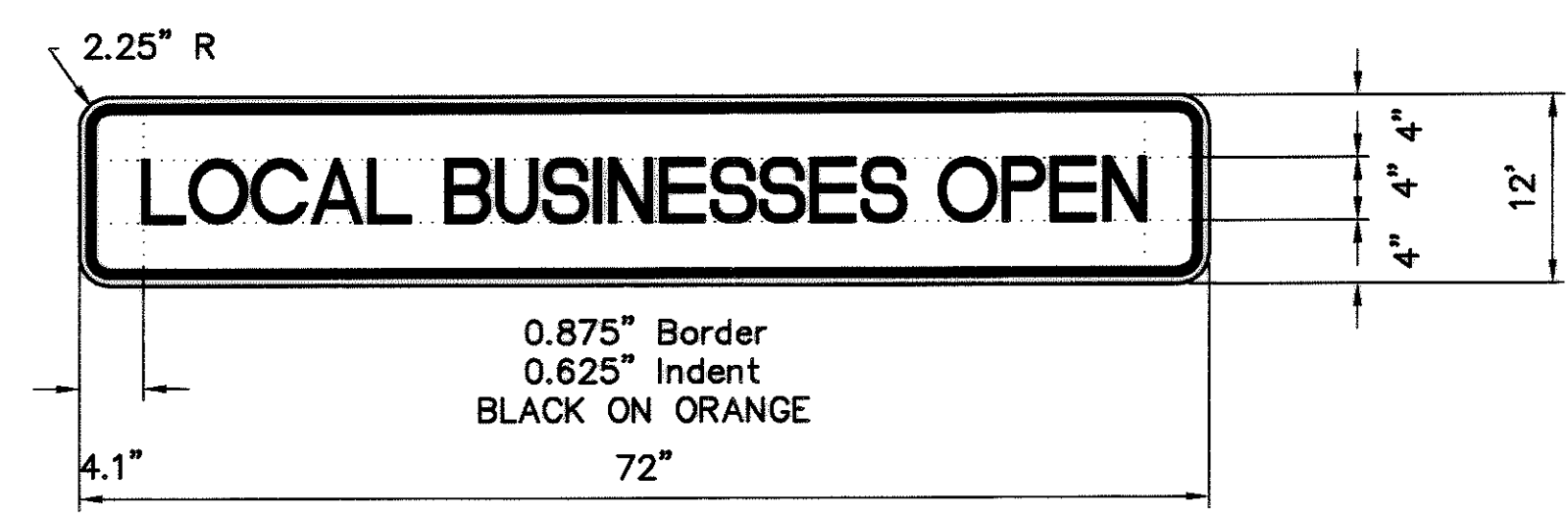
THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS ITEM.

ITEM 614 - MAINTAINING TRAFFIC MISC.; LOCAL BUSINESS SIGNING 25 EACH



IN ADDITION TO THE SIGNS LISTED ABOVE THE CONTRACTOR SHALL INSTALL 4 SIGNS, AS DETAILED BELOW, ON THE LOGO SIGNS ON THE NB AND SB OFF RAMPS OF I-71 (TWO ON THE NB EXIT RAMP AND TWO ON THE SB EXIT RAMP.) THE SIGNS SHALL BE MOUNTED BELOW THE BOTTOM OF EXISTING LOGO'S SIGNS ACROSS THE EXISTING SUPPORTS.

PAYMENT FOR ALL COSTS ASSOCIATED WITH THE MANUFACTURING, MOUNTING, AND REMOVING THE SIGNS, INCLUDING ALL LABOR, MATERIALS AND EQUIPMENT SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM FOR ITEM 614 - MAINTAINING TRAFFIC.



CONTRACTOR'S EQUIPMENT AND OPERATION

ALL VEHICLES AND EQUIPMENT ENTERING OR EXITING THE WORK ZONES MUST BE EQUIPPED WITH AT LEAST ONE FLASHING, ROTATING OR OSCILLATING AMBER LIGHT THAT IS VISIBLE IN ALL DIRECTIONS OF TRAFFIC FOR AT LEAST 1/4 MILE, DAY OR NIGHT. THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAFFIC.

WHILE IN THE WORK ZONE AND BEHIND PCB'S THE FLASHERS ARE TO BE TURNED OFF.

PRIVATE VEHICLES WILL NOT BE PERMITTED WITHIN THE PROJECT LIMITS.

SUSPENSION OF WORK

IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR MAINTENANCE OF TRAFFIC AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE MANUAL, THE ENGINEER MAY SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS. NO COMPENSON WILL BE PAID FOR SUSPENSION OF WORK.

ALTERNATE MAINTENANCE OF TRAFFIC PLANS

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING BY THE ENGINEER.

METHOD OF PAYMENT

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 ITEM 614 MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

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| PHASE | SHEET NO. | STATION | | SIDE | LOCATION | 606 | | | | | | | | | | 614 | | | | | | | | | | 615 | | 617 | 622 | | | | |
|----------------------|-----------|---------|--------|---------|----------|--------------------------------|---|-------------------------|--|------------------------|----------------------------|---------------------------|------------------------|--|---|---|--|--|---|---|--|---|--|---|--|---|--|-------------------------------|--|-----------------------------|--------------------------------|------|--|
| | | FROM | TO | | | GUARDRAIL, TYPE 5, AS PER PLAN | ANCHOR ASSEMBLY, TYPE E-98, AS PER PLAN | ANCHOR ASSEMBLY, TYPE T | WORK ZONE IMPACT ATTENUATOR QUADGUARD CZ, MODEL QZ24064Y | WORK ZONE MARKING SIGN | WORK ZONE SPEED LIMIT SIGN | BARRIER REFLECTOR, TYPE B | OBJECT MARKER, ONE WAY | WORK ZONE SOLID LANE LINE CLASS 1, 642 PAINT | WORK ZONE SOLID LANE LINE CLASS 1, 740.06, TYPE 1 | WORK ZONE CENTERLINE CLASS 1, 642 PAINT | WORK ZONE CENTERLINE CLASS 1, 740.06, TYPE 1 | WORK ZONE EDGE LINE, YELLOW CLASS 1, 642 PAINT | WORK ZONE EDGE LINE, YELLOW CLASS 1, 740.06, TYPE 1 | WORK ZONE EDGE LINE, WHITE CLASS 1, 642 PAINT | WORK ZONE EDGE LINE, WHITE CLASS 1, 740.06, TYPE 1 | WORK ZONE CHANNELIZING LINE, CLASS 1, 642 PAINT | WORK ZONE DOTTED LINE, WHITE, CLASS 1, 642 PAINT | WORK ZONE TRANSVERSE LINE, YELLOW, CLASS 1, 642 PAINT | WORK ZONE TRANSVERSE LINE, YELLOW, CLASS 1, 740.06, TYPE 1 | WORK ZONE STOP LINE, CLASS 1, 642 PAINT | WORK ZONE LANE ARROW, CLASS 1, 642 PAINT | ROADS FOR MAINTAINING TRAFFIC | PAVEMENT FOR MAINTAINING TRAFFIC CLASS A | COMPACTED AGGREGATE, TYPE A | PORTABLE CONCRETE BARRIER, 32" | | |
| | | | | | | LIN. FT. | EACH | EACH | EACH | EACH | EACH | EACH | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | EACH | LUMP | S.Y. | C.Y. | LIN. FT. | | | | |
| 4 | 50 | 122+00 | 125+50 | € | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 50 | 125+50 | 129+99 | LT./RT. | S.R. 18 | | | | | | | 898 | | | | 898 | | | | | | | | | | | | | | | | | |
| 4 | 50 | 125+50 | 175+60 | LT./RT. | S.R. 18 | | | | | | | | | | | | | 10020 | | | | | | | | | | | | | | | |
| 4 | 50 | 125+56 | 125+91 | RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | 35 | | |
| 4 | 50 | 128+00 | 129+99 | RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 | |
| 4 | 50 | 128+38 | 128+48 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | 35 | |
| 4 | 50 | 129+73 | 130+08 | RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | 35 | |
| 4 | 50 | 131+08 | 131+43 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 50 | 131+17 | 133+48 | RT. | S.R. 18 | | | | | | | 231 | | | | 231 | | | | | | | | | | | | | | | | | |
| 4 | 50 | 131+33 | 133+50 | LT. | S.R. 18 | | | | | | | 217 | | | | 217 | | | | | | | | | | | | | | | | | |
| 4 | 51 | 133+19 | 133+54 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 133+50 | 134+75 | LT./RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 134+75 | 134+85 | RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 134+75 | 142+64 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 134+75 | 145+60 | RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 142+00 | 145+60 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 142+00 | 146+60 | RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 142+64 | 144+00 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 143+25 | 146+60 | RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 144+00 | 145+60 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 145+60 | 147+29 | LT./RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 147+22 | 153+40 | RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 147+29 | 153+40 | LT./RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 153+40 | 155+10 | LT./RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 155+08 | 163+24 | RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 155+10 | 156+00 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 155+10 | 163+14 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 157+50 | 163+24 | RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 51 | 157+72 | 157+82 | RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 52 | 163+24 | 164+52 | RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 52 | 164+52 | 167+00 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 52 | 164+52 | 175+60 | LT./RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 52 | 176+77 | 176+77 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 52 | 176+77 | 178+00 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 52 | 176+77 | 179+71 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUBTOTAL FOR PHASE 4 | | | | | | | | | 2 | | | 61 | 61 | 8988 | | | | 8932 | 10314 | | 4832 | 3659 | 346 | | | | | | | | | 1399 | |

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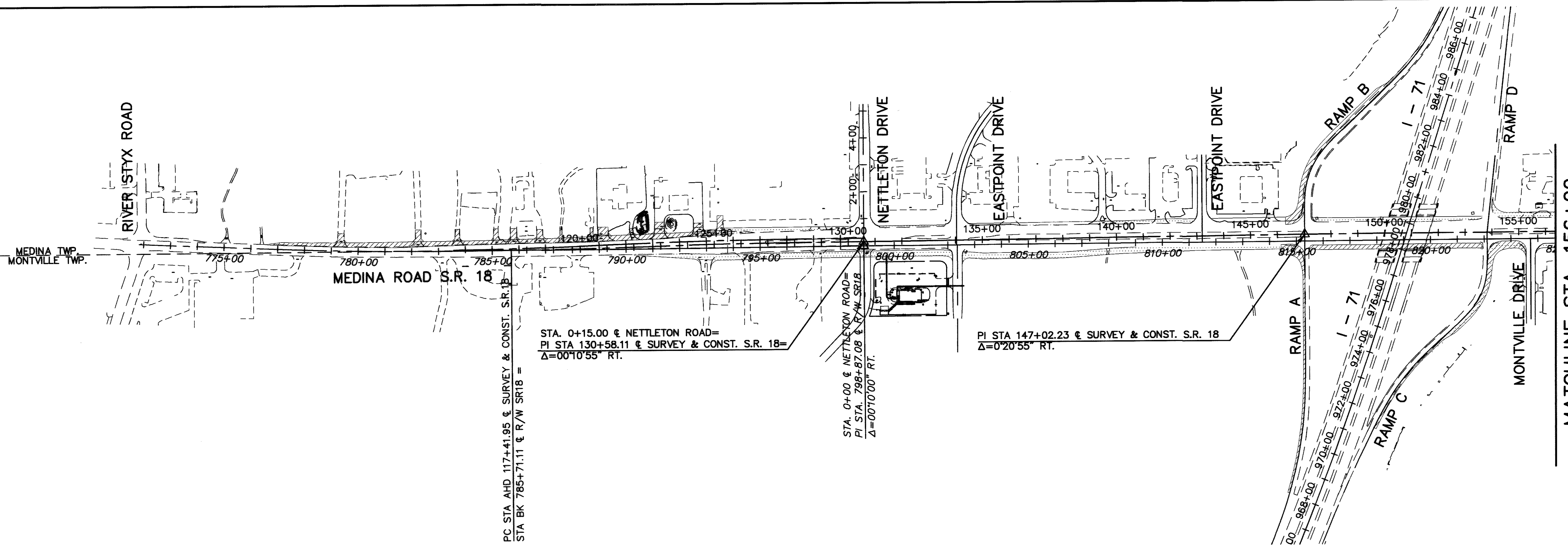
**MAINTENANCE OF TRAFFIC
QUANTITY SUBSUMMARY**

| PHASE | SHEET NO. | STATION | | SIDE | LOCATION | 606 | | | | | | | | | 614 | | | | | | | | | | | 615 | | 617 | 622 | | | | | | | |
|--|-----------|---------|--------|---------|----------|----------|------|------|------|------|------|------|------|-------|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|-------|--|--|
| | | FROM | TO | | | LIN. FT. | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | LIN. FT. | | | | |
| 5 | 53 | 144+00 | 163+00 | LT./RT. | S.R. 18 | | | | | | | | | | | | | 3800 | | | | | | | | | | | | | 32 | | | | | |
| 5 | 53 | 144+00 | 145+60 | LT./RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 53 | 144+00 | 146+75 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 54 | 144+45 | 146+00 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 54 | 145+60 | 147+53 | LT./RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 54 | 147+53 | 153+40 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 54 | 147+53 | 153+12 | LT./RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 54 | 147+33 | 153+51 | RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 54 | 153+40 | 155+10 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 54 | 153+51 | 154+35 | RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 54 | 154+25 | 156+00 | LT./RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 54 | 155+10 | 156+22 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 54 | 155+10 | 162+00 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 54 | 155+10 | 163+00 | LT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 54 | 154+35 | 163+00 | RT. | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUBTOTAL FOR PHASE 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PHASE 1 SUBTOTAL | | | | | | 950 | 16 | 16 | 2 | 20 | 2 | 215 | 215 | 9408 | 2200 | 515 | 200 | 4012 | 4558 | 6410 | 12916 | 3615 | 670 | 220 | 346 | 337 | 109 | | | | | | | | | |
| PHASE 2 SUBTOTAL | | | | | | | | | 6 | | | 552 | 552 | 11846 | | | | 9329 | 1002 | 10230 | 2265 | 917 | 150 | | 349 | 79 | | | | | | | | | | |
| PHASE 3 SUBTOTAL | | | | | | | | | 3 | | | 366 | 366 | 10711 | | | | 2892 | | 16620 | 944 | 2952 | 220 | 346 | 34 | 95 | | | | | | | | | | |
| PHASE 4 SUBTOTAL | | | | | | | | | 2 | | | 61 | 61 | 8988 | | | | 8932 | | 10314 | 4832 | 3659 | 346 | | 326 | 111 | | | | | | | | | | |
| PHASE 5 SUBTOTAL | | | | | | | | | 4 | | | 70 | 70 | 4030 | | | | 3180 | | 3800 | 3132 | 2199 | 153 | | 136 | 74 | | | | | | | | | | |
| GRAND TOTAL CARRIED TO GENERAL SUMMARY | | | | | | 950 | 16 | 16 | 6* | 20 | 2 | 1264 | 1264 | 44983 | 2200 | 857 | 200 | 28345 | 5560 | 47374 | 12916 | 14788 | 10397 | 1089 | 692 | 1182 | 468 | LUMP | | 19200 | 479 | | | 30983 | | |
| GRAND TOTAL (MILES) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* MAXIMUM NUMBER OF UNITS REQUIRED FOR ANY WORK PHASE. RELOCATING TO VARIOUS PHASES IS INCLUDED IN UNIT PRICE BID PER EACH, AS PER NOTE, SHEET NO. 26

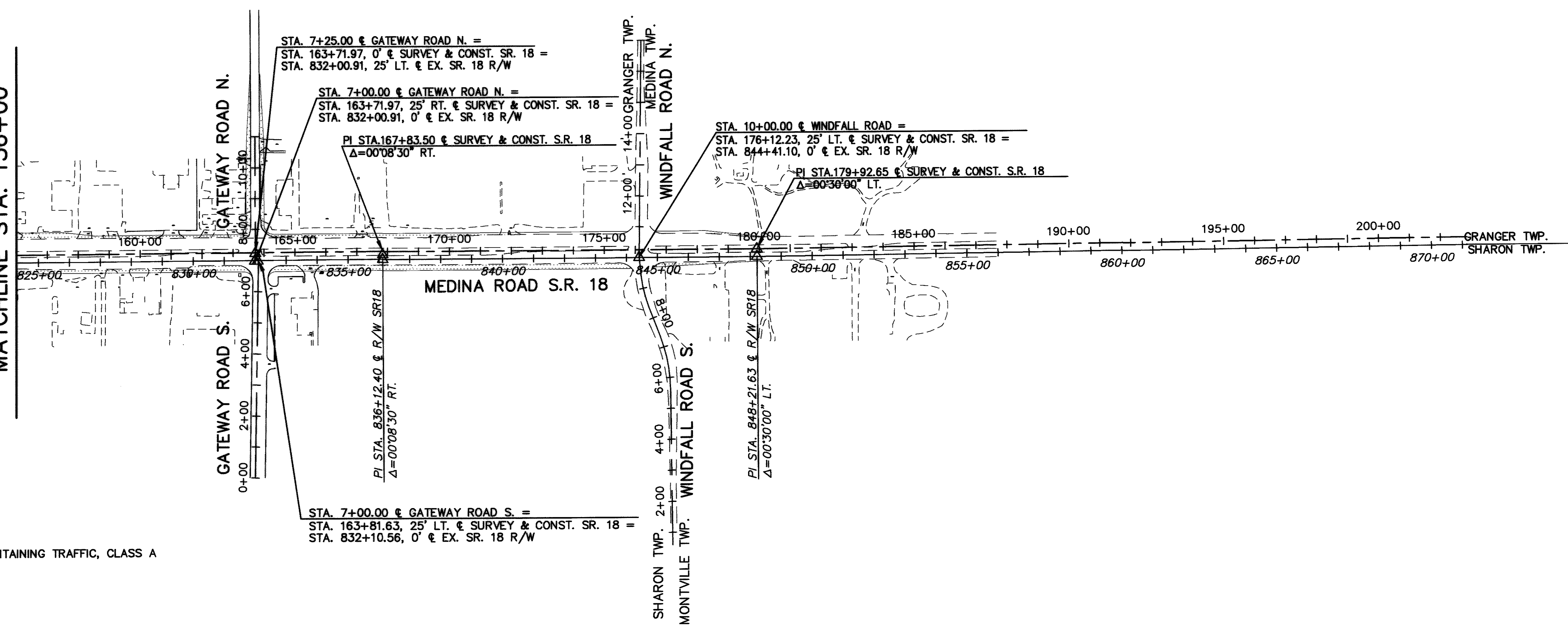
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MAINTENANCE OF TRAFFIC QUANTITY SUBSUMMARY



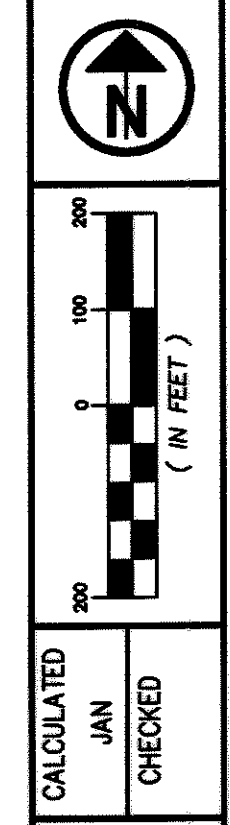
MATCHLINE STA. 156+00
SEE BELOW

SEE ABOVE
MATCHLINE STA. 156+00



LEGEND

- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- PHASE CONSTRUCTION





MOT SCHEMATIC PLAN
PHASE 1

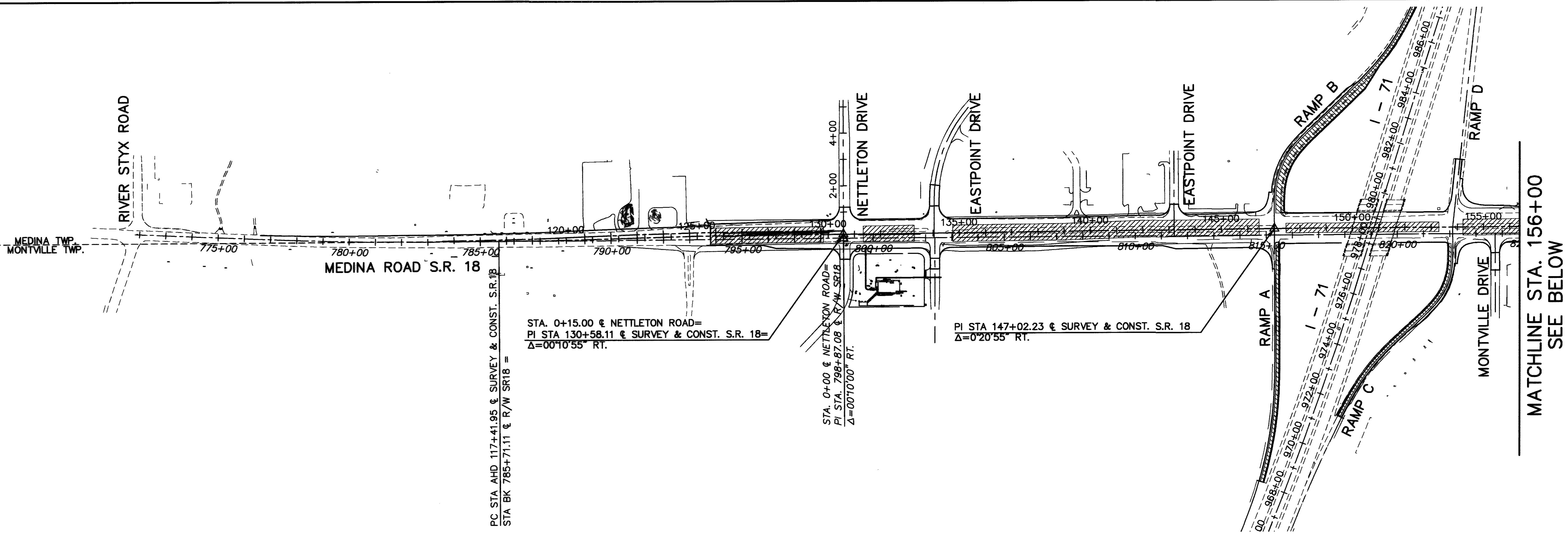
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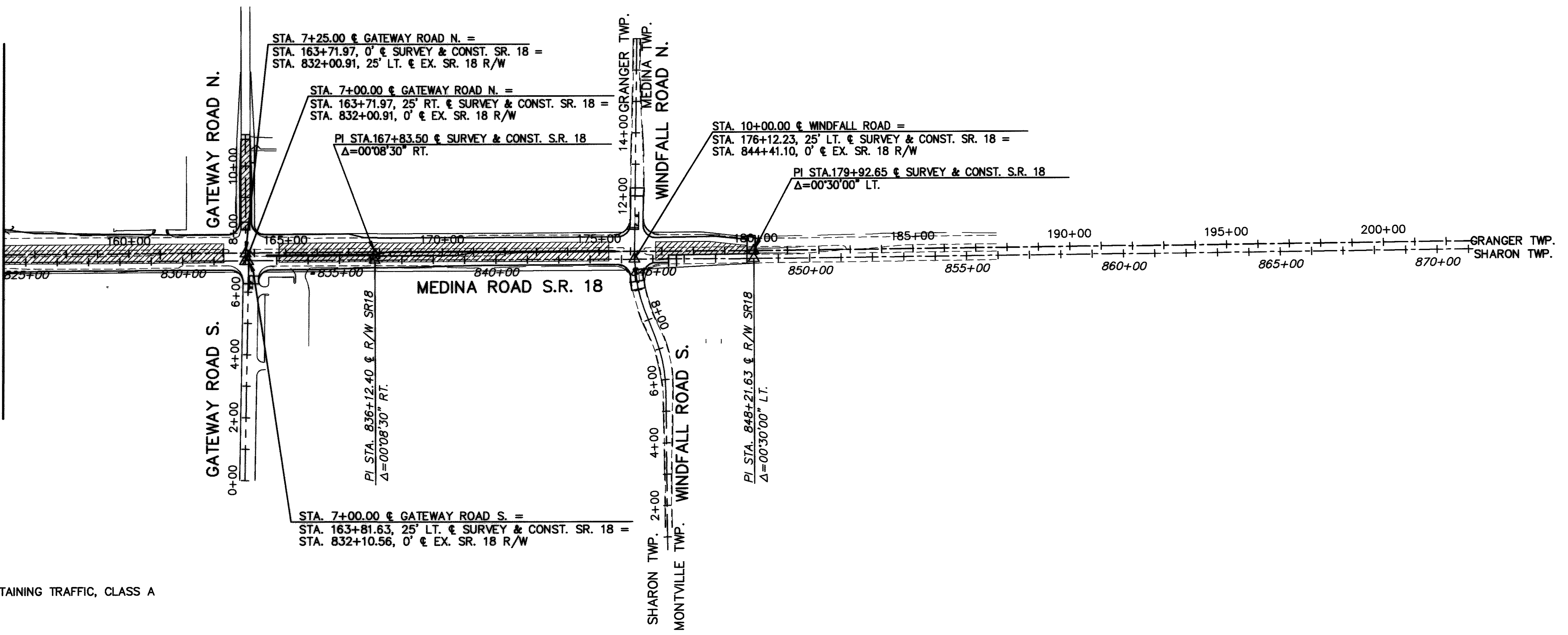
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 ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A

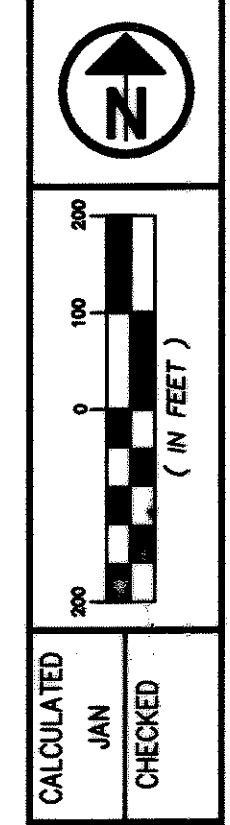
 PHASE CONSTRUCTION



SEE ABOVE
MATCHLINE STA. 156+00

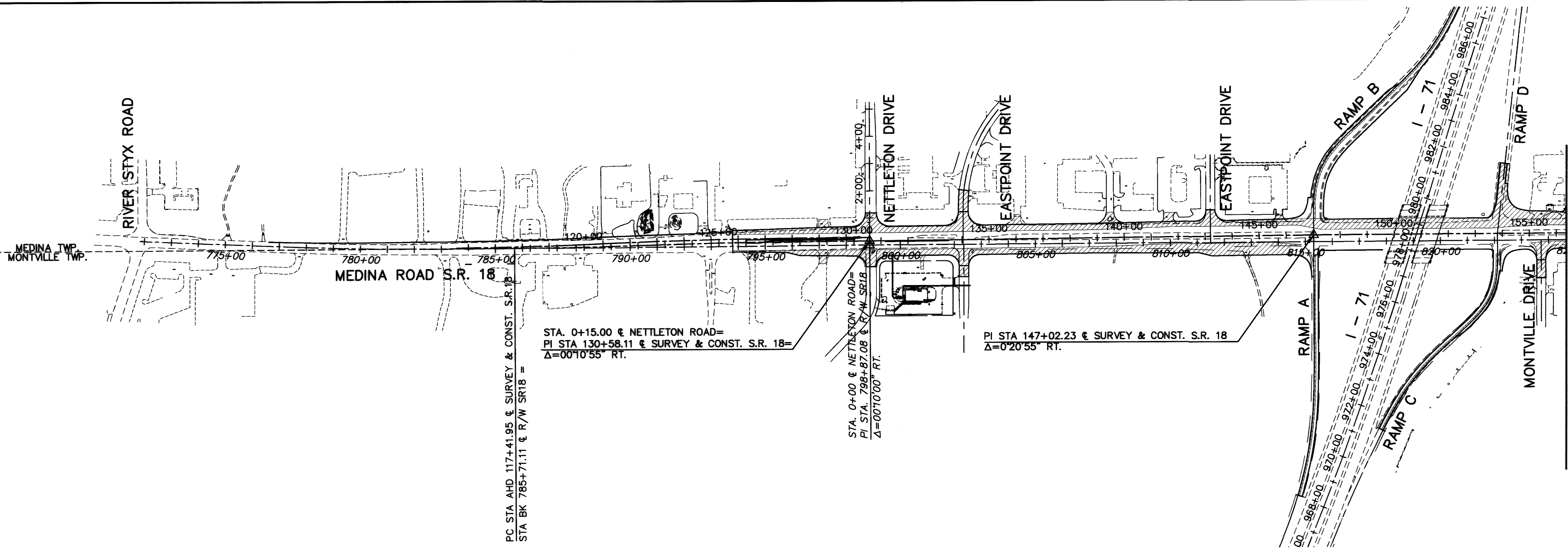


MATCHLINE STA. 156+00
SEE BELOW

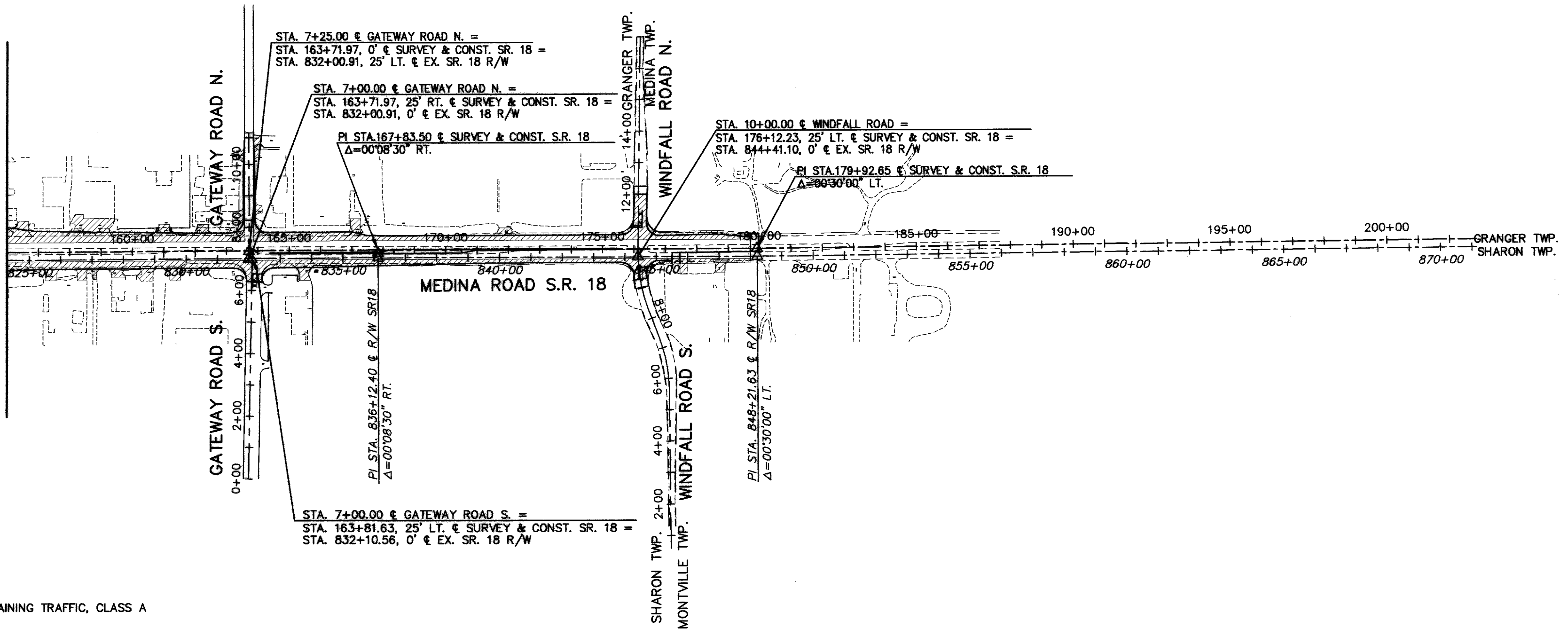


MOT SCHEMATIC PLAN
PHASE 2

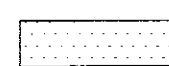
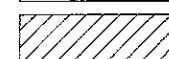
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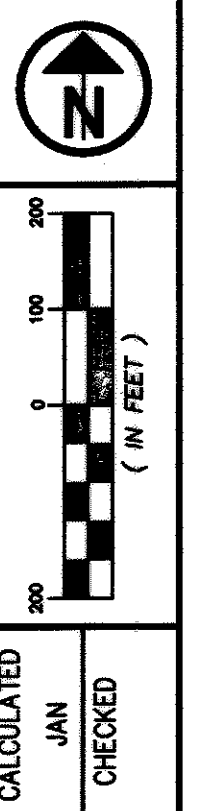
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 MATCHLINE STA. 156+00



LEGEND

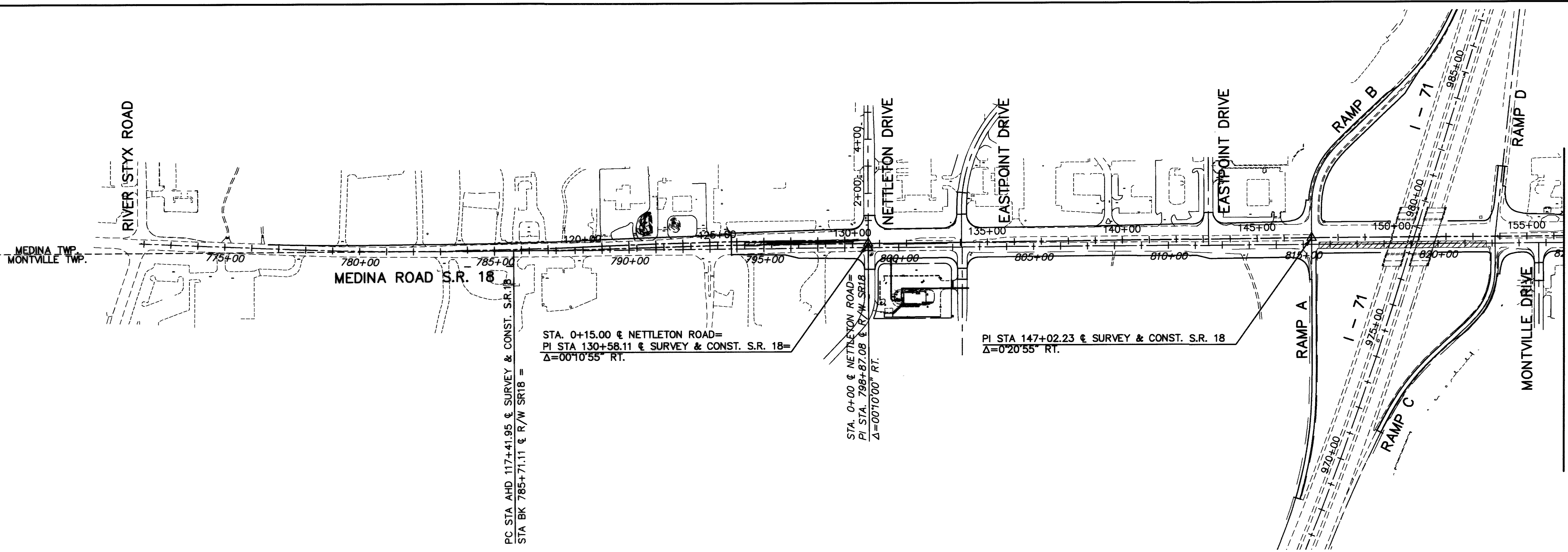
-  ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
-  PHASE CONSTRUCTION

MATCHLINE STA. 156+00
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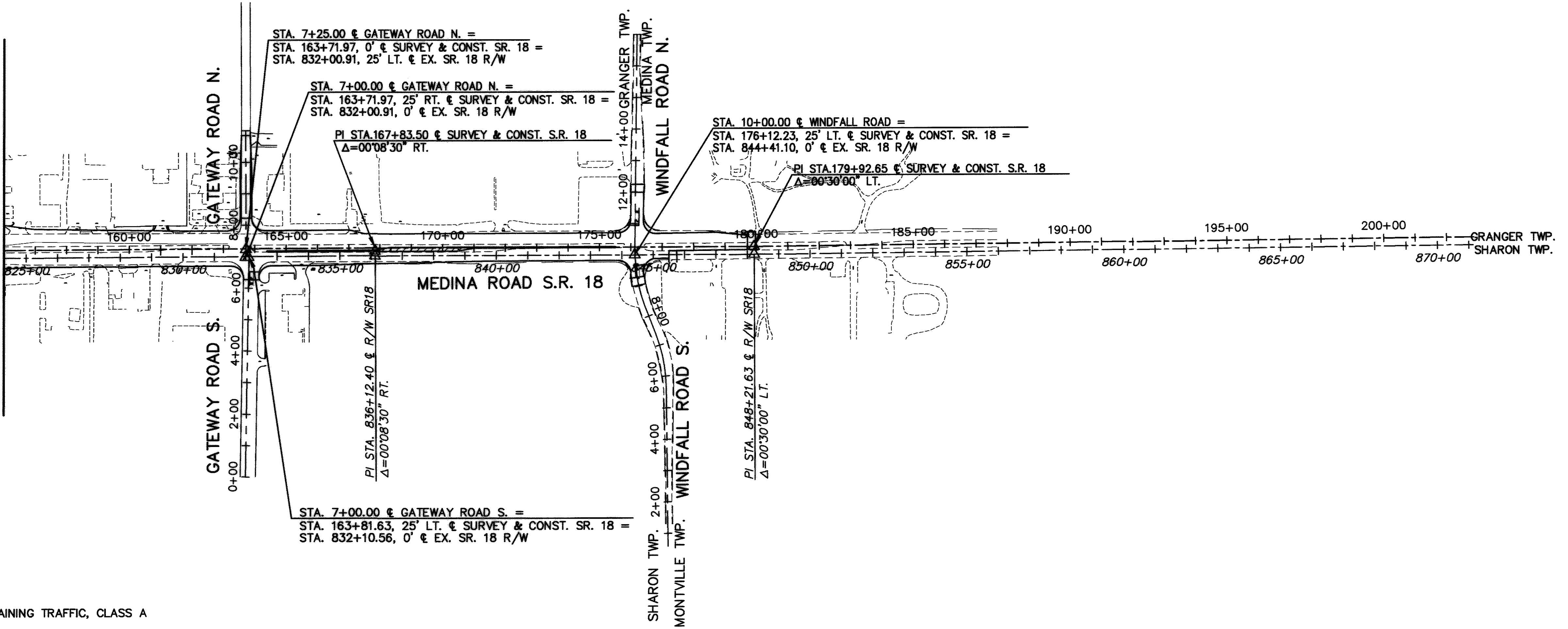


MOT SCHEMATIC PLAN
 PHASE 3

MED - 18 - 15.13

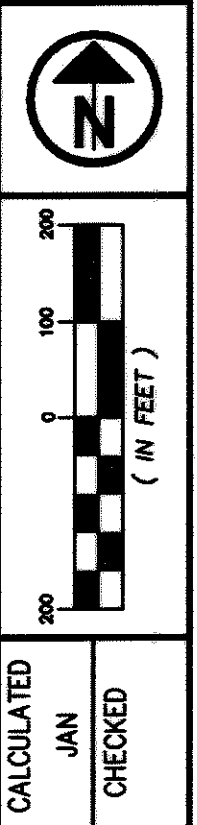


SEE ABOVE
MATCHLINE STA. 156+00



LEGEND
 ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
 PHASE CONSTRUCTION

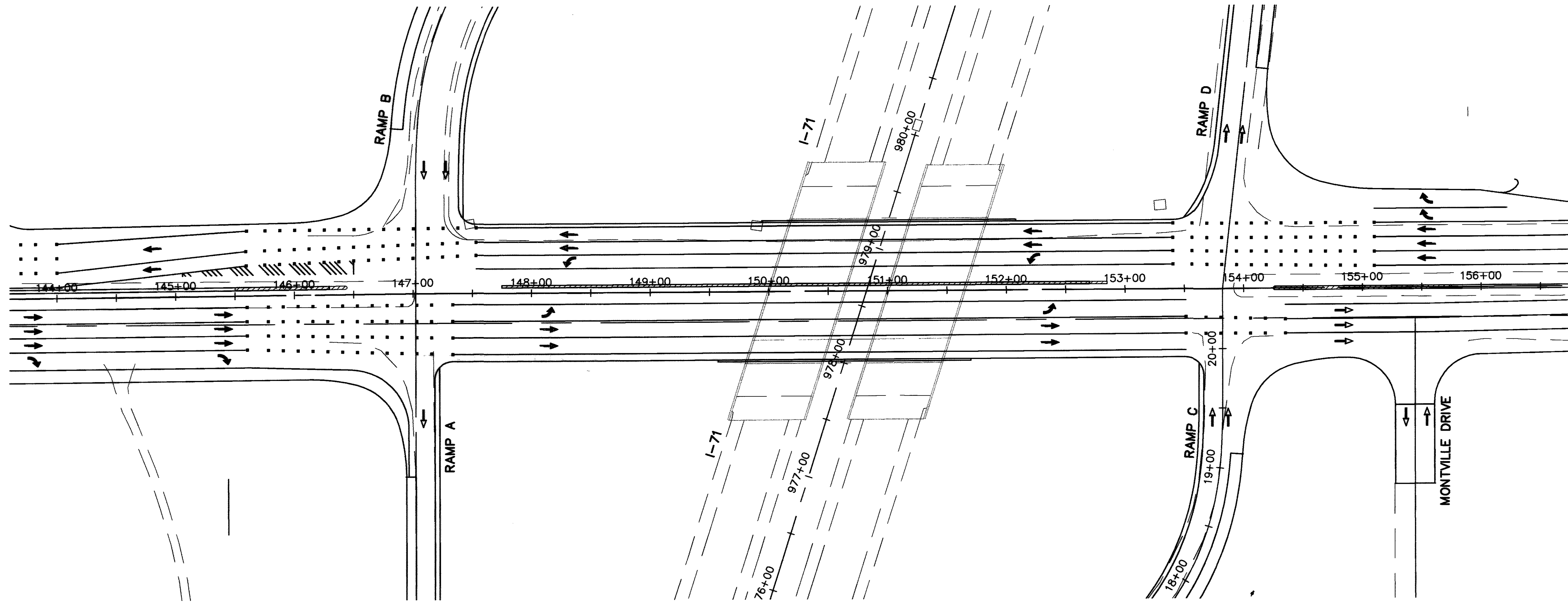
MATCHLINE STA. 156+00
SEE BELOW



MOT SCHEMATIC PLAN
PHASE 4

MED - 18 - 15.13

LEGEND
PHASE CONSTRUCTION



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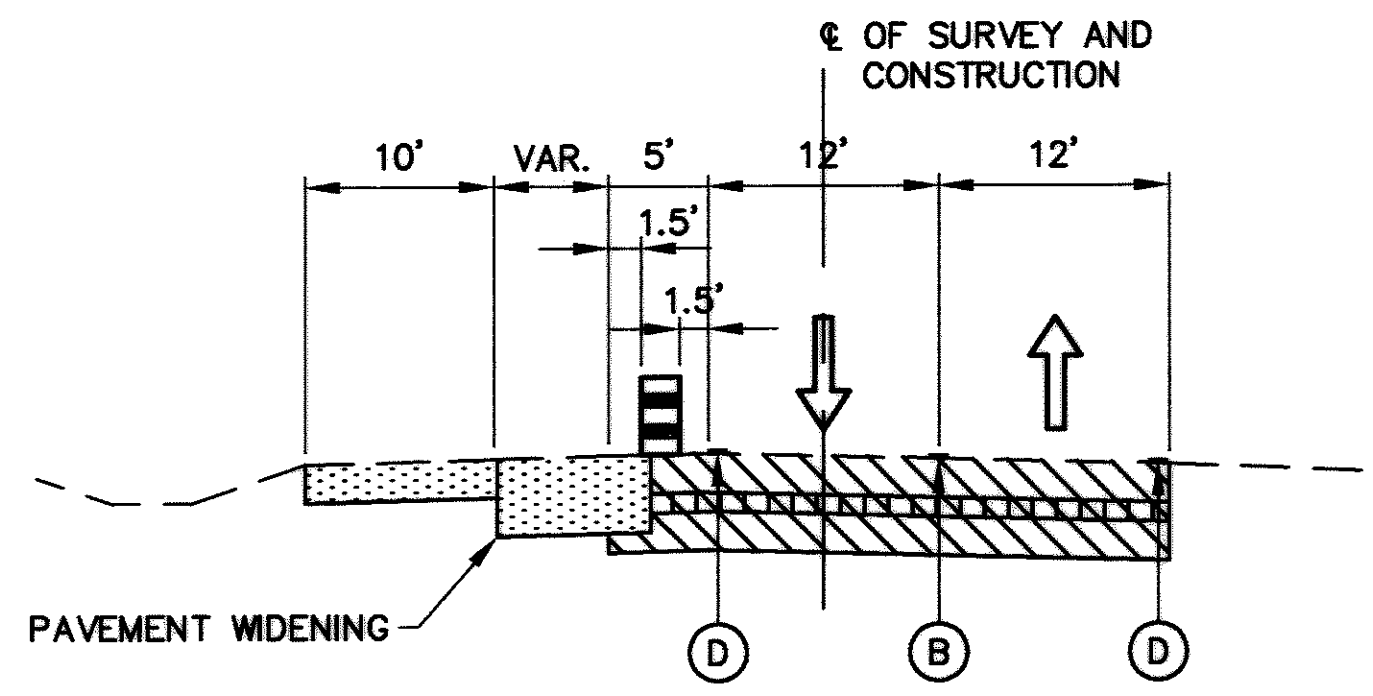
MOT SCHEMATIC PLAN
PHASE 5

MED - 18 - 15.13

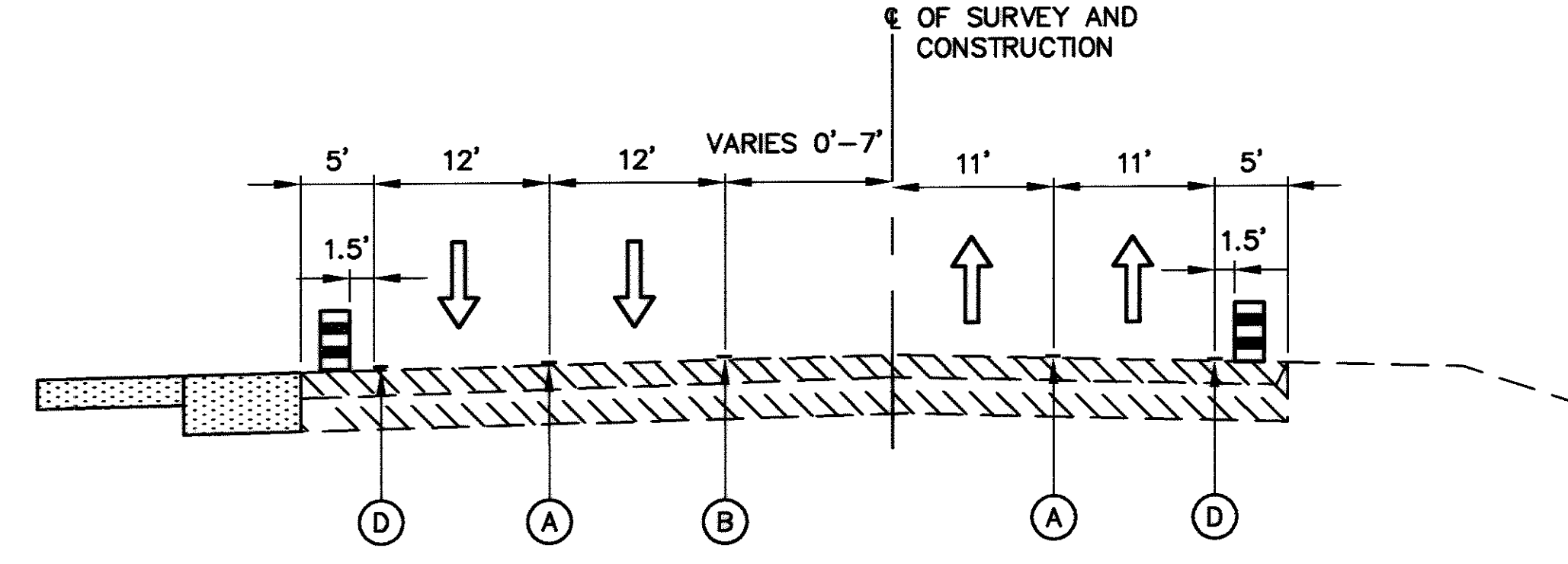
37A
362

LEGEND

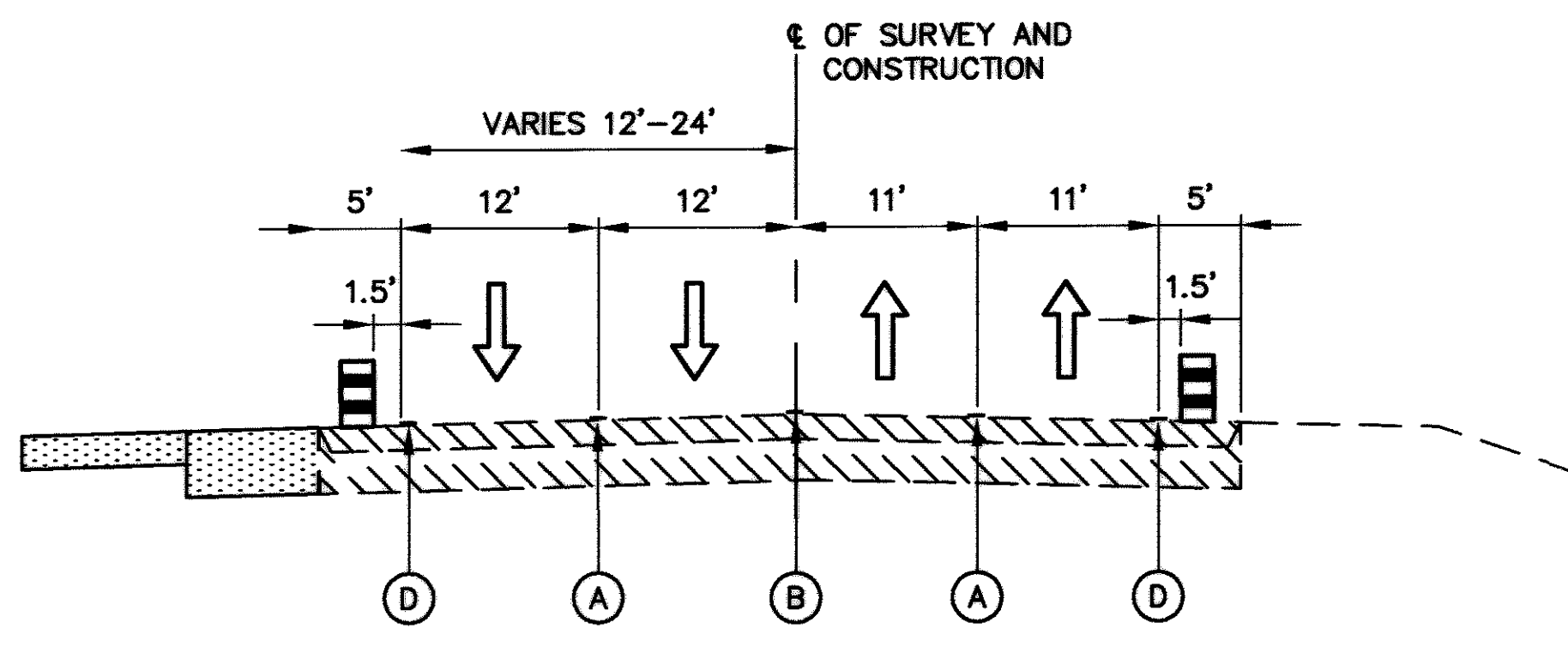
-  EXISTING PAVEMENT
-  PAVEMENT UNDER CONSTRUCTION
-  PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
-  COMPLETED PAVEMENT
- (A) WORK ZONE SOLID LANE LINE
- (B) WORK ZONE CENTERLINE
- (D) WORK ZONE EDGE LINE, WHITE
- (E) WORK ZONE EDGE LINE, YELLOW



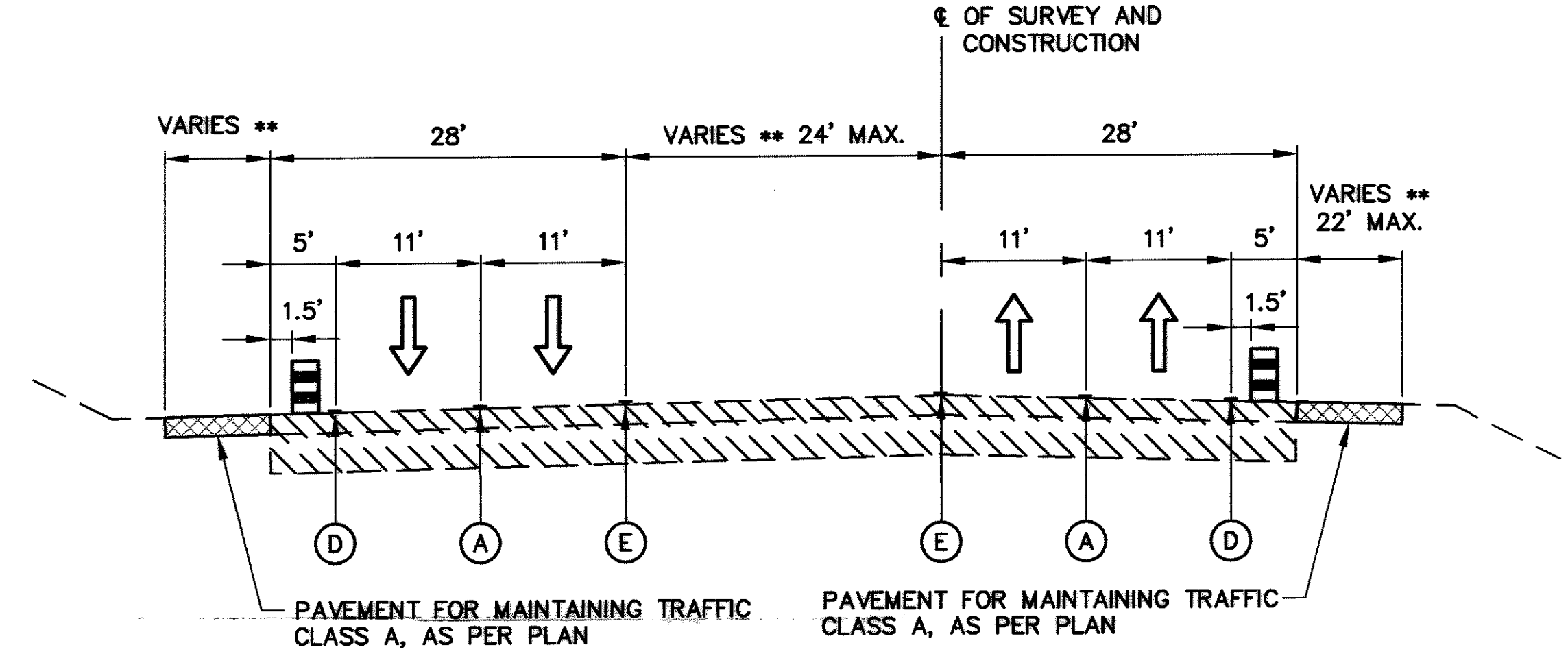
STA. 775+60 TO 117+49.95
PHASE 1



STA. 122+00 TO 125+50
PHASE 1



STA. 117+49.95 TO 122+00
PHASE 1


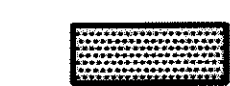








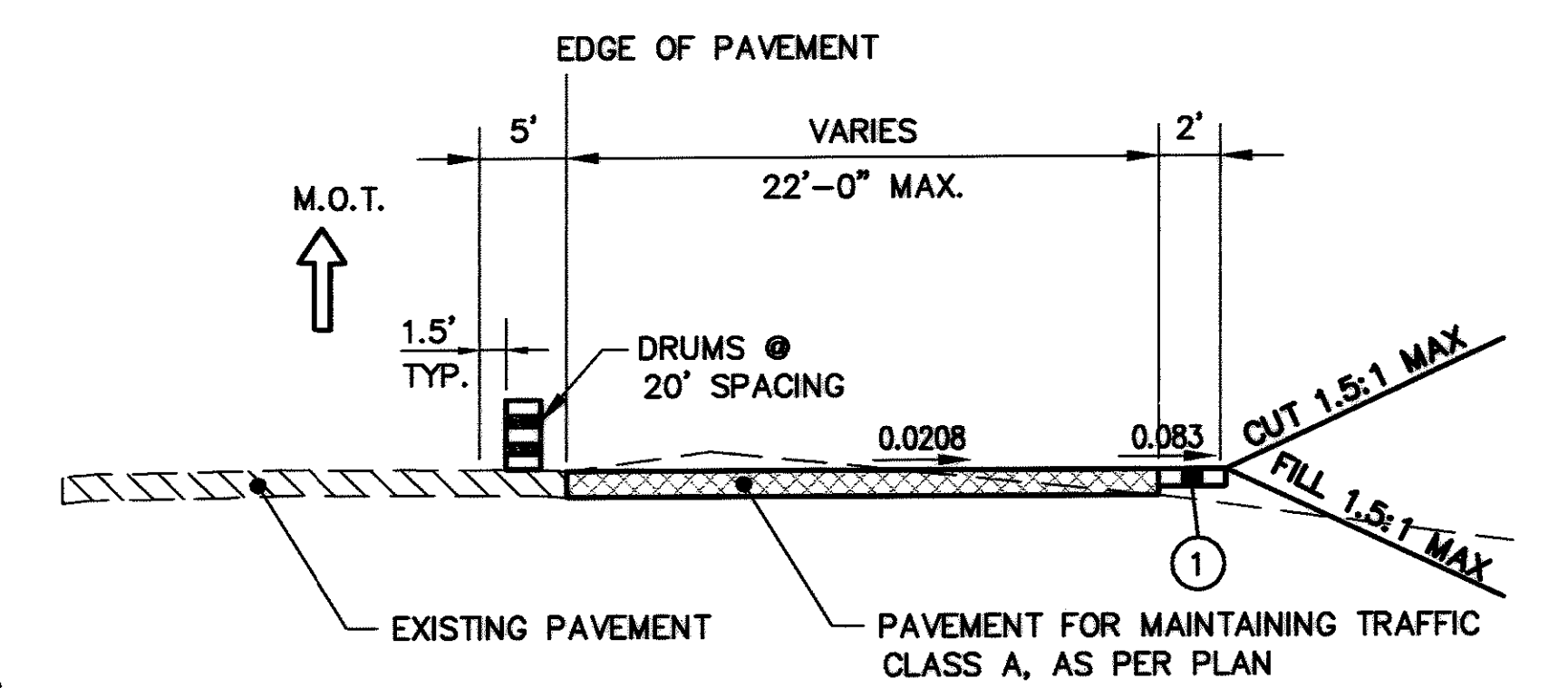
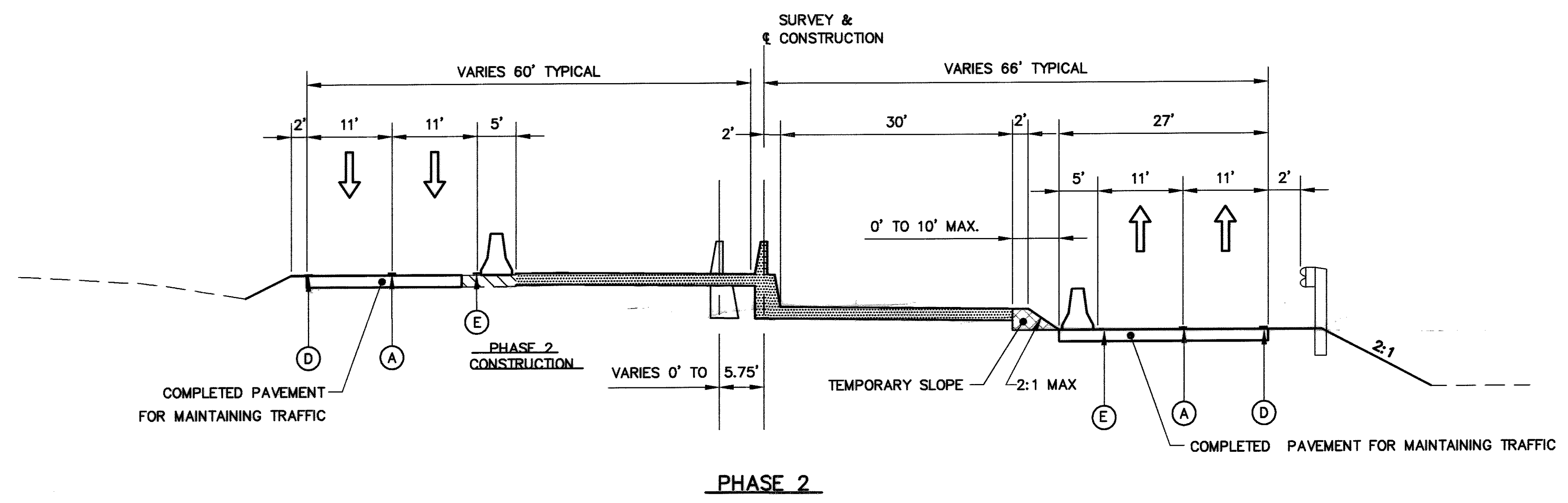
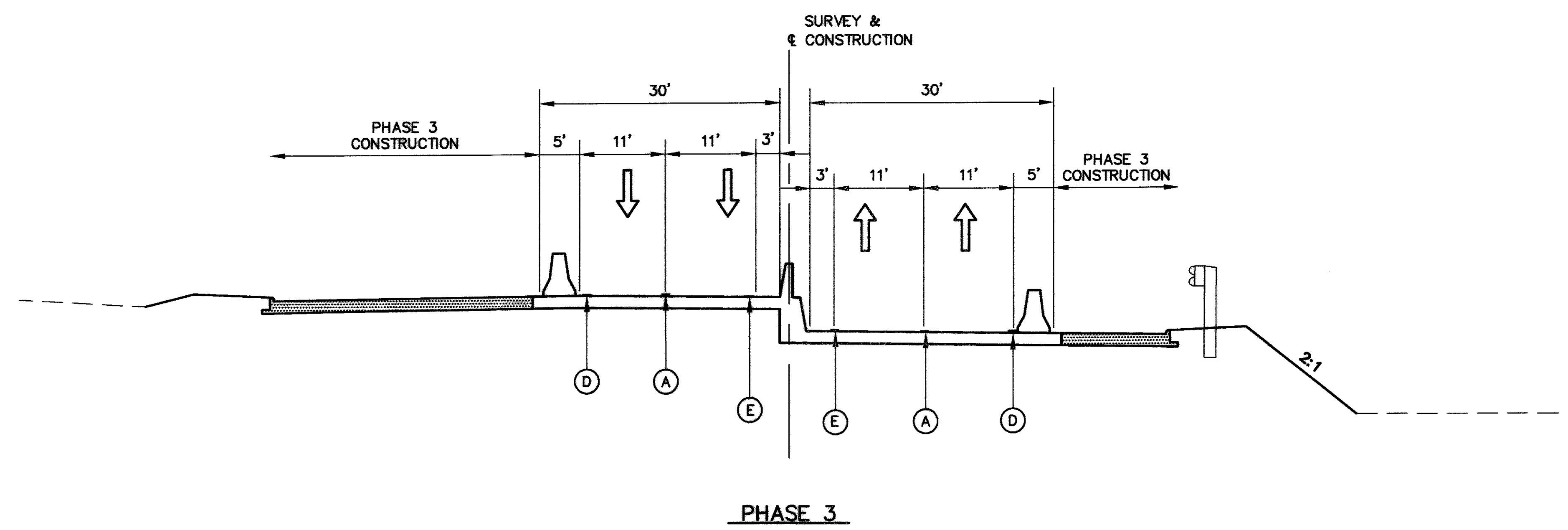
STA. 125+50 TO 134+90
PHASE 1

** SEE CROSS SECTIONS FOR LOCATIONS

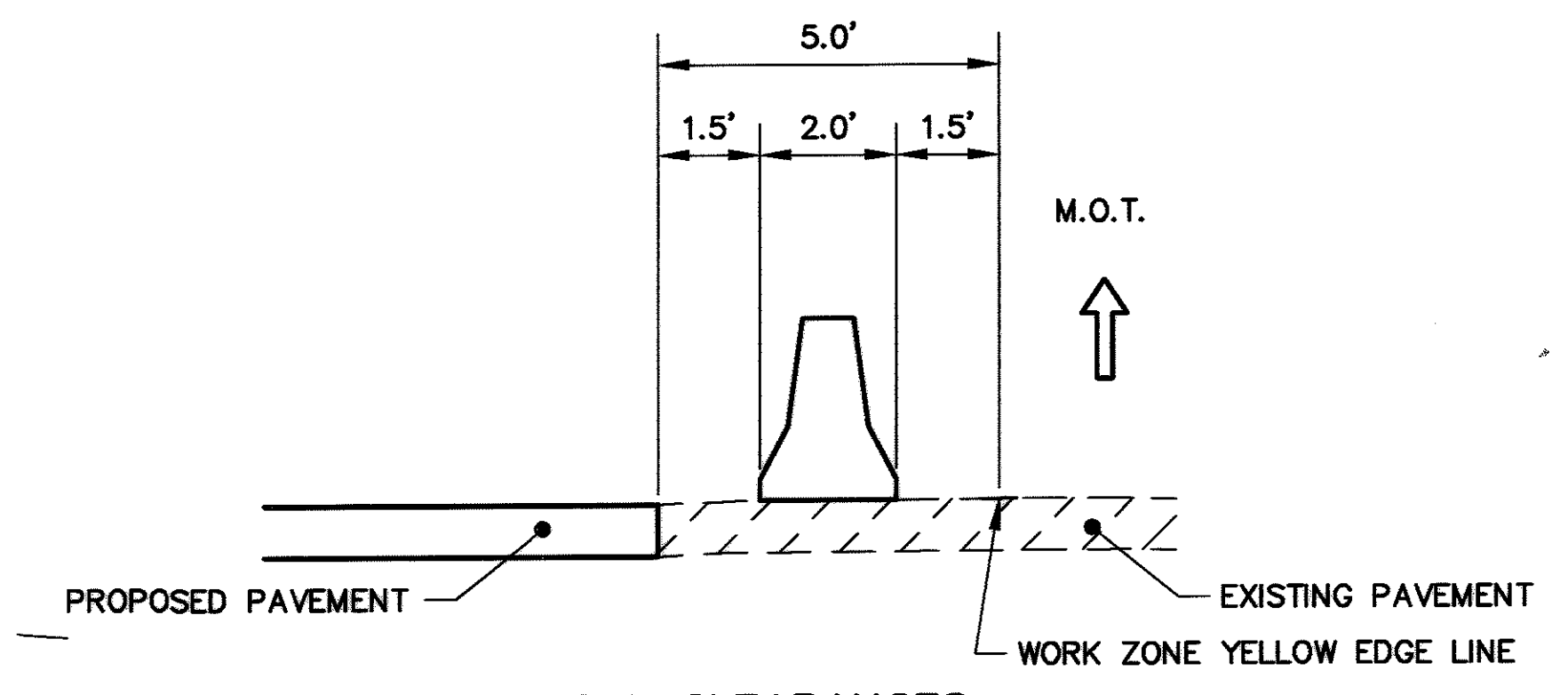
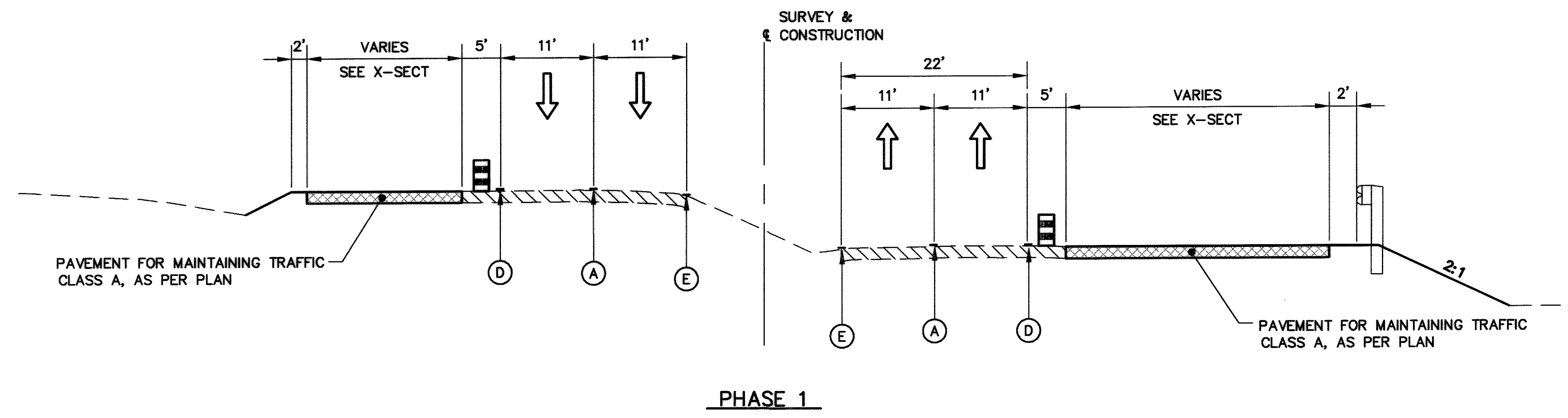
NOTE: CONSTRUCTION WILL BE COMPLETED IN PHASE 1 FROM STA. 775+74 TO 124+50. TRAFFIC WILL UTILIZE THE EXISTING PAVEMENT FOR MAINTENANCE OF TRAFFIC DURING PHASES 2 THROUGH 5. LANE ASSIGNMENTS WILL BE AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS.

LEGEND

-  EXISTING PAVEMENT
-  PAVEMENT UNDER CONSTRUCTION
-  PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
-  COMPLETED PAVEMENT
-  (A) WORK ZONE SOLID LANE LINE
-  (B) WORK ZONE CENTERLINE
-  (D) WORK ZONE EDGE LINE, WHITE
-  (E) WORK ZONE EDGE LINE, YELLOW

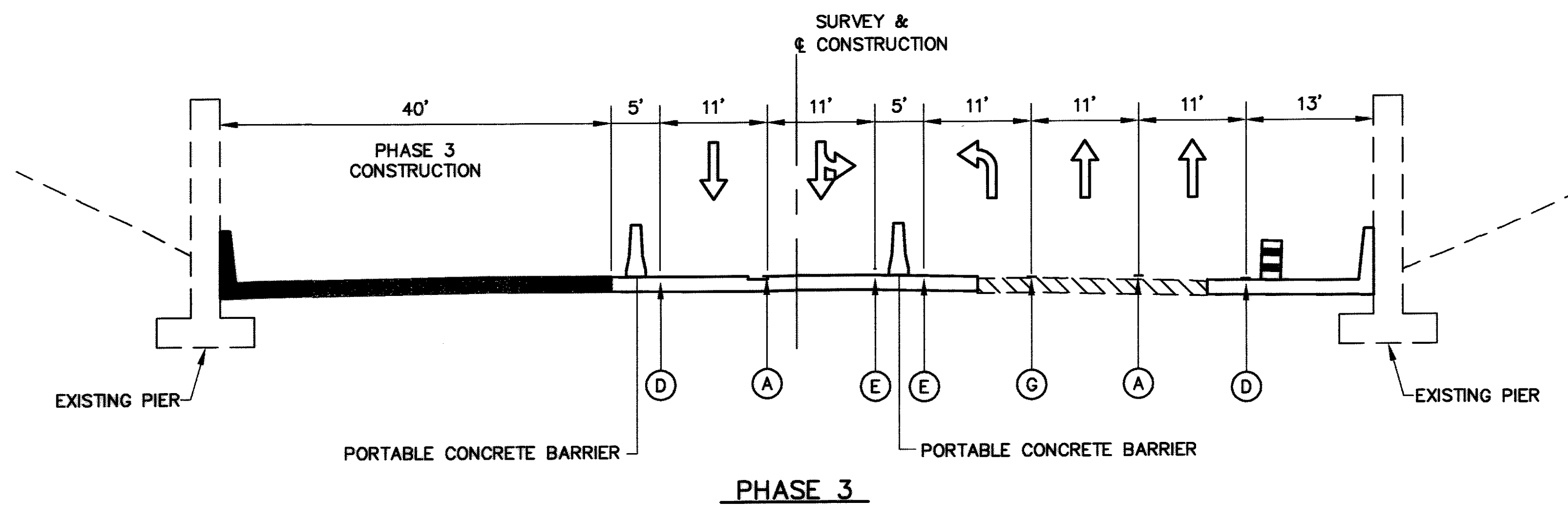


① 617-6" COMPACTED AGGREGATE, TYPE A

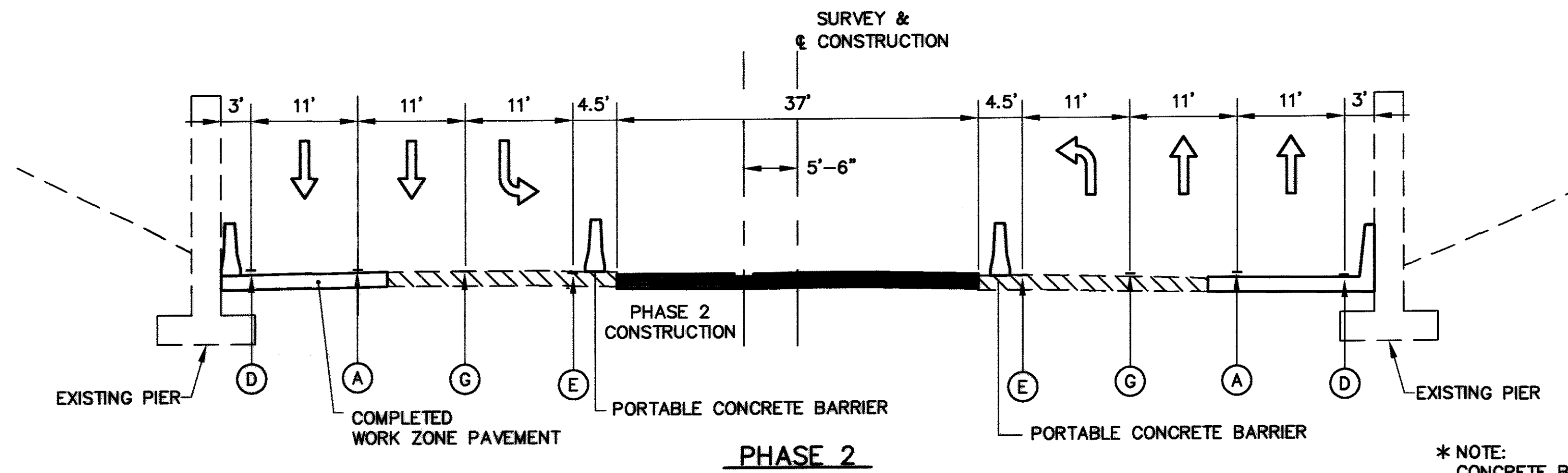


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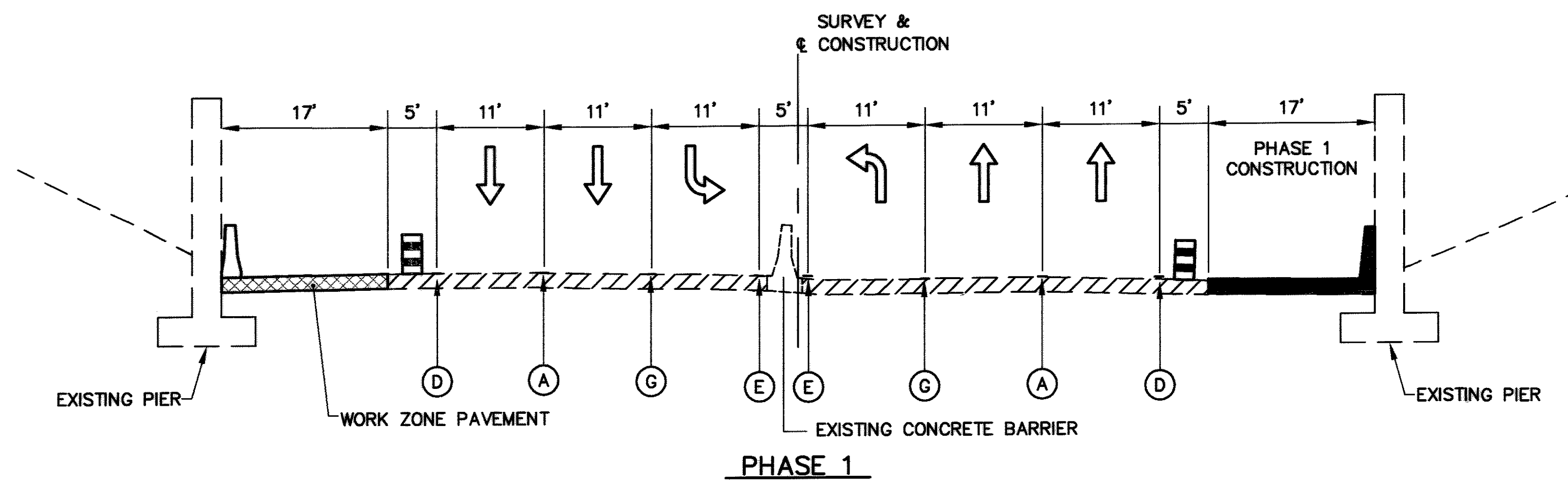
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- LEGEND**
- EXISTING PAVEMENT
 - PAVEMENT UNDER CONSTRUCTION
 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
 - COMPLETED PAVEMENT
 - (A) WORK ZONE SOLID LANE LINE
 - (B) WORK ZONE CENTERLINE
 - (D) WORK ZONE EDGE LINE, WHITE
 - (E) WORK ZONE EDGE LINE, YELLOW



* NOTE: CONCRETE BARRIER ON THIS LOCATION WILL BE CONSTRUCTED UNDER PHASE 5






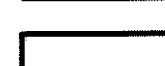
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MAINTENANCE OF TRAFFIC - TYPICAL SECTIONS
STA. 146+29 TO STA. 154+40 - PHASES 1, 2 AND 3

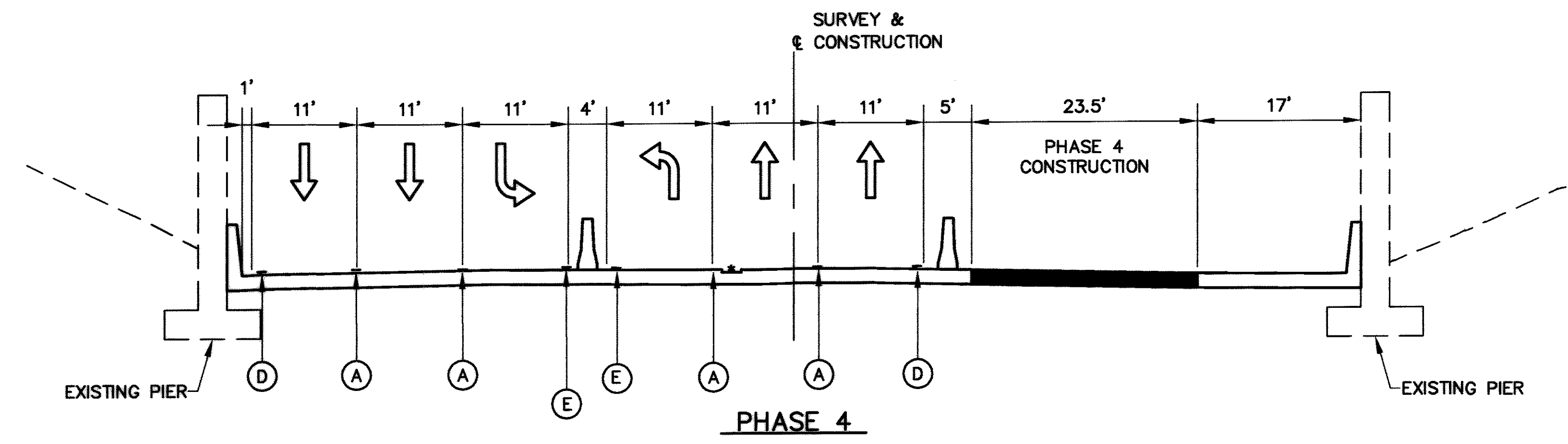
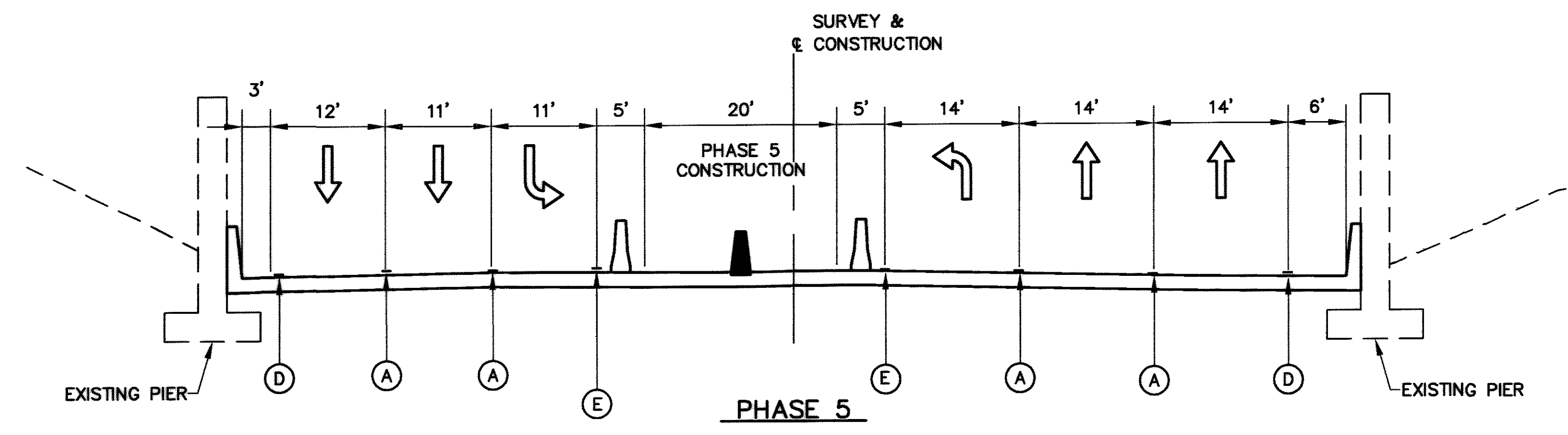
MED - 18 - 15.13

38B
362

LEGEND

-  EXISTING PAVEMENT
-  PAVEMENT UNDER CONSTRUCTION
-  PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
-  COMPLETED PAVEMENT

- (A) WORK ZONE SOLID LANE LINE
- (B) WORK ZONE CENTERLINE
- (D) WORK ZONE EDGE LINE, WHITE
- (E) WORK ZONE EDGE LINE, YELLOW



* NOTE:
CONCRETE BARRIER ON THIS LOCATION WILL
BE CONSTRUCTED UNDER PHASE 5

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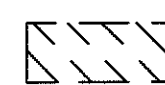
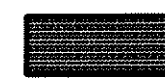


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CHECKED

MAINTENANCE OF TRAFFIC - TYPICAL SECTIONS
STA. 154+40 TO STA. 163+10 - PHASES 1, 2 AND 3

MED - 18 - 15.13

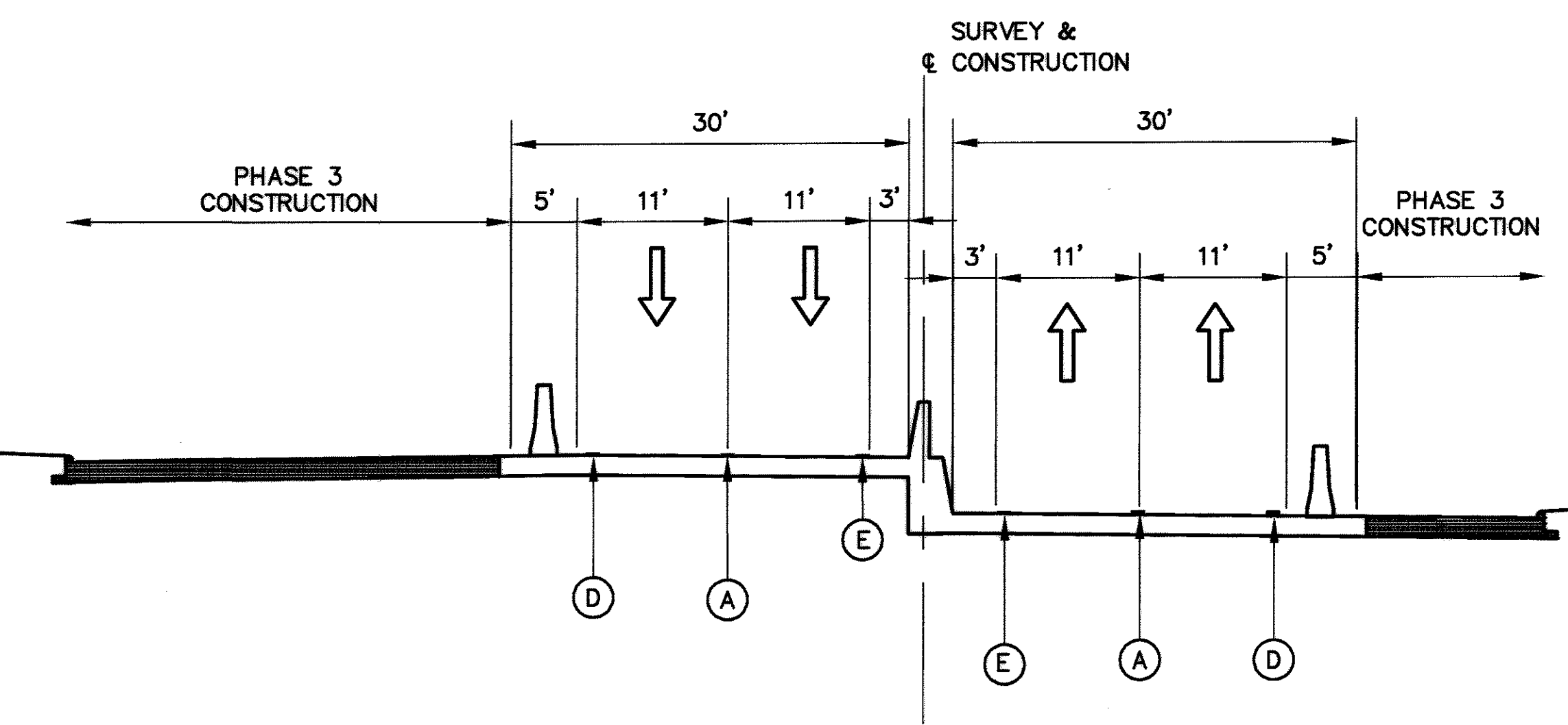
38D
362

LEGEND

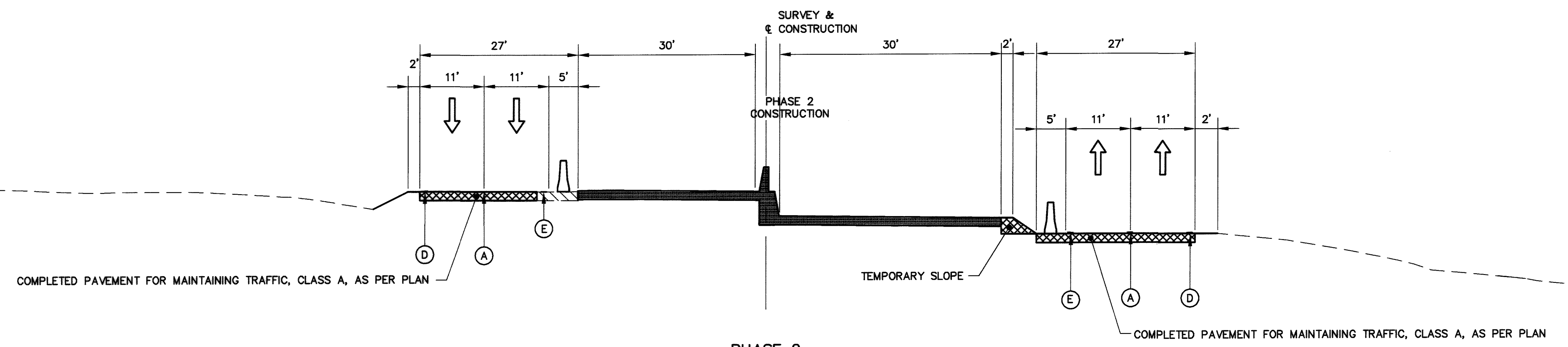
-  EXISTING PAVEMENT
-  PAVEMENT UNDER CONSTRUCTION
-  PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
-  COMPLETED PAVEMENT

- (A) WORK ZONE SOLID LANE LINE
- (B) WORK ZONE CENTERLINE
- (D) WORK ZONE EDGE LINE, WHITE
- (E) WORK ZONE EDGE LINE, YELLOW

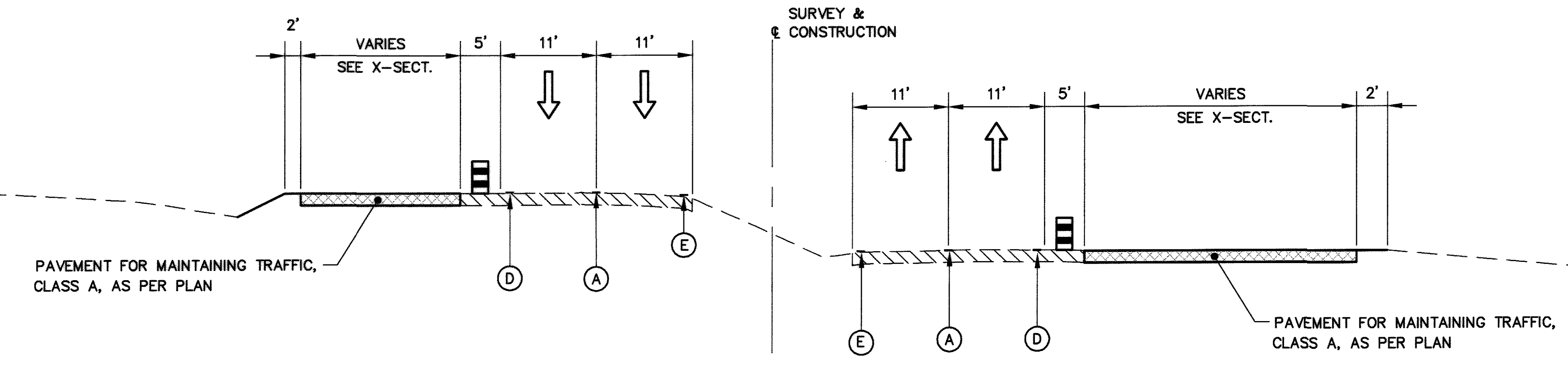
PHASE 3







PHASE 2



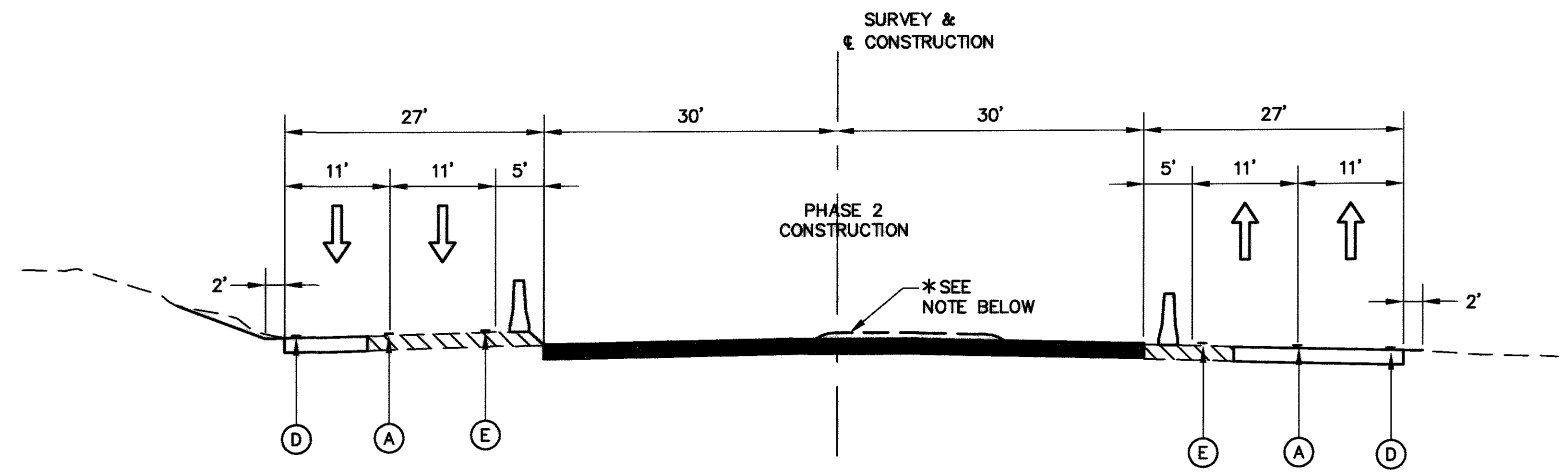
PHASE 1



LEGEND

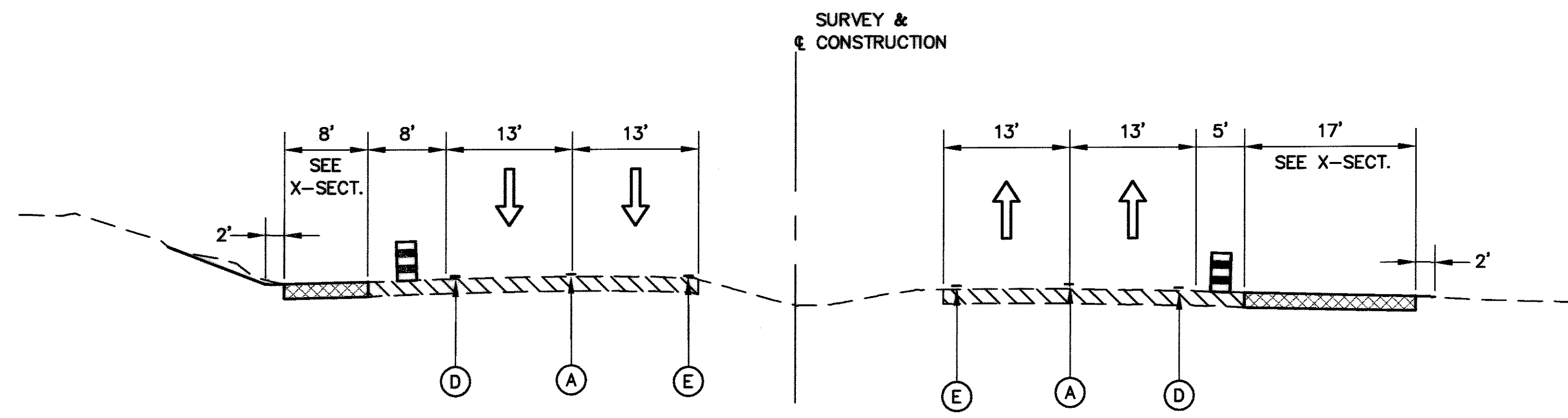
-  EXISTING PAVEMENT
-  PAVEMENT UNDER CONSTRUCTION
-  PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
-  COMPLETED PAVEMENT

- (A) WORK ZONE SOLID LANE LINE
- (B) WORK ZONE CENTERLINE
- (D) WORK ZONE EDGE LINE, WHITE
- (E) WORK ZONE EDGE LINE, YELLOW







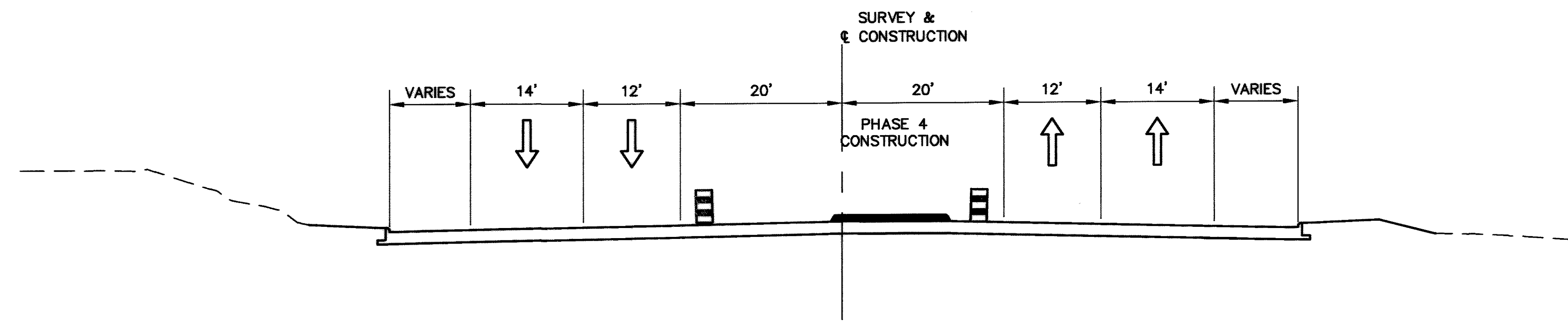
PHASE 2

*NOTE:
RAISED CONCRETE MEDIANS
WILL BE CONSTRUCTED
UNDER PHASE 4.

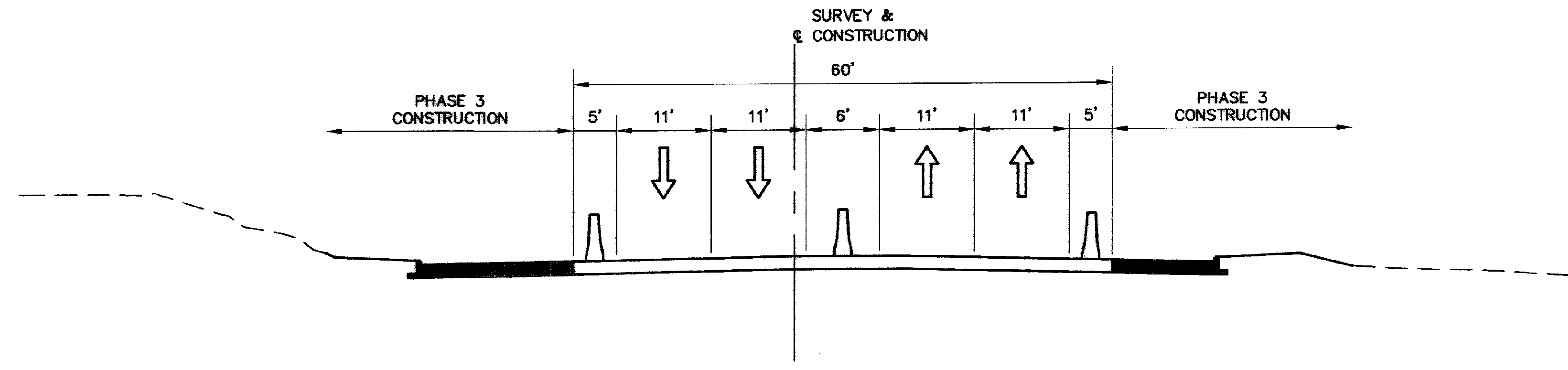


PHASE 1

- LEGEND**
-  EXISTING PAVEMENT
 -  PAVEMENT UNDER CONSTRUCTION
 -  PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
 -  COMPLETED PAVEMENT



PHASE 4
 STA. 126+00 TO STA. 130+00
 STA. 131+25 TO STA. 133+50
 STA. 164+40 TO STA. 175+50






PHASE 3

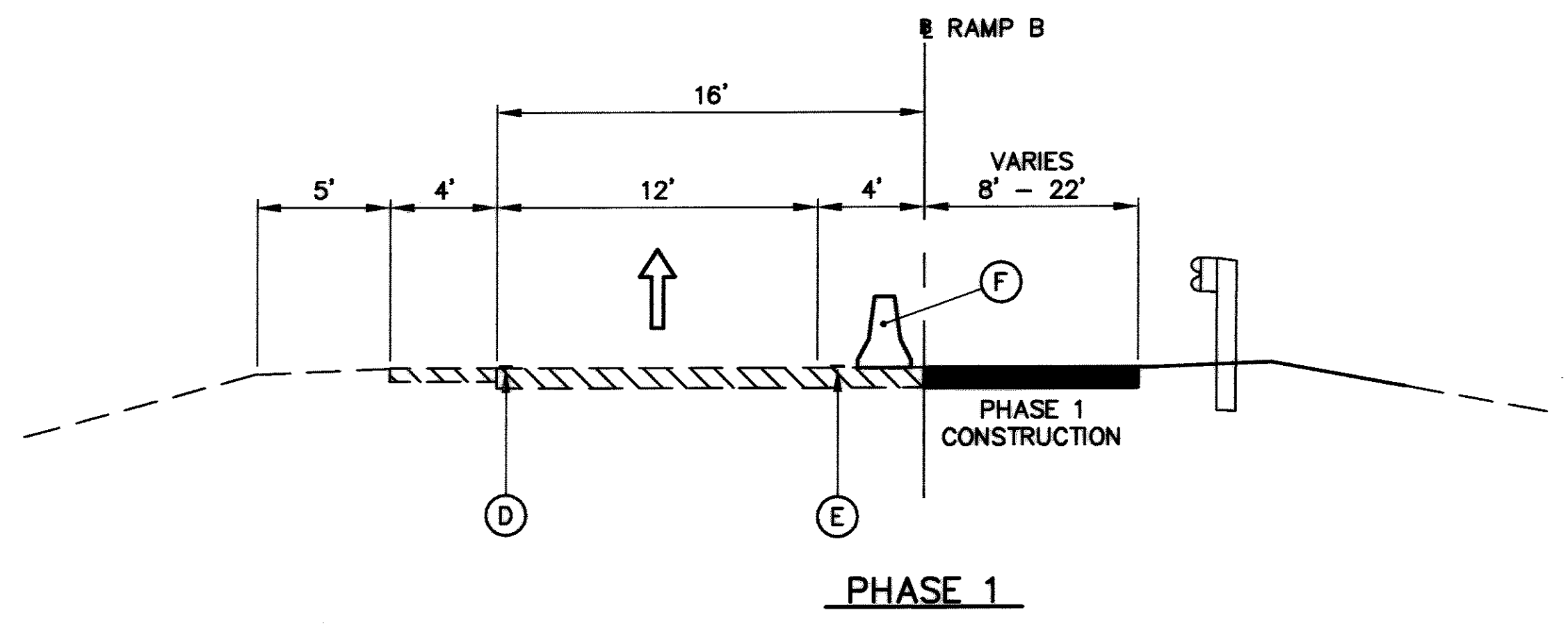
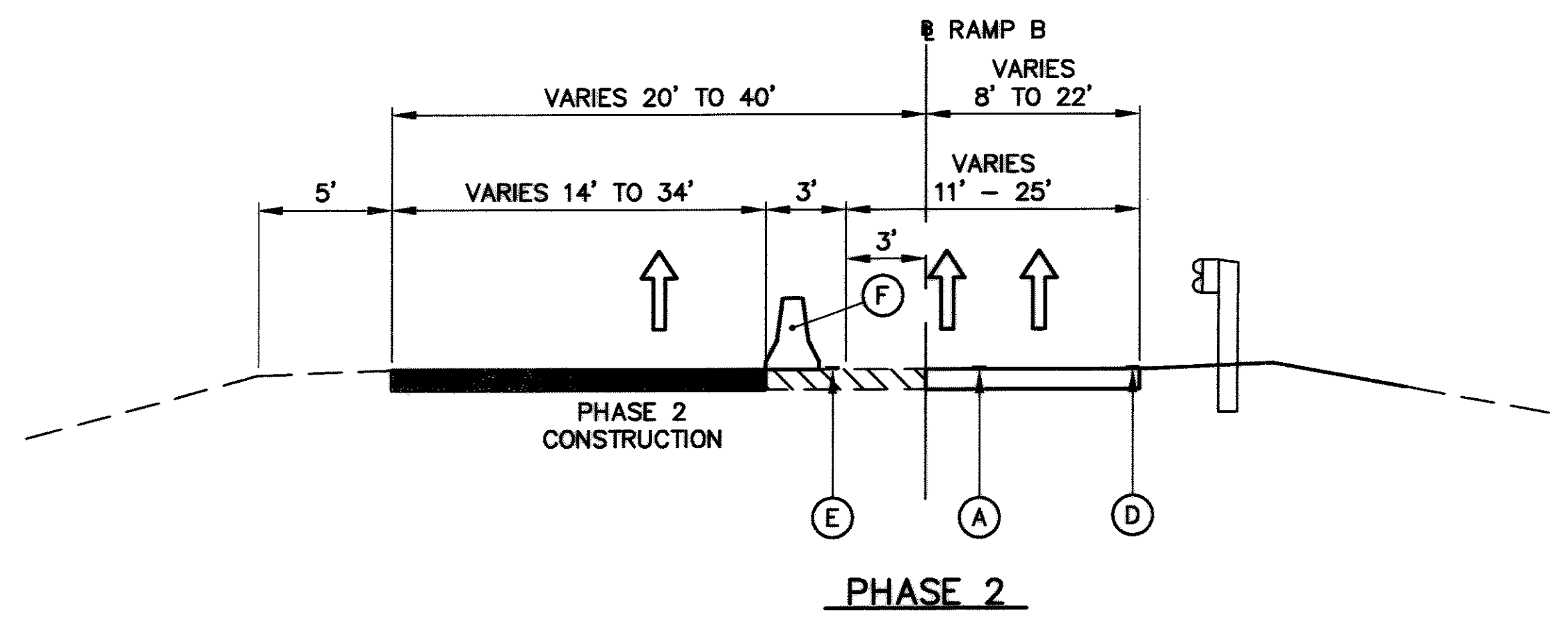
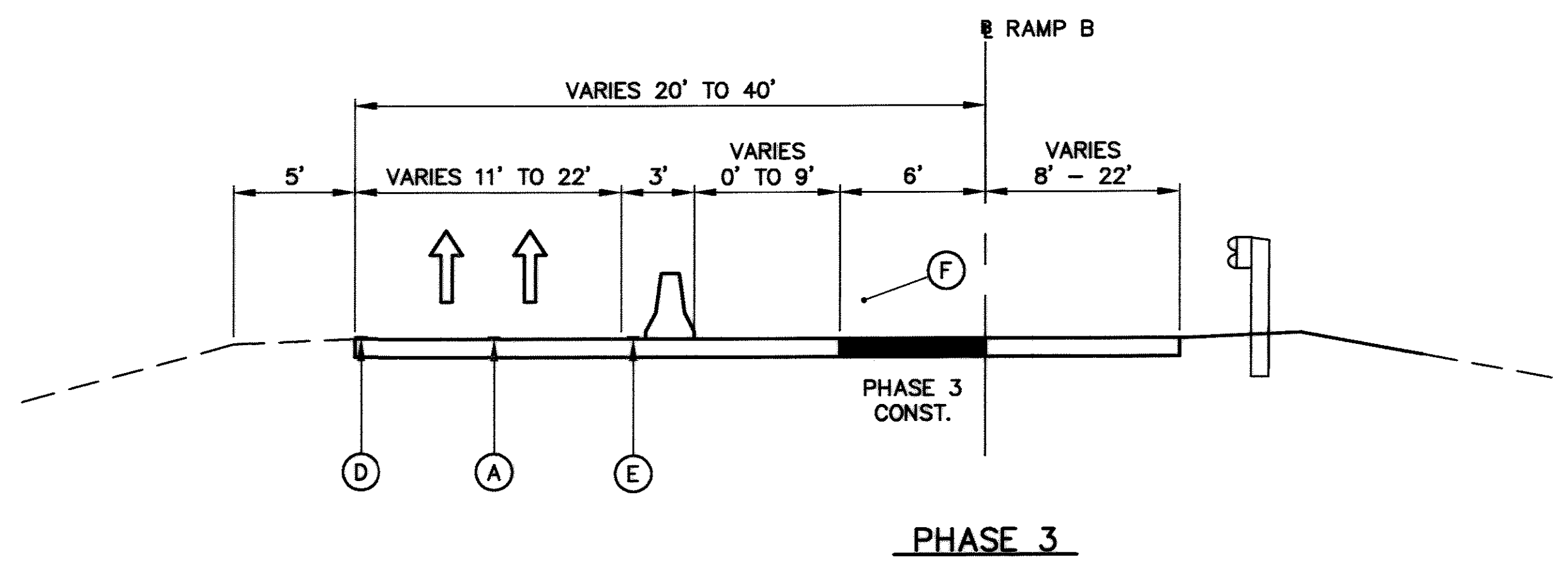
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MAINTENANCE OF TRAFFIC - TYPICAL SECTIONS
STA. 163+10 TO STA. 175+50 - PHASES 3 AND 4

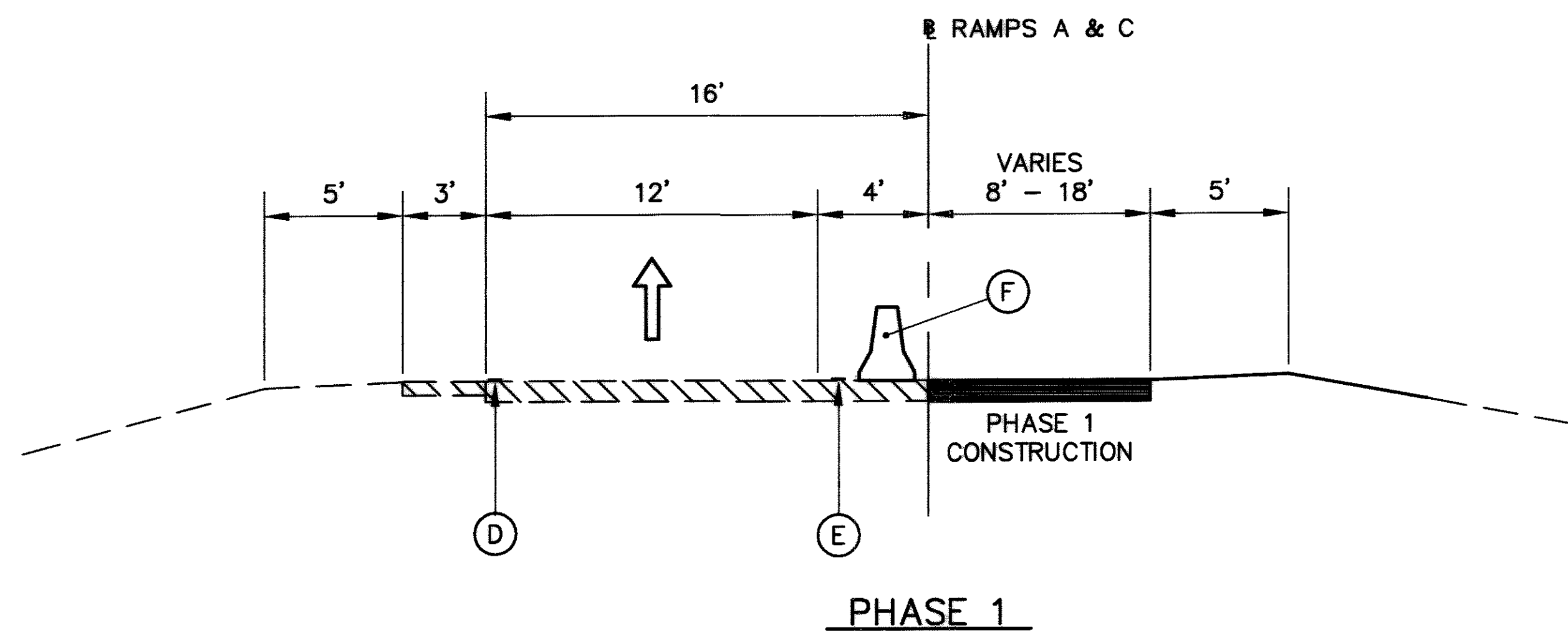
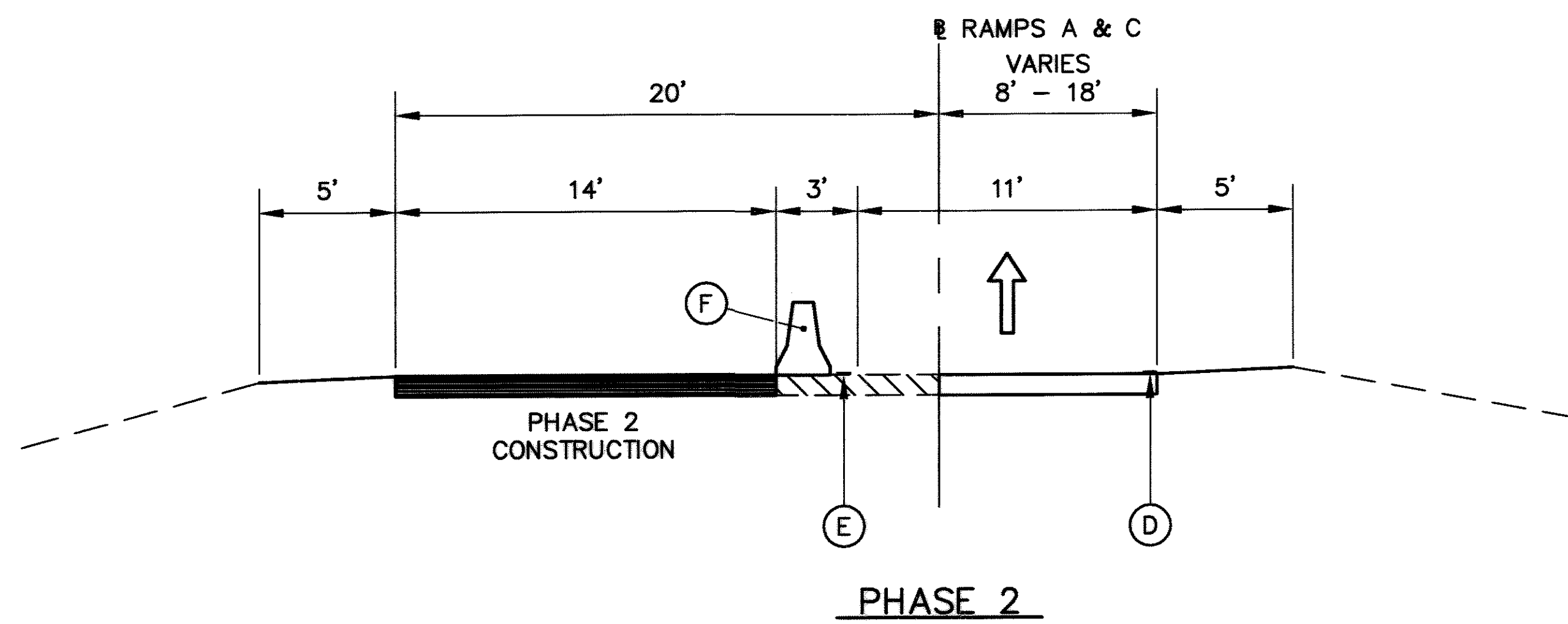
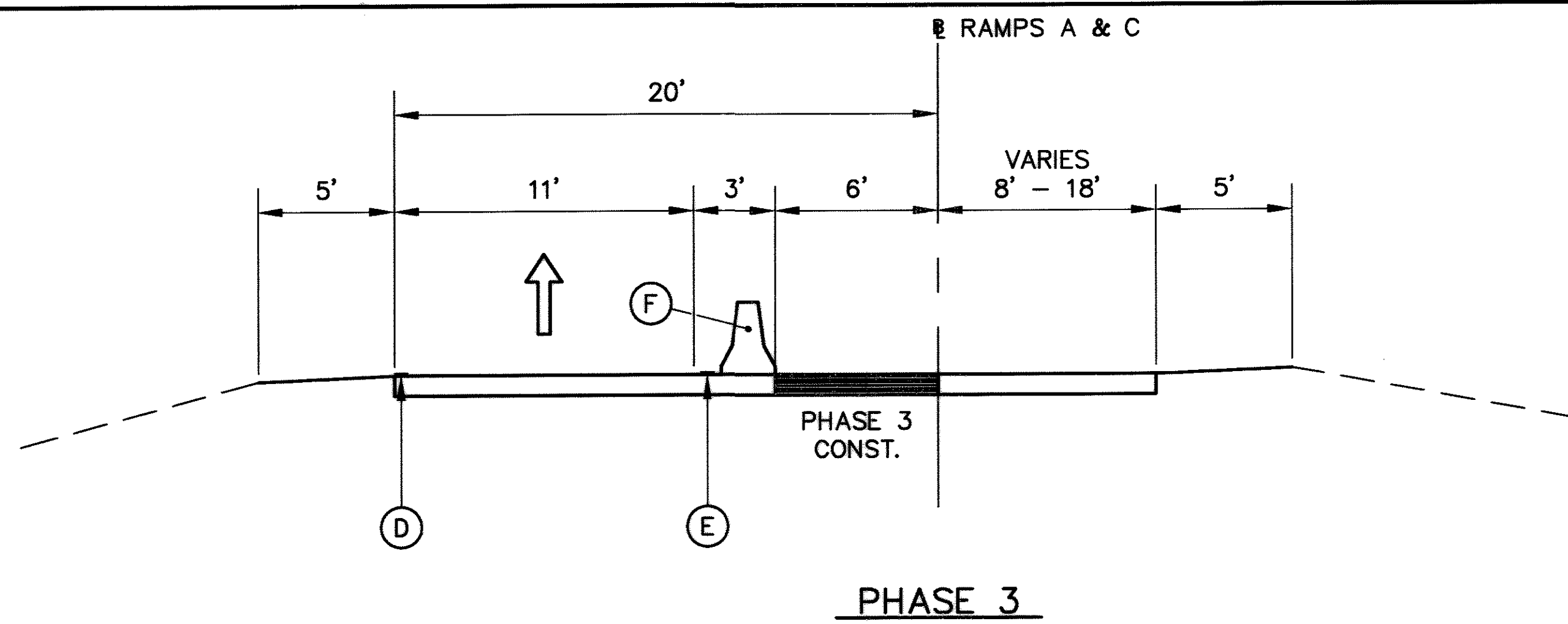
MED - 18 - 15.13

38F
 362

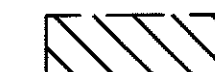


- LEGEND**
-  EXISTING PAVEMENT
 -  PAVEMENT UNDER CONSTRUCTION
 -  COMPLETED PAVEMENT
 - (A) WORK ZONE SOLID LANE LINE
 - (B) WORK ZONE CENTERLINE
 - (D) WORK ZONE EDGE LINE, WHITE
 - (E) WORK ZONE EDGE LINE, YELLOW
 - (F) PORTABLE CONCRETE BARRIER







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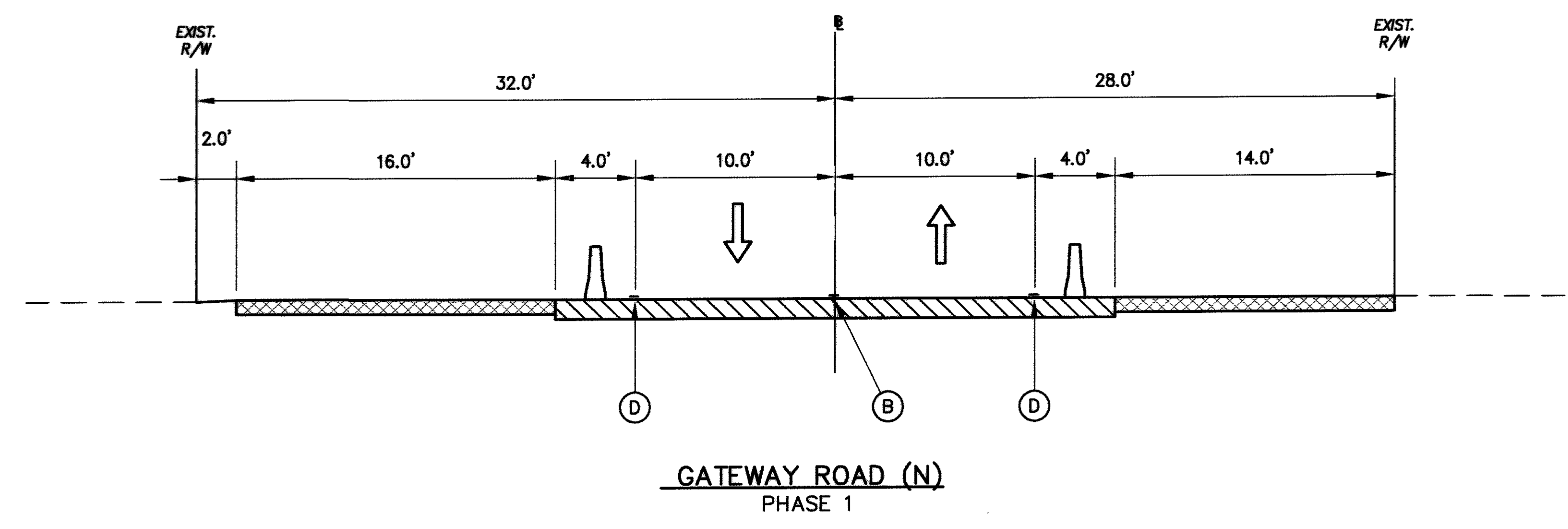
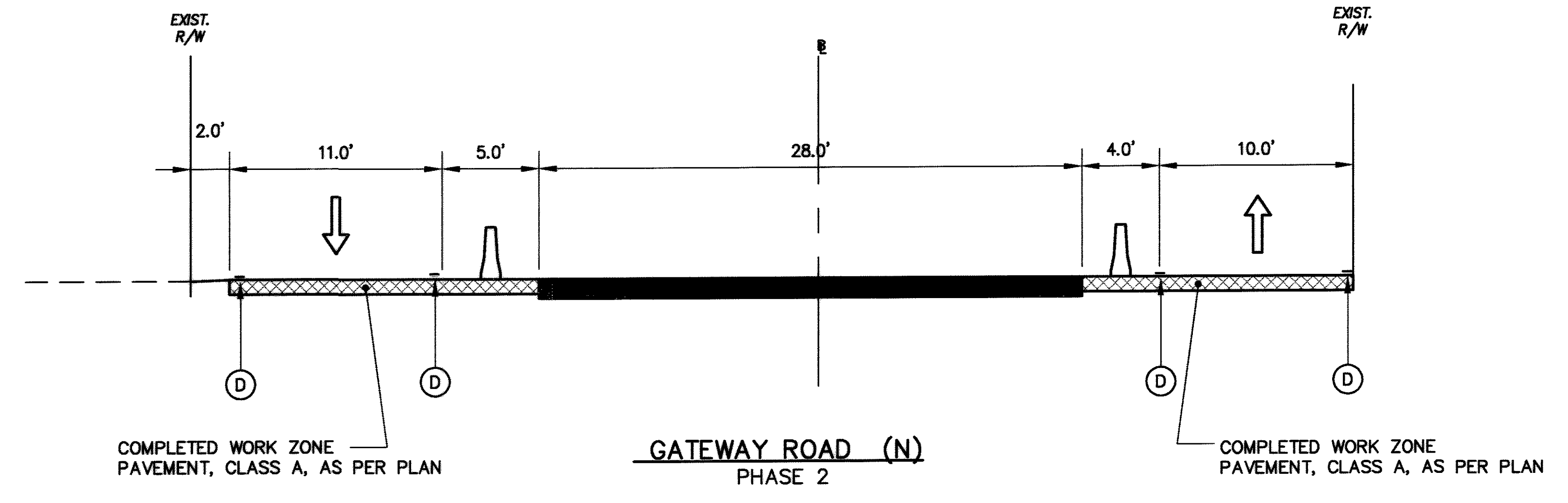
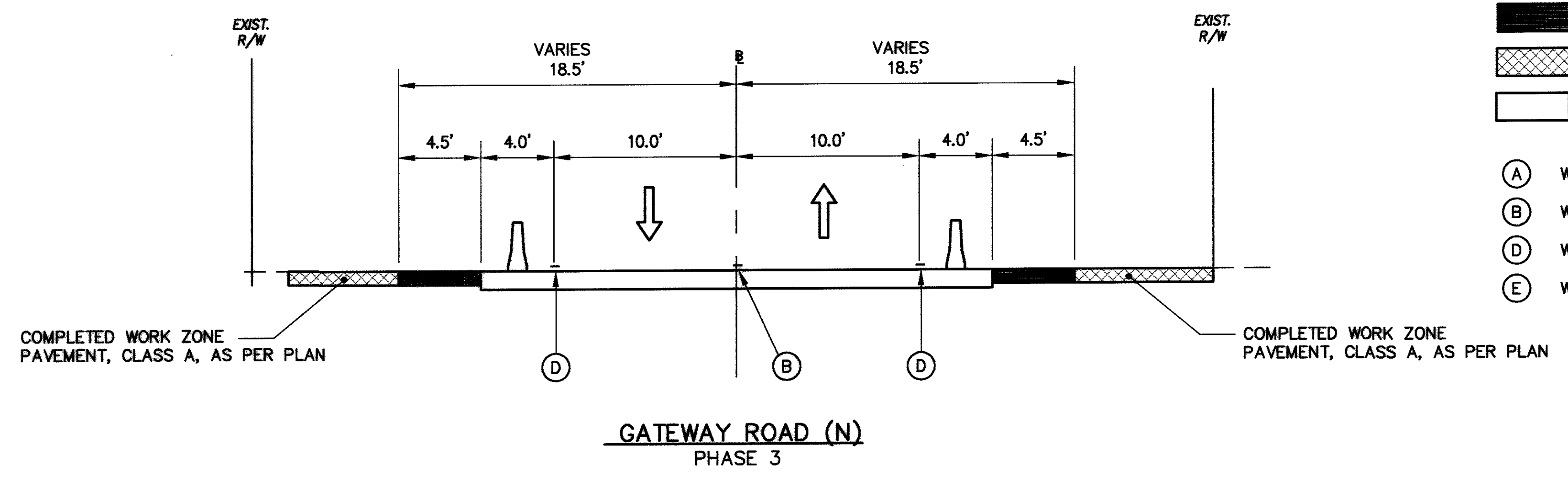
LEGEND

-  EXISTING PAVEMENT
-  PAVEMENT UNDER CONSTRUCTION
-  COMPLETED PAVEMENT
- (A) WORK ZONE SOLID LANE LINE
- (B) WORK ZONE CENTERLINE
- (D) WORK ZONE EDGE LINE, WHITE
- (E) WORK ZONE EDGE LINE, YELLOW
- (F) PORTABLE CONCRETE BARRIER

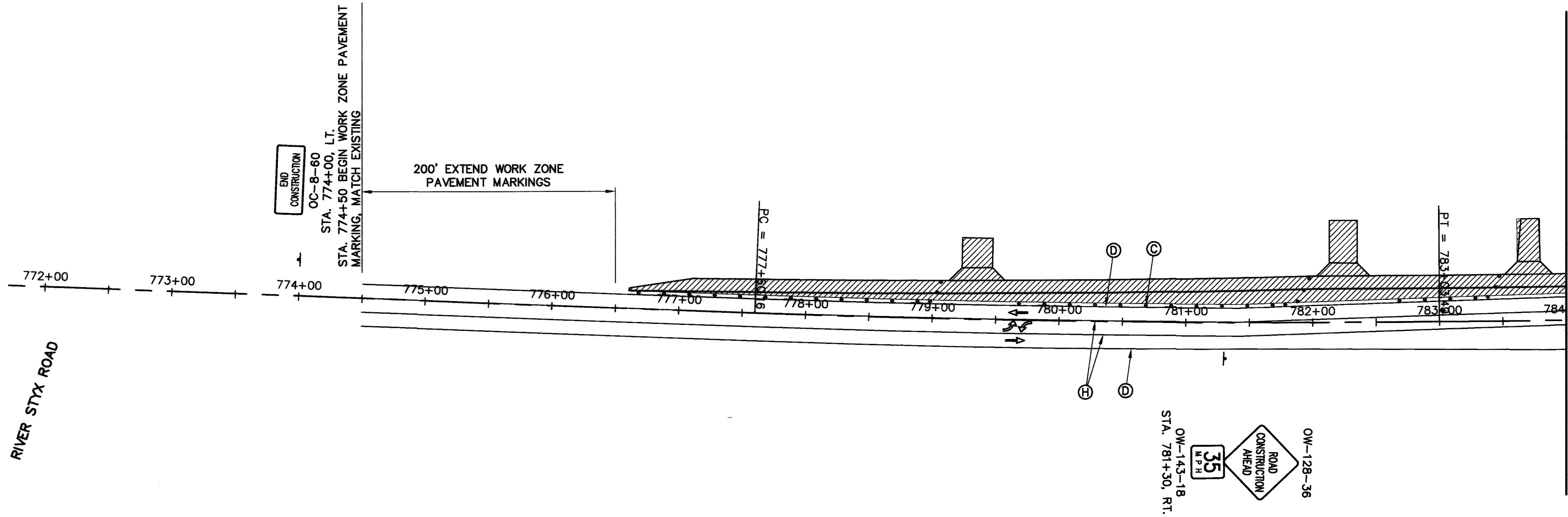
LEGEND

-  EXISTING PAVEMENT
-  PAVEMENT UNDER CONSTRUCTION
-  PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
-  COMPLETED PAVEMENT

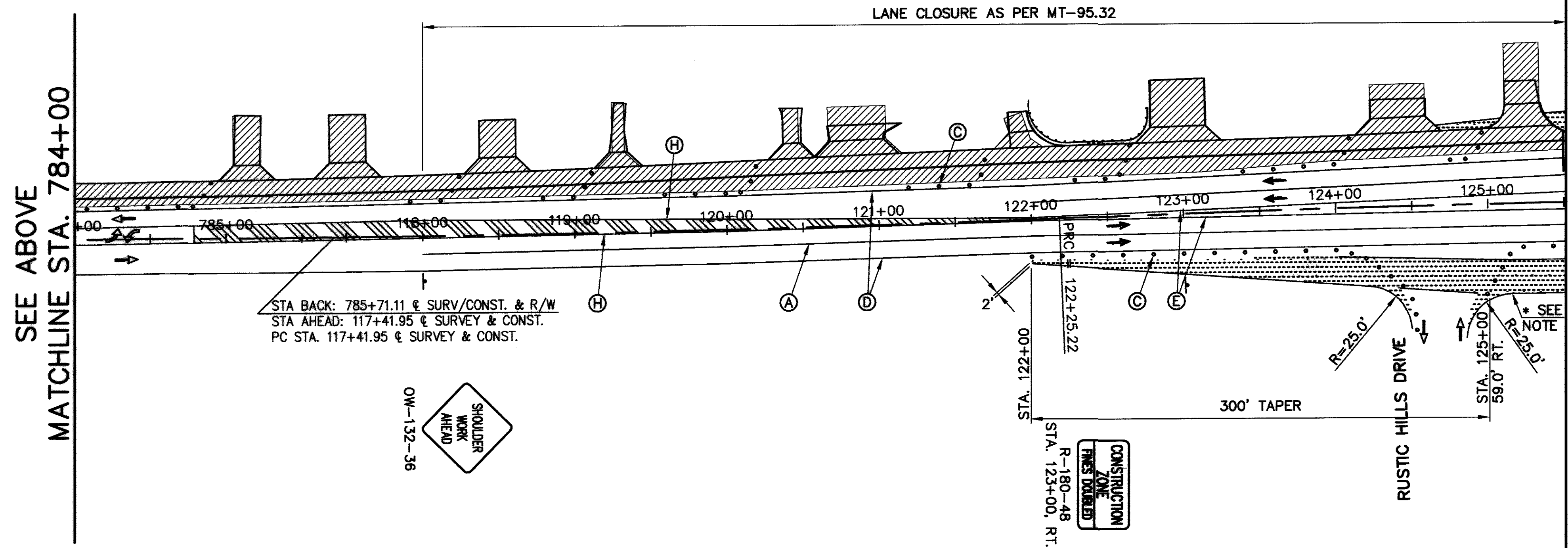
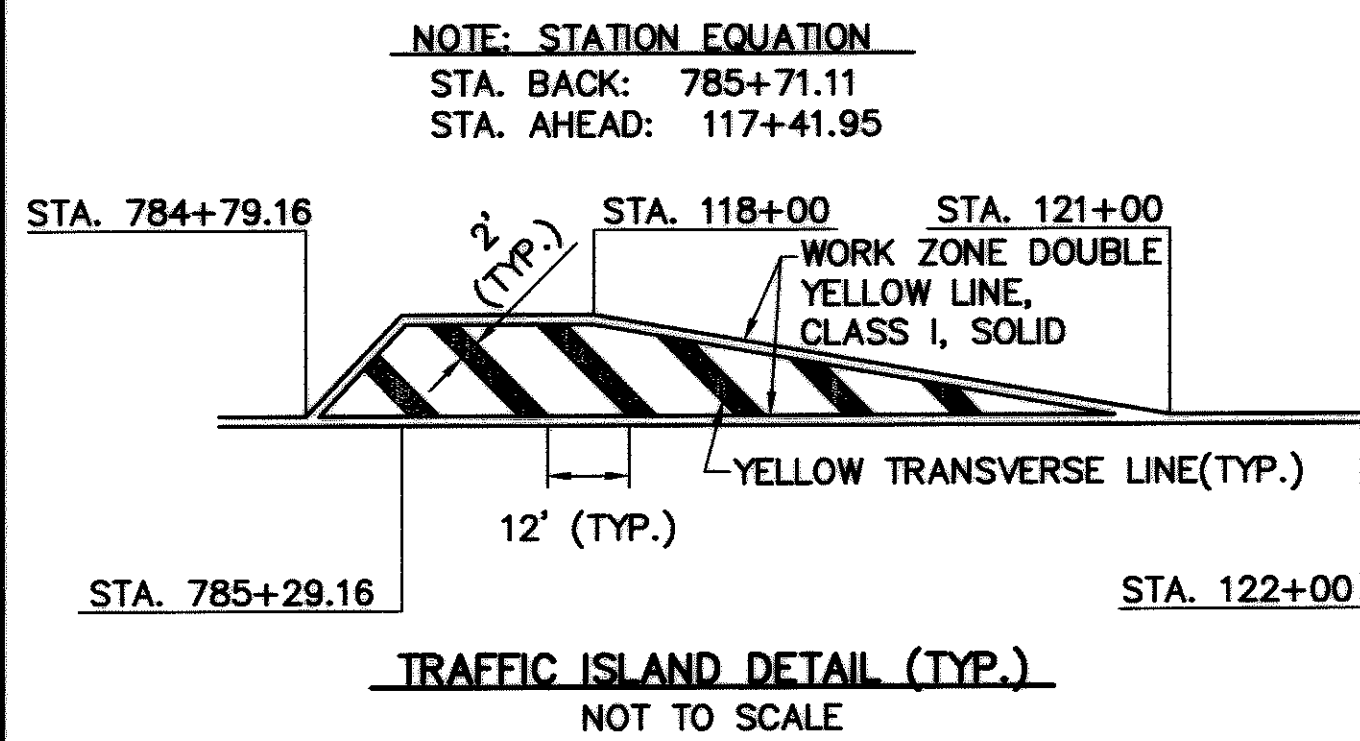
- (A) WORK ZONE SOLID LANE LINE
- (B) WORK ZONE CENTERLINE
- (D) WORK ZONE EDGE LINE, WHITE
- (E) WORK ZONE EDGE LINE, YELLOW



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MATCHLINE STA. 784+00
SEE BELOW



MATCHLINE STA. 125+50
SEE SHEET 40

LEGEND

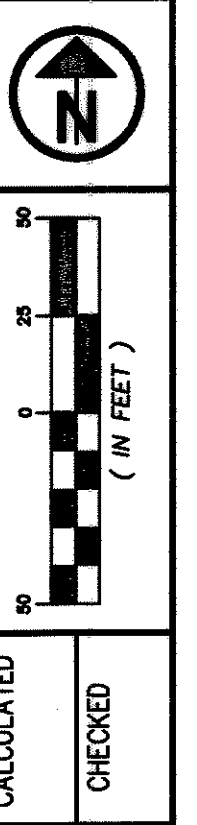
- (A) WORK ZONE LANE LINE, CLASS I
- (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
- (C) DRUMS @ 20' C/C
- (D) WORK ZONE EDGE LINE, WHITE, CLASS I
- (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
- (F) PORTABLE CONCRETE BARRIER
- (G) WORK ZONE CHANNELIZING LINE, CLASS I
- (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
- (I) WORK ZONE STOP LINE
- (J) WORK ZONE DOTTED LINE

- [Pattern] ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- [Pattern] PHASE 1 CONSTRUCTION
- [Pattern] WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- [Symbol] PORTABLE CONCRETE BARRIER END TAPER
- [Symbol] WORK ZONE IMPACT ATTENUATOR
- [Symbol] LANE ASSIGNMENT
- [Symbol] PAVEMENT MARKING

NOTE:
FOR WORK ZONE PAVEMENT LIMITS,
SEE CROSS-SECTIONS

*NOTE: TEMPORARY PAVEMENT DIMENSIONS VARY. THE USABLE EXISTING PAVED SHOULDER'S CONDITION AND THE VERTICAL DISPLACEMENT OF THE PROPOSED PAVEMENT CONTROLS LOCATION AND WIDTH. CONSULT SECTIONS SHOWING OFFSETS AT EVERY STATION. THE MAXIMUM POSSIBLE WIDTH OF PAVEMENT FOR MAINTAINING TRAFFIC IS 22FT.

FOR PHASE 2 MOT, SEE SHEET 43
FOR PHASE 3 MOT, SEE SHEET 46
FOR PHASE 4 MOT, SEE SHEET 51

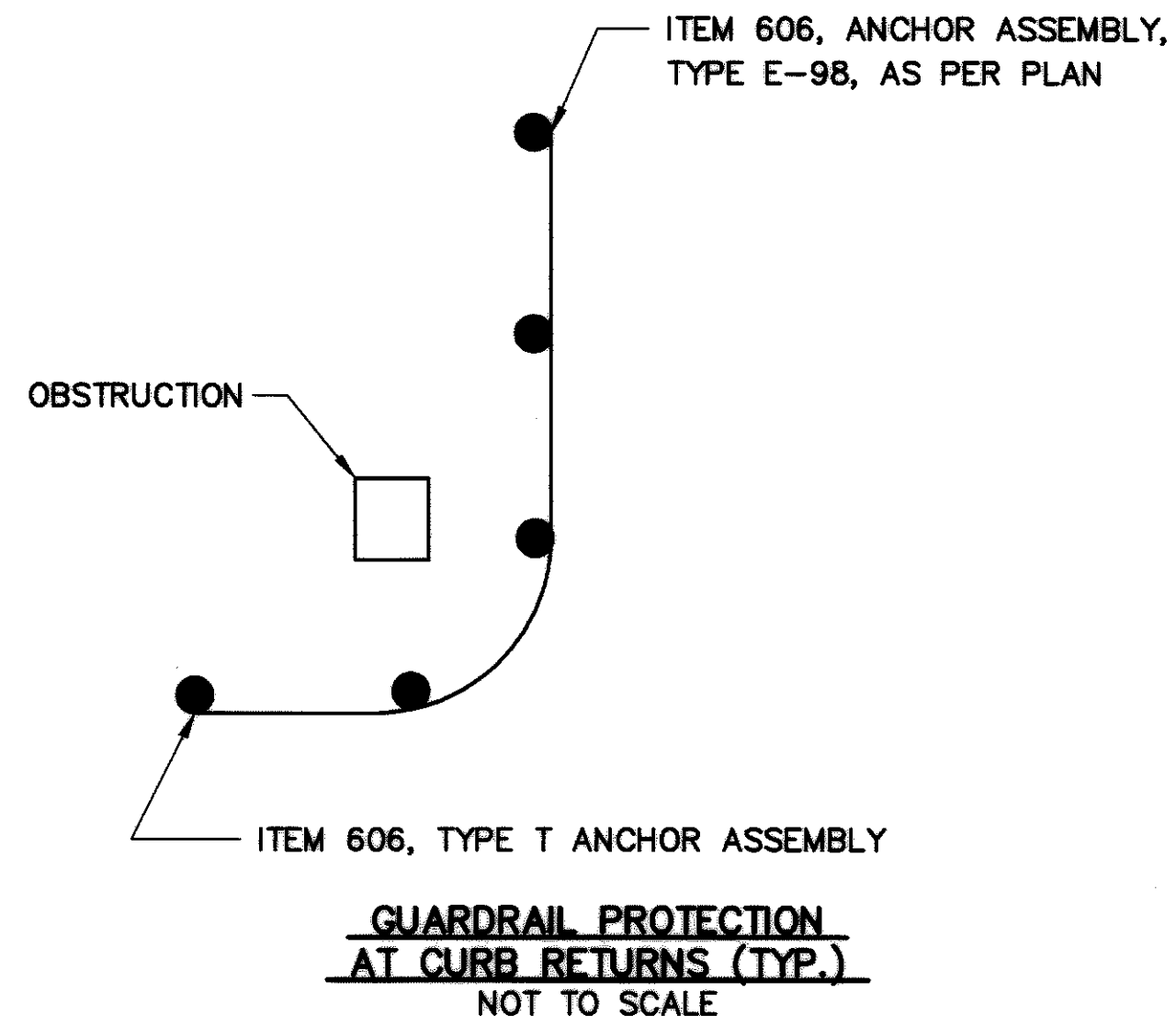


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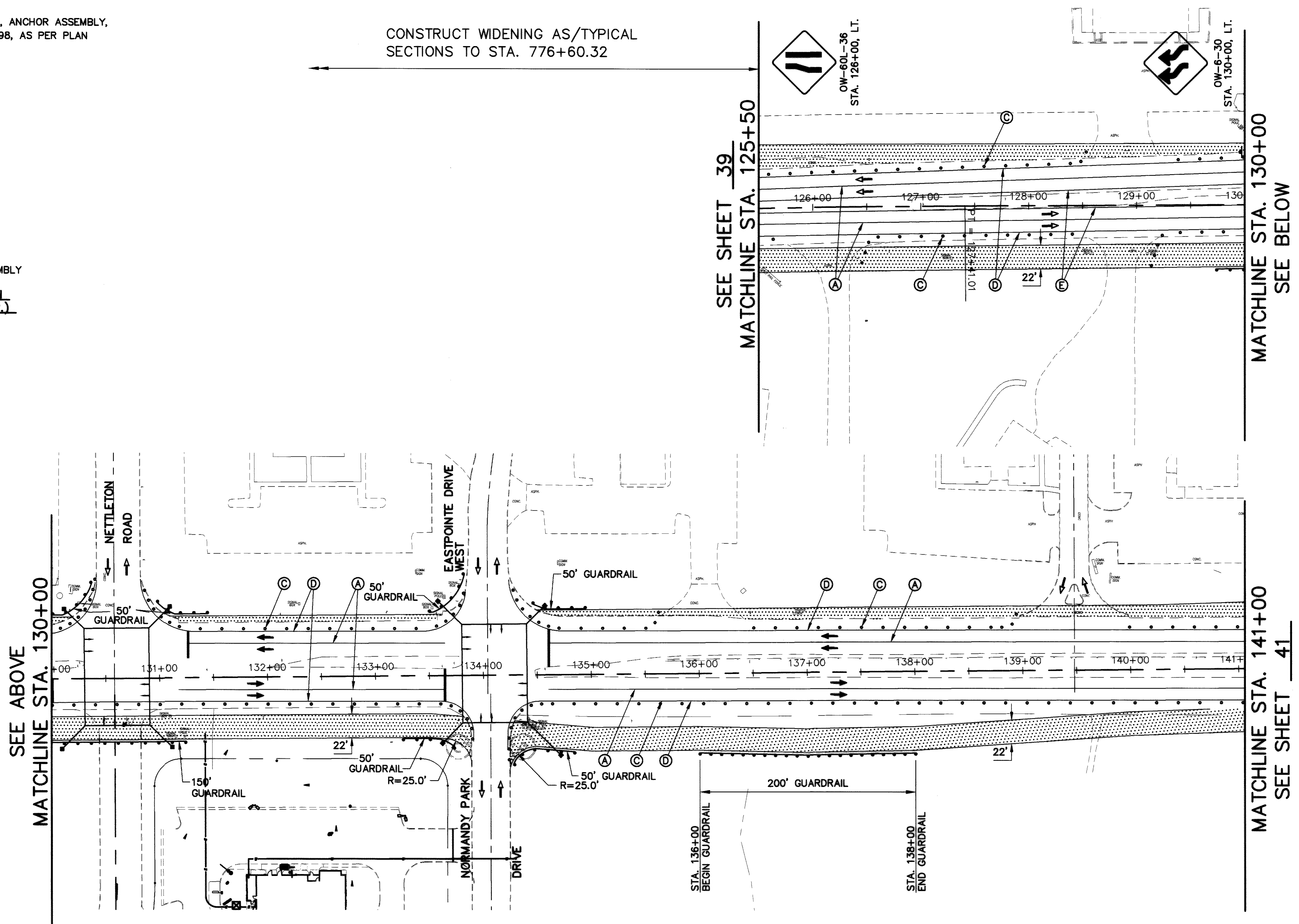
MAINTENANCE OF TRAFFIC PLAN - PHASE 1
STA. 771+82.81 TO STA. 125+50

MED - 18 - 15.13

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CONSTRUCT WIDENING AS/TYPICAL SECTIONS TO STA. 776+60.32



LEGEND

- (A) WORK ZONE LANE LINE, CLASS I
- (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
- (C) DRUMS @ 20' C/C
- (D) WORK ZONE EDGE LINE, WHITE, CLASS I
- (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
- (F) PORTABLE CONCRETE BARRIER
- (G) WORK ZONE CHANNELIZING LINE, CLASS I
- (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
- (I) WORK ZONE STOP LINE

- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- PHASE 1 CONSTRUCTION
- WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- PORTABLE CONCRETE BARRIER END TAPER
- WORK ZONE IMPACT ATTENUATOR
- LANE ASSIGNMENT

NOTE:
FOR WORK ZONE PAVEMENT LIMITS

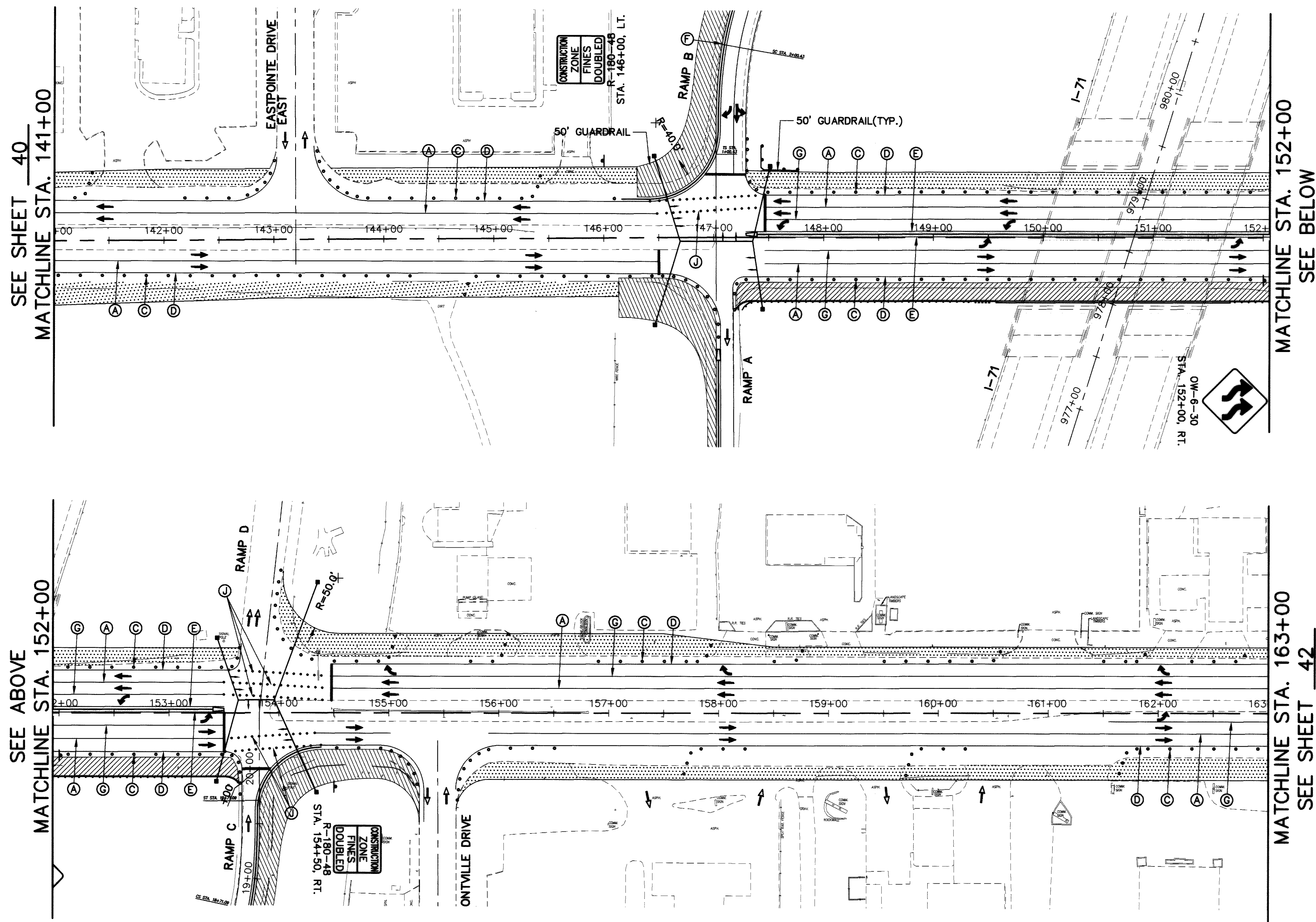
FOR PHASE 2 MOT, SEE SHEET 43
 FOR PHASE 3 MOT, SEE SHEET 46
 FOR PHASE 4 MOT, SEE SHEET 51

MED - 18 - 15.13

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 STA. 125+50 TO STA. 141+00

CALCULATED
 IN
 CHECKED

40
 362



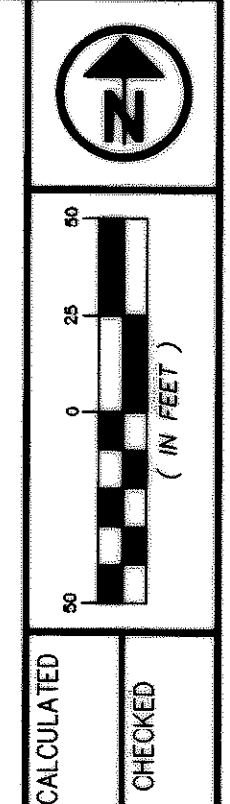
LEGEND

- (A) WORK ZONE LANE LINE, CLASS I
- (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
- (C) DRUMS ● 20' C/C
- (D) WORK ZONE EDGE LINE, WHITE, CLASS I
- (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
- (F) PORTABLE CONCRETE BARRIER
- (G) WORK ZONE CHANNELIZING LINE, CLASS I
- (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
- (I) WORK ZONE STOP LINE
- (J) WORK ZONE DOTTED LINE

- [Pattern] ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- [Pattern] PHASE 1 CONSTRUCTION
- [Pattern] WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- [Symbol] PORTABLE CONCRETE BARRIER END TAPER
- [Symbol] WORK ZONE IMPACT ATTENUATOR
- [Symbol] LANE ASSIGNMENT
- [Symbol] PAVEMENT MARKING

NOTE:
FOR WORK ZONE PAVEMENT LIMITS,
SEE CROSS-SECTIONS

FOR PHASE 2 MOT, SEE SHEET 43
FOR PHASE 2 MOT, SEE SHEET 46
FOR PHASE 3 MOT, SEE SHEET 51

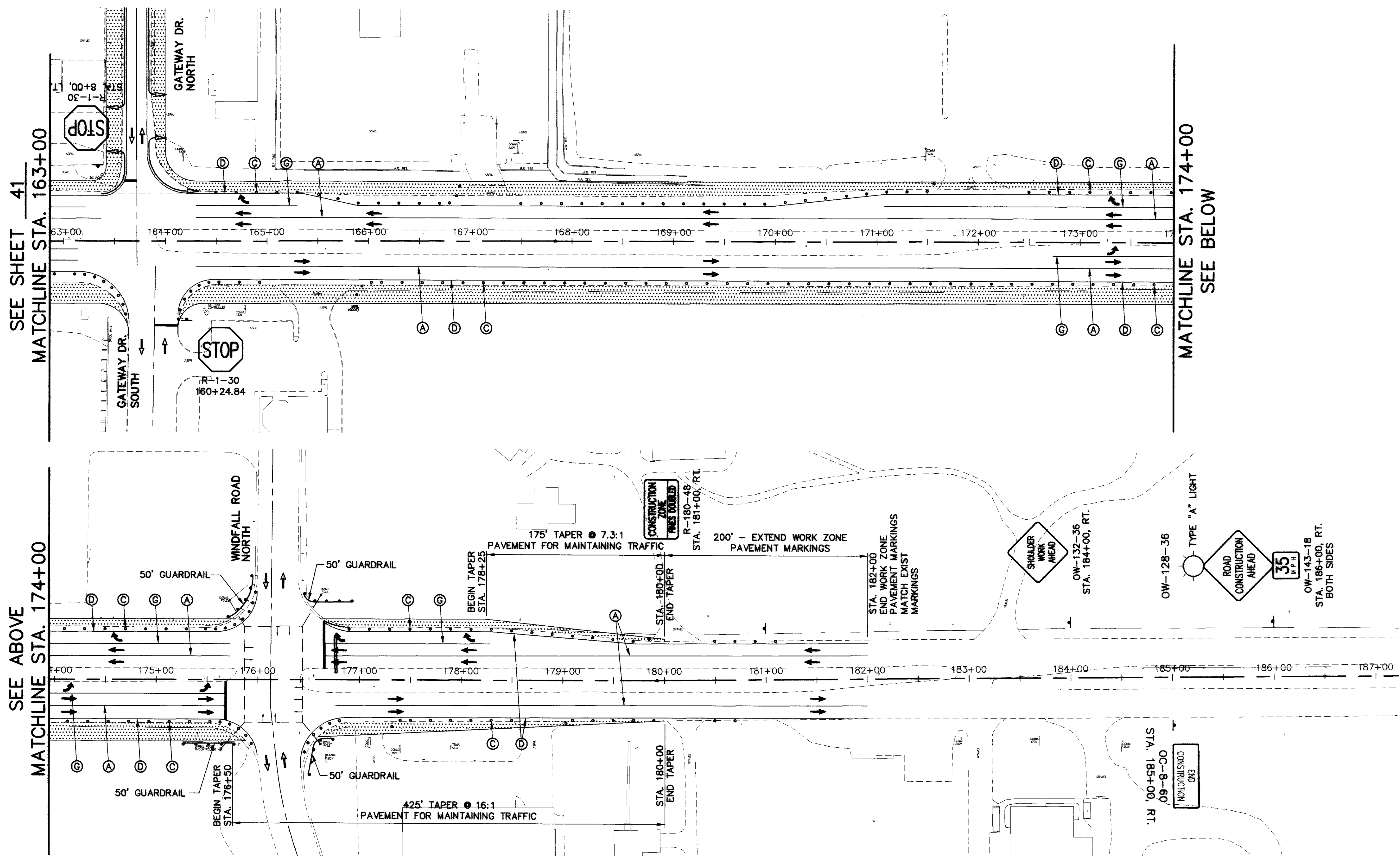


CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
STA. 141+00 TO STA. 163+00

MED - 18 - 15.13

J:\PROJ3\7050600\MOT\70506MPC.DWG User: am05646 Jun 04, 2003 - 2:41pm



SEE SHEET 41
MATCHLINE STA. 163+00

SEE ABOVE
MATCHLINE STA. 174+00


MATCHLINE STA. 174+00
SEE BELOW

- LEGEND**
- (A) WORK ZONE LANE LINE, CLASS I
 - (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
 - (C) DRUMS @ 20' C/C
 - (D) WORK ZONE EDGE LINE, WHITE, CLASS I
 - (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
 - (F) PORTABLE CONCRETE BARRIER
 - (G) WORK ZONE CHANNELIZING LINE, CLASS I
 - (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
 - (I) WORK ZONE STOP LINE
 - (J) WORK ZONE DOTTED LINE

- [Pattern] ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- [Pattern] PHASE 1 CONSTRUCTION
- [Pattern] WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- [Symbol] PORTABLE CONCRETE BARRIER END TAPER
- [Symbol] WORK ZONE IMPACT ATTENUATOR
- [Symbol] LANE ASSIGNMENT
- [Symbol] PAVEMENT MARKING

NOTE:
FOR WORK ZONE PAVEMENT LIMITS,
SEE CROSS-SECTIONS

FOR PHASE 2 MOT, SEE SHEET 43
FOR PHASE 3 MOT, SEE SHEET 46



90
0
90
(IN FEET)

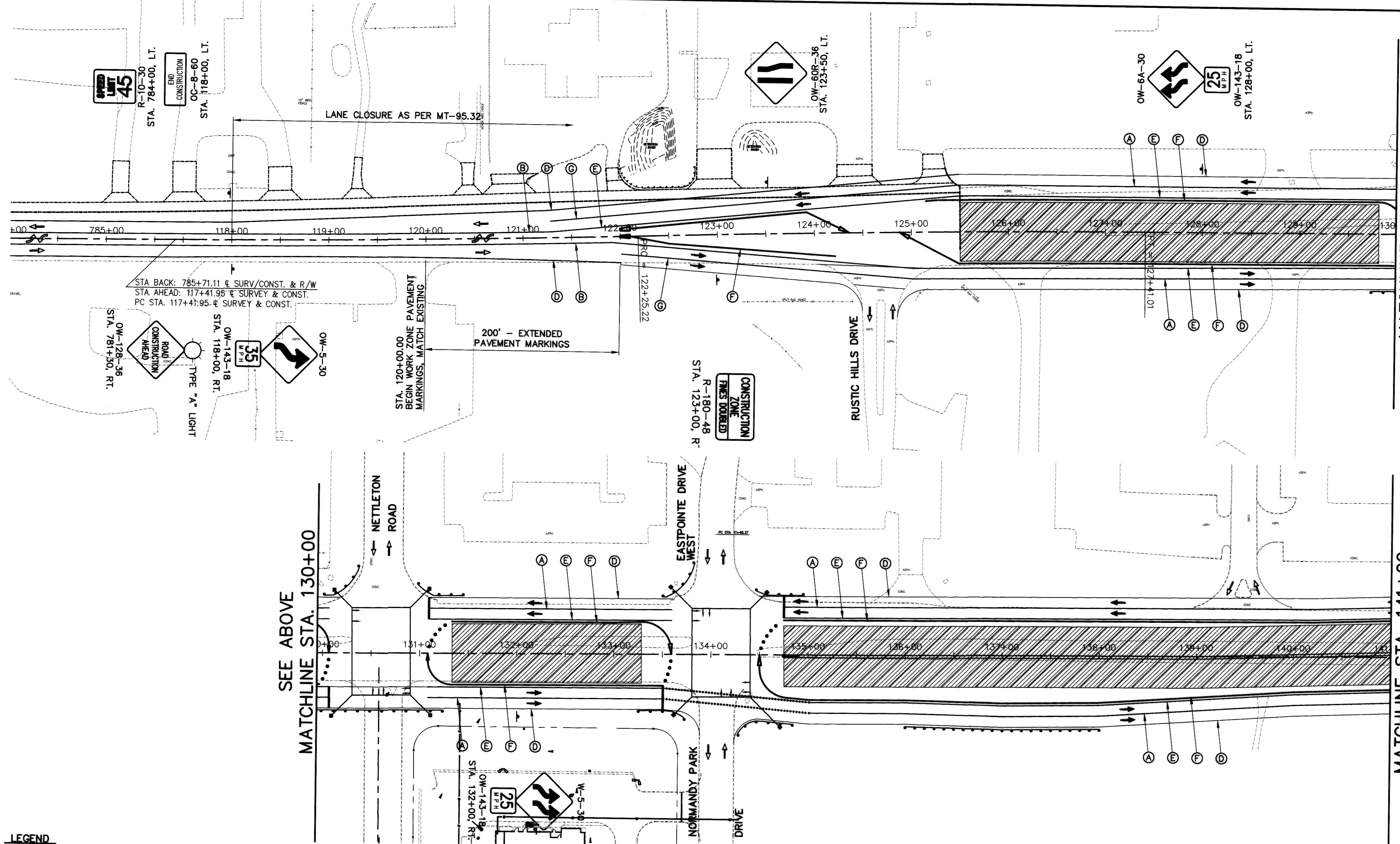
CALCULATED

CHECKED

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
STA. 163+00 TO 182+00

MED - 18 - 15.13

42
362



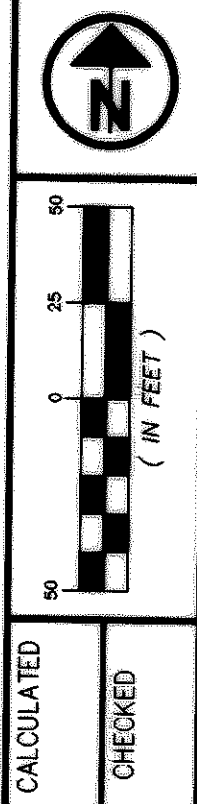
- LEGEND**
- (A) WORK ZONE LANE LINE, CLASS I
 - (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
 - (C) DRUMS ● 20' C/C
 - (D) WORK ZONE EDGE LINE, WHITE, CLASS I
 - (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
 - (F) PORTABLE CONCRETE BARRIER
 - (G) WORK ZONE CHANNELIZING LINE, CLASS I
 - (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
 - (I) WORK ZONE STOP LINE
 - (J) WORK ZONE DOTTED LINE

- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- PHASE 2 CONSTRUCTION
- WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- PORTABLE CONCRETE BARRIER END TAPER
- WORK ZONE IMPACT ATTENUATOR
- LANE ASSIGNMENT
- PAVEMENT MARKING

NOTE:
FOR WORK ZONE PAVEMENT LIMITS,
SEE CROSS-SECTIONS

MATCHLINE STA. 130+00
SEE BELOW

MATCHLINE STA. 141+00
SEE SHEET 44

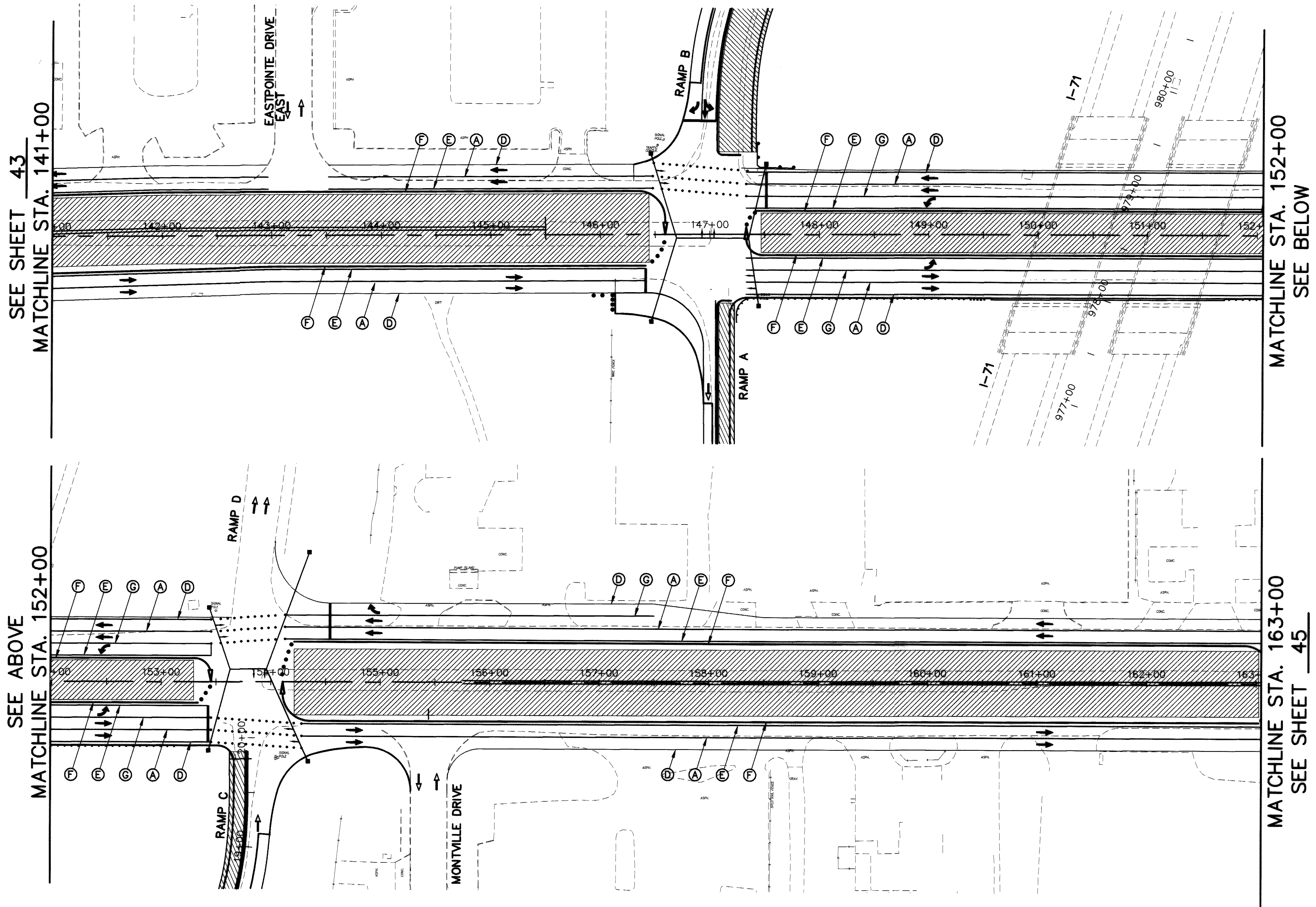


CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
STA. 783+00 TO STA. 141+00

MED - 18 - 15.13

FOR PHASE 1 MOT, SEE SHEET 39
FOR PHASE 3 MOT, SEE SHEET 46
FOR PHASE 4 MOT, SEE SHEET 51



LEGEND

- (A) WORK ZONE LANE LINE, CLASS I
- (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
- (C) DRUMS ● 20' C/C
- (D) WORK ZONE EDGE LINE, WHITE, CLASS I
- (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
- (F) PORTABLE CONCRETE BARRIER
- (G) WORK ZONE CHANNELIZING LINE, CLASS I
- (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
- (I) WORK ZONE STOP LINE
- (J) WORK ZONE DOTTED LINE

PHASE 2 CONSTRUCTION

- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- PHASE 2 CONSTRUCTION
- WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- PORTABLE CONCRETE BARRIER END TAPER
- WORK ZONE IMPACT ATTENUATOR
- LANE ASSIGNMENT
- PAVEMENT MARKING

NOTE:
FOR WORK ZONE PAVEMENT LIMITS,
SEE CROSS-SECTIONS

FOR PHASE 1, SEE SHEET 39
FOR PHASE 3, SEE SHEET 46
FOR PHASE 4, SEE SHEET 51

SEE SHEET 43
MATCHLINE STA. 141+00

SEE ABOVE
MATCHLINE STA. 152+00

MATCHLINE STA. 152+00
SEE BELOW

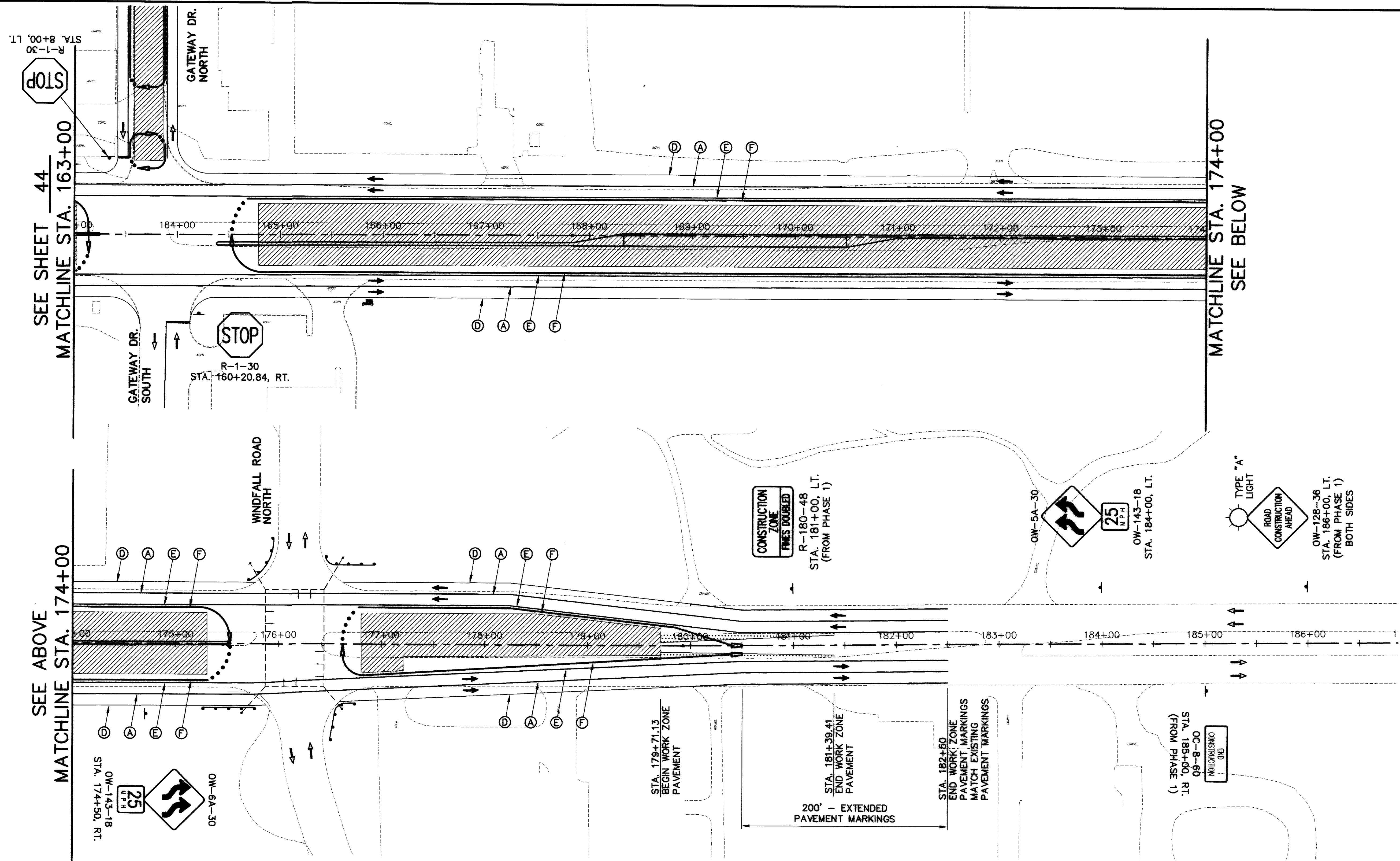
MATCHLINE STA. 163+00
SEE SHEET 45

CALCULATED
CHECKED

(IN FEET)

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
STA. 141+00 TO STA. 163+00

MED - 18 - 15.13



LEGEND

- (A) WORK ZONE LANE LINE, CLASS I
- (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
- (C) DRUMS @ 20' C/C
- (D) WORK ZONE EDGE LINE, WHITE, CLASS I
- (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
- (F) PORTABLE CONCRETE BARRIER
- (G) WORK ZONE CHANNELIZING LINE, CLASS I
- (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
- (I) WORK ZONE STOP LINE
- (J) WORK ZONE DOTTED LINE

- [Pattern] ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- [Pattern] PHASE 2 CONSTRUCTION
- [Pattern] WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- [Symbol] PORTABLE CONCRETE BARRIER END TAPER
- [Symbol] WORK ZONE IMPACT ATTENUATOR
- [Symbol] LANE ASSIGNMENT
- [Symbol] PAVEMENT MARKING

NOTE:
FOR WORK ZONE PAVEMENT LIMITS,
SEE CROSS-SECTIONS

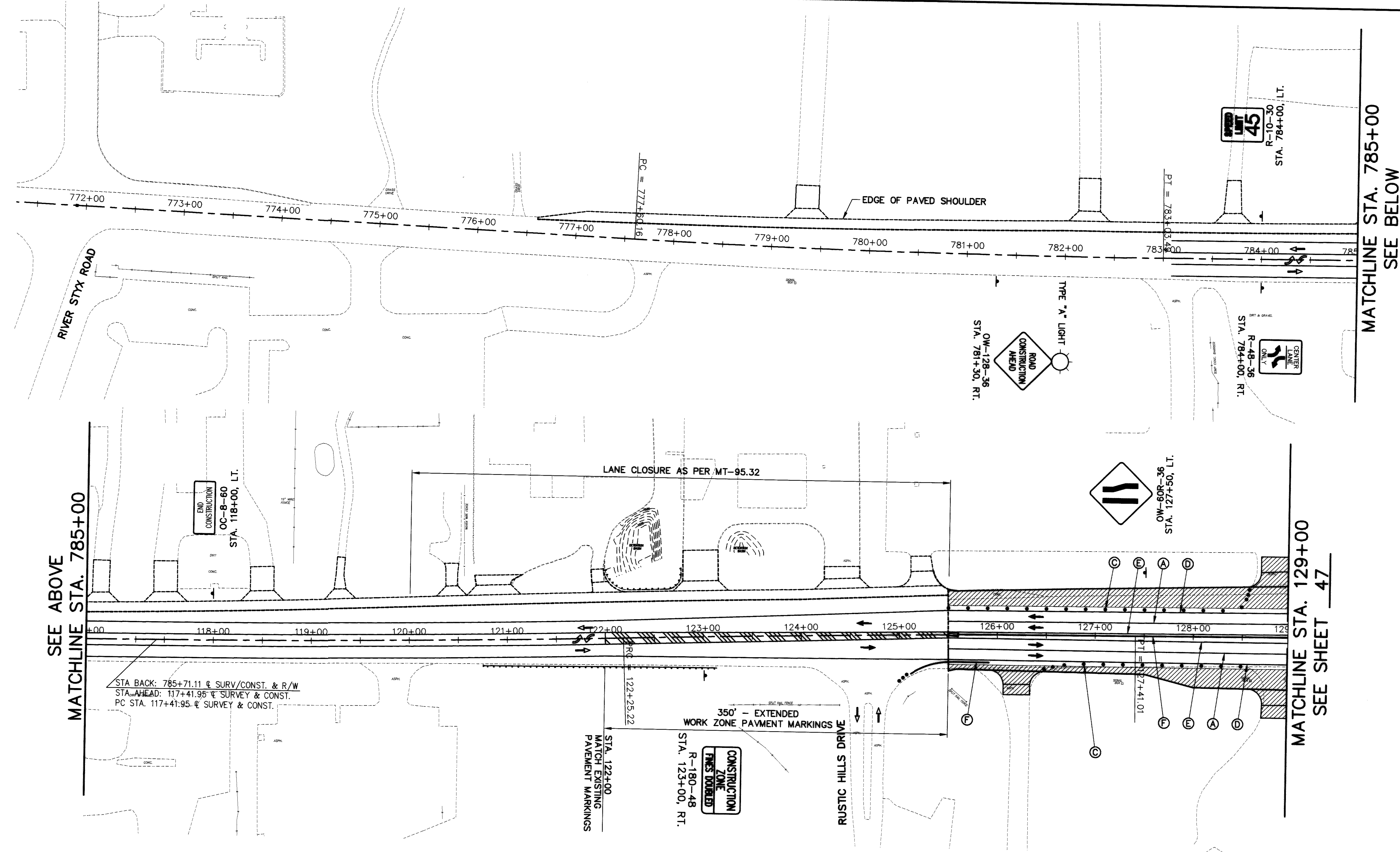
FOR PHASE 1 MOT, SEE SHEET 39
FOR PHASE 3 MOT, SEE SHEET 46
FOR PHASE 4 MOT, SEE SHEET 51

CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
STA. 163+00 TO 182+00

MED - 18 - 15.13

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SEE ABOVE
MATCHLINE STA. 785+00

STA. BACK: 785+71.11 @ SURV/CONST. & R/W
STA. AHEAD: 117+41.95 @ SURVEY & CONST.
PC STA. 117+41.95 @ SURVEY & CONST.

MATCHLINE STA. 129+00
SEE SHEET 47

MATCHLINE STA. 785+00
SEE BELOW

LEGEND

- (A) WORK ZONE LANE LINE, CLASS I
- (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
- (C) DRUMS @ 20' C/C
- (D) WORK ZONE EDGE LINE, WHITE, CLASS I
- (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
- (F) PORTABLE CONCRETE BARRIER
- (G) WORK ZONE CHANNELIZING LINE, CLASS I
- (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
- (I) WORK ZONE STOP LINE
- (J) WORK ZONE DOTTED LINE

- [Pattern] ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- [Pattern] PHASE 3 CONSTRUCTION
- [Pattern] WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- [Symbol] PORTABLE CONCRETE BARRIER END TAPER
- [Symbol] WORK ZONE IMPACT ATTENUATOR
- [Symbol] LANE ASSIGNMENT
- [Symbol] PAVEMENT MARKING

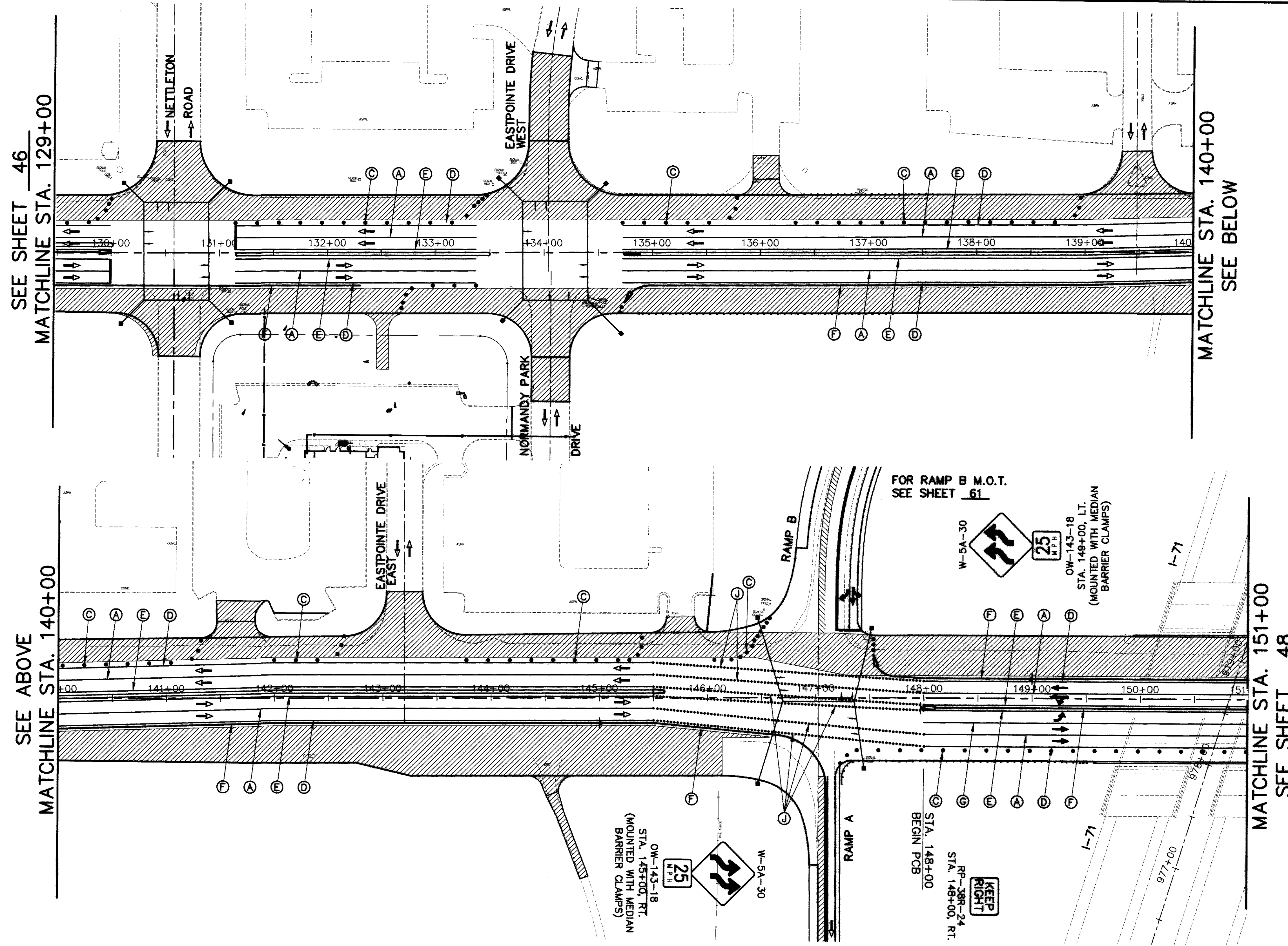
NOTE:
FOR WORK ZONE PAVEMENT LIMITS,
SEE CROSS-SECTIONS

FOR PHASE 1 MOT, SEE SHEET 39
FOR PHASE 2 MOT, SEE SHEET 43
FOR PHASE 4 MOT, SEE SHEET 51

CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
STA. 769+00 TO STA. 129+00

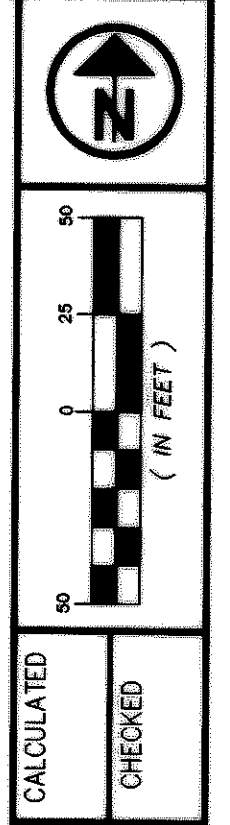
MED - 18 - 15.13



- LEGEND**
- (A) WORK ZONE LANE LINE, CLASS I
 - (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
 - (C) DRUMS ● 20' C/C
 - (D) WORK ZONE EDGE LINE, WHITE, CLASS I
 - (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
 - (F) PORTABLE CONCRETE BARRIER
 - (G) WORK ZONE CHANNELIZING LINE, CLASS I
 - (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
 - (I) WORK ZONE STOP LINE
 - (J) WORK ZONE DOTTED LINE
- [Hatched] ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
 - [Diagonal Lines] PHASE 3 CONSTRUCTION
 - [Vertical Lines] WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
 - [Tapered Arrow] PORTABLE CONCRETE BARRIER END TAPER
 - [Arrow] WORK ZONE IMPACT ATTENUATOR
 - [Double Arrow] LANE ASSIGNMENT
 - [Single Arrow] PAVEMENT MARKING

NOTE:
FOR WORK ZONE PAVEMENT LIMITS,
SEE CROSS-SECTIONS

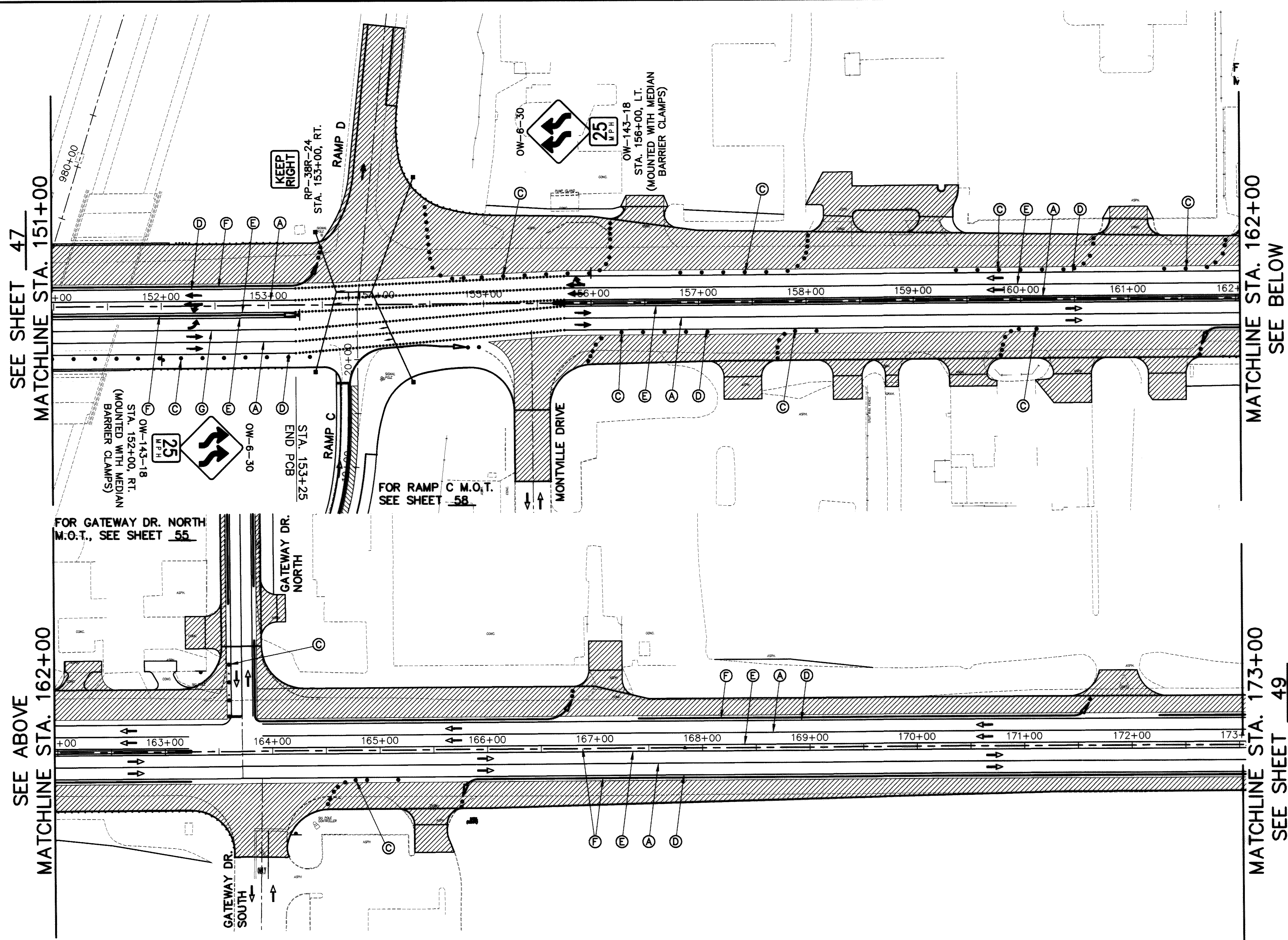
FOR PHASE 1 MOT, SEE SHEET 39
FOR PHASE 2 MOT, SEE SHEET 43



CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
STA. 129+00 TO STA. 151+00

MED - 18 - 15.13



LEGEND

- (A) WORK ZONE LANE LINE, CLASS I
- (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
- (C) DRUMS ● 20' C/C
- (D) WORK ZONE EDGE LINE, WHITE, CLASS I
- (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
- (F) PORTABLE CONCRETE BARRIER
- (G) WORK ZONE CHANNELIZING LINE, CLASS I
- (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
- (I) WORK ZONE STOP LINE
- (J) WORK ZONE DOTTED LINE

- [Pattern] ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- [Pattern] PHASE 3 CONSTRUCTION
- [Pattern] WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- [Symbol] PORTABLE CONCRETE BARRIER END TAPER
- [Symbol] WORK ZONE IMPACT ATTENUATOR
- [Symbol] LANE ASSIGNMENT
- [Symbol] PAVEMENT MARKING

NOTE:
FOR WORK ZONE PAVEMENT LIMITS,
SEE CROSS-SECTIONS

FOR PHASE 1, SEE SHEET 39
FOR PHASE 2, SEE SHEET 43
FOR PHASE 4, SEE SHEET 51

48

362

MED - 18 - 15.13

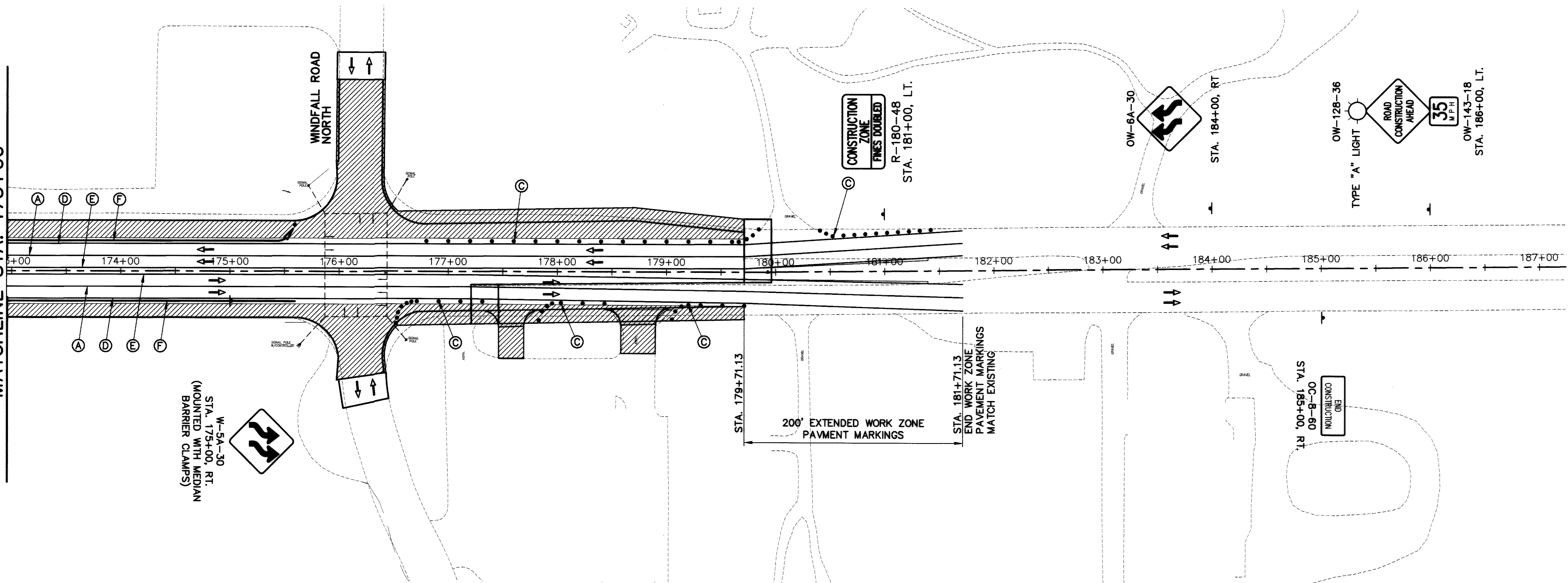
MAINTENANCE OF TRAFFIC PLAN - PHASE 3

STA. 151+00 TO STA. 173+00

CALCULATED

CHECKED

SEE SHEET 48
MATCHLINE STA. 173+00



LEGEND

- (A) WORK ZONE LANE LINE, CLASS I
- (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
- (C) DRUMS ● 20' C/C
- (D) WORK ZONE EDGE LINE, WHITE, CLASS I
- (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
- (F) PORTABLE CONCRETE BARRIER
- (G) WORK ZONE CHANNELIZING LINE, CLASS I
- (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
- (I) WORK ZONE STOP LINE
- (J) WORK ZONE DOTTED LINE

- [Pattern] ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- [Pattern] PHASE 3 CONSTRUCTION
- [Pattern] WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- [Symbol] PORTABLE CONCRETE BARRIER END TAPER
- [Symbol] WORK ZONE IMPACT ATTENUATOR
- [Symbol] LANE ASSIGNMENT
- [Symbol] PAVEMENT MARKING

NOTE:
FOR WORK ZONE PAVEMENT LIMITS,
SEE CROSS-SECTIONS

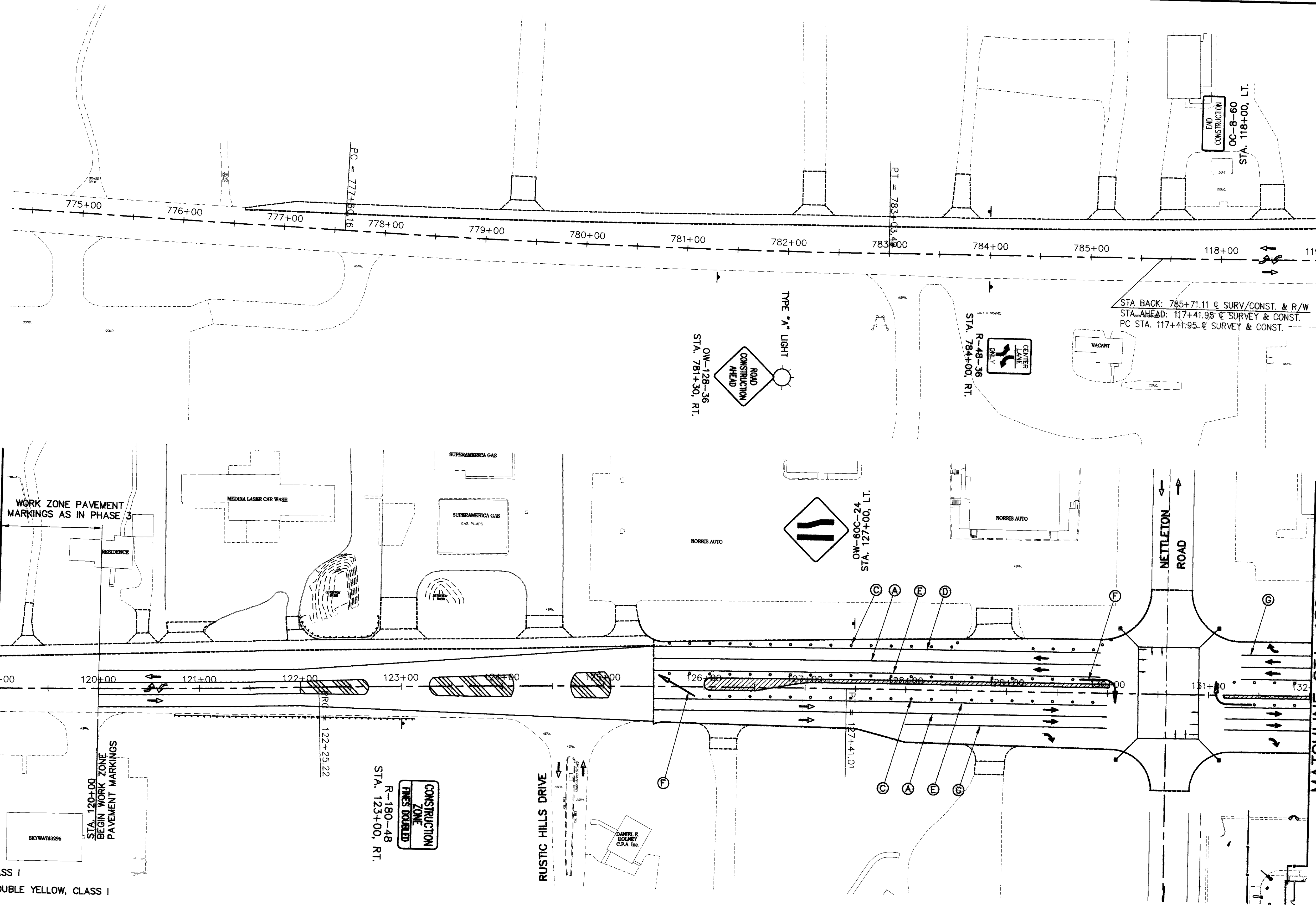
FOR PHASE 1 MOT, SEE SHEET 39
FOR PHASE 2 MOT, SEE SHEET 43
FOR PHASE 4 MOT, SEE SHEET 51

CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
STA. 173+00 TO 182+00

MED - 18 - 15.13

SEE SHEET ABOVE
MATCHLINE STA. 119+00



MATCHLINE STA. 132+00
SEE SHEET 51

MATCHLINE STA. 119+00
SEE BELOW

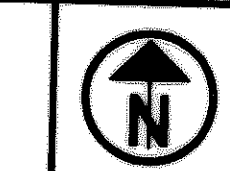
LEGEND

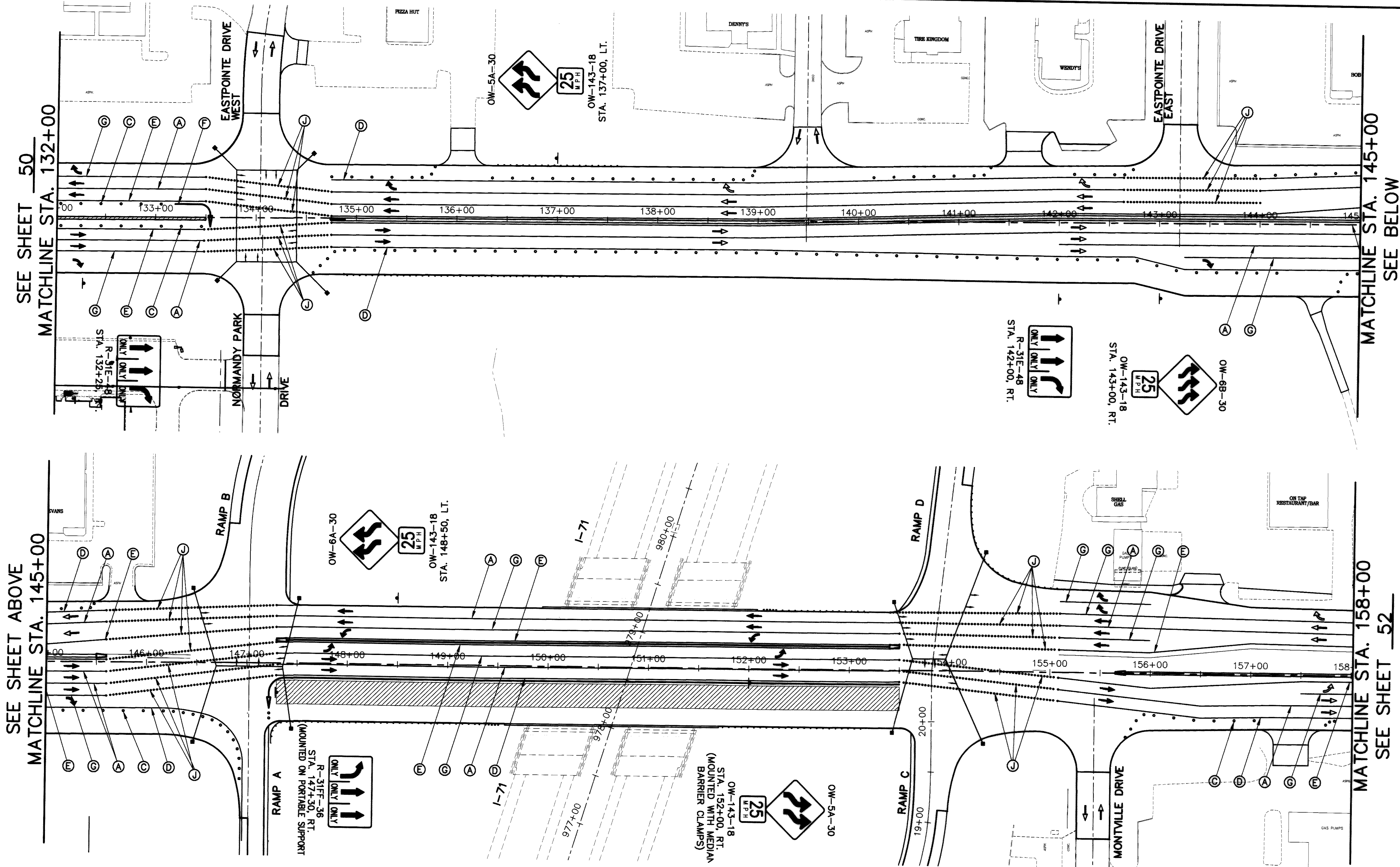
- (A) WORK ZONE LANE LINE, CLASS I
- (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
- (C) DRUMS @ 20' C/C
- (D) WORK ZONE EDGE LINE, WHITE, CLASS I
- (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
- (F) PORTABLE CONCRETE BARRIER
- (G) WORK ZONE CHANNELIZING LINE, CLASS I
- (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
- (I) WORK ZONE STOP LINE
- (J) WORK ZONE DOTTED LINE

- [Hatched Pattern] ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS I
- [Diagonal Hatched Pattern] PHASE 4 CONSTRUCTION
- [Cross-hatched Pattern] WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- [Arrow with Taper] PORTABLE CONCRETE BARRIER END TAPER
- [Arrow with Taper] WORK ZONE IMPACT ATTENUATOR
- [Arrow] LANE ASSIGNMENT
- [Arrow] PAVEMENT MARKING

FOR PHASE 1 MOT, SEE SHEET 39
FOR PHASE 2 MOT, SEE SHEET 43
FOR PHASE 3 MOT, SEE SHEET 46

CALCULATED
CHECKED





- LEGEND**
- (A) WORK ZONE LANE LINE, CLASS I
 - (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
 - (C) DRUMS ● 20' C/C
 - (D) WORK ZONE EDGE LINE, WHITE, CLASS I
 - (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
 - (F) PORTABLE CONCRETE BARRIER
 - (G) WORK ZONE CHANNELIZING LINE, CLASS I
 - (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
 - (I) WORK ZONE STOP LINE
 - (J) WORK ZONE DOTTED LINE

- [Pattern] ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- [Pattern] PHASE 4 CONSTRUCTION
- [Pattern] WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- [Symbol] PORTABLE CONCRETE BARRIER END TAPER
- [Symbol] WORK ZONE IMPACT ATTENUATOR
- [Symbol] LANE ASSIGNMENT
- [Symbol] PAVEMENT MARKING

NOTE:
FOR WORK ZONE PAVEMENT LIMITS, SEE CROSS-SECTIONS

FOR PHASE 1 MOT, SEE SHEET 39
FOR PHASE 2 MOT, SEE SHEET 43
FOR PHASE 3 MOT, SEE SHEET 46

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
STA. 133+00 TO 158+00

CALCULATED
CHECKED

SEE SHEET 50
MATCHLINE STA. 132+00

SEE SHEET 52
MATCHLINE STA. 145+00

SEE SHEET 51
MATCHLINE STA. 158+00

SEE SHEET 52
MATCHLINE STA. 145+00

MED - 18 - 15.13

51
362

SEE ABOVE
MATCHLINE STA. 169+00

SEE SHEET 51
MATCHLINE STA. 158+00

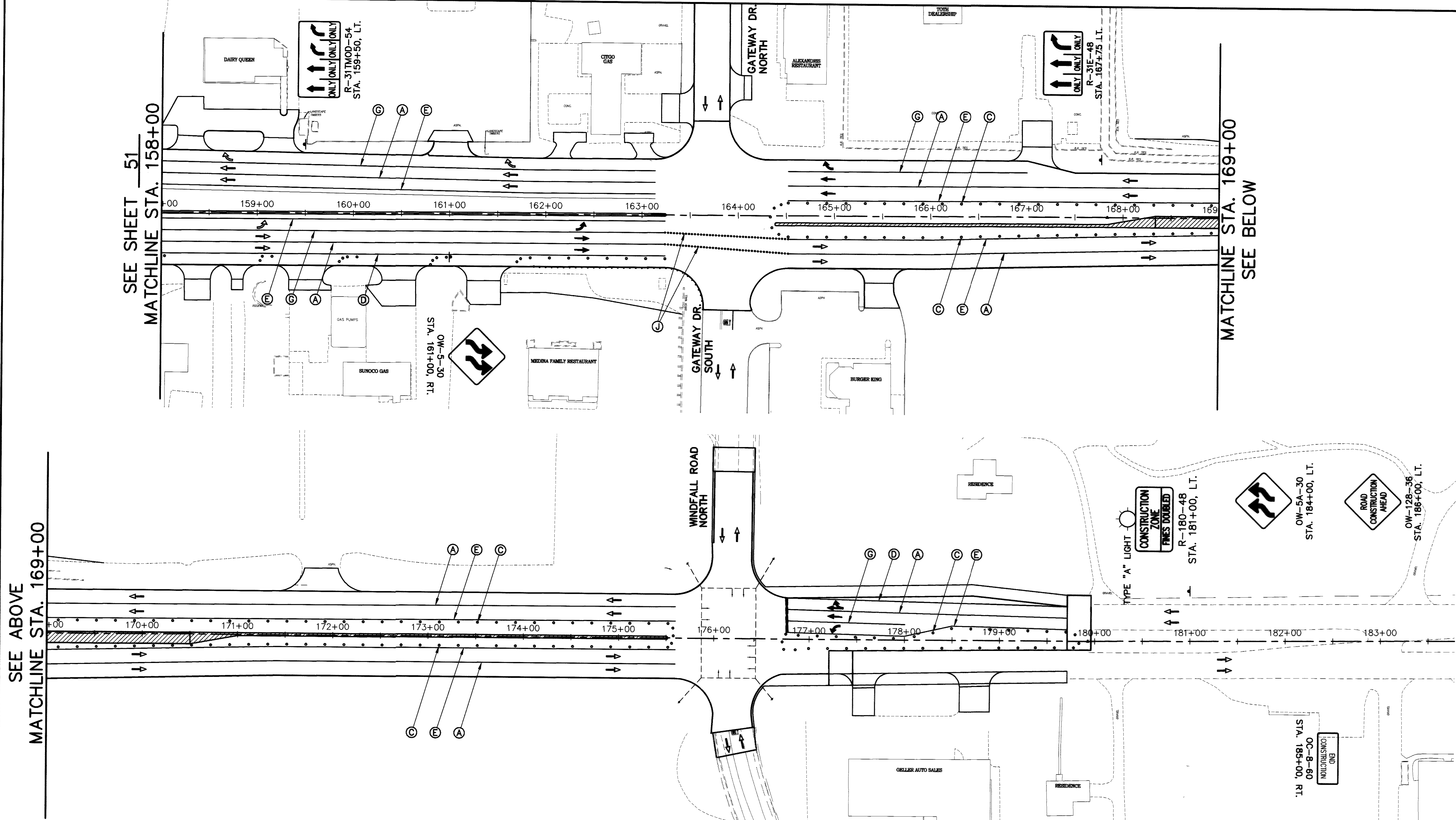
MATCHLINE STA. 169+00
SEE BELOW

- LEGEND**
- (A) WORK ZONE LANE LINE, CLASS I
 - (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
 - (C) DRUMS @ 20' C/C
 - (D) WORK ZONE EDGE LINE, WHITE, CLASS I
 - (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
 - (F) PORTABLE CONCRETE BARRIER
 - (G) WORK ZONE CHANNELIZING LINE, CLASS I
 - (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
 - (I) WORK ZONE STOP LINE
 - (L) WORK ZONE DOTTED LINE

- [Pattern] ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- [Pattern] PHASE 4 CONSTRUCTION
- [Pattern] WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- [Symbol] PORTABLE CONCRETE BARRIER END TAPER
- [Symbol] WORK ZONE IMPACT ATTENUATOR
- [Symbol] LANE ASSIGNMENT
- [Symbol] PAVEMENT MARKING

NOTE:
FOR WORK ZONE PAVEMENT LIMITS,
SEE CROSS-SECTIONS

FOR PHASE 1 MOT, SEE SHEET 39
FOR PHASE 2 MOT, SEE SHEET 43
FOR PHASE 3 MOT, SEE SHEET 46



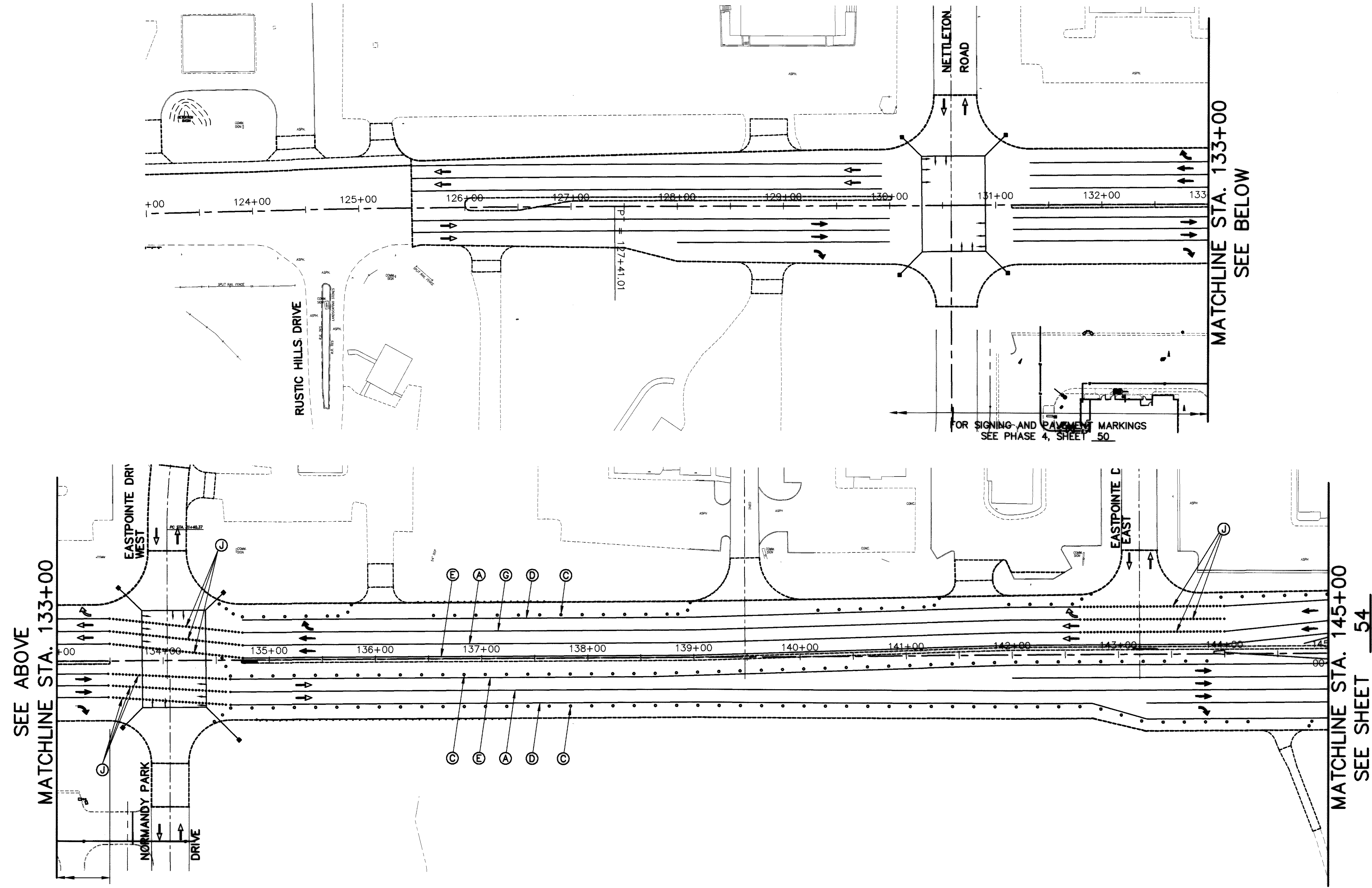
CALCULATED
CHECKED

50
25
0
25
50
(IN FEET)

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
STA. 158+00 TO 180+00

MED - 18 - 15.13

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- LEGEND**
- (A) WORK ZONE LANE LINE, CLASS I
 - (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
 - (C) DRUMS ● 20' C/C
 - (D) WORK ZONE EDGE LINE, WHITE, CLASS I
 - (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
 - (F) PORTABLE CONCRETE BARRIER
 - (G) WORK ZONE CHANNELIZING LINE, CLASS I
 - (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
 - (I) WORK ZONE STOP LINE
 - (J) WORK ZONE DOTTED LINE

- [Pattern] ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- [Pattern] PHASE 5 CONSTRUCTION
- [Pattern] WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- [Symbol] PORTABLE CONCRETE BARRIER END TAPER
- [Symbol] WORK ZONE IMPACT ATTENUATOR
- [Symbol] LANE ASSIGNMENT
- [Symbol] PAVEMENT MARKING

NOTE:
FOR WORK ZONE PAVEMENT LIMITS,
SEE CROSS-SECTIONS

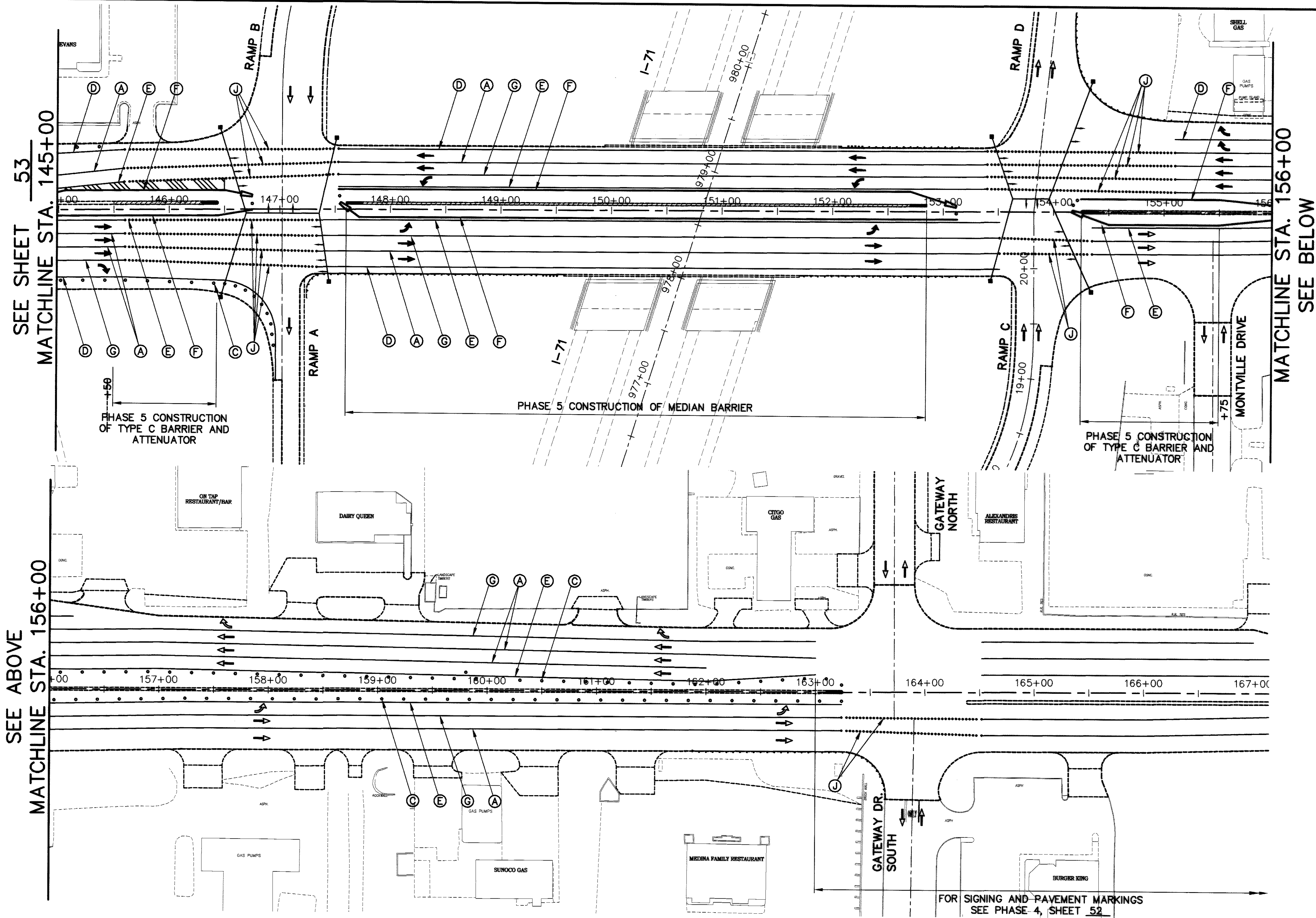
FOR PHASE 1 MOT, SEE SHEET 39
FOR PHASE 2 MOT, SEE SHEET 43
FOR PHASE 3 MOT, SEE SHEET 46

CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC PLAN - PHASE 5
STA. 123+00 TO 145+00

MED - 18 - 15.13

J:\PROJ\7050600\MOT\70506MFM.DWG User: am105646 Jun 04, 2003 - 2:45pm



SEE SHEET 53
MATCHLINE STA. 145+00

SEE ABOVE
MATCHLINE STA. 156+00

MATCHLINE STA. 156+00

MATCHLINE STA. 156+00

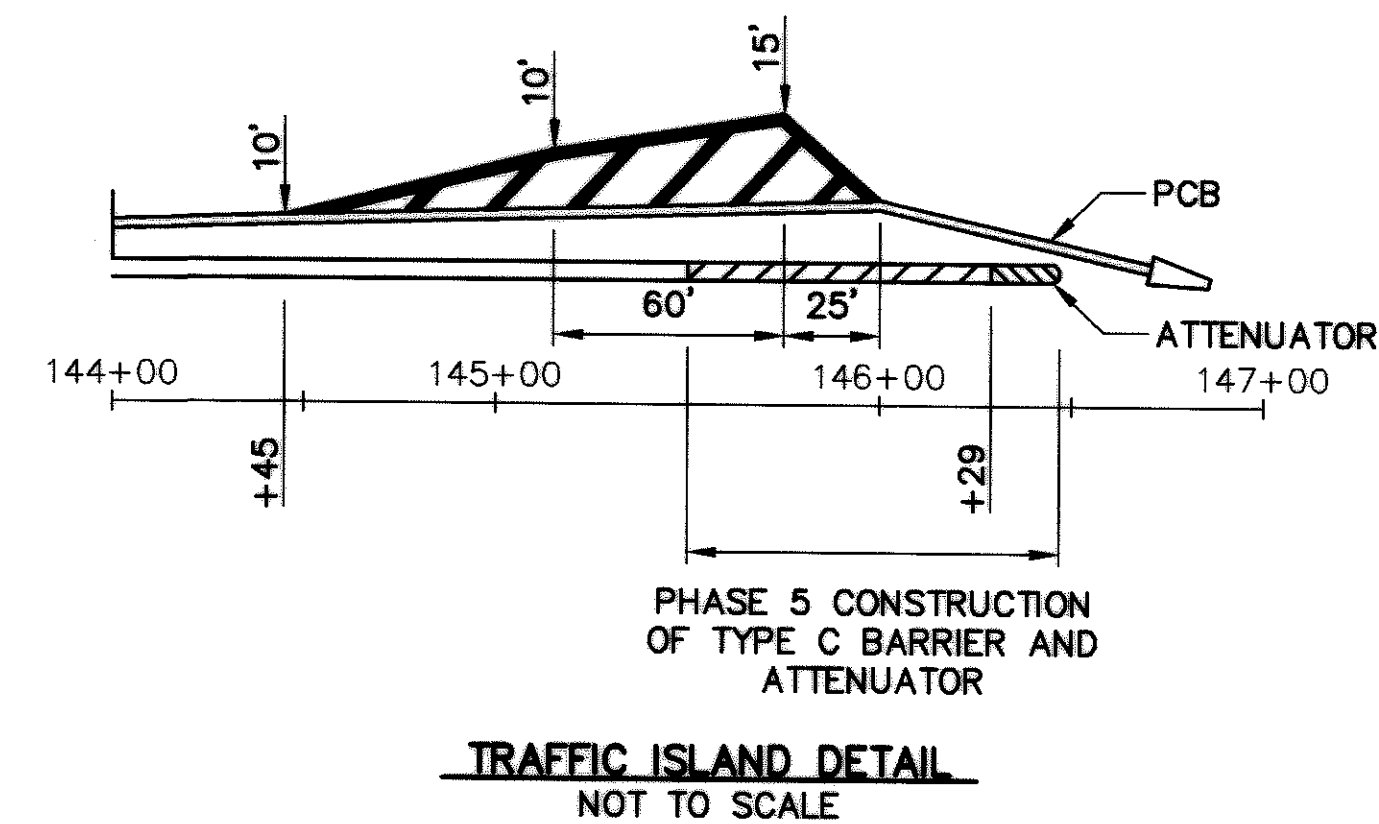
SEE BELOW

LEGEND

- (A) WORK ZONE LANE LINE, CLASS I
- (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
- (C) DRUMS @ 20' c/c
- (D) WORK ZONE EDGE LINE, WHITE, CLASS I
- (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
- (F) PORTABLE CONCRETE BARRIER
- (G) WORK ZONE CHANNELIZING LINE, CLASS I
- (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
- (I) WORK ZONE STOP LINE
- (J) WORK ZONE DOTTED LINE

- [Pattern] ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- [Pattern] PHASE 5 CONSTRUCTION
- [Pattern] WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- [Symbol] PORTABLE CONCRETE BARRIER END TAPER
- [Symbol] WORK ZONE IMPACT ATTENUATOR
- [Symbol] LANE ASSIGNMENT
- [Symbol] PAVEMENT MARKING

NOTE:
FOR WORK ZONE PAVEMENT LIMITS,
SEE CROSS-SECTIONS

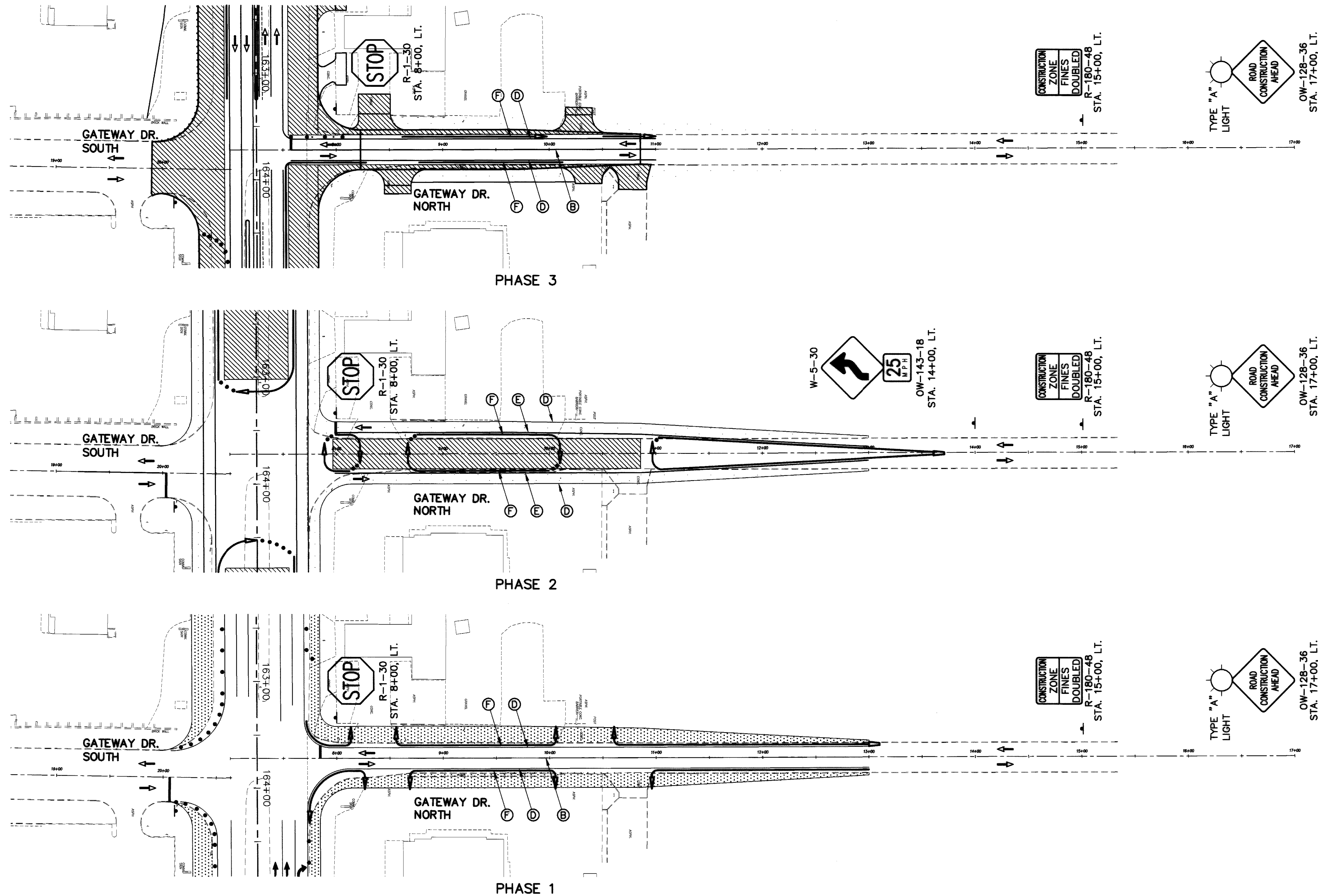


FOR PHASE 1 MOT, SEE SHEET 39
FOR PHASE 2 MOT, SEE SHEET 43
FOR PHASE 3 MOT, SEE SHEET 46

CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC PLAN - PHASE 5
STA. 145+00 TO 163+00

MED - 18 - 15.13



LEGEND

- (A) WORK ZONE LANE LINE, CLASS I
- (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
- (C) DRUMS @ 20' C/C
- (D) WORK ZONE EDGE LINE, WHITE, CLASS I
- (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
- (F) PORTABLE CONCRETE BARRIER
- (G) WORK ZONE CHANNELIZING LINE, CLASS I
- (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
- (I) WORK ZONE STOP LINE
- (J) WORK ZONE DOTTED LINE

PROPOSED CONSTRUCTION

- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- PORTABLE CONCRETE BARRIER END TAPER
- WORK ZONE IMPACT ATTENUATOR
- LANE ASSIGNMENT
- PAVEMENT MARKING

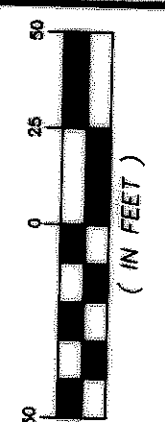
NOTE:
FOR WORK ZONE PAVEMENT LIMITS,
SEE CROSS-SECTIONS

FOR PHASE 1 MOT, SEE SHEET 40
FOR PHASE 2 MOT, SEE SHEET 43
FOR PHASE 3 MOT, SEE SHEET 46

CALCULATED
CHECKED

**MAINTENANCE OF TRAFFIC PLAN - GATEWAY DR.
PHASE 1, 2 AND 3**

MED - 18 - 15.13

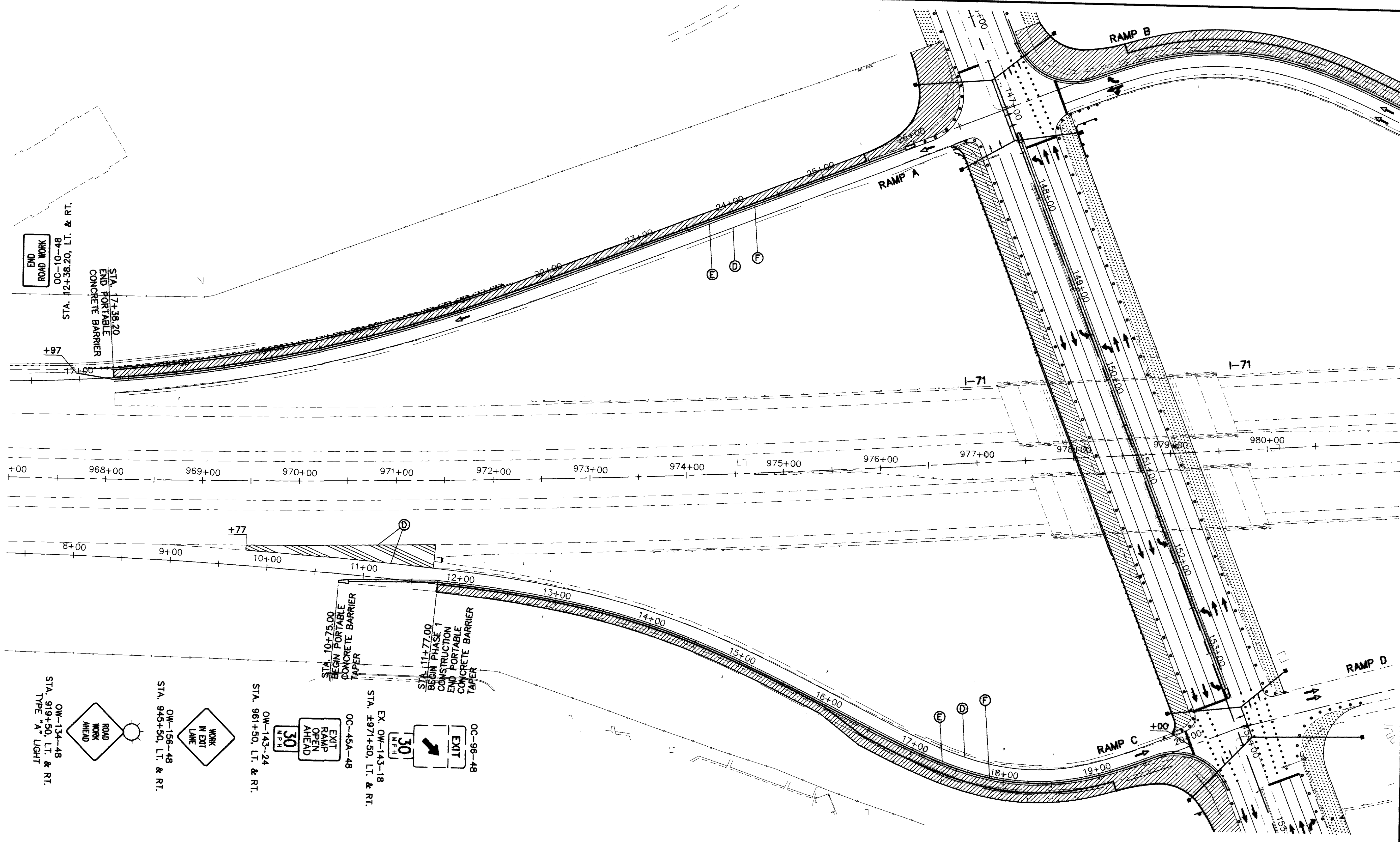


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**MAINTENANCE OF TRAFFIC PLAN
RAMPS A AND C, PHASE 1**

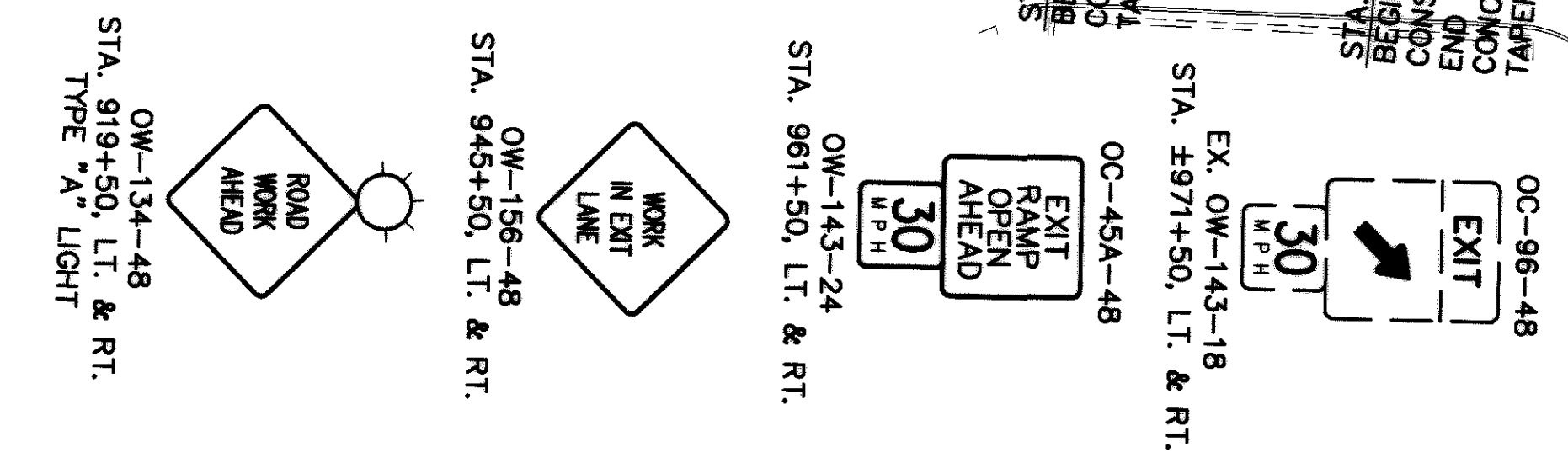
MED - 18 - 15.13

56
362



END ROAD WORK
OC-10-48
STA. 12+36.20, LT. & RT.
STA. 17+38.20
END PORTABLE
CONCRETE BARRIER

STA. 10+75.00
BEGIN PORTABLE
CONCRETE BARRIER
TAPER
STA. 11+77.00
BEGIN PHASE 1
CONSTRUCTION
END PORTABLE
CONCRETE BARRIER
TAPER
STA. 961+50, LT. & RT.
STA. 945+50, LT. & RT.
STA. 919+50, LT. & RT.



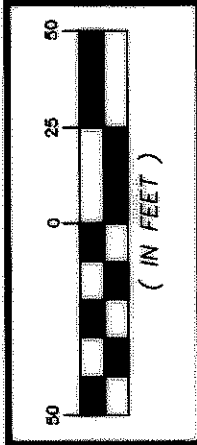
LEGEND

- (A) WORK ZONE LANE LINE, CLASS I
- (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
- (C) DRUMS ● 20' C/C
- (D) WORK ZONE EDGE LINE, WHITE, CLASS I
- (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
- (F) PORTABLE CONCRETE BARRIER
- (G) WORK ZONE CHANNELIZING LINE, CLASS I
- (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
- (I) WORK ZONE STOP LINE
- (J) WORK ZONE DOTTED LINE

- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- PHASE 1 CONSTRUCTION
- WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- PORTABLE CONCRETE BARRIER END TAPER
- WORK ZONE IMPACT ATTENUATOR
- LANE ASSIGNMENT
- PAVEMENT MARKING

FOR PHASE 1 MOT, SEE SHEET 39
FOR PHASE 2 MOT, SEE SHEET 43
FOR PHASE 3 MOT, SEE SHEET 46

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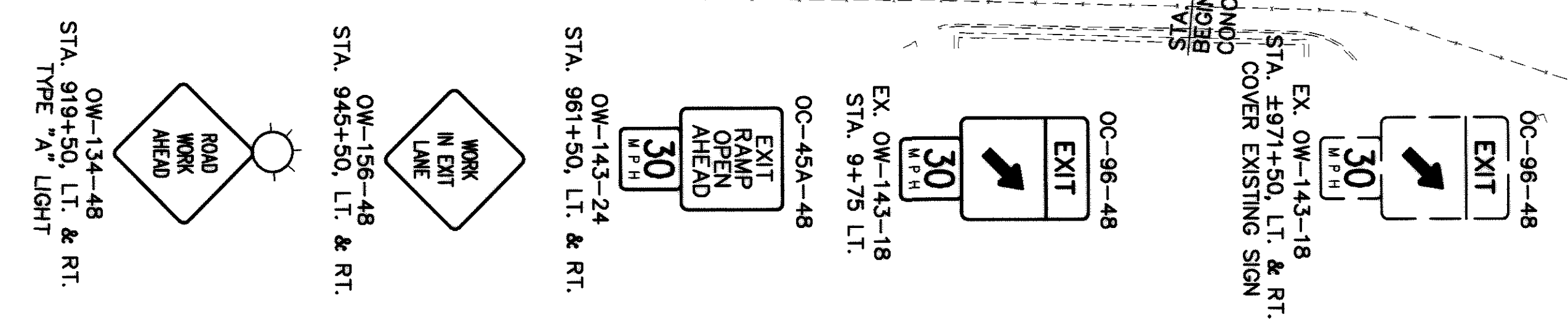
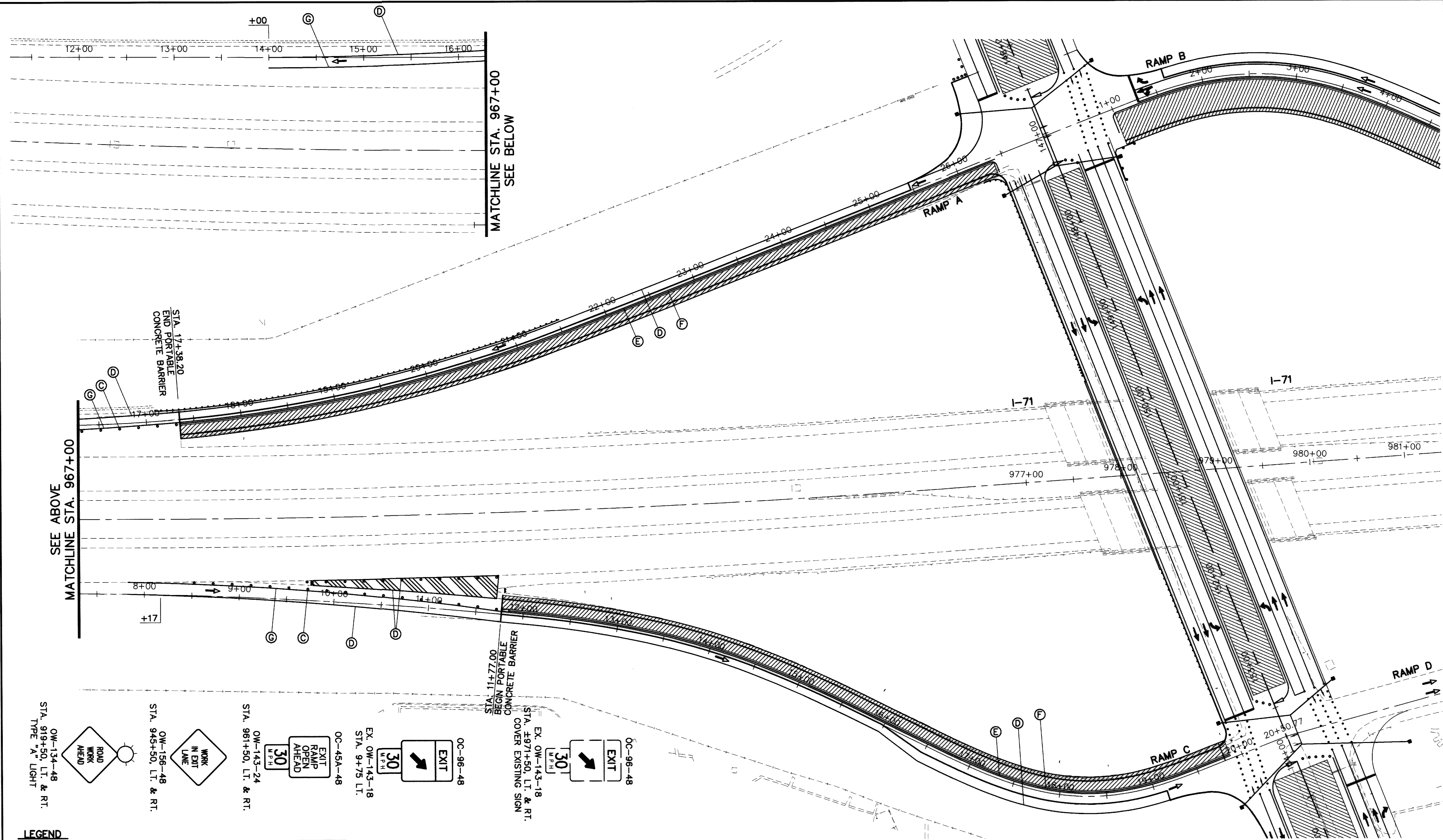


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**MAINTENANCE OF TRAFFIC PLAN
RAMPS A AND C, PHASE 2**

MED - 18 - 15.13

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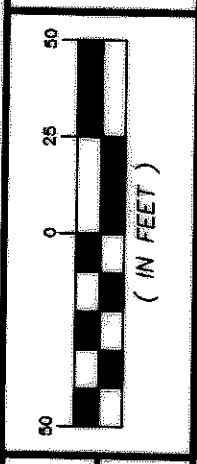
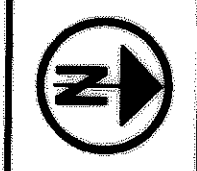


- LEGEND**
- (A) WORK ZONE LANE LINE, CLASS I
 - (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
 - (C) DRUMS @ 20' C/C
 - (D) WORK ZONE EDGE LINE, WHITE, CLASS I
 - (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
 - (F) PORTABLE CONCRETE BARRIER
 - (G) WORK ZONE CHANNELIZING LINE, CLASS I
 - (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
 - (I) WORK ZONE STOP LINE
 - (J) WORK ZONE DOTTED LINE

- [Symbol] ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- [Symbol] PHASE 2 CONSTRUCTION
- [Symbol] WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- [Symbol] PORTABLE CONCRETE BARRIER END TAPER
- [Symbol] WORK ZONE IMPACT ATTENUATOR
- [Symbol] LANE ASSIGNMENT
- [Symbol] PAVEMENT MARKING

FOR PHASE 1 MOT, SEE SHEET 39
 FOR PHASE 2 MOT, SEE SHEET 43
 FOR PHASE 3 MOT, SEE SHEET 46

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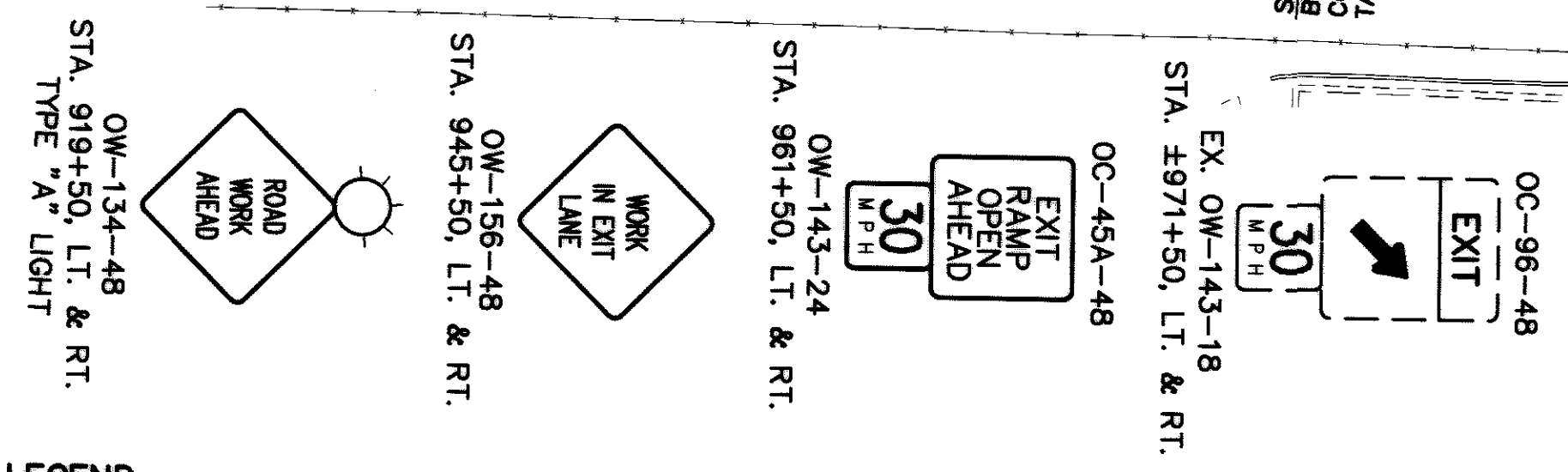
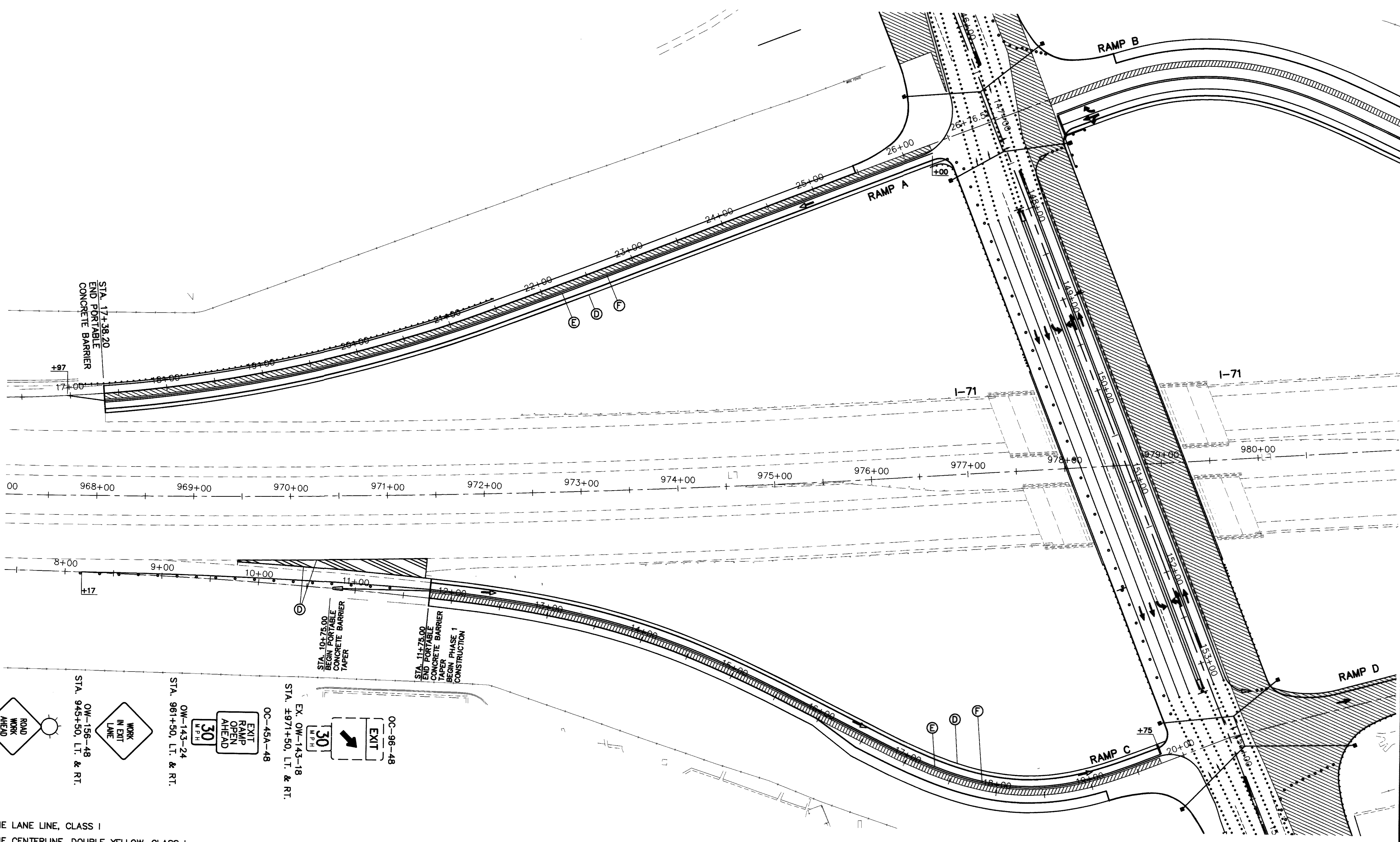


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MAINTENANCE OF TRAFFIC PLAN RAMPS A AND C, PHASE 3

MED - 18 - 15.13

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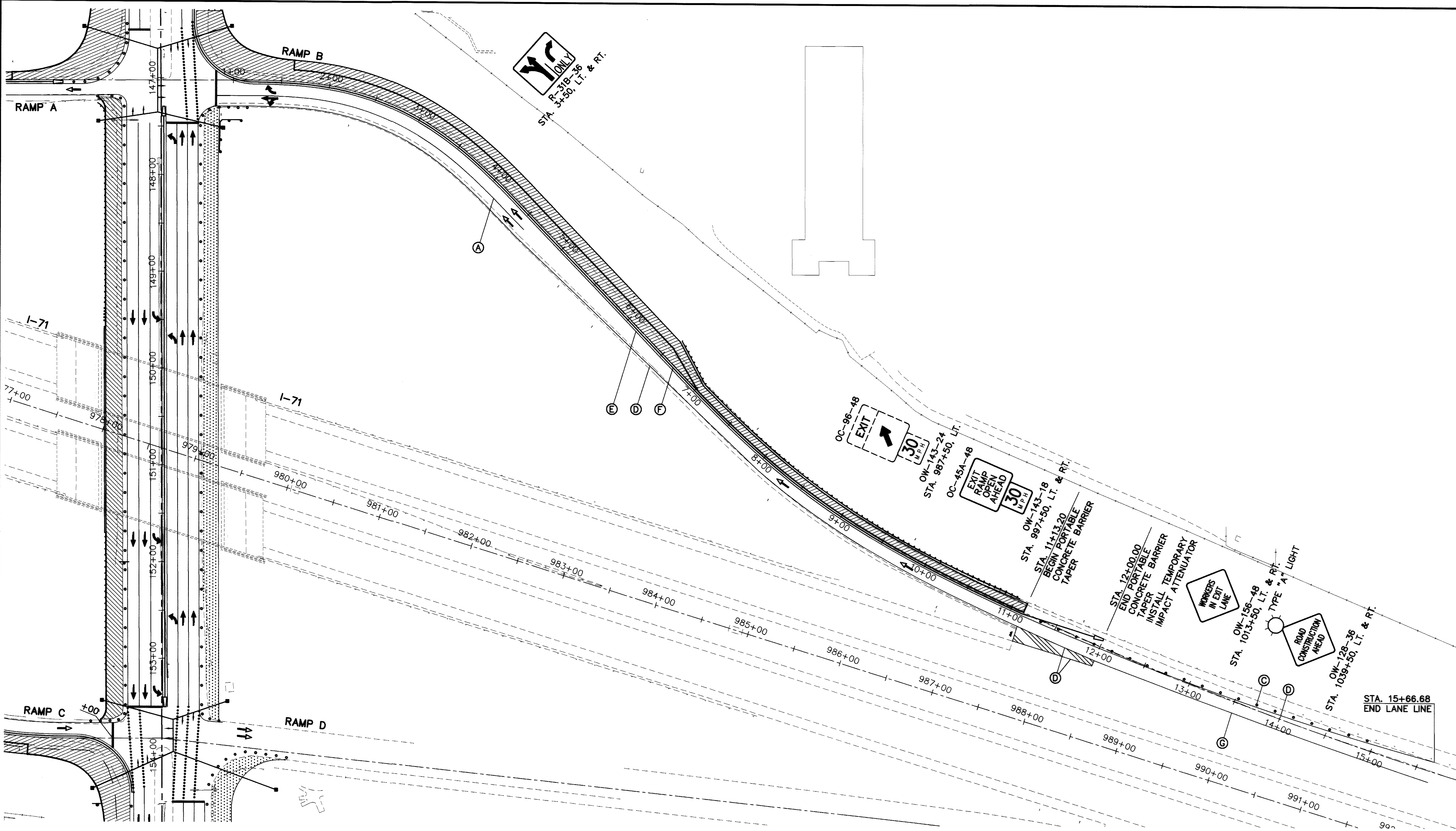
- LEGEND**
- (A) WORK ZONE LANE LINE, CLASS I
 - (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
 - (C) DRUMS @ 20' C/C
 - (D) WORK ZONE EDGE LINE, WHITE, CLASS I
 - (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
 - (F) PORTABLE CONCRETE BARRIER
 - (G) WORK ZONE CHANNELIZING LINE, CLASS I
 - (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
 - (I) WORK ZONE STOP LINE
 - (J) WORK ZONE DOTTED LINE

- [Pattern] ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- [Pattern] PHASE 3 CONSTRUCTION
- [Pattern] WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- [Symbol] PORTABLE CONCRETE BARRIER END TAPER
- [Symbol] WORK ZONE IMPACT ATTENUATOR
- [Symbol] LANE ASSIGNMENT
- [Symbol] PAVEMENT MARKING

FOR PHASE 1 MOT, SEE SHEET 39
FOR PHASE 2 MOT, SEE SHEET 43
FOR PHASE 3 MOT, SEE SHEET 46

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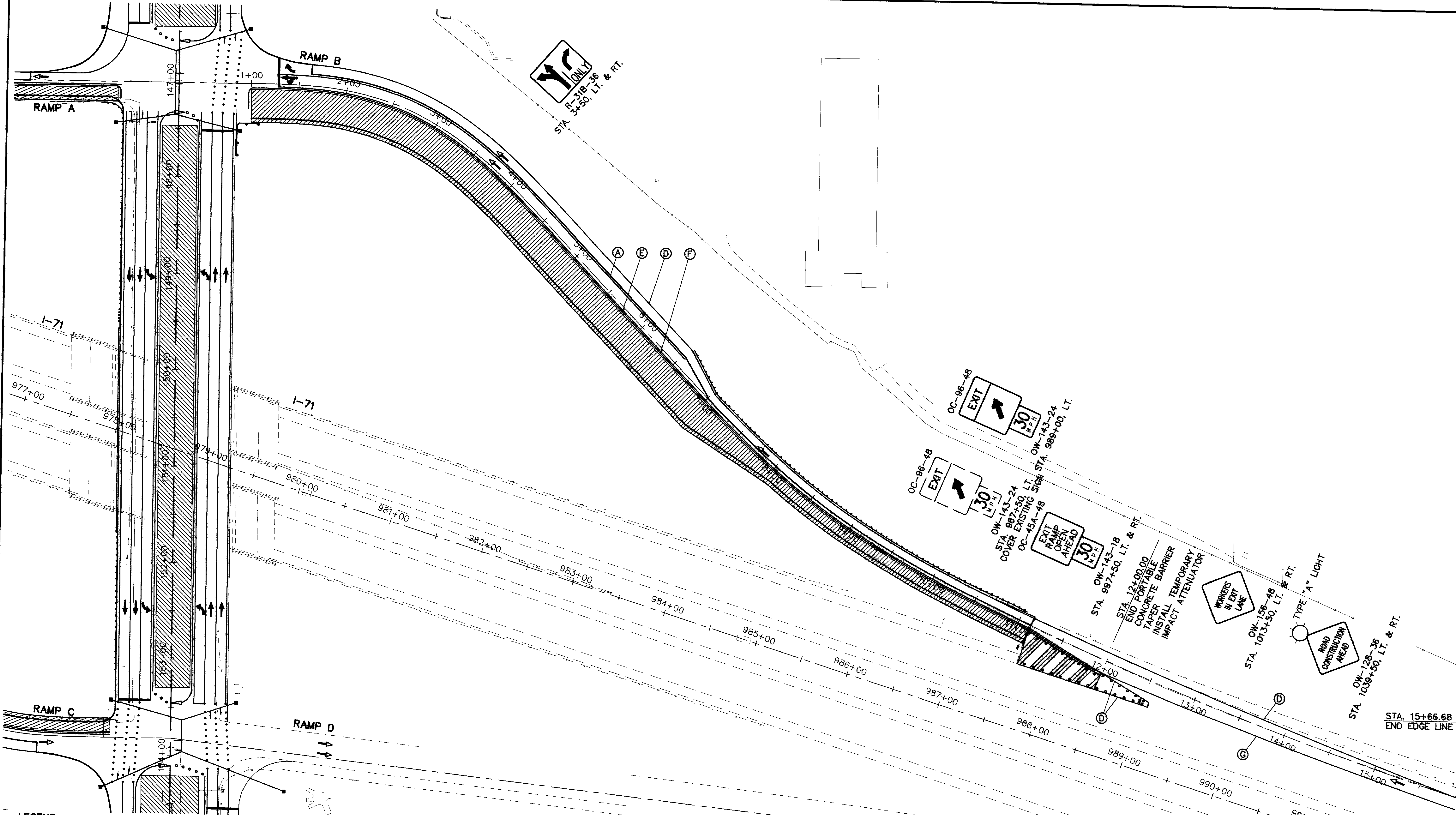
**MAINTENANCE OF TRAFFIC PLAN
RAMP B, PHASE 1**

- LEGEND**
- (A) WORK ZONE LANE LINE, CLASS I
 - (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
 - (C) DRUMS @ 20' C/C
 - (D) WORK ZONE EDGE LINE, WHITE, CLASS I
 - (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
 - (F) PORTABLE CONCRETE BARRIER
 - (G) WORK ZONE CHANNELIZING LINE, CLASS I
 - (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
 - (I) WORK ZONE STOP LINE
 - (J) WORK ZONE DOTTED LINE

- [Pattern] ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- [Pattern] PHASE 1 CONSTRUCTION
- [Pattern] WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- [Symbol] PORTABLE CONCRETE BARRIER END TAPER
- [Symbol] WORK ZONE IMPACT ATTENUATOR
- [Symbol] LANE ASSIGNMENT
- [Symbol] PAVEMENT MARKING

FOR PHASE 1 MOT, SEE SHEET 39
 FOR PHASE 2 MOT, SEE SHEET 43
 FOR PHASE 3 MOT, SEE SHEET 46

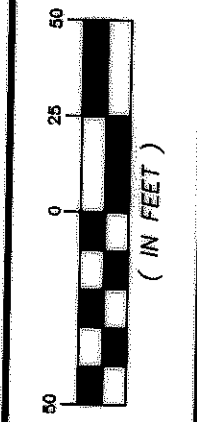
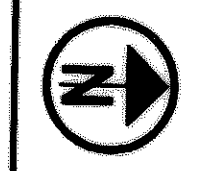
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LEGEND

- (A) WORK ZONE LANE LINE, CLASS I
- (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
- (C) DRUMS @ 20' C/C
- (D) WORK ZONE EDGE LINE, WHITE, CLASS I
- (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
- (F) PORTABLE CONCRETE BARRIER
- (G) WORK ZONE CHANNELIZING LINE, CLASS I
- (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
- (I) WORK ZONE STOP LINE
- (J) WORK ZONE DOTTED LINE

- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- PHASE 2 CONSTRUCTION
- WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- PORTABLE CONCRETE BARRIER END TAPER
- WORK ZONE IMPACT ATTENUATOR
- LANE ASSIGNMENT
- PAVEMENT MARKING



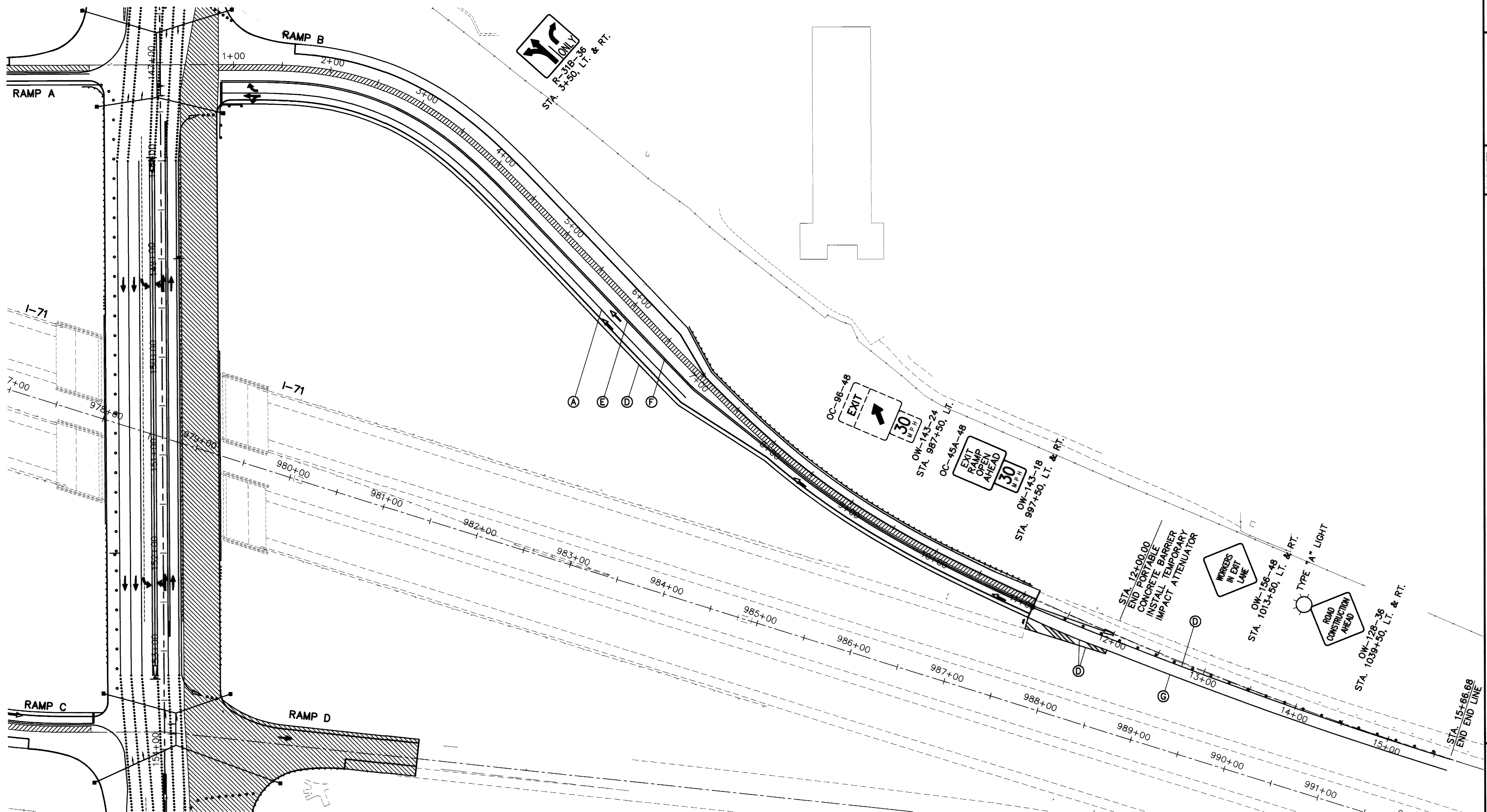
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**MAINTENANCE OF TRAFFIC PLAN
RAMP B, PHASE 2**

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FOR PHASE 1 MOT, SEE SHEET 39
FOR PHASE 2 MOT, SEE SHEET 43
FOR PHASE 3 MOT, SEE SHEET 46

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LEGEND

- (A) WORK ZONE LANE LINE, CLASS I
- (B) WORK ZONE CENTERLINE, DOUBLE YELLOW, CLASS I
- (C) DRUMS ● 20' C/C
- (D) WORK ZONE EDGE LINE, WHITE, CLASS I
- (E) WORK ZONE EDGE LINE, YELLOW, CLASS I
- (F) PORTABLE CONCRETE BARRIER
- (G) WORK ZONE CHANNELIZING LINE, CLASS I
- (H) WORK ZONE DOUBLE YELLOW LINE CLASS I, (SOLID AND BROKEN)
- (I) WORK ZONE STOP LINE
- (J) WORK ZONE DOTTED LINE

- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
- PHASE 3 CONSTRUCTION
- WORK ZONE TRANSVERSE LINES, YELLOW, CLASS I
- PORTABLE CONCRETE BARRIER END TAPER
- WORK ZONE IMPACT ATTENUATOR
- LANE ASSIGNMENT
- PAVEMENT MARKING

FOR PHASE 1 MOT, SEE SHEET 39
 FOR PHASE 2 MOT, SEE SHEET 43
 FOR PHASE 3 MOT, SEE SHEET 46

CALCULATED
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**MAINTENANCE OF TRAFFIC PLAN
 RAMP B, PHASE 3**

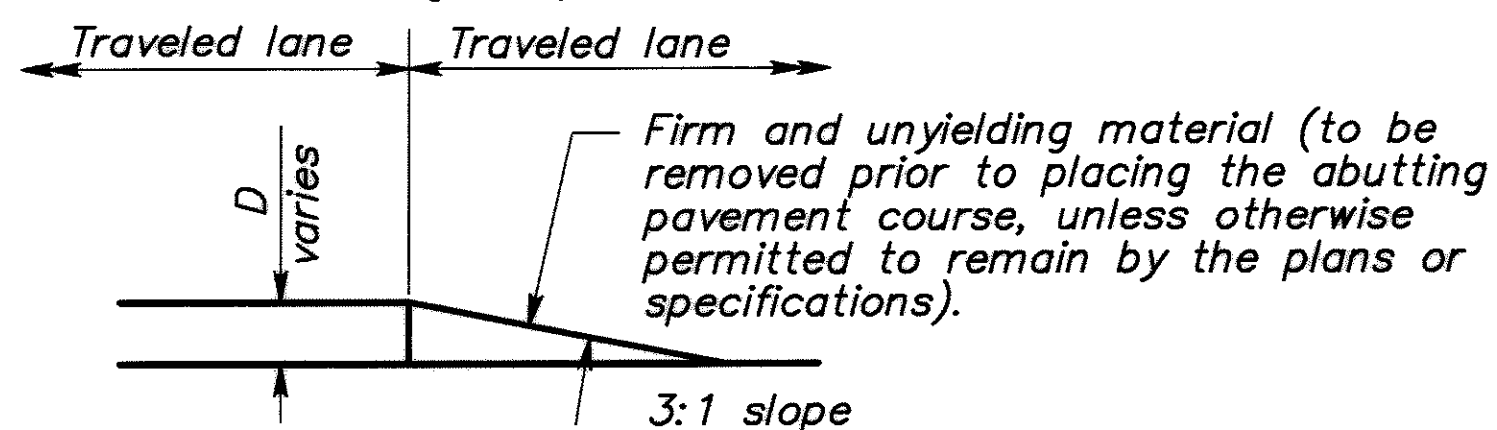
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GENERAL NOTES

- It is intended that this drawing be used for treatment of drop-offs that develop during construction operations, and that are not otherwise provided for in the construction plans. The suggested treatments are intended for high volume projects that will last at least seven days and have an active work zone 1 mile [1.6 km] or less in length. For guidance on the use of this sheet, see L&D Manual Volume One, Section 500. Where the plans do not provide specific items for labor, equipment, or materials to implement the drop-off treatments specified hereon, they shall be included for payment in the lump sum bid for **Item 614 - Maintaining Traffic**.
- While the need for certain advisory signing is noted hereon, it is not intended that this be indicative of all signing that may be required to advise or warn motorists, and all requirements of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) must be fulfilled.
- In urban or otherwise heavily developed areas where pedestrians and/or bicyclists may be present in significant numbers, additional signing and protective measures other than those shown hereon may be required.
- The drop-off treatment selected for use at any given location shall be as appropriate for the prevailing conditions at the site.
- Where concrete barrier is specified, it shall be in accordance with **SCD RM-4.2** and Item 622.
- When drums are specified for a drop-off condition, a minimum number of four drums shall be used. Spacing shall be as indicated in the plans or as specified in the OMUTCD.
- When OW-151 (Low Shoulder) signs or OW-155 (Shoulder Drop-Off) signs or OW-171 (Uneven Lanes) signs are required, they shall be placed 750' [230 m] in advance of the condition, on all intersecting entrance ramps within the limits of the condition and immediately beyond all intersecting roadways within the limits of the condition. When the drop-off condition extends more than 0.5 mile [800 m], additional signs should be erected at intervals of 1.0 mile [1600 m] or less.
- For locations, such as at ramps, lane shifts, lane closures, etc., where traffic is required to negotiate a difference in elevation between pavements, a 3:1 slope treatment similar to the Optional Wedge Treatment shall be provided.
- Portable concrete barrier shall be placed on the same level as the traffic surface and shall not encroach on lane width(s) designated as the minimum required for traffic use. Where drums are used, and their presence would reduce traveled lane widths to less than 10' [3.0 m], drums may be placed on the opposite level from that of traffic provided the dropoff depth does not exceed 5" [125] and approval is granted by the Project Engineer.
- Pavement Repairs (or similar work):
 - Lengths greater than 60' [18 m] - utilize appropriate treatment from Condition I.
 - Lengths of 60' [18 m] or less - repairs shall be effected in accordance with CMS 255.08. Drums may be used as a separator adjacent to the traveled lane.

OPTIONAL WEDGE TREATMENT (MILLING OR RESURFACING)

- This treatment may be used when permitted for Condition I only.
- OW-171 sign required.



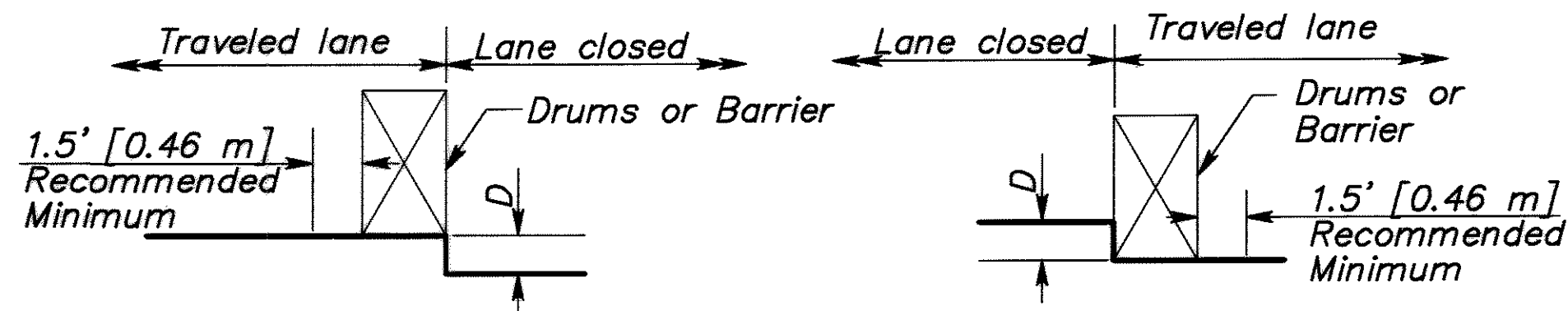
CONDITION I

DROP-OFFS BETWEEN TRAVELED LANES

- These treatments are to be used for resurfacing, pavement planing, excavation, etc. between or within traveled lanes.

| D | Treatment |
|-------------------------------------|---|
| $\leq 1\frac{1}{2}$ " [≤ 40] | Erect OW-171 sign. |
| $1\frac{1}{2}$ " - 3" [40-75] | 1) Lane closure utilizing drums* as shown below OR 2) Optional Wedge Treatment |
| > 3 " - 5" [75-125] | Lane closure utilizing drums as shown below. |
| > 5 " [> 125] | Lane closure utilizing portable concrete barrier as shown below. |

* Cones may be used for daytime only conditions.



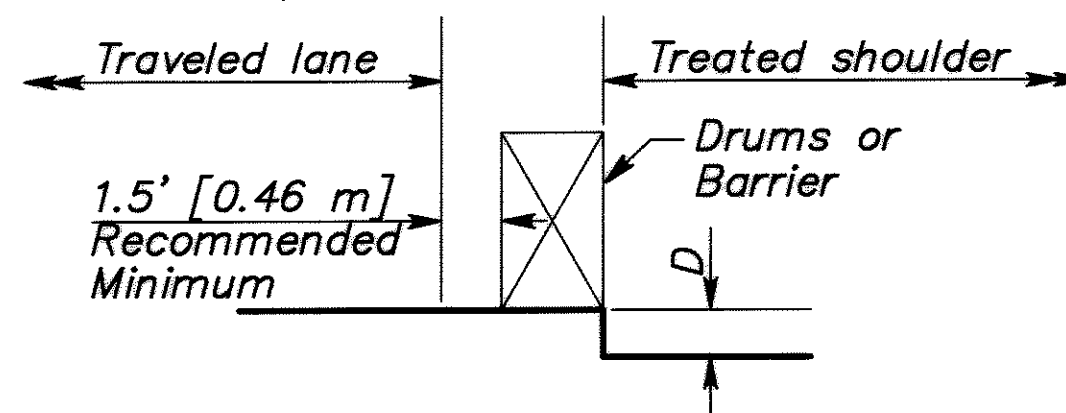
CONDITION II

DROP-OFFS WITHIN GRADED SHOULDER AREA

- The treatments indicated below are for use in conjunction with resurfacing, planing, or excavations within the graded shoulder area.
- The graded shoulder area is that flat or gradually sloping area between the edge of a normally traveled lane and the more steeply sloping ditch foreslope or embankment slope. Its surface may be soil or turf, and/or it may be inclusive of a "treated" area (improved with aggregates, asphaltic materials or concrete). For the purpose herein, its maximum width shall be considered to be 12' [3.6 m].

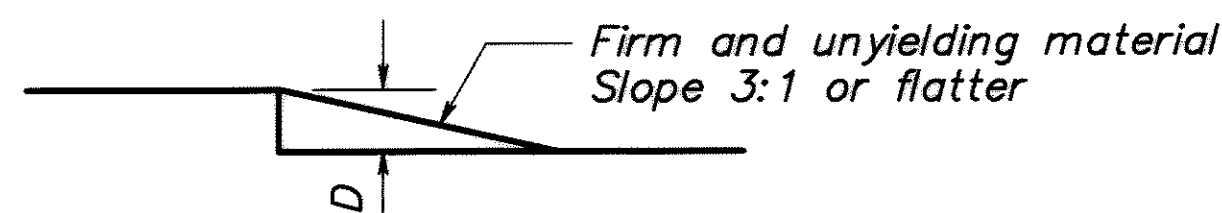
| D | Treatment |
|---|--|
| $\leq 1\frac{1}{2}$ " [≤ 40] | 1) Erect OW-155 signs. |
| $> 1\frac{1}{2}$ " - 5" [40-125] | 1) If minimum lane width* requirements can be met, maintain lanes utilizing drums as shown below OR 2) If minimum lane width* requirements cannot be met, close adjacent lane utilizing drums OR 3) Optional Shoulder Treatment. |
| > 5 " - 12" [125-305] Daylight only | If minimum lane width* requirements can be met, maintain lanes utilizing drums as shown below. |
| > 5 " - 24" [125-610] | 1) If minimum lane width* requirements can be met, maintain lanes utilizing portable concrete barrier as shown below. OR 2) If minimum lane width* requirements cannot be met, close adjacent lane utilizing drums. |
| > 24 " [> 610] | Lane closure utilizing portable concrete barrier as shown below. |

* Minimum lane widths shall be 10' [3.0 m] unless otherwise specified in the plans.



OPTIONAL SHOULDER TREATMENT

- This treatment may not be used within a bituminous shoulder where a hot longitudinal joint per CMS 401.15 is required.
- OW-151 signs required.



CONDITION III

DROP-OFFS BEYOND GRADED SHOULDER OR BACK OF CURB

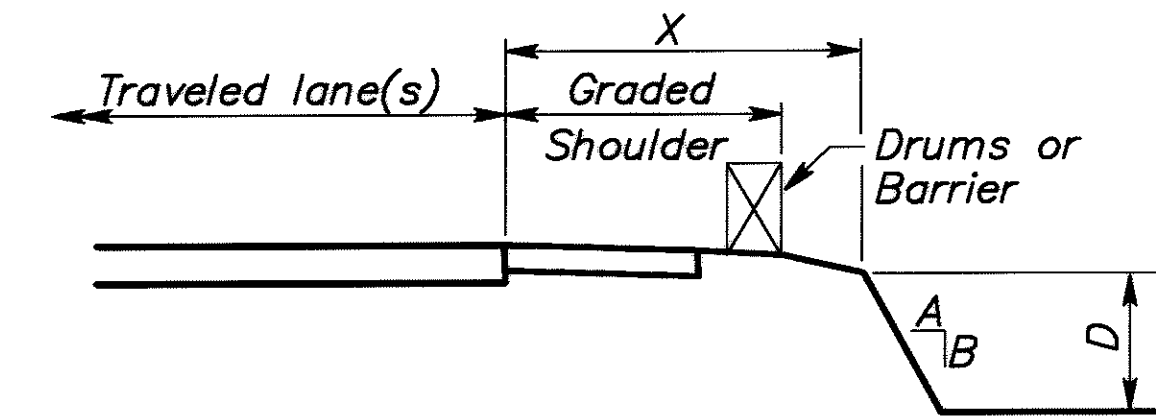
- See Note 2 under Condition II.
- Use Chart A or B below, as applicable.

CHART A

USE FOR: 1. Uncurbed Facilities.

2. Curbed Facilities, where:

- Curbs are less than 6" [150] in height.
- Curbs are 6" [150] or greater in height and the legal speed is greater than 40 mph [70 km/h].

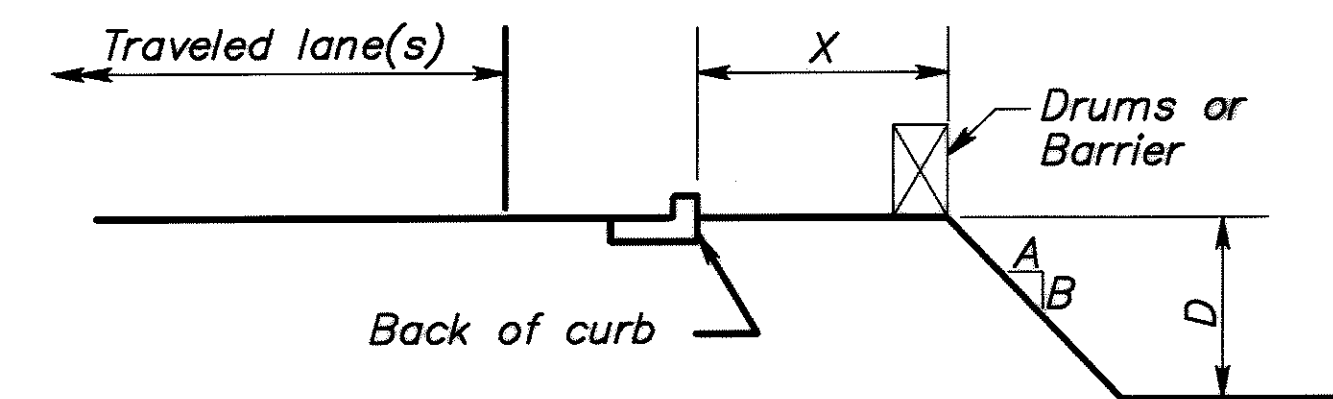


| X | D | A/B | Treatment Required | |
|-------------------------------|-----------------------------------|------------------|--------------------|---------|
| | | | Day | Night |
| 0-4' [0-1.2 m] | Any | Any | (a) | (a) |
| 4'-30" [1.2-9.1 m] | Any | 3:1 or Flatter | None | None |
| 4'-12" [1.2-3.6 m] | < 3 " [≤ 75] | Steeper than 3:1 | None | None |
| 4'-12" [1.2-3.6 m] | > 3 " - ≤ 12 " [75-305] | Steeper than 3:1 | Drums | Drums |
| 4'-12" [1.2-3.6 m] | > 12 " [> 305] | Steeper than 3:1 | Drums | Barrier |
| > 12 " - 20" [3.6-6.1 m] | < 12 " [≤ 305] | Steeper than 3:1 | None | None |
| > 12 " - 20" [3.6-6.1 m] | > 12 " - < 24 " [305-610] | Steeper than 3:1 | Drums | Drums |
| > 12 " - 20" [3.6-6.1 m] | > 24 " [> 610] | Steeper than 3:1 | Drums | Barrier |
| > 20 " - 30" [6.1-9.1 m] | < 24 " [≤ 610] | Steeper than 3:1 | None | None |
| > 20 " - 30" [6.1-9.1 m] | > 24 " [> 610] | Steeper than 3:1 | Drums | Barrier |
| > 30 " [> 9.1 m] | Any | Any | None | None |

(a) Use treatment specified under Condition II.

CHART B

USE FOR: Curbed facilities, where the curb is 6" [150] or greater in height and the legal speed is 40 mph [70 km/h] or less.



| X | D | A/B | Treatment Required | |
|--------------------------|----------------------------|-----|--------------------|-------|
| | | | Day | Night |
| 0-10' [0-3.0 m] | < 12 " [≤ 305] | Any | None | Drums |
| 0-10' [0-3.0 m] | > 12 " [> 305] | Any | Drums | Drums |
| > 10 " [> 3.0 m] | Any | Any | None | None |

NOTE: All metric dimensions (in brackets []) are in millimeters unless otherwise noted.

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Table with columns: ITEM NO., SHEET NUMBER (2-24), ITEM NO., ITEM EXT., GRAND TOTAL, UNIT, DESCRIPTION, SEE SHEET NO. Includes sections for ROADWAY (CONT.), EROSION CONTROL, and DRAINAGE.

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| ITEM NO. | SHEET NUMBER | | | | | | | | | | | | | | | | | | | | ITEM NO. | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. | | | |
|------------------|--------------|----|----|----|------|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----------|-----------|-------------|---------|-------------|---------------|---------|---|-----|
| | 2 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 28A | 33 | 66 | 70 | 71 | 72 | 73 | 76 | 77 | 79 | 80 | | | | | | | 223 | 224 | |
| DRAINAGE (CONT.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 604 | | | | | | | | | | | | | 4 | | | | | | | | | | | 604 | 00400 | 4 | EACH | CATCH BASIN, NO. 3 | |
| 604 | | | | | | | | | | | | 54 | | | | | | | | | | | | 604 | 00800 | 54 | EACH | CATCH BASIN, NO. 3A | |
| 604 | | | | | | | | | | | | 1 | | | | | | | | | | | | 604 | 01200 | 1 | EACH | CATCH BASIN, NO. 4 | |
| 604 | | | | | | | | | | | | 3 | | | | | | | | | | | | 604 | 01600 | 3 | EACH | CATCH BASIN, NO. 5 | |
| 604 | | | | | | | | | | | | 1 | | | | | | | | | | | | 604 | 04100 | 1 | EACH | CATCH BASIN, NO. 2-2A | |
| 604 | | | | | | | | | | | | 14 | | | | | | | | | | | | 604 | 04500 | 14 | EACH | CATCH BASIN, NO. 2-2B | |
| 604 | | | | | | | | | | | | 2 | | | | | | | | | | | | 604 | 04900 | 2 | EACH | CATCH BASIN, NO. 2-3 | |
| 604 | | | | | | | | | | | | 1 | | | | | | | | | | | | 604 | 05300 | 1 | EACH | CATCH BASIN, NO. 2-4 | |
| 604 | | | | | | | | | | | | 3 | | | | | | | | | | | | 604 | 09000 | 3 | EACH | CATCH BASIN ADJUSTED TO GRADE | |
| 604 | | | | | | | | | | | | 5 | | | | | | | | | | | | 604 | 14500 | 5 | EACH | INLET, NO. 3A (TYPE A) | |
| 604 | | | | | | | | | | | | 5 | | | | | | | | | | | | 604 | 22500 | 5 | EACH | INLET, MISC.: MEDIAN WALL INLET, AS PER PLAN (DESIGN A) | 229 |
| 604 | | | | | | | | | | | | 1 | | | | | | | | | | | | 604 | 22500 | 1 | EACH | INLET, MISC.: MEDIAN WALL INLET, AS PER PLAN (DESIGN B) | 228 |
| 604 | | | | | | | | | | | | 49 | | | | | | | | | | | | 604 | 31500 | 49 | EACH | MANHOLE, NO. 3 | |
| 604 | | | | | | | | | | | | 2 | | | | | | | | | | | | 604 | 32100 | 3 | EACH | MANHOLE, NO. 5 | |
| 604 | | | | | | | | | | | | 2 | | | | | | | | | | | | 604 | 34500 | 2 | EACH | MANHOLE ADJUSTED TO GRADE | |
| 604 | | | | 6 | | | | | | | | | | | | | | | | | | | | 604 | 34501 | 6 | EACH | MANHOLE ADJUSTED TO GRADE, AS PER PLAN | 23 |
| 604 | | | | 6 | | | | | | | | | | | | | | | | | | | | 604 | 35501 | 6 | EACH | MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN | 23 |
| 604 | | | | | | | | | | | | | | | | | 4 | | | | | | | 604 | 36600 | 4 | EACH | PRECAST REINFORCED CONCRETE OUTLET | |
| SPECIAL | | | | | 5000 | | | | | | | | | | | | | | | | | | | SPECIAL | 60450000 | 5000 | POUND | MISCELLANEOUS METAL | 24 |
| 605 | | | | | | | | | | | | | | | | | | | | | | | | 605 | 05110 | 2987 | FT. | 4" SHALLOW PIPE UNDERDRAINS W/ FABRIC WRAP, 707.31 OR 707.41 | |
| 605 | | | | | | | | | | | | | | | | | | | | | | | | 605 | 05210 | 73 | FT. | 4" UNCLASSIFIED PIPE UNDERDRAINS W/ FABRIC WRAP, 707.31 OR 707.41 | |
| 605 | | | | | | | | | | | | | | | | | | | | | | | | 605 | 11110 | 16999 | FT. | 6" SHALLOW PIPE UNDERDRAINS W/ FABRIC WRAP, 707.31 OR 707.41 | |
| 605 | | | | | | | | | | | | | | | | | | | | | | | | 605 | 13410 | 3583 | FT. | 6" UNCLASSIFIED PIPE UNDERDRAINS W/ FABRIC WRAP, 707.31 OR 707.41 | |
| PAVEMENT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 254 | | | | | | | | | | | | | | | | | | | | | | | | 254 | 01000 | 9806 | SQ. YD. | PAVEMENT PLANING, ASPHALT CONCRETE (t = 1 1/2") | |
| 301 | | | | | | | | | | | | | | | | | | | | | | | | 301 | 46000 | 24067 | CU. YD. | ASPHALT CONCRETE BASE, PG 64-22 | |
| 304 | | | | | | | | | | | | | | | | | | | | | | | | 304 | 20000 | 14760 | CU. YD. | AGGREGATE BASE | |
| 407 | | | | | | | | | | | | | | | | | | | | | | | | 407 | 10000 | 981 | GALLON | TACK COAT | |
| 407 | | | | | | | | | | | | | | | | | | | | | | | | 407 | 14000 | 4123 | GALLON | TACK COAT FOR INTERMEDIATE COURSE | |
| 408 | | | | | | | | | | | | | | | | | | | | | | | | 408 | 10000 | 34892 | GALLON | PRIME COAT | |
| 442 | | | | | | | | | | | | | | | | | | | | | | | | 442 | 10000 | 4130 | CU. YD. | ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) | |
| 442 | | | | | | | | | | | | | | | | | | | | | | | | 442 | 10100 | 4008 | CU. YD. | ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446) | |
| 448 | | | | | | | | | | | | | | | | | | | | | | | | 448 | 48020 | 94 | CU. YD. | ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22 (DRIVEWAYS) | |
| 451 | | | | | | | | | | | | | | | | | | | | | | | | 451 | 14000 | 430 | SQ. YD. | 9" REINFORCED CONCRETE PAVEMENT | |
| 452 | | | | | | | | | | | | | | | | | | | | | | | | 452 | 12001 | 1992 | SQ. YD. | 8" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN (Type FS) | |
| 609 | | | | | | | | | | | | | | | | | | | | | | | | 609 | 12000 | 826 | FT. | COMBINATION CURB AND GUTTER, TYPE 2 | |
| 609 | | | | | | | | | | | | | | | | | | | | | | | | 609 | 14000 | 1232 | FT. | CURB, TYPE 2-A | |
| 609 | | | | | | | | | | | | | | | | | | | | | | | | 609 | 26000 | 10180 | FT. | CURB, TYPE 6 | |
| 609 | | | | | | | | | | | | | | | | | | | | | | | | 609 | 54000 | 289 | SQ. YD. | 6" CONCRETE TRAFFIC ISLAND | |
| 609 | | | | | | | | | | | | | | | | | | | | | | | | 609 | 72000 | 647 | SQ. YD. | CONCRETE MEDIAN | |

CALCULATED
JMS
CHECKED
SCW

GENERAL SUMMARY

MED - 18 - 15.13

64
362

| NO. | SHEET NUMBER | | | | | | | | | | | | | | | | | | | | ITEM NO. | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. | | | | | | | | | | | | | | | | |
|-----|--------------|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|----|----|----|----|----|----------|-----------|-------------|------|-----------------------|---|-------------------------------------|---|-----|-------|------|-------|--------------------------------------|---------|--|--|-------|-------|-----|--------------------------------|---|----|
| | 2 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 28A | 33 | 66 | 70 | 71 | 72 | 73 | 76 | 77 | 79 | 80 | | | | | | | 223 | 224 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | SANITARY SEWER | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | 8 | 603 | 02000 | 8 | FT. | 8" CONDUIT, TYPE C, WITH 70611 OR 70612 JOINTS (SANITARY) | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | 1 | 604 | 31500 | 1 | EACH | MANHOLE, NO. 3, WITH 706.11 OR 706.12 JOINTS | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | 22 | 604 | 34500 | 22 | EACH | MANHOLE ADJUSTED TO GRADE | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | 19 | 604 | 35500 | 19 | EACH | MANHOLE RECONSTRUCTED TO GRADE | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | LIGHTING | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | FOR LIGHTING SUMMARY, SEE SHEET 330 | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | TRAFFIC CONTROL | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | FOR TRAFFIC CONTROL SUMMARY, SEE SHEETS 270 - 272 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | RETAINING WALLS | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | FOR RETAINING WALL SUMMARY, SEE SHEET 234 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | STRUCTURES (20' AND UNDER) | | | | | | | | | | | | | | | |
| 503 | | | | | | | | | | | | | | | | | | | | | | | | | | | | LUMP | 503 | 21301 | LUMP | | UNCLASSIFIED EXCAVATION, AS PER PLAN | 223A | | | | | | | | |
| 509 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1395 | 509 | 10000 | 1395 | POUNDS | EPOXY COATED REINFORCING STEEL | | | | | | | |
| 512 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 30 | 512 | 33000 | 30 | SQ. YD. | TYPE 2 WATERPROOFING | | | | | | | |
| 512 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 27 | 512 | 33010 | 27 | SQ. YD. | TYPE 3 WATERPROOFING | | | | | | | |
| 516 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 18 | 516 | 13600 | 18 | SQ. FT. | 1" PREFORMED EXPANSION JOINT FILLER | | | | | | | |
| 864 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 19 | 864 | 10100 | 19 | SQ. YD. | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | | | | | | | |
| 898 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | 898 | 20301 | 15 | CU. YD. | QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (FOOTING), AS PER PLAN | 233 | | | | | | |
| 898 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 898 | 98000 | 6 | CU. YD. | QC/QA CONCRETE MISC.: CLASS QSC1, SUBSTRUCTURE (WALL ABOVE FOOTING), AS PER PLAN | 233 | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | MAINTENANCE OF TRAFFIC | | | | | | | |
| 410 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 410 | 12000 | 1000 | CU. YD. | TRAFFIC COMPACTED SURFACE, TYPE A OR B | | | | | | |
| 410 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 410 | 13000 | 1000 | CU. YD. | TRAFFIC COMPACTED SURFACE, TYPE C | | | | | | |
| 606 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 950 | 606 | 13001 | 950 | FT. | GUARDRAIL, TYPE 5, AS PER PLAN | 28 | |
| 606 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 16 | 606 | 22011 | 16 | EACH | ANCHOR ASSEMBLY, TYPE E-98, AS PER PLAN | 28 |
| 606 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 16 | 606 | 26500 | 16 | EACH | ANCHOR ASSEMBLY, TYPE T | |

| ITEM NO. | SHEET NUMBER | | | | | | | | | | | | | | | | | | | | ITEM NO. | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. | | |
|--------------------------------|--------------|----|----|----|----|----|-----|-----|----|-----|-------|----|----|-----|----|----|----|----|----|----|----------|-----------|-------------|-------|-------------|---------------|---|-----|
| | 2 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 28A | 33 | 66 | 70 | 71 | 72 | 73 | 76 | 77 | 79 | 80 | | | | | | | 223 | 224 |
| MAINTENANCE OF TRAFFIC (CONT.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 614 | | | | | | | 300 | | | | | | | | | | | | | | | | 614 | 11100 | 300 | hour | LAW ENFORCEMENT OFFICER WITH PATROL CAR | |
| 614 | | | | | | | | | | | 6 | | | | | | | | | | | | 614 | 12348 | 6 | EACH | WORK ZONE IMPACT ATTENUATOR, QUADGUARD CZ, MODEL QZ24064Y (BIDIRECTIONAL) | 27 |
| 614 | | | | | | | | | | | 20 | | | | | | | | | | | | 614 | 12460 | 20 | EACH | WORK ZONE MARKING SIGN | |
| 614 | | | | | | | | | | | 2 | | | | | | | | | | | | 614 | 12470 | 2 | EACH | WORK ZONE SPEED LIMIT SIGN | |
| 614 | | | | | | | | | | | | | 5 | | | | | | | | | | 614 | 12480 | 5 | EACH | CONSTRUCTION ZONE/FINES DOUBLED SIGN | |
| 614 | | | | | | | | | | | | | | 5 | | | | | | | | | 614 | 12500 | 5 | EACH | REPLACEMENT SIGN | |
| 614 | | | | | | | | | | | | | | 100 | | | | | | | | | 614 | 12600 | 100 | EACH | REPLACEMENT DRUM | |
| 614 | | | | | | | 500 | | | | | | | | | | | | | | | | 614 | 13000 | 500 | CU. YD. | ASPHALT CONCRETE FOR MAINTAINING TRAFFIC | |
| 614 | | | | | | | | | | | 1264 | | | | | | | | | | | | 614 | 13300 | 1264 | EACH | BARRIER REFLECTOR, TYPE B | |
| 614 | | | | | | | | | | | 1264 | | | | | | | | | | | | 614 | 13350 | 1264 | EACH | OBJECT MARKER, ONE WAY | |
| 614 | | | | | | | | | | | | | | | | | | | | | | | 614 | 18000 | 25 | EACH | MAINTAINING TRAFFIC MISC.; LOCAL BUSINESS SIGNING | 28A |
| 614 | | | | | | | | | | | 8.52 | | | | | | | | | | | | 614 | 20100 | 8.52 | MILE | WORK ZONE SOLID LANE LINE, CLASS I, 642 PAINT | |
| 614 | | | | | | | | | | | 0.42 | | | | | | | | | | | | 614 | 20200 | 0.42 | MILE | WORK ZONE SOLID LANE LINE, CLASS I, 740.06, TYPE I | |
| 614 | | | | | | | | | | | 0.16 | | | | | | | | | | | | 614 | 21100 | 0.16 | MILE | WORK ZONE CENTER LINE, CLASS I, 642 PAINT | |
| 614 | | | | | | | | | | | 0.04 | | | | | | | | | | | | 614 | 21200 | 0.04 | MILE | WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I | |
| 614 | | | | | | | | | | | 14.34 | | | | | | | | | | | | 614 | 22100 | 14.34 | MILE | WORK ZONE EDGE LINE, CLASS I, 642 PAINT | |
| 614 | | | | | | | | | | | 3.50 | | | | | | | | | | | | 614 | 22200 | 3.50 | MILE | WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I | |
| 614 | | | | | | | | | | | 14788 | | | | | | | | | | | | 614 | 23200 | 14788 | FT. | WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT | |
| 614 | | | | | | | | | | | 10397 | | | | | | | | | | | | 614 | 24200 | 10397 | FT. | WORK ZONE DOTTED LINE, WHITE, CLASS I, 642 PAINT | |
| 614 | | | | | | | | | | | 1089 | | | | | | | | | | | | 614 | 25200 | 1089 | FT. | WORK ZONE TRANSVERSE LINE, YELLOW, CLASS I, 642 PAINT | |
| 614 | | | | | | | | | | | 692 | | | | | | | | | | | | 614 | 25400 | 692 | FT. | WORK ZONE TRANSVERSE LINE, YELLOW, CLASS I, 740.06, TYPE I | |
| 614 | | | | | | | | | | | 1182 | | | | | | | | | | | | 614 | 26200 | 1182 | FT. | WORK ZONE STOP LINE, CLASS I, 642 PAINT | |
| 614 | | | | | | | | | | | 468 | | | | | | | | | | | | 614 | 30200 | 468 | EACH | WORK ZONE LANE ARROW, CLASS I, 642 PAINT | |
| 615 | | | | | | | | | | | LUMP | | | | | | | | | | | | 615 | 10000 | LUMP | | ROADS FOR MAINTAINING TRAFFIC | |
| 615 | | | | | | | | | | | 19200 | | | | | | | | | | | | 615 | 20000 | 19200 | SQ. YD. | PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A | |
| 616 | | | | | | | 50 | 415 | | | | | | | | | | | | | | | 616 | 10000 | 465 | M. GAL. | WATER | |
| 617 | | | | | | | | | | | 479 | | | | | | | | | | | | 617 | 10100 | 479 | CU. YD. | COMPACTED AGGREGATE, TYPE A | |
| 622 | | | | | | | | | | | 30983 | | | | | | | | | | | | 622 | 40020 | 30983 | FT. | PORTABLE CONCRETE BARRIER, 32" | |
| 614 | | | | | | | | | | | | | | | | | | | | | | | 614 | 11000 | LUMP | | MAINTAINING TRAFFIC | |
| 623 | | | | | | | | | | | | | | | | | | | | | | | 623 | 10000 | LUMP | | CONSTRUCTION LAYOUT STAKES | |
| 624 | | | | | | | | | | | | | | | | | | | | | | | 624 | 10000 | LUMP | | MOBILIZATION | |
| 619 | | | | | | | | | | | | | | | | | | | | | | | 619 | 16020 | 15 | MONTH | FIELD OFFICE, TYPE C | |

| | | | |
|------------------|-----|---------|-----|
| CALCULATED | JMS | CHECKED | SCW |
| GENERAL SUMMARY | | | |
| MED - 18 - 15.13 | | | |
| 65A 362 | | | |

| SHEET NO. | REFERENCE NO. | STATION | | SIDE | LOCATION | 606 | | | | | | 622 | | |
|--|---------------|-------------------|-----------|---------|----------------|-------------------|--|----------------------------|-------------------------|----------------------------------|----------------------------------|--|--|---|
| | | FROM | TO | | | GUARDRAIL, TYPE 5 | IMPACT ATTENUATOR, TYPE 2-98 LS, MODEL QS2404Y (BIDIRECTIONAL) | ANCHOR ASSEMBLY, TYPE E-98 | ANCHOR ASSEMBLY, TYPE T | BRIDGE TERMINAL ASSEMBLY, TYPE 1 | BRIDGE TERMINAL ASSEMBLY, TYPE 2 | CONCRETE BARRIER, SINGLE SLOPE, TYPE A1, AS PER PLAN | CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN | CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN |
| | | | | | | FT. | EACH | EACH | EACH | EACH | EACH | FT. | FT. | FT. |
| 89 | G-1 | 120+75.00 | 123+12.50 | RT. | S.R. 18 | 175.00 | | 1 | 1 | | | | | |
| 89 | G-2 | 122+00.36 | 122+78.49 | LT. | S.R. 18 | 75.00 * | | | 2 | | | | | |
| 93 | G-3 | 134+90.00 | | RT. | S.R. 18 | | 1 | | | | | | | |
| 93 | G-4 | 134+90.00 | 135+47.00 | RT. | S.R. 18 | | | | | | | | 57.0 | |
| 93 | G-5 | 134+87.50 | 137+25.00 | RT. | S.R. 18 | 175.00 | | 1 | 1 | | | | | |
| 95 | G-5A | 136+38.50 | 137+63.50 | LT. | S.R. 19 | 62.50 | | 1 | 1 | | | | | |
| 97 | G-6 | 144+84.91 | 146+29.00 | LT. | S.R. 18 | | | | | | | | 144.1 | |
| 97 | G-7 | 146+29.00 | | LT. | S.R. 18 | | 1 | | | | | | | |
| 99 | G-8 | 147+75.00 | | LT. | S.R. 18 | | 1 | | | | | | | |
| 99 | G-9 | 147+75.00 | 152+70.00 | LT. | S.R. 18 | | | | | | | 495.0 | | |
| 99 | G-10 | 26+22.23 (RAMP A) | 149+59.00 | RT. | RAMP A/S.R. 18 | 237.50 * | | | 1 | 1 | | | | |
| 99 | G-11 | 149+57.00 | 151+70.00 | RT. | S.R. 18 | | | | | | | | | 213.0 |
| 99 | G-12 | 149+94.00 | 152+08.00 | LT. | S.R. 18 | | | | | | | | | 214.0 |
| 99 | G-13 | 151+68.00 | 153+18.00 | LT. | S.R. 18 | 137.50 | | | 1 | | 1 | | | |
| 99 | G-14 | 152+06.00 | 153+18.50 | LT. | S.R. 18 | 62.50 | | 1 | | 1 | | | | |
| 99 | G-15 | 152+70.00 | | LT. | S.R. 18 | | 1 | | | | | | | |
| 101 | G-16 | 1+85.95 (RAMP D) | 155+12.65 | RT./LT. | RAMP D/S.R. 18 | 100.00 * | | 1 | 1 | | | | | |
| 101 | G-17 | 154+40.00 | | LT./RT. | S.R. 18 | | 1 | | | | | | | |
| 101 | G-18 | 154+40.00 | 156+22.50 | LT./RT. | S.R. 18 | | | | | | | | 182.5 | |
| 103 | G-19 | 161+81.50 | 163+63.81 | RT. | S.R. 18 | 137.50 * | | 1 | | | | | | |
| 103 | G-20 | 162+38.50 | 163+10.00 | LT./RT. | S.R. 18 | | | | | | | | 71.5 | |
| 103 | G-21 | 163+10.00 | | LT./RT. | S.R. 18 | | 1 | | | | | | | |
| 171 | G-22 | 6+53.79 | 11+03.79 | LT. | RAMP B | 437.50 | | | 1 | | | | | |
| 168A | G-23 | 17+25.00 | 21+50.00 | LT. | RAMP A | 375.00 | | 1 | | | | | | |
| TOTALS CARRIED TO GENERAL SUMMARY | | | | | | 1975.00 | 6 | 7 | 9 | 2 | 1 | 495 | 455 | 427 |

* LENGTH OF RADIUS GUARDRAIL INCLUDED IN TOTAL LENGTH: 50' (G-2)
 25' (G-10)
 100' (G-16)
 62.5' (G-19)
 SEE PLANS FOR LOCATIONS.

CALCULATED
JMS
CHECKED
RER

GUARDRAIL SUB-SUMMARY

SANITARY SEWER SUB-SUMMARY

| SHEET NO. | REFERENCE NO. | STATION | SIDE | 603 | | 604 | | 202 | |
|--|---------------|----------------|------|--|--------------------------------------|---|---|-----------------------------|-----------------|
| | | | | 8" CONDUIT, TYPE C, WITH 706.11 OR 706.12 JOINTS, FOR SANITARY | MANHOLE ADJUSTED TO GRADE (SANITARY) | MANHOLE RECONSTRUCT TO GRADE (SANITARY) | MANHOLE, No. 3, WITH 706.11 OR 706.12 JOINTS (SANITARY) | PIPE REMOVED, 24" AND UNDER | MANHOLE REMOVED |
| | | | | FT. | EACH | EACH | EACH | FT | EACH |
| | | S.R. 18 | | | | | | | |
| 85 | SA-1 | 779+53.77 | LT. | | 1 | | | | |
| 87 | SA-2 | 783+03.15 | LT. | | 1 | | | | |
| 87 | SA-3 | 118+18.19 | LT. | | 1 | | | | |
| 89 | SA-4 | 120+65.73 | LT. | | 1 | | | | |
| 89 | SA-5 | 125+21.69 | LT. | | 1 | | | | |
| 91 | SA-6 | 128+41.72 | LT. | | 1 | | | | |
| 91 | SA-7 | 130+73.72 | LT. | | 1 | | | | |
| 91 | SA-8 | 125+88.97 | RT. | | 1 | | | | |
| 91 | SA-9 | 127+74.97 | RT. | | 1 | | | | |
| 91 | SA-10 | 130+72.73 | RT. | | 1 | | | | |
| 93 | SA-11 | 133+72.75 | LT. | | | 1 | | | |
| 93 | SA-12 | 134+51.84 | LT. | | 1 | | | | |
| 93 | SA-13 | 133+48.57 | RT. | | | 1 | | | |
| 95 | SA-14 | 136+71.80 | LT. | | | 1 | | | |
| 95 | SA-15 | 139+66.74 | LT. | | 1 | | | | |
| 95 | SA-16 | 136+97.16 | RT. | | | 1 | | | |
| 95 | SA-17 | 139+98.09 | RT. | | | 1 | | | |
| 97 | SA-18 | 143+01.25 | LT. | | 1 | | | | |
| 97 | SA-19 | 142+99.12 | RT. | | | 1 | | | |
| 97 | SA-20 | 145+97.38 | RT. | | | 1 | | | |
| 99 | SA-21 | 147+91.31 | RT. | | | 1 | | | |
| 101 | SA-22 | 152+99.72 | RT. | | | 1 | | | |
| 101 | SA-23 | 155+20.94 | RT. | | | 1 | | | |
| 101 | SA-24 | 156+48.47 | RT. | | | 1 | | | |
| 101 | SA-25 | 156+52.23 | LT. | | 1 | | | | |
| 101 | SA-26 | 158+16.25 | LT. | | 1 | | | | |
| 103 | SA-27 | 160+75.97 | LT. | | 1 | | | | |
| 103 | SA-28 | 163+45.06 | LT. | | 1 | | | | |
| 103 | SA-29 | 159+04.18 | RT. | | | 1 | | | |
| 103 | SA-30 | 161+60.98 | RT. | | | 1 | | | |
| 103 | SA-31 | 163+38.33 | RT. | | | 1 | | | |
| 105 | SA-32 | 166+99.34 | LT. | | 1 | | | | |
| 105 | SA-33 | 164+09.89 | RT. | | | 1 | | | |
| 105 | SA-34 | 166+14.87 | RT. | | 1 | | | | |
| 107 | SA-34A | 169+98.87 | LT. | | 1 | | | | |
| 107 | SA-35 | 170+38.96 | RT. | | | 1 | | | |
| 107 | SA-36 | 172+59.60 | RT. | | | 1 | | | |
| 109 | SA-37 | 175+80.76 | LT. | 8.0 | | | 1 | 8 | 1 |
| 109 | SA-38 | 177+97.78 | LT. | | 1 | | | | |
| 109 | SA-39 | 175+79.16 | RT. | | | 1 | | | |
| 109 | SA-40 | 175+91.32 | RT. | | | 1 | | | |
| 109 | SA-41 | 179+13.47 | RT. | | 1 | | | | |
| TOTALS CARRIED TO GENERAL SUMMARY | | | | 8 | 22 | 19 | 1 | 8 | 1 |

J:\Proj\7050600\ROADWA\70506GSU.DWG User: jon81152 Jun 26, 2003 3:10pm

CALCULATED
MAL
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RER

WATER WORK/SANITARY SEWER SUB-SUMMARIES

MED - 18 - 15.13

| SHEET NO. | REFERENCE NO. | STATION | | SIDE | 202 | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---------------|--------------|---------------|------|-----------------------------|------------------------|---------------------|-----------------|-------------------|-----------------------------------|-------------------|--------------|--------------------------|---------------------------------------|------------------------|---------------|-------------------------|------------------|--------------------|-----------------------|---------------------------|----------------------------------|---------------------------------------|-----------------------------|-----------------------------------|-----------------------------|------|---|
| | | FROM | TO | | PIPE REMOVED, 24" AND UNDER | PIPE REMOVED, OVER 24" | CATCH BASIN REMOVED | MANHOLE REMOVED | MANHOLE ABANDONED | CONCRETE SLOPE PROTECTION REMOVED | GUARDRAIL REMOVED | CURB REMOVED | CONCRETE BARRIER REMOVED | CONCRETE BARRIER REMOVED, AS PER PLAN | GATE REMOVED FOR REUSE | FENCE REMOVED | FENCE REMOVED FOR REUSE | PULL BOX REMOVED | LIGHT POLE REMOVED | REMOVAL MISC.: STATUE | REMOVAL MISC.: CAR VACUUM | REMOVAL MISC.: STRUCTURE REMOVED | REMOVAL MISC.: BRICK PLANTER AND WALL | REMOVAL MISC.: UTILITY POLE | REMOVAL MISC.: BOLLARD WITH LIGHT | REMOVAL MISC.: POST/BOLLARD | | |
| | | | | | FT. | FT. | EACH | EACH | EACH | S.Y. | FT. | FT. | FT. | FT. | EACH | FT. | FT. | EACH | EACH | | EACH | LUMP | LUMP | EACH | EACH | EACH | EACH | |
| 105 | R-110 | 164+01 | 164+20 | LT. | 19 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| 105 | R-111 | 164+20 | 167+53 | LT. | 333 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| 105 | R-112 | 167+53 | | LT. | 27 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| 105 | R-113 | 165+12 | 166+09 | LT. | | | | | | | | | | | | | | | | | | | | | | | 22 | |
| 105 | R-113A | 166+94 | | LT. | | | | | | | | | | | | | | | | | | | | | | | 4 | |
| 105 | R-113B | 166+93 | | LT. | | | | | | | | | | | | | | | | | | | | | | | | |
| 105 | R-114 | 167+26 | 167+33.5 | LT. | | | | | | | | | | | | | | | | | | | | | | | 7 | |
| 105 | R-115 | 161+52 | 164+02 | LT. | 250 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| 105 | R-116 | 164+54 | 165+74 | RT. | 120 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| 105 | R-118 | 165+48 | | RT. | | | | | | | | | | | | | | | | | | | | | | | 4 | |
| 105 | R-119 | 164+02 | 167+08 | RT. | 306 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| 107 | R-120 | 170+48 | 170+68 | RT. | 20 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| 107 | R-120A | 170+48 | | LT. | | | | | | | | | | | | | | | | | | | | | | | | |
| 107 | R-120B | 170+48 | | RT. | | | | | | | | | | | | | | | | | | | | | | | | |
| 107 | R-121 | 170+68 | 173+05 | LT. | 237 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| 107 | R-121A | 170+48 | 172+63 | LT. | 215 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| 109 | R-122 | 172+63 | 175+67 | LT. | 304 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| 109 | R-122A | 175+67 | 176+78 | LT. | 111 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| 109 | R-123 | 176+83 | 177+19 | RT. | 85 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| 109 | R-124 | 177+32 | 179+06 | RT. | 174 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| 109 | R-125 | 177+10 | | RT. | | | | | | | | | 10 | | | | | | | | | | | | | | | |
| 171 | R-126 | 6+52 RAMP B | 8+03.8 RAMP B | LT. | | | | | | | 151 | | | | | | | | | | | | | | | | | |
| 185 | R-128 | 8+62 GATEWAY | 9+02 GATEWAY | LT. | | | | | | | 40 | | | | | | | | | | | | | | | | | |
| SUBTOTALS THIS SHEET | | | | | 2201 | | 13 | | | | 191 | | 10 | | | | | 1 | | | | | LUMP | | | | 37 | |
| SUBTOTALS FROM SHEET 71A | | | | | 3725 | | 21 | 2 | | | 1004 | 10 | | | 1 | 174 | 39 | 1 | 2 | | 1 | | | | 2 | 3 | 2 | 1 |
| SUBTOTALS FROM SHEET 71B | | | | | 3804 | 90 | 24 | 3 | 1 | 39 | 1946 | 211 | 233 | 537 | | 47 | | | 2 | | | LUMP | LUMP | | | 6 | | 2 |
| TOTALS CARRIED TO GENERAL SUMMARY | | | | | 9730 | 90 | 58 | 5 | 1 | 39 | 3141 | 221 | 243 | 537 | 1 | 221 | 39 | 1 | 5 | | 1 | LUMP | LUMP | 2 | 9 | 2 | 40 | |

CALCULATED
MAL
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REMOVAL SUB-SUMMARY

COMMERCIAL SIGN REMOVAL

| SHEET NO. | REFERENCE NO. | STATION | SIDE | PARCEL NO. | OWNER | 202 | REMARKS |
|-----------|---------------|----------|------|------------|--|-----------------------------------|---------|
| | | | | | | REMOVAL MISC.: COMMERCIAL SIGN | |
| | | | | | | LUMP | |
| 85 | R-6 | 781+98 | LT. | 5WD | PRINCE OF PEACE LUTHERAN CHURCH | LUMP | |
| 85 | R-6A | 782+48 | LT. | 5WD | PRINCE OF PEACE LUTHERAN CHURCH | LUMP | |
| 87 | R-12 | 118+01 | LT. | 8WD | MEDINA LAND GROUP, AN OHIO PARTNERSHIP | LUMP | |
| 89 | R-16 | 120+66 | LT. | 12WD | LKB, LTD., AN OHIO LIMITED LIABILITY PARTNERSHIP | LUMP | |
| 89 | R-17 | 121+08 | LT. | 12WD | LKB, LTD., AN OHIO LIMITED LIABILITY PARTNERSHIP | LUMP | |
| 89 | R-24 | 125+33 | RT. | 15WD | DANIEL DOLNEY & ALICE DOLNEY | LUMP | |
| 91 | R-37 | 130+18 | LT. | 17WD | NORRIS REALTY, AN OHIO PARTNERSHIP | LUMP | |
| 95 | R-55 | 141+43 | LT. | 26WD | WEN PROPS LLC. | LUMP | |
| 95 | R-56 | 141+86.5 | LT. | 26WD | WEN PROPS LLC. | LUMP | |
| 101 | R-80 | 155+81 | LT. | 28WD | TRUE NORTH ENERGY, LLC. | LUMP | |
| 101 | R-82 | 156+81 | LT. | 30WD | MICHAELS DEVELOPMENT COMPANY, | LUMP | |
| 101 | R-86 | 158+45 | LT. | 33WD | GREGORY N. THOMARIOS & M.J. PASTIS | LUMP | |
| 103 | R-92 | 158+82 | LT. | 33WD | GREGORY N. THOMARIOS & M.J. PASTIS | LUMP | |
| 103 | R-93 | 158+91 | LT. | 33WD | GREGORY N. THOMARIOS & M.J. PASTIS | LUMP | |
| 103 | R-96 | 160+72.5 | LT. | 38 | CHU BROTHERS MOTELS, INC. | LUMP | |
| 103 | R-98 | 161+30 | LT. | 38 | CHU BROTHERS MOTELS, INC. | LUMP | |
| 103 | R-105 | 159+95 | RT. | 35 | MEDINA LAND CORP. | LUMP | |
| 103 | R-107 | 161+59 | RT. | 37WD | EJAS L. CORPAS | LUMP | |
| 103 | R-108 | 162+50 | RT. | 37WD | EJAS L. CORPAS | LUMP | |
| 105 | R-116A | 167+47 | LT. | 42 | EDWARD T. TOTH & MARCIA L. TOTH | LUMP | |
| 105 | R-117 | 164+78 | RT. | 44 | RENUART LEASING CO. | LUMP | |
| 109 | R-125 | 177+40 | RT. | 44 | RENUART LEASING CO. | LUMP | |
| 109 | R-129 | 176+67 | RT. | 49 | GLEN A. BARENSFELD | LUMP | |

A QUANTITY OF LUMP SUM FOR EACH COMMERCIAL SIGN REMOVED HAS BEEN CARRIED FORWARD TO THE GENERAL SUMMARY

ITEM 202 - REMOVAL MISC.: COMMERCIAL SIGN

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE COMMERCIAL SIGN INCLUDING BUT NOT LIMITED TO ALL ELECTRICAL CONNECTIONS AND LIGHTING, FOUNDATIONS, AND SUPPORTS. ANY ELECTRICAL CIRCUITS SERVICING THE COMMERCIAL SIGN SHALL BE REMOVED TO THE RIGHT-OF-WAY LINE AND CAPPED.

PAYMENT FOR THE WORK DESCRIBED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 202, REMOVAL MISC.: COMMERCIAL SIGN. PAYMENT SHALL INCLUDE ALL WORK NECESSARY TO COMPLETE THIS ITEM, INCLUDING BUT NOT LIMITED TO ALL LABOR, MATERIALS, EQUIPMENT, AND DISPOSAL COSTS IN ACCORDANCE WITH ITEM 202 OF THE SPECIFICATIONS, AND THE REQUIREMENTS ABOVE.

THE CONTRACTOR SHALL CONTACT THE PROPERTY OWNER PRIOR TO STARTING REMOVAL. IF OWNERSHIP IS QUESTIONABLE, THE CONTRACTOR SHOULD CONSIDER CONTACTING THE LOCAL ELECTRIC SUPPLIER.

PAVEMENT REMOVAL CALCULATIONS

| STATION | SIDE | LOCATION | LENGTH = L FT. | AVERAGE WIDTH = W FT. | SURFACE AREA = A SQ. FT. | CURB RETURN SQ. YD. | 202 |
|---|--------|----------|-------------------|--------------------------|-----------------------------|------------------------|-----------------------------|
| | | | | | | | PAVEMENT REMOVED SQ. YD. |
| FROM | TO | | L | W | A = L*W | CR = CADD | A/9 + CR |
| 125+50 | 179+71 | LT. | S.R. 18 | 5421.13 | 29.00 AVG | 157,212.77 | 17468.09 |
| 125+50 | 177+29 | RT. | S.R. 18 | 5179.19 | 33.00 AVG | 170,913.27 | 10358.38 |
| 17+10 | 26+60 | LT./RT. | RAMP A | 950.00 | 16.00 | 15,200.00 | 76.89 |
| 0+72 | 8+04 | LT./RT. | RAMP B | 732.00 | 20.00 AVG | 14,640.00 | 65.89 |
| 8+04 | 11+38 | LT./RT. | RAMP B | 334.00 | 16.00 | 5,344.00 | 742.22 |
| 11+52 | 20+10 | LT./RT. | RAMP C | 858.00 | 16.00 | 13,728.00 | 52.78 |
| 0+50 | 2+60 | LT./RT. | RAMP D | 210.00 | 16.00 | 3,360.00 | 37.78 |
| 8+80 | 9+87 | LT./RT. | NORM | 107.00 | 35.00 | 3,745.00 | 37.78 |
| 20+72 | 21+21 | LT./RT. | E EASTP | 49.00 | 33.00 | 1,617.00 | 99.00 |
| 10+69 | 12+00 | LT./RT. | W EASTP | 131.00 | 33.00 | 4,323.00 | 114.67 |
| 1+60 | 2+80 | LT./RT. | MONTV | 120.00 | 33.00 | 3,960.00 | 72.22 |
| 9+20 | 9+60 | RT. | TRANS CT | 40.00 | 54.93 | 2,197.05 | 244.12 |
| 10+66 | 11+18 | LT./RT. | NETTL | 52.00 | 40.00 | 2,080.00 | 126.11 |
| 19+90 | 20+47 | LT./RT. | S GATEW | 57.00 | 48.00 | 2,736.00 | 98.33 |
| 7+73 | 10+86 | LT./RT. | N GATEW | 313.00 | 28.00 | 8,764.00 | 74.33 |
| TOTAL CARRIED TO GENERAL SUMMARY | | | | | | | 38044 |

EXISTING PAVEMENT COMPOSITION

THE EXISTING PAVEMENT COMPOSITIONS HAVE BEEN DETERMINED USING SELECT PAVEMENT CORINGS AND EXISTING RECORDS. THE CONTRACTOR WILL BE PERMITTED TO TAKE PAVEMENT CORINGS WITH THE APPROVAL OF THE OHIO DEPARTMENT OF TRANSPORTATION TO CONFIRM THE BUILD-UP. THE CONTRACTOR WILL BE REQUIRED TO REMOVE ANY PAVEMENT SPECIFIED FOR REMOVAL UNDER ITEM 202 - PAVEMENT REMOVED REGARDLESS OF THE COMPOSITION WITHOUT ADDITIONAL COMPENSATION.

ADDITIONALLY, MISCELLANEOUS CONCRETE PAVEMENT IS TO BE REMOVED WITHIN THE RIGHT-OF-WAY AS DIRECTED BY THE ENGINEER.

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 202 - PAVEMENT REMOVED 6000 SQ. YD.

| REFERENCE NO. | SHEET NO. | OUTLET AT | STATION | | SIDE | LOCATION | ELEV. | 603 | | | 604 | 605 | | | | FOR INFORMATION ONLY | | | | | | COMMENTS | | |
|--|-----------|-----------|--------------------|--------------------|---------|----------|---------|--------------------|------------------------------------|--|---|--|--|---------|---------------|----------------------|--------------|---------|---------------|---------------|------|----------|--|--|
| | | | 4" CONDUIT, TYPE F | 6" CONDUIT, TYPE B | | | | 6" CONDUIT, TYPE F | PRECAST REINFORCED CONCRETE OUTLET | 4" SHALLOW PIPE UNDERDRAINS, 707.31 OR 707.41 W/ FABRIC WRAP | 6" SHALLOW PIPE UNDERDRAINS 707.31 OR 707.41 W/ FABRIC WRAP | 4" UNCLASSIFIED PIPE UNDERDRAINS 707.31 OR 707.41 W/ FABRIC WRAP | 6" UNCLASSIFIED PIPE UNDERDRAINS 707.31 OR 707.41 W/ FABRIC WRAP | 6" PLUG | 6" - 90° BEND | 6" TEE | 6"x6"x4" WYE | 4" PLUG | 4" - 45° BEND | 4" - 90° BEND | | | | |
| | | | FROM | TO | | | | FT. | FT. | FT. | EACH | FT. | FT. | FT. | FT. | | EACH | EACH | EACH | EACH | EACH | EACH | | |
| U-91 | 91 | D-92 | 129+21 | 127+26 | RT. | S.R. 18 | 1046.27 | | | | | | 195 | | 44 | | 1 | | | | | | BEGIN = 1046.27, END = 1046.00 | |
| | | | 127+26 | 126+72 | RT. | S.R. 18 | 1046.00 | | | 10 | | | | | 116 | | | | | | | | BEGIN = 1043.61, END = 1044.10 | |
| U-92 | 91 | D-93 | 125+50 | 126+66 | RT. | S.R. 18 | 1044.10 | | | 10 | | | | | | | 1 | | | | | | | |
| U-93 | 103 | D-12A | 163+10 | 160+92 | RT. | S.R. 18 | 1122.76 | | | 10 | | | 208 | | | | 1 | | | | | | | |
| U-94 | 103 | D-13A | 160+86 | 158+12 | RT. | S.R. 18 | 1111.07 | | | 10 | | | 264 | | | | 1 | | | | | | | |
| U-95 | 101 | D-16B | 158+06 | 154+50 | RT. | S.R. 18 | 1099.96 | | | 10 | | | 346 | | | | 1 | | | | | | | |
| U-95A | 101 | D-16B | 156+22 | 154+50 | LT. | S.R. 18 | 1099.96 | | | 10 | | | | | 172 | | | | | | | | MEET WALL #2, BEGIN = 1107.96, END = 1099.96 | |
| U-96 | 99 | D-34 | 152+70 | 147+79 | LT. | S.R. 18 | 1084.81 | | | 10 | | | 481 | | | | 1 | | | | | | | |
| U-97 | 97 | D-50A | 146+29 | 144+02 | LT. | S.R. 18 | 1083.87 | | | 10 | | | 217 | | | | 1 | | | | | | | |
| U-98 | 97 | D-55 | 143+96 | 140+12 | RT. | S.R. 18 | 1066.19 | | | 10 | | | 374 | | | | 1 | | | | | | | |
| U-99 | 95 | D-100 | 140+06 | 138+69 | RT. | S.R. 18 | 1065.36 | | | 10 | | | 137 | | | | 1 | | | | | | | |
| | | | 138+69 | 138+27 | RT. | S.R. 18 | 1065.15 | | | 10 | | | | | 32 | | | | | | | | BEGIN = 1065.36, END = 1065.15 | |
| U-100 | 95 | D-99 | 135+63 | 137+73 | RT. | S.R. 18 | 1064.50 | | | 10 | | | | | 200 | | 1 | | | | | | BEGIN = NORMAL, END = 1064.50 | |
| U-101 | 93 | D-64 | 135+61 | 135+02 | RT. | S.R. 18 | 1065.10 | | | 10 | | | 49 | | | | 1 | | | | | | | |
| U-102 | 169A | | 20+13 | 17+36 | RT. | RAMP A | 1087.18 | | | | | | 277 | | | | 1 | 1 | 1 | | | | | |
| | 169A | OUTLET | 17+36 | 17+36 | RT./LT. | RAMP A | 1087.18 | | 30 | 6 | | | | | | | 1 | | | | | | | |
| U-103 | 169A | OUTLET | 20+13 | 17+36 | LT. | RAMP A | 1087.18 | | | | 1 | | 287 | | | | 1 | | | | | | | |
| U-104 | 169A | OUTLET | 20+13 | 17+36 | LT. | RAMP A | 1087.18 | | | | | | 287 | | | | 1 | | | | | | | |
| U-105 | 169A | U-77 | 20+13 | 25+47 | LT. | RAMP A | 1082.57 | | 6 | 6 | | | 534 | | | | 1 | 1 | 1 | | | | | |
| SUBTOTAL THIS SHEET | | | | | | | | | | 120 | | | 2271 | | 564 | | 10 | | | | | | | |
| SUBTOTAL FROM SHEET 75 | | | | | | | | 28 | 52 | 370 | 3 | 1762 | 7984 | | 1002 | | 39 | 4 | 4 | 2 | 4 | 4 | | |
| SUBTOTAL FROM SHEET 74 | | | | | | | | 10 | 20 | 378 | 1 | 1225 | 6744 | 73 | 2017 | | 32 | 2 | | 1 | | 1 | | |
| GRAND TOTAL CARRIED TO GENERAL SUMMARY | | | | | | | | 38 | 72 | 868 | 4 | 2987 | 16999 | 73 | 3583 | | 81 | 6 | 4 | 3 | 4 | 5 | | |

CALCULATED
PAS
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RER

UNDERDRAIN QUANTITIES

| SHEET NO. | STATION | | 203 | | 659 |
|-----------|----------------------|-----------|------------|------------|----------------------|
| | | | EXCAVATION | EMBANKMENT | SEEDING AND MULCHING |
| | FROM | TO | CU. YD. | CU. YD. | SQ. YD. |
| | S.R. 18 | | | | |
| 113 | 776+00 | 777+50 | 321 | 11 | 312 |
| 114 | 777+50 | 779+00 | 647 | 2 | 470 |
| 115 | 779+00 | 780+50 | 469 | 2 | 441 |
| 116 | 780+50 | 782+24 | 776 | | 520 |
| 117 | 782+24 | 784+00 | 493 | | 554 |
| 118 | 784+00 | 785+51 | 307 | | 424 |
| 119 | 785+51 | 119+00 | 419 | 1 | 526 |
| 120 | 119+00 | 120+43.50 | 303 | 7 | 427 |
| 121 | 120+43.50 | 121+50 | 248 | | 285 |
| 122 | 121+50 | 122+50 | 157 | 92 | 265 |
| 123 | 122+50 | 123+00 | 136 | 52 | 187 |
| 124 | 123+00 | 124+42 | 380 | | 391 |
| 125 | 124+42 | 126+00 | 427 | | 647 |
| 126 | 126+00 | 127+50 | 507 | 91 | 792 |
| 127 | 127+50 | 128+86.50 | 677 | 135 | 567 |
| 128 | 128+86.50 | 130+58.11 | 972 | 144 | 583 |
| 129 | 130+58.11 | 132+50.50 | 1143 | 294 | 753 |
| 130 | 132+50.50 | 134+04.04 | 950 | 95 | 532 |
| 131 | 134+04.04 | 136+00 | 606 | 791 | 705 |
| 132 | 136+00 | 137+00 | 175 | 1611 | 855 |
| 133 | 137+00 | 138+50 | 195 | 2060 | 993 |
| 134 | 138+50 | 140+00 | 347 | 614 | 763 |
| 135 | 140+00 | 141+50 | 300 | 373 | 568 |
| 136 | 141+50 | 142+50 | 171 | 278 | 446 |
| 137 | 142+50 | 143+25 | 95 | 309 | 340 |
| 138 | 143+25 | 145+00 | 296 | 1085 | 1339 |
| 139 | 145+00 | 146+00 | 198 | 996 | 603 |
| 140 | 146+00 | 147+02.23 | 195 | 573 | 501 |
| 141 | 147+02.23 | 149+00 | 324 | 609 | 771 |
| 142 | 149+00 | 150+50 | 380 | 228 | 494 |
| 143 | 150+50 | 152+00 | 431 | 158 | 387 |
| 144 | 152+00 | 153+50 | 423 | 591 | 865 |
| 145 | 153+50 | 155+00 | 425 | 1093 | 651 |
| 146 | 155+00 | 156+50 | 515 | 566 | 611 |
| 147 | 156+50 | 158+00 | 393 | 363 | 697 |
| 148 | 158+00 | 158+79.50 | 289 | 157 | 461 |
| 149 | 158+79.50 | 160+00 | 379 | 209 | 614 |
| 150 | 160+00 | 161+01 | 273 | 202 | 478 |
| 151 | 161+01 | 162+25 | 348 | 369 | 556 |
| 152 | 162+25 | 163+00 | 189 | 381 | 446 |
| 153 | 163+00 | 164+00 | 351 | 246 | 318 |
| 154 | 164+00 | 166+00 | 481 | 420 | 843 |
| 155 | 166+00 | 167+50 | 367 | 131 | 586 |
| 156 | 167+50 | 169+00 | 585 | 161 | 860 |
| 157 | 169+00 | 170+50 | 558 | 246 | 768 |
| 158 | 170+50 | 171+93 | 393 | 336 | 694 |
| 159 | 171+93 | 173+50 | 197 | 554 | 727 |
| 160 | 173+50 | 175+50 | 246 | 488 | 955 |
| 161 | 175+50 | 177+00 | 788 | 83 | 709 |
| 162 | 177+00 | 178+50 | 977 | 21 | 896 |
| 163 | 178+50 | 179+50 | 734 | 56 | 638 |
| 164 | 179+50 | 181+00 | 213 | 32 | 217 |
| | SUBTOTAL THIS COLUMN | | 22169 | 17316 | 31031 |

| SHEET NO. | STATION | | 203 | | 659 |
|-----------|-----------------------------------|----------|------------|------------|----------------------|
| | | | EXCAVATION | EMBANKMENT | SEEDING AND MULCHING |
| | FROM | TO | CU. YD. | CU. YD. | SQ. YD. |
| | EASTPOINTE DRIVE (WEST) | | | | |
| 167 | 11+20.52 | 12+50 | 139 | 12 | 328 |
| | NORMANDY DRIVE | | | | |
| 168 | 8+80 | 9+20.85 | 21 | | 168 |
| | RAMP A | | | | |
| ** | 17+10 | 25+25 | 514 | | |
| 170 | 25+25 | 25+47.30 | 47 | | 117 |
| | RAMP B | | | | |
| 173 | 1+00 | 3+00 | 857 | 37 | 1214 |
| 174 | 3+00 | 5+00 | 758 | 358 | 1262 |
| 175 | 5+00 | 6+53.79 | 563 | 1546 | 1528 |
| 176 | 6+53.79 | 8+03.79 | 184 | 272 | 602 |
| ** | 8+03.79 | 11+38.20 | 236 | | |
| | RAMP C | | | | |
| ** | 11+52 | 15+50 | 251 | | |
| 179 | 15+50 | 18+00 | 450 | 175 | 1176 |
| 180 | 18+00 | 19+12.75 | 331 | 114 | 899 |
| | RAMP D | | | | |
| 181 | 1+00 | 2+50 | 172 | 267 | 666 |
| 182 | 2+60 | 3+00 | 63 | 8 | 167 |
| | MONTVILLE DRIVE | | | | |
| 184 | 1+50 | 2+26.22 | 93 | 124 | 498 |
| | GATEWAY DRIVE | | | | |
| 187 | 8+22.75 | 9+50 | 168 | 210 | 849 |
| 188 | 9+50 | 10+85.57 | 71 | 2 | 344 |
| | WINDFALL ROAD | | | | |
| 189 | 9+00 | 12+00 | 755 | 9 | 491 |
| | SUBTOTAL THIS COLUMN | | 5673 | 3134 | 10309 |
| | SUBTOTAL PREVIOUS COLUMN | | 22169 | 17316 | 31031 |
| | TOTALS CARRIED TO GENERAL SUMMARY | | 27842 | 20450 | 41340* |

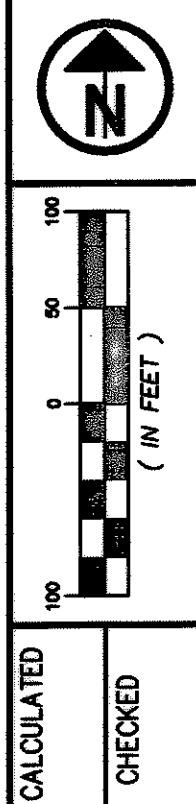
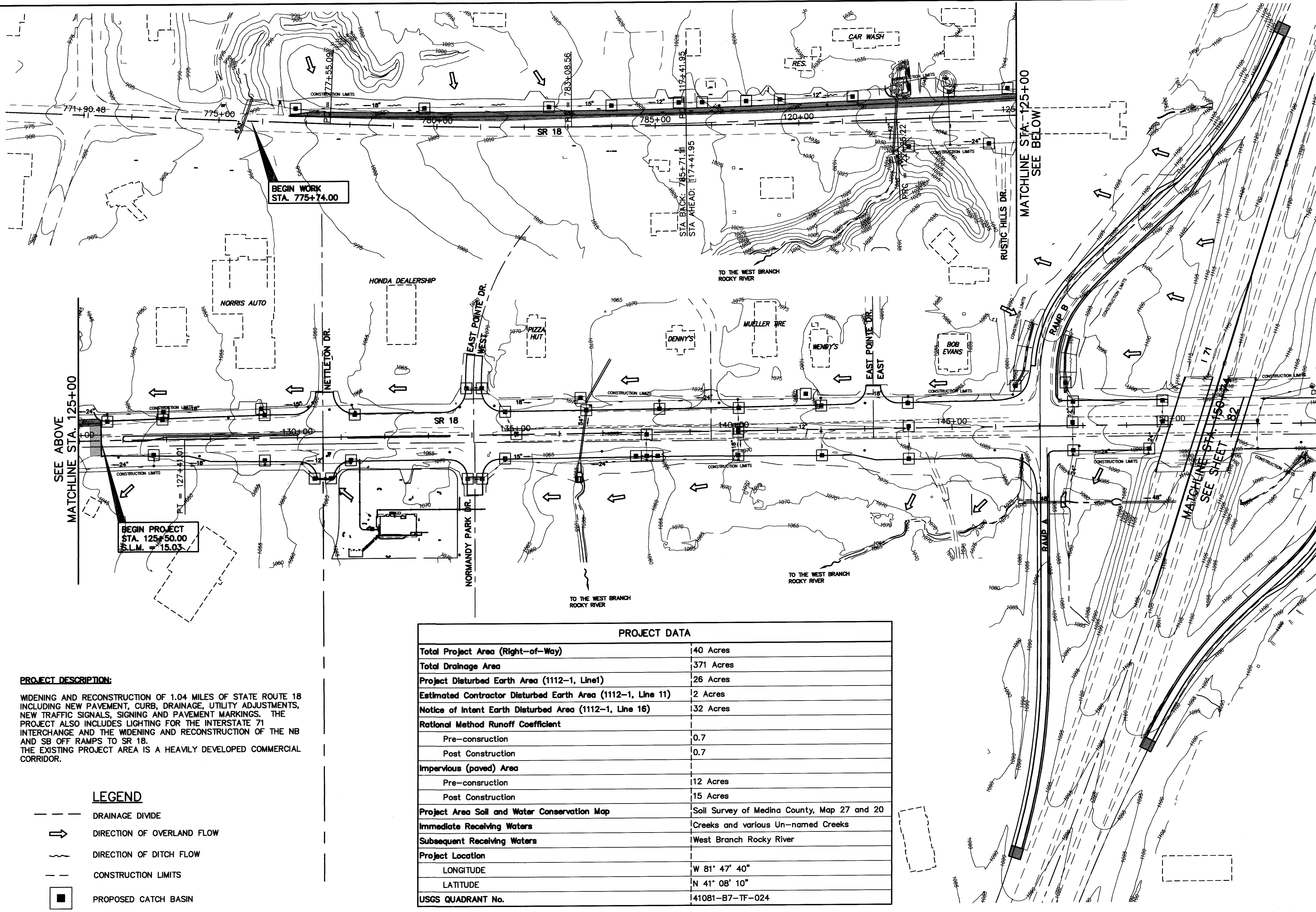
*SEE GENERAL NOTES, SHEET 25.

** SHOULDER QUANTITIES TAKEN FROM THE EXTENDED PROJECT LIMITS. SEE SHEET 8 FOR DETAILS.

CALCULATED
SOW
CHECKED
REF

EARTHWORK SUB-SUMMARY

MED - 18 - 15.13



CALCULATED
CHECKED

PROJECT SITE PLAN

MED - 18 - 15.13

PROJECT DESCRIPTION:

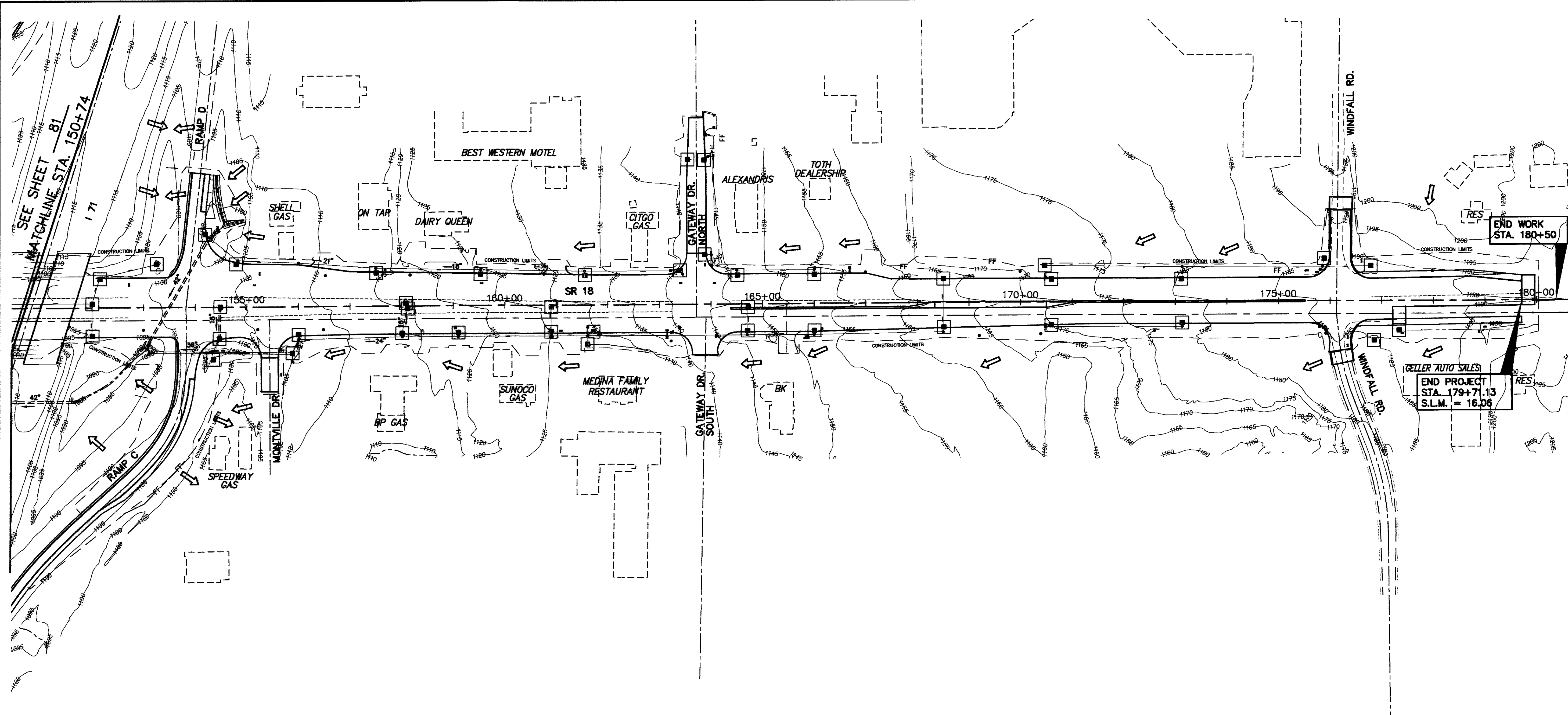
WIDENING AND RECONSTRUCTION OF 1.04 MILES OF STATE ROUTE 18 INCLUDING NEW PAVEMENT, CURB, DRAINAGE, UTILITY ADJUSTMENTS, NEW TRAFFIC SIGNALS, SIGNING AND PAVEMENT MARKINGS. THE PROJECT ALSO INCLUDES LIGHTING FOR THE INTERSTATE 71 INTERCHANGE AND THE WIDENING AND RECONSTRUCTION OF THE NB AND SB OFF RAMP TO SR 18. THE EXISTING PROJECT AREA IS A HEAVILY DEVELOPED COMMERCIAL CORRIDOR.

LEGEND

- DRAINAGE DIVIDE
- ⇨ DIRECTION OF OVERLAND FLOW
- ~ DIRECTION OF DITCH FLOW
- - - CONSTRUCTION LIMITS
- PROPOSED CATCH BASIN

PROJECT DATA

| | |
|--|---|
| Total Project Area (Right-of-Way) | 40 Acres |
| Total Drainage Area | 371 Acres |
| Project Disturbed Earth Area (1112-1, Line 1) | 26 Acres |
| Estimated Contractor Disturbed Earth Area (1112-1, Line 11) | 2 Acres |
| Notice of Intent Earth Disturbed Area (1112-1, Line 16) | 32 Acres |
| Rational Method Runoff Coefficient | |
| Pre-construction | 0.7 |
| Post Construction | 0.7 |
| Impervious (paved) Area | |
| Pre-construction | 12 Acres |
| Post Construction | 15 Acres |
| Project Area Soil and Water Conservation Map | Soil Survey of Medina County, Map 27 and 20 |
| Immediate Receiving Waters | Creeks and various Un-named Creeks |
| Subsequent Receiving Waters | West Branch Rocky River |
| Project Location | |
| LONGITUDE | W 81° 47' 40" |
| LATITUDE | N 41° 08' 10" |
| USGS QUADRANT No. | 41081-B7-TF-024 |



- LEGEND**
- DRAINAGE DIVIDE
 - ➔ DIRECTION OF OVERLAND FLOW
 - PROPOSED CATCH BASIN
 - ~ DIRECTION OF DITCH FLOW
 - - - CONSTRUCTION LIMITS

CALCULATED
CHECKED

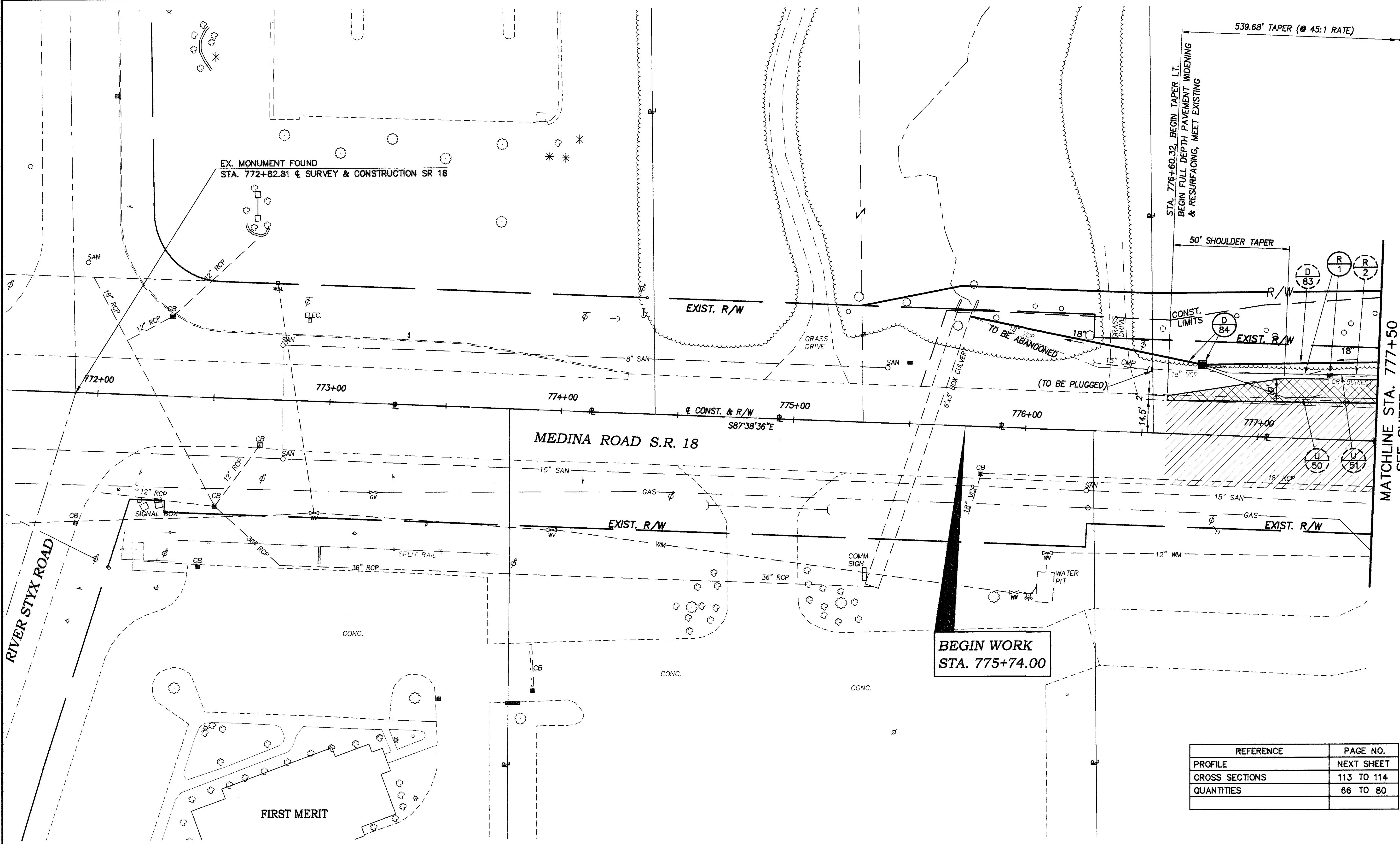
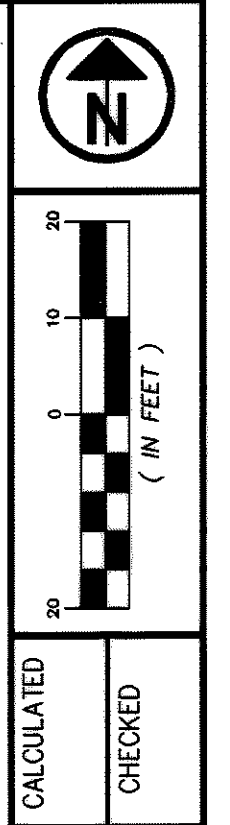
1" = 100'
(IN FEET)

N

PROJECT SITE PLAN

MED - 18 - 15.13

BENCHMARK NO. 1
 CHISELED "d" SOUTH EDGE OF
 CONC. BASE OF LIGHT POLE
 STA. 788+64 @ R/W, 72' LT.
 ELEVATION 1033.64



STA. 776+60.32, BEGIN TAPER LT.
 BEGIN FULL DEPTH PAVEMENT WIDENING
 & RESURFACING, MEET EXISTING

EX. MONUMENT FOUND
 STA. 772+82.81 @ SURVEY & CONSTRUCTION SR 18

MEDINA ROAD S.R. 18

**BEGIN WORK
 STA. 775+74.00**

MATCHLINE STA. 777+50
 SEE SHEET 85

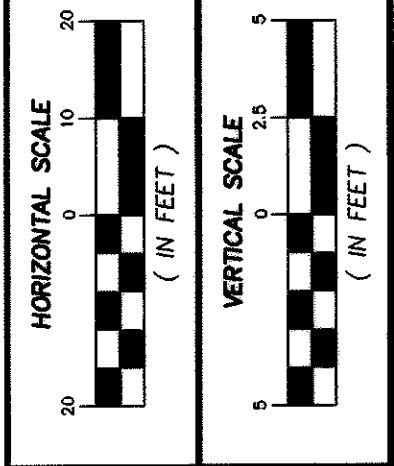
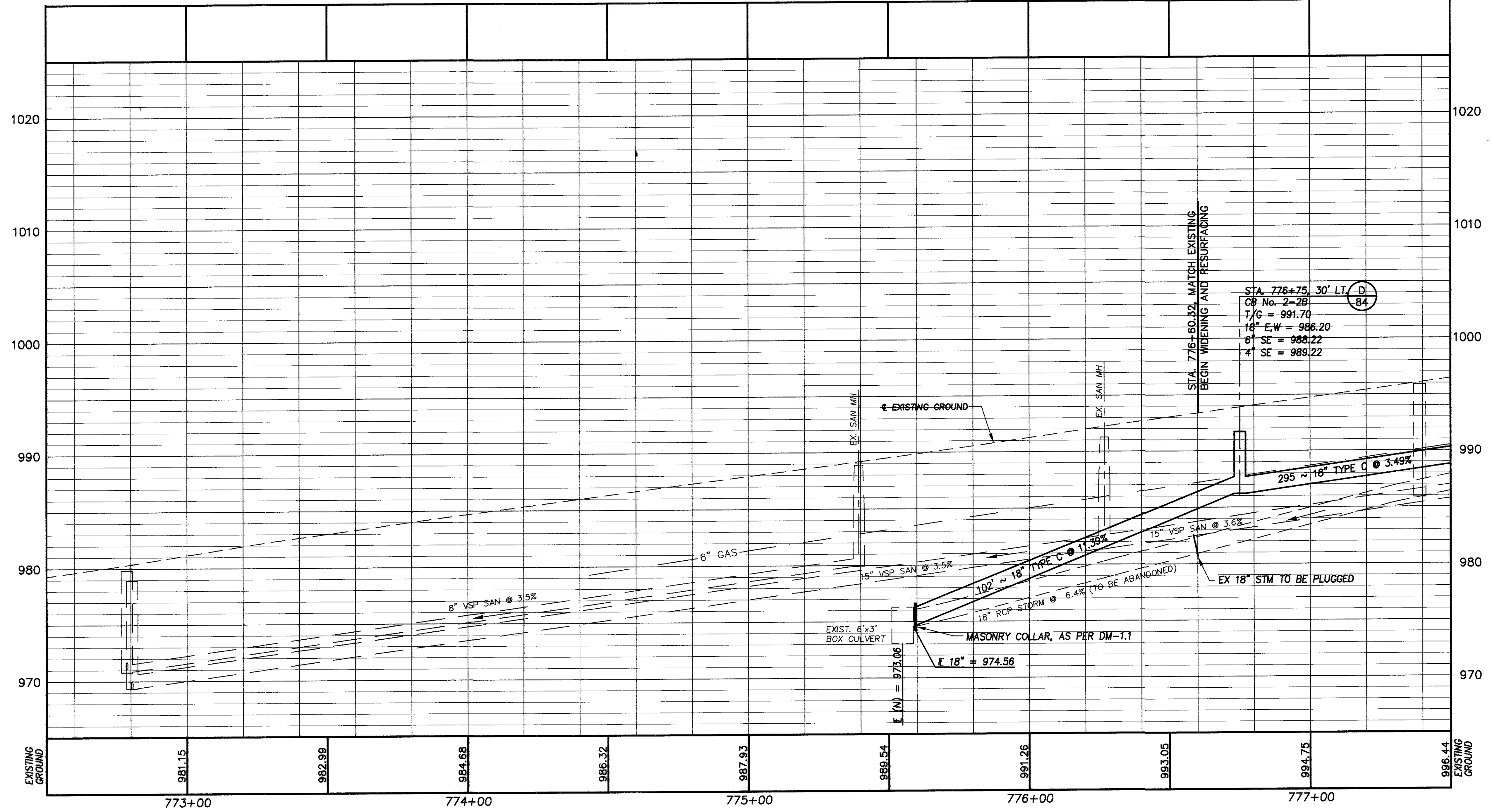
| REFERENCE | PAGE NO. |
|----------------|------------|
| PROFILE | NEXT SHEET |
| CROSS SECTIONS | 113 TO 114 |
| QUANTITIES | 66 TO 80 |

- MILLING AND RESURFACING
- FULL DEPTH PAVEMENT WIDENING

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PLAN - S.R. 18
STA. 77+00 TO STA. 777+50

MED - 18 - 15.13

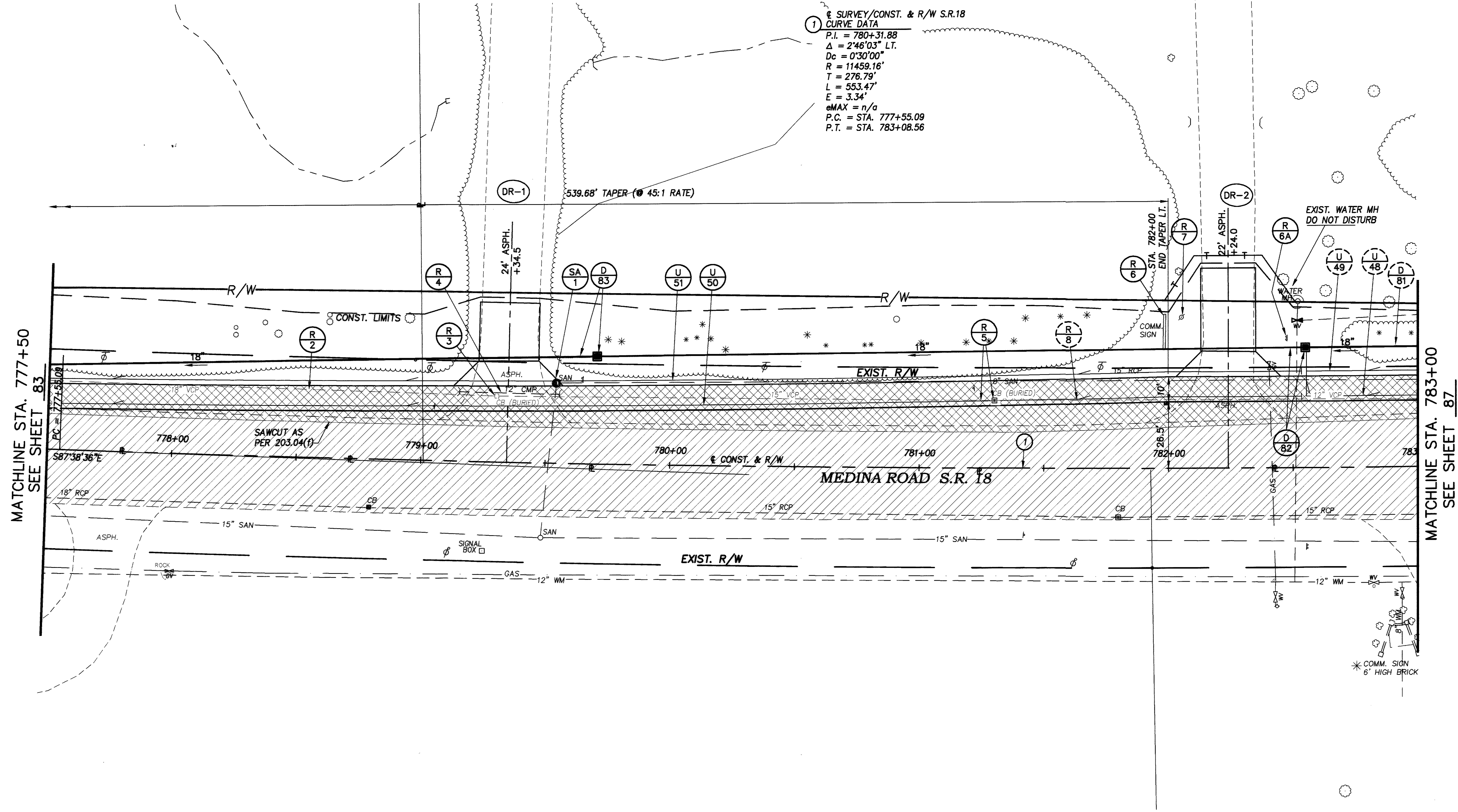


CALCULATED
CHECKED

PROFILE - S.R. 18
STA. 772+50 TO STA. 777+50

BENCHMARK NO. 1
 CHISELED "6" SOUTH EDGE OF
 CONC. BASE OF LIGHT POLE
 STA. 788+64 @ R/W, 72' LT.
 ELEVATION 1033.64

① SURVEY/CONST. & R/W S.R.18
 CURVE DATA
 P.I. = 780+31.88
 $\Delta = 2^{\circ}46'03''$ LT.
 $Dc = 0^{\circ}30'00''$
 $R = 11459.16'$
 $T = 276.79'$
 $L = 553.47'$
 $E = 3.34'$
 $eMAX = n/a$
 P.C. = STA. 777+55.09
 P.T. = STA. 783+08.56



| REFERENCE | PAGE NO. |
|----------------|------------|
| PROFILE | NEXT SHEET |
| CROSS SECTIONS | 114 TO 117 |
| QUANTITIES | 66 TO 80 |

- MILLING & RESURFACING
- FULL DEPTH PAVEMENT WIDENING

N

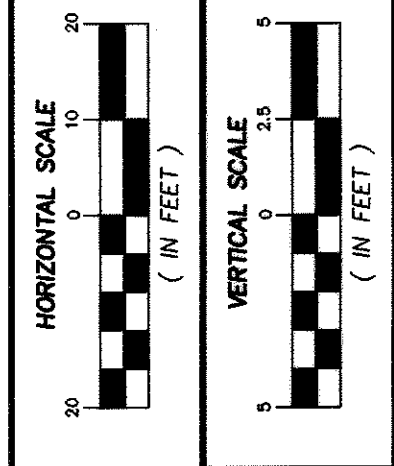
(IN FEET)

CALCULATED _____
 CHECKED _____

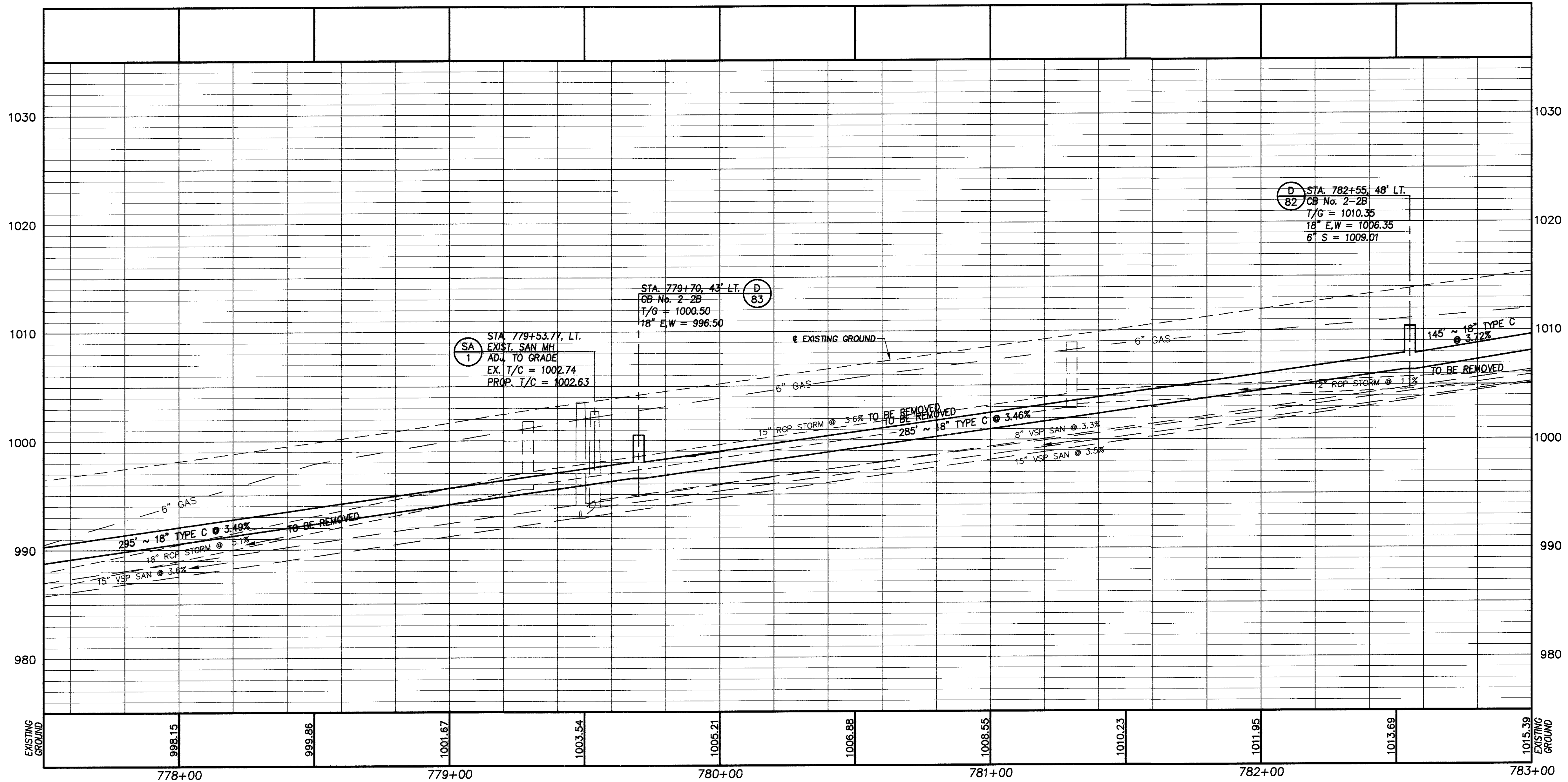
PLAN - S.R. 18
STA. 777+50+00 TO STA. 783+00

MED - 18 - 15.13

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CALCULATED
CHECKED



**PROFILE - S.R. 18
STA. 777+50 TO 783+00**

MED - 18 - 15.13

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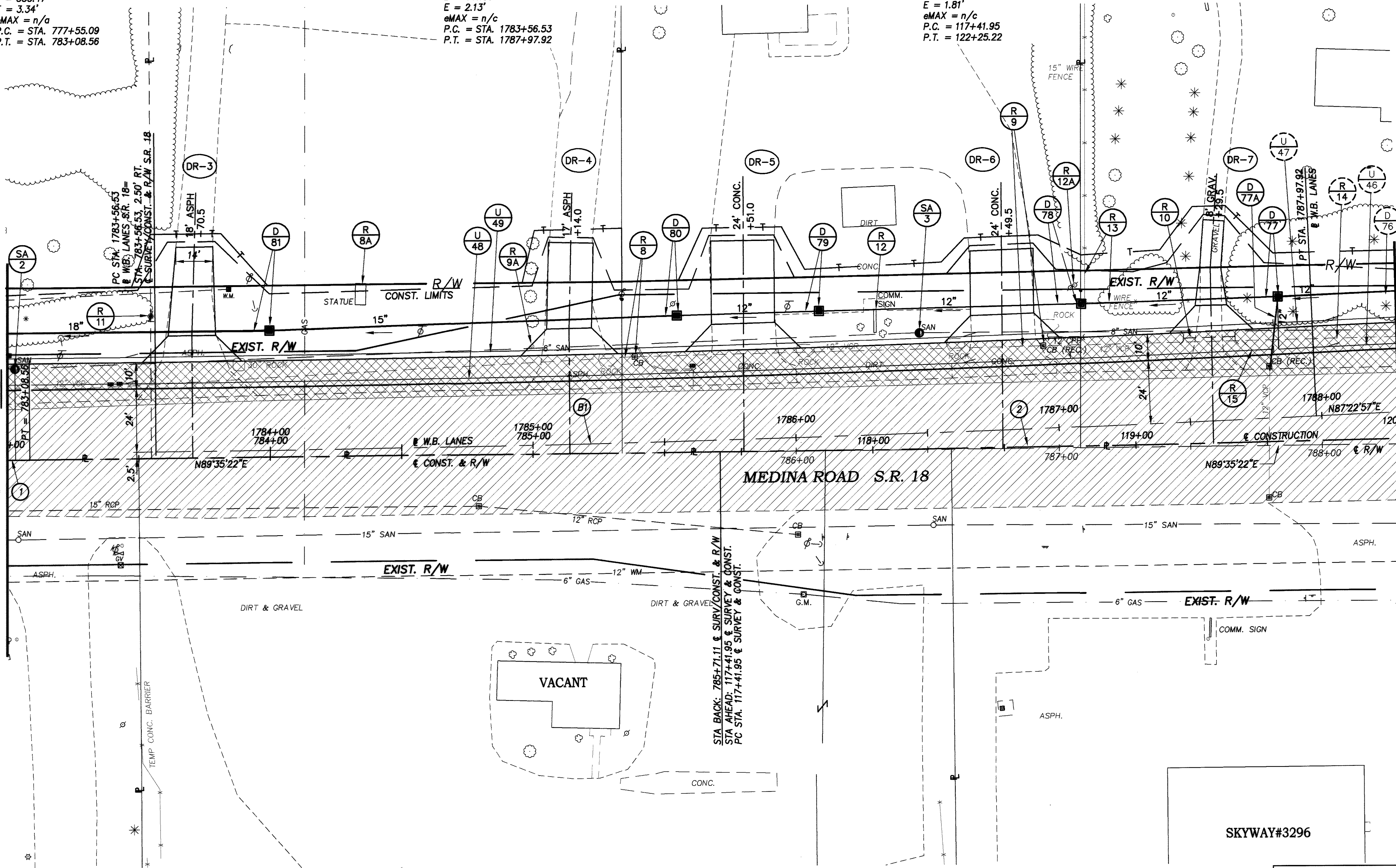
① SURVEY/CONST. & R/W S.R.18
 CURVE DATA
 P.I. = 780+31.88
 $\Delta = 2'46'03''$ LT.
 $D_c = 0'30'00''$
 $R = 11459.16'$
 $T = 276.79'$
 $L = 553.47'$
 $E = 3.34'$
 $eMAX = n/a$
 P.C. = STA. 777+55.09
 P.T. = STA. 783+08.56

① W.B. LANES S.R. 18
 CURVE DATA
 P.I. = 785+77.25
 $\Delta = 2'12'25''$ LT.
 $D_c = 0'30'00''$
 $R = 11459.16'$
 $T = 220.72'$
 $L = 441.39'$
 $E = 2.13'$
 $eMAX = n/c$
 P.C. = STA. 1783+56.53
 P.T. = STA. 1787+97.92

② SURVEY & CONST. S.R. 18
 CURVE DATA
 P.I. = 119+83.60
 $\Delta = 1'43'14''$ LT.
 $D_c = 0'21'22''$
 $R = 16092.78'$
 $T = 241.65'$
 $L = 483.27'$
 $E = 1.81'$
 $eMAX = n/c$
 P.C. = 117+41.95
 P.T. = 122+25.22

MATCHLINE STA. 783+00
 SEE SHEET 85

MATCHLINE STA. 120+00
 SEE SHEET 89

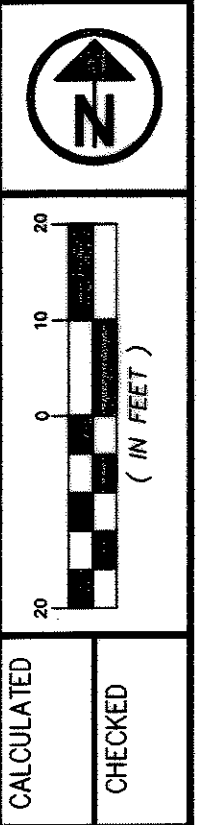


STA. BACK: 785+71.11 & SURV/CONST. & R/W
 STA. AHEAD: 117+41.95 & SURVEY & CONST.
 PC STA. 117+41.95 & SURVEY & CONST.

BENCHMARK NO. 1
 CHISELED "6" SOUTH EDGE OF
 CONC. BASE OF LIGHT POLE
 STA. 788+64 & R/W, 72' LT.
 ELEVATION 1033.64

| REFERENCE | PAGE NO. |
|----------------|------------|
| PROFILE | NEXT SHEET |
| CROSS SECTIONS | 117 TO 120 |
| QUANTITIES | 66 TO 80 |

- MILLING & RESURFACING
- FULL DEPTH PAVEMENT WIDENING

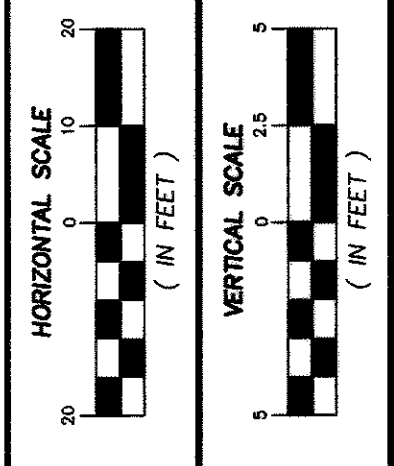
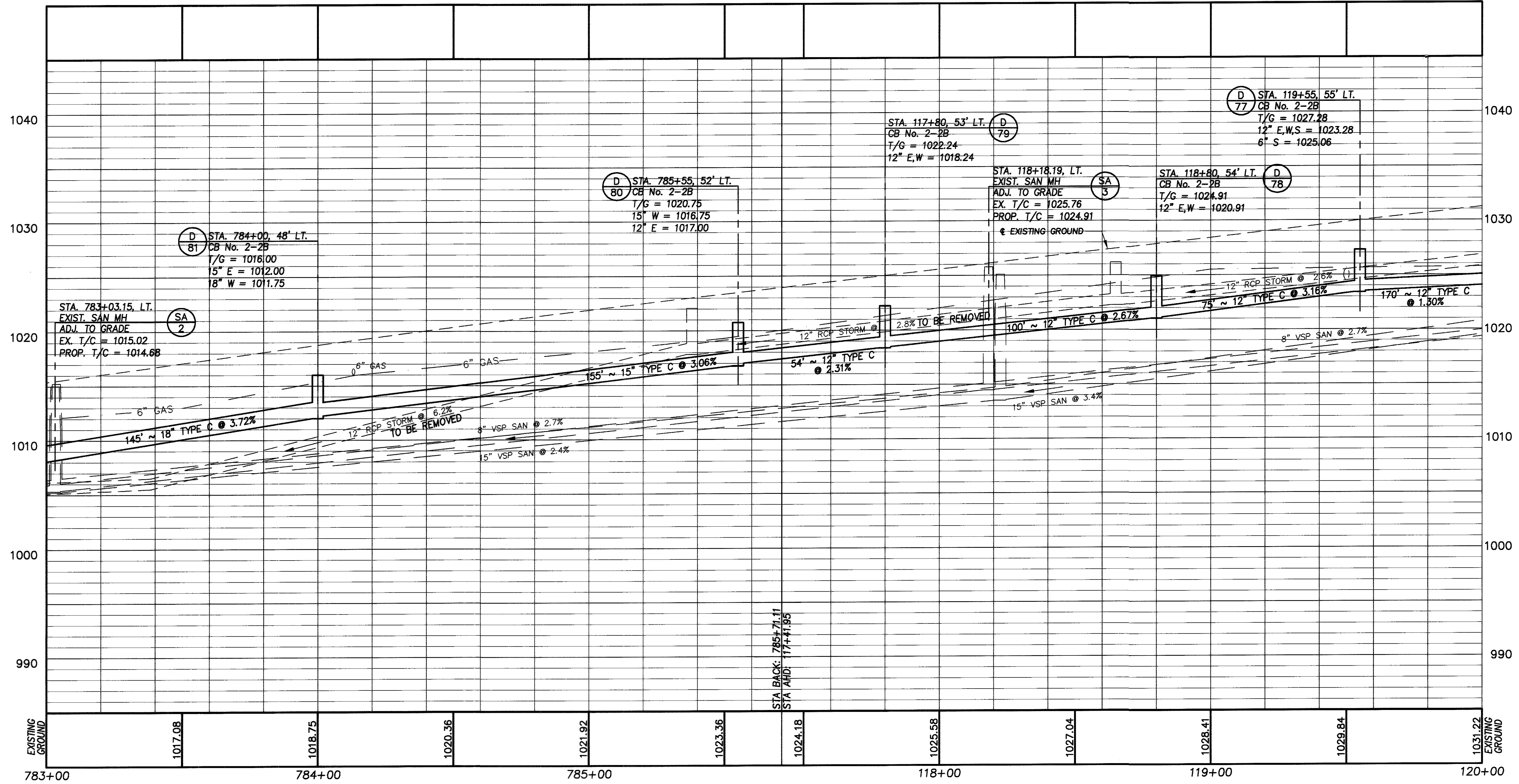


CALCULATED
 CHECKED

PLAN - S.R. 18
 STA. 783+00 TO STA. 120+00

MED - 18 - 15.13

87
 362



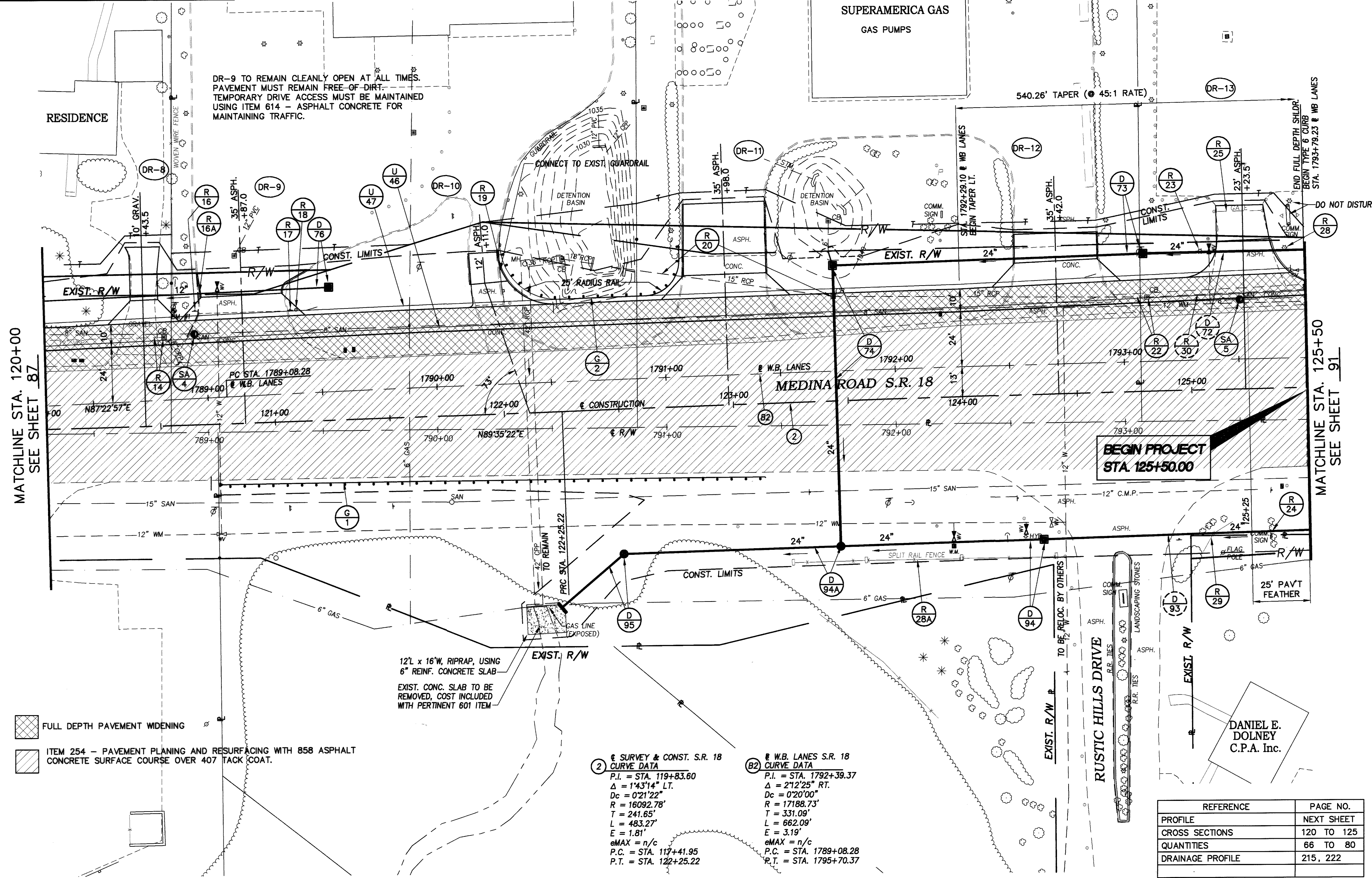
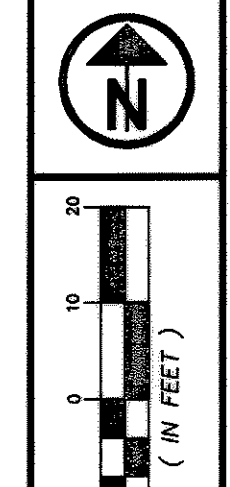
CALCULATED
CHECKED

PROFILE - S.R. 18
STA. 783+00 TO 120+00

MED - 18 - 15.13

BENCHMARK NO. 1
CHISELED "6" SOUTH EDGE OF CONC. BASE OF LIGHT POLE
STA. 788+64 @ R/W, 72' LT.
ELEVATION 1033.64

BENCHMARK NO. 2
CHISELED "+" SOUTH SIDE OF ROUND CONC. WATER MANHOLE
STA. 798+37 @ R/W, 89.5' LT.
ELEVATION 1059.29



MATCHLINE STA. 120+00
SEE SHEET 87

MATCHLINE STA. 125+50
SEE SHEET 91

- FULL DEPTH PAVEMENT WIDENING
- ITEM 254 - PAVEMENT PLANING AND RESURFACING WITH 858 ASPHALT CONCRETE SURFACE COURSE OVER 407 TACK COAT.

2 **¢ SURVEY & CONST. S.R. 18 CURVE DATA**
P.I. = STA. 119+83.60
 $\Delta = 1'43'14''$ LT.
 $D_c = 0'21'22''$
 $R = 16092.78'$
 $T = 241.65'$
 $L = 483.27'$
 $E = 1.81'$
 $e_{MAX} = n/c$
P.C. = STA. 117+41.95
P.T. = STA. 122+25.22

B2 **¢ W.B. LANES S.R. 18 CURVE DATA**
P.I. = STA. 1792+39.37
 $\Delta = 2'12'25''$ RT.
 $D_c = 0'20'00''$
 $R = 17188.73'$
 $T = 331.09'$
 $L = 662.09'$
 $E = 3.19'$
 $e_{MAX} = n/c$
P.C. = STA. 1789+08.28
P.T. = STA. 1795+70.37

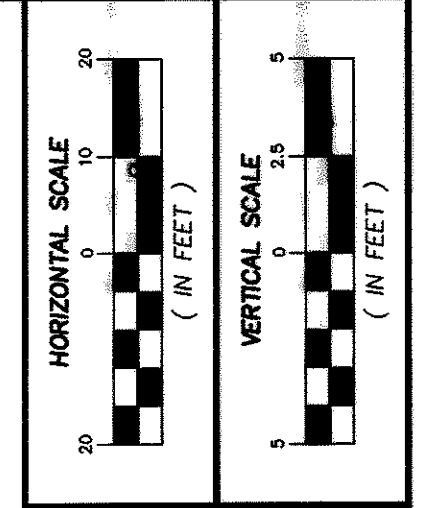
| REFERENCE | PAGE NO. |
|------------------|------------|
| PROFILE | NEXT SHEET |
| CROSS SECTIONS | 120 TO 125 |
| QUANTITIES | 66 TO 80 |
| DRAINAGE PROFILE | 215, 222 |

CALCULATED
CHECKED

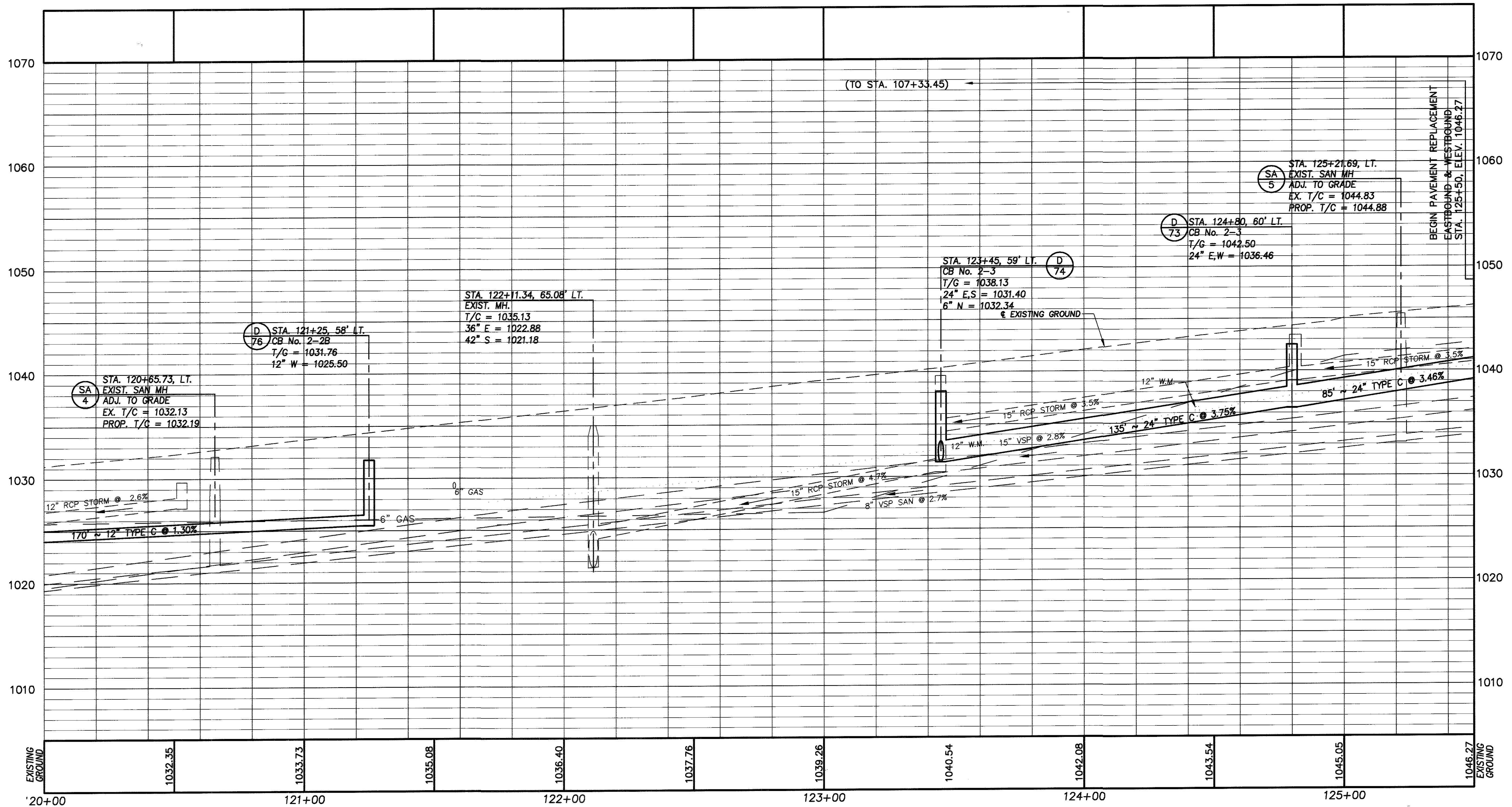
PLAN - S.R. 18
STA. 120+00 TO STA. 125+50

MED - 18 - 15.13

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CALCULATED
CHECKED



PROFILE - S.R. 18
STA. 120+00 TO 125+50

MED - 18 - 15.13

BENCHMARK NO. 2
 CHISELED "+" SOUTH SIDE OF
 ROUND CONC. WATER MANHOLE
 STA. 798+37 @ R/W, 89.5' LT.
 ELEVATION 1059.29

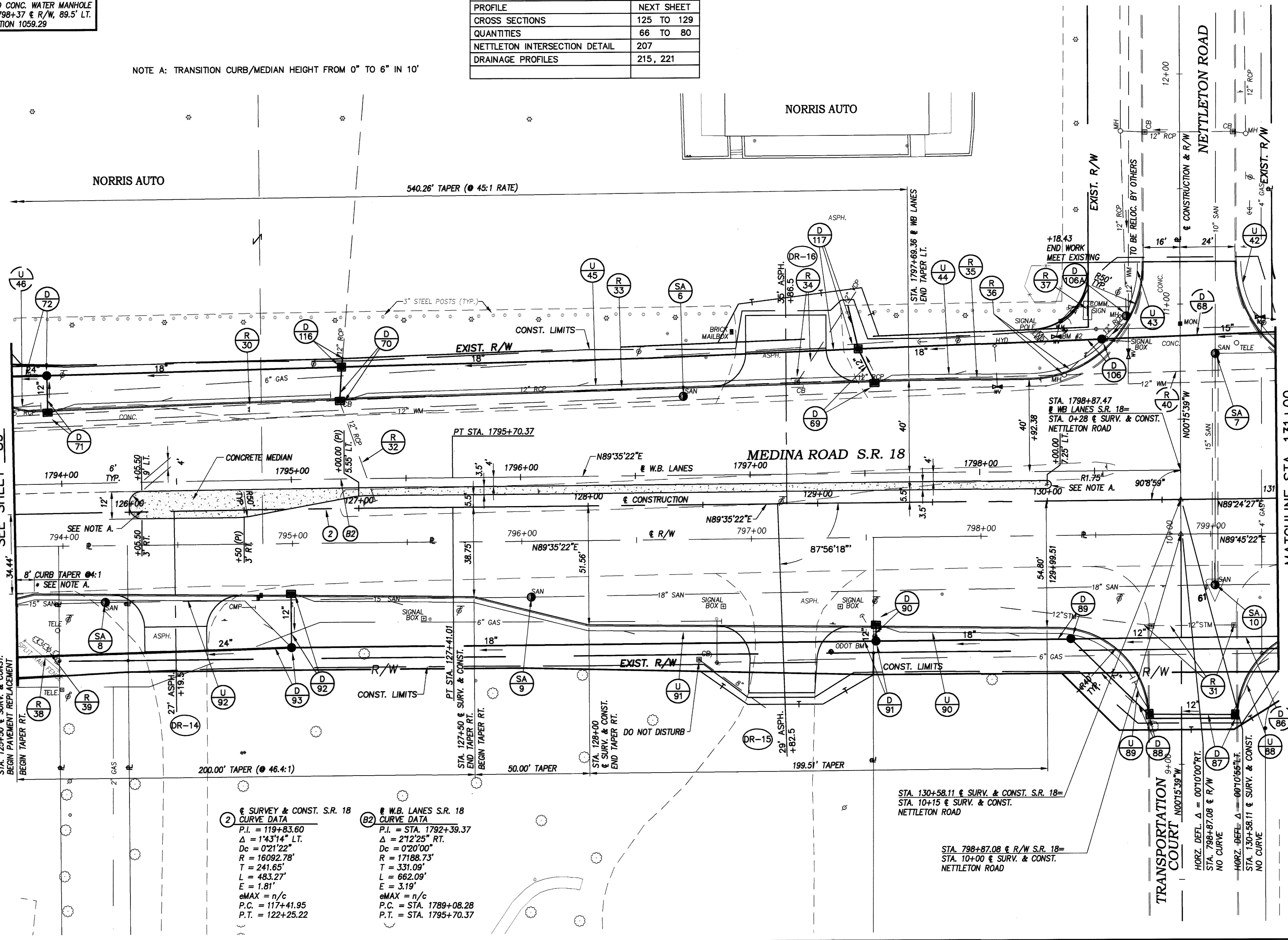
| REFERENCE | PAGE NO. |
|-------------------------------|------------|
| PROFILE | NEXT SHEET |
| CROSS SECTIONS | 125 TO 129 |
| QUANTITIES | 66 TO 80 |
| NETTLETON INTERSECTION DETAIL | 207 |
| DRAINAGE PROFILES | 215, 221 |

NOTE A: TRANSITION CURB/MEDIAN HEIGHT FROM 0" TO 6" IN 10'

MATCHLINE STA. 125+50
 SEE SHEET 89

MATCHLINE STA. 131+00
 SEE SHEET 93

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(2) SURVEY & CONST. S.R. 18 CURVE DATA
 P.I. = 119+83.60
 $\Delta = 1'43'14''$ LT.
 $D_c = 0'21'22''$
 $R = 16092.78'$
 $T = 241.65'$
 $L = 483.27'$
 $E = 1.81'$
 $e_{MAX} = n/c$
 P.C. = 117+41.95
 P.T. = 122+25.22

(B2) W.B. LANES S.R. 18 CURVE DATA
 P.I. = STA. 1792+39.37
 $\Delta = 2'12'25''$ RT.
 $D_c = 0'20'00''$
 $R = 17188.73'$
 $T = 331.09'$
 $L = 662.09'$
 $E = 3.19'$
 $e_{MAX} = n/c$
 P.C. = STA. 1789+08.28
 P.T. = STA. 1795+70.37

STA. 130+58.11 @ SURV. & CONST. S.R. 18=
 STA. 10+15 @ SURV. & CONST. NETTLETON ROAD

STA. 798+87.08 @ R/W S.R. 18=
 STA. 10+00 @ SURV. & CONST. NETTLETON ROAD

HORZ. DEF. $\Delta = 00'10'00''$ RT.
 STA. 798+87.08 @ R/W NO CURVE
 HORZ. DEF. $\Delta = 00'10'56''$ LT.
 STA. 130+58.11 @ SURV. & CONST. NO CURVE

| | |
|------------|---------|
| CALCULATED | CHECKED |
|------------|---------|

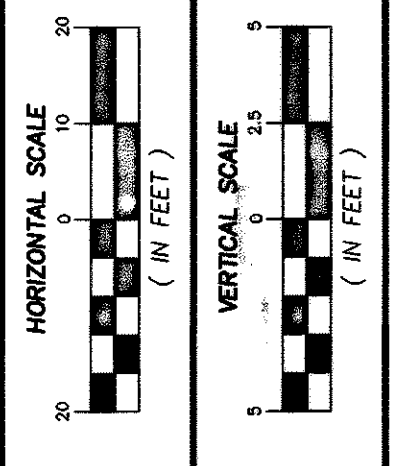
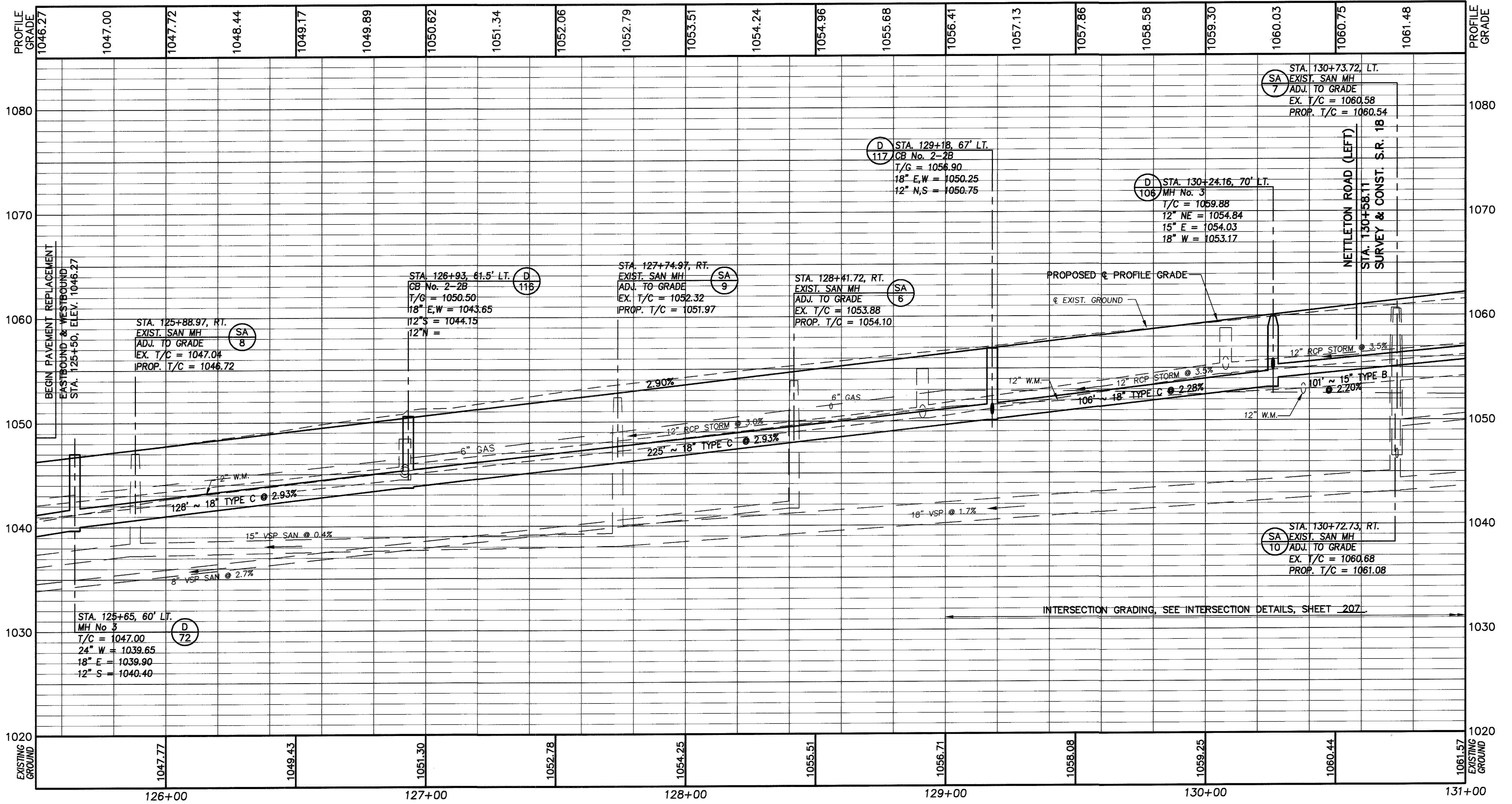
PLAN - S.R. 18

STA. 125+50 TO STA. 131+00

MED - 18 - 15.13

91

362



CALCULATED
CHECKED

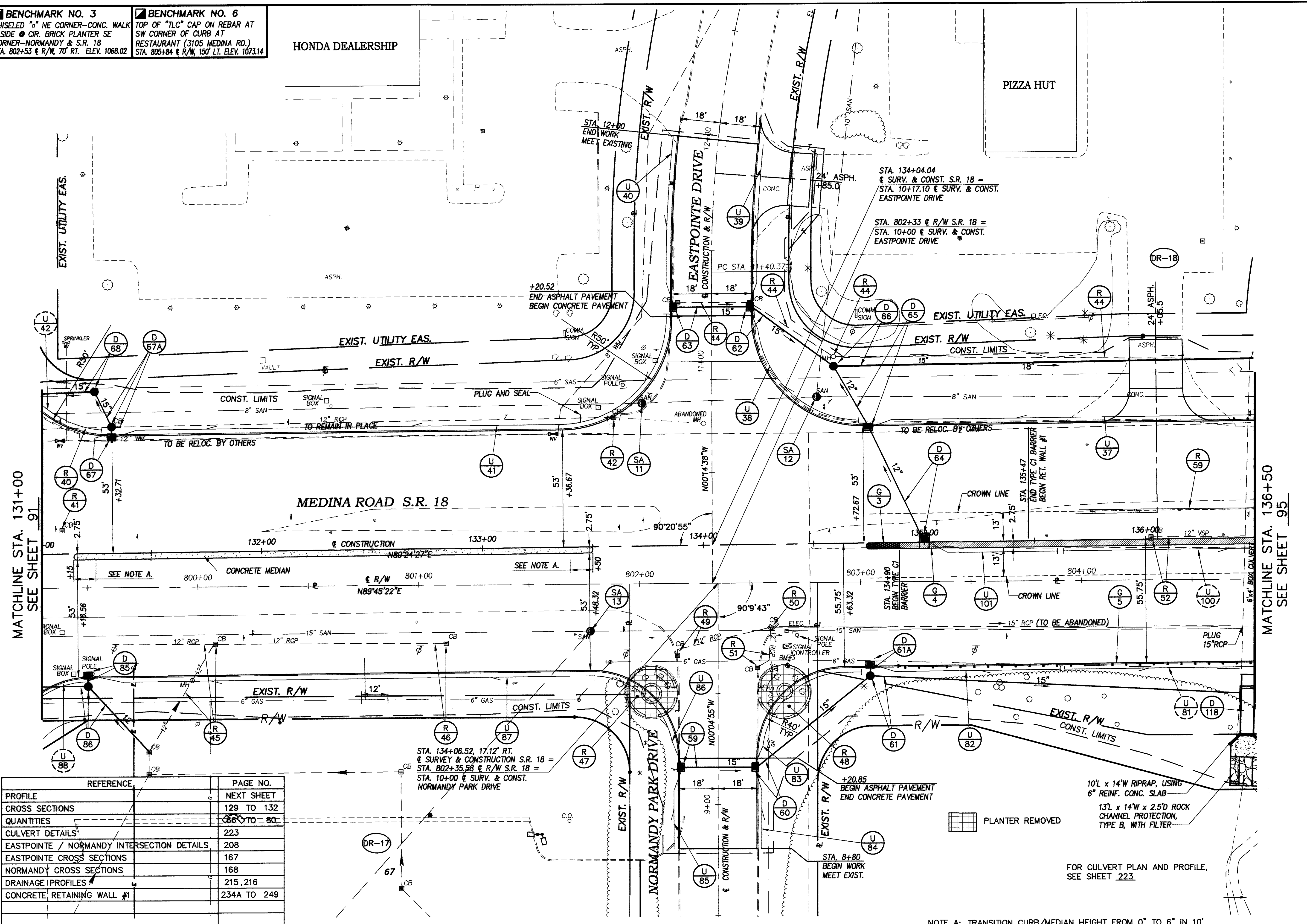
PROFILE - S.R. 1B
STA. 125+50 TO STA. 131+00

BENCHMARK NO. 3
 CHISELED "6" NE CORNER-CONC. WALK
 N. SIDE @ CIR. BRICK PLANTER SE
 CORNER-NORMANDY & S.R. 18
 STA. 802+53 @ R/W, 70' RT. ELEV. 1068.02

BENCHMARK NO. 6
 TOP OF "TLC" CAP ON REBAR AT
 SW CORNER OF CURB AT
 RESTAURANT (3105 MEDINA RD.)
 STA. 805+84 @ R/W, 150' LT. ELEV. 1073.14

HONDA DEALERSHIP

PIZZA HUT



MATCHLINE STA. 131+00
 SEE SHEET 91

MATCHLINE STA. 136+50
 SEE SHEET 95

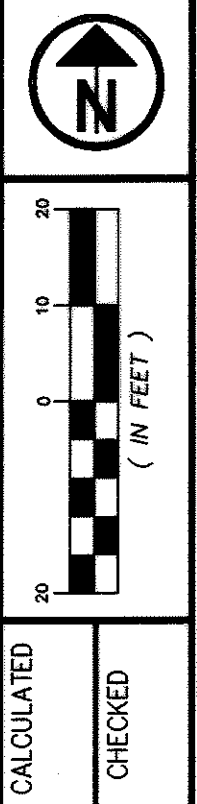
| REFERENCE | PAGE NO. |
|--|-------------|
| PROFILE | NEXT SHEET |
| CROSS SECTIONS | 129 TO 132 |
| QUANTITIES | 86 TO 80 |
| CULVERT DETAILS | 223 |
| EASTPOINTE / NORMANDY INTERSECTION DETAILS | 208 |
| EASTPOINTE CROSS SECTIONS | 167 |
| NORMANDY CROSS SECTIONS | 168 |
| DRAINAGE PROFILES | 215, 216 |
| CONCRETE RETAINING WALL #1 | 234A TO 249 |

STA. 134+06.52, 17.12' RT.
 @ SURVEY & CONSTRUCTION S.R. 18 =
 STA. 802+35.58 @ R/W S.R. 18 =
 STA. 10+00 @ SURV. & CONST.
 NORMANDY PARK DRIVE

10' x 14' W RIPRAP, USING
 6" REINF. CONC. SLAB
 13' x 14' W x 2.5' D ROCK
 CHANNEL PROTECTION,
 TYPE B, WITH FILTER

FOR CULVERT PLAN AND PROFILE,
 SEE SHEET 223.

NOTE A: TRANSITION CURB/MEDIAN HEIGHT FROM 0" TO 6" IN 10'

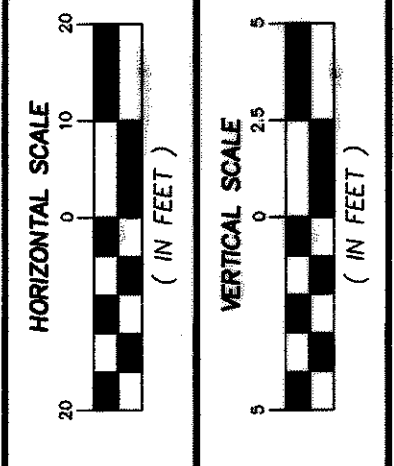
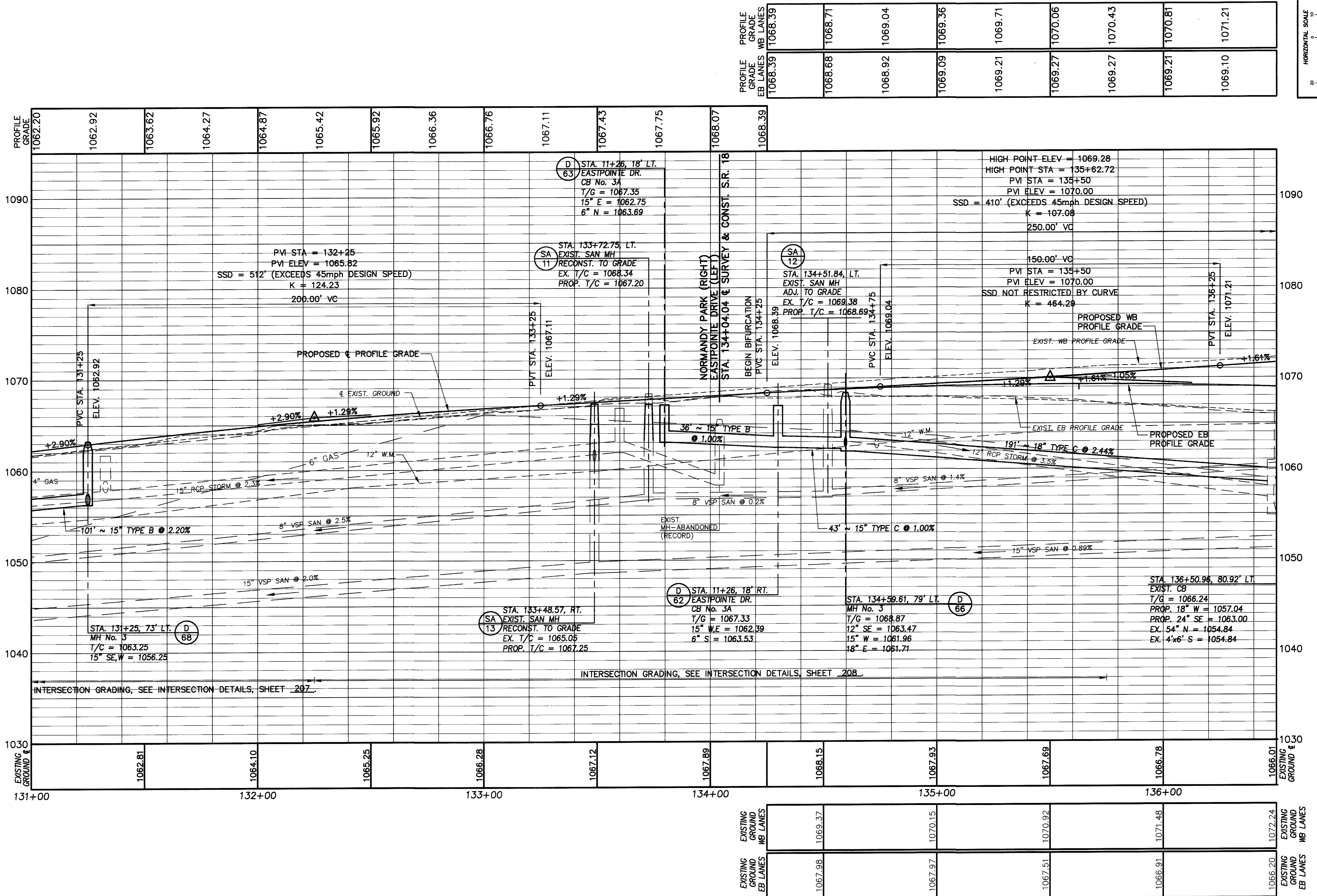


CALCULATED
 CHECKED

PLAN - S.R. 18
 STA. 131+00 TO STA. 136+50

MED - 18 - 15.13
 93
 362

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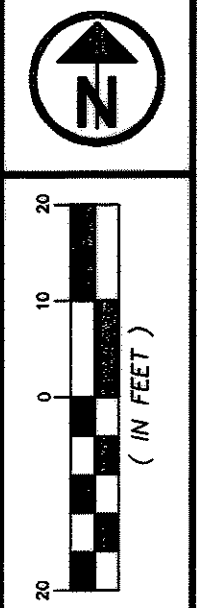
CALCULATED
CHECKED

PROFILE - S.R. 18
STA. 131+00 TO STA. 136+50

MED - 18 - 15.13

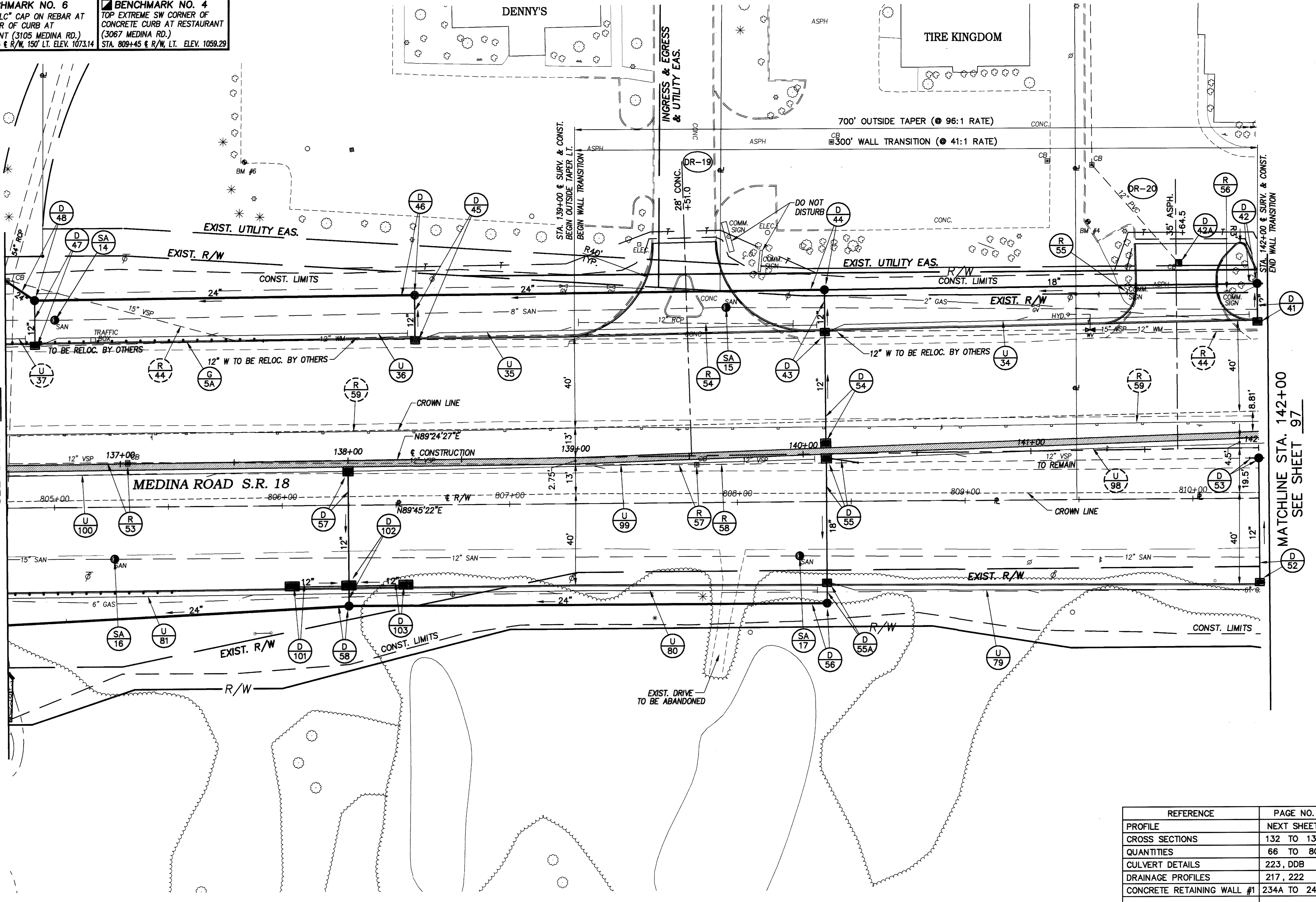
BENCHMARK NO. 6
TOP OF "TLC" CAP ON REBAR AT
SW CORNER OF CURB AT
RESTAURANT (3105 MEDINA RD.)
STA. 805+84 @ R/W, 150' LT. ELEV. 1073.14

BENCHMARK NO. 4
TOP EXTREME SW CORNER OF
CONCRETE CURB AT RESTAURANT
(3067 MEDINA RD.)
STA. 809+45 @ R/W, LT. ELEV. 1059.29



MATCHLINE STA. 136+50
SEE SHEET 93

MATCHLINE STA. 142+00
SEE SHEET 97



| REFERENCE | PAGE NO. |
|----------------------------|-------------|
| PROFILE | NEXT SHEET |
| CROSS SECTIONS | 132 TO 136 |
| QUANTITIES | 66 TO 80 |
| CULVERT DETAILS | 223, DDB |
| DRAINAGE PROFILES | 217, 222 |
| CONCRETE RETAINING WALL #1 | 234A TO 249 |

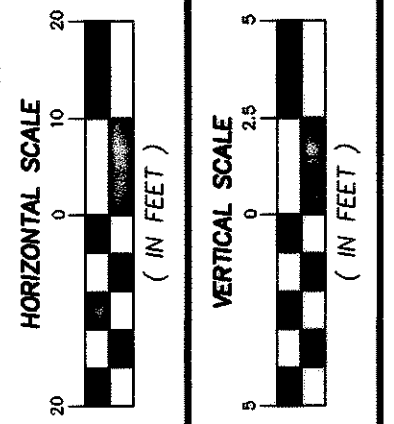
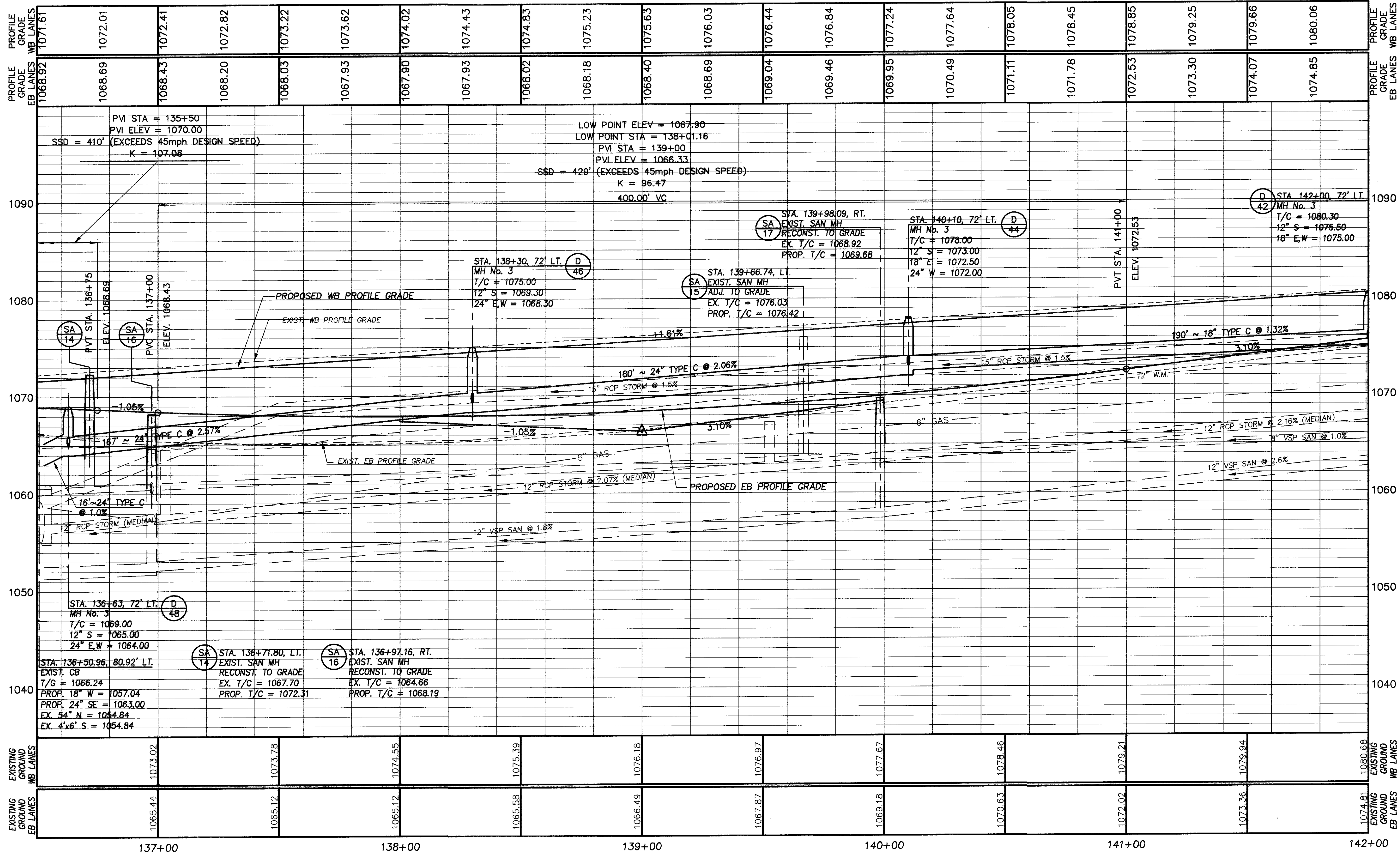
CALCULATED
CHECKED

PLAN - S.R. 18
STA. 136+50 TO STA. 142+00

MED - 18 - 15.13

95
362

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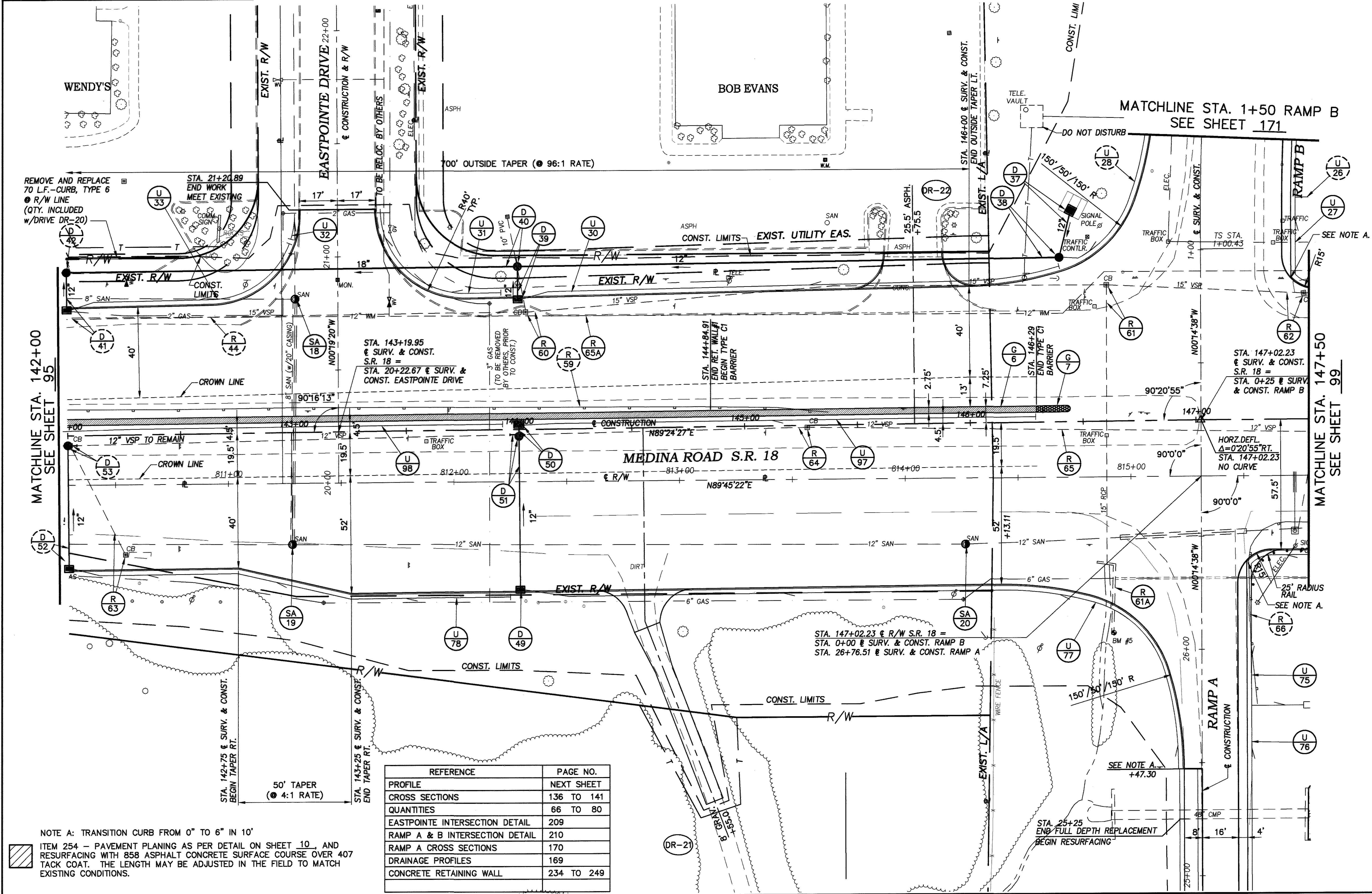
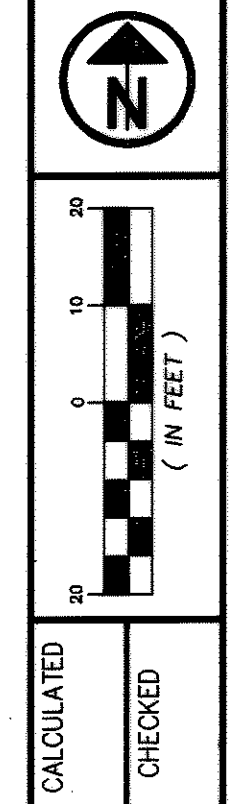


**PROFILE - S.R. 18
STA. 136+50 TO STA. 142+00**

MED - 18 - 15.13

BENCHMARK NO. 4
TOP EXTREME SW CORNER OF
CONCRETE CURB AT
RESTAURANT (3067 MEDINA RD.)
STA. 809+45 @ R/W, LT. ELEV. 1059.29

BENCHMARK NO. 5
CHISELED "U" SE CORNER OF
CONC. HEADWALL
STA. 814+82 @ R/W, 63' RT.
ELEV. 1083.45



REMOVE AND REPLACE
70 L.F. - CURB, TYPE 6
@ R/W LINE
(QTY. INCLUDED
w/DRIVE DR-20)

MATCHLINE STA. 142+00
SEE SHEET 95

MATCHLINE STA. 147+50
SEE SHEET 99

MATCHLINE STA. 1+50 RAMP B
SEE SHEET 171

| REFERENCE | PAGE NO. |
|--------------------------------|------------|
| PROFILE | NEXT SHEET |
| CROSS SECTIONS | 136 TO 141 |
| QUANTITIES | 66 TO 80 |
| EASTPOINTE INTERSECTION DETAIL | 209 |
| RAMP A & B INTERSECTION DETAIL | 210 |
| RAMP A CROSS SECTIONS | 170 |
| DRAINAGE PROFILES | 169 |
| CONCRETE RETAINING WALL | 234 TO 249 |

NOTE A: TRANSITION CURB FROM 0" TO 6" IN 10'
ITEM 254 - PAVEMENT PLANING AS PER DETAIL ON SHEET 10, AND RESURFACING WITH 858 ASPHALT CONCRETE SURFACE COURSE OVER 407 TACK COAT. THE LENGTH MAY BE ADJUSTED IN THE FIELD TO MATCH EXISTING CONDITIONS.

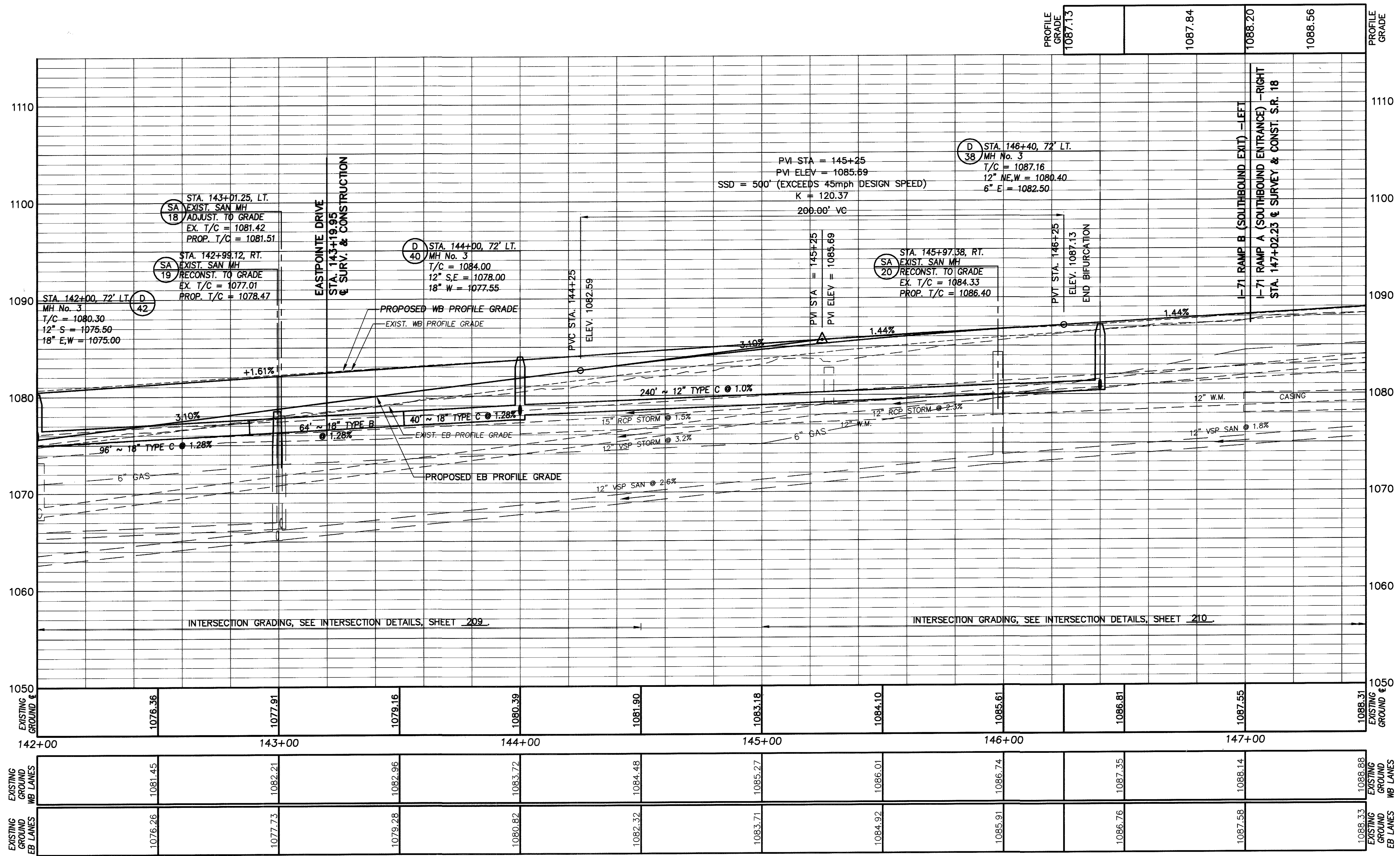
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PLAN - S.R. 18
STA. 142+00 TO STA. 147+50

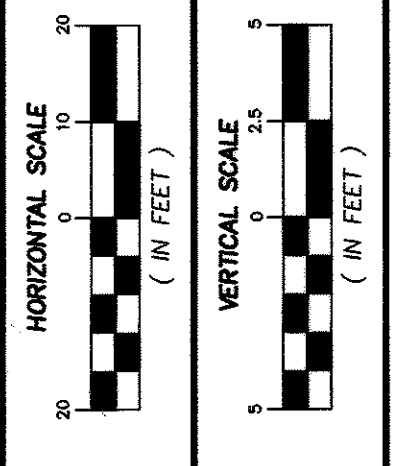
MED - 18 - 15.13

97
362

| | | | | | | | | | | | | | | | | | | |
|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| PROFILE GRADE EB LANES | 1075.62 | 1076.40 | 1077.17 | 1077.95 | 1078.72 | 1079.49 | 1080.27 | 1081.04 | 1081.82 | 1082.59 | 1083.34 | 1084.04 | 1084.68 | 1085.27 | 1085.82 | 1086.30 | 1086.74 | 1087.13 |
| PROFILE GRADE WB LANES | 1080.46 | 1080.86 | 1081.26 | 1081.67 | 1082.07 | 1082.47 | 1082.87 | 1083.28 | 1083.68 | 1084.08 | 1084.48 | 1084.89 | 1085.29 | 1085.69 | 1086.05 | 1086.41 | 1086.77 | 1087.13 |



| | | | | | | | | | | | |
|--------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| EXISTING GROUND EB LANES | 1076.26 | 1077.73 | 1079.28 | 1080.82 | 1082.32 | 1083.71 | 1084.92 | 1085.91 | 1086.76 | 1087.58 | 1088.33 |
| EXISTING GROUND WB LANES | 1081.45 | 1082.21 | 1082.96 | 1083.72 | 1084.48 | 1085.27 | 1086.01 | 1086.74 | 1087.35 | 1088.14 | 1088.88 |
| EXISTING GROUND E | 1076.36 | 1077.91 | 1079.16 | 1080.39 | 1081.90 | 1083.18 | 1084.10 | 1085.61 | 1086.81 | 1087.55 | 1088.31 |



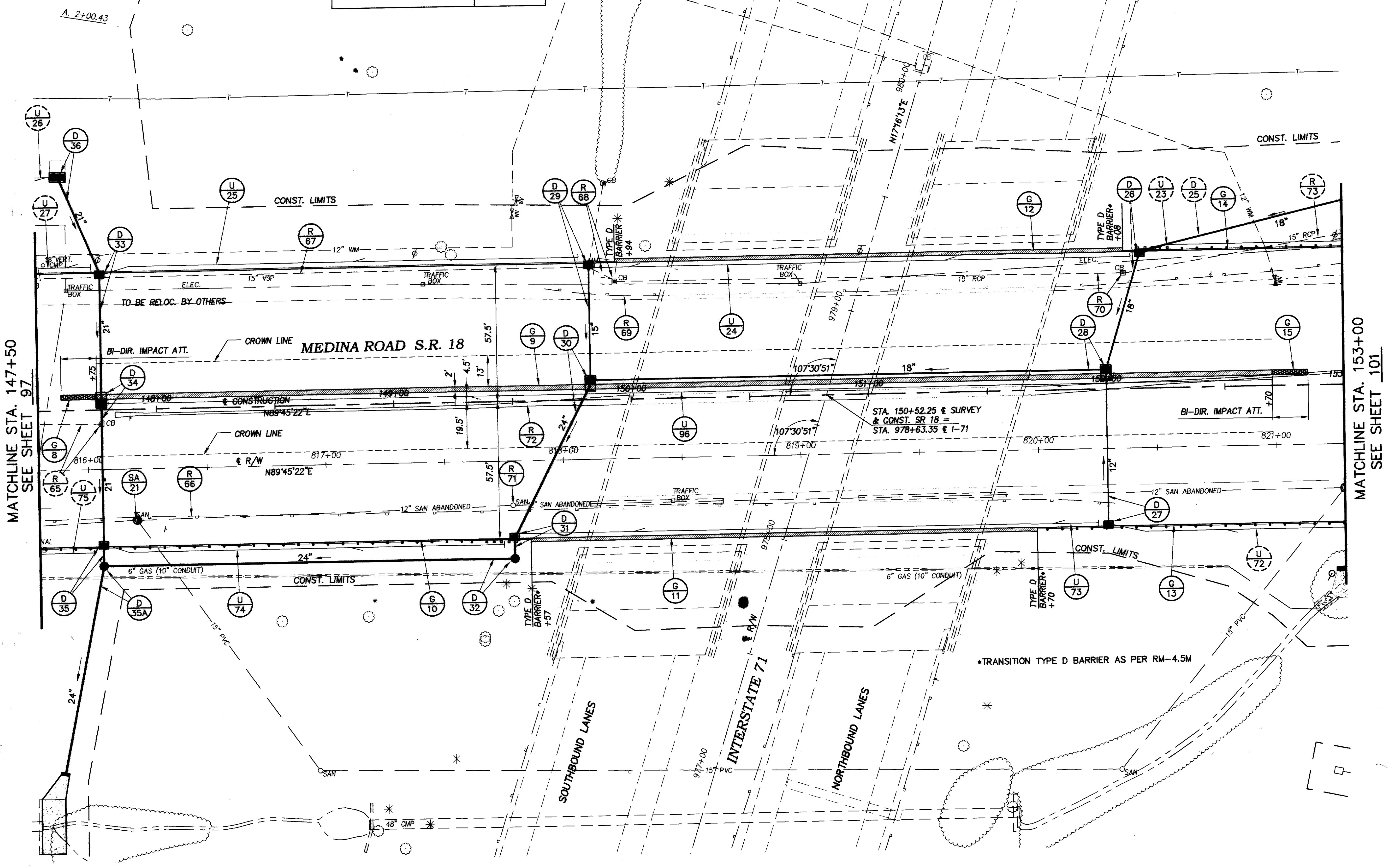
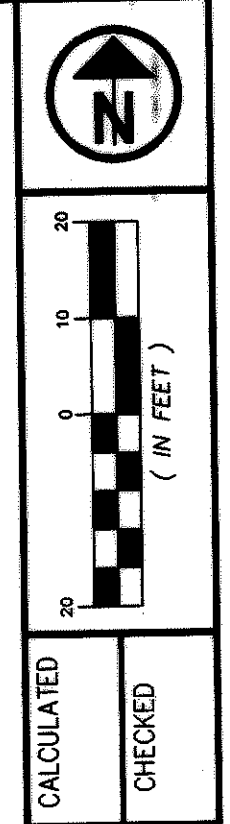
CALCULATED
CHECKED

PROFILE - S.R. 18
STA. 142+00 TO STA. 147+50

BENCHMARK NO. 5
 CHISELED "u" SE CORNER OF
 CONC. HEADWALL
 STA. 814+82 @ R/W, 63' RT.
 ELEV. 1083.45

BENCHMARK NO. 7
 CHISELED "u" NW CORNER OF
 HEADWALL
 STA. 821+18 @ R/W, 70' RT.
 ELEVATION 1093.48

| REFERENCE | PAGE NO. |
|------------------|------------|
| PROFILE | NEXT SHEET |
| CROSS SECTIONS | 141 TO 144 |
| QUANTITIES | 66 TO 80 |
| DRAINAGE PROFILE | 221 |
| CULVERT DETAIL | 227 |



MATCHLINE STA. 147+50
SEE SHEET 97

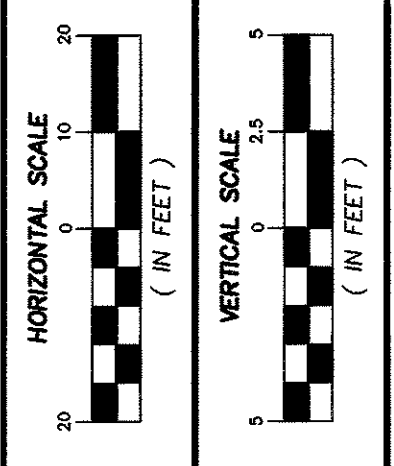
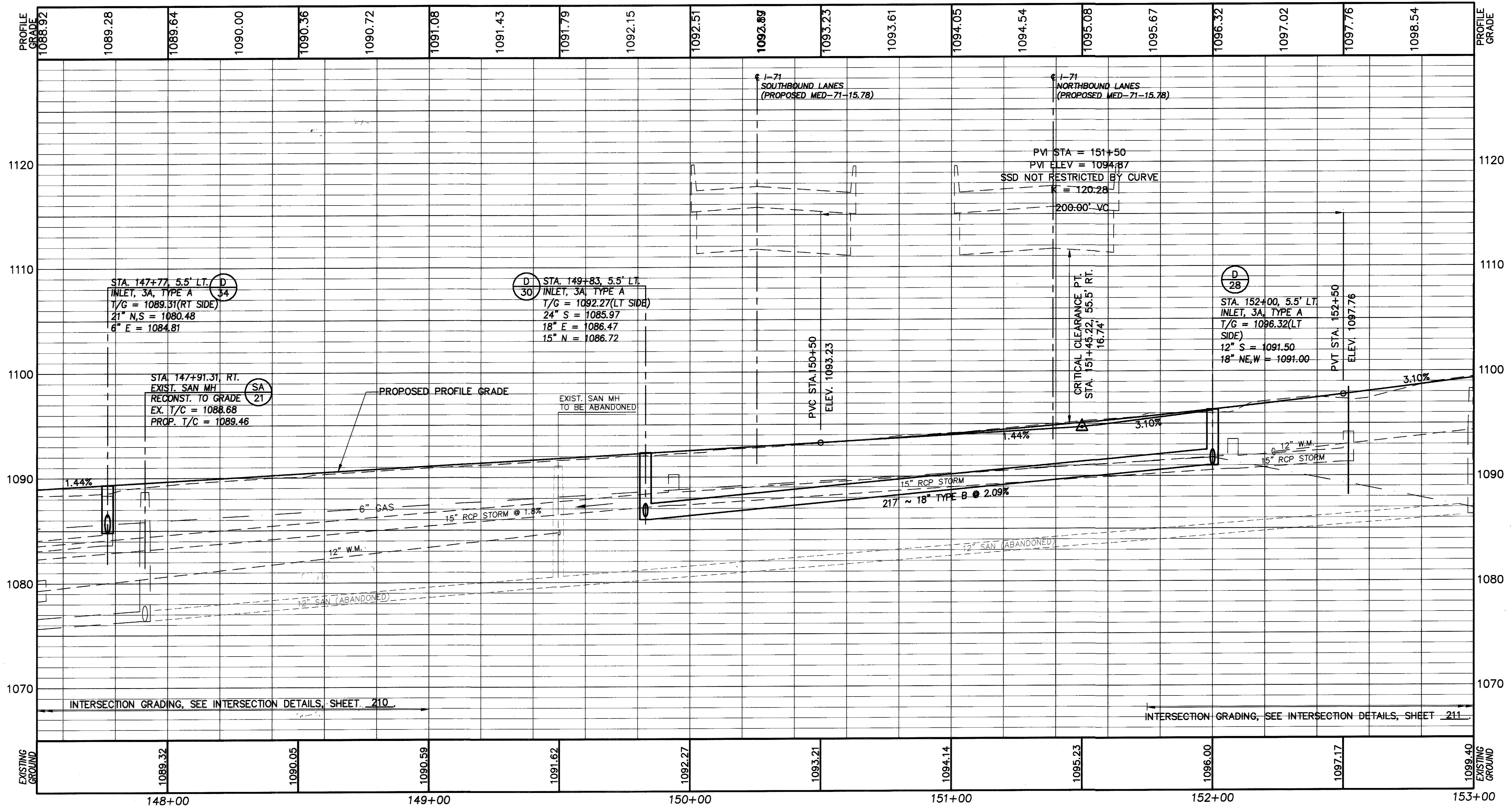
MATCHLINE STA. 153+00
SEE SHEET 101

J:\Proj\3\7050600\ROADWAY\7050600.dwg User: jom81152 Jun 26, 2003 - 2:00pm

PLAN - S.R. 18
STA. 147+50 TO STA. 153+00

MED - 18 - 15.13

99
362



CALCULATED
CHECKED

**PROFILE - S.R. 18
STA. 147+50 TO 153+00**

MED - 18 - 15.13

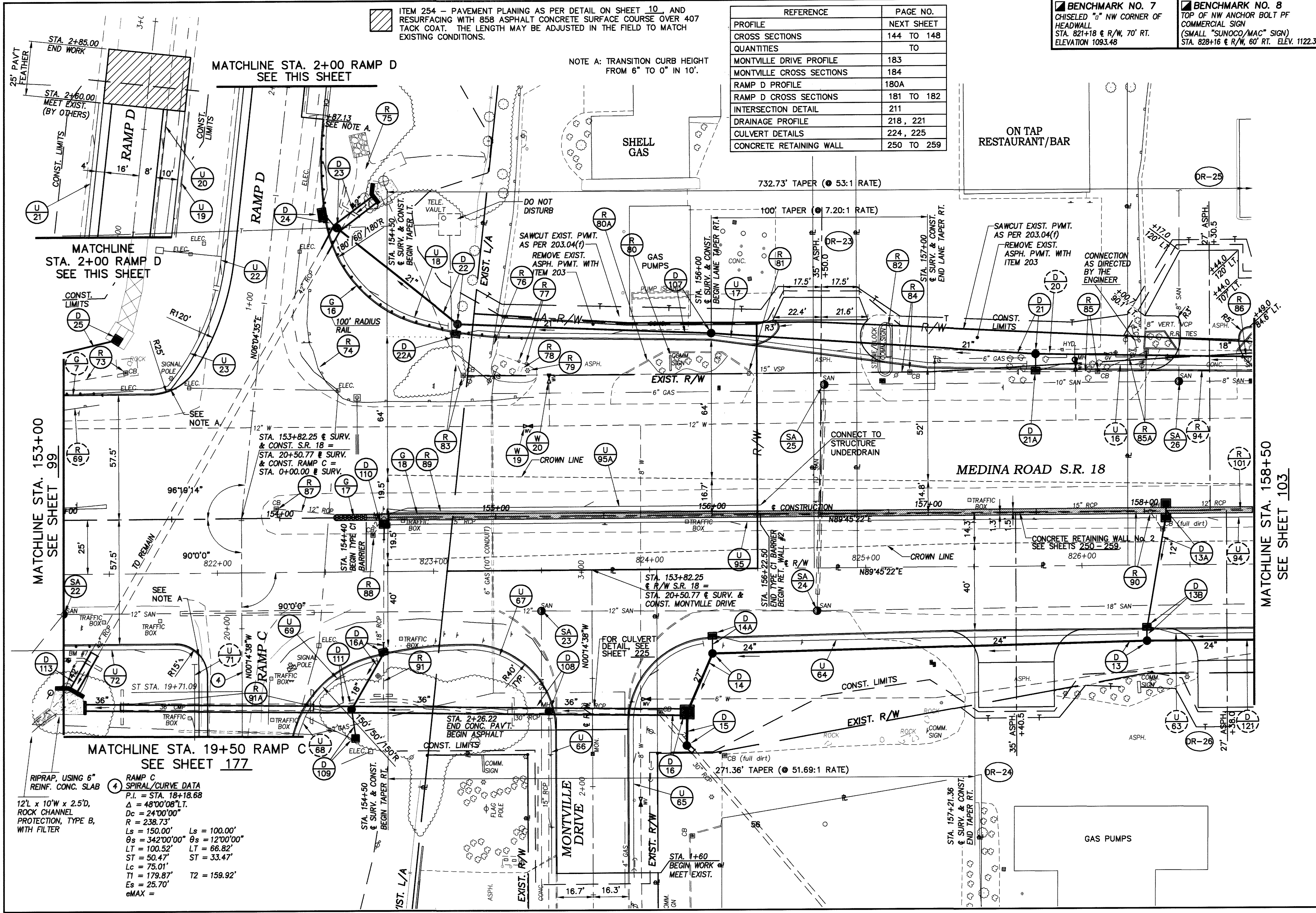
J:\Proj\7050600\ROADWAY\70506gp.dwg User: jon81152 Jun 27, 2003 10:17am

ITEM 254 - PAVEMENT PLANING AS PER DETAIL ON SHEET 10 AND RESURFACING WITH 858 ASPHALT CONCRETE SURFACE COURSE OVER 407 TACK COAT. THE LENGTH MAY BE ADJUSTED IN THE FIELD TO MATCH EXISTING CONDITIONS.

| REFERENCE | PAGE NO. |
|--------------------------|------------|
| PROFILE | NEXT SHEET |
| CROSS SECTIONS | 144 TO 148 |
| QUANTITIES | TO |
| MONTVILLE DRIVE PROFILE | 183 |
| MONTVILLE CROSS SECTIONS | 184 |
| RAMP D PROFILE | 180A |
| RAMP D CROSS SECTIONS | 181 TO 182 |
| INTERSECTION DETAIL | 211 |
| DRAINAGE PROFILE | 218, 221 |
| CULVERT DETAILS | 224, 225 |
| CONCRETE RETAINING WALL | 250 TO 259 |

BENCHMARK NO. 7
CHISELED "B" NW CORNER OF HEADWALL
STA. 821+18 & R/W, 70' RT.
ELEVATION 1093.48

BENCHMARK NO. 8
TOP OF NW ANCHOR BOLT PF COMMERCIAL SIGN (SMALL "SUNOCO/MAC" SIGN)
STA. 828+16 & R/W, 60' RT. ELEV. 1122.30



NOTE A: TRANSITION CURB HEIGHT FROM 6" TO 0" IN 10'.

ON TAP RESTAURANT/BAR

SHELL GAS

MATCHLINE STA. 2+00 RAMP D SEE THIS SHEET

MATCHLINE STA. 2+00 RAMP D SEE THIS SHEET

MATCHLINE STA. 153+00 SEE SHEET 99

MATCHLINE STA. 19+50 RAMP C SEE SHEET 177

MATCHLINE STA. 158+50 SEE SHEET 103

RIPRAP, USING 6" REINF. CONC. SLAB

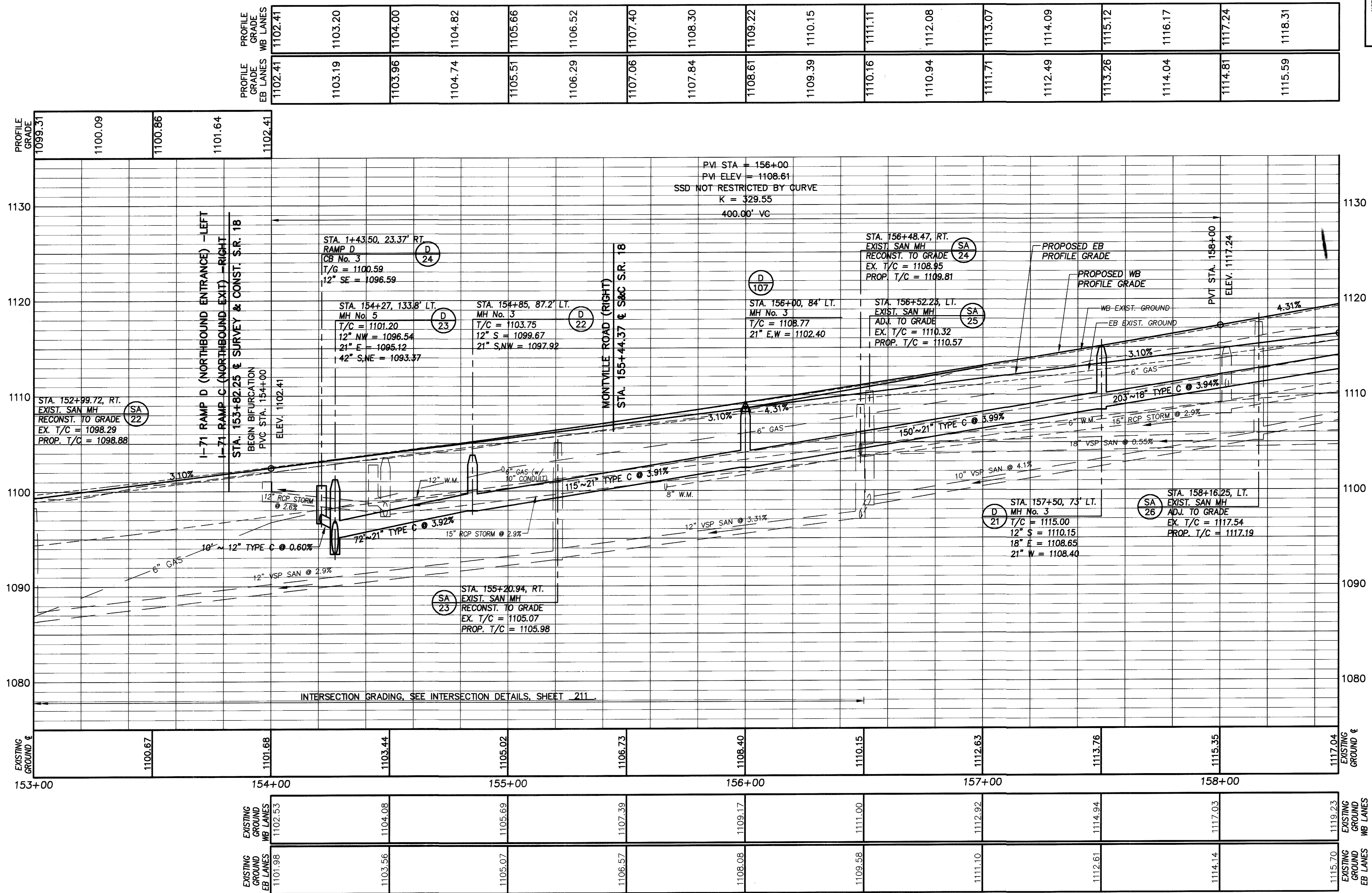
12' x 10' x 2.5'D, ROCK CHANNEL PROTECTION, TYPE B, WITH FILTER

4 RAMP C SPIRAL/CURVE DATA
 P.I. = STA. 18+18.68
 $\Delta = 48^{\circ}00'08''$
 $D_c = 24^{\circ}00'00''$
 $R = 238.73'$
 $L_s = 150.00'$ $L_s = 100.00'$
 $\theta_s = 342^{\circ}00'00''$ $\theta_s = 12^{\circ}00'00''$
 $LT = 100.52'$ $LT = 66.82'$
 $ST = 50.47'$ $ST = 33.47'$
 $L_c = 75.01'$
 $T1 = 179.87'$ $T2 = 159.92'$
 $E_s = 25.70'$
 $eMAX =$

PLAN - S.R. 18
STA. 153+00 TO STA. 158+50

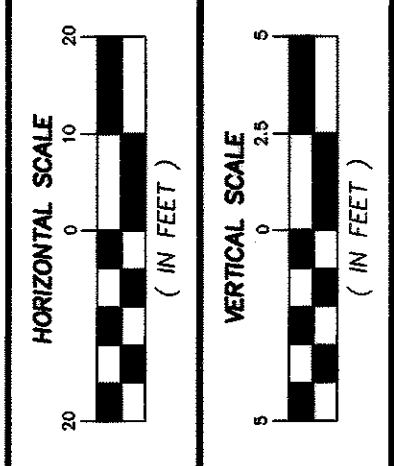
MED - 18 - 15.13

101
362



| | | | | | |
|---------------|---------|---------|---------|---------|---------|
| PROFILE GRADE | 1099.31 | 1100.09 | 1100.86 | 1101.64 | 1102.41 |
|---------------|---------|---------|---------|---------|---------|

| | | | | | | | | | | | | | | | | | | |
|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| PROFILE GRADE EB LANES | 1102.41 | 1103.19 | 1103.96 | 1104.74 | 1105.51 | 1106.29 | 1107.06 | 1107.84 | 1108.61 | 1109.39 | 1110.16 | 1110.94 | 1111.71 | 1112.49 | 1113.26 | 1114.04 | 1114.81 | 1115.59 |
| PROFILE GRADE WB LANES | 1102.41 | 1103.20 | 1104.00 | 1104.82 | 1105.66 | 1106.52 | 1107.40 | 1108.30 | 1109.22 | 1110.15 | 1111.11 | 1112.08 | 1113.07 | 1114.09 | 1115.12 | 1116.17 | 1117.24 | 1118.31 |



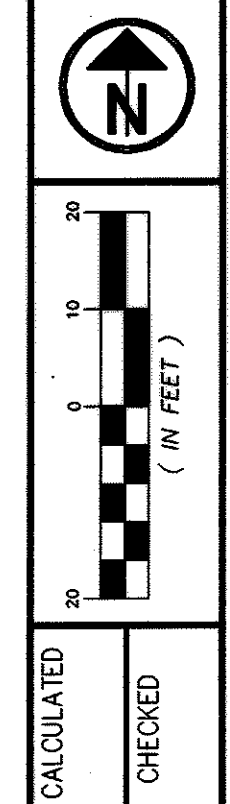
CALCULATED
CHECKED

PROFILE - S.R. 18
STA. 153+00 TO STA. 158+50

BENCHMARK NO. 7
CHISELED "6" NW CORNER OF
HEADWALL
STA. 821+18 @ R/W, 70' RT.
ELEVATION 1093.48

BENCHMARK NO. 8
TOP OF NW ANCHOR BOLT PF
COMMERCIAL SIGN
(SMALL "SUNOCO/MAC" SIGN)
STA. 828+16 @ R/W, 60' RT. ELEV. 1122.30

| REFERENCE | PAGE NO. |
|-----------------------------|------------|
| PROFILE | NEXT SHEET |
| CROSS SECTIONS | 148 TO 154 |
| QUANTITIES | 66 TO 80 |
| GATEWAY INTERSECTION DETAIL | 212 |
| DRAINAGE PROFILE | 218 |
| CONCRETE RETAINING WALL | 250 TO 259 |



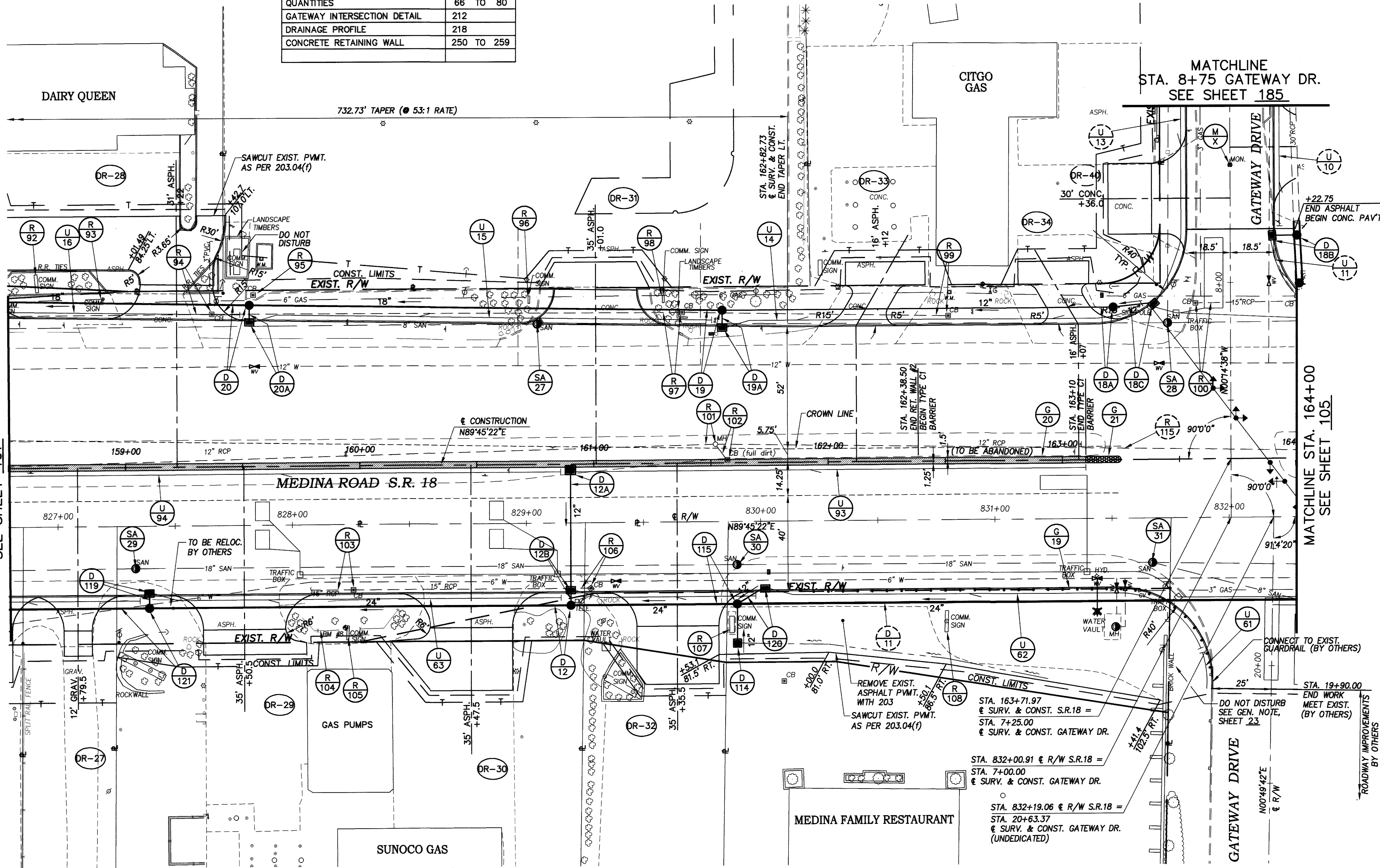
MATCHLINE STA. 158+50
SEE SHEET 101

MATCHLINE STA. 164+00
SEE SHEET 105

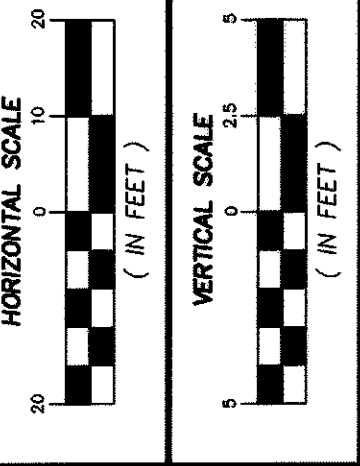
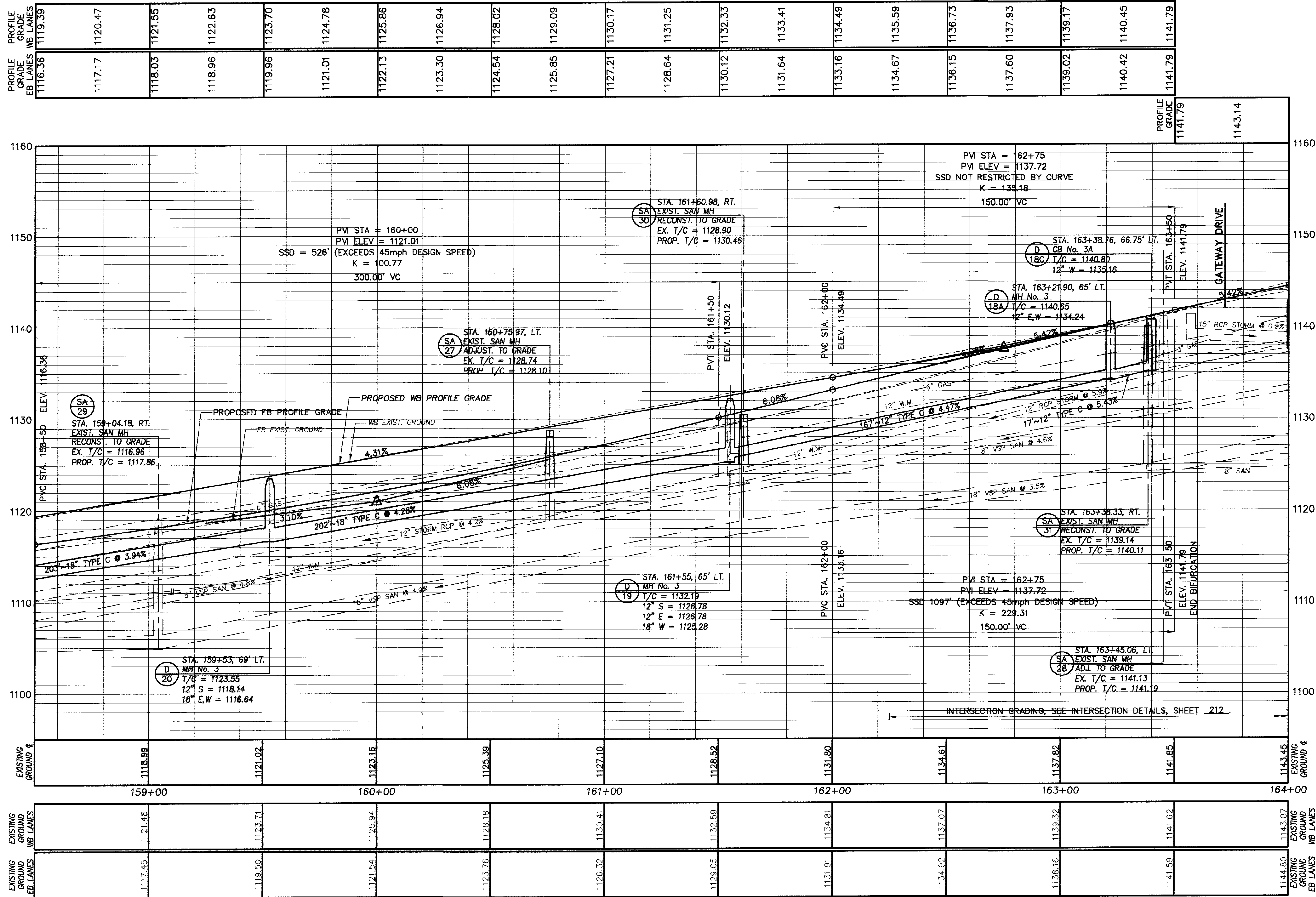
PLAN - S.R. 18
STA. 158+50 TO STA. 164+00

MED - 18 - 15.13

103
362



J:\Proj\7050600\ROADWAY\70506gpk.dwg User: jan81152 Jun 27, 2003 - 10:22am



CALCULATED
CHECKED

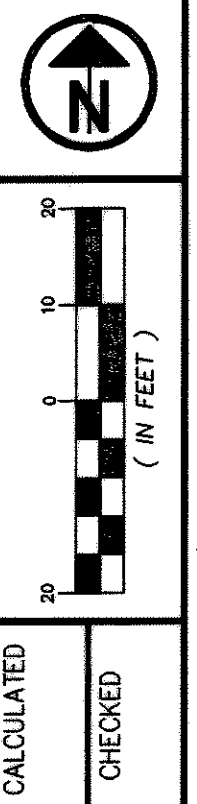
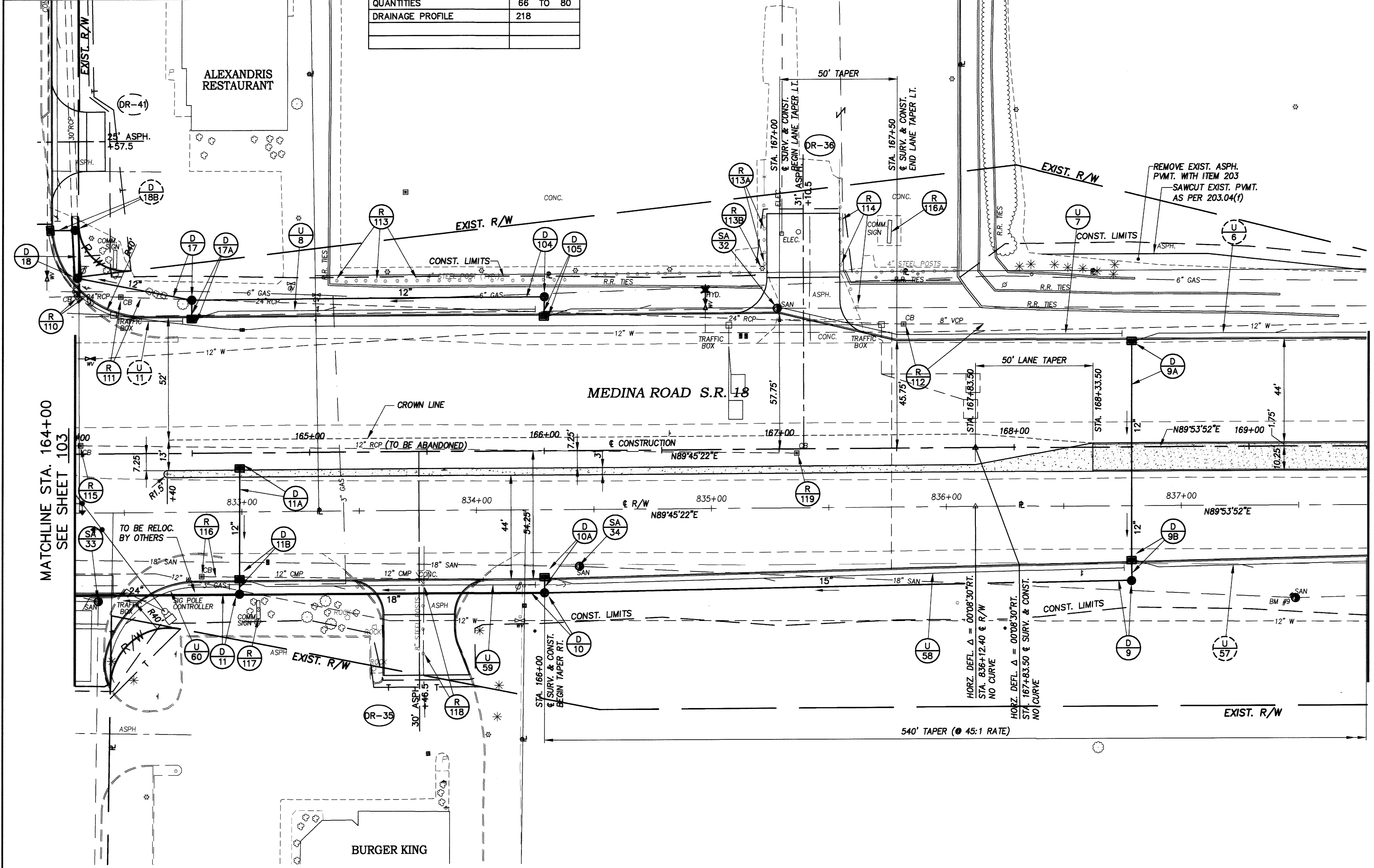
**PROFILE - S.R. 18
STA. 158+50 TO STA. 164+00**

MED - 18 - 15.13

BENCHMARK NO. 8
 TOP OF NW ANCHOR BOLT PF
 COMMERCIAL SIGN
 (SMALL "SUNOCO/MAC" SIGN)
 STA. 828+16 @ R/W, 60' RT. ELEV. 1122.30

BENCHMARK NO. 9
 CHISELED "+" NORTH RIM OF
 SANITARY MANHOLE
 STA. 837+45 @ R/W, 60' RT.
 ELEV. 1164.24

| REFERENCE | PAGE NO. |
|------------------|------------|
| PROFILE | NEXT SHEET |
| CROSS SECTIONS | 154 TO 157 |
| QUANTITIES | 66 TO 80 |
| DRAINAGE PROFILE | 218 |



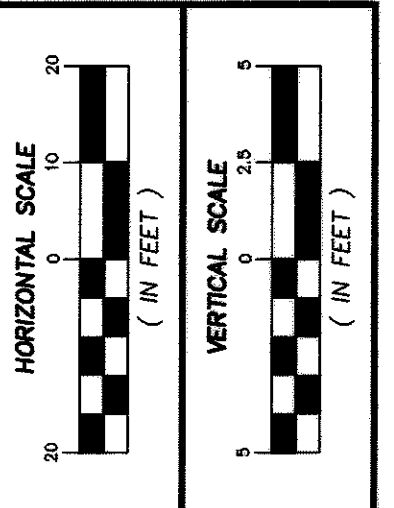
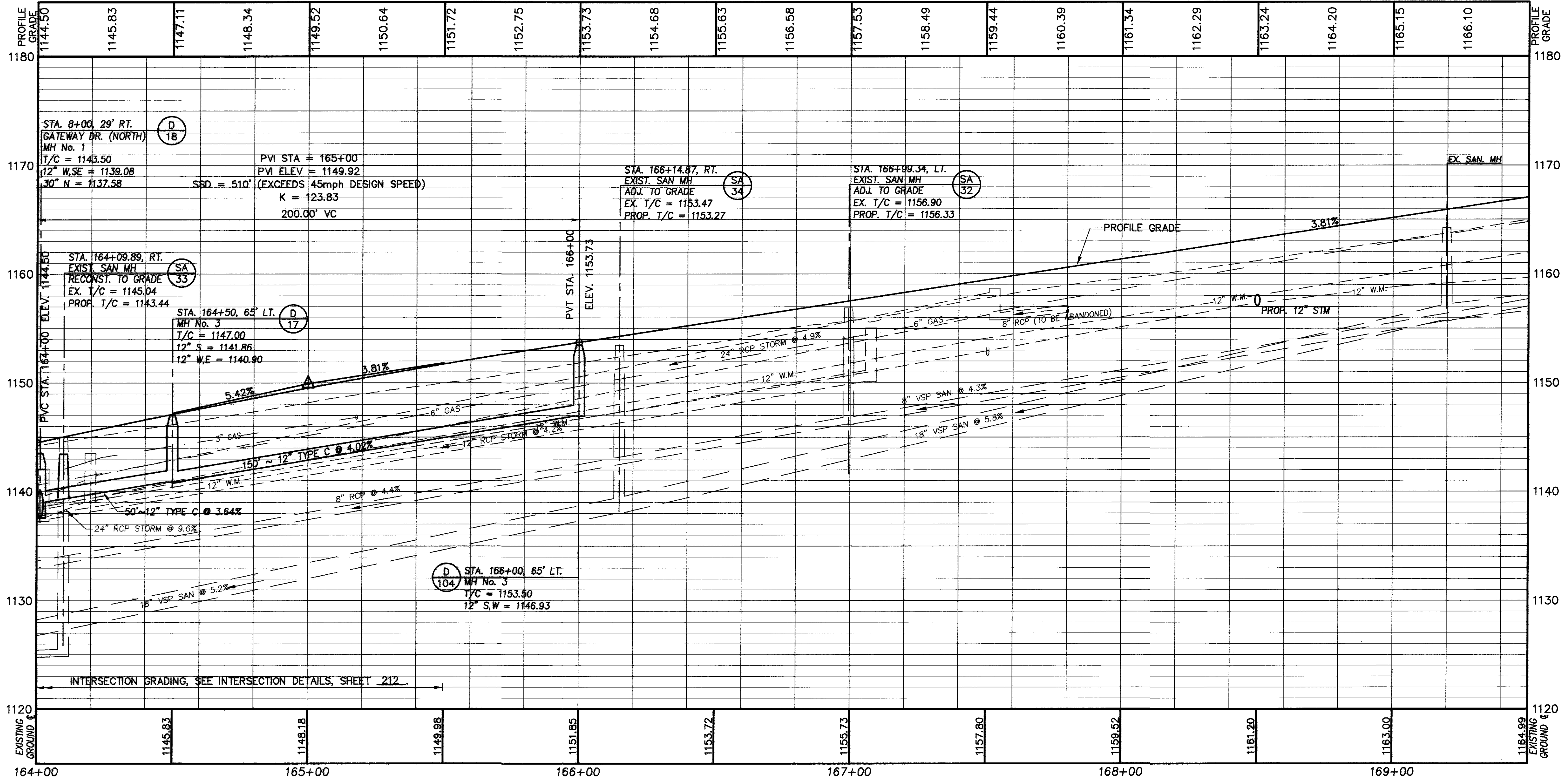
CALCULATED
 CHECKED

PLAN - S.R. 18
 STA. 164+00 TO STA. 169+50

MED - 18 - 15.13

105
 362

J:\Proj3\7050600\ROADWAY\7050600.dwg User: jan81152 Jun 27, 2003 10:25am



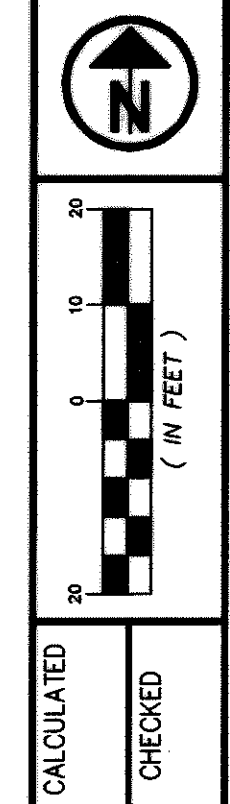
CALCULATED
CHECKED

PROFILE - S.R. 18
STA. 164+00 TO STA. 169+50

BENCHMARK NO. 9
 CHISELED "+" NORTH RIM OF
 SANITARY MANHOLE
 STA. 837+45 ± R/W, 60' RT.
 ELEV. 1164.24

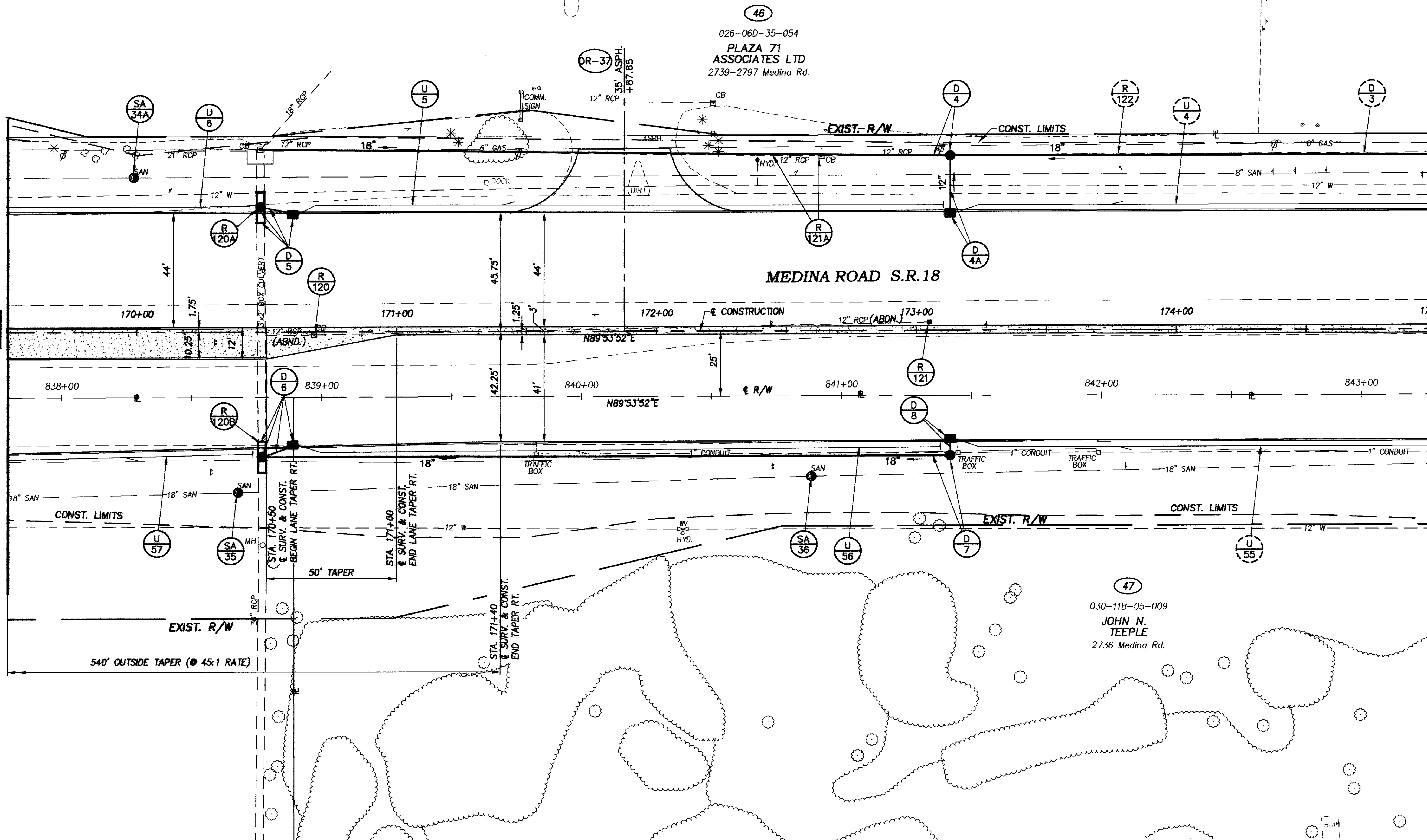
BENCHMARK NO. 10
 TOP OF NE ANCHOR BOLT OF
 SIGNAL POLE, SW CORNER S.R. 18
 & WINDFALL ROAD
 STA. 844+10 ± R/W, 40' RT. ELEV. 1185.77

| REFERENCE | PAGE NO. |
|------------------|------------|
| PROFILE | NEXT SHEET |
| CROSS SECTIONS | 157 TO 160 |
| QUANTITIES | 66 TO 80 |
| DRAINAGE PROFILE | 220 |
| CULVERT DETAIL | 226 |



MATCHLINE STA. 169+50
SEE SHEET 105

MATCHLINE STA. 175+00
SEE SHEET 109



026-06D-35-054
PLAZA 71 ASSOCIATES LTD
 2739-2797 Medina Rd.

030-11B-05-009
JOHN N. TEEPLE
 2736 Medina Rd.

J:\Proj3\7050600\ROADWAY\70506gpm.dwg User: jnn81152 Jun 26, 2003 - 2:07pm

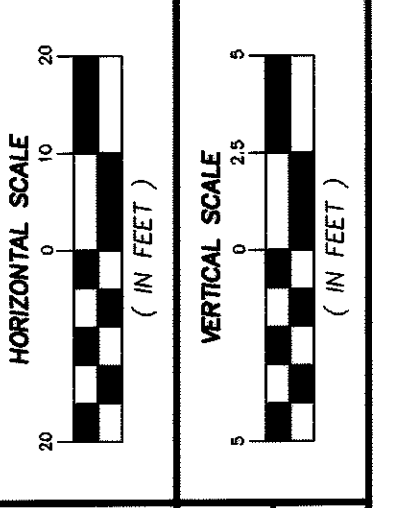
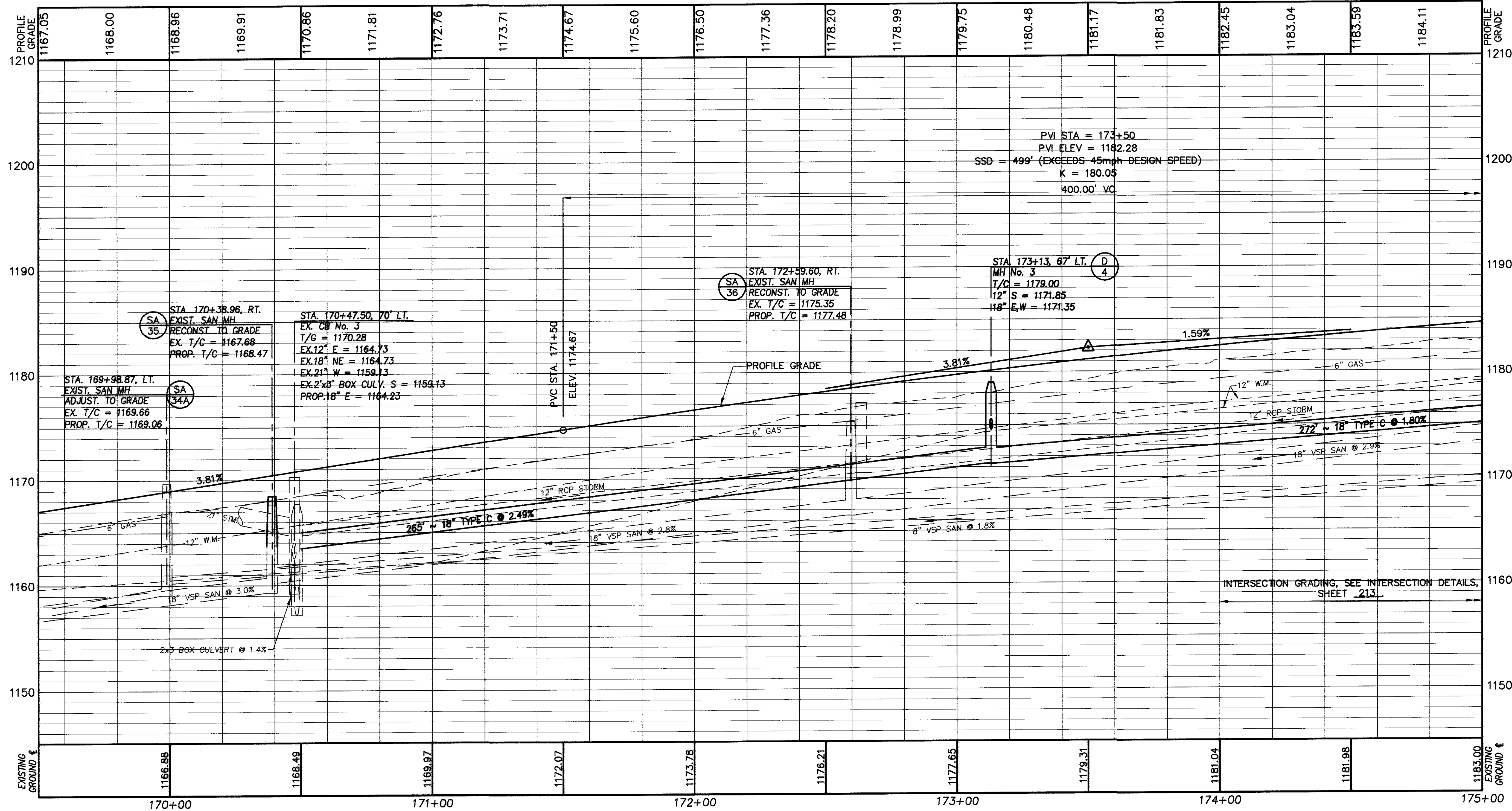
PLAN - S.R. 18
STA. 169+50 TO STA. 175+00

MED - 18 - 15.13

107
362

FOR PROFILE SEE SHEET 108.

J:\proj3\7050600\roadway\70506gfl3.dwg User: jgn81152 Jun 05, 2003 - 12:39pm



CALCULATED
CHECKED

PROFILE - S.R. 18
STA. 169+50 TO STA. 175+00

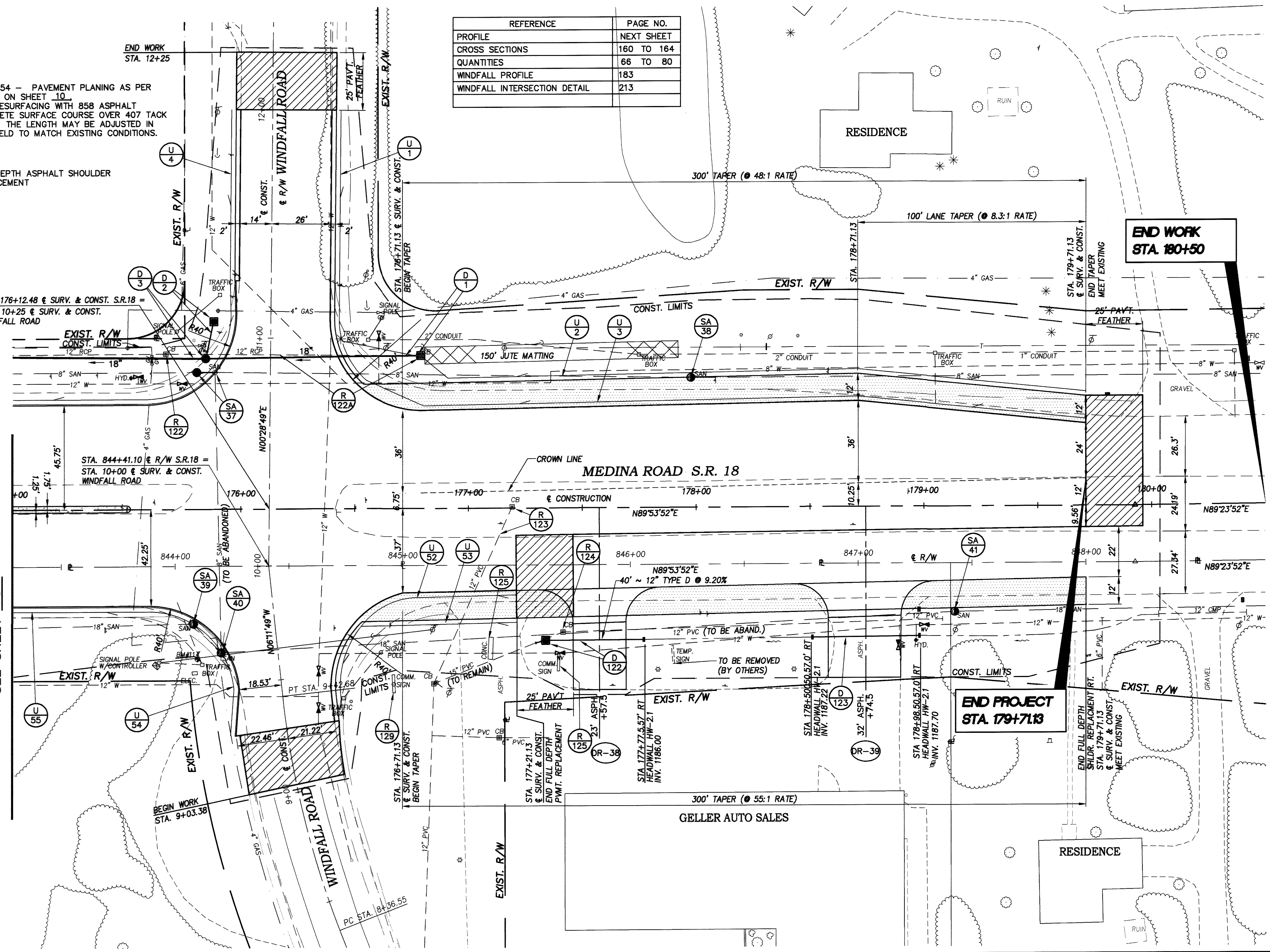
MED - 18 - 15.13

108
362

| REFERENCE | PAGE NO. |
|------------------------------|------------|
| PROFILE | NEXT SHEET |
| CROSS SECTIONS | 160 TO 164 |
| QUANTITIES | 66 TO 80 |
| WINDFALL PROFILE | 183 |
| WINDFALL INTERSECTION DETAIL | 213 |

- ITEM 254 - PAVEMENT PLANING AS PER DETAIL ON SHEET 10 AND RESURFACING WITH 858 ASPHALT CONCRETE SURFACE COURSE OVER 407 TACK COAT. THE LENGTH MAY BE ADJUSTED IN THE FIELD TO MATCH EXISTING CONDITIONS.
- FULL DEPTH ASPHALT SHOULDER REPLACEMENT

MATCHLINE STA. 175+00
SEE SHEET 107



END WORK
STA. 180+50

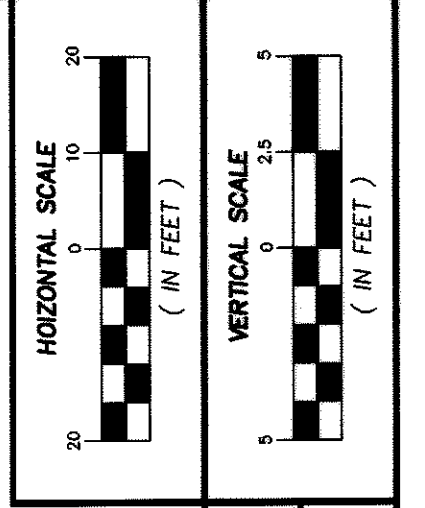
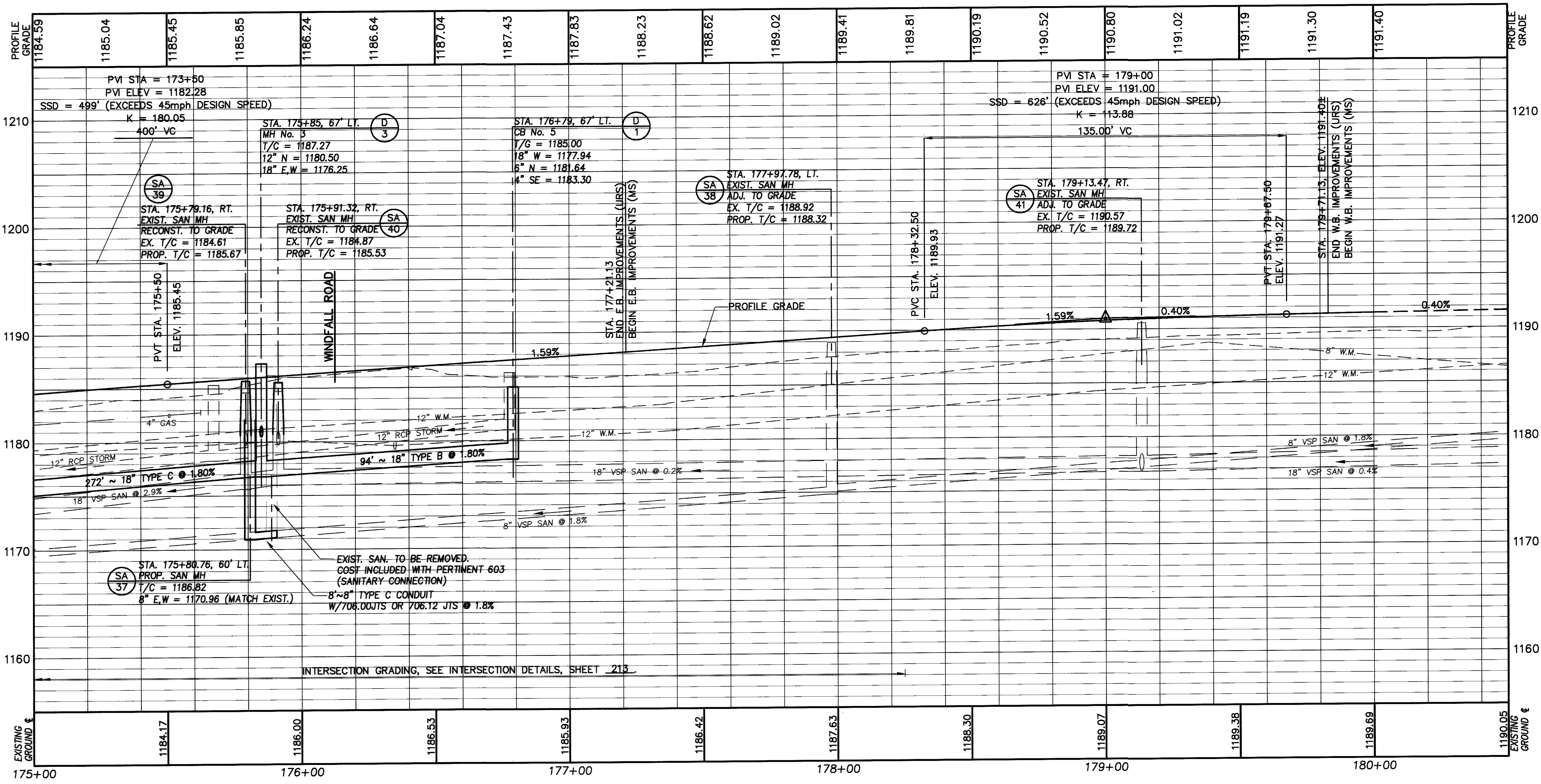
END PROJECT
STA. 179+71.13

CALCULATED
CHECKED

(IN FEET)

PLAN - S.R. 18
STA. 175+00 TO STA. 180+50

MED - 18 - 15.13

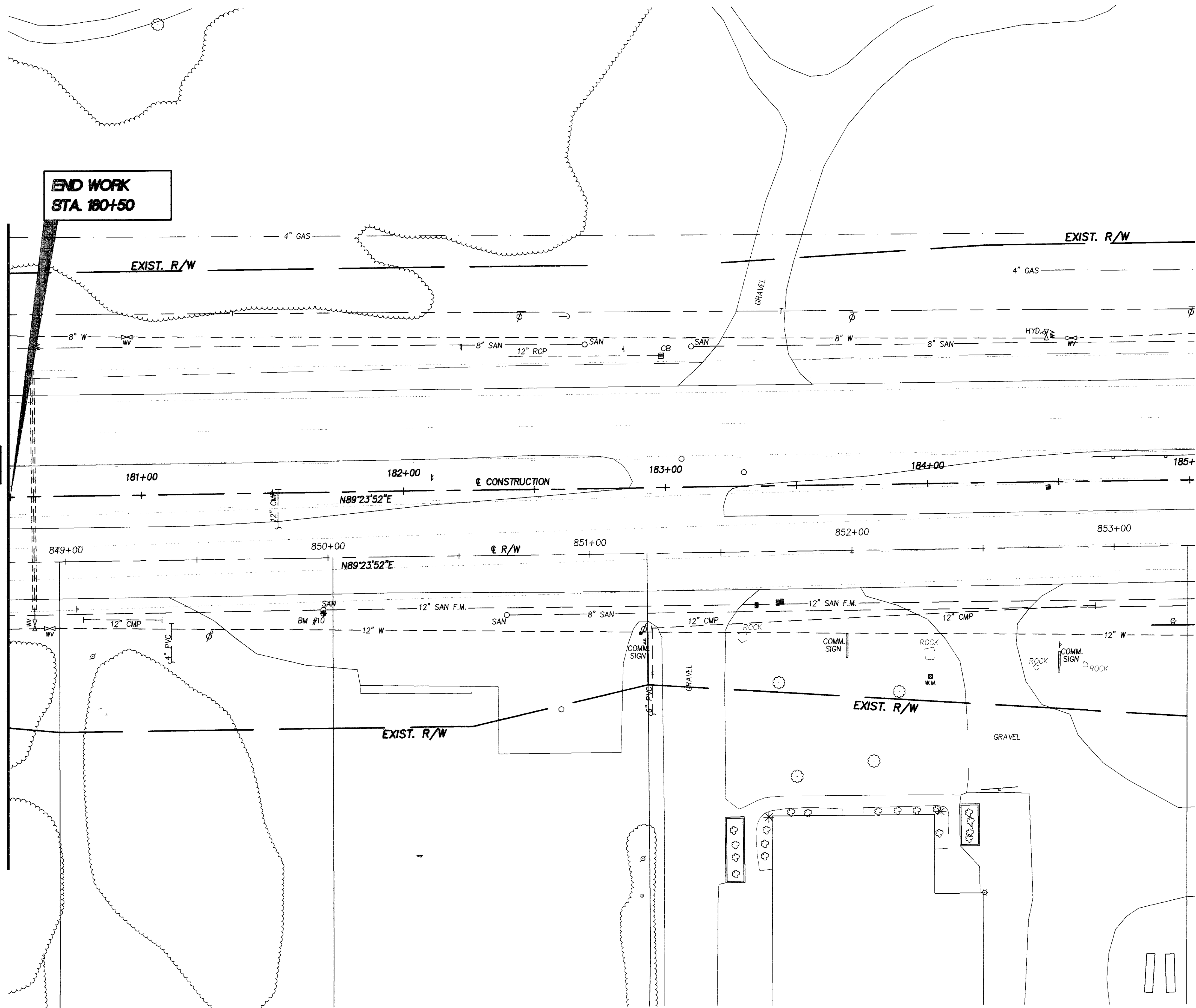


CALCULATED
CHECKED

PROFILE - S.R. 18
STA. 175+00 TO STA. 180+50

MED - 18 - 15.13

MATCHLINE STA. 180+50
SEE SHEET 109

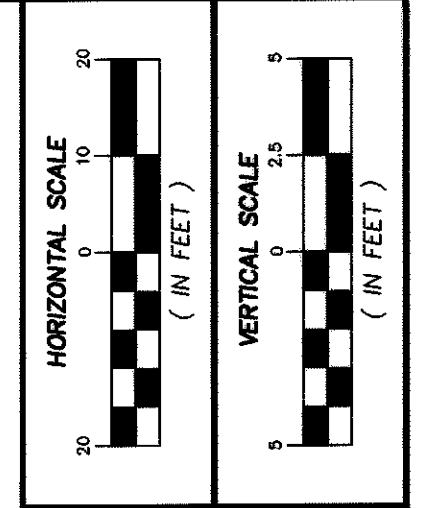
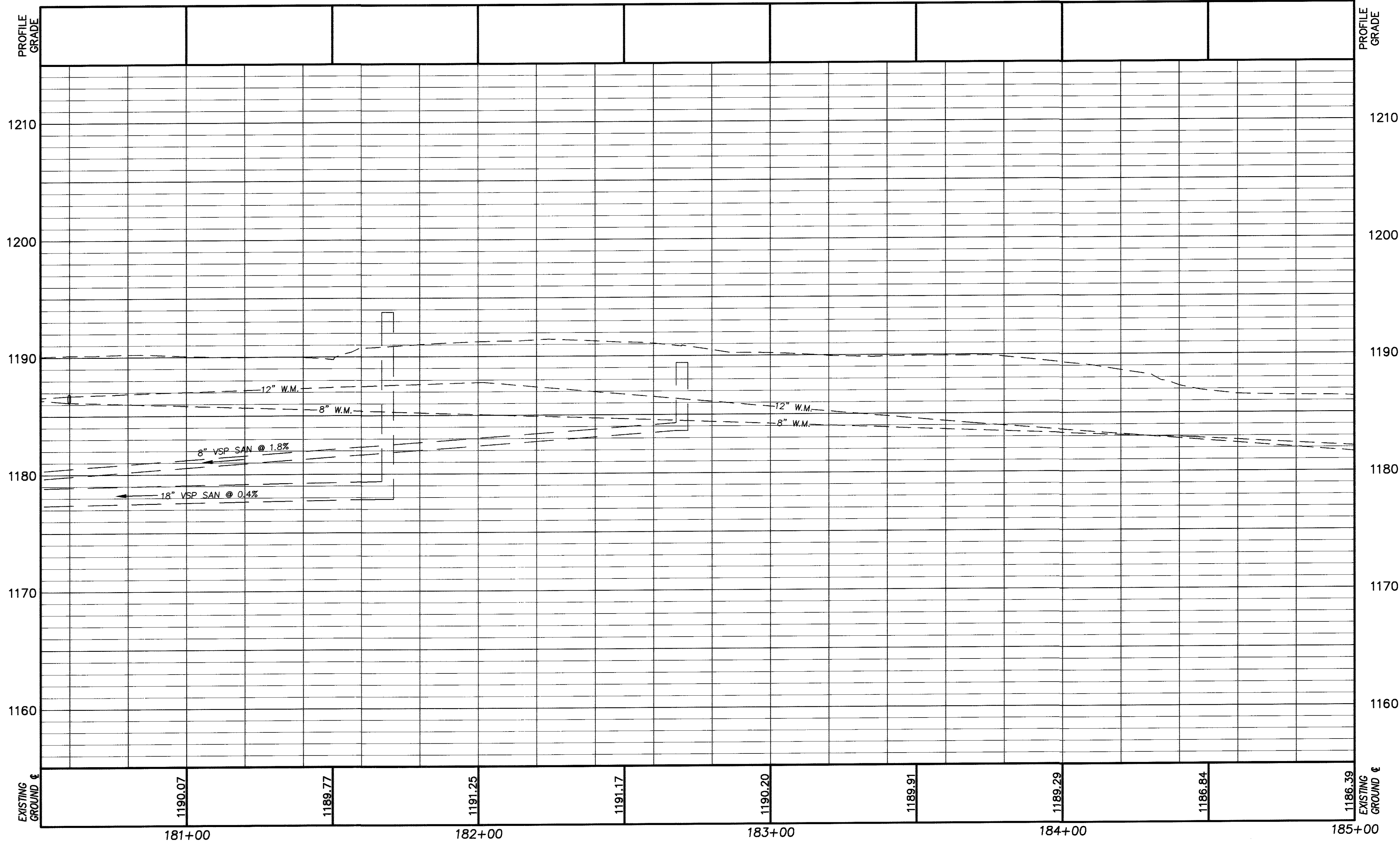


**END WORK
STA. 180+50**

| REFERENCE | PAGE NO. |
|----------------|------------|
| PROFILE | NEXT SHEET |
| CROSS SECTIONS | 164 |
| QUANTITIES | 66 TO 80 |

PLAN - S.R. 18
STA. 180+50 TO 185+00

MED - 18 - 15.13

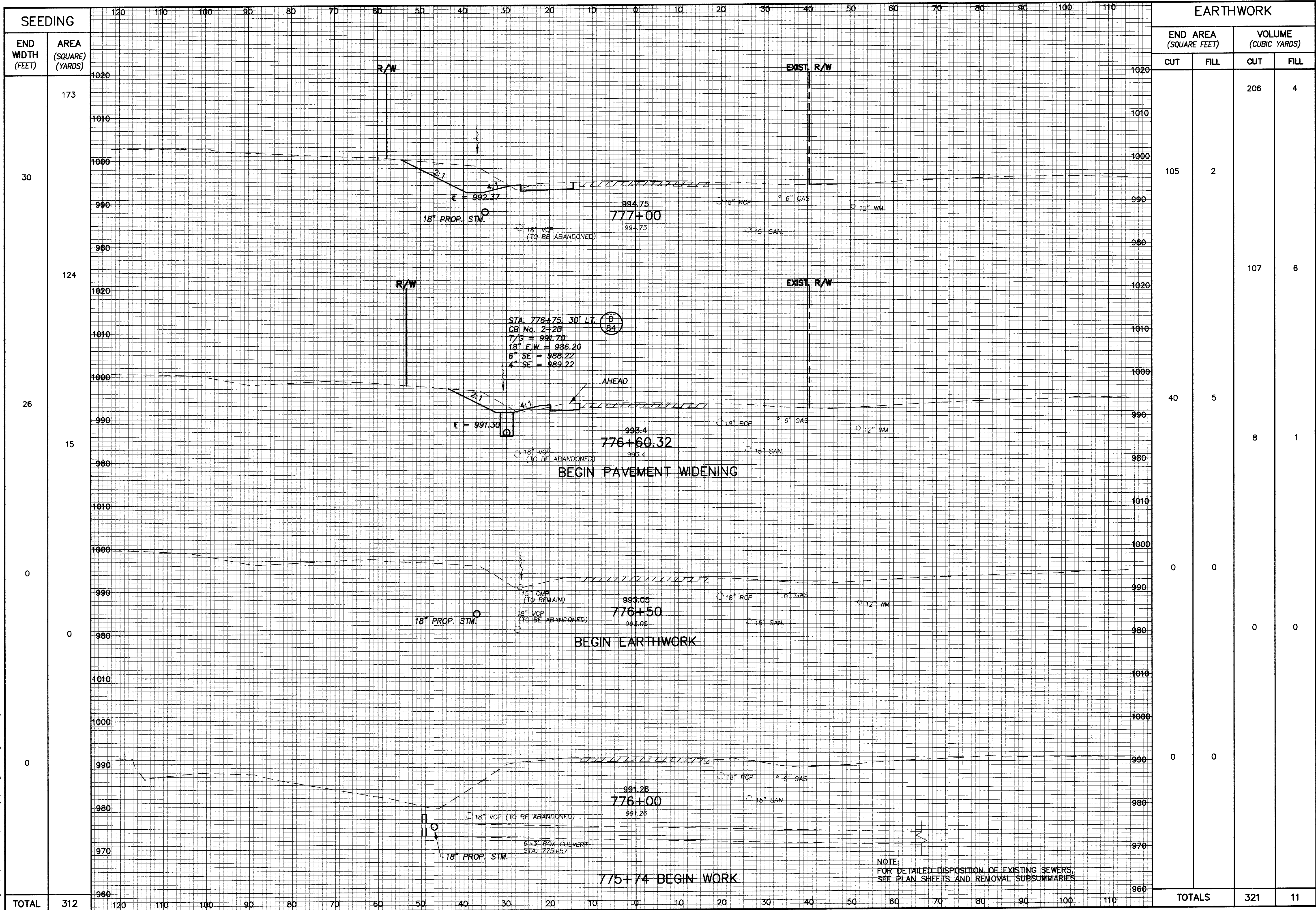


CALCULATED
 CHECKED

PROFILE - S.R. 18
STA. 180+50 TO STA. 185+00

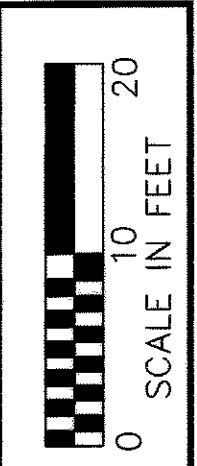
MED - 18 - 15.13

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| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 30 | 173 |
| 124 | |
| 26 | |
| 15 | |
| 0 | |
| 0 | |
| 0 | |
| TOTAL | 312 |

| EARTHWORK | | | |
|------------------------|------|----------------------|-----------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 105 | 2 | 206 | 4 |
| 40 | 5 | 107 | 6 |
| 0 | 0 | 8 | 1 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| TOTALS | | 321 | 11 |



CALCULATED
MAL
CHECKED
RER

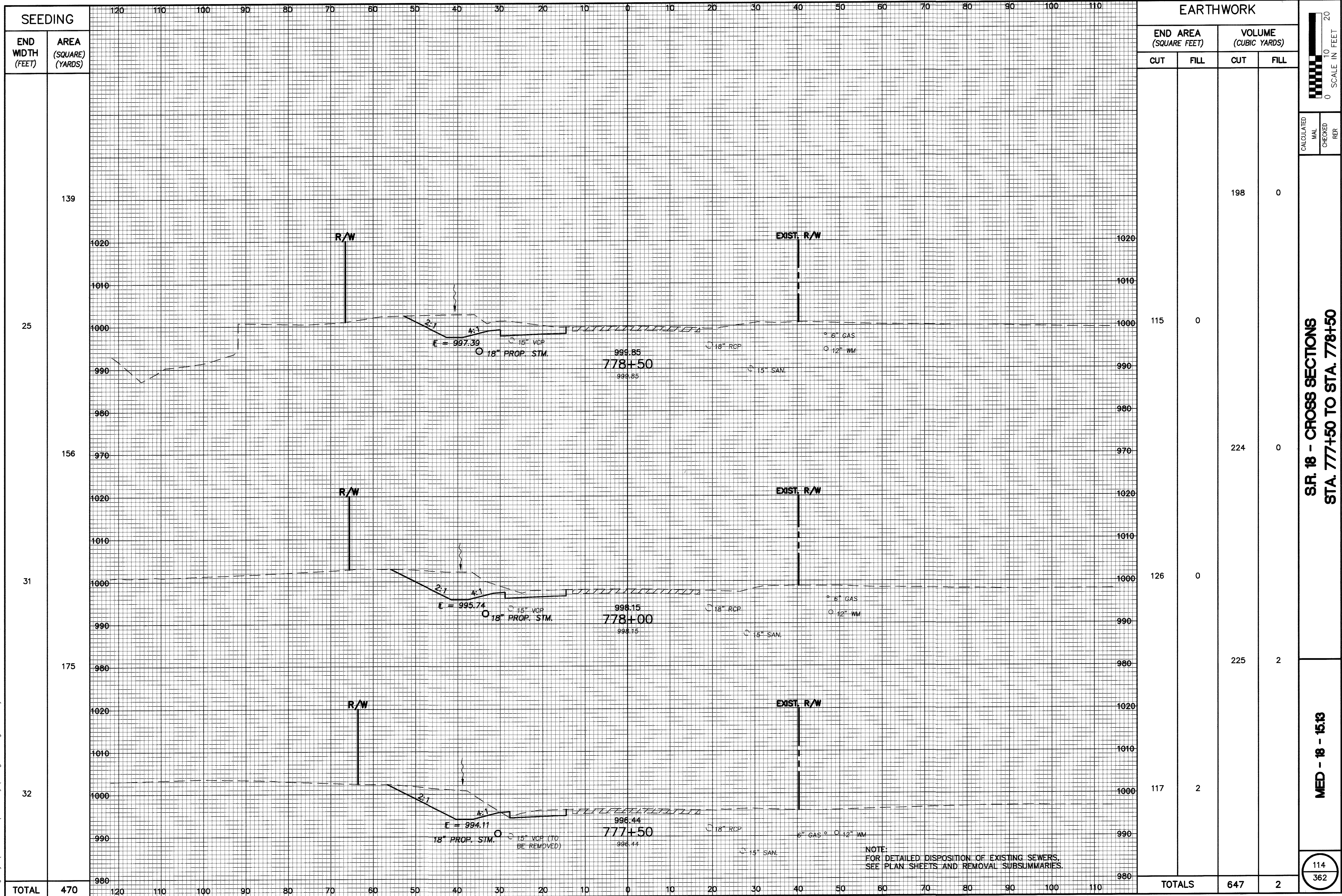
**S.R. 18 - CROSS SECTIONS
STA. 776+00 TO STA. 777+00**

MED - 18 - 15.13

113
362

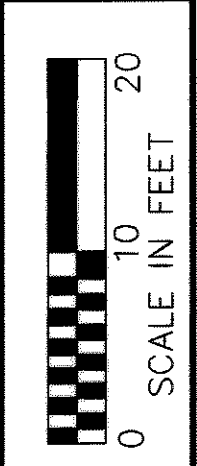
NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx02.dwg User: jan81152 Jun 27, 2003 - 8:08am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 25 | 139 |
| 31 | 156 |
| 32 | 175 |
| TOTAL | 470 |

| EARTHWORK | | | |
|------------------------|------------|----------------------|----------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 115 | 0 | 198 | 0 |
| 126 | 0 | 224 | 0 |
| 117 | 2 | 225 | 2 |
| TOTALS | 647 | 647 | 2 |



CALCULATED
MAL
CHECKED
PER

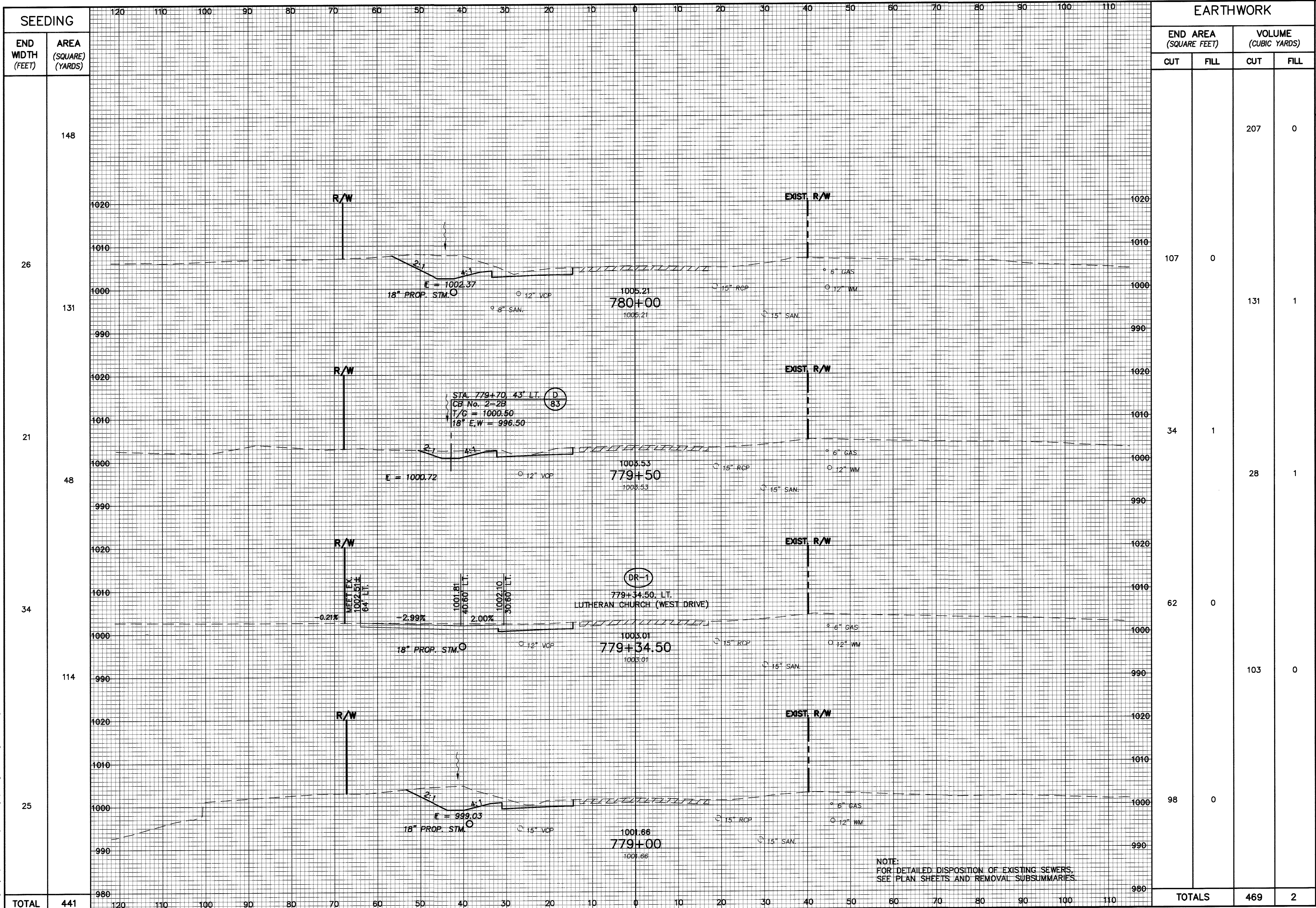
**S.R. 18 - CROSS SECTIONS
STA. 777+50 TO STA. 778+50**

MED - 18 - 15.13

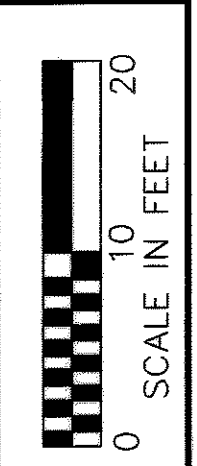
114
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

j:\proj3\7050600\roadway\506gx03.dwg User: jon81152 Jun 27, 2003 8:08am



| SEEDING | | EARTHWORK | | | |
|------------------|---------------------|------------------------|------|----------------------|----------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) | END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| | | CUT | FILL | CUT | FILL |
| 148 | | | | 207 | 0 |
| 26 | | 107 | 0 | | |
| 131 | | | | 131 | 1 |
| 21 | | 34 | 1 | | |
| 48 | | | | 28 | 1 |
| 34 | | 62 | 0 | | |
| 114 | | | | 103 | 0 |
| 25 | | 98 | 0 | | |
| TOTAL | 441 | | | 469 | 2 |



CALCULATED
MAL
CHECKED
RER

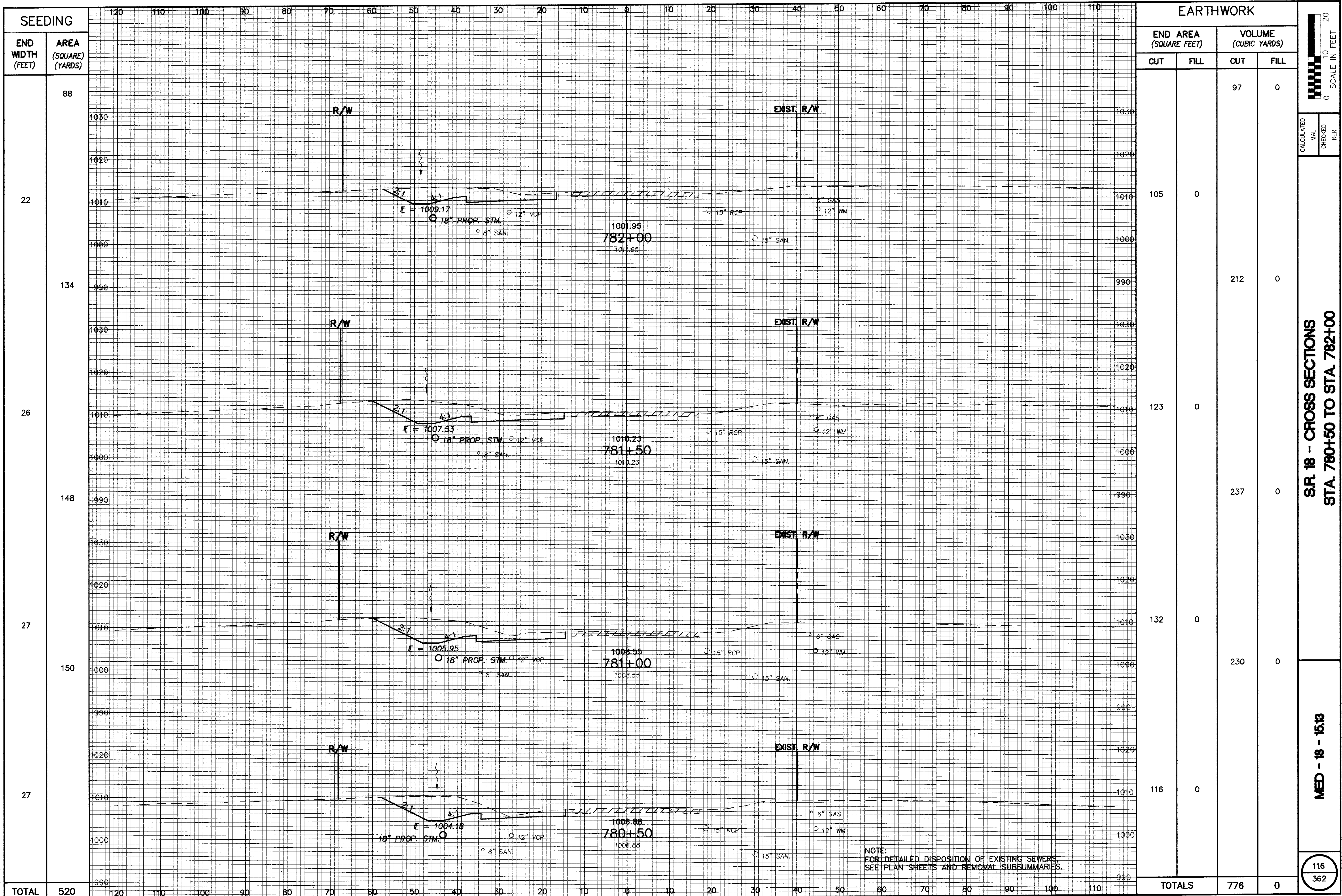
**S.R. 18 - CROSS SECTIONS
STA. 779+00 TO STA. 780+00**

MED - 18 - 15.13

115
362

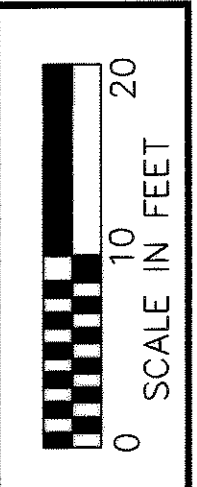
NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gk04.dwg User: jnm81152 Jun 27, 2003 - 8:08am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 88 | |
| 22 | |
| 134 | |
| 26 | |
| 148 | |
| 27 | |
| 150 | |
| 27 | |
| TOTAL | 520 |

| EARTHWORK | | | |
|------------------------|------|----------------------|----------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 97 | 0 |
| 105 | 0 | | |
| | | 212 | 0 |
| 123 | 0 | | |
| | | 237 | 0 |
| 132 | 0 | | |
| | | 230 | 0 |
| 116 | 0 | | |
| TOTALS | | 776 | 0 |



CALCULATED
MAL
CHECKED
RER

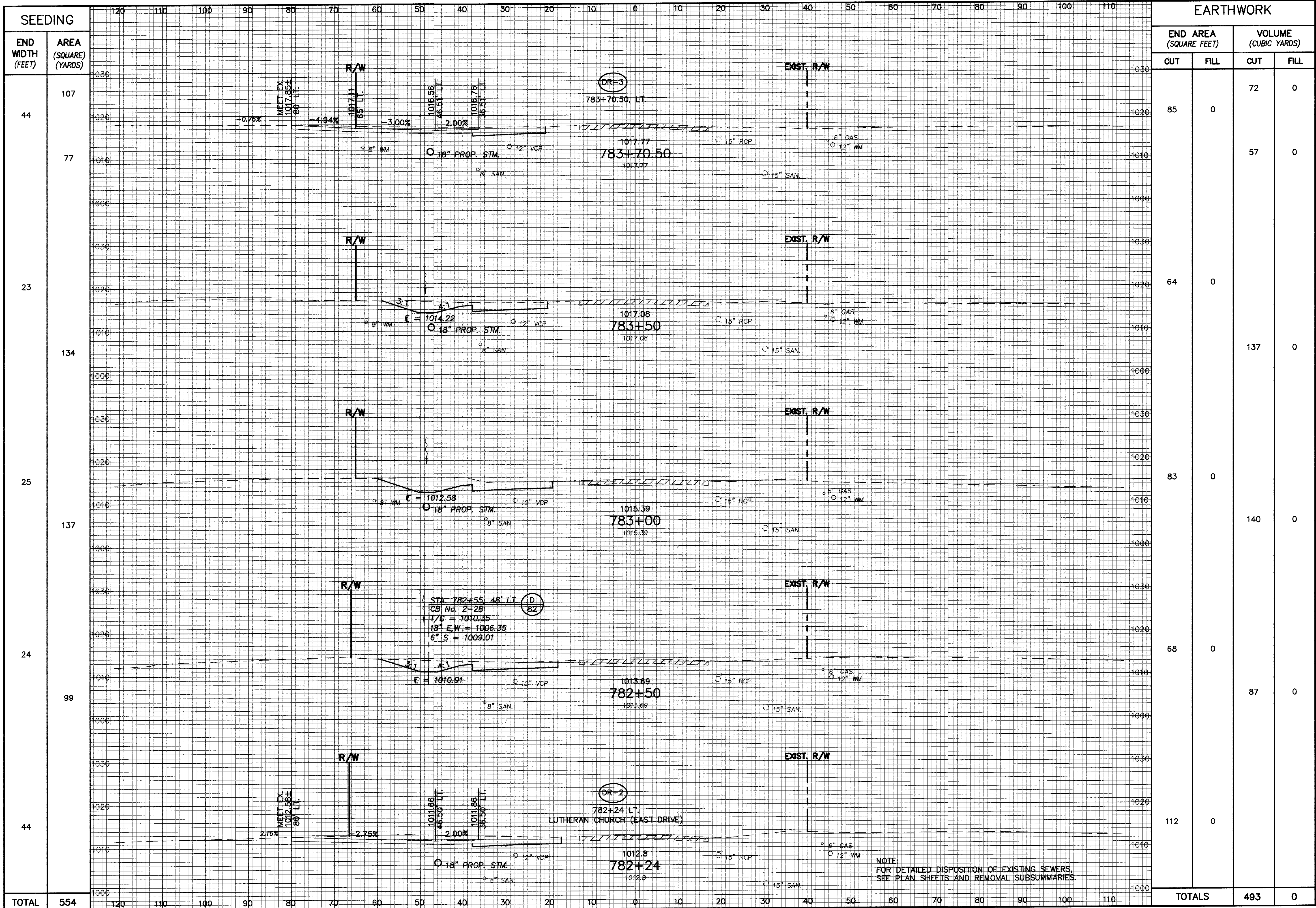
**S.R. 18 - CROSS SECTIONS
STA. 780+50 TO STA. 782+00**

MED - 18 - 15.13

116
362

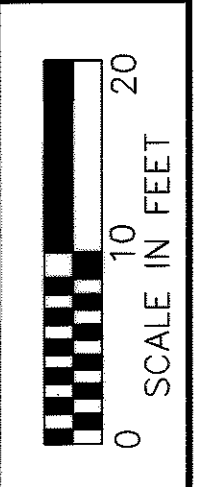
NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx05.dwg User: jom81152 Jun 27, 2003 - 8:09am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 44 | 107 |
| 23 | 77 |
| 134 | 134 |
| 25 | 137 |
| 24 | 99 |
| 44 | 54 |
| TOTAL | 554 |

| EARTHWORK | | | |
|------------------------|------|----------------------|----------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 85 | 0 | 72 | 0 |
| | | 57 | 0 |
| 64 | 0 | | |
| | | 137 | 0 |
| 83 | 0 | | |
| | | 140 | 0 |
| 68 | 0 | | |
| | | 87 | 0 |
| 112 | 0 | | |
| TOTALS | | 493 | 0 |



CALCULATED
MAL
CHECKED
REF

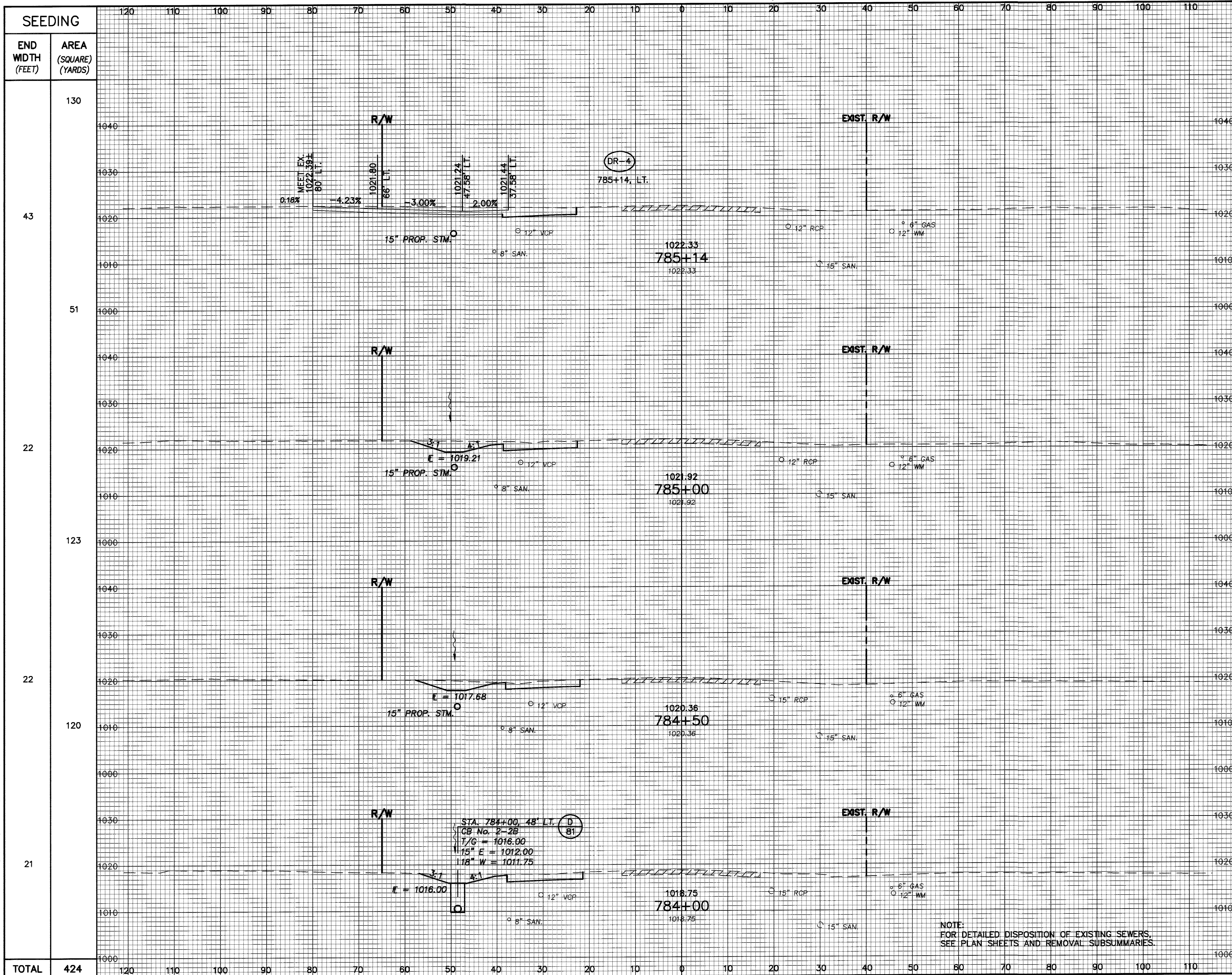
S.R. 18 - CROSS SECTIONS
STA. 782+24 TO STA. 783+70.50

MED - 18 - 15.13

117
362

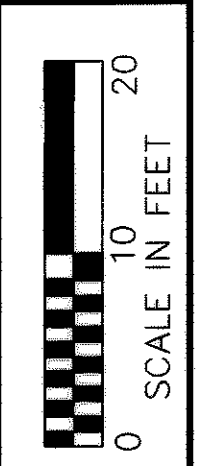
NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

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| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 130 | |
| 43 | |
| 51 | |
| 22 | |
| 123 | |
| 22 | |
| 120 | |
| 21 | |
| TOTAL | 424 |

| EARTHWORK | | | |
|------------------------|------|----------------------|----------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 92 | 0 |
| 87 | 0 | | |
| | | 37 | 0 |
| 55 | 0 | | |
| | | 93 | 0 |
| 45 | 0 | | |
| | | 85 | 0 |
| 46 | 0 | | |
| TOTALS | | 307 | 0 |



CALCULATED
MAL
CHECKED
PER

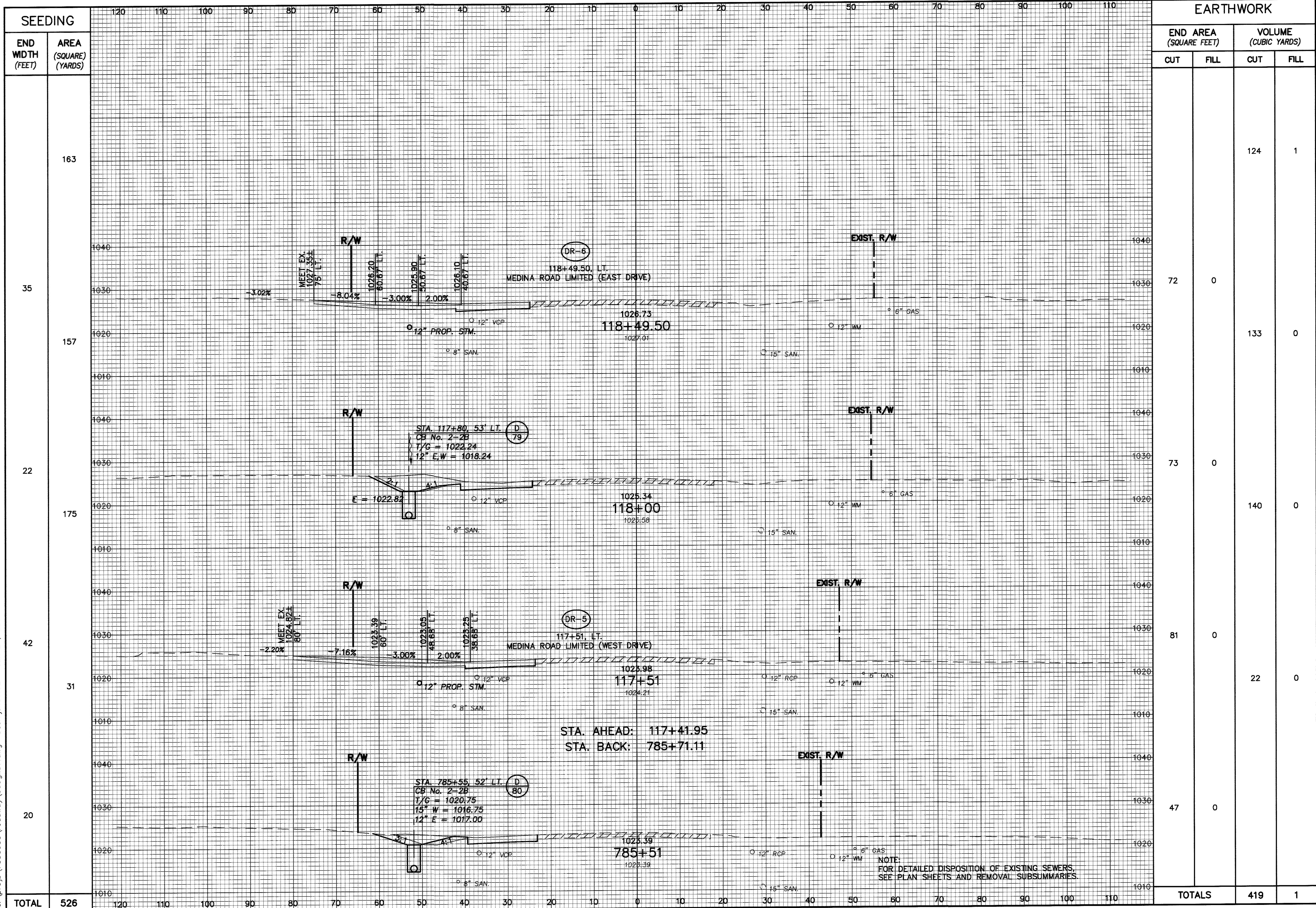
**S.R. 18 - CROSS SECTIONS
STA. 784+00 TO STA. 785+14**

MED - 18 - 15.13

118
362

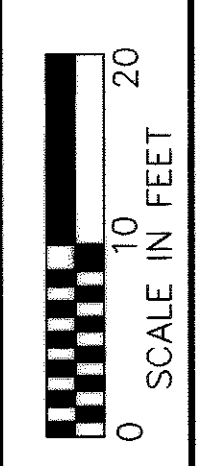
NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

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| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 163 | |
| 35 | |
| 157 | |
| 22 | |
| 175 | |
| 42 | |
| 31 | |
| 20 | |
| TOTAL | 526 |

| EARTHWORK | | | |
|------------------------|------|----------------------|----------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 72 | 0 | 124 | 1 |
| 73 | 0 | 133 | 0 |
| 75 | 0 | 140 | 0 |
| 81 | 0 | 22 | 0 |
| 47 | 0 | | |
| TOTALS | | 419 | 1 |



CALCULATED
MAL
CHECKED
RER

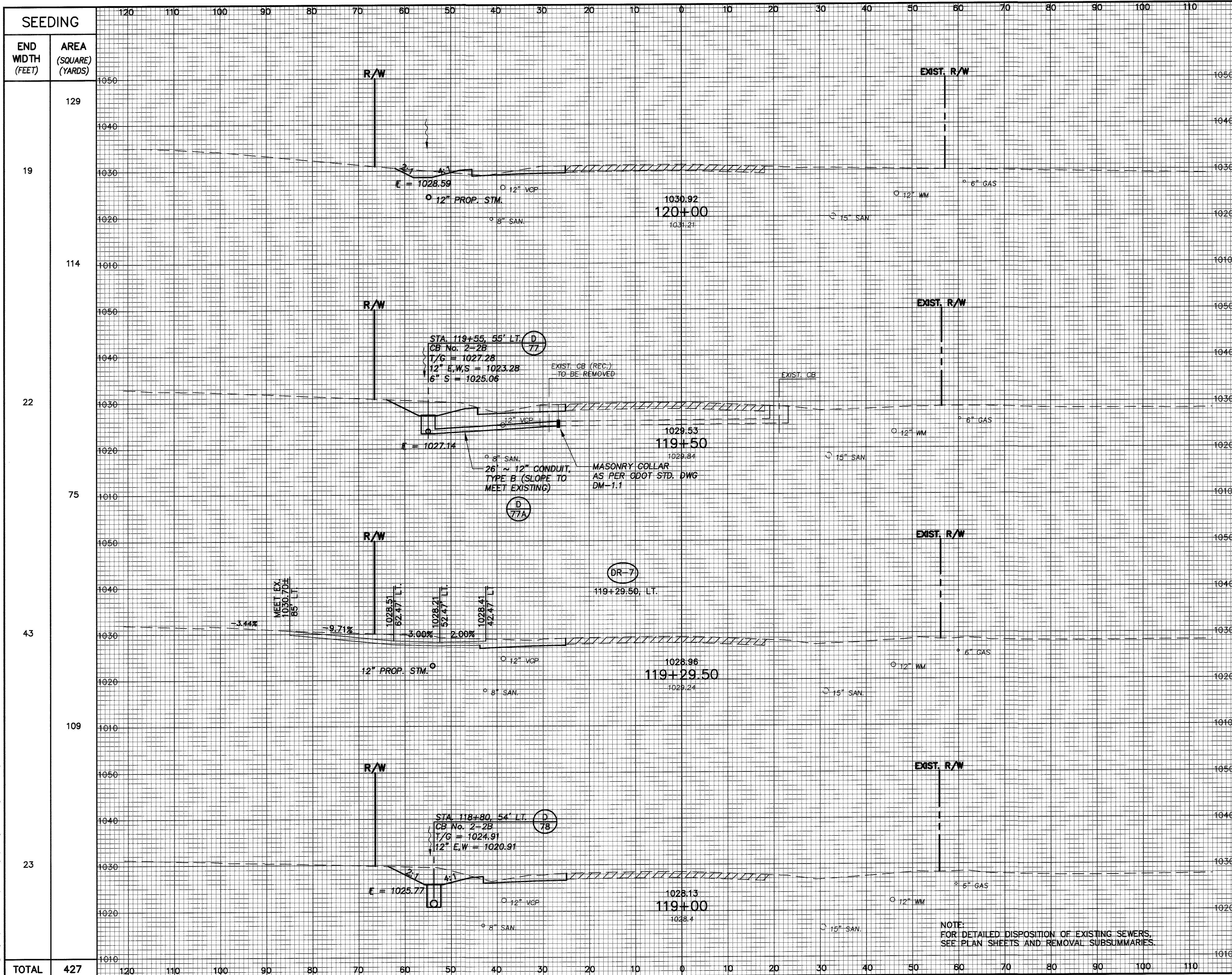
**S.R. 18 - CROSS SECTIONS
STA. 785+51 TO STA. 118+49.50**

MED - 18 - 15.13

119
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

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| SEEDING | | EARTHWORK | | | |
|------------------|---------------------|------------------------|------|----------------------|----------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) | END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| | | CUT | FILL | CUT | FILL |
| 19 | 129 | 29 | 3 | 78 | 3 |
| 22 | 114 | 56 | 0 | 79 | 3 |
| 43 | 75 | 99 | 0 | 59 | 0 |
| 109 | 43 | | | 87 | 1 |
| 23 | 109 | 60 | 1 | | |
| TOTAL | 427 | | | 303 | 7 |



CALCULATED
MAL
CHECKED
RER

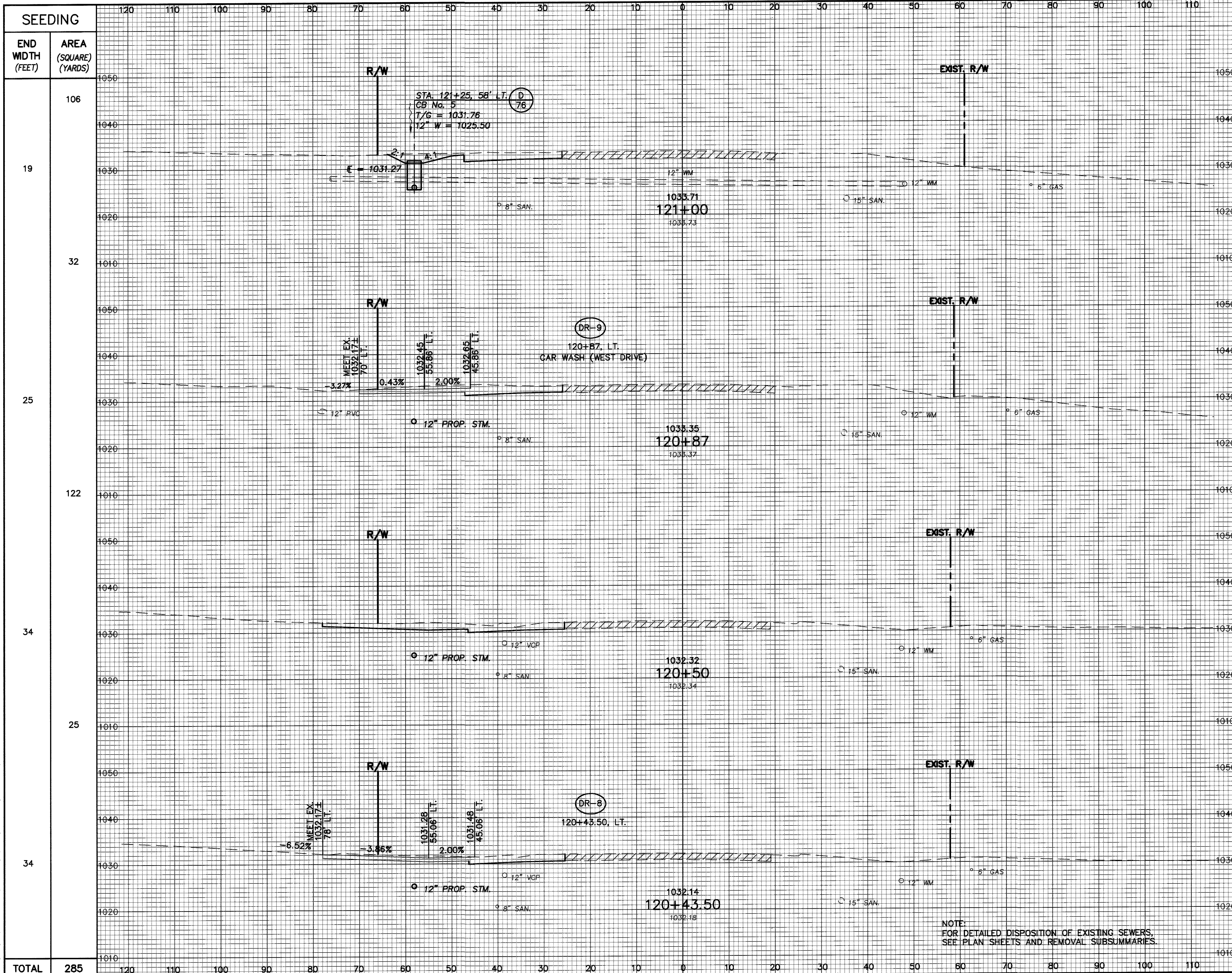
**S.R. 18 - CROSS SECTIONS
STA. 119+00 TO STA. 120+00**

MED - 18 - 15.13

120
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

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| SEEDING | | EARTHWORK | | | |
|------------------|---------------------|------------------------|------|----------------------|----------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) | END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| | | CUT | FILL | CUT | FILL |
| 19 | 106 | 54 | 0 | 108 | 0 |
| 32 | | | | 30 | 0 |
| 25 | | 68 | 0 | | |
| 122 | | | | 93 | 0 |
| 34 | | 67 | 0 | | |
| 25 | | | | 17 | 0 |
| 34 | | 67 | 0 | | |
| TOTAL | 285 | | | 248 | 0 |



CALCULATED
MAL
CHECKED
RER

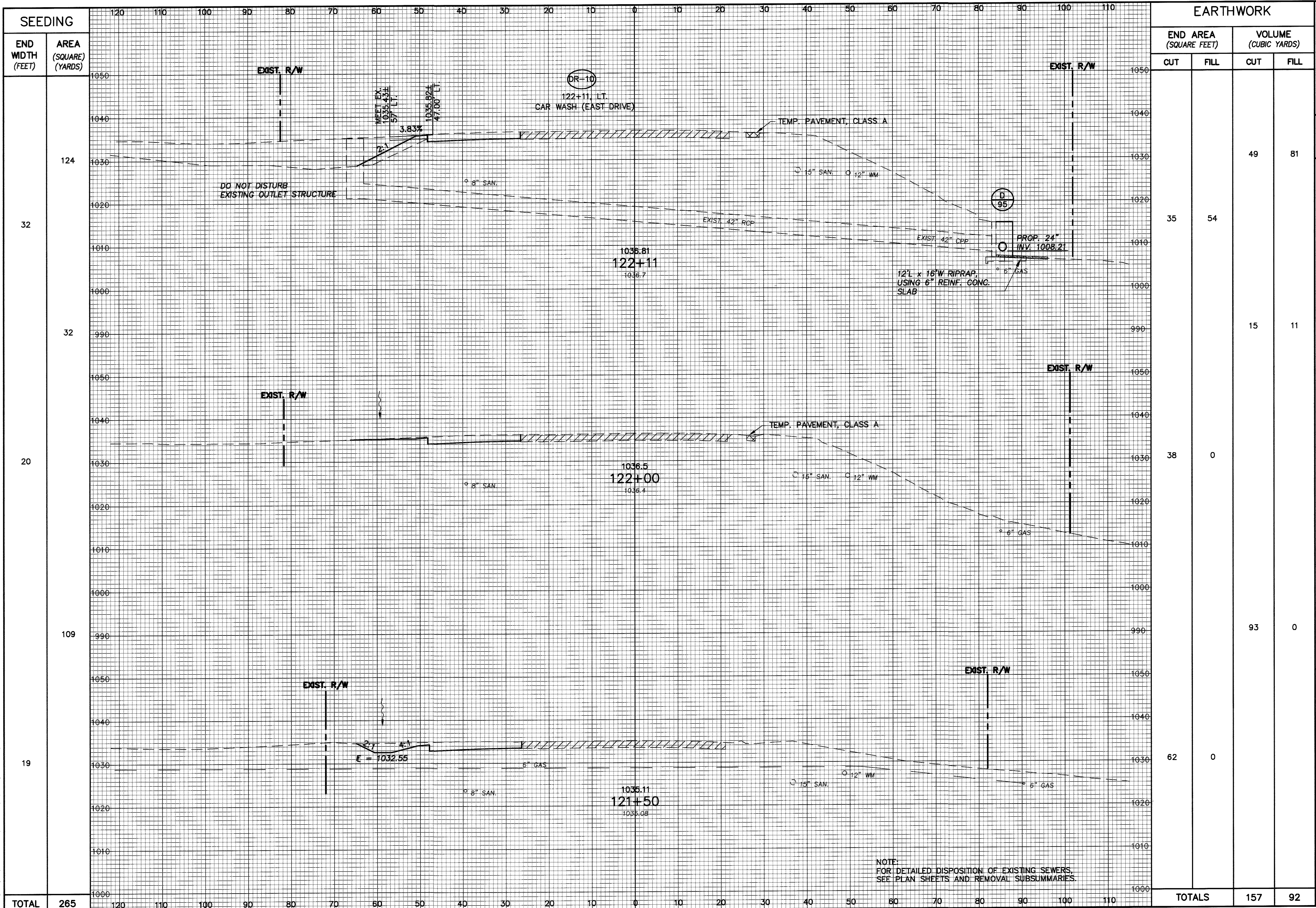
**S.R. 18 - CROSS SECTIONS
STA. 120+43.50 TO STA. 121+00**

MED - 18 - 15.13

121
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

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| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 124 | |
| 32 | |
| 32 | |
| 20 | |
| 109 | |
| 19 | |
| TOTAL | 265 |

| EARTHWORK | | | |
|------------------------|------|----------------------|-----------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 49 | 81 |
| 35 | 54 | | |
| | | 15 | 11 |
| 38 | 0 | | |
| | | 93 | 0 |
| 62 | 0 | | |
| TOTALS | | 157 | 92 |

SCALE IN FEET
0 10 20

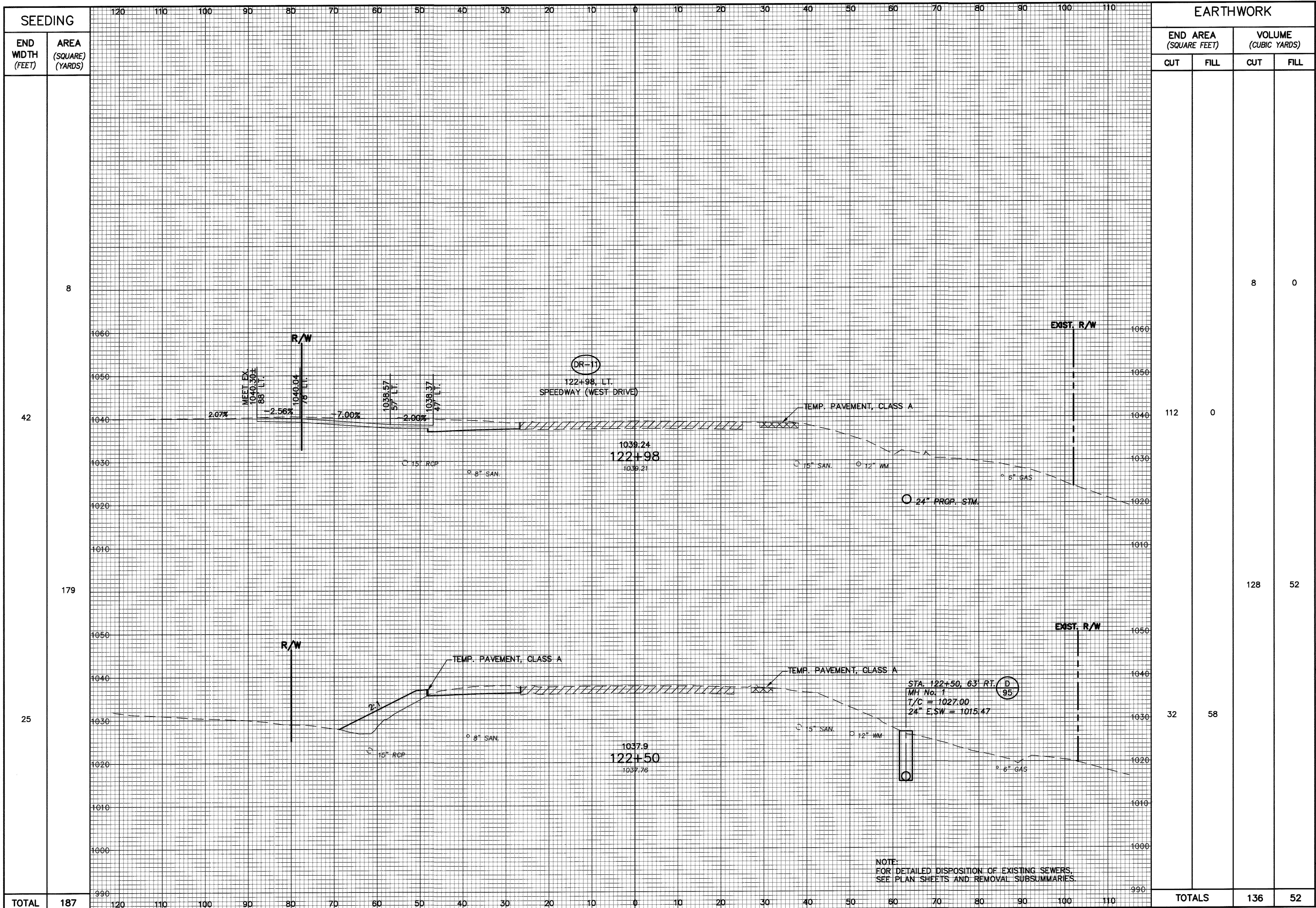
CALCULATED
MAL
CHECKED
RER

**S.R. 18 - CROSS SECTIONS
STA. 121+50 TO STA. 122+11**

MED - 18 - 15.13

122
362

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| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 8 | |
| 42 | |
| 179 | |
| 25 | |
| TOTAL | 187 |

| EARTHWORK | | | |
|------------------------|------|----------------------|-----------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 8 | 0 |
| 112 | 0 | 128 | 52 |
| 32 | 58 | | |
| TOTALS | | 136 | 52 |



CALCULATED
MAL
CHECKED
RER

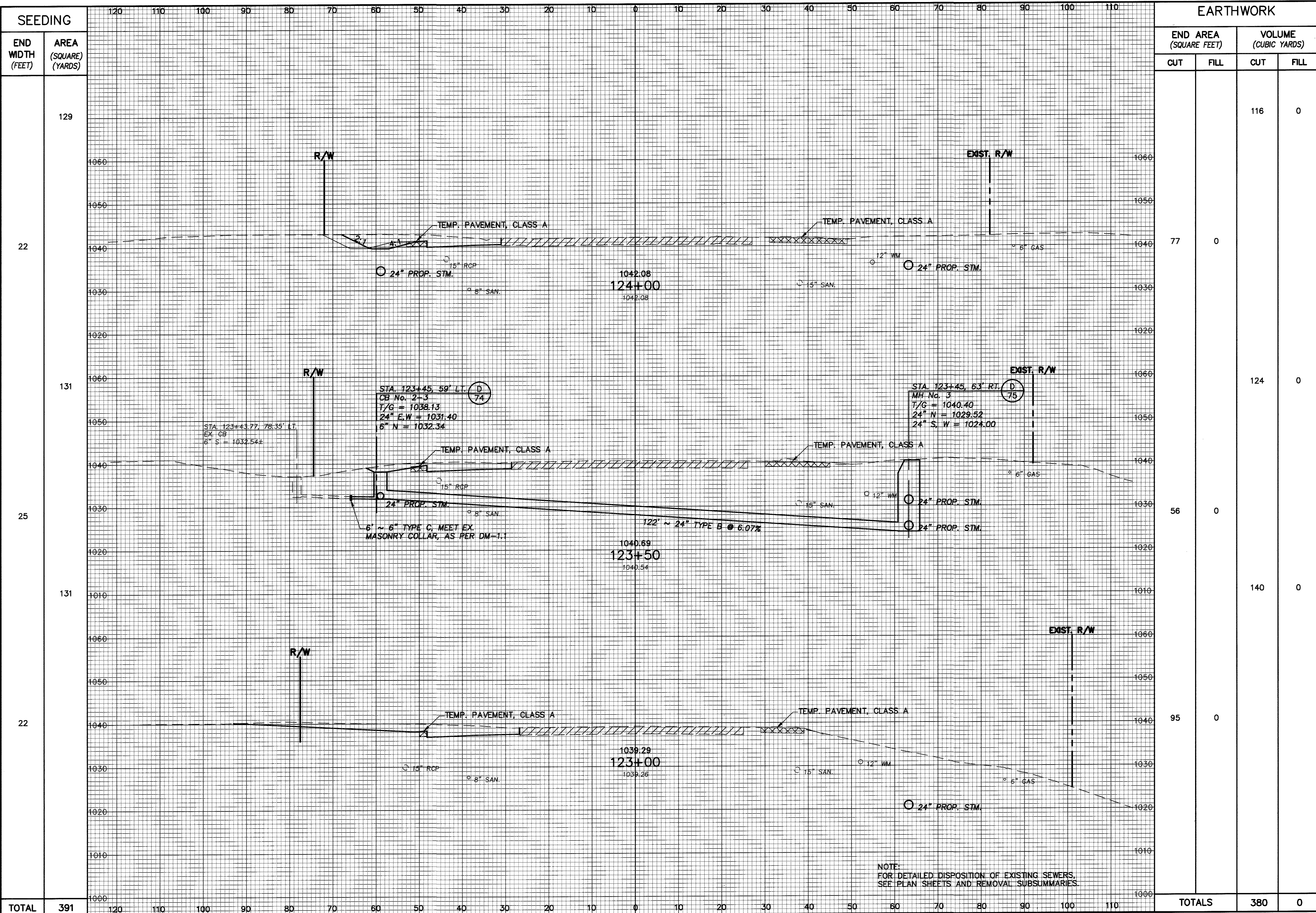
**S.R. 18 - CROSS SECTIONS
STA. 122+50 TO STA. 122+98**

MED - 18 - 15.13

123
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

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| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 22 | 129 |
| 25 | 131 |
| 22 | 131 |
| TOTAL | 391 |

| EARTHWORK | | | |
|------------------------|----------|----------------------|----------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 77 | 0 | 116 | 0 |
| 56 | 0 | 124 | 0 |
| 95 | 0 | 140 | 0 |
| TOTALS | 0 | 380 | 0 |



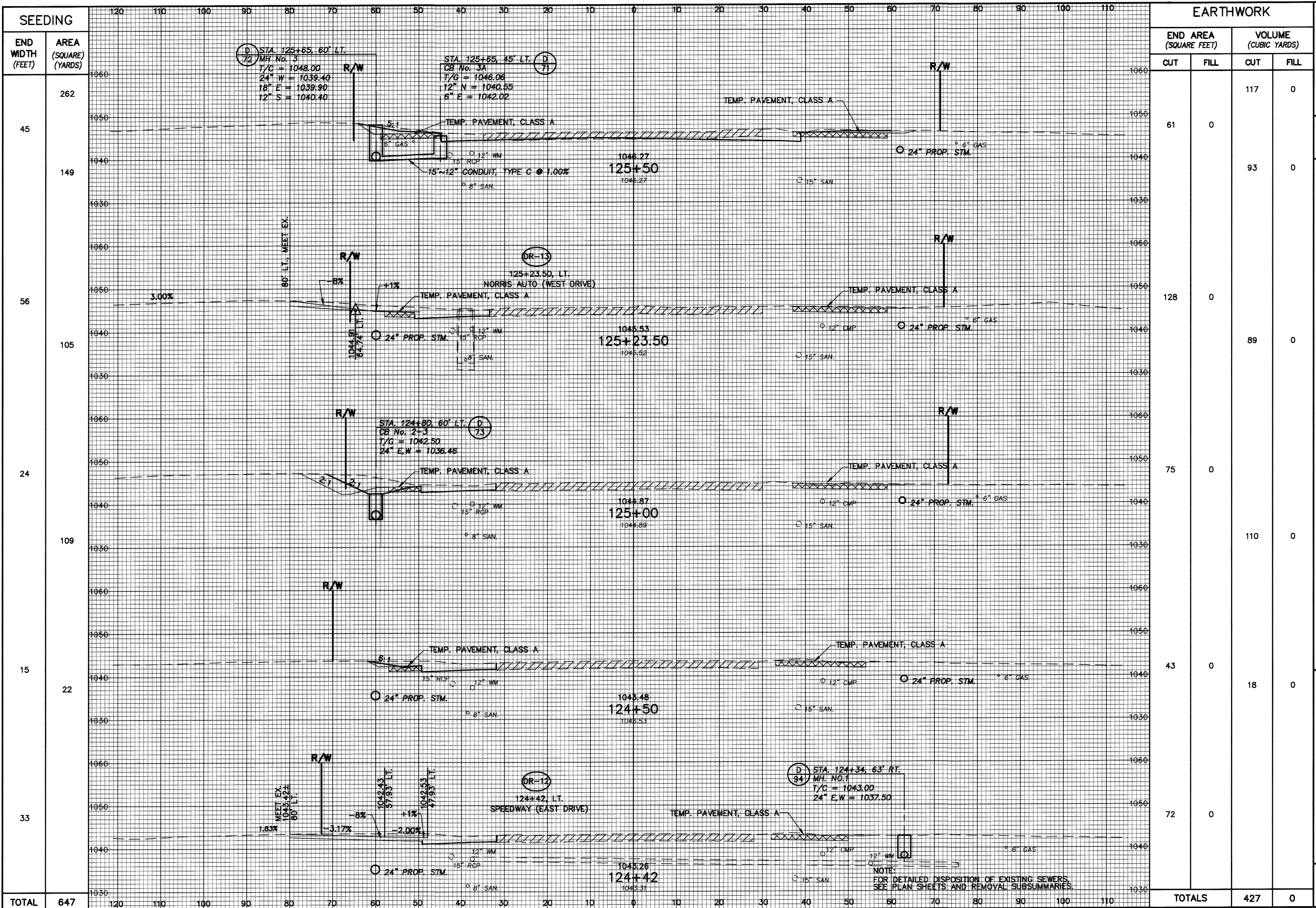
S.P. 18 - CROSS SECTIONS
STA. 123+00 TO STA. 124+00

MED - 18 - 15.13

124
362

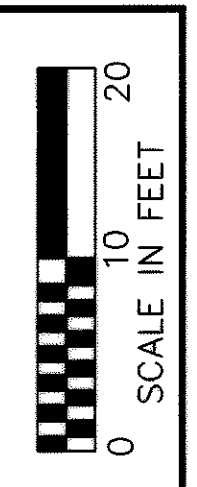
NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

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| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 45 | 262 |
| 56 | 149 |
| 24 | 105 |
| 15 | 109 |
| 33 | 22 |
| TOTAL | 647 |

| EARTHWORK | | | |
|---------------------|------|----------------------|------|
| END AREA (SQ. FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 61 | 0 | 117 | 0 |
| 128 | 0 | 93 | 0 |
| 75 | 0 | 89 | 0 |
| 43 | 0 | 110 | 0 |
| 72 | 0 | 18 | 0 |
| TOTALS | | 427 | 0 |



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RER

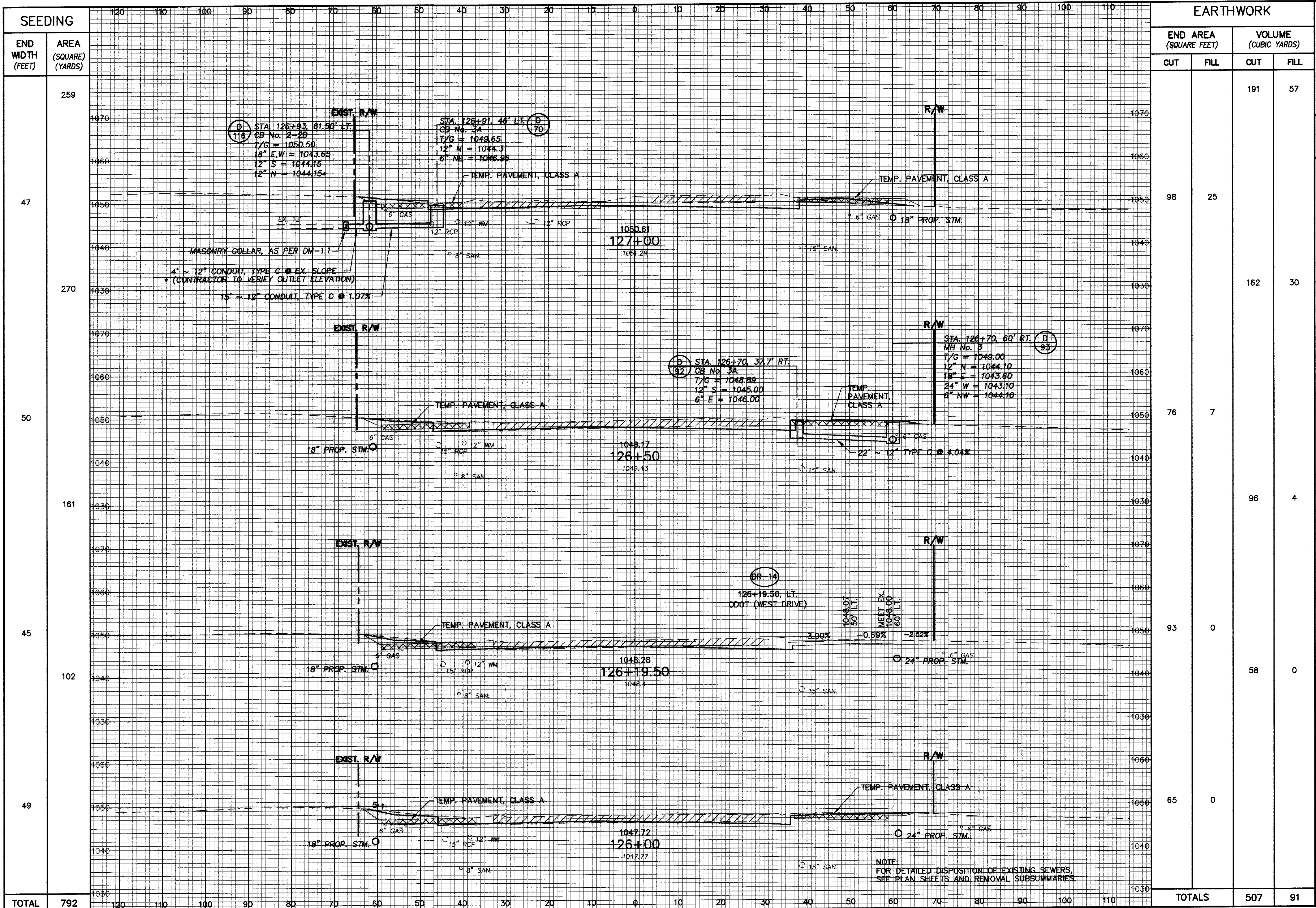
S.R. 18 - CROSS SECTIONS
STA. 124+42 TO STA. 125+50

MED - 18 - 15.13

125
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

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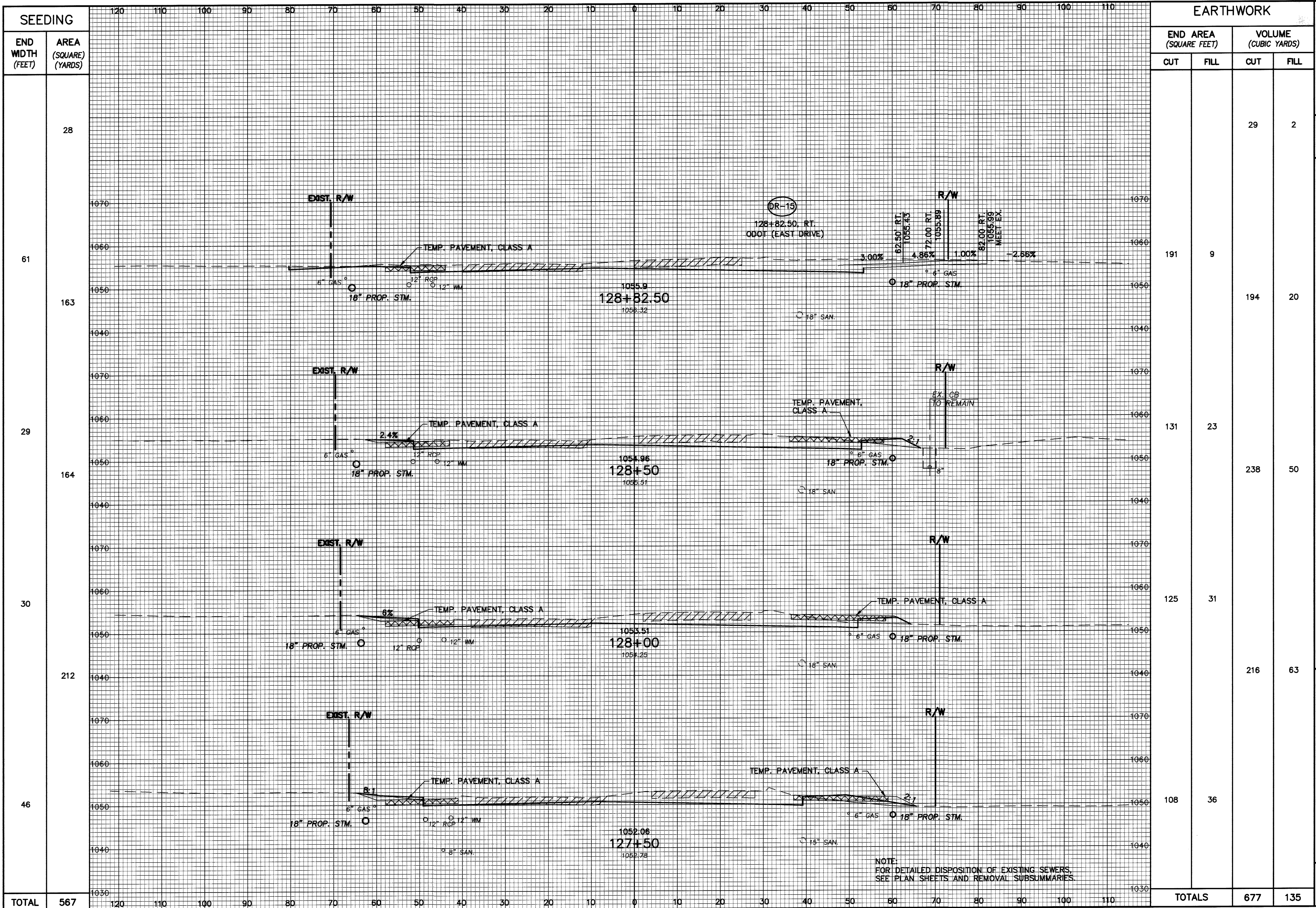


| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 47 | 259 |
| 50 | |
| 161 | |
| 45 | |
| 102 | |
| 49 | |
| TOTAL | 792 |

| EARTHWORK | | | |
|------------------------|------|----------------------|-----------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 98 | 25 | 191 | 57 |
| | | 162 | 30 |
| 76 | 7 | | |
| | | 96 | 4 |
| 93 | 0 | 58 | 0 |
| 65 | 0 | | |
| TOTALS | | 507 | 91 |

CALCULATED: MAL, CHECKED: RER
 S.R. 18 - CROSS SECTIONS
 STA. 126+00 TO STA. 127+00
 MED - 18 - 15.13
 126
 362

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| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 28 | |
| 61 | |
| 163 | |
| 29 | |
| 164 | |
| 30 | |
| 212 | |
| 46 | |
| TOTAL | 567 |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 191 | 9 | 29 | 2 |
| | | 194 | 20 |
| 131 | 23 | | |
| | | 238 | 50 |
| 125 | 31 | | |
| | | 216 | 63 |
| 108 | 36 | | |
| TOTALS | | 677 | 135 |



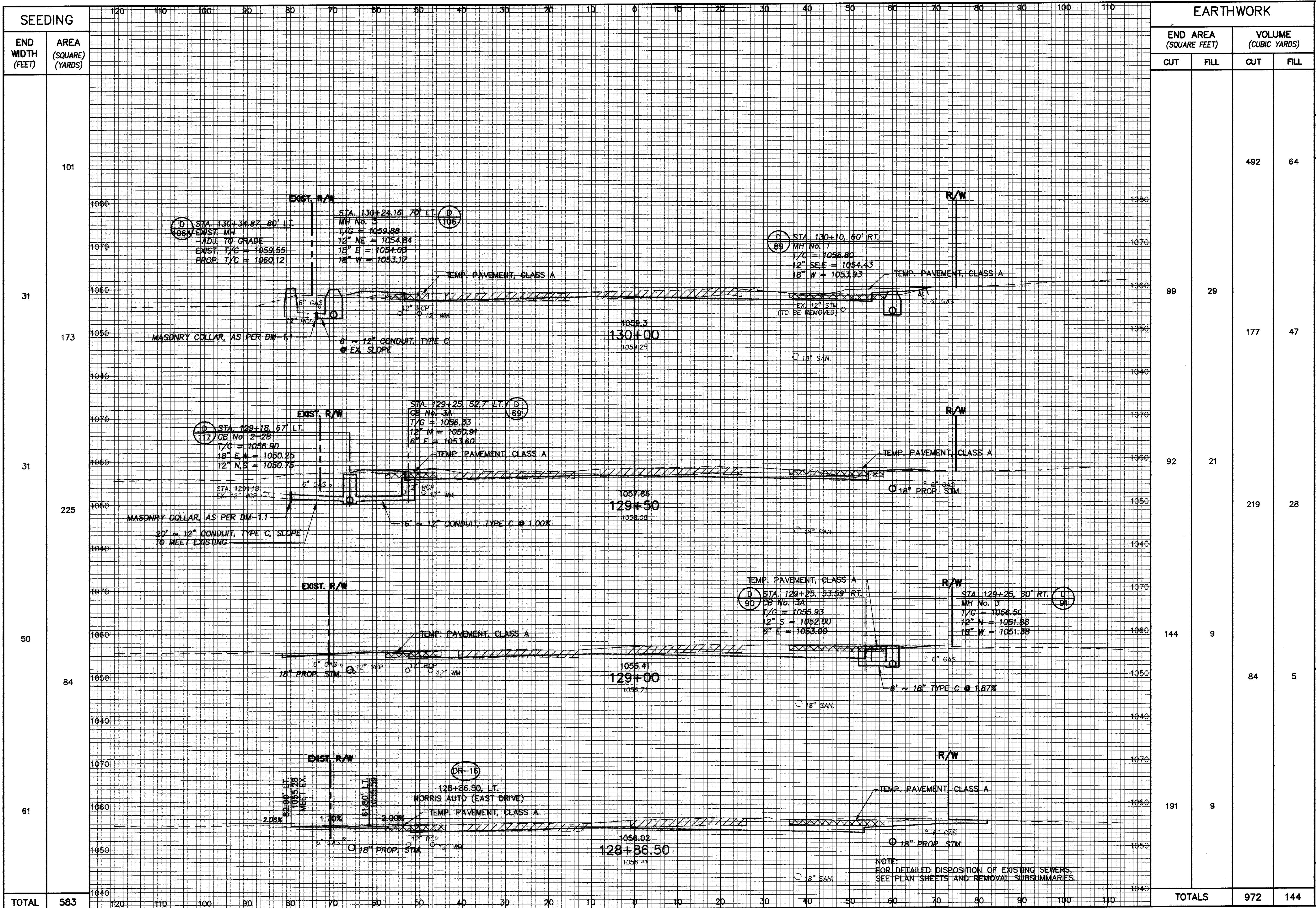
CALCULATED
MAL
CHECKED
REF

**S.R. 18 - CROSS SECTIONS
STA. 127+50 TO STA. 128+82.50**

MED - 18 - 15.13

127
362

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| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 101 | |
| 31 | |
| 173 | |
| 31 | |
| 225 | |
| 50 | |
| 84 | |
| 61 | |
| TOTAL | 583 |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 492 | 64 |
| 99 | 29 | 177 | 47 |
| 92 | 21 | 219 | 28 |
| 144 | 9 | 84 | 5 |
| 191 | 9 | | |
| TOTALS | | 972 | 144 |



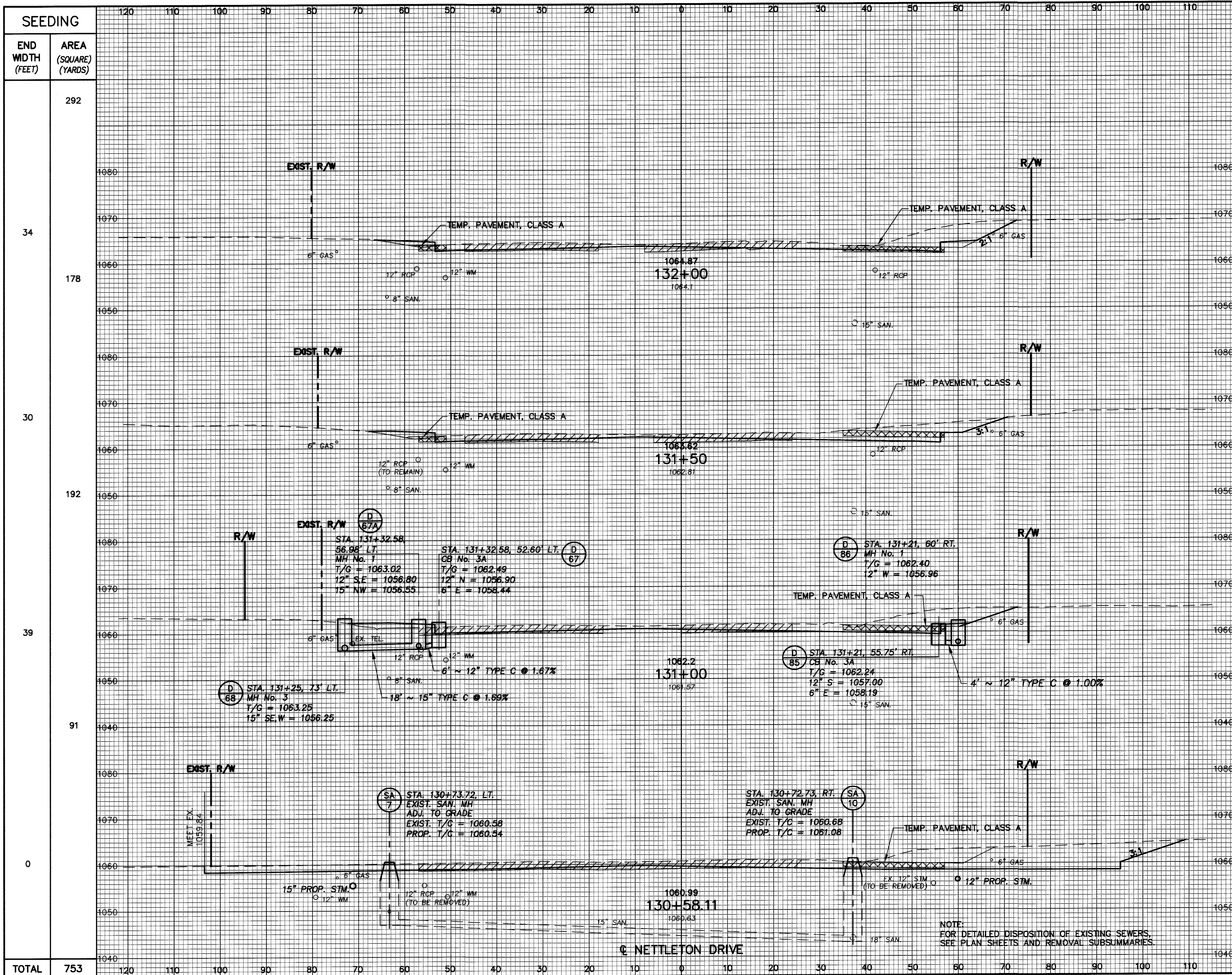
S.R. 18 - CROSS SECTIONS
STA. 128+86.50 TO STA. 130+00

MED - 18 - 15.13

| |
|-----|
| 128 |
| 362 |

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

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| SEEDING | | EARTHWORK | | | |
|------------------|---------------------|------------------------|------|----------------------|------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) | END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| | | CUT | FILL | CUT | FILL |
| 34 | 292 | 125 | 36 | 332 | 71 |
| 178 | | | | 223 | 77 |
| 30 | | 115 | 47 | | |
| 192 | | | | 217 | 87 |
| 39 | | 119 | 46 | | |
| 91 | | | | 371 | 59 |
| 0 | | 358 | 30 | | |
| TOTAL | 753 | TOTALS | | 1143 | 294 |



CALCULATED
MAL
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RER

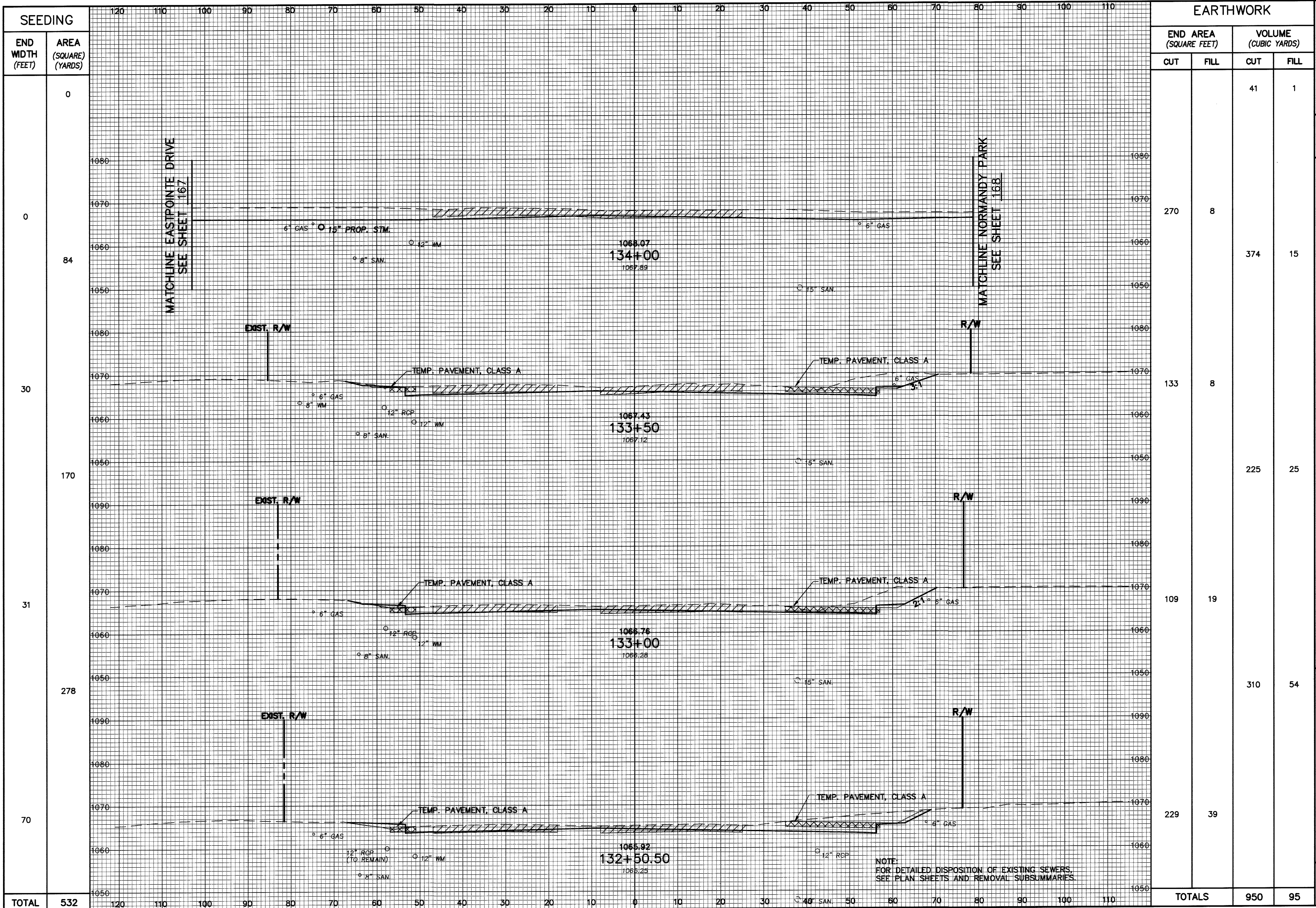
**S.R. 18 - CROSS SECTIONS
STA. 130+58.11 TO STA. 132+00**

MED - 18 - 15.13

129
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx18.dwg User: jcm81152 Jun 27, 2003 - 8:13am



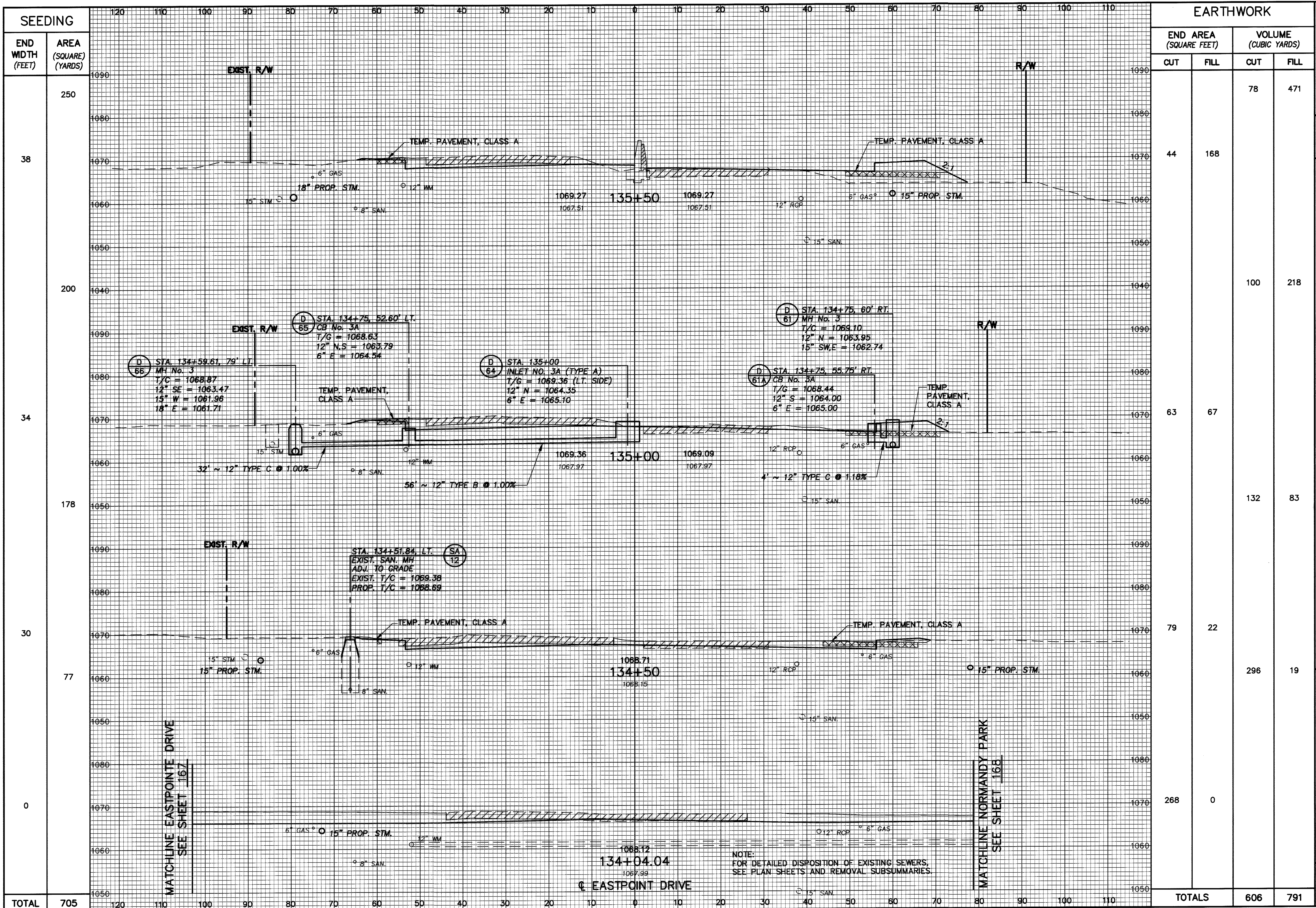
| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 0 | 0 |
| 84 | |
| 30 | |
| 170 | |
| 31 | |
| 278 | |
| 70 | |
| TOTAL | 532 |

| EARTHWORK | | | |
|---------------------|------|----------------------|-----------|
| END AREA (SQ. FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 270 | 8 | 41 | 1 |
| 133 | 8 | 374 | 15 |
| 109 | 19 | 225 | 25 |
| 229 | 39 | 310 | 54 |
| TOTALS | | 950 | 95 |

CALCULATED MAL CHECKED RER
 S.R. 18 - CROSS SECTIONS
 STA. 132+50.50 TO STA. 134+00
 MED - 18 - 15.13
 130
 362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

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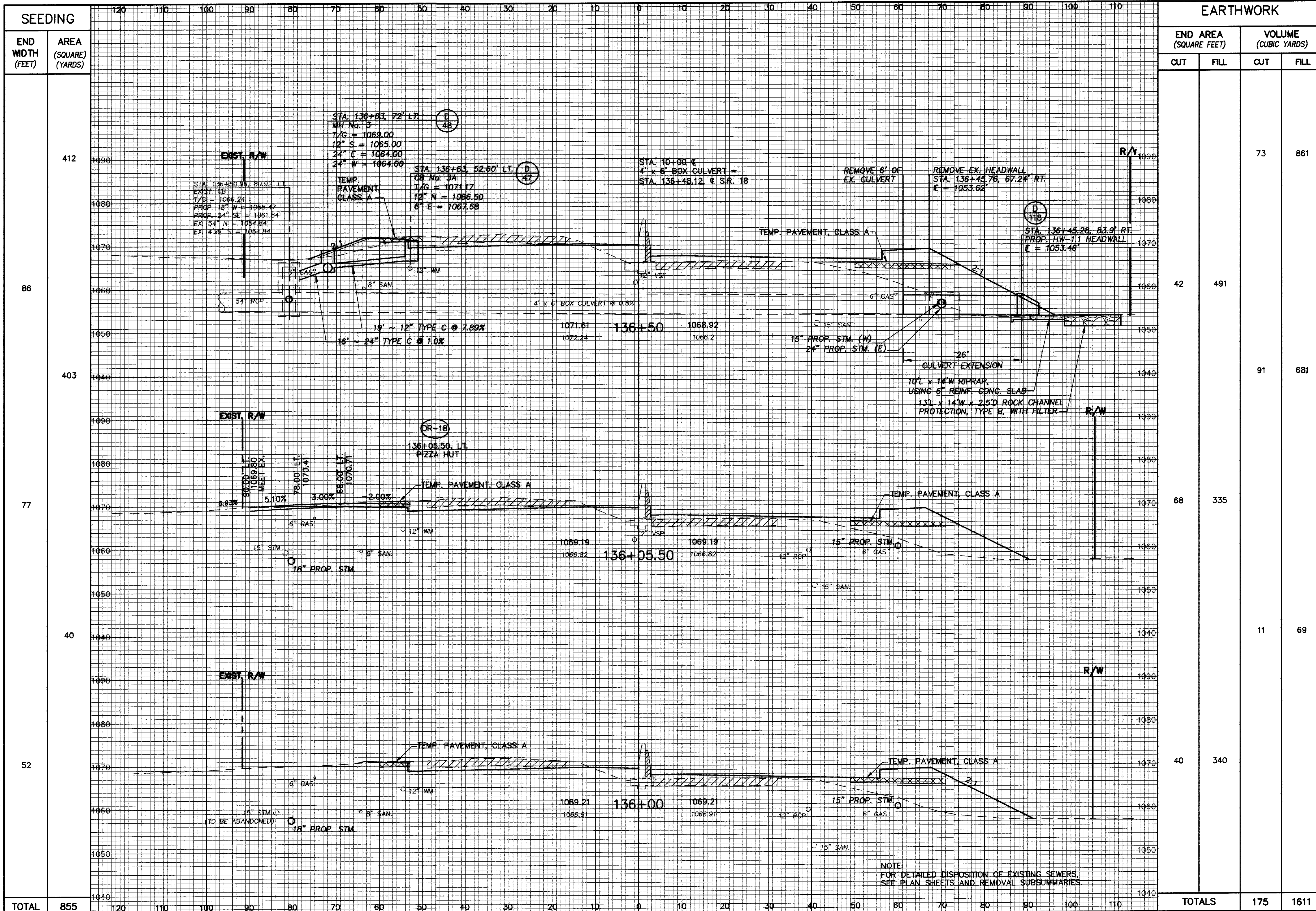
| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 38 | 250 |
| 34 | 200 |
| 178 | 178 |
| 30 | 77 |
| 0 | 0 |
| TOTAL | 705 |

| EARTHWORK | | | |
|---------------------|------|----------------------|------------|
| END AREA (SQ. FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 44 | 168 | 78 | 471 |
| 63 | 67 | 100 | 218 |
| 79 | 22 | 132 | 83 |
| 268 | 0 | 296 | 19 |
| TOTALS | | 606 | 791 |

S.R. 18 - CROSS SECTIONS
 STA. 134+04.04 TO STA. 135+50
 MED - 18 - 15.13
 131
 362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

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| SEEDING | | EARTHWORK | | | |
|------------------|---------------------|------------------------|------|----------------------|-------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) | END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| | | CUT | FILL | CUT | FILL |
| 412 | | | | 73 | 861 |
| 86 | | 42 | 491 | | |
| 403 | | | | 91 | 681 |
| 77 | | 68 | 335 | | |
| 40 | | | | 11 | 69 |
| 52 | | 40 | 340 | | |
| TOTAL | 855 | TOTALS | | 175 | 1611 |

SCALE IN FEET
0 10 20

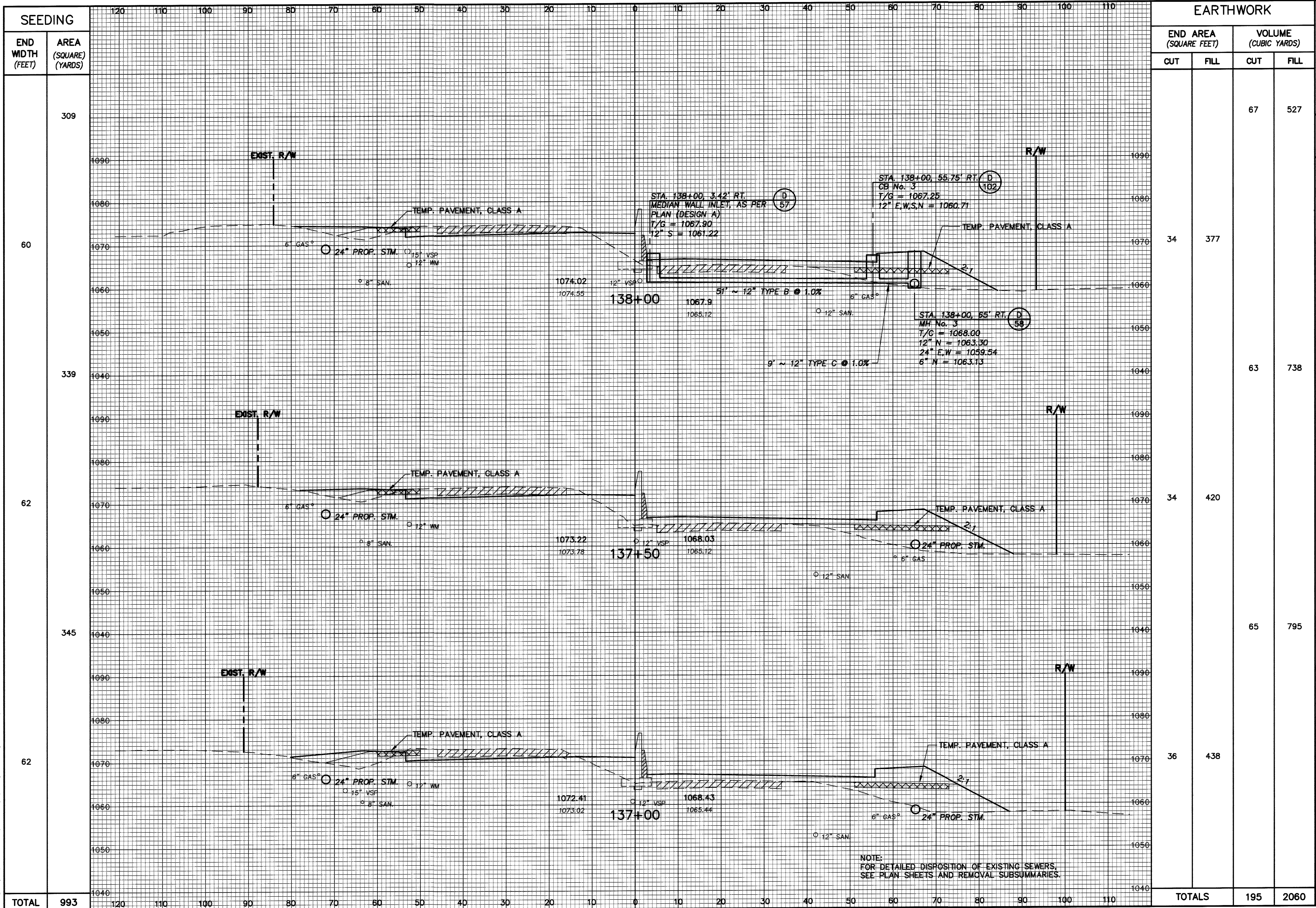
CALCULATED
MAL
CHECKED
RER

**S.R. 18 - CROSS SECTIONS
STA. 136+00 TO STA. 136+50**

MED - 18 - 15.13

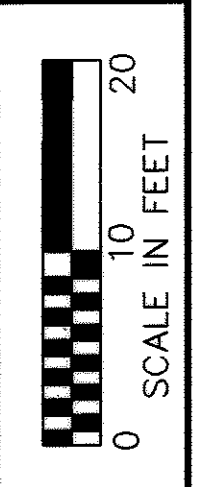
132
362

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| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 60 | 309 |
| 62 | 339 |
| 62 | 345 |
| TOTAL | 993 |

| EARTHWORK | | | |
|------------------------|------|----------------------|-------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 34 | 377 | 67 | 527 |
| 34 | 420 | 63 | 738 |
| 36 | 438 | 65 | 795 |
| TOTALS | | 195 | 2060 |



CALCULATED
MAL
CHECKED
RER

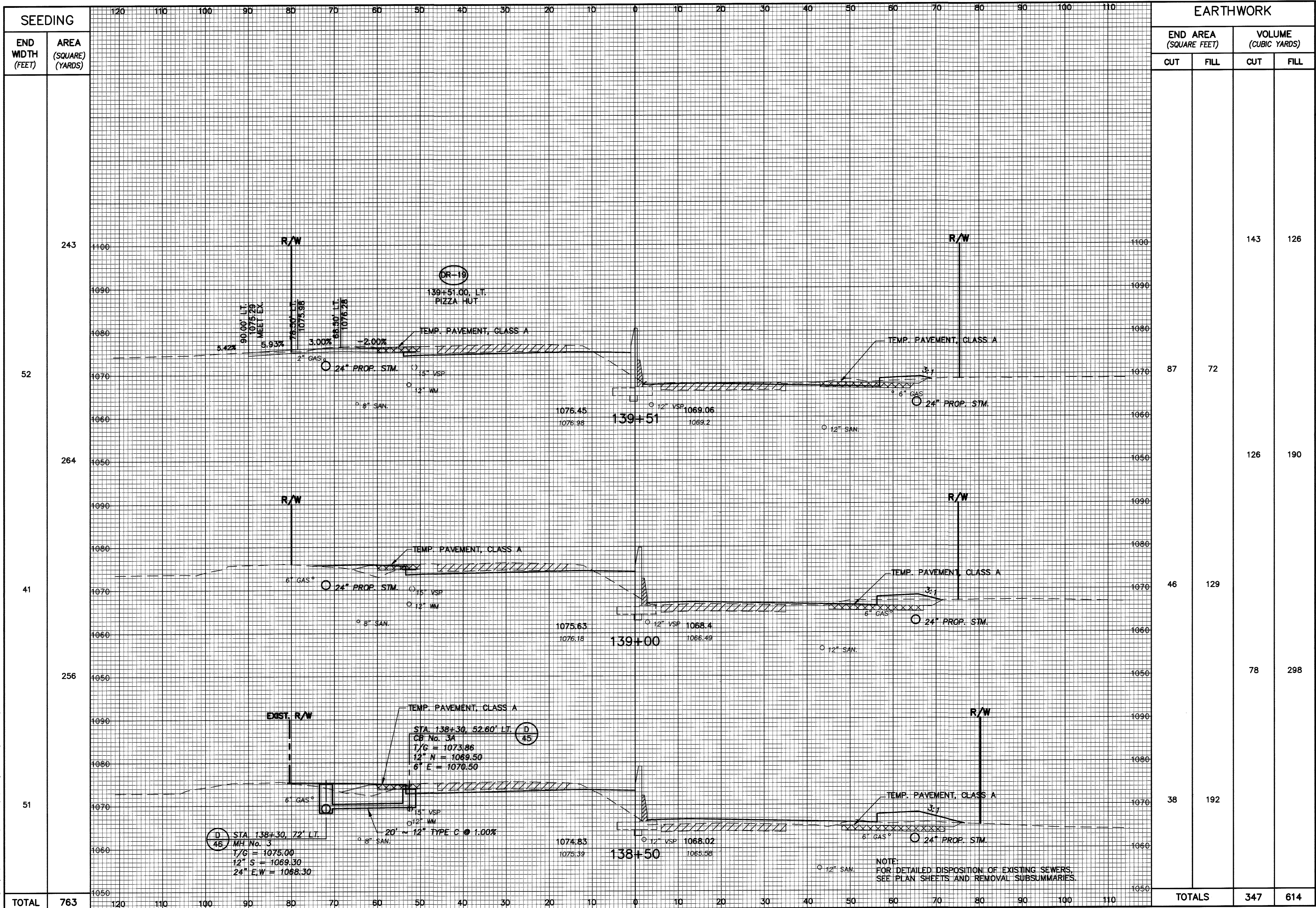
**S.R. 18 - CROSS SECTIONS
STA. 137+00 TO STA. 138+00**

MED - 18 - 15.13

133
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

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| SEEDING | | EARTHWORK | | | |
|------------------|---------------------|------------------------|------|----------------------|------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) | END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| | | CUT | FILL | CUT | FILL |
| 243 | | | | 143 | 126 |
| 52 | | 87 | 72 | | |
| 264 | | | | 126 | 190 |
| 41 | | 46 | 129 | | |
| 256 | | | | 78 | 298 |
| 51 | | 38 | 192 | | |
| TOTAL | 763 | | | 347 | 614 |



CALCULATED
MAL
CHECKED
RER

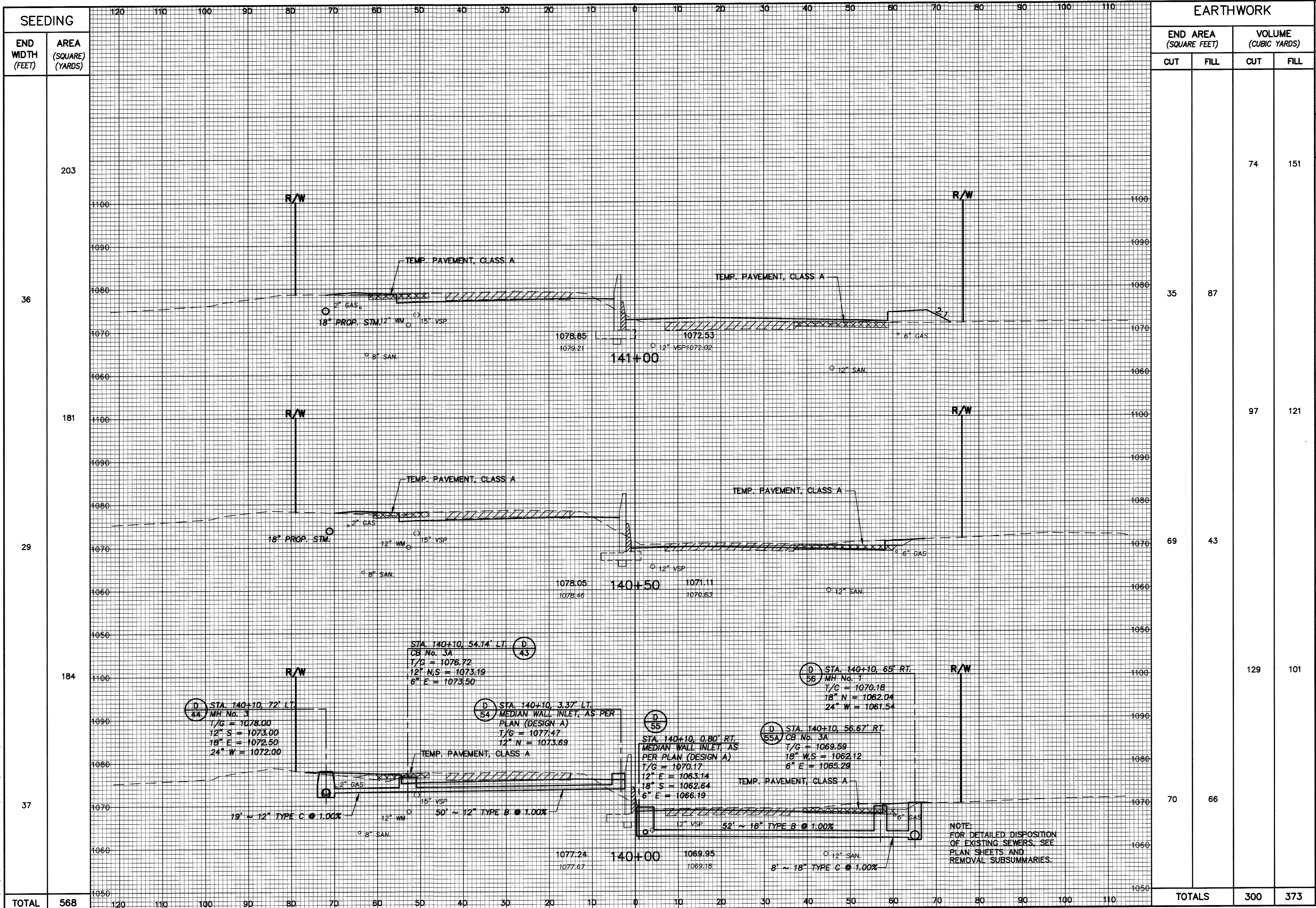
**S.R. 18 - CROSS SECTIONS
STA. 138+50 TO STA. 139+51**

MED - 18 - 15.13

134
362

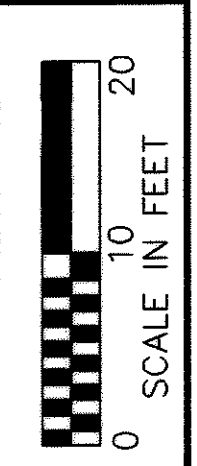
NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

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| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 36 | 203 |
| 29 | 181 |
| 37 | 184 |
| TOTAL | 568 |

| EARTHWORK | | | |
|------------------------|------------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 35 | 87 | 74 | 151 |
| 69 | 43 | 97 | 121 |
| 70 | 66 | 129 | 101 |
| TOTALS | 300 | 300 | 373 |



CALCULATED
MAL
CHECKED
RER

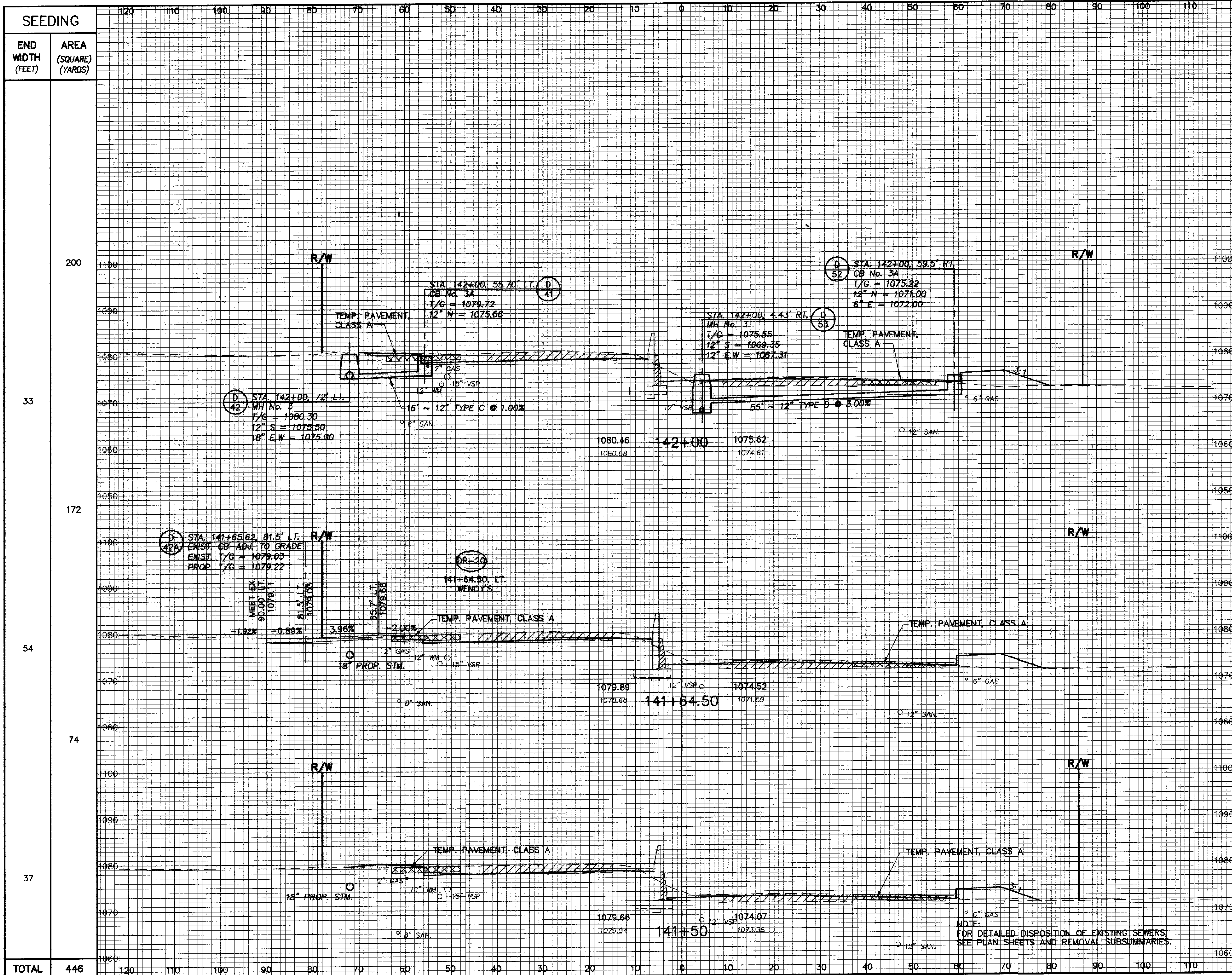
**S.R. 18 - CROSS SECTIONS
STA. 140+00 TO STA. 141+00**

MED - 18 - 15.13

135
362

NOTE:
FOR DETAILED DISPOSITION
OF EXISTING SEWERS, SEE
PLAN SHEETS AND
REMOVAL SUBSUMMARIES.

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| SEEDING | | EARTHWORK | | | |
|------------------|---------------------|------------------------|------|----------------------|------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) | END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| | | CUT | FILL | CUT | FILL |
| 200 | | | | 74 | 165 |
| 33 | | 41 | 85 | | |
| 172 | | | | 68 | 82 |
| 54 | | 62 | 39 | | |
| 74 | | | | 29 | 31 |
| 37 | | 44 | 76 | | |
| TOTAL | 446 | | | 171 | 278 |



CALCULATED
MAL
CHECKED
RER

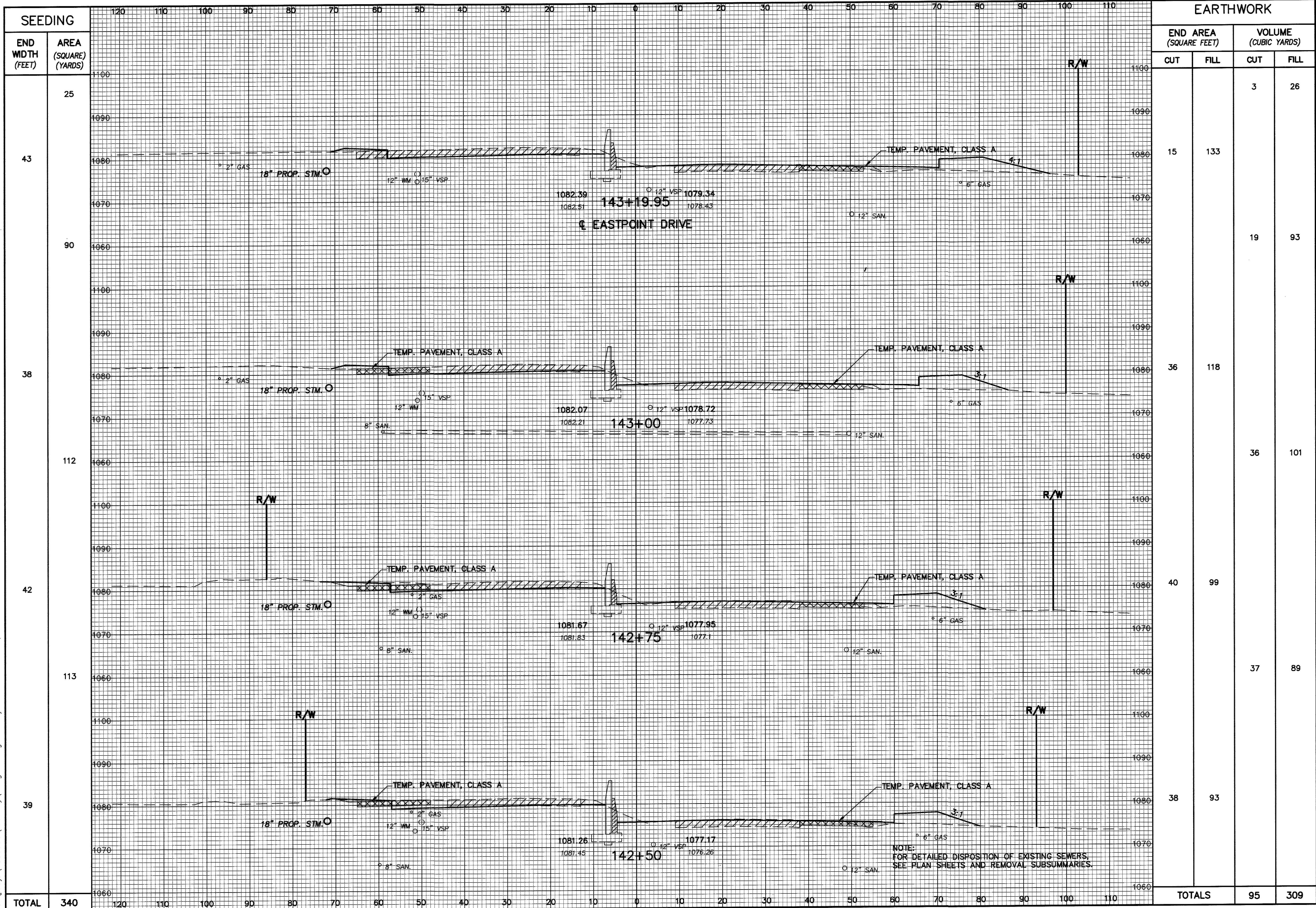
**S.R. 18 - CROSS SECTIONS
STA. 141+50 TO STA. 142+00**

MED - 18 - 15.13

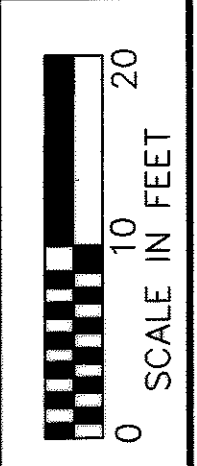
136
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx25.dwg User: jon81152 Jun 27, 2003 8:15am



| SEEDING | | EARTHWORK | | | |
|------------------|---------------------|------------------------|------|----------------------|------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) | END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| | | CUT | FILL | CUT | FILL |
| 43 | 25 | 15 | 133 | 3 | 26 |
| 38 | 90 | 36 | 118 | 19 | 93 |
| 42 | 112 | 40 | 99 | 36 | 101 |
| 39 | 113 | 38 | 93 | 37 | 89 |
| TOTAL | 340 | TOTALS | | 95 | 309 |



CALCULATED
MAL
CHECKED
RER

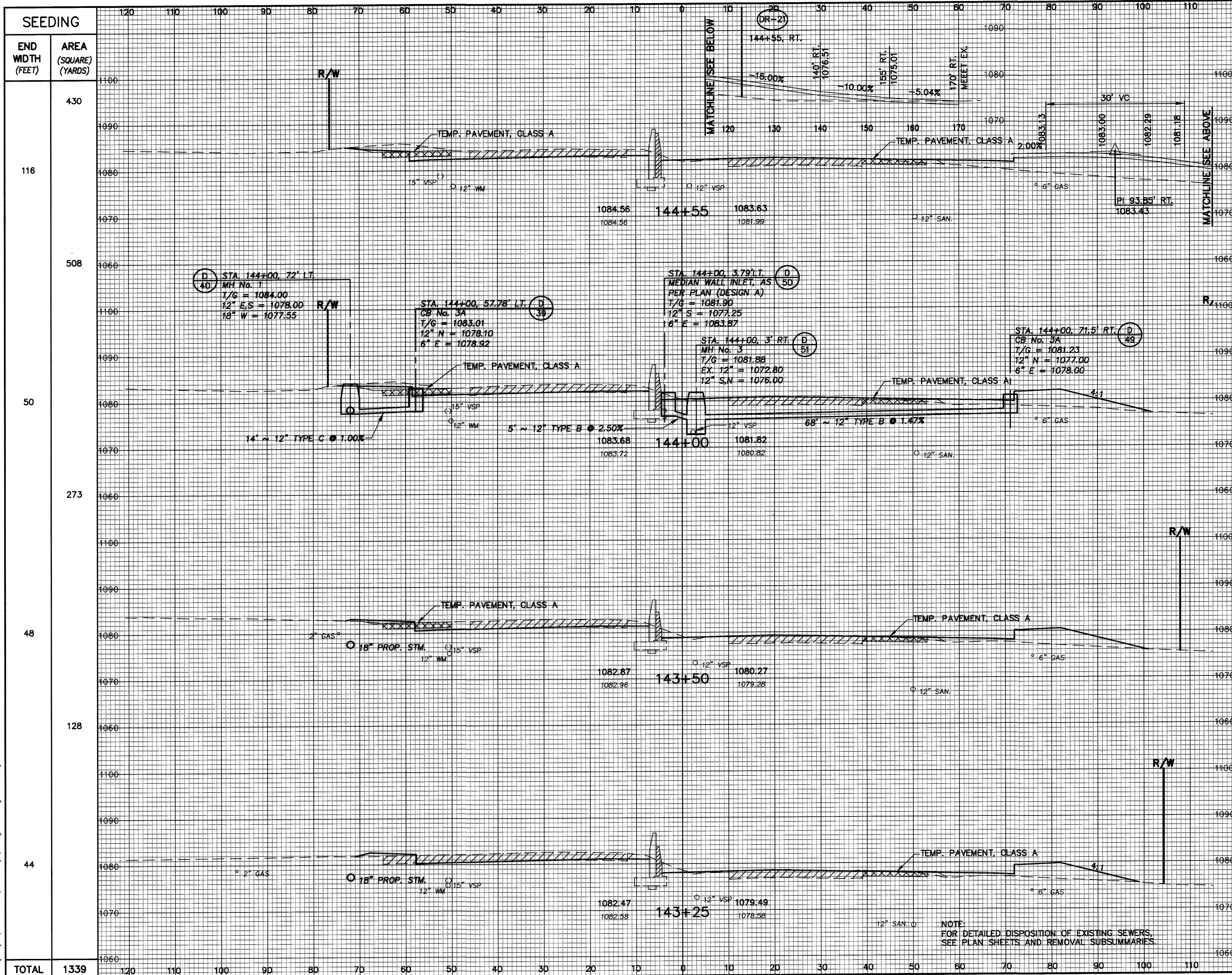
**S.R. 18 - CROSS SECTIONS
STA. 142+50 TO STA. 143+19.95**

MED - 18 - 15.13

137
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx26.dwg User: jn81152 Jun 27, 2003 8:15am



| SEEDING | | EARTHWORK | | | |
|------------------|---------------------|------------------------|------|----------------------|-------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) | END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| | | CUT | FILL | CUT | FILL |
| 116 | 430 | 61 | 257 | 104 | 458 |
| 508 | | | | 103 | 354 |
| 50 | | 40 | 90 | | |
| 273 | | | | 68 | 166 |
| 48 | | 33 | 89 | | |
| 128 | | | | 21 | 107 |
| 44 | | 12 | 141 | | |
| TOTAL | 1339 | | | 296 | 1085 |



CALCULATED
MAL
CHECKED
RER

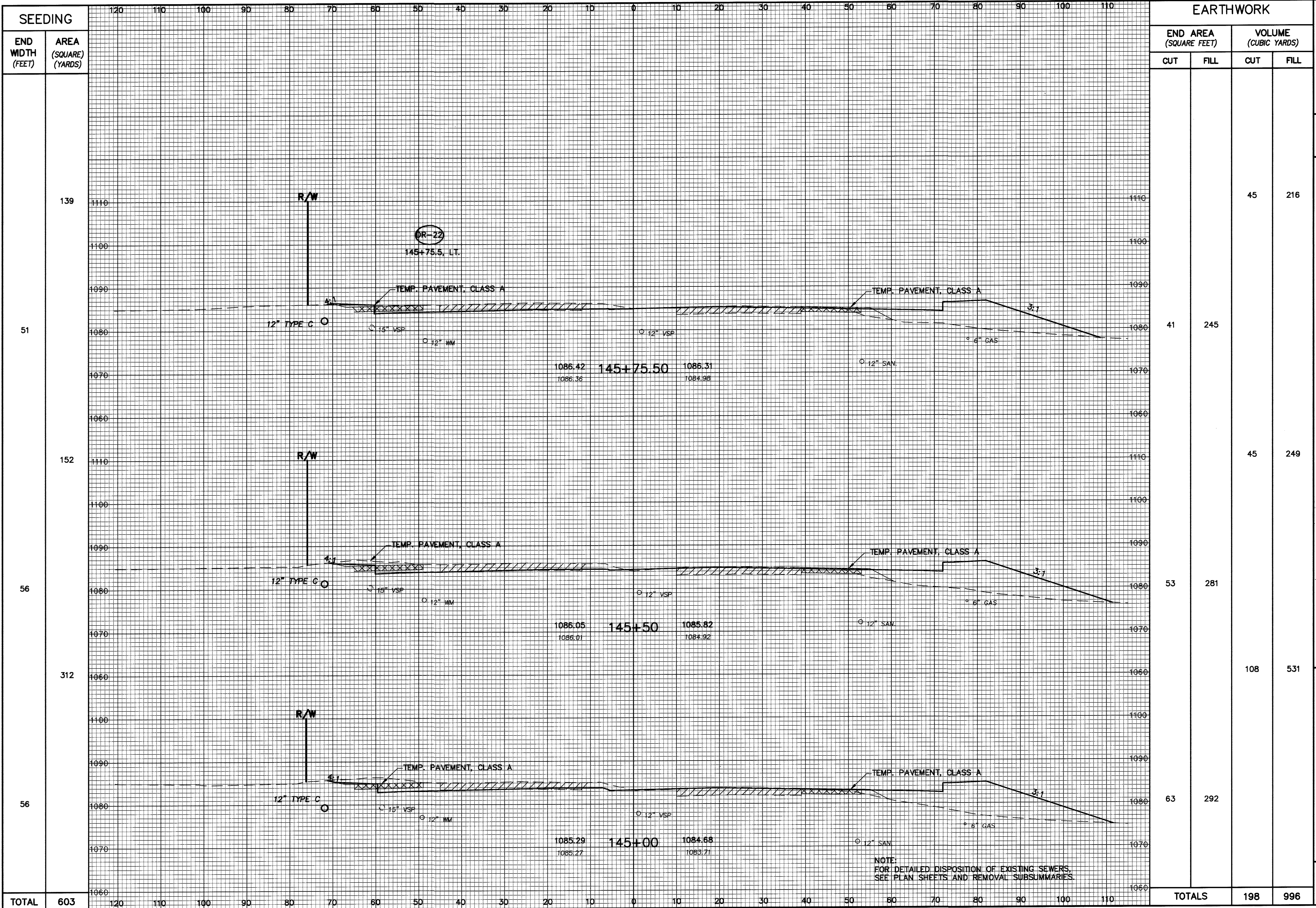
S.R. 18 - CROSS SECTIONS
STA. 143+25 TO STA. 144+55

MED - 18 - 15.13

138
362

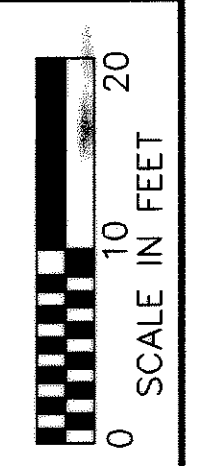
NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx27.dwg User: jan81152 Jun 27, 2003 11:06am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 51 | 139 |
| 56 | 152 |
| 56 | 312 |
| TOTAL | 603 |

| EARTHWORK | | | |
|------------------------|------------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 41 | 245 | 45 | 216 |
| 53 | 281 | 45 | 249 |
| 63 | 292 | 108 | 531 |
| TOTALS | 198 | 198 | 996 |



CALCULATED
MAL
CHECKED
RER

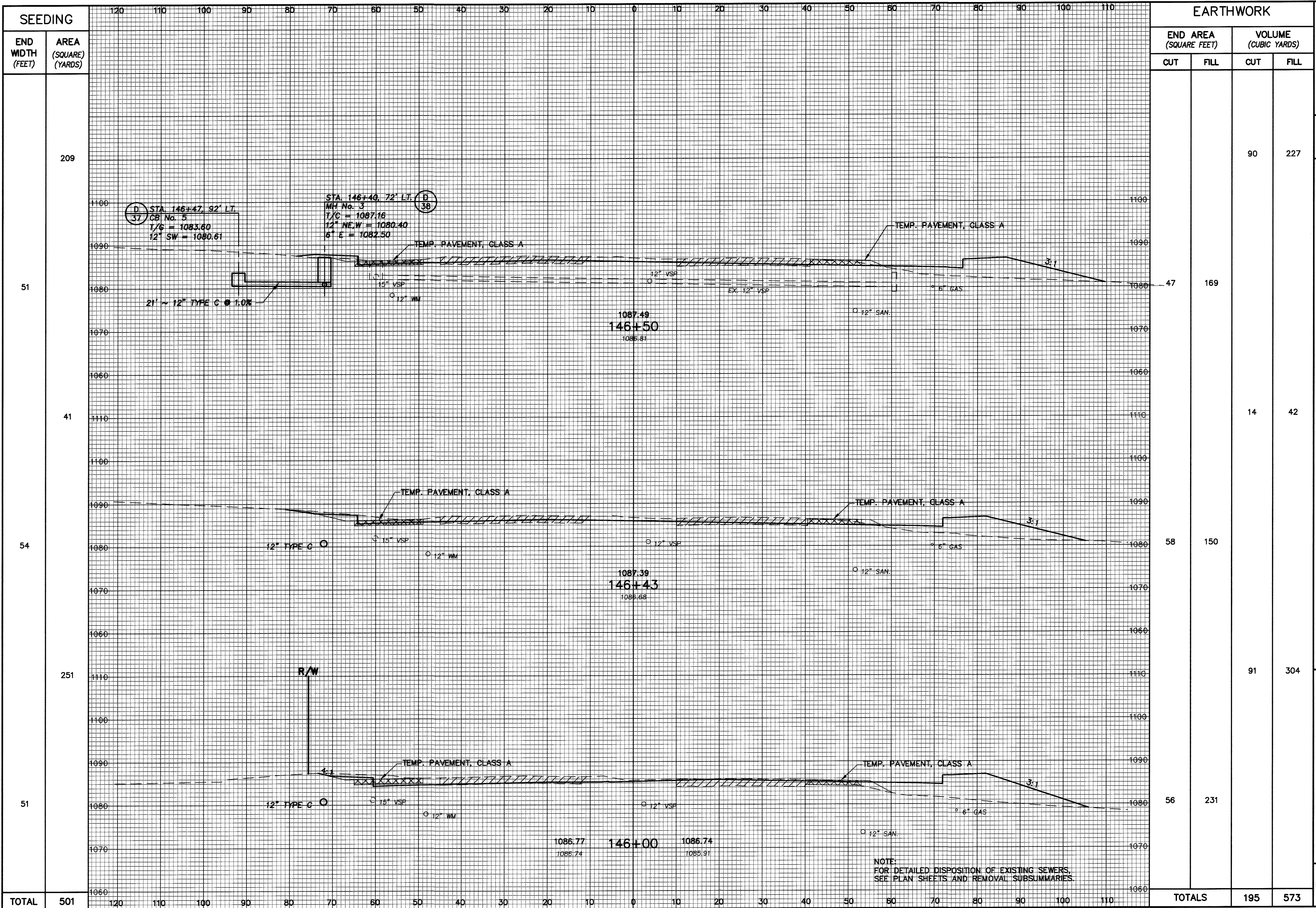
**S.R. 18 - CROSS SECTIONS
STA. 145+00 TO STA. 145+75.50**

MED - 18 - 15.13

139
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx28.dwg User: jan81152 Jun 27, 2003 - 11:06am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 209 | |
| 51 | |
| 41 | |
| 54 | |
| 251 | |
| 51 | |
| TOTAL | 501 |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 90 | 227 |
| | | 14 | 42 |
| | | 58 | 150 |
| | | 91 | 304 |
| | | 56 | 231 |
| TOTALS | | 195 | 573 |



CALCULATED
MAL
CHECKED
REB

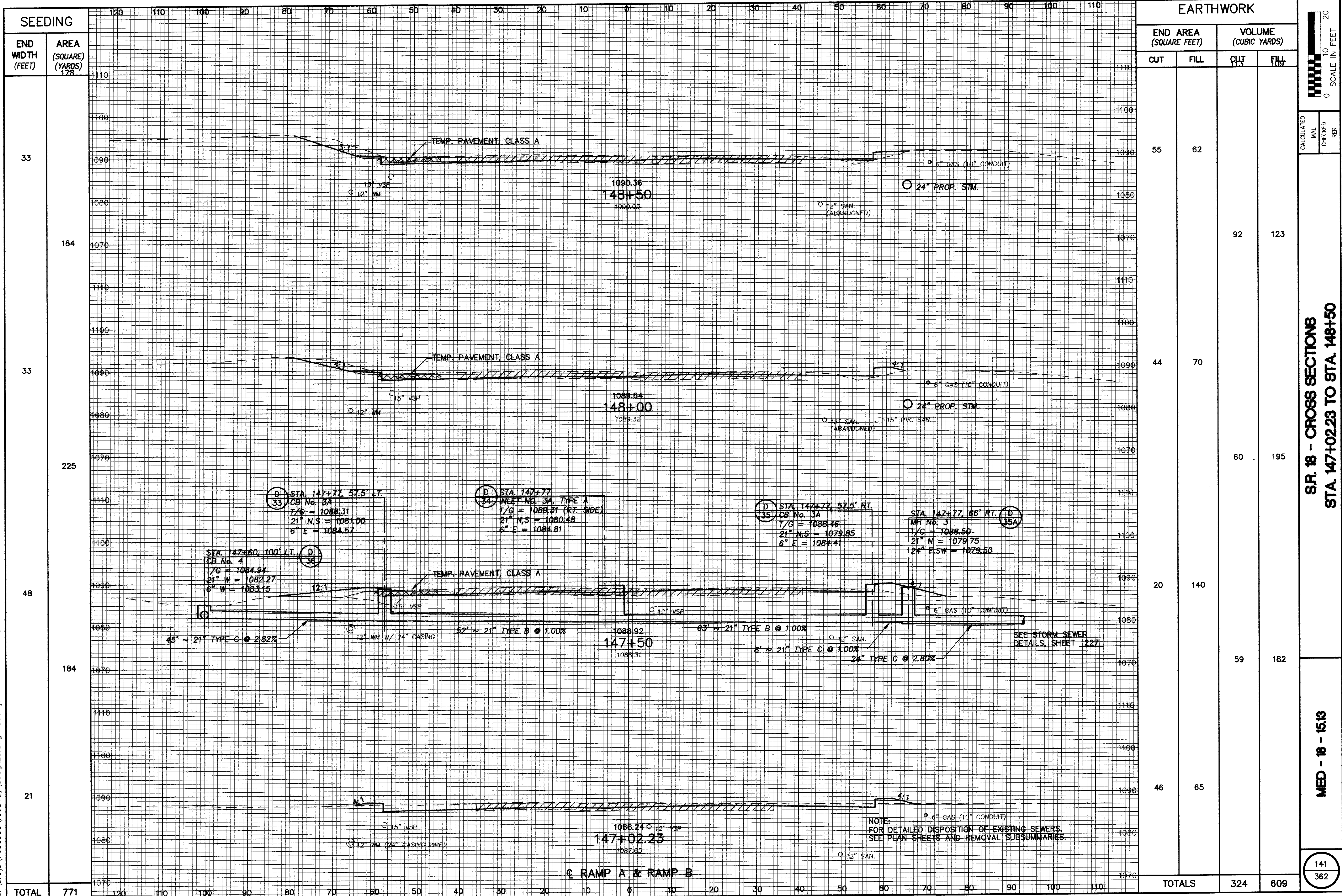
**S.R. 18 - CROSS SECTIONS
STA. 146+00 TO STA. 146+50**

MED - 18 - 15.13

140
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx29.dwg User: jan81152 Jun 27, 2003 - 11:06am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 33 | 178 |
| 33 | 184 |
| 48 | 225 |
| 184 | 771 |
| TOTAL | |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 55 | 62 | 92 | 123 |
| 44 | 70 | 60 | 195 |
| 20 | 140 | 59 | 182 |
| 46 | 65 | | |
| TOTALS | | 324 | 609 |



CALCULATED
MAL
CHECKED
RER

**S.R. 18 - CROSS SECTIONS
STA. 147+02.23 TO STA. 148+50**

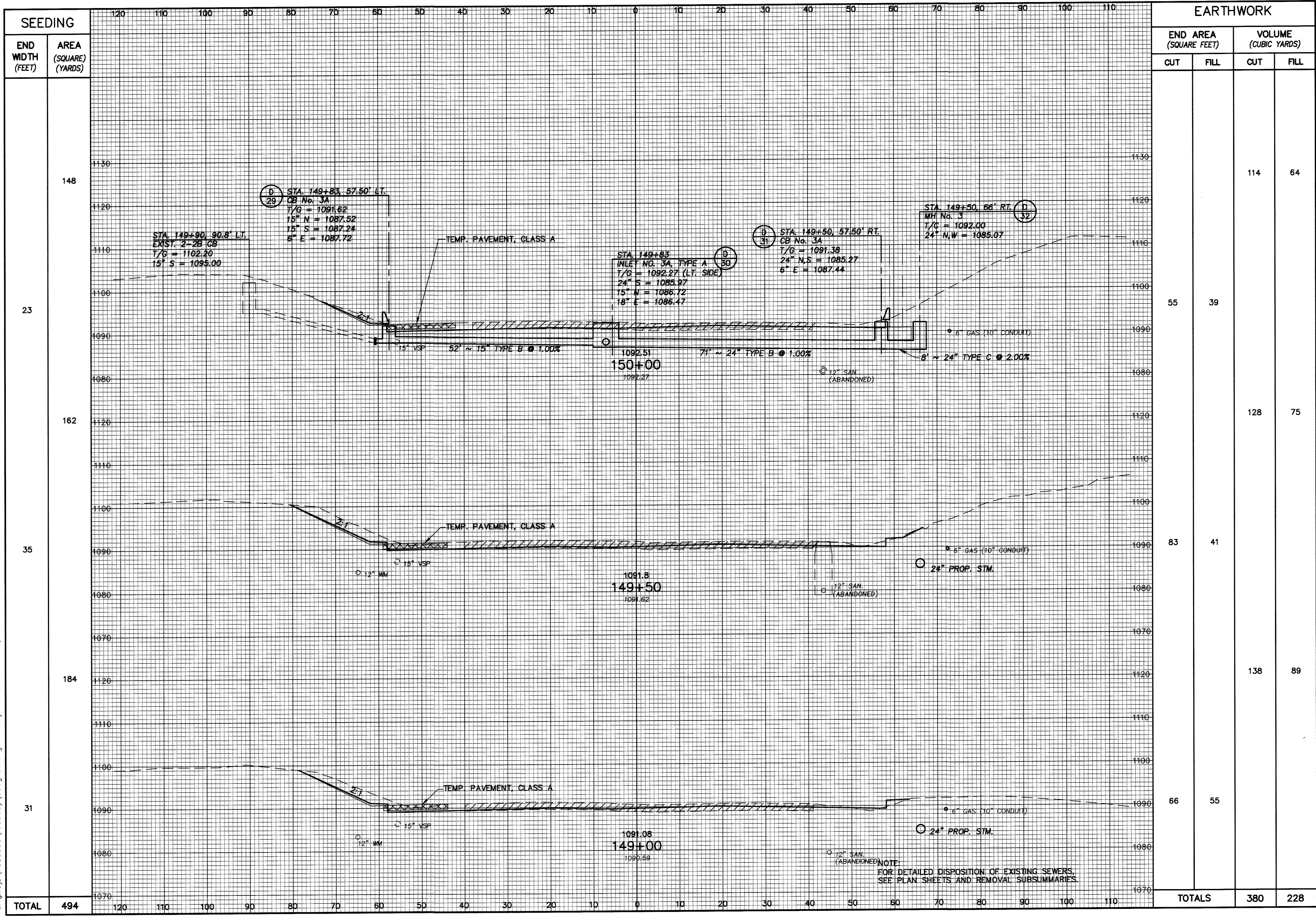
MED - 18 - 15.13

141
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

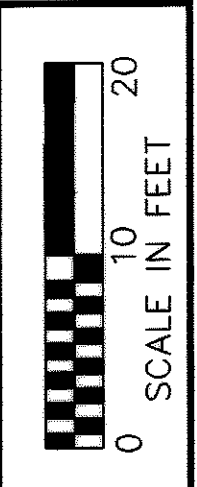
CLAMP A & RAMP B

j:\proj3\7050600\roadway\506gx30.dwg User: jan81152 Jun 27, 2003 - 11:07am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 23 | 148 |
| 35 | 162 |
| 31 | 184 |
| TOTAL | 494 |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 55 | 39 | 114 | 64 |
| 83 | 41 | 128 | 75 |
| 66 | 55 | 138 | 89 |
| TOTALS | | 380 | 228 |



CALCULATED
MAL
CHECKED
RER

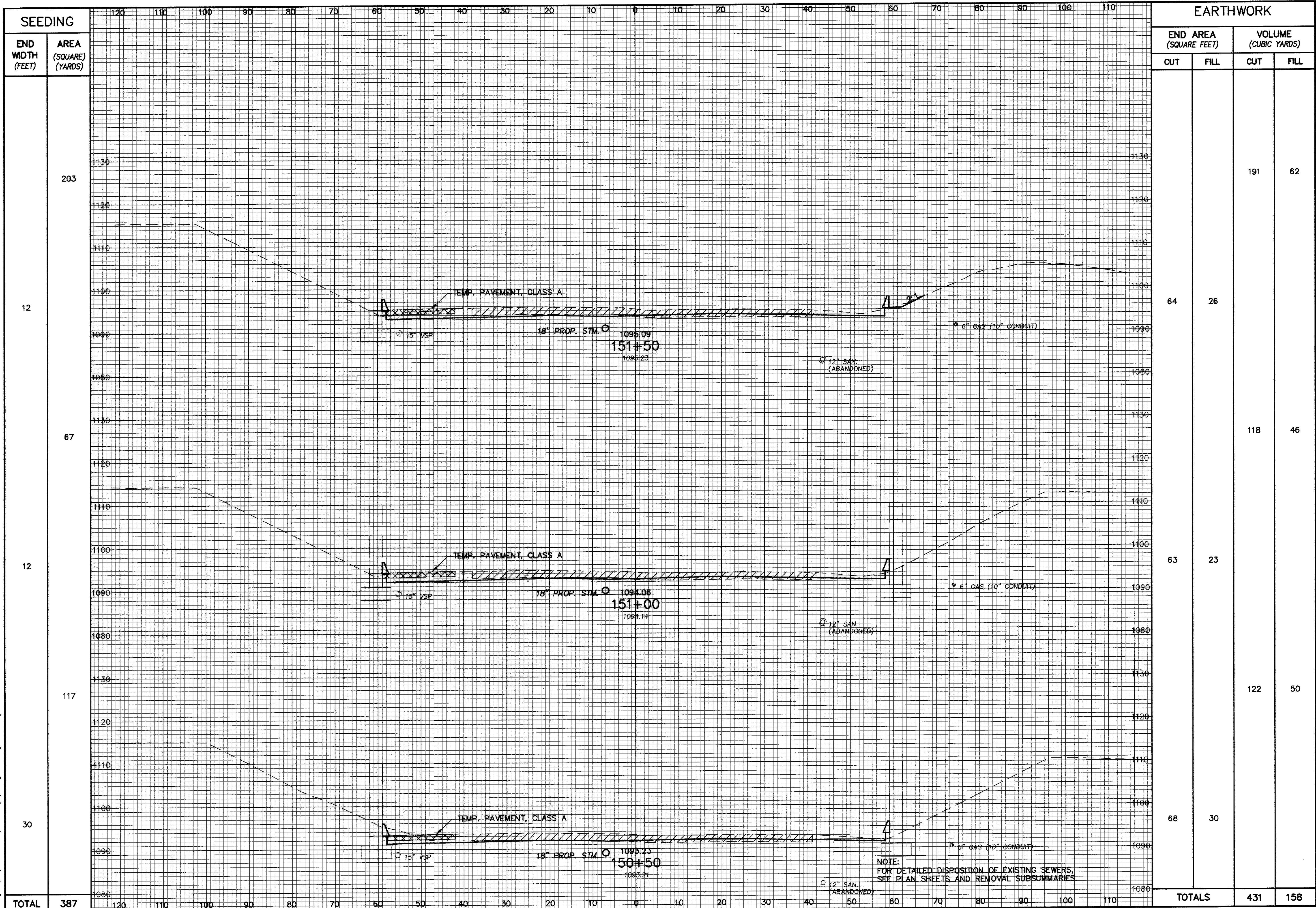
**S.R. 18 - CROSS SECTIONS
STA. 149+00 TO STA. 150+00**

MED - 18 - 15.13

142
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj\3\7050600\roadway\506gx31.dwg User: jon81152 Jun 27, 2003 11:07am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 203 | |
| 12 | |
| 67 | |
| 12 | |
| 117 | |
| 30 | |
| TOTAL | 387 |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 64 | 26 | 191 | 62 |
| 63 | 23 | 118 | 46 |
| 68 | 30 | 122 | 50 |
| TOTALS | | 431 | 158 |



CALCULATED
MAL
CHECKED
RER

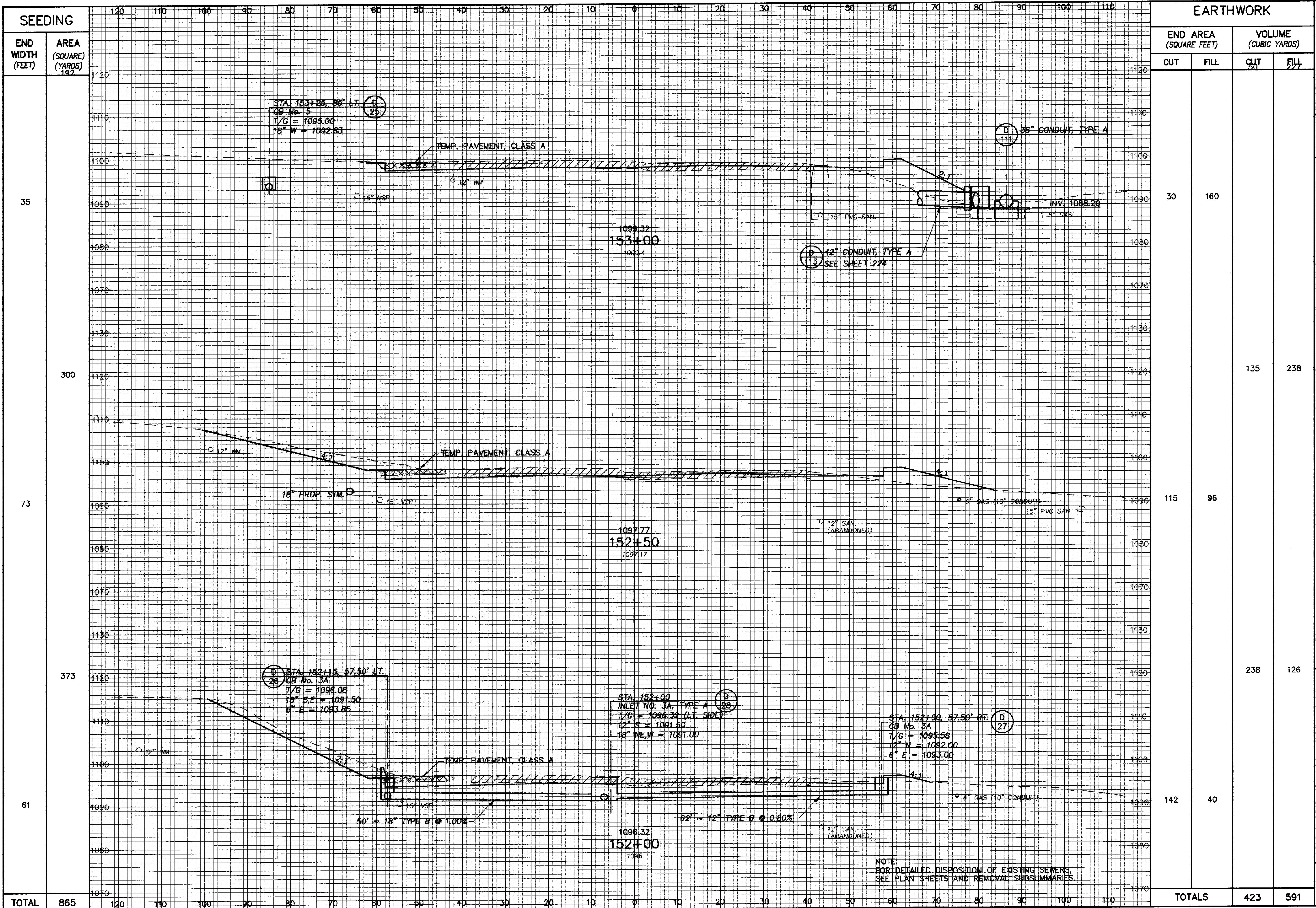
**S.R. 18 - CROSS SECTIONS
STA. 150+50 TO STA. 151+50**

MED - 18 - 15.13

143
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506px32.dwg User: jon81152 Jun 27, 2003 - 11:07am



| SEEDING | |
|------------------|-------------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) 192 |
| 35 | |
| 300 | |
| 373 | |
| 61 | |
| TOTAL | 865 |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 30 | 160 | | |
| 115 | 96 | 135 | 238 |
| | | 238 | 126 |
| 142 | 40 | | |
| TOTALS | | 423 | 591 |

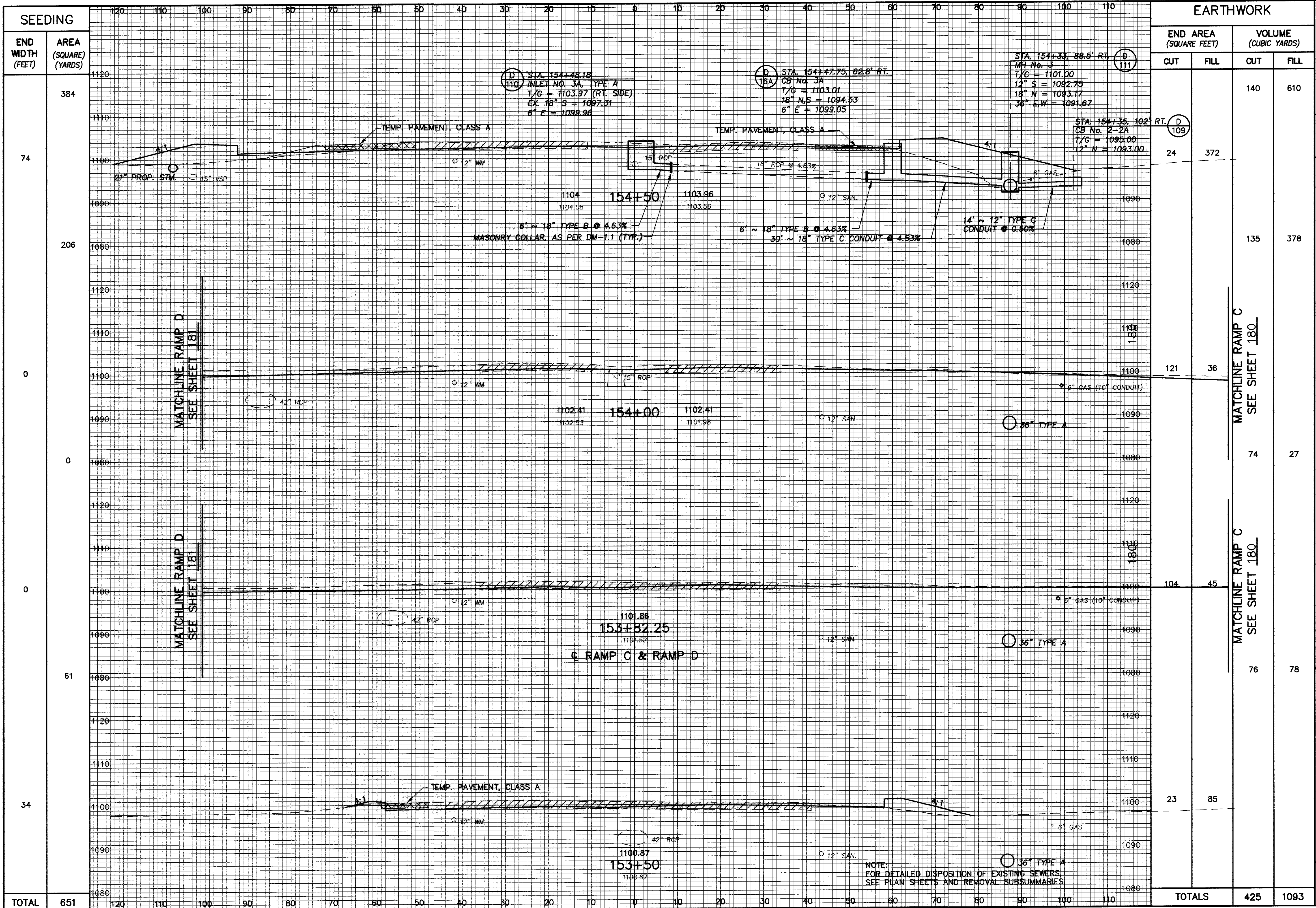
S.R. 18 - CROSS SECTIONS
STA. 152+00 TO STA. 153+00

MED - 18 - 15.13

144
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx33.dwg User: jon81152 Jun 27, 2003 11:08am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 74 | 384 |
| 0 | 0 |
| 0 | 0 |
| 0 | 0 |
| 61 | 34 |
| TOTAL | 651 |

| EARTHWORK | | | |
|------------------------|------|----------------------|-------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 140 | 610 |
| 24 | 372 | | |
| | | 135 | 378 |
| 121 | 36 | | |
| | | 74 | 27 |
| 104 | 45 | | |
| | | 76 | 78 |
| 23 | 85 | | |
| TOTALS | | 425 | 1093 |

SCALE IN FEET

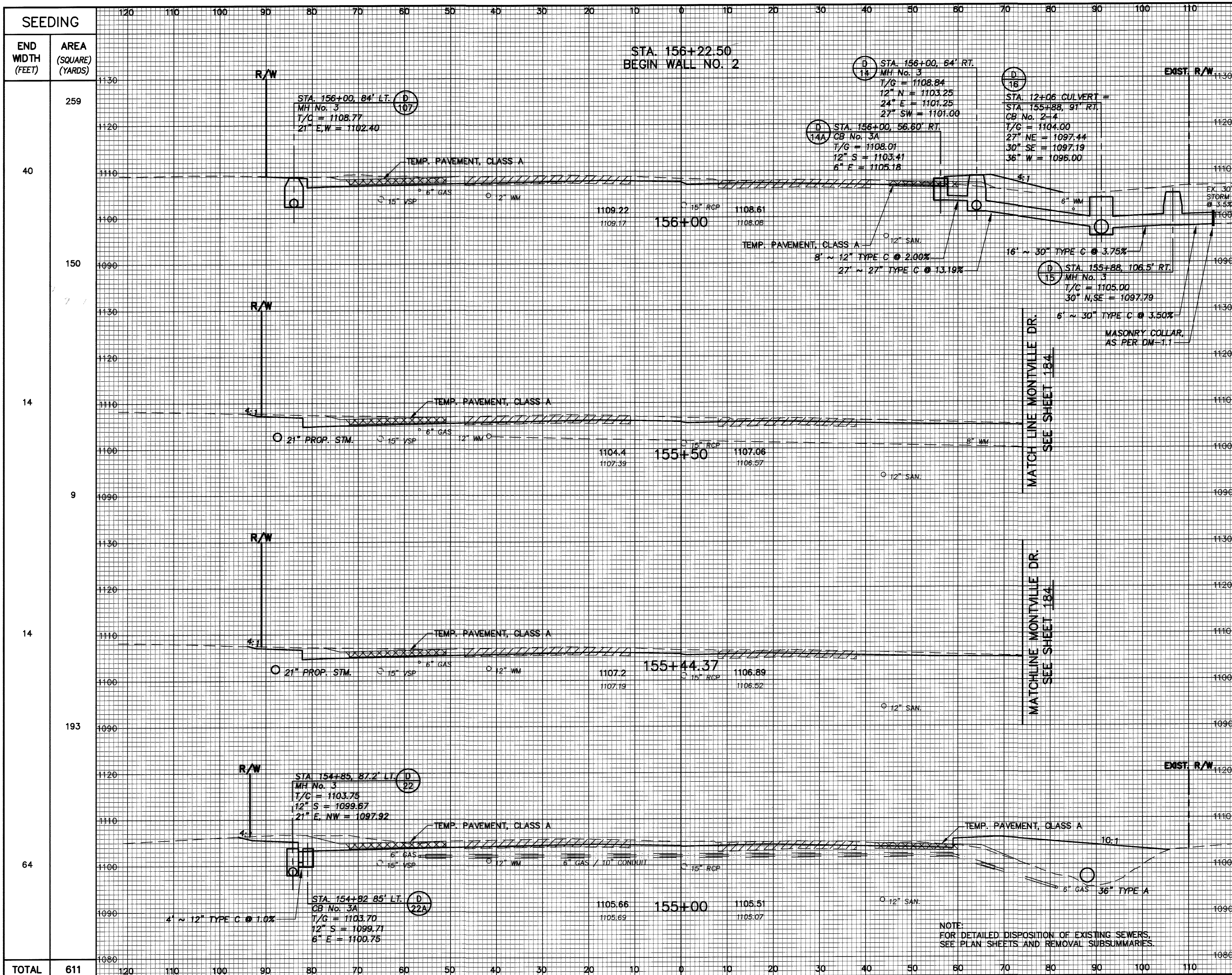
CALCULATED
MAL
CHECKED
RER

**S.R. 18 - CROSS SECTIONS
STA. 153+50 TO STA. 154+50**

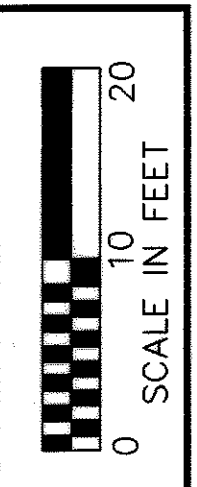
MED - 18 - 15.13

145
362

J:\proj3\7050600\roadway\506gx34.dwg User: jom81152 Jun 27, 2003 11:08am



| SEEDING | | EARTHWORK | | | |
|------------------|---------------------|------------------------|------|----------------------|------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) | END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| | | CUT | FILL | CUT | FILL |
| 259 | | | | | |
| 40 | | 97 | 93 | 169 | 171 |
| 150 | | | | 190 | 129 |
| 14 | | 108 | 46 | | |
| 9 | | | | 16 | 8 |
| 14 | | 43 | 27 | | |
| 193 | | | | 140 | 258 |
| 64 | | 127 | 286 | | |
| TOTAL | 611 | TOTALS | | 515 | 566 |



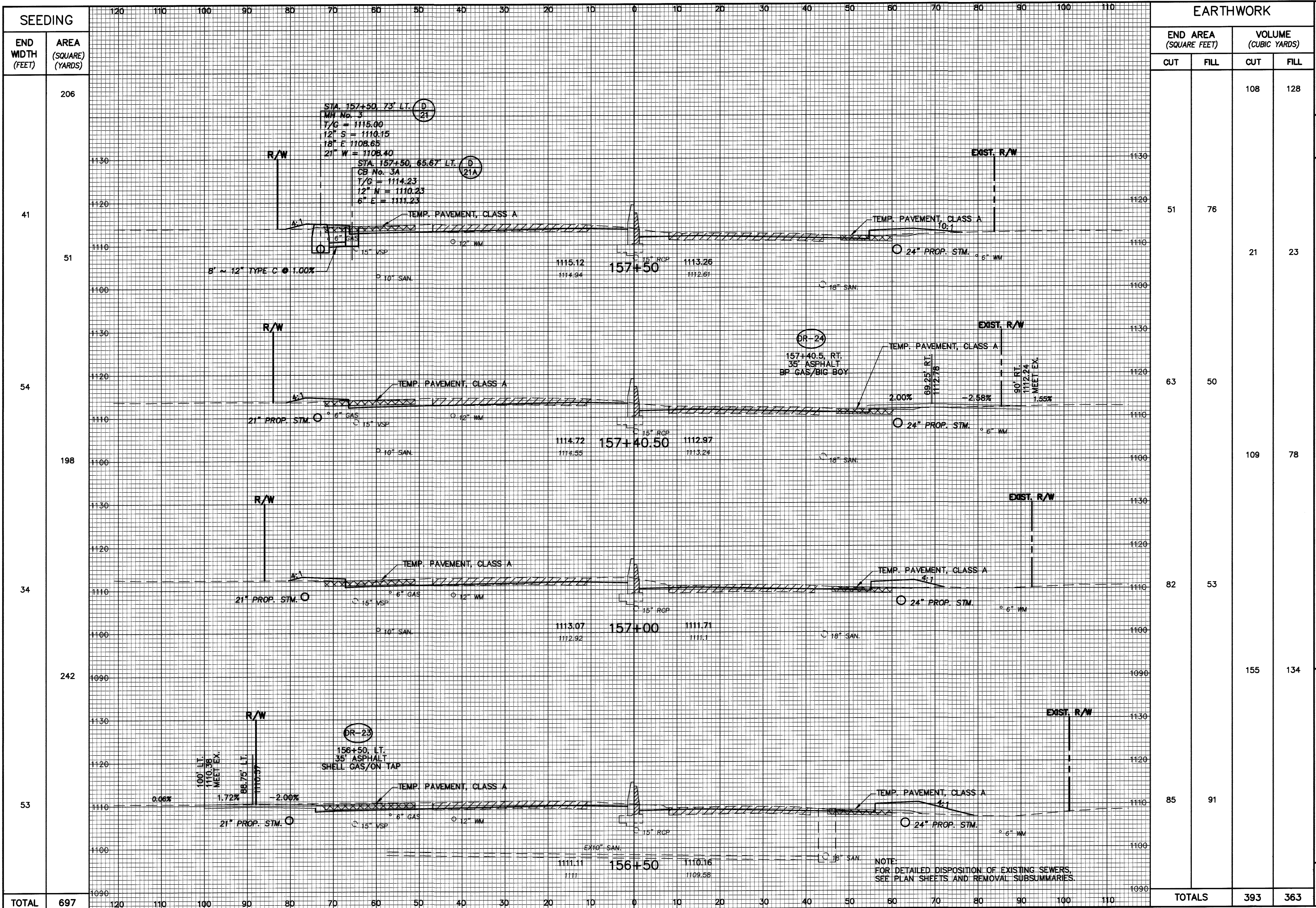
S.R. 18 - CROSS SECTIONS
STA. 155+00 TO STA. 156+00

MED - 18 - 15.13

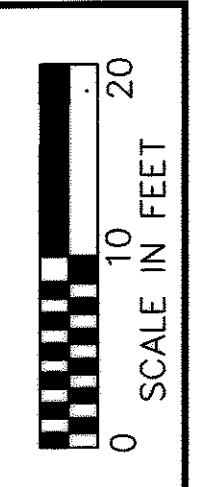
146
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx35.dwg User: jon81152 Jun 27, 2003 11:08am



| EARTHWORK | | | |
|---------------------|------|----------------------|------------|
| END AREA (SQ. FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 108 | 128 |
| 51 | 76 | | |
| | | 21 | 23 |
| 63 | 50 | | |
| | | 109 | 78 |
| 82 | 53 | | |
| | | 155 | 134 |
| 85 | 91 | | |
| TOTALS | | 393 | 363 |



CALCULATED
MAL
CHECKED
RER

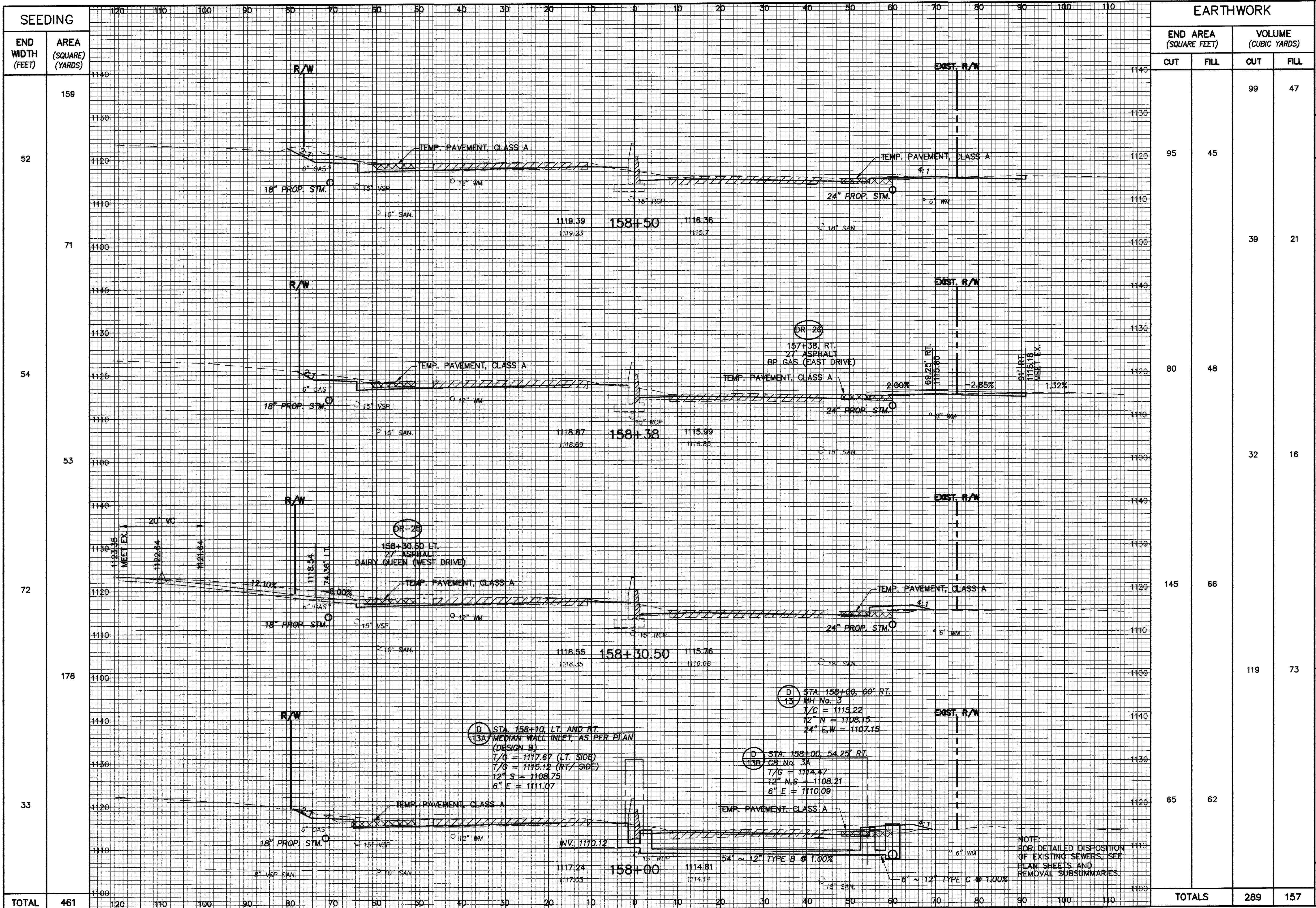
**S.R. 18 - CROSS SECTIONS
STA. 156+50 TO STA. 157+50**

MED - 18 - 15.13

147
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj\3\7050600\roadway\506gx36.dwg User: jon81152 Jun 27, 2003 - 11:09am



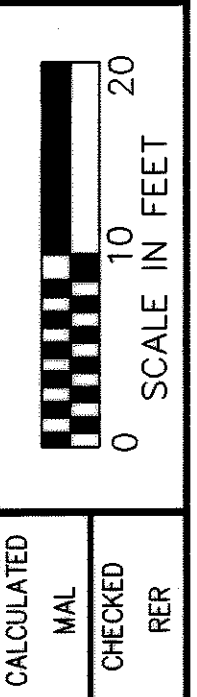
| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 52 | 159 |
| 71 | |
| 54 | |
| 53 | |
| 72 | |
| 178 | |
| 33 | |
| TOTAL | 461 |

| EARTHWORK | | | |
|------------------------|------------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 95 | 45 | 99 | 47 |
| 80 | 48 | 39 | 21 |
| 145 | 66 | 32 | 16 |
| 65 | 62 | 119 | 73 |
| TOTALS | 289 | 289 | 157 |

S.R. 18 - CROSS SECTIONS
STA. 158+00 TO STA. 158+50

MED - 18 - 15.13

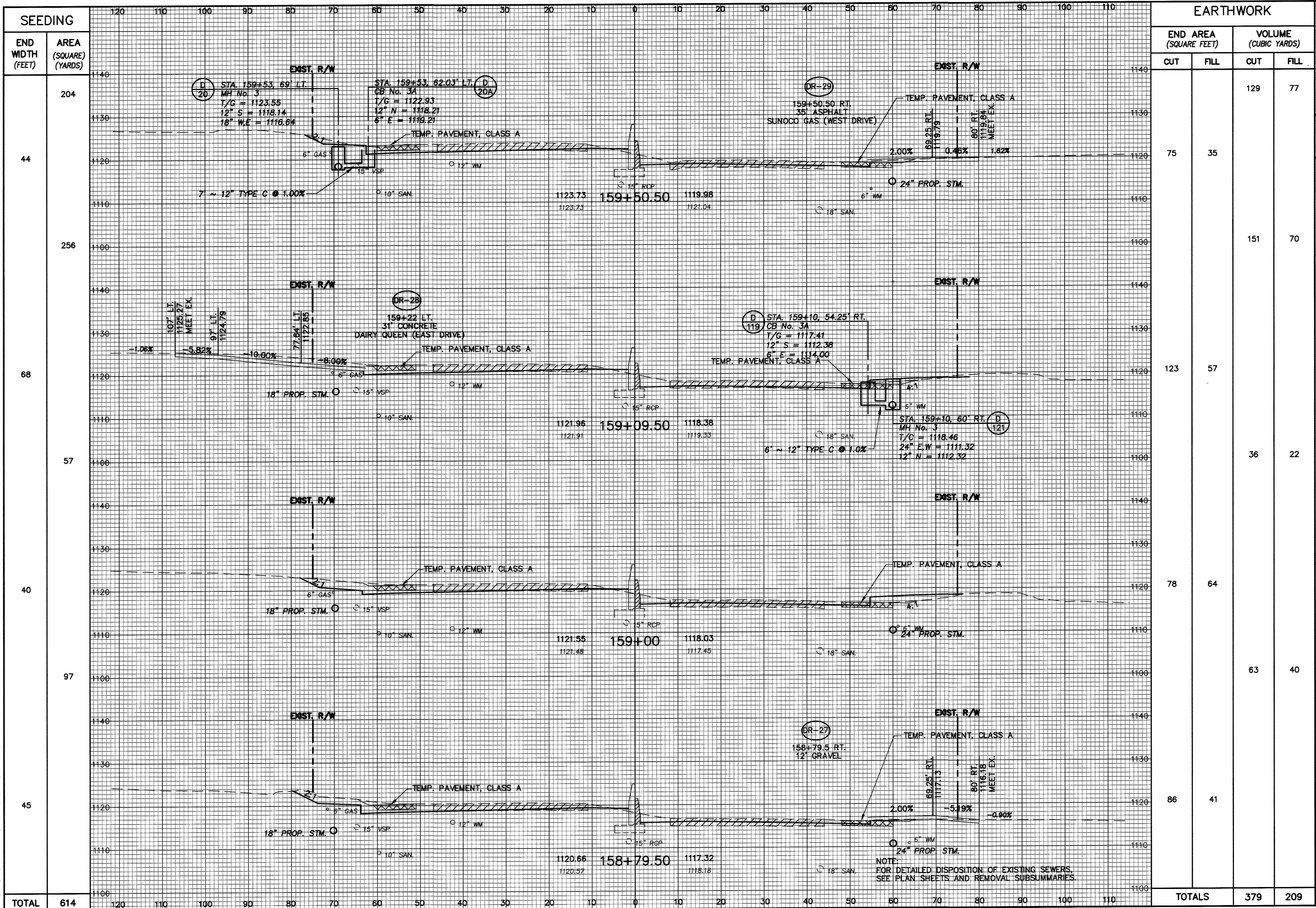
148
362



CALCULATED
MAL
CHECKED
RER

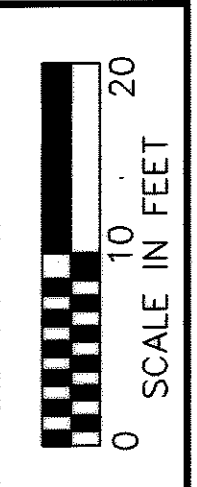
NOTE:
FOR DETAILED DISPOSITION
OF EXISTING SEWERS, SEE
PLAN SHEETS AND
REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gkx37.dwg User: jsm81152 Jun 27, 2003 11:09am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 44 | 204 |
| 68 | 256 |
| 57 | 68 |
| 40 | 57 |
| 97 | 40 |
| 45 | 86 |
| TOTAL | 614 |

| EARTHWORK | | | |
|------------------------|------------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 75 | 35 | 129 | 77 |
| 123 | 57 | 151 | 70 |
| 78 | 64 | 36 | 22 |
| 86 | 41 | 63 | 40 |
| TOTALS | 379 | 379 | 209 |



CALCULATED
MAL
CHECKED
RER

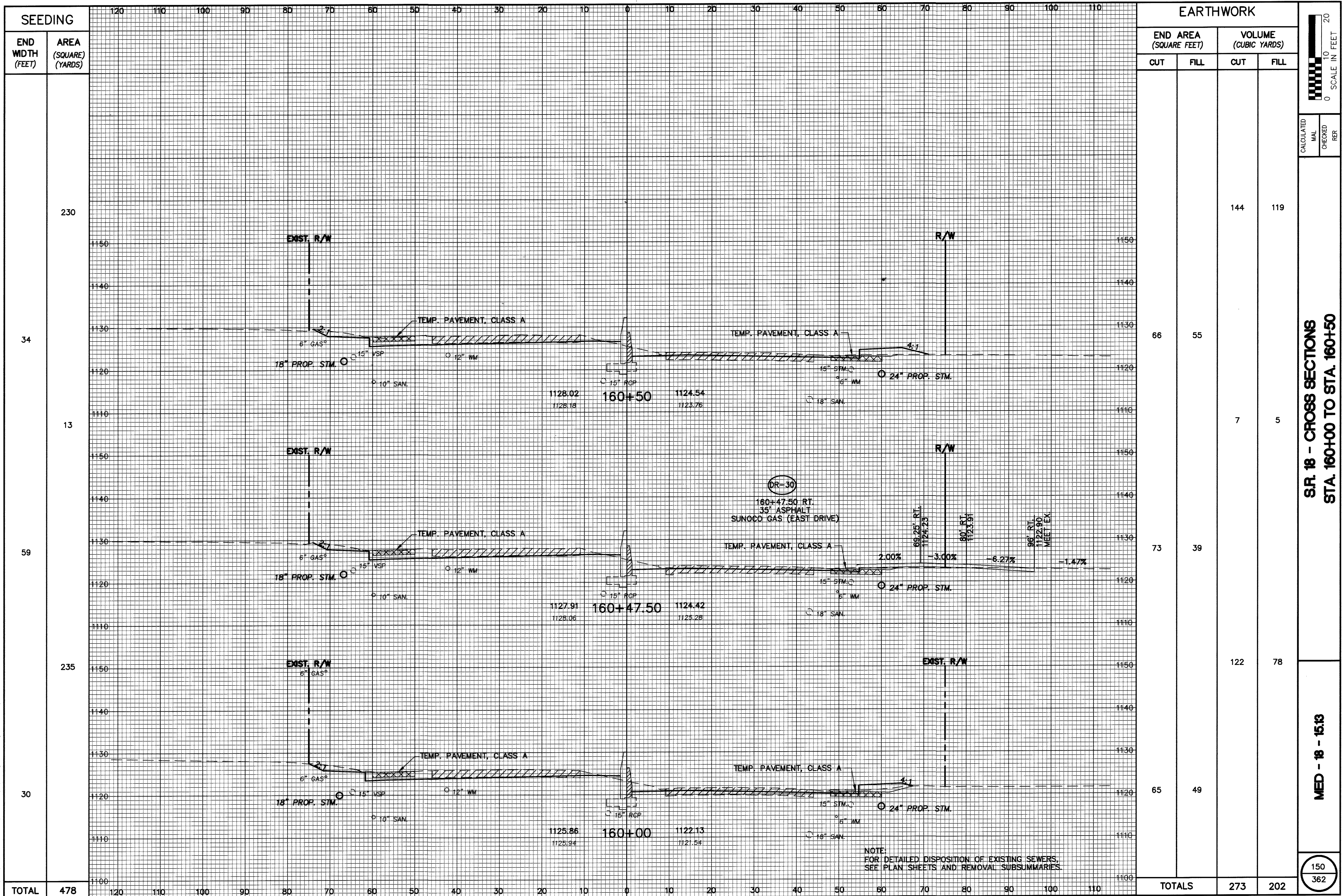
S.R. 18 - CROSS SECTIONS
STA. 158+79.50 TO STA. 159+50.50

MED - 18 - 15.13

149
362

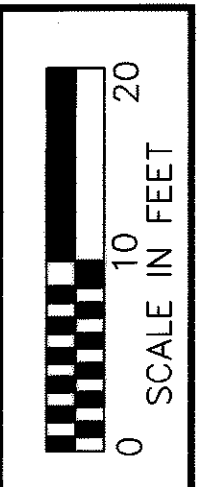
NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx38.dwg User: jms81152 Jun 27, 2003 11:09am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 230 | |
| 34 | |
| 13 | |
| 59 | |
| 235 | |
| 30 | |
| TOTAL | 478 |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 144 | 119 |
| 66 | 55 | | |
| | | 7 | 5 |
| 73 | 39 | | |
| | | 122 | 78 |
| 65 | 49 | | |
| TOTALS | | 273 | 202 |



| | | | |
|------------|-----|---------|-----|
| CALCULATED | MAL | CHECKED | REV |
|------------|-----|---------|-----|

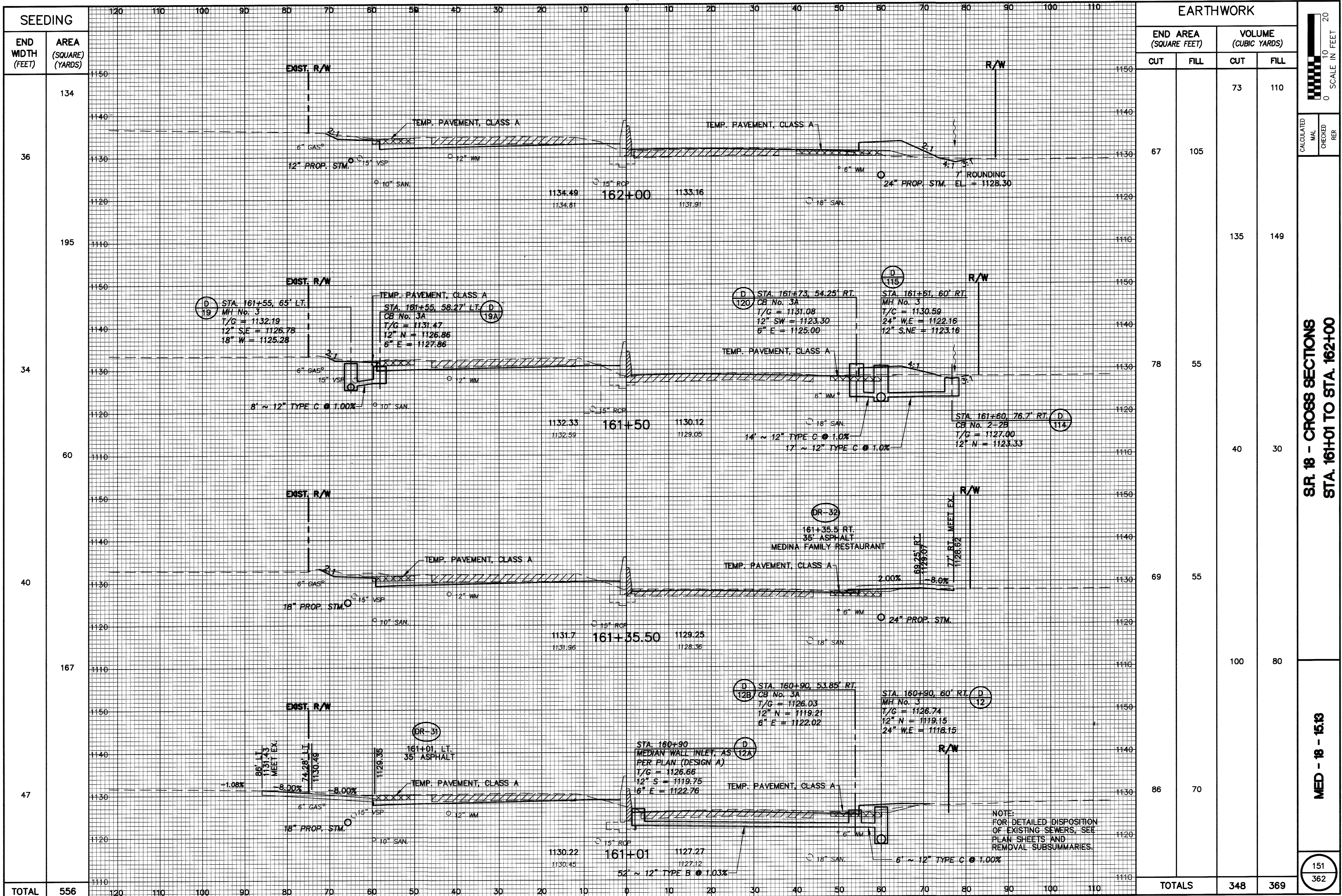
**S.P. 18 - CROSS SECTIONS
STA. 160+00 TO STA. 160+50**

MED - 18 - 15.13

150
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj\3\7050600\roadway\506gx39.dwg User: jnm81152 Jun 27, 2003 11:09am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 36 | 134 |
| 34 | 195 |
| 60 | 195 |
| 40 | 167 |
| 47 | 167 |
| TOTAL | 556 |

| EARTHWORK | | | |
|------------------------|------------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 67 | 105 | 73 | 110 |
| 78 | 55 | 135 | 149 |
| 69 | 55 | 40 | 30 |
| 86 | 70 | 100 | 80 |
| TOTALS | 348 | 348 | 369 |



CALCULATED
MAL
CHECKED
RER

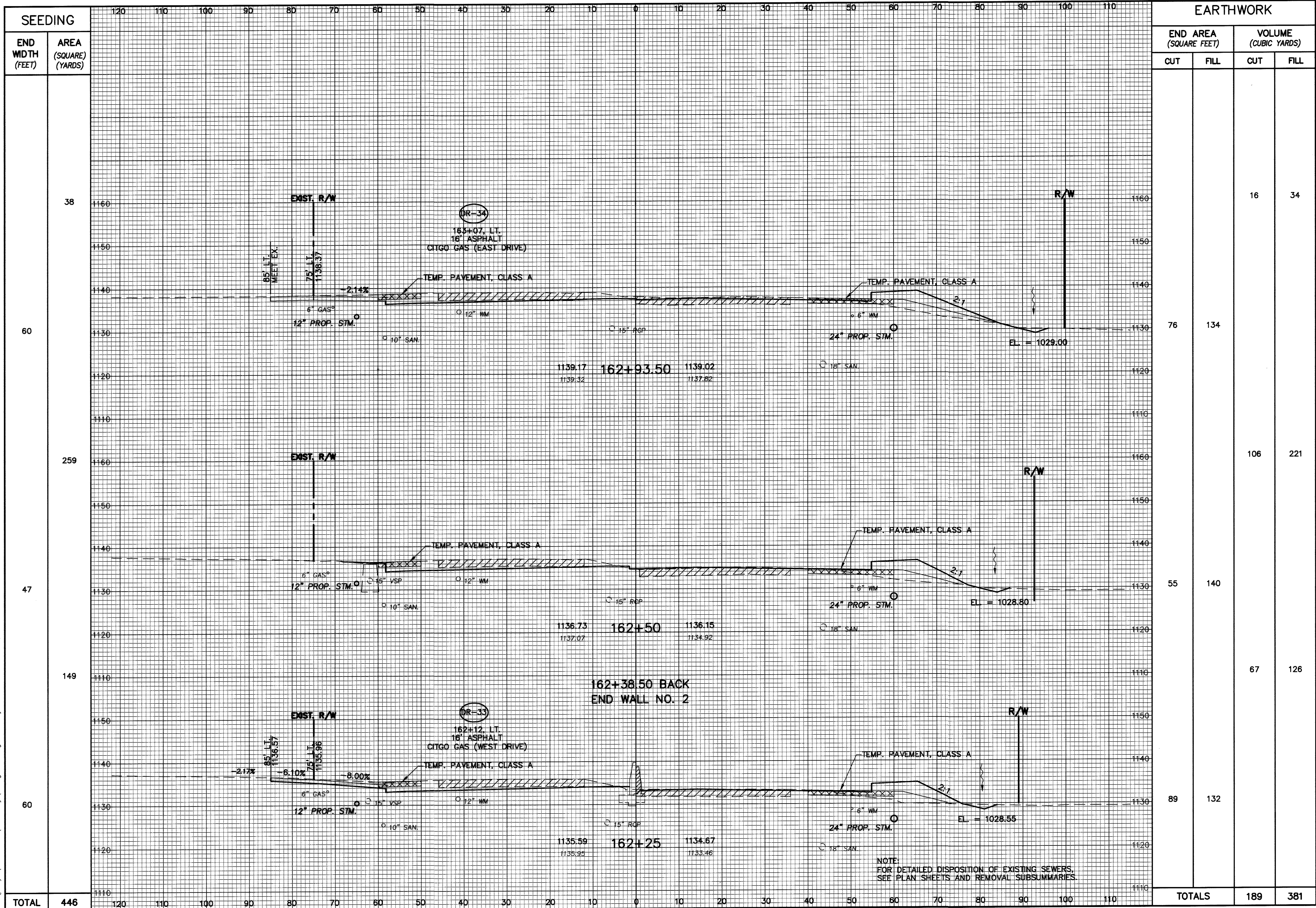
S.R. 18 - CROSS SECTIONS
STA. 161+01 TO STA. 162+00

MED - 18 - 15.13

151
362

NOTE:
FOR DETAILED DISPOSITION
OF EXISTING SEWERS, SEE
PLAN SHEETS AND
REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx40.dwg User: jmn81152 Jun 27, 2003 11:10am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 38 | |
| 60 | |
| 259 | |
| 47 | |
| 149 | |
| 60 | |
| TOTAL | 446 |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 16 | 34 |
| 76 | 134 | | |
| | | 106 | 221 |
| 55 | 140 | | |
| | | 67 | 126 |
| 89 | 132 | | |
| TOTALS | | 189 | 381 |



CALCULATED
MAL
CHECKED
RER

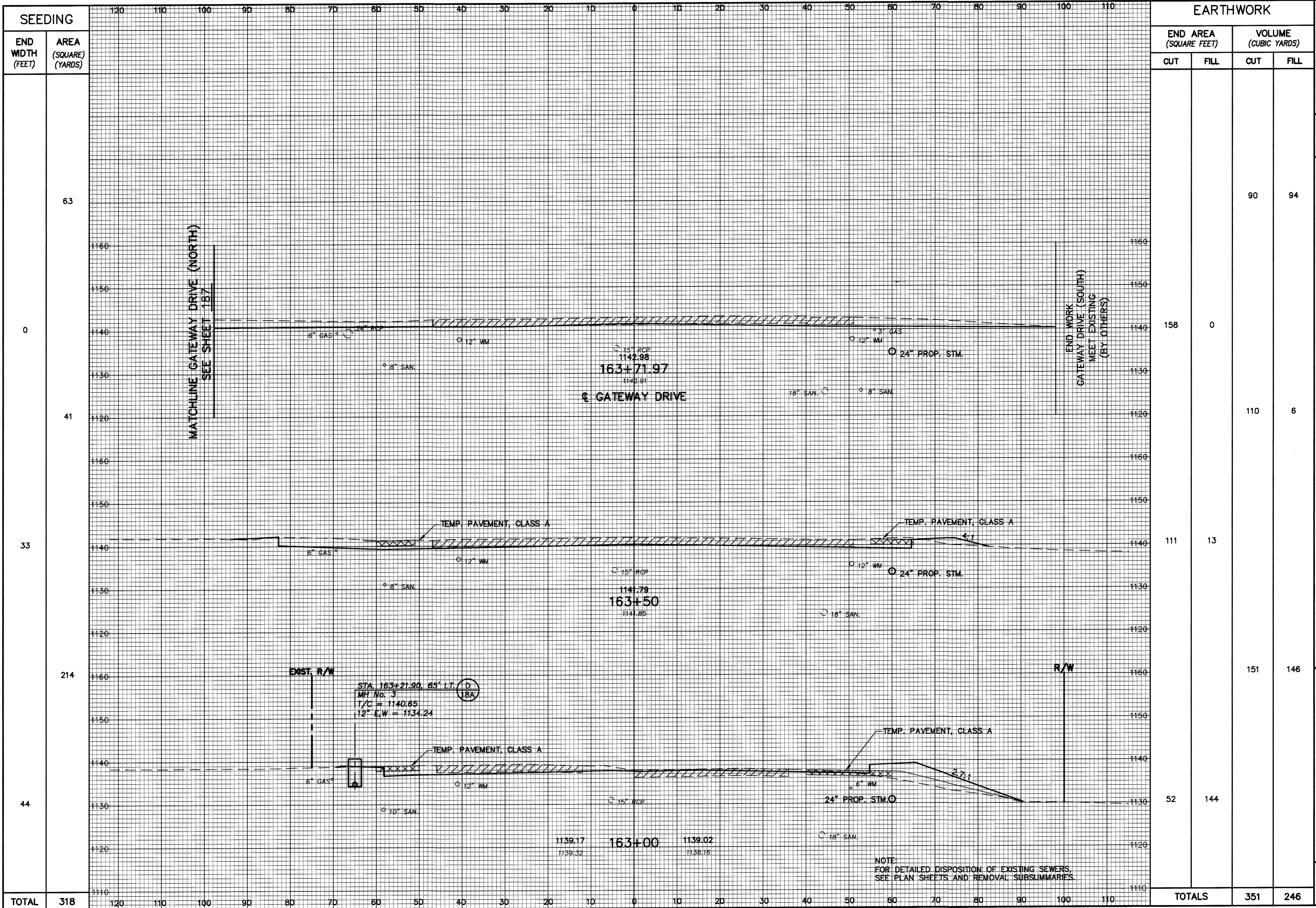
**S.R. 18 - CROSS SECTIONS
STA. 162+25 TO STA. 162+95.50**

MED - 18 - 15.13

152
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx41.dwg User: jon81152 Jun 27, 2003 11:10am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 63 | |
| 0 | |
| 41 | |
| 33 | |
| 214 | |
| 44 | |
| TOTAL | 318 |

| EARTHWORK | | | |
|---------------------|------|----------------------|------------|
| END AREA (SQ. FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 90 | 94 |
| 158 | 0 | | |
| | | 110 | 6 |
| | | | |
| | | 111 | 13 |
| | | | |
| | | 151 | 146 |
| | | | |
| 52 | 144 | | |
| TOTALS | | 351 | 246 |

SCALE IN FEET

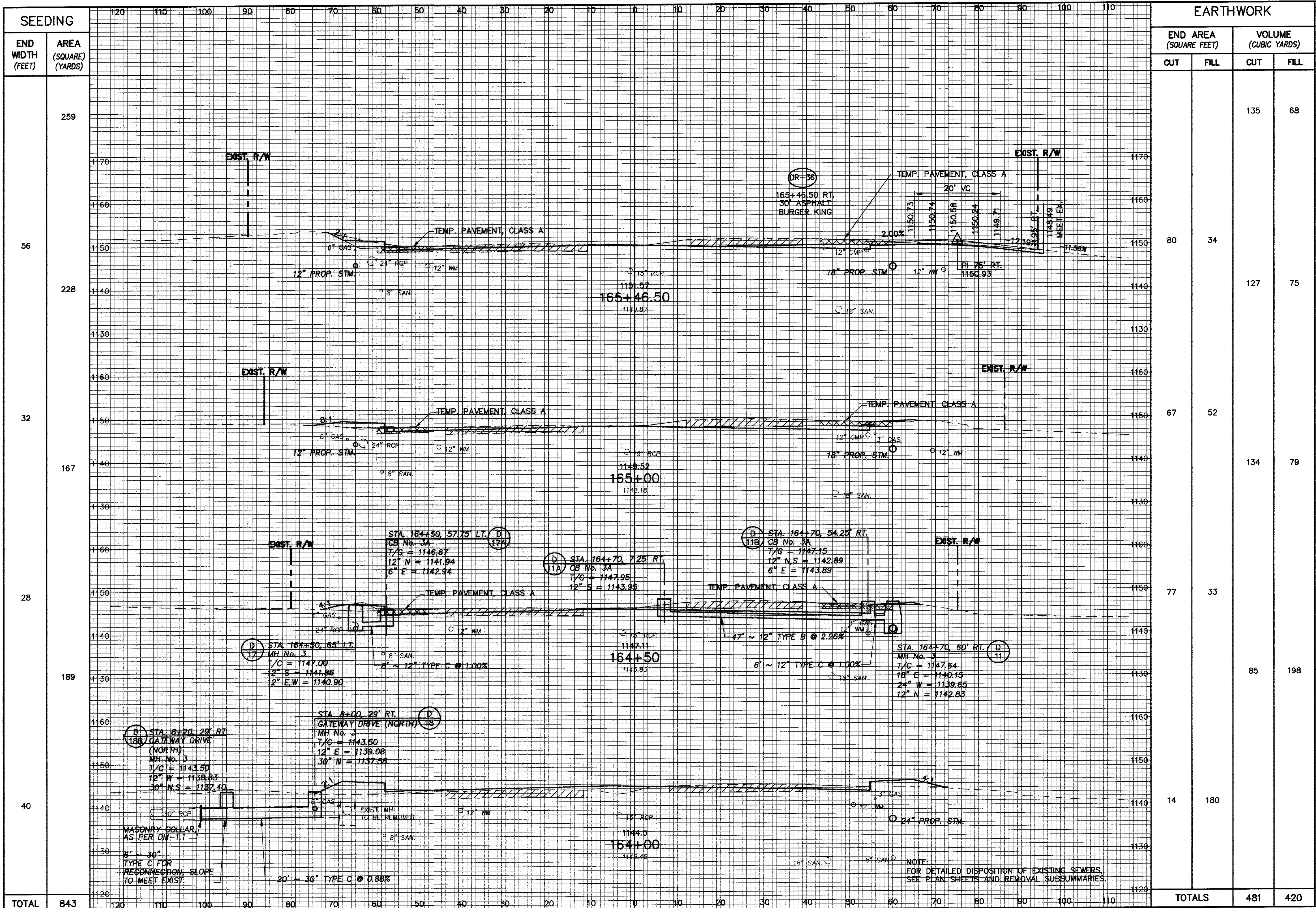
| | |
|------------|--|
| CALCULATED | |
| MAL | |
| CHECKED | |
| REF | |

S.R. 18 - CROSS SECTIONS
STA. 163+00 TO STA. 163+71.97

MED - 18 - 15.13

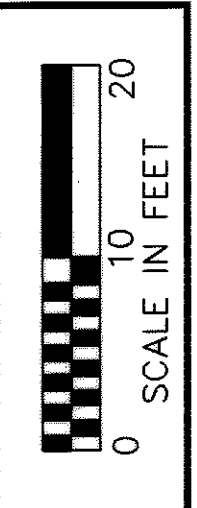
153
362

J:\proj\3\7050600\roadway\506gv42.dwg User: jcm81152 Jun 27, 2003 11:10am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 56 | 259 |
| 32 | |
| 167 | |
| 28 | |
| 189 | |
| 40 | |
| TOTAL | 843 |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 80 | 34 | 135 | 68 |
| 67 | 52 | 127 | 75 |
| 77 | 33 | 134 | 79 |
| 14 | 180 | 85 | 198 |
| TOTALS | | 481 | 420 |



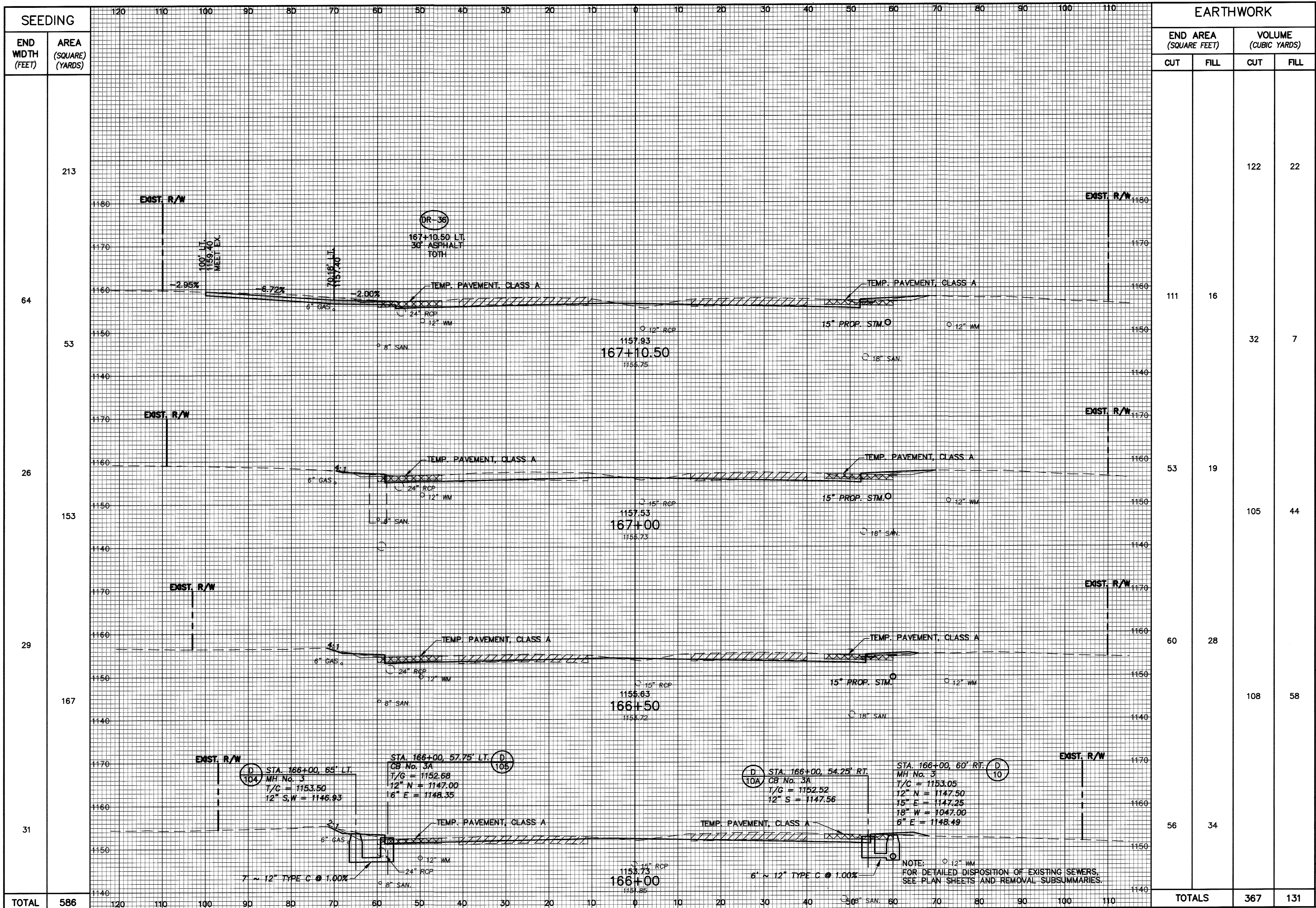
S.R. 18 - CROSS SECTIONS
STA. 164+00 TO STA. 165+46.50

MED - 18 - 15.13

154
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx43.dwg User: jon81152 Jun 27, 2003 - 11:11am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 213 | |
| 64 | |
| 53 | |
| 26 | |
| 153 | |
| 29 | |
| 167 | |
| 31 | |
| TOTAL | 586 |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 122 | 22 |
| 111 | 16 | 32 | 7 |
| 53 | 19 | 105 | 44 |
| 60 | 28 | 108 | 58 |
| 56 | 34 | | |
| TOTALS | | 367 | 131 |



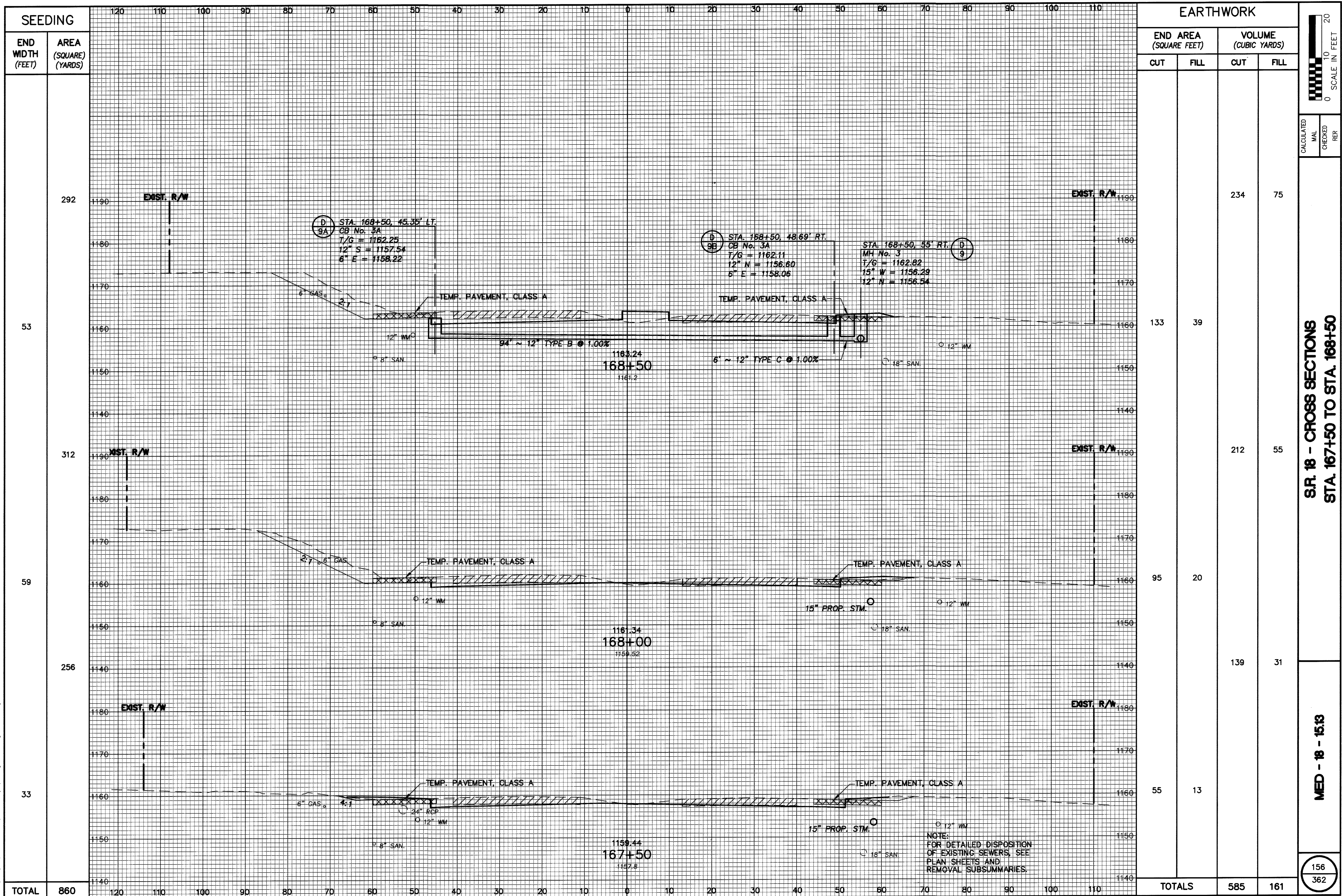
CALCULATED
MAL
CHECKED
RER

S.R. 18 - CROSS SECTIONS
STA. 166+00 TO STA. 167+10.50

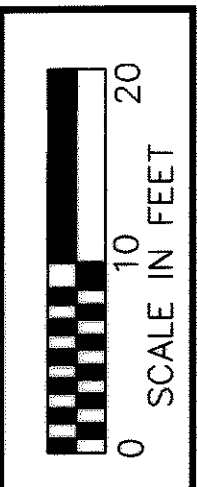
MED - 18 - 15.13

155
362

J:\proj3\7050600\roadway\506gx44.dwg User: jom81152 Jun 27, 2003 11:11am



| SEEDING | | EARTHWORK | | | |
|------------------|---------------------|------------------------|------|----------------------|------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) | END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| | | CUT | FILL | CUT | FILL |
| 292 | | | | 234 | 75 |
| 53 | | 133 | 39 | | |
| 312 | | | | 212 | 55 |
| 59 | | 95 | 20 | | |
| 256 | | | | 139 | 31 |
| 33 | | 55 | 13 | | |
| TOTAL | 860 | | | 585 | 161 |



CALCULATED
MAL
CHECKED
PER

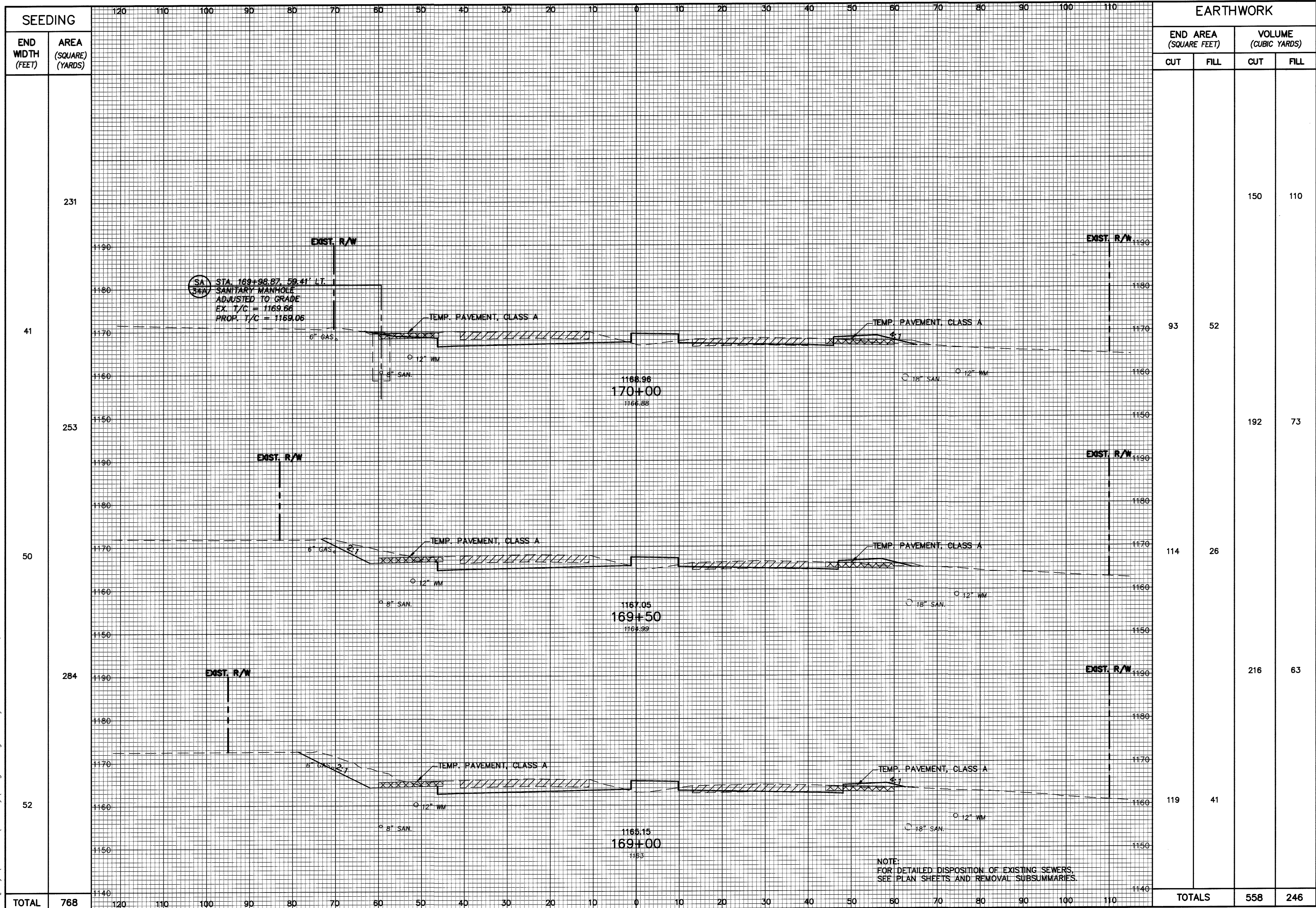
**S.P. 18 - CROSS SECTIONS
STA. 167+50 TO STA. 168+50**

MED - 18 - 15.13

156
362

NOTE:
FOR DETAILED DISPOSITION
OF EXISTING SEWERS, SEE
PLAN SHEETS AND
REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx45.dwg User: jan81152 Jun 27, 2003 - 11:11am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 41 | 231 |
| 50 | 253 |
| 52 | 284 |
| TOTAL | 768 |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 93 | 52 | 150 | 110 |
| 114 | 26 | 192 | 73 |
| 119 | 41 | 216 | 63 |
| TOTALS | | 558 | 246 |



CALCULATED
MAL
CHECKED
RER

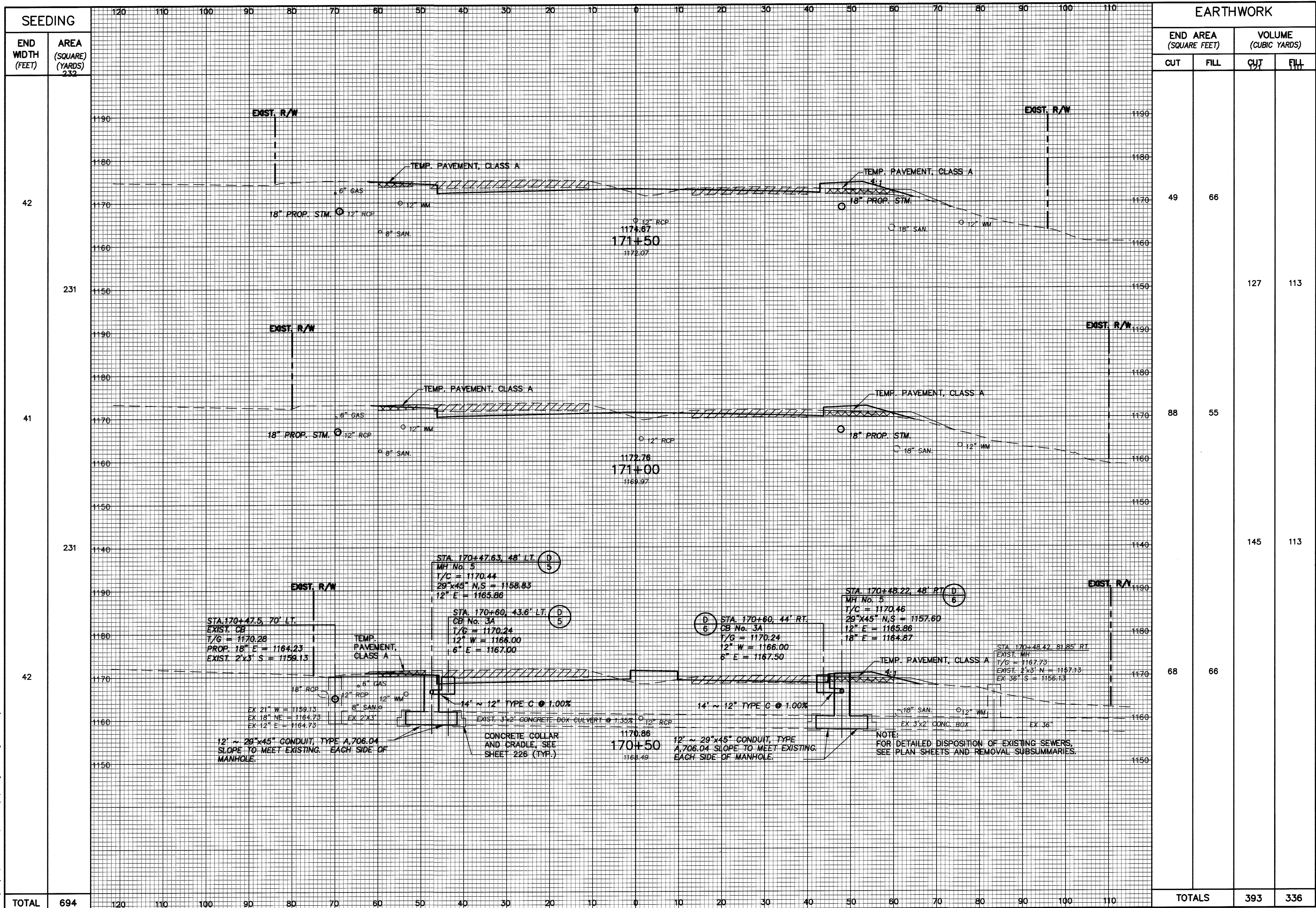
**S.R. 18 - CROSS SECTIONS
STA. 169+00 TO STA. 170+00**

MED - 18 - 15.13

157
362

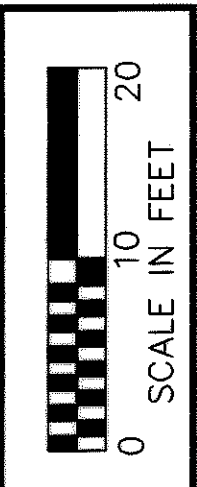
NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx46.dwg User: jom81152 Jun 27, 2003 11:12am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 42 | 232 |
| 41 | 231 |
| 42 | 231 |
| TOTAL | 694 |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 49 | 66 | 127 | 113 |
| 88 | 55 | 145 | 113 |
| 68 | 66 | | |
| TOTALS | | 393 | 336 |

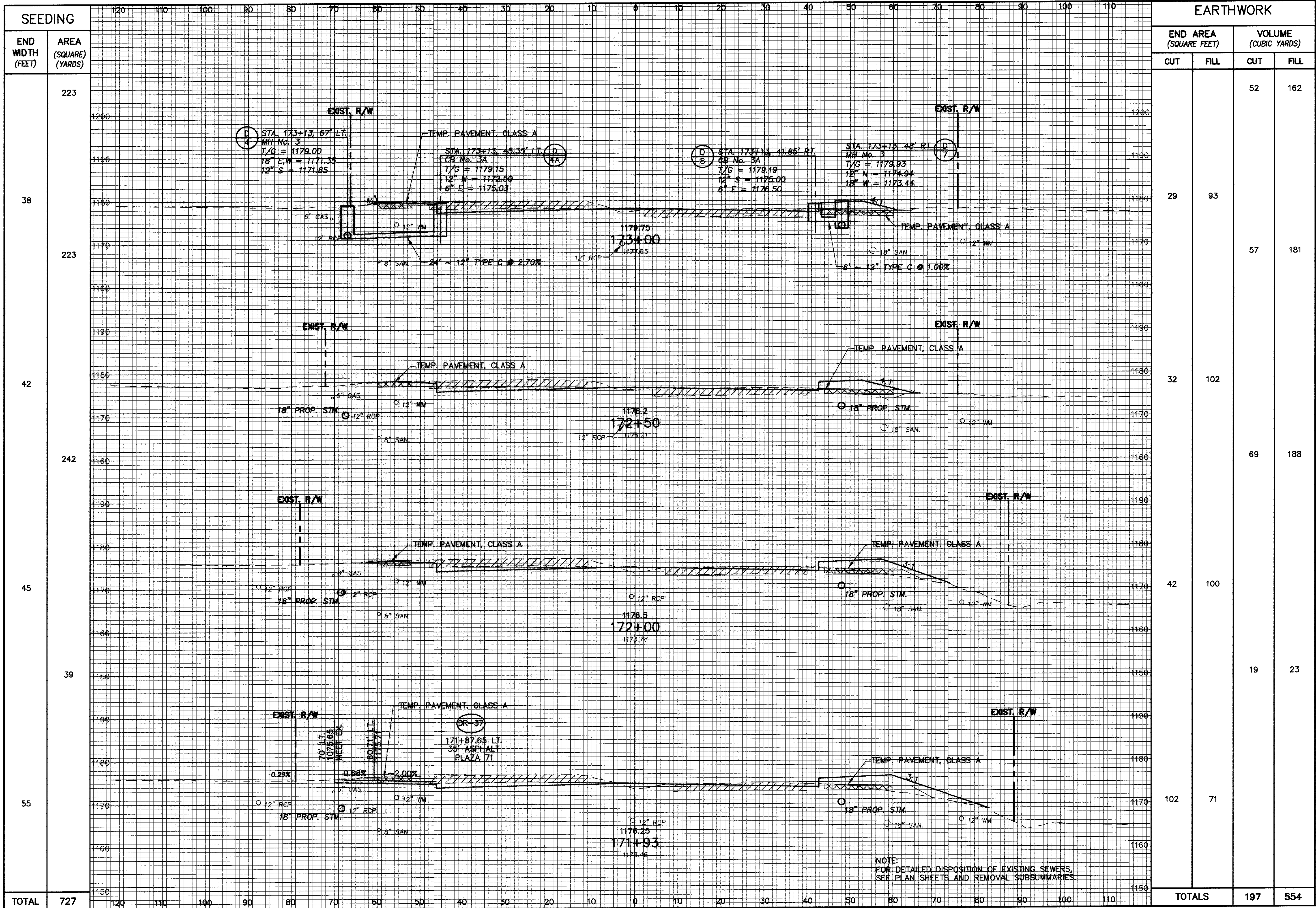


CALCULATED
MAL
CHECKED
RER

**S.R. 18 - CROSS SECTIONS
STA. 170+93 TO STA. 171+50**

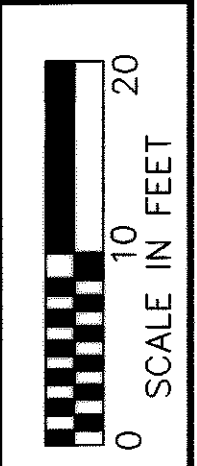
MED - 18 - 15.13

J:\pro3\7050600\roadway\506qx47.dwg User: jon81152 Jun 27, 2003 - 11:12am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 38 | 223 |
| 42 | 223 |
| 45 | 242 |
| 55 | 39 |
| TOTAL | 727 |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 29 | 93 | 52 | 162 |
| | | 57 | 181 |
| 32 | 102 | | |
| | | 69 | 188 |
| 42 | 100 | | |
| | | 19 | 23 |
| TOTALS | | 197 | 554 |



CALCULATED
MAL
CHECKED
RER

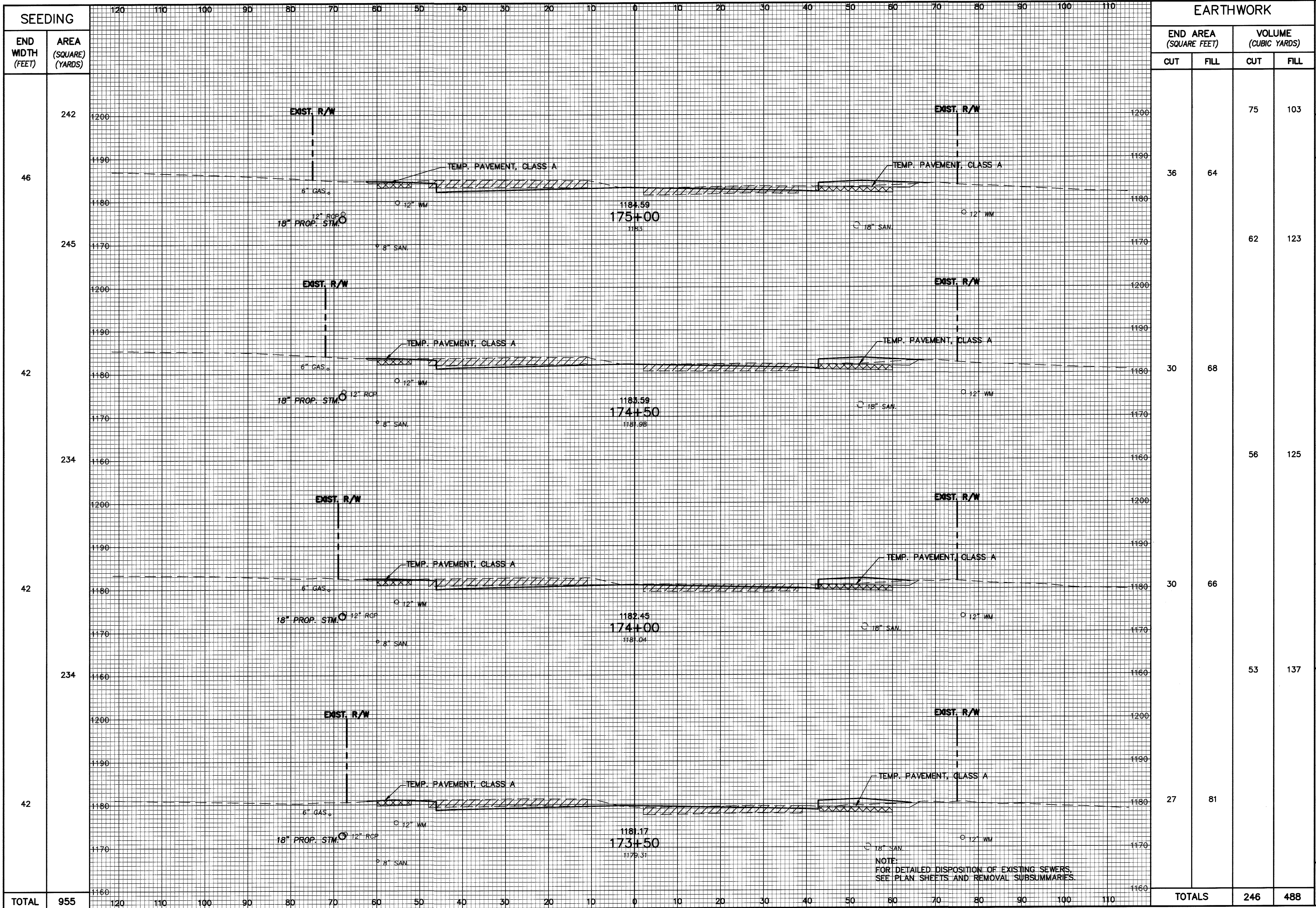
**S.R. 18 - CROSS SECTIONS
STA. 171+93 TO STA. 173+00**

MED - 18 - 15.13

159
362

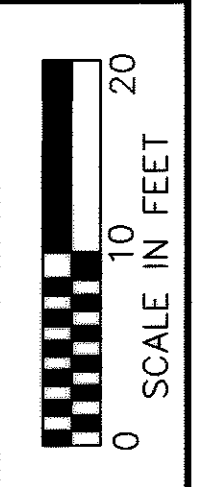
NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

j:\pro3\7050600\roadway\506gx48.dwg User: jon81152 Jun 27, 2003 11:12am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 242 | 242 |
| 46 | 46 |
| 245 | 245 |
| 42 | 42 |
| 234 | 234 |
| 42 | 42 |
| 234 | 234 |
| 42 | 42 |
| TOTAL | 955 |

| EARTHWORK | | | |
|------------------------|------------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 36 | 64 | 75 | 103 |
| 30 | 68 | 62 | 123 |
| 30 | 66 | 56 | 125 |
| 27 | 81 | 53 | 137 |
| TOTALS | 246 | 246 | 488 |



CALCULATED
MAL
CHECKED
RER

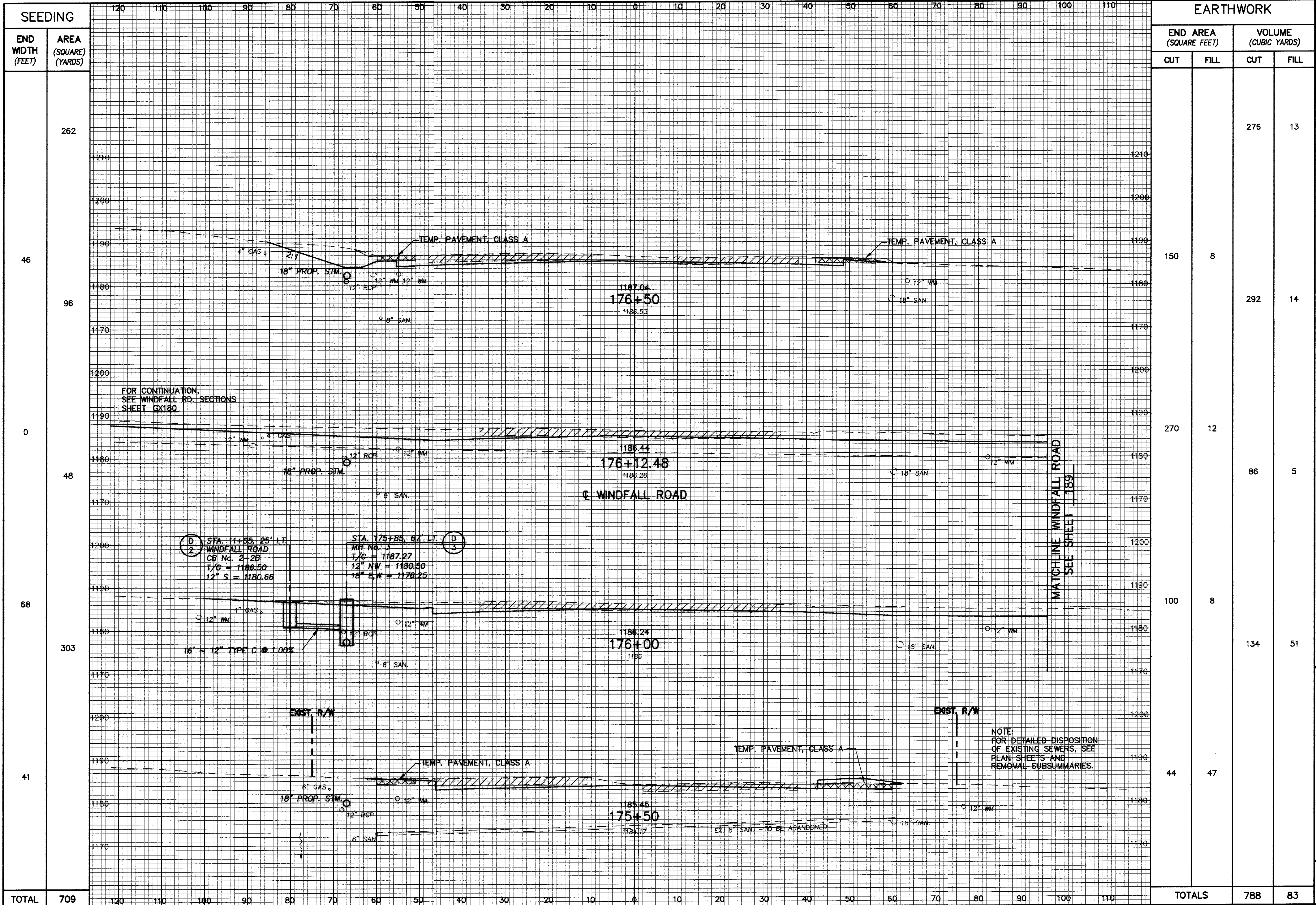
**S.R. 18 - CROSS SECTIONS
STA. 173+50 TO STA. 175+00**

MED - 18 - 15.13

160
362

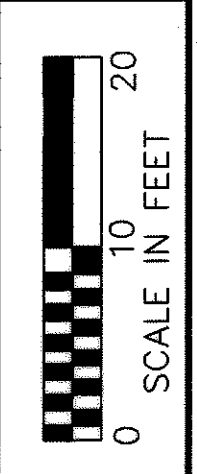
NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx49.dwg User: jon81152 Jun 27, 2003 - 11:12am



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 262 | |
| 46 | |
| 96 | |
| 0 | |
| 48 | |
| 68 | |
| 303 | |
| 41 | |
| TOTAL | 709 |

| EARTHWORK | | | |
|------------------------|------|----------------------|-----------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 276 | 13 |
| 150 | 8 | 292 | 14 |
| 270 | 12 | 86 | 5 |
| 100 | 8 | 134 | 51 |
| 44 | 47 | | |
| TOTALS | | 788 | 83 |



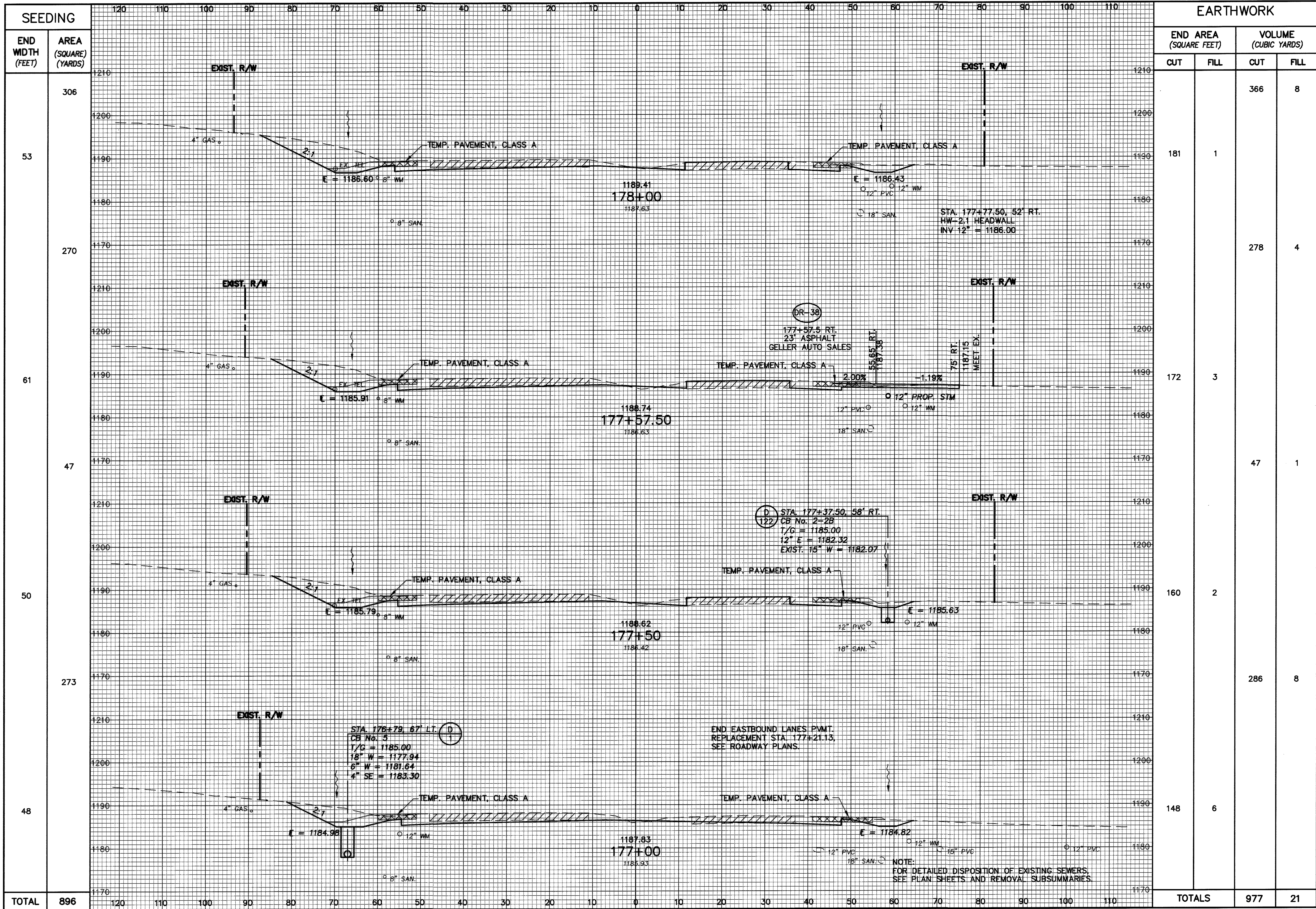
CALCULATED
MAL
CHECKED
PER

**S.R. 18 - CROSS SECTIONS
STA. 175+50 TO STA. 176+50**

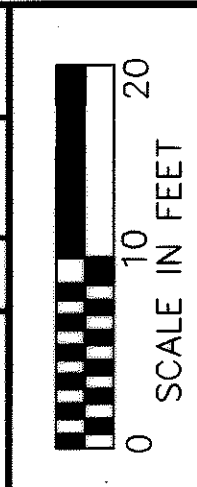
MED - 18 - 15.13

161
362

J:\pro3\7050600\roadway\506gx50.dwg User: jon81152 Jun 27, 2003 - 11:13am



| SEEDING | | EARTHWORK | | | |
|------------------|---------------------|------------------------|------|----------------------|-----------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) | END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| | | CUT | FILL | CUT | FILL |
| 53 | 306 | 181 | 1 | 366 | 8 |
| 270 | | | | 278 | 4 |
| 61 | | 172 | 3 | | |
| 47 | | | | 47 | 1 |
| 50 | | 160 | 2 | | |
| 273 | | | | 286 | 8 |
| 48 | | 148 | 6 | | |
| TOTAL | 896 | TOTALS | | 977 | 21 |



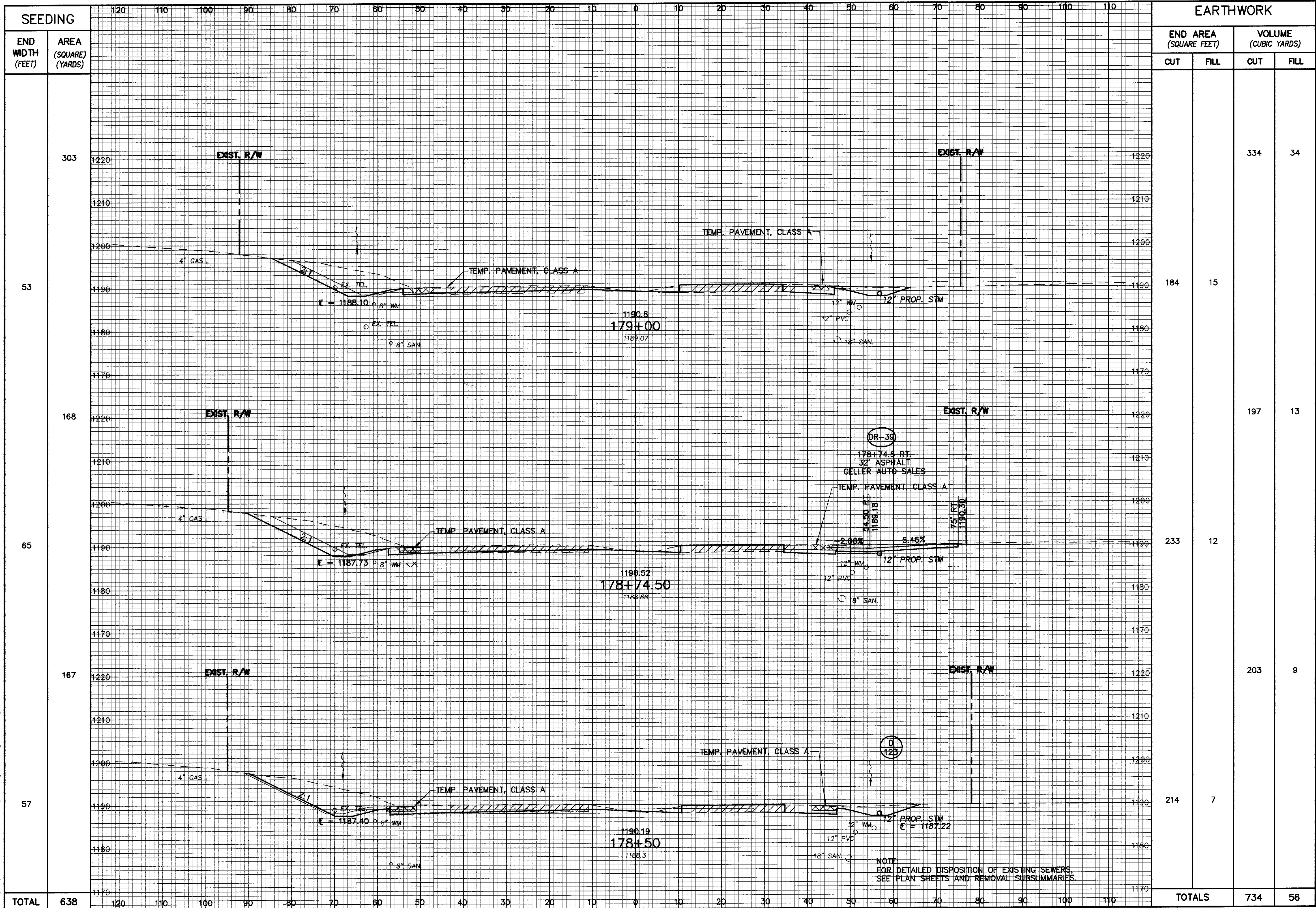
CALCULATED
MAL
CHECKED
RER

**S.R. 18 - CROSS SECTIONS
STA. 177+00 TO STA. 178+00**

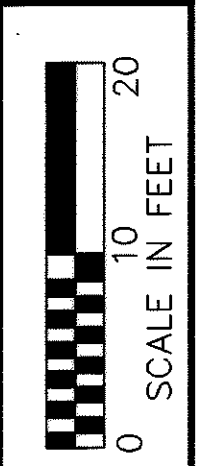
MED - 18 - 15.13

162
362

J:\proj3\7050600\roadway\506gx51.dwg User: jnm81152 Jun 27, 2003 11:13am



| SEEDING | | EARTHWORK | | | |
|------------------|---------------------|------------------------|------|----------------------|-----------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) | END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| | | CUT | FILL | CUT | FILL |
| 303 | | | | 334 | 34 |
| 53 | | 184 | 15 | | |
| 168 | | | | 197 | 13 |
| 65 | | 233 | 12 | | |
| 167 | | | | 203 | 9 |
| 57 | | 214 | 7 | | |
| TOTAL | 638 | | | 734 | 56 |



CALCULATED
MAL
CHECKED
RER

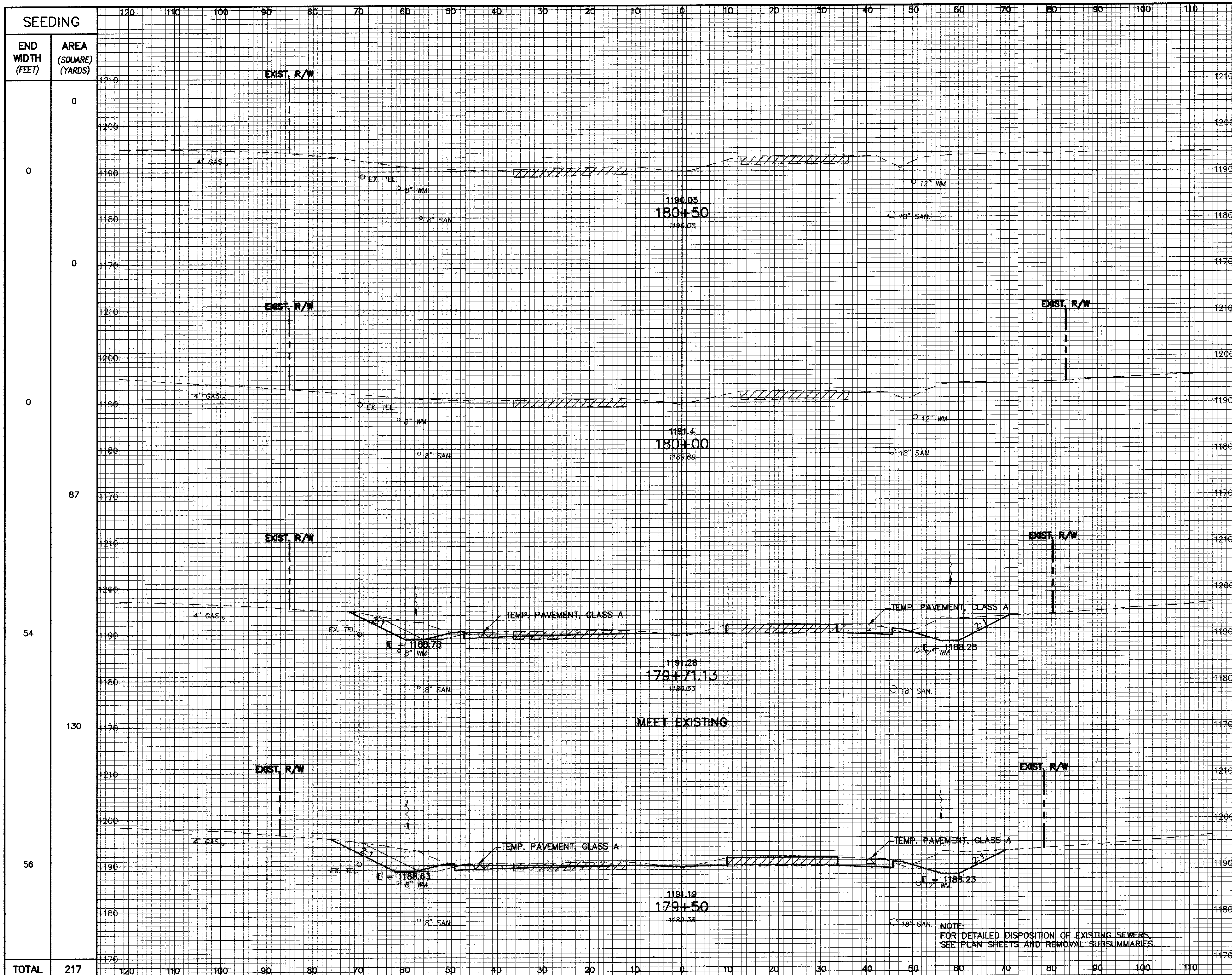
**S.R. 18 - CROSS SECTIONS
STA. 178+50 TO STA. 179+00**

MED - 18 - 15.13

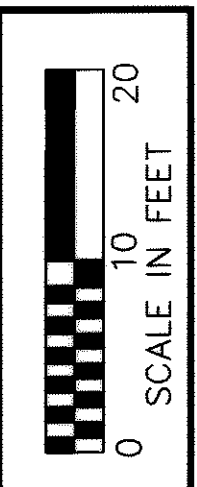
163
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.

J:\proj3\7050600\roadway\506gx52.dwg User: jom81152 Jun 27, 2003 11:13am



| SEEDING | | EARTHWORK | | | |
|------------------|---------------------|------------------------|------|----------------------|-----------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) | END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| | | CUT | FILL | CUT | FILL |
| 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 |
| 87 | 87 | 0 | 0 | 83 | 14 |
| 54 | 54 | 155 | 25 | 130 | 18 |
| 130 | 130 | 176 | 21 | | |
| TOTAL | 217 | | | 213 | 32 |



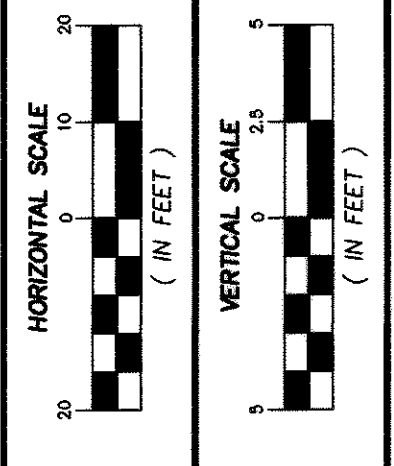
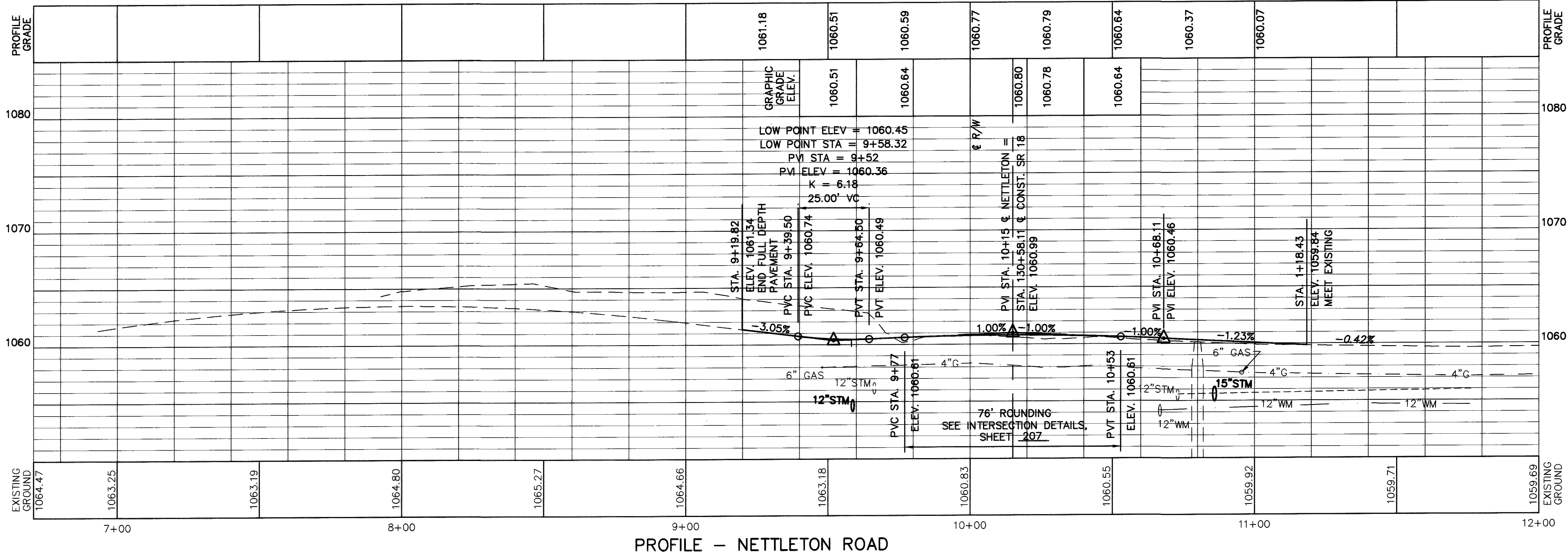
CALCULATED
MAL
CHECKED
RER

**S.R. 18 - CROSS SECTIONS
STA. 179+50 TO STA. 180+50**

MED - 18 - 15.13

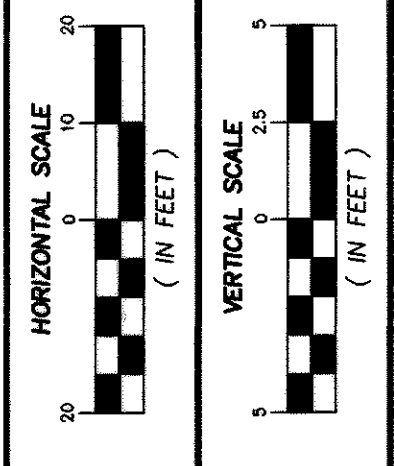
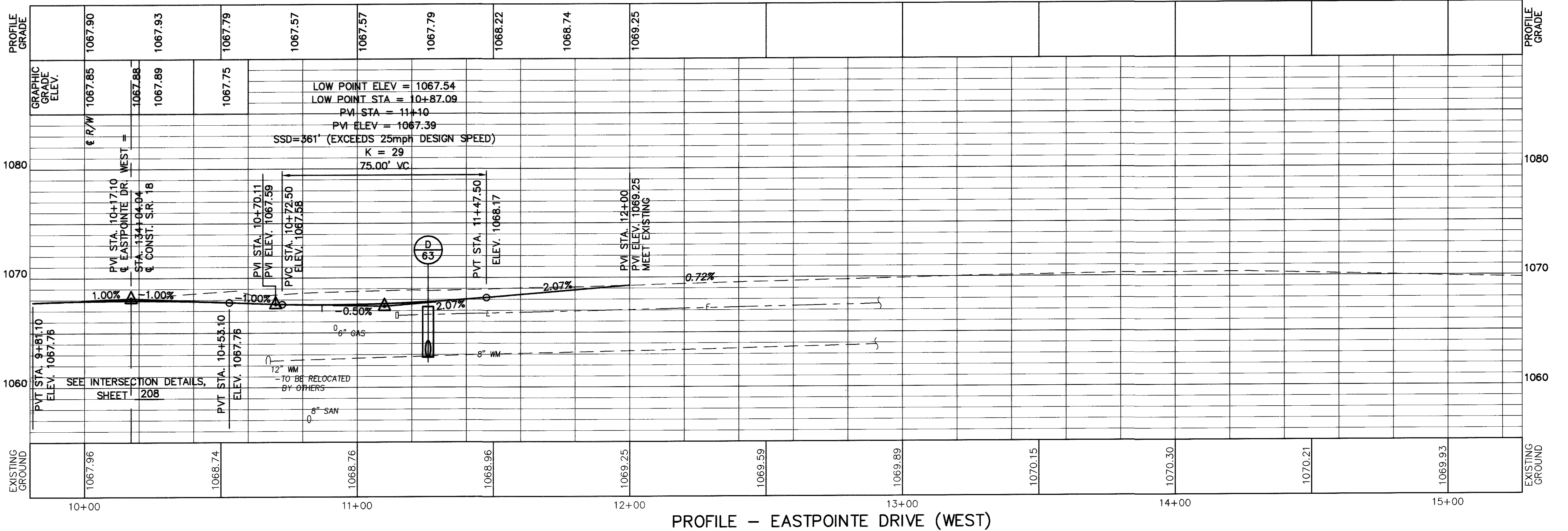
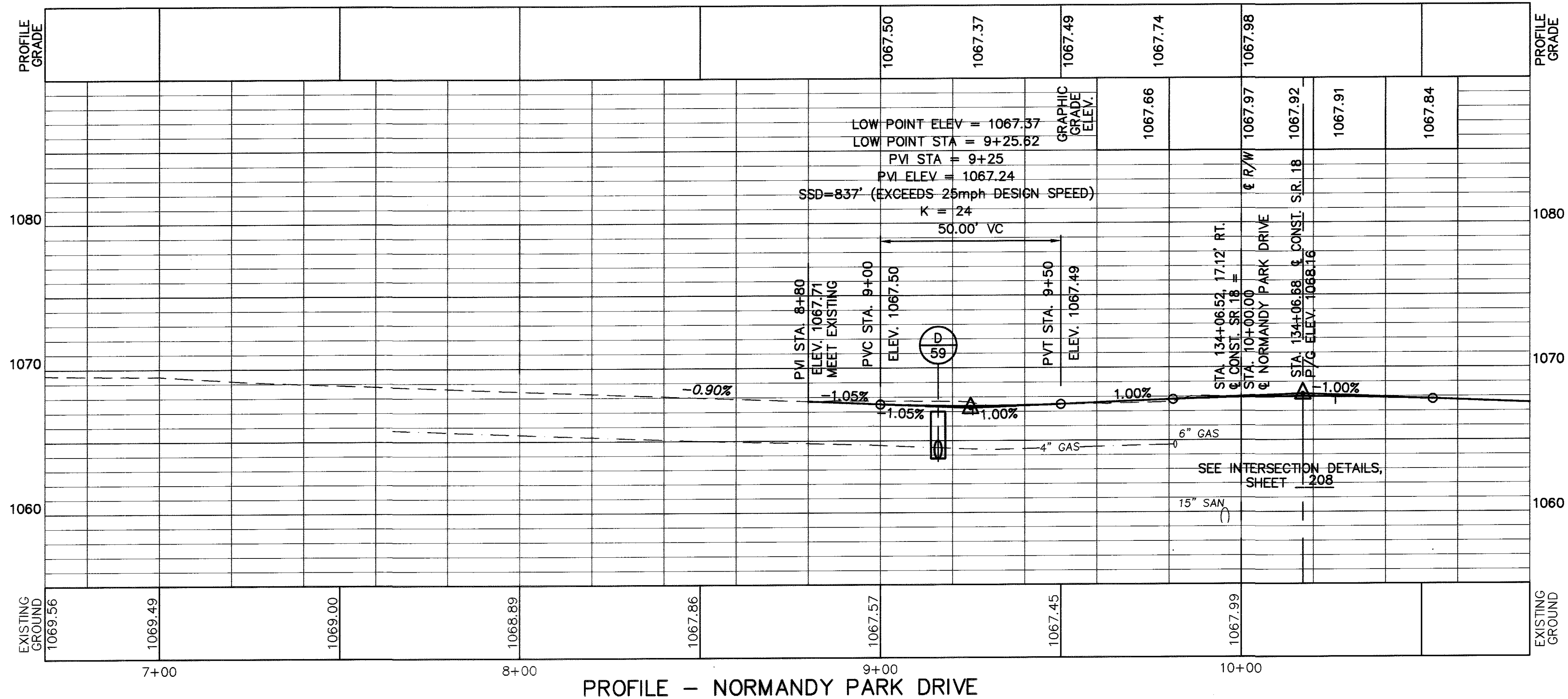
164
362

NOTE:
FOR DETAILED DISPOSITION OF EXISTING SEWERS,
SEE PLAN SHEETS AND REMOVAL SUBSUMMARIES.



CALCULATED
 CHECKED

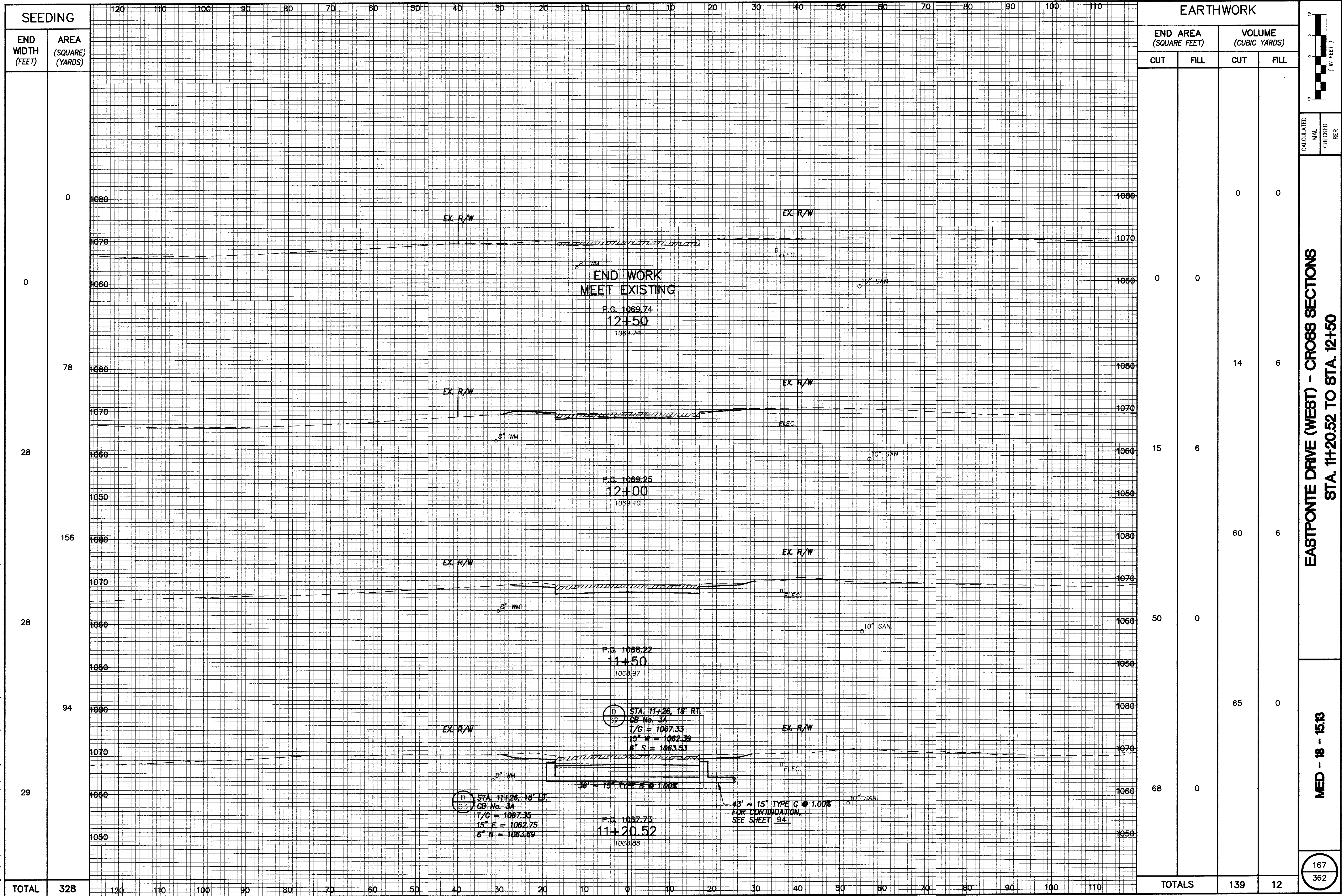
NETTLETON ROAD PROFILE



CALCULATED
 CHECKED

NORMANDY PARK DRIVE PROFILE
EASTPOINTE DRIVE (WEST) PROFILE

J:\proj3\7050600\roadway\506gx150.dwg User: jon81152 Jun 26, 2003 7:22pm



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 0 | |
| 0 | |
| 78 | |
| 28 | |
| 156 | |
| 28 | |
| 94 | |
| 29 | |
| TOTAL | 328 |

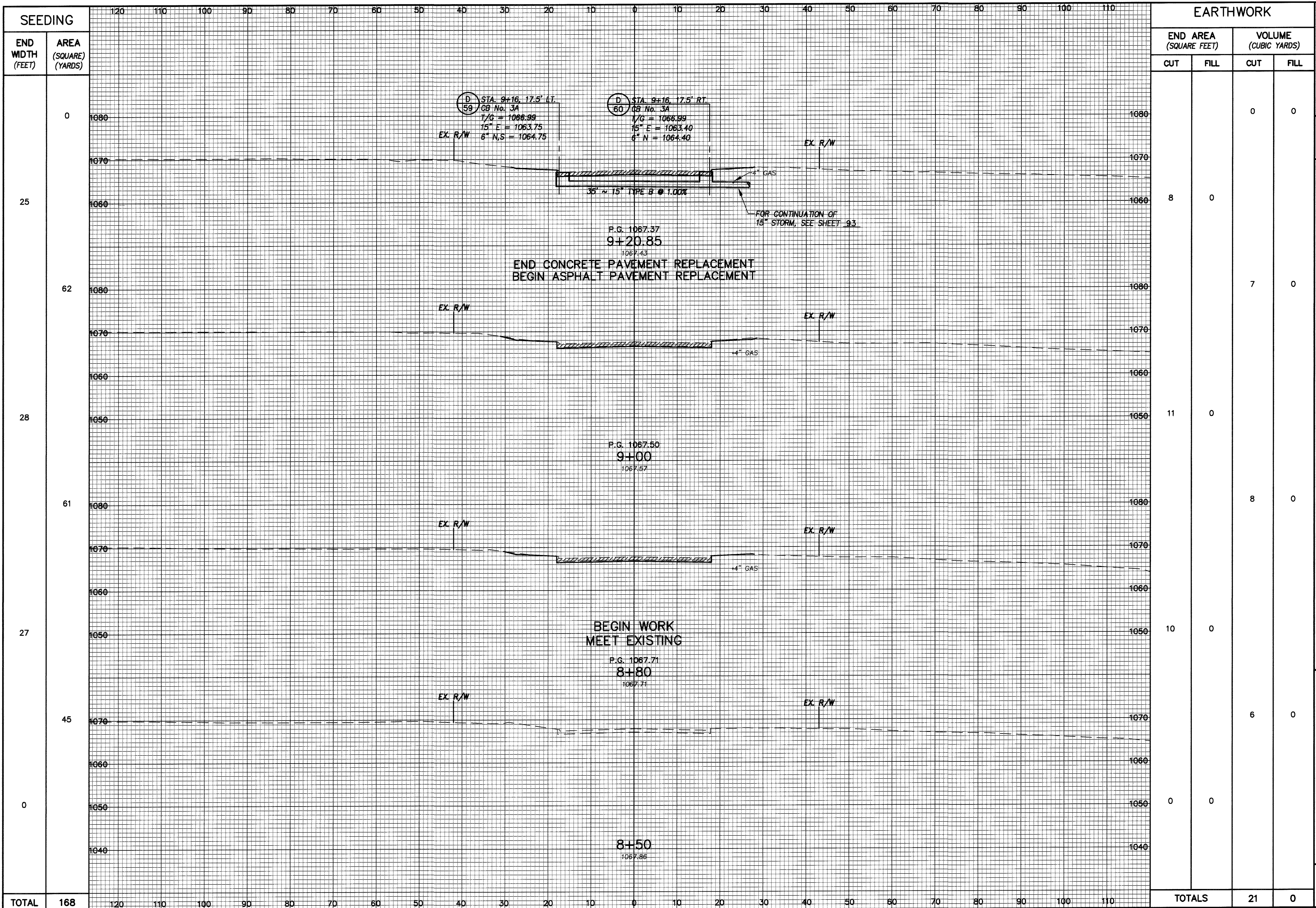
| EARTHWORK | | | |
|------------------------|------|----------------------|-----------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 0 | 0 |
| 0 | 0 | | |
| | | 14 | 6 |
| 15 | 6 | | |
| | | 60 | 6 |
| 50 | 0 | | |
| | | 65 | 0 |
| 68 | 0 | | |
| TOTALS | | 139 | 12 |

EASTPONTE DRIVE (WEST) - CROSS SECTIONS
STA. 11+20.52 TO STA. 12+50

MED - 18 - 15.13

167
362

j:\proj3\7050600\roadway\506gx140.dwg User: jan81152 Jun 26, 2003 - 7:22pm



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 0 | |
| 25 | |
| 62 | |
| 28 | |
| 61 | |
| 27 | |
| 45 | |
| 0 | |
| TOTAL | 168 |

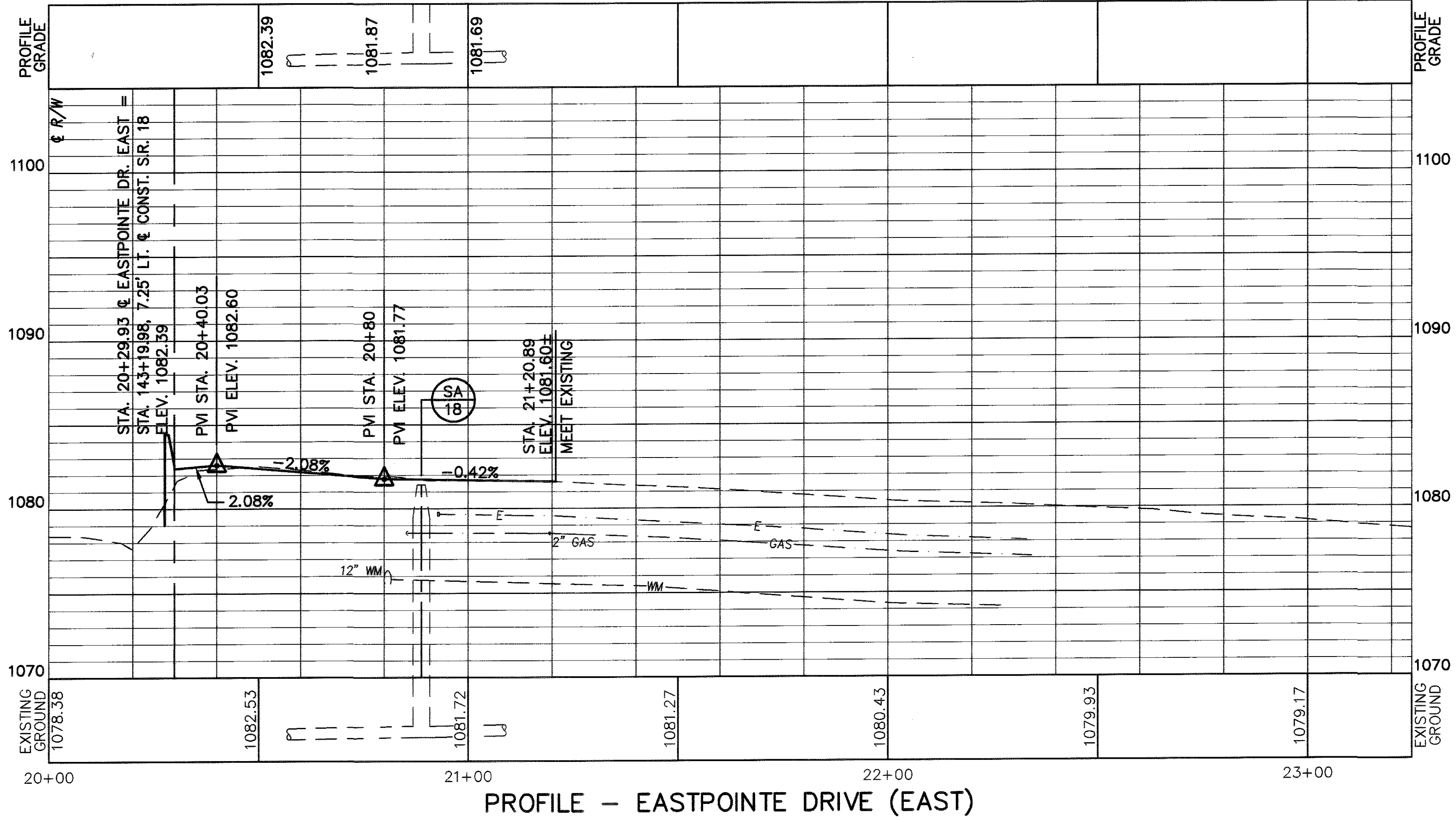
| EARTHWORK | | | |
|------------------------|------|----------------------|----------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 0 | 0 |
| 8 | 0 | | |
| | | 7 | 0 |
| 11 | 0 | | |
| | | 8 | 0 |
| 10 | 0 | | |
| | | 6 | 0 |
| 0 | 0 | | |
| | | | |
| TOTALS | | 21 | 0 |

168
362

MED - 18 - 15.13

**NORMANDY PARK DRIVE - CROSS SECTIONS
STA. 8+50 TO STA. 9+20.85**

CALCULATED
MAL
CHECKED
RER



PROFILE - EASTPOINTE DRIVE (EAST)



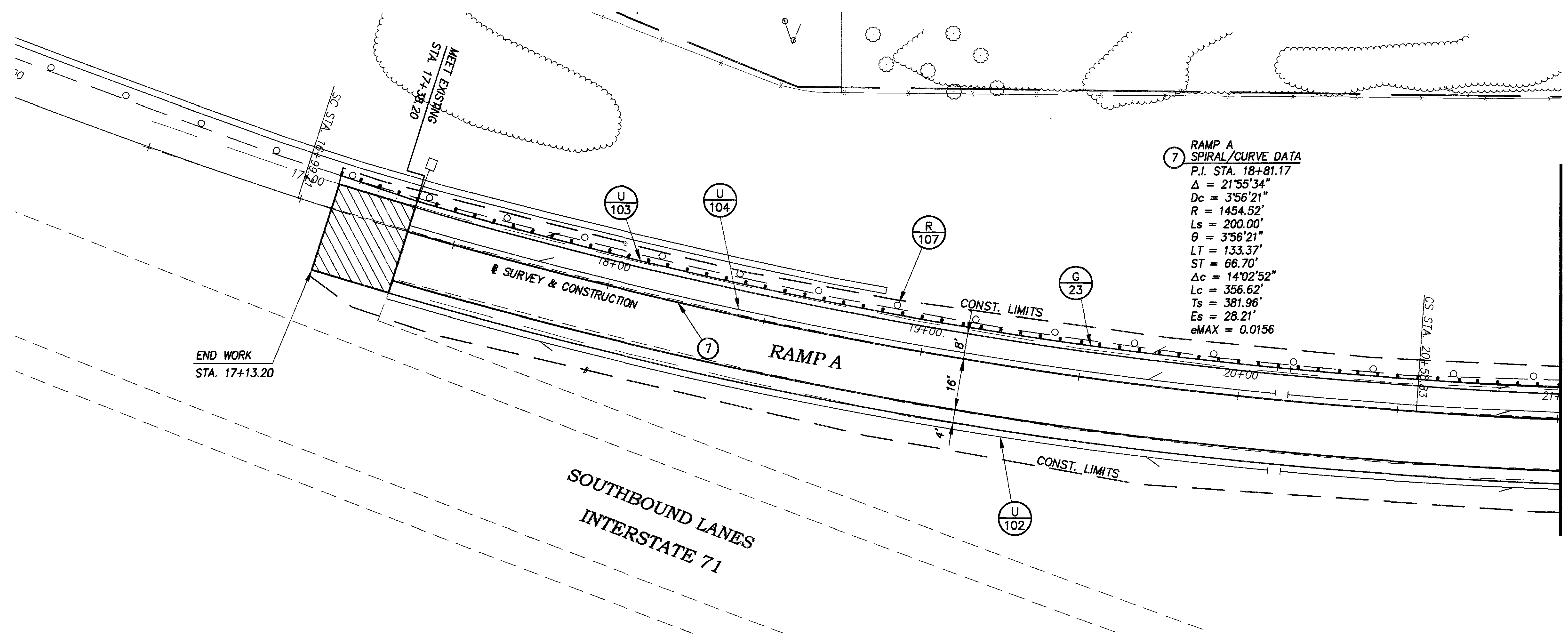
CALCULATED

CHECKED

EASTPOINTE DRIVE (EAST) PROFILE

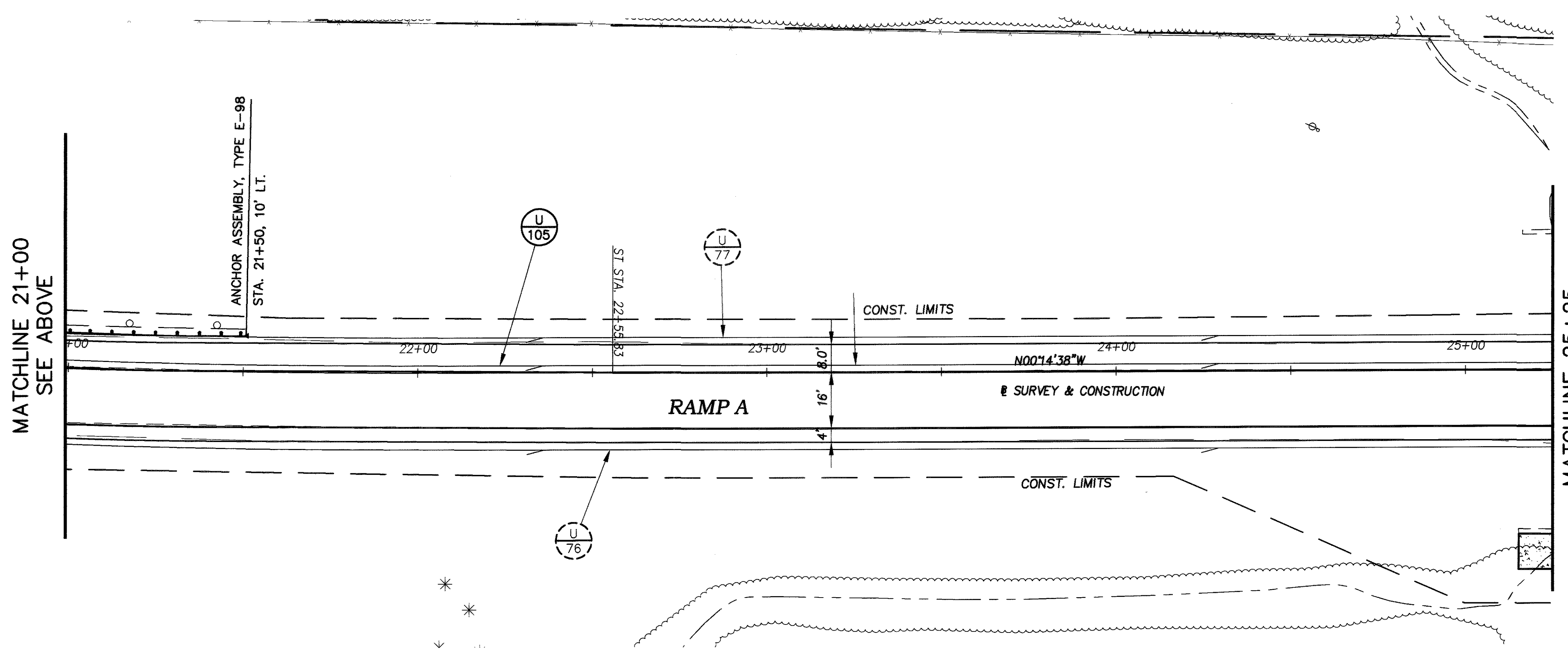
J:\Proj3\7050600\ROADWAY\70506gp0.dwg User: jmn81152 Jun 26, 2003 - 7:43pm

| | |
|--|--|
| BENCHMARK NO. 5 CHISELED "d" SE CORNER OF CONC. HEADWALL STA. 814+82 @ R/W, 63' RT. ELEV. 1083.45 | BENCHMARK NO. 7 CHISELED "d" NW CORNER OF HEADWALL STA. 821+18 @ R/W, 70' RT. ELEVATION 1093.48 |
|--|--|



MATCHLINE 21+00
SEE BELOW

ITEM 254 - PAVEMENT PLANING AS PER DETAIL ON SHEET _____ AND RESURFACING WITH 858 ASPHALT CONCRETE SURFACE COURSE OVER 407 TACK COAT. THE LENGTH MAY BE ADJUSTED IN THE FIELD TO MATCH EXISTING CONDITIONS.

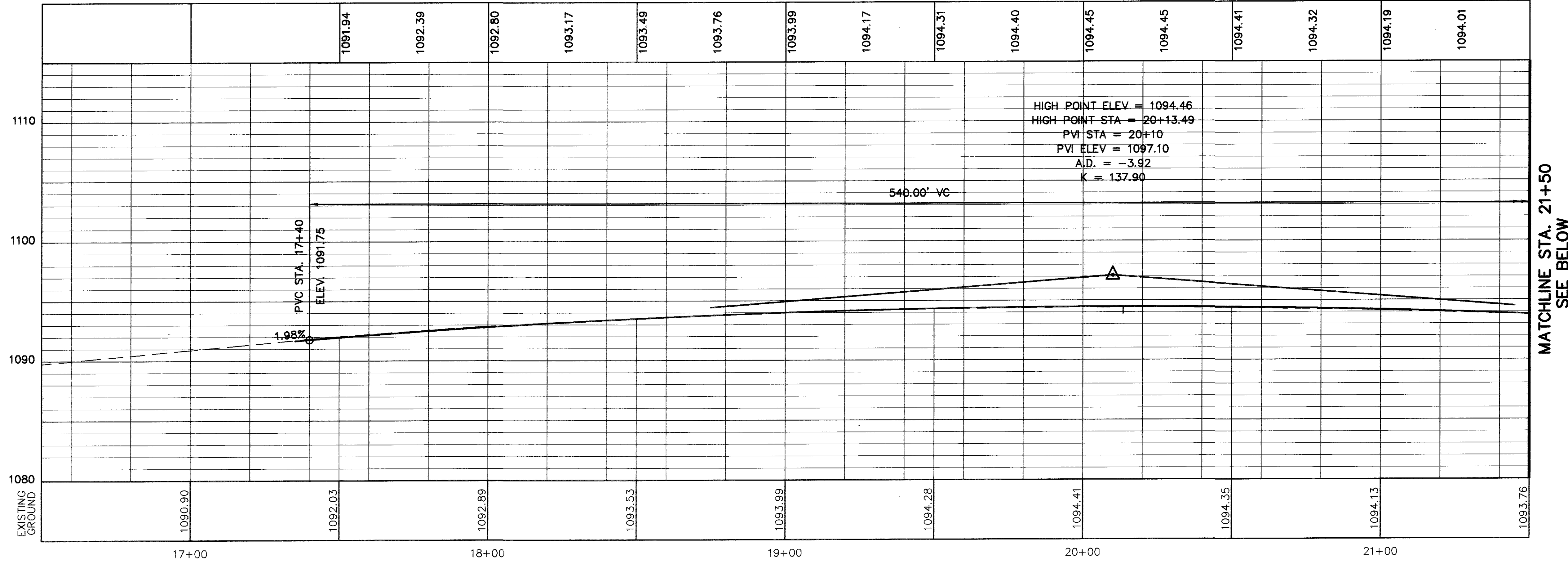
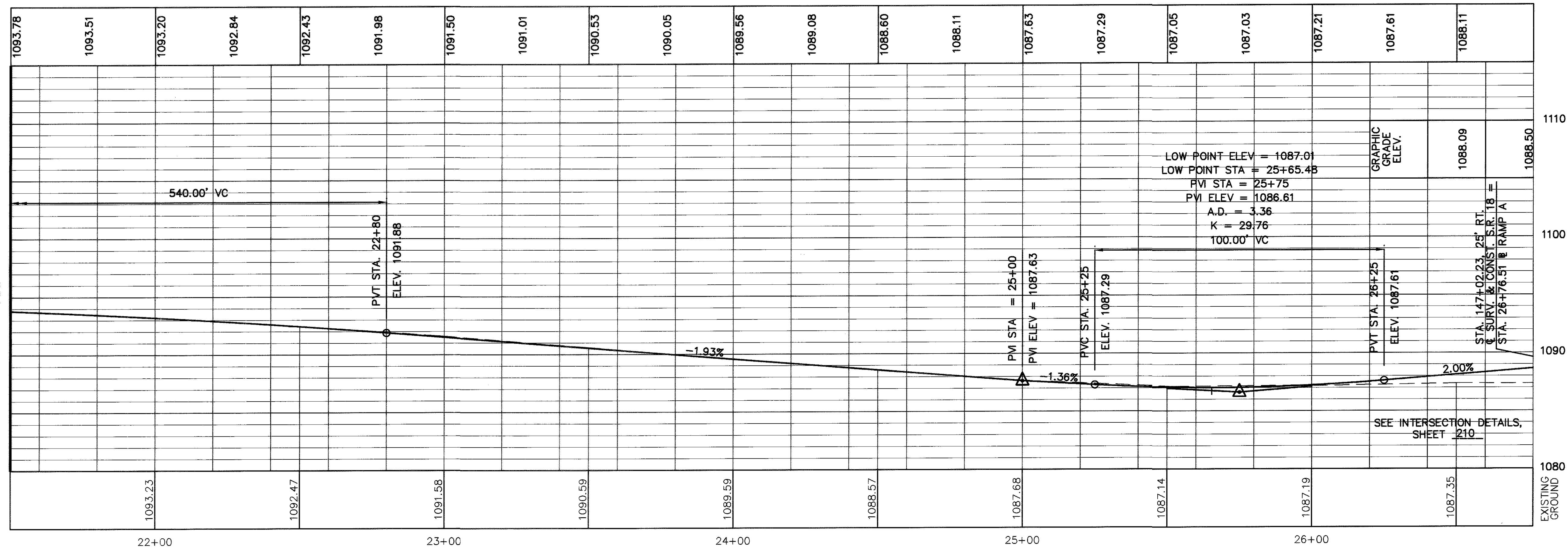


PLAN - RAMP A (-71 SOUTHBOUND ENTRANCE)
STA. 16+00 TO STA. 25+25

MED - 18 - 15.13

| REFERENCE | PAGE NO. |
|----------------|----------|
| PROFILE | 169B |
| CROSS SECTIONS | 170 |
| QUANTITIES | 66 TO 80 |

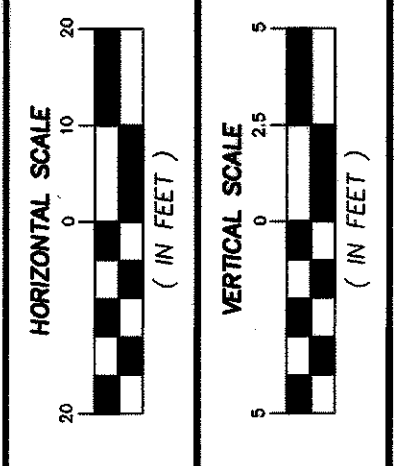
MATCHLINE STA. 21+50
SEE ABOVE



MATCHLINE STA. 21+50
SEE BELOW

HIGH POINT ELEV = 1094.46
HIGH POINT STA = 20+13.49
PVI STA = 20+10
PVI ELEV = 1097.10
A.D. = -3.92
K = 137.90

LOW POINT ELEV = 1087.01
LOW POINT STA = 25+65.45
PVI STA = 25+75
PVI ELEV = 1086.61
A.D. = 3.36
K = 29.76
100.00' VC

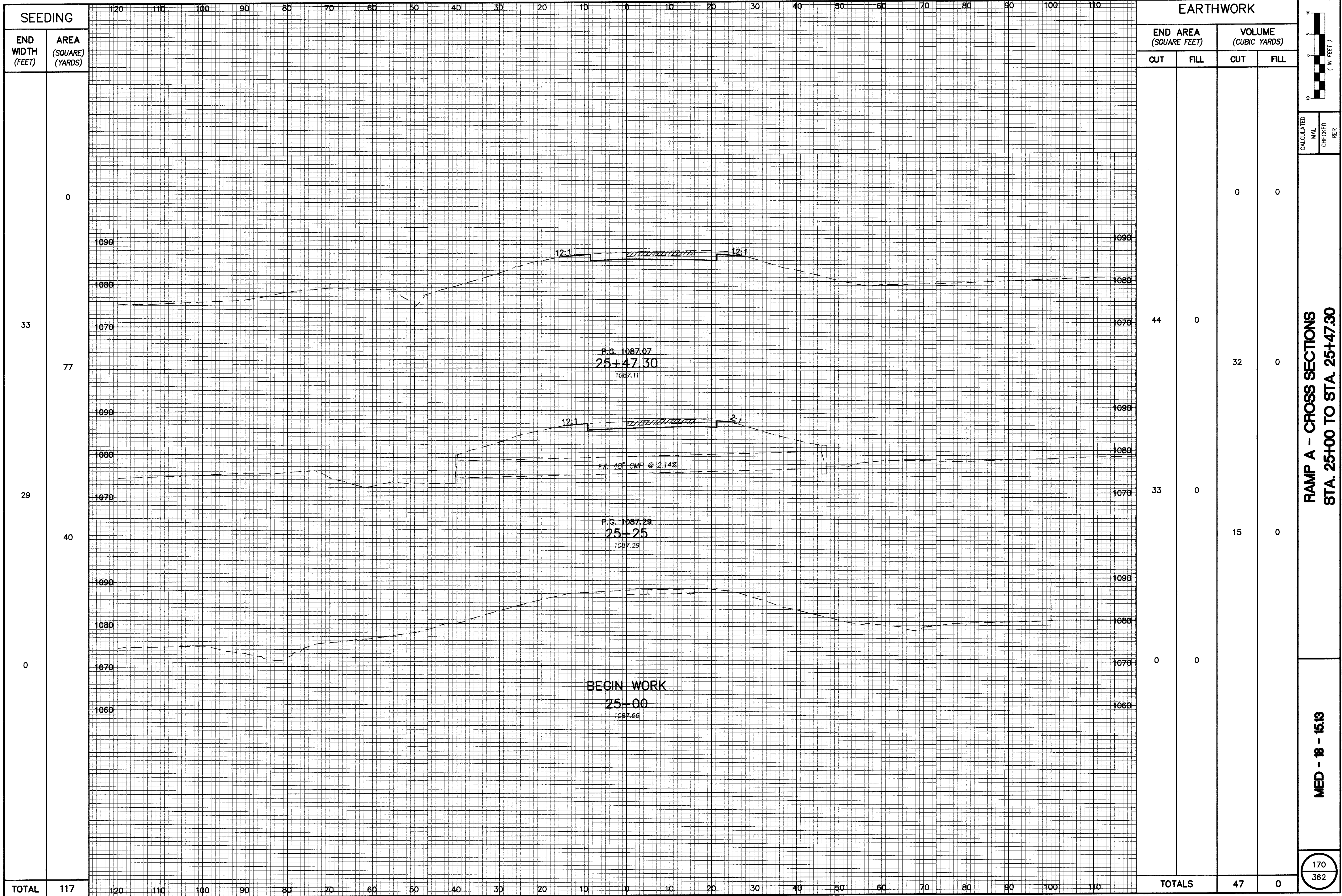


CALCULATED
CHECKED

RAMP A PROFILE

MED - 18 - 15.13

J:\proj3\7050600\roadway\506gx100.dwg User: jan81152 Jun 26, 2003 - 7:22pm



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 0 | |
| 33 | |
| 77 | |
| 29 | |
| 40 | |
| 0 | |
| TOTAL | 117 |

| EARTHWORK | | | |
|------------------------|------|----------------------|----------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 0 | 0 |
| 44 | 0 | 32 | 0 |
| 33 | 0 | 15 | 0 |
| 0 | 0 | | |
| TOTALS | | 47 | 0 |

| | | | |
|------------|-----|---------|-----|
| CALCULATED | MAL | CHECKED | PER |
| | | | |

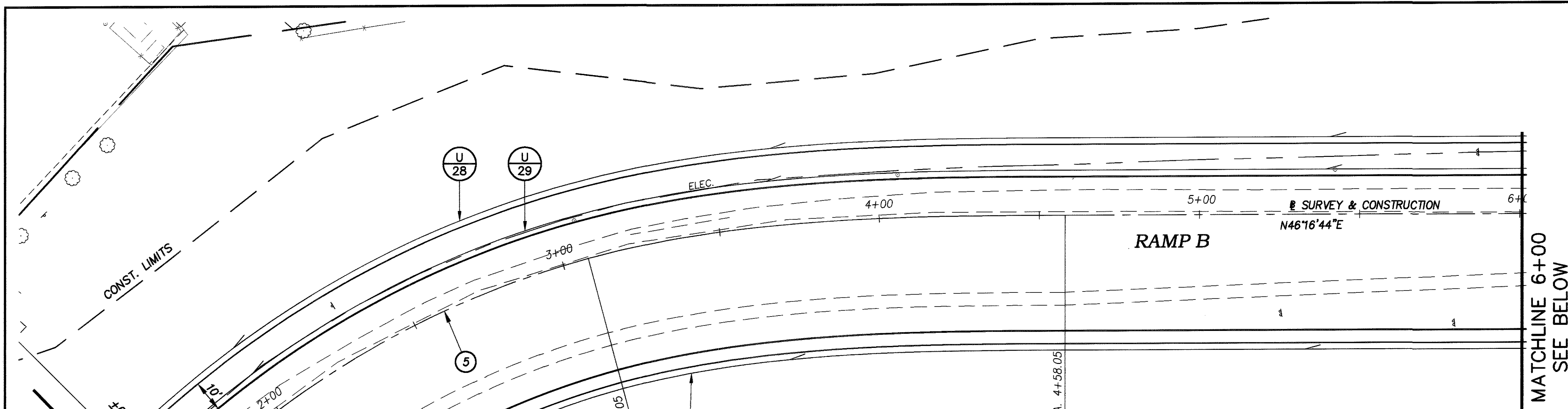
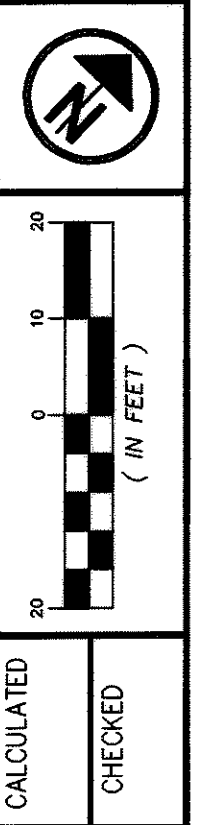
RAMP A - CROSS SECTIONS
 STA. 25+00 TO STA. 25+47.30

MED - 18 - 15.13

170
362

BENCHMARK NO. 5
 CHISELED "0" SE CORNER OF
 CONC. HEADWALL
 STA. 814+82 & R/W, 63' RT.
 ELEV. 1083.45

BENCHMARK NO. 7
 CHISELED "0" NW CORNER OF
 HEADWALL
 STA. 821+18 & R/W, 70' RT.
 ELEVATION 1093.48



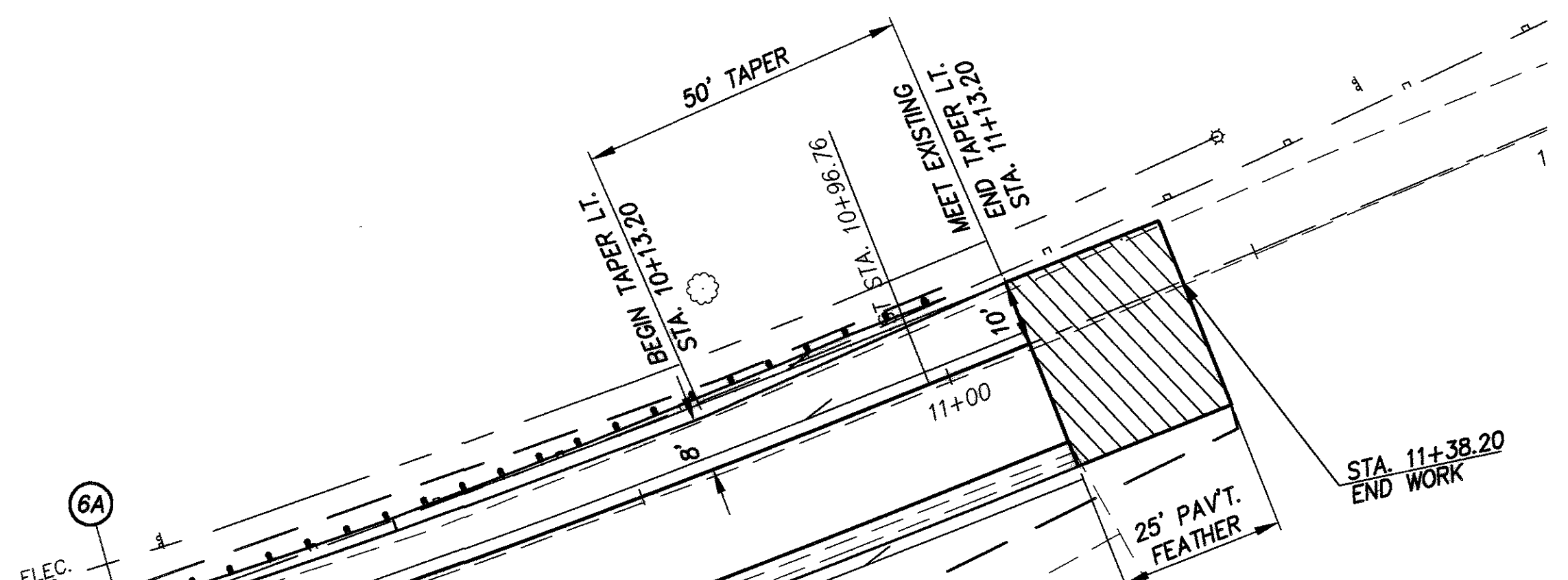
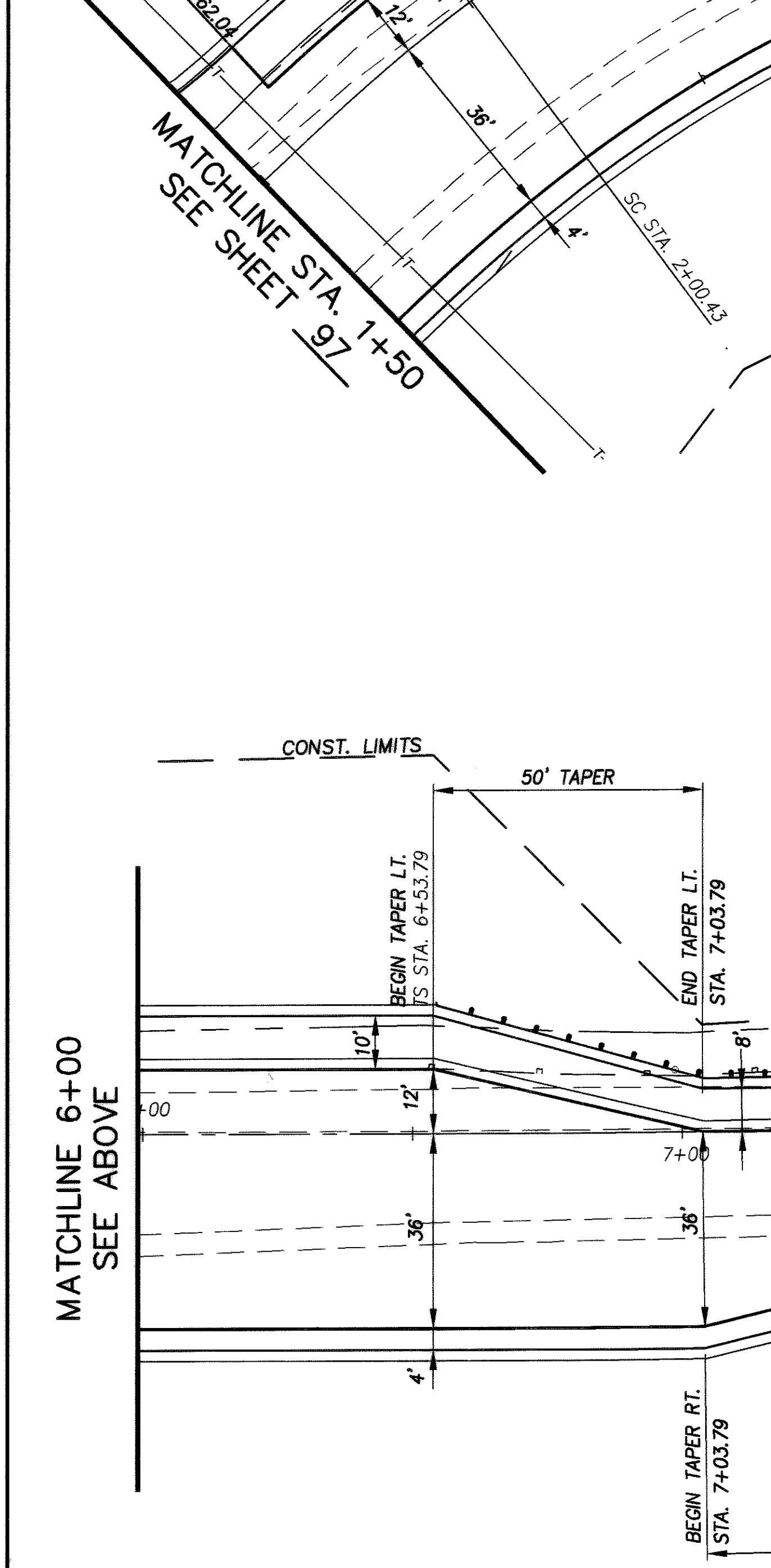
5 RAMP B SPIRAL/CURVE DATA
 P.I. = STA. 2+76.65
 $\Delta = 46^{\circ}31'22''$ RT.
 $Dc = 20'00'00''$
 $R = 286.48'$
 $Ls = 100.00'$ $Ls = 150.00'$
 $\theta_s = 10'00'00''$ $\theta_s = 15'00'00''$
 $LT = 66.77'$ $LT = 100.36'$
 $ST = 33.43'$ $ST = 50.33'$
 $Lc = 107.61'$
 $T1 = 176.22'$ $T2 = 196.88'$
 $Es = 27.92'$
 $e_{MAX} = 0.055$

6 RAMP B CURVE DATA
 P.I. STA. 8+07.60
 $\Delta = 12^{\circ}35'50''$
 $Dc = 7'30'00''$
 $R = 763.94'$
 $Ls = 150.00'$ $\Delta c = 6^{\circ}58'20''$
 $\theta = 5^{\circ}37'30''$ $Lc = 92.96'$
 $LT = 100.05'$ $T1 = 153.81'$
 $ST = 50.05'$ $T2 = 89.95'$

6A RAMP B COMPOUND SPIRAL
 P.I. STA. 9+74.72
 $\Delta = 9'00'00''$
 $Dc1 = 7'30'00''$
 $R1 = 763.94'$
 $Dc2 = 1'30'00''$
 $R2 = 3819.72'$
 $Ls = 200.00'$
 $\theta_1 = 9'00'00''$
 $P = 2.79'$
 $\Delta_1 = 7'30'02''$
 $\Delta_2 = 1'29'58''$
 $T1 = 77.96'$
 $T2 = 122.42'$

ITEM 254 - PAVEMENT PLANING AS PER DETAIL ON SHEET 10, AND RESURFACING WITH 858 ASPHALT CONCRETE SURFACE COURSE OVER 407 TACK COAT. THE LENGTH MAY BE ADJUSTED IN THE FIELD TO MATCH EXISTING CONDITIONS.

| REFERENCE | PAGE NO. |
|----------------|------------|
| PROFILE | 172 |
| CROSS SECTIONS | 173 TO 176 |
| QUANTITIES | 66 TO 80 |

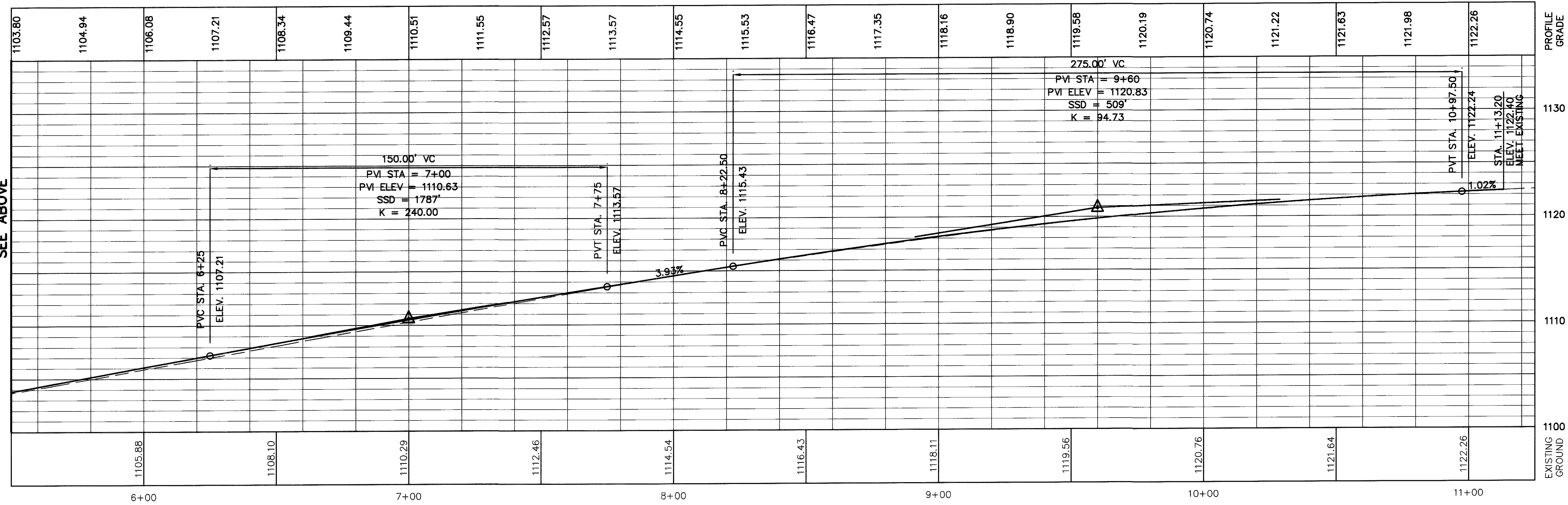


PLAN - RAMP B (I-71 SOUTHBOUND EXIT)
 STA. 1+50 TO STA. 11+50

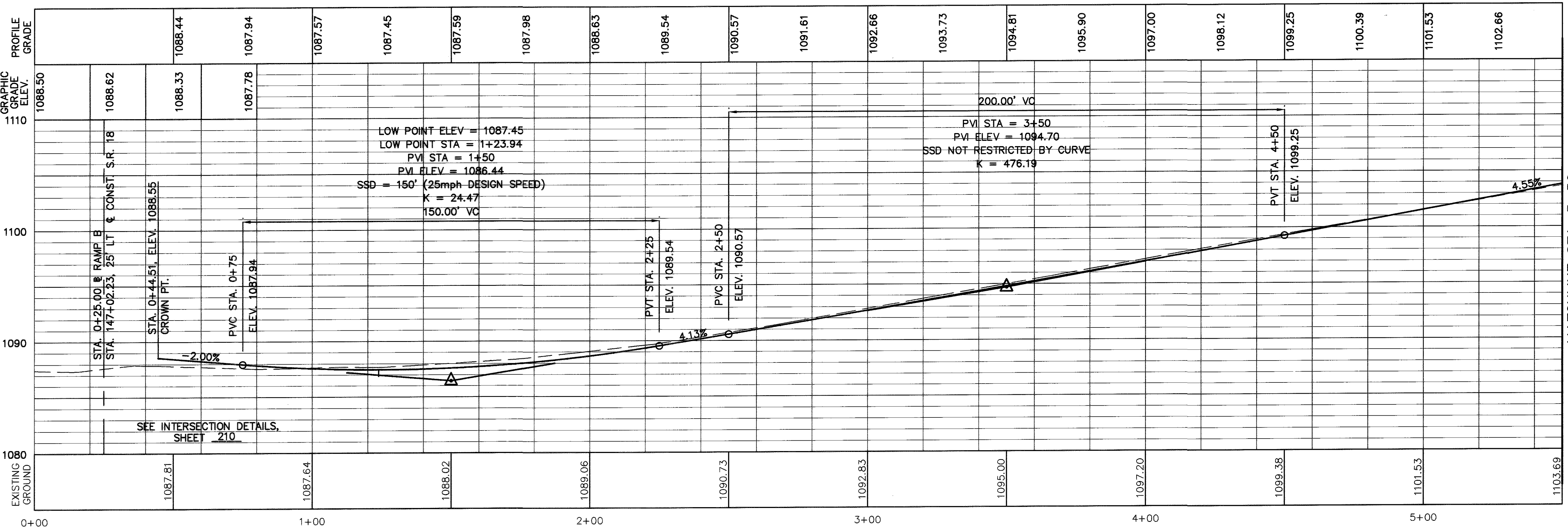
MED - 18 - 15.13

171
362

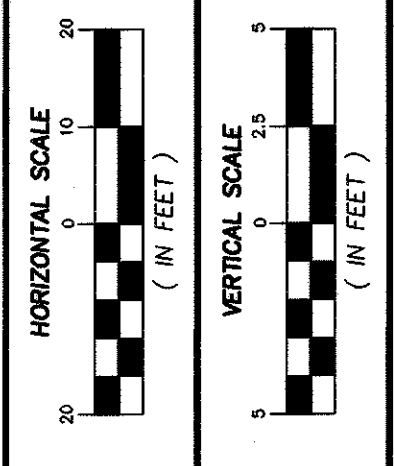
MATCHLINE STA. 5+50
SEE ABOVE



PROFILE - RAMP B



MATCHLINE STA. 5+50
SEE BELOW

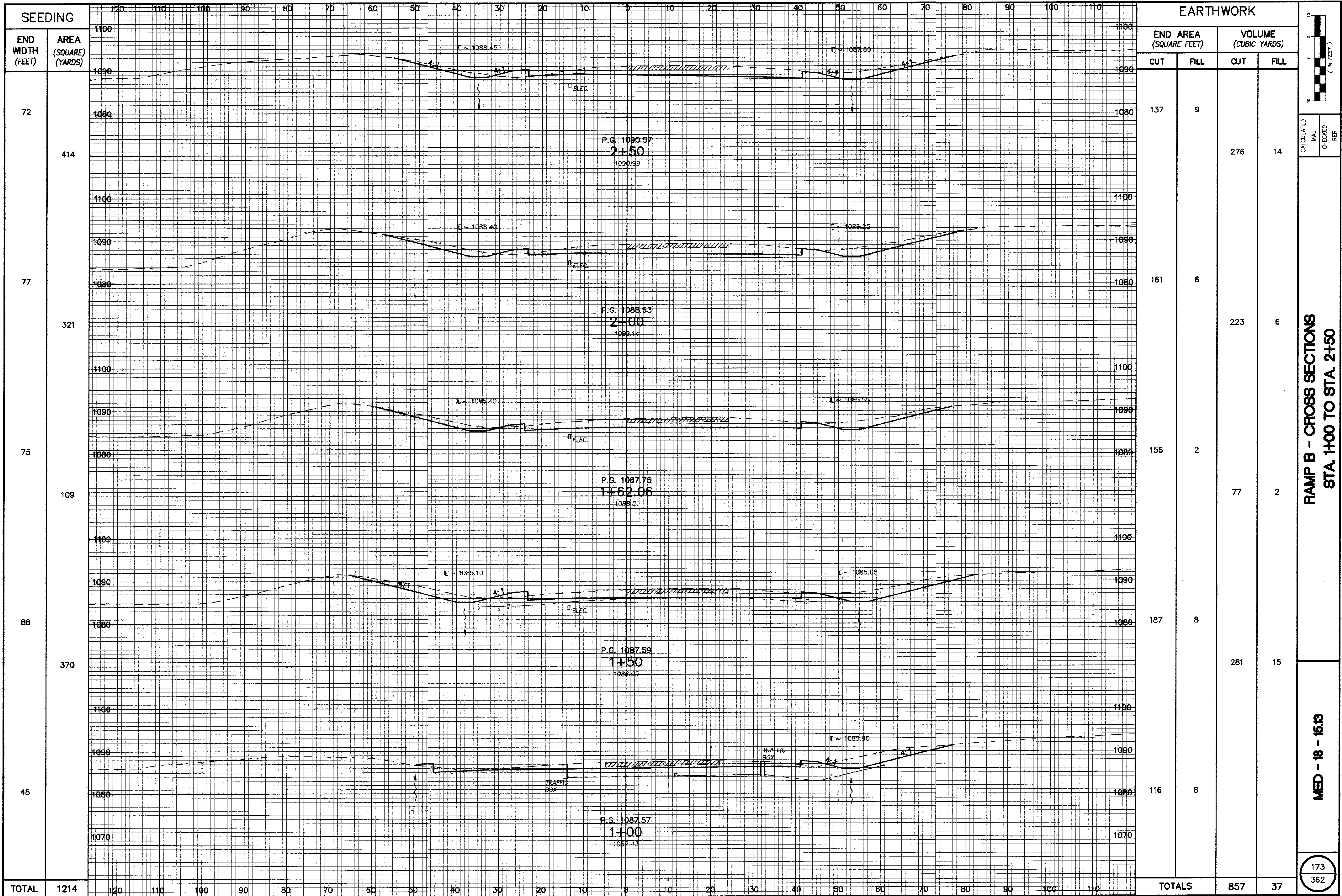


CALCULATED
CHECKED

RAMP B PROFILE

MED - 18 - 15.13

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| SEEDING | | EARTHWORK | | | |
|------------------|---------------------|------------------------|------|----------------------|-----------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) | END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| | | CUT | FILL | CUT | FILL |
| 72 | 414 | 137 | 9 | 276 | 14 |
| 77 | 321 | 161 | 6 | 223 | 6 |
| 75 | 109 | 156 | 2 | 77 | 2 |
| 88 | 370 | 187 | 8 | 281 | 15 |
| 45 | 1214 | 116 | 8 | | |
| TOTAL | | TOTALS | | 857 | 37 |

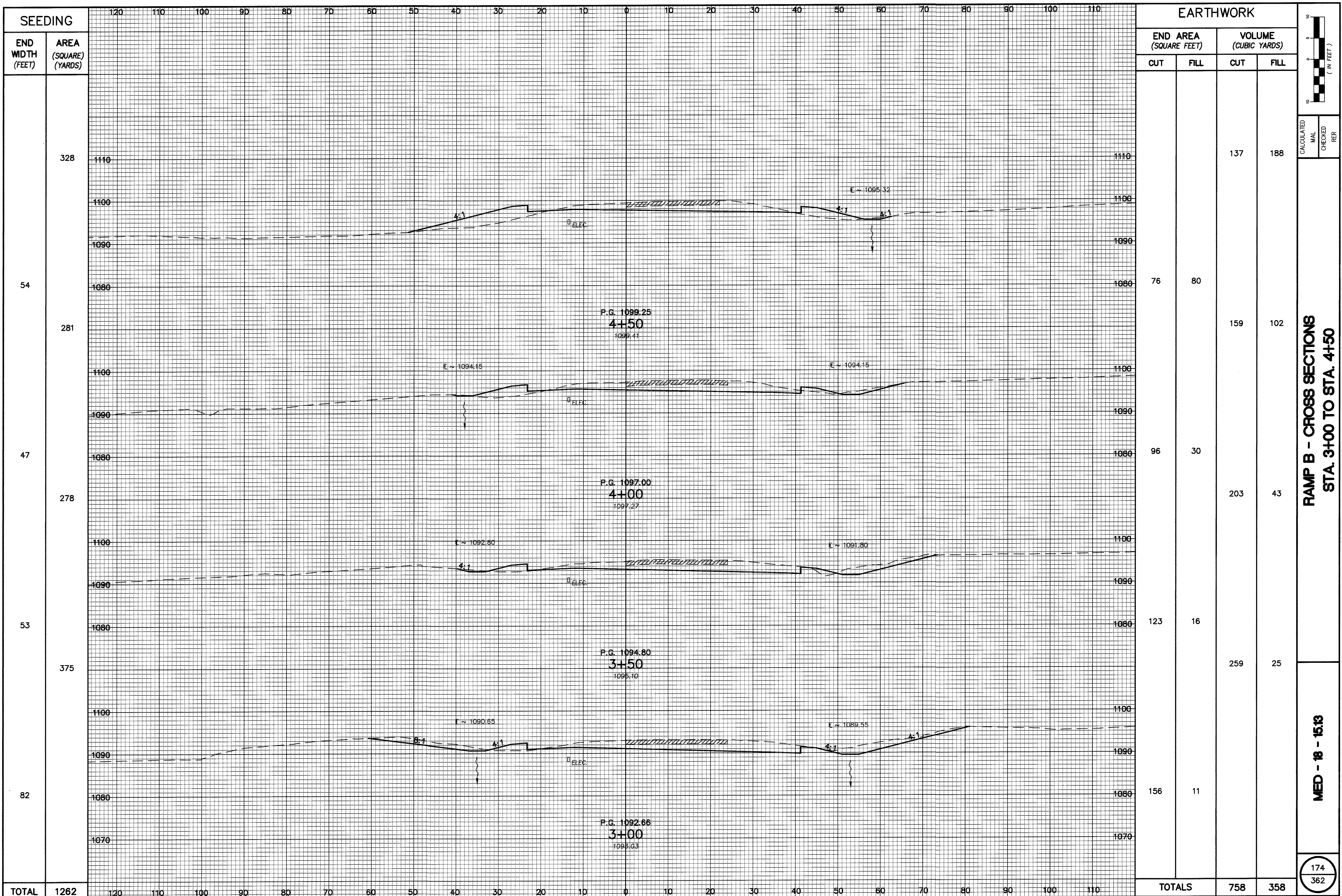
CALCULATED
MAL
CHECKED
PER

**RAMP B - CROSS SECTIONS
STA. 1+00 TO STA. 2+50**

MED - 18 - 15.13

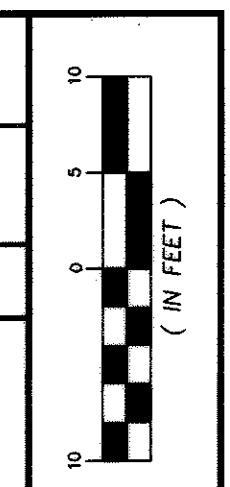
173
362

j:\proj3\7050600\roadway\506gx111.dwg User: jan81152 Jun 26, 2003 7:23pm



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 328 | |
| 54 | |
| 281 | |
| 47 | |
| 278 | |
| 53 | |
| 375 | |
| 82 | |
| TOTAL | 1262 |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 137 | 188 |
| 76 | 80 | 159 | 102 |
| 96 | 30 | 203 | 43 |
| 123 | 16 | 259 | 25 |
| 156 | 11 | | |
| TOTALS | | 758 | 358 |



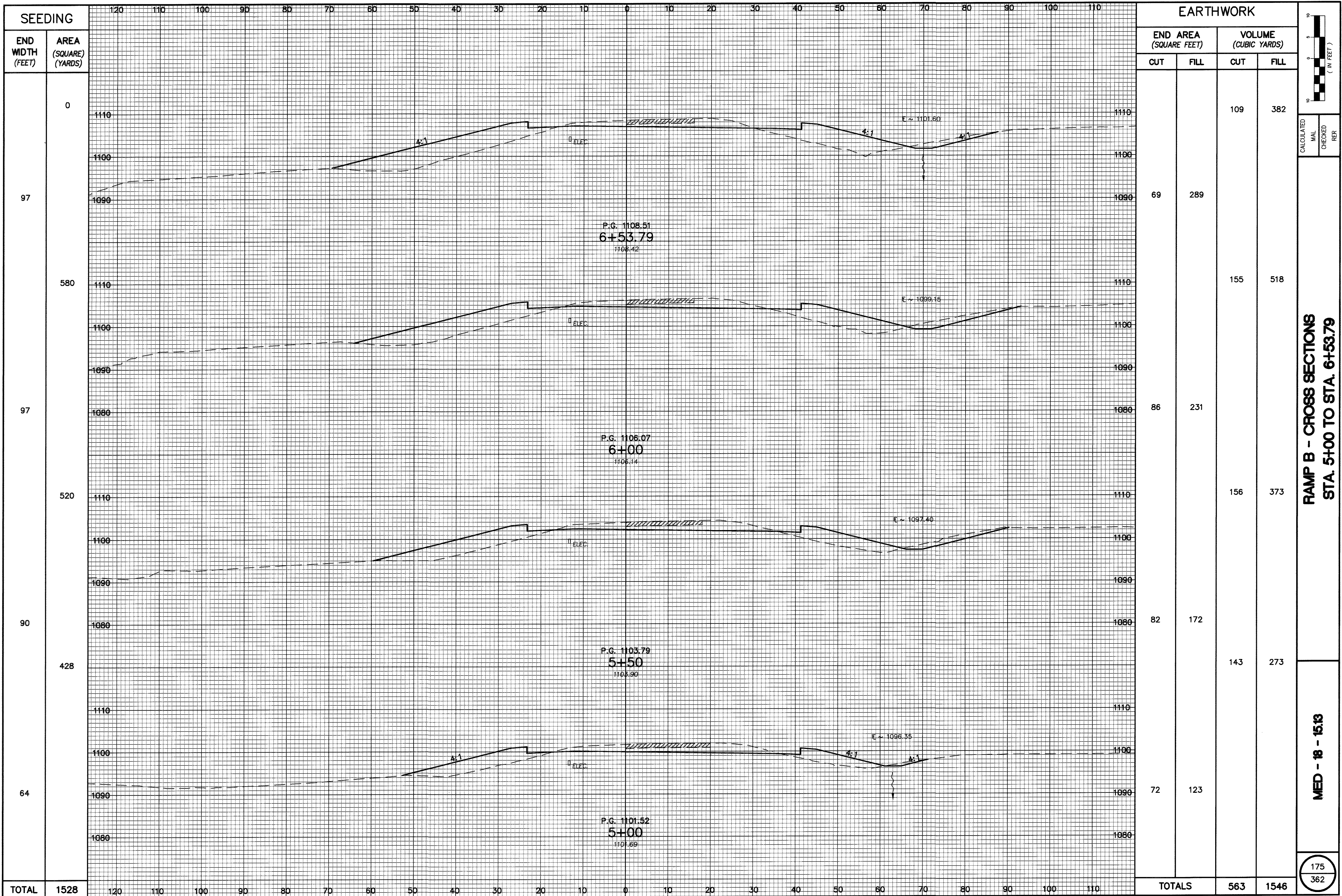
| | | | |
|------------|-----|---------|-----|
| CALCULATED | MAL | CHECKED | PER |
|------------|-----|---------|-----|

**RAMP B - CROSS SECTIONS
STA. 3+00 TO STA. 4+50**

MED - 18 - 15.13

174
362

J:\proj3\7050600\roadway\506gx112.dwg User: jn81152 Jun 26, 2003 7:23pm



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 0 | |
| 97 | |
| 580 | |
| 97 | |
| 520 | |
| 90 | |
| 428 | |
| 64 | |
| TOTAL | 1528 |

| EARTHWORK | | | |
|------------------------|------|----------------------|-------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 109 | 382 |
| 69 | 289 | | |
| | | 155 | 518 |
| 86 | 231 | | |
| | | 156 | 373 |
| 82 | 172 | | |
| | | 143 | 273 |
| 72 | 123 | | |
| TOTALS | | 563 | 1546 |

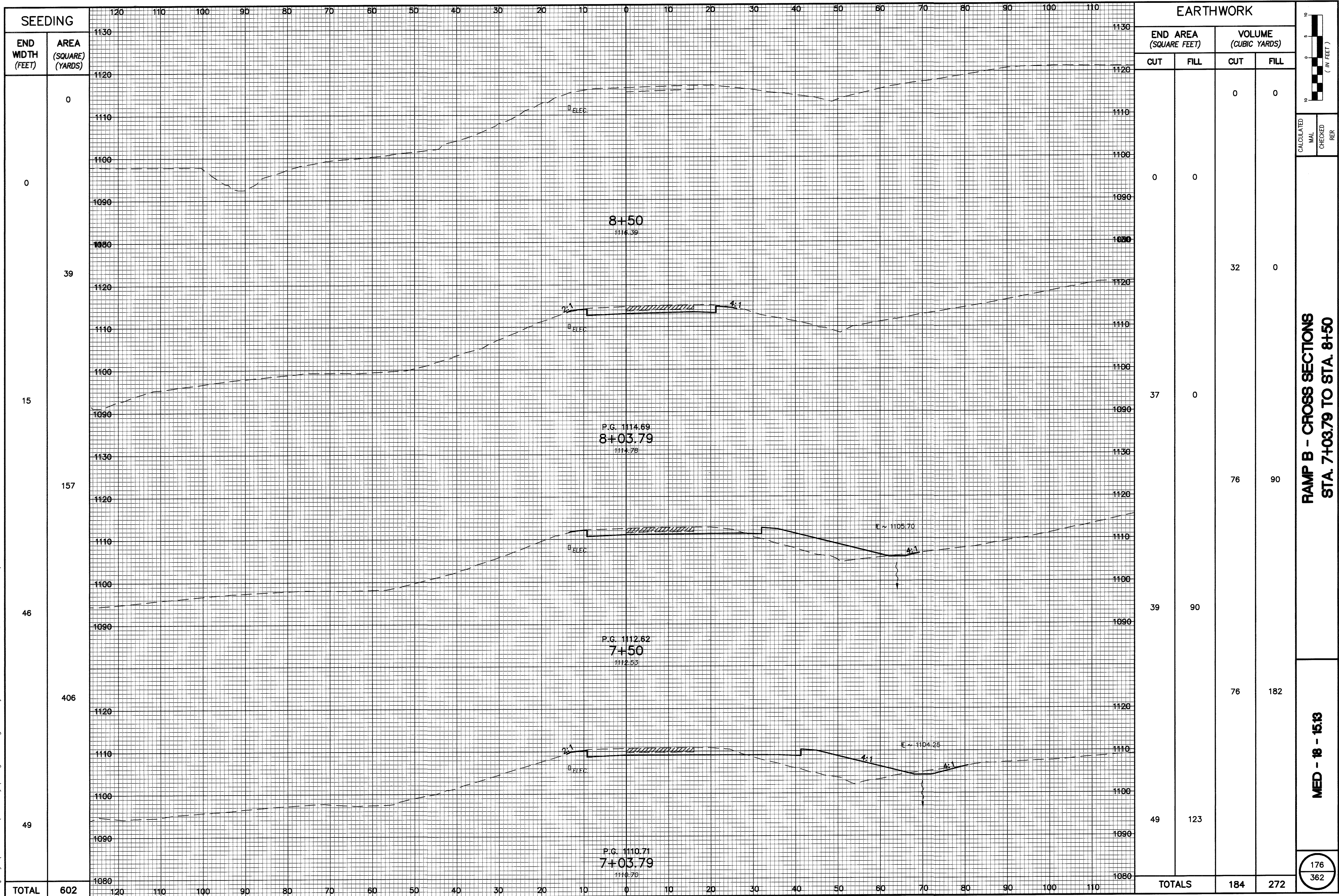
CALCULATED
MAL
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RER

**RAMP B - CROSS SECTIONS
STA. 5+00 TO STA. 6+53.79**

MED - 18 - 15.13

175
362

J:\proj3\7050600\roadway\506gx13.dwg User: jan81152 Jun 26, 2003 7:23pm



| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 0 | 0 |
| 0 | 39 |
| 15 | 157 |
| 46 | 406 |
| 49 | |
| TOTAL | 602 |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 0 | 0 | 0 | 0 |
| | | 32 | 0 |
| 37 | 0 | 76 | 90 |
| 39 | 90 | 76 | 182 |
| 49 | 123 | | |
| TOTALS | | 184 | 272 |

176
362

**RAMP B - CROSS SECTIONS
STA. 7+03.79 TO STA. 8+50**

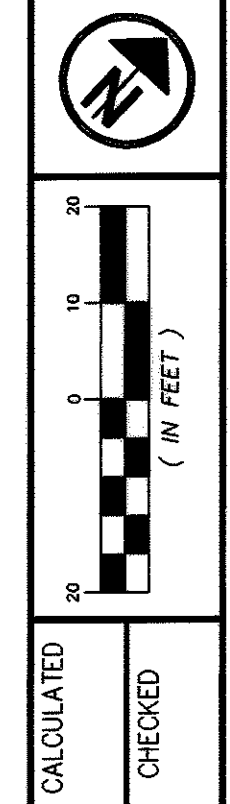
MED - 18 - 15.13

CALCULATED
MAL
CHECKED
REC

(IN FEET)

BENCHMARK NO. 7
CHISELED "a" NW CORNER OF
HEADWALL
STA. 821+18 @ R/W, 70' RT.
ELEVATION 1093.48

BENCHMARK NO. 8
TOP OF NW ANCHOR BOLT PF
COMMERCIAL SIGN
(SMALL "SUNOCO/MAC" SIGN)
STA. 828+16 @ R/W, 60' RT. ELEV. 1122.30

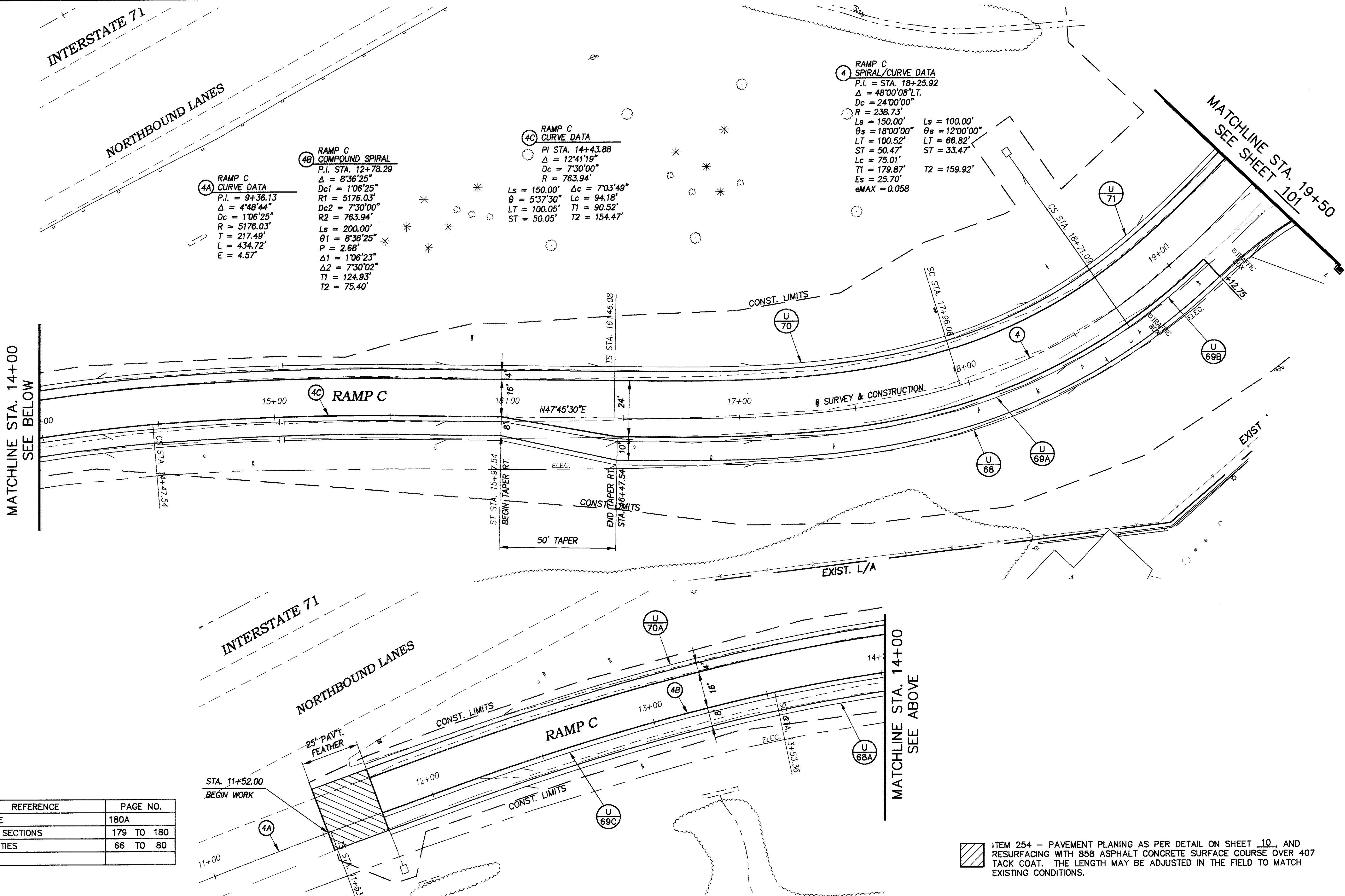


CALCULATED
CHECKED

PLAN - RAMP C (I-71 NORTHBOUND EXIT)
STA. 11+00 TO STA. 19+50

MED - 18 - 15.13

177
362



4A RAMP C CURVE DATA
P.I. = 9+36.13
 $\Delta = 4'48''44''$
Dc = 1'06'25"
R = 5176.03'
T = 217.49'
L = 434.72'
E = 4.57'

4B RAMP C COMPOUND SPIRAL
P.I. STA. 12+78.29
 $\Delta = 8'36''25''$
Dc1 = 1'06'25"
R1 = 5176.03'
Dc2 = 7'30'00"
R2 = 763.94'
Ls = 200.00'
 $\theta_1 = 8'36''25''$
P = 2.68'
 $\Delta_1 = 1'06''23''$
 $\Delta_2 = 7'30''02''$
T1 = 124.93'
T2 = 75.40'

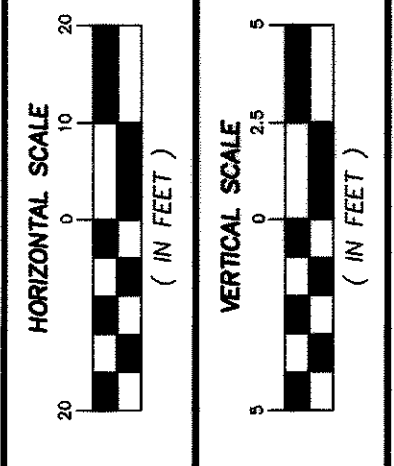
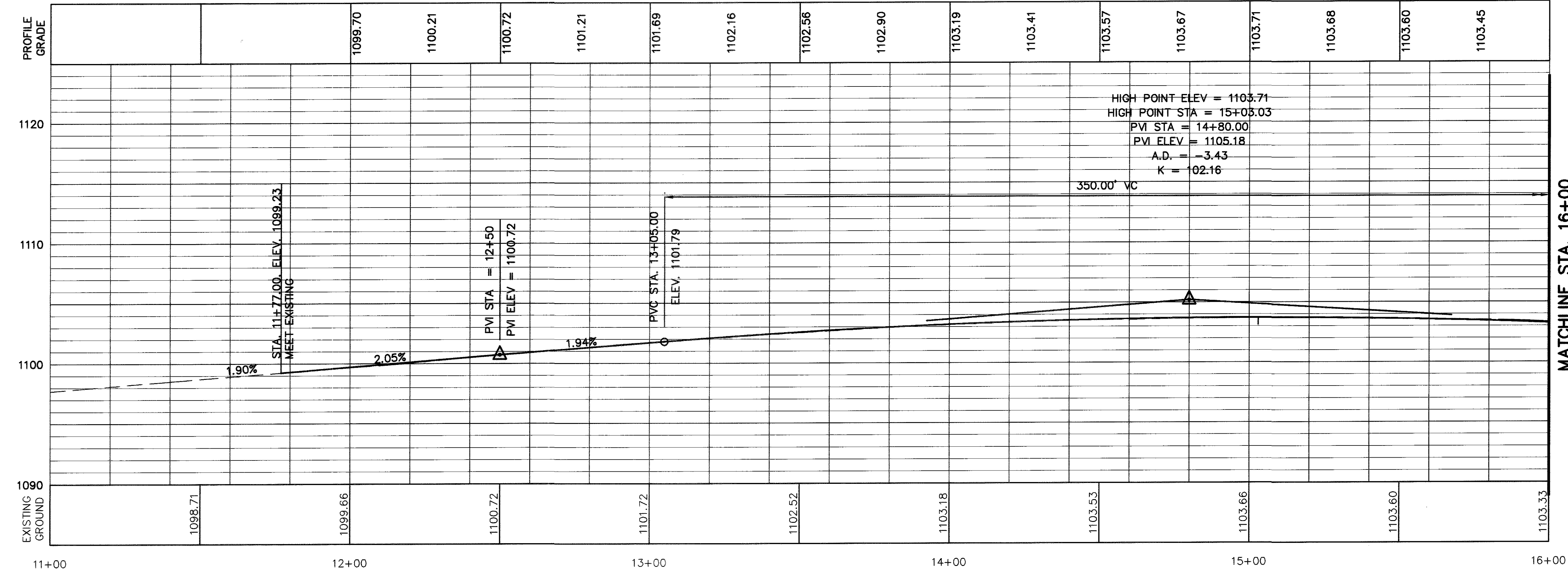
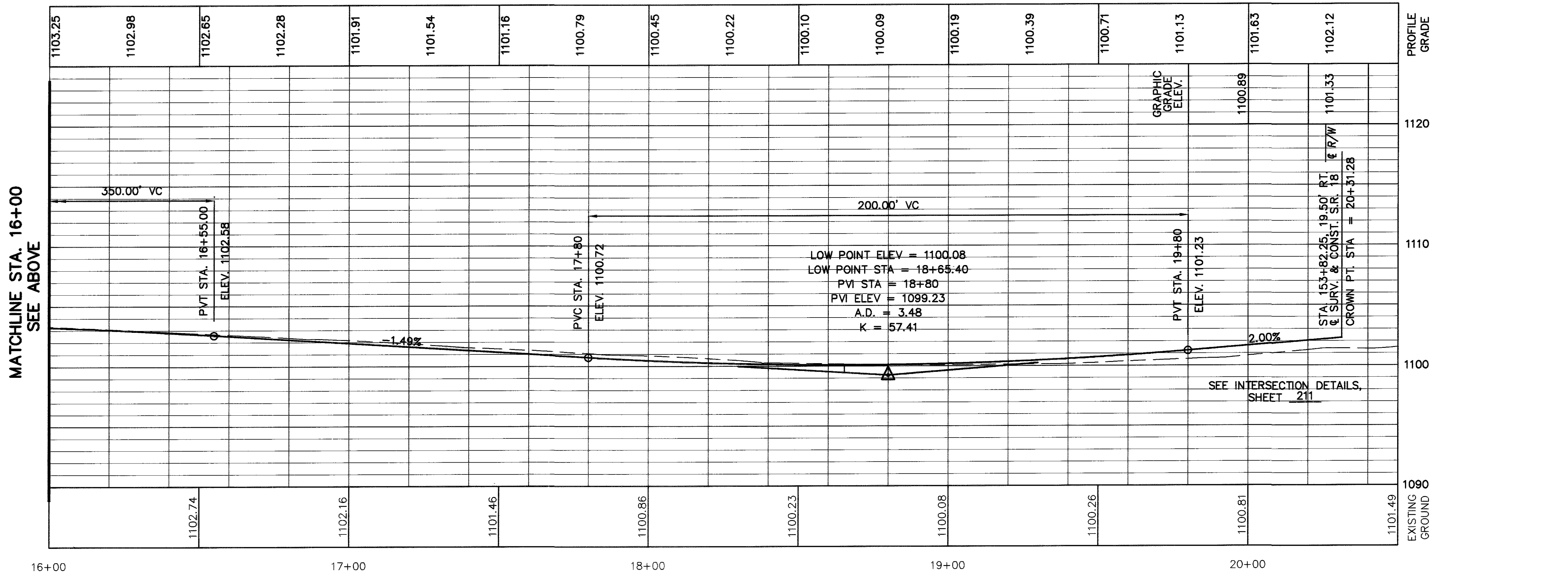
4C RAMP C CURVE DATA
P.I. STA. 14+43.88
 $\Delta = 12'41''19''$
Dc = 7'30'00"
R = 763.94'
Ls = 150.00' $\Delta_c = 7'03''49''$
 $\theta = 5'37''30''$ Lc = 94.18'
LT = 100.05' T1 = 90.52'
ST = 50.05' T2 = 154.47'

4 RAMP C SPIRAL/CURVE DATA
P.I. = STA. 18+25.92
 $\Delta = 48'00''08''$ LT.
Dc = 24'00'00"
R = 238.73'
Ls = 150.00' Ls = 100.00'
 $\theta_s = 18'00''00''$ $\theta_s = 12'00''00''$
LT = 100.52' LT = 66.82'
ST = 50.47' ST = 33.47'
Lc = 75.01' T2 = 159.92'
T1 = 179.87'
Es = 25.70'
eMAX = 0.058

| REFERENCE | PAGE NO. |
|----------------|------------|
| PROFILE | 180A |
| CROSS SECTIONS | 179 TO 180 |
| QUANTITIES | 66 TO 80 |

ITEM 254 - PAVEMENT PLANING AS PER DETAIL ON SHEET 10, AND RESURFACING WITH 858 ASPHALT CONCRETE SURFACE COURSE OVER 407 TACK COAT. THE LENGTH MAY BE ADJUSTED IN THE FIELD TO MATCH EXISTING CONDITIONS.

J:\proj3\7050600\roadway\70506.gpo.dwg User: jmr81152 Jun 26, 2003 7:23pm

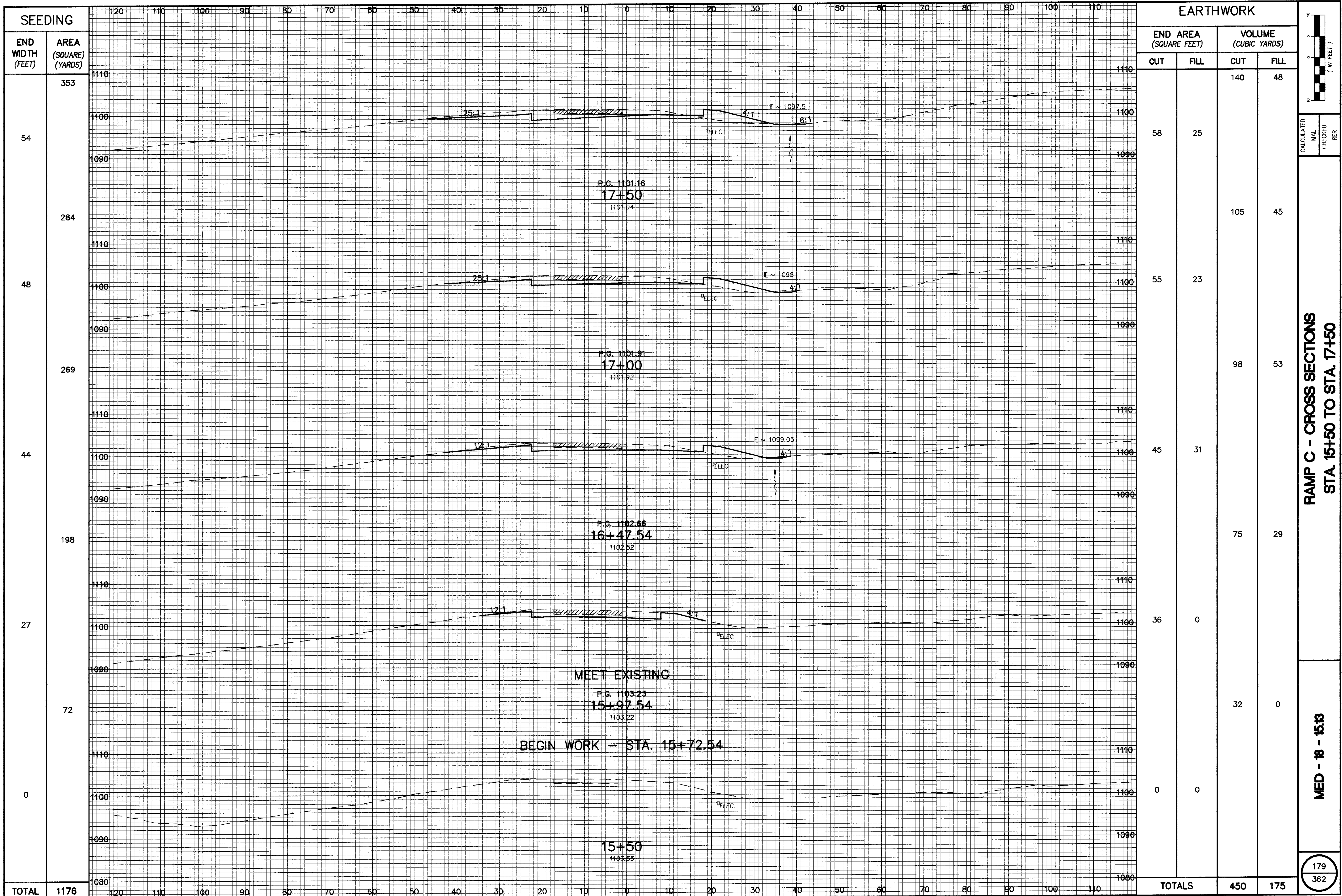


CALCULATED
CHECKED

RAMP C PROFILE

MED - 18 - 15.13

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| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 54 | 353 |
| 48 | 284 |
| 44 | 269 |
| 198 | |
| 27 | |
| 72 | |
| 0 | |
| TOTAL | 1176 |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 58 | 25 | 140 | 48 |
| | | 105 | 45 |
| 55 | 23 | | |
| | | 98 | 53 |
| 45 | 31 | | |
| | | 75 | 29 |
| 36 | 0 | | |
| | | 32 | 0 |
| 0 | 0 | | |
| TOTALS | | 450 | 175 |



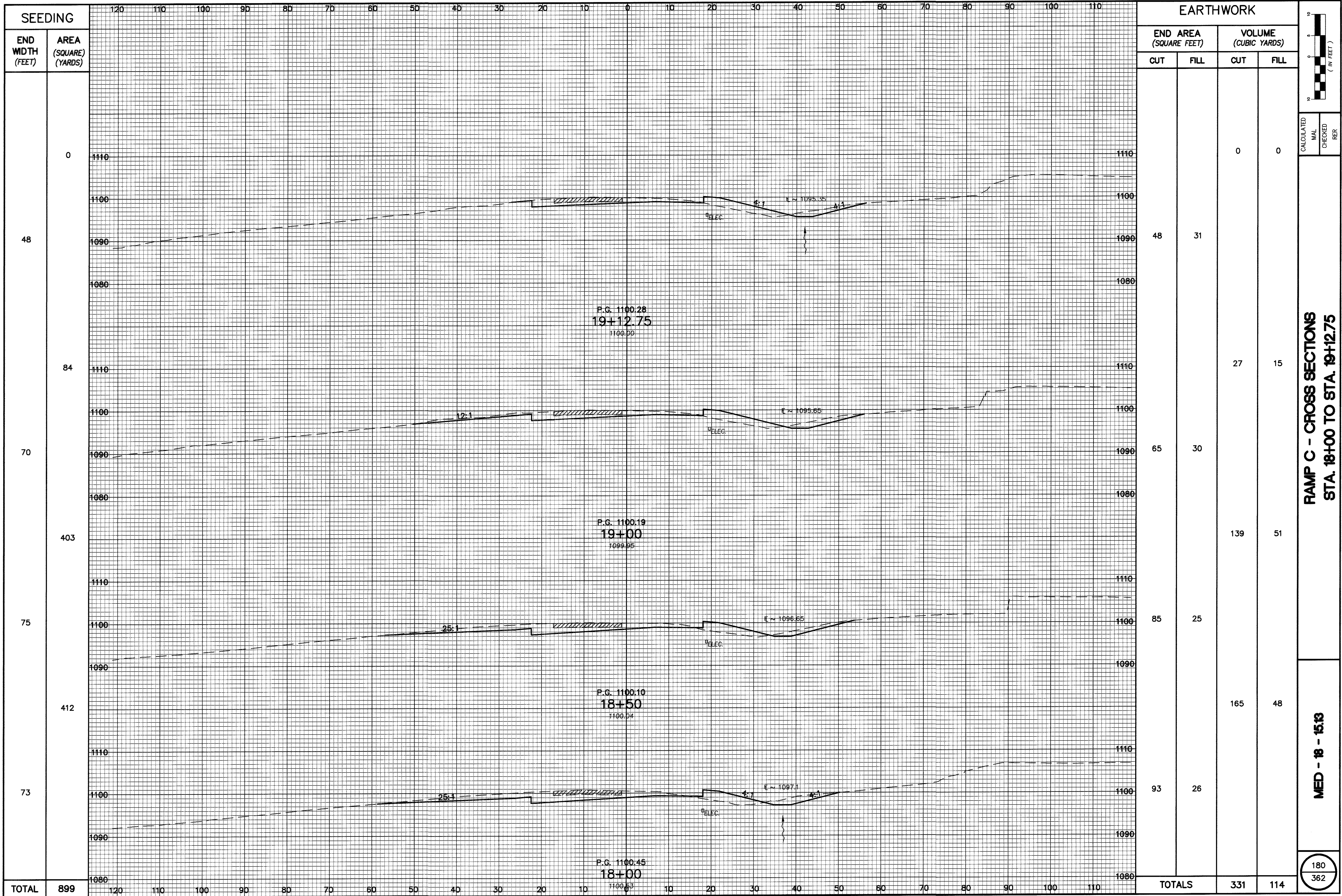
CALCULATED
MAL
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RER

**RAMP C - CROSS SECTIONS
STA. 15+50 TO STA. 17+50**

MED - 18 - 15.13

179
362

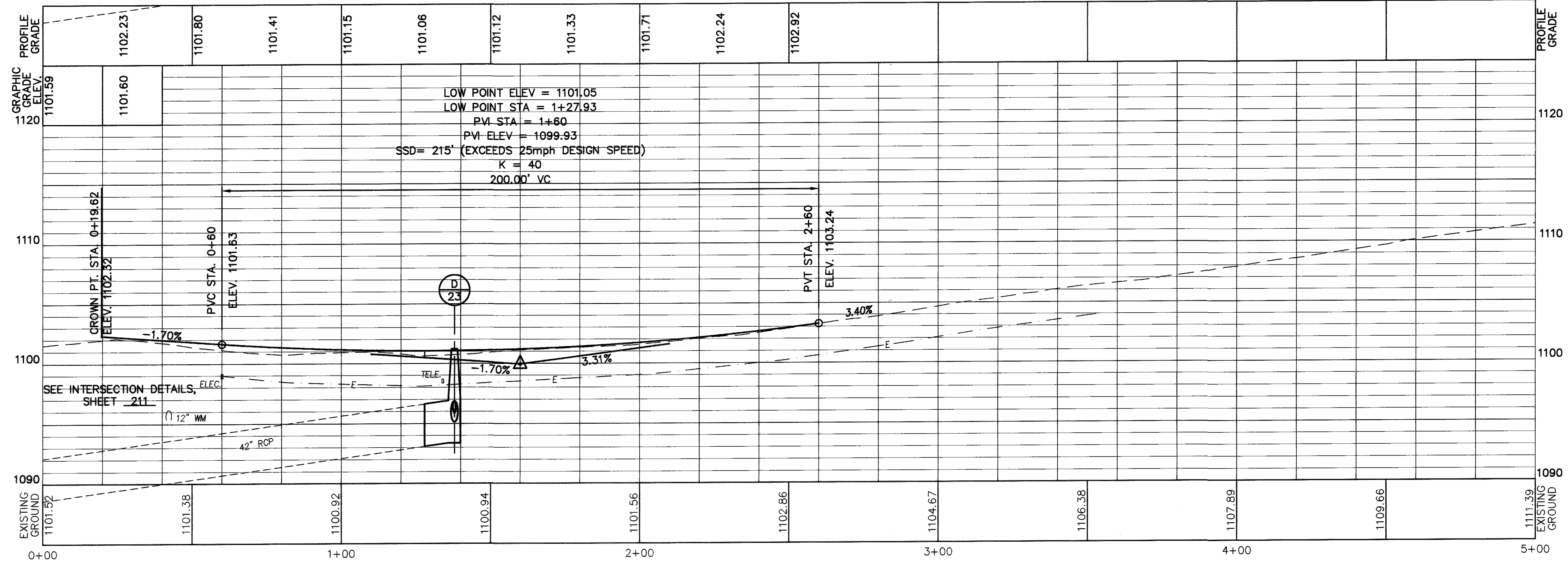
J:\proj3\7050600\roadway\506gx121.dwg User: jan81152 Jun 26, 2003 7:24pm



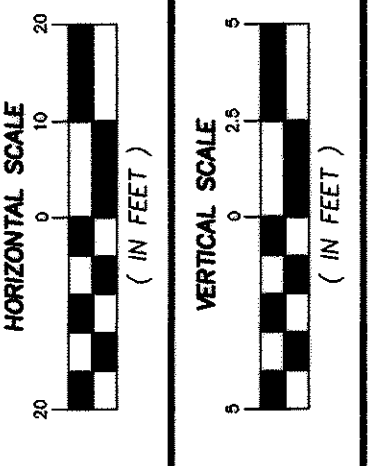
**RAMP C - CROSS SECTIONS
STA. 18+00 TO STA. 19+12.75**

MED - 18 - 15.13

180
362



PROFILE - RAMP D

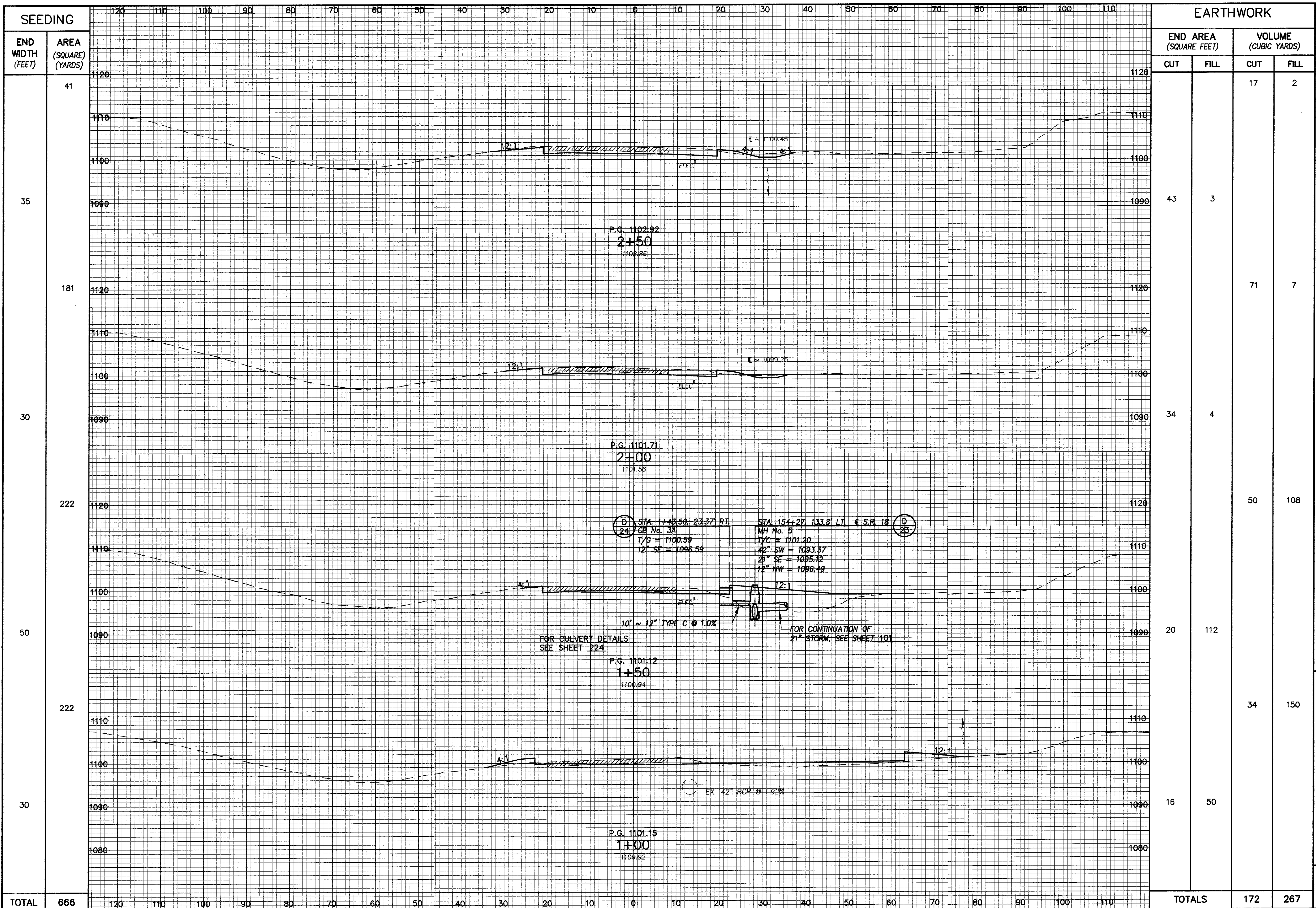


CALCULATED
CHECKED

RAMP D PROFILE

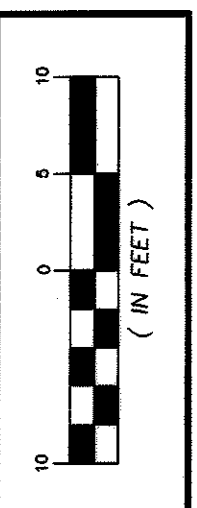
MED - 18 - 15.13

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| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 41 | |
| 35 | |
| 181 | |
| 30 | |
| 222 | |
| 50 | |
| 222 | |
| 30 | |
| TOTAL | 666 |

| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 17 | 2 |
| 43 | 3 | | |
| | | 71 | 7 |
| 34 | 4 | | |
| | | 50 | 108 |
| 20 | 112 | | |
| | | 34 | 150 |
| 16 | 50 | | |
| TOTALS | | 172 | 267 |



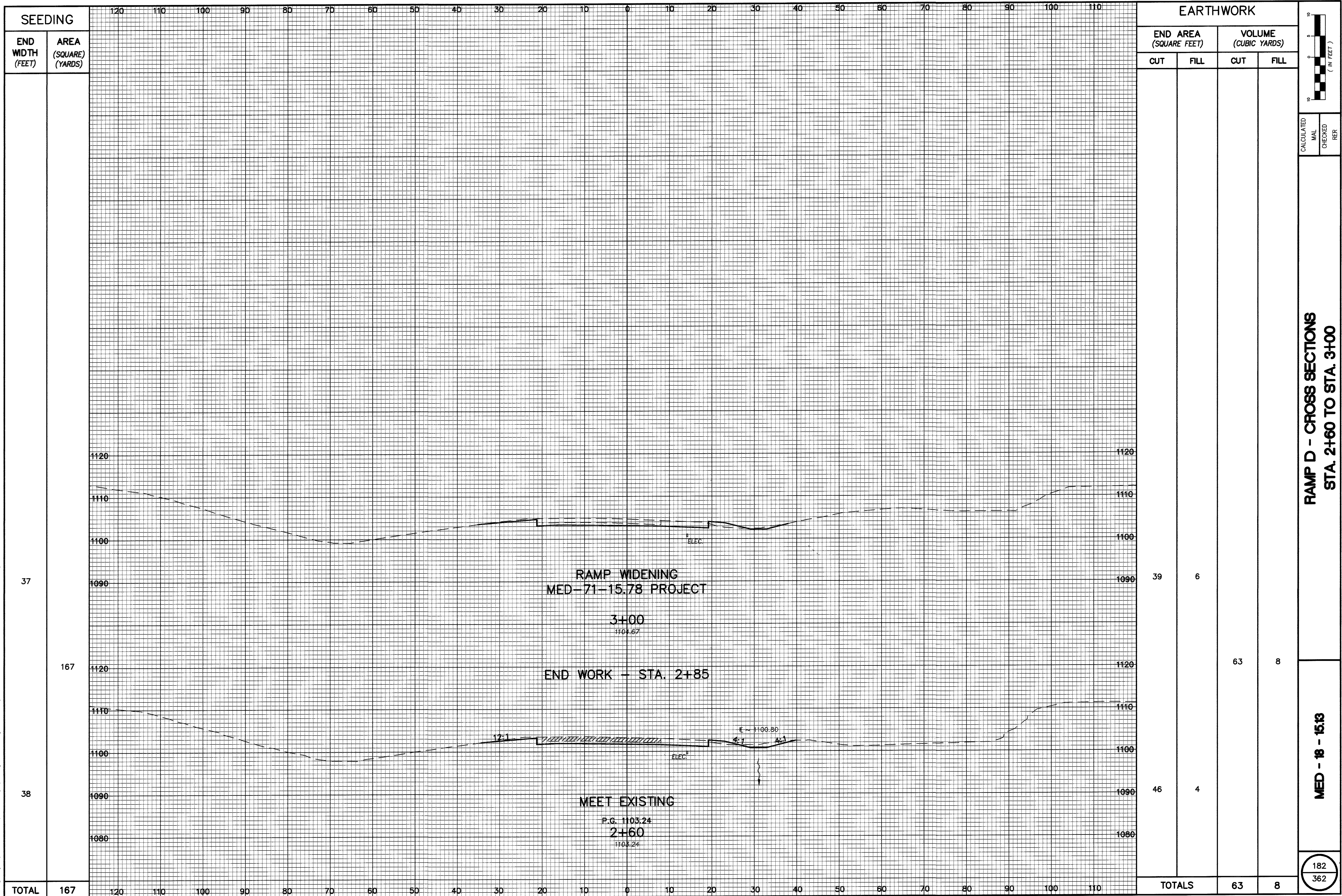
CALCULATED
MAL
CHECKED
PER

**RAMP D - CROSS SECTIONS
STA. 1+00 TO STA. 2+50**

MED - 18 - 15.13

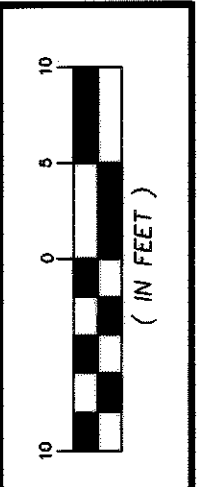
181
362

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| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 37 | |
| 167 | |
| 38 | |
| TOTAL | 167 |

| EARTHWORK | | | |
|------------------------|------|----------------------|----------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 39 | 6 | | |
| | | 63 | 8 |
| 46 | 4 | | |
| TOTALS | | 63 | 8 |

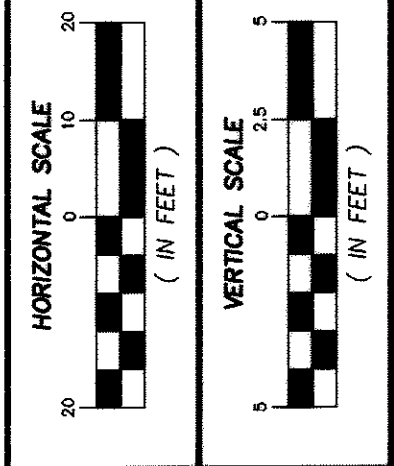
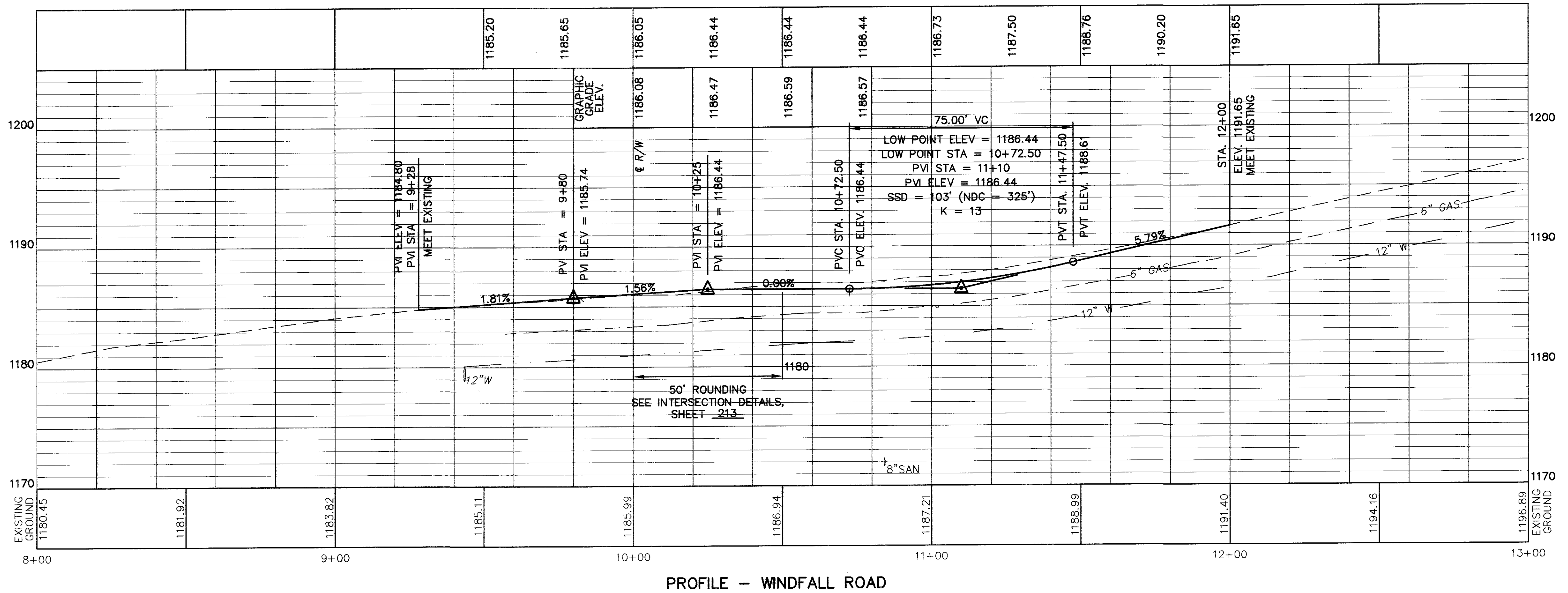
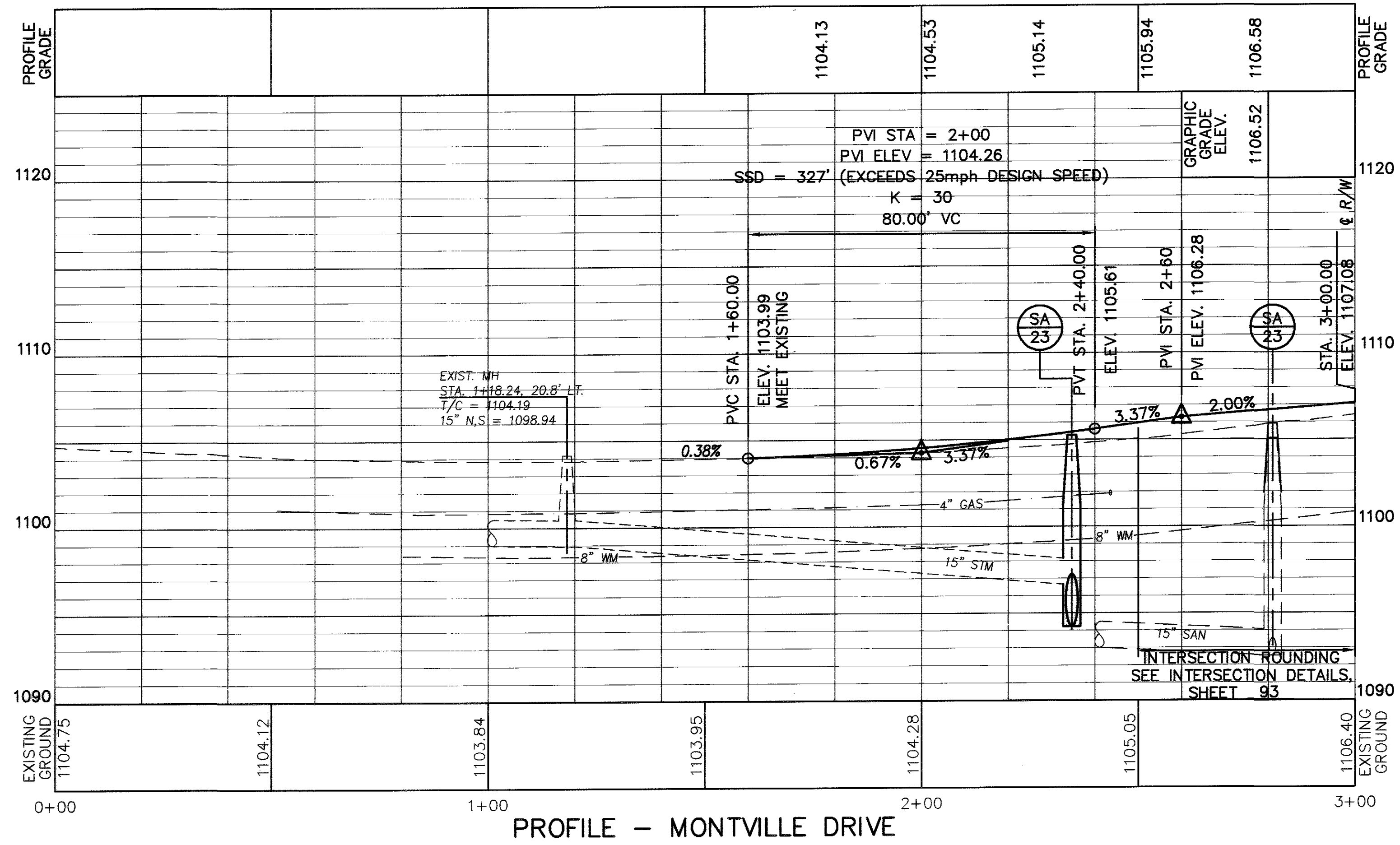


CALCULATED
MAL
CHECKED
RER

**RAMP D - CROSS SECTIONS
STA. 2+60 TO STA. 3+00**

MED - 18 - 15.13

182
362

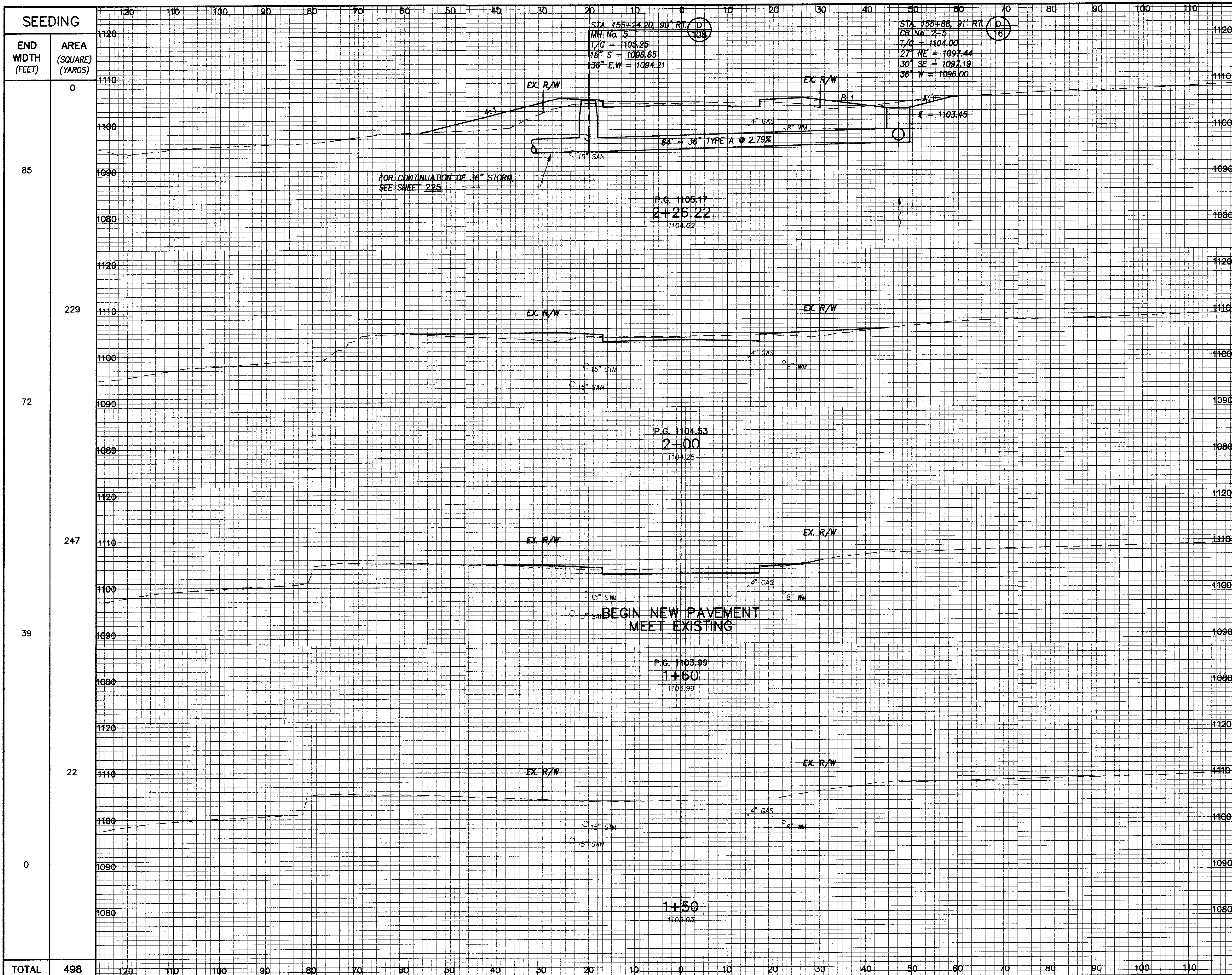


CALCULATED
 CHECKED

**MONTVILLE ROAD PROFILE
 WINDFALL ROAD PROFILE**

MED - 18 - 15.13

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| EARTHWORK | | | |
|---------------------|------|----------------------|------------|
| END AREA (SQ. FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 38 | 101 | 0 | 0 |
| 33 | 53 | 35 | 75 |
| 35 | 10 | 51 | 47 |
| 0 | 0 | 7 | 2 |
| TOTALS | | 93 | 124 |

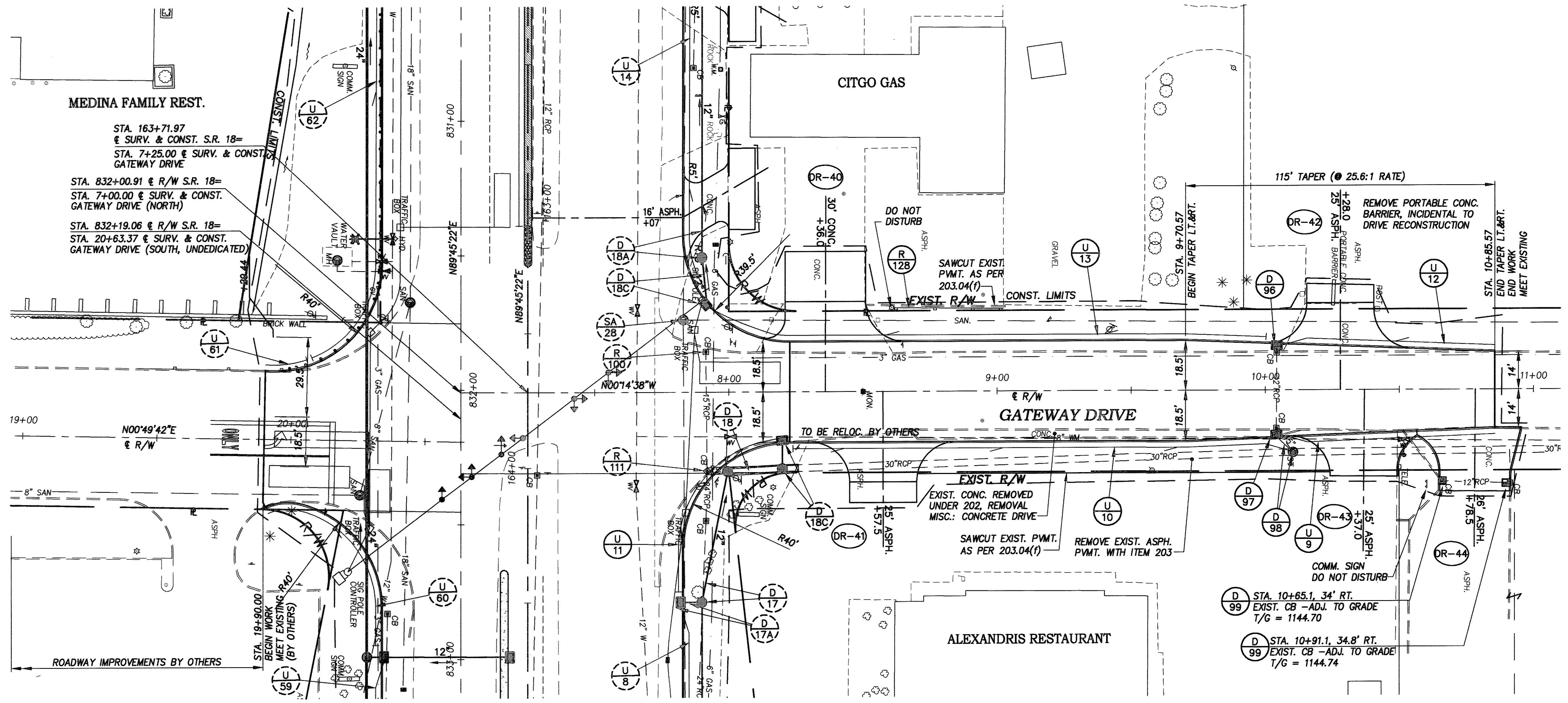
MONTVILLE DRIVE - CROSS SECTIONS
STA. 1+50 TO STA. 2+26.22

MED - 18 - 15.13

| | | | |
|------------|-----|---------|-----|
| CALCULATED | MAL | CHECKED | REB |
| | | | |

| |
|-----|
| 184 |
| 362 |

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MEDINA FAMILY REST.

STA. 163+71.97
 € SURV. & CONST. S.R. 18=
 STA. 7+25.00 € SURV. & CONST.
 GATEWAY DRIVE

STA. 832+00.91 € R/W S.R. 18=
 STA. 7+00.00 € SURV. & CONST.
 GATEWAY DRIVE (NORTH)

STA. 832+19.06 € R/W S.R. 18=
 STA. 20+63.37 € SURV. & CONST.
 GATEWAY DRIVE (SOUTH, UNDEDICATED)

CITGO GAS

GATEWAY DRIVE

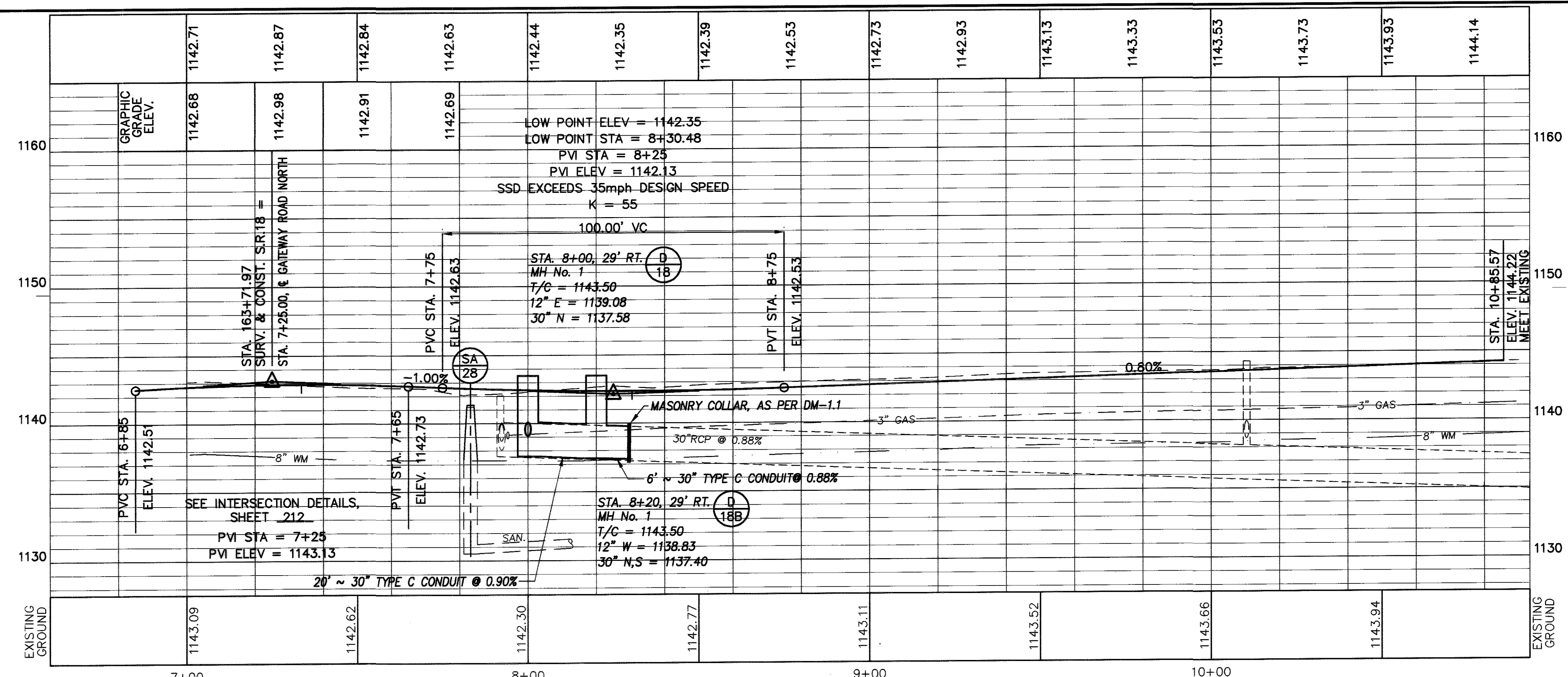
ALEXANDRIS RESTAURANT

| REFERENCE | PAGE NO. |
|----------------|------------|
| PROFILE | 186 |
| CROSS SECTIONS | 187 TO 188 |
| QUANTITIES | 66 TO 80 |

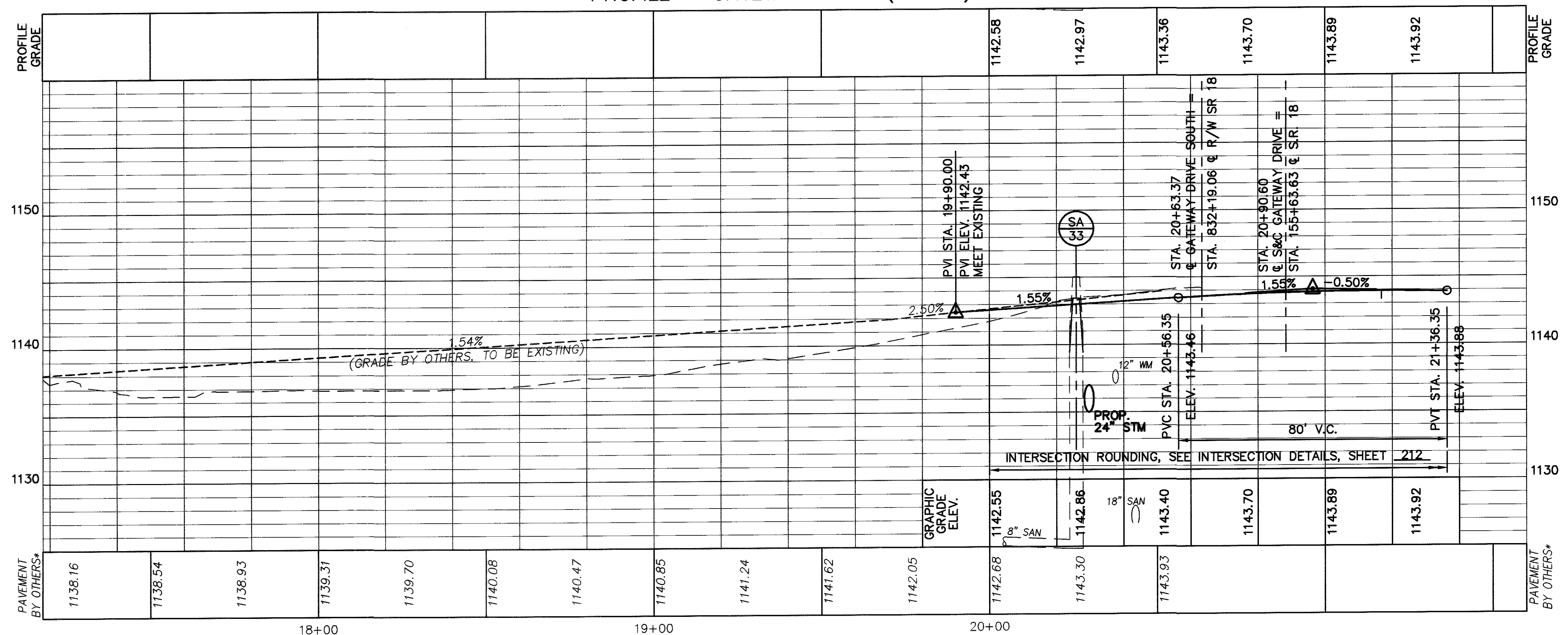
PLAN - GATEWAY DRIVE
 STA. 100 TO STA. 1100

MED - 18 - 15.13

CALCULATED
 CHECKED

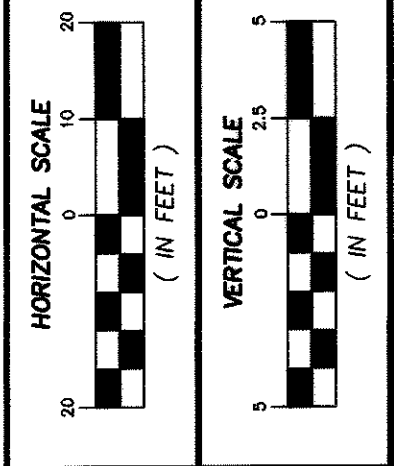


PROFILE - GATEWAY DRIVE (NORTH)



PROFILE - GATEWAY DRIVE (SOUTH)

* EXISTING ELEVATIONS FROM GATEWAY DRIVE PROJECT PREPARED FOR MEDINA COUNTY ENGINEER BY McCOY ASSOCIATES.

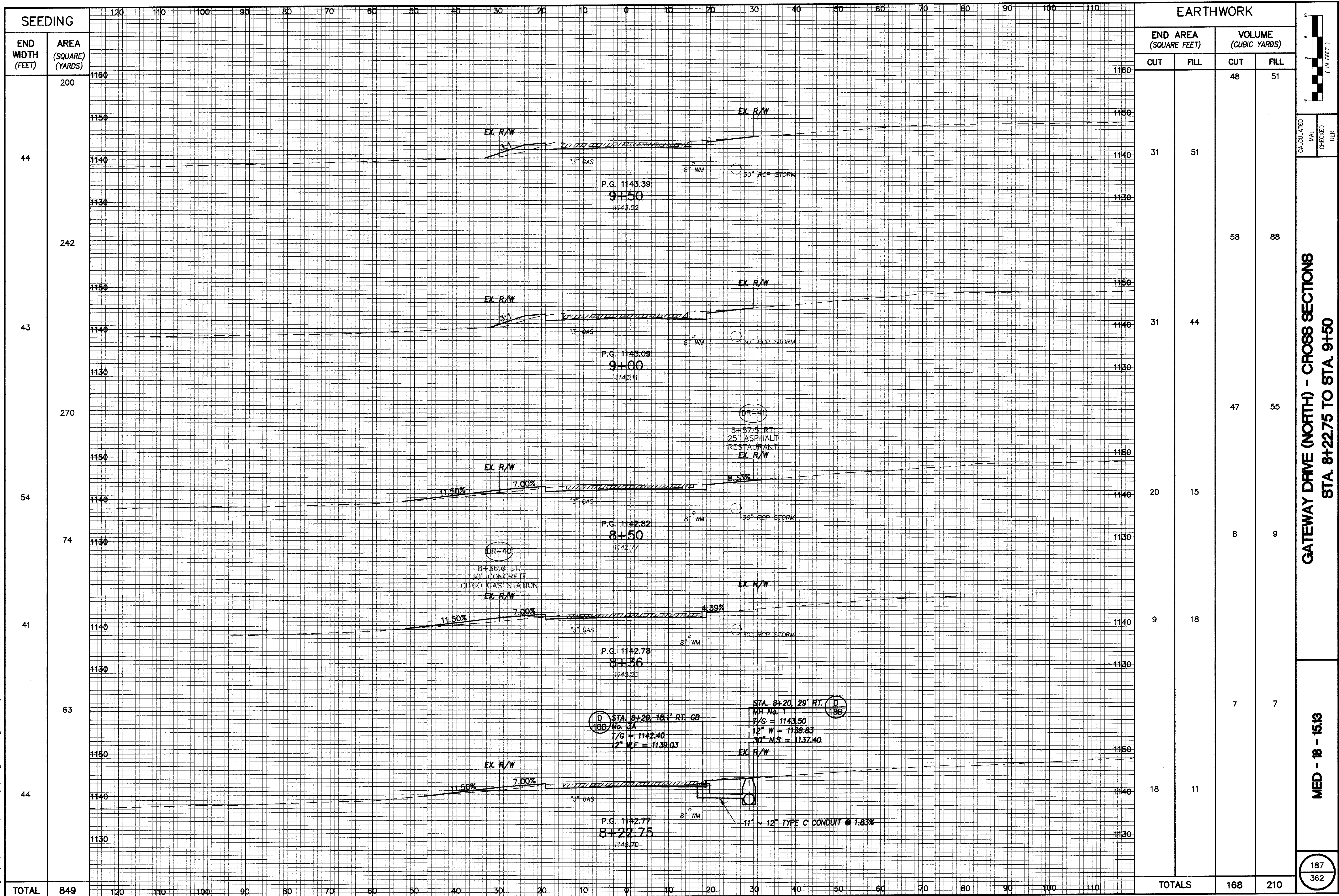


CALCULATED
CHECKED

GATEWAY DRIVE PROFILES

MED - 18 - 15.13

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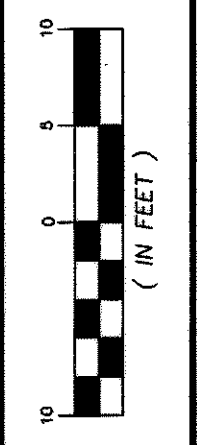
| EARTHWORK | | | |
|---------------------|------|----------------------|------------|
| END AREA (SQ. FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | 48 | 51 |
| 31 | 51 | | |
| | | 58 | 88 |
| 31 | 44 | | |
| | | 47 | 55 |
| 20 | 15 | | |
| | | 8 | 9 |
| 9 | 18 | | |
| | | 7 | 7 |
| 18 | 11 | | |
| TOTALS | | 168 | 210 |

GATEWAY DRIVE (NORTH) - CROSS SECTIONS
 STA. 8+22.75 TO STA. 9+50

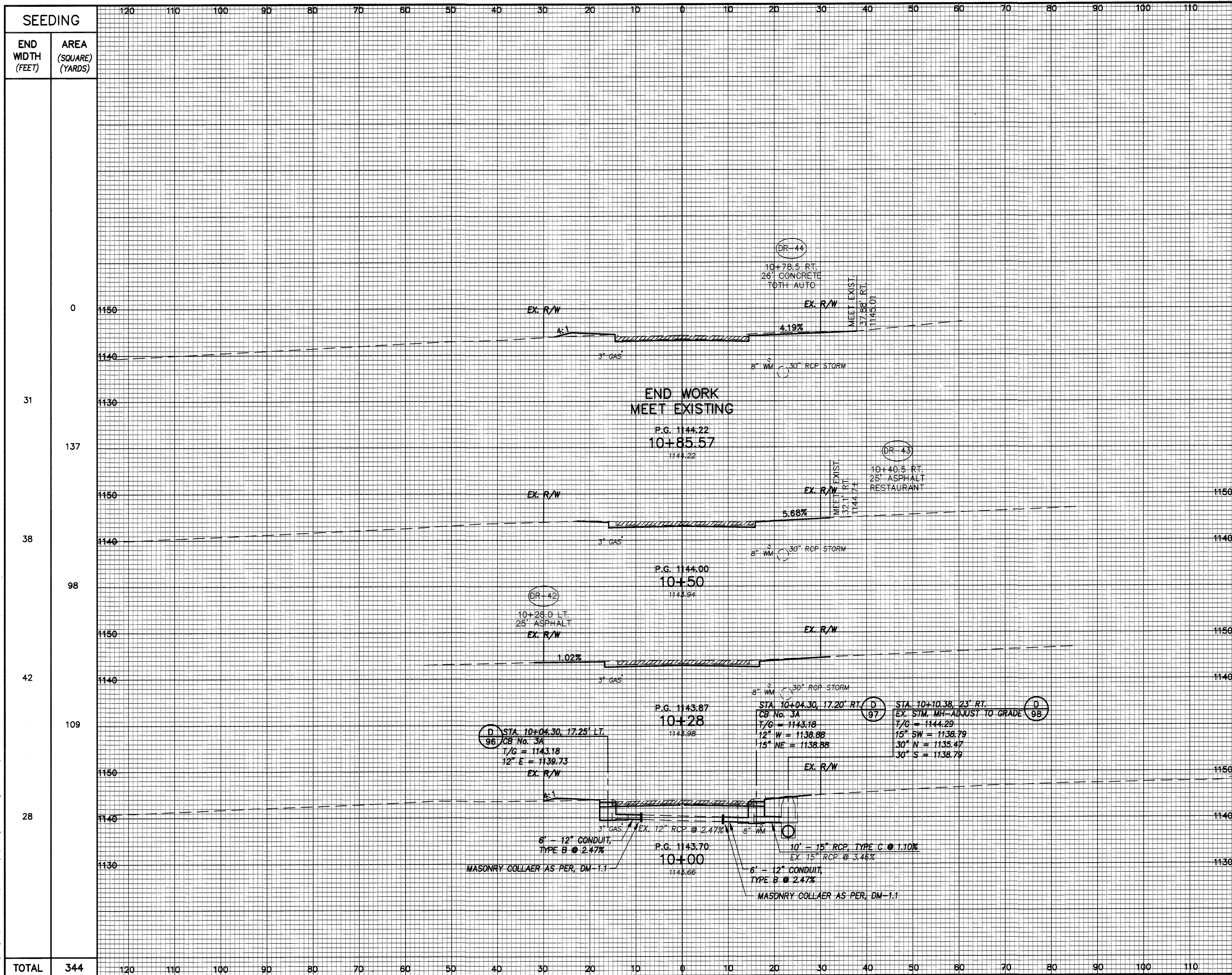
MED - 18 - 15.13

187
 362

CALCULATED
 MAL
 CHECKED
 REB



J:\pro3\7050600\roadway\506gx171.dwg User: jmr81152 Jun 26, 2003 7:24pm



| SEEDING | | EARTHWORK | | | |
|------------------|---------------------|------------------------|------|----------------------|----------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) | END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| | | CUT | FILL | CUT | FILL |
| 0 | | | | 0 | 0 |
| 31 | | 9 | 5 | | |
| 137 | | | | 25 | 0 |
| 38 | | 29 | 0 | | |
| 98 | | | | 22 | 0 |
| 42 | | 24 | 0 | | |
| 109 | | | | 24 | 2 |
| 28 | | 21 | 4 | | |
| TOTAL | 344 | TOTALS | | 71 | 2 |

CALCULATED

MAL

CHECKED

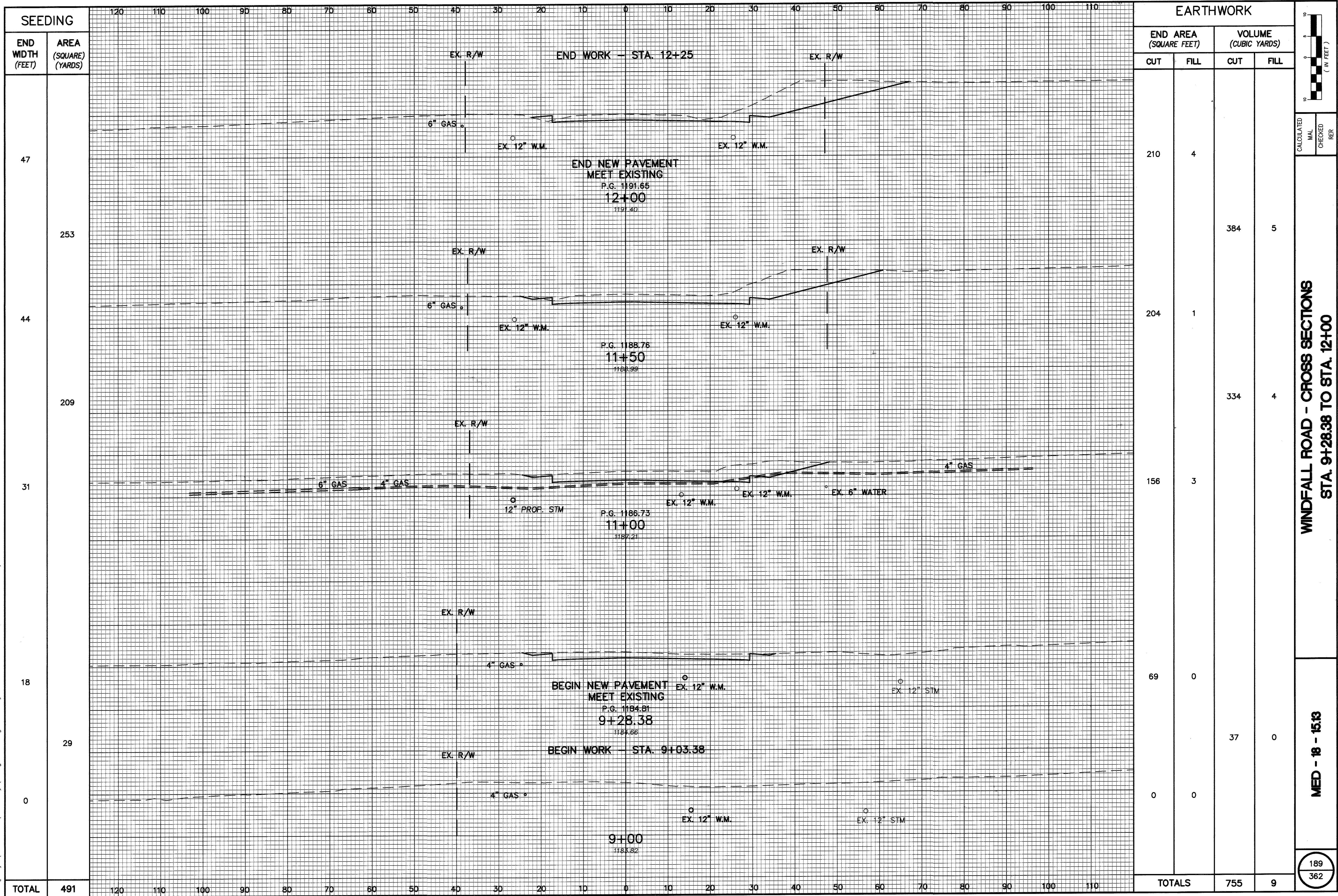
RER

GATEWAY DRIVE (NORTH) - CROSS SECTIONS
 STA. 10+00 TO STA. 10+85.57

MED - 18 - 15.13

188
362

j:\proj\7050600\roadway\506gx180.dwg User: jon81152 Jun 26, 2003 7:24pm



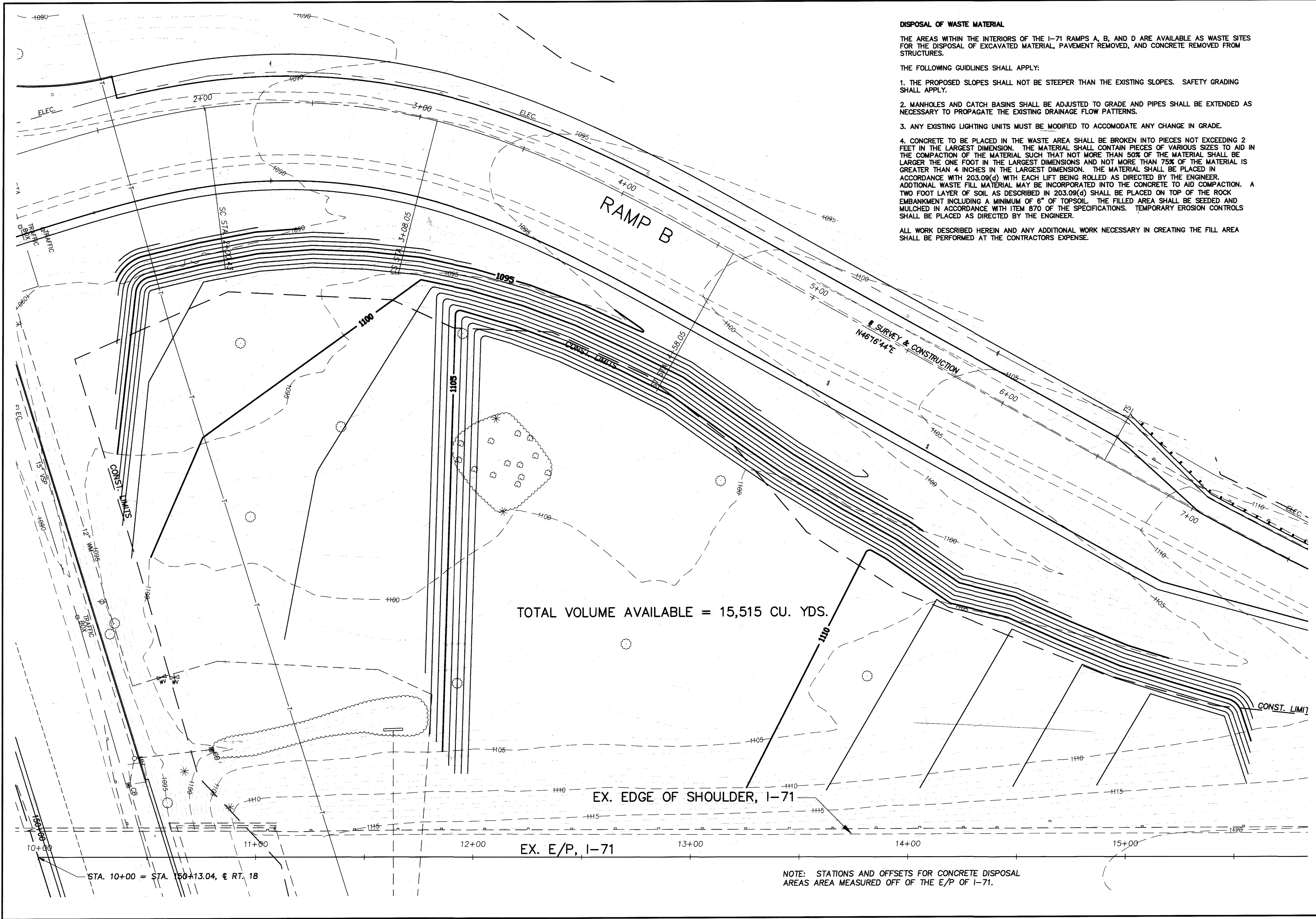
| EARTHWORK | | | |
|---------------------|------|----------------------|----------|
| END AREA (SQ. FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| 210 | 4 | 384 | 5 |
| 204 | 1 | 334 | 4 |
| 156 | 3 | | |
| 69 | 0 | 37 | 0 |
| 0 | 0 | | |
| TOTALS | | 755 | 9 |

WINDFALL ROAD - CROSS SECTIONS
 STA. 9+28.38 TO STA. 12+00

MED - 18 - 15.13

189
 362

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DISPOSAL OF WASTE MATERIAL

THE AREAS WITHIN THE INTERIORS OF THE I-71 RAMPS A, B, AND D ARE AVAILABLE AS WASTE SITES FOR THE DISPOSAL OF EXCAVATED MATERIAL, PAVEMENT REMOVED, AND CONCRETE REMOVED FROM STRUCTURES.

THE FOLLOWING GUIDELINES SHALL APPLY:

1. THE PROPOSED SLOPES SHALL NOT BE STEEPER THAN THE EXISTING SLOPES. SAFETY GRADING SHALL APPLY.
2. MANHOLES AND CATCH BASINS SHALL BE ADJUSTED TO GRADE AND PIPES SHALL BE EXTENDED AS NECESSARY TO PROPAGATE THE EXISTING DRAINAGE FLOW PATTERNS.
3. ANY EXISTING LIGHTING UNITS MUST BE MODIFIED TO ACCOMMODATE ANY CHANGE IN GRADE.
4. CONCRETE TO BE PLACED IN THE WASTE AREA SHALL BE BROKEN INTO PIECES NOT EXCEEDING 2 FEET IN THE LARGEST DIMENSION. THE MATERIAL SHALL CONTAIN PIECES OF VARIOUS SIZES TO AID IN THE COMPACTION OF THE MATERIAL SUCH THAT NOT MORE THAN 50% OF THE MATERIAL SHALL BE LARGER THAN 4 INCHES IN THE LARGEST DIMENSIONS AND NOT MORE THAN 75% OF THE MATERIAL IS GREATER THAN 4 INCHES IN THE LARGEST DIMENSION. THE MATERIAL SHALL BE PLACED IN ACCORDANCE WITH 203.09(d) WITH EACH LIFT BEING ROLLED AS DIRECTED BY THE ENGINEER. ADDITIONAL WASTE FILL MATERIAL MAY BE INCORPORATED INTO THE CONCRETE TO AID COMPACTION. A TWO FOOT LAYER OF SOIL AS DESCRIBED IN 203.09(d) SHALL BE PLACED ON TOP OF THE ROCK EMBANKMENT INCLUDING A MINIMUM OF 6" OF TOPSOIL. THE FILLED AREA SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH ITEM 870 OF THE SPECIFICATIONS. TEMPORARY EROSION CONTROLS SHALL BE PLACED AS DIRECTED BY THE ENGINEER.

ALL WORK DESCRIBED HEREIN AND ANY ADDITIONAL WORK NECESSARY IN CREATING THE FILL AREA SHALL BE PERFORMED AT THE CONTRACTORS EXPENSE.

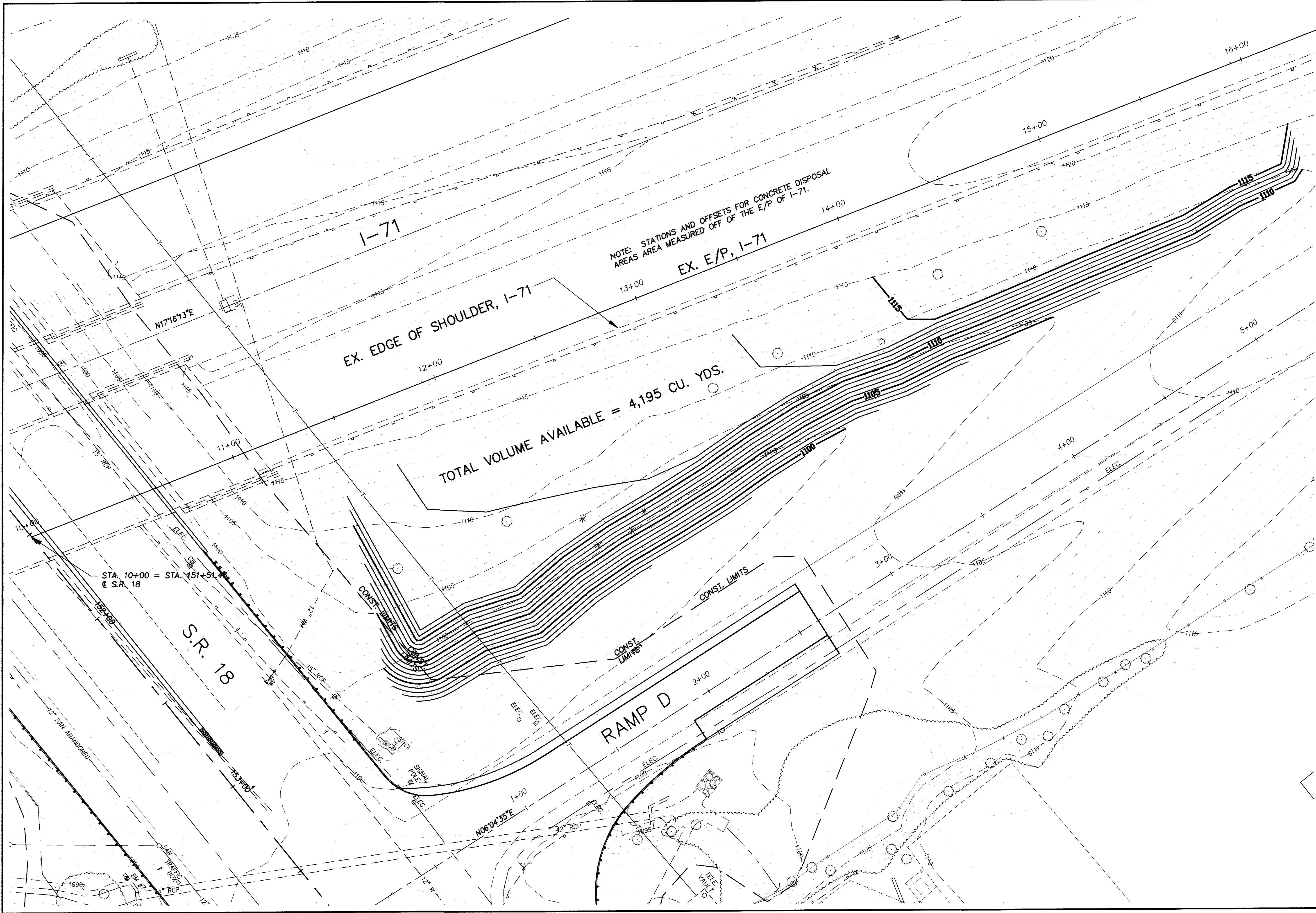


| | | | |
|------------|-----|---------|-----|
| CALCULATED | SCW | CHECKED | REB |
|------------|-----|---------|-----|

CONCRETE DISPOSAL/GRADING PLAN AT RAMP B

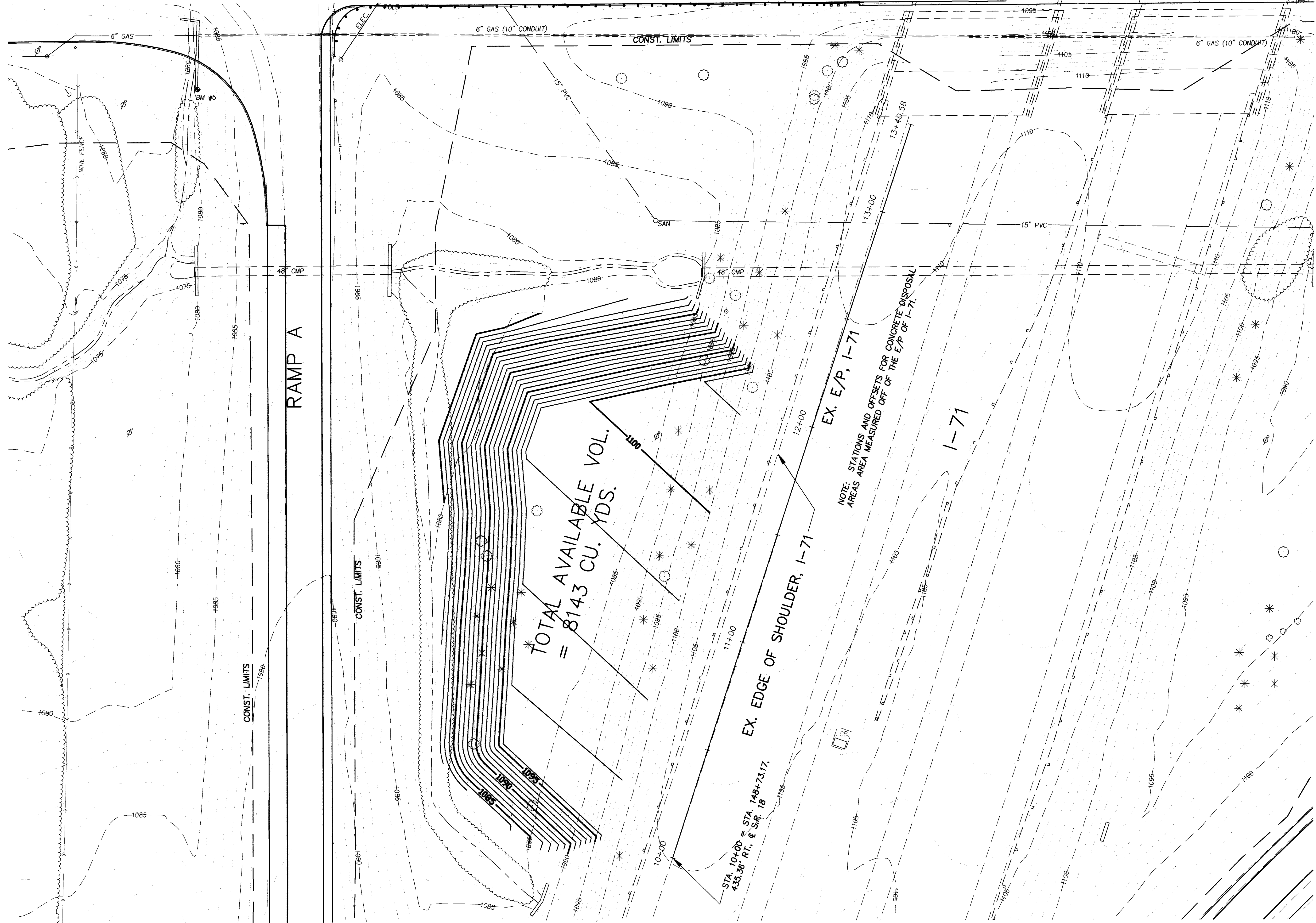
MED - 18 - 15.13

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| | | | |
|------------|-----|---------|-----------|
| CALCULATED | SCW | CHECKED | REVISIONS |
| | | | |

CONCRETE DISPOSAL/GRADING PLAN AT RAMP D



TOTAL AVAILABLE VOL.
= 8143 CU. YDS.

STA. 10+00 = STA. 148+73.17,
455.36' RT., @ S.R. 18

NOTE: STATIONS AND OFFSETS FOR CONCRETE DISPOSAL
AREAS AREA MEASURED OFF OF THE E/P OF I-71.

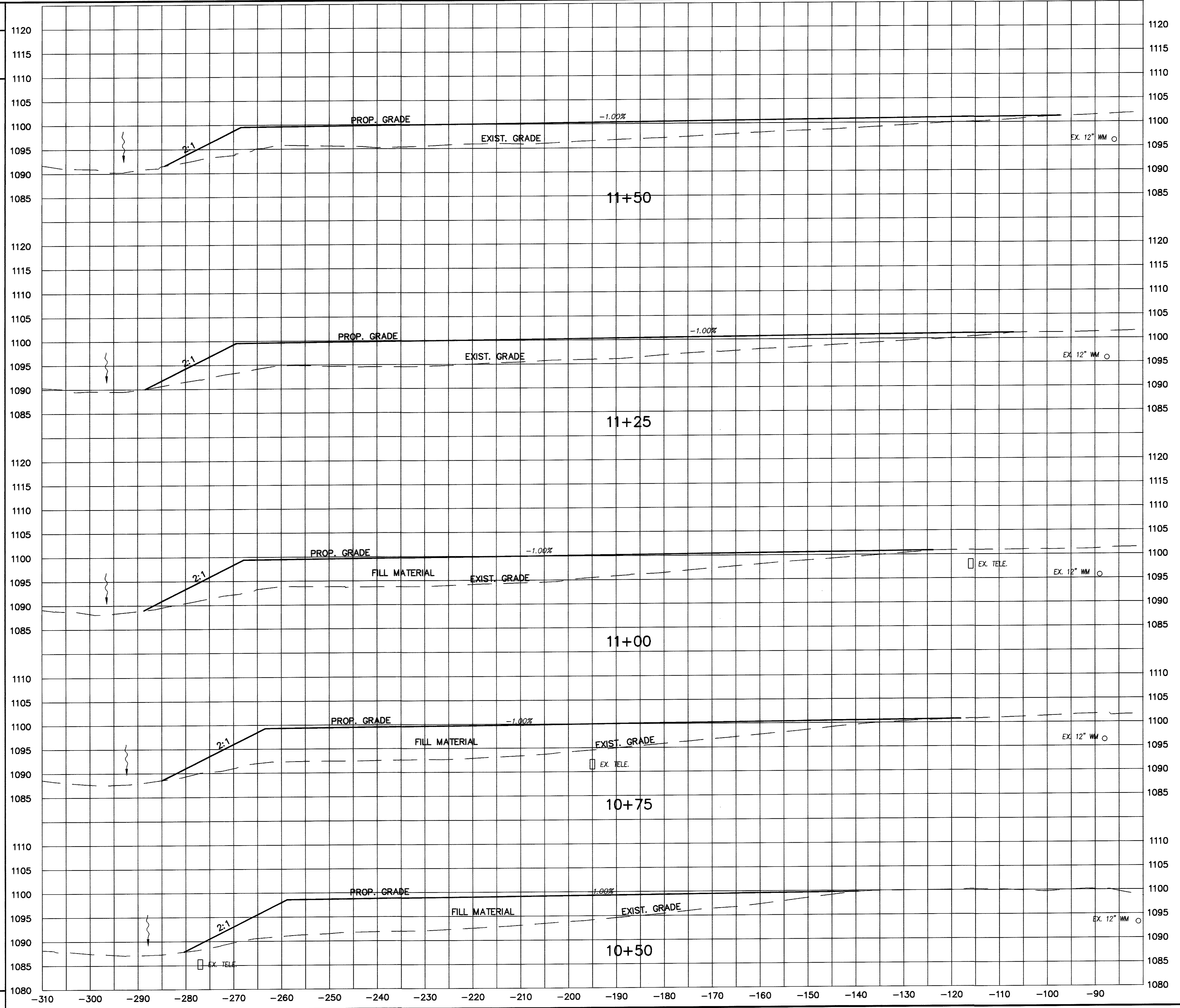
CALCULATED
SCW
CHECKED
REF

20
10
0
10
20
(IN FEET)

CONCRETE DISPOSAL/GRADING PLAN AT RAMP A

J:\proj3\7050600\concretedisposal\concx1.dwg User: am05646 Jun 04, 2003 - 3:28pm

| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 185 | 549 |
| 182 | 510 |
| 169 | 489 |
| 171 | 474 |
| 145 | 438 |
| TOTAL | 2460 |



| EARTHWORK | | | |
|------------------------|------|----------------------|-------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | 568 | | 516 |
| | 647 | | 563 |
| | 665 | | 608 |
| | 734 | | 648 |
| | 653 | | 643 |
| TOTALS | | | 2978 |

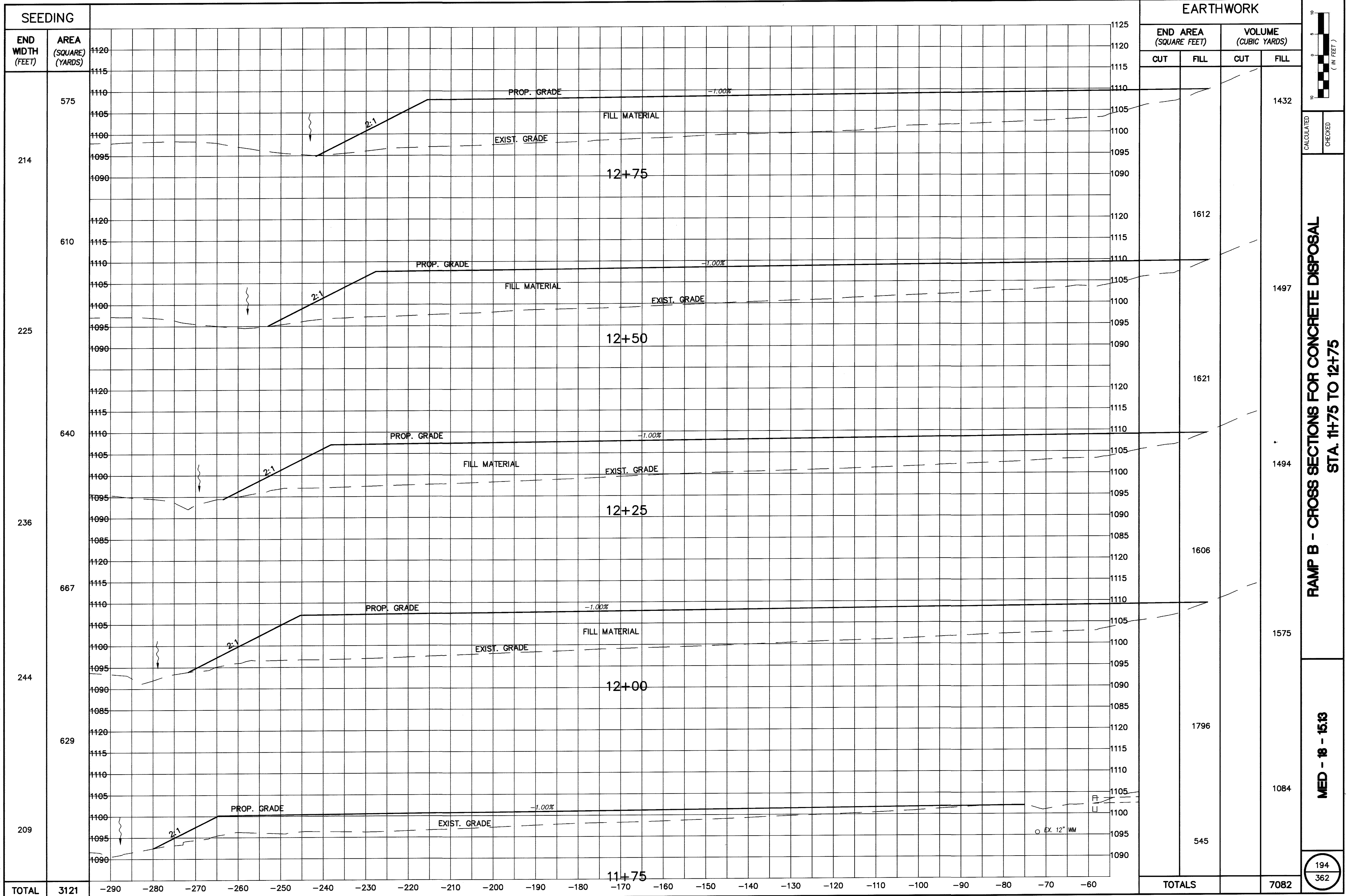
CALCULATED
 CHECKED

**RAMP B - CROSS SECTIONS FOR CONCRETE DISPOSAL
 STA. 10+50 TO 11+50**

MED - 18 - 15.13

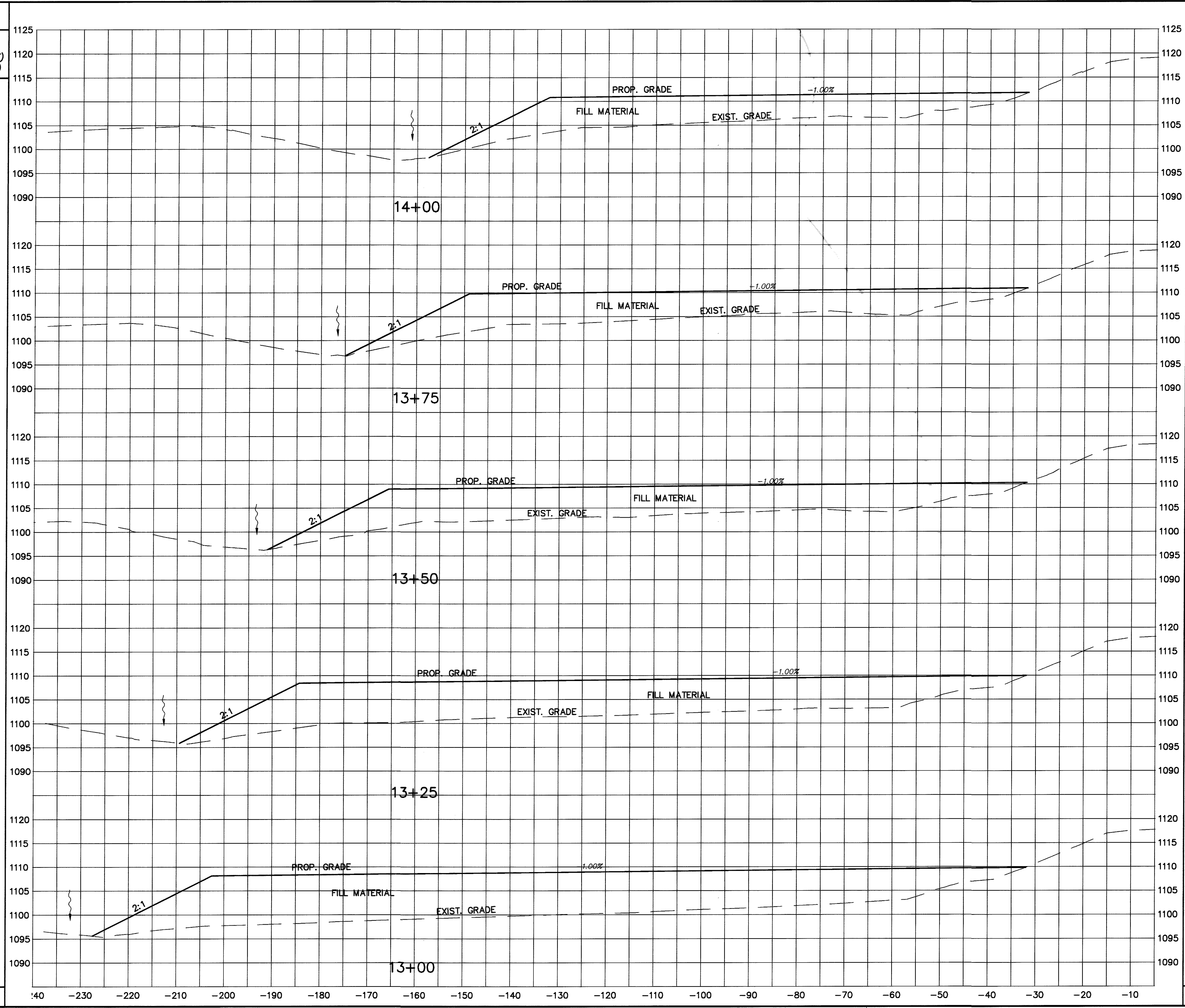
193
 362

j:\proj3\7050600\concretedisposal\concx2.dwg User:ami05646 Jun 04, 2003 - 3:28pm



j:\proj3\7050600\concretedisposal\concx3.dwg User: aml05646 Jun 04, 2003 - 3:28pm

| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 130 | 335 |
| 147 | 385 |
| 163 | 431 |
| 182 | 479 |
| 200 | 531 |
| TOTAL | 2161 |



| EARTHWORK | | | |
|------------------------|------|----------------------|-------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | | 492 |
| | 578 | | 587 |
| | 689 | | 711 |
| | 846 | | 921 |
| | 1143 | | 1215 |
| | 1482 | | |
| TOTALS | | | 3926 |



CALCULATED
CHECKED

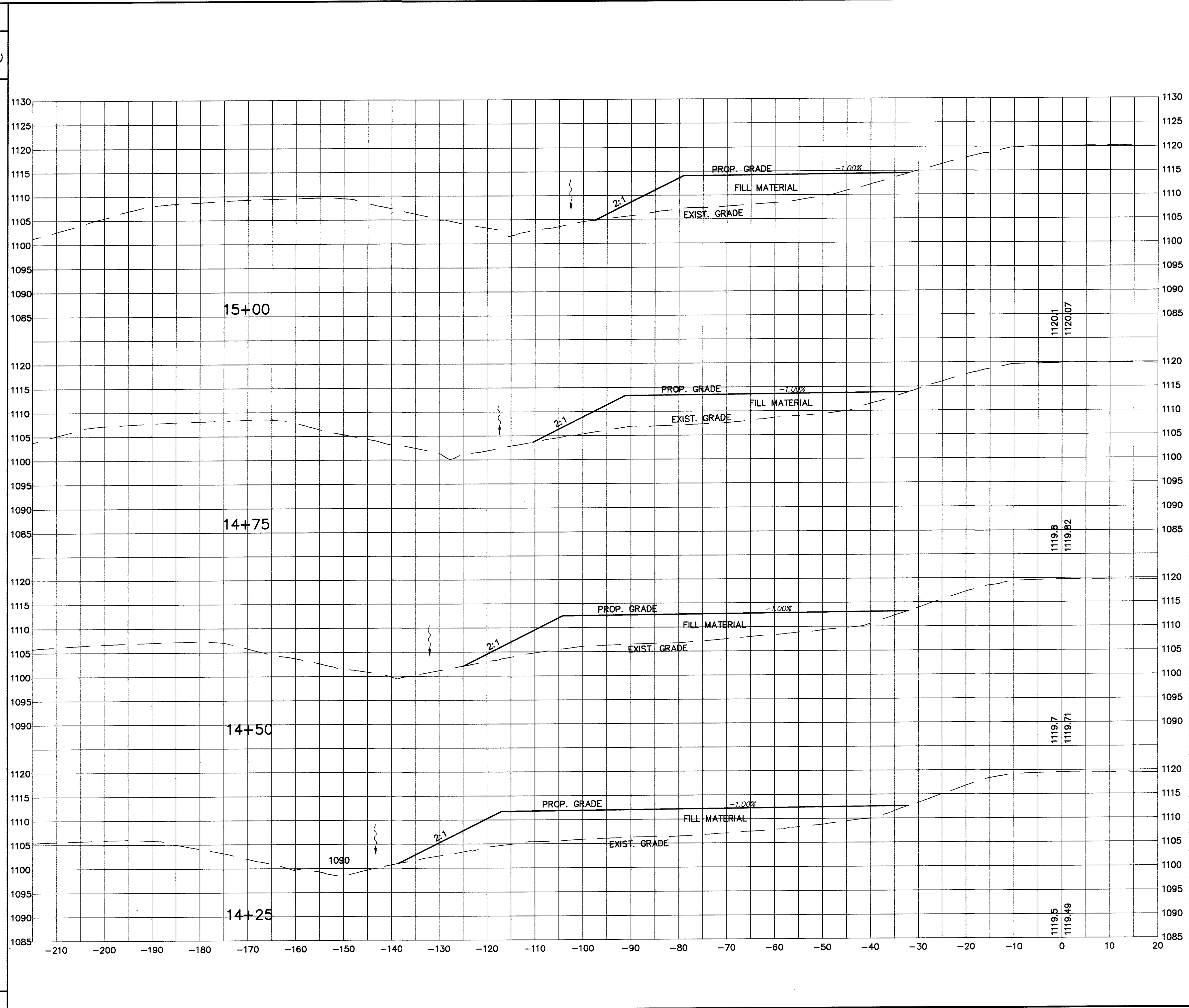
**RAMP B - CROSS SECTIONS FOR CONCRETE DISPOSAL
STA. 13+00 TO 14+00**

MED - 18 - 15.13

195
362

j:\proj3\7050600\concretedisposal\concx4.dwg User: am105646 Jun 04, 2003 - 3:29pm

| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 182 | |
| 70 | |
| 213 | |
| 83 | |
| 250 | |
| 97 | |
| 335 | |
| 111 | |
| TOTAL | 980 |



| EARTHWORK | | | |
|------------------------|------|----------------------|-------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | | 238 |
| | 283 | | 289 |
| | 340 | | 346 |
| | 406 | | 413 |
| | 485 | | |
| TOTALS | | | 1286 |

**RAMP B - CROSS SECTIONS FOR CONCRETE DISPOSAL
STA. 14+25 TO 15+00**

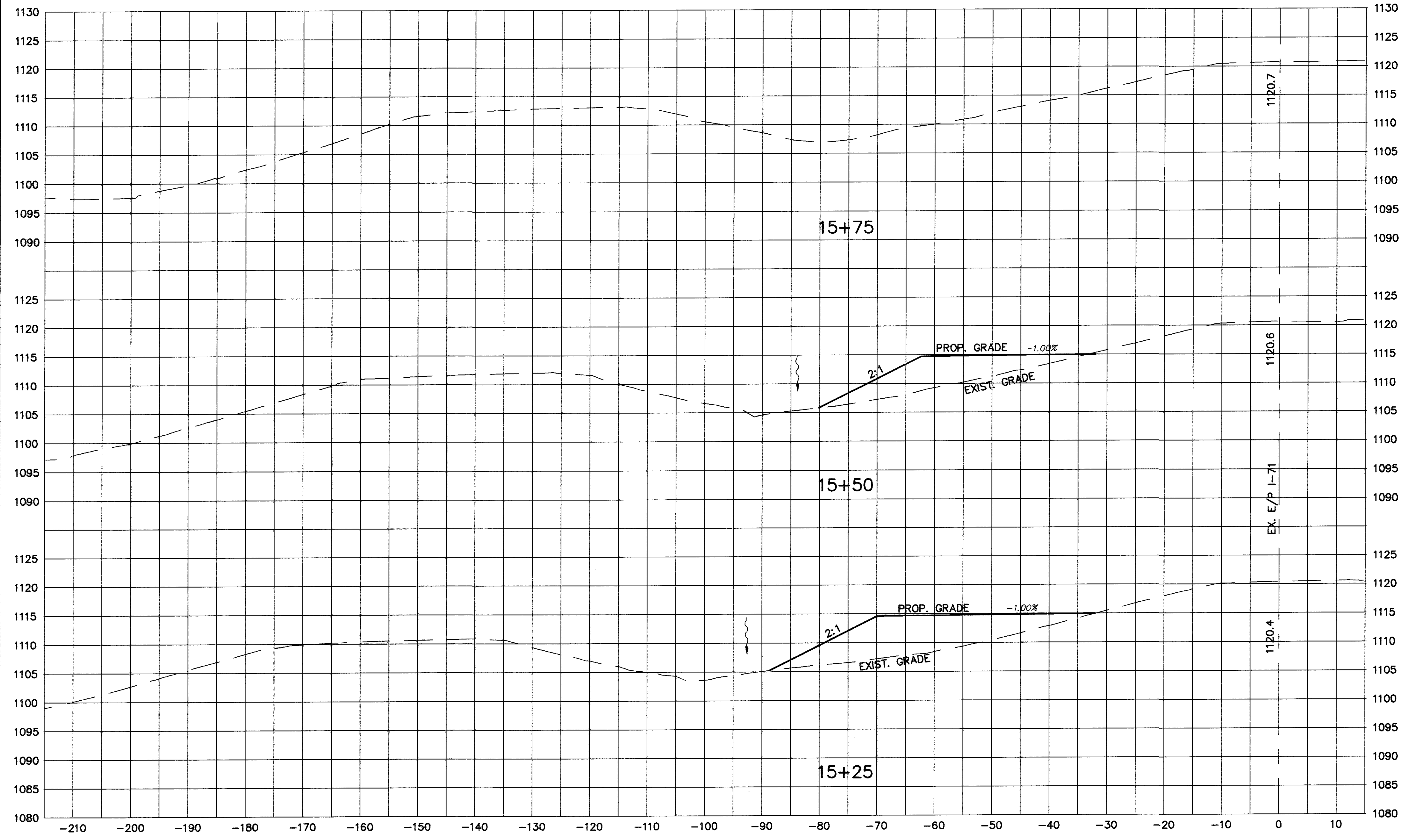
MED - 18 - 15.13

196
362

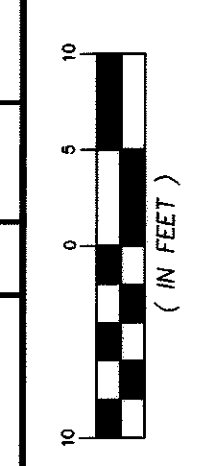
CALCULATED
CHECKED

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| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 74 | |
| 53 | |
| 159 | |
| 61 | |
| TOTAL | 166 |



| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | | | 68 |
| | 146 | | 175 |
| | 231 | | |
| TOTALS | | | 243 |



CALCULATED
CHECKED

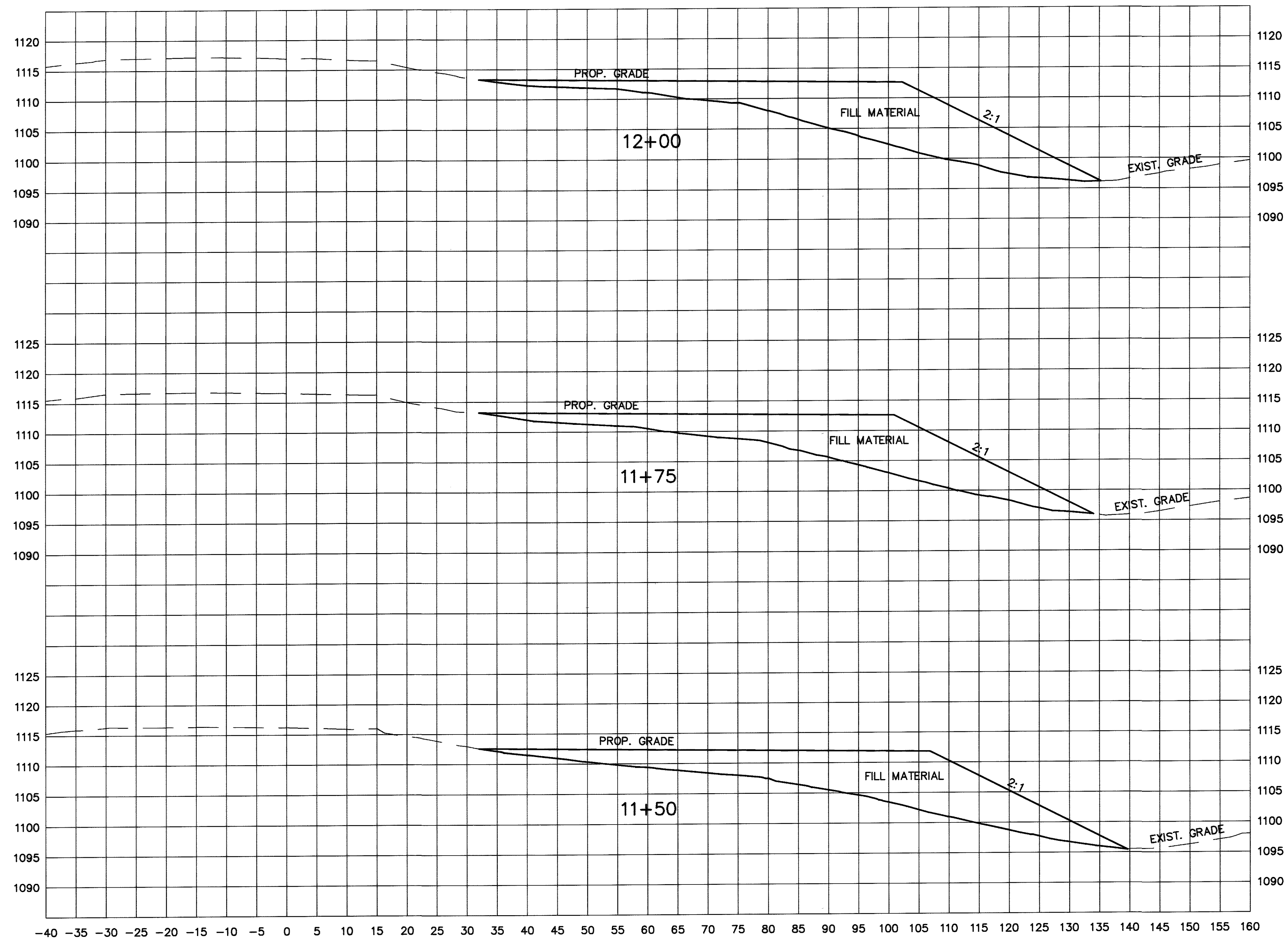
**RAMP B - CROSS SECTIONS FOR CONCRETE DISPOSAL
STA. 15+25 TO 15+75**

MED - 18 - 15.13

197
362

J:\proj3\7050600\concretedisposal\concx6.dwg User: am05646 Jun 04, 2003 - 3:29pm

| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 108 | 288 |
| 107 | 299 |
| 113 | 306 |
| TOTAL | 893 |



| EARTHWORK | | | |
|------------------------|------|----------------------|-------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | 478 | | 401 |
| | 443 | | 427 |
| | 493 | | 433 |
| TOTALS | | | 1261 |

CALCULATED
CHECKED

**RAMP D - CROSS SECTIONS FOR CONCRETE DISPOSAL
STA. 11+50 TO 12+00**

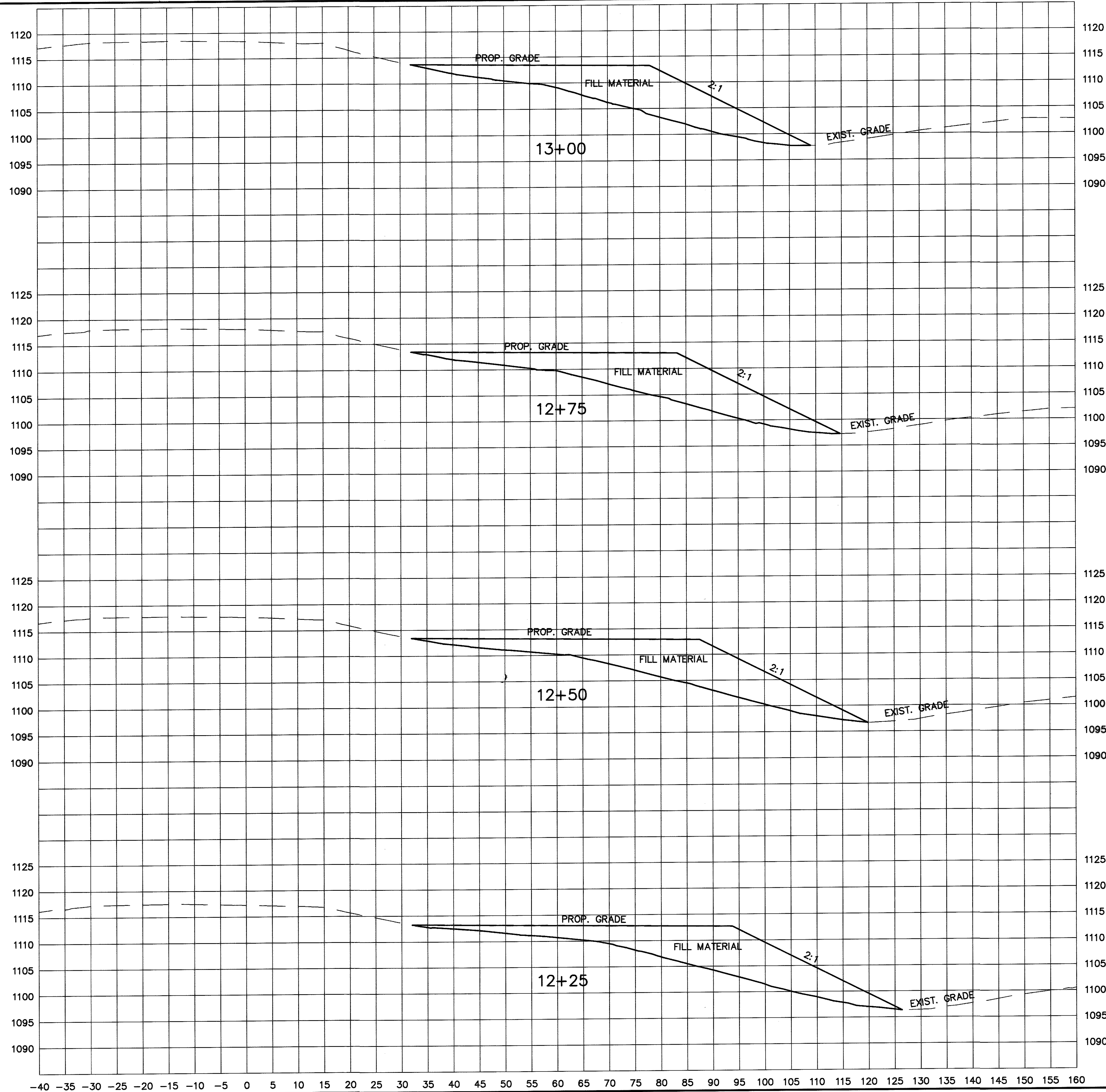
MED - 18 - 15.13

198
362

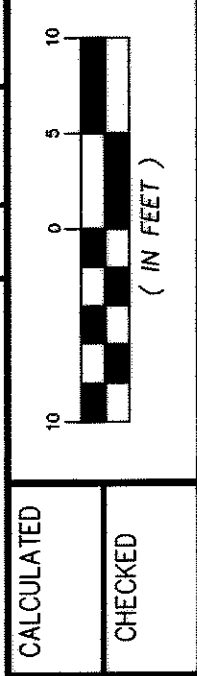


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| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 82 | 218 |
| 87 | 234 |
| 92 | 249 |
| 99 | 265 |
| TOTAL | 966 |



| EARTHWORK | | | |
|------------------------|------|----------------------|-------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | 357 | | 300 |
| | 371 | | 337 |
| | 370 | | 343 |
| | 387 | | 351 |
| TOTALS | | | 1331 |



CALCULATED
CHECKED

**RAMP D - CROSS SECTIONS FOR CONCRETE DISPOSAL
STA. 12+25 TO 13+00**

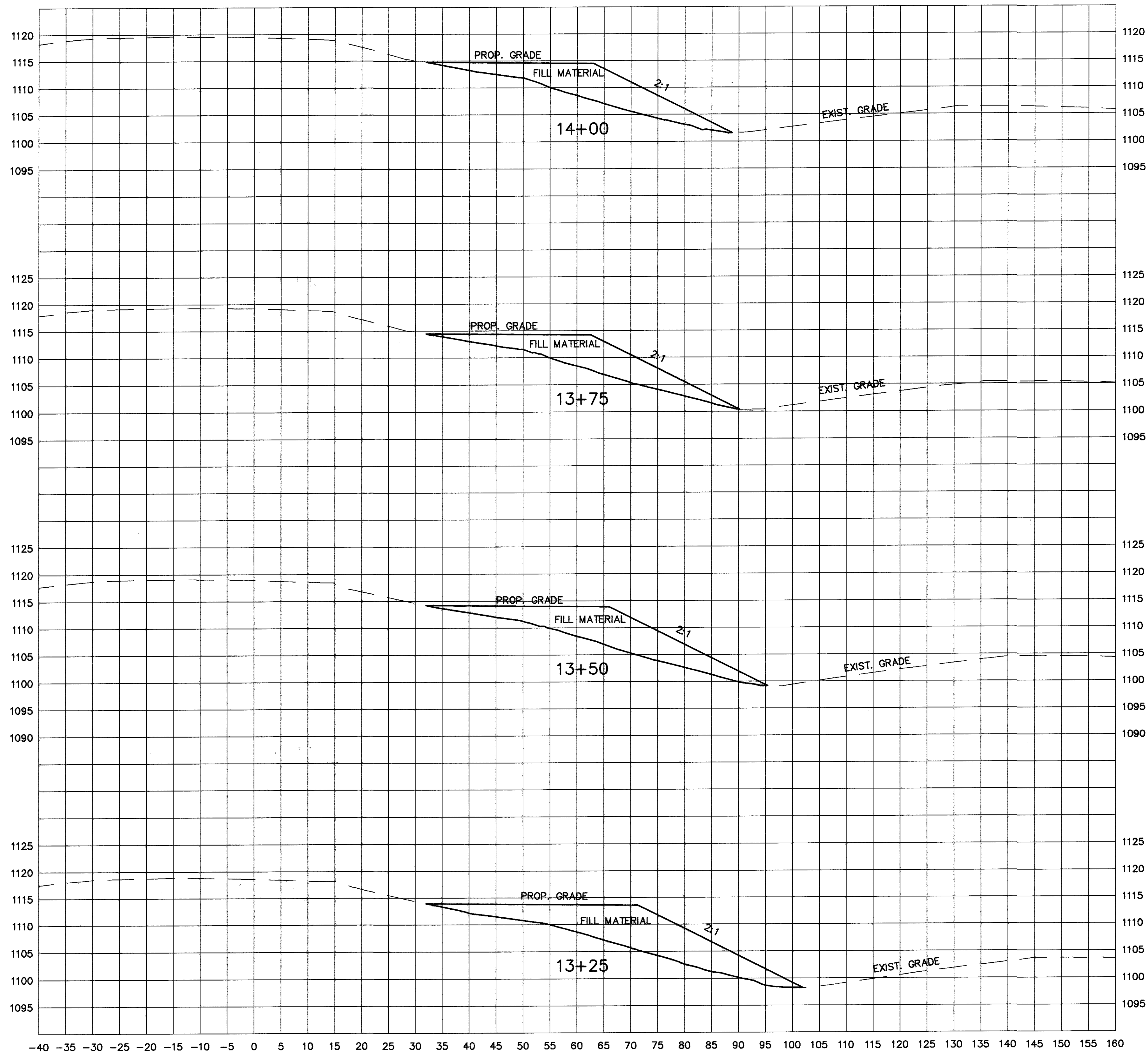
MED - 18 - 15.13

199
362

J:\proj3\7050600\concretedisposal\concx8.dwg User: am05646 Jun 04, 2003 - 3:29pm

SEEDING

| END WIDTH (FEET) | AREA (SQUARE YARDS) |
|------------------|---------------------|
| 62 | 167 |
| 62 | 172 |
| 67 | 179 |
| 75 | 197 |
| TOTAL | 715 |



EARTHWORK

| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
|------------------------|------|----------------------|------------|
| CUT | FILL | CUT | FILL |
| | 191 | | 165 |
| | 182 | | 173 |
| | 225 | | 188 |
| | 291 | | 239 |
| TOTALS | | | 765 |

**RAMP D - CROSS SECTIONS FOR CONCRETE DISPOSAL
STA. 13+25 TO 14+00**

MED - 18 - 15.13

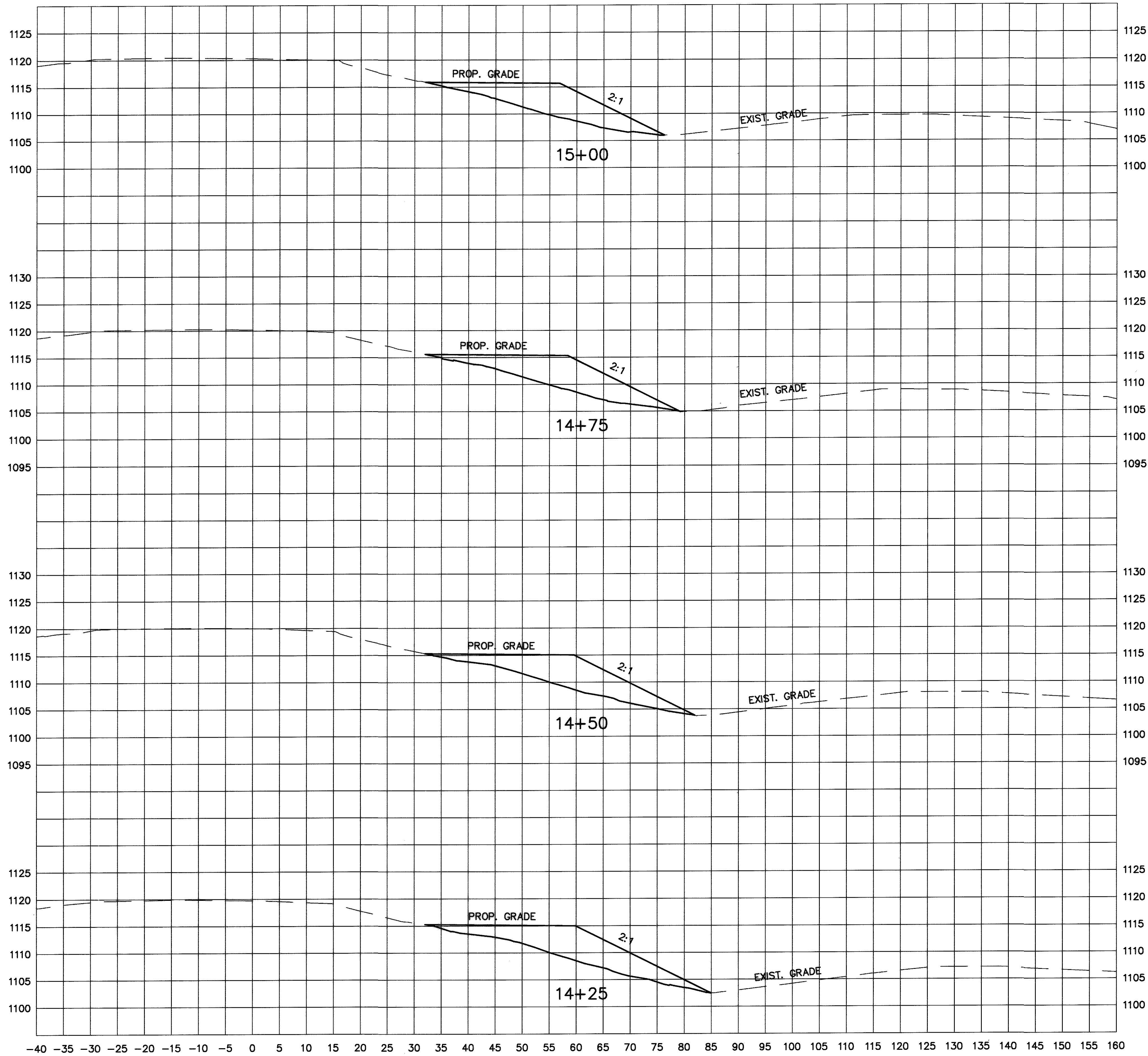
200
362

CALCULATED
CHECKED



J:\proj3\7050600\concretedisposal\concx9.dwg User: am105646 Jun 04, 2003 - 3:29pm

| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 48 | 131 |
| 51 | 215 |
| 54 | 240 |
| 58 | 210 |
| TOTAL | 796 |



| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | 142 | | 126 |
| | 149 | | 135 |
| | 152 | | 139 |
| | 166 | | 147 |
| TOTALS | | | 547 |

201
362

RAMP D - CROSS SECTIONS FOR CONCRETE DISPOSAL
STA. 14+25 TO 15+00

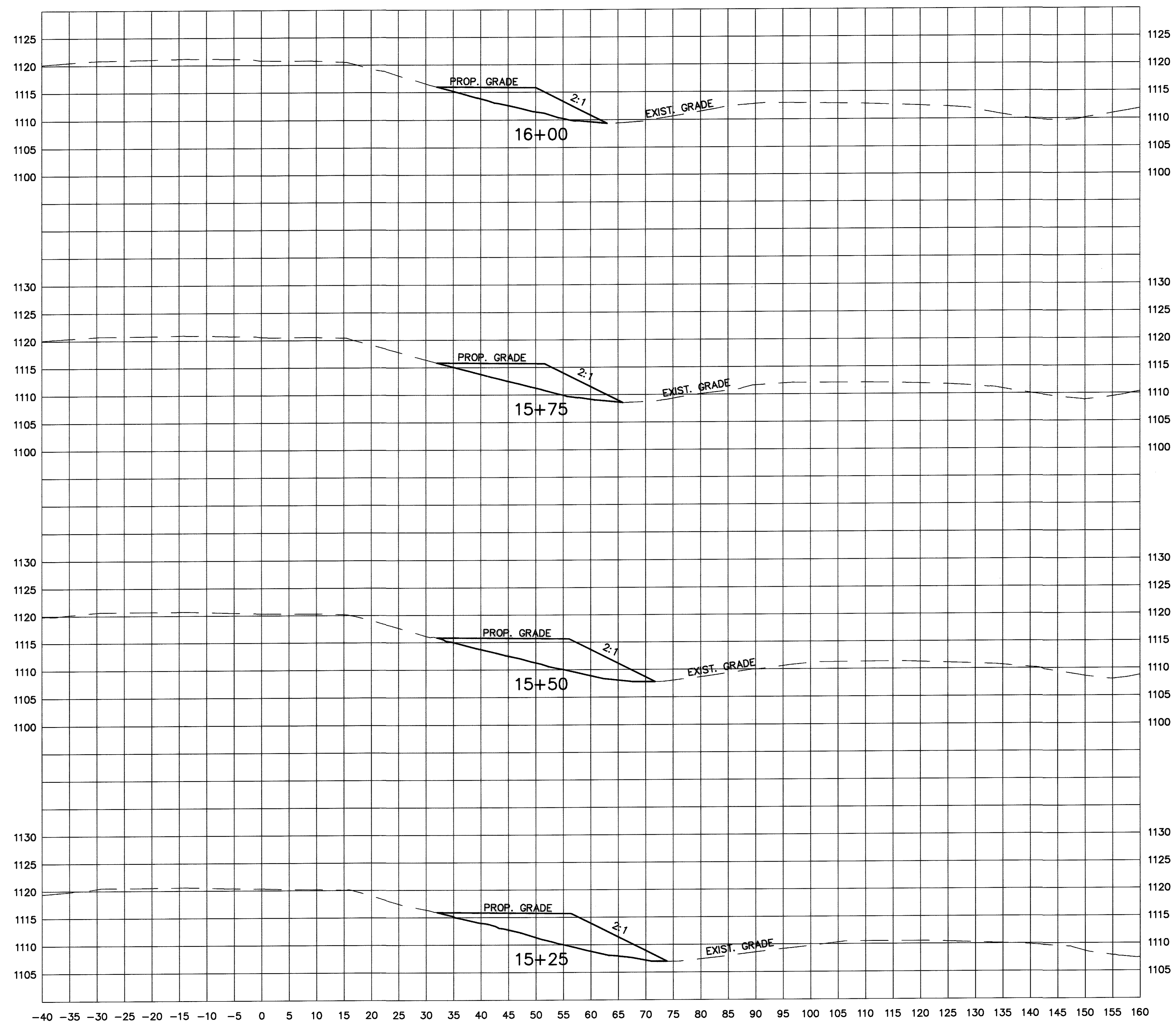
MED - 18 - 15.13

CALCULATED
 CHECKED

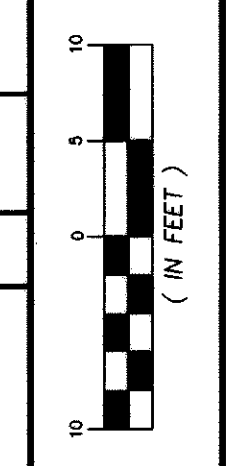


J:\proj3\7050600\concretedisposal\concx10.dwg User: arml05646 Jun 04, 2003 3:29pm

| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 35 | 49 |
| 38 | 101 |
| 44 | 114 |
| 46 | 125 |
| TOTAL | 389 |



| EARTHWORK | | | |
|------------------------|------|----------------------|------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | 73 | | 34 |
| | 86 | | 74 |
| | 125 | | 98 |
| | 131 | | 119 |
| TOTALS | | | 291 |



CALCULATED
CHECKED

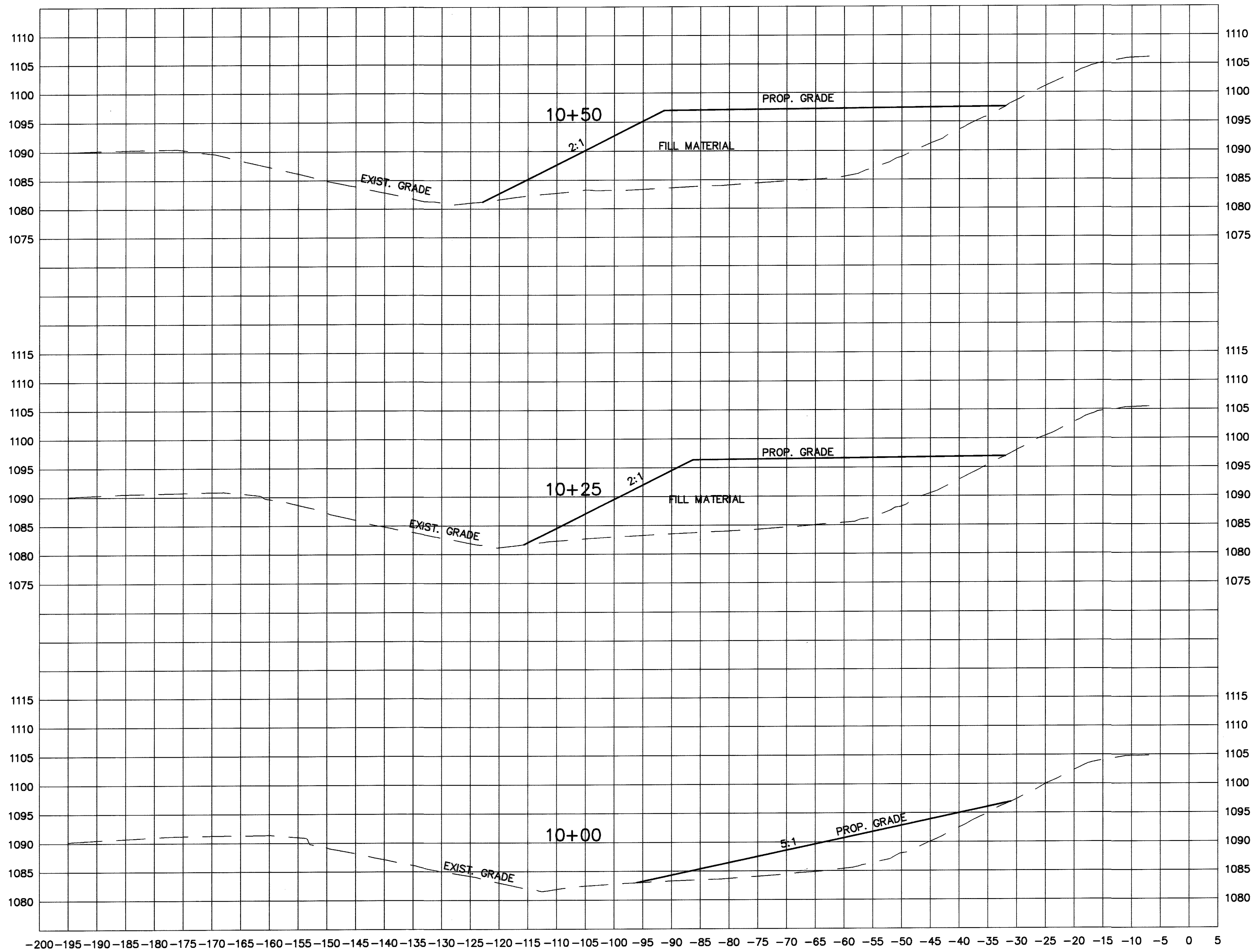
**RAMP D - CROSS SECTIONS FOR CONCRETE DISPOSAL
STA. 15+25 TO 16+00**

MED - 18 - 15.13

202
362

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| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 95 | 274 |
| 87 | 253 |
| 70 | 218 |
| TOTAL | 745 |



| EARTHWORK | | | |
|------------------------|------|----------------------|-------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | 779 | | 794 |
| | 675 | | 673 |
| | 206 | | 408 |
| TOTALS | | | 1875 |

| | |
|------------|---------|
| CALCULATED | CHECKED |
|------------|---------|

**RAMP A - CROSS SECTIONS FOR CONCRETE DISPOSAL
STA. 10+00 TO 10+50**

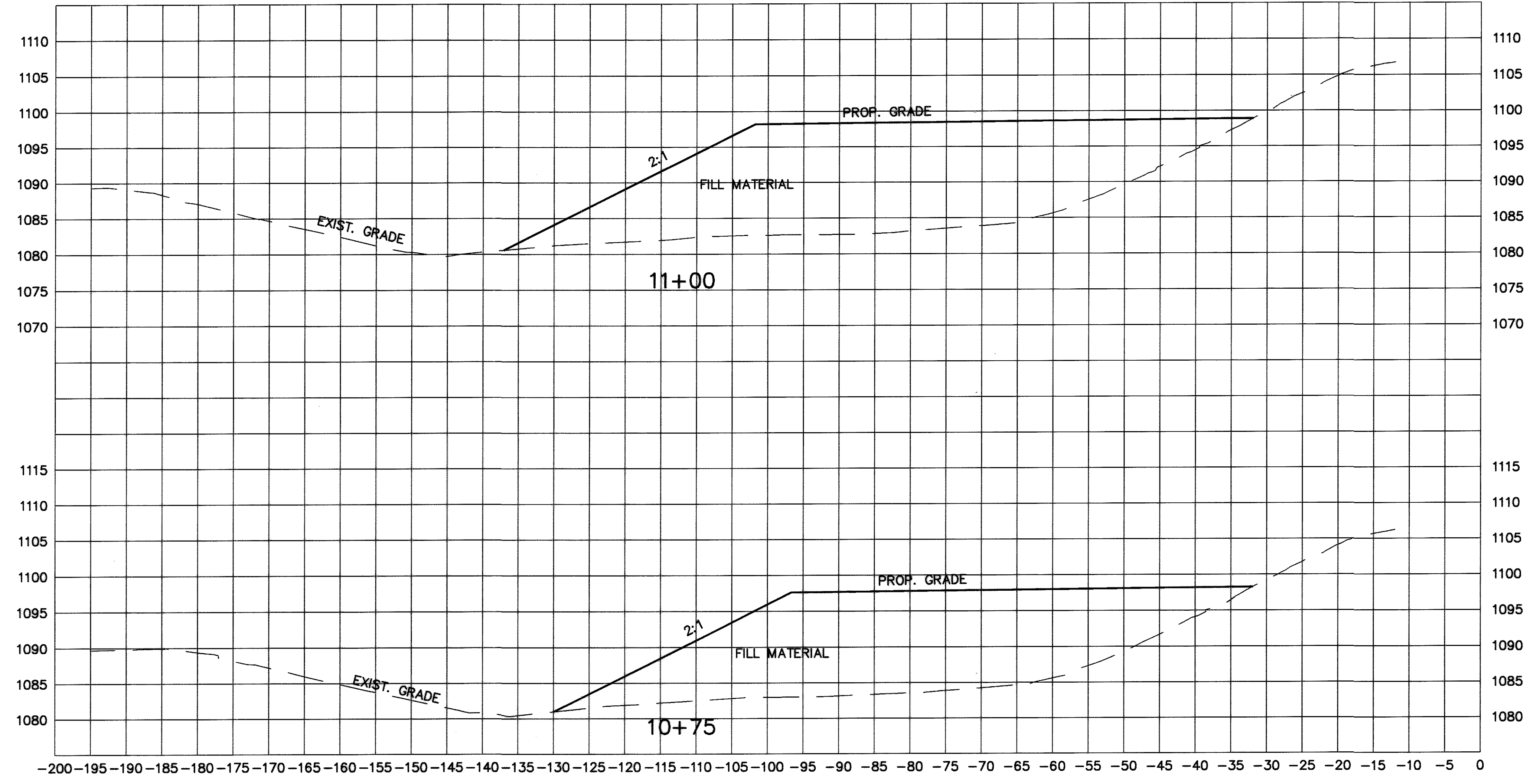
MED - 18 - 15.13

| |
|-----|
| 203 |
| 362 |

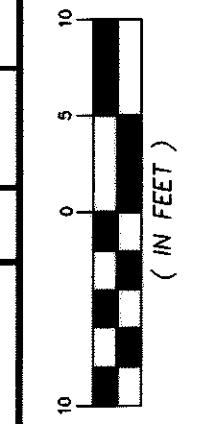


J:\proj3\7050600\concretedisposal\concx12.dwg User: am105646 Jun 04, 2003 3:29pm

| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 108 | 311 |
| 210 | |
| 102 | |
| TOTAL | 521 |



| EARTHWORK | | | |
|------------------------|------|----------------------|-------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | 1093 | | 1100 |
| | 935 | | 939 |
| TOTALS | | | 2039 |



CALCULATED
CHECKED

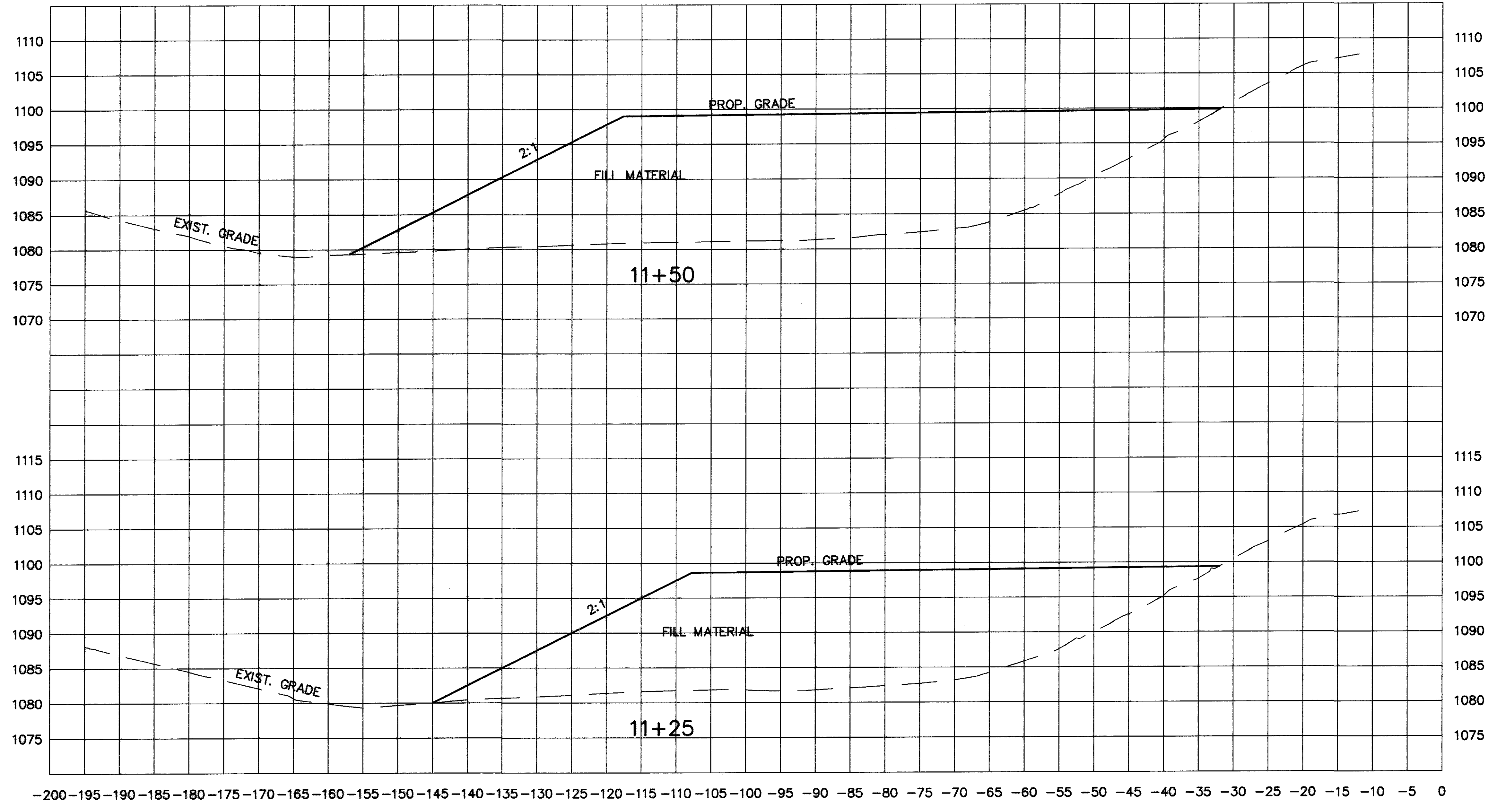
**RAMP A - CROSS SECTIONS FOR CONCRETE DISPOSAL
STA. 10+25 TO 11+00**

MED - 18 - 15.13

204
362

J:\proj3\7050600\concretedisposal\concx13.dwg User: am105646 Jun 04, 2003 - 3:29pm

| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 129 | 357 |
| 116 | 340 |
| TOTAL | 697 |



| EARTHWORK | | | |
|------------------------|------|----------------------|-------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | 1559 | | 1464 |
| | 1282 | | 1315 |
| TOTALS | | | 2779 |



CALCULATED
CHECKED

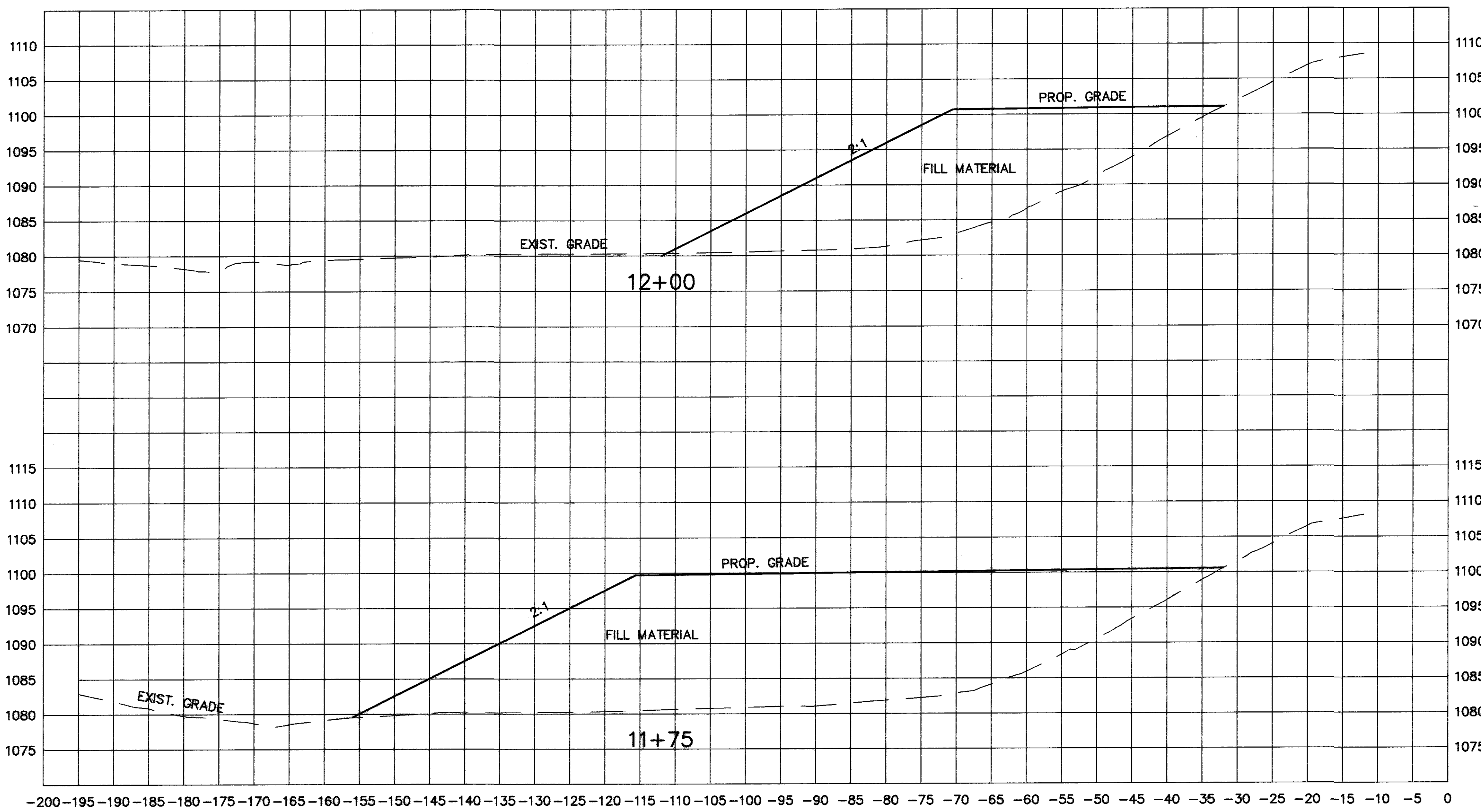
**RAMP A - CROSS SECTIONS FOR CONCRETE DISPOSAL
STA. 11+25 TO 11+50**

MED - 18 - 15.13

205
362

J:\proj\3\7050600\concretedisposal\concx14.dwg User: am105646 Jun 04, 2003 - 3:29pm

| SEEDING | |
|------------------|---------------------|
| END WIDTH (FEET) | AREA (SQUARE YARDS) |
| 83 | 115 |
| 128 | 293 |
| TOTAL | 408 |



TOTALS FOR RAMPS A, B, AND D
 ITEM 203 - EMBANKMENT 27853 CU. YDS.
 ITEM 870 - SEEDING AND MULCHING 15018 SQ. YDS.

| EARTHWORK | | | |
|------------------------|------|----------------------|-------------|
| END AREA (SQUARE FEET) | | VOLUME (CUBIC YARDS) | |
| CUT | FILL | CUT | FILL |
| | 764 | | 354 |
| | 1604 | | 1096 |
| TOTALS | | | 1450 |



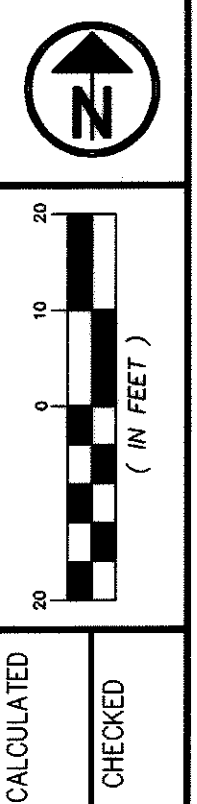
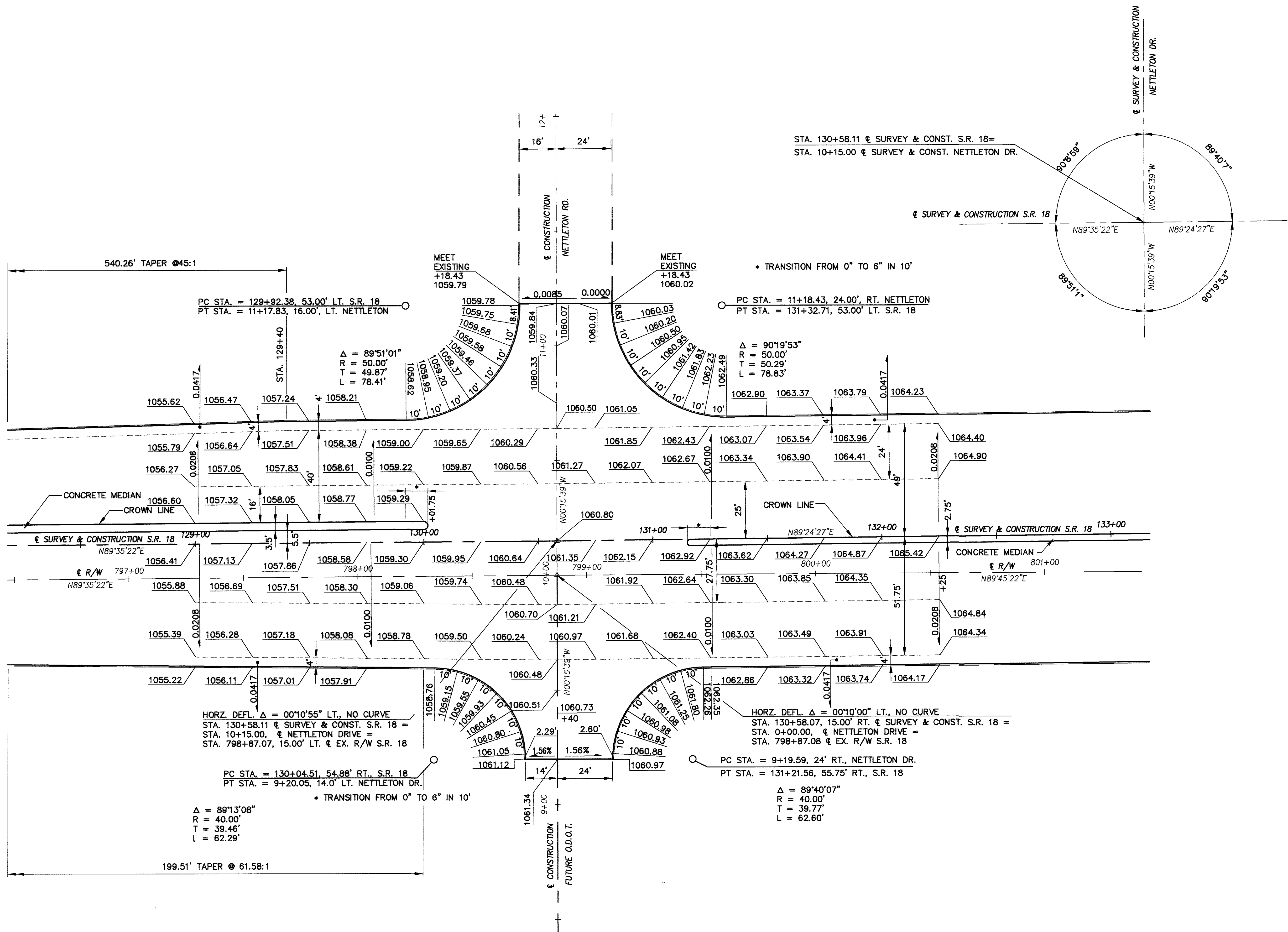
CALCULATED
CHECKED

**RAMP A - CROSS SECTIONS FOR CONCRETE DISPOSAL
 STA. 11+75 TO 12+00**

MED - 18 - 15.13

206
362

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CALCULATED
CHECKED

**INTERSECTION DETAILS
NETTLETON DRIVE**

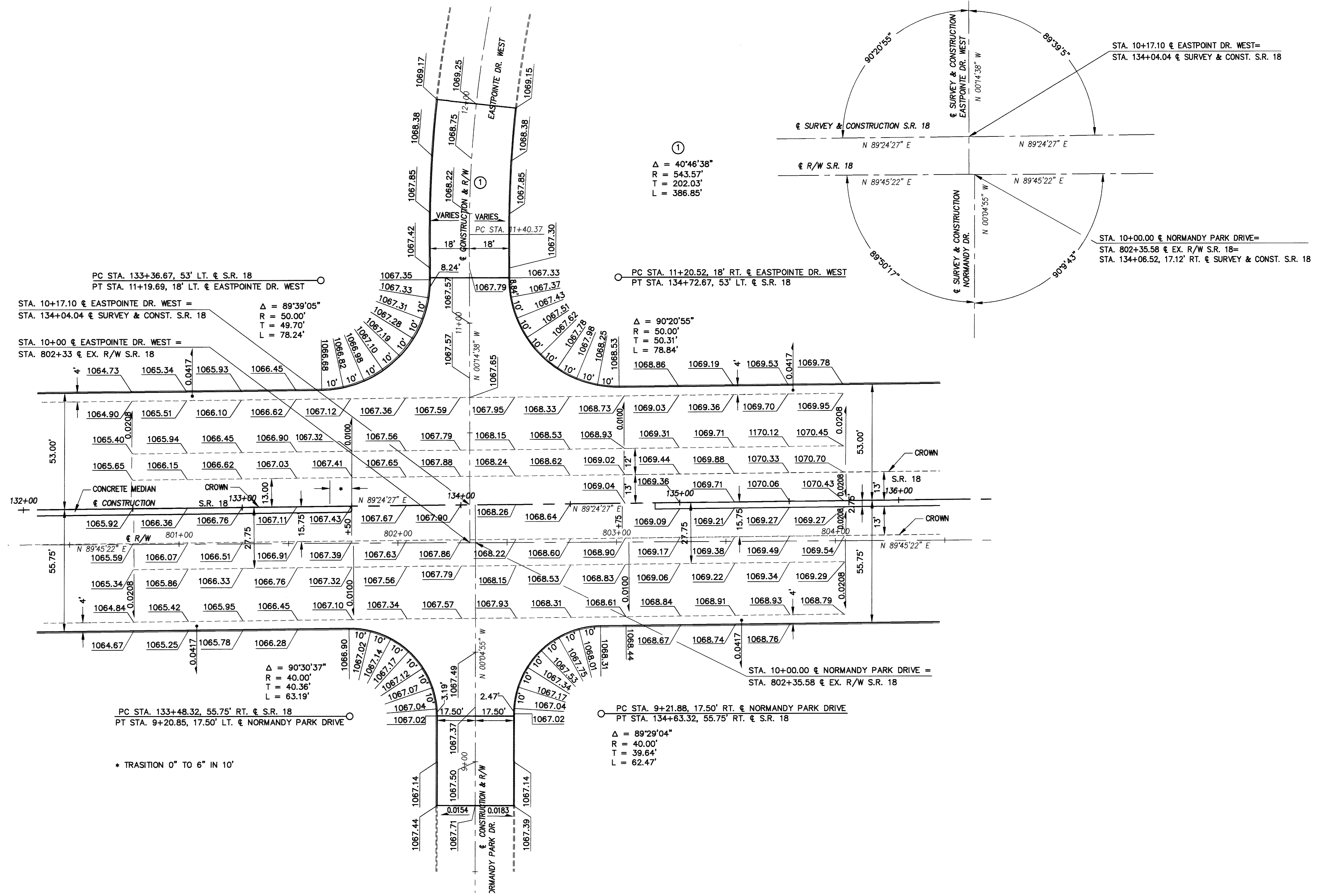
MED - 18 - 15.13

207
362

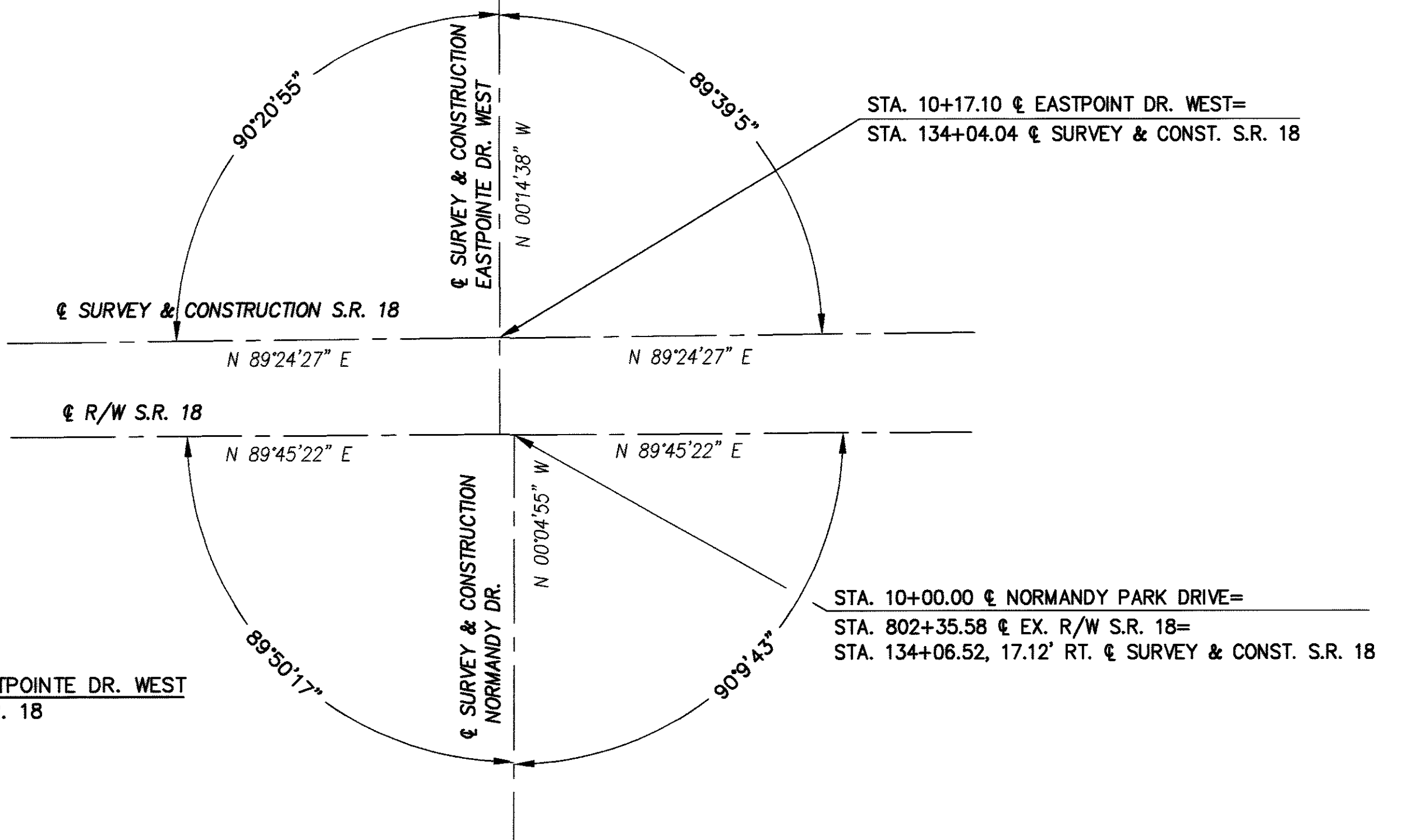


INTERSECTION DETAIL
NORMANDY PARK DRIVE AND EASTPOINTE DRIVE WEST

MED - 18 - 15.13



①
 $\Delta = 40^\circ 46' 38''$
 $R = 543.57'$
 $T = 202.03'$
 $L = 386.85'$



$\Delta = 90^\circ 20' 55''$
 $R = 50.00'$
 $T = 50.31'$
 $L = 78.84'$

$\Delta = 90^\circ 30' 37''$
 $R = 40.00'$
 $T = 40.36'$
 $L = 63.19'$

$\Delta = 89^\circ 29' 04''$
 $R = 40.00'$
 $T = 39.64'$
 $L = 62.47'$

* TRANSITION 0" TO 6" IN 10'

J:\proj3\7050600\roadway\70506gmd.dwg User: am105646 Jun 04, 2003 - 3:29pm



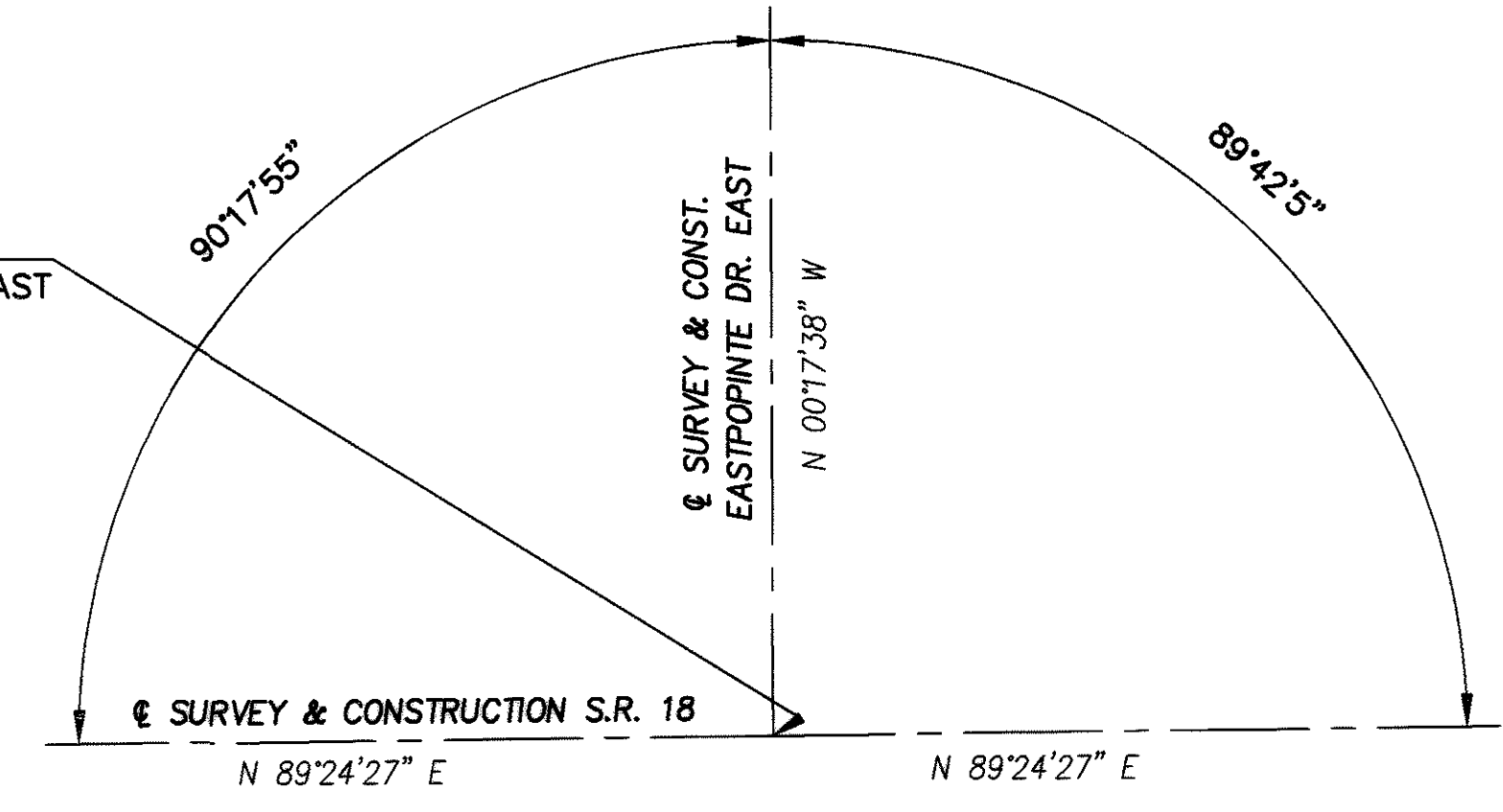
CALCULATED
CHECKED

INTERSECTION DETAIL
EASTPOINTE DRIVE EAST

MED - 18 - 15.13

209
362

STA. 143+19.95 ϵ SURVEY & CONST. S.R. 18 =
STA. 20+22.67 ϵ SURVEY & CONST. EASTPOINTE DR. EAST



700' TAPER @ 96:1

BEGIN TAPER
STA 139+00, 53' LT.

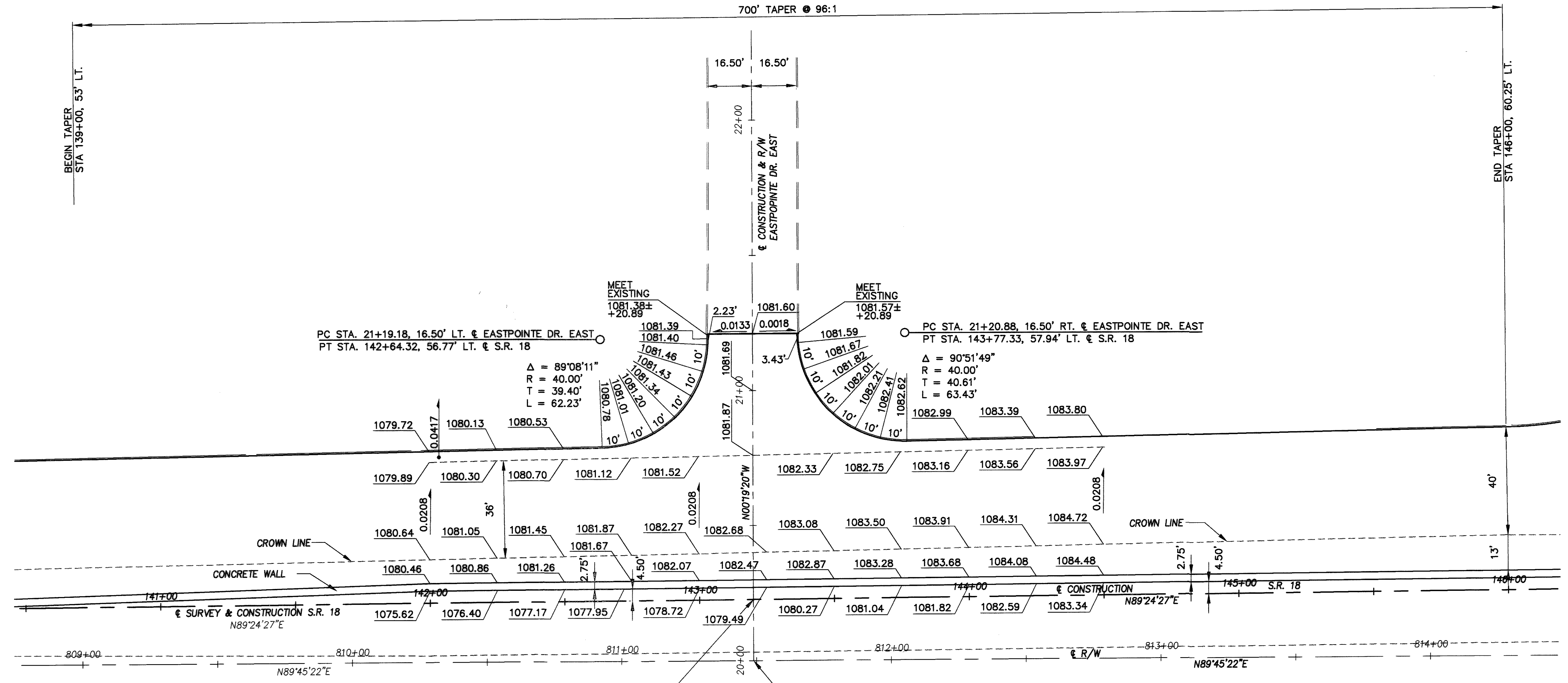
END TAPER
STA 146+00, 60.25' LT.

PC STA. 21+19.18, 16.50' LT. ϵ EASTPOINTE DR. EAST
PT STA. 142+64.32, 56.77' LT. ϵ S.R. 18

$\Delta = 89^{\circ}08'11''$
 $R = 40.00'$
 $T = 39.40'$
 $L = 62.23'$

PC STA. 21+20.88, 16.50' RT. ϵ EASTPOINTE DR. EAST
PT STA. 143+77.33, 57.94' LT. ϵ S.R. 18

$\Delta = 90^{\circ}51'49''$
 $R = 40.00'$
 $T = 40.61'$
 $L = 63.43'$



STA. 20+22.67 ϵ EASTPOINTE DR. EAST =
STA. 143+19.95 ϵ SURVEY & CONST. S.R. 18

STA. 20+00 ϵ EASTPOINTE DR. EAST =
STA. 811+48.92 ϵ EX. R/W S.R. 18 =



CALCULATED
CHECKED

INTERSECTION DETAIL
RAMP A AND RAMP B

MED - 18 - 15.13

210
362

PC STA. 145+99, 60.25' LT., ϕ SURVEY & CONST. S.R. 18

PT STA. 1+61.56, 22.00' LT., ϕ SURVEY & CONST. RAMP B

$\Delta = 16^{\circ}02'34''$
 $R = 150.00'$
 $T = 21.14'$
 $L = 42.00'$

PCC STA. 146+41.01, 66.52' LT., ϕ SURVEY & CONST. S.R. 18
PCC STA. 1+21.76, 29.26' LT., ϕ SURVEY & CONST. RAMP B

$\Delta = 16^{\circ}02'34''$
 $R = 150.00'$
 $T = 21.14'$
 $L = 42.00'$

$\Delta = 53^{\circ}10'38''$
 $R = 50.00'$
 $T = 25.03'$
 $L = 46.41'$

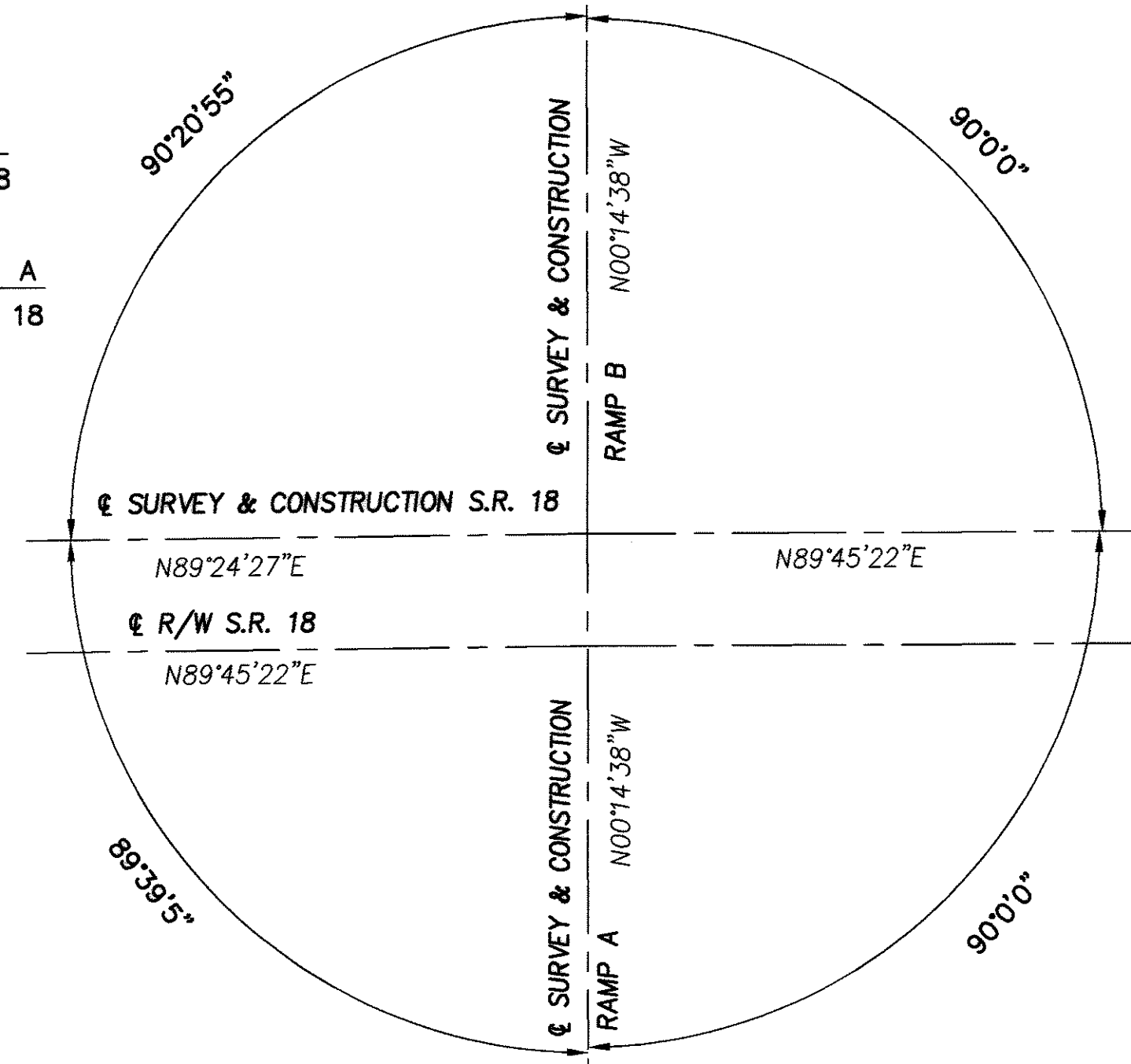
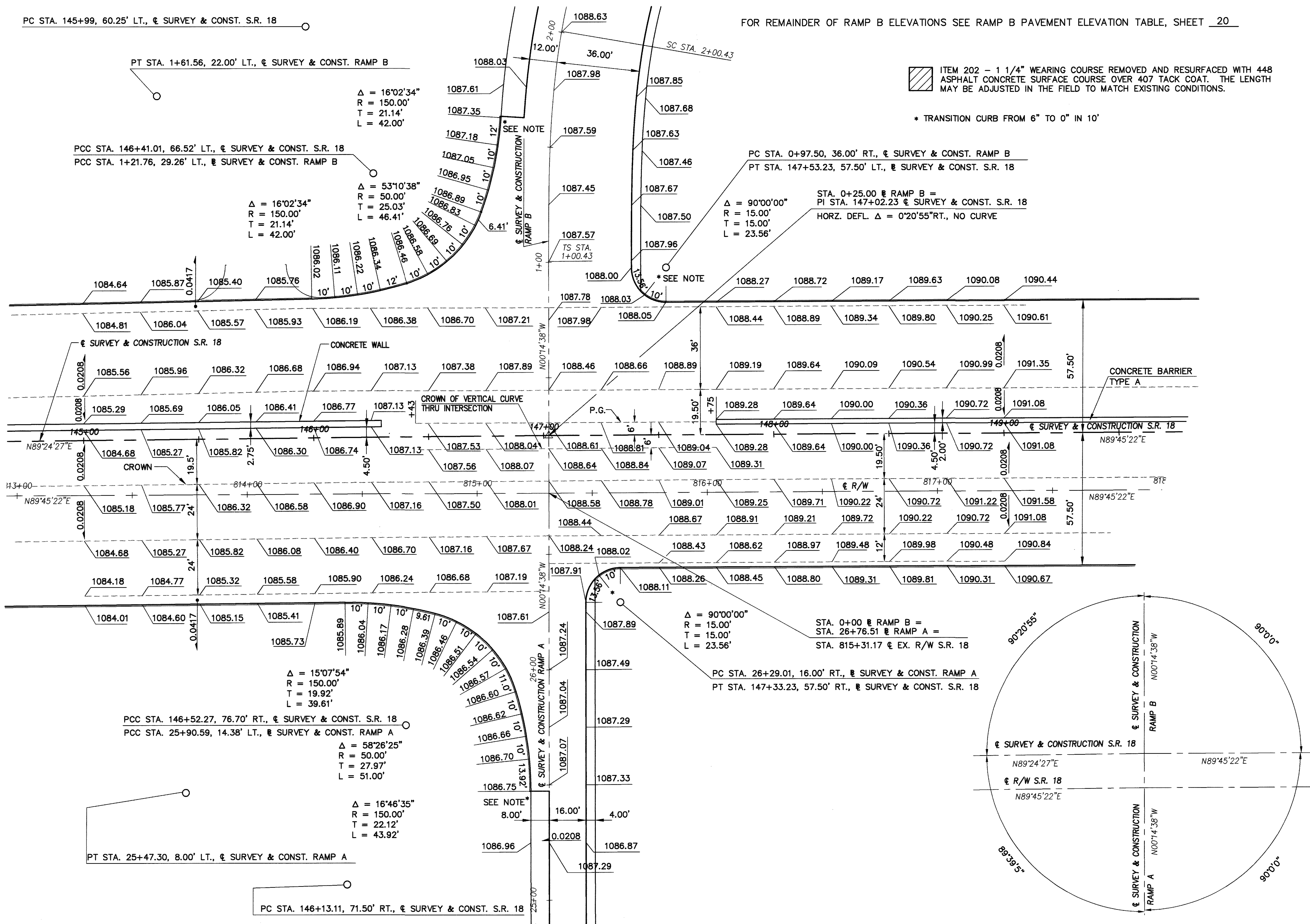
FOR REMAINDER OF RAMP B ELEVATIONS SEE RAMP B PAVEMENT ELEVATION TABLE, SHEET 20

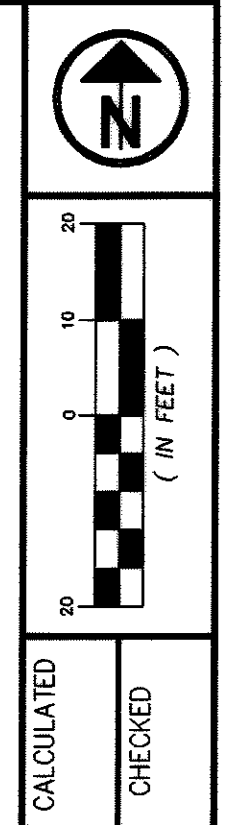
ITEM 202 - 1 1/4" WEARING COURSE REMOVED AND RESURFACED WITH 448 ASPHALT CONCRETE SURFACE COURSE OVER 407 TACK COAT. THE LENGTH MAY BE ADJUSTED IN THE FIELD TO MATCH EXISTING CONDITIONS.

* TRANSITION CURB FROM 6" TO 0" IN 10'

PC STA. 0+97.50, 36.00' RT., ϕ SURVEY & CONST. RAMP B
PT STA. 147+53.23, 57.50' LT., ϕ SURVEY & CONST. S.R. 18

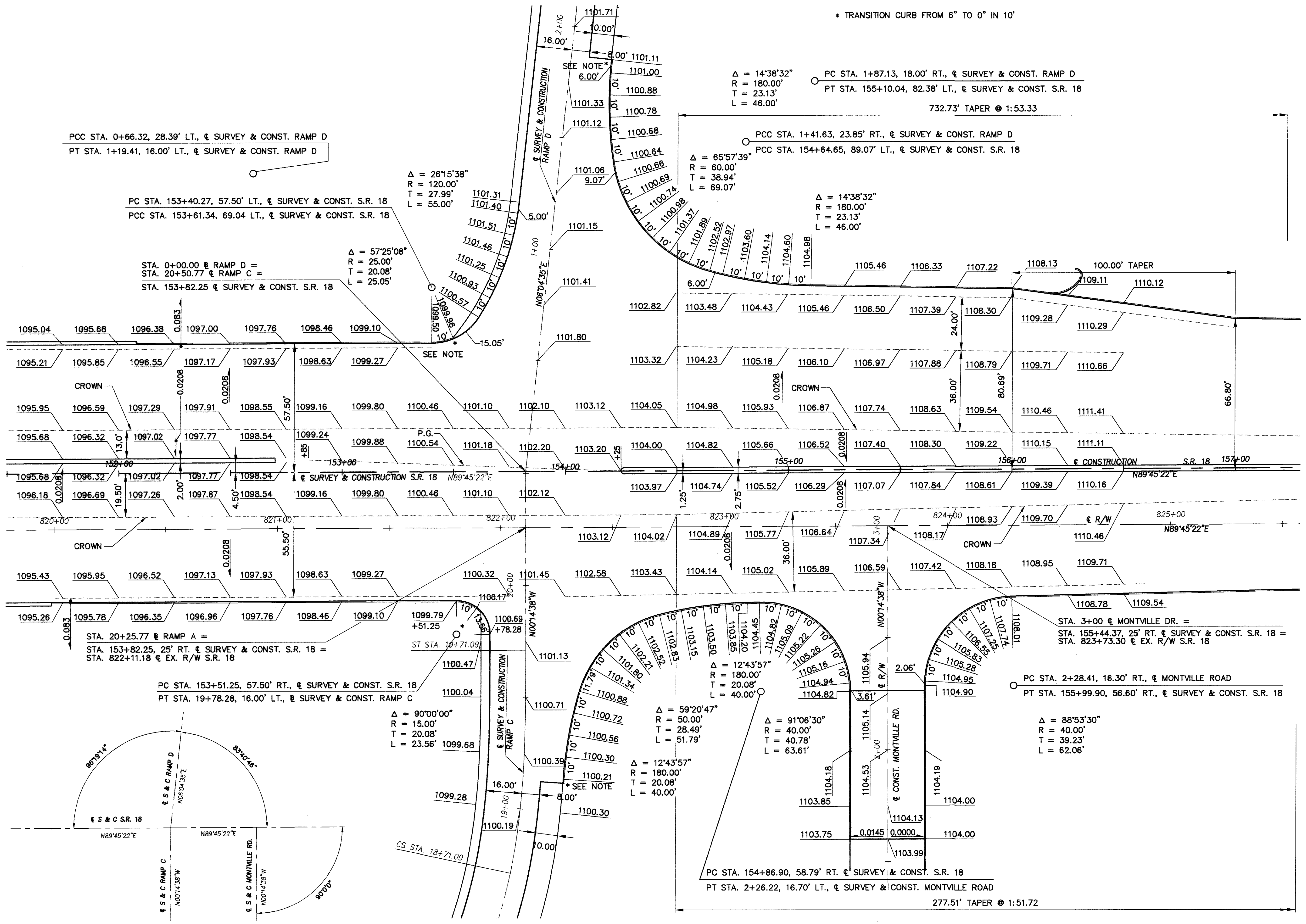
STA. 0+25.00 ϕ RAMP B =
PI STA. 147+02.23 ϕ SURVEY & CONST. S.R. 18
HORZ. DEFL. $\Delta = 0^{\circ}20'55''$ RT., NO CURVE
 $\Delta = 90^{\circ}00'00''$
 $R = 15.00'$
 $T = 15.00'$
 $L = 23.56'$

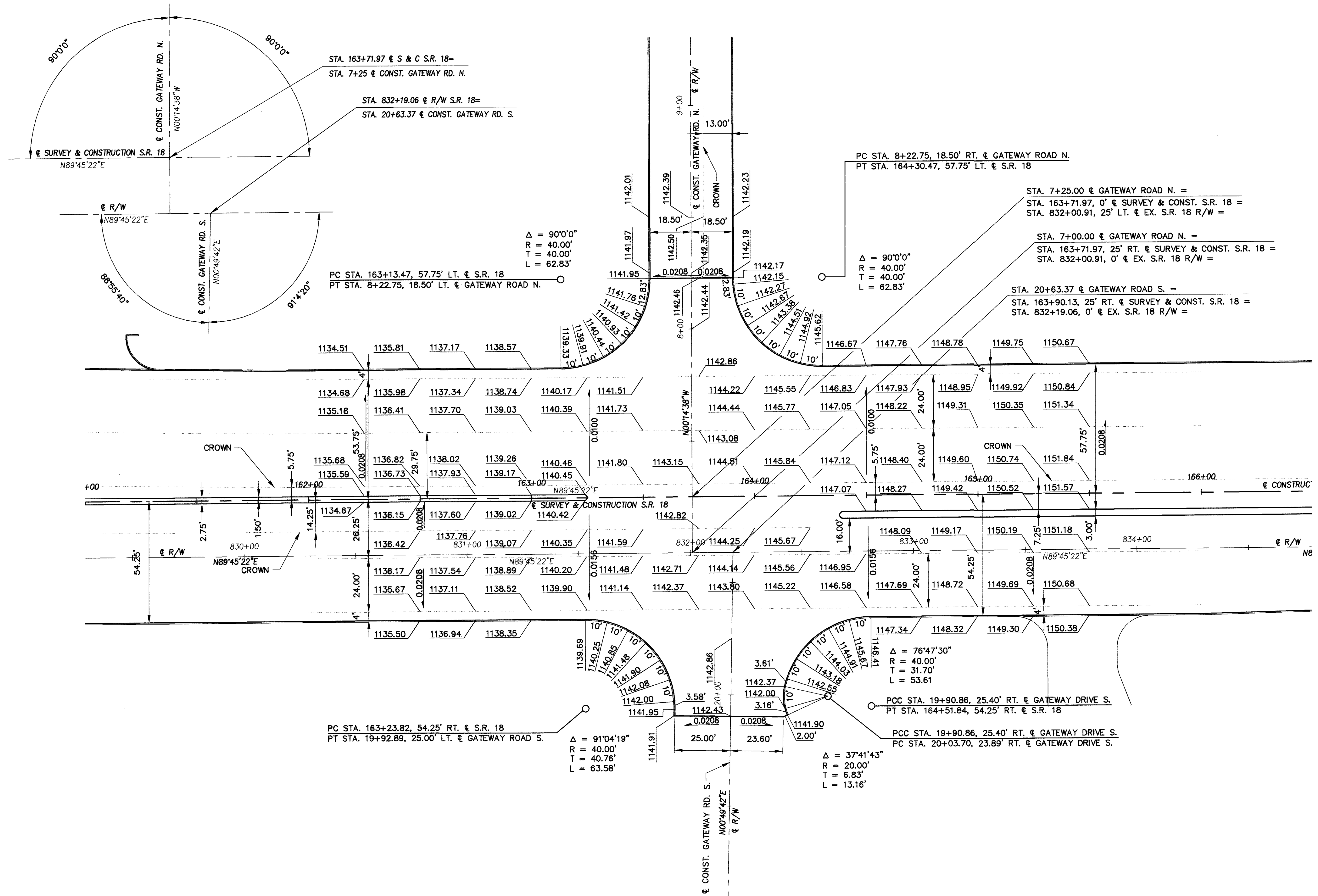




INTERSECTION DETAIL
RAMP C, RAMP D AND MONTVILLE DRIVE

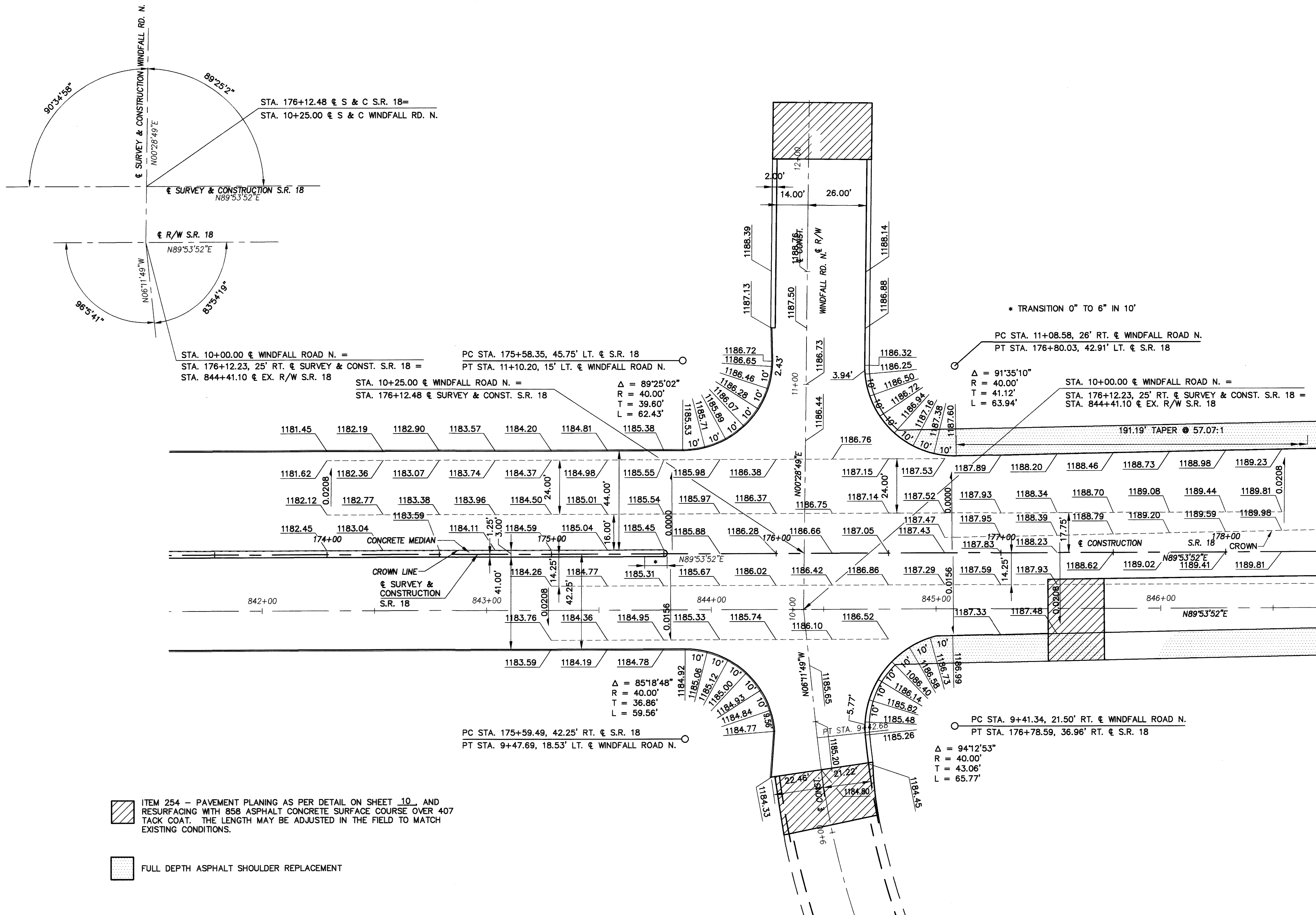
MED - 18 - 15.13






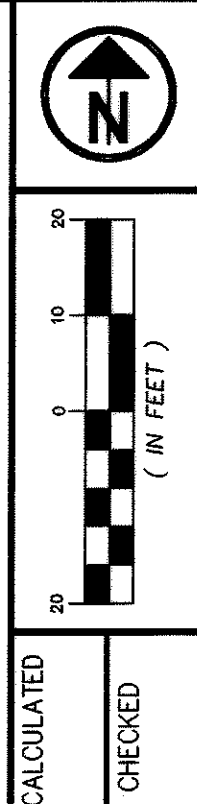
CALCULATED
CHECKED

INTERSECTION DETAIL
GATEWAY ROAD NORTH AND SOUTH



 ITEM 254 - PAVEMENT PLANING AS PER DETAIL ON SHEET 10, AND RESURFACING WITH 858 ASPHALT CONCRETE SURFACE COURSE OVER 407 TACK COAT. THE LENGTH MAY BE ADJUSTED IN THE FIELD TO MATCH EXISTING CONDITIONS.

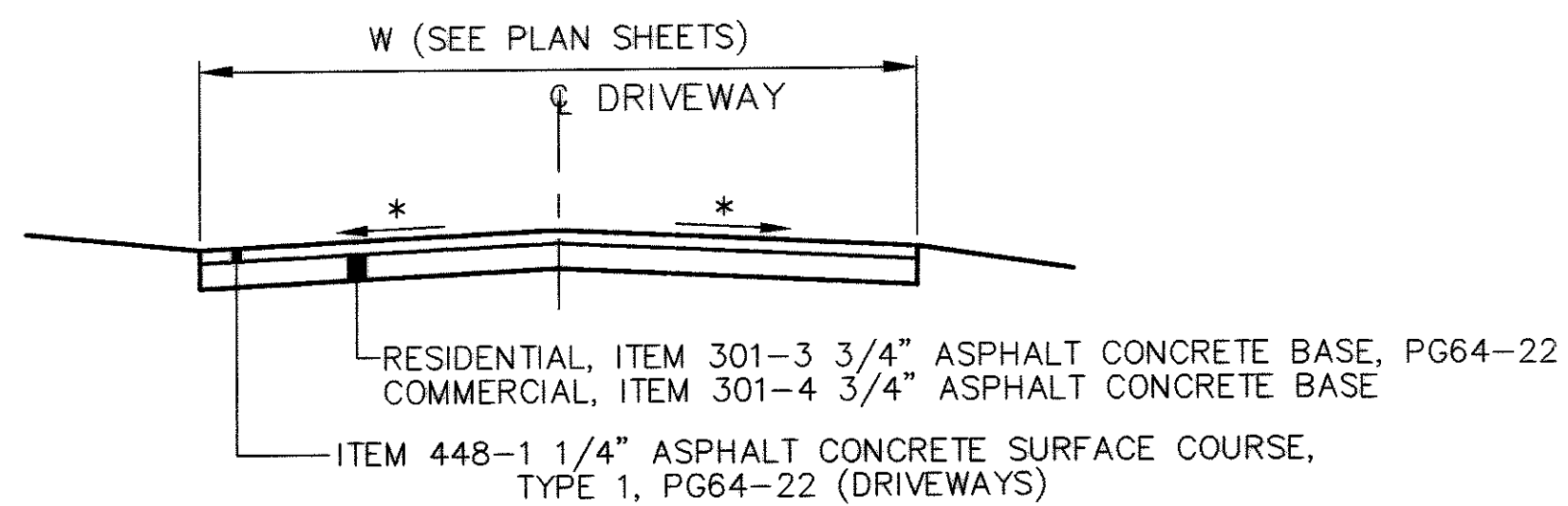
 FULL DEPTH ASPHALT SHOULDER REPLACEMENT



CALCULATED
CHECKED

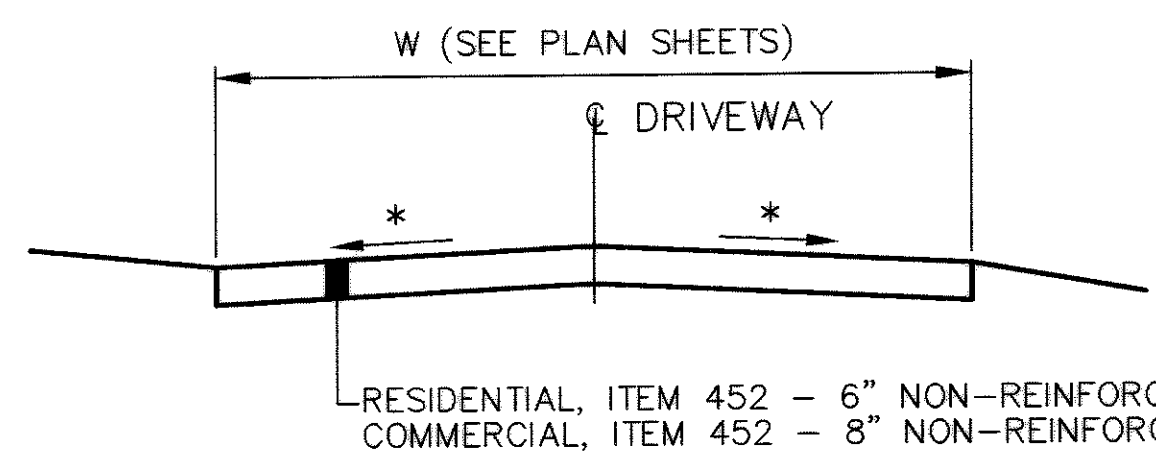
INTERSECTION DETAIL
WINDFALL ROAD

MED - 18 - 15.13



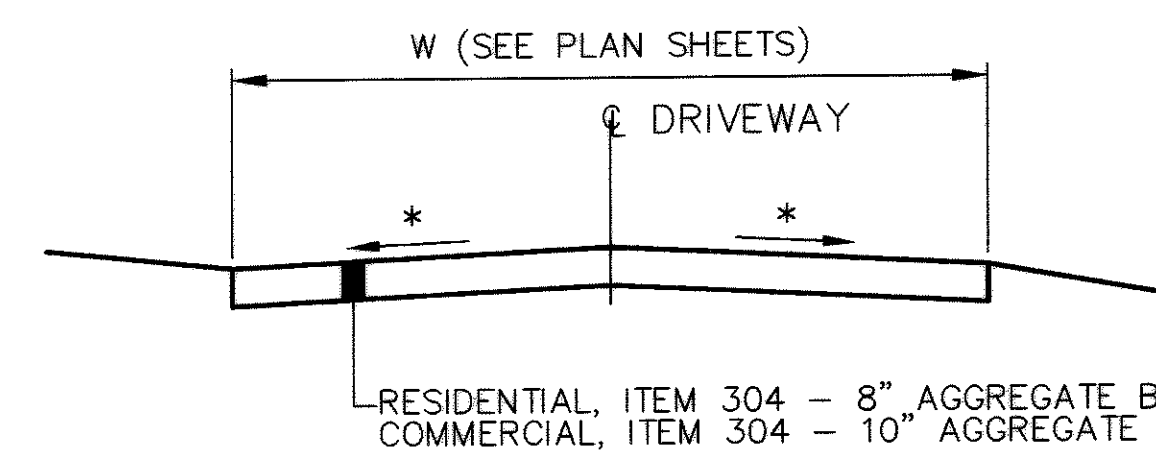
* SLOPE AS DIRECTED BY THE ENGINEER

ASPHALT DRIVE
 SECTION A-A
 SECTION B-B



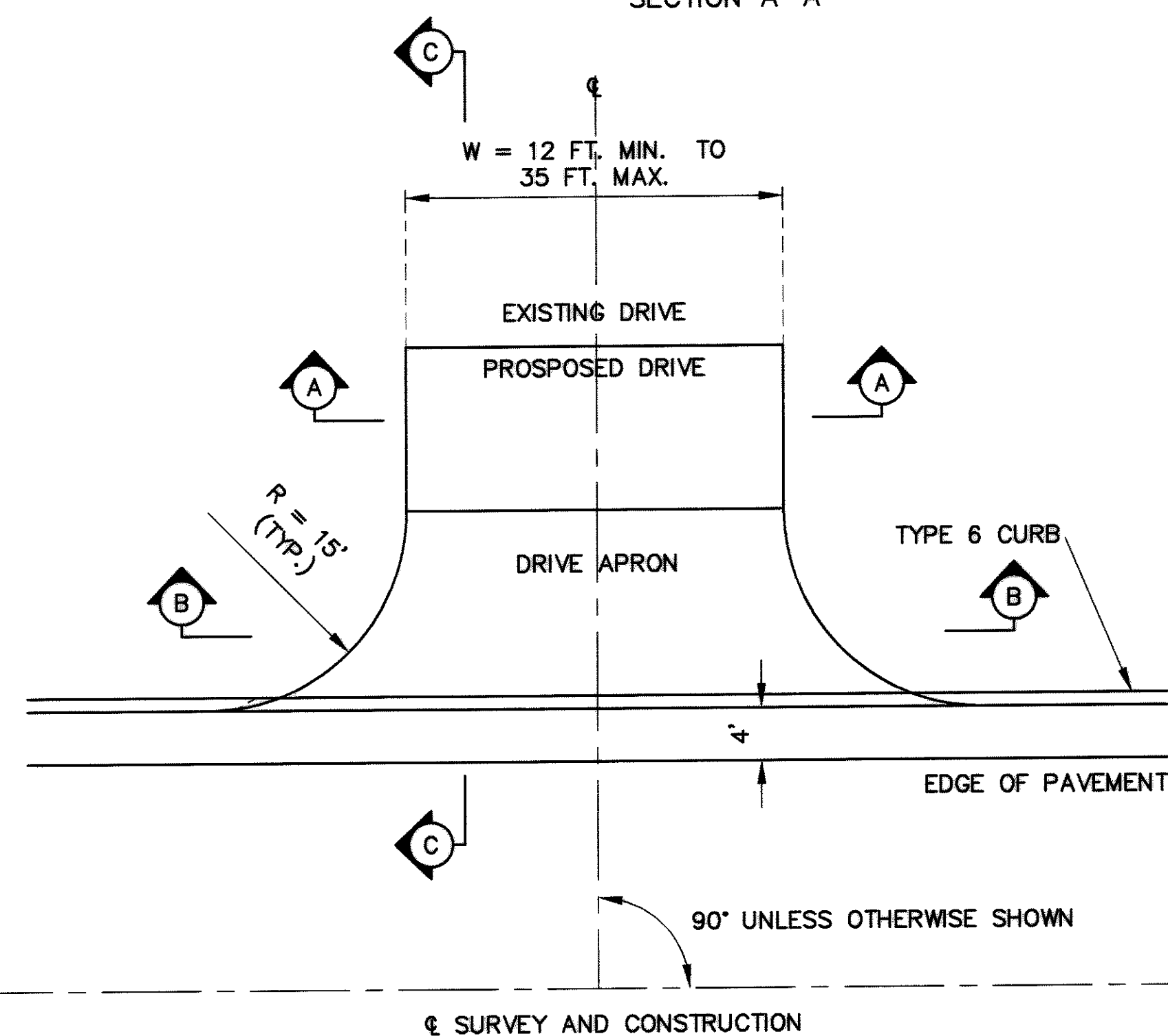
* SLOPE AS DIRECTED BY THE ENGINEER

CONCRETE DRIVE
 SECTION A-A
 SECTION B-B



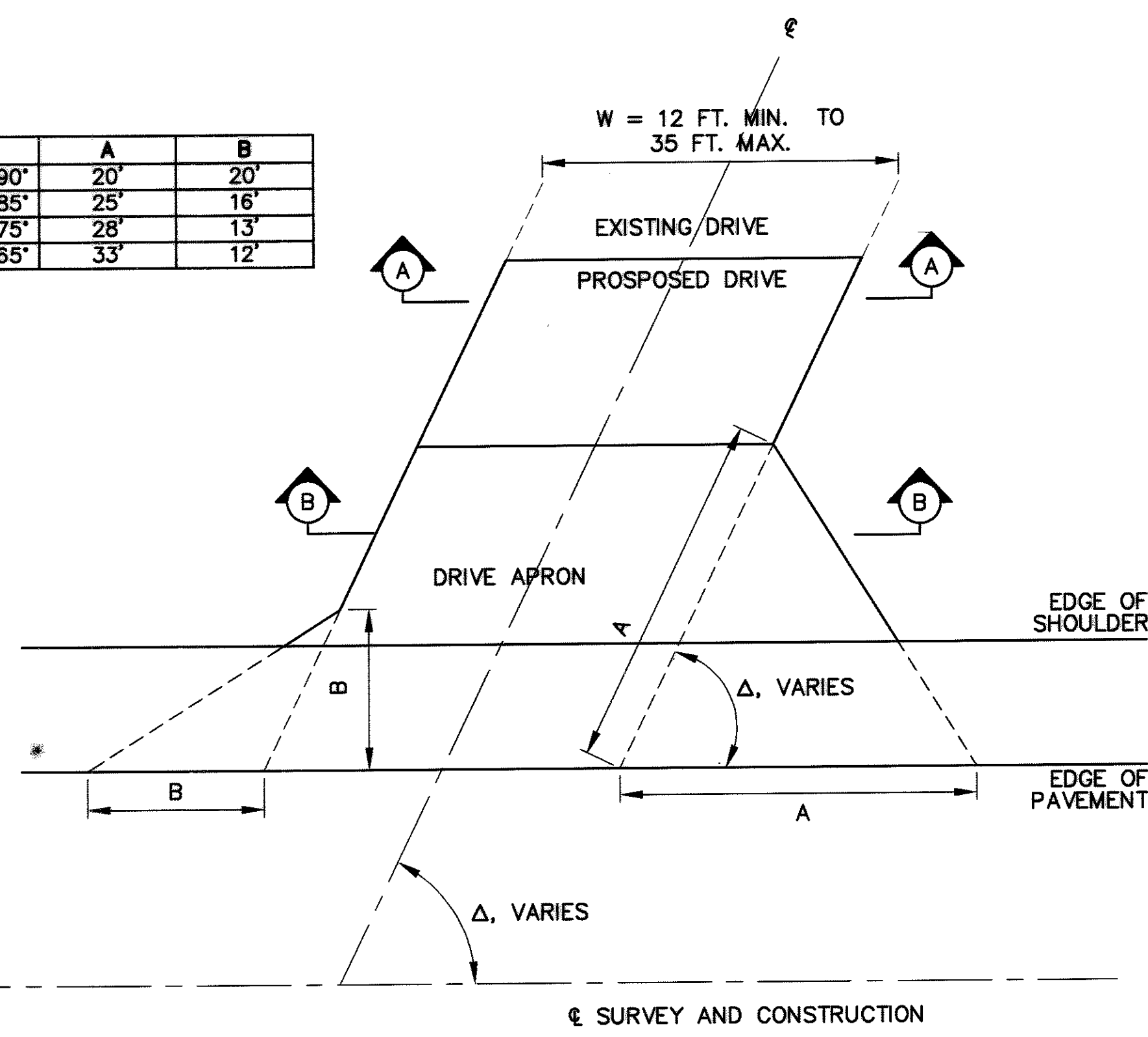
* SLOPE AS DIRECTED BY THE ENGINEER

AGGREGATE DRIVE
 SECTION A-A

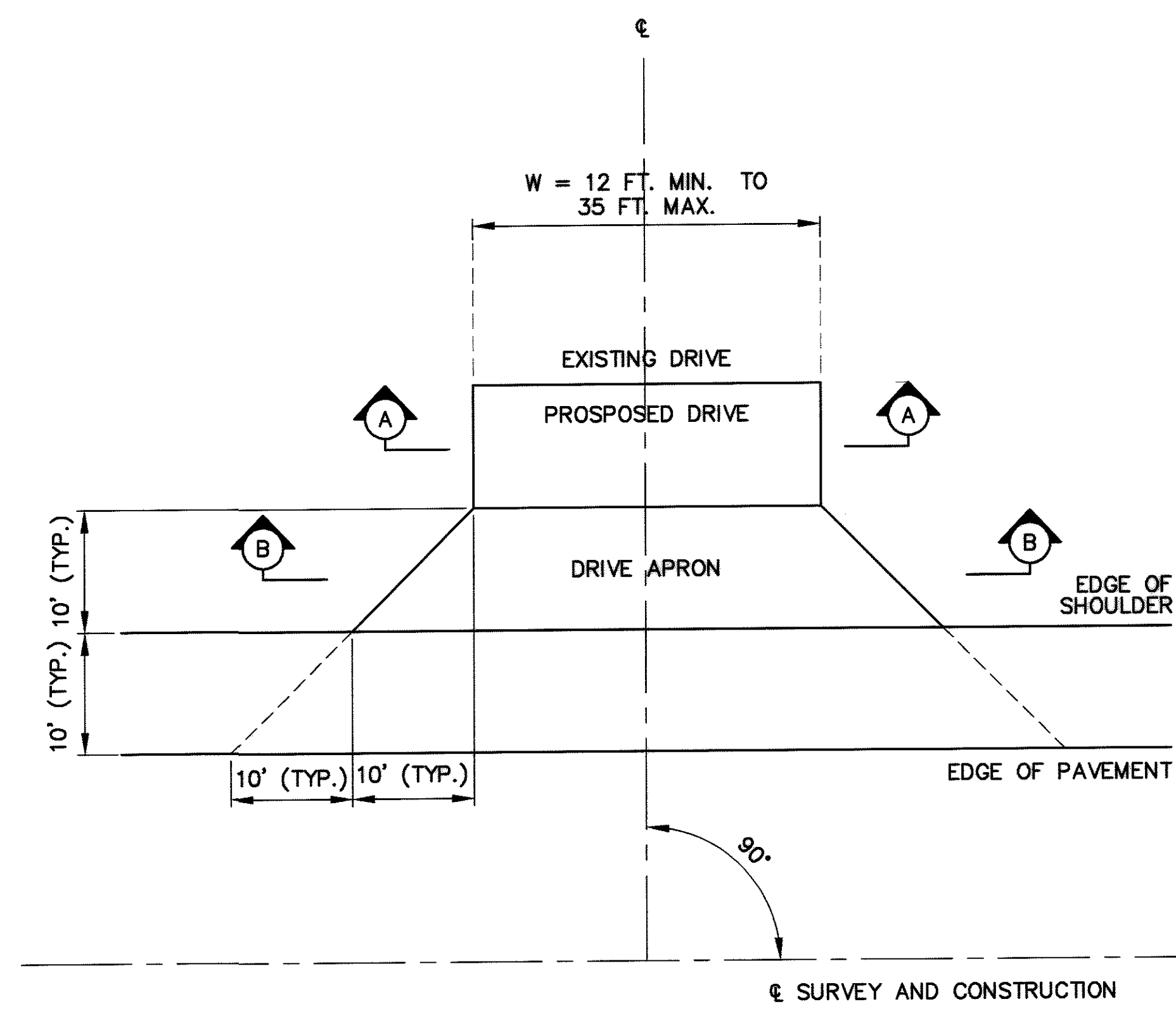


COMMERCIAL DRIVE
 CURBED ROADWAY SECTION

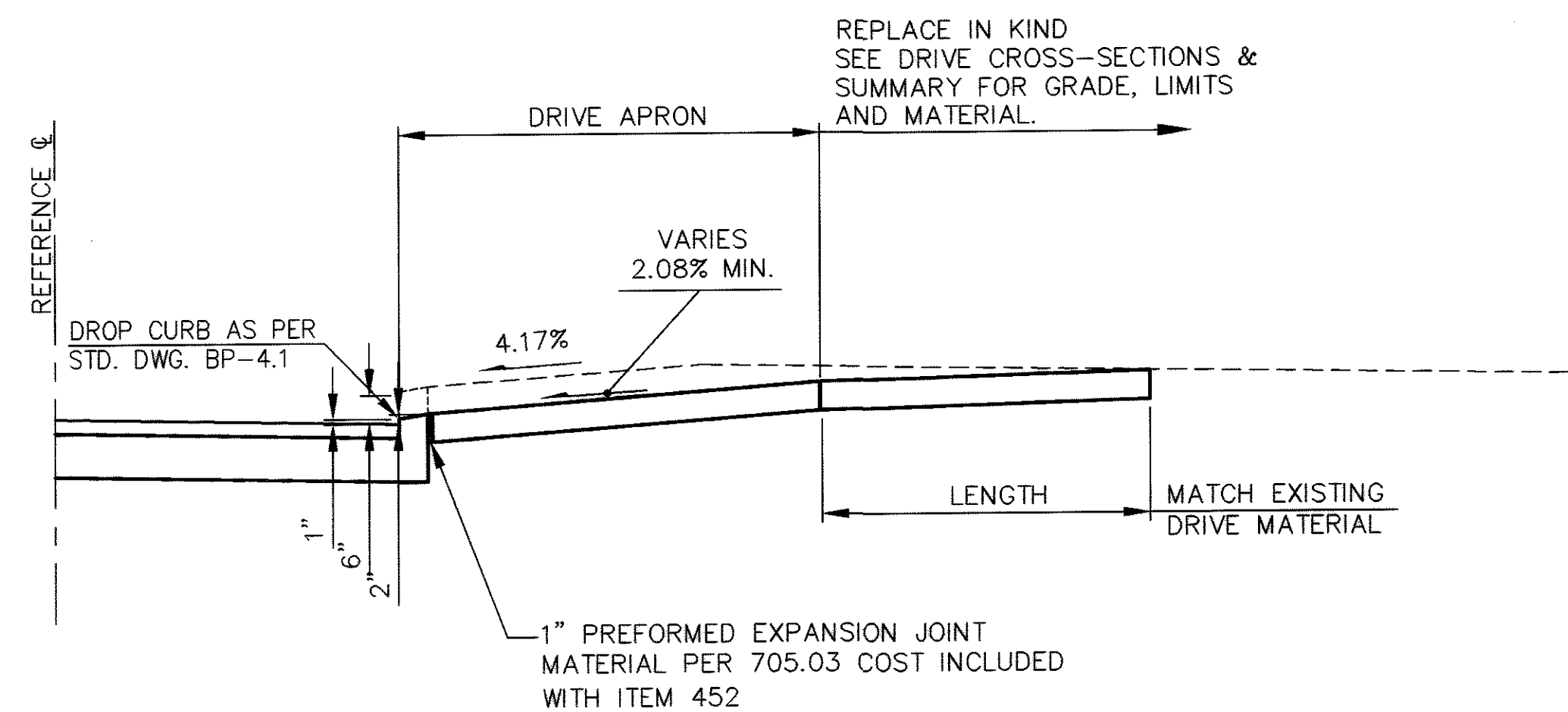
| Δ | A | B |
|------------|-----|-----|
| 85° TO 90° | 20' | 20' |
| 75° TO 85° | 25' | 16' |
| 65° TO 75° | 28' | 13' |
| 55° TO 65° | 33' | 12' |



SKewed DRIVE
 UNCURRED ROADWAY SECTION



NORMAL DRIVE
 UNCURRED ROADWAY SECTION



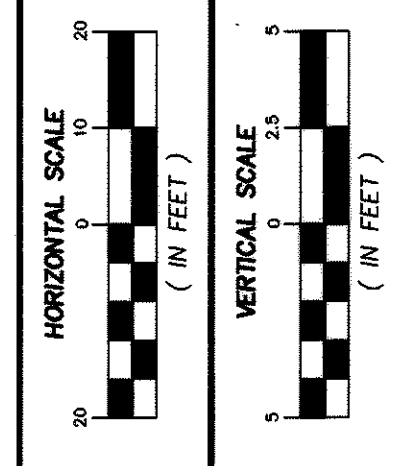
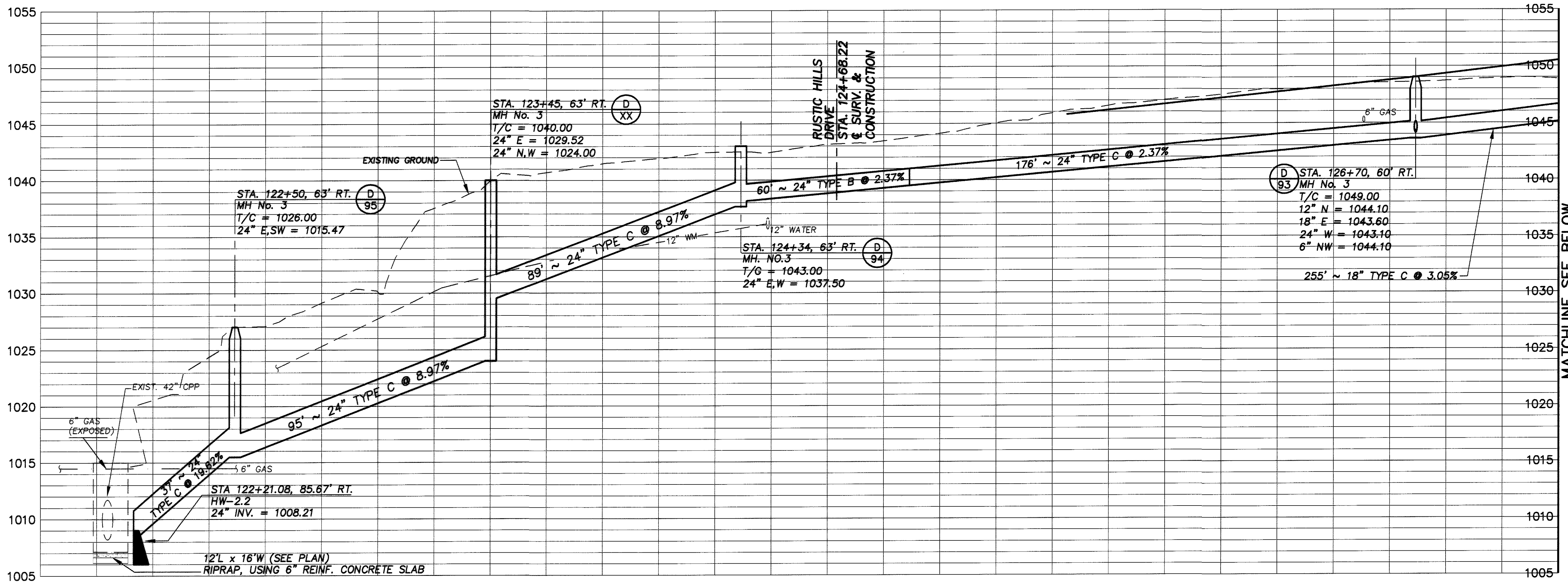
DRIVE APRON SECTION
 SECTION C-C



CALCULATED
 CHECKED

DRIVE DETAILS

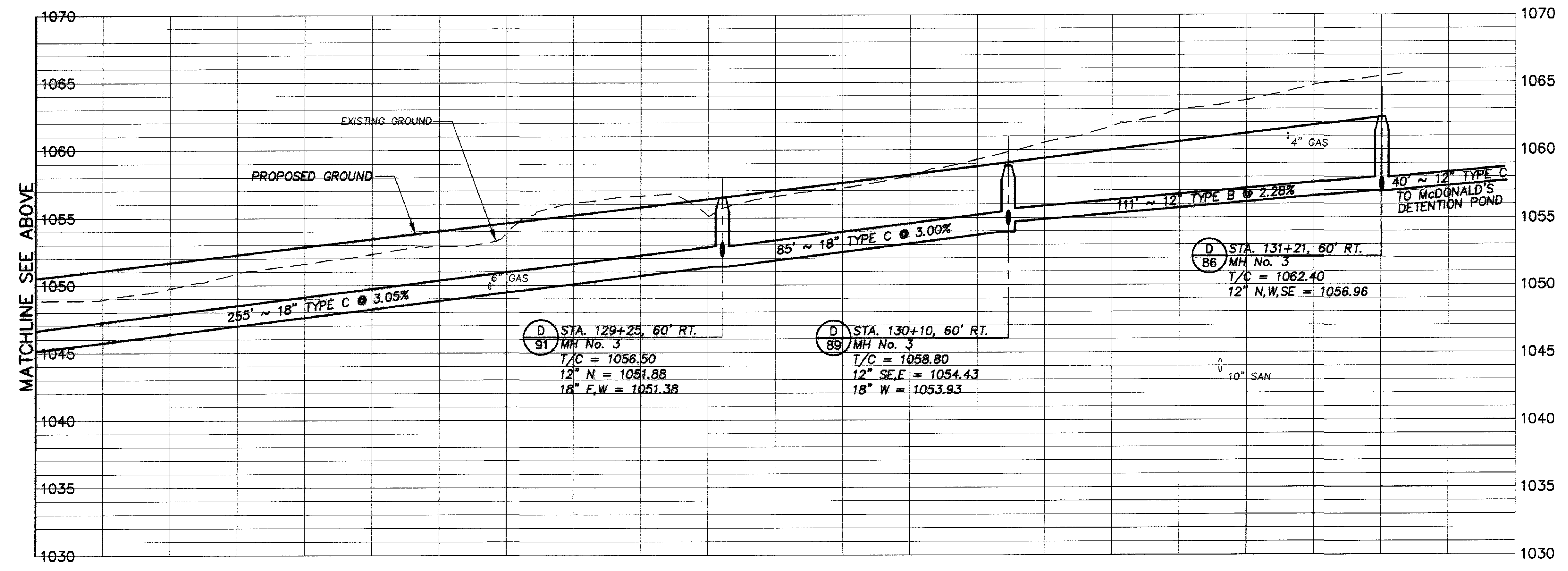
MED - 18 - 15.13



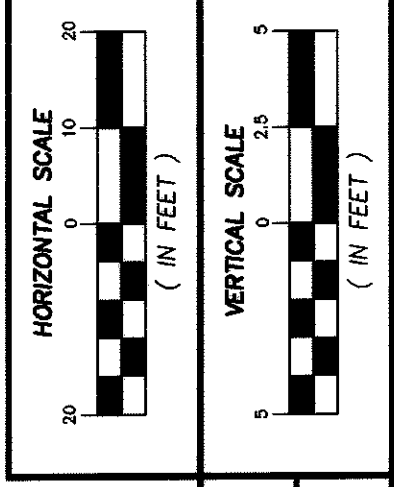
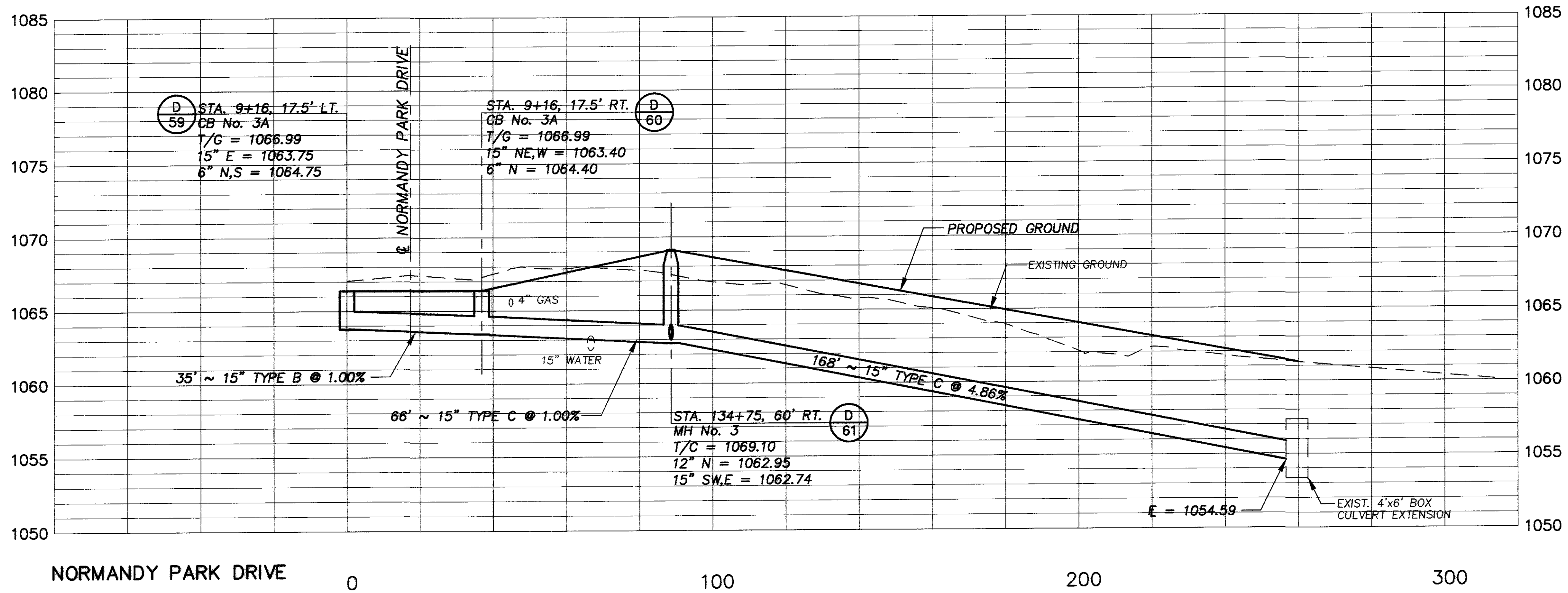
| | |
|------------|-----|
| CALCULATED | IMT |
| CHECKED | IM |

MATCHLINE SEE BELOW

DRAINAGE PROFILE
STA. 122+00 TO STA. 131+21



MED - 18 - 15.13

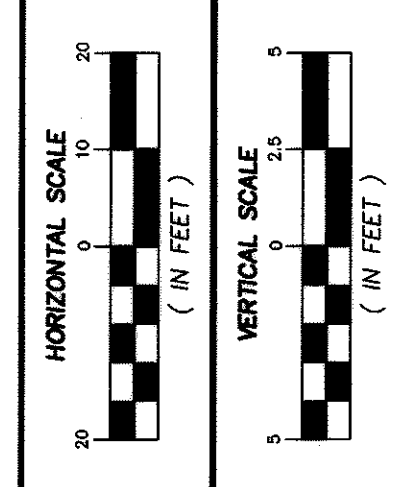
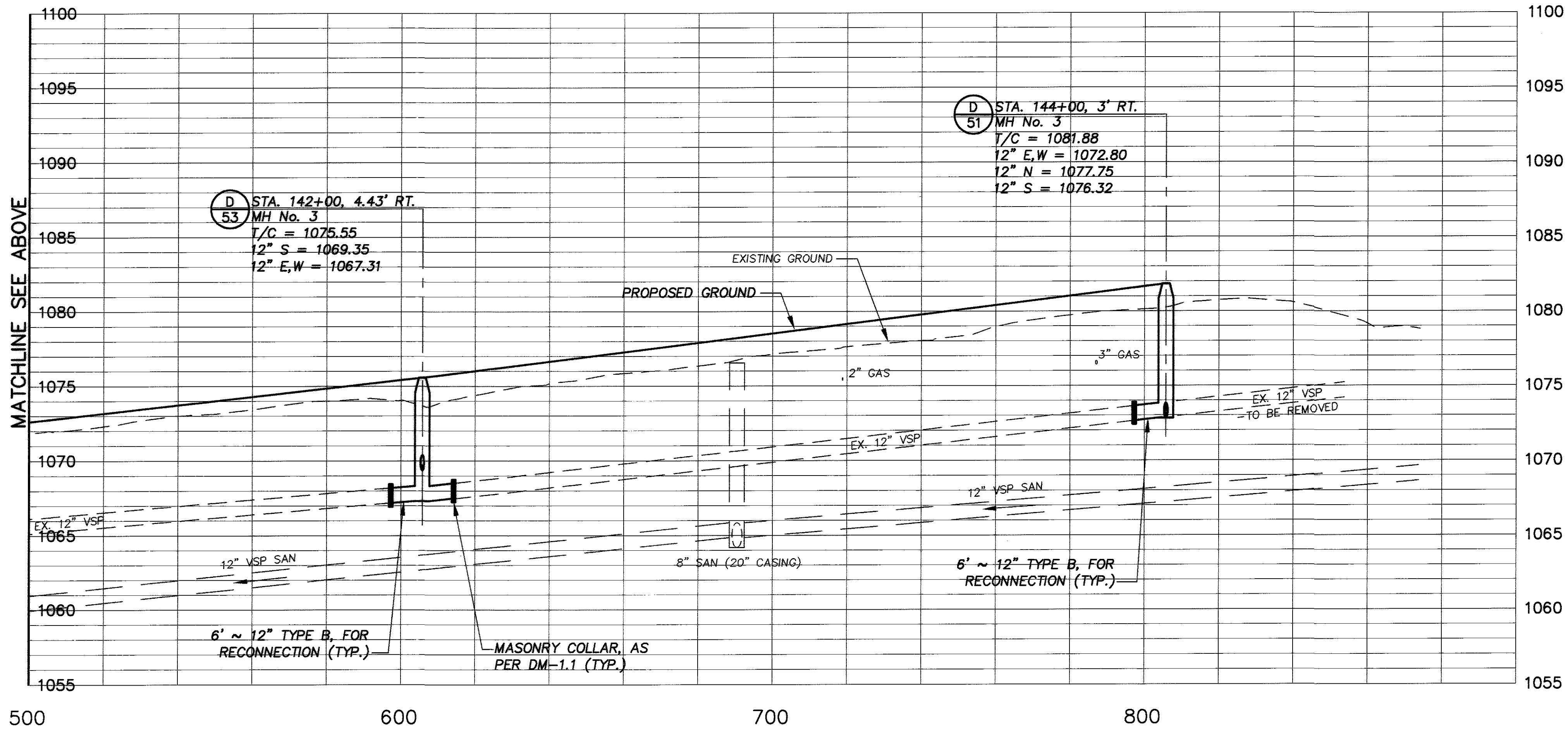
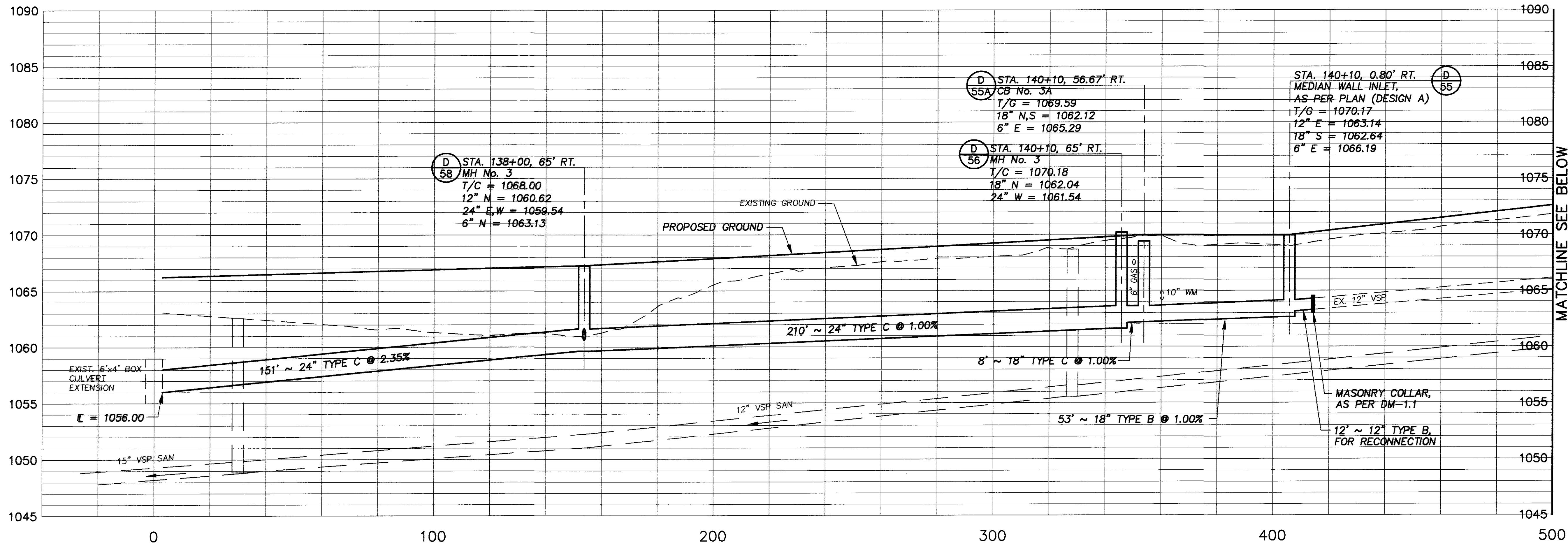


| | |
|------------|-----|
| CALCULATED | MJT |
| CHECKED | IM |

DRAINAGE PROFILE
STA. 133+86 TO STA. 136+50

MED - 18 - 15.13

J:\proj3\7050600\roadway\70506.dfc.dwg User: jan81152 Jun 04, 2003 - 10:01pm

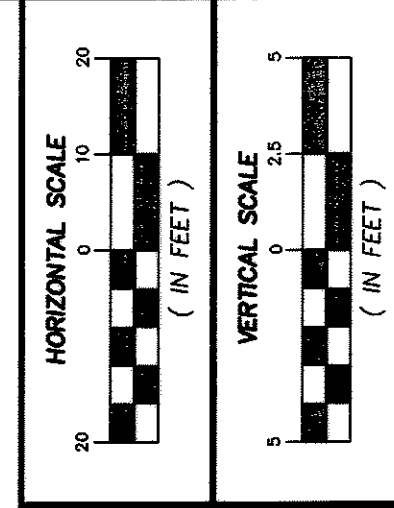
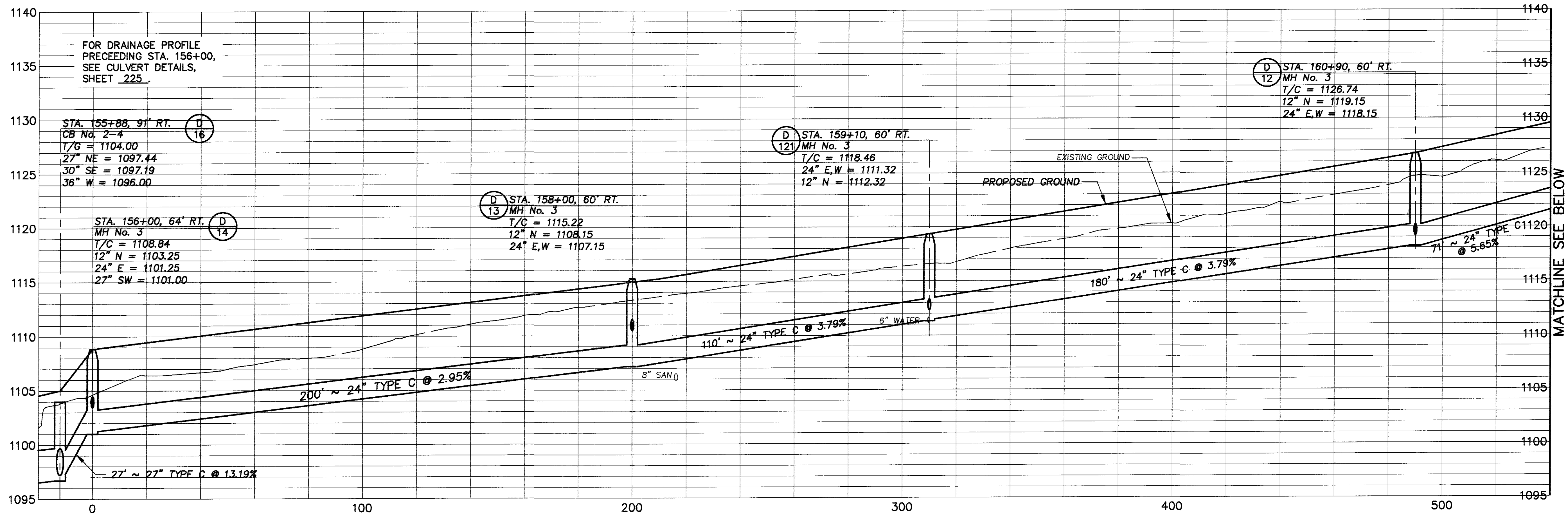


| | |
|------------|---------|
| CALCULATED | IM |
| MIT | CHECKED |

DRAINAGE PROFILE
STA. 138+00 TO STA. 144+00

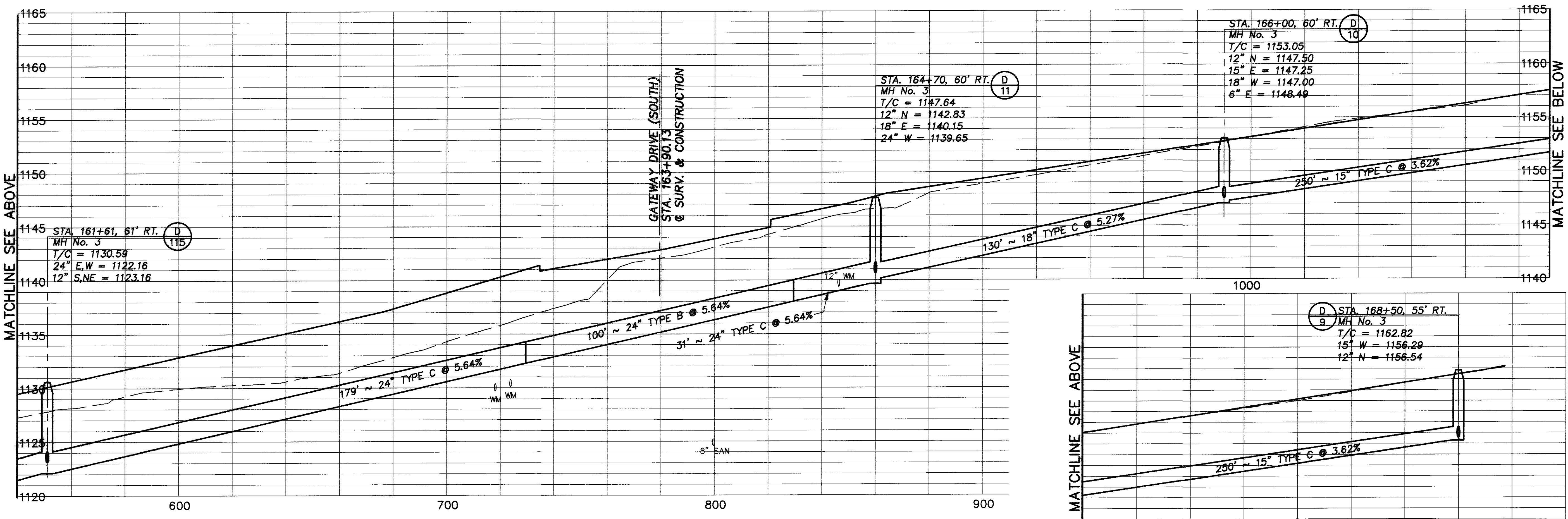
MED - 18 - 15.13

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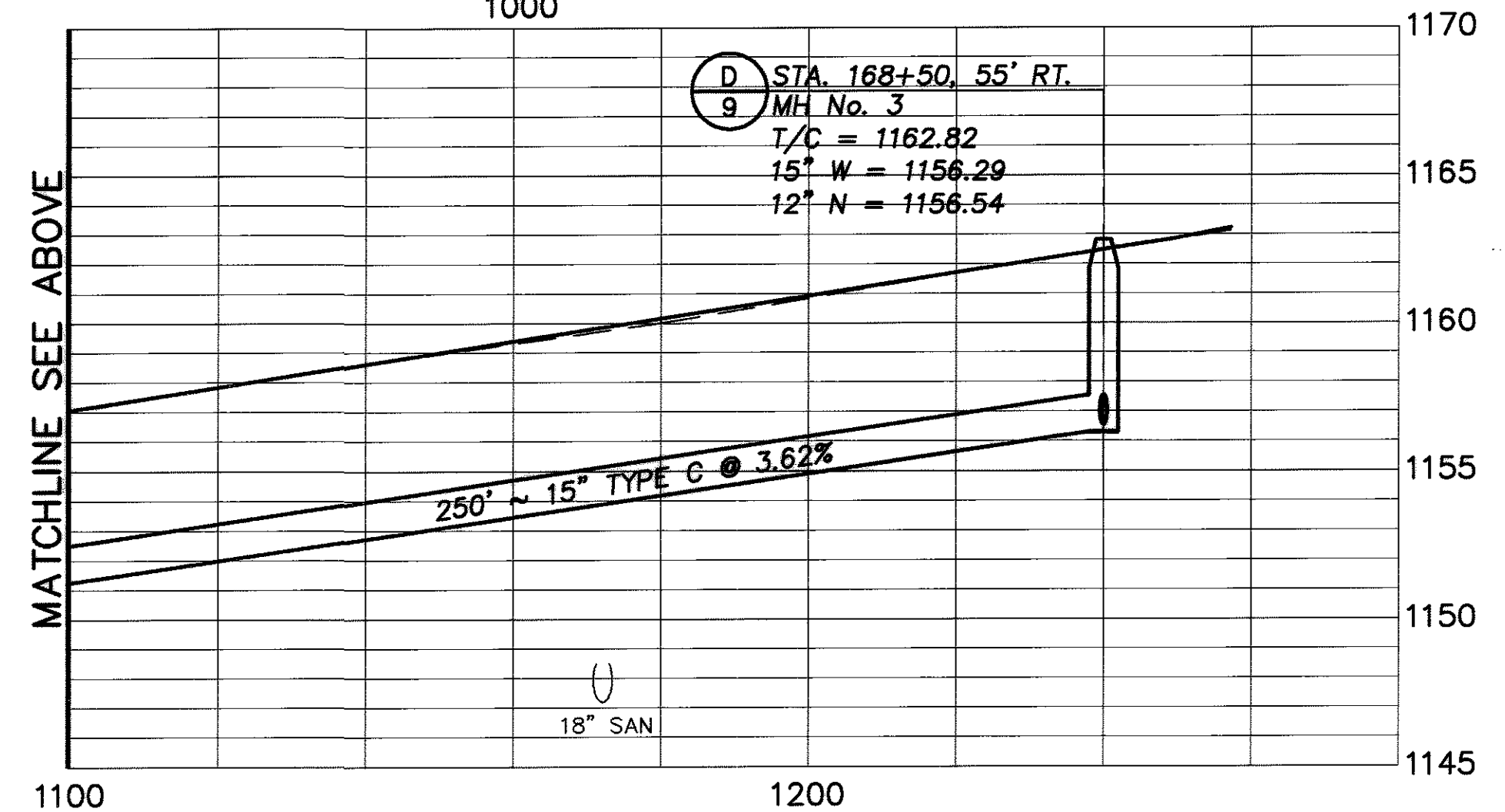
| | | |
|------------|---------|----|
| CALCULATED | MUT | IM |
| | | |
| | CHECKED | |

MATCHLINE SEE BELOW



MATCHLINE SEE BELOW

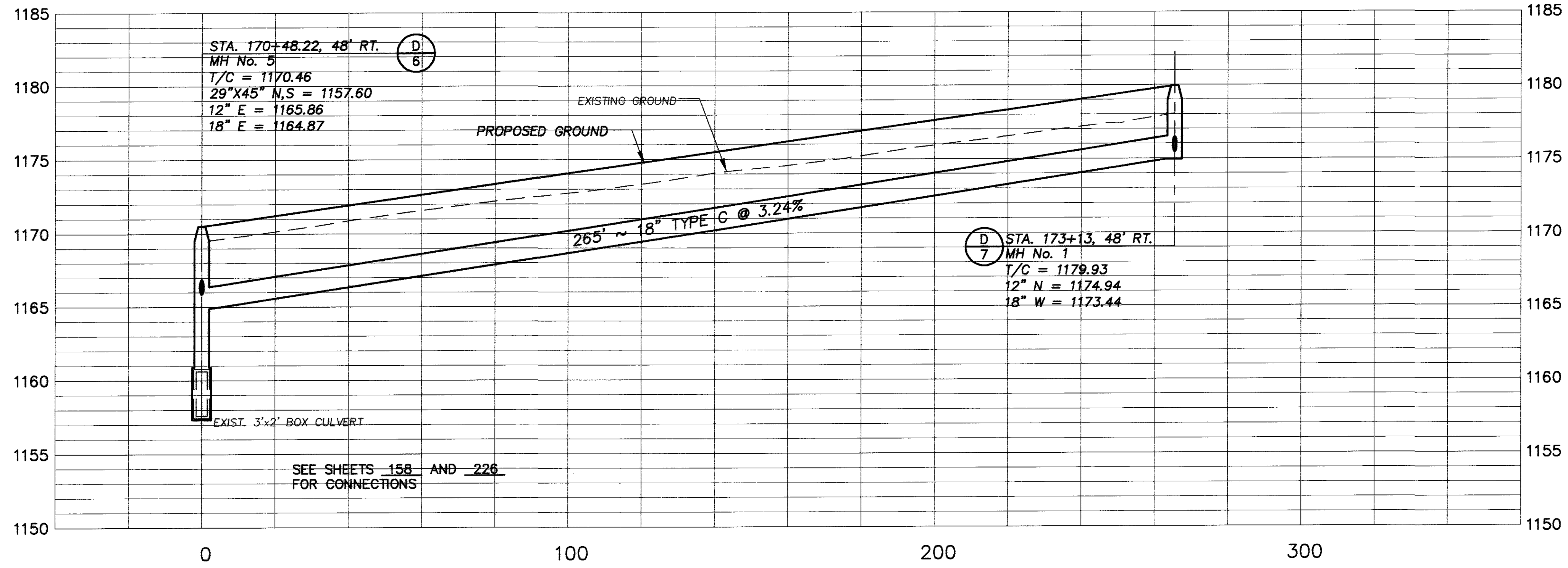
MATCHLINE SEE ABOVE



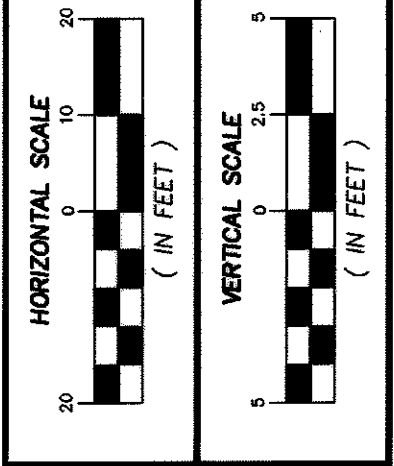
MATCHLINE SEE ABOVE

DRAINAGE PROFILE
STA. 155+88+00 TO STA. 168+50

MED - 18 - 15.13



SEE SHEETS 158 AND 226 FOR CONNECTIONS

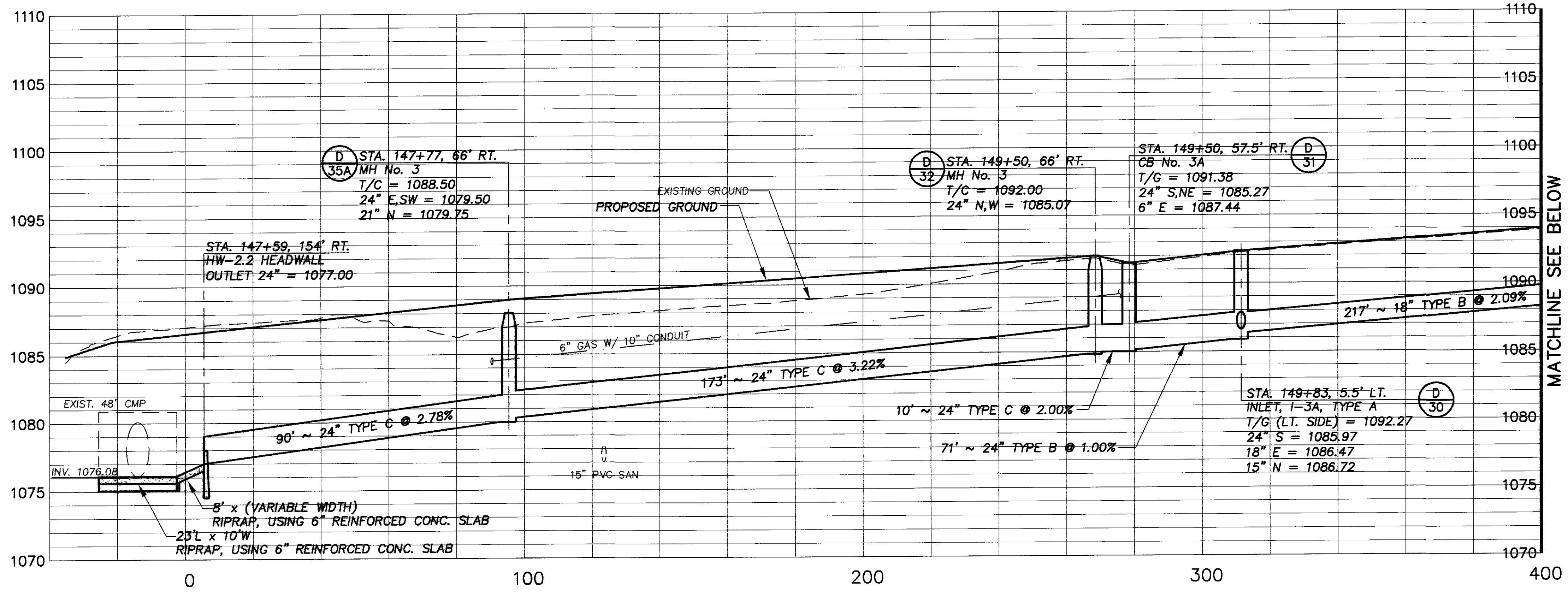


| |
|------------|
| CALCULATED |
| MJT |
| CHECKED |
| IM |

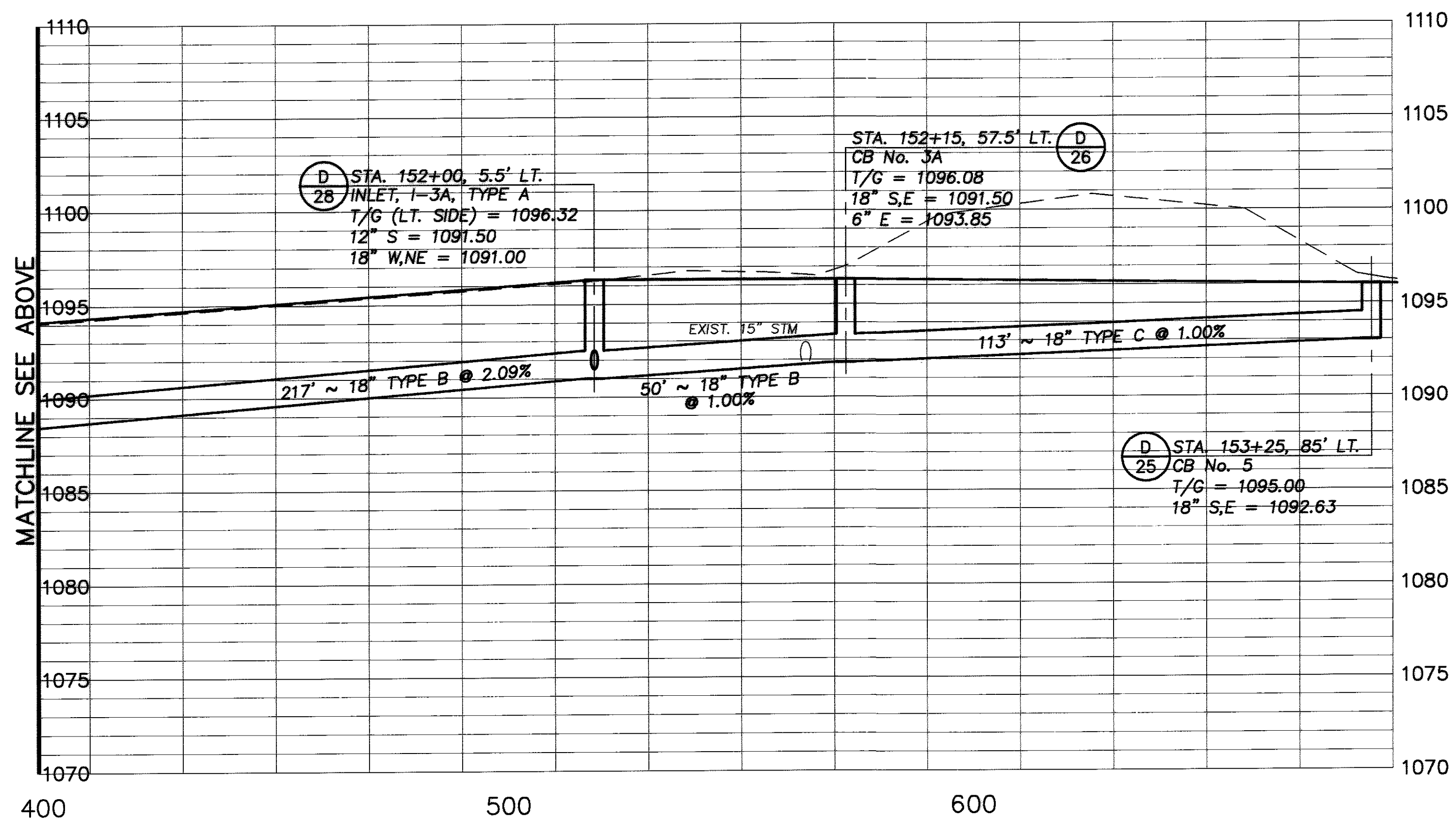
DRAINAGE PROFILE
STA. 170+47.50 TO STA. 173+13

MED - 18 - 15.13

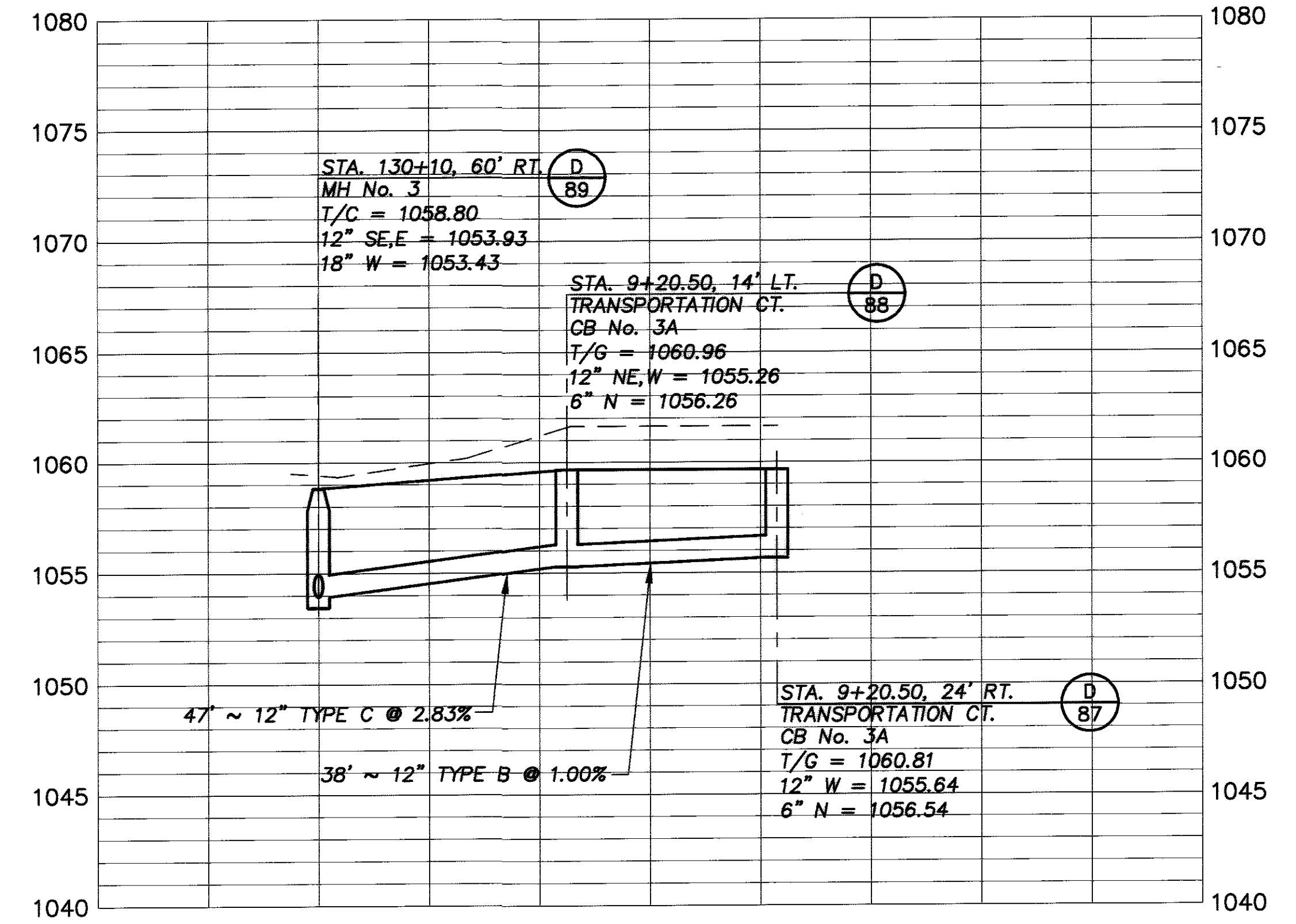
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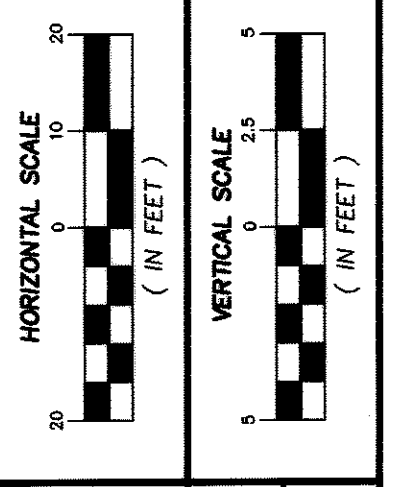
STA. 147+50 TO 153+25



STA. 147+50 TO 153+25



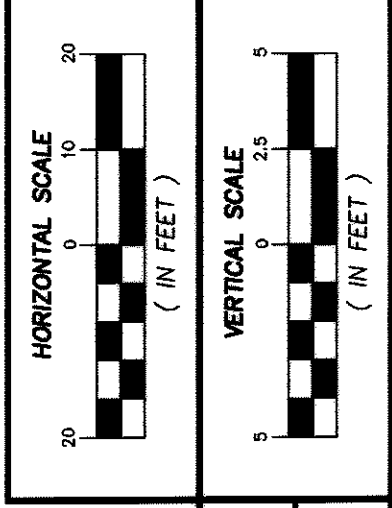
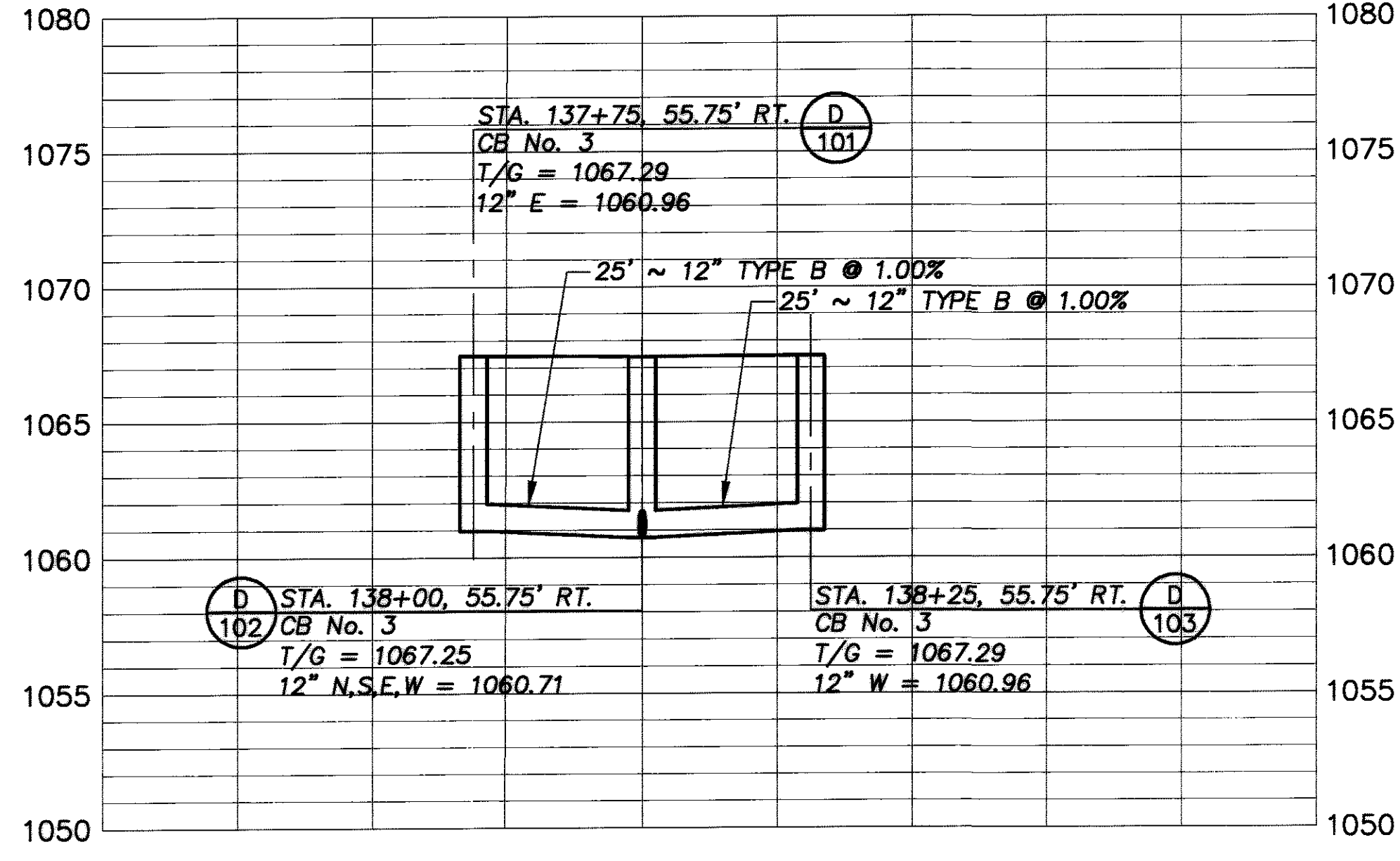
NETTLETON SOUTH



| | | | |
|------------|-----|---------|----|
| CALCULATED | PAS | CHECKED | IM |
|------------|-----|---------|----|

DRAINAGE PROFILE
STA. 147+50 TO STA. 153+25 AND NETTLETON SOUTH

MED - 18 - 15.13

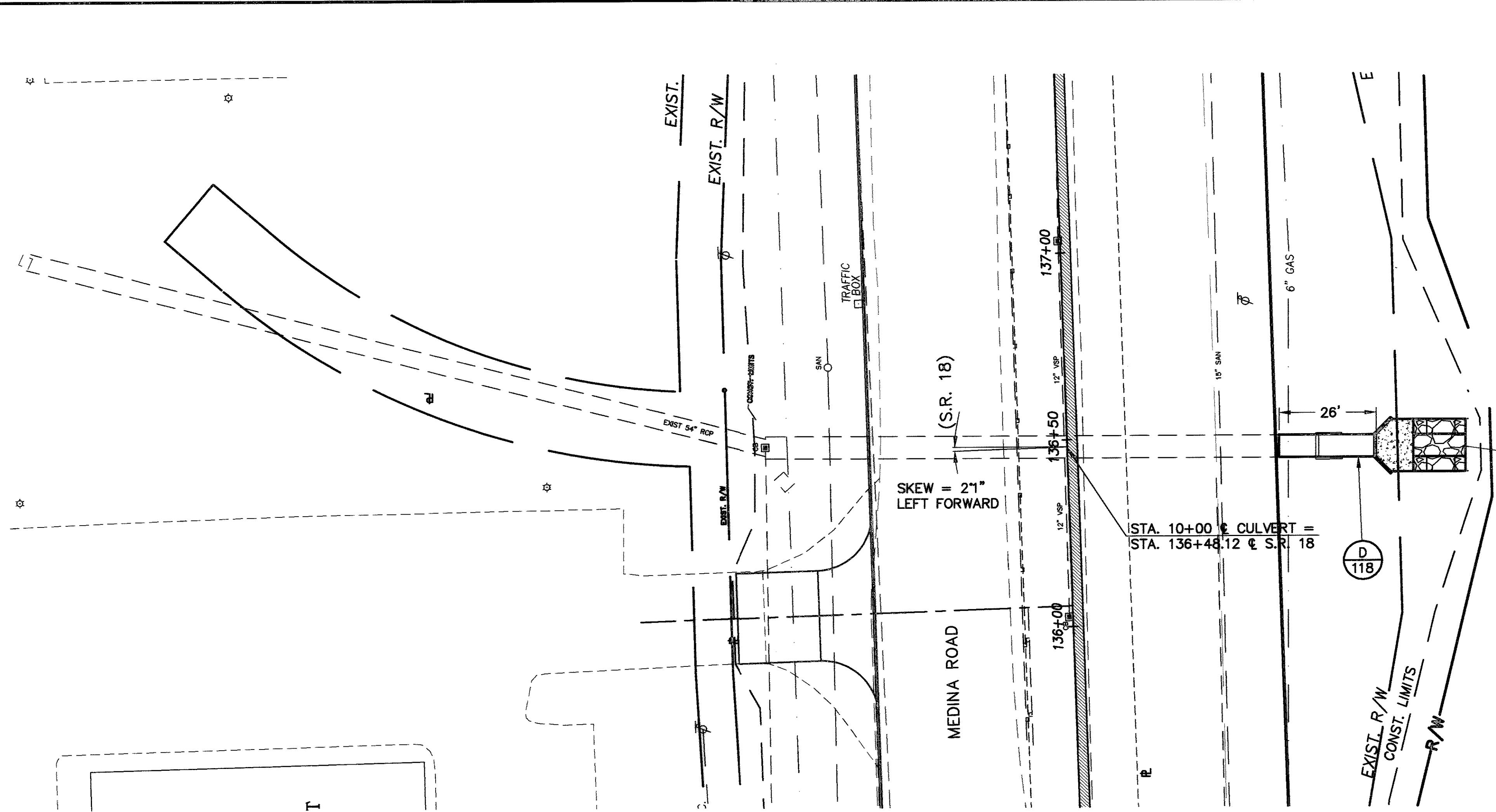


| | |
|------------|----|
| CALCULATED | IM |
| PAS | |
| CHECKED | |

**DRAINAGE PROFILE - STA. 122+11.34 TO 122+30,
STA. 137+75 TO 138+25, 2.75 FT**

MED - 18 - 15.13

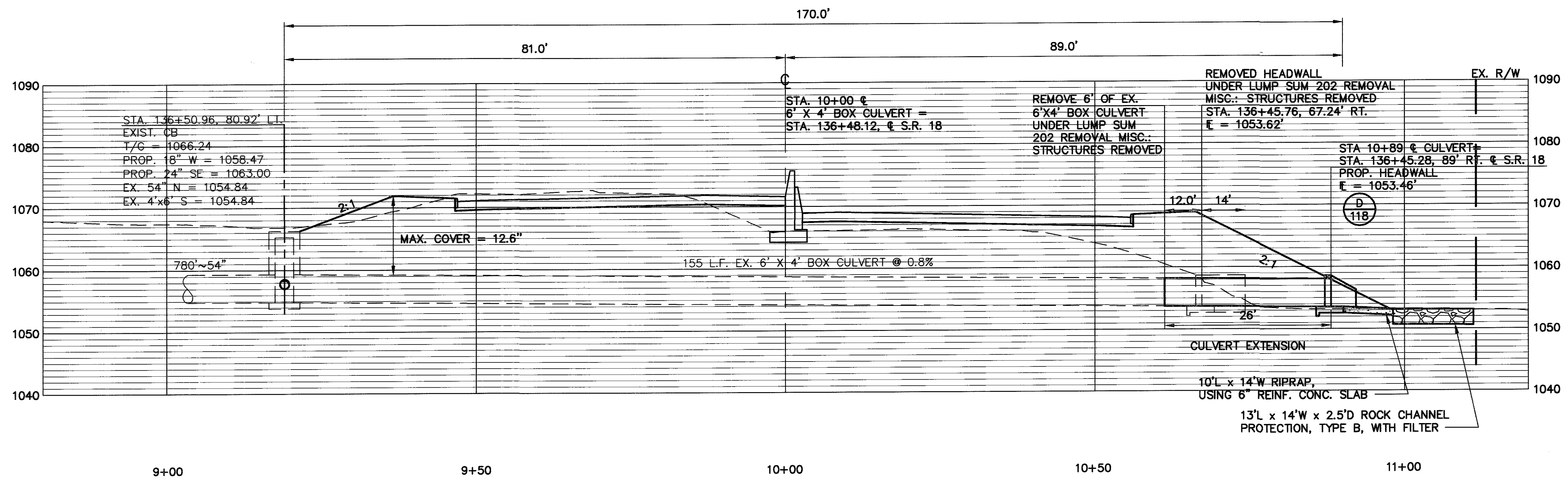
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| ESTIMATED QUANTITIES | | | | |
|----------------------|------|----------|----------|--|
| REF. NO. | ITEM | UNIT | QUAN. | DESCRIPTION |
| | 202 | LUMP SUM | LUMP SUM | REMOVAL MISC.: STRUCTURE REMOVED |
| | 503 | LUMP SUM | LUMP SUM | UNCLASSIFIED EXCAVATION, AS PER PLAN |
| | 509 | POUNDS | 1395 | EPOXY COATED REINFORCING STEEL |
| | 512 | S.Y. | 30 | TYPE 2 WATERPROOFING |
| | 512 | S.Y. | 27 | TYPE 3 WATERPROOFING |
| | 516 | S.F. | 18 | 1" PREFORMED EXPANSION JOINT FILLER |
| D-118 | 601 | C.Y. | 16.9 | ROCK CHANNEL PROTECTION, TYPE B WITH FILTER |
| D-118 | 601 | S.Y. | 12.8 | RIPRAP USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN |
| | 603 | LIN. FT. | 26 | 6' x 4' CONDUIT, TYPE A, 706.05, AS PER PLAN |
| | 898 | C.Y. | 6 | QC/QA CONCRETE MISC.; CLASS QSC1, SUBSTRUCTURE (WALL ABOVE FOOTING), AS PER PLAN |
| | 898 | C.Y. | 15 | QC/QA CONCRETE CLASS QSC1, SUBSTRUCTURE (FOOTING), APP |
| | 864 | S.Y. | 19 | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) |

| HYDRAULIC DESIGN DATA | |
|----------------------------------|-----------|
| DRAINAGE AREA | 235 ACRES |
| Q25 | 162 cfs |
| Q100 | 260 cfs |
| HW25 | 1059.75 |
| HW100 | 1064.19 |
| V25 | 9.52 fps |
| V100 | 10.84 fps |
| TW25 | 9.08 ft |
| TW100 | 10.28 ft |
| CONDITION OF CULVERT = EXCELLENT | |

FOR CULVERT NOTES, SEE SHEET 223A



CALCULATED IN CHECKED PER
 CULVERT PLAN AND PROFILE
 STA. 136+48.12 6' X 4' BOX

MED - 18 - 15.13

BOX CULVERT GENERAL NOTES

DESIGN SPECIFICATIONS:

CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) 1996, INCLUDING THE 1997, 1998, 1999 AND 2000 INTERIM SPECIFICATIONS, AND THE OHIO DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL.

DESIGN DATA:

CONCRETE:
CLASS C FOR FOOTING, WALLS, AND BARRIERS COMPRESSIVE STRENGTH - 4000 psi

REINFORCING STEEL: ALL REINFORCING STEEL IN ACCORDANCE WITH ASTM A615, A616, OR A617, EPOXY COATED, GRADE 60, MINIMUM YIELD STRENGTH 60,000 psi

CULVERT HEADWALL FOUNDATION BEARING PRESSURE:

FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM BEARING PRESSURE OF 2000 POUNDS PER SQUARE FOOT. THE ALLOWABLE BEARING PRESSURE IS 2500 POUNDS PER SQUARE FOOT.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN:

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE MEDIAN WALLS SHALL BE 203 MATERIAL PLACED IN 6' LIFTS.

EXISTING UNSUITABLE MATERIAL BELOW A FOOTING OR CONDUIT FOUNDATION SHALL BE REMOVED TO THE DEPTH AS DIRECTED BY THE ENGINEER. THE WIDTH OF THE REMOVAL SHALL BE AS INDICATED ON THE DIAGRAM. REPLACEMENT BEDDING MATERIAL SHALL BE ITEM 613 - LOW STRENGTH MORTAR BACKFILL (TYPE 2) MATERIAL.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS ASSOCIATED WITH THE DESCRIPTION ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN.

ITEM 512 - TYPE 2 WATERPROOFING:

ITEM 512 - TYPE 2 WATERPROOFING, SHALL EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE FOOT FOR ITEM 512 - TYPE 2 WATERPROOFING.

ITEM 512 - TYPE 3 WATERPROOFING:

ITEM 512 - TYPE 3 WATERPROOFING, SHALL BE APPLIED TO THE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 3 WATERPROOFING.

ITEM 603 - 6' X 4' CONDUIT, TYPE A, 706.05, AS PER PLAN:

THE 6' X 4' CONDUIT SHALL BE PER ASTM C789 TABLE 2.

ALL OF CMS 603 SHALL BE PERFORMED EXCEPT THE FOLLOWING:

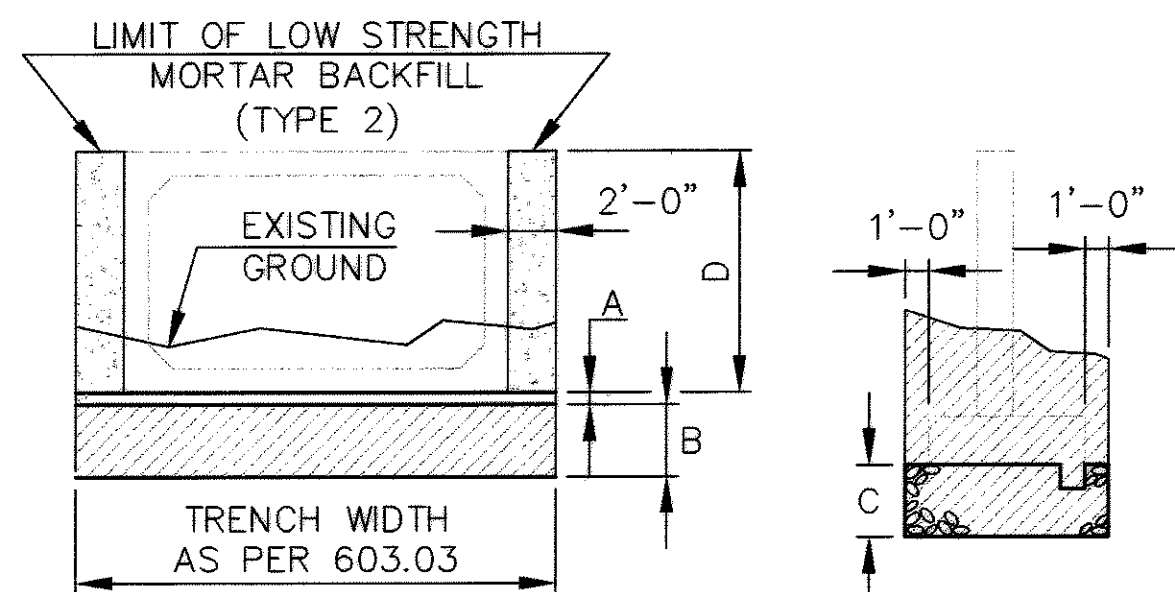
BACKFILLING SHALL BE MODIFIED TO CONSIST OF LOW STRENGTH MORTAR BACKFILL (TYPE 2) MEETING THE REQUIREMENTS OF CMS 613. THE LIMITS EXTEND UP TO THE TOP OF THE CULVERT.

JOINT WRAP AS SPECIFIED IN 603.06 AND CONCRETE SEALING AS SPECIFIED IN 603.08 ARE NOT REQUIRED UNDER THE LIMITS OF THE MEMBRANE WATERPROOFING. THE EXTERIOR JOINT GAP ON THE TOP AND SIDES BETWEEN THE PRECAST CULVERT SECTIONS SHALL BE FILLED WITH PORTLAND CEMENT MORTAR PRIOR TO INSTALLING THE MEMBRANE WATERPROOFING.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN ITEM 603, AS PER PLAN.

REINFORCING SCHEDULE

| MARK | No. REQD. | LGTH. | TYPE | DIMENSIONS | | | | INCRM. | WEIGHT LBS. |
|-----------------|-----------|-------|------|------------|-----|-----|---|----------|-------------|
| | | | | A | B | C | D | | |
| HEADWALL | | | | | | | | | |
| B 501 | 7 | 5-3 | 2 | 2-2 | 1-2 | | | | 38 |
| B 502 | 1 | 7-7 | ST | | | | | | 8 |
| B 503 | 4 | 8-8 | 12 | 2-0 | 6-9 | 4-9 | | | 36 |
| B 504 | 48 | 5-8 | ST | | | | | | 284 |
| SERIES | 2-SETS | 7-7 | | | | | | | |
| OF | OF 5- | TO | ST | | | | | 1-2 | 103 |
| B 505 | 10 | 12-3 | | | | | | | |
| B 506 | 26 | 7-9 | 1 | 2-2 | 5-8 | | | | 210 |
| SERIES | 2-SETS | 8-8 | | 2-0 | 6-9 | 4-9 | | | 3 |
| OF | OF 5- | TO | 12 | TO | TO | TO | | 0-6-- | 102 |
| B 507 | 10 | 10-11 | | 2-0 | 9-0 | 6-4 | | | 4 |
| SERIES | 2-SETS | 0-7 | | | | | | | 5 |
| OF | OF 4- | TO | ST | | | | | 0-7-- | 13 |
| B 508 | 8 | 2-5 | | | | | | | 16 |
| B 509 | 24 | 7-11 | 2 | 3-6 | 1-2 | | | | 198 |
| SERIES | 4-SETS | 2-10 | | | | | | | 5 |
| OF | OF 10- | TO | ST | | | | | 0-3-- | 170 |
| B 510 | 40 | 5-4 | | | | | | | 16 |
| B 511 | 8 | 5-6 | ST | | | | | | 46 |
| B 512 | 4 | 7-10 | 12 | 0-7 | 7-4 | 5-2 | | | 33 |
| B 513 | 4 | 8-8 | 12 | 1-0 | 7-9 | 5-6 | | | 36 |
| B 514 | 2 | 7-2 | 12 | 0-7 | 6-8 | 4-8 | | | 15 |
| B 515 | 2 | 8-0 | 12 | 1-0 | 7-1 | 5-0 | | | 17 |
| B 516 | 2 | 2-10 | 12 | 0-7 | 2-4 | 1-8 | | | 6 |
| B 517 | 2 | 3-8 | 12 | 1-0 | 2-9 | 2-0 | | | 8 |
| B 518 | 2 | 8-3 | 12 | 0-7 | 7-9 | 5-6 | | | 17 |
| B 519 | 2 | 9-1 | 12 | 1-0 | 8-2 | 5-9 | | | 19 |
| B 520 | 7 | 3-0 | 3 | 0-10 | 1-2 | 1-3 | | | 22 |
| B 521 | 2 | 6-10 | ST | | | | | | 14 |
| TOTAL | | | | | | | | HEADWALL | 1395* |



BOX CULVERT

RETAINING WALL/
WINGWALL

LIMITS OF ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

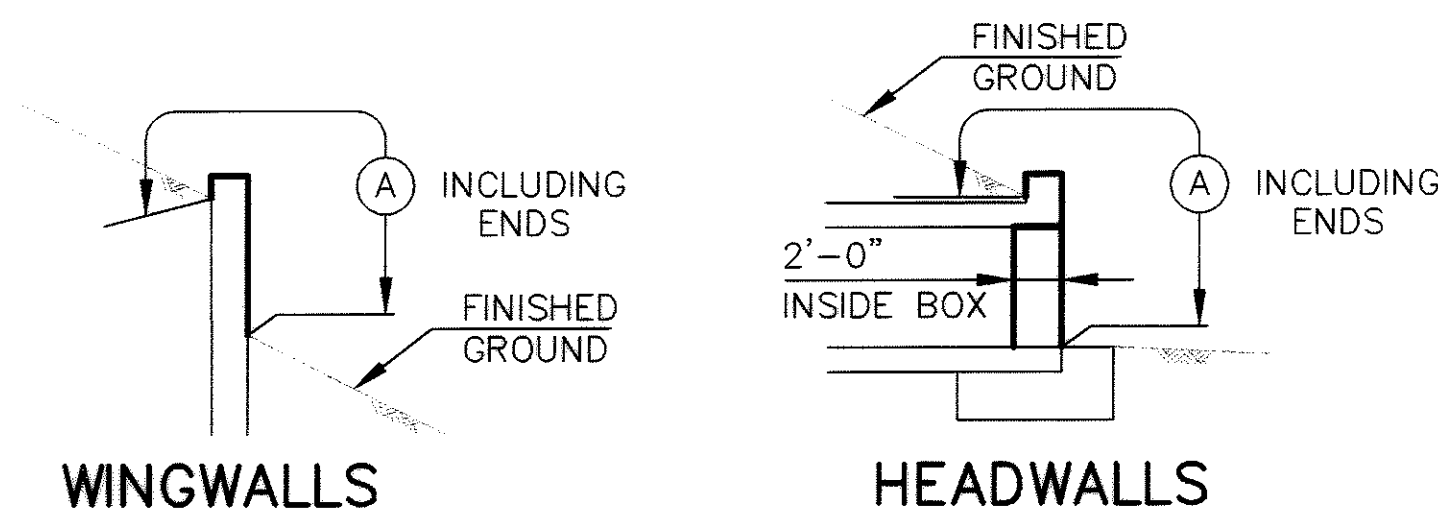
■ DENOTES EXCAVATION INCLUDED WITH ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN FOR PAYMENT.

A - 6 INCH MINIMUM PER CMS 603.

B - REMOVAL OF UNSUITABLE MATERIAL AND REPLACEMENT WITH ITEM 613 - LOW STRENGTH MORTAR BACKFILL (TYPE 2) MATERIAL. INCLUDE WITH ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN FOR PAYMENT.

C - REMOVAL OF UNSUITABLE MATERIAL AND REPLACEMENT WITH ITEM 613 - LOW STRENGTH MORTAR BACKFILL (TYPE 2) MATERIAL. INCLUDE WITH ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN FOR PAYMENT.

D - ITEM 613 - LOW STRENGTH MORTAR BACKFILL (TYPE 2). INCLUDE WITH ITEM 603 - 6' X 4' CONDUIT, TYPE A, 706.05, AS PER PLAN.

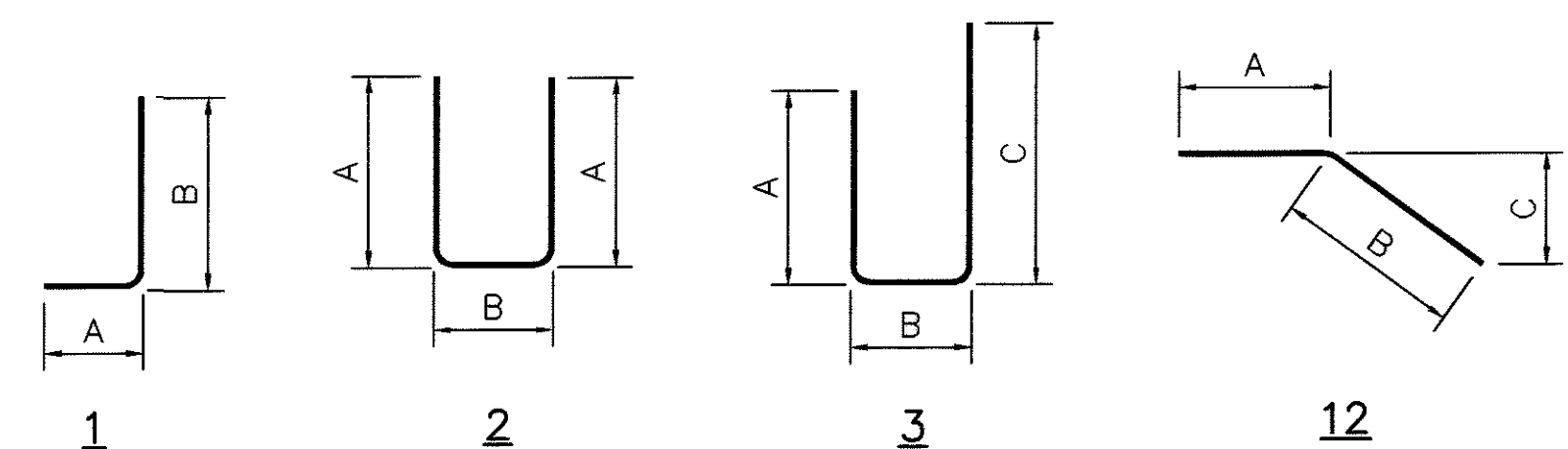


WINGWALLS

HEADWALLS

LIMITS OF ITEM 864 - SEALING CONCRETE SURFACES (EPOXY-URETHANE)

(A) ~ SEAL ENTIRE CONCRETE SURFACE AREA



NOTES

① ALL REINFORCING STEEL SHALL BE EPOXY-COATED.

② REINFORCING SAMPLES:

REFER TO CMS SECTIONS 106.03, 700, 709.01 THROUGH 709.05 AND 709.08 SUFFICIENT ADDITIONAL REINFORCING STEEL SHALL BE PROVIDED FOR SAMPLING. RANDOM SAMPLES SHALL BE REPLACED IN THE STRUCTURES BY THE ADDITIONAL STEEL. SPLICED IN ACCORDANCE WITH 509.08.

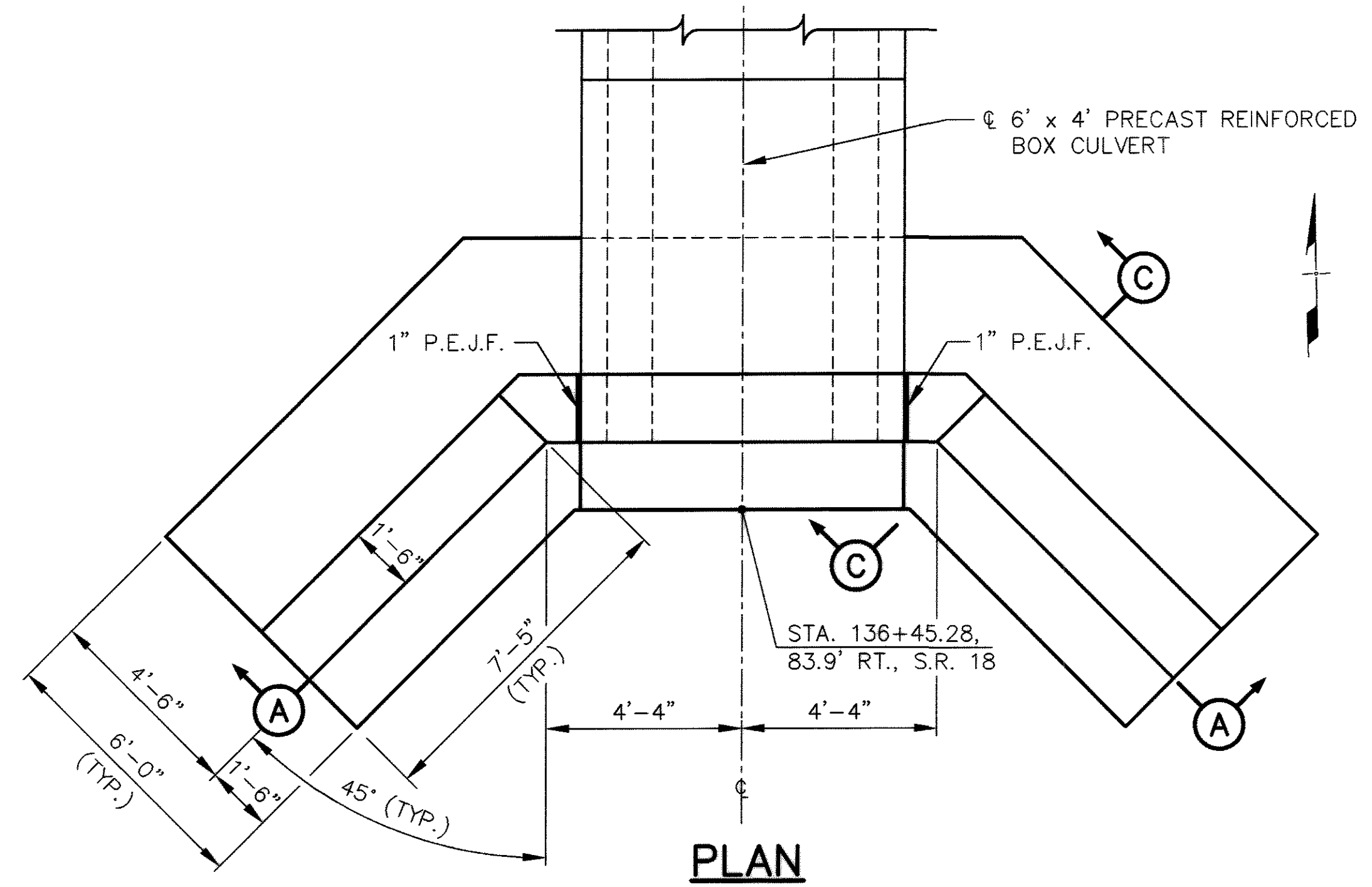
③ THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

* REINFORCING STEEL WEIGHTS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

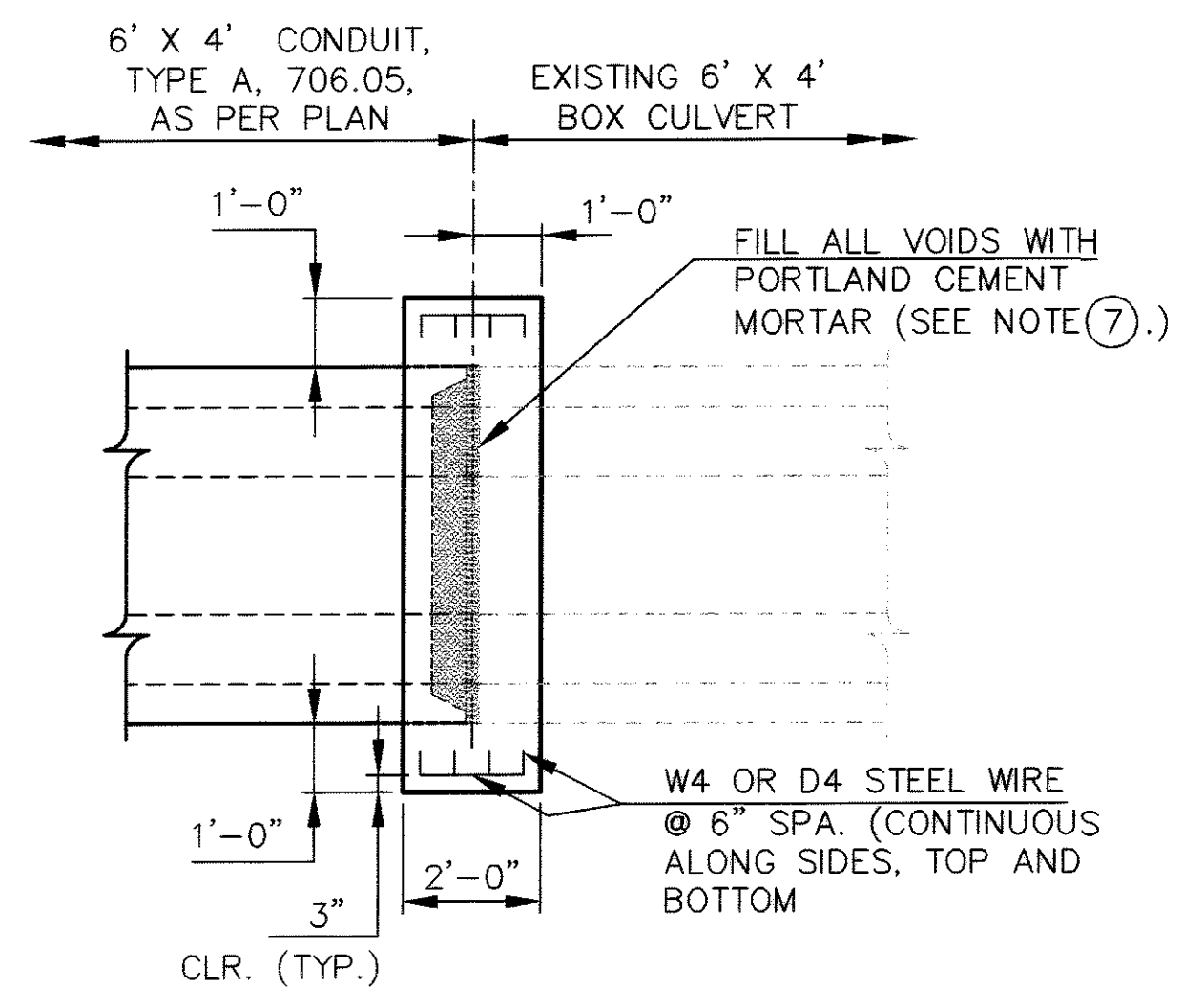
NOTES

- ① THE PREFIX 'B' SHALL BE ADDED TO ALL BAR MARKS IN THE BOX CULVERT/HEADWALL.
- ② ANCHOR PER CMS 510 WITH NONSHRINK, NONMETALLIC GROUT AND TO A DEPTH OF 5". PAYMENT FOR BARS, GROUT, AND INSTALLATION SHALL BE INCLUDED WITH ITEM 842, CLASS C CONCRETE (RETAINING WALL/WINGWALL ABOVE FOOTING) FOR PAYMENT.

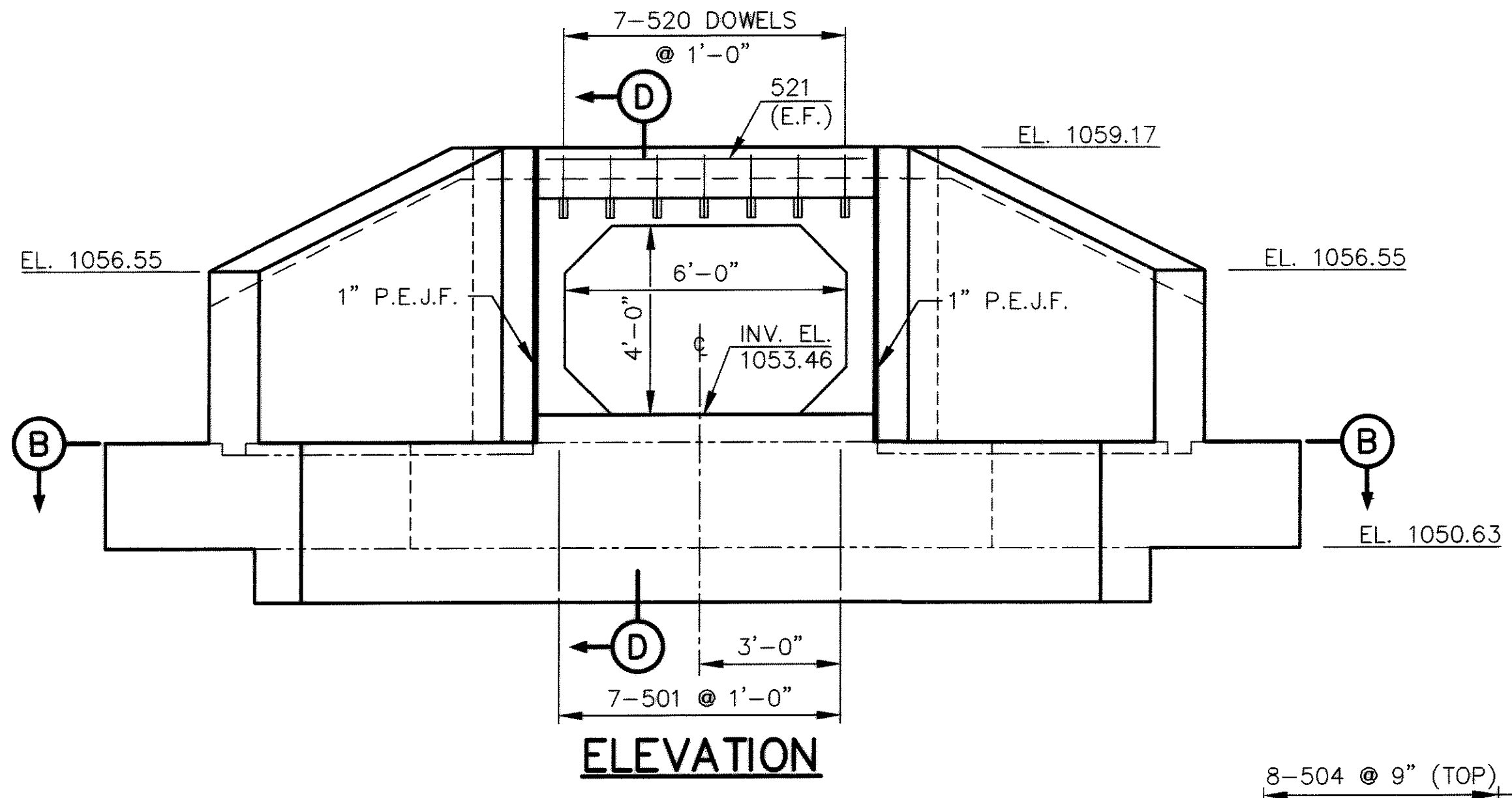
AS AN ALTERNATIVE TO RESIN BONDING, THREADED INSERTS OR NONPROTRUDING MECHANICAL CONNECTORS CAST INTO THE CULVERT BY THE CULVERT MANUFACTURER MAY BE USED PROVIDED THEY CAN RESIST A MINIMUM ULTIMATE PULL OUT STRENGTH OF 12,000 POUNDS AND MAINTAIN THE MINIMUM COVER AT THE BOTTOM OF THE CULVERT SLAB. MECHANICAL CONNECTORS MUST PROVIDE AN "L" SHAPED BAR INSIDE THE CULVERT WITH MECHANICAL CONNECTORS AND CONNECTED BARS SHALL BE INCLUDED WITH ITEM 603 FOR PAYMENT. PAYMENT FOR FIELD PLACED REINFORCING DOWELS IN THE HEADWALL SHALL BE INCLUDED WITH ITEM 842 FOR PAYMENT.
- ③ MASONRY COLLAR SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 603 - 6' X 4' CONDUIT, TYPE A, 706.05, AS PER PLAN.
- ④ FOR ADDITIONAL NOTES SEE BOX CULVERT GENERAL NOTES ON SHEET 223A/362.
- ⑤ FOR QUANTITIES AND LIMITS OF ITEM 864 - SEALING CONCRETE SURFACES (EPOXY-URETHANE) SEE SHEET 223A/362.
- ⑥ FOR REINFORCING SCHEDULE SEE SHEET 223A/362.
- ⑦ PORTLAND CEMENT MORTAR SHALL BE INCLUDED WITH ITEM 603 - 6' X 4' CONDUIT, TYPE A, 706.05, AS PER PLAN FOR PAYMENT.



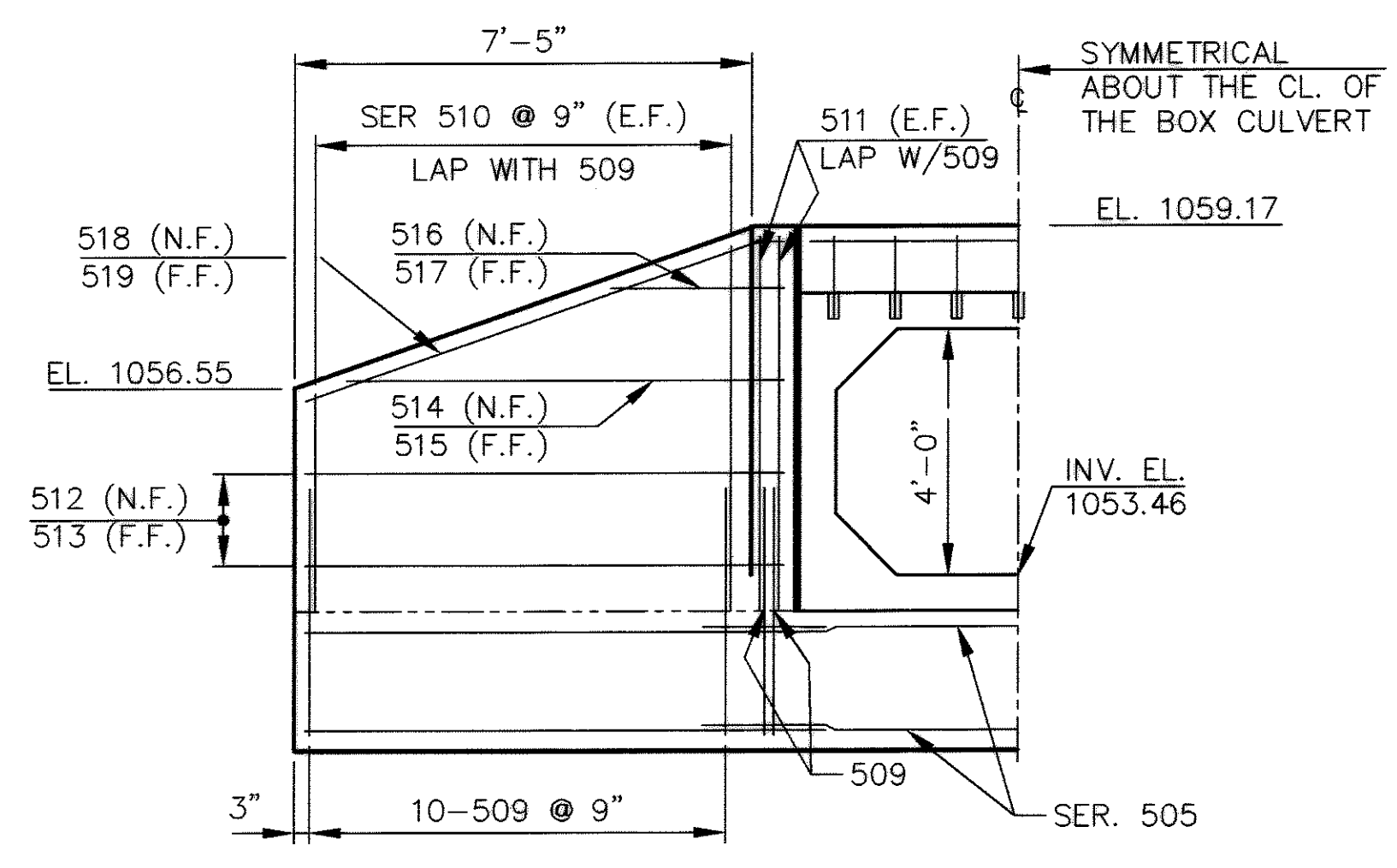
PLAN



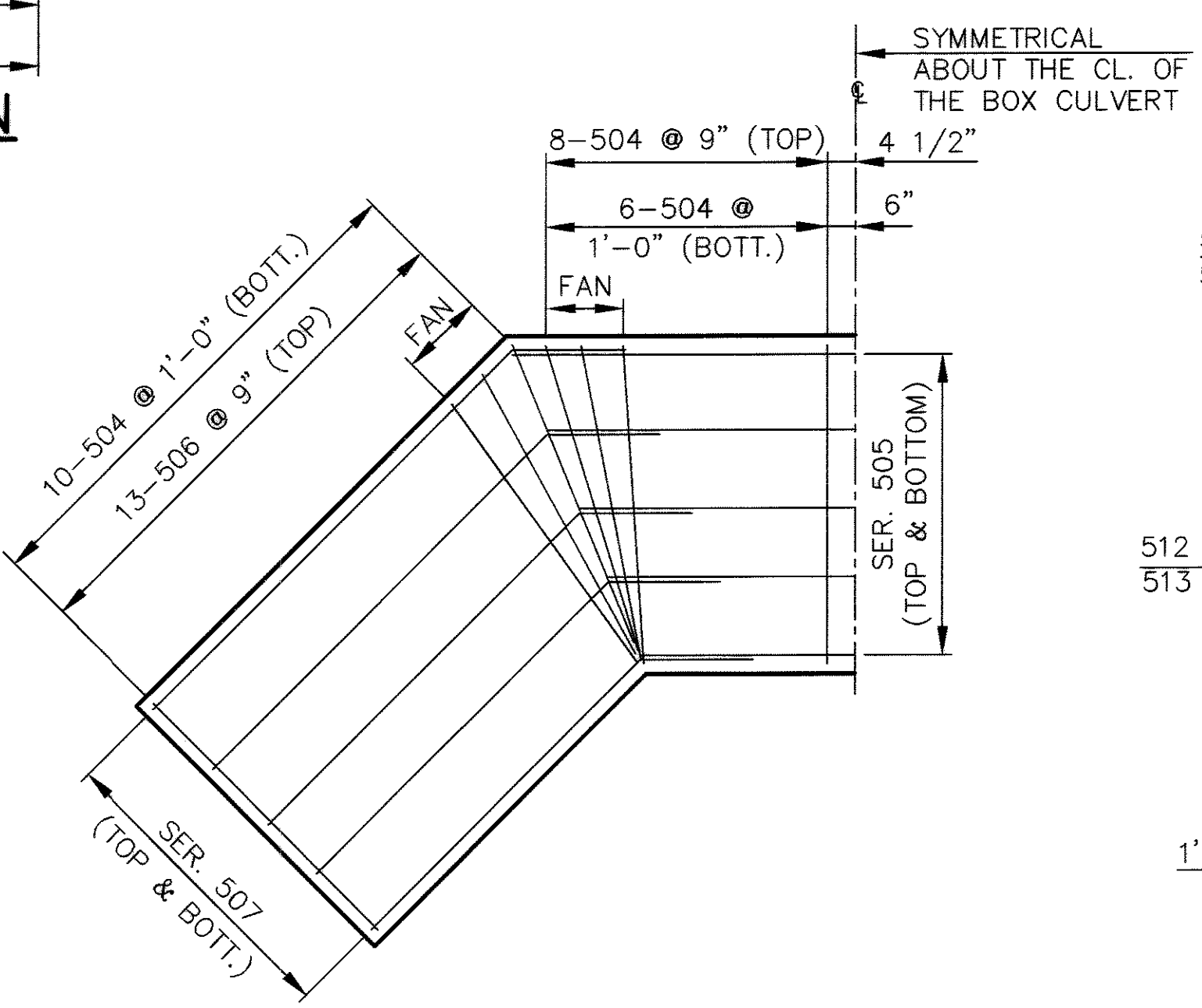
MASONRY COLLAR DETAIL



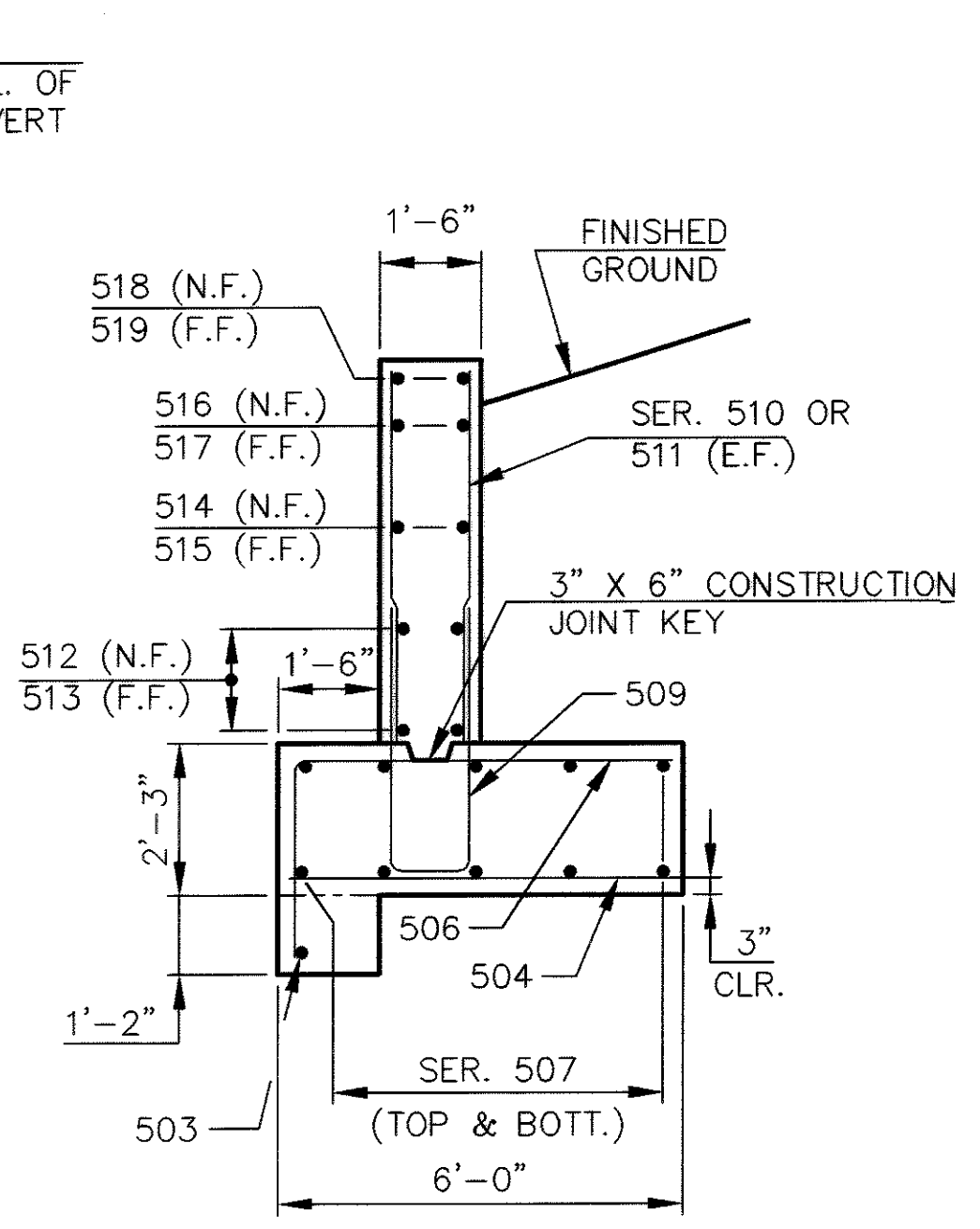
ELEVATION



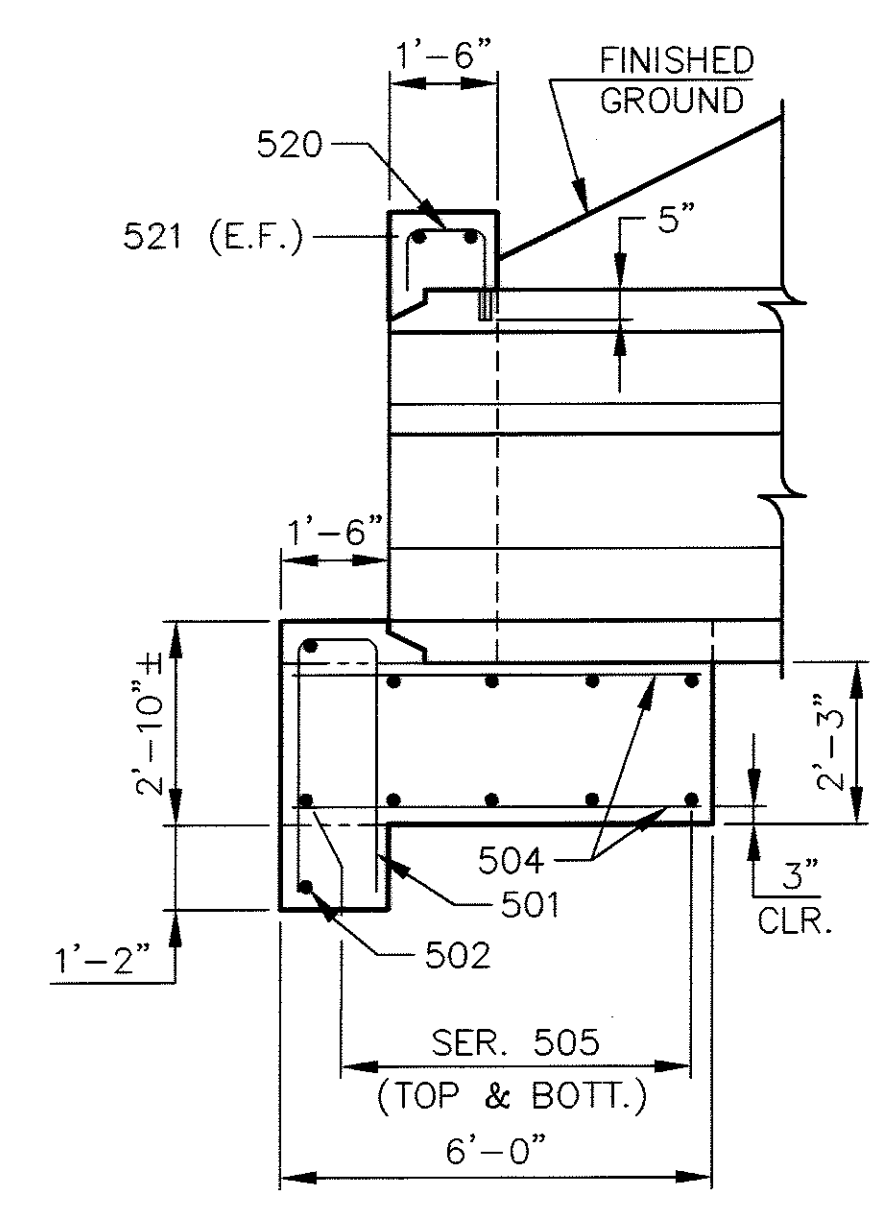
HALF-SECTION A-A



HALF-SECTION B-B

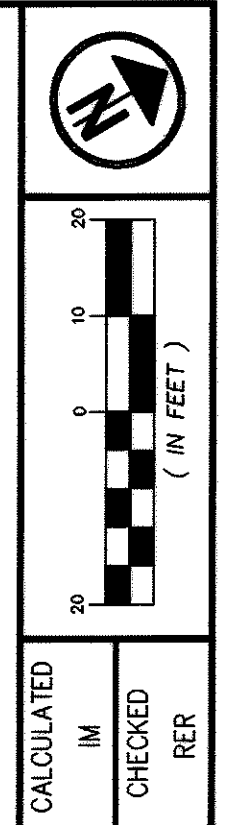


SECTION C-C



SECTION D-D

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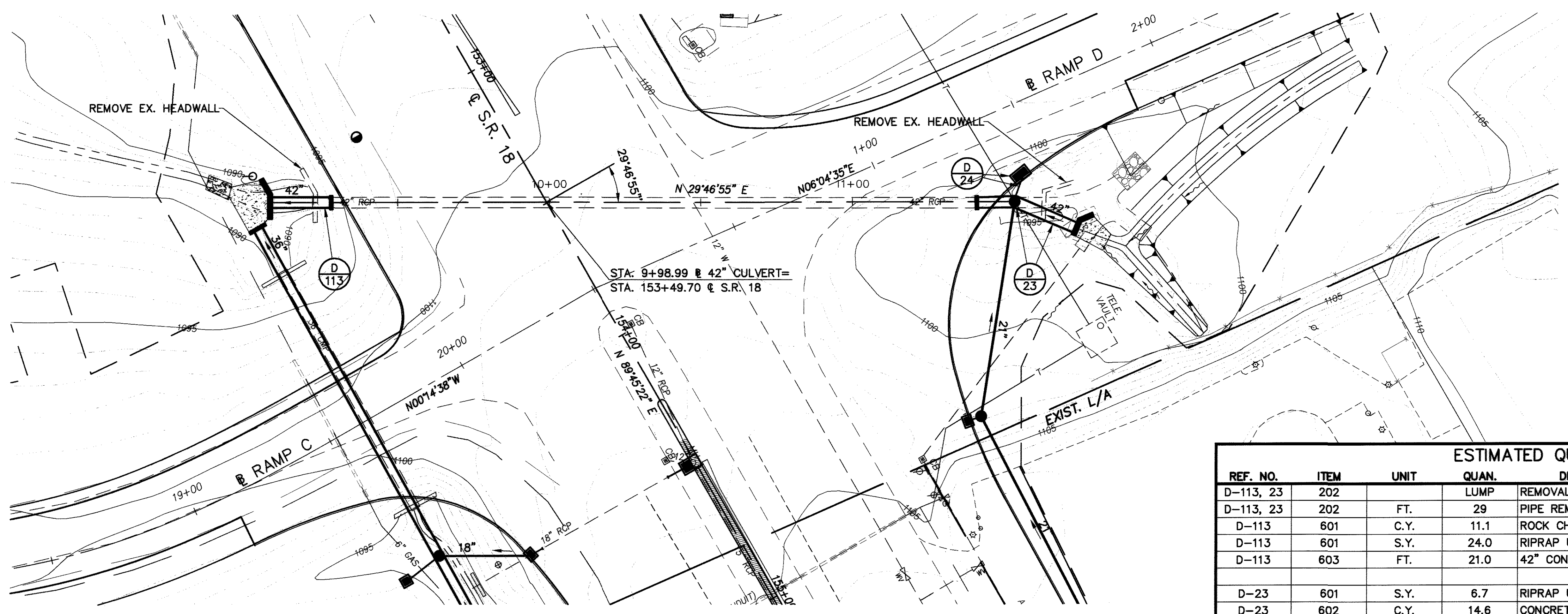


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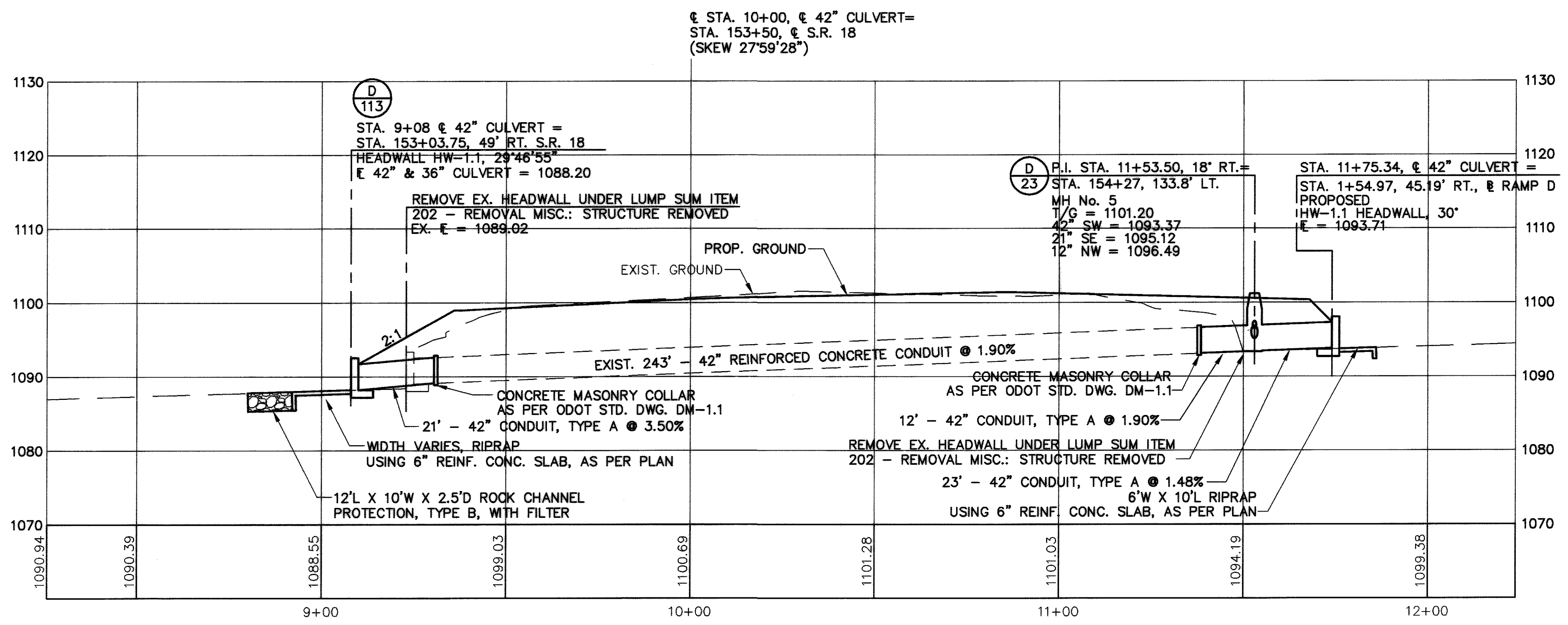
CULVERT DETAIL
STA. 153+49.70 42" CULVERT

MED - 18 - 15.13

224
362



| ESTIMATED QUANTITIES | | | | |
|----------------------|------|------|-------|---|
| REF. NO. | ITEM | UNIT | QUAN. | DESCRIPTION |
| D-113, 23 | 202 | LUMP | | REMOVAL MISC.: STRUCTURE REMOVED |
| D-113, 23 | 202 | FT. | 29 | PIPE REMOVED, OVER 24" |
| D-113 | 601 | C.Y. | 11.1 | ROCK CHANNEL PROTECTION, TYPE B WITH FILTER |
| D-113 | 601 | S.Y. | 24.0 | RIPRAP USING 6" REINFORCED CONCRETE SLAB |
| D-113 | 603 | FT. | 21.0 | 42" CONDUIT, TYPE A, 706.02 |
| D-23 | 601 | S.Y. | 6.7 | RIPRAP USING 6" REINFORCED CONCRETE SLAB |
| D-23 | 602 | C.Y. | 14.6 | CONCRETE MASONRY |
| D-23 | 603 | FT. | 35.0 | 42" CONDUIT, TYPE A, 706.02 |
| D-23 | 604 | EACH | 1 | MANHOLE, NO. 5 |



| HYDRAULIC DESIGN DATA | |
|-----------------------------|-----------|
| DRAINAGE AREA | 34 ACRES |
| Q25 | 62 CFS |
| Q100 | 92 CFS |
| HW25 | 1097.00 |
| HW100 | 1098.91 |
| V25 | 14.09 FPS |
| V100 | 15.37 FPS |
| TW25 | 5.37 FT |
| TW50 | 6.18 FT |
| CONDITION OF CULVERT = GOOD | |

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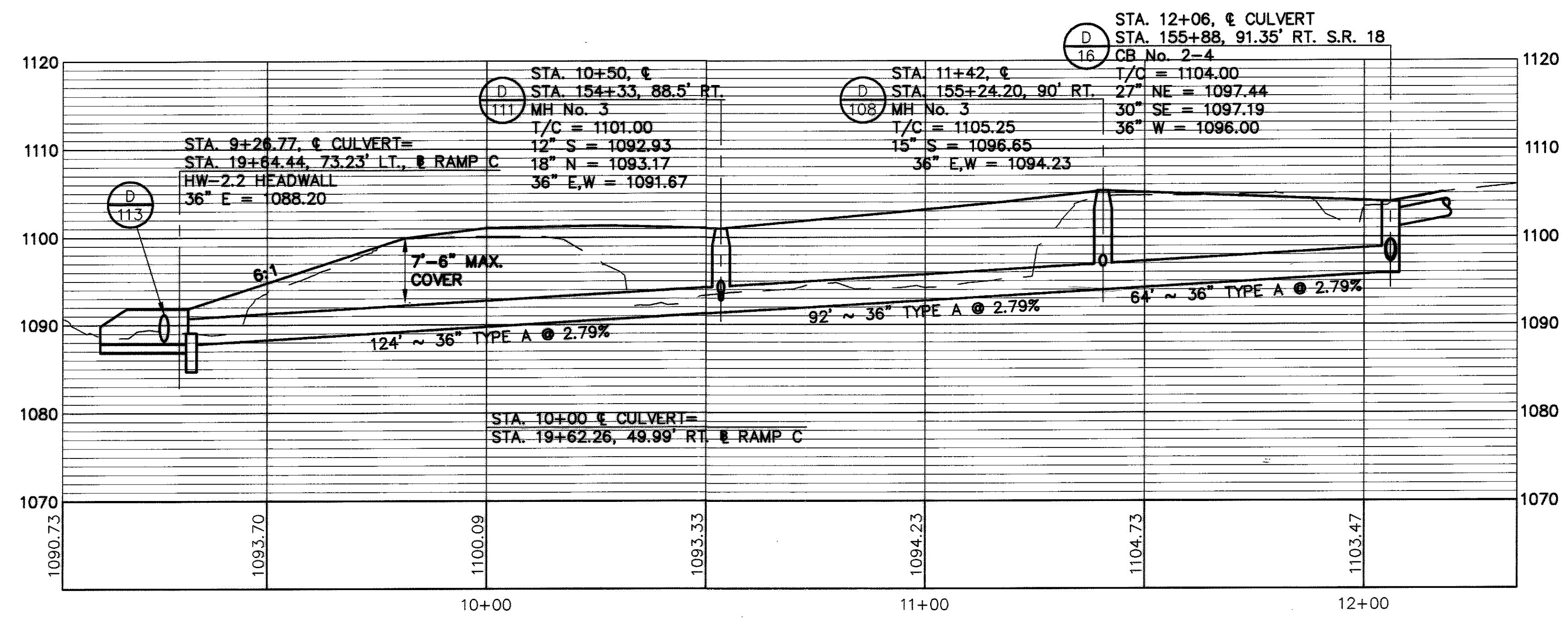
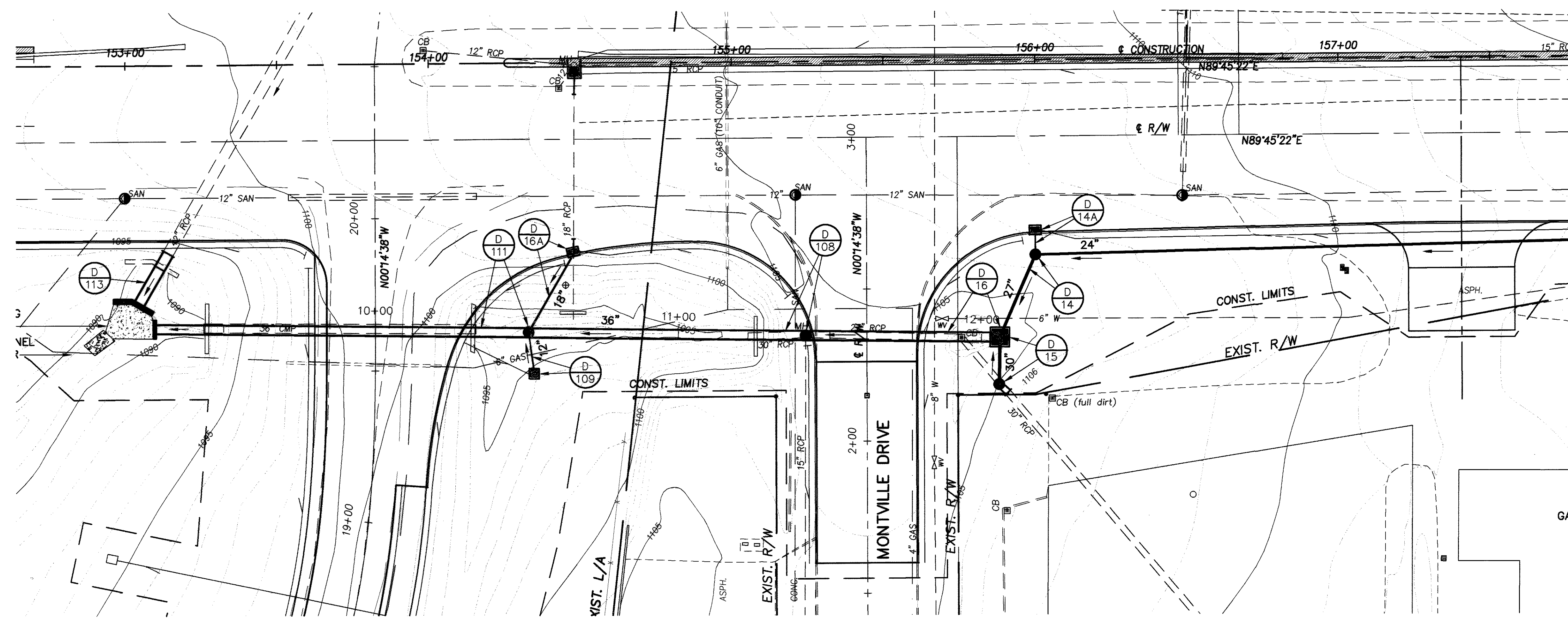


CALCULATED
IM
CHECKED

CULVERT DETAIL
STA. 19+62.95 RAMP C, 36' CULVERT

MED - 18 - 15.13

225
362

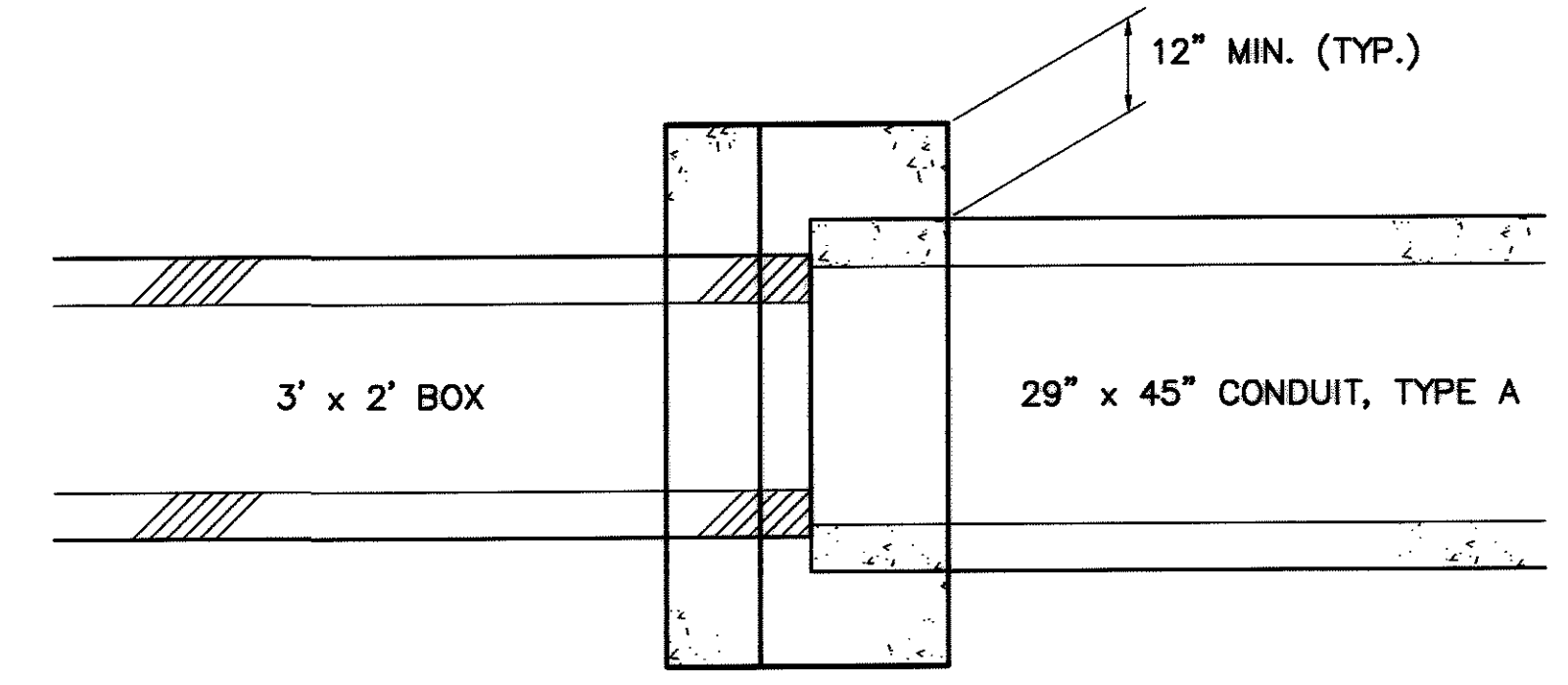
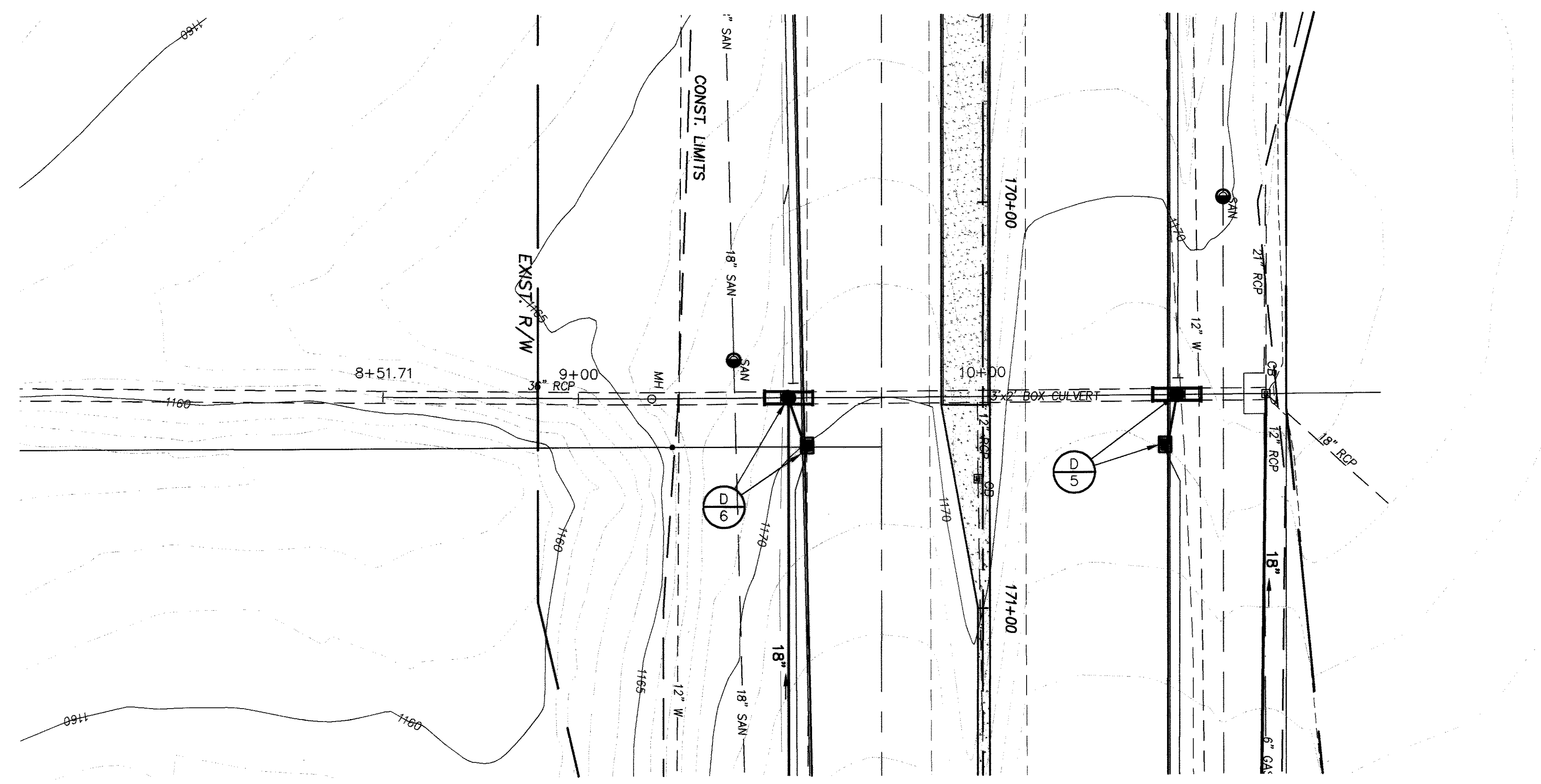


| HYDRAULIC DESIGN DATA | |
|-----------------------------|-----------|
| DRAINAGE AREA | 28 ACRES |
| Q25 | 49.17 CFS |
| Q100 | 72.13 CFS |
| HW25 | 1100.88 |
| HW100 | 1103.07 |
| V25 | 16.38 FPS |
| V100 | 18.35 FPS |
| TW25 | 1.32 FT |
| TW50 | 1.63 FT |
| CONDITION OF CULVERT = GOOD | |

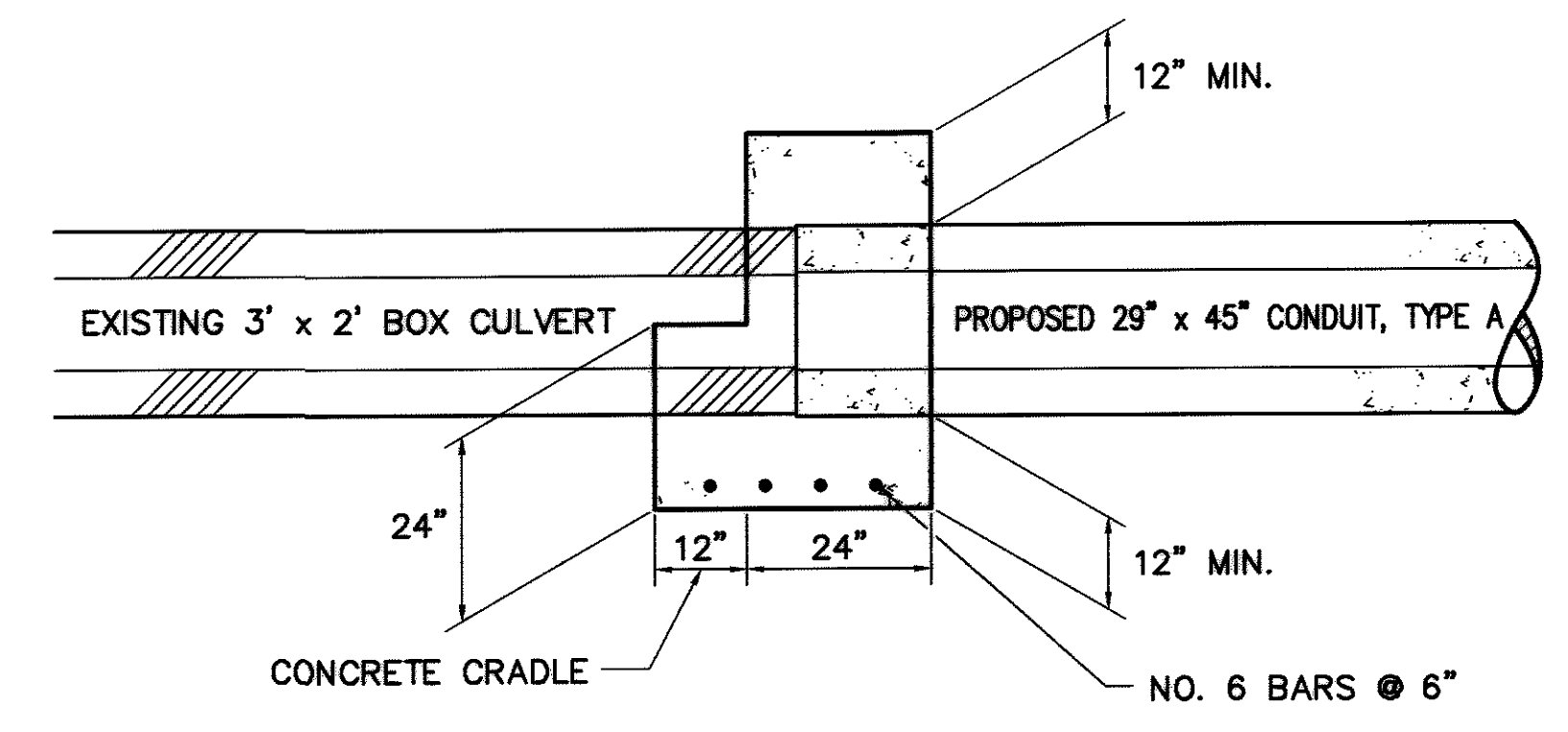
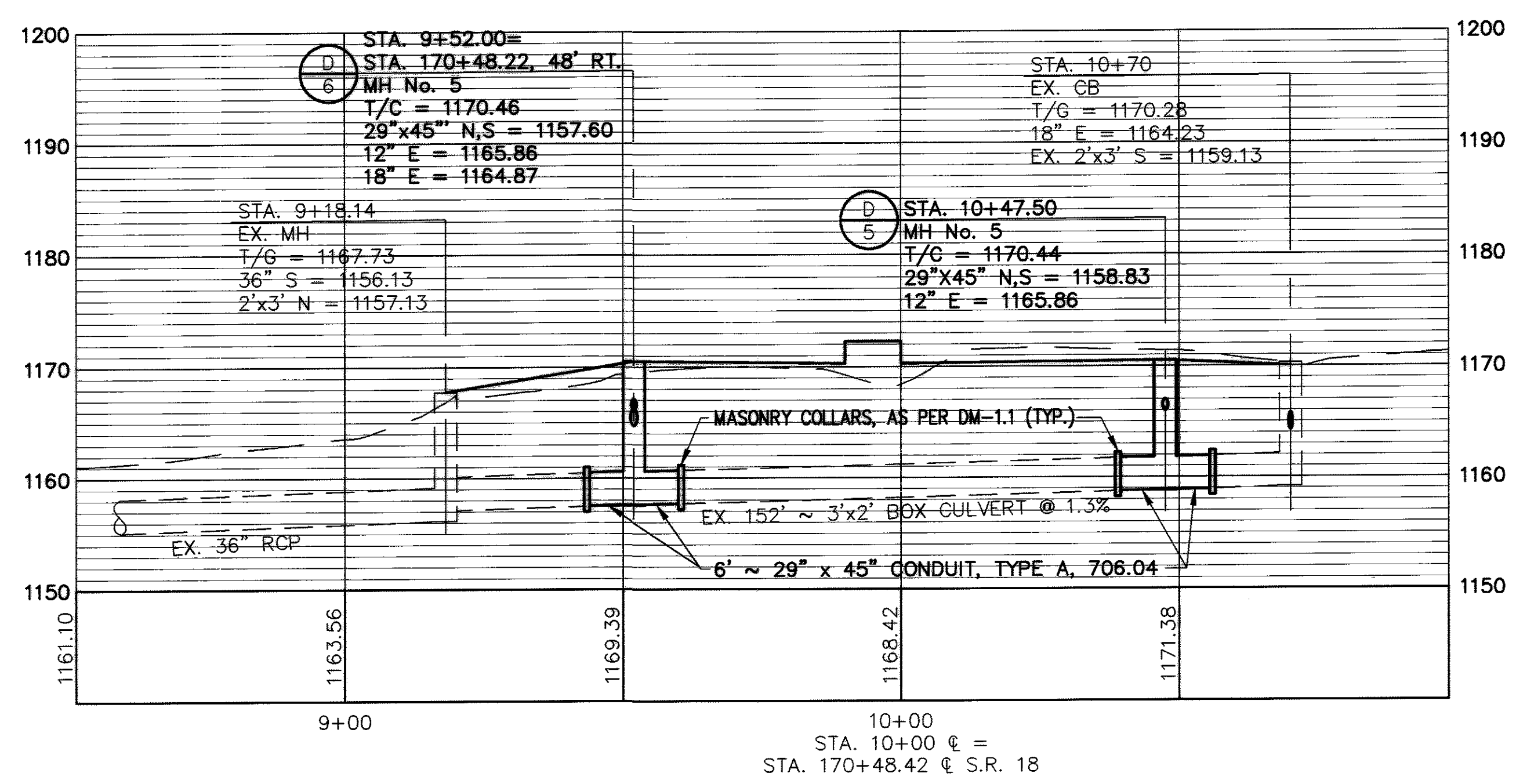
FOR CATCH BASIN, MANHOLE, AND CONDUIT QUANTITIES, REFER TO DRAINAGE SUBSUMMARY SHEET 69.

PAYMENT FOR THE HEADWALL, RIPRAP, AND ROCK CHANNEL PROTECTION SHALL BE INCLUSIVE WITH D-113 REFER TO SHEET 224.

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PLAN



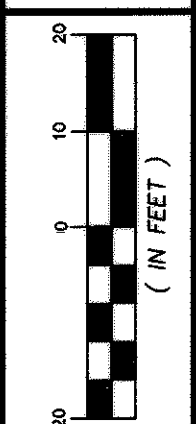
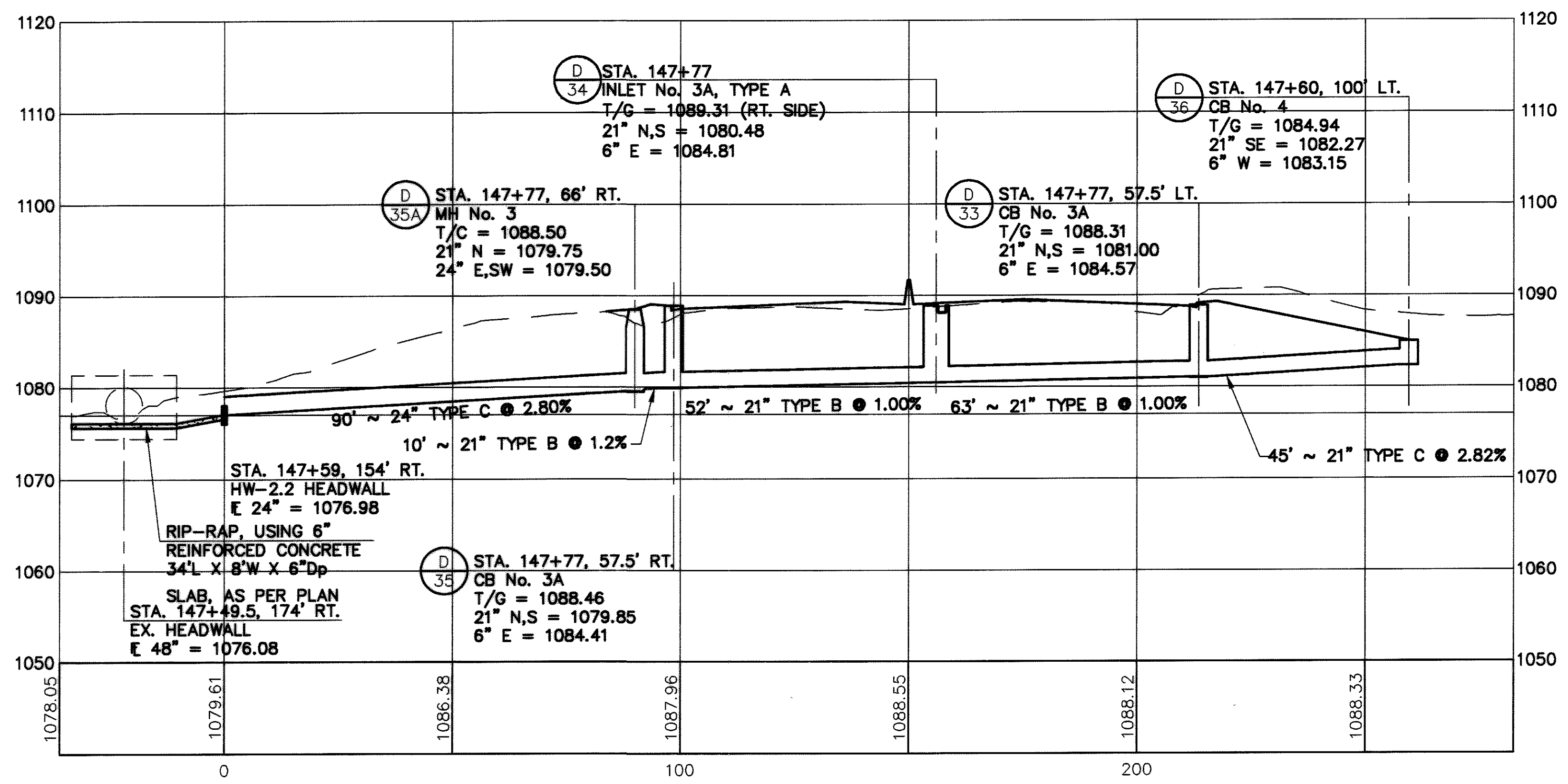
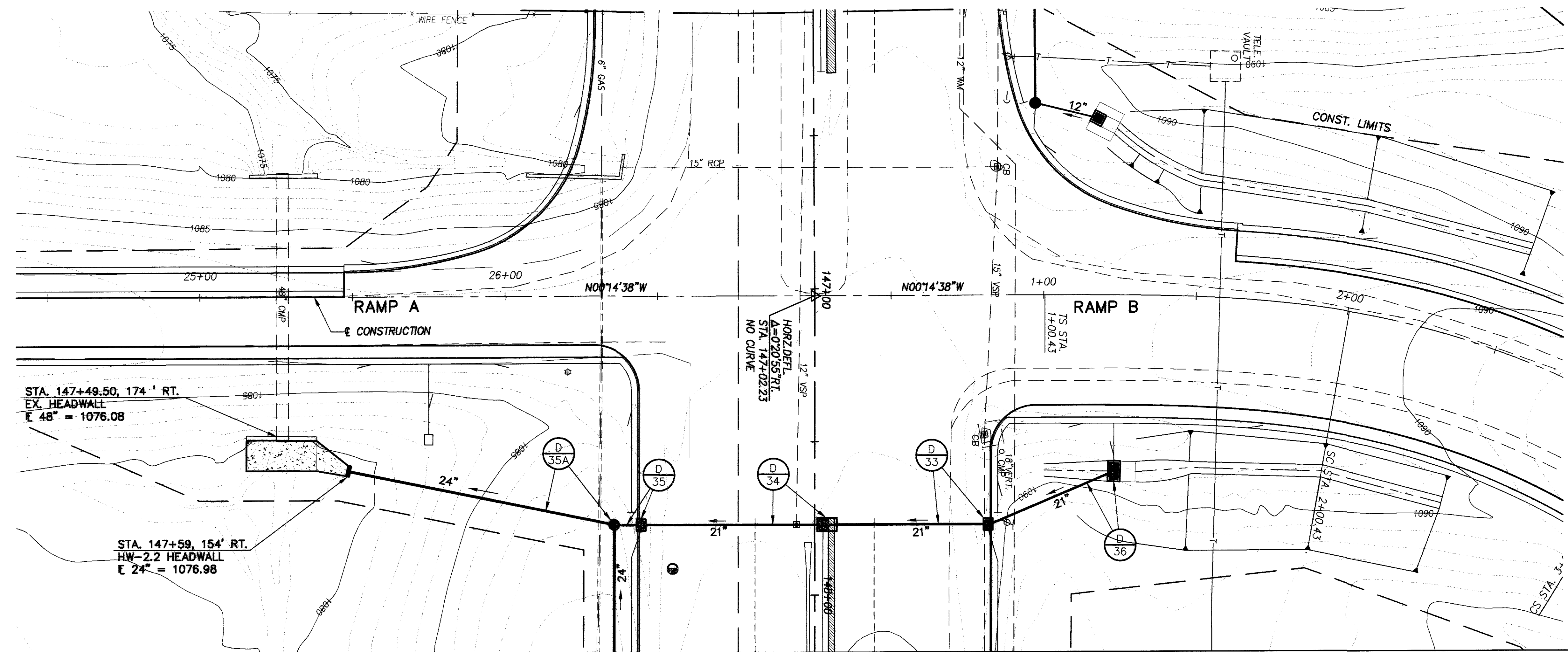
ELEVATION

MASONRY COLLAR AS PER DM-1.1
N.T.S.
COST INCLUDED IN PERTINENT 603 ITEM

| HYDRAULIC DESIGN DATA | |
|-----------------------------|-----------|
| DRAINAGE AREA | 17 ACRES |
| Q25 | 34.43 CFS |
| Q100 | 50.74 CFS |
| HW25 | 1160.98 |
| HW100 | 1162.54 |
| V25 | 15.98 FPS |
| V100 | 17.92 FPS |
| TW25 | 6.06 FT |
| TW50 | 7.02 FT |
| CONDITION OF CULVERT = FAIR | |

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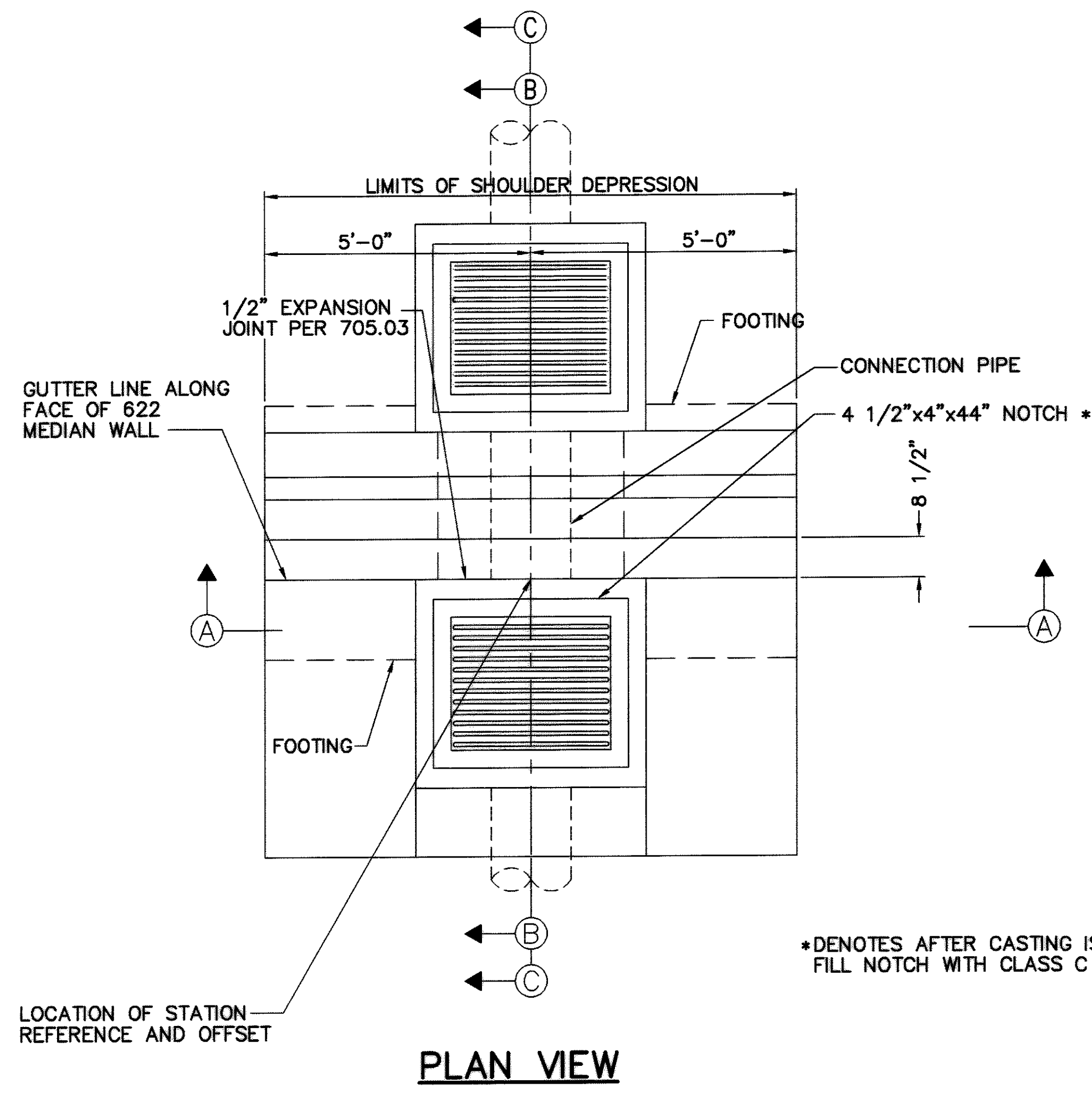
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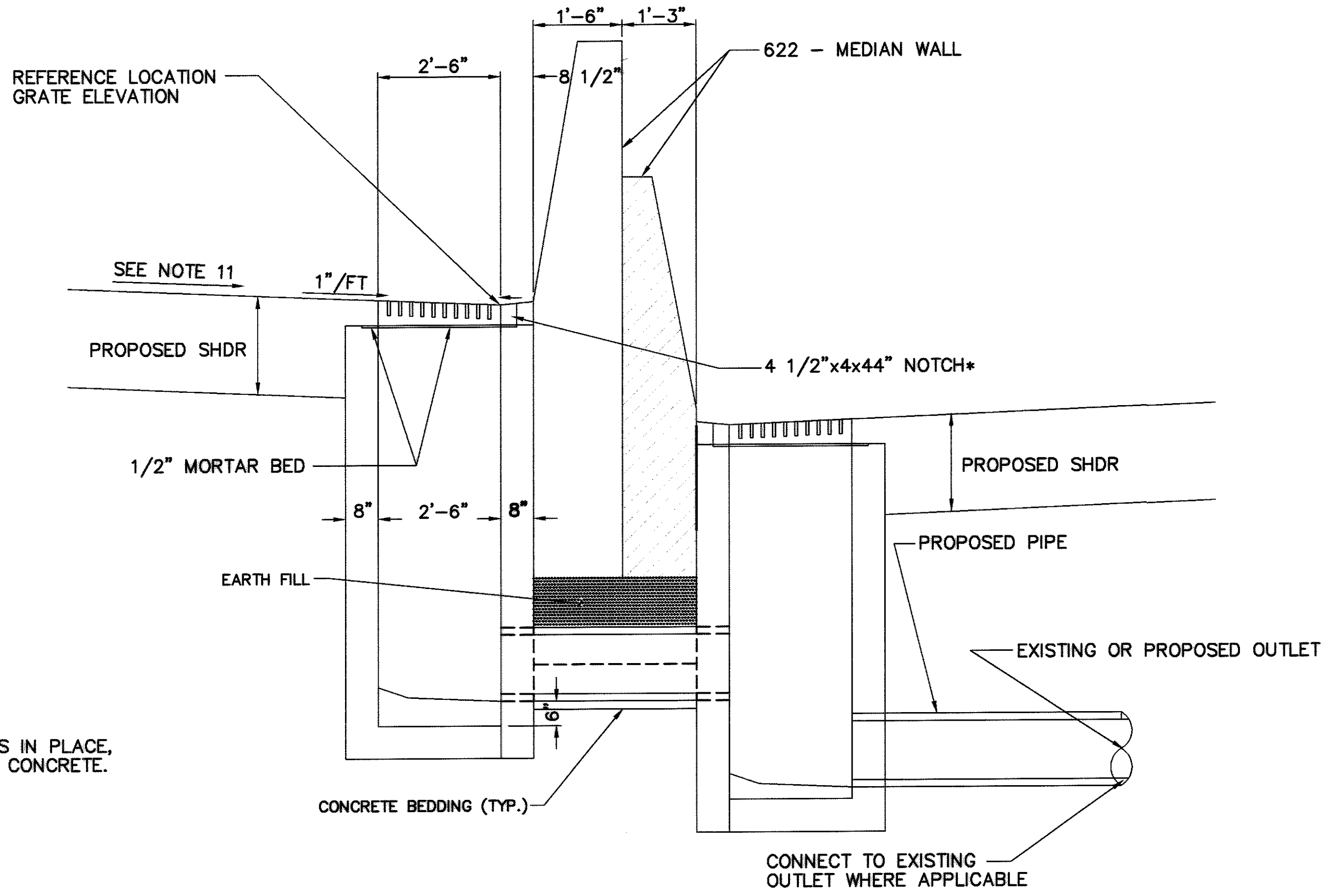
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**STORM SEWER PLAN AND PROFILE
STA. 147+77**

MED - 18 - 15.13

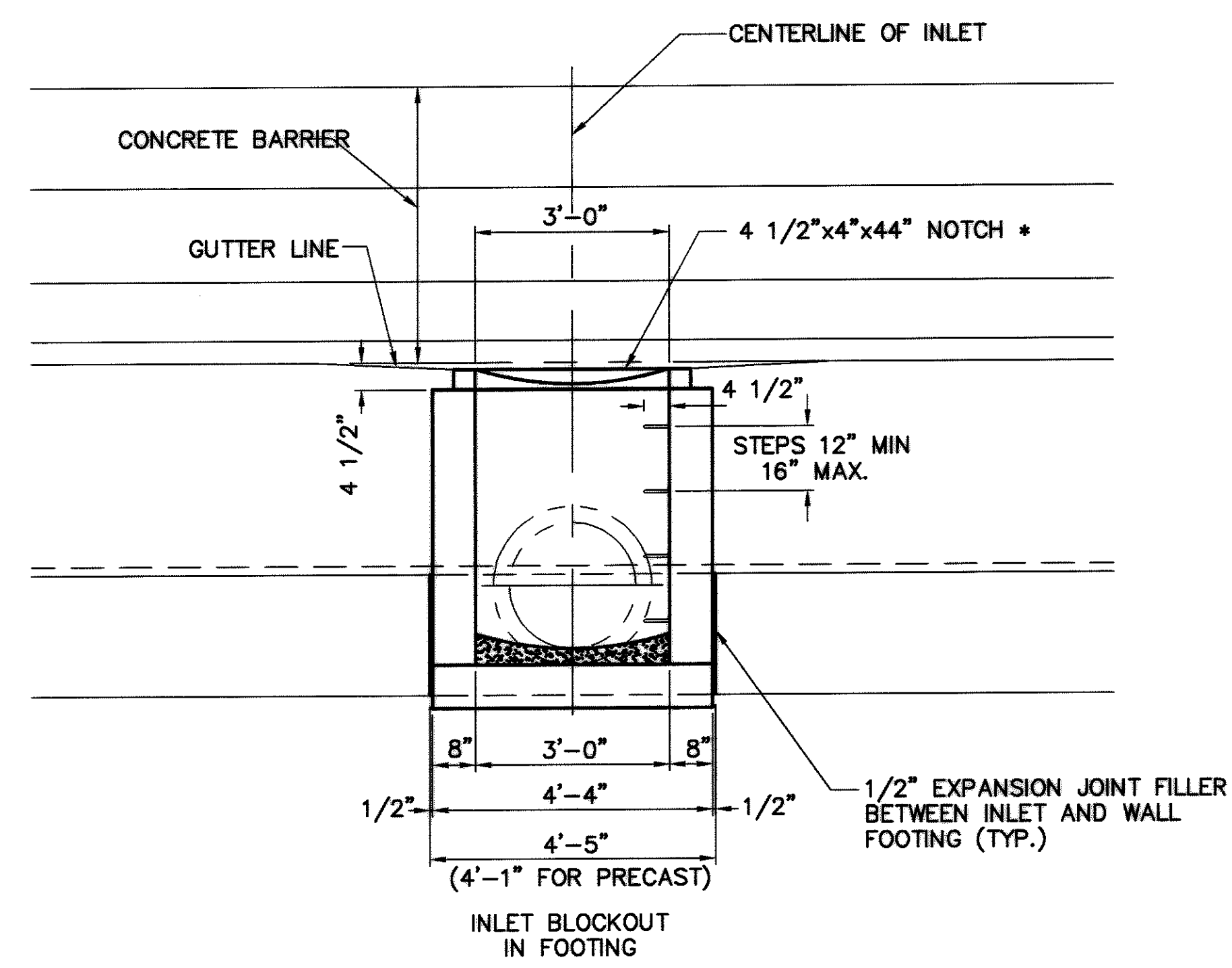


PLAN VIEW



SECTIONAL VIEW 'B-B'
WESTBOUND HIGH SIDE

MEDIAN WALL INLET. AS PER PLAN
DESIGN "B"
STA. 158+10

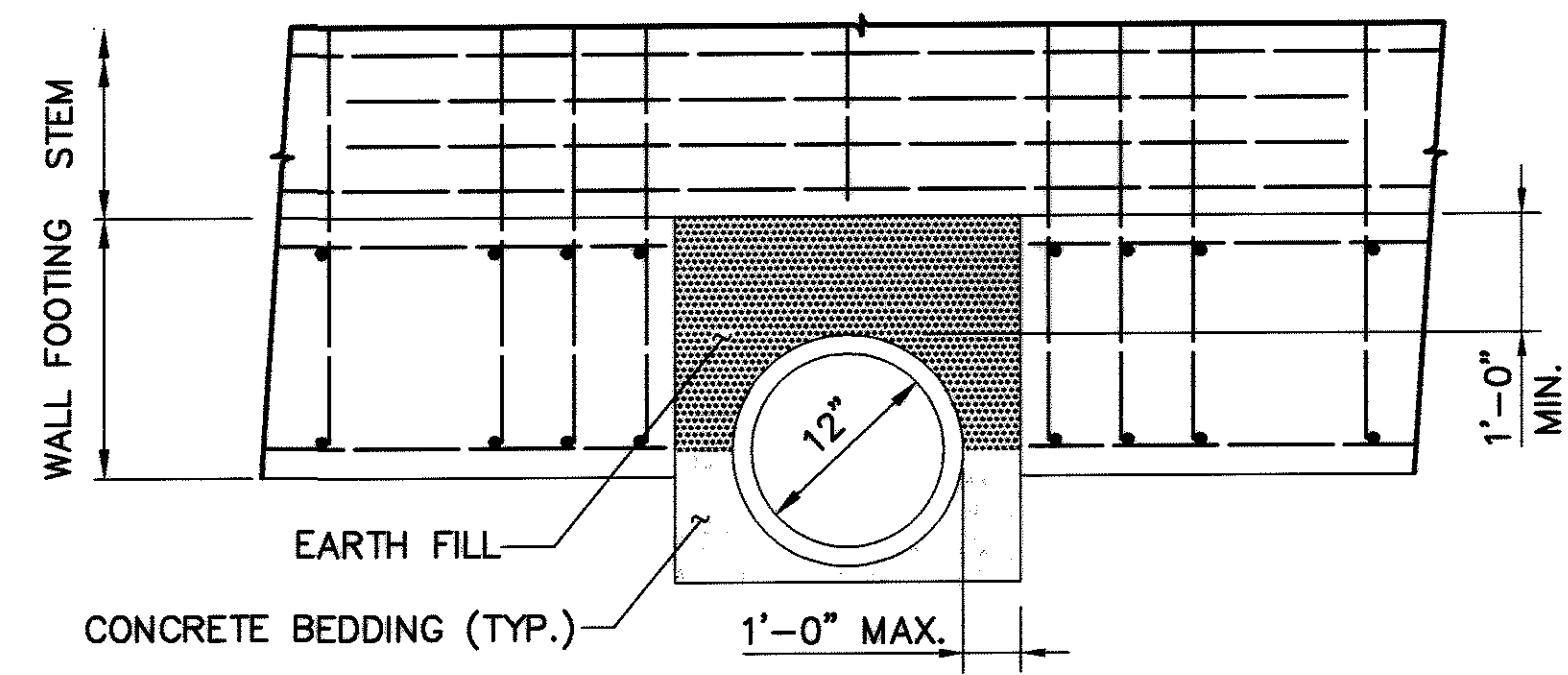


ELEVATION VIEW 'A-A'

NOTES

1. WALLS : THE SECTIONS BETWEEN THE BASE AND THE UPPER PERMISSIBLE CONSTRUCTION JOINT MAY BE BUILT OF PRECAST CONCRETE WITH A MINIMUM WALL THICKNESS OF 6" OR CAST-IN-PLACE CONCRETE WITH AN 8" NOMINAL THICKNESS FOR DEPTHS OF 12' OR LESS.
2. THE UNIT ABOVE THE UPPER PERMISSIBLE CONSTRUCTION JOINT MAY BE PRECAST OR CAST-IN-PLACE.
3. CONCRETE FOR PRECAST OR CAST-IN-PLACE CATCH BASIN CONSTRUCTION SHALL MEET THE REQUIREMENTS OF 899 CLASS C.
4. IF A SKEWED PIPE PROTRUDES MORE THAN 2" INSIDE A WALL. THE PIPE SHALL BE TRIMMED FLUSH AND FINISHED TO PROVIDE A NEAT APPEARANCE.
5. STEPS SHALL BE PROVIDED IN ACCORDANCE WITH O.D.O.T. STANDARD DRAWING MH-1 FOR CATCH BASINS OVER 72" IN DEPTH.
6. CATCH BASINS OVER 12 FEET IN DEPTH SHALL BE BUILT OF CLASS C CONCRETE REINFORCED BY PLACING 1/2" DIA. BARS 12" CENTER TO CENTER BOTH HORIZONTALLY AND VERTICALLY WITH A 2" CLEARANCE FROM INSIDE FACE OF THE WALL.
7. OPENINGS FOR PIPES SHALL BE THE PIPE OUTSIDE DIAMETER PLUS 2" WHEN FIELD CUT OR PREFABRICATED.
8. FOR CASTING DETAILS SEE O.D.O.T. STANDARD DRAWING I-3A & B.
9. P.C.J. DENOTES PERMISSIBLE CONSTRUCTION JOINT.
10. SECTIONAL VIEWS SHOW OUTLET PIPE ON EASTBOUND SIDE.
11. SHOULDER AND ROADWAY CROSS SLOPES SHOWN IN THE TYPICAL SECTIONS, SHEETS 10 AND 13.

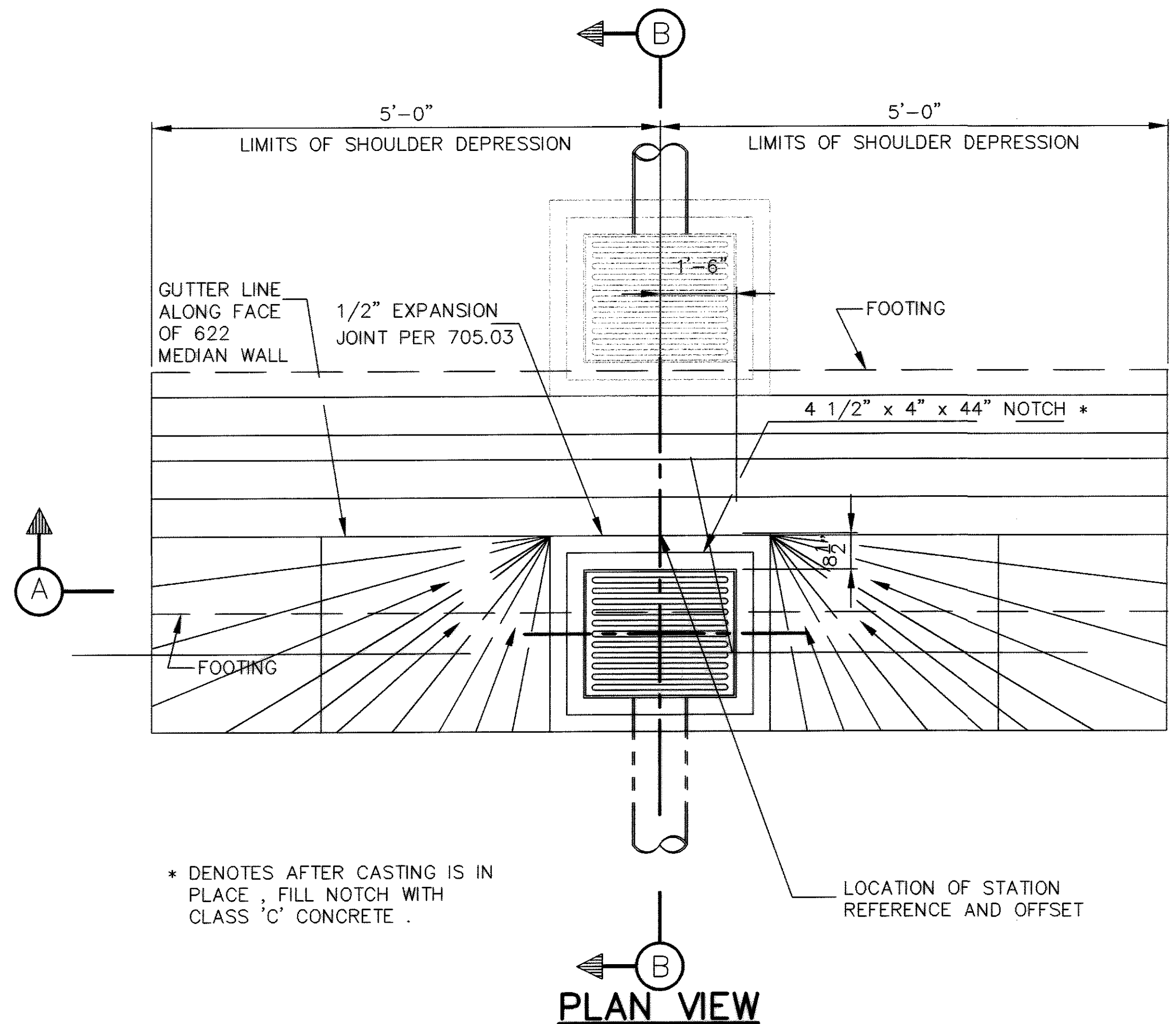
DENOTES UNREINFORCED CONCRETE



MEDIAN WALL FOOTER DETAIL

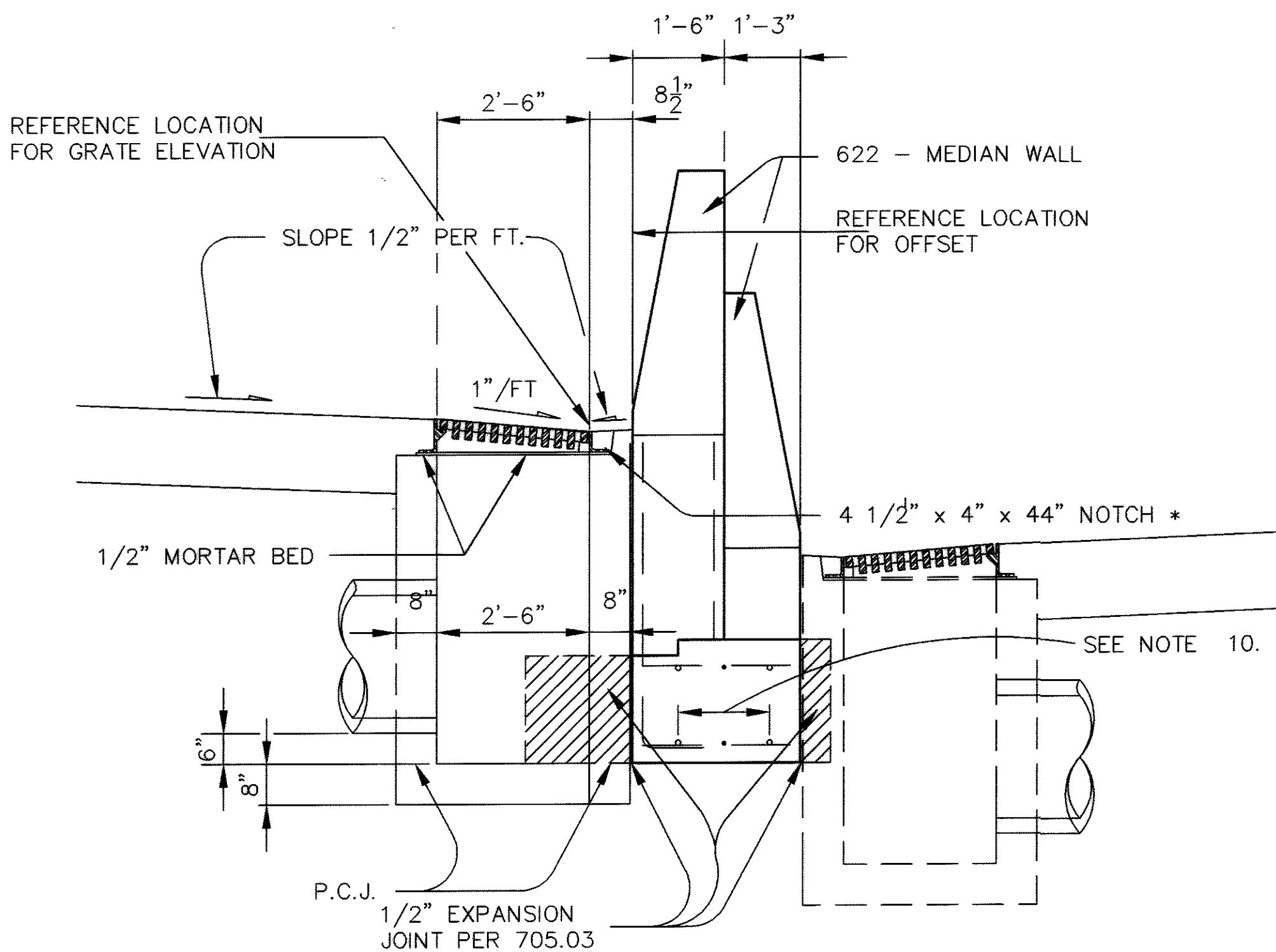
REFER TO RETAINING WALL DETAILS, SHEET 251 FOR ADDITIONAL INFORMATION

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* DENOTES AFTER CASTING IS IN PLACE, FILL NOTCH WITH CLASS 'C' CONCRETE.

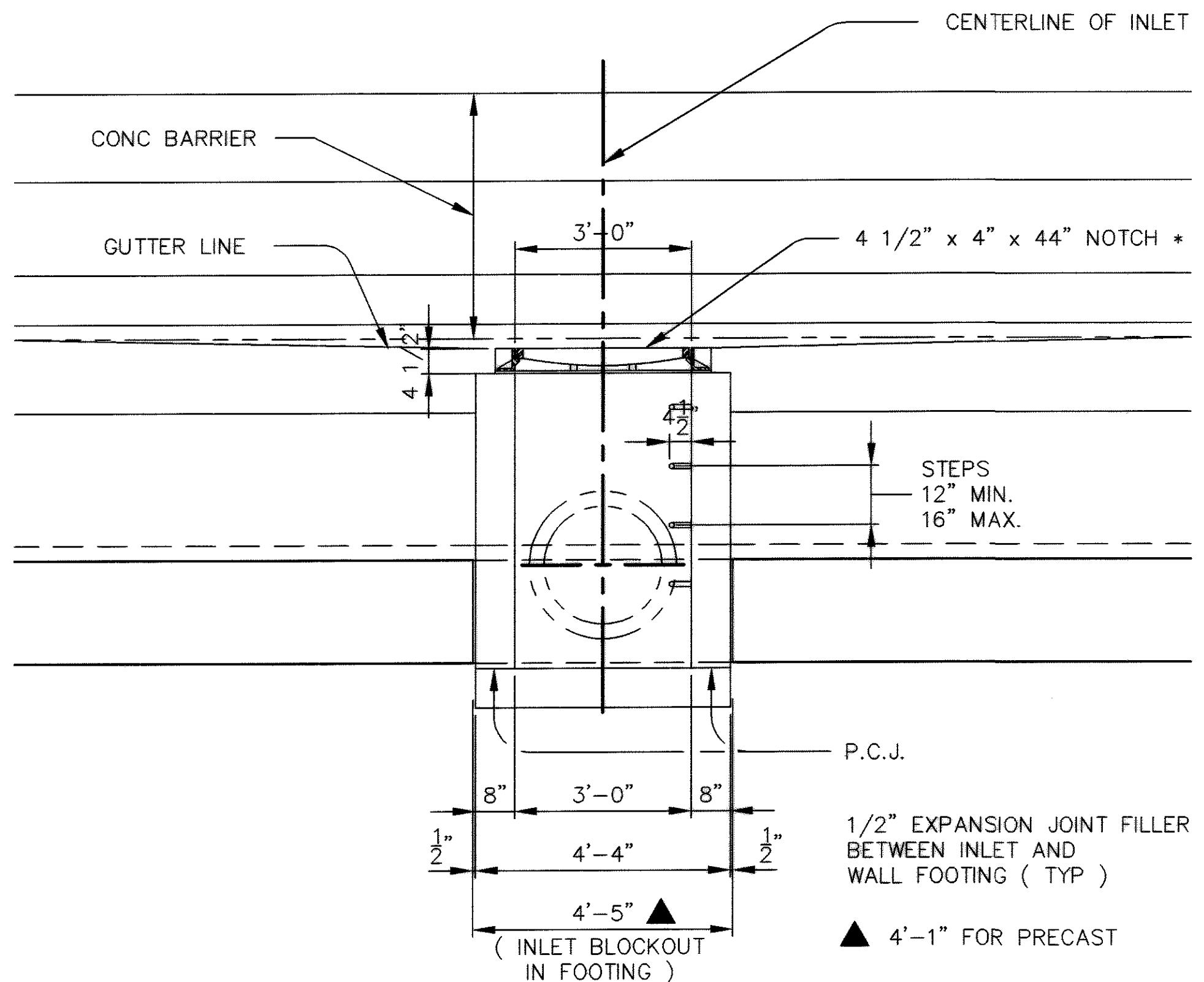
PLAN VIEW



SECTIONAL VIEW 'B-B'

NOTES :

1. WALLS : THE SECTIONS BETWEEN THE BASE AND THE UPPER PERMISSIBLE CONSTRUCTION JOINT MAY BE BUILT OF PRECAST CONCRETE WITH A MINIMUM WALL THICKNESS OF 6" OR CAST-IN-PLACE CONCRETE WITH AN 8" NOMINAL THICKNESS FOR DEPTHS OF 12' OR LESS .
 2. THE UNIT ABOVE THE UPPER PERMISSIBLE CONSTRUCTION JOINT MAY BE PRECAST OR CAST-IN-PLACE .
 3. CONCRETE FOR PRECAST OR CAST-IN-PLACE CATCH BASIN CONSTRUCTION SHALL MEET THE REQUIREMENTS OF 511 CLASS C .
 4. IF A SKEWED PIPE PROTRUDES MORE THAN 2" INSIDE A WALL , THE PIPE SHALL BE TRIMMED FLUSH AND FINISHED TO PROVIDE A NEAT APPEARANCE .
 5. STEPS SHALL BE PROVIDED IN ACCORDANCE WITH O.D.O.T. STANDARD DRAWING MH-1 FOR CATCH BASINS OVER 72" IN DEPTH.
 6. CATCH BASINS OVER 12 FEET IN DEPTH SHALL BE BUILT OF CLASS C CONCRETE REINFORCED BY PLACING 1/2" DIA. BARS 12" CENTER TO CENTER BOTH HORIZONTALLY AND VERTICALLY WITH A 2" CLEARANCE FROM INSIDE FACE OF THE WALL .
 7. OPENINGS FOR PIPES SHALL BE THE PIPE OUTSIDE DIAMETER PLUS 2" WHEN FIELD CUT OR PREFABRICATED .
 8. FOR CASTING DETAILS SEE O.D.O.T. STANDARD DRAWING I-3A & B
 9. P.C.J. DENOTES PERMISSIBLE CONSTRUCTION JOINT .
 10. FOUR ADDITIONAL #5 BARS , 10'-0" LONG , CENTERED ABOUT THE THE CENTERLINE OF THE CATCH BASIN, SHALL BE PLACED, 2 TOP AND 2 BOTTOM, IN THE FOOTING . THE COST SHALL BE INCLUDED WITH THE COST OF MEDIAN WALL INLET, AS PER PLAN, DESIGN "A".
- ▨ DENOTES 1/2" EXPANSION JOINT FILLER BETWEEN SIDES OF CATCH BASIN AND FOOTING NOTCH .

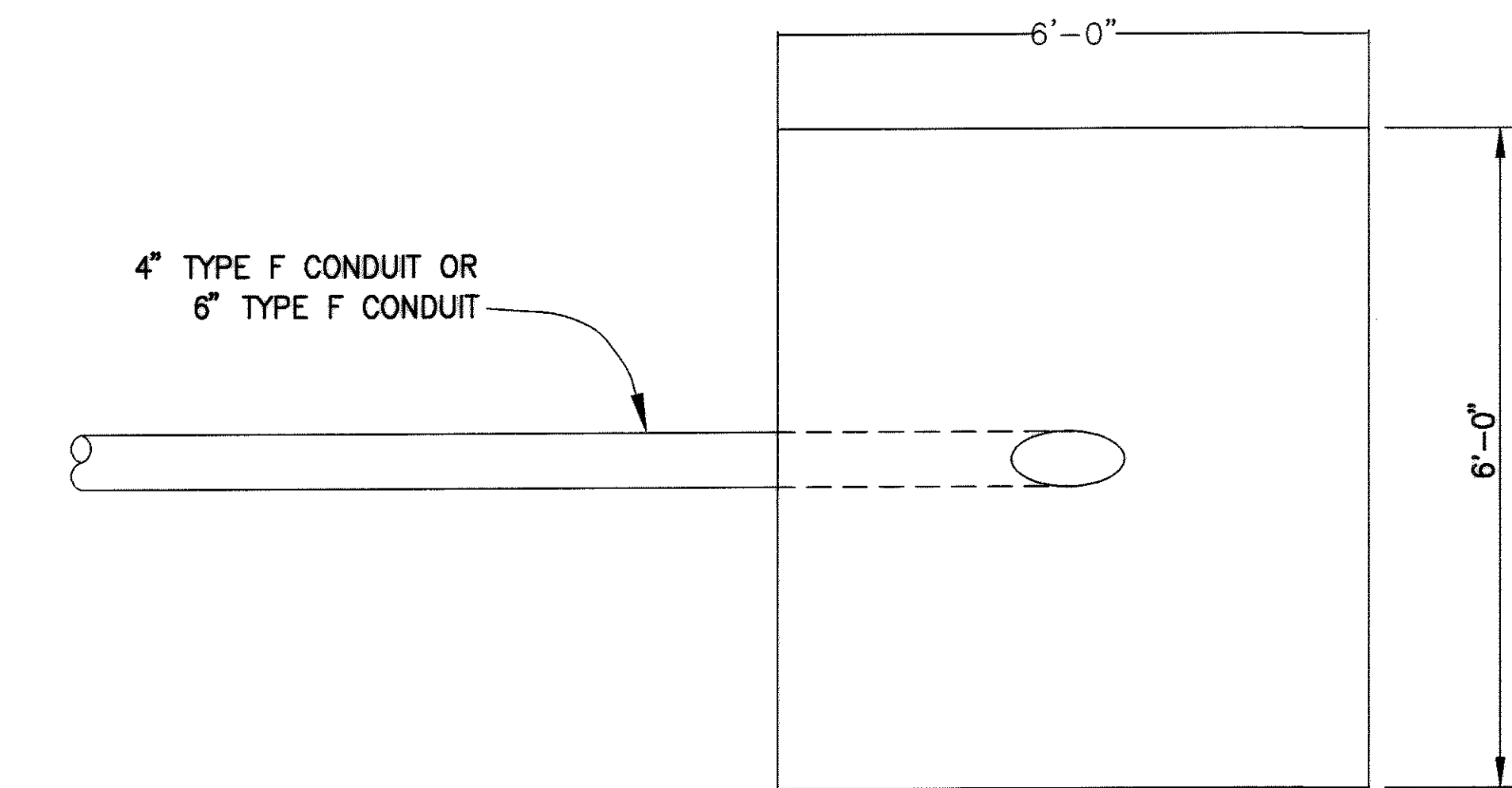
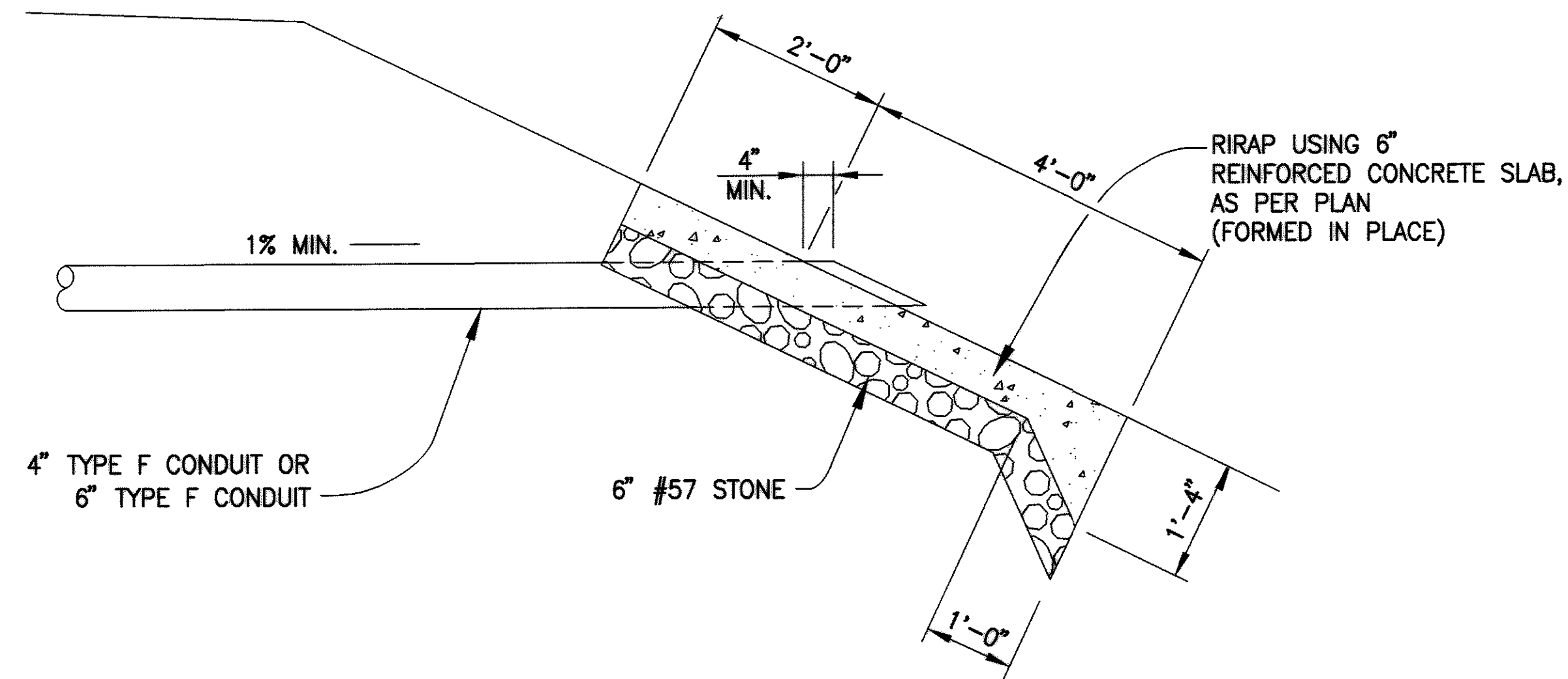


ELEVATION VIEW 'A-A'

MEDIAN WALL INLET, AS PER PLAN

DESIGN "A"

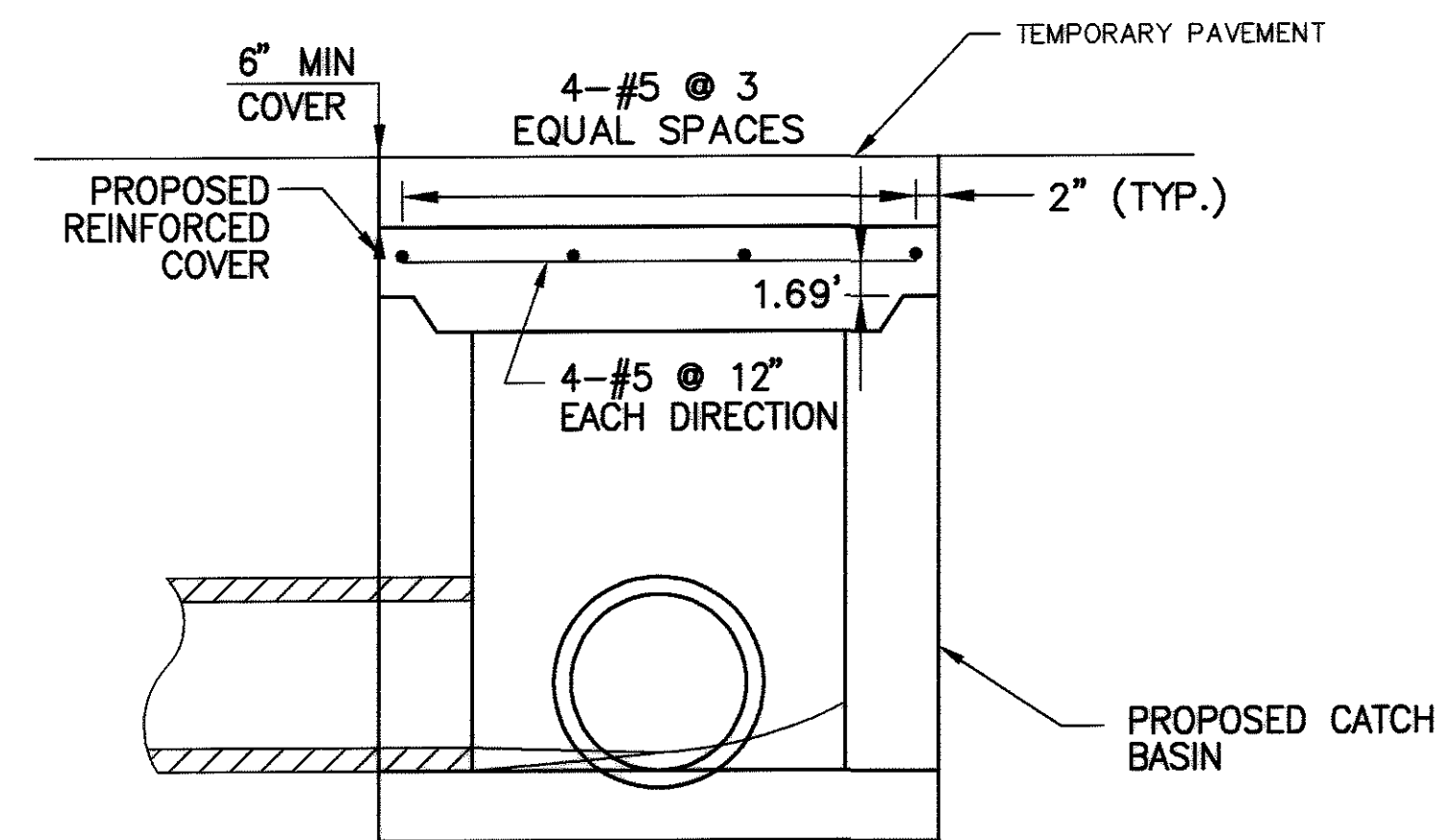
- STA. 138+00
- STA. 140+10
- STA. 144+00
- STA. 160+90



NOTE:

SOME LOCATIONS FOR RIPRAP PLACEMENT WILL HAVE AN EXISTING HEADWALL NEARBY, DO NOT DISTURB THESE HEADWALLS. THE OUTLET SHALL BE PLACED SO THERE IS POSITIVE DRAINAGE FLOW AND SHALL NOT OUTLET BEHIND THE HEADWALL OR BE PLACED IN A MANNER THAT WILL ERODE THE GROUND AROUND THE HEADWALLS AS DIRECTED BY THE ENGINEER.

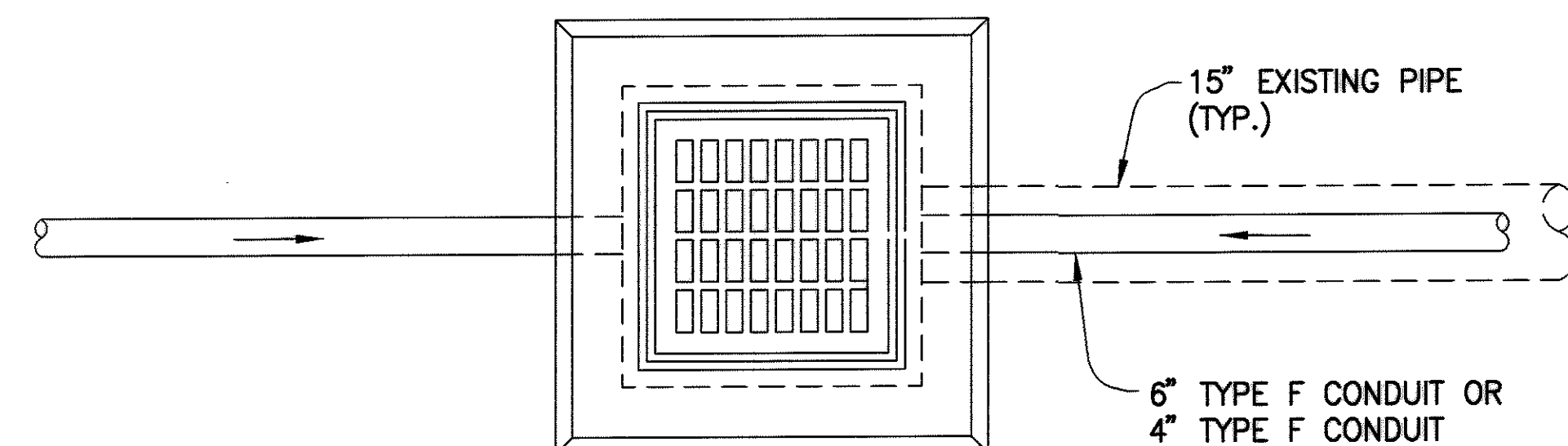
OUTLET DETAIL TO RIPRAP



TEMPORARY REMOVABLE CATCH BASIN COVER

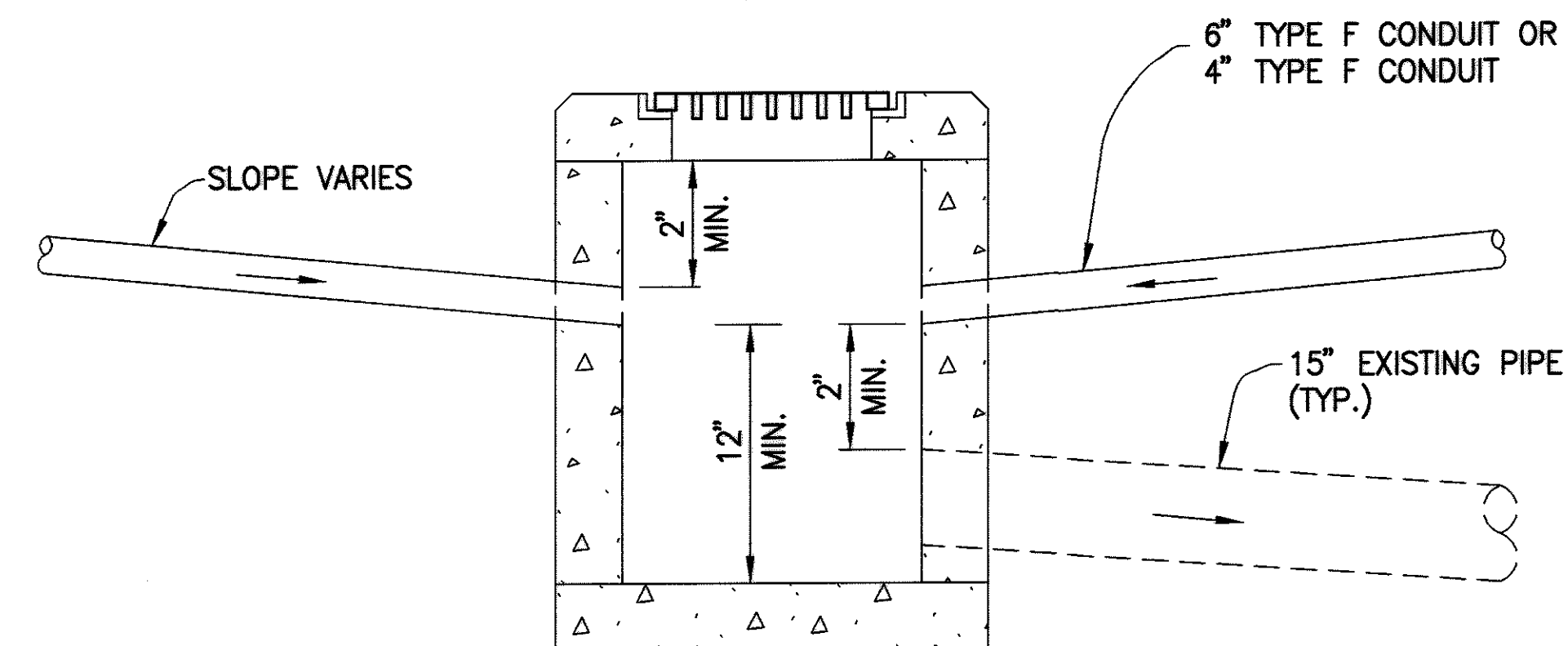
NOTE: USE REMOVABLE FLAT SLAB COVER WITHOUT OPENING FOR MANHOLES AS PER STD. DWG. MH-1.2

REMOVABLE COVER CAN BE SUBSTITUTED BY A STEEL PLATE OF APPROVED SIZE AND THICKNESS.



SEE PLAN & PROFILE FOR STRUCTURE TYPE

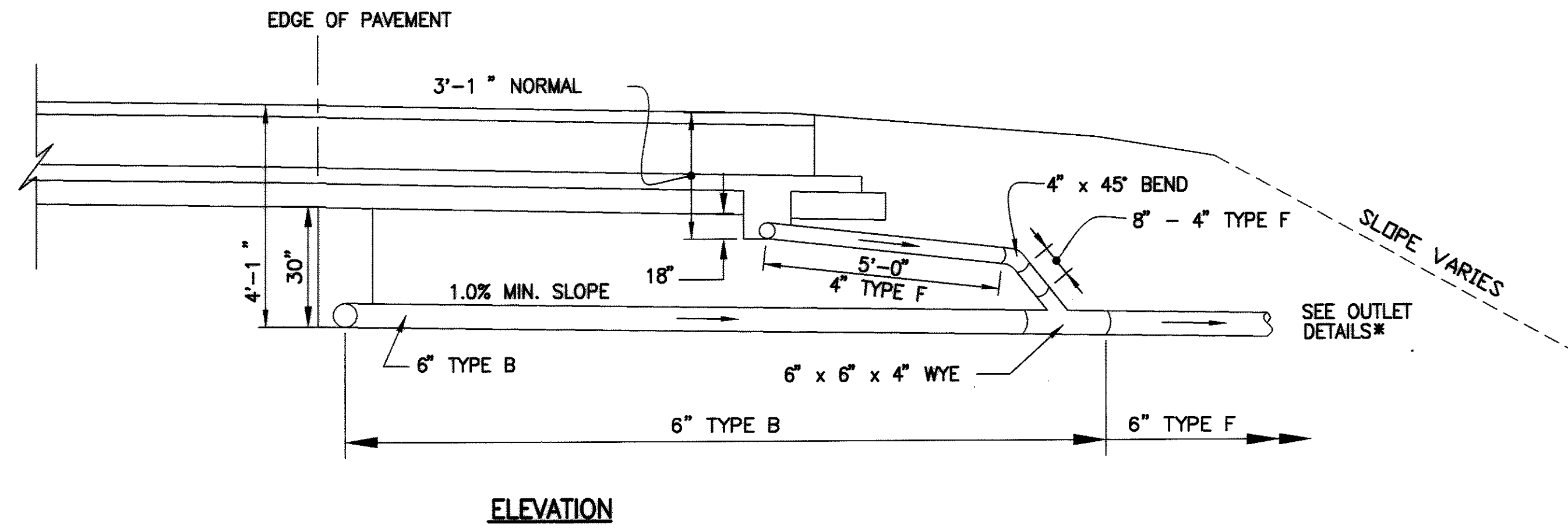
TOP VIEW



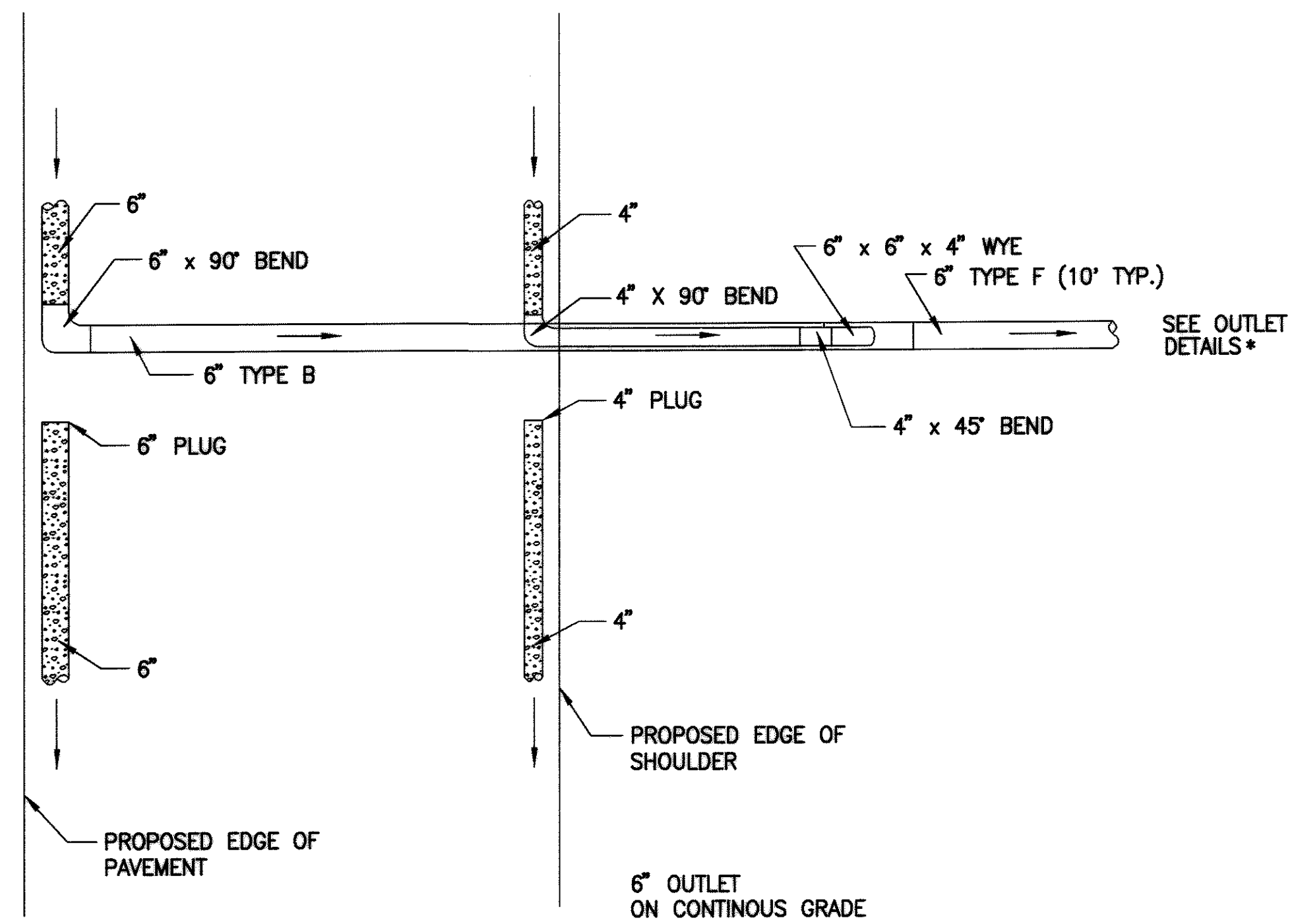
CROSS-SECTION

OUTLET DETAIL TO CATCH BASIN OR MANHOLE

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ELEVATION



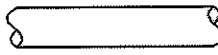


PLAN

UNDERDRAIN DETAILS A, D & O

* FOR UNDERDRAIN DETAIL, SEE OUTLET TO RIPRAP DETAIL
FOR UNDERDRAIN DETAIL, SEE OUTLET TO CATCH BASIN DETAIL

LEGEND

-  6" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 (30" NORMAL DEPTH) OR
-  4" BY TYPE PIPE UNDERDRAIN WITH FABRIC WRAP, 707.31 OR 707.41 (18" NORMAL DEPTH)
-  OUTLET PIPES

CALCULATED
CHECKED

UNDERDRAIN DETAILS

MED - 18 - 15.13

MEDIAN WALL GENERAL NOTES

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT STANDARD CONSTRUCTION DRAWINGS:

BP-2.1 DATED 07-28-00

REFERENCE SHALL BE MADE TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

864 DATED 07-11-00
898 DATED 02-17-03

DESIGN SPECIFICATIONS:

CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) 1996, INCLUDING THE 1997, 1998, 1999 AND 2000 INTERIM SPECIFICATIONS, AND THE OHIO DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL.

DESIGN DATA:

CONCRETE:
QC/QA CONCRETE CLASS QSC1 FOR FOOTING, WALLS, AND BARRIERS COMPRESSIVE STRENGTH = 4000 psi

REINFORCING STEEL: ALL REINFORCING STEEL IN ACCORDANCE WITH ASTM A615, A996, EPOXY COATED, GRADE 60, MINIMUM YIELD STRENGTH 60,000 psi

MEDIAN WALL JOINTS:

EXPANSION JOINTS SHALL BE SPACED AT APPROXIMATELY 96 FOOT CENTERS AND CONTRACTION JOINTS AT APPROXIMATELY 32 FOOT CENTERS IN THE WALL STEM AND BARRIER ON TOP OF THE MEDIAN WALL. ONLY CONSTRUCTION JOINTS SHOULD BE USED IN THE FOOTINGS.

DESIGN ASSUMPTIONS:

THE FOLLOWING DESIGN VALUES WERE ASSUMED IN PREPARING THE MEDIAN WALL FOOTING AND WALL DESIGN:

SPECIFIC WEIGHT OF FOUNDATION SOIL AND BACKFILL = 120 pcf

ANGLE OF INTERNAL FRICTION OF BACKFILL = 30 DEGREES

SLIDING FRICTION FACTOR = 0.35

LOAD FACTOR DESIGN METHOD WAS USED FOR THE DESIGN OF STRUCTURE ELEMENTS.

MEDIAN WALL FOUNDATION BEARING PRESSURE:

WALL 1: FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM BEARING PRESSURE OF 2500 POUNDS PER SQUARE FOOT. THE ALLOWABLE BEARING PRESSURE IS 3000 POUNDS PER SQUARE FOOT.

WALL 2: FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM BEARING PRESSURE OF 2500 POUNDS PER SQUARE FOOT. THE ALLOWABLE BEARING PRESSURE IS 3500 POUNDS PER SQUARE FOOT.

AFTER THE REMOVAL OF UNSUITABLE MATERIAL (PER ITEM 503) IS COMPLETE, THE CONSTRUCTION OF THE EMBANKMENT SHALL BE MONITORED ESPECIALLY UP TO THE LEVEL OF THE BOTTOM OF THE MEDIAN WALL FOOTING.

MEDIAN WALL FOOTING DESIGN:

THE FOOTING DESIGNS SATISFY THE FOLLOWING DESIGN CONDITIONS:

FACTOR OF SAFETY AGAINST OVERTURNING > 2.0 FOR SURCHARGE LOAD, 1.3 FOR RAILING LOAD

FACTOR OF SAFETY AGAINST SLIDING > 1.5 FOR SURCHARGE LOAD AND RAILING LOAD

PASSIVE PRESSURE DEPTH = GUTTER LINE TO BOTTOM OF KEY - NEGLECT TOP 3 FOOT OF EARTH.

UTILITY LINES

THE EXISTING 12" VSP FROM APPROXIMATELY STA. 140+10 TO THE END OF WALL NO. 1 IS TO REMAIN. THE CONTRACTOR SHALL EXERCISE EXTREME CARE AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE GAS LINE DURING ALL CONSTRUCTION OPERATIONS.

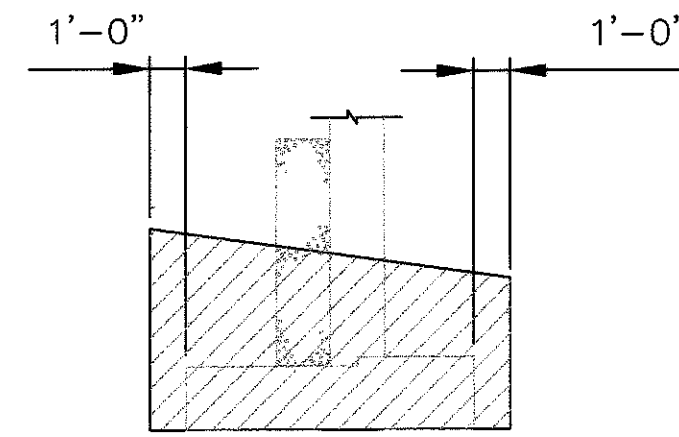
ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN:

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE MEDIAN WALLS SHALL BE 203 MATERIAL PLACED IN 6" LIFTS.

SHOULD THE 12" VSP OR 12" RCP (TO BE ABANDONED) INTERFERE WITH THE PROPOSED WALL FOOTING, THE PORTION OF THE PIPE INTERFERING WITH THE FOOTING SHALL BE REMOVED, AND THE OPEN END OF THE REMAINING PIPE SHALL BE SEALED.

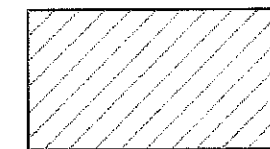
EXISTING UNSUITABLE MATERIAL BELOW A FOOTING OR CONDUIT FOUNDATION SHALL BE REMOVED TO THE DEPTH AS DIRECTED BY THE ENGINEER. THE WIDTH OF THE REMOVAL SHALL BE AS INDICATED ON THE DIAGRAM. REPLACEMENT BEDDING MATERIAL SHALL BE ITEM 613 - LOW STRENGTH MORTAR BACKFILL (TYPE 2) MATERIAL.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS ASSOCIATED WITH THE DESCRIPTION ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN.



MEDIAN WALL

LIMITS OF ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN



DENOTES EXCAVATION INCLUDED WITH ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN FOR PAYMENT.

ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER:

THE TOTAL PAY QUANTITY FOR THIS ITEM SHALL INCLUDE THE QUANTITY FOR EXPANSION JOINT FILLER LOCATED IN THE WALLS, REINFORCED BARRIER AND UNREINFORCED BARRIER WITHIN THE LIMITS OF THE WALLS AS SHOWN IN THE PLANS.

ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN

THE MATERIAL SHALL BE NO. 57 GRAVEL.

ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN

PAYMENT FOR THIS ITEM SHALL INCLUDE ALL MATERIALS AND LABOR REQUIRED TO CONSTRUCT THE UNREINFORCED CONCRETE BARRIER AS SHOWN ON THE PLANS. THIS ITEM SHALL INCLUDE PAYMENT FOR GROOVING AND SEALING WITH 705.04 PER STANDARD DRAWING BP-2.1. IN ADDITION, LABOR AND MATERIALS REQUIRED TO INSTALL THE 1 INCH DIAMETER DOWEL HOLES SHALL ALSO BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN.

ITEM 898 - QC/QA CONCRETE MISC.: CLASS QSC1, SUBSTRUCTURE (WALL ABOVE FOOTING), AS PER PLAN

ALL LABOR AND MATERIALS REQUIRED TO INSTALL THE 36" WIDE MEMBRANE TYPE 2 WATERPROOFING AT EXPANSION AND CONTRACTION JOINTS SHALL BE INCLUDED WITH THIS ITEM FOR PAYMENT. SEE SHEET 32/34 FOR DETAILS. THE COARSE AGGREGATE SHALL BE LIMESTONE.

ITEM 898 - QC/QA CONCRETE CLASS QSC1, SUBSTRUCTURE (FOOTING), AS PER PLAN

THE COARSE AGGREGATE SHALL BE LIMESTONE.

ITEM 864 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

THE EPOXY-URETHANE SEALER SHALL BE THE "NEUTRAL" COLOR MEETING FEDERAL COLOR NO. 27778.

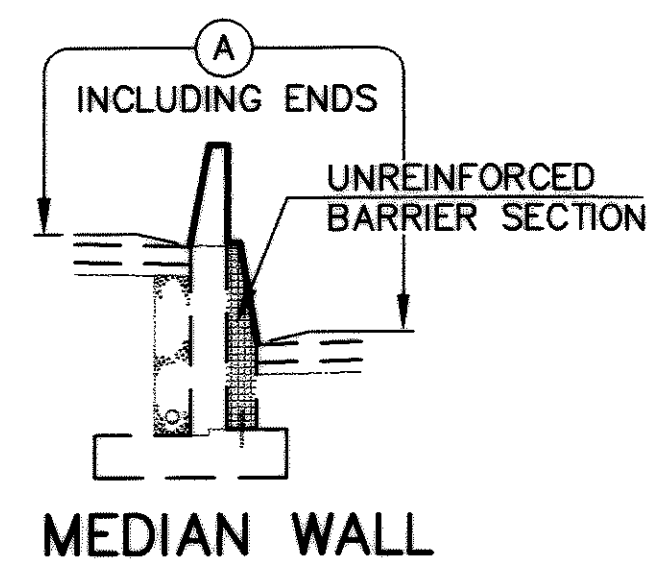
ABBREVIATIONS

- E.F. - EACH FACE
- F.F. - FAR FACE
- N.F. - NEAR FACE
- D.H. - DESIGN HEIGHT
- SER. - SERIES
- W.B. - WEST BOUND
- E.B. - EAST BOUND
- T. - TOP
- B. - BOTTOM
- VSP - VITRIFIED STORM PIPE
- RCP - REINFORCED CONCRETE PIPE
- FL. - FLOWLINE

MEDIAN WALL GENERAL SUMMARY

CHECKED BY: A.L.H. DATE: 1/09/02
 CALC'D BY: L.M.P. DATE: 1/11/02

| ITEM | ITEM EXT. | TOTAL | UNIT | DESCRIPTION | WALL 1 | WALL 2 | REF. SHEET |
|------|-----------|----------|---------|--|--------|--------|------------|
| 503 | 21301 | LUMP SUM | | UNCLASSIFIED EXCAVATION, AS PER PLAN | LUMP | LUMP | 1 / 34 |
| 509 | 10000 | 129033 | POUNDS | EPOXY COATED REINFORCING STEEL | 82632 | 46401 | |
| 516 | 13200 | 59 | SQ. FT. | 1/2" PREFORMED EXPANSION JOINT FILLER | 43 | 16 | |
| 516 | 13600 | 292 | SQ. FT. | 1" PREFORMED EXPANSION JOINT FILLER | 189 | 103 | |
| 518 | 21231 | LUMP SUM | | POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN | LUMP | LUMP | 1 / 34 |
| 518 | 40000 | 1541 | FT. | 6" PERFORATED CORRUGATED PLASTIC PIPE | 930 | 611 | |
| 622 | 10161 | 1554 | FT. | CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN | 938 | 616 | 1 / 34 |
| 864 | 10100 | 2314 | SQ. YD. | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | 1481 | 833 | |
| 898 | 20301 | 795 | CU. YD. | QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (FOOTING), AS PER PLAN | 504 | 291 | 1 / 34 |
| 898 | 98000 | 791 | CU. YD. | QC/QA CONCRETE MISC.: CLASS QSC1, SUBSTRUCTURE (WALL ABOVE FOOTING), AS PER PLAN | 516 | 275 | 1, 32/34 |
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LIMITS OF ITEM 864 - SEALING CONCRETE SURFACES (EPOXY-URETHANE)

(A) ~ SEAL ENTIRE CONCRETE SURFACE AREA

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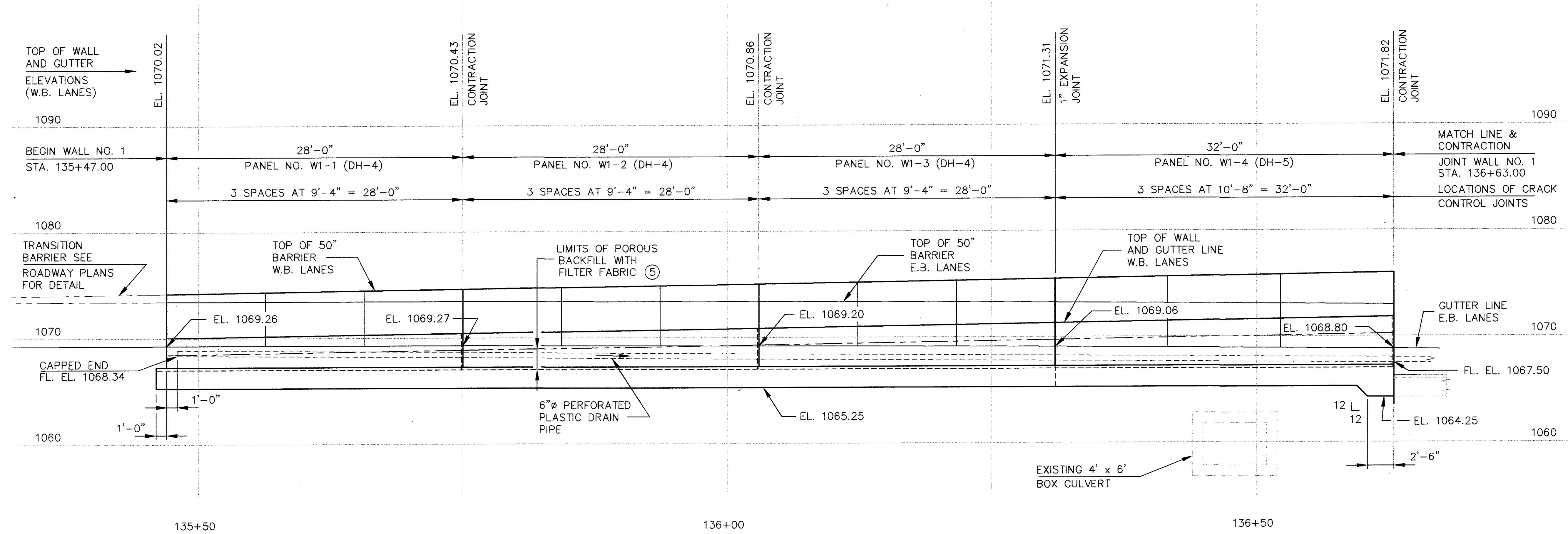
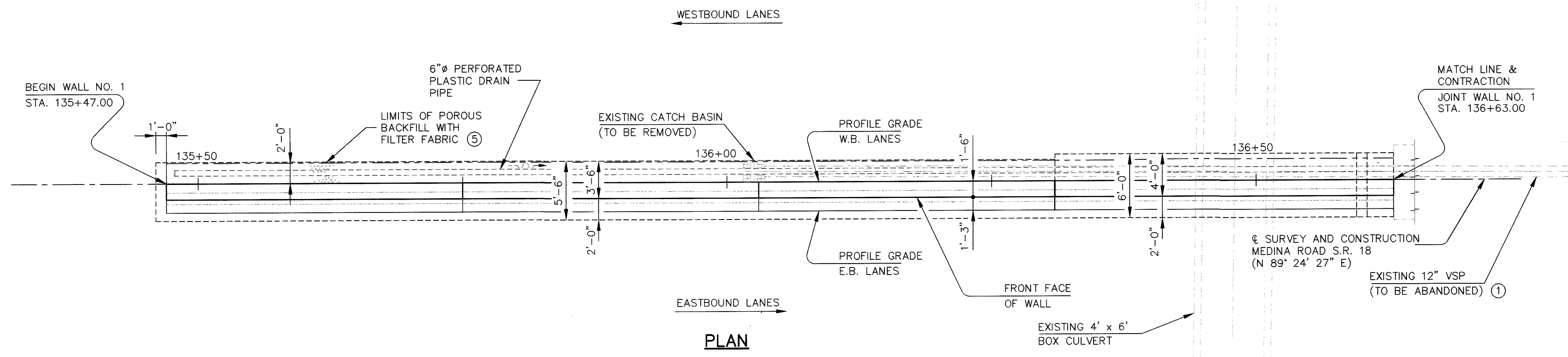
| | |
|--|--|
| | 564 White Pond Drive Akron, Ohio 44320-1100 (330) 836-9111 |
| DATE: 1/17/02 REVIEWED BY: B.K.L. STRUCTURE FILE NUMBER: N/A | DRAWN BY: A.L.H. REVISIONS: |
| DESIGNED BY: L.M.P. CHECKED BY: D.A.M. | |
| RETAINING WALL GENERAL SUMMARY & SEALING DIAGRAMS MEDINA ROAD - S.R. 18 MEDIAN WALLS | |
| MED-18-15.13 | |
| 2 / 34 | |
| 234 362 | |

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| | |
|----------|-----------------------|
| DESIGNED | DATE |
| L.M.P. | 01/17/02 |
| CHECKED | B.K.L. |
| C.A.R. | STRUCTURE FILE NUMBER |
| | N/A |

GENERAL PLAN AND ELEVATION
S.R. 18 - WALL NUMBER 1
STA. 135+47.00 TO STA. 136+63.00

MED-18-15.13



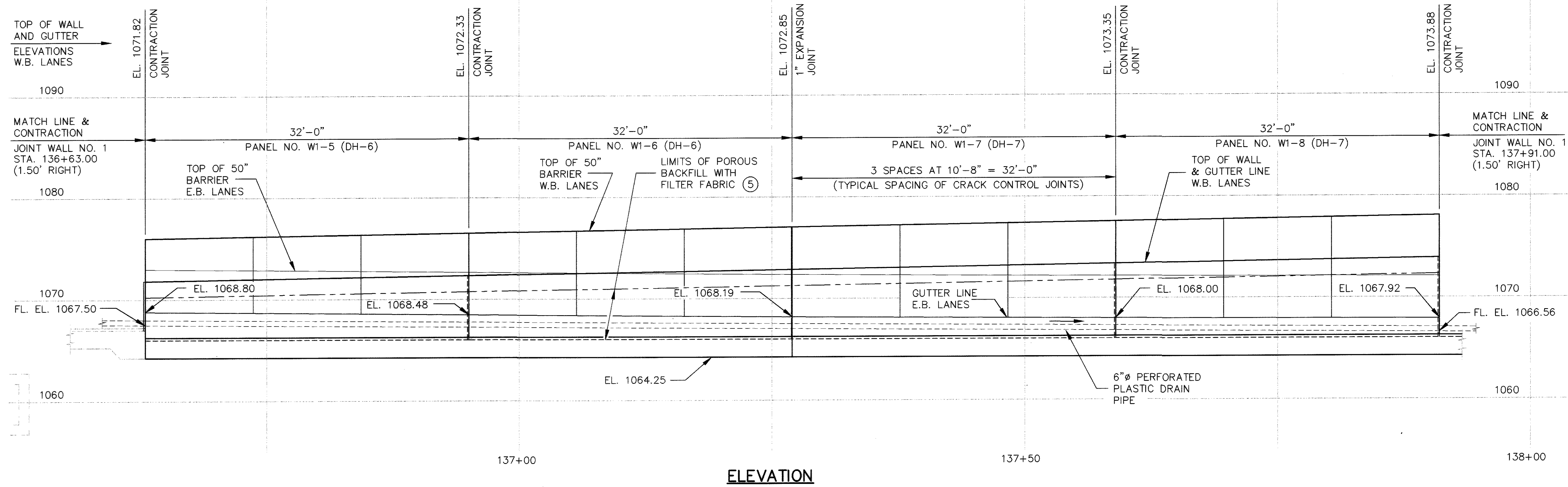
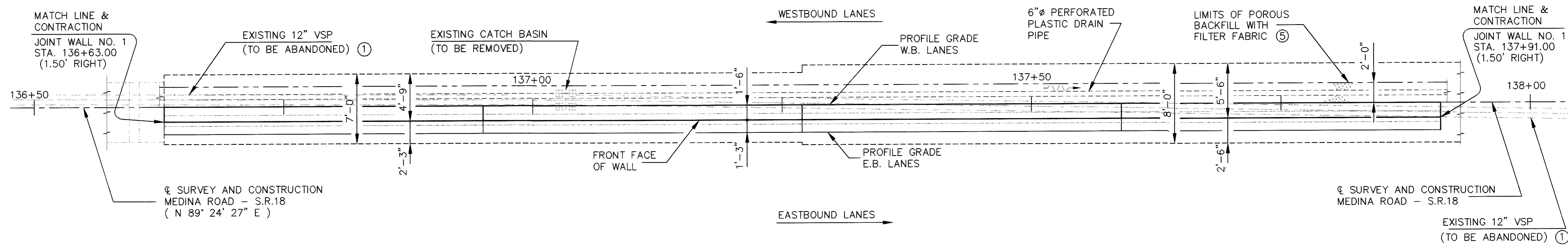
- NOTES:**
- (1) SHOULD THE 12" VSP, TO BE ABANDONED, INTERFERE WITH THE RETAINING WALL FOOTING, THE PIPE SHALL BE REMOVED AND INCLUDED WITH ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN FOR PAYMENT.
 - (2) WALL NUMBER (1) IS DESIGNED FOR A MAXIMUM ALLOWABLE BEARING PRESSURE OF 3.0 ksf.
 - (3) FOR WALL SECTIONS REFER TO SHEETS 29 OF 34.
 - (4) FOR WALL DETAILS, REFER TO SHEET 32 OF 34.
 - (5) POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, DOWN TO THE TOP OF THE FOOTING AND LATERALLY TO THE ENDS OF THE WALL.

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|----------|----------|-----------------------|
| DESIGNED | L.M.P. | C.A.R. |
| DRAWN | A.L.H. | REVISED |
| REVIEWED | B.K.L. | STRUCTURE FILE NUMBER |
| DATE | 01/17/02 | N/A |

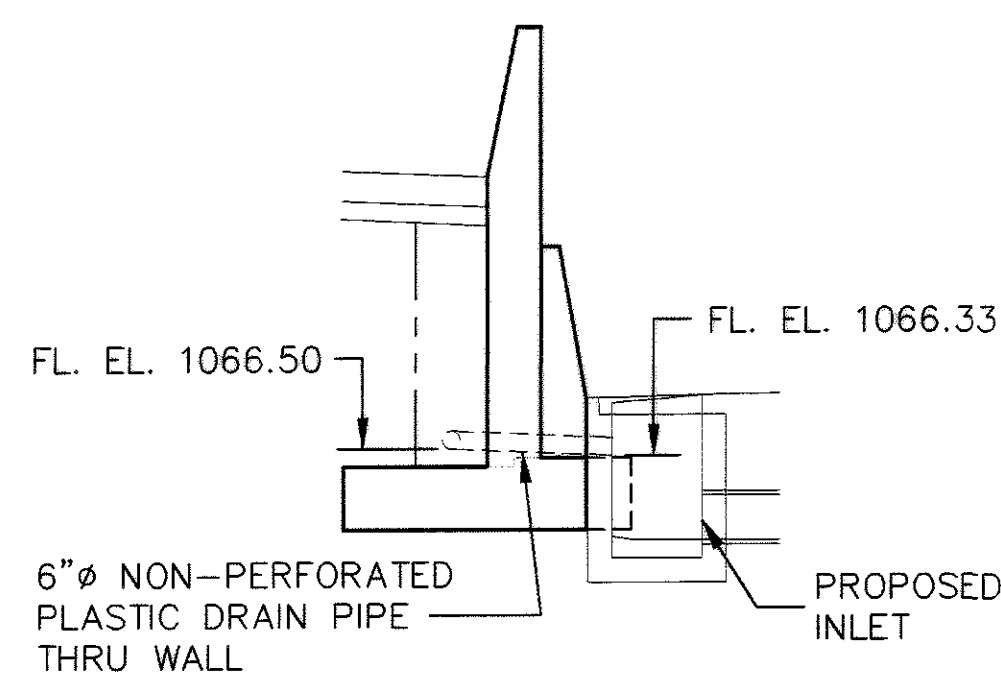
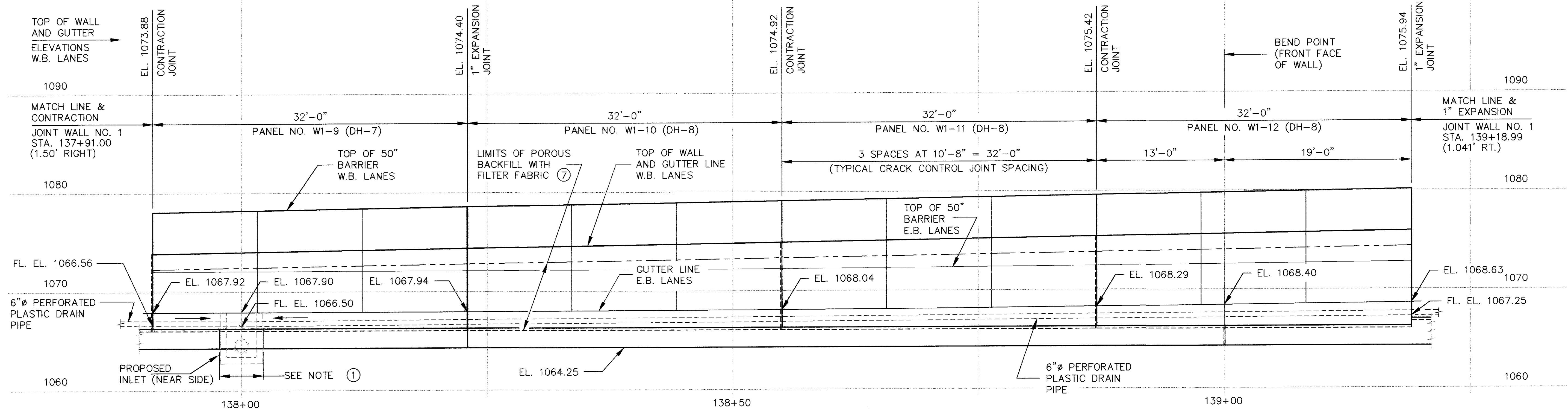
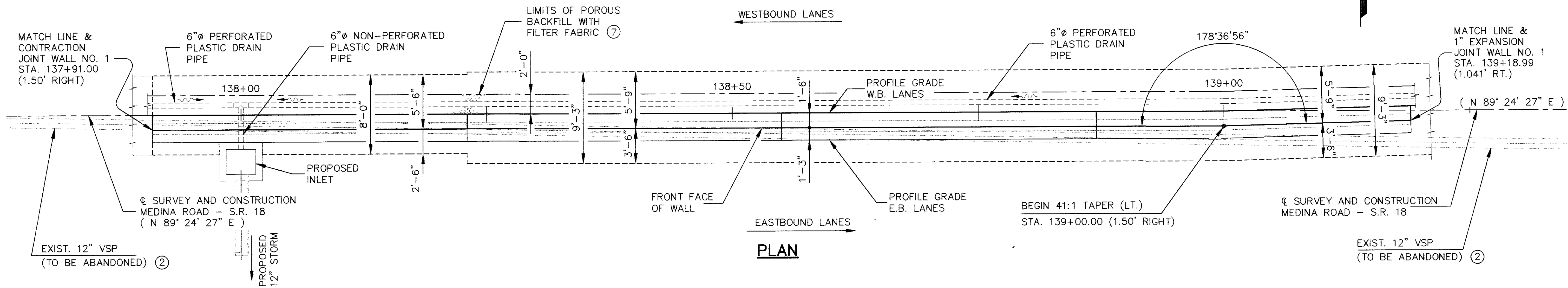
GENERAL PLAN AND ELEVATION
S.R. 18 - WALL NUMBER 1
STA. 136+63.00 TO STA. 137+91.00

MED-18-15.13



- NOTES:**
- ① SHOULD THE 12" VSP, TO BE ABANDONED, INTERFERE WITH THE RETAINING WALL FOOTING, THE PIPE SHALL BE REMOVED AND INCLUDED WITH ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN FOR PAYMENT.
 - ② WALL NUMBER (1) IS DESIGNED FOR A MAXIMUM ALLOWABLE BEARING PRESSURE OF 3.0 ksf.
 - ③ FOR WALL SECTIONS REFER TO SHEETS 29 AND 30 OF 34.
 - ④ FOR WALL DETAILS, REFER TO SHEET 32 OF 34.
 - ⑤ POROUS BACKFILL WITH FILTER FABRIC, 2'-0" SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, DOWN TO THE TOP OF THE FOOTING AND Laterally TO THE ENDS OF THE WALL.

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SECTION AT STA. 138+00

ELEVATION

NOTES:

- ① FOR CATCH BASIN NOTCH AND ADDITIONAL DRAINAGE DETAILS SEE SHEETS 32 OF 34.
- ② SHOULD THE 12" VSP, TO BE ABANDONED, INTERFERE WITH THE RETAINING WALL FOOTING, THE PIPE SHALL BE REMOVED AND INCLUDED WITH ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN FOR PAYMENT.
- ③ WALL NUMBER (1) IS DESIGNED FOR A MAXIMUM ALLOWABLE BEARING PRESSURE OF 3.0 ksf.
- ④ FOR WALL SECTIONS REFER TO SHEETS 30 OF 34.
- ⑤ FOR WALL DETAILS, REFER TO SHEET 32 OF 34.
- ⑥ REFER TO ROADWAY SHEET 229 OF 302 FOR PROPOSED INLET DETAILS.
- ⑦ POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, DOWN TO THE TOP OF THE FOOTING AND Laterally TO THE ENDS OF THE WALL.

URS

564 White Pond Drive
Akron, Ohio 44320-1100
(937) 836-9111

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|----------|-----------------------|
| DESIGNED | DATE |
| L.M.P. | 01/17/02 |
| CHECKED | B.K.L. |
| C.A.R. | STRUCTURE FILE NUMBER |
| | N/A |
| DRAWN | REVIEWED |
| A.L.H. | B.K.L. |
| REVISED | DATE |
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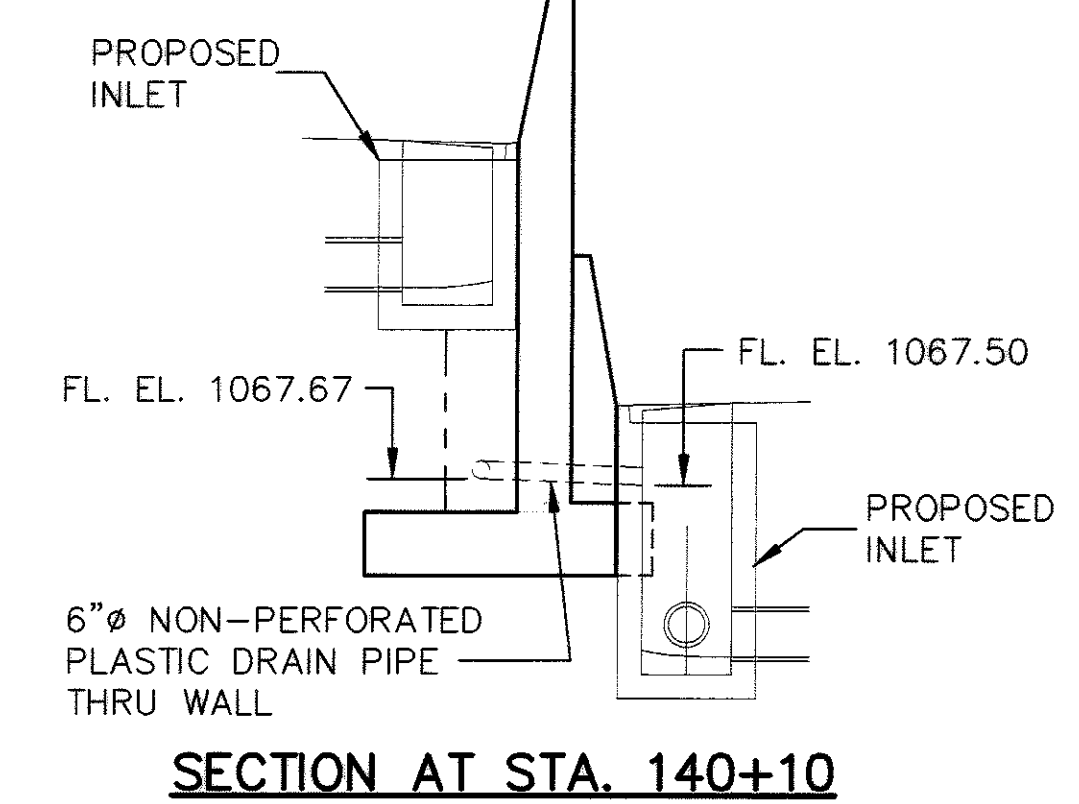
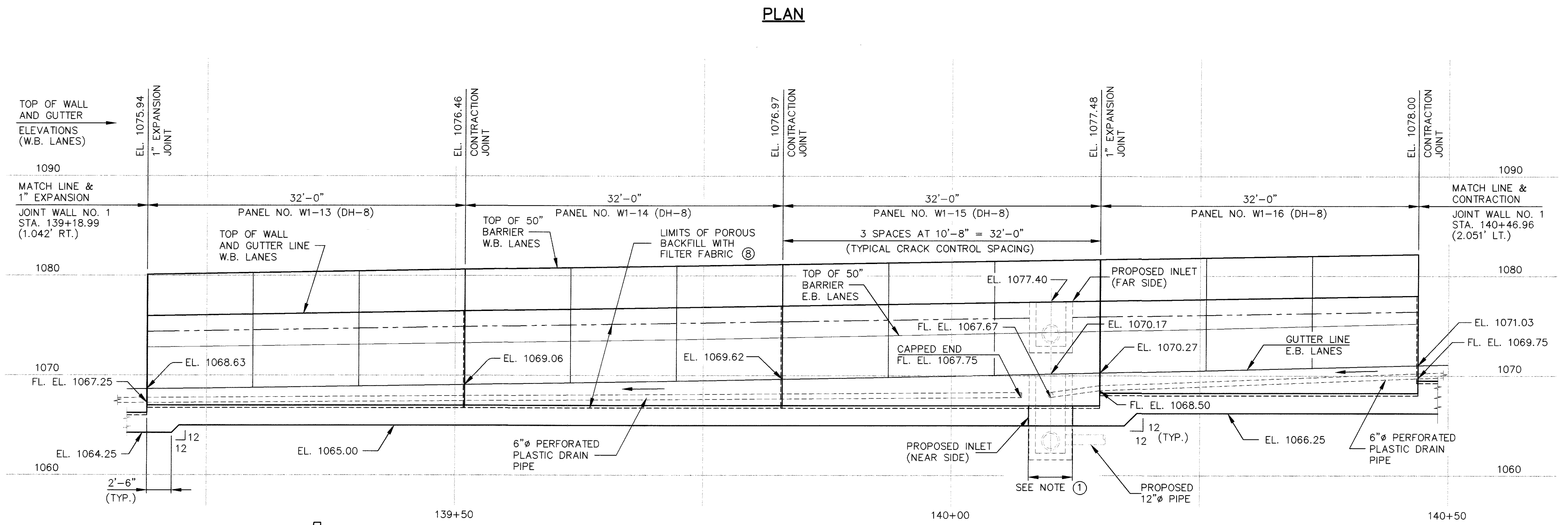
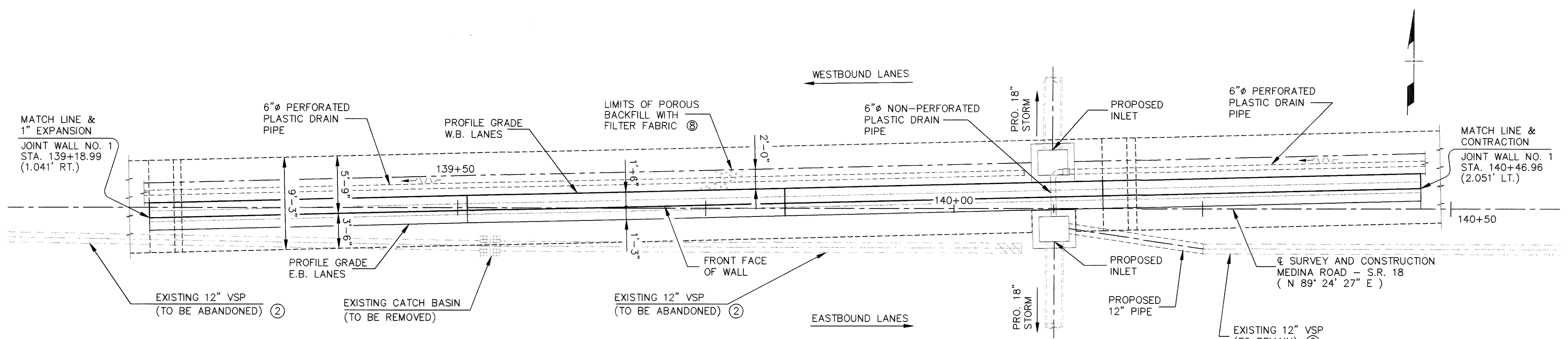
GENERAL PLAN AND ELEVATION
S.R. 18 - WALL NUMBER 1
STA. 137+91.00 TO STA. 139+18.99

MED-18-15.13

5 / 34

236
362

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- NOTES:**
- FOR CATCH BASIN NOTCH AND ADDITIONAL DRAINAGE DETAILS SEE SHEET 32 OF 34.
 - SHOULD THE 12" VSP, TO BE ABANDONED, INTERFERE WITH THE RETAINING WALL FOOTING, THE PIPE SHALL BE REMOVED AND INCLUDED WITH ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN FOR PAYMENT.
 - WALL NUMBER (1) IS DESIGNED FOR A MAXIMUM ALLOWABLE BEARING PRESSURE OF 3.0 ksf.
 - FOR WALL SECTIONS REFER TO SHEETS 30 OF 34.
 - FOR WALL DETAILS, REFER TO SHEET 32 OF 34.
 - THE EXISTING 12" VSP FROM STA. 140+10 TO THE END OF WALL NUMBER 1 IS TO REMAIN. THE CONTRACTOR SHALL EXERCISE EXTREME CARE AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE UTILITY DURING ALL CONSTRUCTION OPERATIONS.
 - HORIZONTAL DIMENSIONS ARE GIVEN ALONG THE FRONT FACE OF WALL.
 - POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, DOWN TO THE TOP OF THE FOOTING AND Laterally TO THE ENDS OF THE WALL.

564 White Pond Drive
Akron, Ohio 44320-1100
URS
(330) 896-9111

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|-----------------------|----------|
| DATE | 01/17/02 |
| REVIEWED | B.K.L. |
| DESIGNED | L.M.P. |
| DRAWN | A.L.H. |
| CHECKED | C.A.R. |
| STRUCTURE FILE NUMBER | N/A |
| REVISED | |

GENERAL PLAN AND ELEVATION
S.R. 18 - WALL NUMBER 1
STA. 139+18.99 TO STA. 140+46.96

MED-18-15.13

6 / 34

237
362

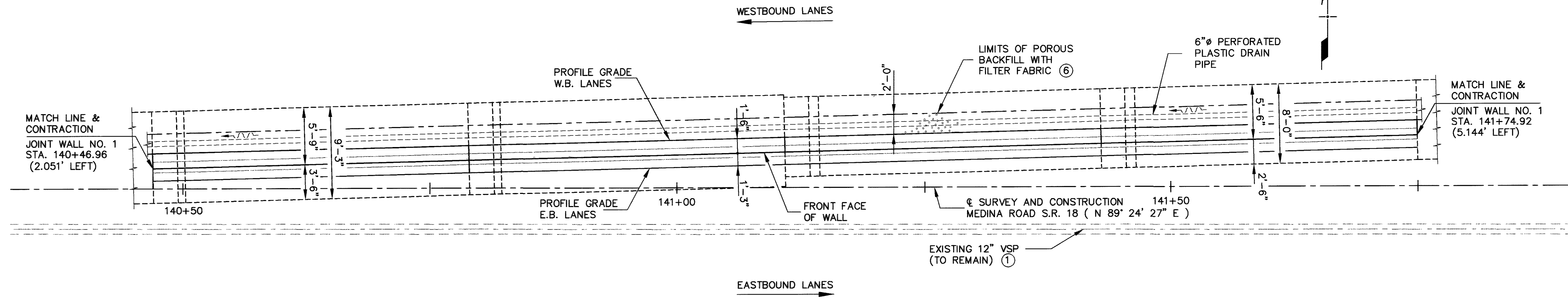
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| DESIGNED | DATE |
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| C.A.R. | REVIEWED |
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GENERAL PLAN AND ELEVATION
S.R. 18 - WALL NUMBER 1
STA. 140+46.96 TO STA. 141+74.92

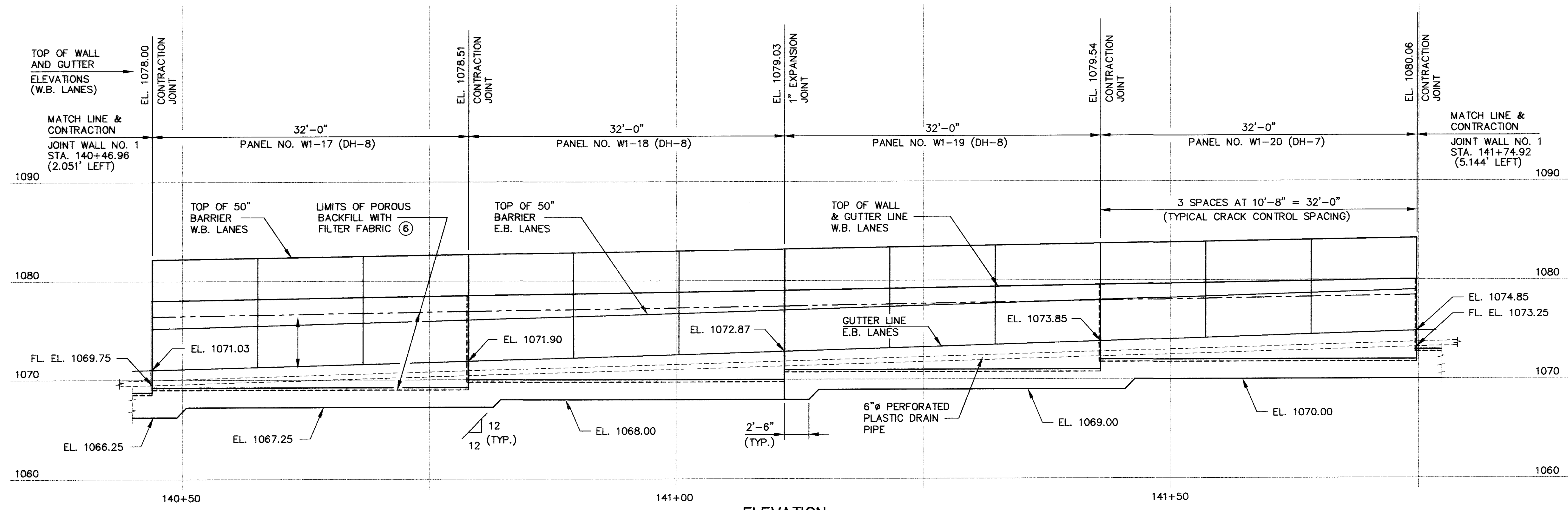
MED-18-15.13

7/34

238
362



PLAN



ELEVATION

NOTES:

- THE EXISTING 12" VSP FROM STA. 140+10 TO THE END OF WALL NUMBER 1 IS TO REMAIN. THE CONTRACTOR SHALL EXERCISE EXTREME CARE AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE UTILITY DURING ALL CONSTRUCTION OPERATIONS.
- WALL NUMBER (1) IS DESIGNED FOR A MAXIMUM ALLOWABLE BEARING PRESSURE OF 3.0 ksf.
- FOR WALL SECTIONS REFER TO SHEETS 30 OF 34.
- FOR WALL DETAILS, REFER TO SHEET 32 OF 34.
- HORIZONTAL DIMENSIONS ARE GIVEN ALONG THE FRONT FACE OF WALL.
- POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, DOWN TO THE TOP OF THE FOOTING AND Laterally TO THE ENDS OF THE WALL.

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(330) 836-9111

URS

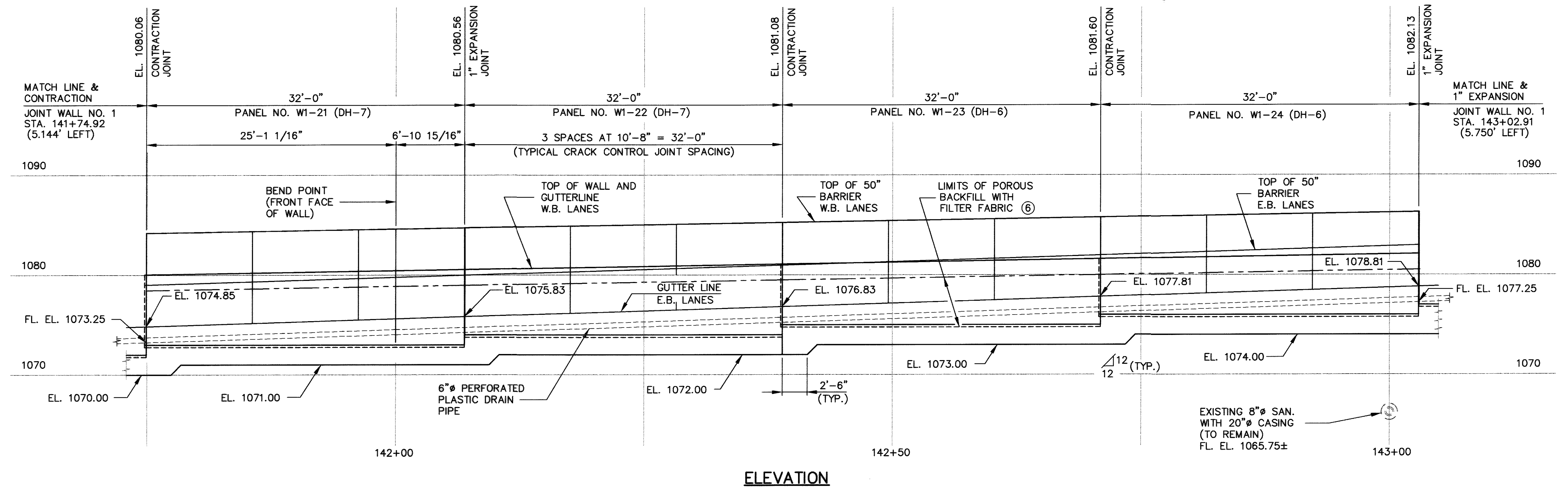
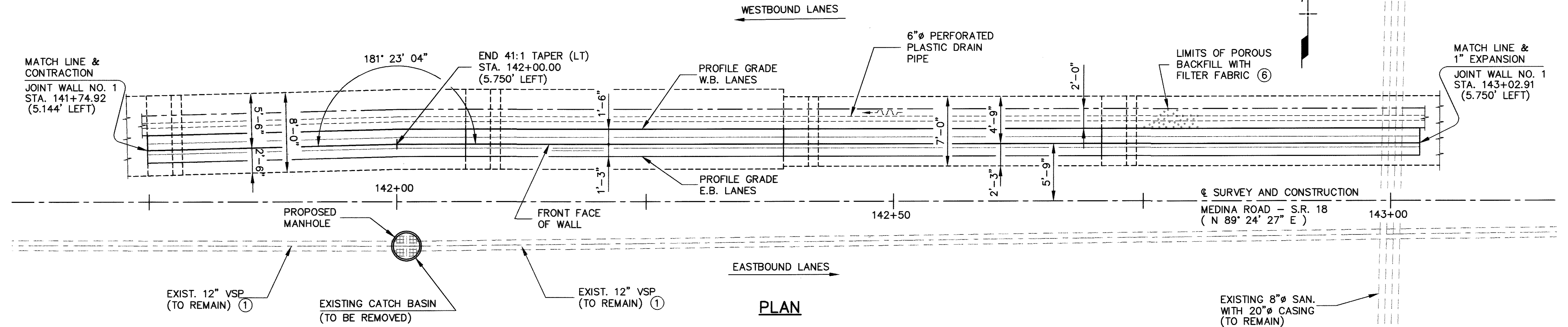
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| DESIGNED | L.M.P. | CHECKED | C.A.R. |
| DRAWN | A.L.H. | REVISED | |
| REVIEWED | B.K.L. | DATE | 01/17/02 |
| | | STRUCTURE FILE NUMBER | N/A |

GENERAL PLAN AND ELEVATION
S.R. 18 - WALL NUMBER 1
STA. 141+74.92 TO STA. 143+02.91

MED-18-15.13

8 / 34

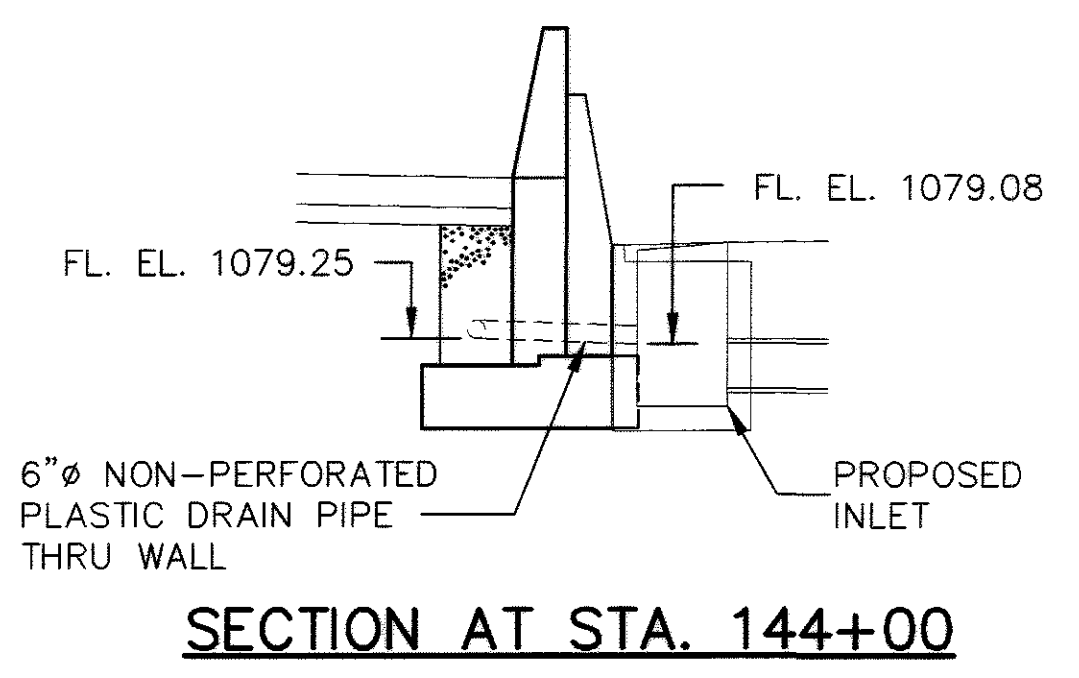
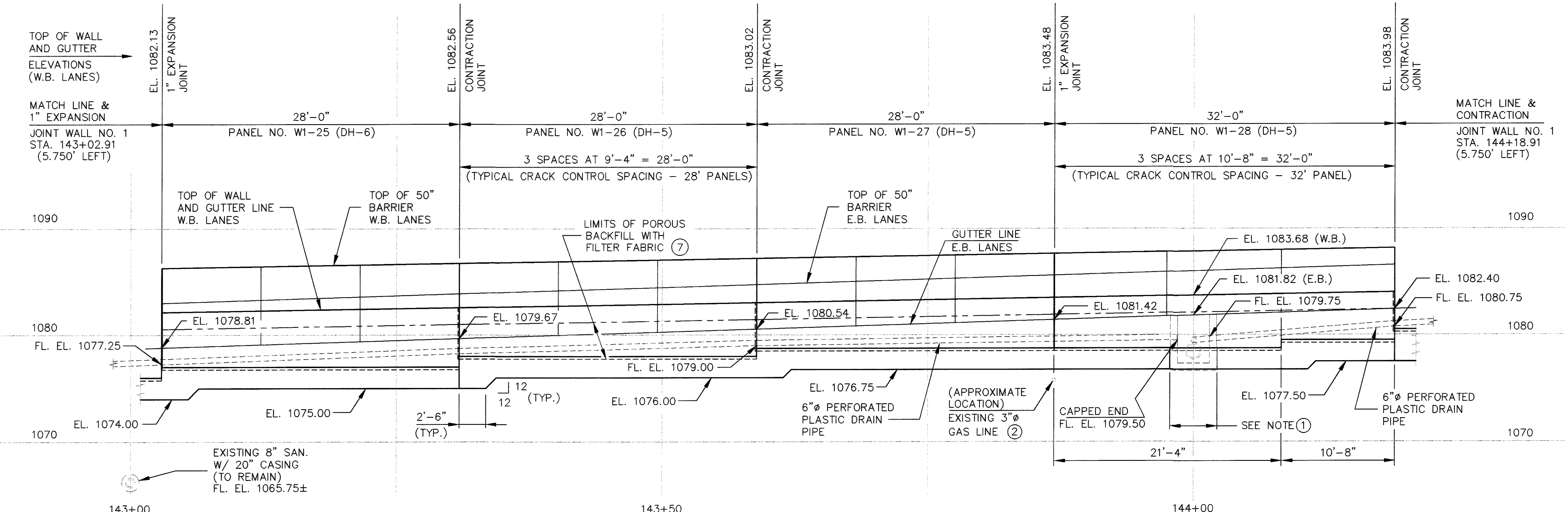
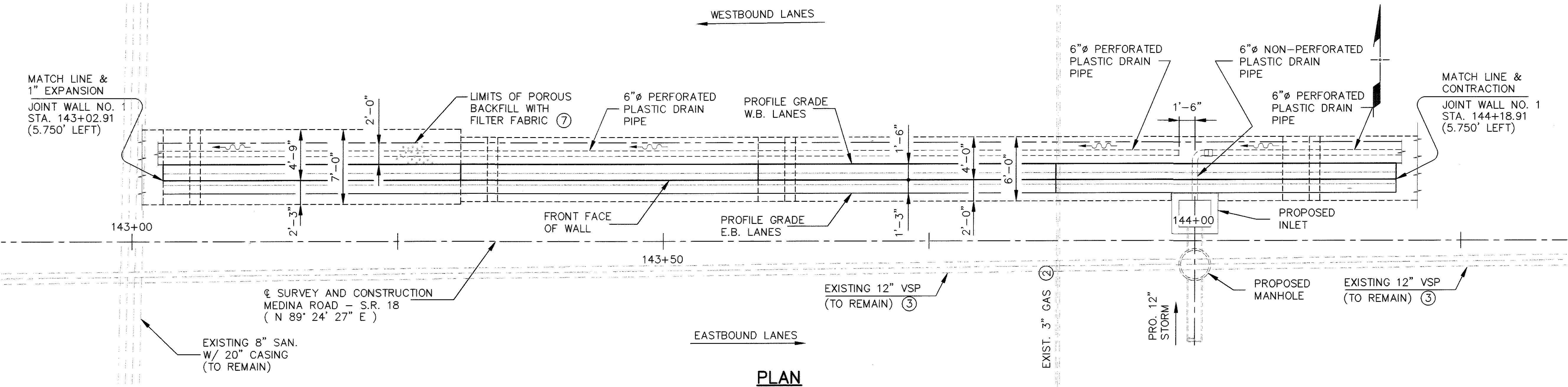
239
362



NOTES:

- (1) THE EXISTING 12" VSP FROM STA. 140+10 TO THE END OF WALL NUMBER 1 IS TO REMAIN. THE CONTRACTOR SHALL EXERCISE EXTREME CARE AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE UTILITY DURING ALL CONSTRUCTION OPERATIONS.
- (2) WALL NUMBER (1) IS DESIGNED FOR A MAXIMUM ALLOWABLE BEARING PRESSURE OF 3.0 ksf.
- (3) FOR WALL SECTIONS REFER TO SHEETS 29 AND 30 OF 34.
- (4) FOR WALL DETAILS, REFER TO SHEET 32 OF 34.
- (5) HORIZONTAL DIMENSIONS ARE GIVEN ALONG THE FRONT FACE OF WALL.
- (6) POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, DOWN TO THE TOP OF THE FOOTING AND LATERALLY TO THE ENDS OF THE WALL.

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ELEVATION

NOTES:

- ① FOR CATCH BASIN NOTCH AND ADDITIONAL DRAINAGE DETAILS SEE SHEET 32 OF 34.
- ② THE EXISTING 3" GAS LINE SHOWN IS TO BE REMOVED BY OTHERS PRIOR TO CONSTRUCTION.
- ③ THE EXISTING 12" VSP FROM STA. 140+10 TO THE END OF WALL NUMBER 1 IS TO REMAIN. THE CONTRACTOR SHALL EXERCISE EXTREME CARE AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE UTILITY DURING ALL CONSTRUCTION OPERATIONS.
- ④ WALL NUMBER (1) IS DESIGNED FOR A MAXIMUM ALLOWABLE BEARING PRESSURE OF 3.0 ksf.
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- ⑥ FOR WALL DETAILS, REFER TO SHEET 32 OF 34.
- ⑦ POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, DOWN TO THE TOP OF THE FOOTING AND Laterally TO THE ENDS OF THE WALL.

URS
564 White Pond Drive
Akron, Ohio 44320-1100
(330) 836-9111

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| DESIGNED | L.M.P. | C.A.R. |
| DRAWN | A.L.H. | REVIS |
| REVIEWED | B.K.L. | STRUCTURE FILE NUMBER |
| DATE | 01/17/02 | N/A |

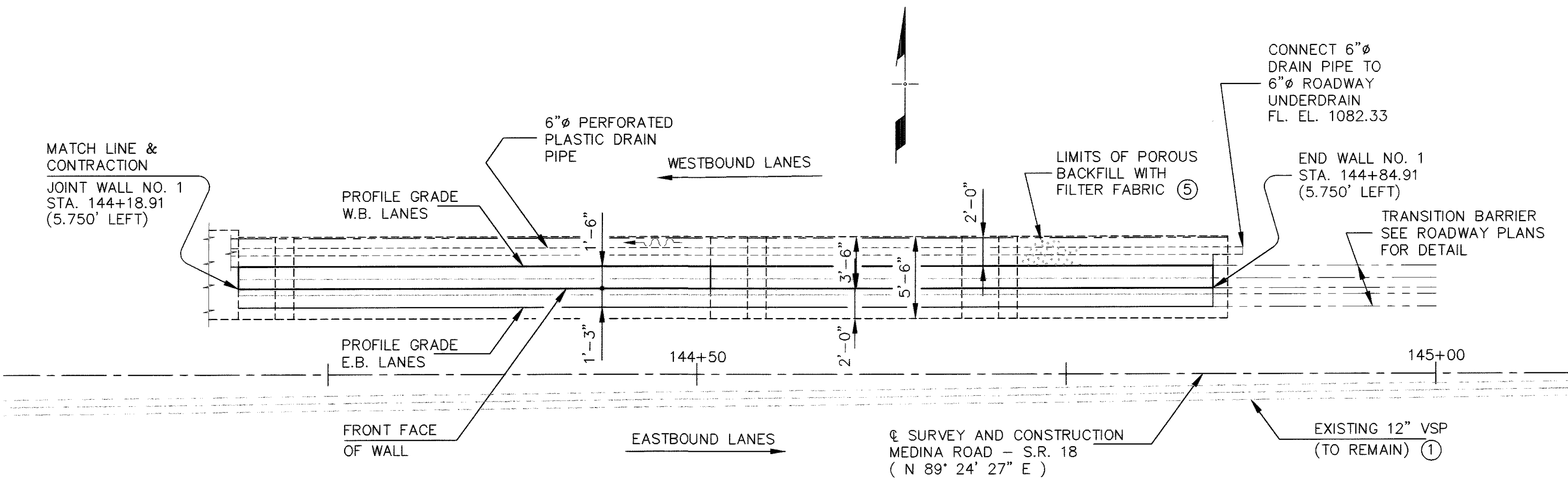
GENERAL PLAN AND ELEVATION
S.R. 18 - WALL NUMBER 1
STA. 143+02.91 TO STA. 144+18.91

MED-18-15.13

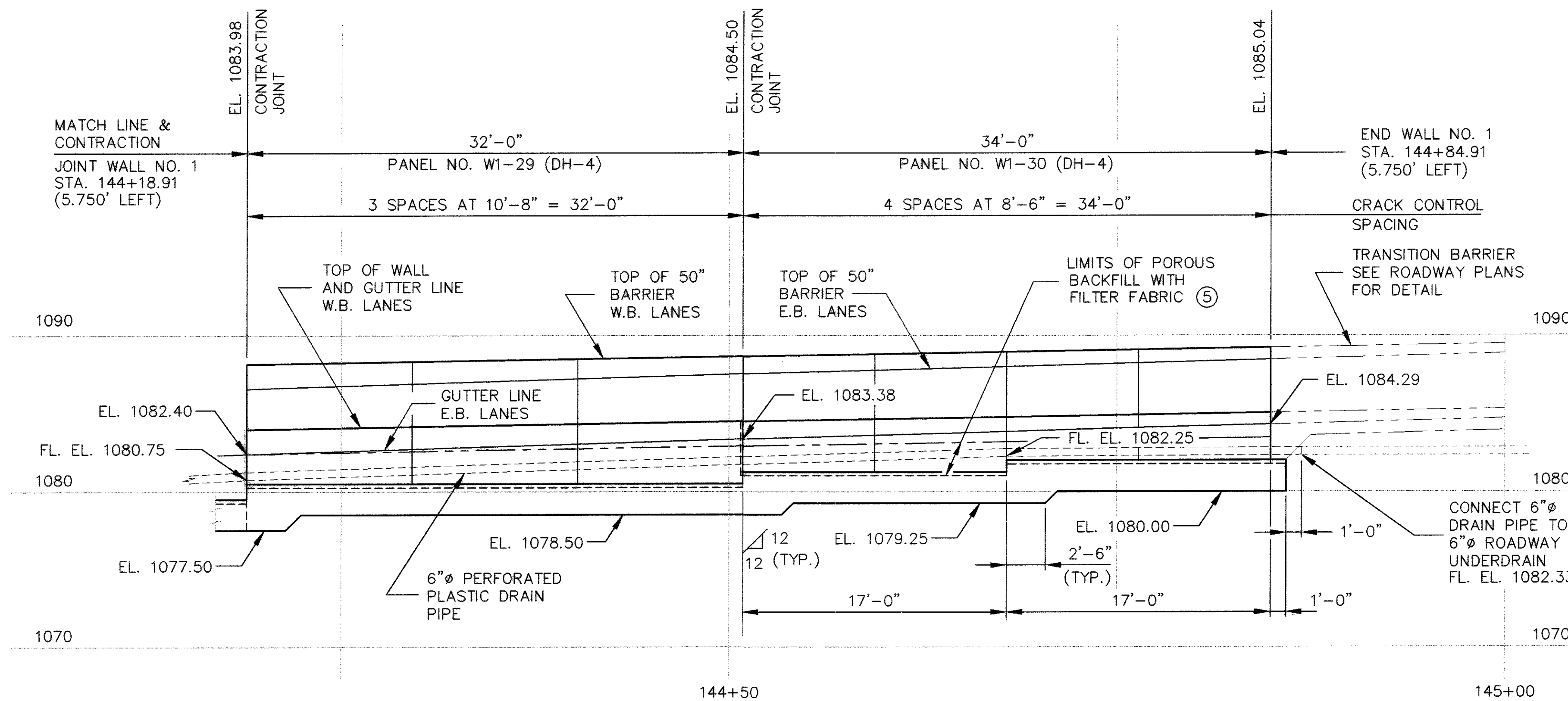
9 / 34

240
362

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PLAN



ELEVATION

NOTES:

- ① THE EXISTING 12" VSP FROM STA. 140+10 TO THE END OF WALL NUMBER 1 IS TO REMAIN. THE CONTRACTOR SHALL EXERCISE EXTREME CARE AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE UTILITY DURING ALL CONSTRUCTION OPERATIONS.
- ② WALL NUMBER (1) IS DESIGNED FOR A MAXIMUM ALLOWABLE BEARING PRESSURE OF 3.0 ksf.
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- ④ FOR WALL DETAILS, REFER TO SHEET 32 OF 34.
- ⑤ POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, DOWN TO THE TOP OF THE FOOTING AND LATERALLY TO THE ENDS OF THE WALL.

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Akron, Ohio 44320-1100
(330) 836-9111

URS

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|---------|----------|-----------------------|----------|
| DRAWN | DATE | REVIEWED | DATE |
| A.L.H. | 01/17/02 | B.L.L. | 01/17/02 |
| CHECKED | | STRUCTURE FILE NUMBER | |
| C.A.R. | | | N/A |

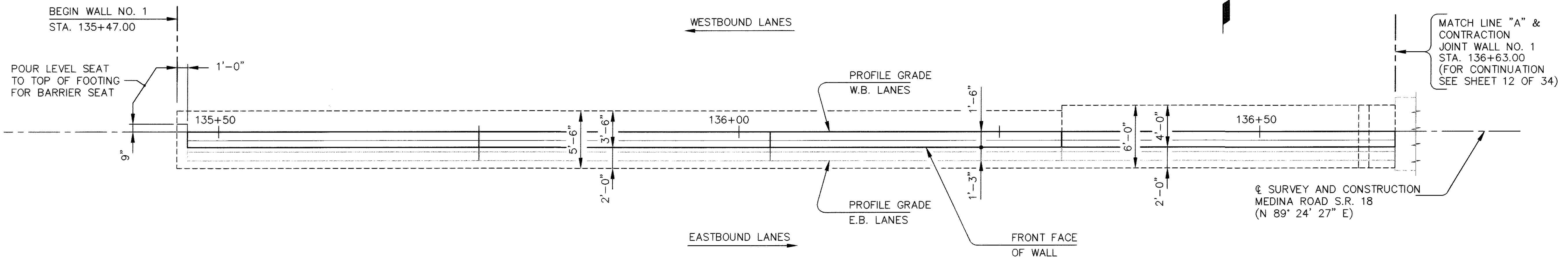
GENERAL PLAN AND ELEVATION
S.R. 18 - WALL NUMBER 1
STA. 144+18.91 TO STA. 144+84.91

MED-18-15.13

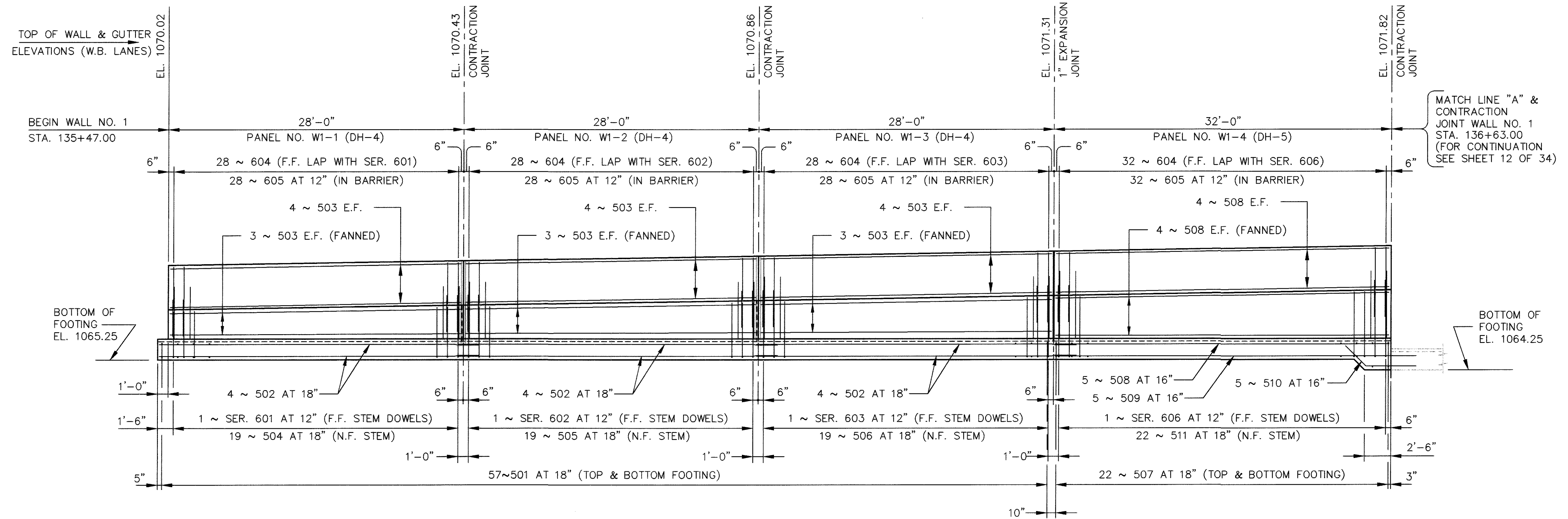
10/34

241
362

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PLAN



ELEVATION

ABBREVIATIONS

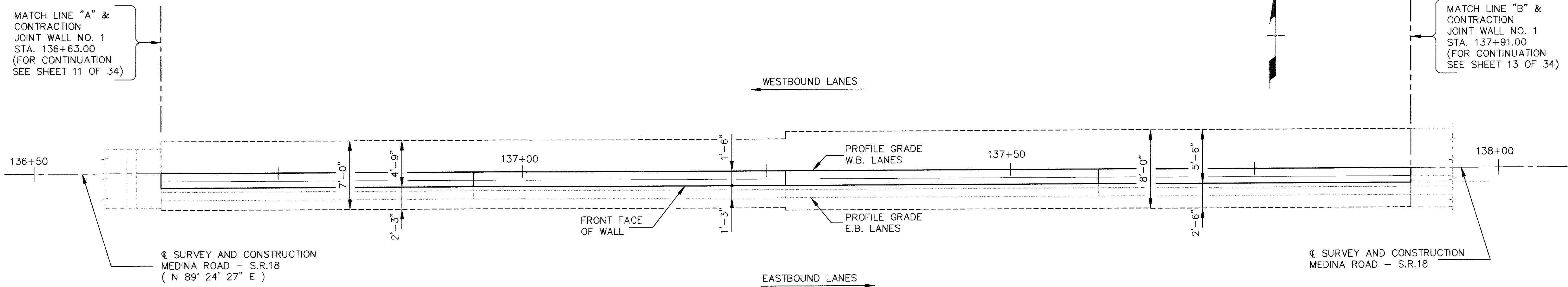
SER. - SERIES
E.F. - EACH FACE
N.F. - FAR FACE
N.F. - NEAR FACE

NOTES:

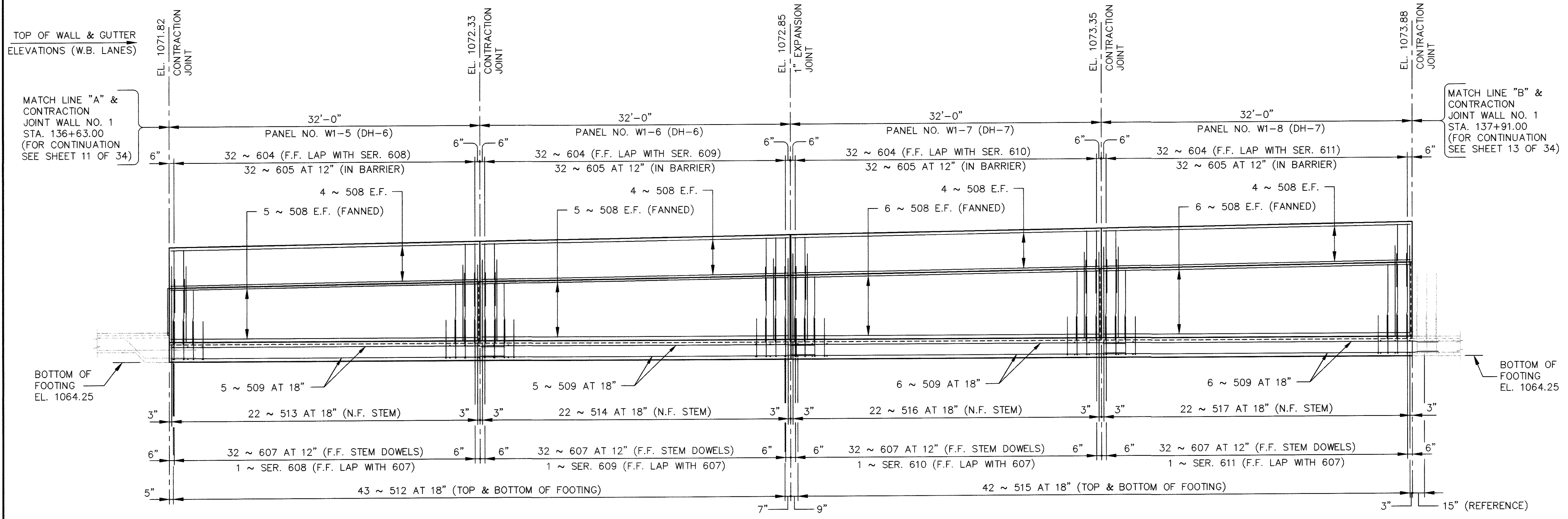
- ① THE PREFIX '1W' SHALL BE ADDED TO ALL REINFORCING BARS LOCATED IN WALL 1.
- ② THE MINIMUM BAR LAP LENGTHS ARE AS FOLLOWS:
#5 BAR ~ 2'-0"
#6 BAR ~ 2'-6"
- ③ FOR ADDITIONAL NOTES, REFER TO THE STRUCTURE GENERAL NOTES ON SHEET 1 OF 34.
- ④ FOR ADDITIONAL WALL DETAILS, REFER TO SHEET 32 OF 34.
- ⑤ FOR WALL SECTIONS, REFER TO SHEETS 29 AND 30 OF 34.

| | |
|----------|-----------------------|
| DESIGNED | DATE |
| L.M.P. | 01/17/02 |
| CHECKED | B.K.L. |
| C.A.R. | STRUCTURE FILE NUMBER |
| | N/A |

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PLAN



ELEVATION

ABBREVIATIONS
 SER. - SERIES
 E.F. - EACH FACE
 N.F. - FAR FACE
 N.F. - NEAR FACE

- NOTES:**
- THE PREFIX '1W' SHALL BE ADDED TO ALL REINFORCING BARS LOCATED IN WALL 1.
 - THE MINIMUM BAR LAP LENGTHS ARE AS FOLLOWS:
 #5 BAR ~ 2'-0"
 #6 BAR ~ 2'-6"
 - FOR ADDITIONAL NOTES, REFER TO THE STRUCTURE GENERAL NOTES ON SHEET 1 OF 34.
 - FOR ADDITIONAL WALL DETAILS, REFER TO SHEET 32 OF 34.
 - FOR WALL SECTIONS, REFER TO SHEETS 29 AND 30 OF 34.

564 White Pond Drive
Akron, Ohio 44320-1100
URS (330) 836-9111

| | |
|-----------------------|----------|
| DATE | 01/17/02 |
| REVIEWED | B.K.L. |
| STRUCTURE FILE NUMBER | N/A |
| DRAWN | A.L.H. |
| REVIS | |
| DESIGNED | L.M.P. |
| CHECKED | |
| C.A.R. | |

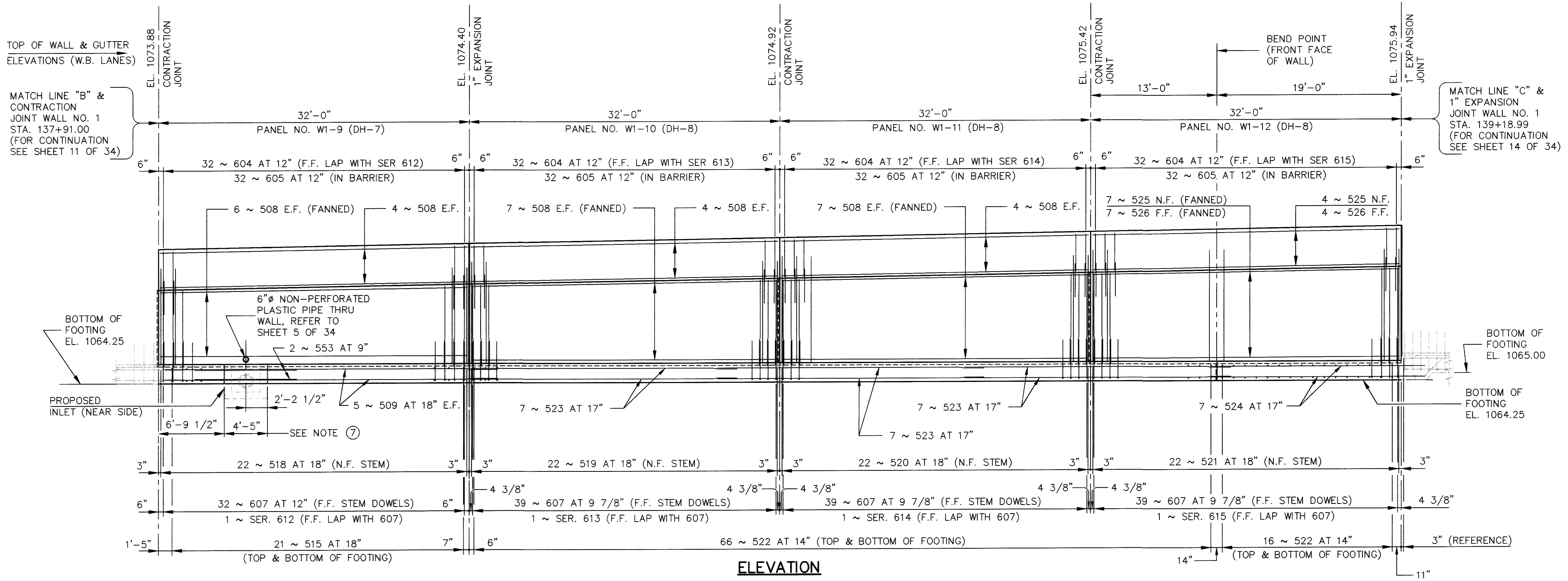
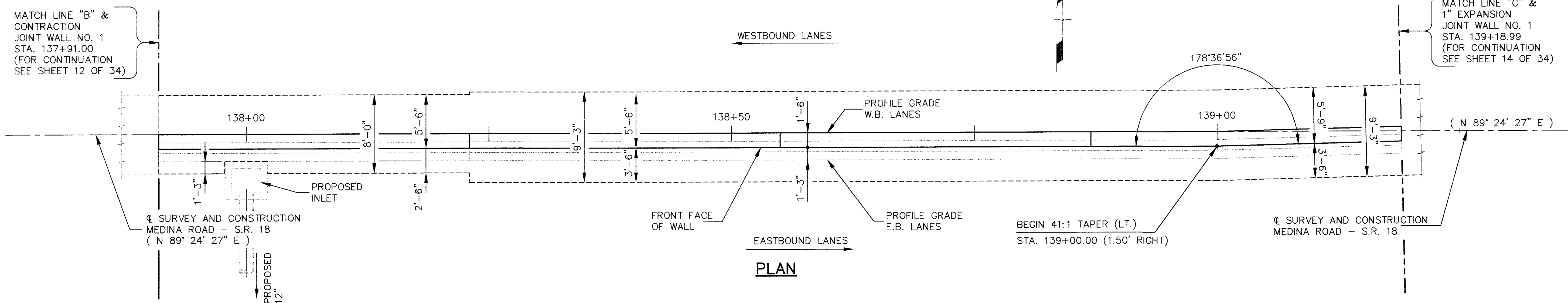
DETAIL WALL 1 - (PANELS W1-5 THRU W1-8)
 S.R. 18 - WALL NUMBER 1
 STA. 136+63.00 TO STA. 137+91.00

MED-18-15.13

12/34

243
362

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ABBREVIATIONS
 SER. - SERIES
 E.F. - EACH FACE
 N.F. - FAR FACE
 N.F. - NEAR FACE

- NOTES:**
- THE PREFIX '1W' SHALL BE ADDED TO ALL REINFORCING BARS LOCATED IN WALL 1.
 - THE MINIMUM BAR LAP LENGTHS ARE AS FOLLOWS:
 #5 BAR ~ 2'-0"
 #6 BAR ~ 2'-6"

- FOR ADDITIONAL NOTES, REFER TO THE STRUCTURE GENERAL NOTES ON SHEET 1 OF 34.
- FOR ADDITIONAL WALL DETAILS, REFER TO SHEET 32 OF 34.
- FOR WALL SECTIONS, REFER TO SHEETS 29 AND 30 OF 34.

- HORIZONTAL DIMENSIONS ARE GIVEN ALONG FRONT FACE OF WALL.
- FOR CATCH BASIN NOTCH AND ADDITIONAL DRAINAGE DETAILS SEE SHEET 32 OF 34 AND ROADWAY DRAINAGE SHEET 229 OF 362.

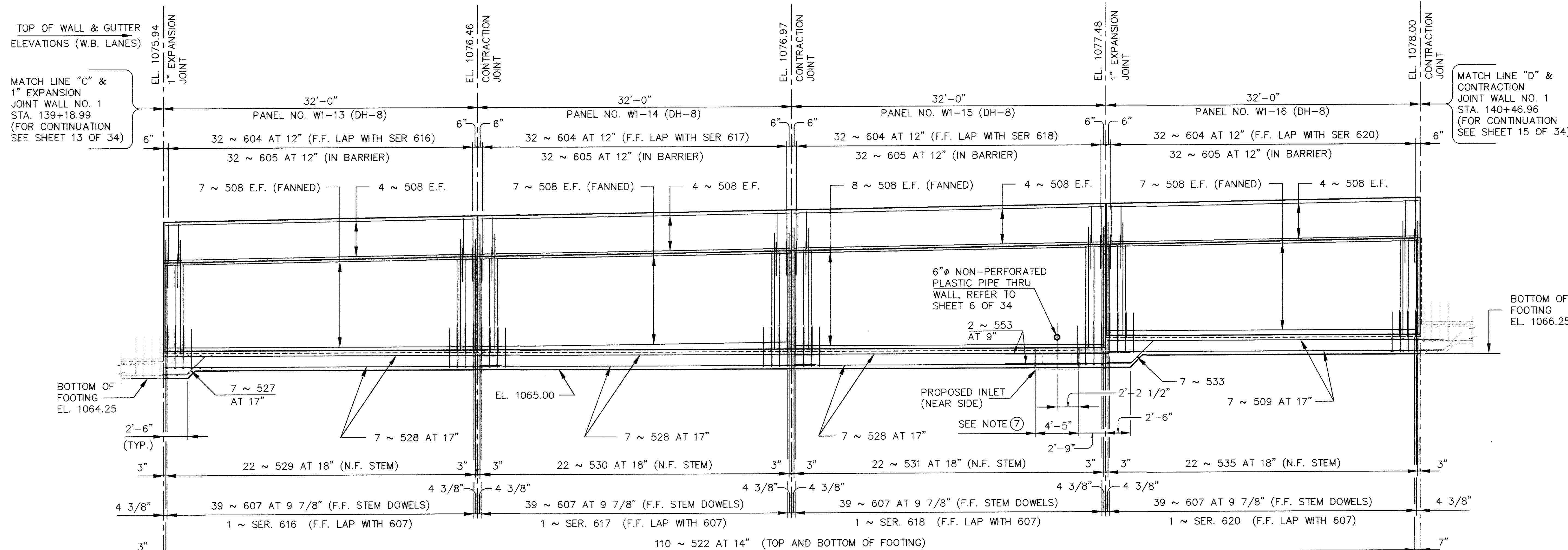
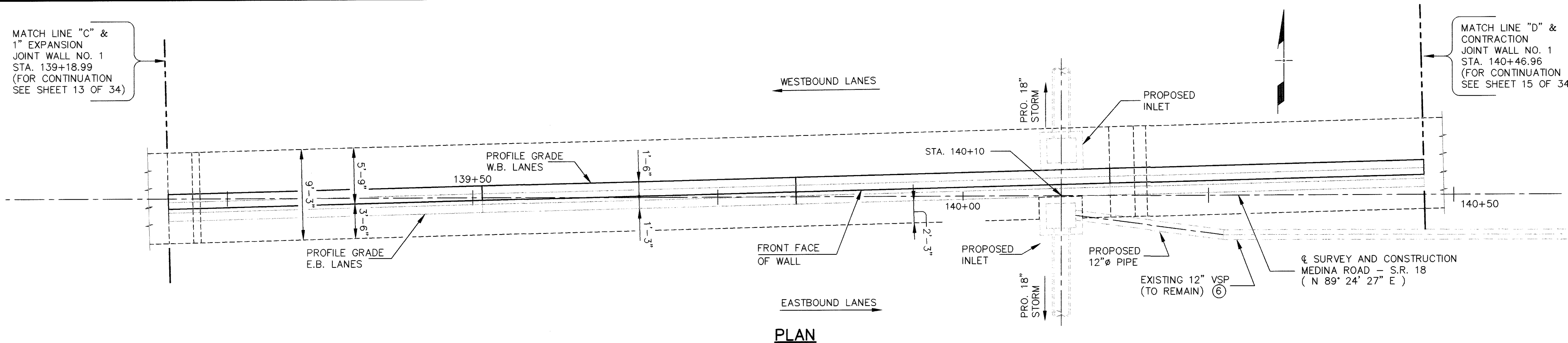
564 White Pond Drive
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| | | | | | |
|---|----------|----------|--------|-----------------------|--------|
| DATE | 01/17/02 | REVIEWED | B.K.L. | STRUCTURE FILE NUMBER | N/A |
| DRAWN | A.L.H. | DESIGNED | L.M.P. | CHECKED | C.A.R. |
| DETAIL WALL 1 - (PANELS W1-9 THRU W1-12) | | | | | |
| S.R. 18 - WALL NUMBER 1 | | | | | |
| STA. 137+91.00 TO STA. 139+18.99 | | | | | |
| MED-18-15.13 | | | | | |
| 13/34 | | | | | |
| 244 | | | | | |
| 362 | | | | | |

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MATCH LINE "C" &
1" EXPANSION
JOINT WALL NO. 1
STA. 139+18.99
(FOR CONTINUATION
SEE SHEET 13 OF 34)

MATCH LINE "D" &
CONTRACTION
JOINT WALL NO. 1
STA. 140+46.96
(FOR CONTINUATION
SEE SHEET 15 OF 34)



ABBREVIATIONS

SER. - SERIES
E.F. - EACH FACE
N.F. - FAR FACE
N.F. - NEAR FACE

- ① THE PREFIX '1W' SHALL BE ADDED TO ALL REINFORCING BARS LOCATED IN WALL 1.
- ② THE MINIMUM BAR LAP LENGTHS ARE AS FOLLOWS:
#5 BAR ~ 2'-0"
#6 BAR ~ 2'-6"

NOTES:

- ③ FOR ADDITIONAL NOTES, REFER TO THE STRUCTURE GENERAL NOTES ON SHEET 1 OF 34.
- ④ FOR ADDITIONAL WALL DETAILS, REFER TO SHEET 32 OF 34.
- ⑤ FOR WALL SECTIONS, REFER TO SHEETS 29 AND 30 OF 34.
- ⑥ HORIZONTAL DIMENSIONS ARE GIVEN ALONG FRONT FACE OF WALL.
- ⑧ THE EXISTING 12" VSP FROM STA. 140+10 TO THE END OF WALL NUMBER 1 IS TO REMAIN. THE CONTRACTOR SHALL EXERCISE EXTREME CARE AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE UTILITY DURING ALL CONSTRUCTION OPERATIONS.
- ⑦ FOR CATCH BASIN NOTCH AND ADDITIONAL DRAINAGE DETAILS SEE SHEET 32 OF 34 AND ROADWAY DRAINAGE SHEET 229 OF 362.

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|----------|-----------------------|----------|----------|---------|
| DESIGNED | DATE | REVIEWED | DATE | DRAWN |
| L.M.P. | 01/17/02 | B.K.L. | 01/17/02 | A.L.H. |
| CHECKED | STRUCTURE FILE NUMBER | REVISED | N/A | REVISED |
| C.A.R. | | | | |

DETAIL WALL 1 - (PANELS W1-13 THRU W1-16)
S.R. 18 - WALL NUMBER 1
STA. 139+18.99 TO STA. 140+46.96

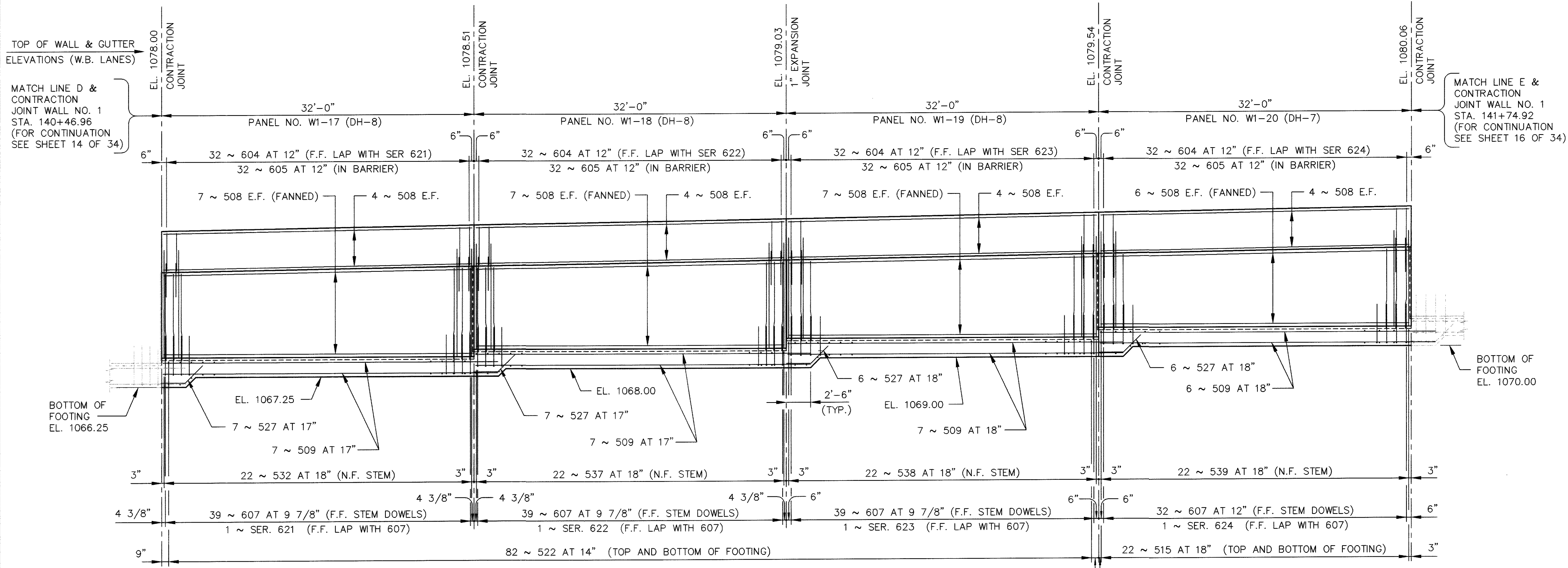
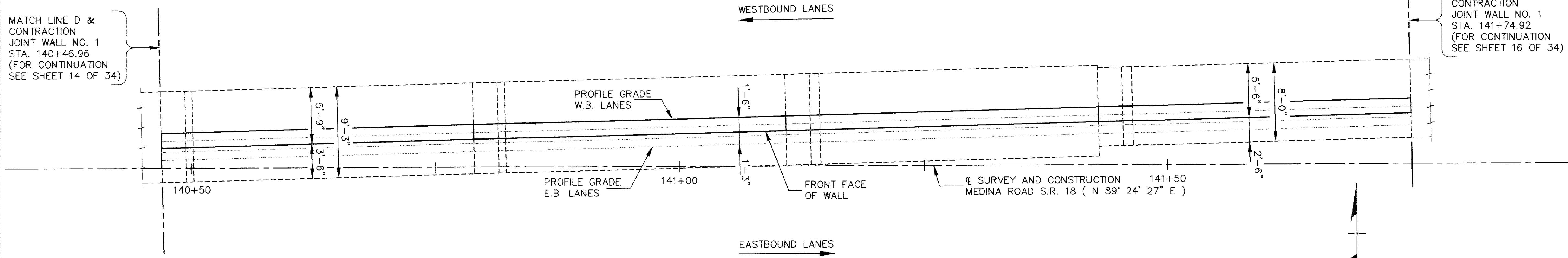
MED-18-15.13

14 / 34

245
362

MATCH LINE D & CONTRACTION JOINT WALL NO. 1 STA. 140+46.96 (FOR CONTINUATION SEE SHEET 14 OF 34)

MATCH LINE E & CONTRACTION JOINT WALL NO. 1 STA. 141+74.92 (FOR CONTINUATION SEE SHEET 16 OF 34)



ABBREVIATIONS

SER. - SERIES
 E.F. - EACH FACE
 N.F. - FAR FACE
 N.F. - NEAR FACE

- NOTES:**
- THE PREFIX '1W' SHALL BE ADDED TO ALL REINFORCING BARS LOCATED IN WALL 1.
 - THE MINIMUM BAR LAP LENGTHS ARE AS FOLLOWS:
 #5 BAR ~ 2'-0"
 #6 BAR ~ 2'-6"

- FOR ADDITIONAL NOTES, REFER TO THE STRUCTURE GENERAL NOTES ON SHEET 1 OF 34.
- FOR ADDITIONAL WALL DETAILS, REFER TO SHEET 32 OF 34.
- FOR WALL SECTIONS, REFER TO SHEET 30 OF 34.

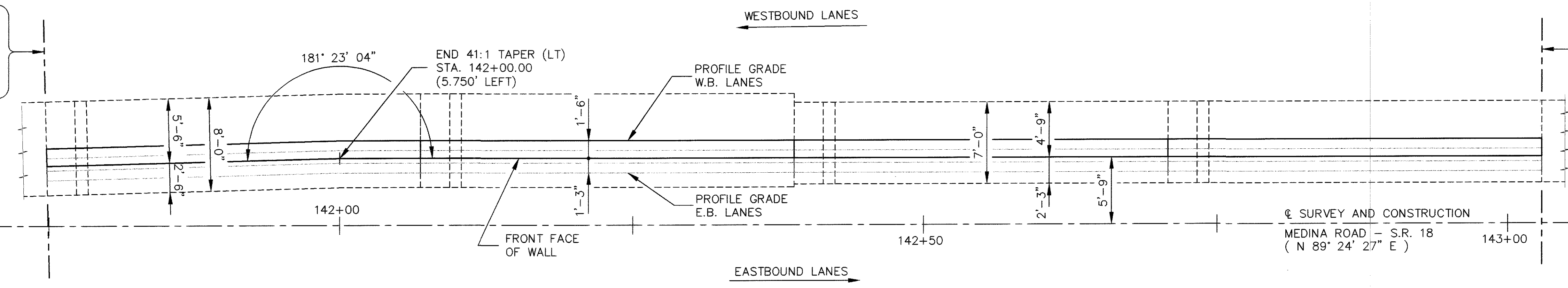
- HORIZONTAL DIMENSIONS ARE GIVEN ALONG FRONT FACE OF WALL.
- THE EXISTING 12" VSP FROM FROM STA. 140+10 TO THE END OF WALL NUMBER 1 IS TO REMAIN. THE CONTRACTOR SHALL EXERCISE EXTREME CARE AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE UTILITY DURING ALL CONSTRUCTION OPERATIONS.

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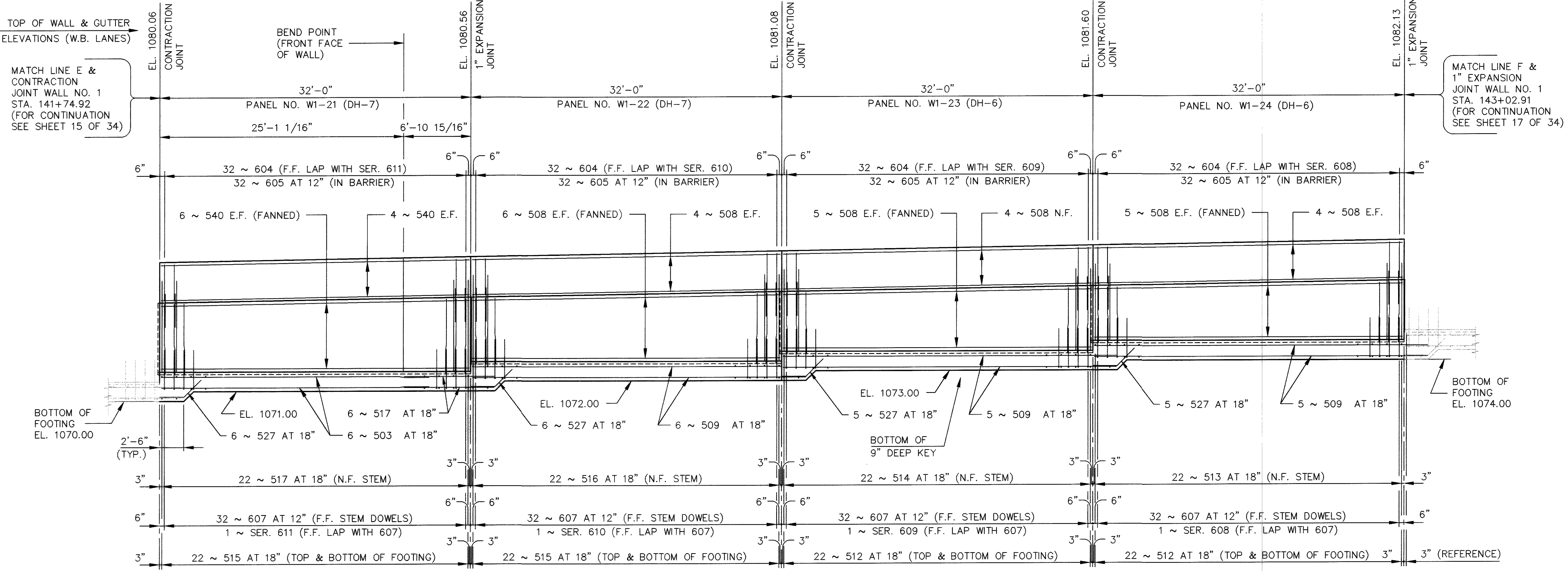
564 White Pond Drive
 Akron, Ohio 44320-1100
URS
 DATE: 01/17/02
 REVIEWED: B.K.L. STRUCTURE FILE NUMBER: N/A
 DRAWN: A.L.H. REVISED:
 DESIGNED: L.M.P. CHECKED: C.A.R.
DETAIL WALL 1 - (PANELS W1-17 THRU W1-20)
 S.R. 18 - WALL NUMBER 1
 STA. 140+46.96 TO STA. 141+74.92
MED-18-15.13
 15 / 34
 246
 362

MATCH LINE E & CONTRACTION JOINT WALL NO. 1 STA. 141+74.92 (FOR CONTINUATION SEE SHEET 15 OF 34)

MATCH LINE F & 1" EXPANSION JOINT WALL NO. 1 STA. 143+02.91 (FOR CONTINUATION SEE SHEET 17 OF 34)



PLAN



ELEVATION

ABBREVIATIONS

SER. - SERIES
E.F. - EACH FACE
N.F. - FAR FACE
N.F. - NEAR FACE

NOTES:

- ① THE PREFIX '1W' SHALL BE ADDED TO ALL REINFORCING BARS LOCATED IN WALL 1.
- ② THE MINIMUM BAR LAP LENGTHS ARE AS FOLLOWS:
#5 BAR ~ 2'-0"
#6 BAR ~ 2'-6"
- ③ FOR ADDITIONAL NOTES, REFER TO THE STRUCTURE GENERAL NOTES ON SHEET 1 OF 34.
- ④ FOR ADDITIONAL WALL DETAILS, REFER TO SHEET 32 OF 34.
- ⑤ FOR WALL SECTIONS, REFER TO SHEETS 29 AND 30 OF 34.
- ⑥ HORIZONTAL DIMENSIONS ARE GIVEN ALONG FRONT FACE OF WALL.
- ⑦ THE EXISTING 12" VSP FROM FROM STA. 140+10 TO THE END OF WALL NUMBER 1 IS TO REMAIN. THE CONTRACTOR SHALL EXERCISE EXTREME CARE AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE UTILITY DURING ALL CONSTRUCTION OPERATIONS.

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| DATE | 01/17/02 |
| REVIEWED | B.K.L. |
| STRUCTURE FILE NUMBER | N/A |
| DRAWN | A.L.H. |
| CHECKED | REVISD |
| DESIGNED | L.M.P. |
| C.A.F. | |

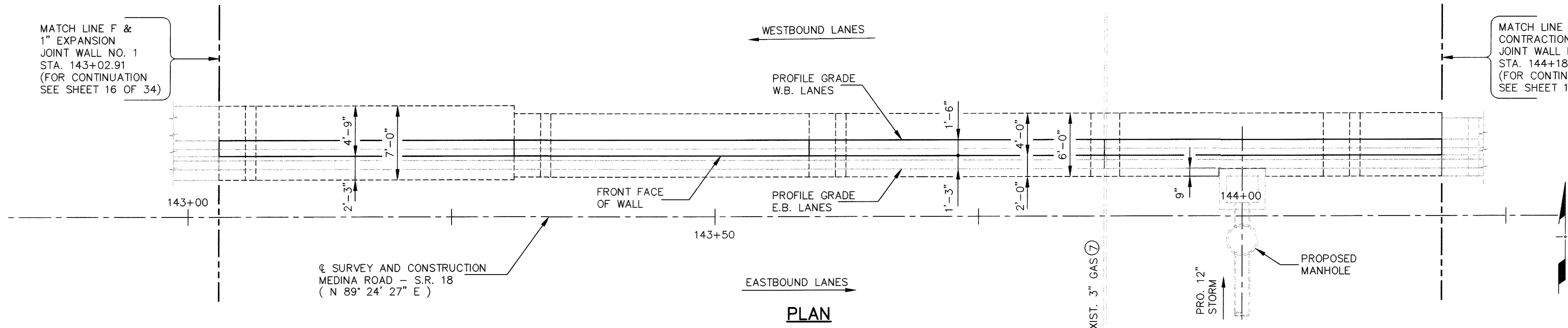
DETAIL WALL 1 - (PANELS W1-21 THRU W1-24)
S.R. 18 - WALL NUMBER 1
STA. 141+74.92 TO STA. 143+02.91

MED-18-15.13

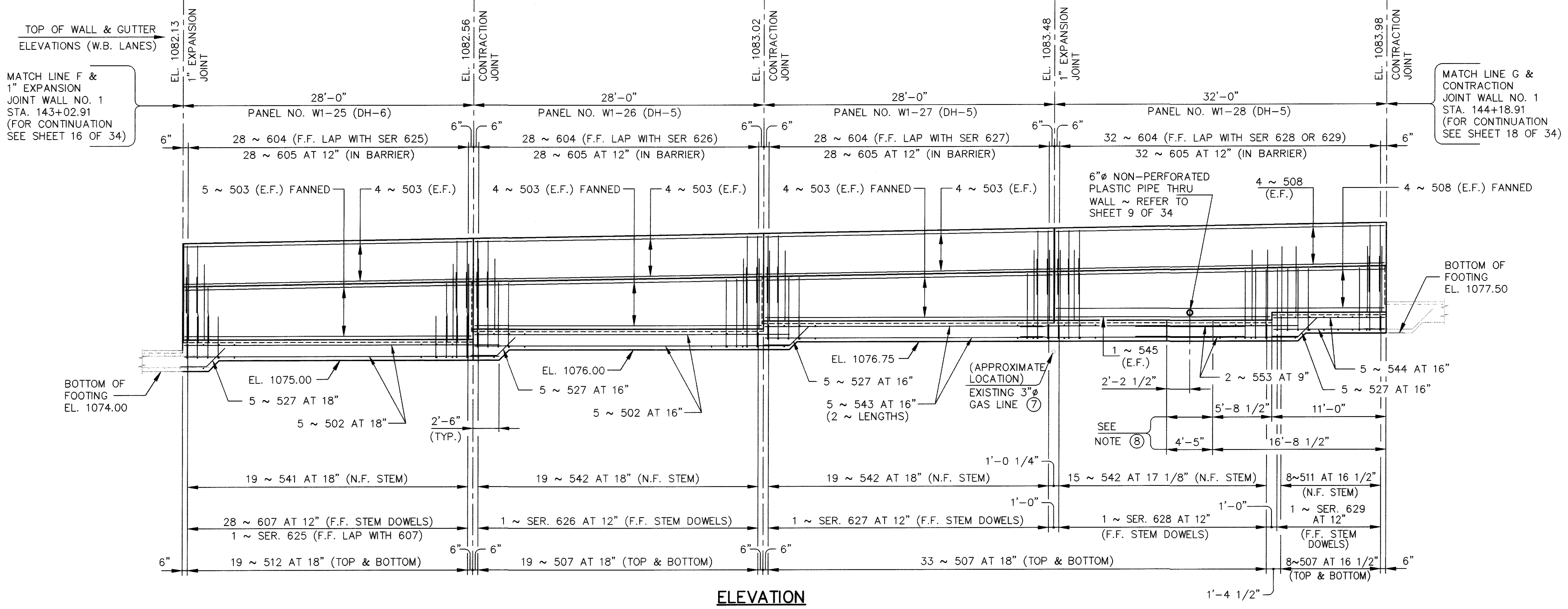
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MATCH LINE F & 1" EXPANSION JOINT WALL NO. 1 STA. 143+02.91 (FOR CONTINUATION SEE SHEET 16 OF 34)

MATCH LINE G & CONTRACTION JOINT WALL NO. 1 STA. 144+18.91 (FOR CONTINUATION SEE SHEET 18 OF 34)



PLAN



ELEVATION

ABBREVIATIONS

SER. - SERIES
E.F. - EACH FACE
N.F. - FAR FACE
N.F. - NEAR FACE

- ① THE PREFIX '1W' SHALL BE ADDED TO ALL REINFORCING BARS LOCATED IN WALL 1.
- ② THE MINIMUM BAR LAP LENGTHS ARE AS FOLLOWS:
#5 BAR ~ 2'-0"
#6 BAR ~ 2'-6"
- ③ FOR ADDITIONAL NOTES, REFER TO THE STRUCTURE GENERAL NOTES ON SHEET 1 OF 34.

NOTES:

- ④ FOR ADDITIONAL WALL DETAILS, REFER TO SHEET 32 OF 34.
- ⑤ FOR WALL SECTIONS, REFER TO SHEETS 29 AND 30 OF 34.
- ⑥ THE EXISTING 12" VSP FROM FROM STA. 140+10 TO THE END OF WALL NUMBER 1 IS TO REMAIN. THE CONTRACTOR SHALL EXERCISE EXTREME CARE AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE UTILITY DURING ALL CONSTRUCTION OPERATIONS.
- ⑦ THE EXISTING 3" GAS LINE SHOWN IS TO BE REMOVED BY OTHERS PRIOR TO CONSTRUCTION.
- ⑧ FOR CATCH BASIN NOTCH AND ADDITIONAL DRAINAGE DETAILS SEE SHEET 32 OF 34 AND ROADWAY DRAINAGE SHEET 229 OF 362.

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| DESIGNED | L.M.P. | C.A.R. |
| DRAWN | A.L.H. | REVISED |
| REVIEWED | B.K.L. | 01/17/02 |
| DATE | 01/17/02 | STRUCTURE FILE NUMBER |
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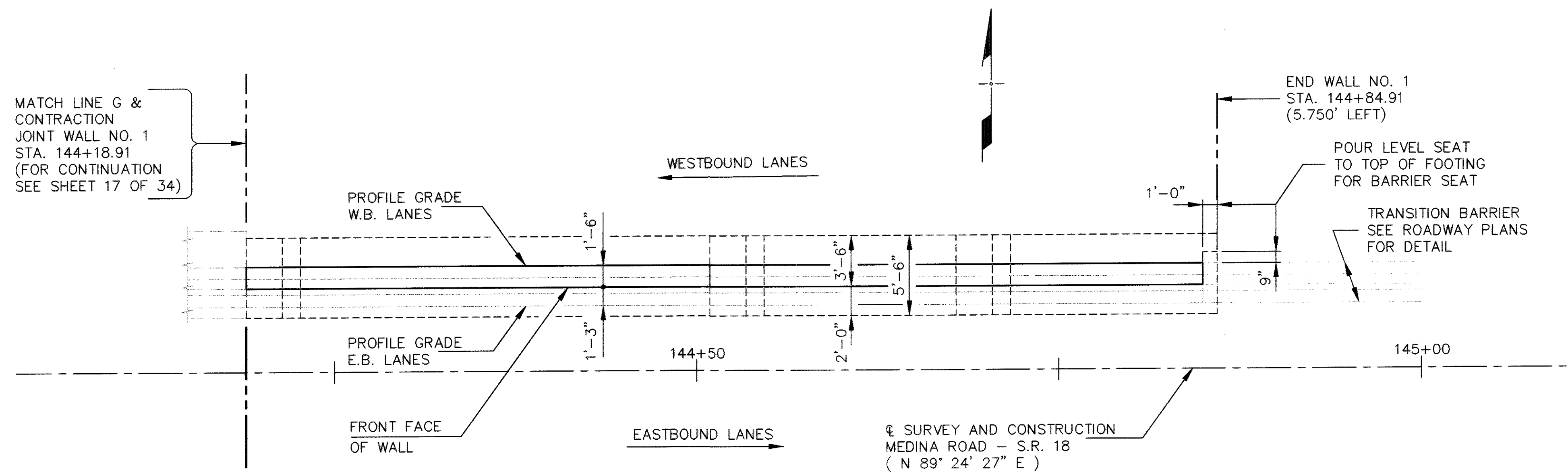
DETAIL WALL 1 - (PANELS W1-25 THRU W1-28)
 S.R. 18 - WALL NUMBER 1
 STA. 143+02.91 TO STA. 144+18.91

MED-18-15.13

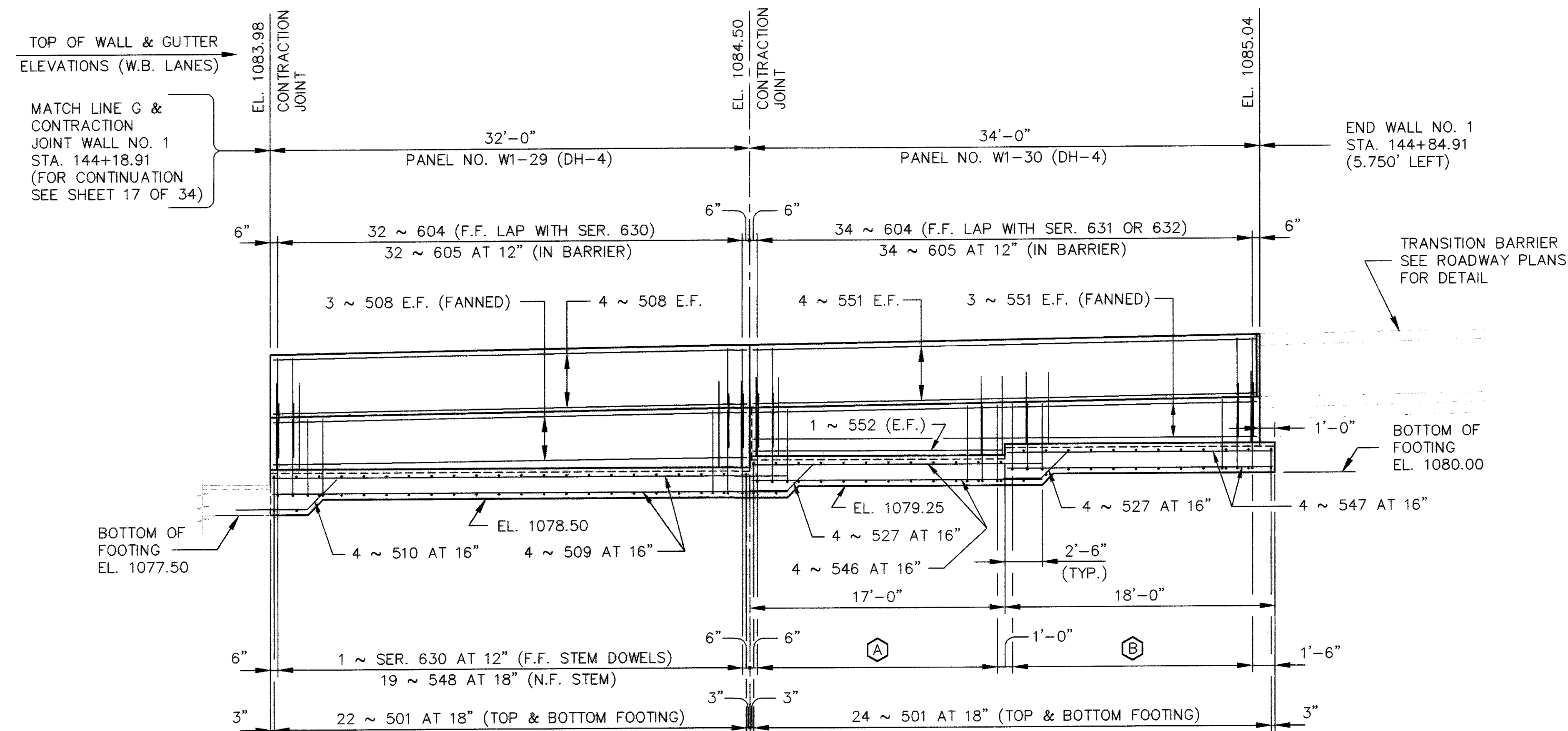
17 / 34

248
 362

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PLAN



ELEVATION

LEGEND

- Ⓐ 1 ~ SER. 631 AT 12" (F.F. STEM DOWELS)
12 ~ 549 AT 18" (N.F. STEM)
- Ⓑ 1 ~ SER. 632 AT 12" (F.F. STEM DOWELS)
11 ~ 550 AT 18" (N.F. STEM)

NOTES:

- ① THE PREFIX '1W' SHALL BE ADDED TO ALL REINFORCING BARS LOCATED IN WALL 1.
- ② THE MINIMUM BAR LAP LENGTHS ARE AS FOLLOWS:
#5 BAR ~ 2'-0"
#6 BAR ~ 2'-6"
- ③ FOR ADDITIONAL NOTES, REFER TO THE STRUCTURE GENERAL NOTES ON SHEET 1 OF 34.
- ④ FOR ADDITIONAL WALL DETAILS, REFER TO SHEET 32 OF 34.
- ⑤ FOR WALL SECTIONS, REFER TO SHEETS 29 AND 30 OF 34.
- ⑥ THE EXISTING 12" VSP FROM STA. 140+10 TO THE END OF WALL NUMBER 1 IS TO REMAIN. THE CONTRACTOR SHALL EXERCISE EXTREME CARE AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE UTILITY DURING ALL CONSTRUCTION OPERATIONS.

ABBREVIATIONS

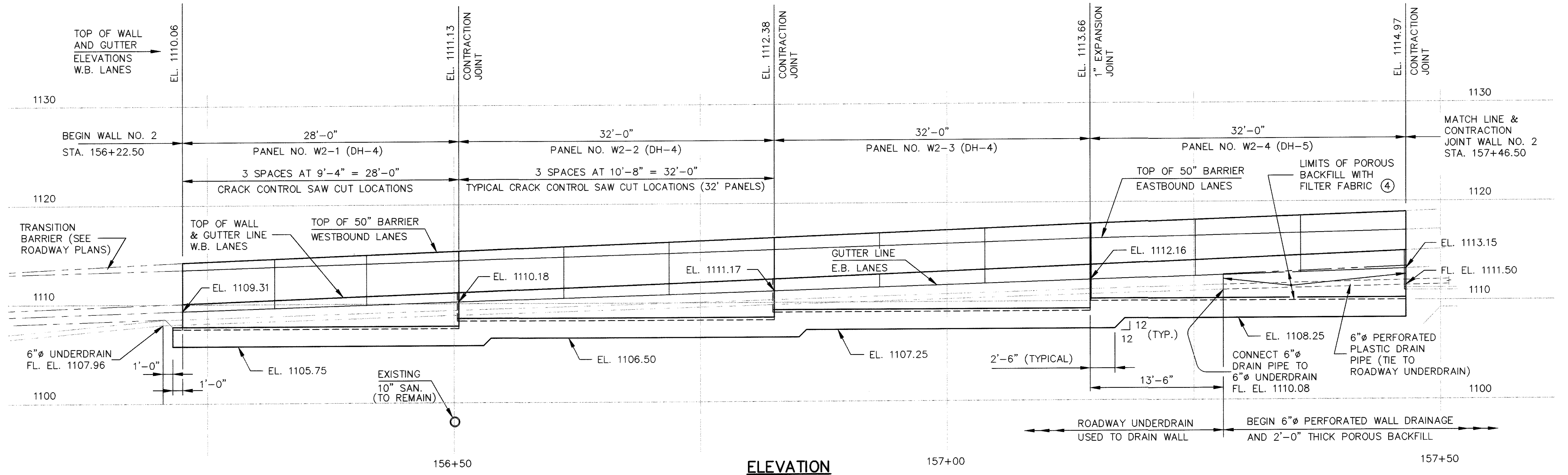
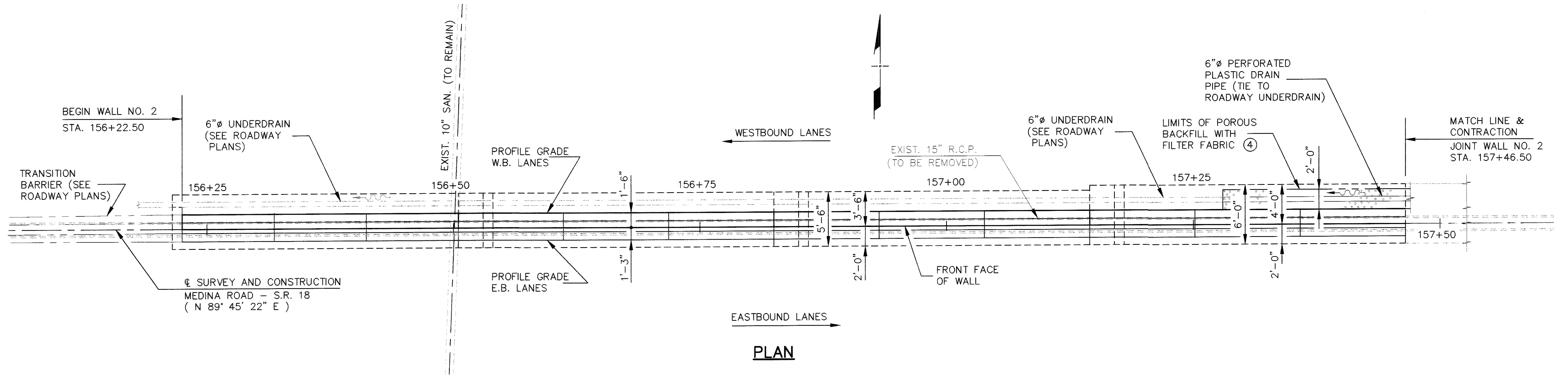
- SER. - SERIES
- E.F. - EACH FACE
- N.F. - FAR FACE
- N.F. - NEAR FACE

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| DESIGNED | DATE |
| L.M.P. | 01/17/02 |
| CHECKED | B.K.L. |
| C.A.R. | REVIEWED |
| | STRUCTURE FILE NUMBER |
| | N/A |

DETAIL WALL 1 - (PANELS W1-29 AND W1-30)
S.R. 18 - WALL NUMBER 1
STA. 144+18.91 TO STA. 144+84.91

MED-18-15.13

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- NOTE:**
- ① WALL NUMBER (2) WAS DESIGNED FOR A MAXIMUM BEARING PRESSURE OF 3.5 k.s.f.
 - ② FOR WALL SECTIONS, REFER TO SHEET 31 OF 34.
 - ③ FOR ADDITIONAL WALL DETAILS, REFER TO SHEET 32 OF 34.
 - ④ POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, DOWN TO THE TOP OF THE FOOTING AND Laterally TO THE ENDS OF THE WALL.

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| L.M.P. | A.L.H. | B.K.L. | 01/17/02 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | N/A |
| C.A.R. | | | |

GENERAL PLAN AND ELEVATION
S.R. 18 - WALL NUMBER 2
STA. 156+22.50 TO 157+46.50

MED-18-15.13

19 / 34

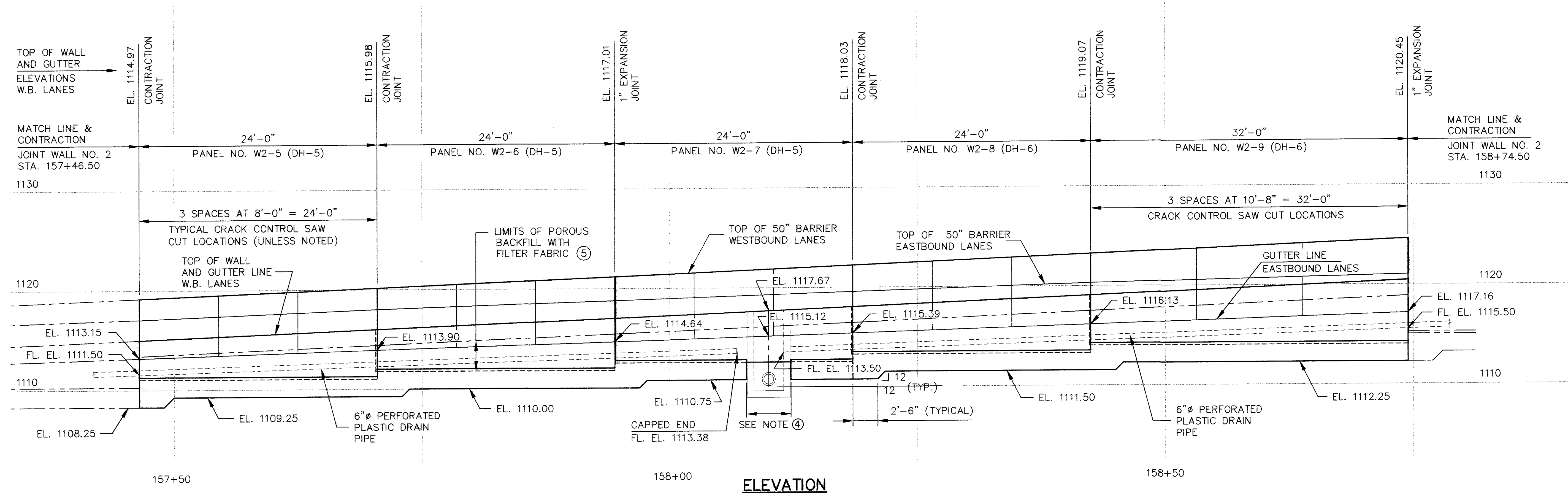
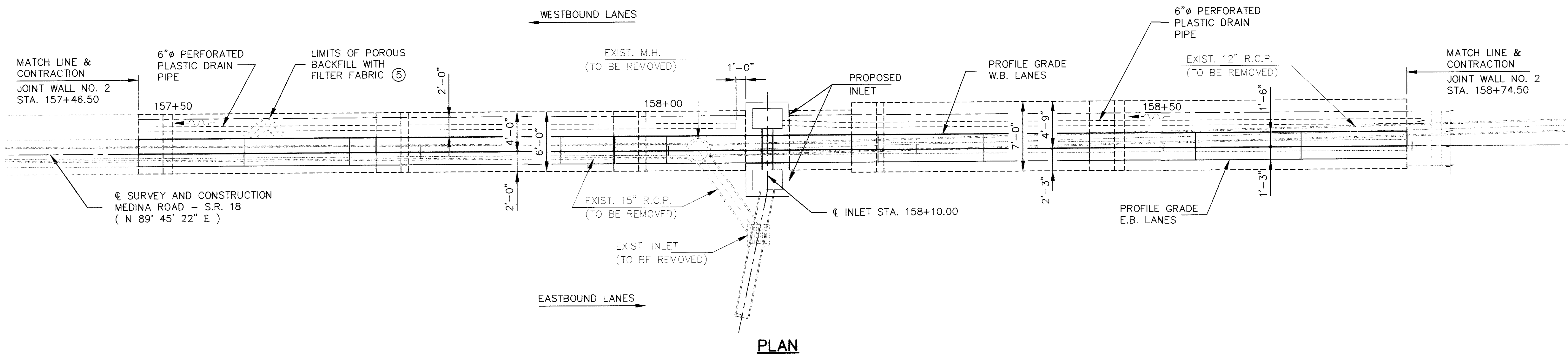
250
362

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| REVIEWED | DATE | STRUCTURE FILE NUMBER |
| B.K.L. | 01/17/02 | N/A |
| DRAWN | A.L.H. | REVISED |
| L.M.P. | | C.A.R. |

GENERAL PLAN AND ELEVATION
S.R. 18 - WALL NUMBER 2
STA. 157+46.50 TO 158+74.50

MED-18-15.13



- NOTE:**
- ① WALL NUMBER (2) WAS DESIGNED FOR A MAXIMUM BEARING PRESSURE OF 3.5 k.s.f.
 - ② FOR WALL SECTIONS, REFER TO SHEET 31 OF 34.
 - ③ FOR ADDITIONAL WALL DETAILS, REFER TO SHEET 32 OF 34.
 - ④ FOR CATCH BASIN NOTCH AND ADDITIONAL DRAINAGE DETAILS SEE SHEET 32 OF 34 AND ROADWAY DRAINAGE SHEET 228 OF 362.
 - ⑤ POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, DOWN TO THE TOP OF THE FOOTING AND Laterally TO THE ENDS OF THE WALL.

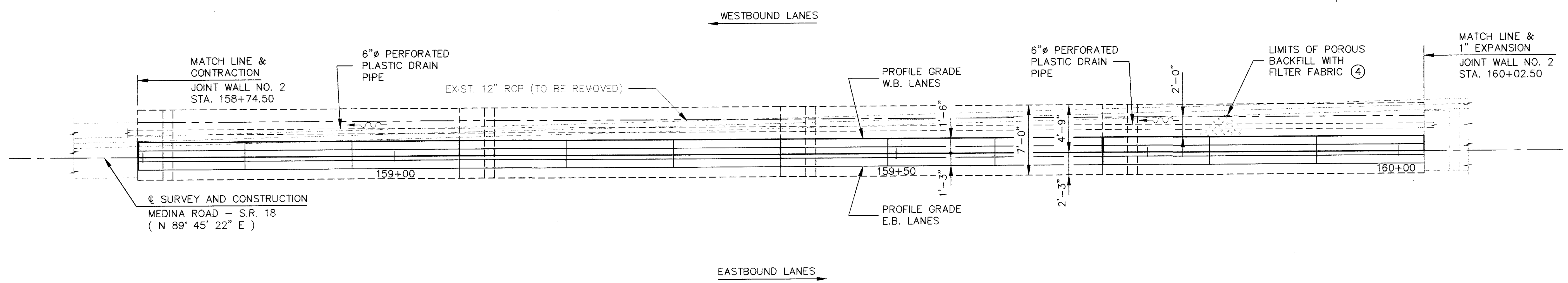
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| DATE | 01/17/02 |
| REVIEWED | B.K.L. |
| STRUCTURE FILE NUMBER | N/A |
| DRAWN | A.L.H. |
| REVIS | |
| CHECKED | C.A.R. |

GENERAL PLAN AND ELEVATION
S.R. 18 - WALL NUMBER 2
STA. 158+74.50 TO 160+02.50

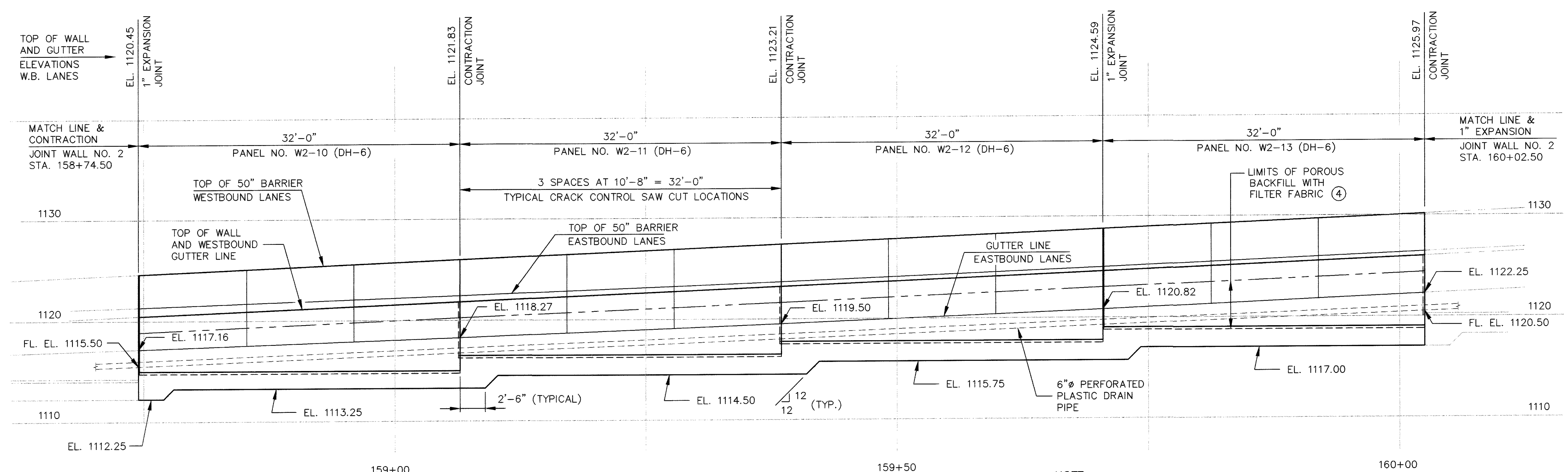
MED-18-15.13

21/34

252
362



PLAN

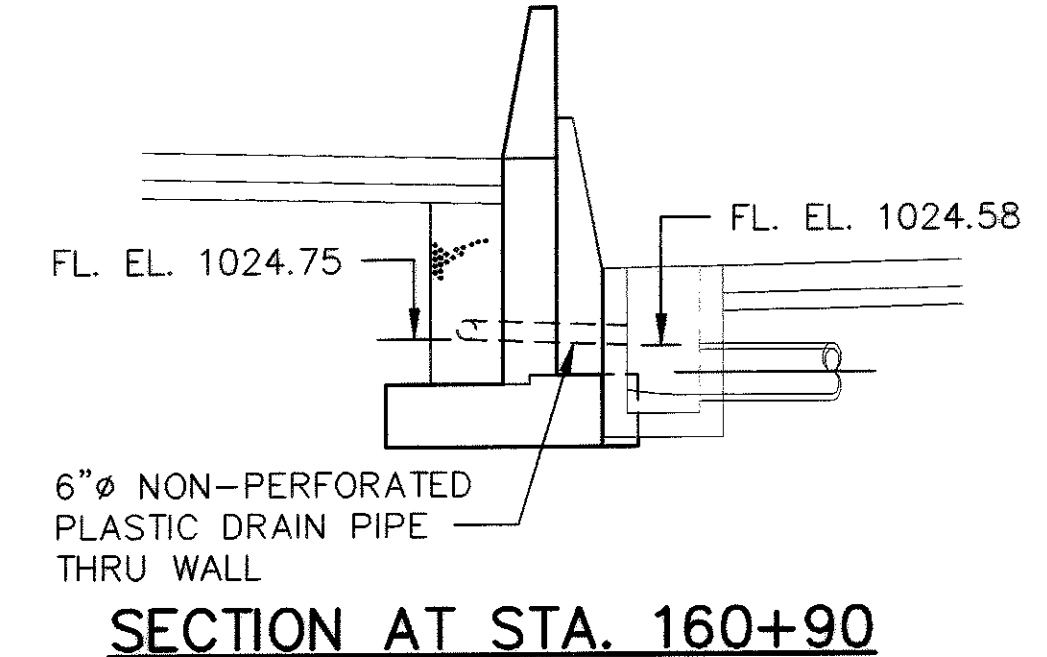
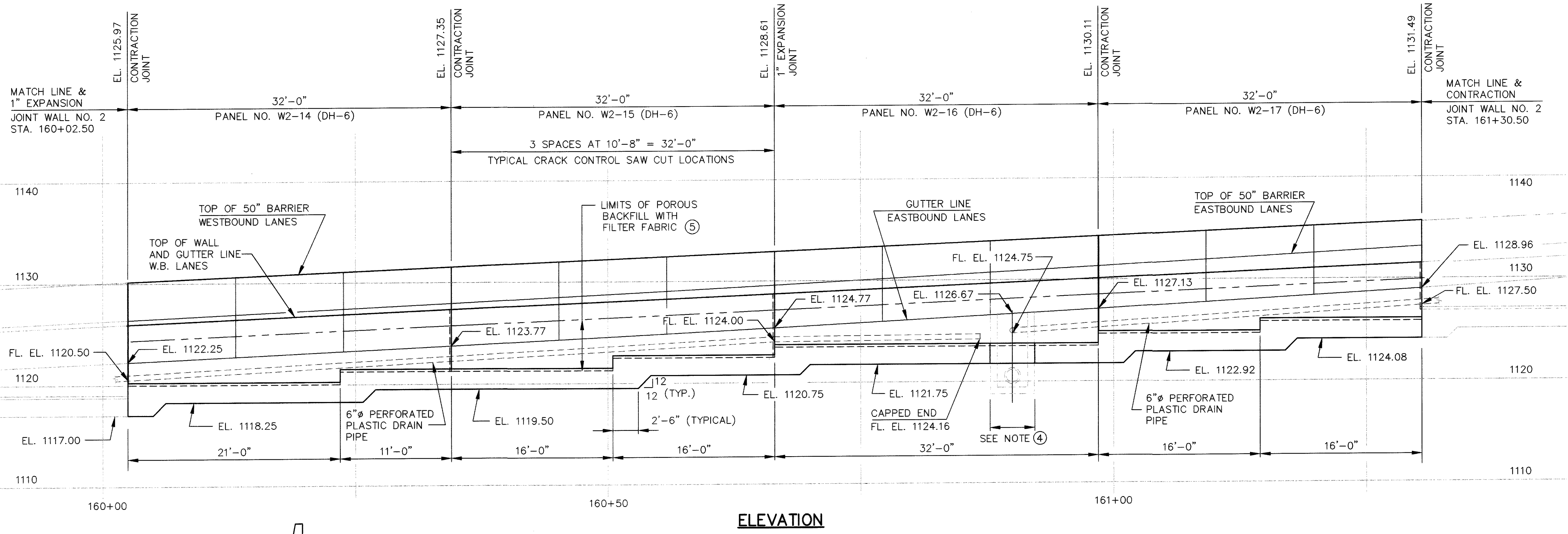
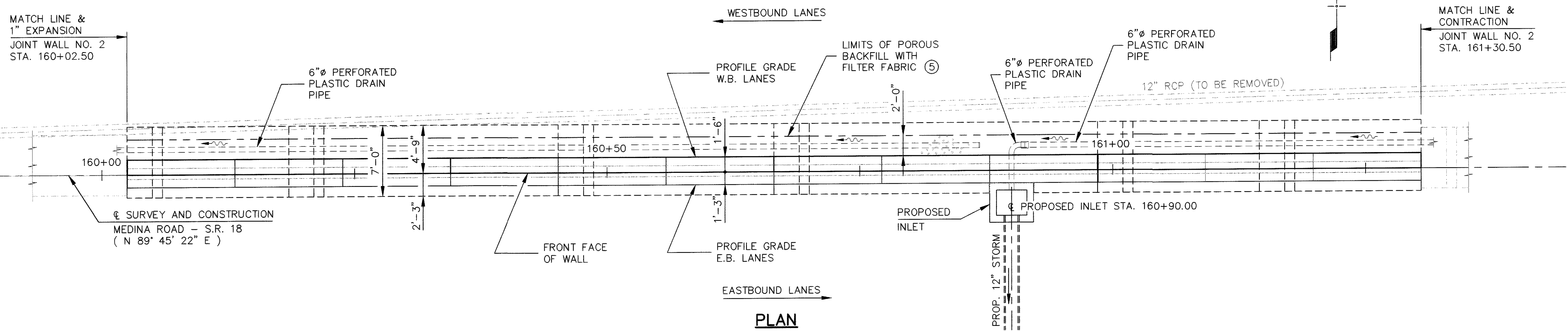


ELEVATION

- NOTE:**
- ① WALL NUMBER (2) WAS DESIGNED FOR A MAXIMUM BEARING PRESSURE OF 3.5 k.s.f.
 - ② FOR WALL SECTIONS, REFER TO SHEET 31 OF 34.
 - ③ FOR ADDITIONAL WALL DETAILS, REFER TO SHEET 32 OF 34.
 - ④ POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, DOWN TO THE TOP OF THE FOOTING AND Laterally TO THE ENDS OF THE WALL.

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- NOTE:**
- ① WALL NUMBER (2) WAS DESIGNED FOR A MAXIMUM BEARING PRESSURE OF 3.5 k.s.f.
 - ② FOR WALL SECTIONS, REFER TO SHEET 31 OF 34.
 - ③ FOR ADDITIONAL WALL DETAILS, REFER TO SHEET 32 OF 34.
 - ④ FOR CATCH BASIN NOTCH AND ADDITIONAL DRAINAGE DETAILS SEE SHEET 32 OF 34 AND ROADWAY SHEET 229 OF 362.
 - ⑤ POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, DOWN TO THE TOP OF THE FOOTING AND Laterally TO THE ENDS OF THE WALL.

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| DESIGNED | DRAWN | REVIEWED | DATE |
|----------|---------|-----------------------|----------|
| L.M.P. | A.L.H. | B.K.L. | 01/17/02 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | N/A |
| C.A.R. | | | |

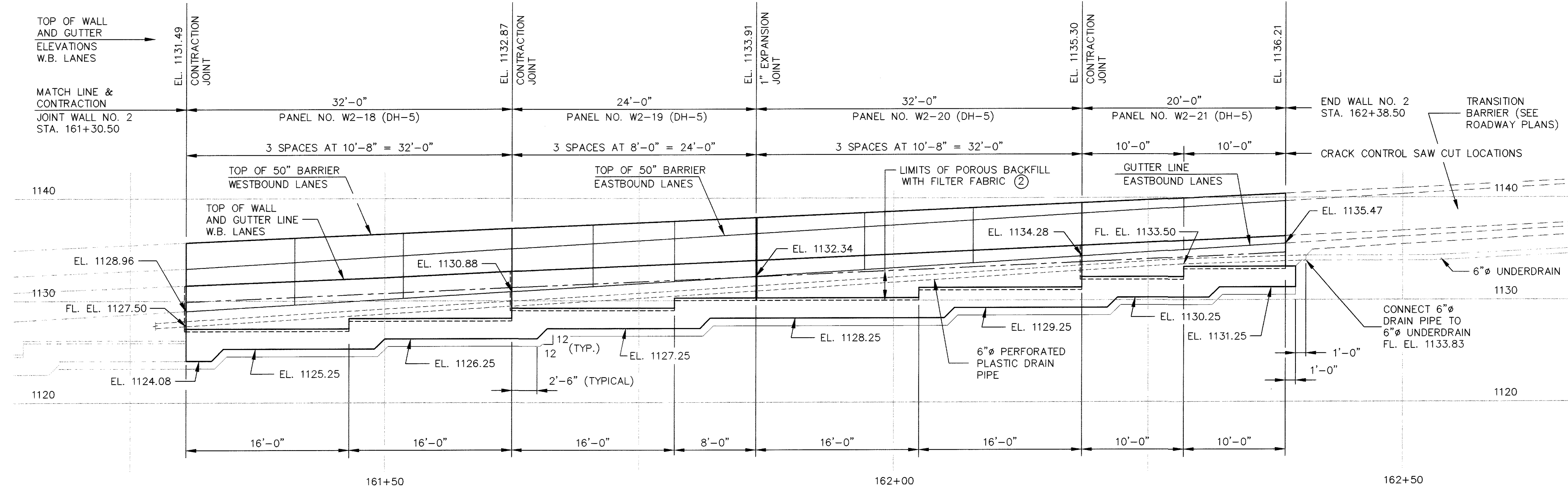
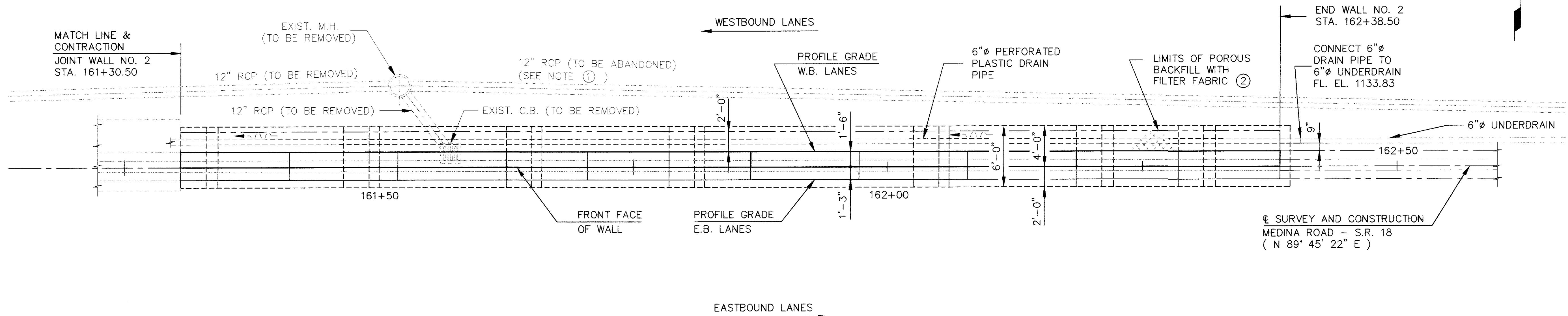
GENERAL PLAN AND ELEVATION
S.R. 18 - WALL NUMBER 2
STA. 160+02.50 TO 161+30.50

MED-18-15.13
22/34

253

362

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- NOTE:**
- ① SHOULD THE 12" R.C.P., TO BE ABANDONED, INTERFERE WITH THE RETAINING WALL FOOTING, THE PIPE SHALL BE REMOVED AND INCLUDED WITH ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN FOR PAYMENT.
 - ② POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, DOWN TO THE TOP OF THE FOOTING AND Laterally TO THE ENDS OF THE WALL.

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| DESIGNED | L.M.P. | CHECKED | C.A.R. |
| DRAWN | A.L.H. | REVIEWED | |
| DATE | 01/17/02 | REVIEWED | B.K.L. |
| DATE | 01/17/02 | STRUCTURE FILE NUMBER | N/A |

GENERAL PLAN AND ELEVATION

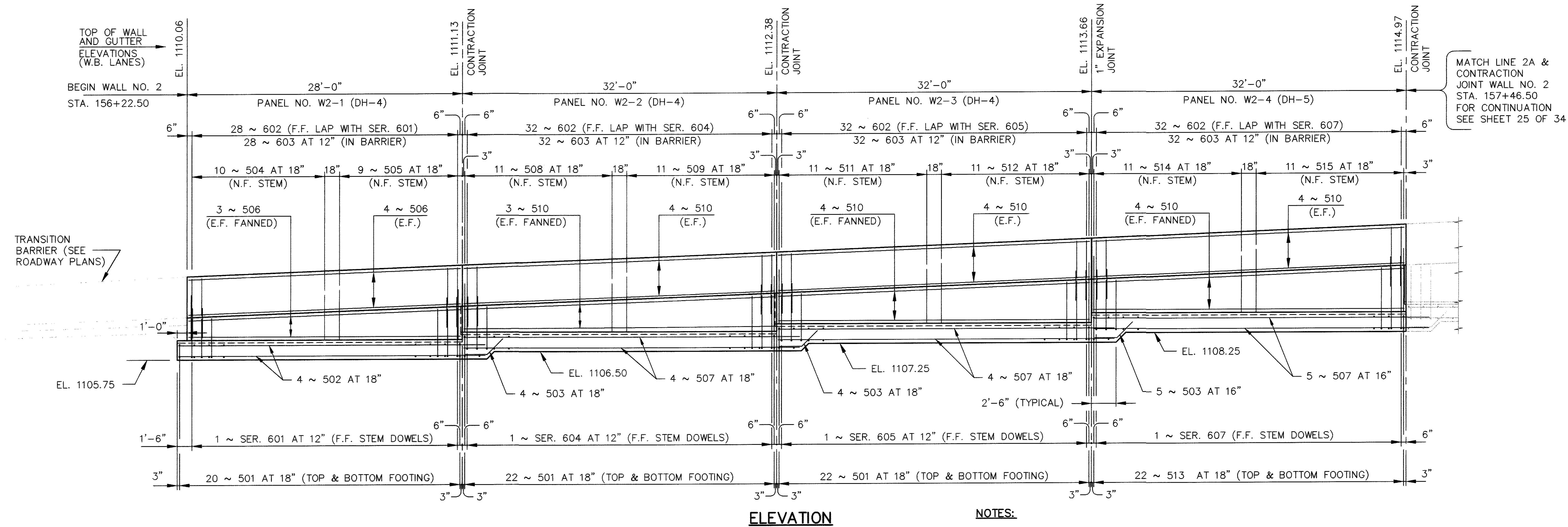
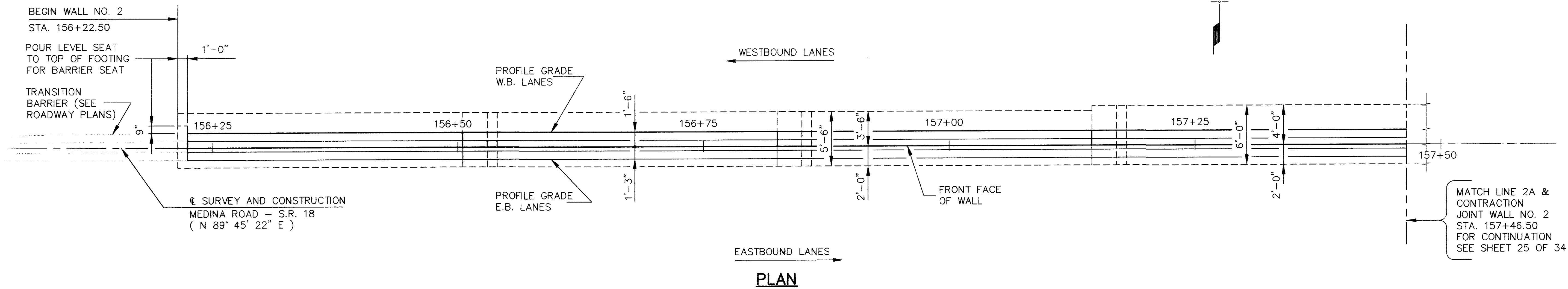
S.R. 18 - WALL NUMBER 2
STA. 161+30.50 TO 162+38.50

MED-18-15.13

23 / 36

254
362

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- NOTES:**
- THE PREFIX '2W' SHALL BE ADDED TO ALL REINFORCING BARS LOCATED IN WALL 2.
 - THE MINIMUM BAR LAP LENGTHS ARE AS FOLLOWS:
#5 BAR - 2'-0"
#6 BAR - 2'-6"
 - FOR ADDITIONAL NOTES, REFER TO THE STRUCTURE GENERAL NOTES ON SHEET 1 OF 34.
- LEGEND:**
- SER. - SERIES
 - E.F. - EACH FACE
 - N.F. - NEAR FACE
 - F.F. - FAR FACE

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| DESIGNED | L.M.P. | CHECKED | C.A.R. |
| DRAWN | A.L.H. | REVISED | |
| REVIEWED | B.K.L. | DATE | 01/17/02 |
| STRUCTURE FILE NUMBER | N/A | | |

DETAIL WALL 2 - (PANELS W2-1 THRU W2-4)
S.R. 18 - WALL NUMBER 2
STA. 156+22.50 TO 157+46.50

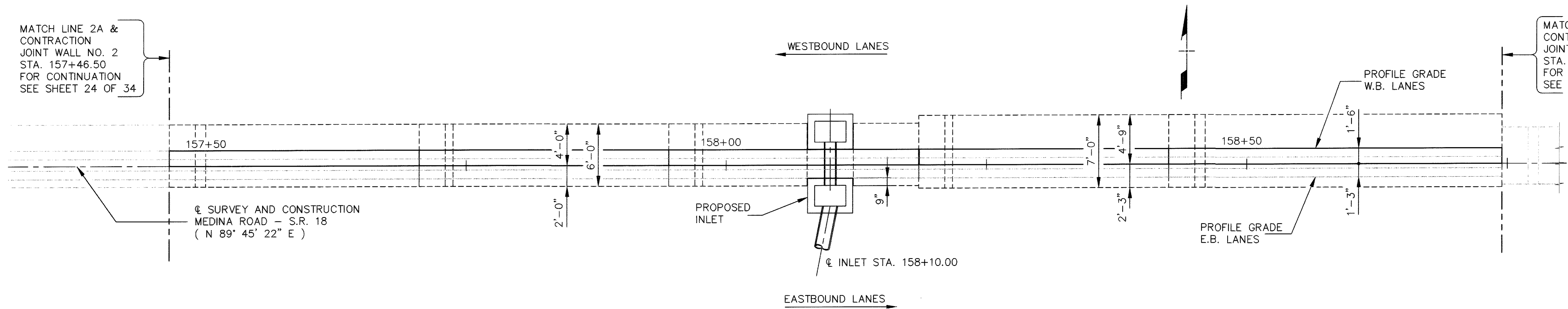
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24 / 34

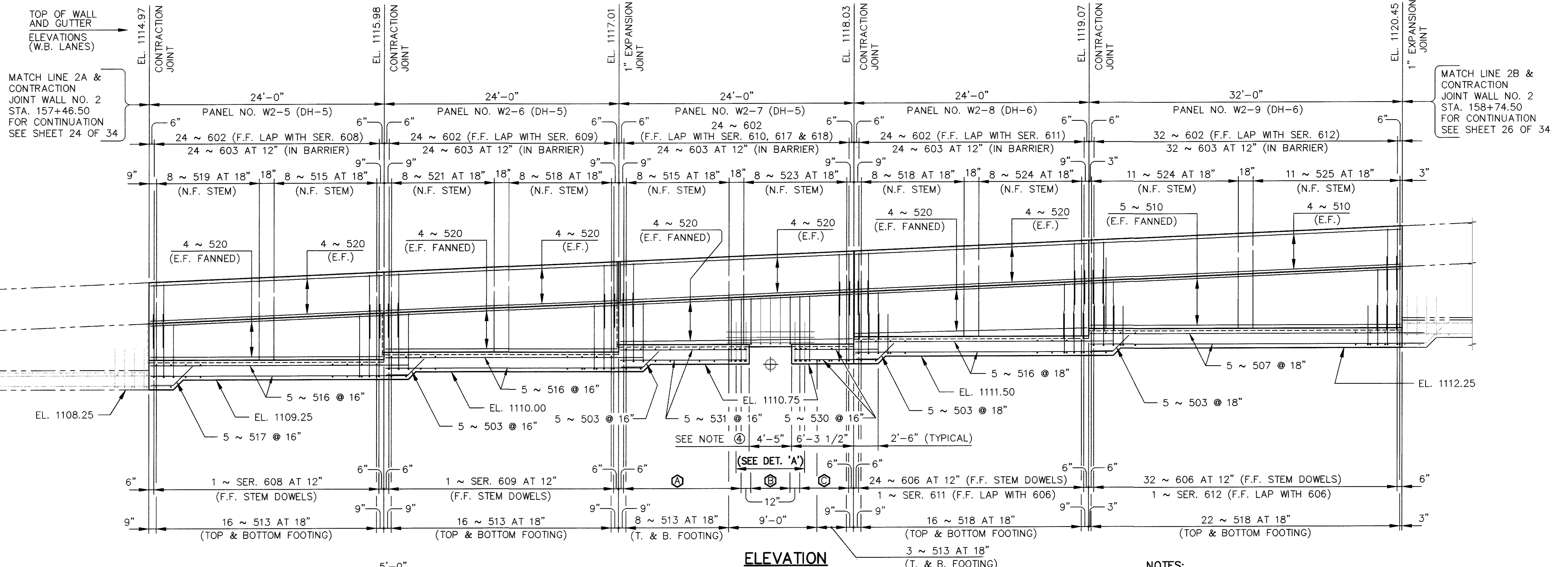
255
362

MATCH LINE 2A & CONSTRUCTION JOINT WALL NO. 2 STA. 157+46.50 FOR CONTINUATION SEE SHEET 24 OF 34

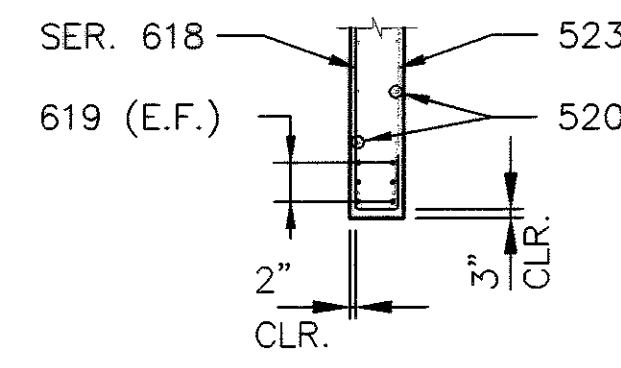
MATCH LINE 2B & CONSTRUCTION JOINT WALL NO. 2 STA. 158+74.50 FOR CONTINUATION SEE SHEET 26 OF 34



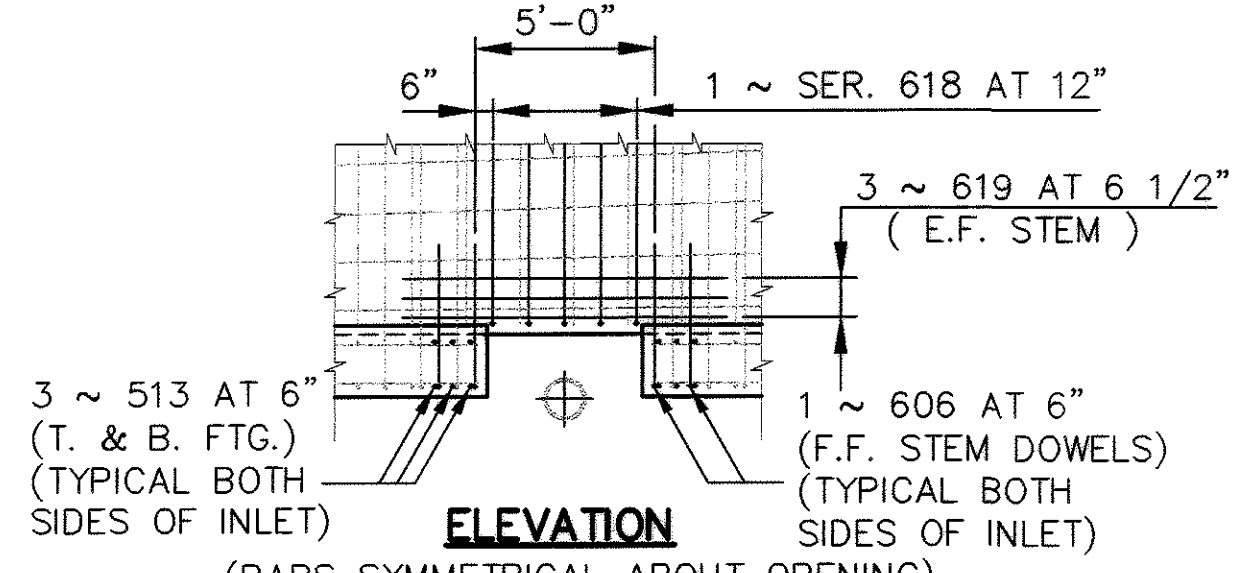
PLAN



ELEVATION



SECTION
(SECTION THRU FOOTING VOID)



DETAIL 'A'
(SHOWING FOOTING VOID)

- Ⓐ 1 ~ SER. 610 (F.F. STEM DOWELS)
- Ⓑ 1 ~ SER. 618 (STEM DOWELS)
- Ⓒ 1 ~ SER. 617 (F.F. STEM DOWELS)

NOTES:

- ① THE PREFIX '2W' SHALL BE ADDED TO ALL REINFORCING BARS LOCATED IN WALL 2.
- ② THE MINIMUM BAR LAP LENGTHS ARE AS FOLLOWS:
#5 BAR - 2'-0"
#6 BAR - 2'-6"
- ③ FOR ADDITIONAL NOTES, REFER TO THE STRUCTURE GENERAL NOTES ON SHEET 1 OF 34.
- ④ FOR CATCH BASIN NOTCH AND ADDITIONAL DRAINAGE DETAILS SEE SHEET 32 OF 34 AND ROADWAY DRAINAGE SHEET 228 OF 362.

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|----------|-----------------------|
| DESIGNED | DATE |
| L.M.P. | 01/17/02 |
| CHECKED | B.K.L. |
| C.A.R. | STRUCTURE FILE NUMBER |
| | N/A |

DETAIL WALL 2 - (PANELS W2-5 THRU W2-9)
S.R. 18 - WALL NUMBER 2
STA. 157+46.50 TO 158+74.50

MED-18-15.13

25/34

256
362

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MATCH LINE 2B & CONTRACTION JOINT WALL NO. 2 STA. 158+74.50 FOR CONTINUATION SEE SHEET 25 OF 34

MATCH LINE 2C & 1" EXPANSION JOINT WALL NO. 2 STA. 160+02.50 FOR CONTINUATION SEE SHEET 27 OF 34

☐ SURVEY AND CONSTRUCTION MEDINA ROAD - S.R. 18 (N 89° 45' 22" E)

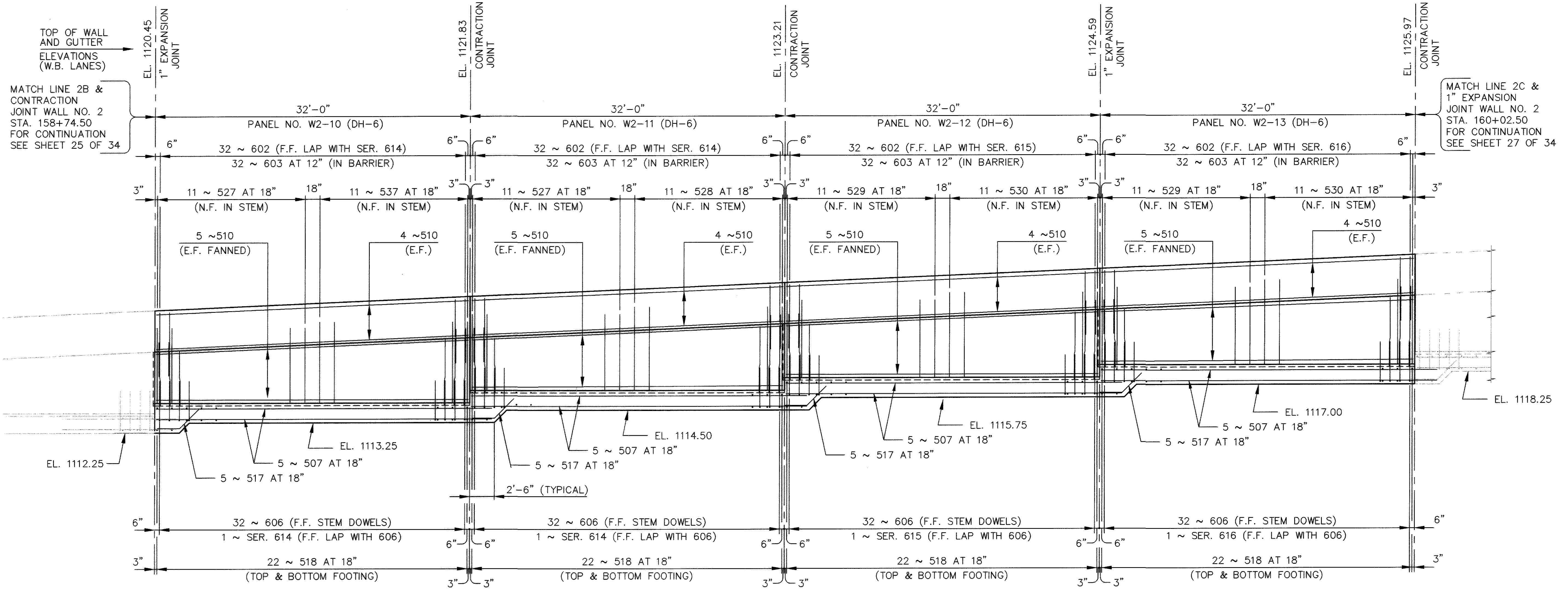
WESTBOUND LANES

EASTBOUND LANES

PROFILE GRADE W.B. LANES

PROFILE GRADE E.B. LANES

PLAN



ELEVATION

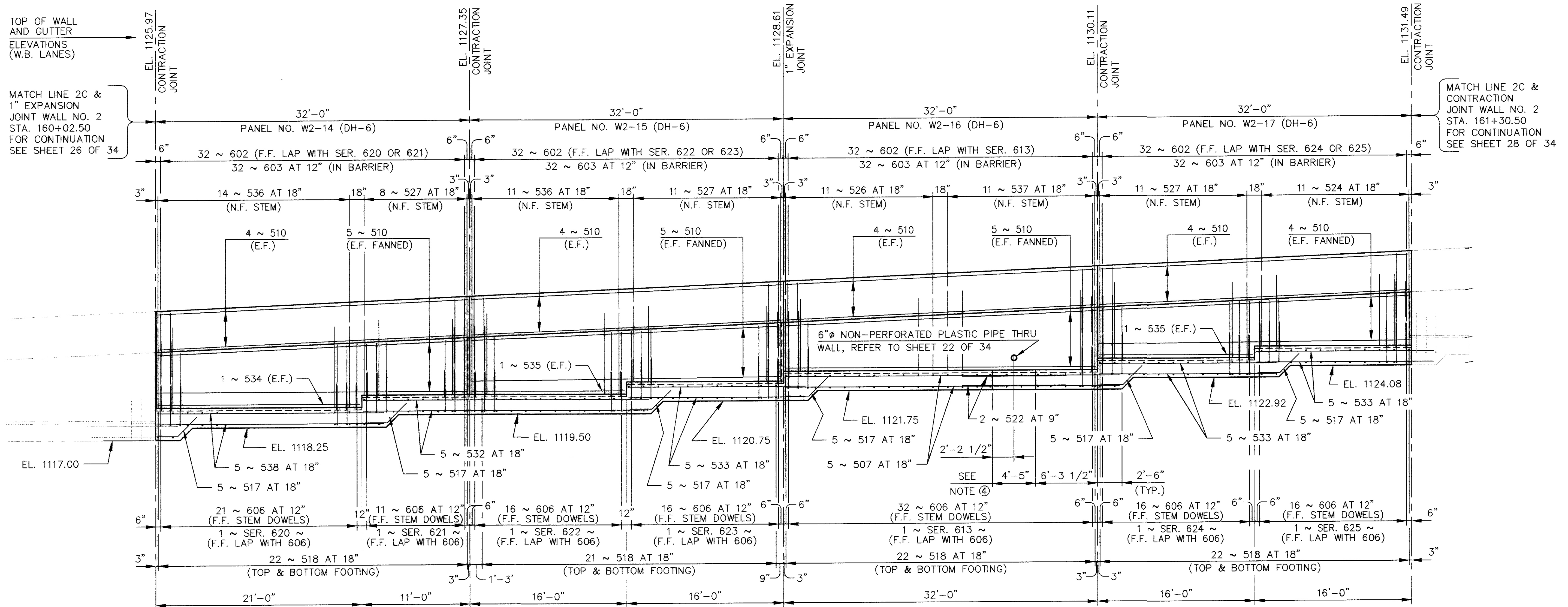
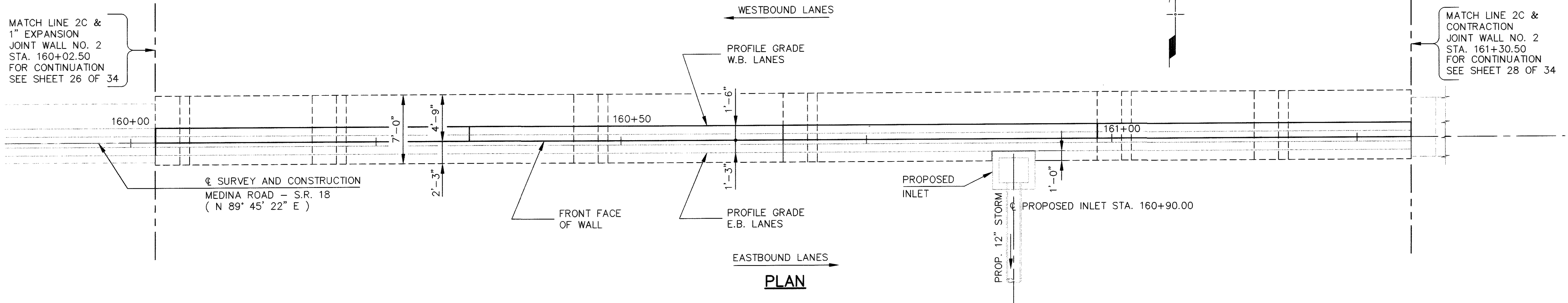
- NOTES:**
- ① THE PREFIX '2W' SHALL BE ADDED TO ALL REINFORCING BARS LOCATED IN WALL 2.
 - ② THE MINIMUM BAR LAP LENGTHS ARE AS FOLLOWS:
#5 BAR - 2'-0"
#6 BAR - 2'-6"
 - ③ FOR ADDITIONAL NOTES, REFER TO THE STRUCTURE GENERAL NOTES ON SHEET 1 OF 34.

| | | | |
|-----------------------|--------|---------|----------|
| DESIGNED | L.M.P. | CHECKED | C.A.R. |
| DRAWN | A.L.H. | REVISED | |
| REVIEWED | B.K.L. | DATE | 01/17/02 |
| STRUCTURE FILE NUMBER | | N/A | |

DETAIL WALL 2 - (PANELS W2-10 THRU W2-13)
S.R. 18 - WALL NUMBER 2
STA. 158+74.50 TO 160+02.50

MED-18-15.13

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- NOTES:**
- ① THE PREFIX '2W' SHALL BE ADDED TO ALL REINFORCING BARS LOCATED IN WALL 2.
 - ② THE MINIMUM BAR LAP LENGTHS ARE AS FOLLOWS:
#5 BAR - 2'-0"
#6 BAR - 2'-6"
 - ③ FOR ADDITIONAL NOTES, REFER TO THE STRUCTURE GENERAL NOTES ON SHEET 1 OF 34.
 - ④ FOR CATCH BASIN NOTCH AND ADDITIONAL DRAINAGE DETAILS SEE SHEET 32 OF 34 AND ROADWAY DRAINAGE SHEET 229 OF 362.

URS
 564 White Pond Drive
 Alhambra, CA 91801-4320-1100
 (800) 856-9111

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| DESIGNED | DATE | REVIEWED | DATE |
| L.M.P. | 01/17/02 | B.K.L. | 01/17/02 |
| CHECKED | | A.L.H. | |
| C.A.R. | | REVISED | N/A |
| | | STRUCTURE FILE NUMBER | N/A |

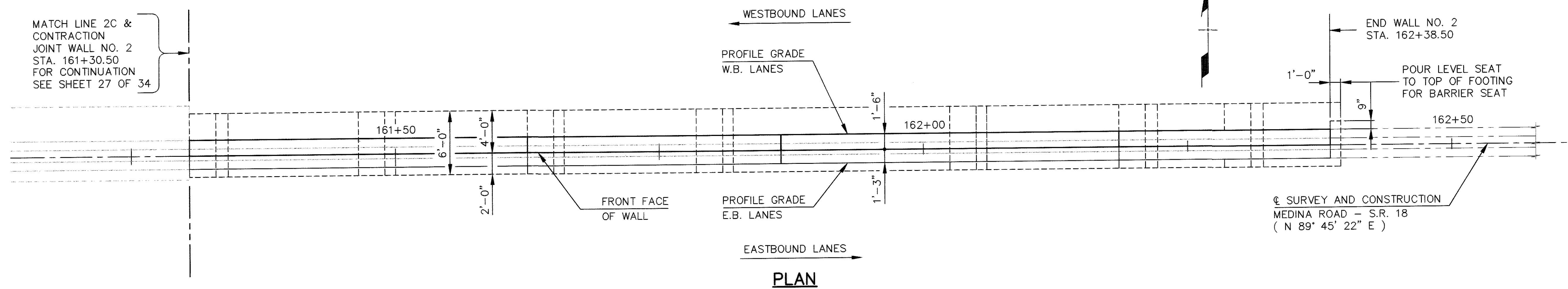
DETAIL WALL 2 - (PANELS W2-14 THRU W2-17)
 S.R. 18 - WALL NUMBER 2
 STA. 160+02.50 TO 161+30.50

MED-18-15.13

27 / 34

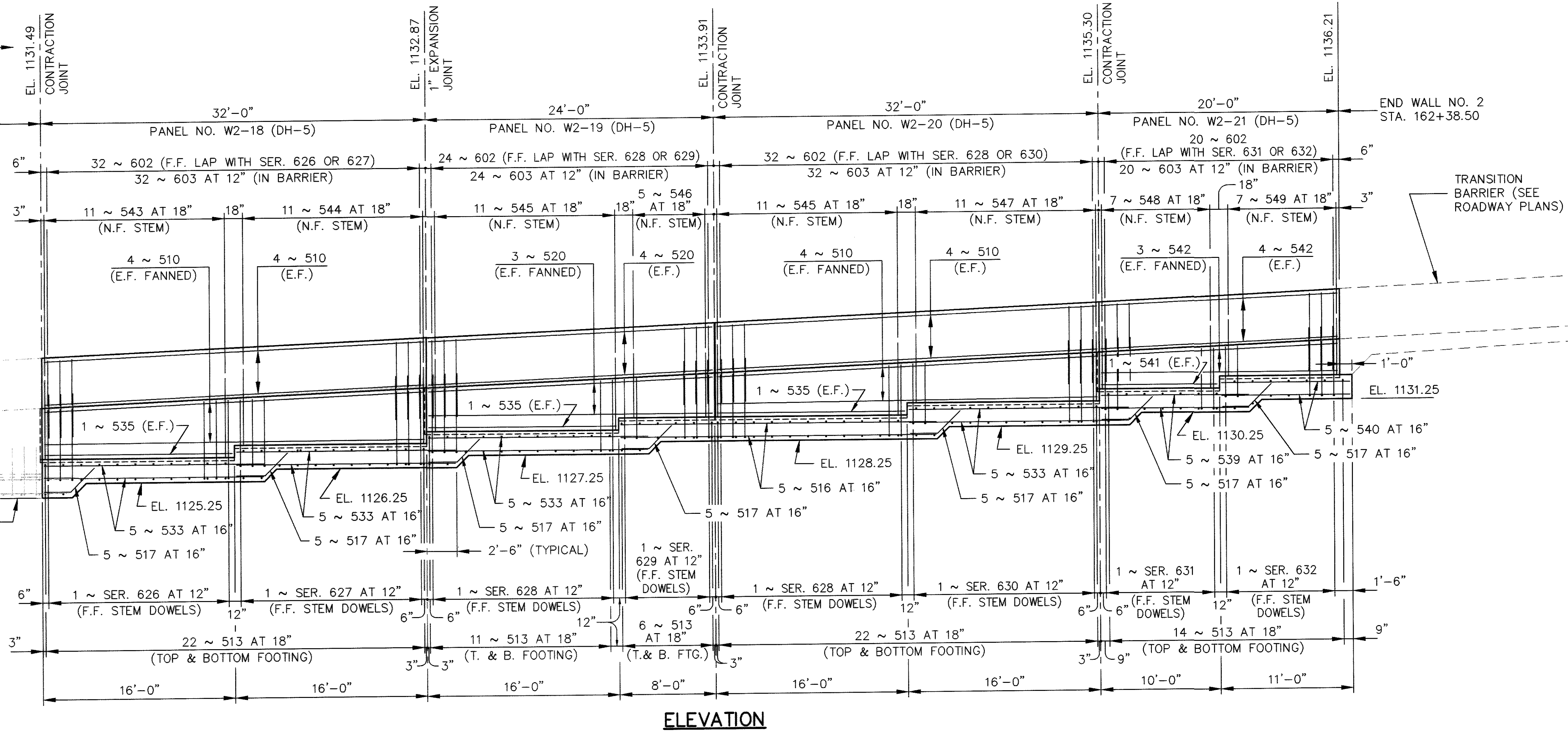
258
 362

MATCH LINE 2C & CONTRACTION JOINT WALL NO. 2 STA. 161+30.50 FOR CONTINUATION SEE SHEET 27 OF 34



TOP OF WALL AND GUTTER ELEVATIONS (W.B. LANES)

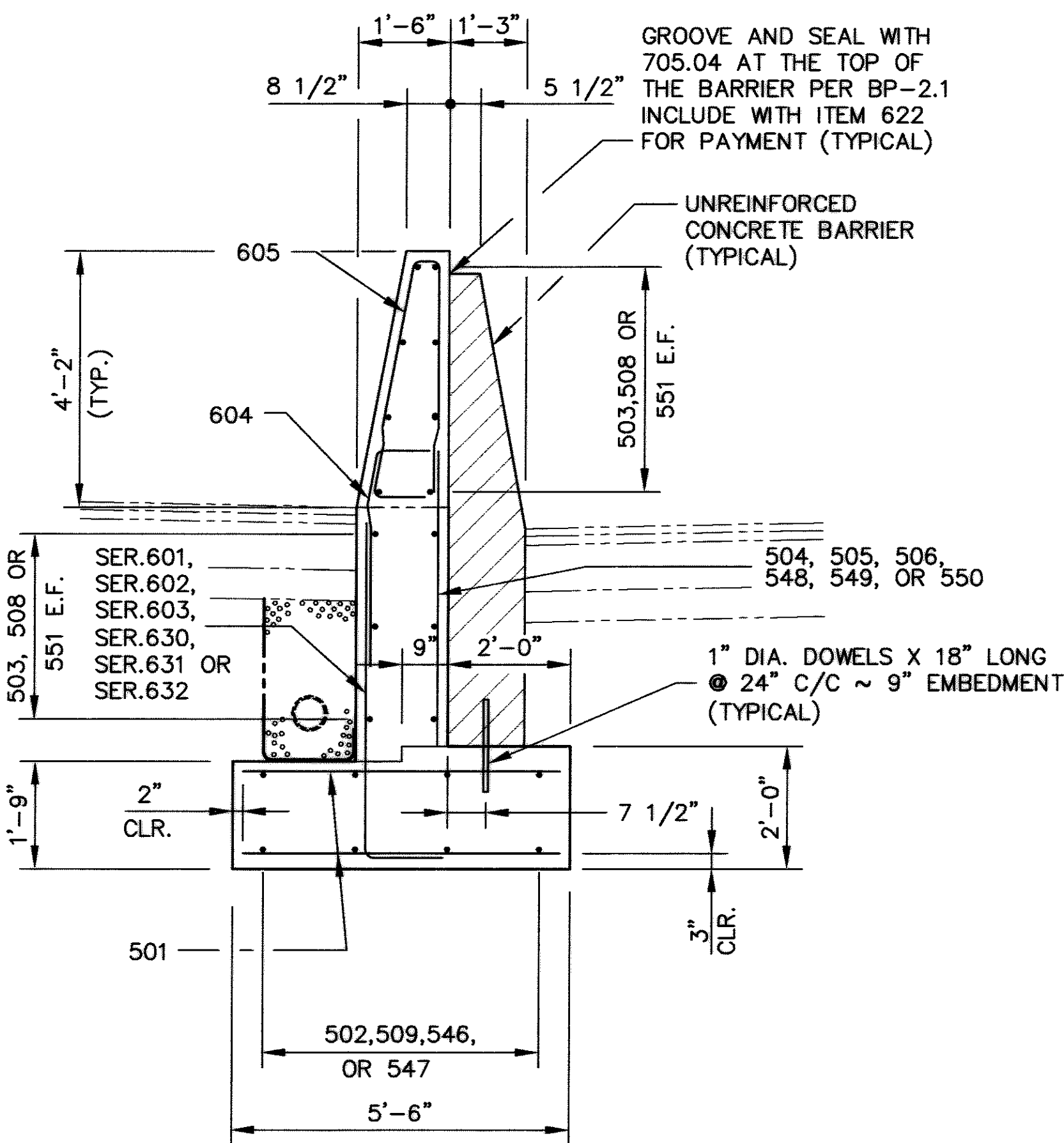
MATCH LINE 2C & CONTRACTION JOINT WALL NO. 2 STA. 161+30.50 FOR CONTINUATION SEE SHEET 27 OF 34



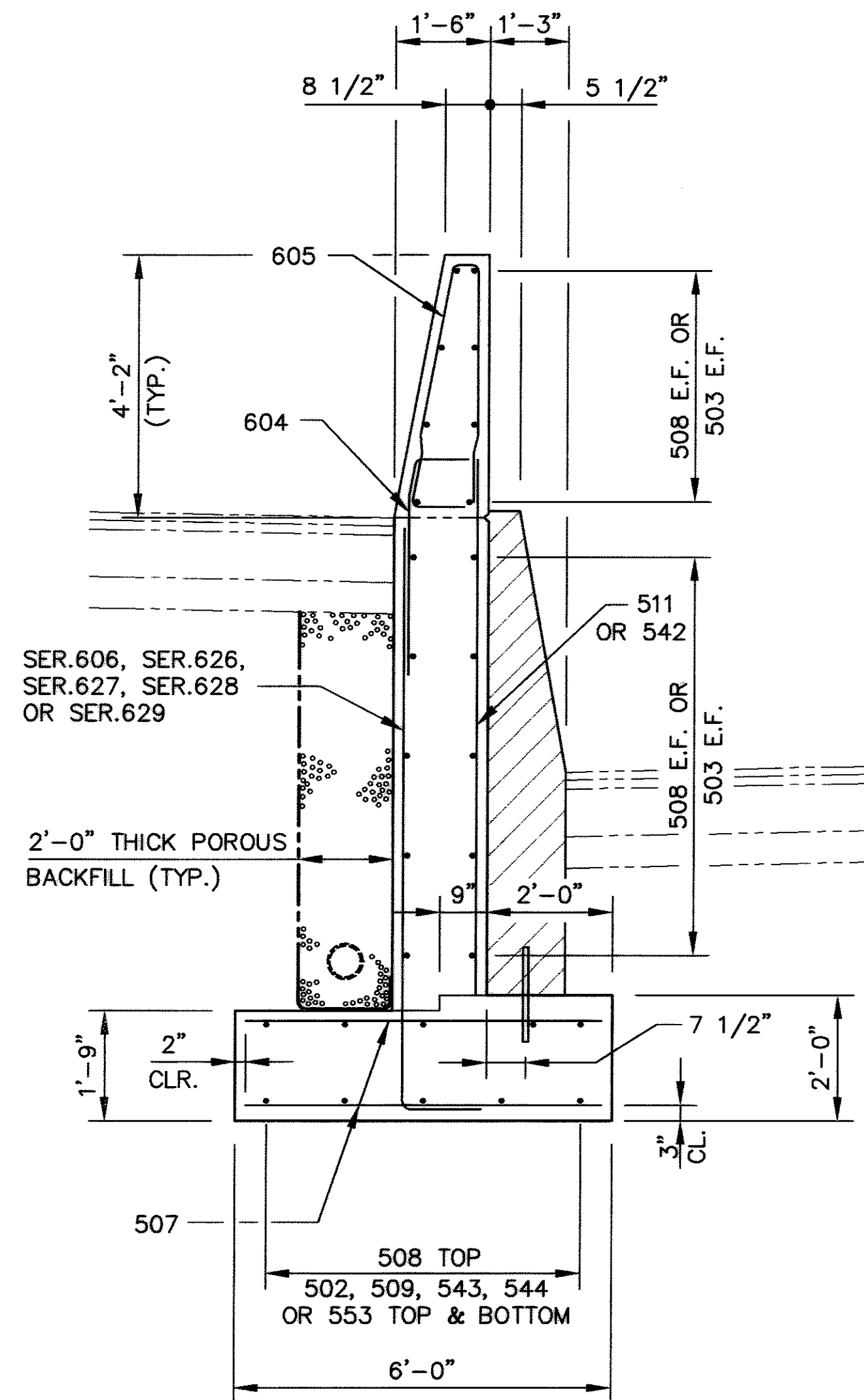
- NOTES:**
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 - THE MINIMUM BAR LAP LENGTHS ARE AS FOLLOWS:
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#6 BAR - 2'-6"
 - FOR ADDITIONAL NOTES, REFER TO THE STRUCTURE GENERAL NOTES ON SHEET 1 OF 34.

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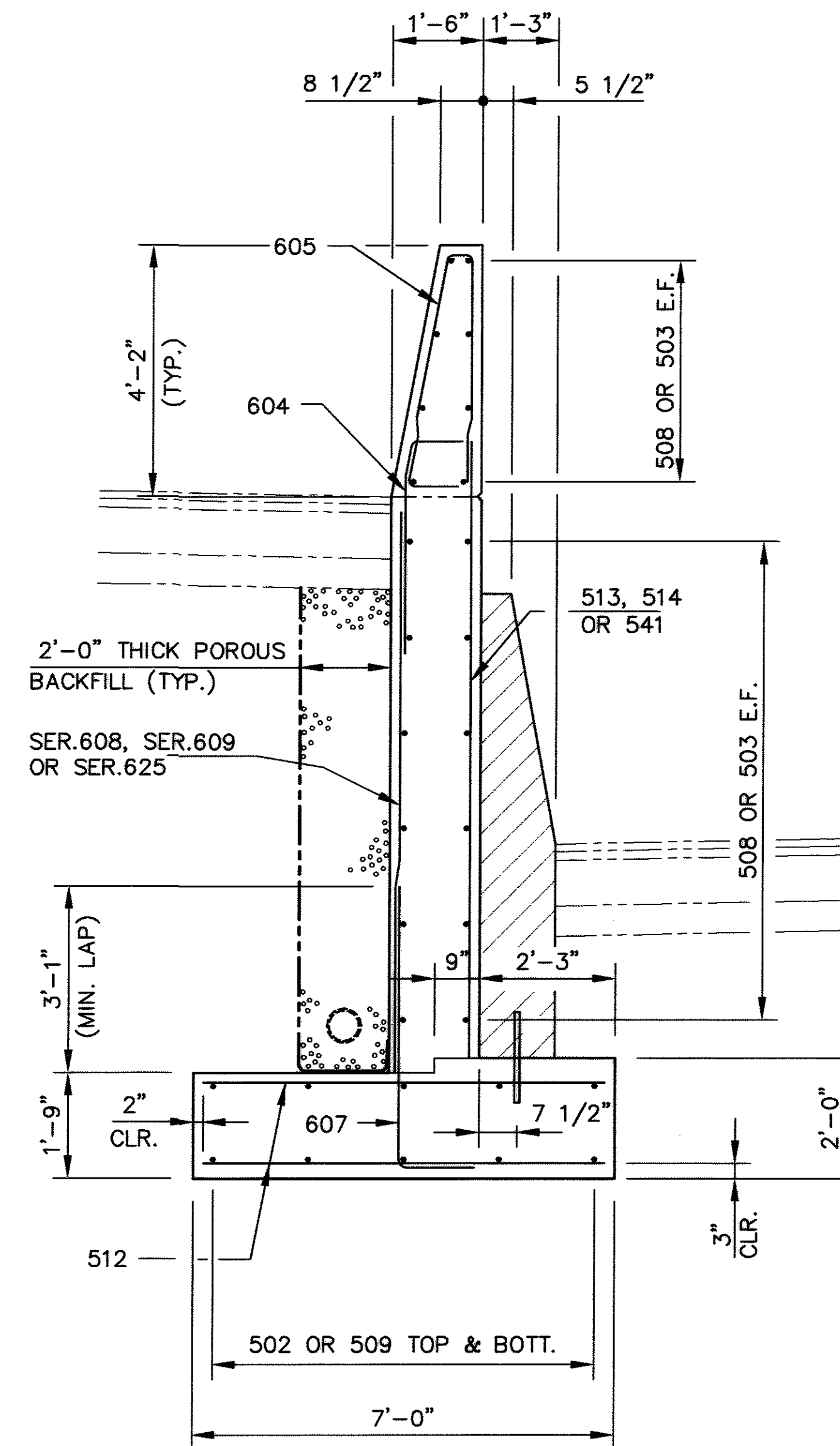
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| DESIGNED | L.M.P. | CHECKED | C.A.R. |
| DRAWN | A.L.H. | REVISED | |
| REVIEWED | B.K.L. | STRUCTURE FILE NUMBER | N/A |
| DATE | 01/17/02 | | |



TYPICAL WALL SECTION
D.H.-4 (WALL HEIGHT LESS THAN 4.0')



TYPICAL WALL SECTION
D.H.-5 (WALL HEIGHT 4.0' TO 5.0')

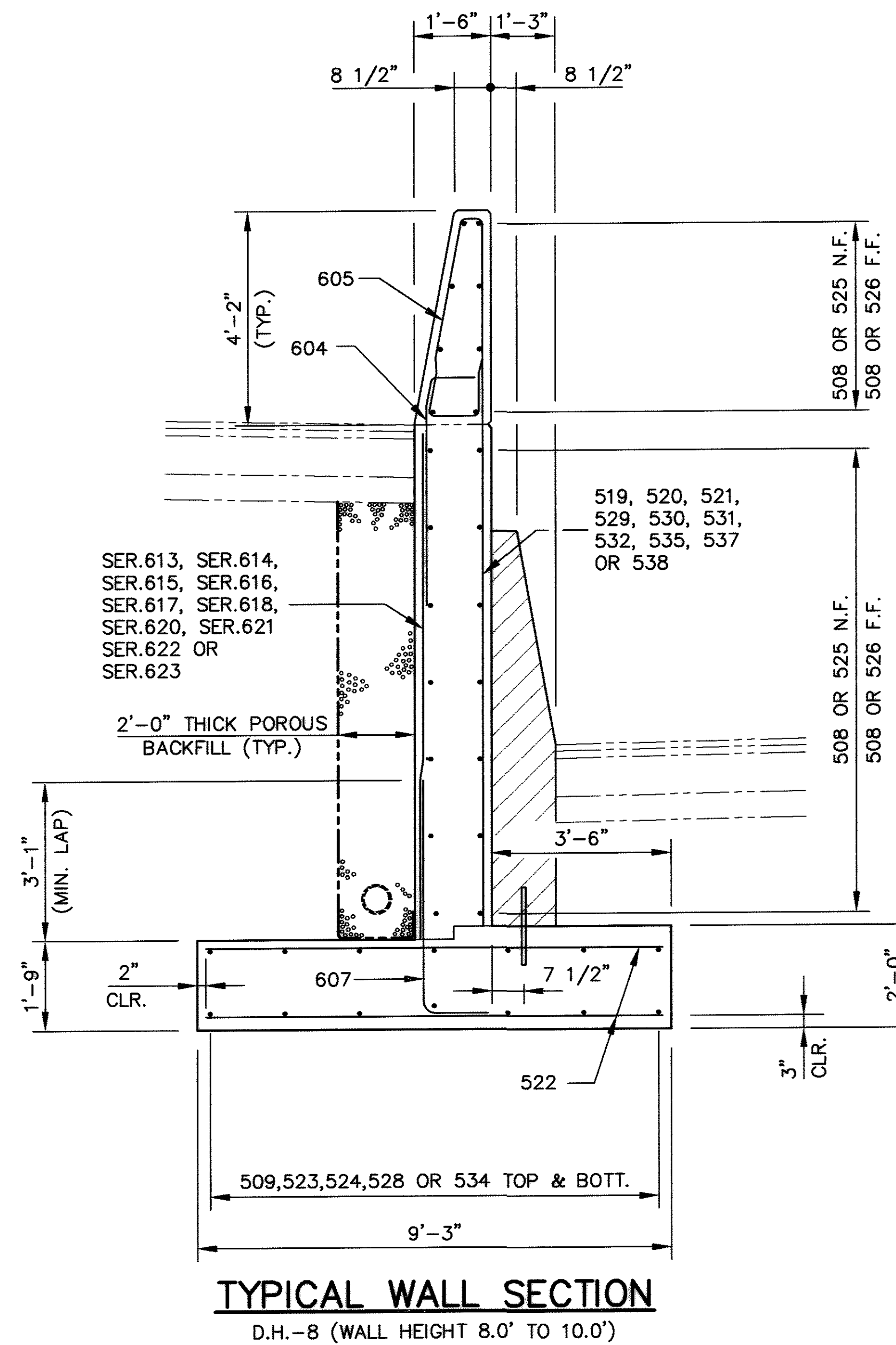
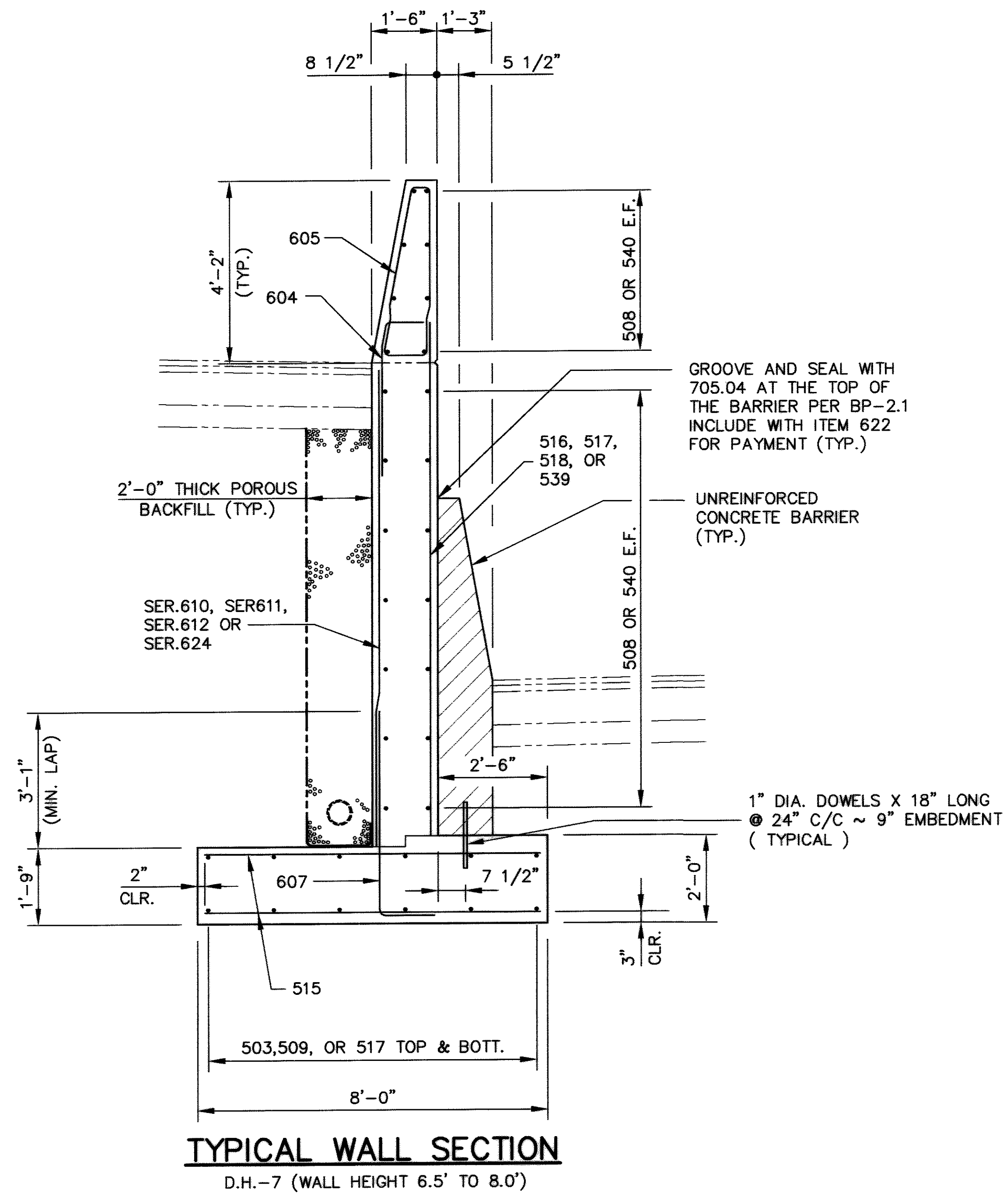


TYPICAL WALL SECTION
D.H.-6 (WALL HEIGHT 5.0' TO 6.5')

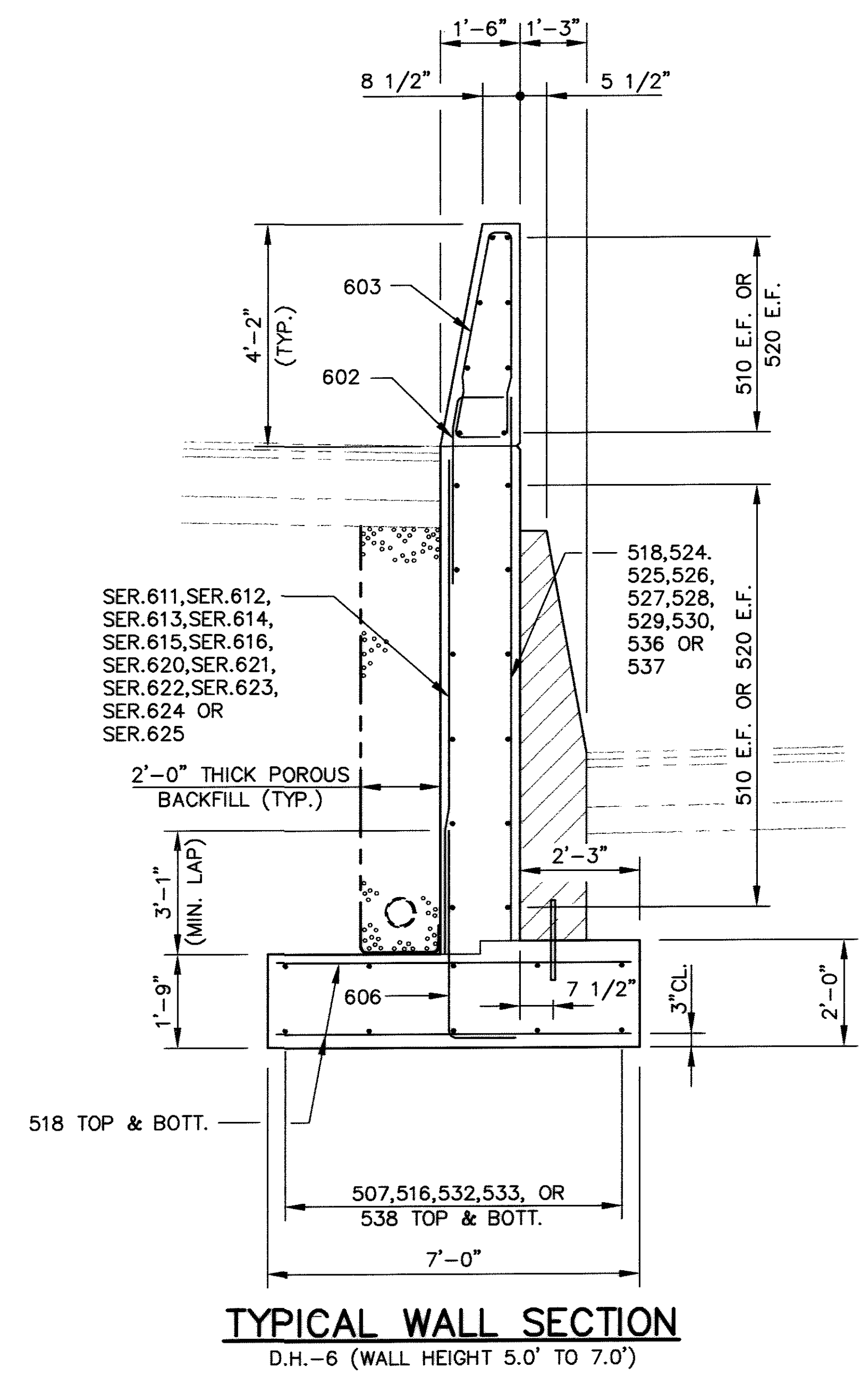
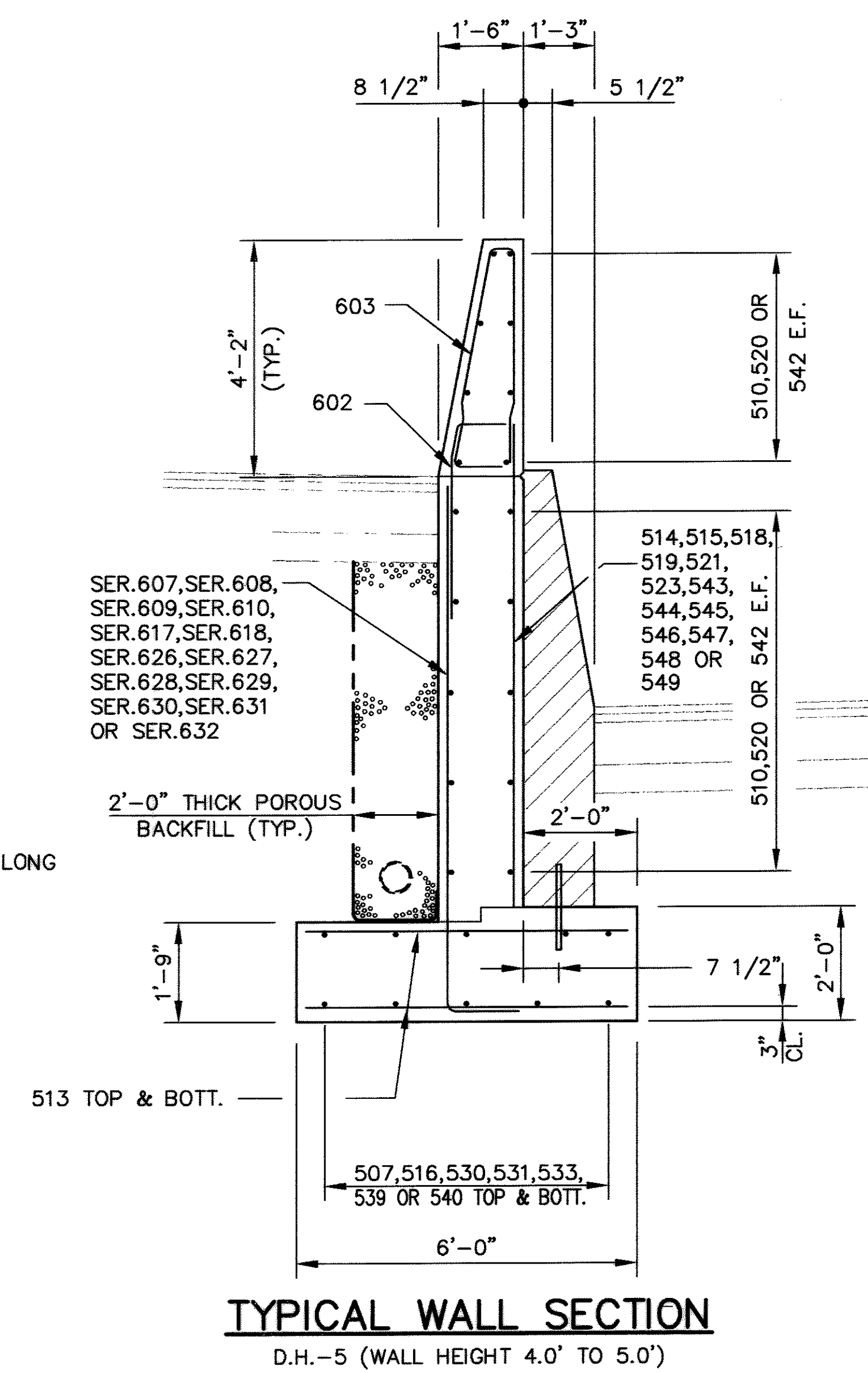
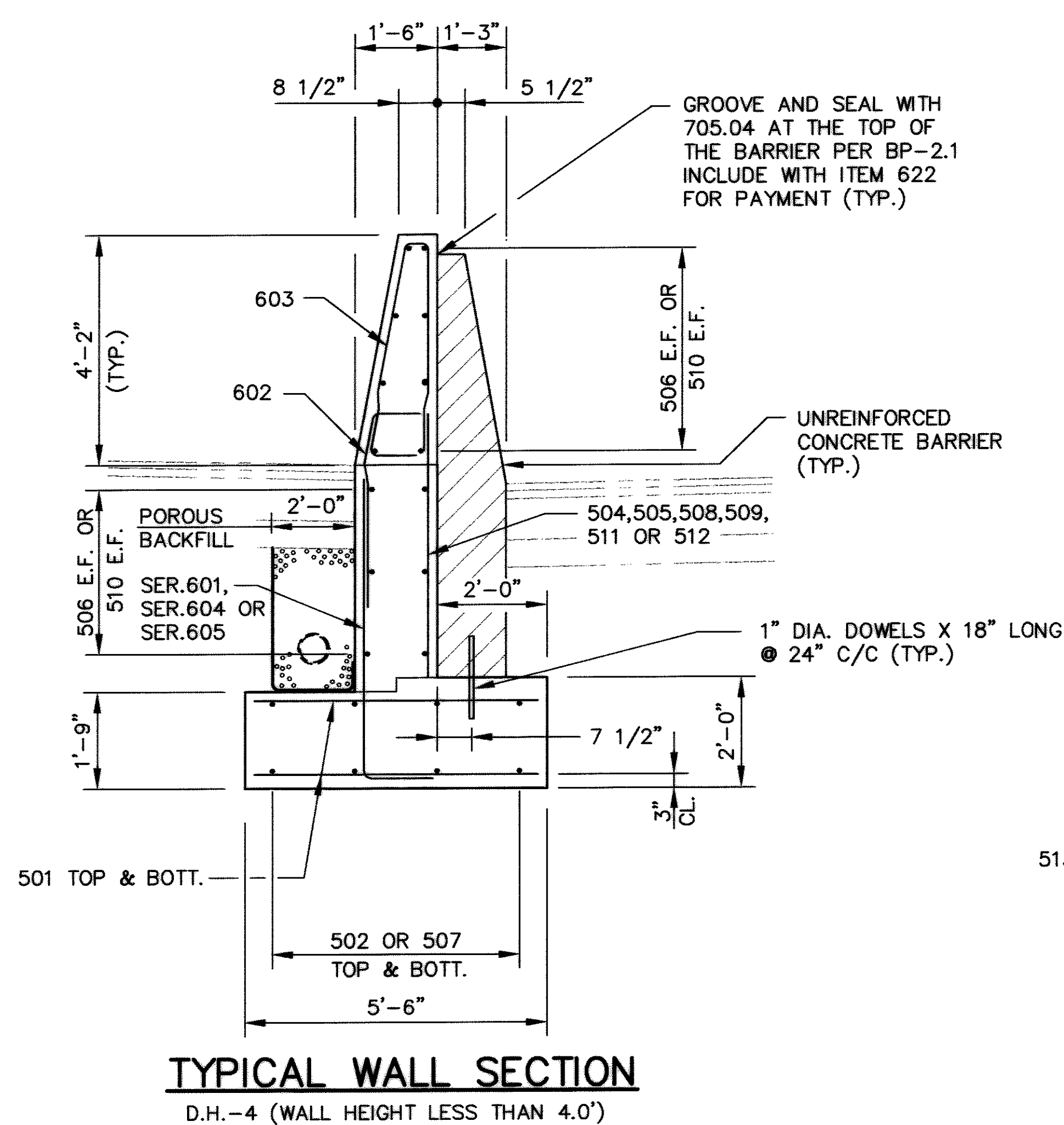
NOTES:

- ① WALL HEIGHT IS DEFINED AS THE DISTANCE FROM THE WESTBOUND TOP OF WALL TO THE TOP OF FOOTING.
- ② 1" DIAMETER DOWELS ARE TO BE INCLUDED WITH ITEM 622-CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN.

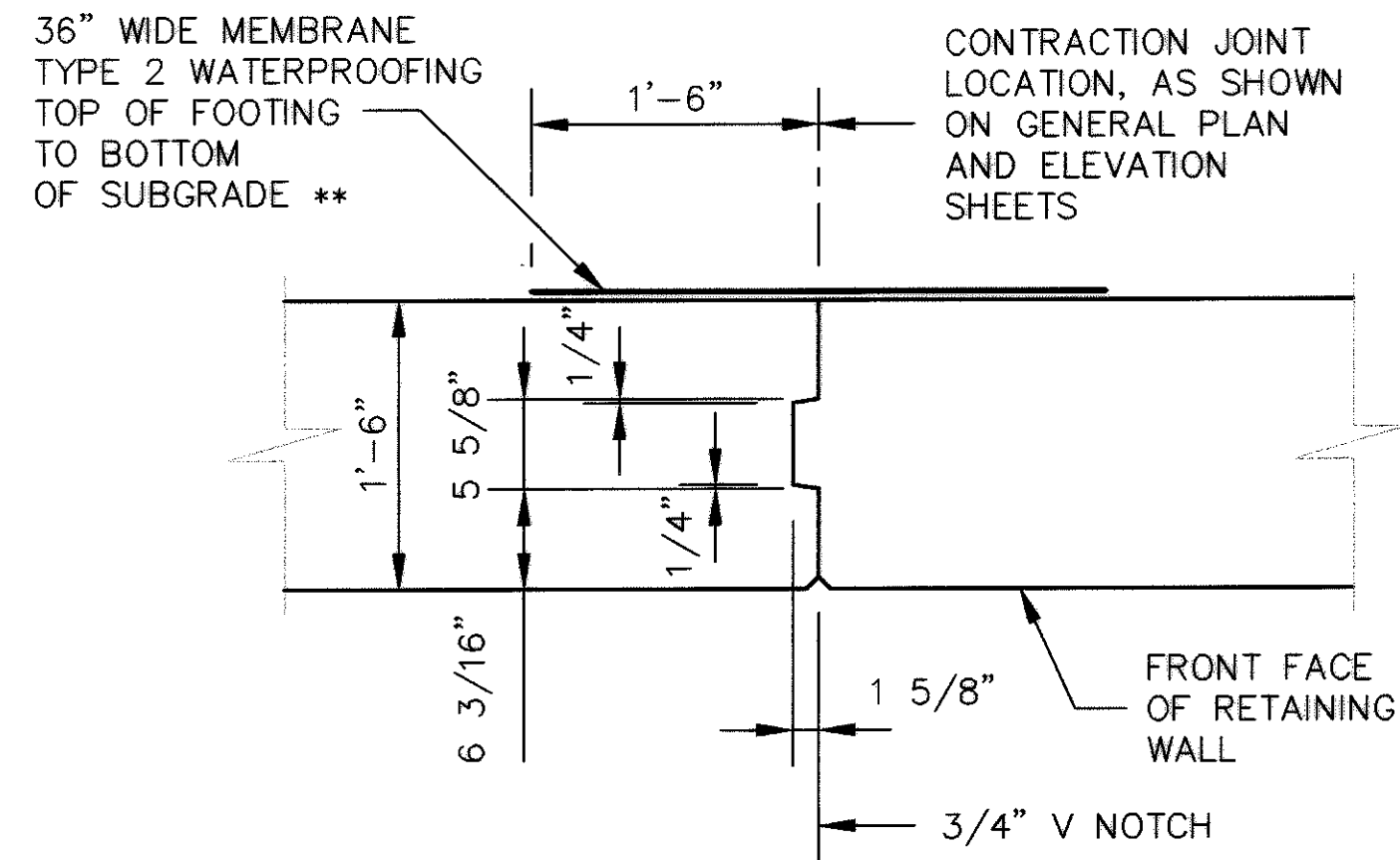
▨ DENOTES ITEM 622-CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN.



- NOTES:**
- WALL HEIGHT IS DEFINED AS THE DISTANCE FROM THE WESTBOUND TOP OF WALL TO THE TOP OF FOOTING.
 - 1" DIAMETER DOWELS ARE TO BE INCLUDED WITH ITEM 622-CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN.
- /// DENOTES ITEM-CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN.

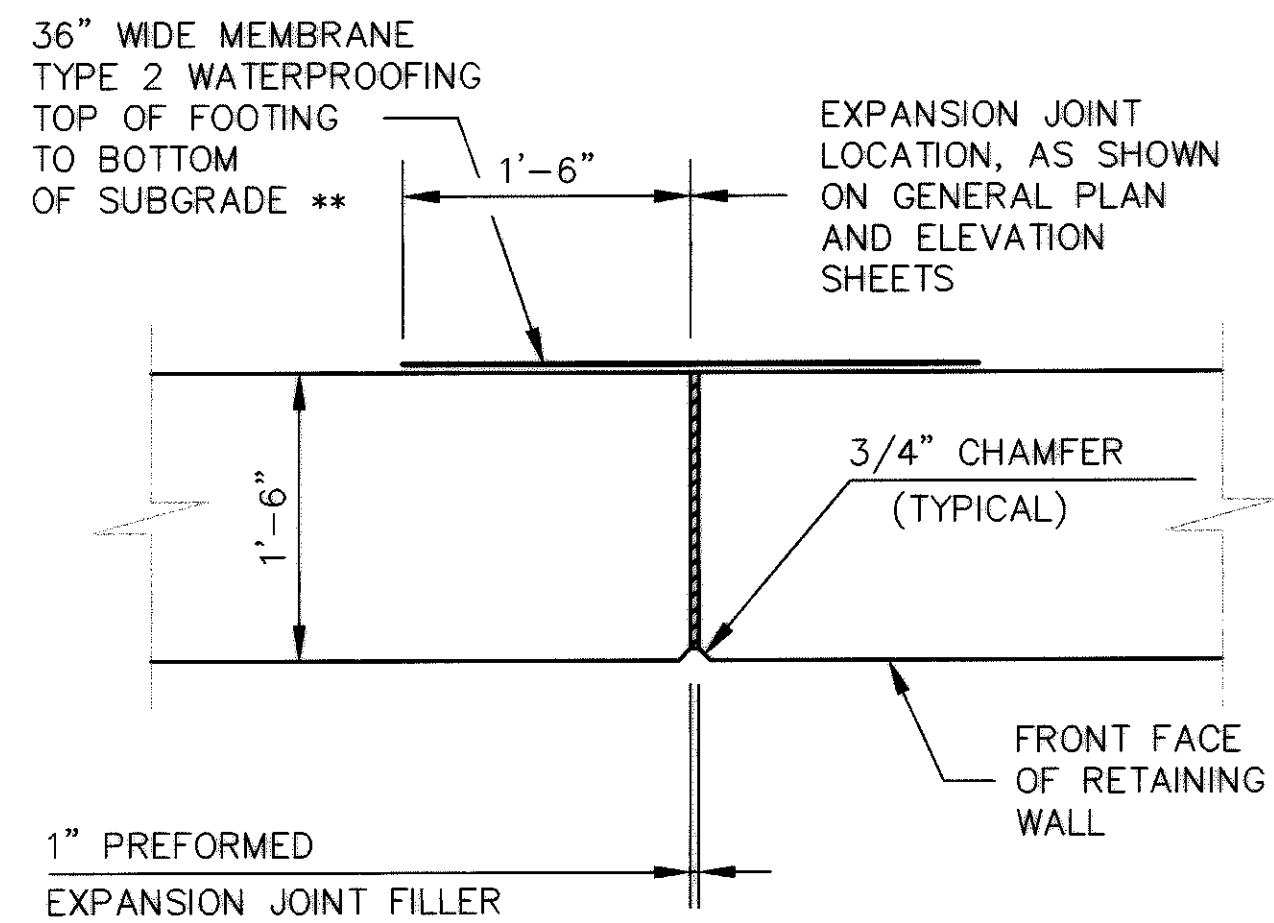


- NOTES:**
- WALL HEIGHT IS DEFINED AS THE DISTANCE FROM THE WESTBOUND TOP OF WALL TO THE TOP OF FOOTING.
 - 1" DIAMETER DOWELS ARE TO BE INCLUDED WITH ITEM 622-CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN.
- /// DENOTES ITEM-CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN.



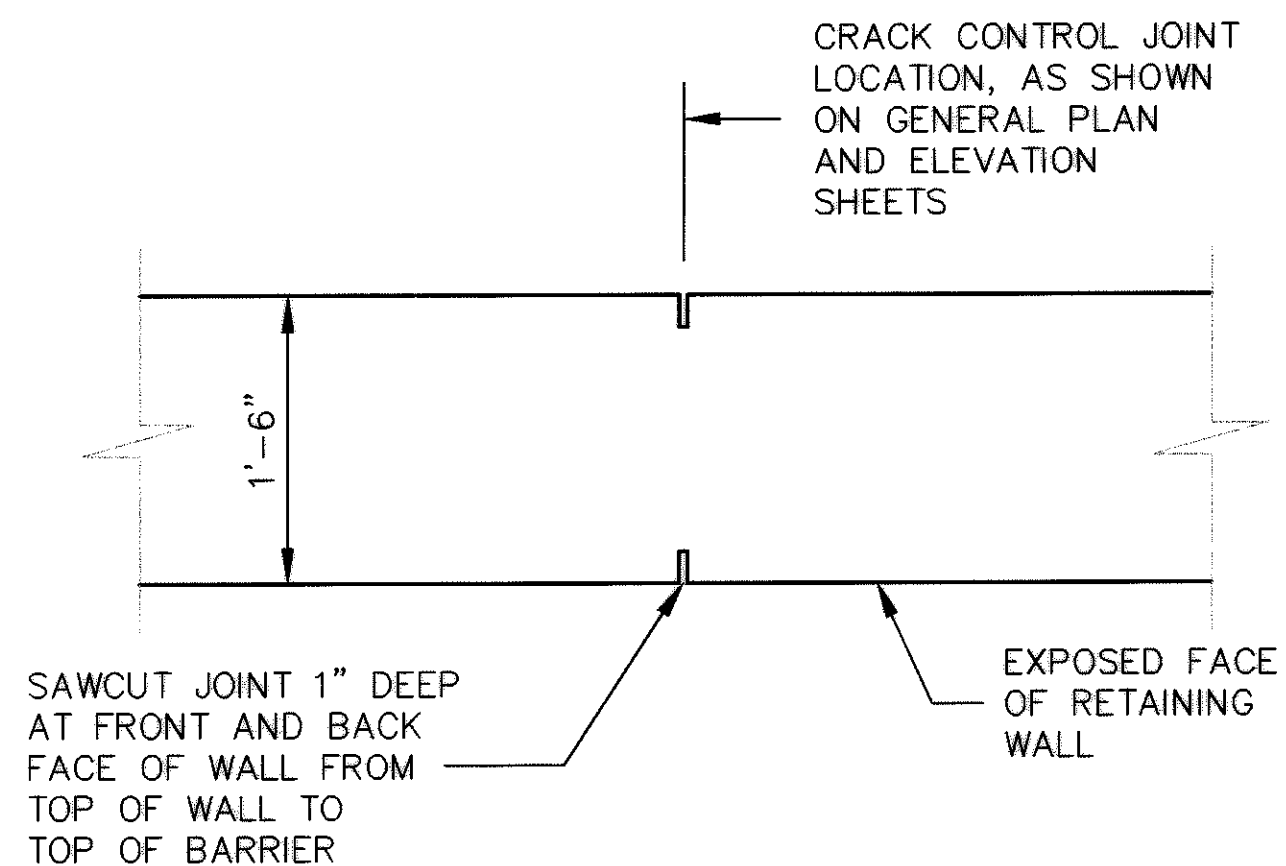
TYPICAL CONTRACTION JOINT DETAIL

** DENOTES TO BE INCLUDED WITH ITEM 898 QC/QA CONCRETE MISC.; CLASS QSC1, SUBSTRUCTURE (WALL ABOVE FOOTING), AS PER PLAN, FOR PAYMENT

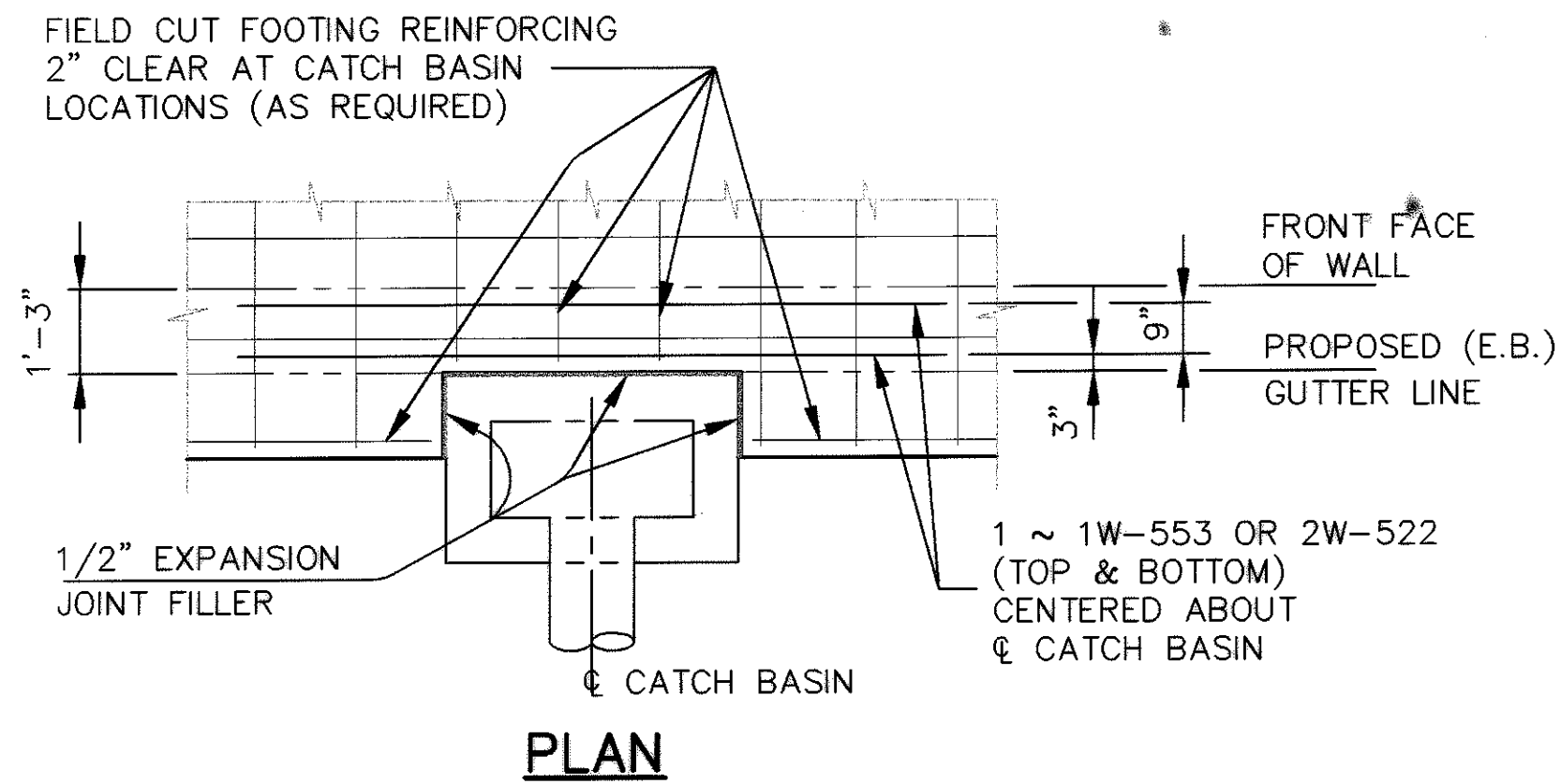


TYPICAL EXPANSION JOINT DETAIL

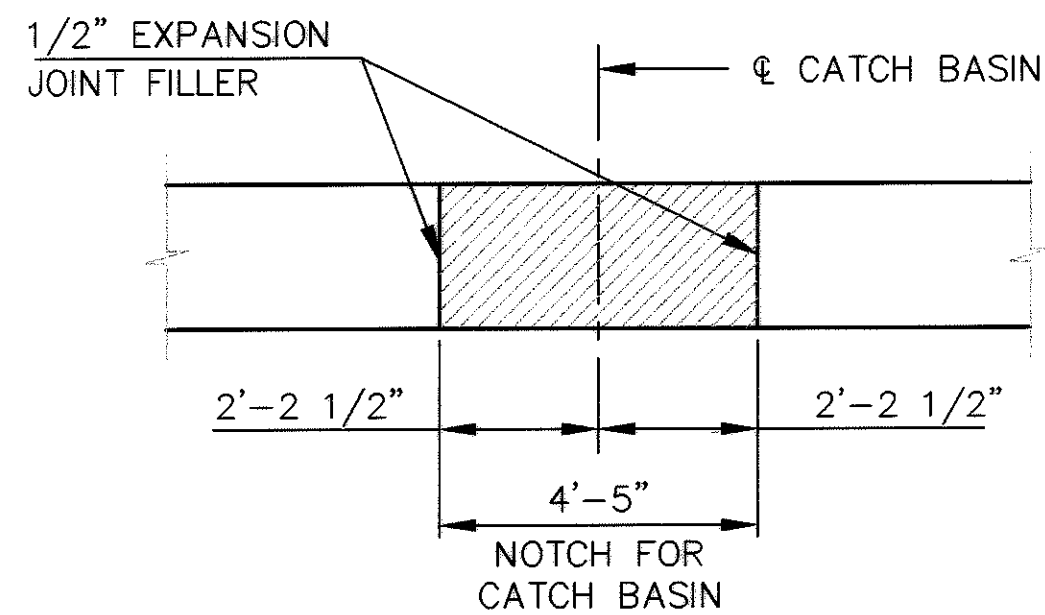
** DENOTES TO BE INCLUDED WITH ITEM 898 QC/QA CONCRETE MISC.; CLASS QSC1, SUBSTRUCTURE (WALL ABOVE FOOTING), AS PER PLAN, FOR PAYMENT



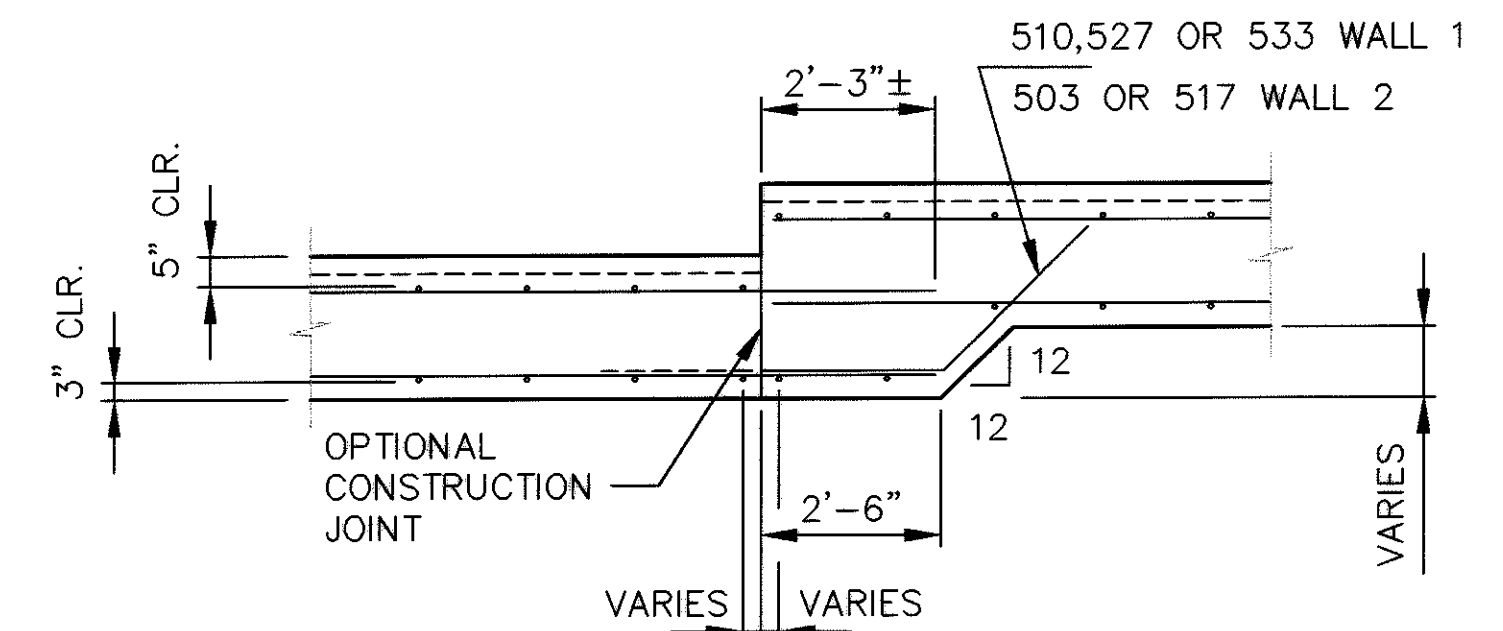
TYPICAL BARRIER CRACK CONTROL JOINT DETAIL



PLAN



**ELEVATION
DETAIL CB
(TYPICAL NOTCH FOR CATCH BASIN)**



TYPICAL STEP DETAIL

REFER TO PANEL DETAIL SHEETS FOR ADDITIONAL INFORMATION

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| DESIGNED | L.M.P. | CHECKED | C.A.R. |
| DRAWN | A.L.H. | REVISED | |
| REVIEWED | B.K.L. | DATE | 01/17/02 |
| | | STRUCTURE FILE NUMBER | N/A |

TYPICAL WALL DETAILS
MEDINA ROAD - S.R. 18 - WALLS
STA. 135+47.00 TO STA. 144+84.91 AND STA. 156+22.50 TO STA. 162+38.50

MED-18-15.13

SCOPE

THE WORK TO BE PERFORMED BY THE CONTRACTOR IN CONNECTION WITH THE TRAFFIC CONTROL DEVICES OF THIS PROJECT CONSIST OF FURNISHING LABOR, SUPPLIES, EQUIPMENT, MATERIALS, AND PERFORMING ALL OPERATIONS NECESSARY FOR THE ACCEPTABLE INSTALLATION OF THE TRAFFIC CONTROL DEVICES, IN STRICT ACCORDANCE WITH THESE PLANS, NOTES, AND SPECIFICATIONS. THESE NOTES, SCHEDULES, AND DRAWINGS ARE INTENDED TO PROVIDE FOR ALL MATERIAL AND LABOR REQUIRED TO FURNISH AND INSTALL A COMPLETE TRAFFIC CONTROL SYSTEM.

THE WORK INCLUDED IN THIS PROJECT INCLUDES THE INSTALLATION OF STRAIN POLES FOR TRAFFIC SIGNALS, VEHICLE LOOP DETECTORS, AND OTHER TRAFFIC CONTROL ITEMS REQUIRED.

POWER SUPPLY

ELECTRIC POWER SHALL BE OBTAINED FROM THE OHIO EDISON COMPANY AND SHALL BE 120 VOLTS. THE CONTRACTOR SHALL COORDINATE WITH THE OHIO EDISON COMPANY. ANY COSTS ASSOCIATED WITH THE POWER CONNECTION SERVICE SHALL BE INCIDENTAL AND INCLUDED IN THE CONTROLLER ITEM.

SERVICE SIGNS

ALL SERVICE TYPE SIGNS, WHICH ARE BLUE SIGNS IDENTIFYING RESTAURANTS, LODGING, AND GAS STATIONS, LISTED ON THIS PROJECT AS "OHIO LOGOS" ARE THE PROPERTY OF "OHIO LOGOS INCORPORATED". THESE SIGNS SHALL REMAIN IN PLACE AND FUNCTIONAL AS LONG AS POSSIBLE. OHIO LOGOS, INC. IS RESPONSIBLE FOR THE REMOVAL AND REERECTION OF THE LOGO SIGNS. THE CONTRACTOR SHALL CONTACT OHIO LOGOS, INC. (1-800-860-5646) IN WRITING A MINIMUM OF THIRTY (30) DAYS PRIOR TO THE PROJECT BEGINNING DATE. THIS INFORMATION SHALL BE SENT TO:

OHIO LOGOS, INC.
4384 TULLER ROAD
DUBLIN, OHIO 43017
ATTN: ROGER ROSE, GENERAL MANAGER

IF THE CONTRACTOR DETERMINES THAT THESE SIGNS WILL BE AFFECTED BY CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY O.D.O.T. DISTRICT OFFICE PERSONNEL A MINIMUM OF SIXTY (60) DAYS PRIOR TO ANY WORK WHICH WILL AFFECT THESE SIGNS OR CAUSE THEIR TEMPORARY REMOVAL, CONTACT OHIO LOGOS, INC. (1-800-860-5646) SO THEY MAY SCHEDULE FORCES TO REMOVE, STORE, AND REERECT THE SIGNS. THE CONTRACTOR SHALL NOTIFY O.D.O.T. DISTRICT PERSONNEL AND OHIO LOGOS, INC. WHEN THE SIGNS CAN BE REERECTED. THIS "DOWN TIME" SHALL BE LIMITED TO A MAXIMUM TWO (2) WEEK PERIOD. THE CONTRACTOR SHALL NOT ALTER, REMOVE, RELOCATE, OR TAKE THESE SIGNS DOWN.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 180 DAYS FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION, THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL, AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLER, DETECTOR AMPLIFIERS, AND ASSOCIATED EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE STATE OF OHIO.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM SHALL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING THE SYSTEM.

INSPECTION

ALL WORK PERFORMED WILL BE INSPECTED BY O.D.O.T.. THE CONTRACTOR WILL BE RESPONSIBLE FOR NOTIFYING O.D.O.T. 48 HOURS IN ADVANCE TO CALL FOR INSPECTION OF ANY WORK PERFORMED ON THIS SIGNAL SYSTEM. THE CONTRACTOR SHALL COORDINATE INSPECTION WITH KEVIN CAPIZZI OF THE OHIO DEPARTMENT OF TRANSPORTATION AT 419-499-3180, JIM BUZZARD.

MAINTENANCE OF NEW TRAFFIC SIGNAL

THE CONTRACTOR SHALL NOTIFY KEVIN CAPIZZI, O.D.O.T. DISTRICT No.3, SIGNAL ELECTRICIAN (PHONE: 419-207-2822), A MINIMUM OF SEVEN (7) DAYS PRIOR TO START OF CONSTRUCTION. MR. CAPIZZI SHALL BE PROVIDED A WRITTEN COPY OF THE CONTRACTOR'S WORK SCHEDULE. THE CONTRACTOR SHALL NOTIFY MR. CAPIZZI EVERY MORNING PRIOR TO WORKING ON THE SIGNAL AND INFORM HIM OF WHAT WORK IS TO BE PERFORMED THAT DAY, AND ALSO INFORM HIM OF ANY CHANGES TO THE ORIGINAL WORK SCHEDULE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE SIGNAL BEGINNING AT THE START OF CONSTRUCTION AND ENDING AT THE TIME OF FINAL ACCEPTANCE BY O.D.O.T.. THE CONTRACTOR SHALL RESPOND TO ALL EMERGENCY CALL OUTS FOR OUTAGES OR MALFUNCTIONS IN A TIMELY MANNER. AT NO TIME SHALL THE CONTRACTOR'S RESPONSE TIME EXCEED FOUR (4) HOURS. THE CONTRACTOR SHALL PROVIDE O.D.O.T. WITH THE NAMES AND PHONE NUMBERS OF THE CONTACT PERSON OR PERSONS PRIOR TO CONSTRUCTION. THE CONTACT PERSON OR PERSONS SHALL BE AVAILABLE FOR EMERGENCY CALLOUT 24 HOURS PER DAY, 7 DAYS PER WEEK, DURING THE TIME WHICH THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF THE SIGNAL OR SIGNALS.

WHEN THE CONTRACTOR HAS FAILED TO OR CANNOT RESPOND TO AN OUTAGE OF SIGNAL EQUIPMENT AT LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF ITEM 105.15 AND SUBSEQUENT BILLINGS TO THE STATE OF OHIO OR MEDINA COUNTY FOR POLICE SERVICES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH ITEM 105.15.

ITEM 632-POWER SERVICE, AS PER PLAN

POWER SERVICE SHALL BE AS PER SPECIFICATION 632 AND STANDARD CONSTRUCTION DRAWING TC-83.10.

DISCONNECT SWITCH ENCLOSURES FURNISHED IN ACCORDANCE WITH ITEM 632-POWER SERVICE, AS PER PLAN, SHALL INCLUDE A PADLOCK EQUAL TO WILSON BOHANNON 660, WITH LOCK BODY AND SHACKLE OF BRONZE OR BRASS, AND KEYING SHALL BE TO THE STATE MASTER.

THE CONTRACTOR SHALL NOTIFY THE DISTRICT 3 TRAFFIC DEPARTMENT FOURTEEN (14) DAYS IN ADVANCE OF POWER HOOK-UP, PHONE 419-207-2822, EXTENSION 512. THE CONTRACTOR SHALL BE RESPONSIBLE FOR APPLICATION OF ELECTRICAL SERVICE INSPECTION AND ALSO FOR SCHEDULING THE INSPECTOR. UPON APPROVAL OF THE POWER SERVICE INSTALLATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING THE POWER SERVICE HOOK-UP WITH THE LOCAL POWER COMPANY.

ITEM 625-TRENCH. (IN PAVED AREAS, BY TYPE)AS PER PLAN

THIS WORK SHALL CONSIST OF EXCAVATING THE TRENCH TO A DEPTH OF THIRTY (30) INCHES, BACKFILLING, AND RESTORING THE AREA.

IDENTIFYING TAPE SHALL BE USED TO IDENTIFY WHERE UNDERGROUND CABLE HAS BEEN INSTALLED. THE IDENTIFYING TAPE SHALL BE AN INERT MATERIAL MEASURING APPROXIMATELY SIX (6) INCHES IN WIDTH. THE TAPE SHALL BE COMPOSED OF A POLYETHYLENE PLASTIC, HIGHLY RESISTANT TO ALKALIS, ACID, OR OTHER COMPOUNDS LIKELY TO BE ENCOUNTERED IN SOILS. THE TAPE SHALL BE SUPPLIED IN CONTINUOUS ROLLS WITH THE IDENTIFYING LETTERS REPEATED CONTINUOUSLY THE FULL LENGTH OF THE TAPE. THE TAPE SHALL BE ALLEN SYSTEMS, TERRA TAPE, TECTA TAPE, OR AN EQUAL APPROVED BY THE ENGINEER.

THE TAPE SHALL BE BURIED IN THE ELECTRIC LINE TRENCH WITH ONE (1) STRIP PLACED NO LESS THAN TWO (2) INCHES OR MORE THAN TWELVE (12) INCHES BELOW THE FINAL FINISHED GRADE OF THE TRENCH. THE TAPE SHALL BE PLACED WITH THE PRINTED SIDE UP AND SHALL BE ESSENTIALLY PARALLEL WITH THE FINAL GRADE.

PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT UNIT PRICE PER FOOT OF ITEM 625-TRENCH, (IN PAVED AREAS, BY TYPE)AS PER PLAN.

UNDERDRAINS FOR PULL BOXES

UNDERDRAINS FOR PULL BOXES SHALL BE INSTALLED ACCORDING TO O.D.O.T. STANDARD CONSTRUCTION DRAWING HL-30.11. UNDERDRAINS SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20 FEET. AN ESTIMATED QUANTITY OF 1000 LINEAR FEET OF ITEM 603-4" CONDUIT, TYPE E HAS BEEN CARRIED TO THE TRAFFIC CONTROL GENERAL SUMMARY FOR THIS PURPOSE.

CERTIFICATION AND APPROVAL OF TRAFFIC CONTROL ITEMS

SUBMISSIONS BY THE CONTRACTOR FOR APPROVAL SHALL CONFORM WITH 632.03 AND 633.03 AS APPROPRIATE, EXCEPT THAT FOUR (4) SETS OF INFORMATION AND SUBMISSIONS SHALL BE MADE TO THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 3, CONSTRUCTION ENGINEER, FOR HIS INFORMATION AND COMMENTS.

ITEM 632-SIGNALIZATION, MISC.: METER BASE, 100 AMP WITH BYPASS

THE CONTRACTOR SHALL SUPPLY A METER BASE SOCKET FOR ELECTRICAL INSTALLATION. THE METER BASE SOCKET SHALL BE 100 AMP AND INCLUDE A BYPASS SWITCH 1-1/2" HUB AT THE TOP OF THE METER BASE. THE METER BASE SOCKET SHALL BE AS MANUFACTURED BY SUPERIOR TECHNOLOGY, INC., MODEL RRLOTU18448AX, THOMAS AND BETTS, 100 AMP, MODEL URS 1005MLHO, MILBANK, 125 AMP, MODEL U-3417-R2, OR AN APPROVED EQUAL.

PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH ITEM 632-SIGNALIZATION, MISC.: METER BASE, 100 AMP WITH BYPASS.

ITEM 632-LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN

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

- A) EACH AMPLIFIER SHALL BE NUMBERED TO CORRESPOND TO IT'S LOOP NUMBER. THE LOOP NUMBERS ARE SHOWN ON THE PLAN SHEETS.
- B) THE AMPLIFIER SHALL BE AUTOMATICALLY SELF-TUNING.
- C) SINGLE-CHANNEL AMPLIFIER UNITS ARE TO BE USED.
- D) THE OUTPUT DEVICE SHALL BE A RELAY, AND ALL CONTACT SHALL BE INCLUDED IN THE WIRING HARNESS.

THE LOOP DETECTOR UNITS SHALL HAVE TWO (2) OUTPUTS. FOR NON-SYSTEM LOOPS OPERATING IN THE PRESENCE MODE, ONE OUTPUT SHALL BE PRESENCE AND THE OTHER SHALL BE PULSE TO ENABLE ACCURATE COUNTING OF VEHICLES ENTERING THE LOOP EVEN WHEN PRECEDING VEHICLES REMAIN PRESENT OVER THE LOOP. THE COUNT OUTPUT SHALL BE WIRED TO THE SYSTEM INPUT OF THE CONTROLLER. THE PRESENCE OUTPUT SHALL BE WIRED TO THE CONTROLLER'S PHASE DETECTOR INPUT. DUAL OUTPUT DETECTOR UNITS SHALL HAVE DELAY AND EXTEND FEATURES ON THE PRESENCE OUTPUT.

ITEM 633 - CONTROLLER, MASTER, TRAFFIC RESPONSIVE, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A SOLID STATE DIGITAL MICROPROCESSOR TYPE TRAFFIC RESPONSIVE MASTER CONTROLLER WITH MENU DRIVEN PROMPTS, INTERNAL TBC, TELEMETRY UNIT, IN THE LOCAL CONTROLLER CABINET, AND ALL OTHER ACCESSORIES THAT ARE NECESSARY TO MAKE THE MASTER COMPLETELY FUNCTIONAL AND OPERATIONAL AS SHOWN IN THE PLANS. THE MASTER CONTROLLER SHALL BE CAPABLE OF OPERATING THE SYSTEM WITH ONE PHONE LINE. THIS ITEM SHALL ALSO INCLUDE THE EXTRA CABINET SPACE NECESSARY TO BE LOCATED IN THE LOCAL CONTROLLER CABINETS WHERE INDICATED IN THE PLANS. THE MASTER SHALL BE OF THE SAME BRAND AS THE LOCAL CONTROLLER. THE CONTROLLER SHALL CONFORM TO ODOT SPECIFICATION 633 AND 733.

THE CONTROLLER SHALL BE INSTALLED IN THE CONTROLLER CABINET AT THE INTERSECTION OF S.R.18 AND NORMANDY/EASTPOINTE DRIVE.

AN ADDITIONAL CONTROLLER SHALL BE FURNISHED TO BE USED AS A BACKUP. A QUANTITY OF 1 HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE.

ITEM 625-GROUND ROD, AS PER PLAN

IN ADDITION TO ITEM 625.09, THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A SEVEN (7) STRAND #4 COPPER WIRE FROM THE TOP OF THE GROUND ROD AND ATTACHING IT TO THE NEUTRAL BAR IN THE CONTROLLER CABINET.

PAYMENT SHALL BE MADE AT THE CONTRACT BID PRICE PER EACH ITEM 625-GROUND ROD, AS PER PLAN.

ITEM 632-MESSENGER WIRE, 7-STRAND, 1/4" DIAMETER WITH ACCESSORIES, AS PER PLAN

THIS ITEM CONSISTS OF INSTALLING A 1/4" MESSENGER WIRE FOR THE PURPOSE OF TETHERING THE VEHICULAR SIGNAL HEADS, AS DETAILED ON SHEET NO. 292. HARDWARE USED TO CONNECT THE SIGNAL HEADS TO THE TETHER WIRE SHALL BE BREAKAWAY DESIGN. SPREADER BARS USED AT THE BOTTOM OF 2-WAY SIGNAL HEADS SHALL BE PER PELCO PART NO. SE-5060, "TWO-WAY SINGLE STUD LOWER ARM ASSEMBLY" OR APPROVED EQUAL. THE TETHER WIRE SHALL BE ATTACHED TO THE STRAIN POLE BY USE OF A POLE CLAMP OR BY WRAPPING AS PER SCD TC-84.20.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, TOOLS, EQUIPMENT, AND OTHER INCIDENTALS NECESSARY FOR THE INSTALLATION OF THE TETHER WIRE. PAYMENT FOR THIS ITEM WILL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAR FOOT.

ITEM 633-CABINET FOUNDATION, AS PER PLAN

THE RISER FOR THE CONTROLLER FOUNDATION SHALL EXTEND TWELVE (12) INCHES ABOVE THE THE TOP OF THE FOUNDATION AS SHOWN ON STANDARD CONSTRUCTION DRAWING TC-83.20.

ALL LABOR, MATERIALS, TOOLS, AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK SHALL BE INCLUDED IN THE CONTRACT PRICE BID PER EACH OF ITEM 633-CABINET FOUNDATION, AS PER PLAN.

ITEM 630-SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN

POLE MOUNTED SIGN ATTACHMENTS SHALL BE FURNISHED AND INSTALLED AS DETAILED ON SHEET NO. 295.

ALL LABOR, TOOLS, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK SHALL BE INCLUDED IN THE CONTRACT PRICE BID PER EACH ITEM 630-SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN.

ITEM 632-REMOVAL OF TRAFFIC SIGNAL INSTALLATION

THIS WORK SHALL CONSIST OF THE REMOVAL AND DISPOSAL OR SALVAGE OF TRAFFIC SIGNAL EQUIPMENT (AS NOTED HEREIN) THAT WILL NOT BE REUSED AS PART OF THIS PROJECT. THESE ITEMS INCLUDE STRAIN POLES, VEHICULAR SIGNAL HEADS, PULL BOXES, CONTROLLER AND CABINETS, AND ITEMIZED EQUIPMENT. NO ITEM SHALL BE REMOVED UNTIL THE NEW INSTALLATION IS IN FULL OPERATION, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

THE FOLLOWING ITEMS ARE TO BE REMOVED AT EACH INTERSECTION. ALL EQUIPMENT EXCEPT MESSENGER WIRE AND SIGNAL CABLE SHALL BE SALVAGED FOR ODOT.

NETTLETON ROAD
2 SIGNAL POLES
6 VEHICULAR SIGNALS
MESSENGER WIRE
SIGNAL CABLE
CONTROLLER
CABINET

NORMANDY DRIVE
2 SIGNAL POLES
7 VEHICULAR SIGNALS
MESSENGER WIRE
SIGNAL CABLE
CONTROLLER
CABINET

RAMPS 'A' AND 'B'
2 SIGNAL POLES
CABINET
5 VEHICULAR SIGNALS
MESSENGER WIRE
SIGNAL CABLE
CONTROLLER
CABINET

RAMPS 'C' AND 'D'
2 SIGNAL POLES
CABINET
5 VEHICULAR SIGNALS
MESSENGER WIRE
SIGNAL CABLE
CONTROLLER
CABINET

GATEWAY ROAD
2 SIGNAL POLES
6 VEHICULAR SIGNALS
MESSENGER WIRE
SIGNAL CABLE
CONTROLLER
CABINET

CALCULATED
T.C.I.
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K.P.W.

TRAFFIC CONTROL GENERAL NOTES

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ITEM 633 - CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET TYPE TS1, AS PER PLAN

THE CONTROLLER SHALL BE TS-2 TYPE 2 WITH DOWNWARD COMPATIBILITY WITH NEMA TS-1. THE OVERLAP PROGRAMMING SHALL BE BY USE OF AN INTERCHANGEABLE PLUG-IN PRINTED CIRCUIT BOARD ASSEMBLY AS DIRECTED IN TS-1-1989. IF THE CONTROLLER DOES NOT HAVE A SOCKET FOR THE INTERCHANGEABLE PLUG-IN PRINTED CIRCUIT BOARD ASSEMBLY, THE BOARD SHALL STILL BE PROVIDED SEPARATELY. 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. THE CONTROLLER CABINET SHALL BE KEYED TO THE STATE MASTER.

CONTROLLER CABINET SIZE SHALL COMPLY TO THE REQUIREMENTS OF NEMA TS-1 SECTION 14 BUT SHALL BE A MINIMUM SIZE OF 57"HIGH x 30"WIDE x 17"DEEP, SM DESIGNATION. THE CONTROLLER CABINET DOOR HANDLE, DOOR HINGE, AND HINGE BOLTS SHALL BE STAINLESS STEEL. GROUND MOUNTED CONTROLLER CABINETS SHALL INCLUDE A 12" CABINET EXTENSION.

THE CONTROLLER SHALL HAVE INTERNAL TIME BASE COORDINATION AND PROVIDE DATA UPLOAD AND DOWNLOAD CAPABILITY. ALL CONTROLLER MEMORIES SHALL BE INVOLITILE AND SHALL NOT REQUIRE BATTERIES OR OTHER SOURCES OF ENERGY TO RETAIN DATA WHILE POWER IS REMOVED FROM THE CONTROLLER.

PRINTED BOARD BACK PANELS OF THE CONTROLLER CABINET SHALL NOT BE ACCEPTABLE. SOLDERED CONNECTIONS WILL BE PERMITTED FOR WIRING ON THE BACKSIDE OF THE BACK PANEL. THE CONTROLLER CABINET SHALL HAVE DETECTOR CALL BUTTONS FOR ALL PHASES INCLUDING PED MOVEMENTS, CABINET LIGHT WITH SWITCH AND AUTO FLASH SWITCH ON THE INSIDE CABINET DOOR.

THE CONFLICT MONITOR SHALL BE CAPABLE OF 12-CHANNEL OPERATION AND EXTENDED MONITORING (IN ACCORDANCE WITH 733.03, SECTION A "TYPE TS-1" PART 2C) IN ADDITION TO NEMA REQUIREMENTS. THE MONITOR SHALL HAVE THE CAPABILITY OF MONITORING EACH LOAD SWITCH SEPARATELY, AS SHOWN IN THE LOAD SWITCH HOOKUP DIAGRAM IN THE PLANS. 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 AND SHALL BE CAPABLE OF UPLOADED REPORTS OF EVENTS OR USER SETTINGS VIA CLOSED LOOP HOST CONTROLLER. A MINIMUM OF 9 EVENTS SHALL BE LOGGED. EXAMPLE OF EVENTS INCLUDE: POWER OUTAGES, CONFLICTS, CONTROLLER VOLTAGE MONITOR, ETC.. EVENTS SHALL BE DISPLAYED ON THE CONFLICT MONITOR'S LIQUID CRYSTAL DISPLAY WHEN INTERROGATED.

THE LOAD SWITCHES SHALL PROVIDE INPUT AND OUTPUT INDICATIONS.

PAYMENT FOR THIS ITEM 633, CONTROLLER, ACTUATED, BY PHASE, SOLID STATE DIGITAL MICROPROCESSOR, WITH INTERNAL TIME BASE COORDINATION, AS PER PLAN, WILL BE AT THE CONTRACT PRICE BID PER EACH COMPLETE AND IN PLACE INCLUDING ALL CONNECTIONS TESTED AND ACCEPTED.

ITEM 633-TELEPHONE SERVICE, AS PER PLAN

THIS ITEM SHALL CONSIST OF THE CONTRACTOR CONNECTING THE SIGNAL SYSTEM TO O.D.O.T.'S EXISTING TI PHONE SYSTEM IN THE MEDINA O.D.O.T. MAINTENANCE GARAGE. ALL EXPENSES INCURRED FOR INSTALLATION, MINIMUM CHARGES, AND ALL OTHER CHARGES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

THE PHONE MODEM, NORMALLY INSTALLED IN THE CONTROLLER CABINET, AT THE INTERSECTION OF S.R.18 AND NORMANDY/EASTPOINTE DRIVE SHALL BE INSTALLED IN THE O.D.O.T. MAINTENANCE GARAGE, COMPLETELY WIRED TO REPORT CABINET FAILURES, DETECTOR FAILURES, AND TRAFFIC COUNTS. THE CONTRACTOR SHALL INSTALL THE CABLE, AS SPECIFIED BY THE MANUFACTURER, FROM THE CONTROLLER TO THE PHONE MODEM IN THE MAINTENANCE GARAGE AS SHOWN ON THE PLANS.

THE CONTRACTOR SHALL CONTACT KEVIN CAPIZZI OF THE OHIO DEPARTMENT OF TRANSPORTATION AT 1-419-207-2822, FOR THE LOCATION OF INSTALLATION OF THE PHONE JACK AND MODEM IN THE O.D.O.T. MAINTENANCE GARAGE.

ALL LABOR, MATERIALS, CABLE(APPRX. 850'), TOOLS, AND INCIDENTALS NECESSARY TO PROVIDE COMMUNICATIONS TO THE SIGNAL SYSTEM SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER EACH ITEM 632-PHONE DROP, AS PER PLAN.

ITEM 632-SIGNALIZATION, MISC.: DETECTOR WIRE SPLICES

PROPOSED DETECTOR LOOPS ATTACHED TO EXISTING LOOP DETECTOR LEAD-IN CABLES SHALL BE SPLICED AS FOLLOWS: WIRES INSTALLED FROM THE LOOP TO THE SPLICE WITH LEAD-IN CABLE SHALL BE TWISTED UNIFORMLY AT 3 TO 5 TURNS PER FOOT. THE LOOP ENDS SHALL BE SPLICED TO THE EXISTING LEAD-IN CABLE. THE WIRES SHALL BE JOINED BY A MUTUALLY TWISTED IN-LINE SPLICE, ROSIN CORE SOLDERED AND WRAPPED IN VINYL OR EQUIVALENT ELECTRICAL TAPE AND ENCAPSULATED WITH AN APPROVED POURED WATERPROOF EPOXY INSULATED SPLICE IN ACCORDANCE WITH 713.15. THE TUBING ENDS SHALL EXTEND INTO, AND BE SEALED WITHIN, THE POURED EPOXY SPLICE.

ALL LABOR, TOOLS, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK SHALL BE INCLUDED IN THE CONTRACT UNIT BID FOR EACH ITEM 632-SIGNALIZATION, MISC.: DETECTOR WIRE SPLICES.

ITEM 632-SIGNALIZATION, MISC.: LASHING AND UNLASHING SIGNAL WIRE

SIGNAL WIRE REQUIRED TO BE LASHED TO EXISTING MESSENGER WIRE SHALL BE UNLASHED AND LASHED AS PER 632.21 AND 732.18.

ALL LABOR, TOOLS, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER EACH ITEM 632-SIGNALIZATION, MISC.: LASHING AND UNLASHING SIGNAL WIRE.

ITEM 632-VEHICULAR SIGNAL HEAD, (BY TYPE), AS PER PLAN

VEHICULAR SIGNAL HEADS USED ON THIS PROJECT SHALL BE ALUMINUM WITH LIGHT EMITTING DIODE (LED) LAMPS. SIGNAL HEAD HANGERS SHALL BE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING. THE HANGER SHALL BE AS MANUFACTURED BY PELCO PRODUCTS, INC. (PART NO. SE-0523 AND SE-0531) OR EQUAL. THREADED PIPE STYLE HANGERS SHALL NOT BE PERMITTED.

THE LED TRAFFIC SIGNAL LAMPS PROVIDED SHALL BE GELCORE, DIALIGHT OR APPROVED EQUAL. ALL LED LAMPS SHALL BE THE LATEST MODEL CURRENTLY IN PRODUCTION AND NEW EQUIPMENT NO LONGER BEING MANUFACTURED SHALL NOT BE ACCEPTED EVEN IF IT MEETS THE FOLLOWING SPECIFICATIONS.

ALL LED SIGNAL LAMPS USED ON THIS PROJECT SHALL CONFORM TO THE FOLLOWING SECTIONS OF THE LATEST OHIO DEPARTMENT OF TRANSPORTATION SPECIAL SPECIFICATIONS FOR LED SIGNAL LAMP UNITS:

- 1) DESCRIPTION
- 2) PREQUALIFICATION
- 3) MATERIAL REQUIREMENTS
- 4) DOCUMENTATION REQUIREMENTS
- 5) EVALUATION
- 6) WARRANTY
- 7) METHOD OF MEASUREMENT
- 8) BASIS OF PAYMENT

ADJUSTABLE SIGNAL HANGERS WITH TRI-STUD ATTACHMENT WILL BE PERMITTED AS NEEDED TO PROVIDE PROPER SIGNAL HEAD CLEARANCE. DROP PIPES WITH THREADED ENDS SHALL NOT BE USED ON THIS PROJECT.

SPREADER BARS USED AT THE BOTTOM OF 2-WAY SIGNAL HEADS SHALL BE PER PELCO PART NO. SE-5060, "TWO-WAY SINGLE STUD LOWER ARM ASSEMBLY" OR APPROVED EQUAL.

PAYMENT FOR ITEM 632 - VEHICULAR SIGNAL HEAD (BY TYPE), AS PER PLAN, WILL BE MADE AT THE CONTRACT UNIT PRICE PER EACH.

ITEM 621-RAISED PAVEMENT MARKER

MATERIALS SUPPLIED BY O.D.O.T.

ALL MATERIALS ARE TO BE CONTRACTOR FURNISHED, EXCEPT THAT O.D.O.T. SHALL SUPPLY RPM MATERIALS IN THE QUANTITIES SHOWN HEREIN TO THE CONTRACTOR. PAY ITEMS FOR O.D.O.T. SUPPLIED MATERIALS SHALL BE INDICATED AS "INSTALLATION ONLY".

AT THE PRE-CONSTRUCTION CONFERENCE AN AUTHORIZATION FOR PICK-UP FORM WILL BE FURNISHED BY THE DISTRICT CONSTRUCTION ADMINISTRATOR AND THE CONTRACTOR WILL BE INFORMED OF THE LOCATION OF THE O.D.O.T. SUPPLIED MATERIALS TO BE PICKED UP. MATERIALS WILL BE PICKED UP AT THE RECYCLER'S WAREHOUSE OR AS ARRANGED WITH THE DISTRICT. THE CONTRACTOR SHALL PICK-UP O.D.O.T. SUPPLIED RPM MATERIALS AT THE SPECIFIED LOCATION(S) FOR TRANSPORT TO THE WORK SITE OR TO THE CONTRACTOR'S STORAGE FACILITY. THE RECYCLED PAISED PAVEMENT MARKER (RPM) AUTHORIZATION FORM IS TO BE SIGNED BY THE DISTRICT CONSTRUCTION ENGINEER PRIOR TO PICK-UP OF THE RPM'S. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND/OR THE PARTIES LISTED ON THE AUTHORIZATION FORM IN WRITING AT LEAST FIVE (5) CALENDAR DAYS PRIOR TO PICK-UP OF THE O.D.O.T. SUPPLIED MATERIALS. THE CONTRACTOR SHALL STORE THE RPM'S WITHOUT DAMAGE OR CONTAMINATION WITH FOREIGN MATTER. A DEDUCTION IN THE AMOUNT OF THE ACTUAL COST TO O.D.O.T. SHALL BE MADE FOR MATERIALS DAMAGED BY THE CONTRACTOR OR FOR CASTINGS RECEIVED BY THE CONTRACTOR WHICH WERE NOT INSTALLED AND WERE NOT RETURNED TO O.D.O.T..

RETURN OF NON-PERFORMED RAISED PAVEMENT MARKER MATERIALS SUPPLIED BY O.D.O.T.

RAISED PAVEMENT MARKER MATERIALS SUPPLIED BY O.D.O.T., THAT ARE NON-PERFORMED SHALL BE CAREFULLY REPACKED OR PACKED IN THE BOXES IN THE SAME STYLE AND QUANTITY AS ORIGINALLY RECEIVED FROM O.D.O.T.. CASTING STYLES SHALL NOT BE MIXED WITHIN ANY ONE CONTAINER. THE CONTRACTOR SHALL CLEARLY MARK ON THE OUTSIDE OF EACH CONTAINER, THE COLOR OF THE PRISMATIC RETRO-REFLECTOR, AND THE STYLE OF CASTING. BOXES SHALL BE PLACED ON SKIDS OR PALLETS IN THE SAME STYLE (LOW PROFILE OR CONVENTIONAL, REFLECTORIZED OR NON-REFLECTORIZED) AND NO MORE THAN 420 RPM'S (OR 21 BOXES) ON ONE SKID.

ONLY USE THE BOXES SUPPLIED BY THE RAISED PAVEMENT MARKER RECYCLER. BOXES MUST BE MARKED WITH THE RECYCLER'S PART OR CATALOG NUMBER AND THE PROJECT NUMBER. THE RECYCLER'S CATALOG OR PART NUMBERS MAY BE OBTAINED FROM THE OFFICE OF TRAFFIC ENGINEERING IN COLUMBUS, OHIO OR FROM THE RECYCLER. BOXES NOT MARKED WITH THE PROPER RECYCLER'S CATALOG OR PART NUMBERS, AND O.D.O.T.'S PROJECT NUMBER WILL NOT BE ACCEPTED AT THE RECYCLER'S WAREHOUSE.

NON-PERFORMED MATERIALS WILL BE RETURNED TO THE LOCATION AS SPECIFIED BY THE DISTRICT CONSTRUCTION ENGINEER WITHIN 30 DAYS OF THE COMPLETION OF THE PROJECT.

THE ABOVE WORK INCLUDING ALL LABOR, EQUIPMENT, AND MATERIAL NEEDED TO PERFORM THE WORK, SHALL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE PAY ITEM.

IF O.D.O.T. HAS TO REPACK THE RPM'S CORRECTLY, THE CONTRACTOR WILL BE ASSESSED THE ACTUAL COST FOR REPACKAGING THE MATERIALS BY O.D.O.T.'S FORCES.

LOADING OF MATERIALS SUPPLIED BY O.D.O.T. AT THE RECYCLER'S WAREHOUSE

TRUCKS SHALL A LOADING HEIGHT OF 48 INCHES AND BE ABLE TO BACK UP FLUSH TO THE LOADING DOCK.

TRUCKS SHALL NOT HAVE ANY OBSTRUCTIONS OR PROTRUSIONS THAT PREVENT THE LOADING BY A STANDARD FORKLIFT OR LIFT TRUCK. SEMI-TRUCKS OR 20 FOOT COMMERCIAL TRUCKS ARE THE MOST APPROPRIATE TRUCKS FOR LOADS IN EXCESS OF 4 PALLETS (ONE PALLET=21 BOXES=2100 LBS.).

STAKE BODY TRUCKS ARE APPROPRIATE TO LOAD LESS LOAD AND THE LOAD CAN BE SAFELY SECURED FOR TRANSPORT BY CHAINING OR STRAPPING DOWN AS NEEDED.

PICKUP TRUCKS ARE APPROPRIATE FOR LOADS OF APPROXIMATELY ONE PALLET, PROVIDED THE PICKUP TRUCK IS RATED FOR THE LOAD AND THE LOAD CAN BE SAFELY SECURED FOR TRANSPORT.

DUMP TRUCKS, TILT BED TRUCKS, AND NON-COMMERCIAL MOVING VANS WILL NOT BE LOADED.

THE WAREHOUSE SUPERVISOR WILL REFUSE TO LOAD ANY TRUCK THAT IS UNSAFE TO LOAD OR UNSUITABLE FOR THE LOAD BEING PLACED ON THE TRUCK.

ITEM 633 - REMOTE MONITORING STATION, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF PROVIDING THE CENTRAL OFFICE CONTROL EQUIPMENT TO ODOT. COORDINATION MUST BE MADE WITH KEVIN CAPIZZI OF ODOT FOR THE INSTALLATION OF THE EQUIPMENT. THE CENTRAL OFFICE CONTROL EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR, AS DIRECTED BY THE ENGINEER, AND SHALL CONSIST OF THE FOLLOWING:

1. AN IBM OR IBM COMPATIBLE PERSONAL COMPUTER, INCLUDING PENTIUM IV 2000 MHZ MICROPROCESSOR, 256 MB RAM, 1.44 MB INTERNAL 3.5 INCH FLOPPY DISKETTE DRIVE, AN 8X CD-WRITER DRIVE, 20.0 GB ULTRA ATA HARD DISK DRIVE, 16 MB VIDEO CARD, TWO SERIAL AND ONE PRINTER (PARALLEL) PORTS, TWO USB PORTS, AND WINDOWS 2000.

A. AN HP LASERJET 1100SE OR AN APPROVED EQUAL.

B. 19" HIGH RESOLUTION MONITOR CAPABLE OF 1280 x 1024 RESOLUTION WITH A REFRESH RATE OF 85 HZ.

C. A 56K BAUD RATE (HAYES COMPATIBLE) MODEM.

D. A POWER LINE FILTER, VOLTAGE SURGE PROTECTOR AND A FUSE PROTECTED MULTI-SERVICE OUTLET WITH AT LEAST SIX POSITIONS.

E. A UPS-650 BACK-UP SYSTEM AS MANUFACTURED BY AMERICAN POWER CONVERSION CORP. (APC).

F. ALL NECESSARY CABLES AND ACCESSORIES NEEDED TO MAKE THE SYSTEM OPERATE ACCORDING TO THESE SPECIFICATIONS.

G. MICROSOFT COMPATIBLE SERIAL MOUSE WITH MAT

H. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ARRANGEMENTS WITH THE LOCAL TELEPHONE COMPANY TO HAVE THE TELEPHONE SERVICE DROP INSTALLED.

2. ONE PENTIUM III 1 GHZ PORTABLE LAPTOP MICROCOMPUTER WITH 20.0 GB HARD DISK DRIVE, 1.44 MB INTERNAL 3.5 INCH FLOPPY DISK DRIVE, 16X (MINIMUM) INTERNAL CD-ROM DRIVE, 64 MB RAM MEMORY AND 56K BAUD INTERNAL MODEM (HAYES COMPATIBLE), VGA MONITOR PORT, PORTABLE IOMEGA ZIP DRIVE WITH 3 IOMEGA ZIP DISKS, AC ADAPTER, ALL SOFTWARE SPECIFIED FOR ITEM "1.", AND CARRYING CASE.

3. THE CENTRAL SOFTWARE SHALL BE COMPATIBLE WITH THE MASTER CONTROLLER.

4. BENCH MARK TESTING WILL BE ACCOMPLISHED IN CONJUNCTION WITH THE TRAINING COURSE AFTER INSTALLATION. THE PURPOSE OF BENCHMARK TESTING IS TO DEMONSTRATE THE CAPABILITIES OF THE SYSTEM WHICH THE SUPPLIER HAS FURNISHED. THE COMPUTER, PERIPHERAL DEVICES AND ELEMENTS UTILIZED FOR THE TESTS SHALL BE THE SPECIFIC ITEMS WHICH WILL BE INSTALLED IN THE CITY. BENCHMARK TESTING SHALL INCLUDE THE FOLLOWING:
 - A. LOAD AND OPERATE A BENCHMARK PROGRAM ON THE COMPUTER, UTILIZING ALL PERIPHERAL DEVICES AND AT LEAST TWO ACTUATED (FOUR PHASE MINIMUM) INTERSECTION CONTROLLERS. THE BENCHMARK PROGRAM SHALL CONTAIN PARAMETERS FOR AT LEAST 15 LOCAL INTERSECTIONS, AT LEAST 10 SENSOR INPUTS WITH THE ABILITY TO SIMULATE FIELD VOLUME AND OCCUPANCY DETECTOR DATA, AND SHALL OPERATE WITH AT LEAST 3 MASTER CONTROLLERS.
 - B. THE BENCHMARK TESTS SHALL EXERCISE ALL FEATURES OF THE HARDWARE, SOFTWARE, COMMUNICATIONS SYSTEM AND LOCAL CONTROLLERS AND SHALL BE A MINIMUM OF 48 HOURS OF CONTINUOUS OPERATION. THE TESTING SHALL BE ARRANGED AT A TIME MUTUALLY AGREEABLE TO THE CITY AND CONTRACTOR. THE COURSE SHALL COVER FAMILIARIZATION AND OPERATIONAL TRAINING IN THE USE OF THE SYSTEM. THE TRAINING SHALL BE BASED UPON (HANDS-ON) OPERATION OF THE MASTER PERIPHERALS, COMMUNICATIONS DEVICES AND LOCAL CONTROLLERS.

A QUANTITY OF ONE (1) HAS BEEN CARRIED TO THE GENERAL SUMMARY.

PAYMENT FOR ITEM 633 - REMOTE MONITORING STATION WILL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH REMOTE MONITORING STATION IN PLACE AND FULLY OPERATIONAL AS SHOWN IN THE PLANS.

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TRAFFIC CONTROL GENERAL NOTES

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ITEM 630 - SPAN WIRE SIGN SUPPORT, TYPE TC-17.10, DESIGN 5, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 630.06, LIGHT POLE EXTENSIONS, AS DETAILED ON TC-22.10 AND SHOWN ON SHEET NO. 293, SHALL BE FURNISHED AND INSTALLED.

ALL LABOR, MATERIALS, TOOLS, AND INCIDENTALS SHALL BE INCLUDED IN THE CONTRACT PRICE BID PER EACH ITEM 630-SPAN WIRE SIGN SUPPORT, TYPE TC-17.10, DESIGN 5, AS PER PLAN.

ITEM 632 - COMBINATION STRAIN POLE, TYPE TC-81.10 AND SIGN SUPPORT, TYPE TC-9.10 WITH LIGHT POLE EXTENSION

THIS SUPPORT SHALL CONSIST OF A TC-81.10 DESIGN 10 POLE WITH A TC-9.10 DESIGN 2 SIGN SUPPORT ARM WITH LIGHT POLE EXTENSION. ALL SIGNAL SUPPORT ITEMS REQUIRED BY CMS ITEM 632 AND ALL SIGN SUPPORT ITEMS REQUIRED BY CMS ITEM 630 SHALL BE INCLUDED AS PART OF THIS SUPPORT.

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE AND WILL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY FOR EACH SUPPORT FURNISHED, IN PLACE, COMPLETE AND ACCEPTED.

GROUND MOUNTED SIGN SHEETING MATERIAL

THE BACKGROUNDS OF GROUND MOUNTED PERMANENT TRAFFIC CONTROL SIGNS SHALL BE REFLECTORIZED WITH TYPE G REFLECTIVE SHEETING. REFLECTORIZED LEGENDS, SHIELDS, AND SYMBOLS (E.G. ROUTE SHIELDS, HAZARDOUS CARGO PLAQUE, AIRPORT SYMBOL, ARROWS, AND BORDERS) USED ON GROUND MOUNTED PERMANENT TRAFFIC CONTROL SIGNS SHALL BE OF TYPE G REFLECTIVE SHEETING. ALL REFLECTIVE SHEETING MATERIALS SHALL BE CONTAINED ON THE ODOT LIST OF PREQUALIFIED SIGN SHEETING MATERIALS.

BASIS OF PAYMENT SHALL BE AT THE UNIT PRICE BID PER SQ. FT. FOR:

- ITEM 630 - SIGN, GROUND MOUNTED EXTRUSHEET
- ITEM 630 - SIGN, FLAT SHEET

OVERHEAD MOUNTED SIGN SHEETING MATERIALS

THE BACKGROUNDS OF OVERHEAD MOUNTED PERMANENT TRAFFIC CONTROL SIGNS SHALL BE REFLECTORIZED WITH TYPE G REFLECTIVE SHEETING. REFLECTORIZED LEGENDS, SHIELDS, AND SYMBOLS USED ON OVERHEAD MOUNTED PERMANENT TRAFFIC CONTROL SIGNS SHALL BE OF TYPE H OR TYPE J REFLECTIVE SHEETING. ALL REFLECTIVE SHEETING MATERIALS SHALL BE CONTAINED ON THE ODOT LIST OF PREQUALIFIED SIGN SHEETING MATERIALS.

BASIS OF PAYMENT SHALL BE A THE UNIT PRICE BID PER SQ. FT. FOR:

- ITEM 630 - SIGN, OVERHEAD EXTRUSHEET, AS PER PLAN

ITEM 630-SIGN, FLAT SHEET, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 630.04, SIGNS FURNISHED AND INSTALLED SHALL BE AS DETAILED ON SHEET NO. 291.

ALL LABOR, TOOLS, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE REQUIRED WORK SHALL BE INCLUDED IN THE CONTRACT PRICE BID PER SQUARE FOOT OF ITEM 630-SIGN, FLAT SHEET, AS PER PLAN.

ALTERNATE BID ITEMS

ITEM 633-CONTROLLER, MASTER, TRAFFIC RESPONSIVE, AS PER PLAN-ALTERNATE BID

THE CONTROLLER SHALL MEET THE SAME SPECIFICATIONS AS ITEM 633 - CONTROLLER, MASTER, TRAFFIC RESPONSIVE, AS PER PLAN EXCEPT THAT THE CONTROLLER SHALL BE MANUFACTURED BY:
ECONOLITE COMPANY
3360 E. LA PALMA
ANAHEIM, CALIFORNIA 92806-2856
(714) 630-3700

ITEM 633-CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET TYPE TS1, AS PER PLAN-ALTERNATE BID

THE CONTROLLER SHALL MEET THE SAME SPECIFICATIONS AS ITEM 633 - CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET TYPE TS1, AS PER PLAN EXCEPT THAT THE CONTROLLER SHALL BE AN ASC/2-2000 AS MANUFACTURED BY:
ECONOLITE COMPANY
3360 E. LA PALMA
ANAHEIM, CALIFORNIA 92806-2856
(714) 630-3700

ITEM 633- REMOTE MONITORING STATION, AS PER PLAN-ALTERNATE BID

THE REMOTE MONITORING STATION SHALL MEET THE SAME SPECIFICATIONS AS ITEM 633 - REMOTE MONITORING STATION, AS PER PLAN EXCEPT THAT THE CENTRAL SOFTWARE SHALL BE THE LATEST VERSION OF "ARIES" SOFTWARE AS MANUFACTURED BY:
ECONOLITE COMPANY
3360 E. LA PALMA
ANAHEIM, CALIFORNIA 92806-2856
(714) 630-3700

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TRAFFIC CONTROL GENERAL NOTES

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GENERAL SUMMARY

| SHEET NUMBER | | | | | | | | | | | | | | | | | | PARTICIPATION | | ITEM | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | AS PER PLAN SHEET REF. |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|--|---------------|-------|-------|-----------|---|------|-------------|------------------------|
| 267 | 268 | 269 | 280 | 281 | 282 | 296 | 297 | 298 | 299 | 300 | 308 | 312 | 316 | 320 | 324 | 328 | | | | | | | | | |
| | | | 6 | 4 | 2 | | | | | | | | | | | | | 630 | 86102 | 12 | EACH | REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL | | | |
| | | | 4 | 2 | | | | | | | | | | | | | | 630 | 87400 | 6 | EACH | REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL | | | |
| | | | 1 | 1 | | | | | | | | | | | | | | 630 | 89706 | 2 | EACH | REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30 | | | |
| | | | | | | | | 2 | | | 2 | | | | | | | 631 | 84000 | 4 | EACH | SIGN SERVICE | | | |
| | | | | | | | | 4 | | | | | | | | | | 631 | 84300 | 4 | EACH | SIGN WIRED | | | |
| | | | | | | | | 2 | | | | | | | | | | 631 | 85100 | 2 | EACH | DISCONNECT SWITCH WITH ENCLOSURE, TYPE X | | | |
| | | | | | | | | 4 | | | | | | | | | | 631 | 87202 | 4 | EACH | BALLAST, TYPE CMRI-175-480 | | | |
| | | | | | | | | 4 | | | | | | | | | | 631 | 89200 | 4 | EACH | MERCURY VAPOR LUMINAIRE, TYPE TC-31.21, WITH 175 WATT LAMP | | | |
| | | | 2 | 2 | | | | | | | | | | | | | | 631 | 94000 | 4 | EACH | REMOVAL OF LUMINAIRE AND STORAGE | | | |
| | | | 1 | 1 | | | | | | | | | | | | | | 631 | 94300 | 2 | EACH | REMOVAL OF DISCONNECT SWITCH AND STORAGE | | | |
| | | | | | | | | | | | 9 | 8 | 11 | 11 | 9 | 1 | | 632 | 00301 | 49 | EACH | VEHICULAR SIGNAL HEAD, 3 SECTION, 12" LENS, 1-WAY, AS PER PLAN | 268 | | |
| | | | | | | | | | | | 1 | 2 | | | 2 | | | 632 | 00501 | 5 | EACH | VEHICULAR SIGNAL HEAD, 5 SECTION, 12" LENS, 1-WAY, AS PER PLAN | 268 | | |
| | | | | | | | | | | | 10 | 10 | 11 | 11 | 11 | 1 | | 632 | 25000 | 54 | EACH | COVERING OF VEHICULAR SIGNAL HEAD | | | |
| | | | | | | | | | | | 11 | 15 | 19 | 18 | 19 | 13 | | 632 | 26500 | 95 | EACH | DETECTOR LOOP | | | |
| | | | | | | | | | | | 9 | 14 | 14 | 13 | 17 | 10 | | 632 | 27009 | 77 | EACH | LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN | 267 | | |
| | | | | | | | | | | | 413 | 432 | 358 | 375 | 343 | | | 632 | 29901 | 1921 | FT. | MESSENGER WIRE, 7 STRAND 1/4" DIA., WITH ACCESSORIES, AS PER PLAN | 267 | | |
| | | | | | | | | | | | 413 | 432 | 358 | 375 | 343 | | | 632 | 30200 | 1921 | FT. | MESSENGER WIRE, 7 STRAND 3/8" DIA., WITH ACCESSORIES | | | |
| | | | | | | | | | | | 734 | 632 | 1387 | 1233 | 846 | 110 | | 632 | 40500 | 4942 | FT. | SIGNAL CABLE, 5 CONDUCTOR NO.14 AWG | | | |
| | | | | | | | | | | | 91 | 325 | | | 318 | | | 632 | 40700 | 734 | FT. | SIGNAL CABLE, 7 CONDUCTOR NO.14 AWG | | | |
| | | | | | | | | | | | 179 | 690 | 1510 | 1055 | 1288 | 336 | | 632 | 53202 | 5058 | FT. | INTERCONNECT CABLE, 6 PAIR, NO.19 AWG, SOLID, REA (PE-39) | | | |
| | | | | | | | | | | | 4 | 4 | 4 | 4 | 4 | | | 632 | 64000 | 20 | EACH | STRAIN POLE FOUNDATION | | | |
| | | | | | | | | | | | 2966 | 4138 | 7146 | 5194 | 5799 | 2354 | | 632 | 65200 | 27597 | FT. | LOOP DETECTOR LEAD-IN CABLE | | | |
| | | | | | | | | | | | 56 | 50 | 253 | 111 | 186 | | | 632 | 68300 | 656 | FT. | POWER CABLE, 3 CONDUCTOR NO.6 AWG | | | |
| | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | | | 632 | 70001 | 5 | EACH | POWER SERVICE, AS PER PLAN | 267 | | |
| | | | | | | | | | | | 2 | 1 | 1 | | 1 | | | 632 | 70400 | 5 | EACH | CONDUIT RISER, 2" DIAMETER | | | |
| | | | | | | | | | | | 4 | 4 | 2 | 2 | 4 | | | 632 | 83000 | 16 | EACH | STRAIN POLE, TYPE TC-81.10, DESIGN 10 | | | |
| | | | | | | | | | | | | | 1 | 1 | | | | 632 | 85000 | 2 | EACH | COMBINATION STRAIN POLE, TYPE TC-81.10, DESIGN 10 | | | |
| | | | | | | | | | | | | | 1 | 1 | | | | 632 | 85300 | 2 | EACH | COMBINATION STRAIN POLE, TYPE TC-81.10 AND SIGN SUPPORT, TYPE TC-9.10 WITH LIGHT POLE EXTENSION | 269 | | |
| | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | | | 632 | 90100 | 5 | EACH | REMOVAL OF TRAFFIC SIGNAL INSTALLATION | | | |
| | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | | | 632 | 90400 | 5 | EACH | SIGNALIZATION, MISC.: METER BASE, 100 AMP WITH BYPASS | 267 | | |
| | | | | | | | | | | | | | | | | 6 | | 632 | 90400 | 6 | EACH | SIGNALIZATION, MISC.: DETECTOR WIRE SPLICES | 268 | | |
| | | | | | | | | | | | | | | | | 1 | | 632 | 90400 | 1 | EACH | SIGNALIZATION, MISC.: LASHING AND UNLASHING SIGNAL WIRE | 268 | | |
| | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | | 633 | 01581 | 6 | EACH | CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET TYPE TS1, AS PER PLAN | 268 | | |
| 1 | | | | | | | | | | | | 1 | | | | | | 633 | 39001 | 2 | EACH | CONTROLLER, MASTER, TRAFFIC RESPONSIVE, AS PER PLAN | 267 | | |
| | | | | | | | | | | | | 1 | 1 | 1 | 1 | | | 633 | 67101 | 4 | EACH | CABINET FOUNDATION, AS PER PLAN | 267 | | |
| | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | | | 633 | 67200 | 5 | EACH | CONTROLLER WORK PAD | | | |
| | | 1 | | | | | | | | | | | | | | | | 633 | 68001 | 1 | EACH | REMOTE MONITORING STATION, AS PER PLAN | 268 | | |
| | | | | | | | | | | | | 1 | | | | | | 633 | 68501 | 1 | EACH | TELEPHONE SERVICE, AS PER PLAN | 268 | | |
| | | | | | | | | | | | | LUMP | | | | | | 633 | 72000 | LUMP | | TRAINING | | | |
| | | | | | | | | | | | | LUMP | | | | | | 633 | 72500 | LUMP | | SYSTEM ANALYSIS | | | |

CALCULATED
 T.K.I.
 CHECKED
 K.P.W.

TRAFFIC CONTROL GENERAL SUMMARY

MED - 18 - 15.13

J:\Proj\7050600\TRAFFIC\70506TG02.DWG User: tk100242 Jul 21, 2003 - 10:12am

GENERAL SUMMARY

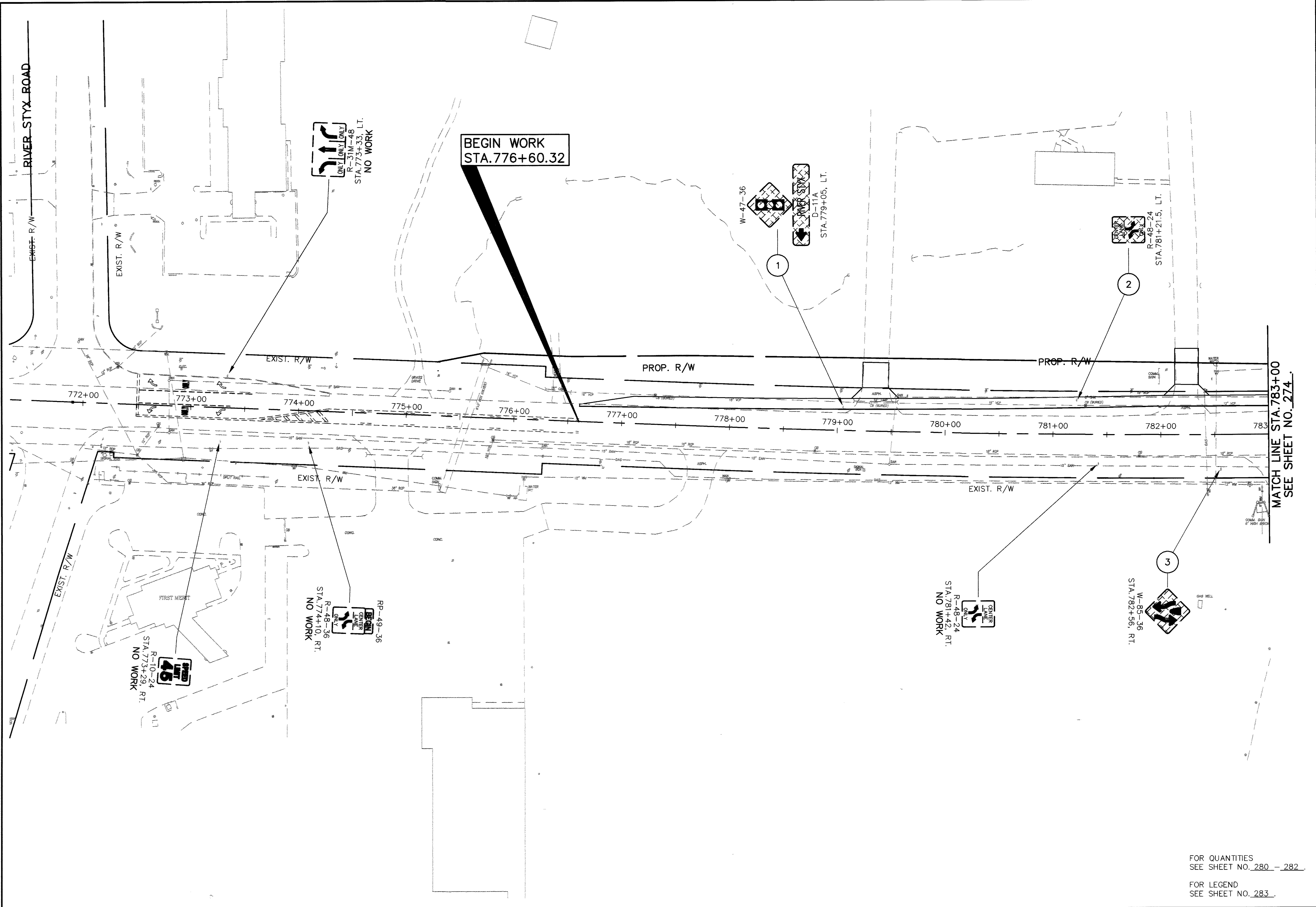
| SHEET NUMBER | | | | | | | | | | | | | | | PARTICIPATION | | ITEM | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | AS PER PLAN SHEET REF. | | |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|-----|-----|-----|---------------|-----|------|-----------|-------------|-------|-------------|---|--|-----|
| 267 | 268 | 282 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 308 | 312 | 316 | 320 | 324 | | | | | | | 328 | |
| | | | | | | | | | 2.51 | 2.24 | 0.77 | | | | | | | | 644 | 00100 | 5.52 | MILE | EDGE LINE | |
| | | | | | | | | | 1.75 | 1.67 | 0.32 | | | | | | | | 644 | 00200 | 3.74 | MILE | LANE LINE | |
| | | | | | | | | | 1.02 | 0.39 | 0.28 | | | | | | | | 644 | 00300 | 1.69 | MILE | CENTER LINE | |
| | | | | | | | | | 4264 | 5491 | 1521 | | | | | | | | 644 | 00400 | 11 276 | FT. | CHANNELIZING LINE | |
| | | | | | | | | | 452 | 363 | 222 | | | | | | | | 644 | 00500 | 1037 | FT. | STOP LINE | |
| | | | | | | | | | | | | | | | | | | | 644 | 00700 | 4395 | FT. | TRANSVERSE LINE | |
| | | | | | | | | | 152 | 128 | 43 | | | | | | | | 644 | 00900 | 323 | SQ. FT. | ISLAND MARKING | |
| | | | | | | | | | 41 | 65 | 39 | | | | | | | | 644 | 01300 | 145 | EACH | LANE ARROW | |
| | | | | | | | | | 6 | 11 | 7 | | | | | | | | 644 | 01410 | 28 | EACH | WORD ON PAVEMENT, 96" | |
| | | | | | | | | | 159 | 258 | | | | | | | | | 644 | 01500 | 417 | FT. | DOTTED LINE, 4" | |
| | | | | | | | | | | | | | | | | | | | 646 | 10000 | 0.07 | MILE | EDGE LINE | |
| | | | | | | | | | | | 0.07 | | | | | | | | 646 | 10200 | 0.19 | MILE | CENTER LINE | |
| | | | | | | | | | | | 522 | | | | | | | | 646 | 10300 | 522 | FT. | CHANNELIZING LINE | |
| | | | | | | | | | | | 80 | | | | | | | | 646 | 10600 | 80 | FT. | TRANSVERSE LINE | |
| | | | | | | | | | | | 7 | | | | | | | | 646 | 20300 | 7 | EACH | LANE ARROW | |
| | | | | | | | | | | | | 5 | | | | | | | 646 | 20410 | 5 | EACH | WORD ON PAVEMENT, 96" | |
| | | | | | | | | | | | | | | | | | | | | | | | ALTERNATE BID ITEMS | |
| | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 633 | 01581 | 6 | EACH | CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET TYPE TS1, AS PER PLAN | 269 |
| | 1 | | | | | | | | | | | | | 1 | | | | 633 | 39001 | 2 | EACH | CONTROLLER, MASTER, TRAFFIC RESPONSIVE, AS PER PLAN | 269 | |
| | | 1 | | | | | | | | | | | | | | | | 633 | 68001 | 1 | EACH | REMOTE MONITORING STATION, AS PER PLAN | 269 | |

CALCULATED
 I.K.I.
 CHECKED
 K.P.W.

TRAFFIC CONTROL GENERAL SUMMARY

MED - 18 - 15.13

272
 362



| | |
|------------|--------|
| CALCULATED | T.K.I. |
| CHECKED | K.P.W. |

**EXISTING SIGNING PLAN
STA. 772+00 TO STA. 783+00**

MED - 18 - 15.13

FOR QUANTITIES
SEE SHEET NO. 280 - 282.
FOR LEGEND
SEE SHEET NO. 283.

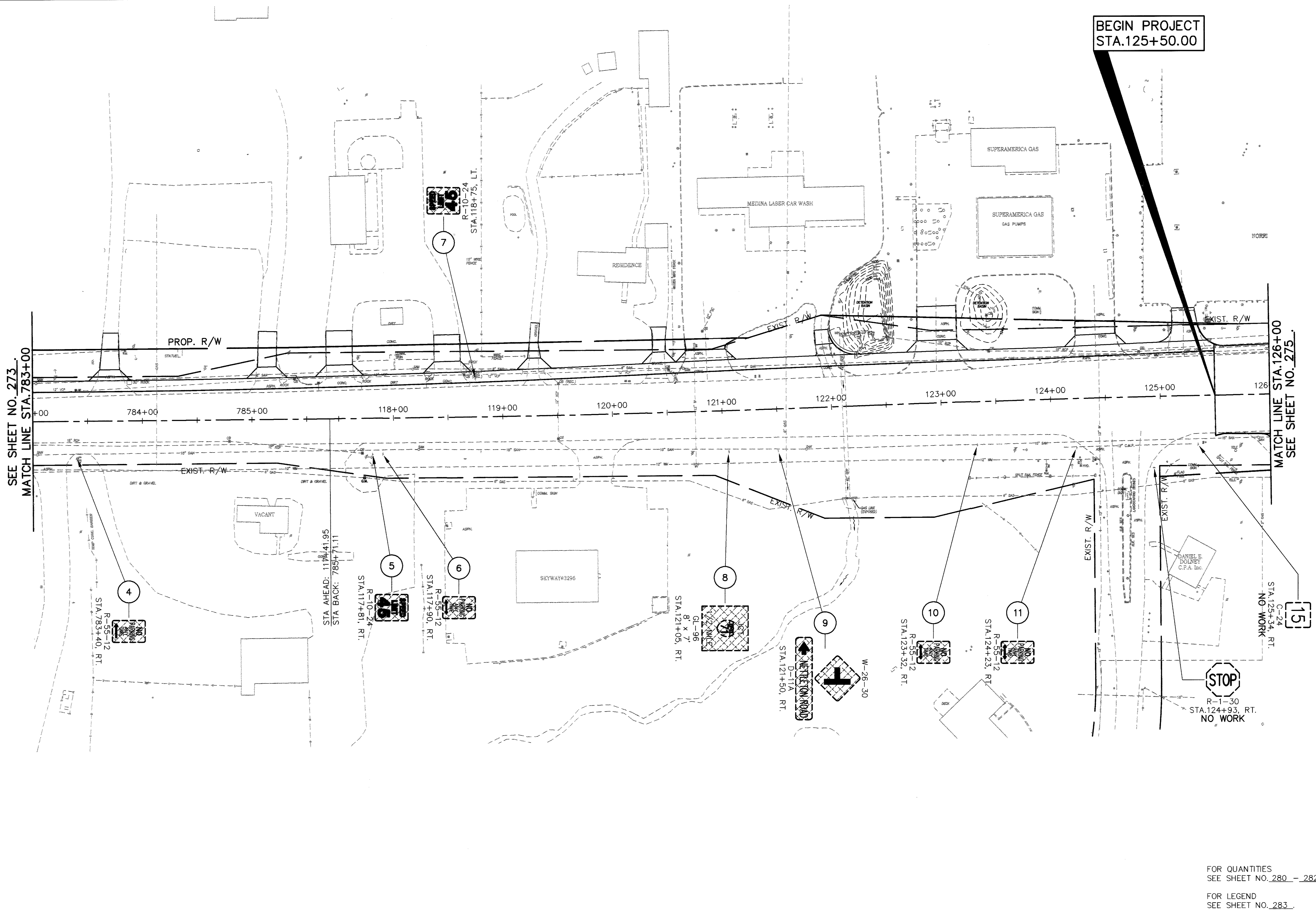
SEE SHEET NO. 273.
MATCH LINE STA. 783+00

BEGIN PROJECT
STA. 125+50.00

| |
|------------|
| CALCULATED |
| T.K.L. |
| CHECKED |
| K.P.W. |

EXISTING SIGNING PLAN
STA. 783+00 TO STA. 126+00

MED - 18 - 15.13

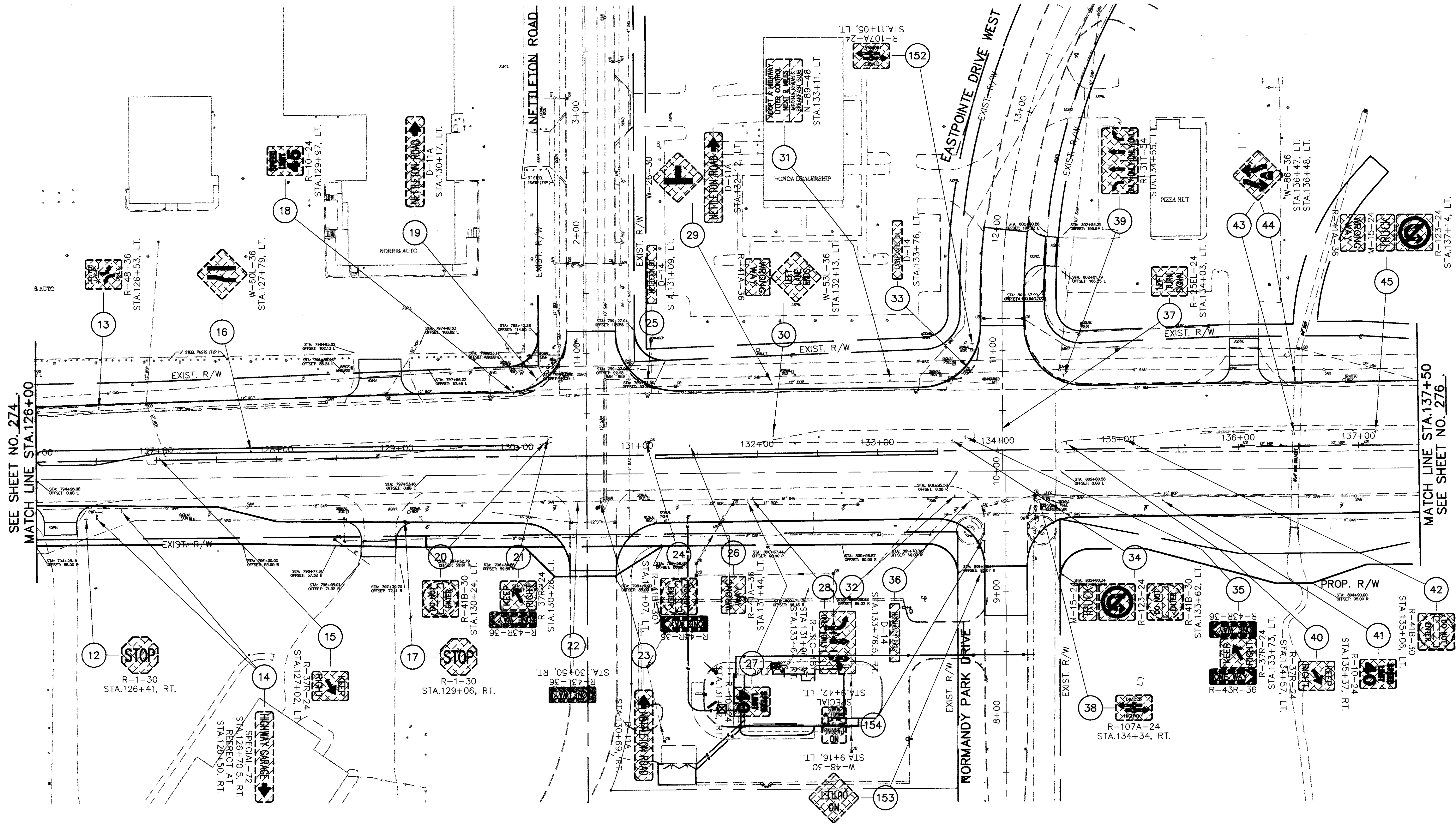


FOR QUANTITIES
SEE SHEET NO. 280 - 282
FOR LEGEND
SEE SHEET NO. 283

SEE SHEET NO. 274
MATCH LINE STA. 126+00

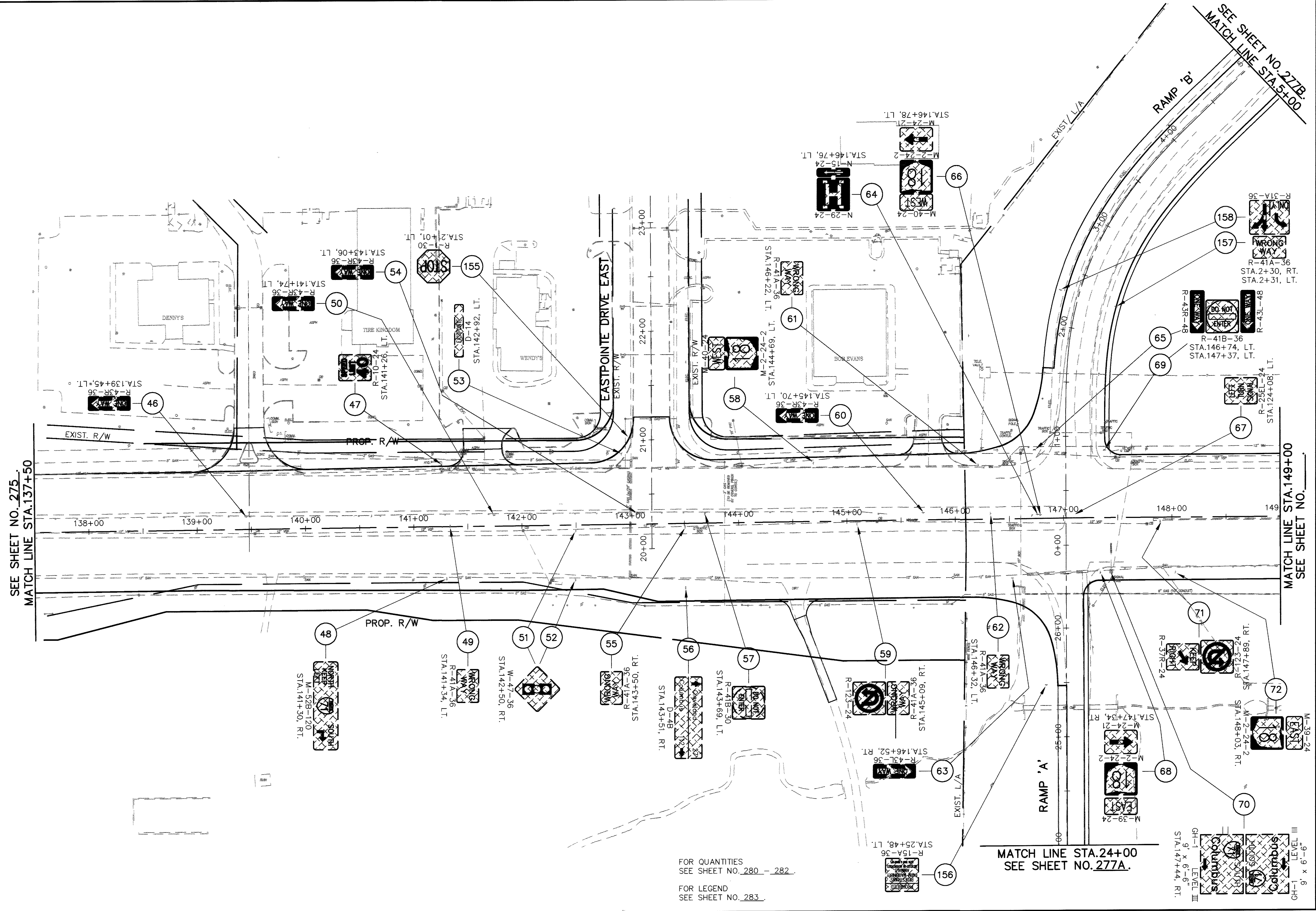
MATCH LINE STA. 137+50
SEE SHEET NO. 276

**EXISTING SIGNING PLAN
STA. 126+00 TO STA. 137+50**



FOR QUANTITIES
SEE SHEET NO. 280 - 282
FOR LEGEND
SEE SHEET NO. 283

CALCULATED
I.K.L.
CHECKED
K.P.W.



SEE SHEET NO. 275.
MATCH LINE STA. 137+50

MATCH LINE STA. 24+00
SEE SHEET NO. 277A.

MATCH LINE STA. 149+00
SEE SHEET NO. 276

FOR QUANTITIES
SEE SHEET NO. 280 - 282.

FOR LEGEND
SEE SHEET NO. 283.

CALCULATED T.K.L. CHECKED K.P.W.

**EXISTING SIGNING PLAN
STA. 137+50 TO STA. 149+00**

MED - 18 - 1513

276
362

SEE SHEET NO. 277B.
MATCH LINE STA. 5+00

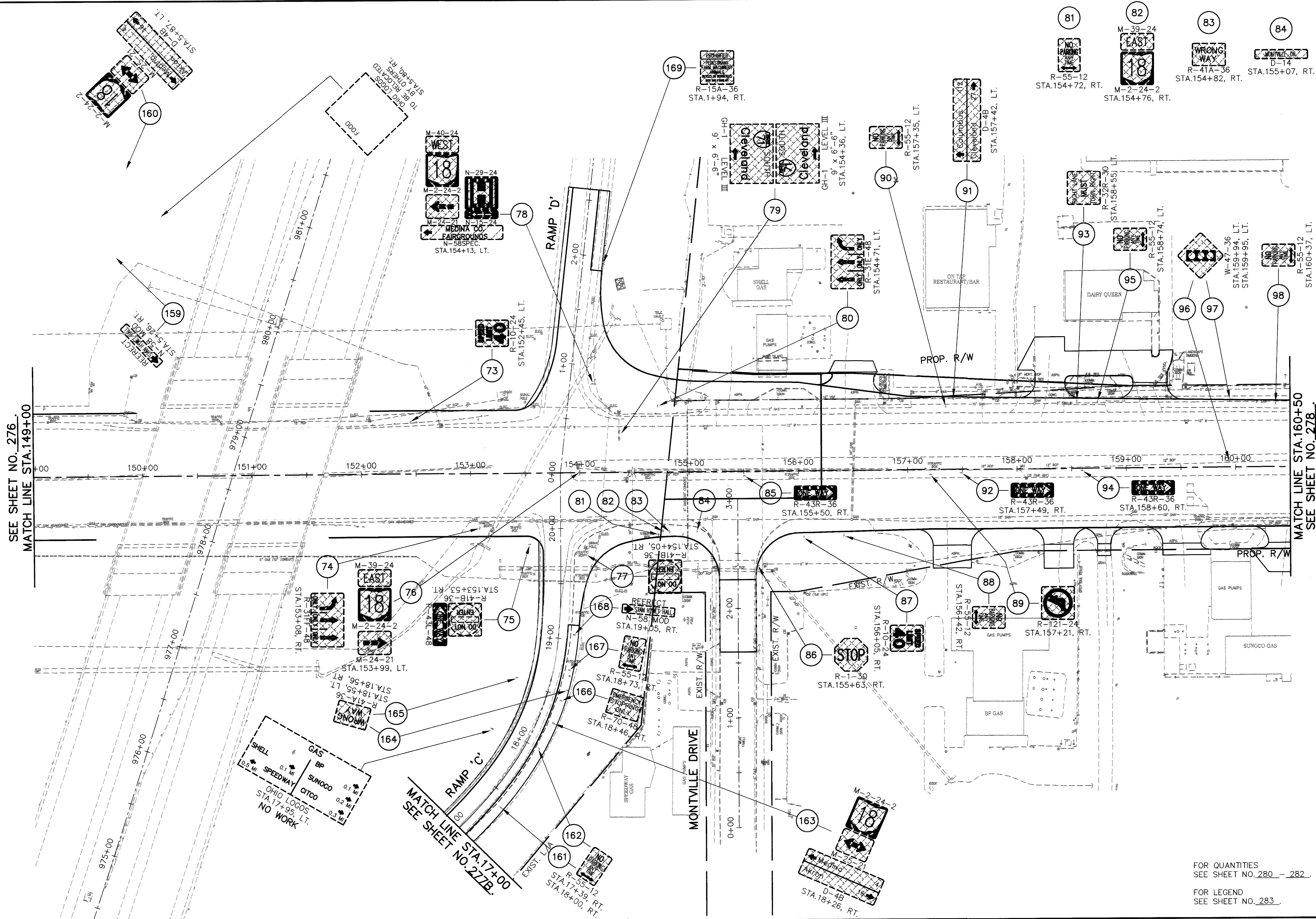
SEE SHEET NO. 276
MATCH LINE STA.149+00

MATCH LINE STA.160+50
SEE SHEET NO. 278

**EXISTING SIGNING PLAN
STA.149+00 TO STA.160+50**

MED - 18 - 1513

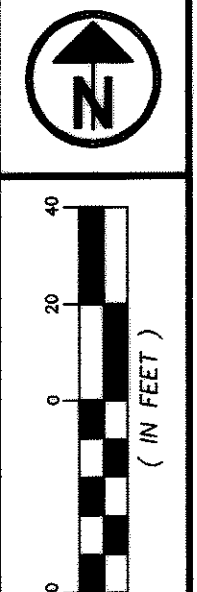
277
362



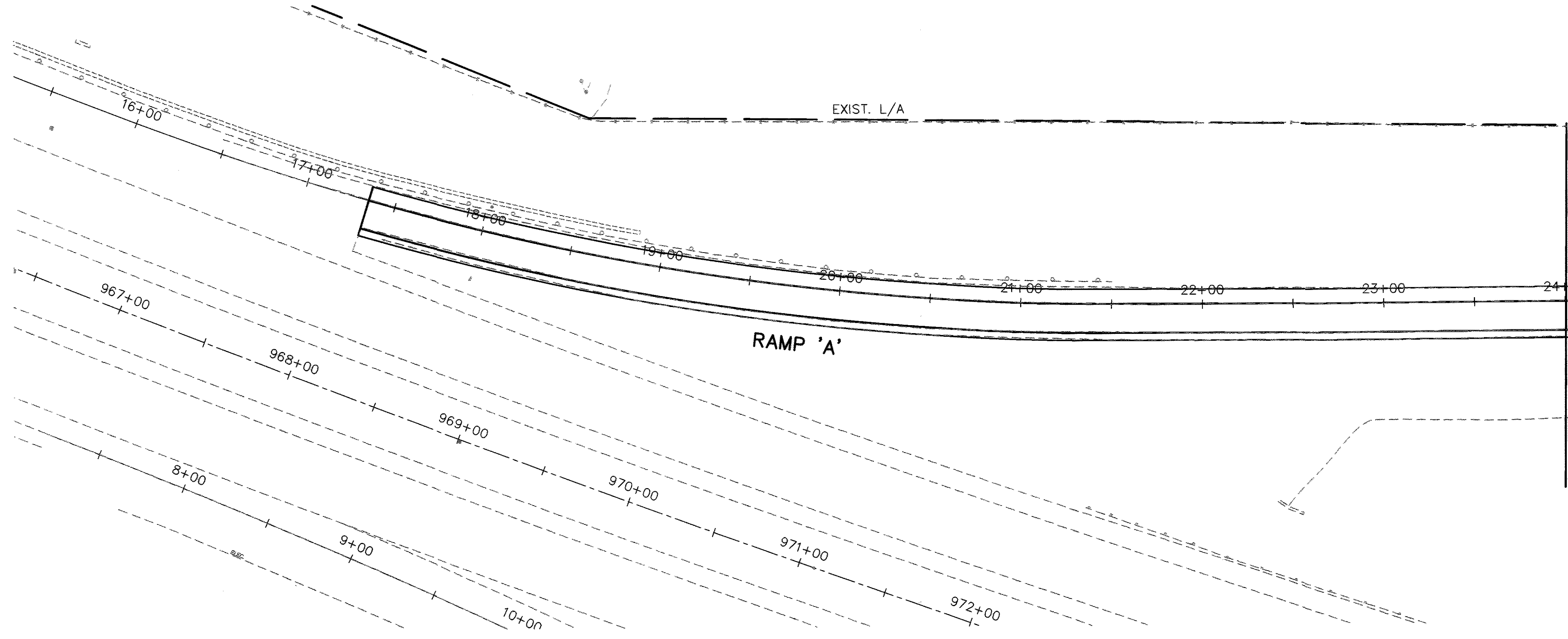
FOR QUANTITIES
SEE SHEET NO. 280 - 282

FOR LEGEND
SEE SHEET NO. 283

| | |
|------------|--------|
| CALCULATED | T.K.I. |
| CHECKED | K.P.W. |



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MATCH LINE STA. 24+00
SEE SHEET NO. 276

FOR QUANTITIES
SEE SHEET NO. 280 - 282
FOR LEGEND
SEE SHEET NO. 283

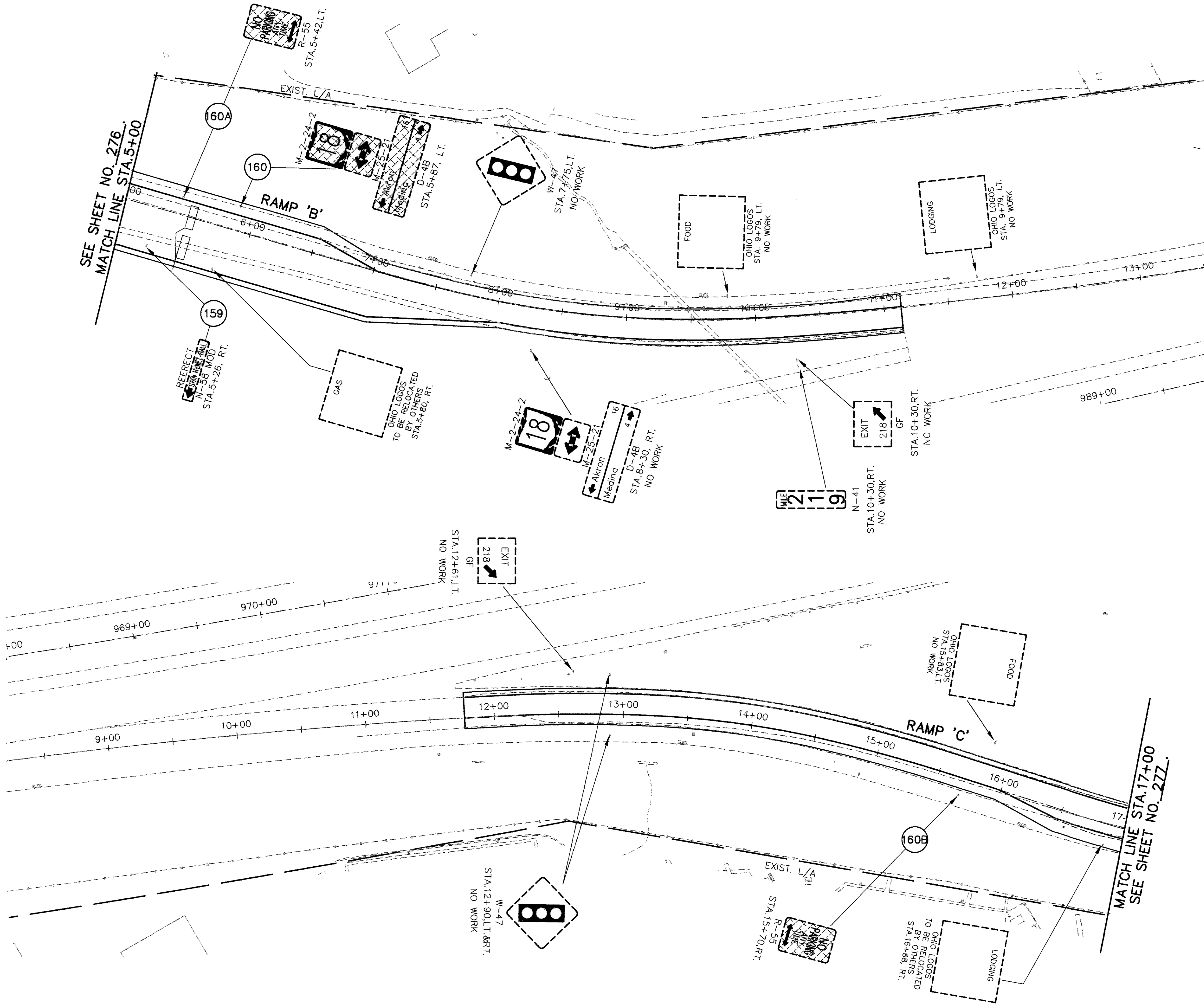
CALCULATED
T.K.L.
CHECKED
K.P.W.



**EXISTING SIGNING PLAN
STA. 149+00 TO STA. 160+50**

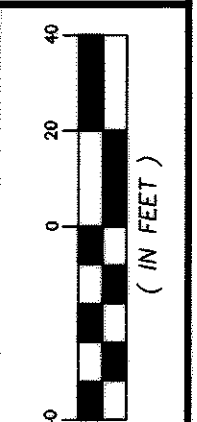
MED - 18 - 15.13

277A
362



SEE SHEET NO. 276.
MATCH LINE STA. 5+00

MATCH LINE STA. 17+00
SEE SHEET NO. 277.



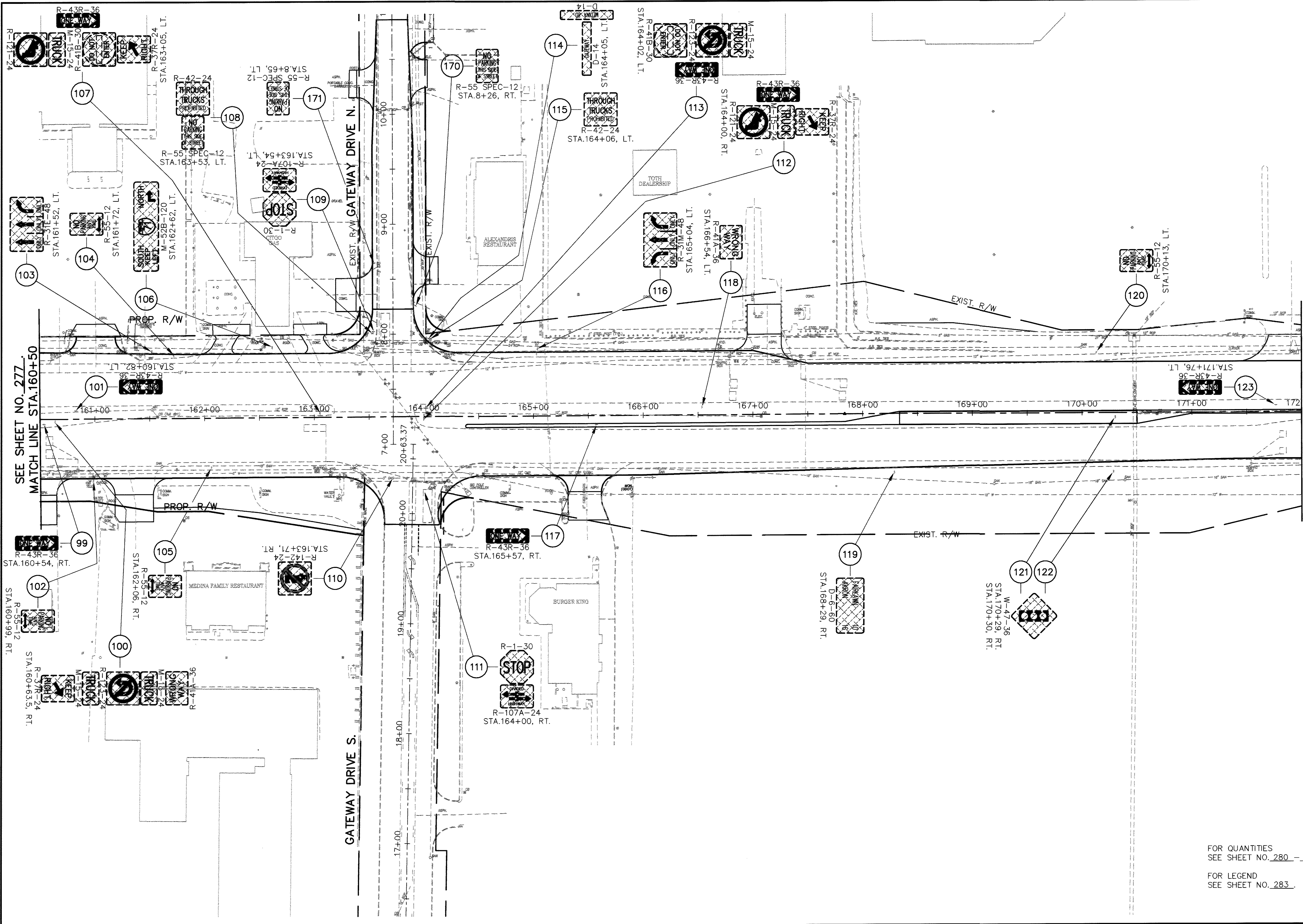
| | | | |
|------------|--------|---------|--------|
| CALCULATED | T.K.I. | CHECKED | K.P.W. |
|------------|--------|---------|--------|

EXISTING SIGNING PLAN
STA. 149+00 TO STA. 160+50

MED - 18 - 15.13

FOR QUANTITIES
SEE SHEET NO. 280 - 282.
FOR LEGEND
SEE SHEET NO. 283.

277B
362



SEE SHEET NO. 277.
MATCH LINE STA. 160+50

MATCH LINE STA. 172+00
SEE SHEET NO. 279.





| | |
|------------|--------|
| CALCULATED | T.K.I. |
| CHECKED | K.P.W. |

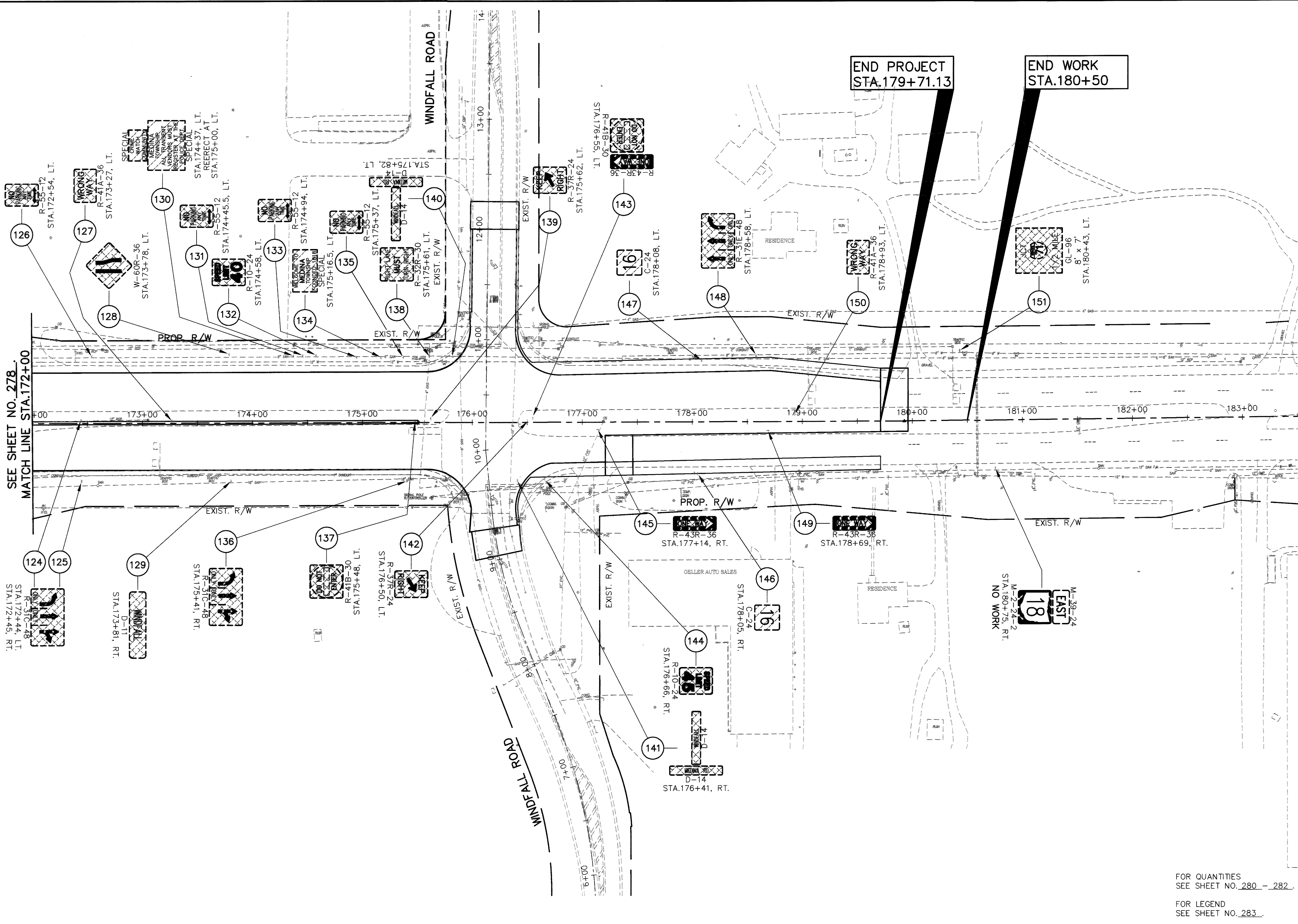
EXISTING SIGNING PLAN
STA. 160+50 TO STA. 172+00

MED - 18 - 15.13

FOR QUANTITIES
SEE SHEET NO. 280 - 282.

FOR LEGEND
SEE SHEET NO. 283.

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SEE SHEET NO. 278.
MATCH LINE STA.172+00

END PROJECT
STA.179+71.13

END WORK
STA.180+50

| | | |
|------------|---------|--------|
| CALCULATED | | |
| T.K.I. | CHECKED | K.P.W. |
| | | |

(IN FEET)

EXISTING SIGNING PLAN
STA.172+00 TO STA.183+50

FOR QUANTITIES SEE SHEET NO. 280 - 282.
FOR LEGEND SEE SHEET NO. 283.

EXISTING SIGN SUB-SUMMARY

| SHEET NO. | REFERENCE NO. | STATION | SIDE | CODE | SIZE (INCHES) | ITEM NUMBERS | | | | | | | | | | | | | | | | |
|-----------------------|---------------|---------|------|-------------|---------------|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | | 630 | | | | | | | | | | | | | | | | |
| | | | | | | REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL | REMOVAL OF GROUND MOUNTED SIGN AND REERECTION | REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL | REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL | REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL | | | | | | | | | | | | |
| EACH | EACH | EACH | EACH | EACH | | | | | | | | | | | | | | | | | | |
| S.R.18 - MEDINA ROAD | | | | | | | | | | | | | | | | | | | | | | |
| 279 | 136 | 175+41 | RT. | R-31C-48 | - | 1 | | | | 2 | | | | | | | | | | | | |
| | 137 | 175+48 | LT. | R-41B-30 | - | 1 | | | | 1 | | | | | | | | | | | | |
| | 138 | 175+61 | LT. | R-32R-30 | - | 1 | | | | 1 | | | | | | | | | | | | |
| | 139 | 175+62 | LT. | R-37R-24 | - | 1 | | | | 1 | | | | | | | | | | | | |
| | 140 | 175+82 | LT. | D-14 | - | 2 | | | | 1 | | | | | | | | | | | | |
| | 141 | 176+41 | RT. | D-14 | - | 2 | | | | 1 | | | | | | | | | | | | |
| | 142 | 176+50 | LT. | R-37R-24 | - | 1 | | | | 1 | | | | | | | | | | | | |
| | 143 | 176+55 | LT. | R-41B-30 | - | 1 | | | | 1 | | | | | | | | | | | | |
| | 143 | 176+55 | LT. | R-43R-36 | - | 1 | | | | | | | | | | | | | | | | |
| | 144 | 176+66 | RT. | R-10-24 | - | 1 | | | | 1 | | | | | | | | | | | | |
| | 145 | 177+14 | RT. | R-43R-36 | - | 1 | | | | 1 | | | | | | | | | | | | |
| | 146 | 178+05 | RT. | C-24 | - | | 1 | | | 1 | | | | | | | | | | | | |
| | 147 | 178+08 | LT. | C-24 | - | | 1 | | | 1 | | | | | | | | | | | | |
| | 148 | 178+58 | LT. | R-31E-48 | - | 1 | | | | 2 | | | | | | | | | | | | |
| | 149 | 178+69 | RT. | R-43R-36 | - | 1 | | | | 1 | | | | | | | | | | | | |
| | 150 | 178+93 | LT. | R-41A-36 | - | 1 | | | | 1 | | | | | | | | | | | | |
| 279 | 151 | 180+43 | LT. | GL-96 | - | | | 1 | | | 2 | | | | | | | | | | | |
| EASTPOINTE DRIVE WEST | | | | | | | | | | | | | | | | | | | | | | |
| 275 | 152 | 11+05 | LT. | R-107A-24 | - | 1 | | | | 1 | | | | | | | | | | | | |
| NORMANDY DRIVE | | | | | | | | | | | | | | | | | | | | | | |
| 275 | 153 | 9+16 | LT. | W-48-30 | - | 1 | | | | 1 | | | | | | | | | | | | |
| 275 | 154 | 9+42 | LT. | R-55SPEC-12 | - | | 1 | | | 1 | | | | | | | | | | | | |
| EASTPOINTE DRIVE EAST | | | | | | | | | | | | | | | | | | | | | | |
| 276 | 155 | 21+01 | LT. | R-1-30 | - | 1 | | | | 1 | | | | | | | | | | | | |
| RAMP 'A' | | | | | | | | | | | | | | | | | | | | | | |
| 276 | 156 | 25+48 | LT. | R-15A-36 | - | 1 | | | | 1 | | | | | | | | | | | | |
| RAMP 'B' | | | | | | | | | | | | | | | | | | | | | | |
| 276 | 157 | 2+30 | RT. | R-41A-36 | - | 1 | | | | 1 | | | | | | | | | | | | |
| 276 | 157 | 2+30 | RT. | R-31A-36 | - | 1 | | | | 1 | | | | | | | | | | | | |
| 276 | 158 | 2+31 | LT. | R-41A-36 | - | 1 | | | | 1 | | | | | | | | | | | | |
| 276 | 158 | 2+31 | LT. | R-31A-36 | - | 1 | | | | 1 | | | | | | | | | | | | |
| 277B | 159 | 5+26 | RT. | N-58 MOD | - | | 1 | | | | 2 | | | | | | | | | | | |
| 277B | 160 | 5+87 | LT. | D-4B | - | 1 | | | | | 2 | | | | | | | | | | | |
| 277B | 160 | 5+87 | LT. | M-2-24-2 | - | 1 | | | | 1 | | | | | | | | | | | | |
| 277B | 160 | 5+87 | LT. | M-25-21 | - | 1 | | | | 1 | | | | | | | | | | | | |
| 277B | 160A | 5+42 | LT. | R-55-12 | - | 1 | | | | | 1 | | | | | | | | | | | |
| SUB-TOTAL | | | | | | 28 | 3 | 1 | | 29 | 2 | | | | | | | | | | | |

| SHEET NO. | REFERENCE NO. | STATION | SIDE | CODE | SIZE (INCHES) | ITEM NUMBERS | | | | | | | | | | | | | | | | | |
|--------------------|---------------|---------|------|-------------|---------------|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|---|--|--|
| | | | | | | 630 | | | | | | | | | | | | | | | | | |
| | | | | | | REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL | REMOVAL OF GROUND MOUNTED SIGN AND REERECTION | REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL | REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL | REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL | | | | | | | | | | | | | |
| EACH | EACH | EACH | EACH | EACH | | | | | | | | | | | | | | | | | | | |
| RAMP 'C' | | | | | | | | | | | | | | | | | | | | | | | |
| 277B | 160B | 15+70 | RT. | R-55-12 | - | 1 | | | | | | | | | | | | | | | 1 | | |
| 277 | 161 | 17+39 | RT. | R-55-12 | - | 1 | | | | | | | | | | | | | | | 1 | | |
| | 162 | 18+00 | RT. | R-55-12 | - | 1 | | | | | | | | | | | | | | | 1 | | |
| | 163 | 18+26 | RT. | D-4B | - | 1 | | | | | | | | | | | | | | | 2 | | |
| | 163 | 18+26 | RT. | M-2-24-2 | - | 1 | | | | | | | | | | | | | | | | | |
| | 163 | 18+26 | RT. | M-25-21 | - | 1 | | | | | | | | | | | | | | | | | |
| | 164 | 18+55 | LT. | R-41A-36 | - | 1 | | | | | | | | | | | | | | | 1 | | |
| | 165 | 18+56 | RT. | R-41A-36 | - | 1 | | | | | | | | | | | | | | | 1 | | |
| | 166 | 18+46 | RT. | R-70-48 | - | 1 | | | | | | | | | | | | | | | 1 | | |
| | 167 | 18+73 | RT. | R-55-12 | - | 1 | | | | | | | | | | | | | | | 1 | | |
| 277 | 168 | 19+05 | RT. | N-58 MOD | - | | | 1 | | | | | | | | | | | | | 2 | | |
| RAMP 'D' | | | | | | | | | | | | | | | | | | | | | | | |
| 277 | 169 | 1+94 | RT. | R-15A-36 | - | 1 | | | | | | | | | | | | | | | 1 | | |
| GATEWAY ROAD NORTH | | | | | | | | | | | | | | | | | | | | | | | |
| 278 | 170 | 8+26 | RT. | R-55SPEC-12 | - | 1 | | | | | | | | | | | | | | | 1 | | |
| 278 | 171 | 8+65 | LT. | R-55SPEC-12 | - | 1 | | | | | | | | | | | | | | | 1 | | |
| TOTAL | | | | | | 41 | 4 | 1 | | 43 | 2 | | | | | | | | | | | | |

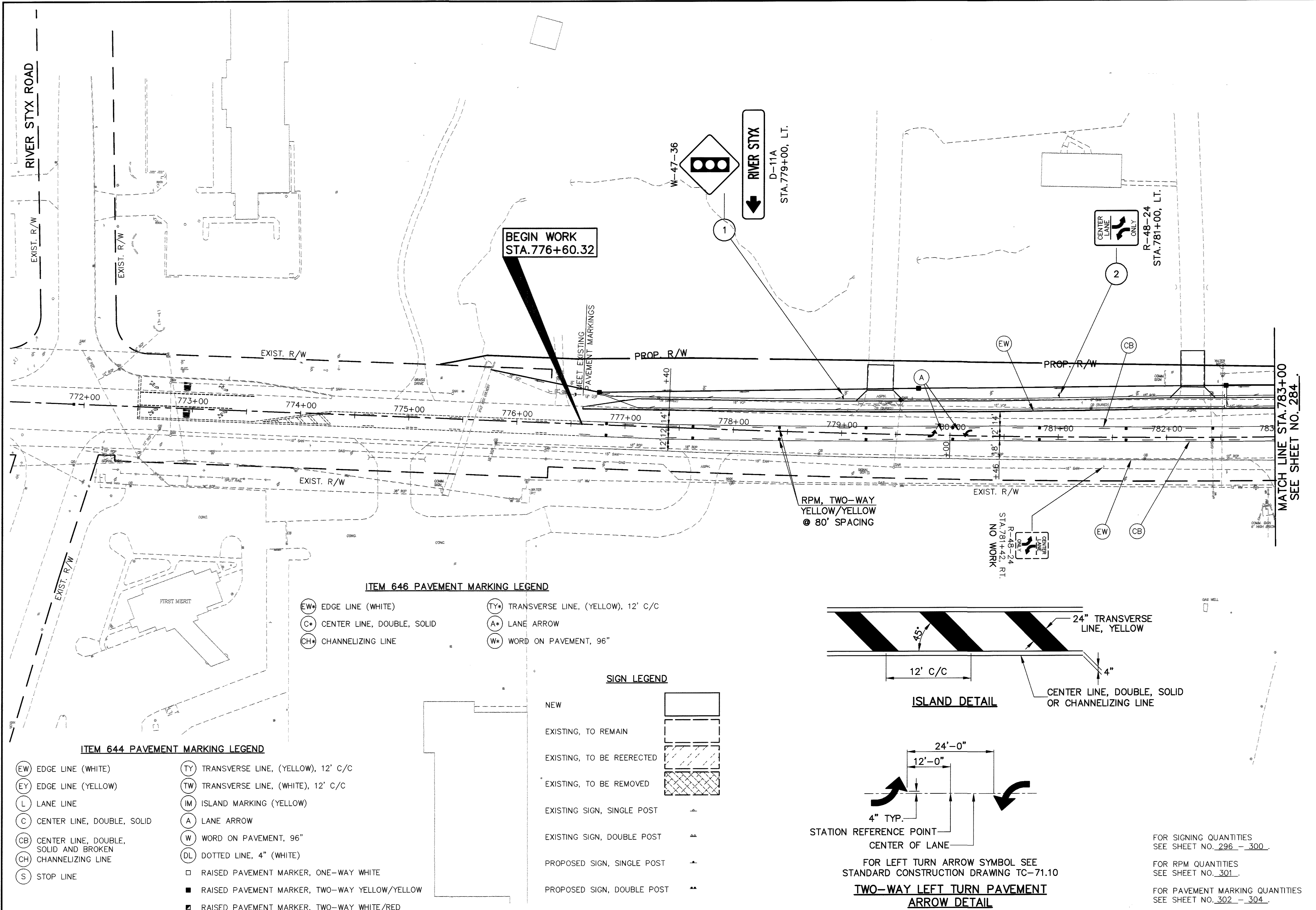
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EXISTING SIGN SUB-SUMMARY

MED - 18 - 15.13

CALCULATED
 TKL
 CHECKED
 K.P.W.

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CALCULATED
I.K.I.
CHECKED
K.P.W.

**SIGNING AND PAVEMENT MARKING PLAN
STA. 772+00 TO STA. 783+00**

MED - 18 - 15.13

283
362

ITEM 646 PAVEMENT MARKING LEGEND

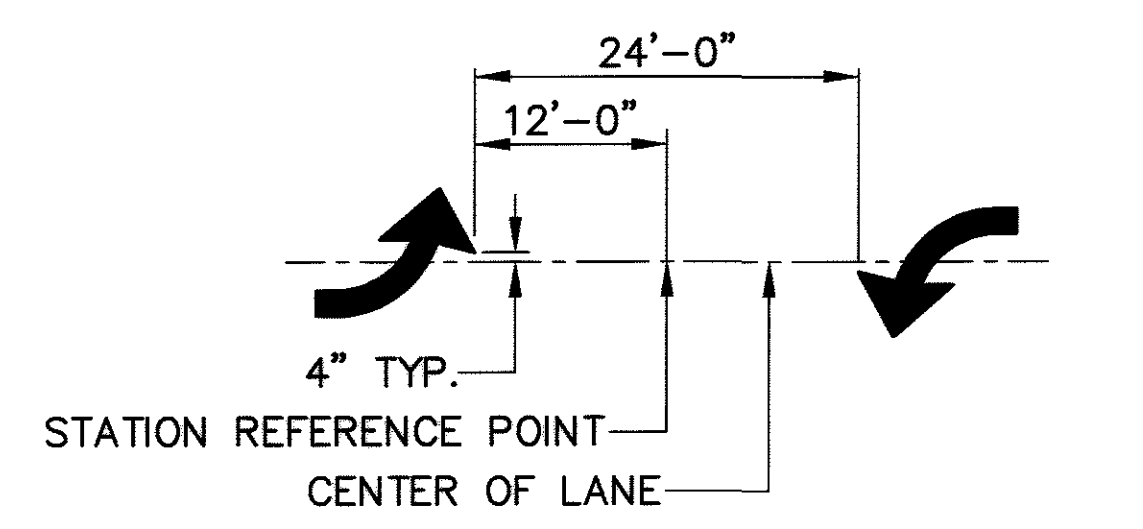
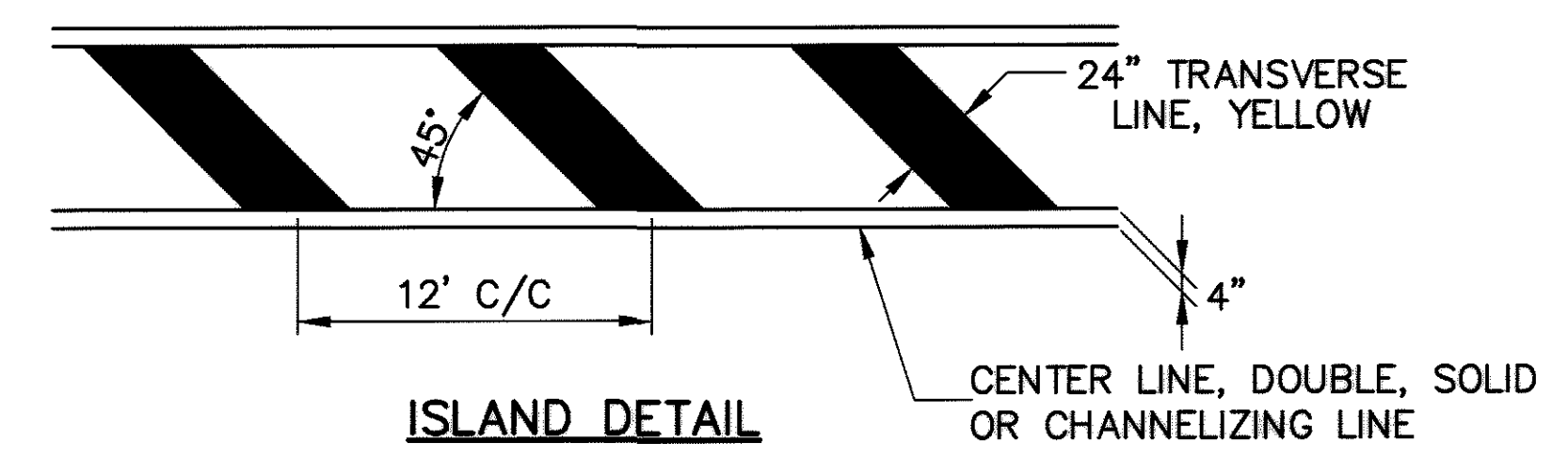
- EW* EDGE LINE (WHITE)
- C+ CENTER LINE, DOUBLE, SOLID
- CH* CHANNELIZING LINE
- TY* TRANSVERSE LINE, (YELLOW), 12' C/C
- A* LANE ARROW
- W* WORD ON PAVEMENT, 96"

SIGN LEGEND

- NEW
- EXISTING, TO REMAIN
- EXISTING, TO BE REERECTED
- EXISTING, TO BE REMOVED
- EXISTING SIGN, SINGLE POST
- EXISTING SIGN, DOUBLE POST
- PROPOSED SIGN, SINGLE POST
- PROPOSED SIGN, DOUBLE POST

ITEM 644 PAVEMENT MARKING LEGEND

- EW EDGE LINE (WHITE)
- EY EDGE LINE (YELLOW)
- L LANE LINE
- C CENTER LINE, DOUBLE, SOLID
- CB CENTER LINE, DOUBLE, SOLID AND BROKEN
- CH CHANNELIZING LINE
- S STOP LINE
- TY TRANSVERSE LINE, (YELLOW), 12' C/C
- TW TRANSVERSE LINE, (WHITE), 12' C/C
- IM ISLAND MARKING (YELLOW)
- A LANE ARROW
- W WORD ON PAVEMENT, 96"
- DL DOTTED LINE, 4" (WHITE)
- RAISED PAVEMENT MARKER, ONE-WAY WHITE
- RAISED PAVEMENT MARKER, TWO-WAY YELLOW/YELLOW
- RAISED PAVEMENT MARKER, TWO-WAY WHITE/RED



FOR LEFT TURN ARROW SYMBOL SEE STANDARD CONSTRUCTION DRAWING TC-71.10

TWO-WAY LEFT TURN PAVEMENT ARROW DETAIL

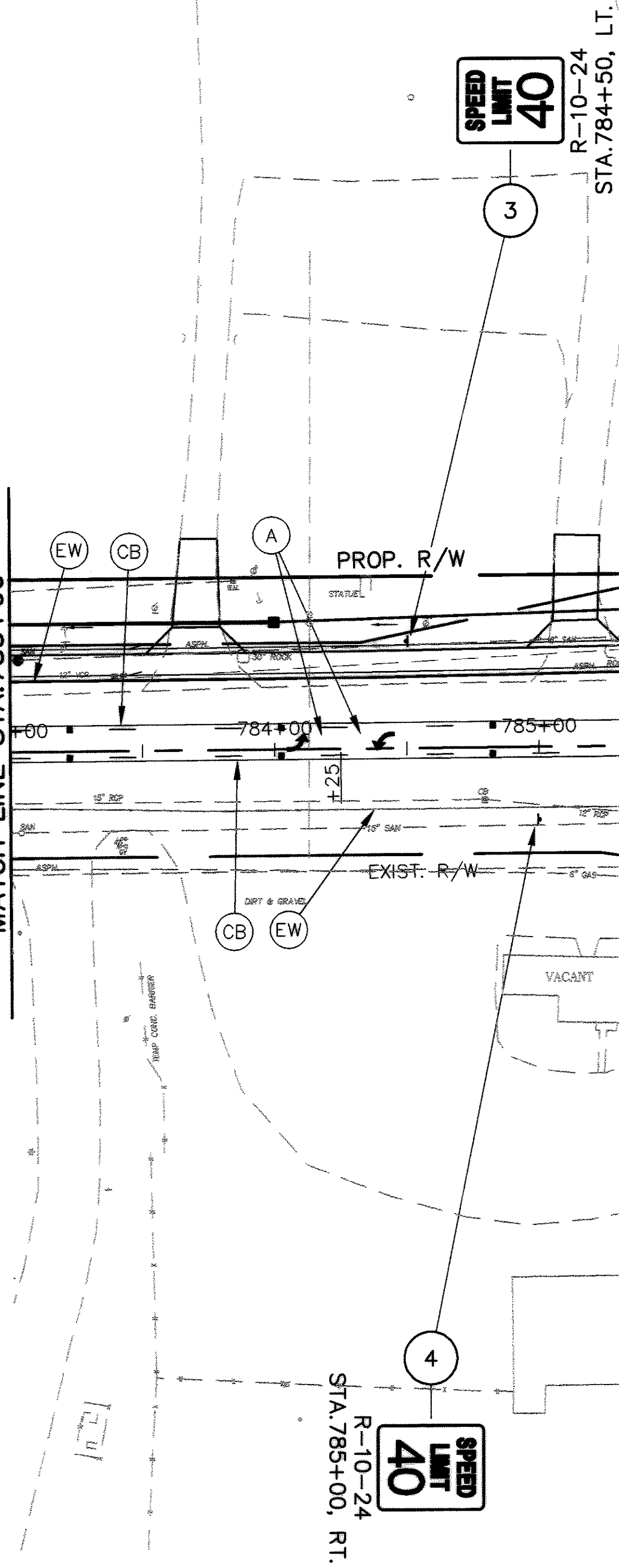
FOR SIGNING QUANTITIES SEE SHEET NO. 296 - 300

FOR RPM QUANTITIES SEE SHEET NO. 301

FOR PAVEMENT MARKING QUANTITIES SEE SHEET NO. 302 - 304

MATCH LINE STA. 783+00
SEE SHEET NO. 284

SEE SHEET NO. 283.
MATCH LINE STA. 783+00



SPEED LIMIT 40
R-10-24
STA. 784+50, LT.

SPEED LIMIT 40
R-10-24
STA. 785+00, RT.

CENTER LINE ONLY
R-48-24
STA. 119+00, RT.

RPM, TWO-WAY
YELLOW/YELLOW
80' SPACING

W-85-36
STA. 123+00, RT.

RPM, TWO-WAY
WHITE/RED
80' SPACING

RPM, TWO-WAY
WHITE/RED
80' SPACING

BEGIN PROJECT
STA. 125+50.00

W-60R-36
STA. 124+90, LT.

D-11A
STA. 125+50, RT.
NETLETON RD

FOR LEGEND
SEE SHEET NO. 283.

FOR SIGNING QUANTITIES
SEE SHEET NO. 296 - 300.

FOR RPM QUANTITIES
SEE SHEET NO. 301.

FOR PAVEMENT MARKING QUANTITIES
SEE SHEET NO. 302 - 304.

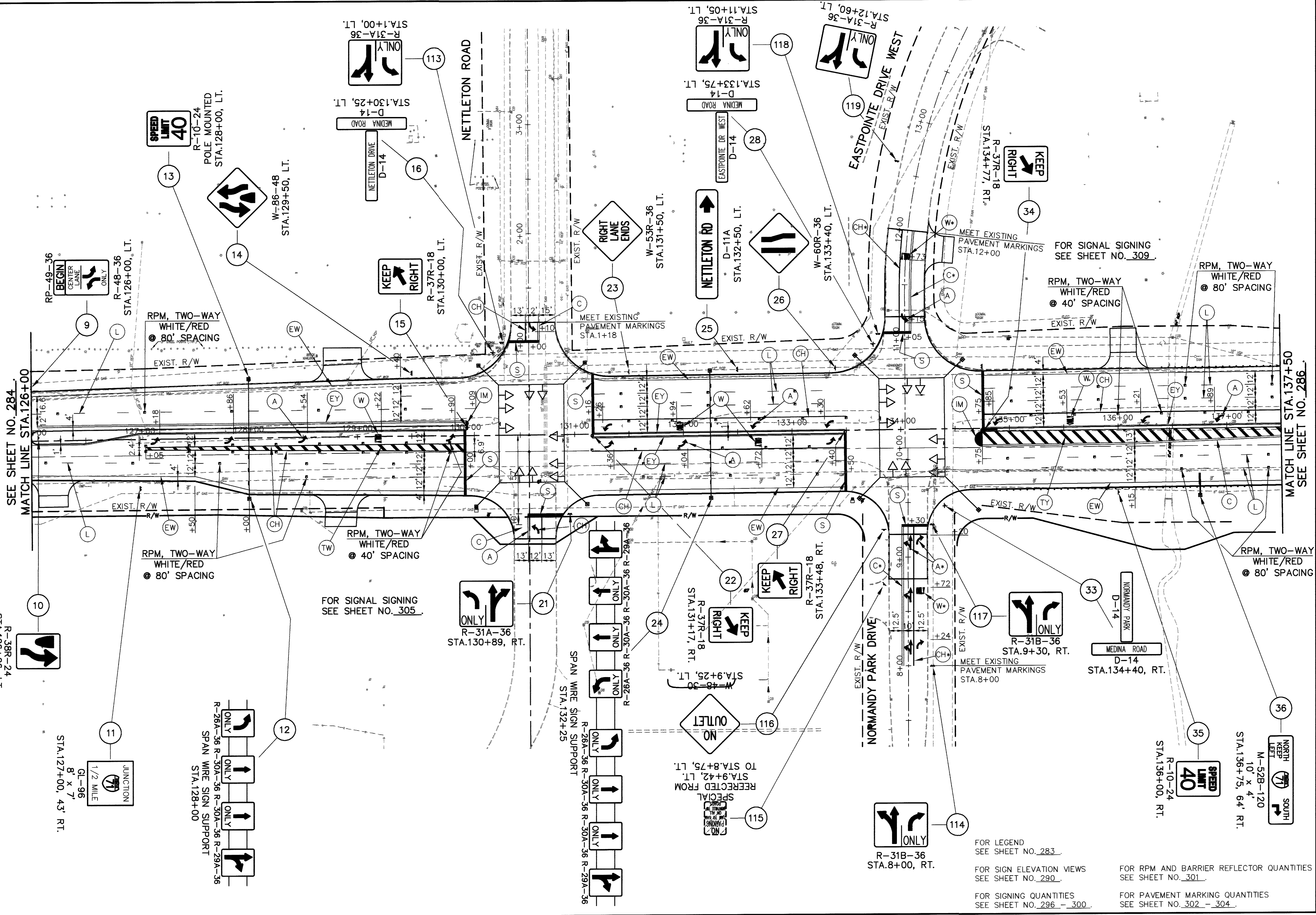
MATCH LINE STA. 126+00
SEE SHEET NO. 285.

| | |
|----------------------|-------------------|
| CALCULATED T.K.L. | CHECKED R.P.W. |
| | |

SIGNING AND PAVEMENT MARKING PLAN
STA. 783+00 TO STA. 126+00

MED - 18 - 15.13

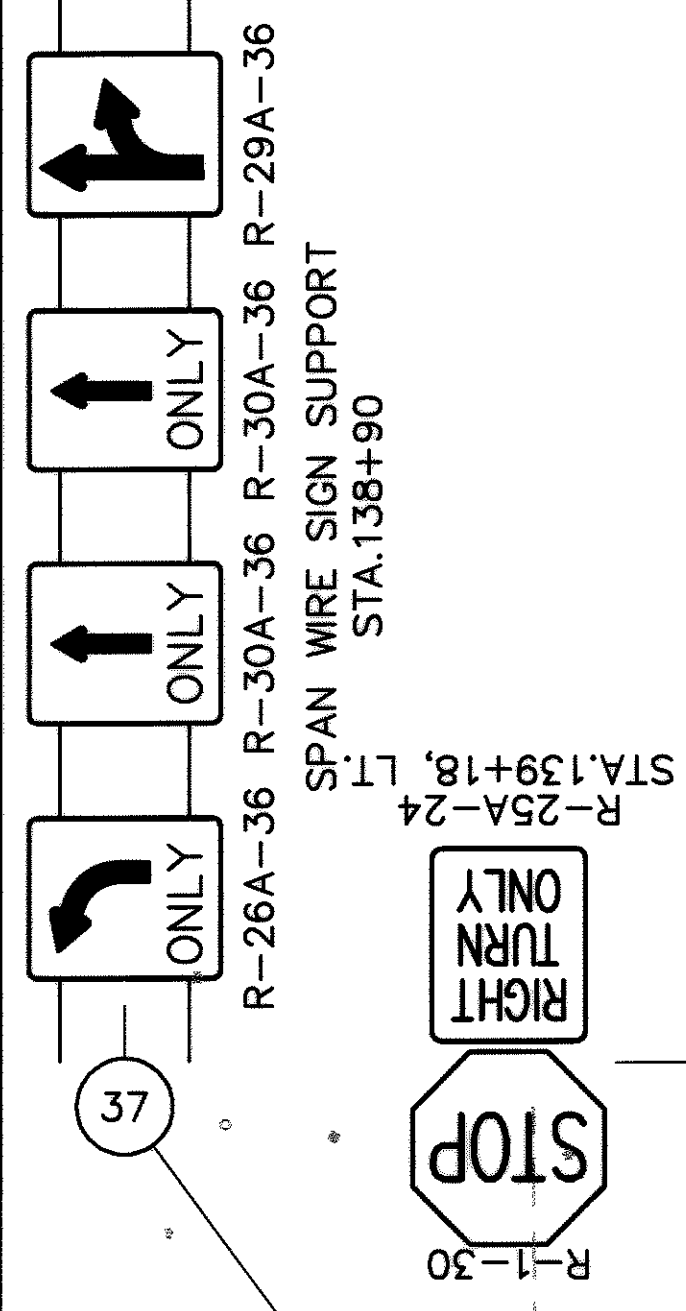
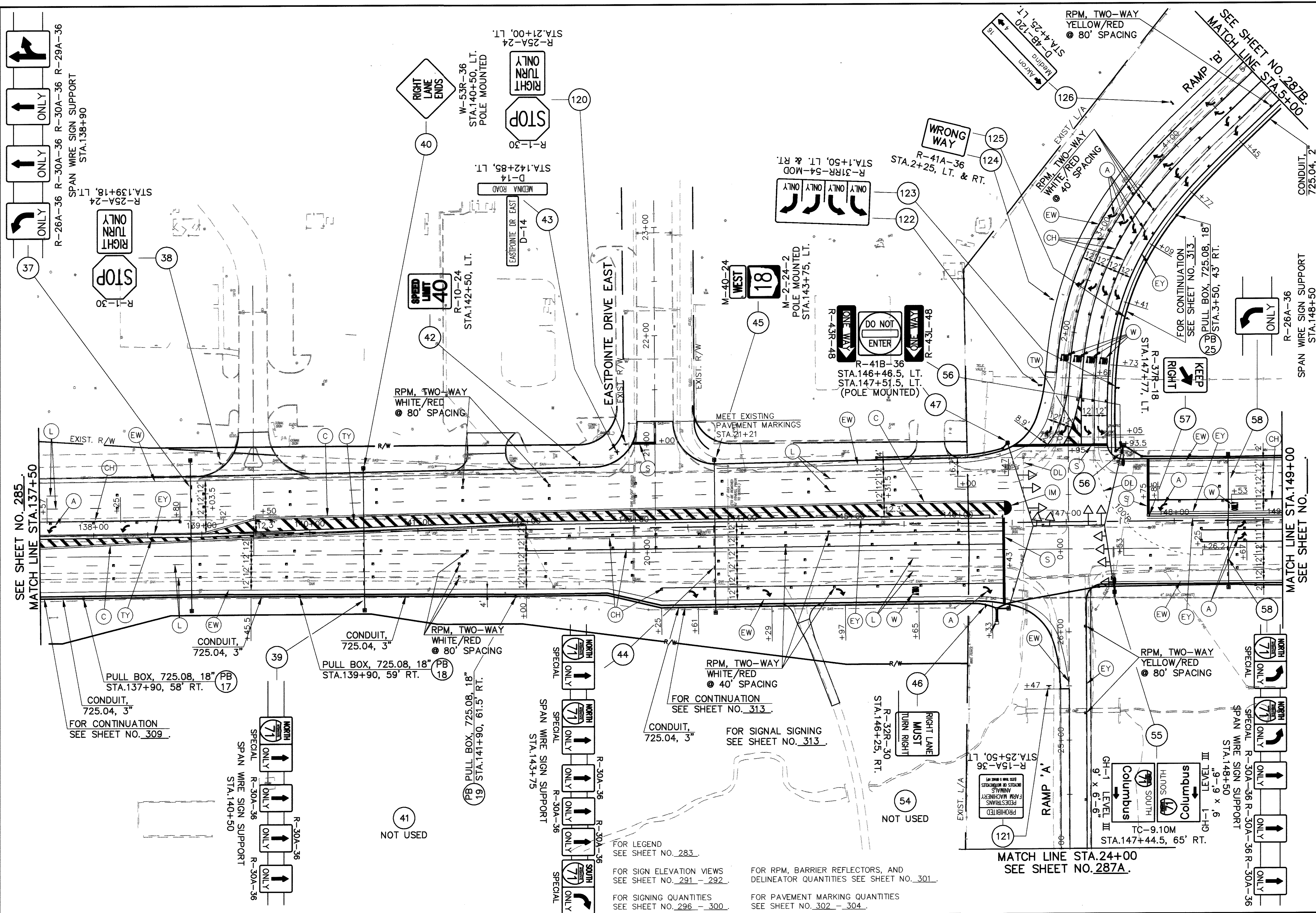
284
362



| | |
|------------|--------|
| CALCULATED | T.K.L. |
| CHECKED | K.P.W. |

SIGNING AND PAVEMENT MARKING PLAN
STA.126+00 TO STA.137+50

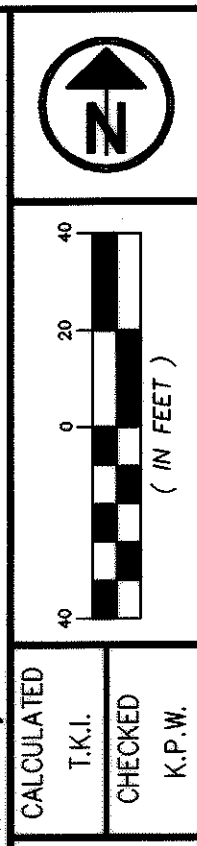
MED - 18 - 15.13



SEE SHEET NO. 285
MATCH LINE STA.137+50

MATCH LINE STA.149+00
SEE SHEET NO.

FOR LEGEND SEE SHEET NO. 283.
FOR SIGN ELEVATION VIEWS SEE SHEET NO. 291 - 292.
FOR SIGNING QUANTITIES SEE SHEET NO. 296 - 300.
FOR RPM, BARRIER REFLECTORS, AND DELINEATOR QUANTITIES SEE SHEET NO. 301.
FOR PAVEMENT MARKING QUANTITIES SEE SHEET NO. 302 - 304.

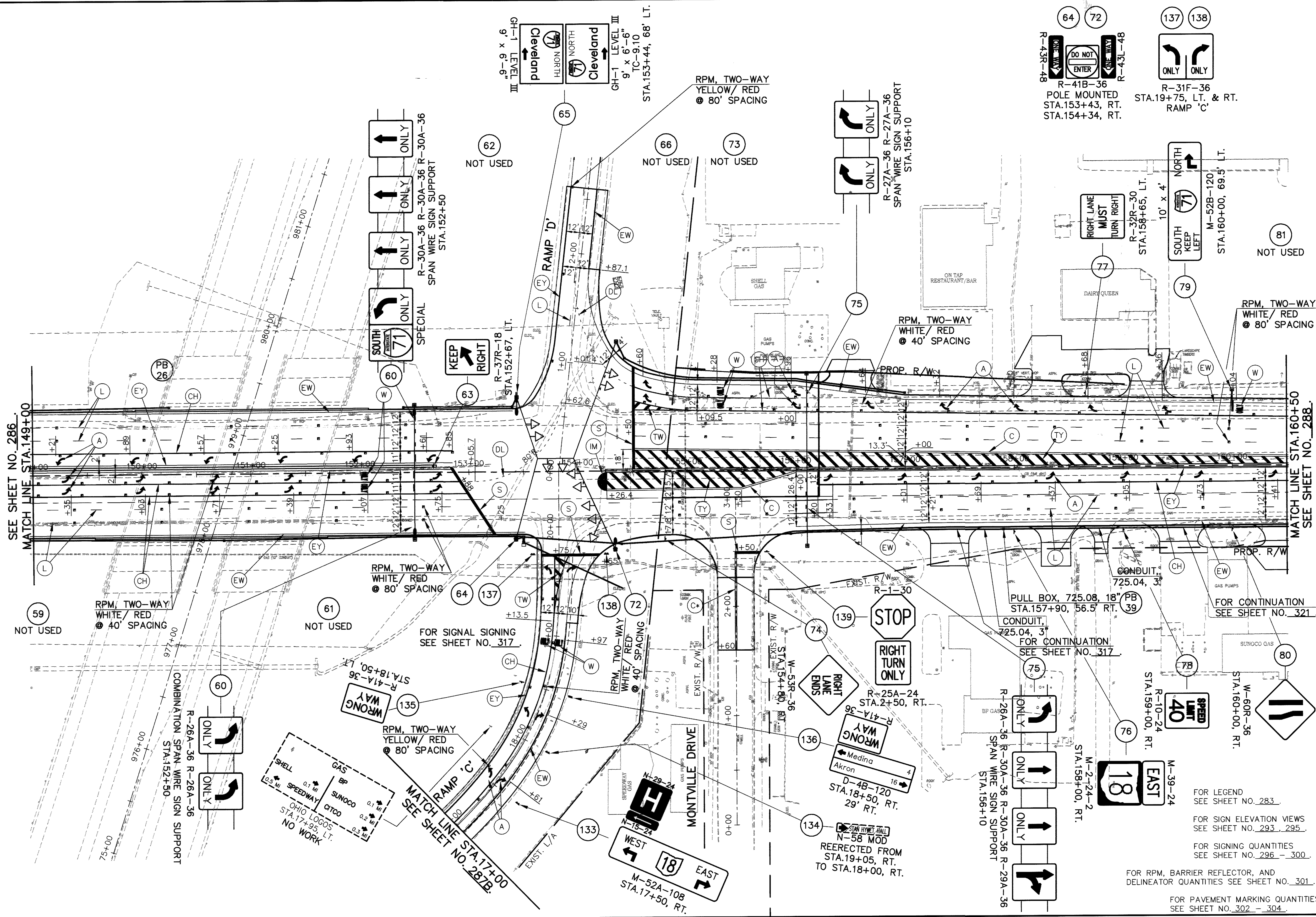


| | |
|------------|--------|
| CALCULATED | T.K.L. |
| CHECKED | K.P.W. |

SIGNING AND PAVEMENT MARKING PLAN
STA.137+50 TO STA.149+00

MED - 18 - 15.13

286
362



SEE SHEET NO. 286
MATCH LINE STA.149+00

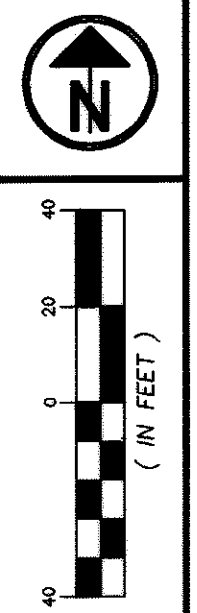
MATCH LINE STA.160+50
SEE SHEET NO. 288

**SIGNING AND PAVEMENT MARKING PLAN
STA.149+00 TO STA.160+50**

MED - 18 - 15.13

287
362

| | |
|------------|--------|
| CALCULATED | T.K.L. |
| CHECKED | K.P.W. |



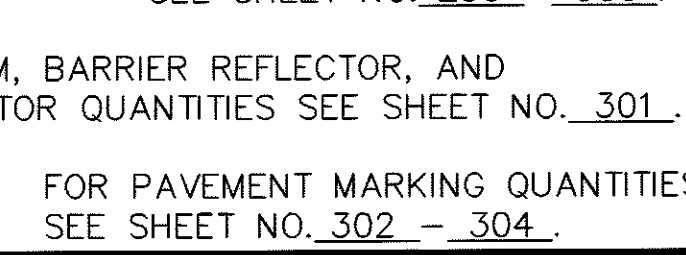
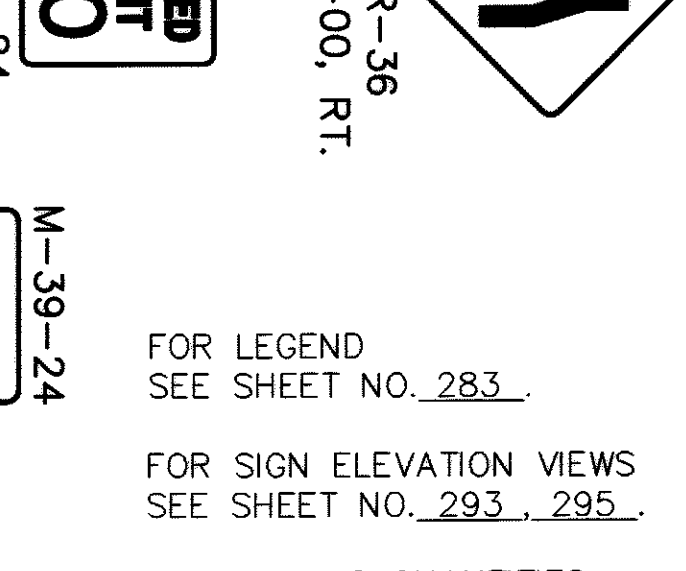
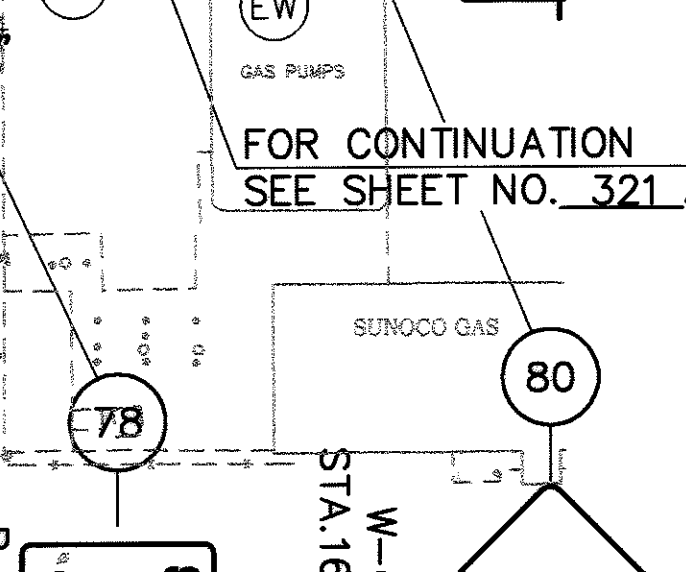
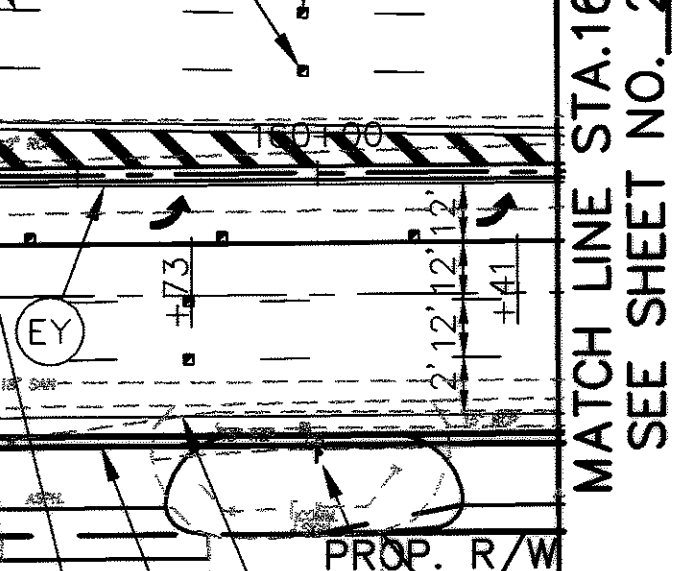
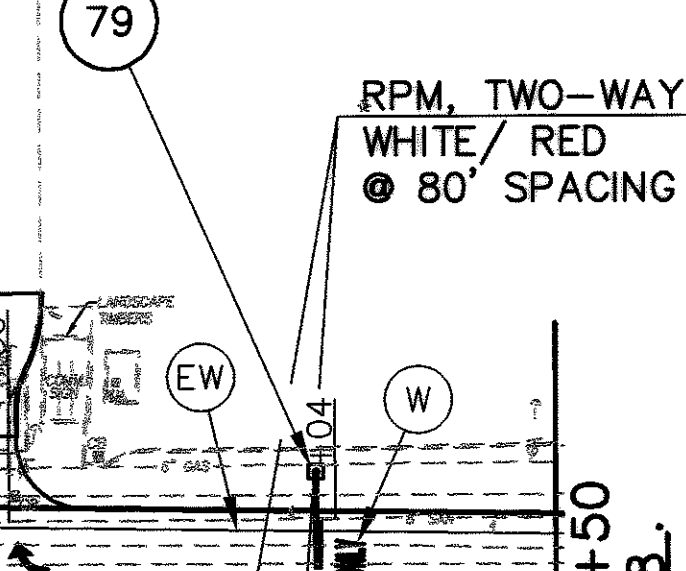
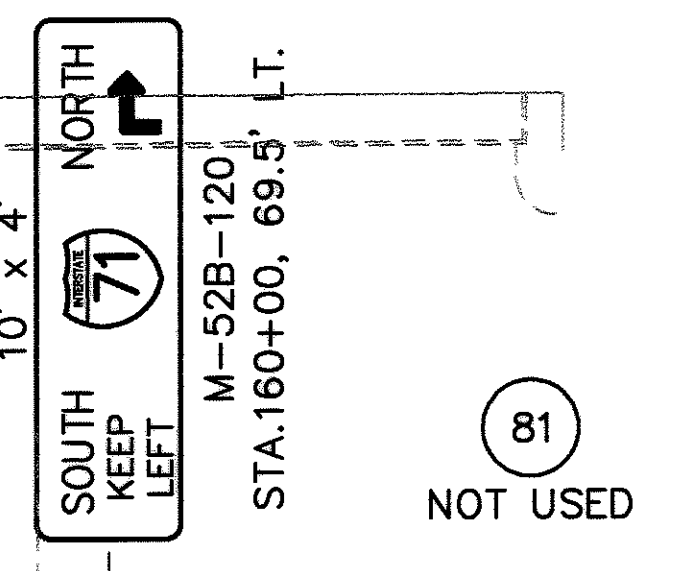
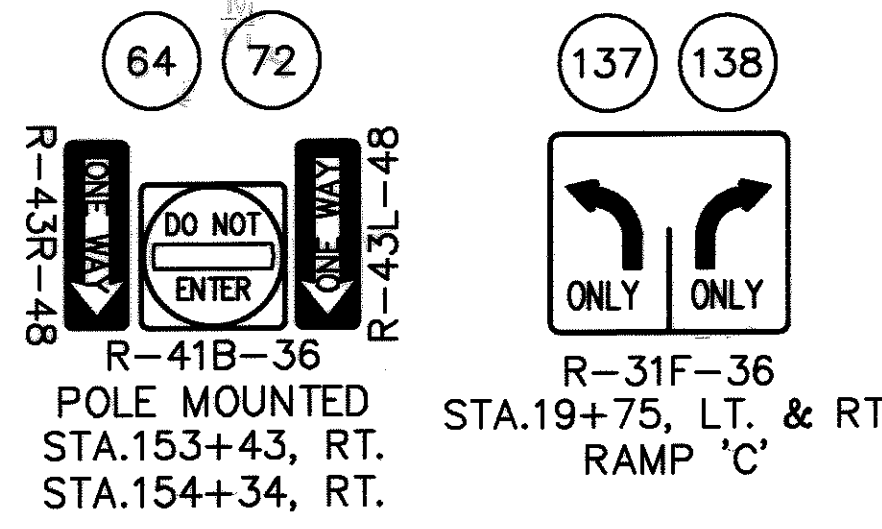
FOR LEGEND SEE SHEET NO. 283.

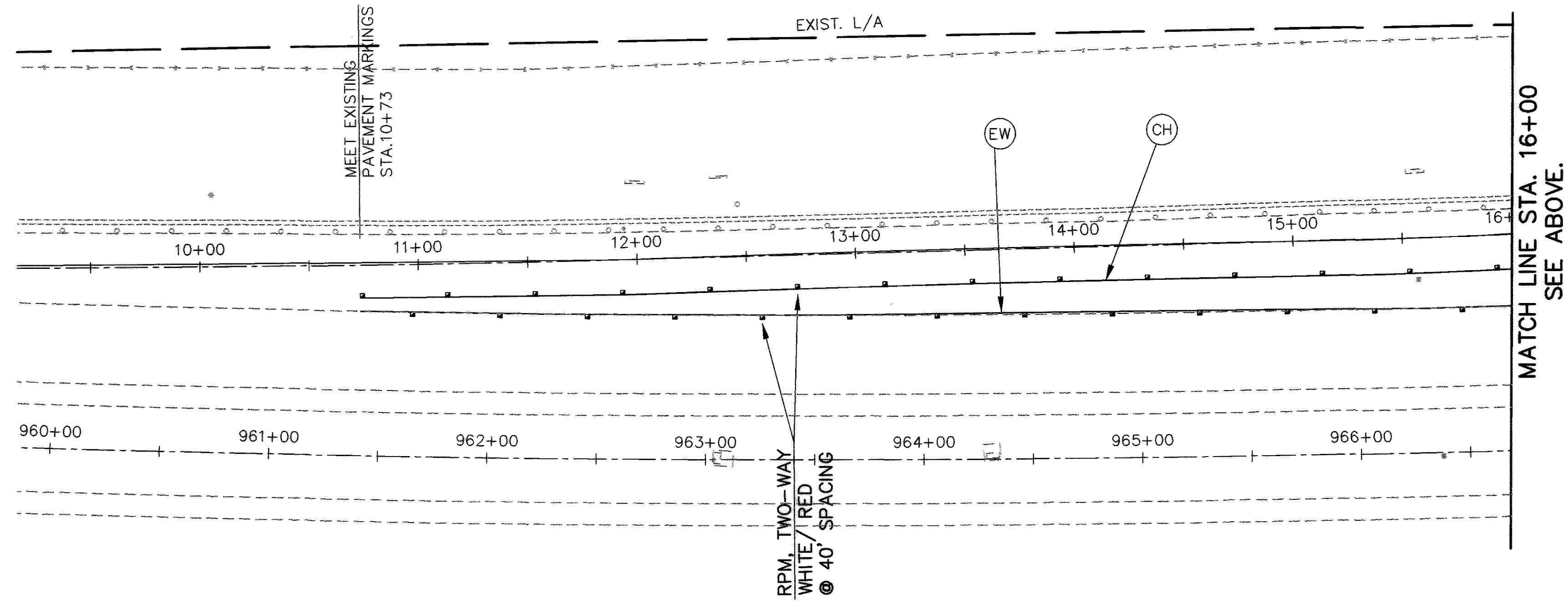
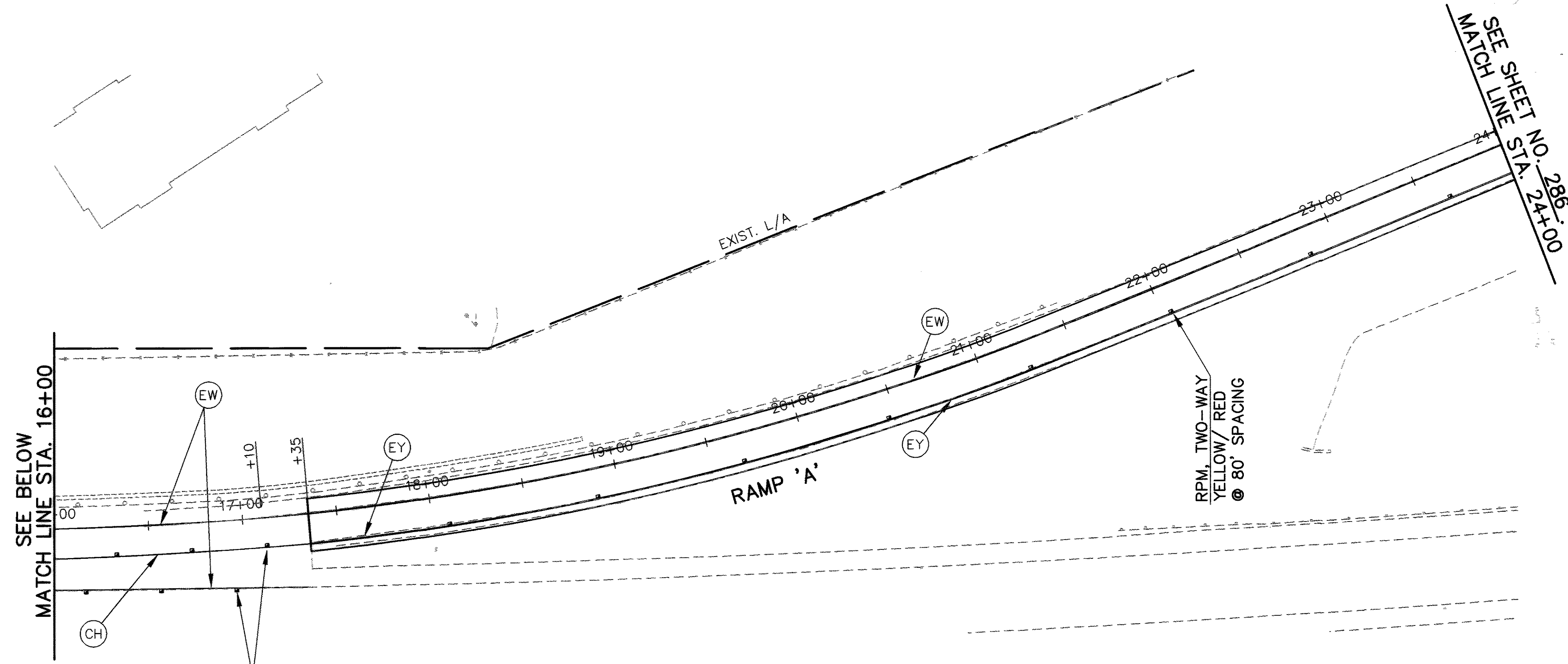
FOR SIGN ELEVATION VIEWS SEE SHEET NO. 293, 295.

FOR SIGNING QUANTITIES SEE SHEET NO. 296 - 300.

FOR RPM, BARRIER REFLECTOR, AND DELINEATOR QUANTITIES SEE SHEET NO. 301.

FOR PAVEMENT MARKING QUANTITIES SEE SHEET NO. 302 - 304.





FOR QUANTITIES
SEE SHEET NO. 280 - 282

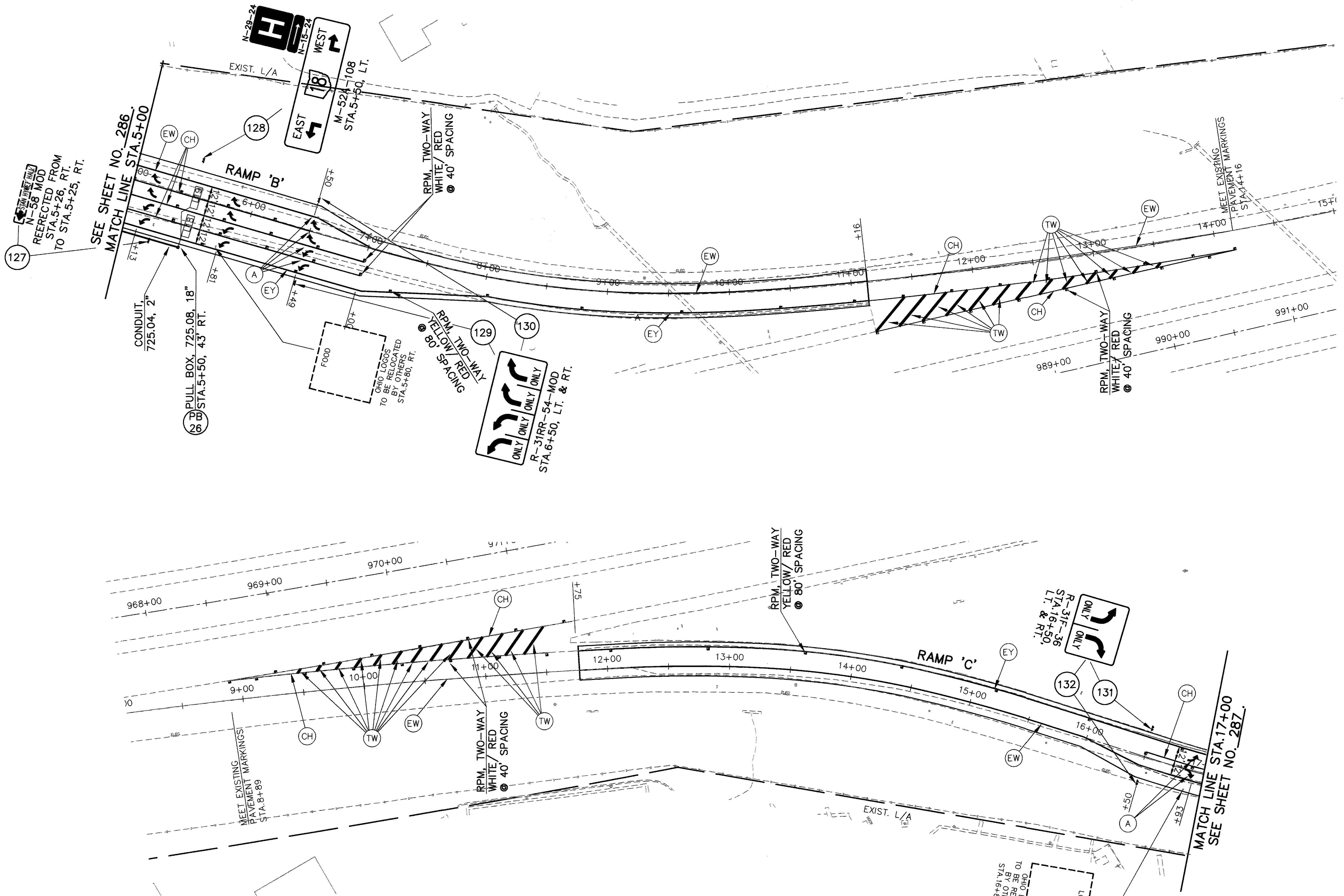
FOR LEGEND
SEE SHEET NO. 283

| | |
|----------------------|-------------------|
| CALCULATED T.K.L. | CHECKED K.P.W. |
| | |

SIGNING AND PAVEMENT MARKING PLAN
RAMP 'A'

MED - 18 - 15.13

287A
362



CALCULATED
T.K.I.
CHECKED
K.P.W.

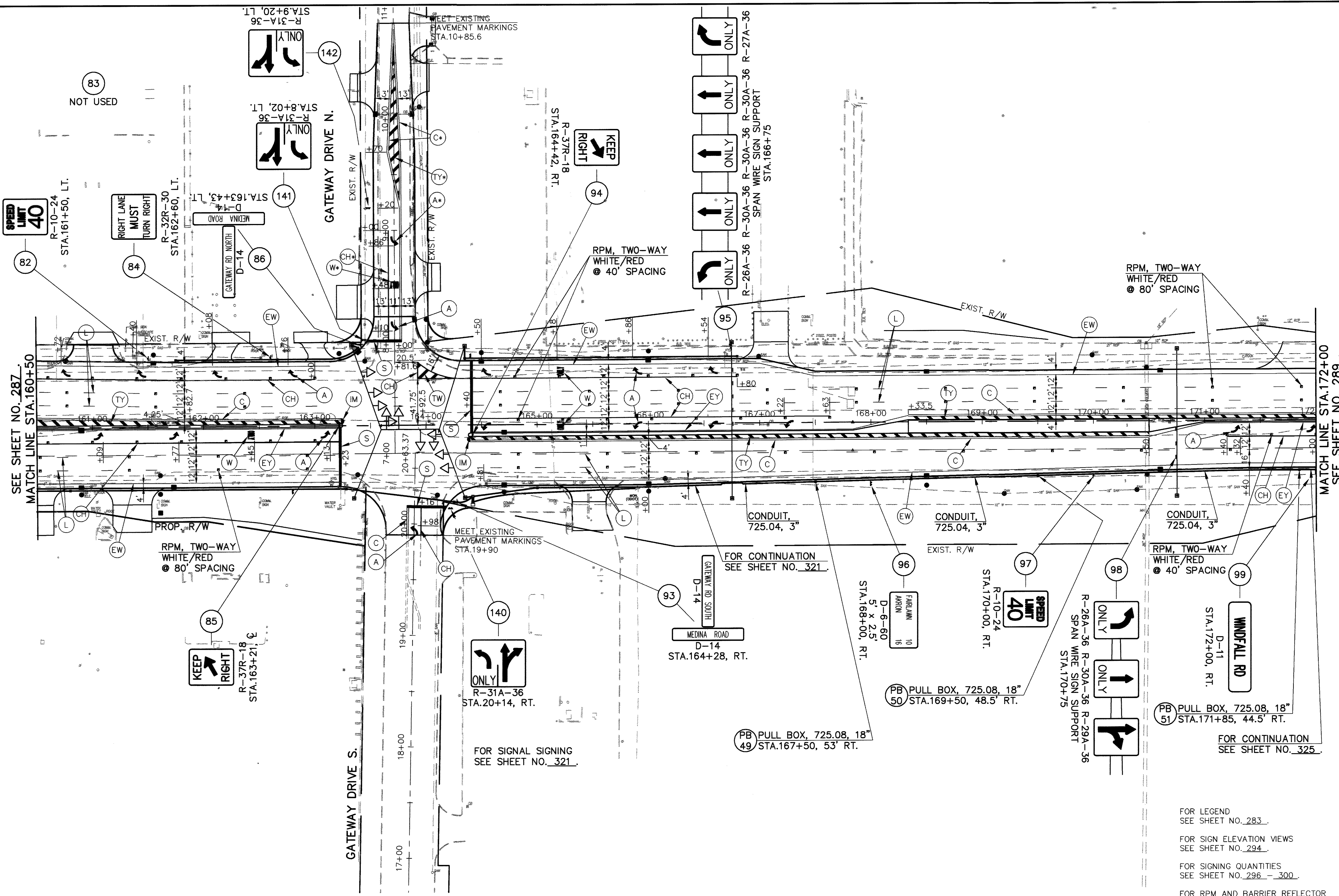
(IN FEET)

**SIGNING AND PAVEMENT MARKING PLAN
RAMP 'B' AND RAMP 'C'**

MED - 18 - 15.13

FOR QUANTITIES
SEE SHEET NO. 280 - 282.

FOR LEGEND
SEE SHEET NO. 283.



SEE SHEET NO. 287.
MATCH LINE STA.160+50

MATCH LINE STA.172+00
SEE SHEET NO. 289.

FOR LEGEND
SEE SHEET NO. 283.

FOR SIGN ELEVATION VIEWS
SEE SHEET NO. 294.

FOR SIGNING QUANTITIES
SEE SHEET NO. 296 - 300.

FOR RPM AND BARRIER REFLECTOR
QUANTITIES SEE SHEET NO. 301.

FOR PAVEMENT MARKING QUANTITIES
SEE SHEET NO. 302 - 304.

| | |
|------------|--------|
| CALCULATED | T.K.L. |
| CHECKED | K.P.W. |

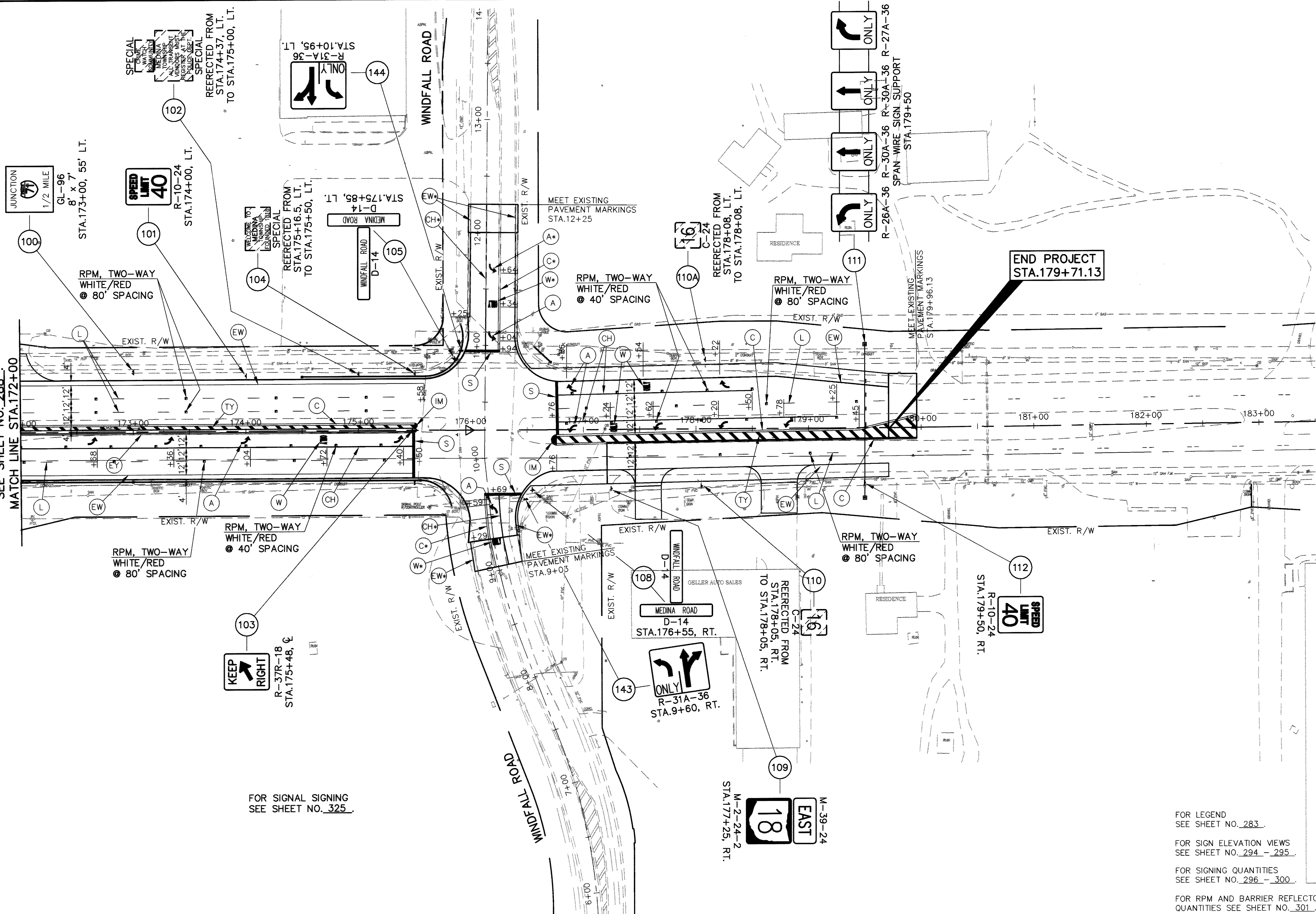
(IN FEET)

0 20 40

SIGNING AND PAVEMENT MARKING PLAN
STA.160+50 TO STA.172+00

MED - 18 - 15.13

SEE SHEET NO. 288
MATCH LINE STA.172+00



FOR SIGNAL SIGNING
SEE SHEET NO. 325

FOR LEGEND
SEE SHEET NO. 283

FOR SIGN ELEVATION VIEWS
SEE SHEET NO. 294 - 295

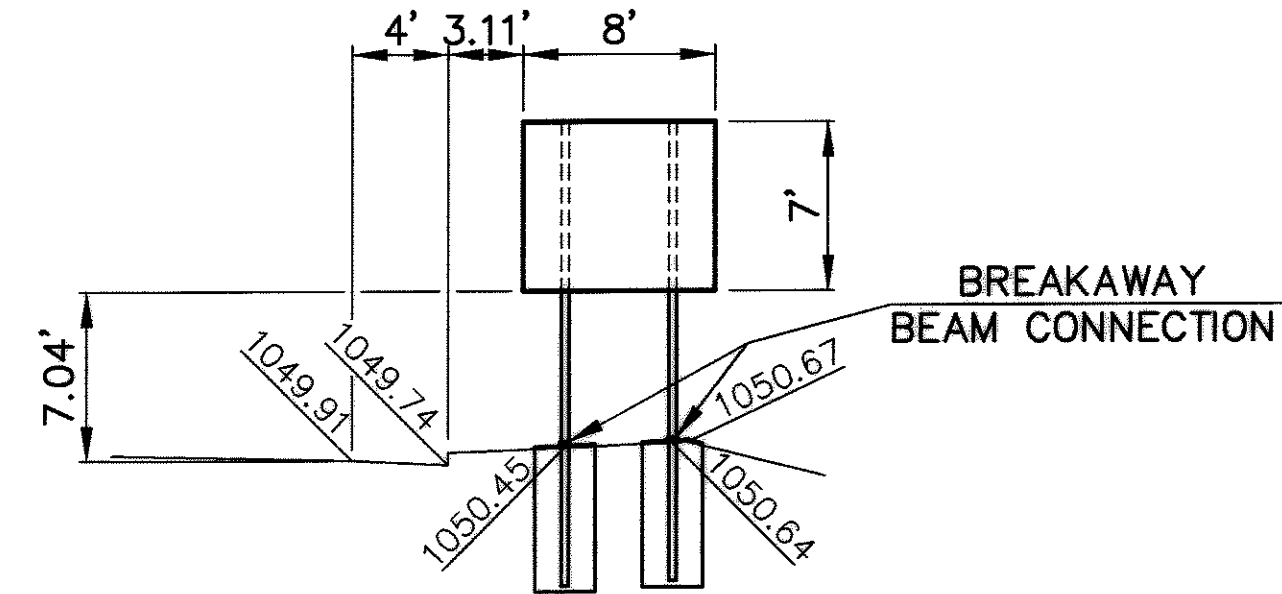
FOR SIGNING QUANTITIES
SEE SHEET NO. 296 - 300

FOR RPM AND BARRIER REFLECTOR
QUANTITIES SEE SHEET NO. 301

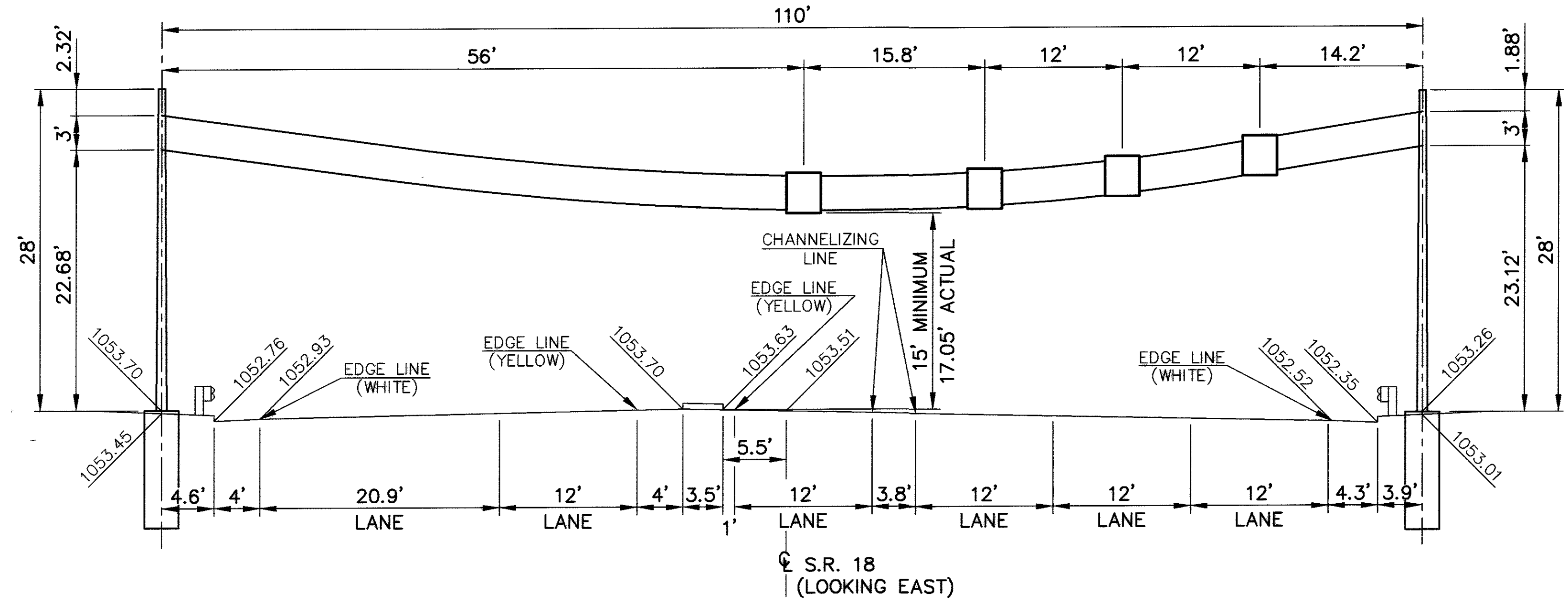
FOR PAVEMENT MARKING QUANTITIES
SEE SHEET NO. 302 - 304



J:\proj3\7050600\traffic\705061e01.dwg User: am\05646 May 30, 2003 - 2:28pm

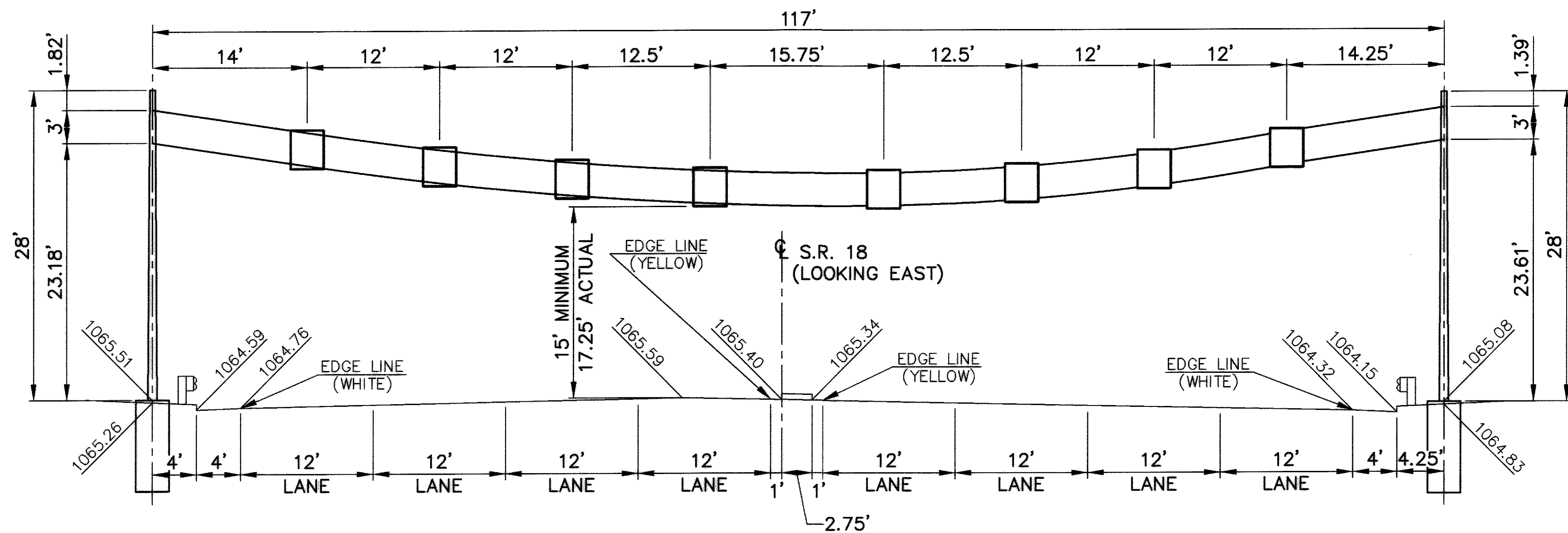


SIGN NO. 11
 STA.127+00, 45' RT.
 W10 x 12 BEAMS
 LT. BEAM = 19.25'
 RT. BEAM = 19.06'

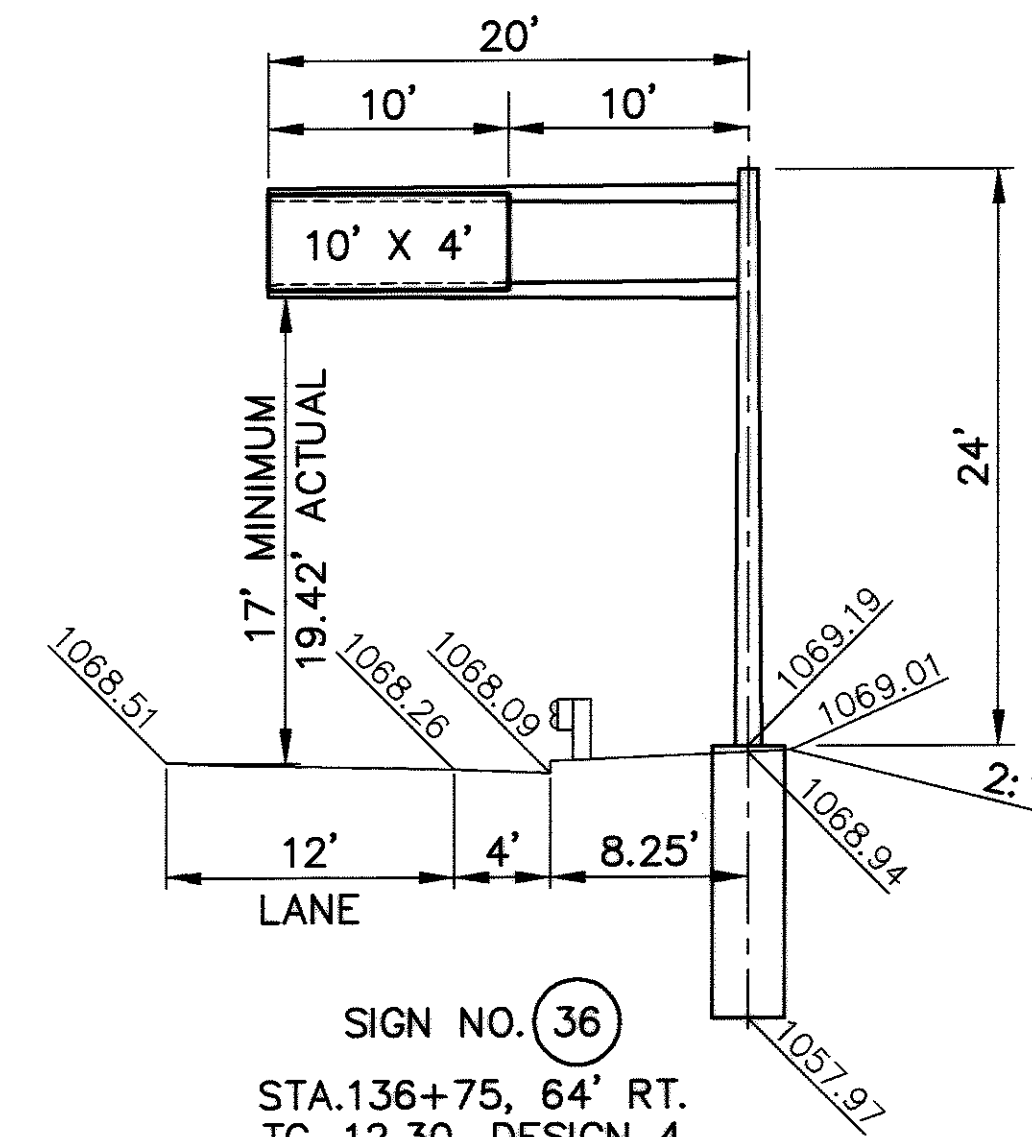


SPAN WIRE SIGN SUPPORT NO. 12
 STA.128+00
 TC-17.10, DESIGN 5

FOR PLAN VIEW
 SEE SHEET NO. 285.



SPAN WIRE SIGN SUPPORT NO. 24
 STA.132+25
 TC-17.10, DESIGN 5



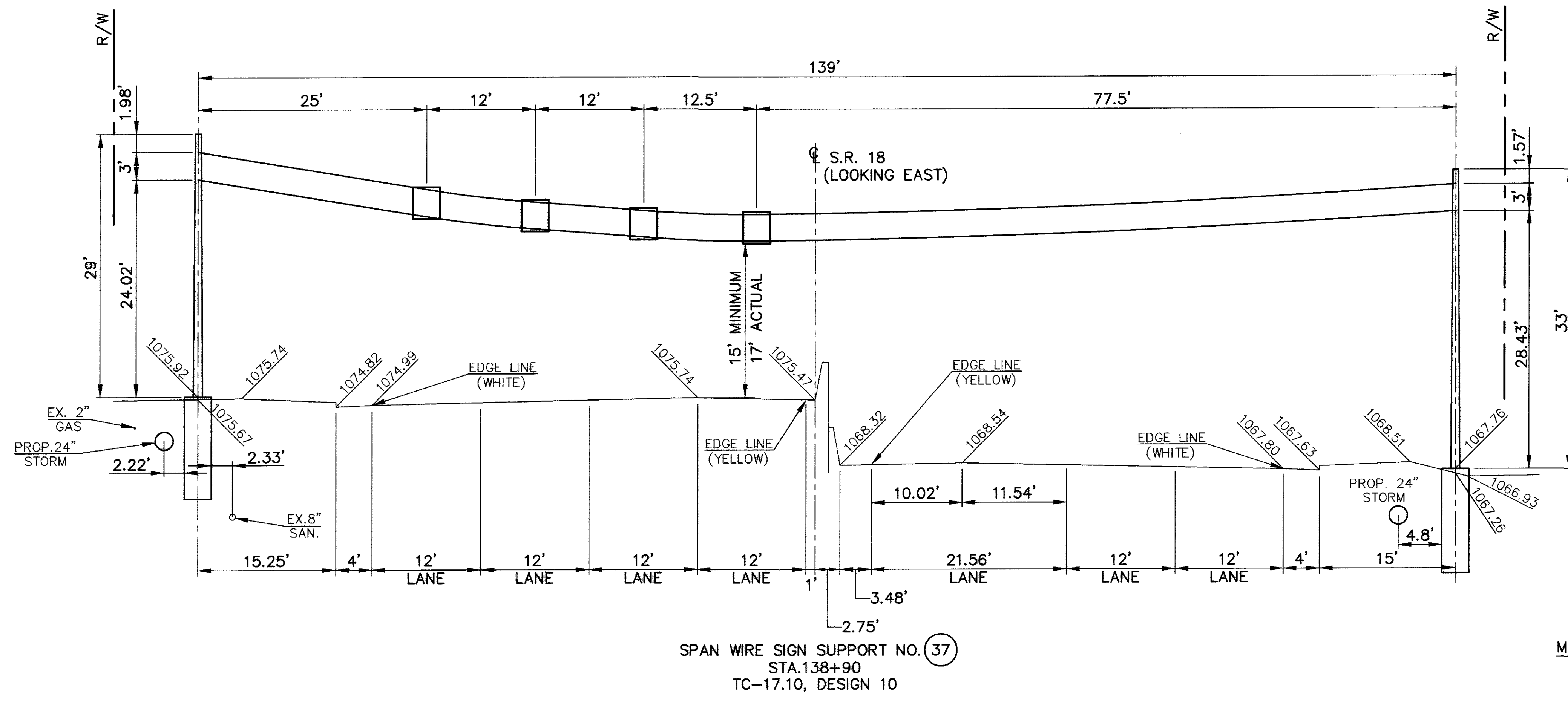
SIGN NO. 36
 STA.136+75, 64' RT.
 TC-12.30, DESIGN 4
 POLE = 24'
 ARM = 20'

TRAFFIC CONTROL ELEVATION VIEWS

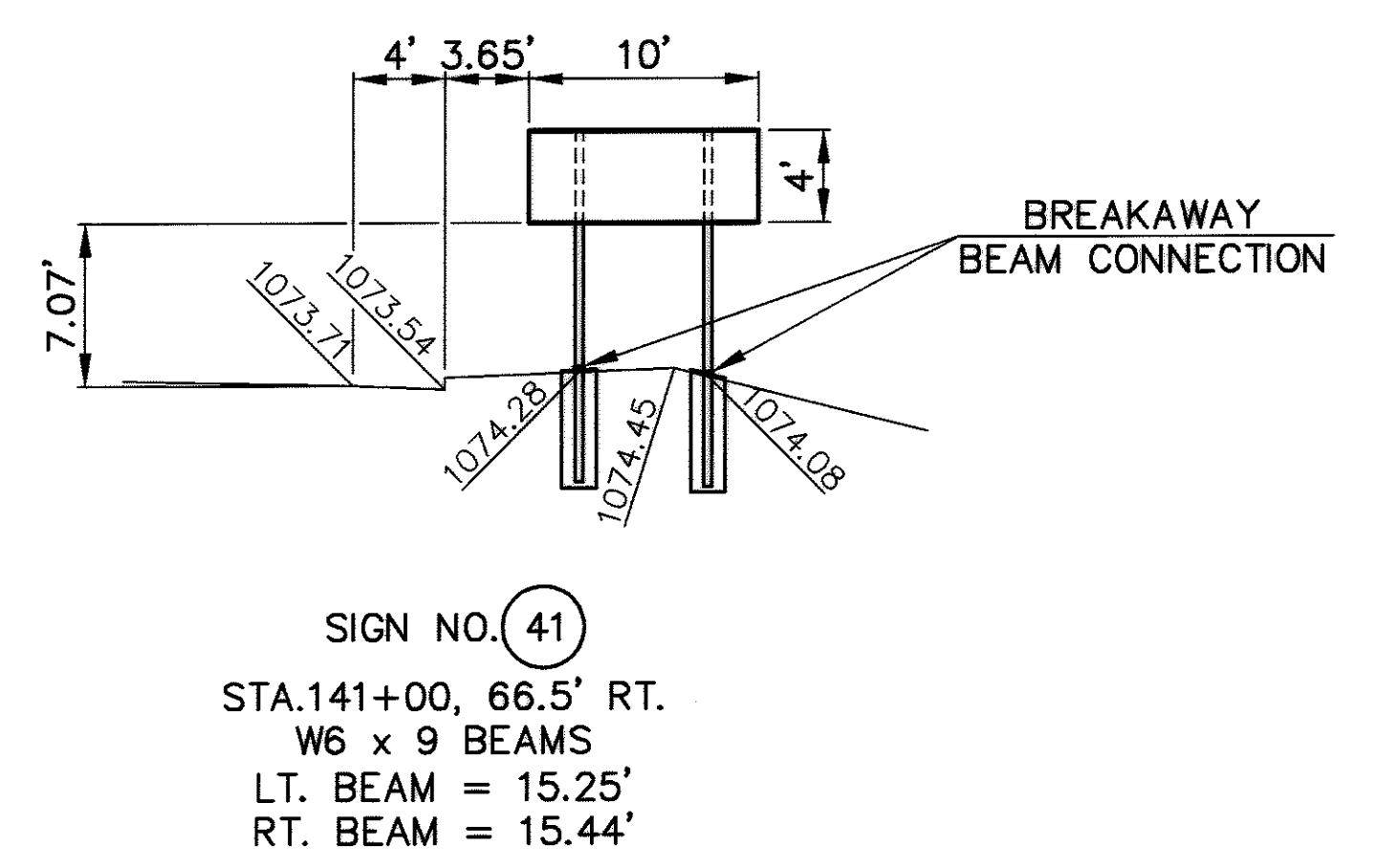
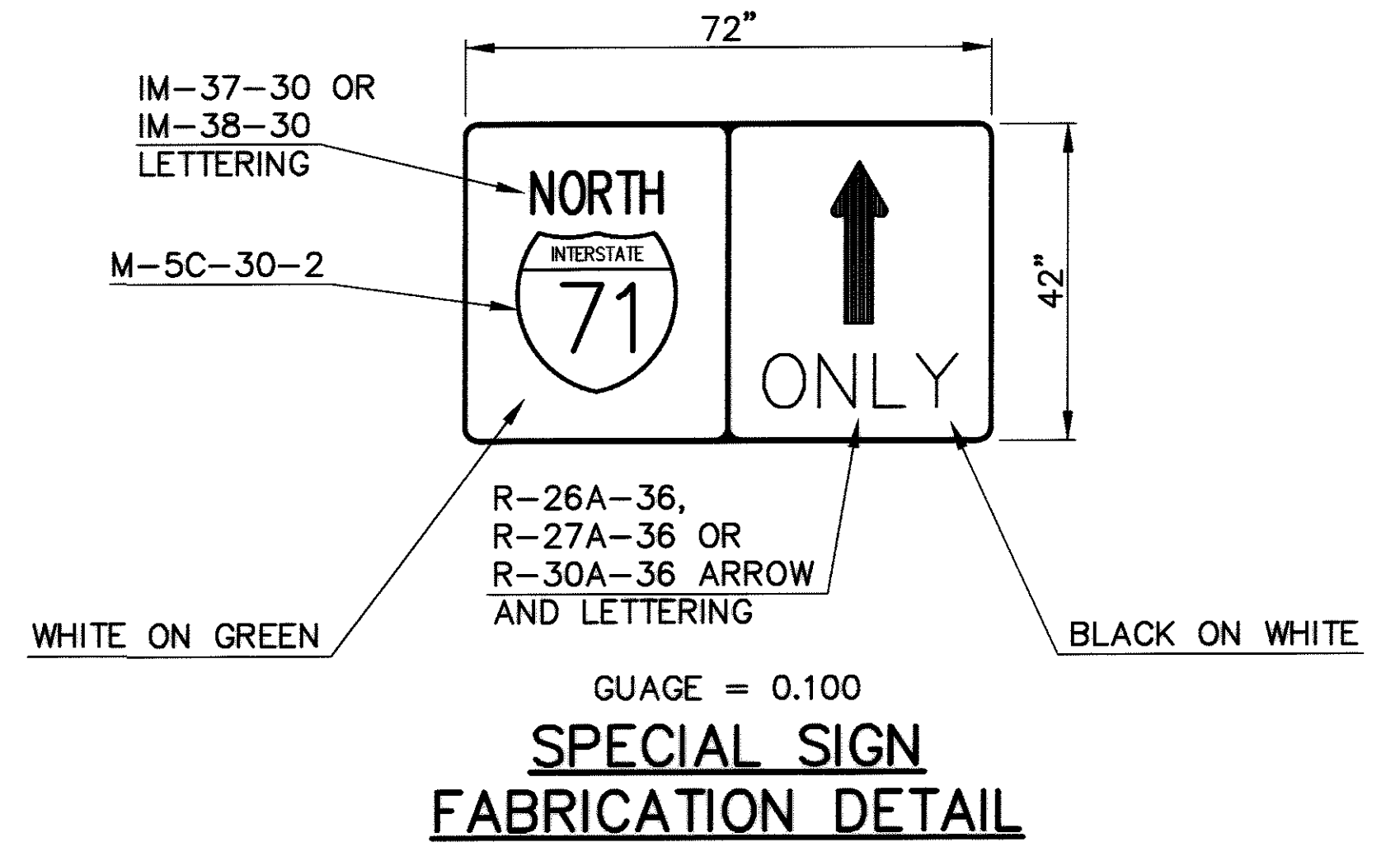
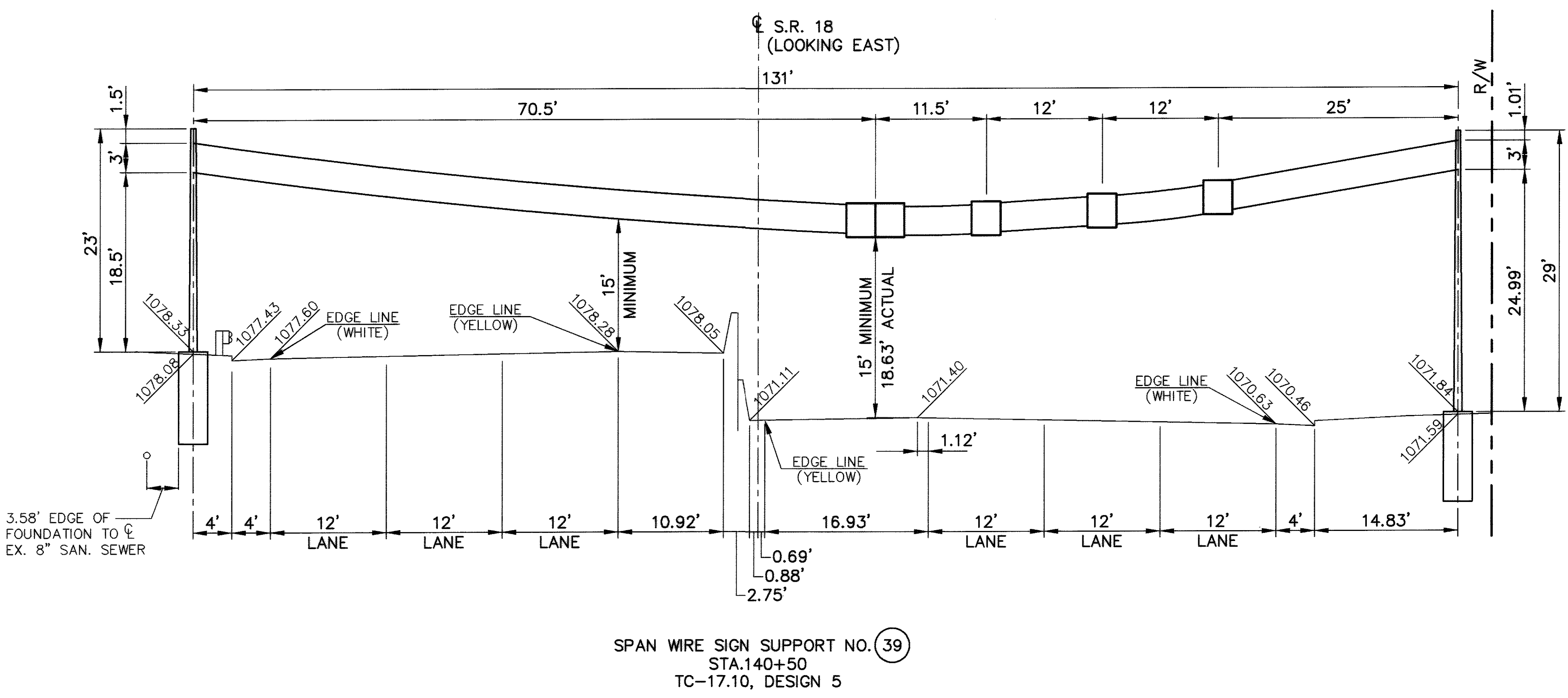
MED - 18 - 15.13

SCALE: 1/8" = 1'
 CALCULATED
 T.K.L.
 CHECKED
 K.P.W.

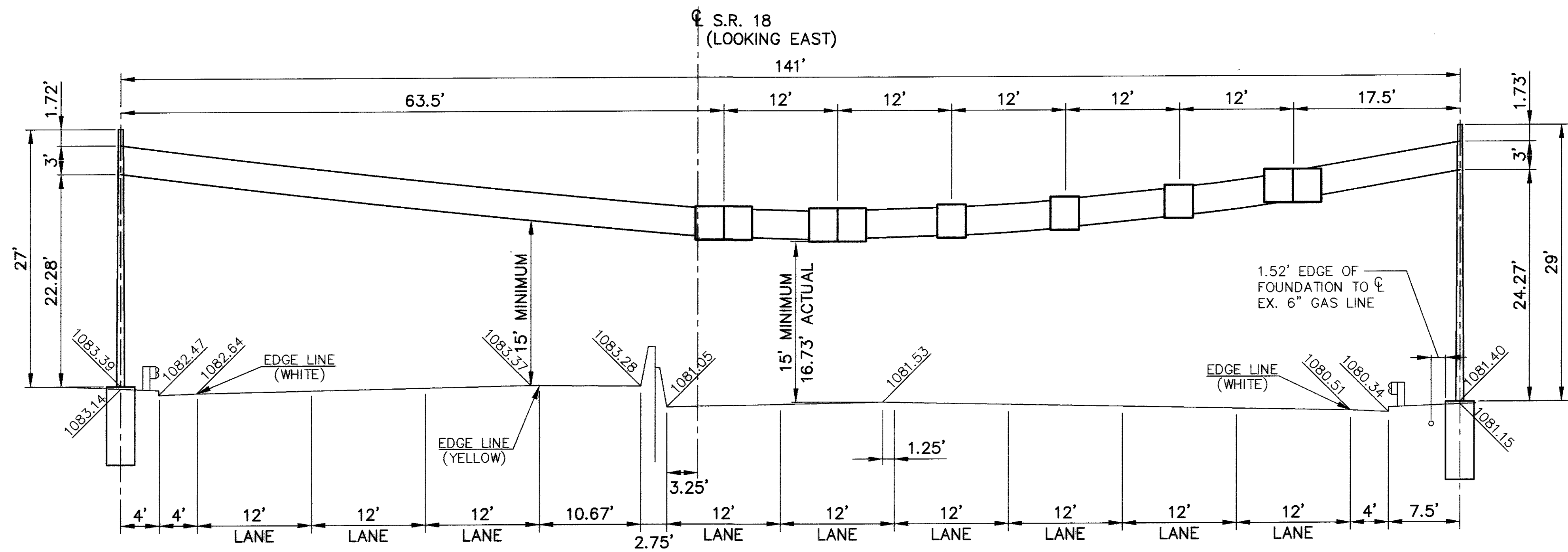
J:\proj3\7050600\traffic\705061e02.dwg User: aml05646 May 30, 2003 - 2:28pm



FOR PLAN VIEW SEE SHEET NO. 286.

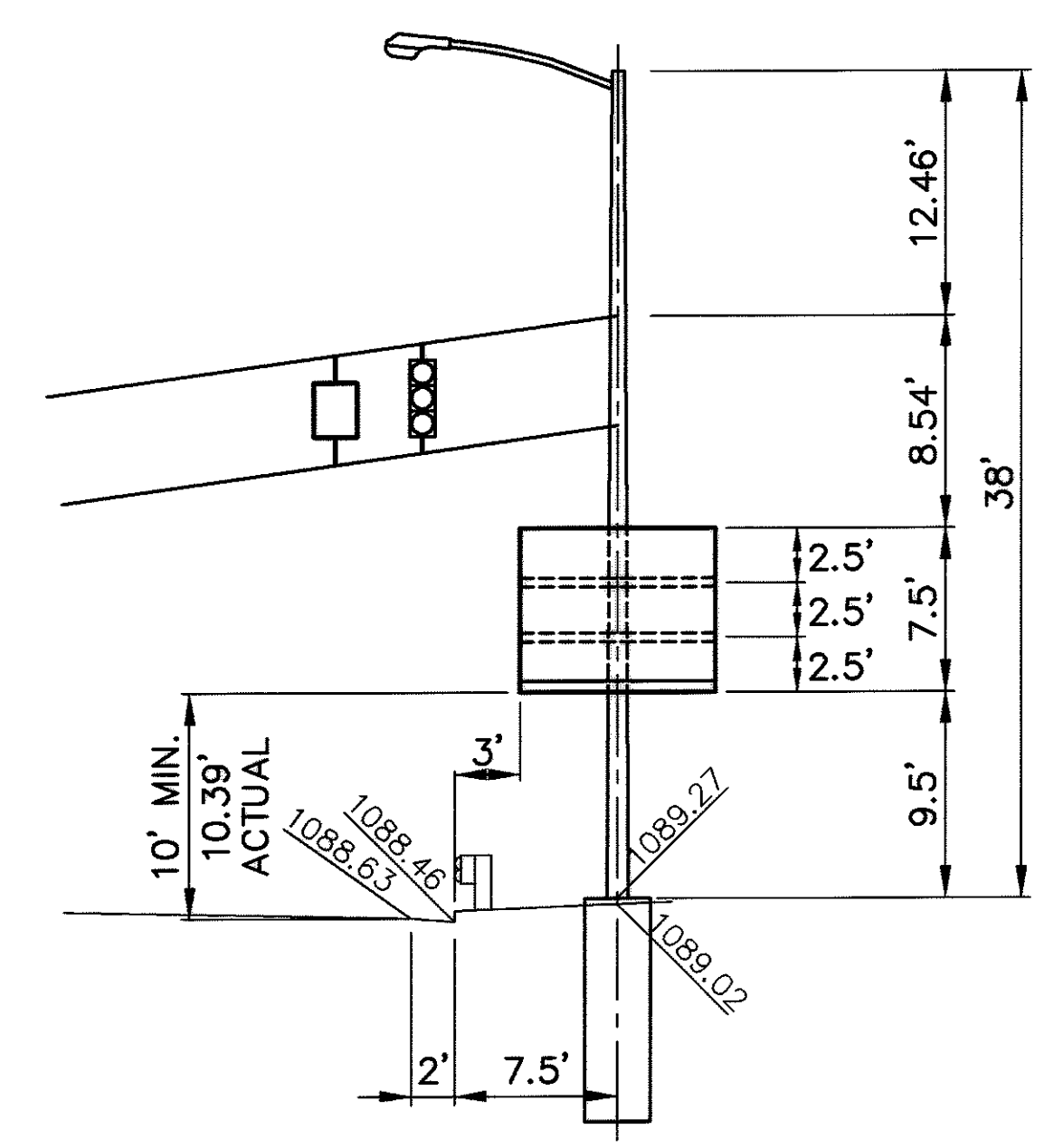


J:\proj3\7050600\traffic\705061e03.dwg User: aml05646 May 30, 2003 - 2:29pm

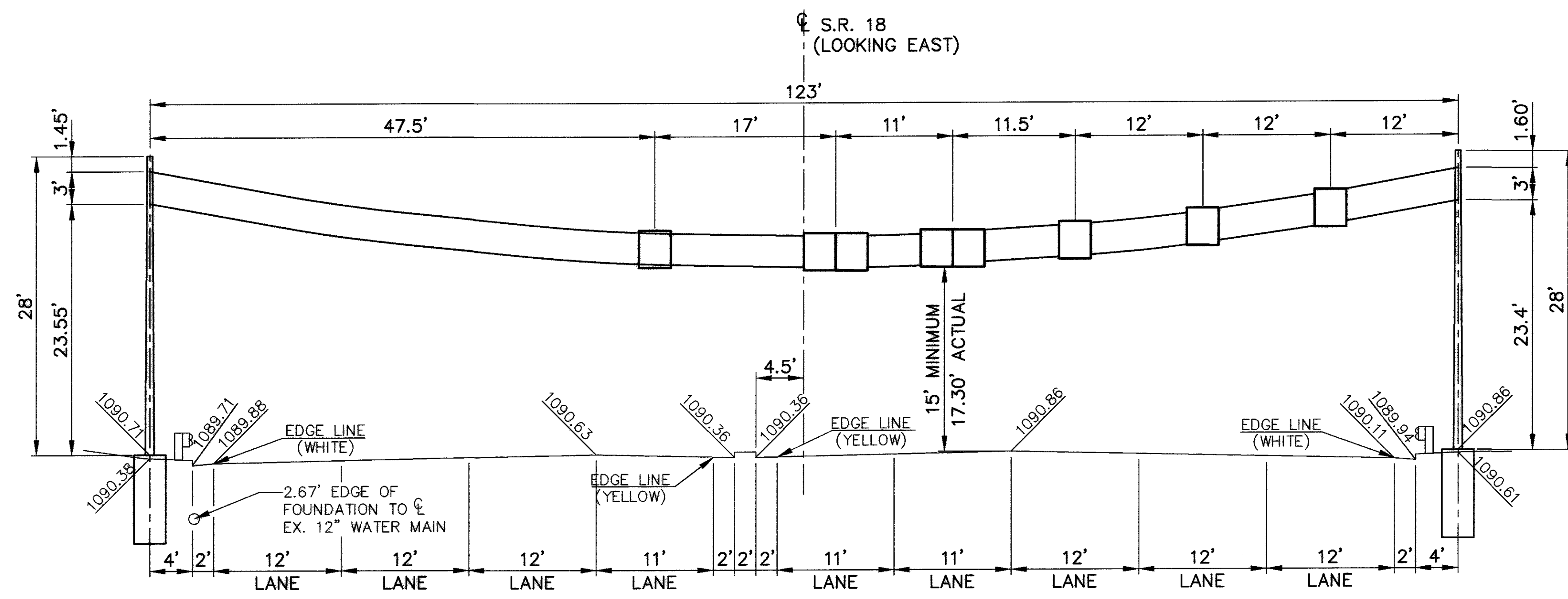


SPAN WIRE SIGN SUPPORT NO. 44
 STA.143+75
 TC-17.10, DESIGN 5

FOR PLAN VIEW
 SEE SHEET NO. 286



COMBINATION SIGNAL AND SIGN SUPPORT NO. 55
 STA.147+44.5, 65' RT.
 TC-81.10, DESIGN 10
 SIGN ATTACHMENT TC-9.10, DESIGN 2
 SIGN AREA = 9' x 7' = 63 SQ. FT.
 LUMINAIRES = 1 @ 175 WATTS



COMBINATION SPAN WIRE SIGN SUPPORT NO. 58
 STA.148+50
 TC-17.10, DESIGN 5

SCALE: 1/8" = 1'

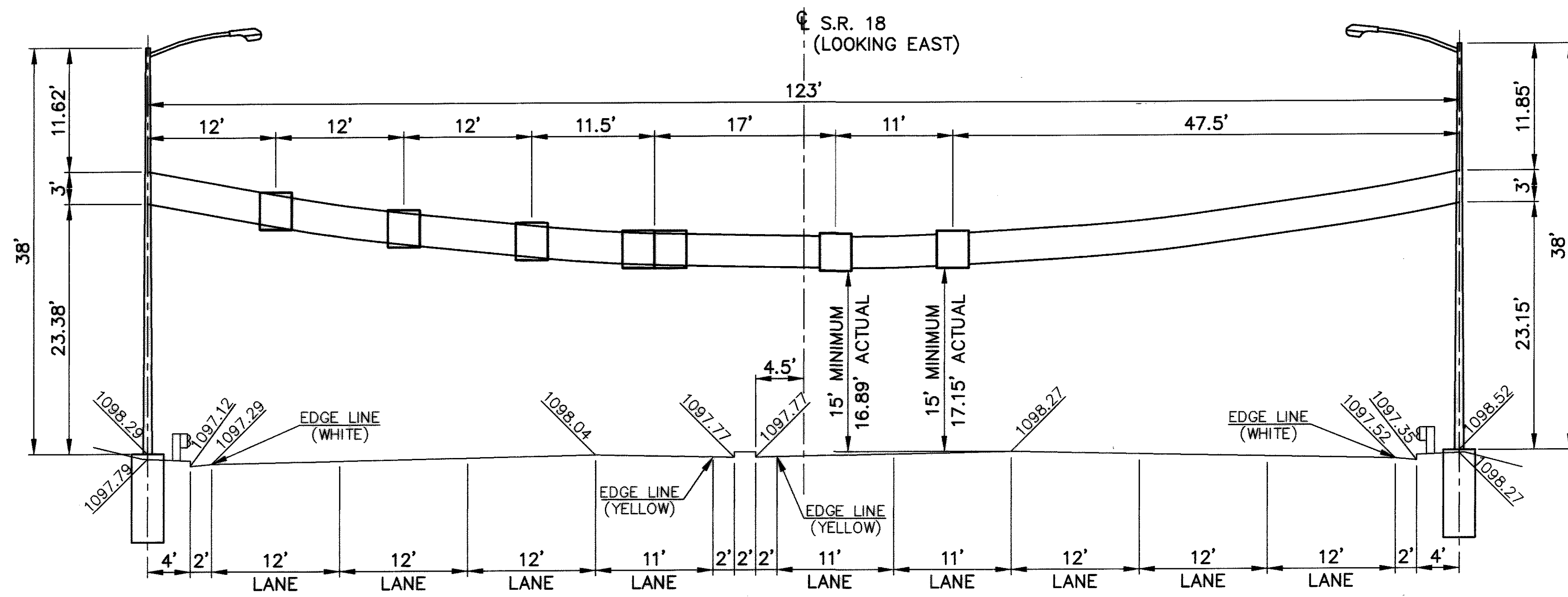
CALCULATED
 T.K.L.
 CHECKED
 K.P.W.

TRAFFIC CONTROL ELEVATION VIEWS

MED - 18 - 15.13

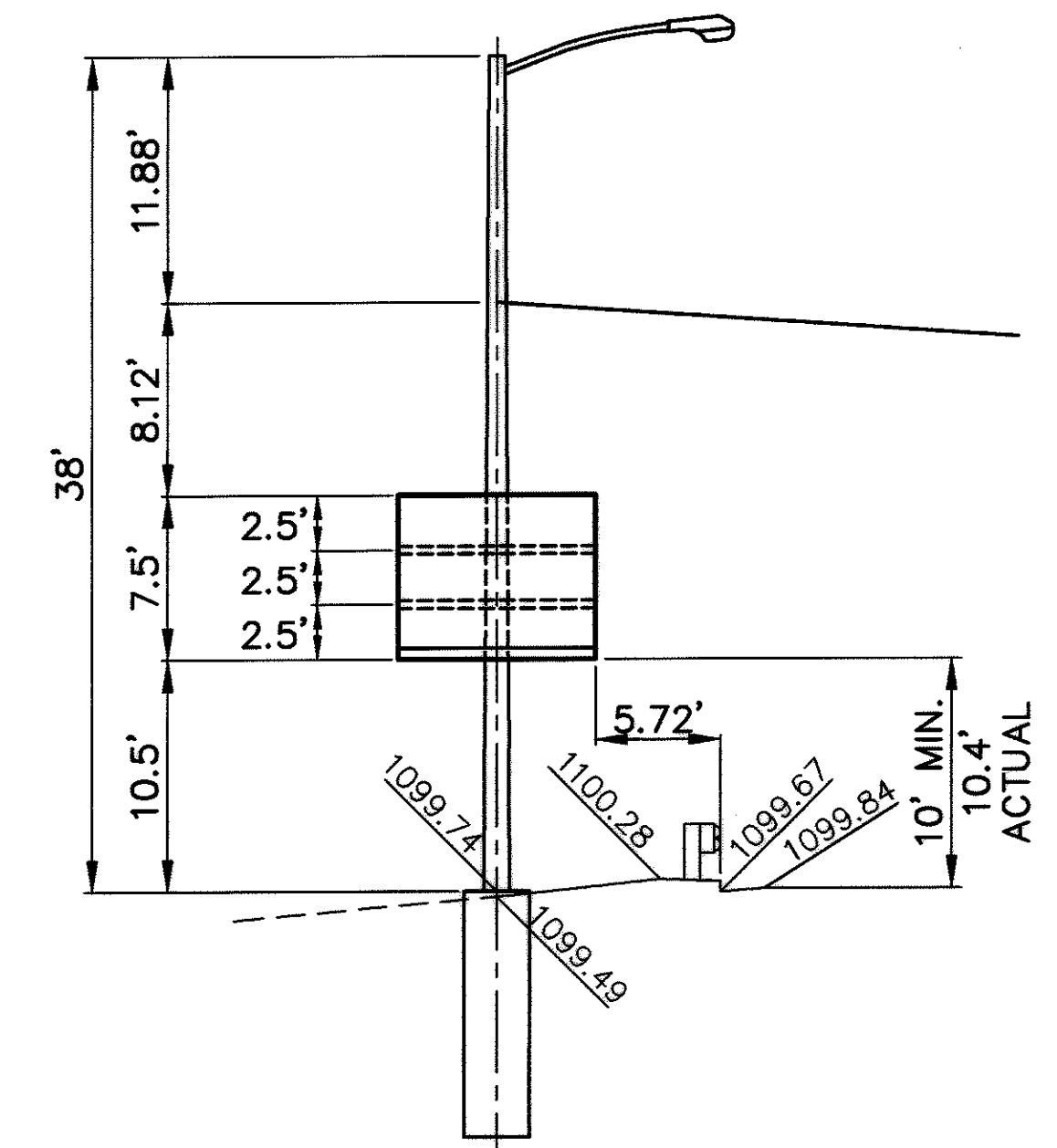
292
 362

J:\Pro35\7050600\TRAFFIC\70506TE04.DWG User: tk100242 Jul 18, 2003 11:16am

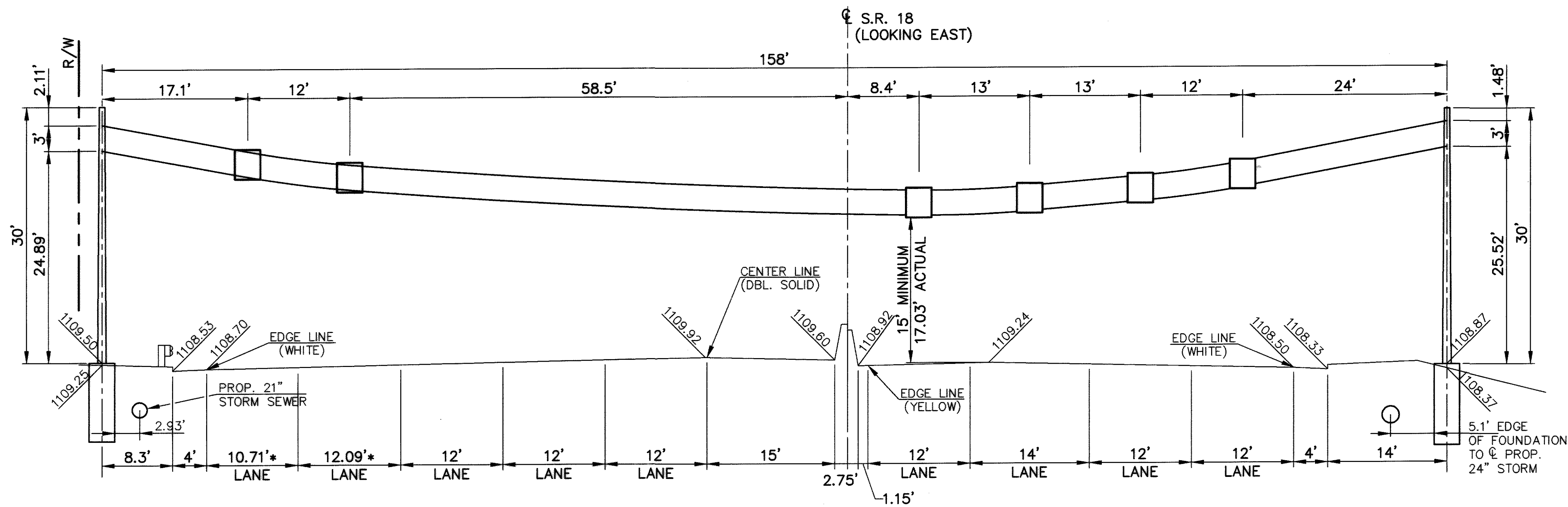


SPAN WIRE SIGN SUPPORT NO. (60)
 STA.152+50
 TC-17.10, DESIGN 5, AS PER PLAN

FOR PLAN VIEW
 SEE SHEET NO. 287.

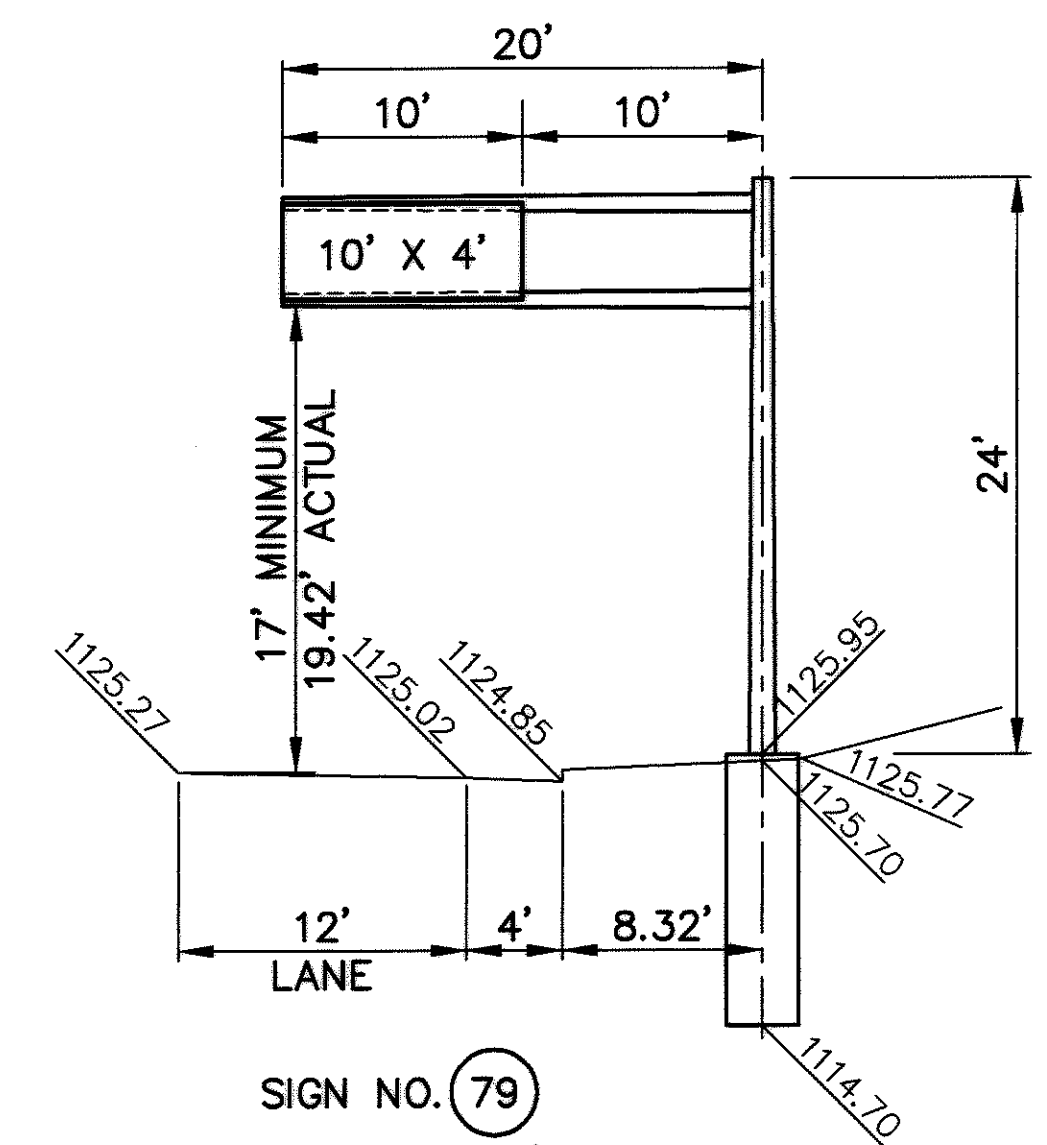


COMBINATION SIGNAL AND SIGN SUPPORT NO. (65)
 STA.153+44, 68' LT.
 TC-81.10, DESIGN 10
 SIGN ATTACHMENT TC-9.10, DESIGN 2
 SIGN AREA = 9' x 7' = 63 SQ. FT.
 LUMINAIRES = 1 @ 175 WATTS



* - DISTANCE MEASURED PARALLEL
 TO MESSENGER WIRE.

SPAN WIRE SIGN SUPPORT NO. (75)
 STA.156+10
 TC-17.10, DESIGN 5



SIGN NO. (79)
 STA.160+00, 69.5' LT.
 TC-12.30, DESIGN 4
 POLE = 24'
 ARM = 20'

SCALE: 1/8" = 1'

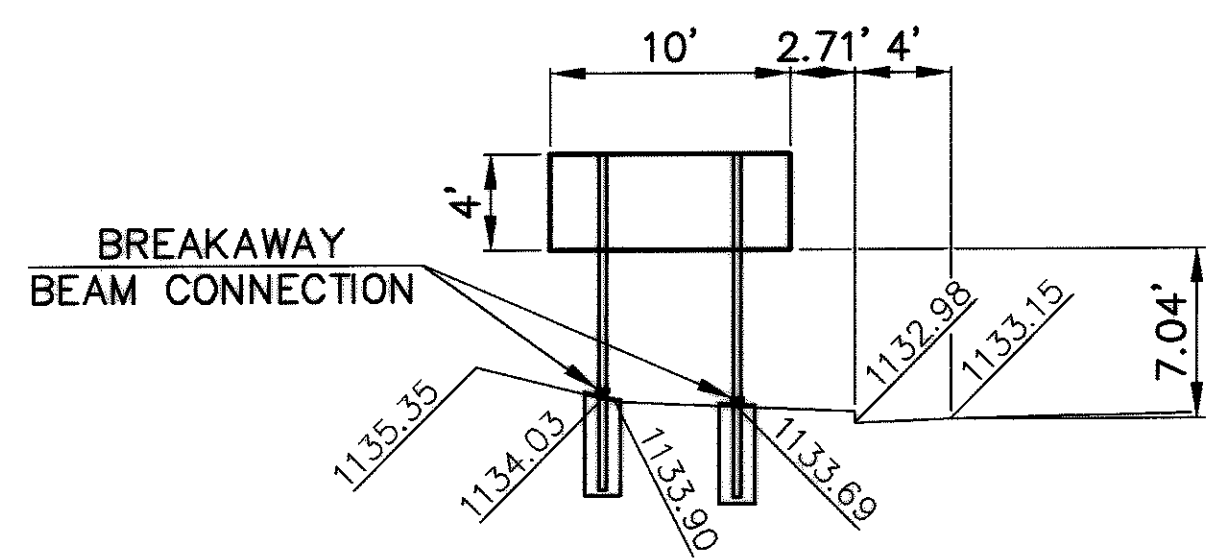
CALCULATED
 T.K.L.
 CHECKED
 K.P.W.

TRAFFIC CONTROL ELEVATION VIEWS

MED - 18 - 15.13

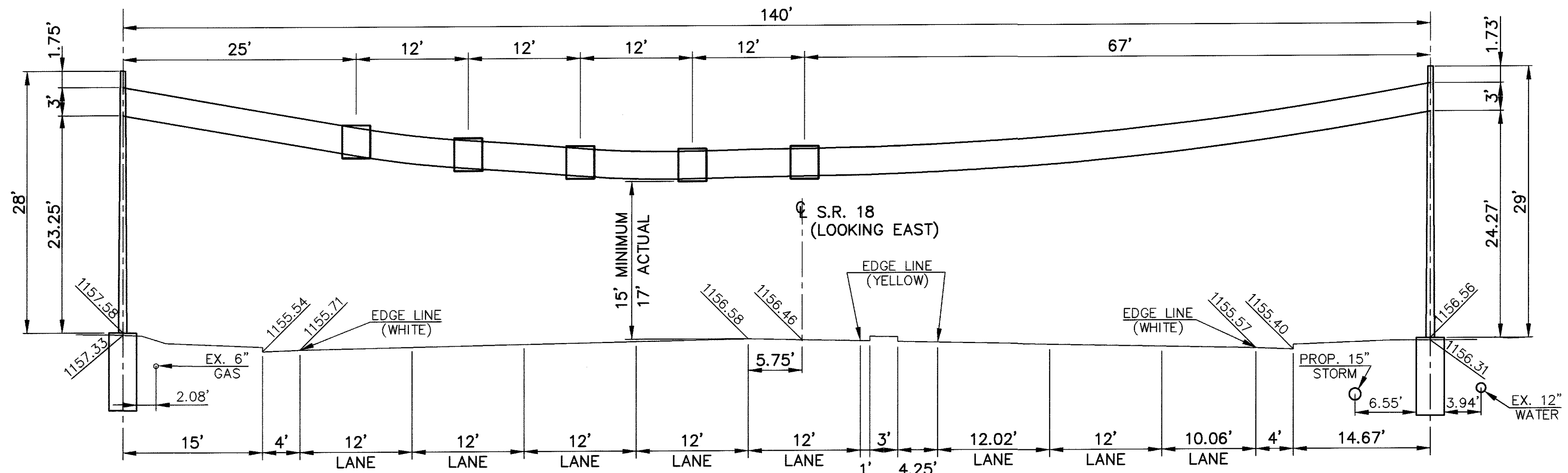
293
 362

J:\proj\7050600\traffic\70506te05.dwg User: am\05646 May 30, 2003 - 2:29pm



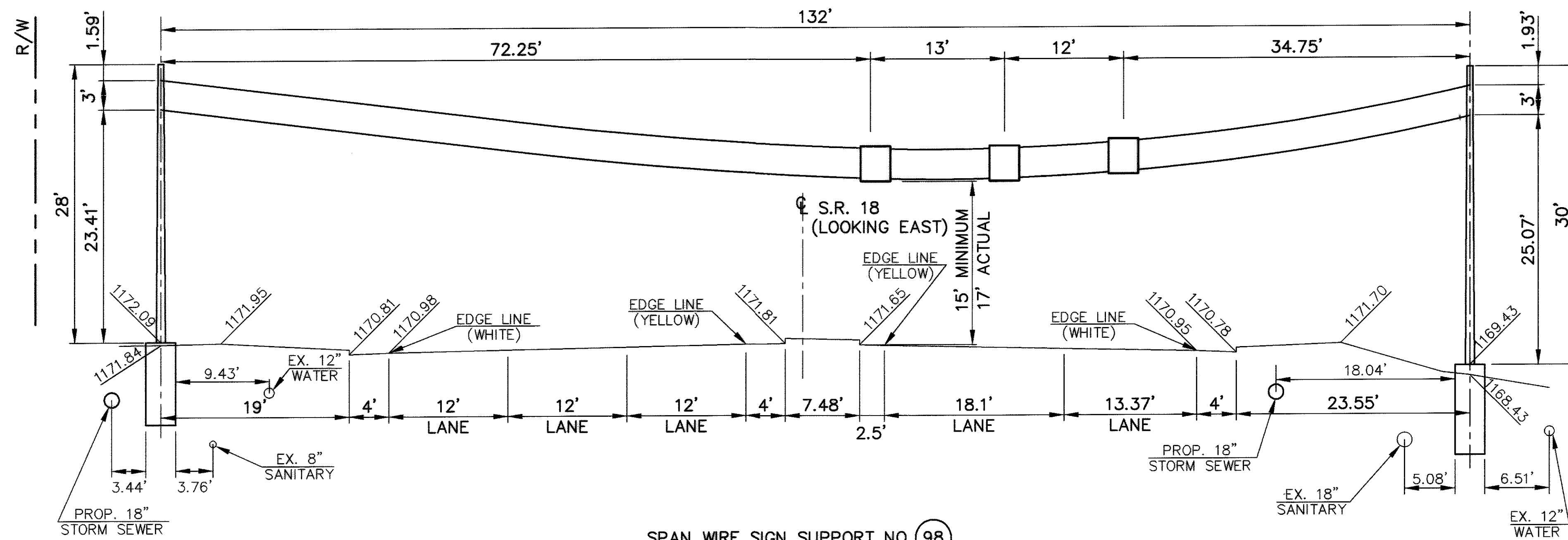
SIGN NO. 83
STA.161+90, 66' LT.
S4 x 7.7 BEAMS
LT. BEAM = 13.91'
RT. BEAM = 14.25'

FOR PLAN VIEW
SEE SHEET NO. 288.



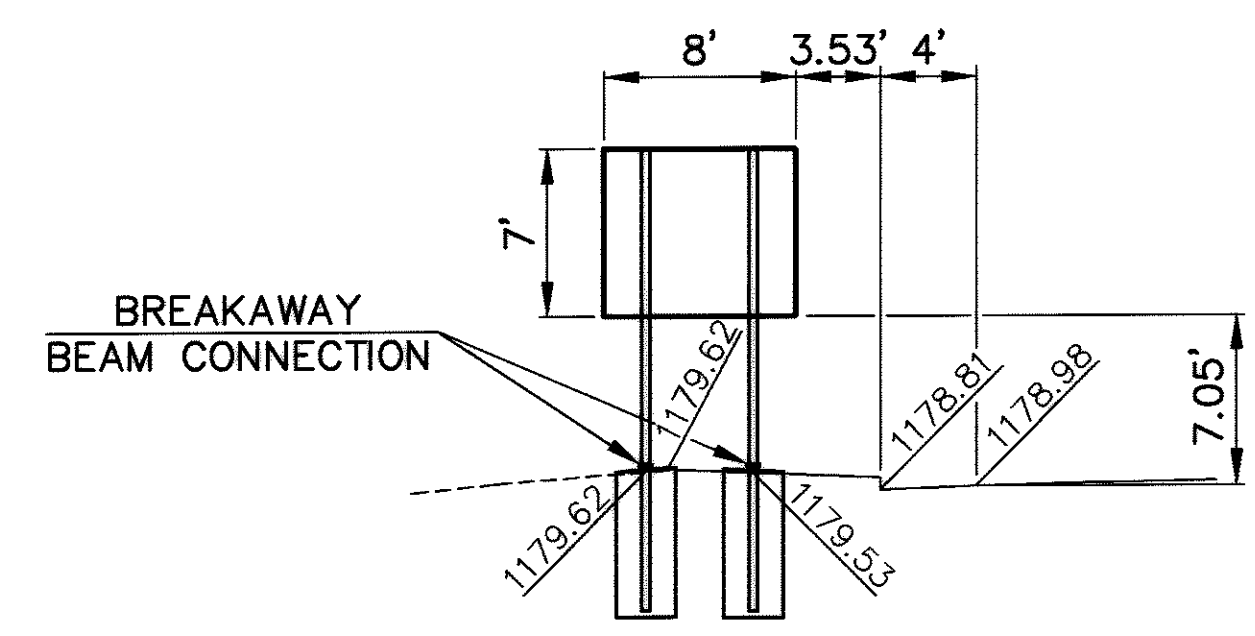
SPAN WIRE SIGN SUPPORT NO. 95
STA.166+75
TC-17.10, DESIGN 5

FOR PLAN VIEW
SEE SHEET NO. 288.



SPAN WIRE SIGN SUPPORT NO. 98
STA.170+75
TC-17.10, DESIGN 5

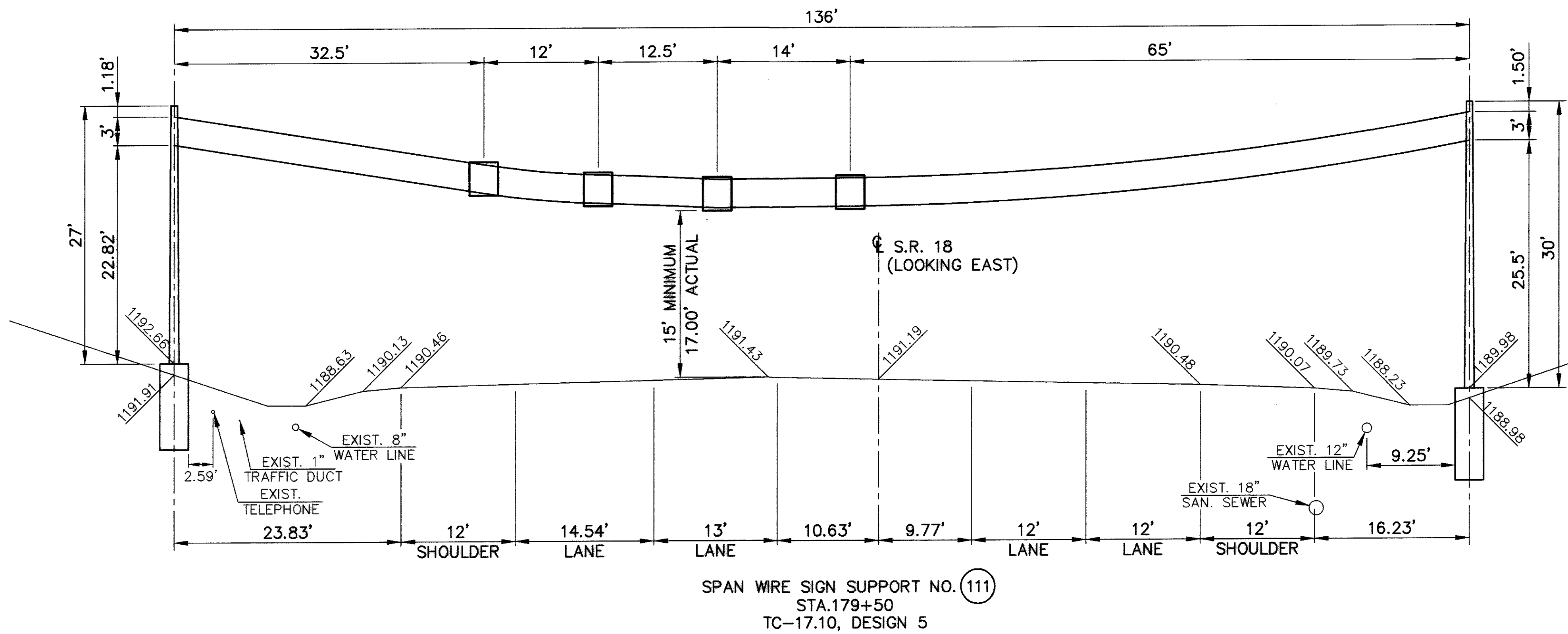
FOR PLAN VIEW
SEE SHEET NO. 288.



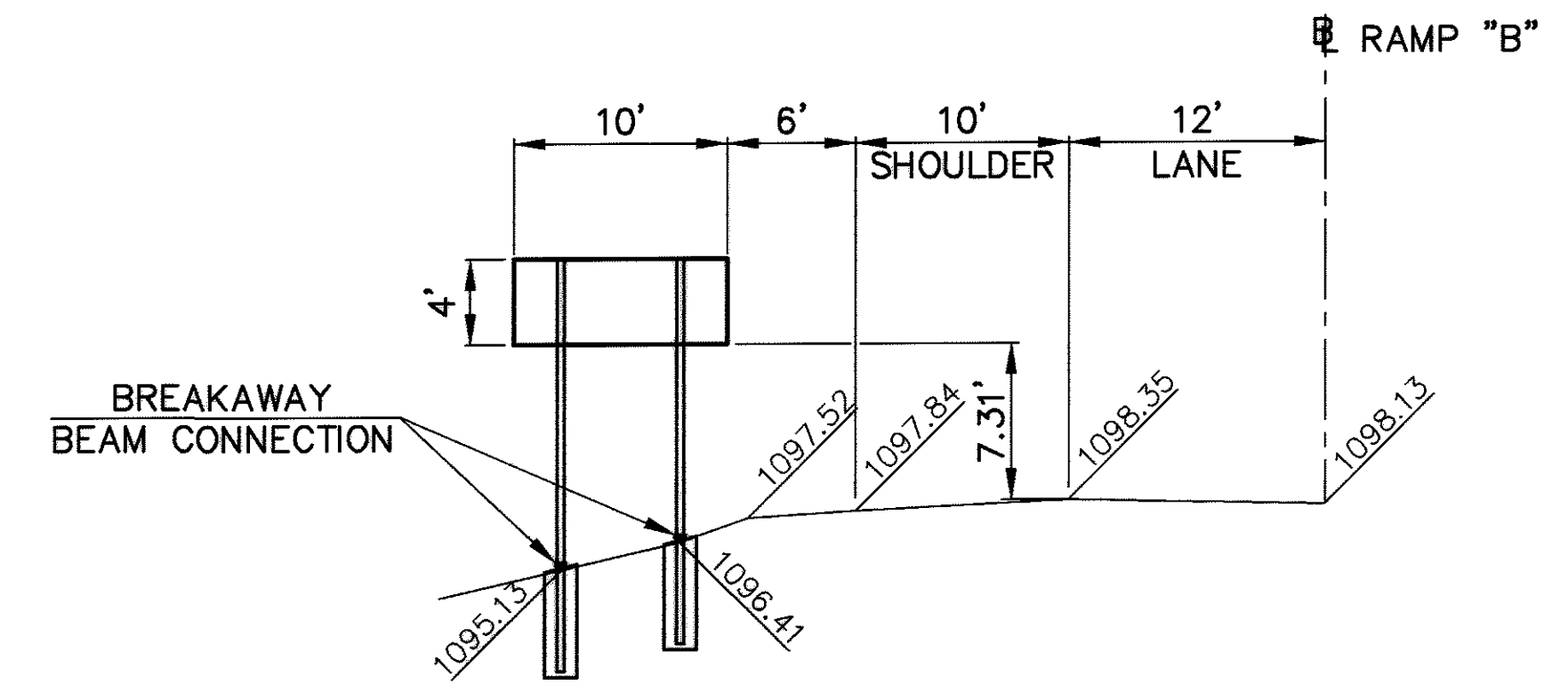
SIGN NO. 100
STA.173+00, 55' LT.
W10 x 12 BEAMS
LT. BEAM = 19.23'
RT. BEAM = 19.25'

FOR PLAN VIEW
SEE SHEET NO. 289.

J:\proj3\7050600\traffic\705061e06.dwg User: am105646 May 30, 2003 - 2:29pm

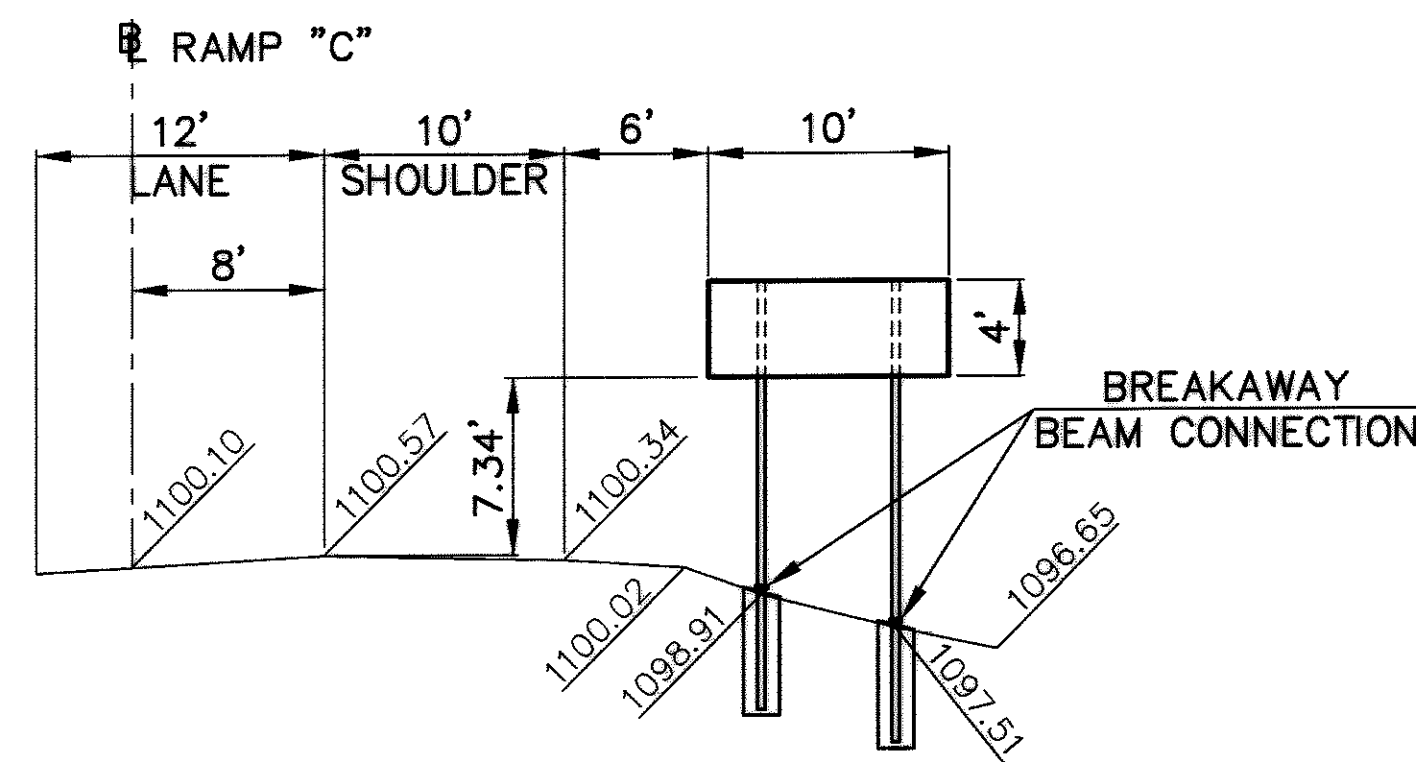


FOR PLAN VIEW
SEE SHEET NO. 289



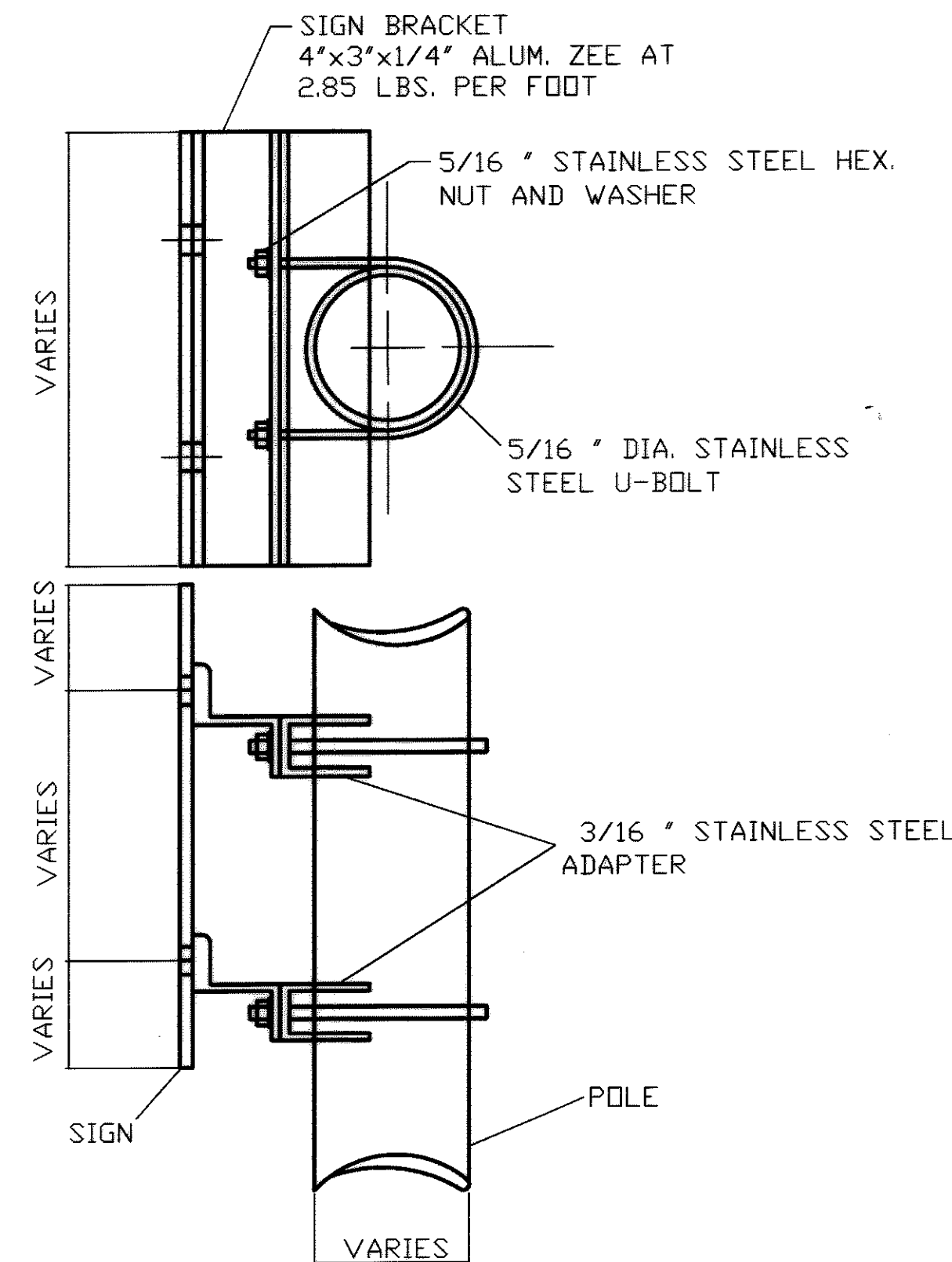
SIGN NO. 126
4+25, 33' LT.
W6 x 9 BEAMS
LT. BEAM = 19.28'
RT. BEAM = 18.00'

FOR PLAN VIEW
SEE SHEET NO. 286

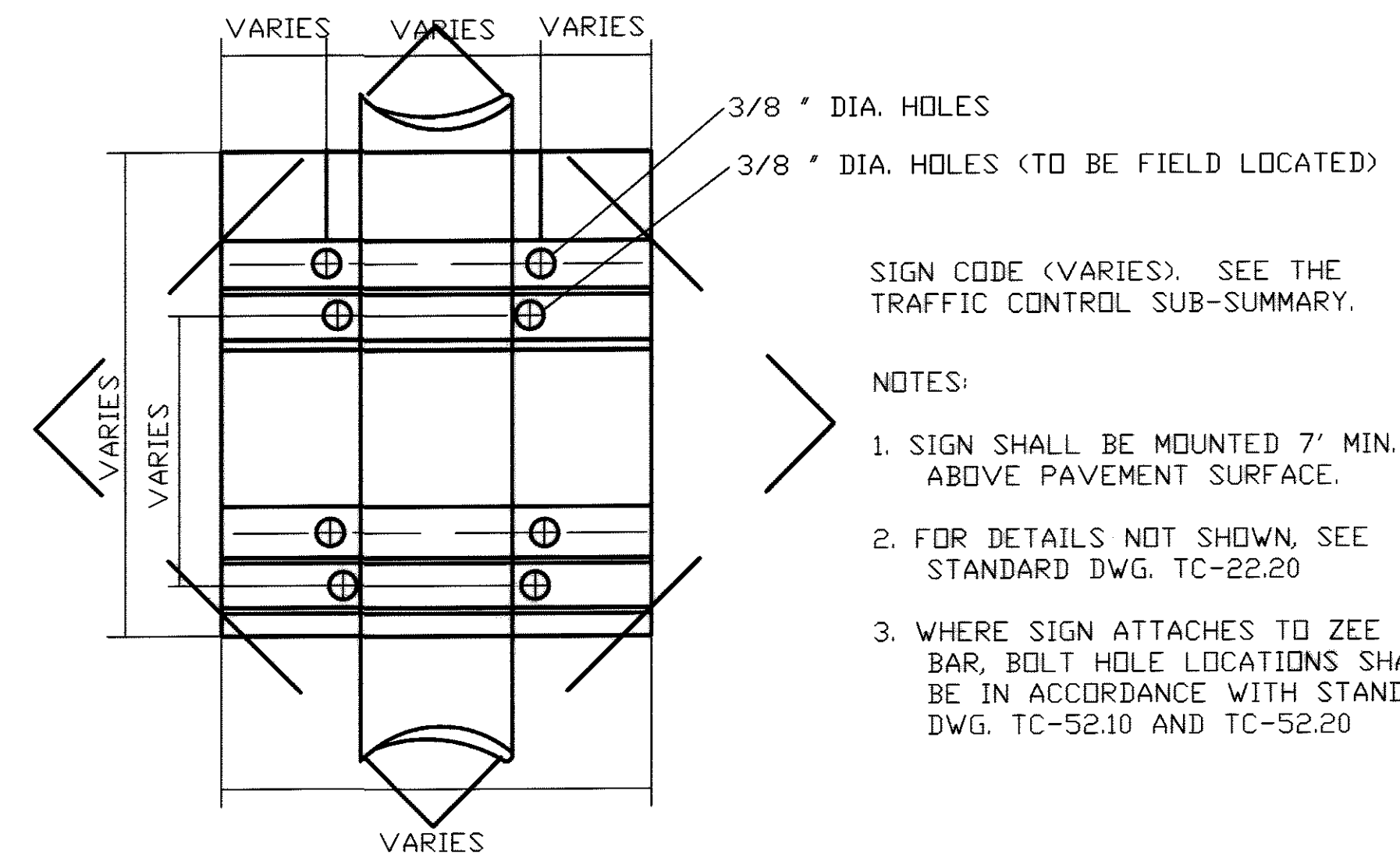


SIGN NO. 136
18+50, 29' RT.
W6 x 9 BEAMS
LT. BEAM = 17.75'
RT. BEAM = 19.15'

FOR PLAN VIEW
SEE SHEET NO. 287



VARIES, AS PER STANDARD DWG.
TC-52.10 AND TC-52.20



SIGN CODE (VARIES). SEE THE
TRAFFIC CONTROL SUB-SUMMARY.

NOTES:

- SIGN SHALL BE MOUNTED 7' MIN. ABOVE PAVEMENT SURFACE.
- FOR DETAILS NOT SHOWN, SEE STANDARD DWG. TC-22.20
- WHERE SIGN ATTACHES TO ZEE BAR, BOLT HOLE LOCATIONS SHALL BE IN ACCORDANCE WITH STANDARD DWG. TC-52.10 AND TC-52.20

ITEM 630-SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN

TRAFFIC CONTROL ELEVATION VIEWS

MED - 18 - 15.13

SCALE: 1/8" = 1'

CALCULATED
T.K.L.
CHECKED
K.P.W.

295
362

ITEM 620-DELINEATORS

| LOCATION | SIDE | SPACING | TYPE C POST MOUNTED | DELINEATOR REMOVED FOR STORAGE EACH |
|-----------------|------|---------|---------------------|-------------------------------------|
| RAMP 'A' | | | | |
| 17+50 TO 25+50 | RT. | 200' | 5 | 5 |
| RAMP 'B' | | | | |
| 2+00 TO 3+50 | LT. | 50' | 4 | 4 |
| 4+50 TO 6+50 | LT. | 200' | 2 | 2 |
| 7+00 TO 11+00 | RT. | 200' | 3 | 3 |
| RAMP 'C' | | | | |
| 12+00 TO 17+60 | LT. | 80' | 8 | 8 |
| 18+10 TO 19+10 | RT. | 50' | 3 | 3 |
| TOTAL | | | 25 | 25 |

ITEM 626-BARRIER REFLECTORS

| LOCATION | SIDE | SPACING | TYPE A2 WHITE/RED | TYPE B2 YELLOW/RED |
|-------------------------------|-------|---------|-------------------|--------------------|
| | | | EACH | EACH |
| S.R.18/MEDINA ROAD | | | | |
| 134+75 TO 146+43 | LT/RT | 100' | | 24 |
| 154+25 TO 163+23 | LT/RT | 100' | | 20 |
| 120+75 TO 123+12.50 | RT. | 75' | 4 | |
| 122+00.36 TO 122+78.49 | LT. | 50' | 3 | |
| 134+87.50 TO 137+25 | RT. | 75' | 4 | |
| 26+22.23 (RAMP A) TO 149+59 | RT. | 80' | 4 | |
| 151+68 TO 153+18 | LT. | 75' | 3 | |
| 152+06 TO 153+18.50 | LT. | 55' | 3 | |
| 1+85.95 (RAMP D) TO 154+75.44 | LT. | 60' | 3 | |
| 161+81.50 TO 163+63.81 | RT. | 100' | 3 | |
| RAMP B | | | | |
| 6+53.79 TO 8+03.79 | RT. | 75' | 3 | |
| TOTAL | | | 30 | 44 |

ITEM 621-RAISED PAVEMENT MARKERS AND RETROREFLECTORS

| SHEET NO. | LOCATION | FROM | TO | SIDE | SPACING | RPM REFLECTOR | | | |
|---------------|--------------------|-----------|-----------|-------|---------|-------------------|-------------|------------|------------|
| | | | | | | INSTALLATION ONLY | YELLOW | WHITE | RED |
| | | | | | | EACH | EACH | EACH | EACH |
| 283 | S.R.18/MEDINA ROAD | 776+60.32 | 783+00 | LT/RT | 80' | 16 | 32 | | |
| 284 | S.R.18/MEDINA ROAD | 783+00 | 785+71.11 | LT/RT | 80' | 8 | 16 | | |
| | S.R.18/MEDINA ROAD | 117+41.95 | 126+00 | LT/RT | 80' | 20 | 40 | | |
| | S.R.18/MEDINA ROAD | 120+40 | 126+00 | LT. | 80' | 7 | | 7 | 7 |
| 284 | S.R.18/MEDINA ROAD | 124+00 | 126+00 | RT. | 80' | 2 | | 2 | 2 |
| 285 | S.R.18/MEDINA ROAD | 126+00 | 130+00 | LT/RT | 80' | 10 | | 10 | 10 |
| | S.R.18/MEDINA ROAD | 128+00 | 130+00 | RT. | 80' | 2 | | 2 | 2 |
| | S.R.18/MEDINA ROAD | 131+16 | 137+50 | LT/RT | 80' | 28 | | 28 | 28 |
| | S.R.18/MEDINA ROAD | 127+05 | 130+00 | RT. | 40' | 16 | | 16 | 16 |
| | S.R.18/MEDINA ROAD | 131+16 | 133+50 | LT/RT | 40' | 12 | | 12 | 12 |
| 285 | S.R.18/MEDINA ROAD | 134+75 | 137+50 | LT. | 40' | 6 | | 6 | 6 |
| 286 | S.R.18/MEDINA ROAD | 137+50 | 149+00 | LT/RT | 80' | 48 | | 48 | 48 |
| | S.R.18/MEDINA ROAD | 139+45.5 | 142+00 | RT. | 80' | 3 | | 3 | 3 |
| | S.R.18/MEDINA ROAD | 137+50 | 138+80 | LT. | 40' | 4 | | 4 | 4 |
| | S.R.18/MEDINA ROAD | 142+00 | 146+43 | RT. | 40' | 22 | | 22 | 22 |
| | S.R.18/MEDINA ROAD | 143+25 | 146+43 | RT. | 40' | 8 | | 8 | 8 |
| | S.R.18/MEDINA ROAD | 147+75 | 149+00 | LT. | 40' | 3 | | 3 | 3 |
| | RAMP 'A' | 24+00 | 26+25 | RT. | 80' | 3 | 3 | | 3 |
| | RAMP 'B' | 0+95 | 5+00 | RT. | 80' | 5 | 5 | | 5 |
| 286 | RAMP 'B' | 0+95 | 5+00 | RT. | 40' | 28 | | 28 | 28 |
| 287 | S.R.18/MEDINA ROAD | 149+00 | 160+50 | LT/RT | 80' | 48 | | 48 | 48 |
| | S.R.18/MEDINA ROAD | 149+00 | 152+88 | LT/RT | 40' | 30 | | 30 | 30 |
| | S.R.18/MEDINA ROAD | 154+50 | 156+00 | LT. | 40' | 4 | | 4 | 4 |
| | S.R.18/MEDINA ROAD | 154+50 | 160+50 | LT. | 40' | 15 | | 15 | 15 |
| | S.R.18/MEDINA ROAD | 156+20 | 160+50 | RT. | 40' | 11 | | 11 | 11 |
| | RAMP 'C' | 17+00 | 19+75 | LT. | 80' | 3 | 3 | | 3 |
| | RAMP 'C' | 17+00 | 19+75 | LT. | 40' | 7 | | 7 | 7 |
| 287 | RAMP 'D' | 1+00 | 2+60 | LT. | 80' | 3 | 3 | | 3 |
| Xref TPO9.dwg | RAMP 'A' | 10+73 | 17+10 | LT. | 40' | 32 | | 32 | 32 |
| Xref TPO9.dwg | RAMP 'A' | 17+10 | 24+00 | LT. | 80' | 9 | 9 | | 9 |
| Xref TPO8.dwg | RAMP 'B' | 5+00 | 11+00 | RT. | 80' | 8 | 8 | | 8 |
| | RAMP 'B' | 5+00 | 7+00 | RT. | 40' | 12 | | 12 | 12 |
| | RAMP 'B' | 5+00 | 6+50 | BL | 40' | 4 | | 4 | 4 |
| | RAMP 'B' | 11+16 | 14+16 | RT. | 40' | 16 | | 16 | 16 |
| | RAMP 'C' | 8+89 | 11+75 | LT. | 40' | 14 | | 14 | 14 |
| | RAMP 'C' | 11+75 | 17+00 | LT. | 80' | 7 | 7 | | 7 |
| Xref TPO8.dwg | RAMP 'C' | 16+50 | 17+00 | LT. | 40' | 2 | | 2 | 2 |
| 288 | S.R.18/MEDINA ROAD | 160+50 | 172+00 | LT. | 80' | 26 | | 26 | 26 |
| | S.R.18/MEDINA ROAD | 160+50 | 166+00 | RT. | 80' | 12 | | 12 | 12 |
| | S.R.18/MEDINA ROAD | 166+00 | 172+00 | RT. | 80' | 7 | | 7 | 7 |
| | S.R.18/MEDINA ROAD | 160+50 | 163+23 | RT. | 40' | 7 | | 7 | 7 |
| | S.R.18/MEDINA ROAD | 160+50 | 163+00 | LT. | 40' | 7 | | 7 | 7 |
| | S.R.18/MEDINA ROAD | 164+40 | 166+80 | LT. | 40' | 6 | | 6 | 6 |
| | S.R.18/MEDINA ROAD | 164+40 | 167+63 | LT. | 40' | 8 | | 8 | 8 |
| 288 | S.R.18/MEDINA ROAD | 171+40 | 172+00 | RT. | 40' | 3 | | 3 | 3 |
| 289 | S.R.18/MEDINA ROAD | 172+00 | 179+71.13 | LT. | 80' | 12 | | 12 | 12 |
| | S.R.18/MEDINA ROAD | 172+00 | 179+71.13 | RT. | 80' | 8 | | 8 | 8 |
| | S.R.18/MEDINA ROAD | 172+00 | 175+50 | RT. | 40' | 8 | | 8 | 8 |
| | S.R.18/MEDINA ROAD | 176+76 | 178+50 | LT. | 40' | 5 | | 5 | 5 |
| 289 | S.R.18/MEDINA ROAD | 176+76 | 179+25 | LT. | 40' | 7 | | 7 | 7 |
| TOTAL | | | | | | 602 | 126 | 520 | 558 |
| | | | | | | | 1204 | | |

J:\Proj3\7050600\TRAFFIC\70506T09.DWG User: jrn81152 Jul 17, 2003 6:48pm

CALCULATED
T.K.I.
CHECKED
K.P.W.

DELINEATOR AND RAISED PAVEMENT MARKER SUB-SUMMARY

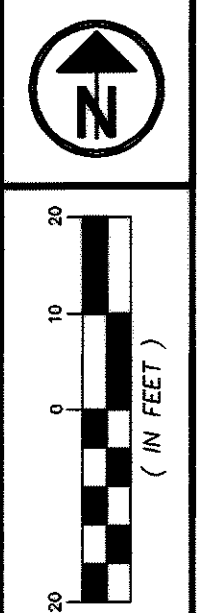
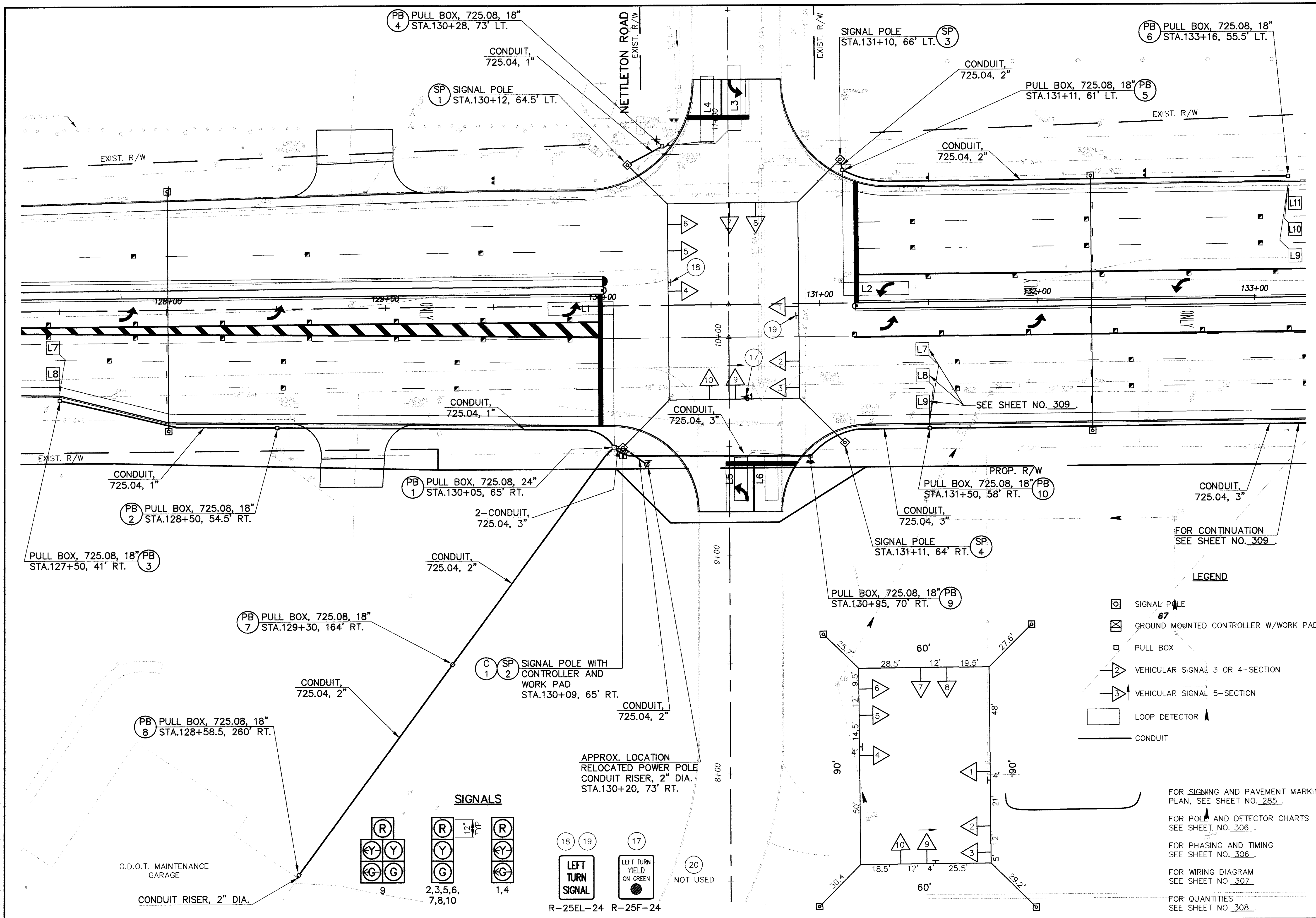
MED - 18 - 15.13

301
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PAVEMENT MARKING SUB-SUMMARY

| SHEET NO. | REFERENCE NO. | LOCATION | STATION | | SIDE | ITEM NUMBERS | | | | | | | | | | | | | | | SHEET NO. | REFERENCE NO. | LOCATION | STATION | | SIDE | ITEM NUMBERS | | | | | | | | | | | | | | |
|-----------|---------------|--------------------|---------|----------|-------|------------------|-------------------|-------------------|---------------------------------------|----------------------------|-------------------|-----------|-------------------------|------------------------|------------------------|------------|-----------------------|-----------------------|------------------|--------------------------------|--------------------|---------------|----------|-------------------|---------------------------------------|-------|----------------------------|-------------------|-----------|-------------------------|------------------------|------------------------|------------|-----------------------|-----------------------|-----|-----|--|--|--|--|
| | | | FROM | TO | | EDGE LINE, WHITE | EDGE LINE, YELLOW | LANE LINE, TYPE 1 | CENTER LINE, DOUBLE, SOLID AND BROKEN | CENTER LINE, DOUBLE, SOLID | CHANNELIZING LINE | STOP LINE | TRANSVERSE LINE, YELLOW | TRANSVERSE LINE, WHITE | ISLAND MARKING, YELLOW | LANE ARROW | WORD ON PAVEMENT, 96" | DOTTED LINE, 4" WHITE | EDGE LINE, WHITE | EDGE LINE, YELLOW | | | | LANE LINE, TYPE 1 | CENTER LINE, DOUBLE, SOLID AND BROKEN | | CENTER LINE, DOUBLE, SOLID | CHANNELIZING LINE | STOP LINE | TRANSVERSE LINE, YELLOW | TRANSVERSE LINE, WHITE | ISLAND MARKING, YELLOW | LANE ARROW | WORD ON PAVEMENT, 96" | DOTTED LINE, 4" WHITE | | | | | | |
| | | | MILE | MILE | | MILE | MILE | MILE | FT. | FT. | FT. | FT. | S.F. | EACH | EACH | FT. | MILE | MILE | MILE | MILE | | | | MILE | FT. | | FT. | FT. | FT. | S.F. | EACH | EACH | FT. | | | | | | | | |
| | | | 644 | 644 | | 644 | 644 | 644 | 644 | 644 | 644 | 644 | 644 | 644 | 644 | 644 | 644 | 644 | 644 | 644 | | | | 644 | 644 | | 644 | 644 | 644 | 644 | 644 | 644 | 644 | 644 | 644 | | | | | | |
| 286 | A | RAMP 'B' | 3+09 | - | LT/RT | | | | | | | | | | | 4 | | | 287 | W | S.R.18/MEDINA ROAD | 152+07 | - | RT. | | | | | | | | | | | | | 2 | | | | |
| | A | RAMP 'B' | 3+77 | - | LT/RT | | | | | | | | | | | 4 | | | | W | S.R.18/MEDINA ROAD | 155+28 | - | LT. | | | | | | | | | | | | 2 | | | | | |
| | A | RAMP 'B' | 4+45 | - | LT/RT | | | | | | | | | | | 4 | | | | W | S.R.18/MEDINA ROAD | 160+04 | - | LT. | | | | | | | | | | | | 1 | | | | | |
| 286 | W | RAMP 'B' | 1+73 | - | LT/RT | | | | | | | | | | | | | | DL | S.R.18/MEDINA ROAD TO RAMP 'D' | 152+88 | 0+62.6 | LT/RT | | | | | | | | | | | | | 129 | | | | | |
| | | | | | | | | | | | | | | | | | | | DL | RAMP 'D' TO S.R.18/MEDINA ROAD | 1+87.1 | 154+50 | LT/RT | | | | | | | | | | | | | | 129 | | | | |
| 287 | EW | S.R.18/MEDINA ROAD | 149+00 | 160+50 | LT/RT | 0.436 | | | | | | | | | | | | | EW | RAMP 'C' | 17+00 | 19+75 | RT. | 0.052 | | | | | | | | | | | | | | | | | |
| | EY | S.R.18/MEDINA ROAD | 149+00 | 152+88 | LT/RT | | 0.147 | | | | | | | | | | | | EY | RAMP 'C' | 17+00 | 19+75 | LT. | | 0.052 | | | | | | | | | | | | | | | | |
| | EY | S.R.18/MEDINA ROAD | 156+00 | 160+50 | RT. | | 0.085 | | | | | | | | | | | | CH | RAMP 'C' | 17+00 | 19+75 | LT/RT | | | | 275 | | | | | | | | | | | | | | |
| | C | S.R.18/MEDINA ROAD | 154+26 | 156+00 | RT. | | | | | 0.033 | | | | | | | | | CH | RAMP 'C' | 19+13.5 | 19+75 | LT. | | | | 61.5 | | | | | | | | | | | | | | |
| | C | S.R.18/MEDINA ROAD | 154+50 | 160+50 | LT. | | | | | 0.114 | | | | | | | | | S | RAMP 'C' | 19+75 | - | LT/RT | | | | | 54 | | | | | | | | | | | | | |
| | L | S.R.18/MEDINA ROAD | 149+00 | 160+50 | LT/RT | | | 0.871 | | | | | | | | | | | TW | RAMP 'C' | 19+13.5 | 19+75 | LT/RT | | | | | | | 27 | | | | | | | | | | | |
| | CH | S.R.18/MEDINA ROAD | 149+00 | 152+88 | LT/RT | | | | | | 1164 | | | | | | | | A | RAMP 'C' | 17+61 | - | LT/RT | | | | | | | | | 2 | | | | | | | | | |
| | CH | S.R.18/MEDINA ROAD | 154+50 | 156+00 | LT. | | | | | | 300 | | | | | | | | A | RAMP 'C' | 18+29 | - | LT/RT | | | | | | | | | 2 | | | | | | | | | |
| | CH | S.R.18/MEDINA ROAD | 154+50 | 155+09.5 | LT. | | | | | | 59.5 | | | | | | | | A | RAMP 'C' | 19+65 | - | LT/RT | | | | | | | | | 2 | | | | | | | | | |
| | CH | S.R.18/MEDINA ROAD | 156+00 | 160+50 | LT. | | | | | | 450 | | | | | | | | W | RAMP 'C' | 18+97 | - | LT/RT | | | | | | | | | | 2 | | | | | | | | |
| | CH | S.R.18/MEDINA ROAD | 156+20 | 160+50 | RT. | | | | | | 430 | | | | | | | | EW | RAMP 'D' | 1+00 | 2+85 | RT. | 0.04 | | | | | | | | | | | | | | | | | |
| | S | S.R.18/MEDINA ROAD | 152+88 | - | RT. | | | | | | | 74 | | | | | | | EY | RAMP 'D' | 0+60 | 2+85 | LT. | | 0.042 | | | | | | | | | | | | | | | | |
| | S | S.R.18/MEDINA ROAD | 154+50 | - | LT. | | | | | | | 94 | | | | | | | L | RAMP 'D' | 0+62.6 | 2+60 | LT. | | | 0.037 | | | | | | | | | | | | | | | |
| | TY | S.R.18/MEDINA ROAD | 154+26 | 156+00 | RT. | | | | | | | | 287 | | | | | | 287 | S | MONTVILLE DRIVE | 2+50 | - | RT. | | | | | | 23 | | | | | | | | | | | |
| | TY | S.R.18/MEDINA ROAD | 154+50 | 160+50 | LT. | | | | | | | | 846 | | | | | | 287A | EW/CH | RAMP 'A' | 10+73 | 17+35 | RT. | 0.125 | | | | | | | | | | | | | | | | |
| | TW | S.R.18/MEDINA ROAD | 154+50 | 155+09.5 | LT. | | | | | | | | | | 21 | | | | EW | RAMP 'A' | 10+73 | 24+00 | BL | 0.251 | | | | | | | | | | | | | | | | | |
| | IM | S.R.18/MEDINA ROAD | 154+26 | - | RT. | | | | | | | | | | | | | | EW | RAMP 'A' | 10+73 | 24+00 | RT. | | 0.126 | | | | | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 149+21 | - | LT. | | | | | | | | | | | 1 | | | 287A | EY | RAMP 'A' | 17+35 | 24+00 | RT. | | | | | | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 149+89 | - | LT. | | | | | | | | | | | 1 | | | 287B | EW | RAMP 'B' | 5+00 | 14+16 | BL | 0.173 | | | | | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 150+57 | - | LT. | | | | | | | | | | | 1 | | | EY | RAMP 'B' | 5+00 | 11+16 | RT. | | 0.117 | | | | | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 151+25 | - | LT. | | | | | | | | | | | 1 | | | CH | RAMP 'B' | 5+00 | 6+50 | BL | | | | | 150 | | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 151+93 | - | LT. | | | | | | | | | | | 1 | | | CH | RAMP 'B' | 5+00 | 7+00 (x2) | RT. | | | | | 400 | | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 152+61 | - | LT. | | | | | | | | | | | 1 | | | A | RAMP 'B' | 5+13 | - | LT/RT | | | | | | | | | 4 | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 149+35 | - | RT. | | | | | | | | | | | 2 | | | CH | RAMP 'B' | 11+16 | 14+16 (x2) | RT. | | | | | | 600 | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 150+03 | - | RT. | | | | | | | | | | | 2 | | | 287B | TW | RAMP 'B' | 11+16 | 14+16 | RT. | | | | | | | 257 | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 150+71 | - | RT. | | | | | | | | | | | 2 | | | 288 | EW | S.R.18/MEDINA ROAD | 160+50 | 172+00 | LT/RT | 0.436 | | | | | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 151+39 | - | RT. | | | | | | | | | | | 2 | | | EY | S.R.18/MEDINA ROAD | 160+50 | 163+23 | RT. | | 0.052 | | | | | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 152+75 | - | RT. | | | | | | | | | | | 2 | | | EY | S.R.18/MEDINA ROAD | 164+40 | 168+33.5 | RT. | | 0.075 | | | | | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 154+60 | - | LT. | | | | | | | | | | | 2 | | | EY | S.R.18/MEDINA ROAD | 170+50 | 172+00 | RT. | | 0.028 | | | | | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 155+96 | - | LT. | | | | | | | | | | | 2 | | | L | S.R.18/MEDINA ROAD | 160+50 | 172+00 | LT. | | | 0.436 | | | | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 156+64 | - | LT. | | | | | | | | | | | 1 | | | L | S.R.18/MEDINA ROAD | 160+50 | 166+00 | RT. | | | 0.208 | | | | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 157+32 | - | LT. | | | | | | | | | | | 1 | | | L | S.R.18/MEDINA ROAD | 166+00 | 172+00 | RT. | | | 0.114 | | | | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 158+00 | - | LT. | | | | | | | | | | | 1 | | | CH | S.R.18/MEDINA ROAD | 160+50 | 163+00 | LT. | | | | | | 250 | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 158+68 | - | LT. | | | | | | | | | | | 1 | | | CH | S.R.18/MEDINA ROAD | 160+50 | 163+23 | RT. | | | | | | 273 | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 159+36 | - | LT. | | | | | | | | | | | 1 | | | CH | S.R.18/MEDINA ROAD | 163+92.5 | 166+80 | LT. | | | | | | 356 | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 156+33 | - | RT. | | | | | | | | | | | 1 | | | CH | S.R.18/MEDINA ROAD | 171+40 | 172+00 | RT. | | | | | | 60 | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 157+01 | - | RT. | | | | | | | | | | | 1 | | | S | S.R.18/MEDINA ROAD | 163+23 | - | RT. | | | | | | | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 157+69 | - | RT. | | | | | | | | | | | 1 | | | S | S.R.18/MEDINA ROAD | 164+40 | - | LT. | | | | | | | | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 158+37 | - | RT. | | | | | | | | | | | 1 | | | TY/C | S.R.18/MEDINA ROAD | 160+50 | 163+23 | LT. | | | | 0.052 | | | 162 | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 159+05 | - | RT. | | | | | | | | | | | 1 | | | TY/C | S.R.18/MEDINA ROAD | 164+40 | 170+50 | RT. | | | | 0.116 | | | 303 | | | | | | | | | | | |
| | A | S.R.18/MEDINA ROAD | 159+73 | - | RT. | | | | | | | | | | | 1 | | | TY/C | S.R.18/MEDINA ROAD | 168+33.5 | 172+00 | | | | | | | | | | | | | | | | | | | |

J:\Proj\3\7050600\TRAFFIC\70506CP01.DWG User: jmb05689 Jun 26, 2003 - 8:34am



CALCULATED
T.K.L.
CHECKED
K.P.W.

**TRAFFIC SIGNAL PLAN
S.R.18 AT NETTLETON ROAD**

MED - 18 - 15.13

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FOR CONTINUATION
SEE SHEET NO. 309.

LEGEND

- SIGNAL POLE
- GROUND MOUNTED CONTROLLER W/WORK PAD
- PULL BOX
- VEHICULAR SIGNAL 3 OR 4-SECTION
- VEHICULAR SIGNAL 5-SECTION
- LOOP DETECTOR
- CONDUIT

FOR SIGNING AND PAVEMENT MARKING
PLAN, SEE SHEET NO. 285.

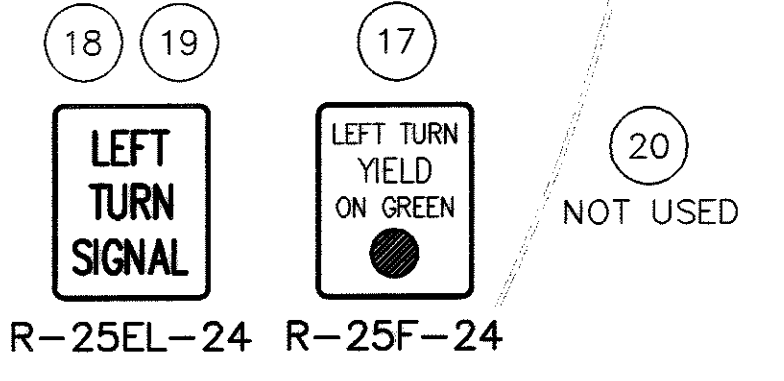
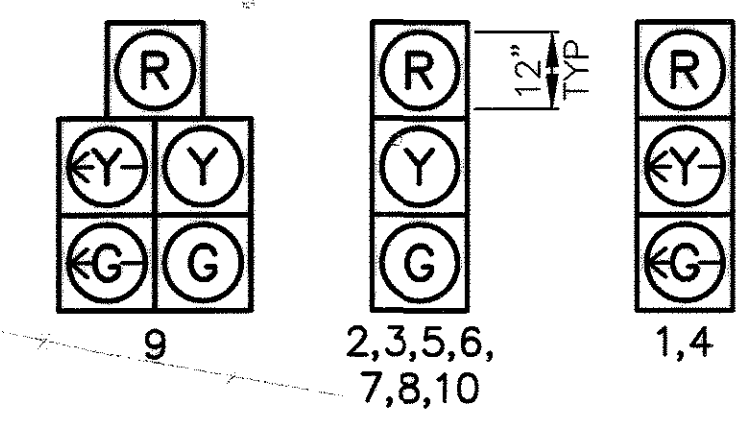
FOR POLE AND DETECTOR CHARTS
SEE SHEET NO. 306.

FOR PHASING AND TIMING
SEE SHEET NO. 306.

FOR WIRING DIAGRAM
SEE SHEET NO. 307.

FOR QUANTITIES
SEE SHEET NO. 308.

SIGNALS



R-25EL-24 R-25F-24

TRAFFIC SIGNAL DETECTORS

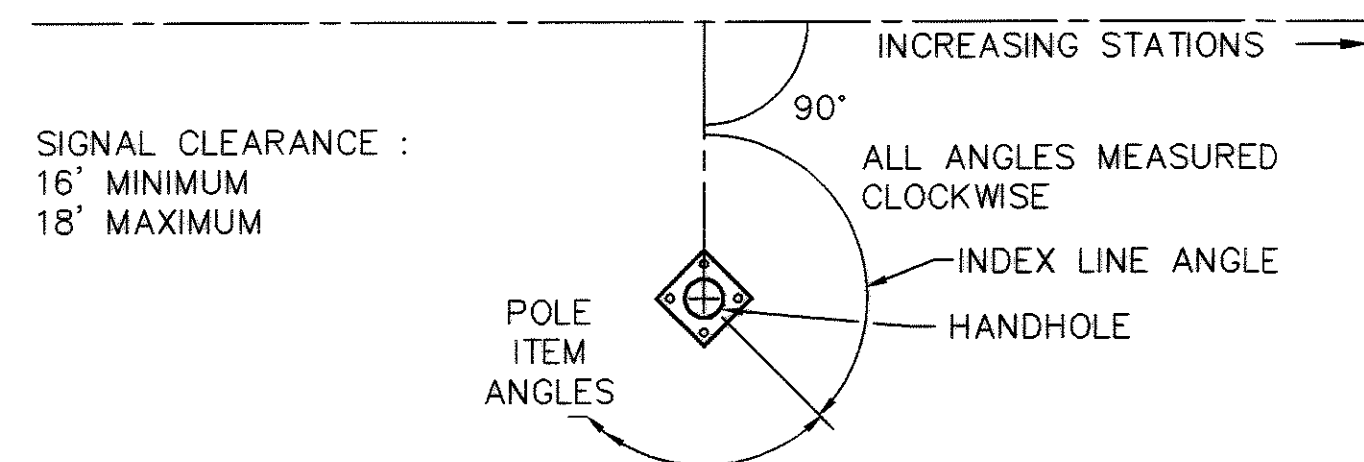
| DETECTOR | SIZE | NO. OF TURNS | PULSE OR PRESENCE | DELAY OR EXTENSION (SEC.) | DET. UNIT NO. | PHASE | REMARKS |
|----------|----------|--------------|-------------------|---------------------------|---------------|-------|------------------|
| L1 | 6' x 30' | 3 | PRESENCE | - | 1 | 1+5 | - |
| L2 | 6' x 30' | 3 | PRESENCE | - | 2 | 1+5 | - |
| L3 | 6' x 30' | 3 | PRESENCE | - | 3 | 4+7 | - |
| L4 | 6' x 30' | 3 | PRESENCE | DELAY 10 | 4 | 4+8 | - |
| L5 | 6' x 20' | 3 | PRESENCE | - | 5 | 4+8 | - |
| L6 | 6' x 20' | 3 | PRESENCE | DELAY 10 | 5 | 4+8 | - |
| L7 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 6 | 2 | - |
| L8 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 6 | 2 | - |
| L9 | 6' x 6' | 4 | PRESENCE | EXT. 3 | 7 | 6 | SYSTEM LOOP ALSO |
| L10 | 6' x 6' | 4 | PRESENCE | EXT. 3 | 8 | 6 | SYSTEM LOOP ALSO |
| L11 | 6' x 6' | 4 | PRESENCE | EXT. 3 | 9 | 6 | SYSTEM LOOP ALSO |

COORDINATION TIMING (1)

| | DIAL 1 | DIAL 2 | DIAL 3 |
|----------------------|---------------------|---------|------------|
| CYCLE LENGTH | 90 | 100 | 120 |
| PHASE 1 SPLIT | 18% | 16% | 16% |
| PHASE 2 SPLIT | 49% | 54% | 54% |
| PHASE 3 SPLIT | 0% | 0% | 0% |
| PHASE 4 SPLIT | 33% | 30% | 30% |
| PHASE 5 SPLIT | 18% | 16% | 16% |
| PHASE 6 SPLIT | 49% | 54% | 54% |
| PHASE 7 SPLIT | 10% | 9% | 11% |
| PHASE 8 SPLIT | 23% | 21% | 19% |
| PERMISSIVE YIELD (2) | 5% | 5% | 5% |
| OFFSET (3) | 10% | 9% | 8% |
| TIME OF DAY SCHEDULE | 9AM-3PM 7PM-10PM | 3PM-7PM | 6:30AM-9AM |

NOTES:

- 1.) PHASE SPLITS INCLUDE GREEN, YELLOW AND ALL RED TIME.
- 2.) PERMISSIVE YIELDS SHALL START AT THE ZERO POINT OF THE CYCLE.
- 3.) OFFSETS SHALL BE REFERENCED TO PHASE 2+6, BEGINING OF YELLOW, S.R. 18/NORMANDY DRIVE/EASTPOINTE DRIVE INTERSECTION.



SIGNAL SUPPORT TYPE TC-81.10

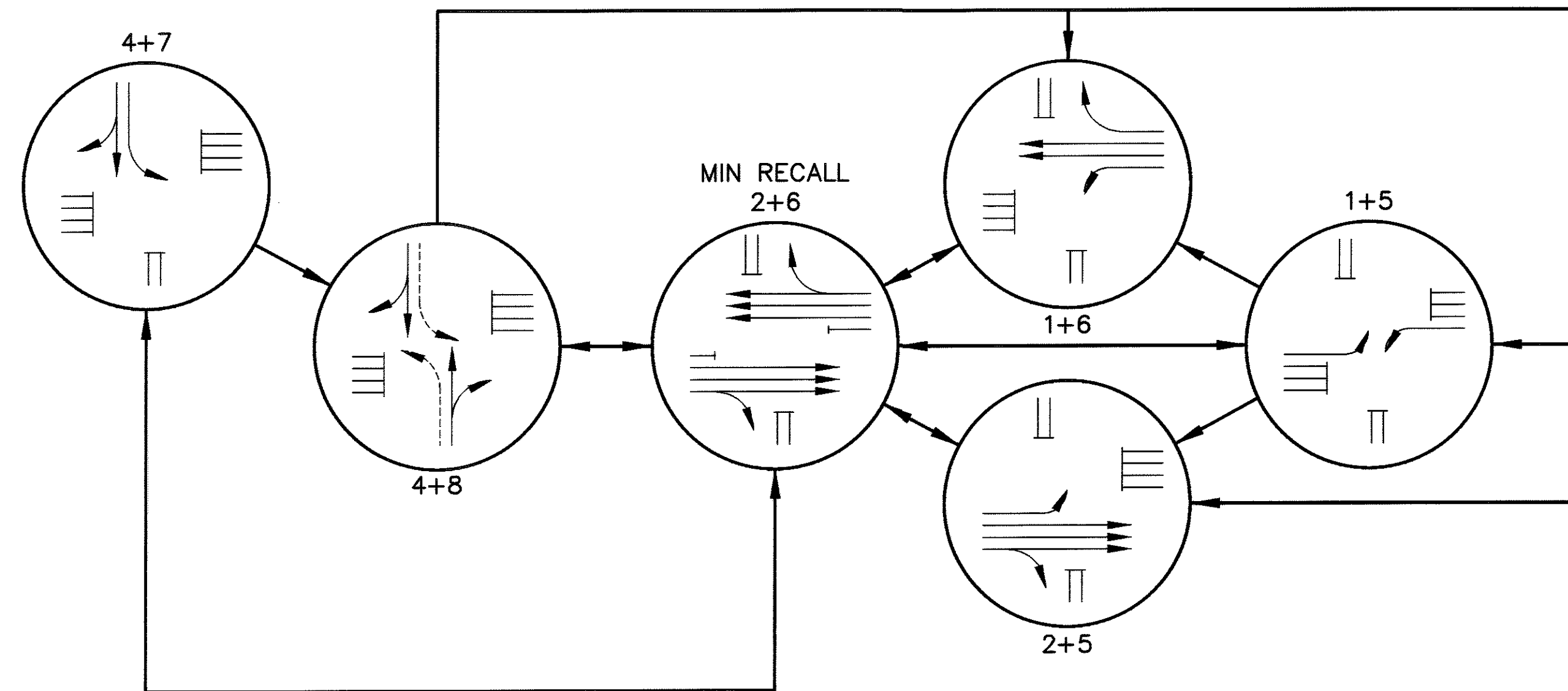
| POLE NO. | DESIGN NO. | POLE HEIGHT (FT.) | FOUNDATION ELEVATION | GROUND AT FOUNDATION ELEVATION | MESSENGER WIRE ATTACHMENT HEIGHT | INDEX LINE ANGLE (HANDHOLE) | ANGLES (DEG.) FROM INDEX LINE | | | |
|----------|------------|-------------------|----------------------|--------------------------------|----------------------------------|-----------------------------|-------------------------------|-------------------|--|--|
| | | | | | | | CABLE ENTRANCE (12" FROM TOP) | LUMINAIRE BRACKET | | |
| SP1 | 10 | 32 | 1060.20 | 1059.95 | 29.47' | 135° | 180 | - | | |
| SP2 | 10 | 32 | 1060.26 | 1060.01 | 29.34' | 225° | 180 | - | | |
| SP3 | 10 | 32 | 1062.55 | 1062.30 | 26.20' | 225° | 180 | - | | |
| SP4 | 10 | 32 | 1062.97 | 1062.72 | 27.47' | 135° | 180 | - | | |

DISPLAY CHART

| PHASE | 1+5 | | | 1+6 | | | 2+5 | | | 2+6 | | | 4+7 | | | 4+8 | | | FLASH | |
|-------|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-------|---|
| | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | | |
| 1 | <G | <Y | R | R | R | R | <G | <Y | R | R | R | R | R | R | R | R | R | R | R | R |
| 2,3 | R | R | R | R | R | R | G | G | G | G | Y | R | R | R | R | R | R | R | R | R |
| 4 | <G | <Y | R | <G | <Y | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R |
| 5,6 | R | R | R | G | G | G | R | R | R | G | Y | R | R | R | R | R | R | R | R | R |
| 7,8 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R |
| 9 | R | R | R | R | R | R | R | R | R | R | R | R | G | Y | R | G | Y | R | R | R |
| 10 | R | R | R | R | R | R | R | R | R | R | R | R | G | Y | R | G | Y | R | R | R |

- Ⓚ-REMAINS <G IF FOLLOWED BY PHASE 2+5
- Ⓛ-REMAINS <G IF FOLLOWED BY PHASE 1+6
- Ⓜ-REMAINS G IF FOLLOWED BY PHASE 2+5
- Ⓨ-REMAINS G IF FOLLOWED BY PHASE 1+6
- Ⓩ-REMAINS G IF FOLLOWED BY PHASE 4+8
- ⓐ-REMAINS G/<Y IF FOLLOWED BY PHASE 4+8
- ⓑ-REMAINS G IF FOLLOWED BY PHASE 4+8

PHASING DIAGRAM

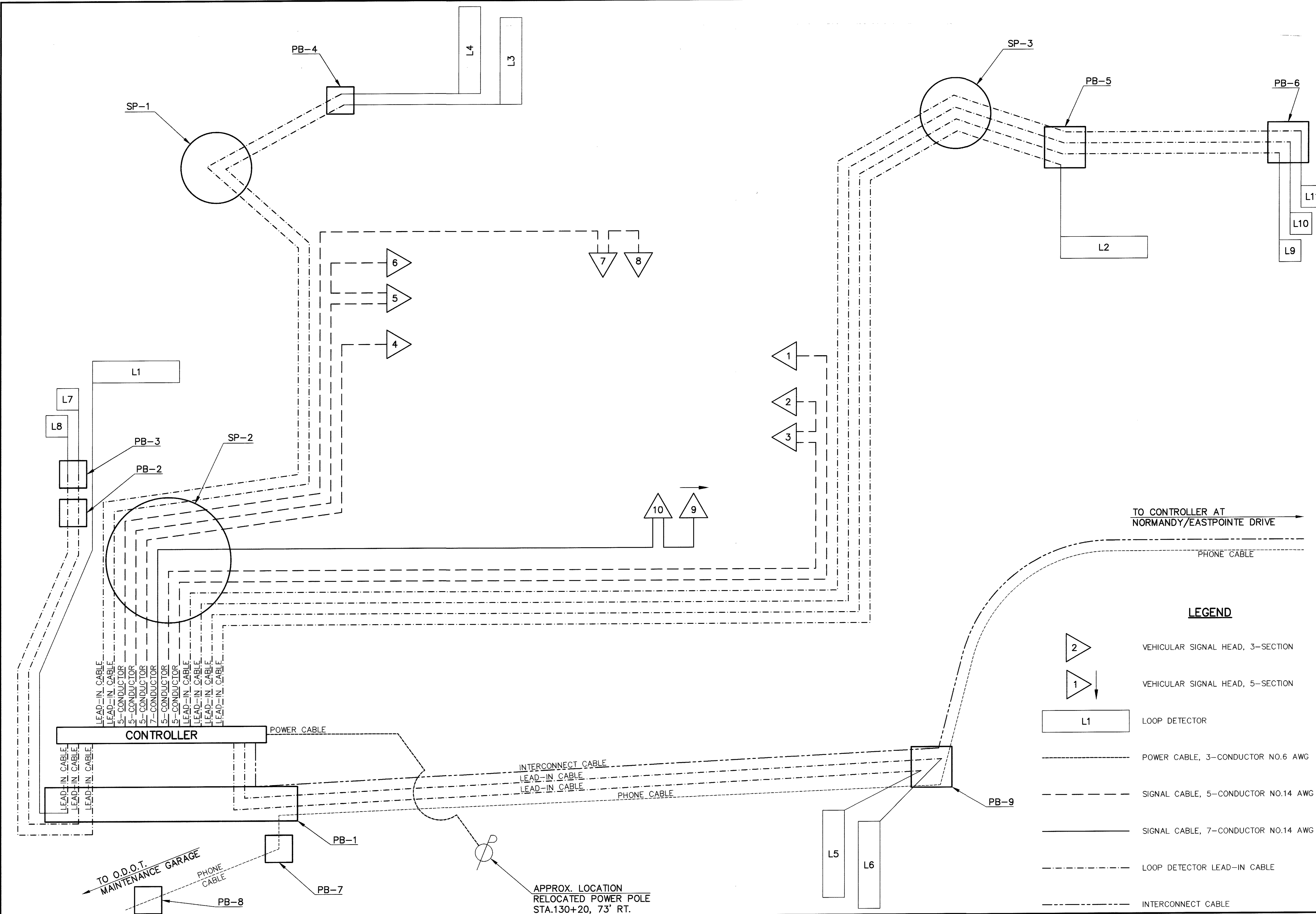


NOTE: OMIT PHASE 7 WHEN PHASE 8 IS ON.

TIMING CHART

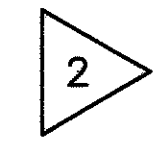
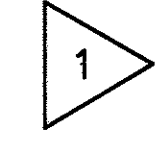

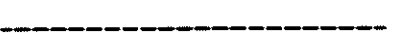
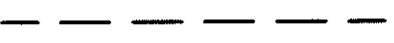

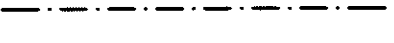

| INTERVAL OR FEATURE | NEMA PHASE NO. | | | | | | | |
|--------------------------------|----------------|-----|-------|-----|-------|-----|-------|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| INTERSECTION MOVEMENT | WB/LT | EB | NB/LT | SB | EB/LT | WB | SB/LT | NB |
| MINIMUM GREEN (INITIAL) (SEC.) | 7 | 25 | | 10 | 7 | 25 | 7 | 10 |
| ADDED INITIAL (SEC./ACT.) | - | 1.0 | | - | - | 1.0 | - | - |
| PASSAGE TIME (SEC.) | 2.5 | 4.0 | | 2.5 | 2.5 | 4.0 | 2.5 | 2.5 |
| MAXIMUM INITIAL (SEC.) | - | 45 | | - | - | 45 | - | - |
| MAXIMUM GREEN (SEC.) | 20 | 60 | | 30 | 20 | 60 | 20 | 30 |
| YELLOW CHANGE (SEC.) | 4.5 | 4.5 | | 3.6 | 4.5 | 4.5 | 3.6 | 3.6 |
| ALL RED CLEARANCE (SEC.) | 2.0 | 2.0 | | 2.5 | 2.0 | 2.0 | 2.5 | 2.5 |
| RECALL | | | | | | | | |
| MAXIMUM (ON/OFF) | OFF | OFF | | OFF | OFF | OFF | OFF | OFF |
| MINIMUM (ON/OFF) | OFF | ON | | OFF | OFF | ON | OFF | OFF |
| PEDESTRIAN (ON/OFF) | OFF | OFF | | OFF | OFF | OFF | OFF | OFF |
| MEMORY (ON/OFF) | OFF | OFF | | OFF | OFF | OFF | OFF | OFF |

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TO CONTROLLER AT
NORMANDY/EASTPOINTE DRIVE

LEGEND

-  VEHICULAR SIGNAL HEAD, 3-SECTION
-  VEHICULAR SIGNAL HEAD, 5-SECTION
-  LOOP DETECTOR
-  POWER CABLE, 3-CONDUCTOR NO.6 AWG
-  SIGNAL CABLE, 5-CONDUCTOR NO.14 AWG
-  SIGNAL CABLE, 7-CONDUCTOR NO.14 AWG
-  LOOP DETECTOR LEAD-IN CABLE
-  INTERCONNECT CABLE

| | |
|------------|---------|
| CALCULATED | T.K.L. |
| | CHECKED |
| | K.P.W. |

**WIRING DIAGRAM
SR.18 AT NETTLETON ROAD**

MED - 18 - 15.13

307
362

TRAFFIC SIGNAL QUANTITY SUB-SUMMARY

| SHEET No. | REFERENCE No. | LOCATION STATION TO STATION | SIDE | ITEM NUMBERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|---------------|----------------------------------|------|--------------|-------------------------|-----------------------|-----------------------|---------------------|---|---------------------|---------------------|---------------------|----------|--|--|---|---------------|------------------------|---------------------------------------|----------------------------|--|---|-------------------------------------|-------------------------------------|---|-----------------------------|-----------------------------------|----------------------------|--|-----------------------------------|--|--|---------------------|----------|----------|----------|----------|---|-----|--|
| | | | | 625 | | | | | | | | | | | | | | 632 | | | | | | | | | | 633 | | | | | | | | | | | | |
| | | | | GROUND ROD | GROUND ROD, AS PER PLAN | PULL BOX, 725.08, 18" | PULL BOX, 725.08, 24" | TRENCH, AS PER PLAN | TRENCH IN PAVED AREA, TYPE A, AS PER PLAN | CONDUIT, 725.04, 1" | CONDUIT, 725.04, 2" | CONDUIT, 725.04, 3" | | VEHICULAR SIGNAL HEAD, 3 SECTION, 12" LENS, 1-WAY, AS PER PLAN | VEHICULAR SIGNAL HEAD, 5 SECTION, 12" LENS, 1-WAY, AS PER PLAN | LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN | DETECTOR LOOP | STRAIN POLE FOUNDATION | STRAIN POLE, TYPE TC-81.10, DESIGN 10 | CONDUIT RISER, 2" DIAMETER | MESSENGER WIRE, 7 STRAND 3/8" DIA., WITH ACCESSORIES | MESSENGER WIRE, 7 STRAND 1/4" DIA., WITH ACCESSORIES, AS PER PLAN | SIGNAL CABLE, 5 CONDUCTOR NO.14 AWG | SIGNAL CABLE, 7 CONDUCTOR NO.14 AWG | INTERCONNECT CABLE, 6 PAIR, NO.19 AWG, SOLID, REA (PE-39) | LOOP DETECTOR LEAD-IN CABLE | POWER CABLE, 3 CONDUCTOR NO.6 AWG | POWER SERVICE, AS PER PLAN | SIGNALIZATION, MISC. METER BASE, 100 AMP WITH BYPASS | COVERING OF VEHICULAR SIGNAL HEAD | REMOVAL OF TRAFFIC SIGNAL INSTALLATION | CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET TYPE TSI, AS PER PLAN | CONTROLLER WORK PAD | | | | | | | |
| EACH | EACH | EACH | EACH | FT. | FT. | FT. | FT. | FT. | | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | L.F. | L.F. | FT. | FT. | FT. | FT. | FT. | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | | | | |
| 305 | C1 | 130+09 | RT. | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SP-2 | 130+09 | RT. | 1 | | | | | | | | | | | | | | | | 413 | 413 | | | | | | | | | | | | | | | | | | | |
| | PB-1 | 130+09 TO 130+05 | RT. | | | 1 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-2 | 130+05 TO 128+50 | RT. | | 1 | 158 | | 158 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-3 | 128+50 TO 127+50 | RT. | | 1 | 101 | | 101 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-9 | 130+05 TO 130+95 | RT. | | 1 | 85 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-10 | 130+90 TO 131+50 | RT. | | 1 | 63 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SP-1 | 130+12 | LT. | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-4 | 130+12 TO 130+28 | LT. | | 1 | 18 | | 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SP-4 | 131+11 | RT. | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SP-3 | 131+10 | LT. | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-5 | 131+10 TO 131+11 | LT. | | 1 | 5 | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-6 | 131+11 TO 133+16 | LT. | | 1 | 206 | | 206 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-7 | 130+05 TO 129+30 | RT. | | 1 | 124 | | 124 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-8 | 129+30 TO 128+58.5 | RT. | | 1 | 59 | 61 | 120 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 305 | | 128+58.5 TO MAINTENANCE GARAGE | RT. | | | 1 | | 1 | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| | | POWER SERVICE | | | | 14 | | | | | | | | | | | | 1 | | | | | | | | 56 | 1 | 1 | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 1 | | | | | | | | | | | | | | | | | | | | 158 | | | | | | | | | | | | | | | | 1 | | |
| | | C-1 TO VEHICULAR SIGNAL 2 AND 3 | | | | | | | | | | | | | | | | | | | | 138 | | | | | | | | | | | | | | | | 2 | | |
| | | C-1 TO VEHICULAR SIGNAL 4 | | | | | | | | | | | | | | | | | | | | 106 | | | | | | | | | | | | | | | | 1 | | |
| | | C-1 TO VEHICULAR SIGNAL 5 AND 6 | | | | | | | | | | | | | | | | | | | | 141 | | | | | | | | | | | | | | | | 2 | | |
| | | C-1 TO VEHICULAR SIGNAL 7 AND 8 | | | | | | | | | | | | | | | | | | | | 191 | | | | | | | | | | | | | | | | 2 | | |
| | | C-1 TO VEHICULAR SIGNAL 9 AND 10 | | | | | | | | | | | | | | | | | | | | 91 | | | | | | | | | | | | | | | | 2 | | |
| | | C-1 TO LOOP DETECTOR L1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 21 | |
| | | C-1 TO LOOP DETECTOR L2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 267 | |
| | | C-1 TO LOOP DETECTOR L3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 221 | |
| | | C-1 TO LOOP DETECTOR L4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 221 | |
| | | C-1 TO LOOP DETECTOR L5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 111 | |
| | | C-1 TO LOOP DETECTOR L6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 111 | |
| | | C-1 TO LOOP DETECTOR L7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 290 | |
| | | C-1 TO LOOP DETECTOR L8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 290 | |
| | | C-1 TO LOOP DETECTOR L9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 478 | |
| | | C-1 TO LOOP DETECTOR L10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 478 | |
| | | C-1 TO LOOP DETECTOR L11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 478 | |
| | | C-1 TO PB-10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 179 | |
| TOTAL | | | | 4 | 1 | 9 | 1 | 838 | 61 | 277 | 456 | 156 | 9 | 1 | 9 | 11 | 4 | 4 | 2 | 413 | 413 | 734 | 91 | 179 | 2966 | 56 | 1 | 1 | 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |

CALCULATED
T.K.L.
CHECKED
K.P.W.

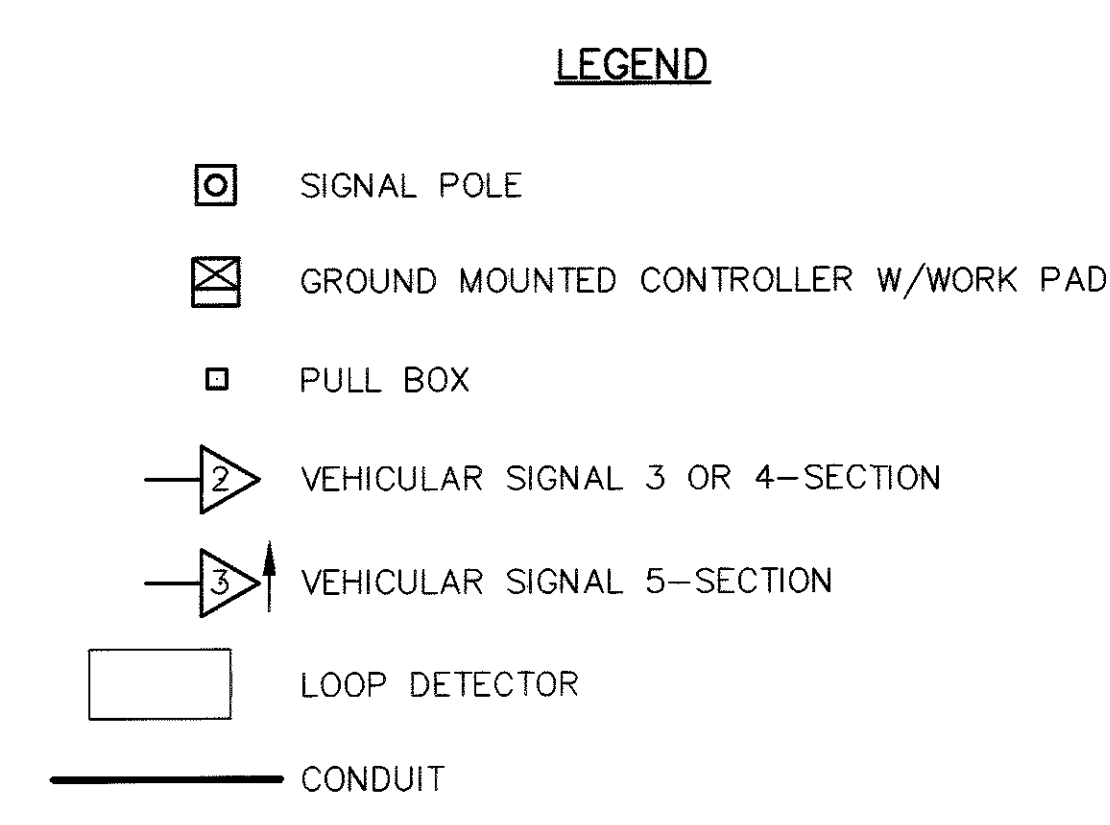
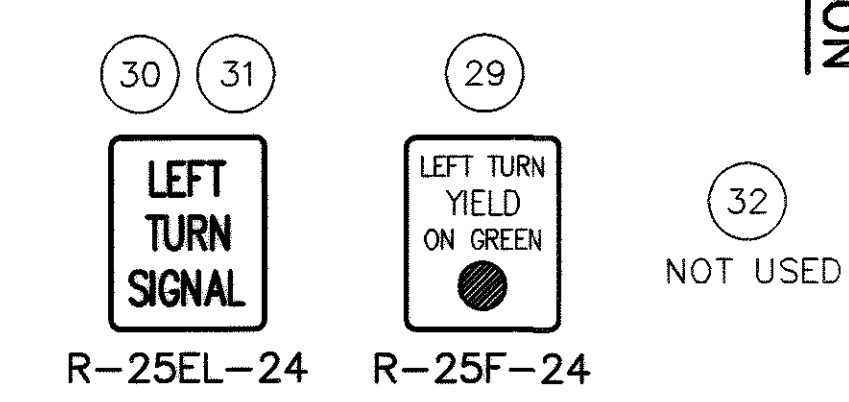
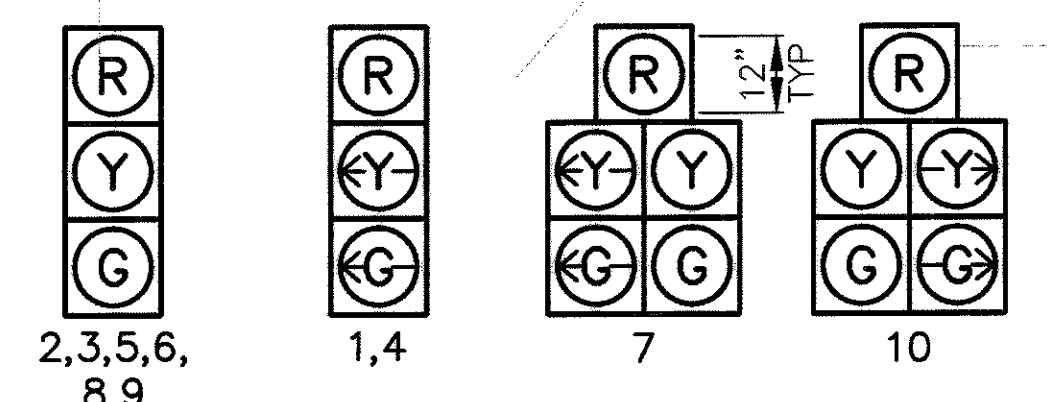
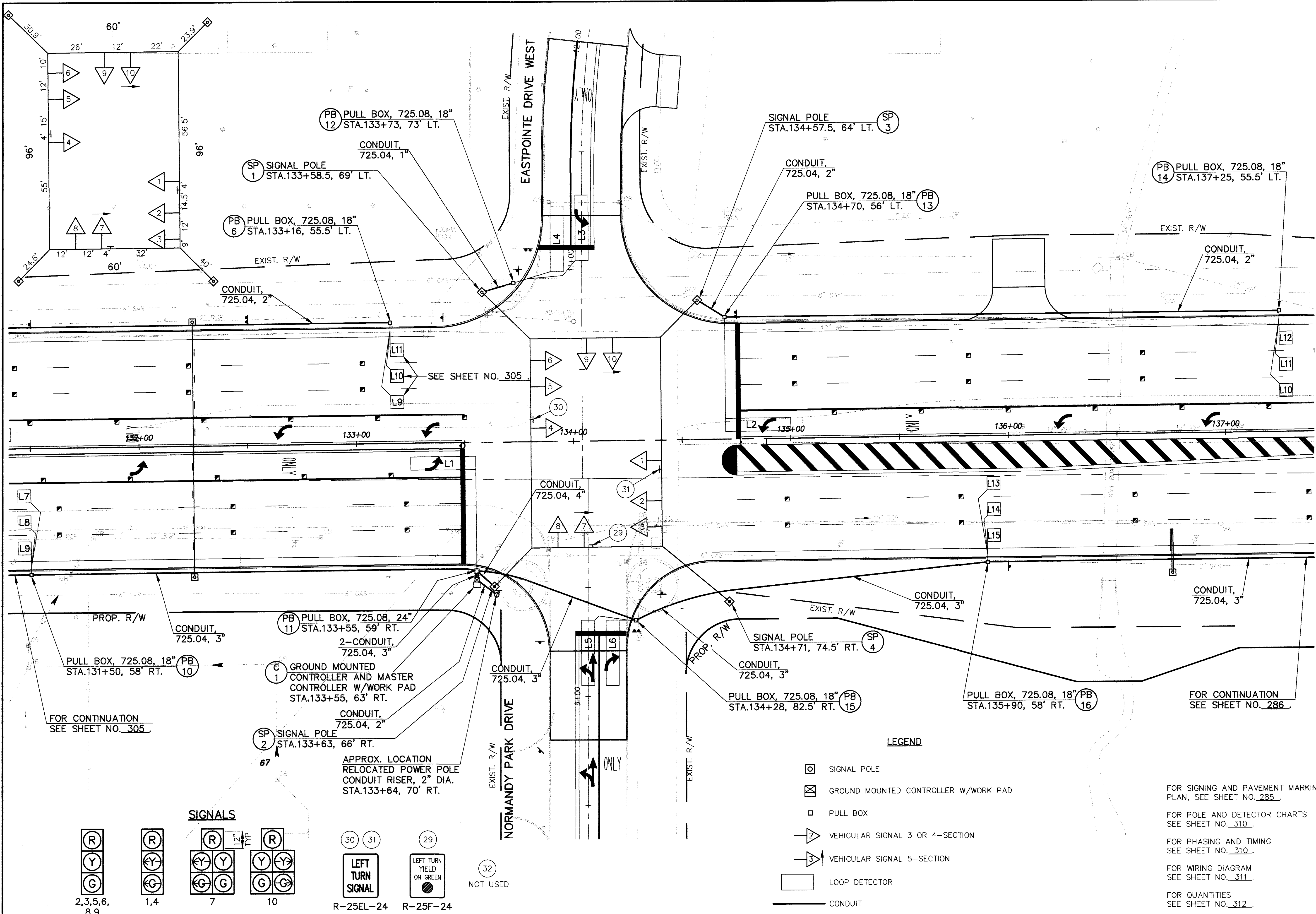
TRAFFIC SIGNAL SUB-SUMMARY
S.R.18 AT NETTLETON ROAD

MED - 18 - 15.13

308
362

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FOR SIGNING AND PAVEMENT MARKING PLAN, SEE SHEET NO. 285.

FOR POLE AND DETECTOR CHARTS SEE SHEET NO. 310.

FOR PHASING AND TIMING SEE SHEET NO. 310.

FOR WIRING DIAGRAM SEE SHEET NO. 311.

FOR QUANTITIES SEE SHEET NO. 312.




| | |
|------------|---------|
| CALCULATED | TICKLED |
| CHECKED | K.P.W. |

TRAFFIC SIGNAL PLAN

SR.18 AT NORMANDY PARK DRIVE/EASTPOINTE DRIVE WEST

MED - 18 - 15.13

| |
|-----|
| 309 |
| 362 |

TRAFFIC SIGNAL DETECTORS

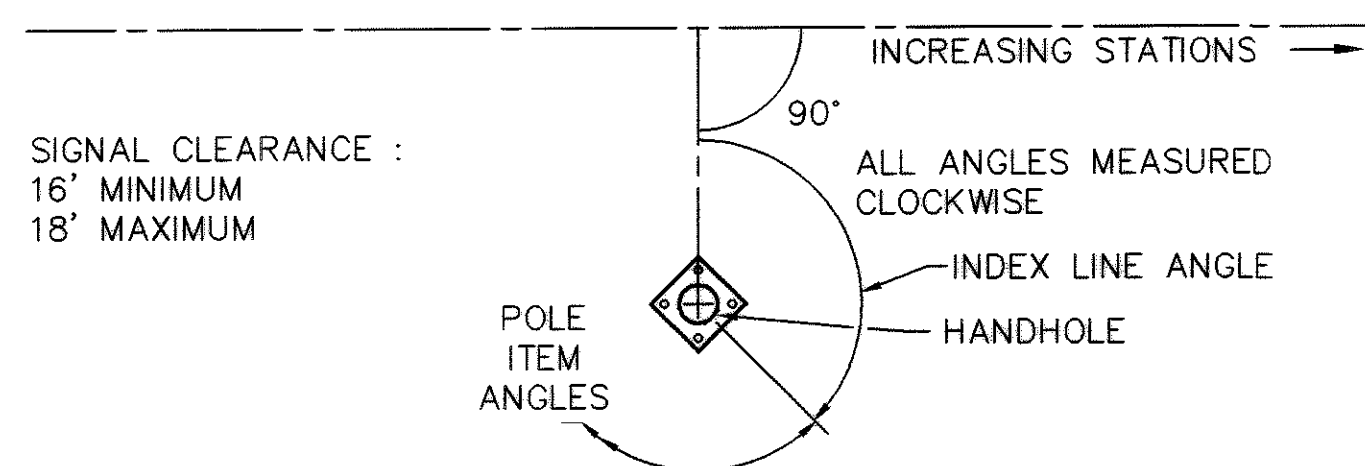
| DETECTOR | SIZE | NO. OF TURNS | PULSE OR PRESENCE | DELAY OR EXTENSION (SEC.) | DET. UNIT NO. | PHASE | REMARKS |
|----------|----------|--------------|-------------------|---------------------------|---------------|-------|------------------|
| L1 | 6' x 30' | 3 | PRESENCE | - | 1 | 1+5 | - |
| L2 | 6' x 30' | 3 | PRESENCE | - | 2 | 1+5 | - |
| L3 | 6' x 30' | 3 | PRESENCE | - | 3 | 3+7 | - |
| L4 | 6' x 30' | 3 | PRESENCE | DELAY 10 | 4 | 4+8 | - |
| L5 | 6' x 30' | 3 | PRESENCE | - | 5 | 3+7 | - |
| L6 | 6' x 30' | 3 | PRESENCE | DELAY 10 | 6 | 4+8 | - |
| L7 | 6' x 6' | 4 | PRESENCE | EXT. 3 | 7 | 2 | SYSTEM LOOP ALSO |
| L8 | 6' x 6' | 4 | PRESENCE | EXT. 3 | 8 | 2 | SYSTEM LOOP ALSO |
| L9 | 6' x 6' | 4 | PRESENCE | EXT. 3 | 9 | 2 | SYSTEM LOOP ALSO |
| L10 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 10 | 6 | - |
| L11 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 10 | 6 | - |
| L12 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 12 | 6 | - |
| L13 | 6' x 6' | 4 | PRESENCE | - | 13 | - | SYSTEM LOOP |
| L14 | 6' x 6' | 4 | PRESENCE | - | 14 | - | SYSTEM LOOP |
| L15 | 6' x 6' | 4 | PRESENCE | - | 15 | - | SYSTEM LOOP |

COORDINATION TIMING (1)

| | DIAL 1 | DIAL 2 | DIAL 3 |
|----------------------|---------------------|---------|------------|
| CYCLE LENGTH | 90 | 100 | 120 |
| PHASE 1 SPLIT | 21% | 21% | 20% |
| PHASE 2 SPLIT | 43% | 46% | 47% |
| PHASE 3 SPLIT | 0% | 0% | 0% |
| PHASE 4 SPLIT | 36% | 33% | 33% |
| PHASE 5 SPLIT | 21% | 21% | 20% |
| PHASE 6 SPLIT | 43% | 46% | 47% |
| PHASE 7 SPLIT | 14% | 15% | 16% |
| PHASE 8 SPLIT | 22% | 18% | 17% |
| PERMISSIVE YIELD (2) | 5% | 5% | 5% |
| OFFSET (3) | 0% | 0% | 0% |
| TIME OF DAY SCHEDULE | 9AM-3PM 7PM-10PM | 3PM-7PM | 6:30AM-9AM |

NOTES:

- 1.) PHASE SPLITS INCLUDE GREEN, YELLOW AND ALL RED TIME.
- 2.) PERMISSIVE YIELDS SHALL START AT THE ZERO POINT OF THE CYCLE.
- 3.) OFFSETS SHALL BE REFERENCED TO PHASE 2+6, BEGINNING OF YELLOW, S.R. 18/NORMANDY DRIVE/EASTPOINTE DRIVE INTERSECTION.



SIGNAL SUPPORT TYPE TC-81.10

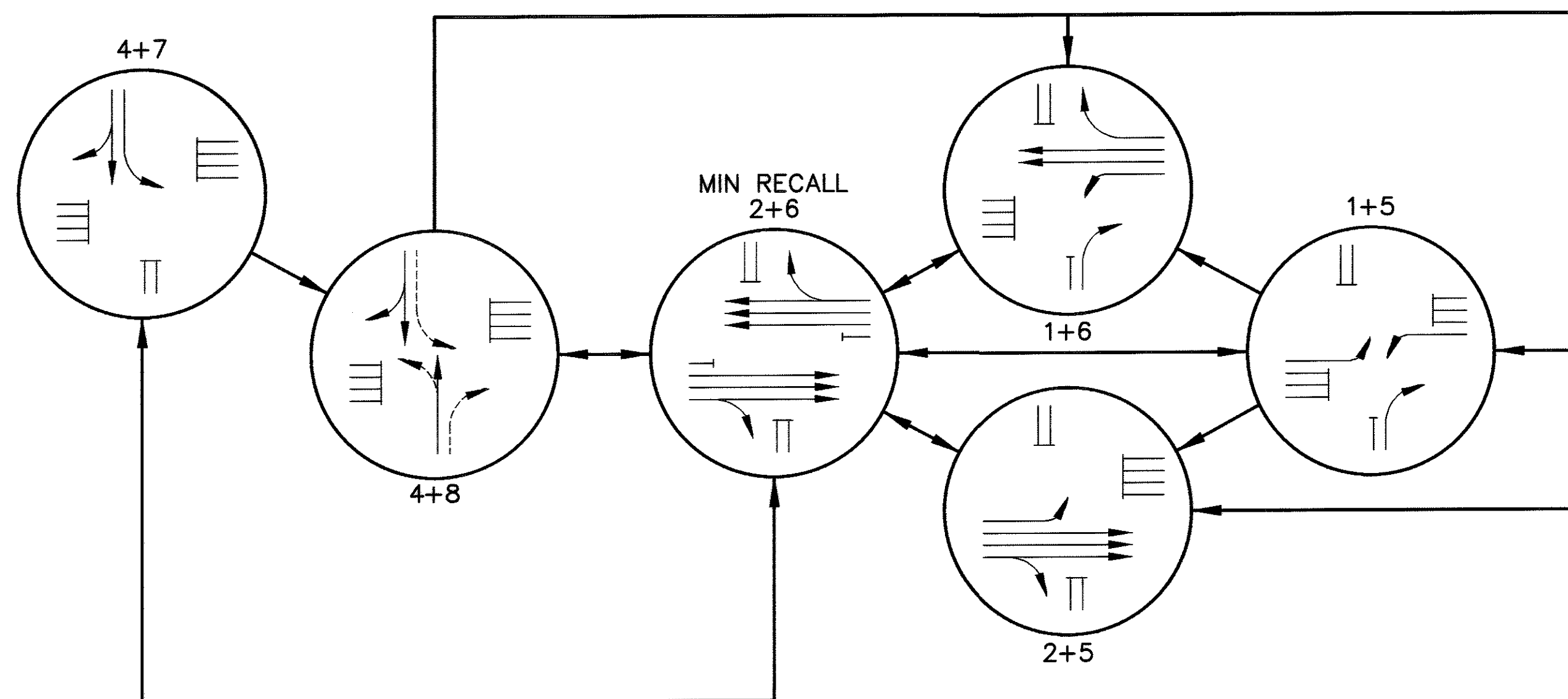
| POLE NO. | DESIGN NO. | POLE HEIGHT (FT.) | FOUNDATION ELEVATION | GROUND AT FOUNDATION ELEVATION | MESSENGER WIRE ATTACHMENT HEIGHT | INDEX LINE ANGLE (HANDHOLE) | ANGLES (DEG.) FROM INDEX LINE | | | |
|----------|------------|-------------------|----------------------|--------------------------------|----------------------------------|-----------------------------|-------------------------------|-------------------|--|--|
| | | | | | | | CABLE ENTRANCE (12" FROM TOP) | LUMINAIRE BRACKET | | |
| SP1 | 10 | 32 | 1068.13 | 1067.88 | 28.65' | 135° | 180 | - | | |
| SP2 | 10 | 32 | 1068.01 | 1067.76 | 27.20' | 225° | 180 | - | | |
| SP3 | 10 | 32 | 1069.13 | 1068.88 | 25.21' | 225° | 180 | - | | |
| SP4 | 10 | 32 | 1068.14 | 1067.39 | 29.95' | 135° | 180 | - | | |

DISPLAY CHART

| PHASE | 1+5 | | | 1+6 | | | 2+5 | | | 2+6 | | | 4+7 | | | 4+8 | | | FLASH | |
|--------|-----|-----|----|-----|-----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-------|---|
| | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | | |
| SIGNAL | | | | | | | | | | | | | | | | | | | | |
| 1 | ←G | ←Y | R | R | R | R | ←G | ←Y | R | R | R | R | R | R | R | R | R | R | R | R |
| 2,3 | R | R | R | R | R | R | G | G | G | G | Y | R | R | R | R | R | R | R | R | R |
| 4 | ←G | ←Y | R | ←G | ←Y | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R |
| 5,6 | R | R | R | G | G | G | R | R | R | G | Y | R | R | R | R | R | R | R | R | R |
| 7 | R | R | R | R | R | R | R | R | R | R | R | R | ←G | ←Y | R | G | Y | R | R | R |
| 8 | R | R | R | R | R | R | R | R | R | R | R | R | G | Y | R | G | Y | R | R | R |
| 9 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | G | Y | R | R | R |
| 10 | G→R | Y→R | R | G→R | Y→R | R | R | R | R | R | R | R | R | R | R | G | Y | R | R | R |

- ①-REMAINS ←G IF FOLLOWED BY PHASE 2+5
- ②-REMAINS ←G IF FOLLOWED BY PHASE 1+6
- ③-REMAINS G→R IF FOLLOWED BY PHASE 1+6
- ④-REMAINS G IF FOLLOWED BY PHASE 2+5
- ⑤-REMAINS G IF FOLLOWED BY PHASE 1+6
- ⑥-REMAINS ←Y/G IF FOLLOWED BY PHASE 4+8
- ⑦-REMAINS G IF FOLLOWED BY PHASE 4+8

PHASING DIAGRAM

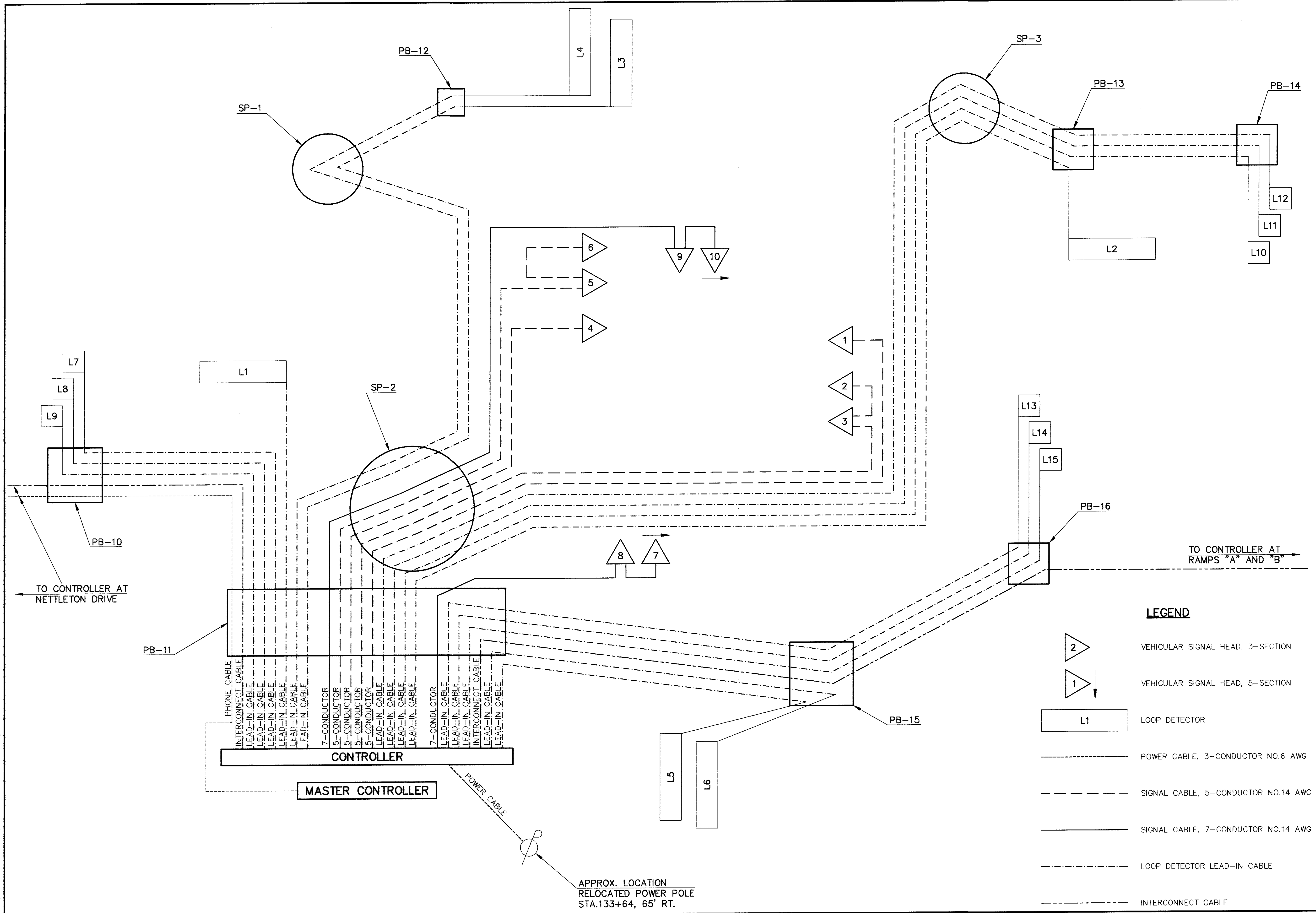


NOTE: OMIT PHASE 7 WHEN PHASE 8 IS ON

TIMING CHART

| INTERVAL OR FEATURE | NEMA PHASE NO. | | | | | | | |
|--------------------------------|---------------------|-----|-------|-----|-------|-----|-------|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| INTERSECTION MOVEMENT | WB/LT | EB | NB/LT | SB | EB/LT | WB | SB/LT | NB |
| MINIMUM GREEN (INITIAL) (SEC.) | 7 | 25 | | 10 | 7 | 25 | 7 | 10 |
| ADDED INITIAL (SEC./ACT.) | - | 1.0 | | - | - | 1.0 | - | - |
| PASSAGE TIME (SEC.) | 2.5 | 3.0 | | 2.5 | 2.5 | 4.0 | 2.5 | 2.5 |
| MAXIMUM INITIAL (SEC.) | - | 45 | | - | - | 45 | - | - |
| MAXIMUM GREEN (SEC.) | 20 | 60 | | 30 | 20 | 60 | 20 | 30 |
| YELLOW CHANGE (SEC.) | 4.5 | 4.5 | | 3.6 | 4.5 | 4.5 | 3.6 | 3.6 |
| ALL RED CLEARANCE (SEC.) | 2.0 | 2.0 | | 2.5 | 2.0 | 2.0 | 2.5 | 2.5 |
| RECALL | MAXIMUM (ON/OFF) | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| | MINIMUM (ON/OFF) | OFF | ON | OFF | OFF | ON | OFF | OFF |
| | PEDESTRIAN (ON/OFF) | OFF | OFF | | OFF | OFF | OFF | OFF |
| MEMORY (ON/OFF) | OFF | OFF | | OFF | OFF | OFF | OFF | OFF |

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APPROX. LOCATION
RELOCATED POWER POLE
STA.133+64, 65' RT.

CALCULATED
T.K.L.
CHECKED
K.P.W.

WIRING DIAGRAM
S.R.18 AT NORMANDY PARK DRIVE/EASTPOINTE DRIVE WEST

MED - 18 - 15.13

311
362

TRAFFIC SIGNAL QUANTITY SUB-SUMMARY

| LOCATION | | ITEM NUMBERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|-------|----------------------------------|-------------------------|-----------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|--|---|---------------|------------------------|---------------------------------------|----------------------------|--|-------------------------------------|-------------------------------------|---|-----------------------------|-----------------------------------|----------------------------|---|---|-----------------------------------|--|--|---|---------------------------------|---------------------|--------------------------------|-----------------|
| | | 625 | | | | | | | | | | | 632 | | | | | | | | | | 633 | | | | | | | | | | | |
| | | GROUND ROD | GROUND ROD, AS PER PLAN | PULL BOX, 725.08, 18" | PULL BOX, 725.08, 24" | TRENCH, AS PER PLAN | CONDUIT, 725.04, 1" | CONDUIT, 725.04, 2" | CONDUIT, 725.04, 3" | CONDUIT, 725.04, 4" | VEHICULAR SIGNAL HEAD, 3 SECTION, 12" LENS, 1-WAY, AS PER PLAN | VEHICULAR SIGNAL HEAD, 5 SECTION, 12" LENS, 1-WAY, AS PER PLAN | LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN | DETECTOR LOOP | STRAIN POLE FOUNDATION | STRAIN POLE, TYPE TC-81.10, DESIGN 10 | CONDUIT RISER, 2" DIAMETER | MESSENGER WIRE, 7 STRAND 3/8" DIA., WITH ACCESSORIES | SIGNAL CABLE, 5 CONDUCTOR NO.14 AWG | SIGNAL CABLE, 7 CONDUCTOR NO.14 AWG | INTERCONNECT CABLE, 6 PAIR, NO.19 AWG, SOLID, REA (PE-39) | LOOP DETECTOR LEAD-IN CABLE | POWER CABLE, 3 CONDUCTOR NO.6 AWG | POWER SERVICE, AS PER PLAN | SIGNALIZATION, MISC.: METER BASE, 100 AMP WITH BYPASS | MESSENGER WIRE, 7 STRAND 1/4" DIA., WITH ACCESSORIES, AS PER PLAN | COVERING OF VEHICULAR SIGNAL HEAD | REMOVAL OF TRAFFIC SIGNAL INSTALLATION | CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET TYPE TS1, AS PER PLAN | CONTROLLER, MASTER, TRAFFIC RESPONSIVE, AS PER PLAN | CABINET FOUNDATION, AS PER PLAN | CONTROLLER WORK PAD | TELEPHONE SERVICE, AS PER PLAN | SYSTEM ANALYSIS |
| EACH | EACH | EACH | EACH | FT. | FT. | FT. | FT. | FT. | EACH | EACH | EACH | EACH | EACH | EACH | EACH | FT. | FT. | FT. | FT. | FT. | FT. | EACH | EACH | FT. | EACH | EACH | EACH | EACH | EACH | LUMP | LUMP | | | |
| 309 | C-1 | 133+55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-11 | 133+55 TO 133+55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SP-2 | 133+55 TO 133+63 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-15 | 133+55 TO 134+28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 309 | PB-16 | 134+28 TO 135+90 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 286 | PB-17 | 135+90 TO 137+90 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 309 | SP-1 | 133+58.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-12 | 133+58.5 TO 133+73 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SP-3 | 134+54.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-13 | 134+54.5 TO 134+70 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-14 | 134+70 TO 137+25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SP-4 | 134+57 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 309 | | 133+55 TO 131+50 (PB-10) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | POWER SERVICE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 2 AND 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 5 AND 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 7 AND 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 9 AND 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO PB-10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO PB-17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL | | 4 | 1 | 6 | 1 | 952 | 15 | 271 | 655 | 7 | 8 | 2 | 14 | 15 | 4 | 4 | 1 | 432 | 632 | 325 | 690 | 4138 | 50 | 1 | 1 | 432 | 10 | 1 | 1 | 1 | 1 | 1 | LUMP | LUMP |

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CALCULATED
T.K.I.
CHECKED
K.P.W.

TRAFFIC SIGNAL SUB-SUMMARY
S.R.18 AT NORMANDY PARK DRIVE/EASTPONTE DRIVE WEST

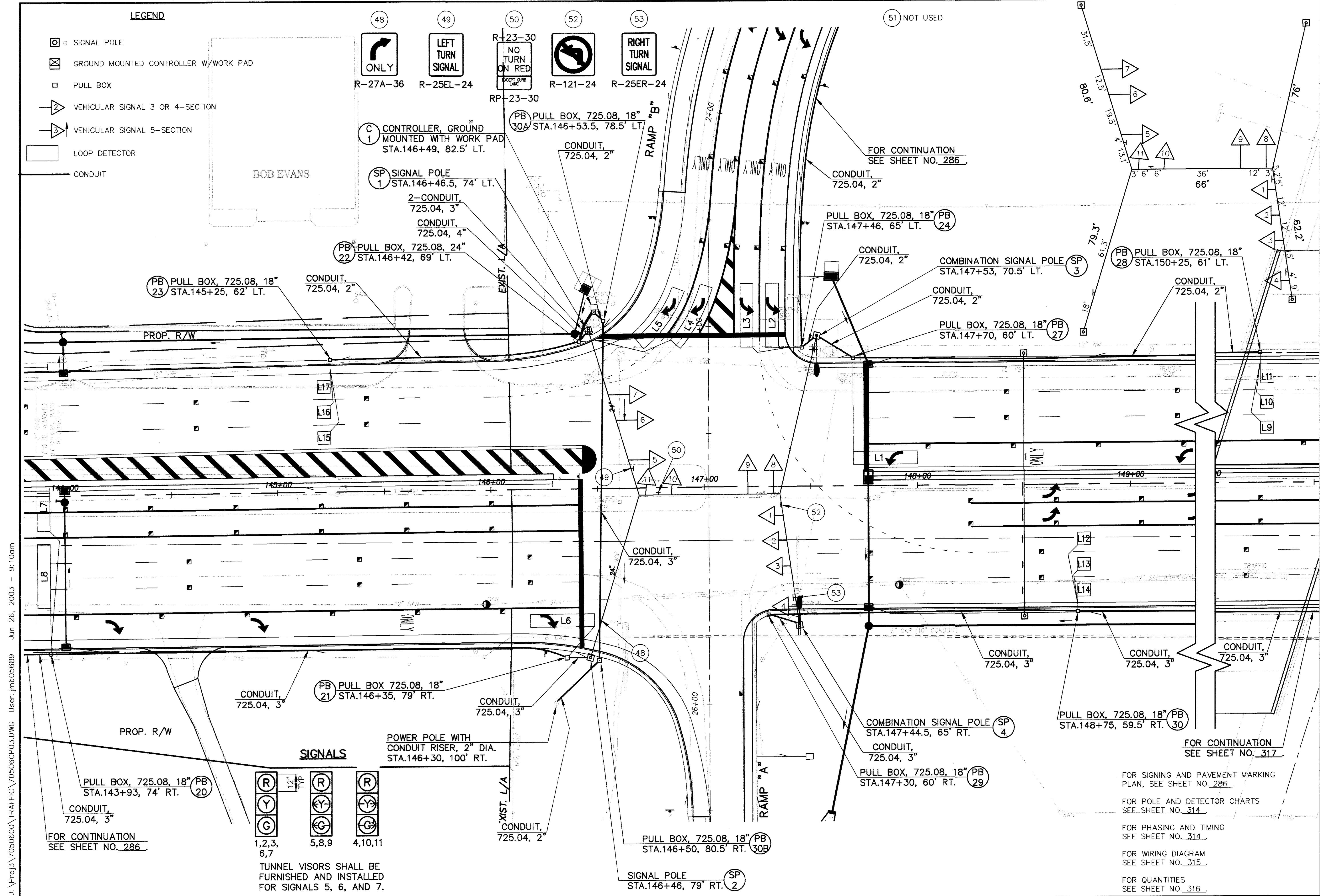
MED - 18 - 15.13

LEGEND

- SIGNAL POLE
- GROUND MOUNTED CONTROLLER W/WORK PAD
- PULL BOX
- VEHICULAR SIGNAL 3 OR 4-SECTION
- VEHICULAR SIGNAL 5-SECTION
- LOOP DETECTOR
- CONDUIT

- (48) ONLY
- (49) LEFT TURN SIGNAL
- (50) NO TURN ON RED
- (52) RIGHT TURN SIGNAL
- (53) RIGHT TURN SIGNAL
- (51) NOT USED

CALCULATED T.K.L. CHECKED K.P.W.



SIGNALS

| | | |
|------------|-------|---------|
| | | |
| 1,2,3, 6,7 | 5,8,9 | 4,10,11 |

TUNNEL VISORS SHALL BE FURNISHED AND INSTALLED FOR SIGNALS 5, 6, AND 7.

**TRAFFIC SIGNAL PLAN
S.R.18 AT I-71 RAMP 'A' AND 'B'**

MED - 18 - 15.13

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TRAFFIC SIGNAL DETECTORS

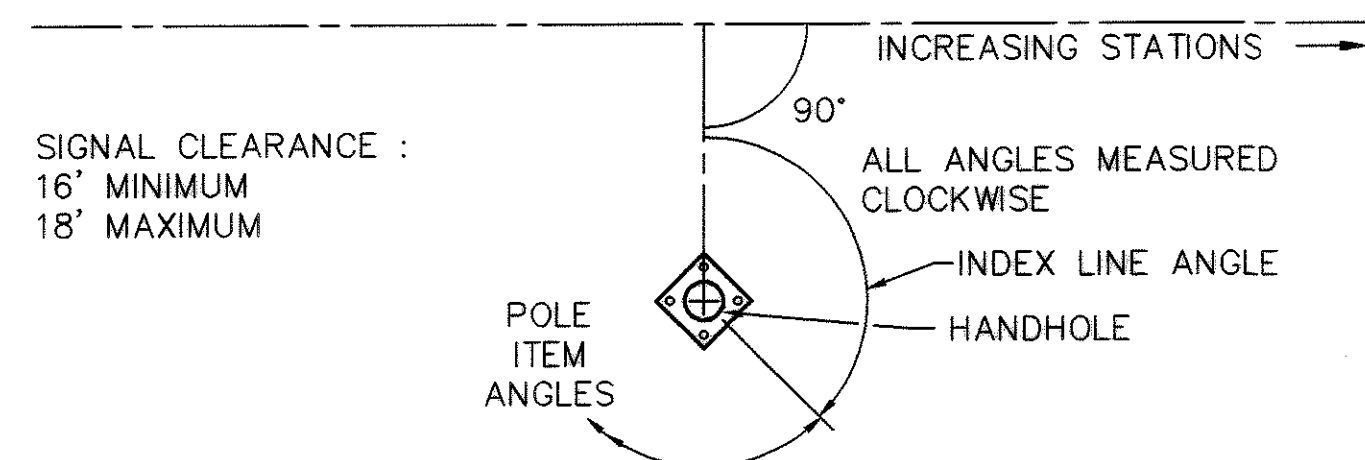
| DETECTOR | SIZE | NO. OF TURNS | PULSE OR PRESENCE | DELAY OR EXTENSION (SEC.) | DET. UNIT NO. | PHASE | REMARKS |
|----------|----------|--------------|-------------------|---------------------------|---------------|-------|-------------|
| L1 | 6' x 30' | 3 | PRESENCE | - | 1 | 1+6 | - |
| L2 | 6' x 30' | 3 | PRESENCE | - | 2 | 4+7 | - |
| L3 | 6' x 30' | 3 | PRESENCE | - | 2 | 4+7 | - |
| L4 | 6' x 30' | 3 | PRESENCE | DELAY 10 | 3 | 4+7 | - |
| L5 | 6' x 30' | 3 | PRESENCE | DELAY 10 | 3 | 4+7 | - |
| L6 | 6' x 30' | 3 | PRESENCE | DELAY 10 | 4 | 2+4 | - |
| L7 | 6' x 18' | 3 | PRESENCE | EXT. 4 | 5 | 2 | - |
| L8 | 6' x 30' | 3 | PRESENCE | EXT. 4 | 5 | 2 | - |
| L9 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 6 | 6 | - |
| L10 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 6 | 6 | - |
| L11 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 7 | 6 | - |
| L12 | 6' x 6' | 4 | PRESENCE | - | 8 | - | SYSTEM LOOP |
| L13 | 6' x 6' | 4 | PRESENCE | - | 9 | - | SYSTEM LOOP |
| L14 | 6' x 6' | 4 | PRESENCE | - | 10 | - | SYSTEM LOOP |
| L15 | 6' x 6' | 4 | PRESENCE | - | 11 | - | SYSTEM LOOP |
| L16 | 6' x 6' | 4 | PRESENCE | - | 12 | - | SYSTEM LOOP |
| L17 | 6' x 6' | 4 | PRESENCE | - | 13 | - | SYSTEM LOOP |
| L18 | 6' x 18' | 3 | PRESENCE | DELAY 2 | 14 | 4+7 | - |
| L19 | 6' x 18' | 3 | PRESENCE | DELAY 2 | 14 | 4+7 | - |

COORDINATION TIMING (1)

| | DIAL 1 | DIAL 2 | DIAL 3 |
|----------------------|---------------------|---------|------------|
| CYCLE LENGTH | 90 | 100 | 120 |
| PHASE 1 SPLIT | 22% | 22% | 25% |
| PHASE 2 SPLIT | 41% | 40% | 37% |
| PHASE 3 SPLIT | 0% | 0% | 0% |
| PHASE 4 SPLIT | 37% | 38% | 38% |
| PHASE 5 SPLIT | 0% | 0% | 0% |
| PHASE 6 SPLIT | 63% | 62% | 62% |
| PHASE 7 SPLIT | 37% | 38% | 38% |
| PHASE 8 SPLIT | 0% | 0% | 0% |
| PERMISSIVE YIELD (2) | 5% | 5% | 5% |
| OFFSET (3) | 49% | 49% | 8% |
| TIME OF DAY SCHEDULE | 9AM-3PM 7PM-10PM | 3PM-7PM | 6:30AM-9AM |

NOTES:

- 1.) PHASE SPLITS INCLUDE GREEN, YELLOW AND ALL RED TIME.
- 2.) PERMISSIVE YIELDS SHALL START AT THE ZERO POINT OF THE CYCLE.
- 3.) OFFSETS SHALL BE REFERENCED TO PHASE 2+6, BEGINNING OF YELLOW, S.R. 18/NORMANDY DRIVE/EASTPOINTE DRIVE INTERSECTION.



SIGNAL SUPPORT TYPE TC-81.10

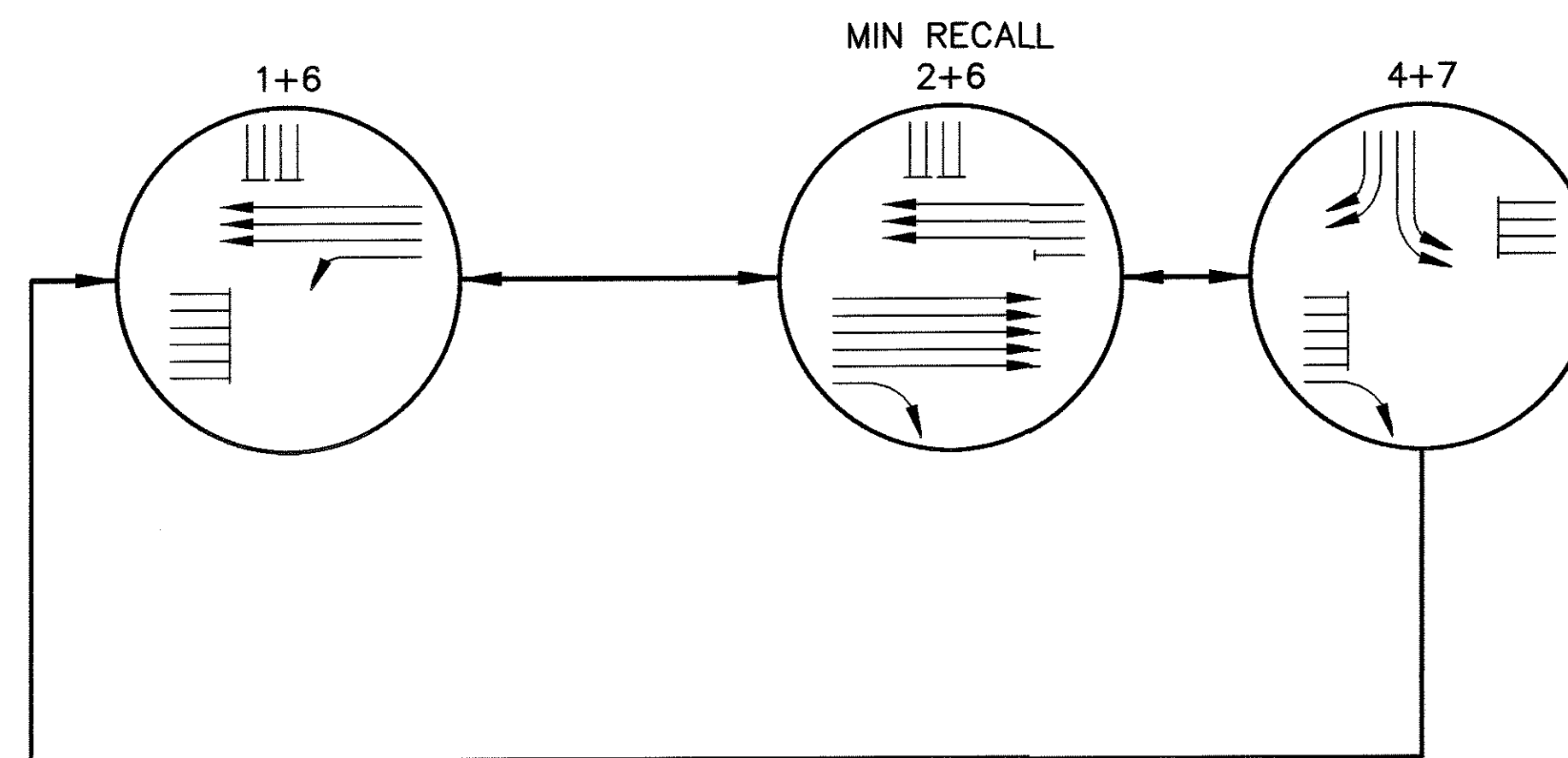
| POLE NO. | DESIGN NO. | POLE HEIGHT (FT.) | FOUNDATION ELEVATION | GROUND AT FOUNDATION ELEVATION | MESSENGER WIRE ATTACHMENT HEIGHT | INDEX LINE ANGLE (HANDHOLE) | ANGLES (DEG.) FROM INDEX LINE | | | |
|----------|------------|-------------------|----------------------|--------------------------------|----------------------------------|-----------------------------|-------------------------------|-------------------|--|--|
| | | | | | | | CABLE ENTRANCE (12" FROM TOP) | LUMINAIRE BRACKET | | |
| SP1 | 10 | 32 | 1087.53 | 1087.28 | 30.82' | 163° | 180 | - | | |
| SP2 | 10 | 32 | 1087.23 | 1086.98 | 31.12' | 197° | 180 | - | | |
| SP3 | 10 | 38 | 1088.45 | 1088.20 | 26.48' | 193° | 180 | 167° | | |
| SP4 | 10 | 38 | 1089.27 | 1089.02 | 25.66' | 172° | 180 | 188° | | |

DISPLAY CHART

| PHASE | 1+6 | | | 2+6 | | | 4+7 | | | FLASH |
|-------|-----|----|----|-----|----|----|-----|----|----|-------|
| | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | |
| 1,2,3 | R | R | R | G | Y | R | R | R | R | Y |
| 4 | R | R | R | G→ | Y→ | R | G→ | Y→ | R | Y |
| 5 | ←G | ←Y | R | R | R | R | R | R | R | R |
| 6,7 | G | G | G | G | Y | R | R | R | R | Y |
| 8,9 | R | R | R | R | R | R | ←G | ←Y | R | R |
| 10,11 | R | R | R | R | R | R | G→ | Y→ | R | R |

- ①-REMAINS G→ IF FOLLOWED BY PHASE 4+7
- ②-REMAINS G IF FOLLOWED BY PHASE 1+6
- ③-REMAINS G→ IF FOLLOWED BY PHASE 2+6

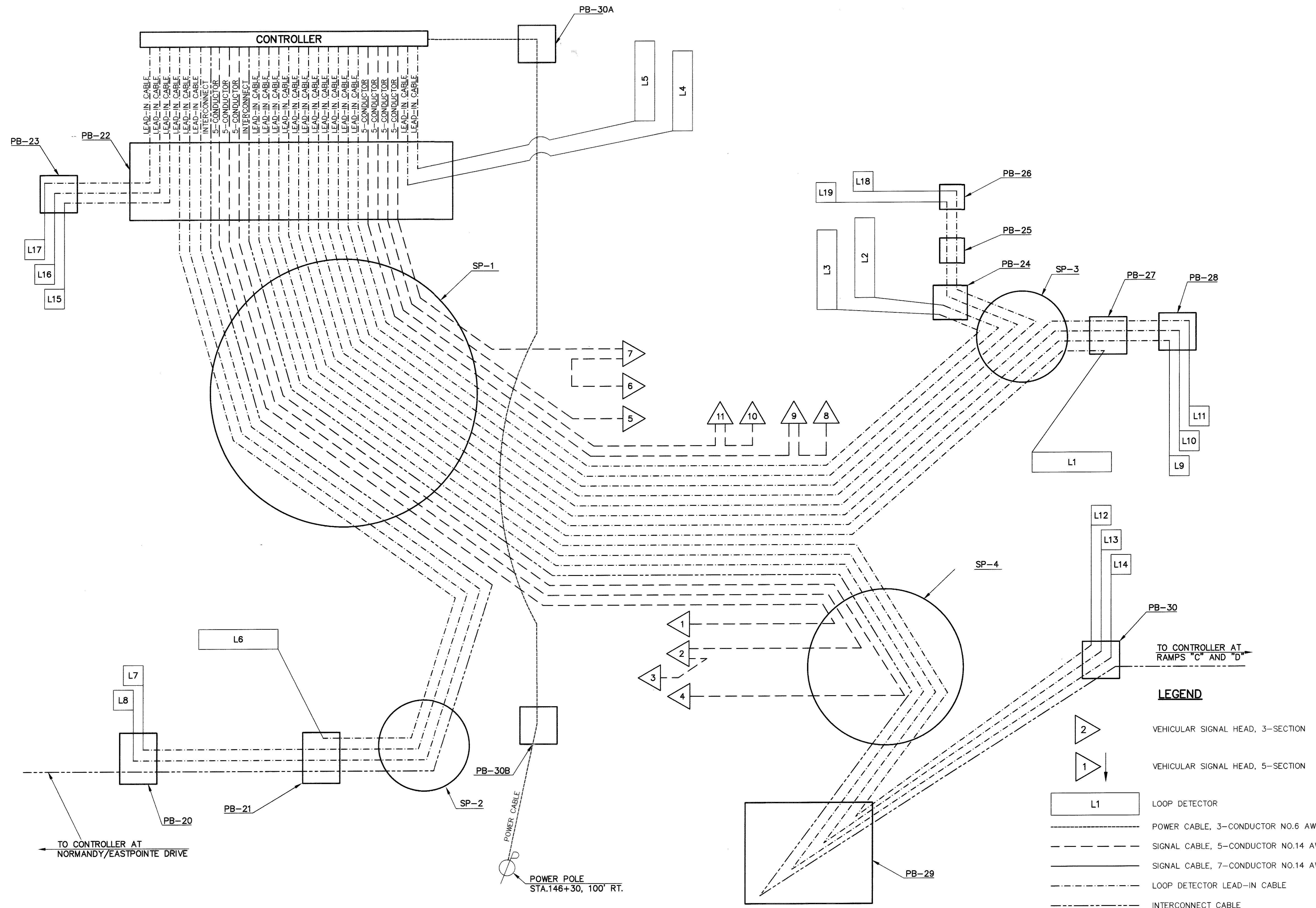
PHASING DIAGRAM



TIMING CHART


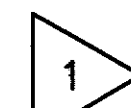


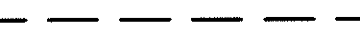

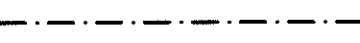

| INTERVAL OR FEATURE | NEMA PHASE NO. | | | | | | | |
|--------------------------------|---------------------|-----|-------|-----|-------|-----|-------|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| INTERSECTION MOVEMENT | WB/LT | EB | NB/LT | SB | EB/LT | WB | SB/LT | NB |
| MINIMUM GREEN (INITIAL) (SEC.) | 7 | 20 | | 20 | | 20 | 20 | |
| ADDED INITIAL (SEC./ACT.) | - | 1.0 | | - | | 1.0 | 1.0 | |
| PASSAGE TIME (SEC.) | 2.5 | 4.0 | | 2.5 | | 4.0 | 2.5 | |
| MAXIMUM INITIAL (SEC.) | - | 30 | | 30 | | 30 | 30 | |
| MAXIMUM GREEN (SEC.) | 25 | 60 | | 40 | | 60 | 40 | |
| YELLOW CHANGE (SEC.) | 4.5 | 4.5 | | 4.5 | | 4.5 | 4.5 | |
| ALL RED CLEARANCE (SEC.) | 2.0 | 2.0 | | 2.5 | | 2.0 | 2.5 | |
| RECALL | MAXIMUM (ON/OFF) | OFF | OFF | OFF | | OFF | OFF | |
| | MINIMUM (ON/OFF) | OFF | ON | OFF | | ON | OFF | |
| | PEDESTRIAN (ON/OFF) | OFF | OFF | OFF | | OFF | OFF | |
| MEMORY (ON/OFF) | OFF | OFF | | OFF | | OFF | OFF | |

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TO CONTROLLER AT RAMP'S 'C' AND 'D'

LEGEND

-  VEHICULAR SIGNAL HEAD, 3-SECTION
-  VEHICULAR SIGNAL HEAD, 5-SECTION
-  LOOP DETECTOR
-  POWER CABLE, 3-CONDUCTOR NO.6 AWG
-  SIGNAL CABLE, 5-CONDUCTOR NO.14 AWG
-  SIGNAL CABLE, 7-CONDUCTOR NO.14 AWG
-  LOOP DETECTOR LEAD-IN CABLE
-  INTERCONNECT CABLE

**WIRING DIAGRAM
S.R.18 AT I-71 RAMP'S 'A' AND 'B'**

MED - 18 - 15.13

| | |
|------------|--------|
| CALCULATED | T.K.I. |
| CHECKED | K.P.W. |

315
362

TRAFFIC SIGNAL QUANTITY SUB-SUMMARY

| LOCATION | | | ITEM NUMBERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|--------|-----------------------------------|--------------|-------------------------|-----------------------|-----------------------|---------------------|---|---------------------|---------------------|---------------------|--|---|---------------|------------------------|---------------------------------------|---|---|----------------------------|--|-------------------------------------|---|---|-----------------------------|-----------------------------------|----------------------------|---|-----------------------------------|--|--|---------------------------------|---------------------|----------|----------|----------|--|--|
| | | | 625 | | | | | | | | | | | | | | 632 | | | | | | | | | | | | | | 633 | | | | | | |
| | | | GROUND ROD | GROUND ROD, AS PER PLAN | PULL BOX, 725.08, 18" | PULL BOX, 725.08, 24" | TRENCH, AS PER PLAN | TRENCH, IN PAVED AREAS, TYPE B, AS PER PLAN | CONDUIT, 725.04, 2" | CONDUIT, 725.04, 3" | CONDUIT, 725.04, 4" | VEHICULAR SIGNAL HEAD, 3 SECTION, 12" LENS, 1-WAY, AS PER PLAN | LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN | DETECTOR LOOP | STRAIN POLE FOUNDATION | STRAIN POLE, TYPE TC-81.10, DESIGN 10 | COMBINATION STRAIN POLE, TYPE TC-81.10, DESIGN 10 | COMBINATION STRAIN POLE, TYPE TC-81 AND SIGN SUPPORT, TYPE TC-9.10 W/LIGHT POLE EXTENSION | CONDUIT RISER, 2" DIAMETER | MESSENGER WIRE, 7 STRAND 3/8" DIA., WITH ACCESSORIES | SIGNAL CABLE, 5 CONDUCTOR NO.14 AWG | MESSENGER WIRE, 7 STRAND 1/4" DIA., WITH ACCESSORIES, AS PER PLAN | INTERCONNECT CABLE, 6 PAIR, NO.19 AWG, SOLID, REA (PE-39) | LOOP DETECTOR LEAD-IN CABLE | POWER CABLE, 3 CONDUCTOR NO.6 AWG | POWER SERVICE, AS PER PLAN | SIGNALIZATION, MISC.: METER BASE, 100 AMP WITH BYPASS | COVERING OF VEHICULAR SIGNAL HEAD | REMOVAL OF TRAFFIC SIGNAL INSTALLATION | CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET TYPE TSI, AS PER PLAN | CABINET FOUNDATION, AS PER PLAN | CONTROLLER WORK PAD | | | | | |
| EACH | EACH | EACH | EACH | FT. | FT. | FT. | FT. | FT. | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | FT. | FT. | FT. | FT. | FT. | FT. | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | | | | | | | |
| 313 | C-1 | 146+49 | LT. | 1 | | 6 | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| | PB-22 | 146+42 TO 146+49 | LT. | | | 16 | | | 32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SP-2 | 146+35 TO 146+46 | RT. | 1 | | | | | | | | 1 | 1 | | | | | 358 | | 358 | | | | | | | | | | | | | | | | | |
| 313 | PB-20 | 146+35 TO 143+93 | RT. | | 1 | 243 | | | 243 | | | | | | | | | | | | | 248 | | | | | | | | | | | | | | | |
| 286 | PB-19 | 143+93 TO 141+90 | RT. | | 1 | 205 | | | 205 | | | | | | | | | | | | | 210 | | | | | | | | | | | | | | | |
| 286 | PB-18 | 141+90 TO 139+90 | RT. | | 1 | 200 | | | 200 | | | | | | | | | | | | | 205 | | | | | | | | | | | | | | | |
| 286 | | 139+90 TO 137+90 (PB-17) | RT. | | 1 | 200 | | | 200 | | | | | | | | | | | | | 200 | | | | | | | | | | | | | | | |
| 313 | PB-29 | 147+44.5 TO 147+30 | RT. | | 1 | 16 | | | 16 | | | | | | | | | | | | | 21 | | | | | | | | | | | | | | | |
| 313 | PB-30 | 147+30 TO 148+75 | RT. | | 1 | 145 | | | 145 | | | | | | | | | | | | | 150 | | | | | | | | | | | | | | | |
| 317 | | 148+75 TO 150+75 (PB-31) | RT. | | | 200 | | | 200 | | | | | | | | | | | | | 200 | | | | | | | | | | | | | | | |
| 313 | SP-1 | 146+46.5 | LT. | 1 | | | | | | 6 | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-21 | 146+35 TO 146+46 | RT. | | 1 | 11 | | | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-23 | 146+42 TO 145+25 | LT. | | 1 | 118 | | | 118 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SP-3 | 147+53 | LT. | 1 | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 313 | PB-24 | 147+53 TO 147+46 | LT. | | 1 | 9 | | | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 286 | PB-25 | 147+46 TO 3+50 RAMP 'B' | RT. | | 1 | 231 | | | 231 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 287 | PB-26 | 3+50 TO 5+50 RAMP 'B' | RT. | | 1 | 194 | | | 194 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 313 | PB-27 | 147+53 TO 147+70 | LT. | | 1 | 20 | | | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-28 | 147+70 TO 150+25 | LT. | | 1 | 255 | | | 255 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SP-4 | 147+44.5 | RT. | 1 | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-30A | 146+53.5 TO 146+49 | LT. | | 1 | 159 | | | 159 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 313 | PB-30B | 146+50 TO 146+30 | RT. | | 1 | 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 2 AND 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 6 AND 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 8 AND 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 10 AND 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L1 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTORS L2, L3 | | | | | | | | | | | | | | | | | | | | | 1 | 2 | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTORS L4, L5 | | | | | | | | | | | | | | | | | | | | | 1 | 2 | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L6 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L7 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L8 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L9 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L10 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L11 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L12 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L13 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L14 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L15 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L16 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L17 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L18 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L19 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | |
| TOTAL | | | | 4 | 1 | 15 | 1 | 2097 | 159 | | 827 | 1411 | 6 | | 11 | 14 | 19 | 4 | 2 | 1 | 1 | 358 | 1387 | 358 | 1510 | 7146 | 253 | 1 | 1 | 11 | 1 | 1 | 1 | 1 | 1 | | |

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**TRAFFIC SIGNAL SUB-SUMMARY
S.R.18 AT I-71 RAMPS 'A' AND RAMP 'B'**

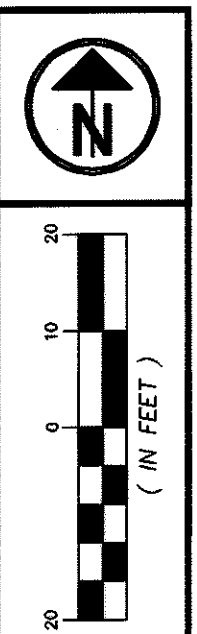
MED - 18 - 15.13

| |
|----------------------|
| CALCULATED T.K.L. |
| CHECKED K.P.W. |

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LEGEND

- ⊠ SIGNAL POLE
- ⊠ GROUND MOUNTED CONTROLLER W/WORK PAD
- PULL BOX
- ⊠ VEHICULAR SIGNAL 3 OR 4-SECTION
- ⊠ VEHICULAR SIGNAL 5-SECTION
- LOOP DETECTOR
- CONDUIT

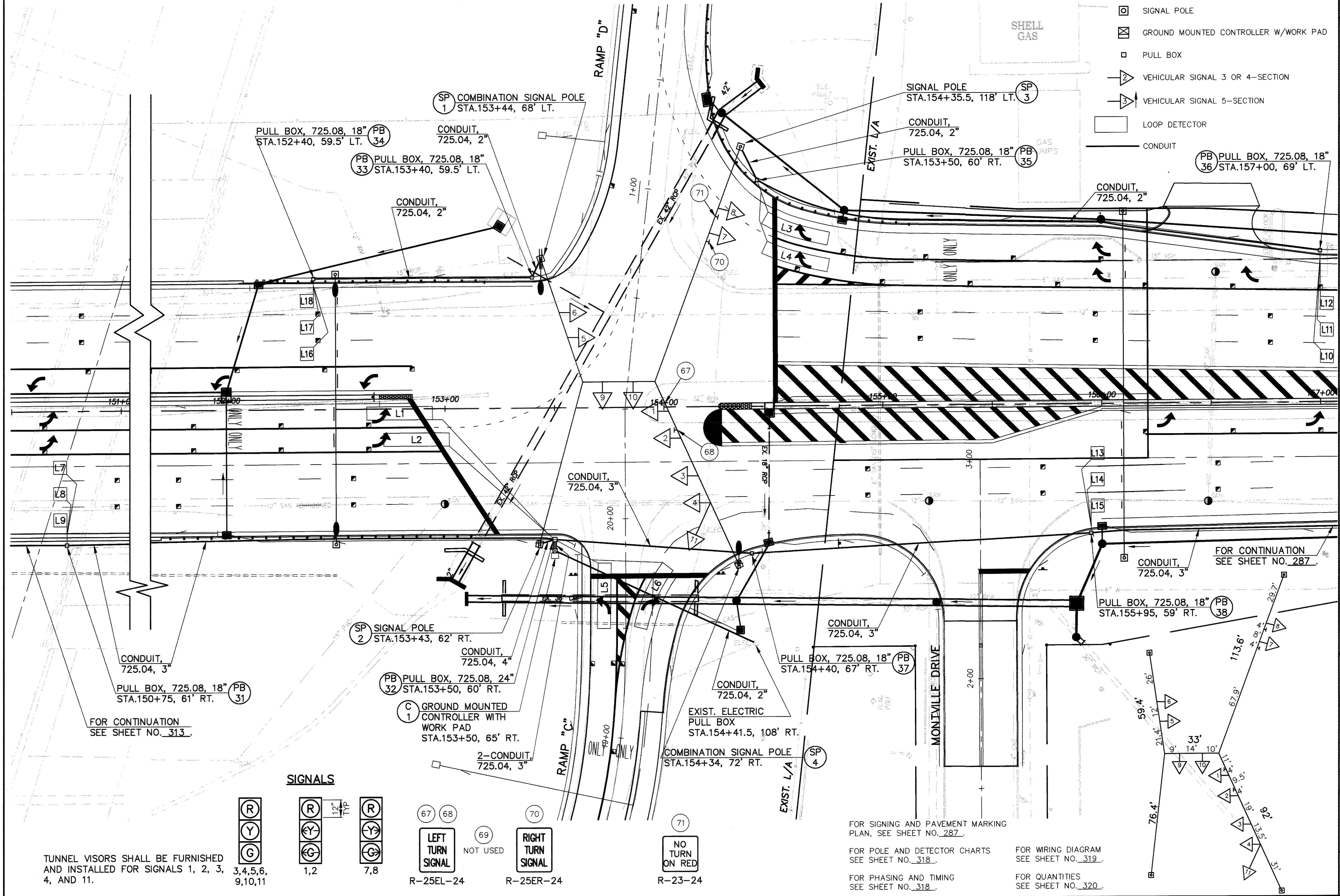


CALCULATED T.K.I. CHECKED K.P.W.

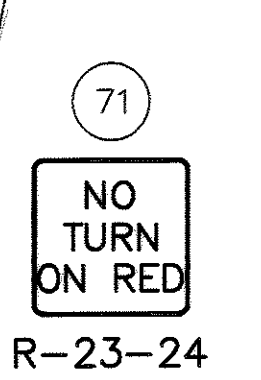
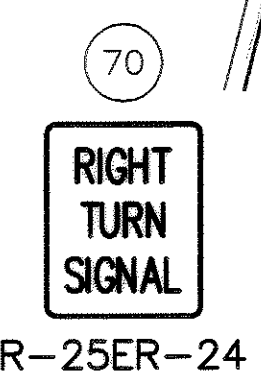
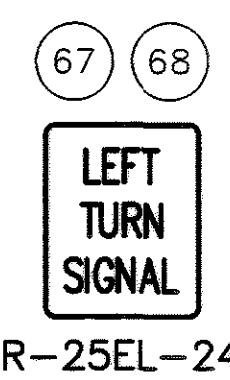
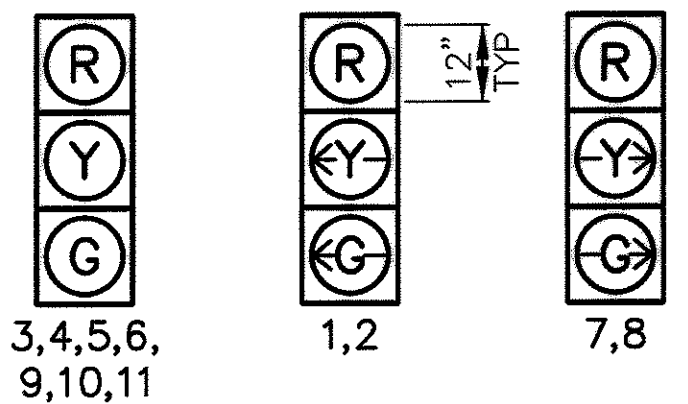
TRAFFIC SIGNAL PLAN
SR.18 AT I-71 RAMPS 'C' AND 'D'

MED - 18 - 15.13

317
362



SIGNALS



TUNNEL VISORS SHALL BE FURNISHED AND INSTALLED FOR SIGNALS 1, 2, 3, 4, AND 11.

FOR SIGNING AND PAVEMENT MARKING PLAN, SEE SHEET NO. 287.

FOR POLE AND DETECTOR CHARTS SEE SHEET NO. 318.

FOR PHASING AND TIMING SEE SHEET NO. 318.

FOR WIRING DIAGRAM SEE SHEET NO. 319.

FOR QUANTITIES SEE SHEET NO. 320.

FOR CONTINUATION SEE SHEET NO. 287.

FOR CONTINUATION SEE SHEET NO. 313.

PULL BOX, 725.08, 18" PB STA.150+75, 61' RT. 31

SIGNAL POLE 2 STA.153+43, 62' RT.

PULL BOX, 725.08, 24" PB STA.153+50, 60' RT. 32

GROUND MOUNTED CONTROLLER WITH WORK PAD STA.153+50, 65' RT. 1

2-CONDUIT, 725.04, 3"

COMBINATION SIGNAL POLE STA.154+34, 72' RT. 4

PULL BOX, 725.08, 18" PB STA.154+40, 67' RT. 37

CONDUIT, 725.04, 3"

PULL BOX, 725.08, 18" PB STA.155+95, 59' RT. 38

CONDUIT, 725.04, 3"

COMBINATION SIGNAL POLE 1 STA.153+44, 68' LT.

PULL BOX, 725.08, 18" PB STA.152+40, 59.5' LT. 34

PULL BOX, 725.08, 18" PB STA.153+40, 59.5' LT. 33

CONDUIT, 725.04, 2"

CONDUIT, 725.04, 2"

SIGNAL POLE STA.154+35.5, 118' LT. 3

CONDUIT, 725.04, 2"

PULL BOX, 725.08, 18" PB STA.153+50, 60' RT. 35

CONDUIT, 725.04, 2"

PULL BOX, 725.08, 18" PB STA.157+00, 69' LT. 36

TRAFFIC SIGNAL DETECTORS

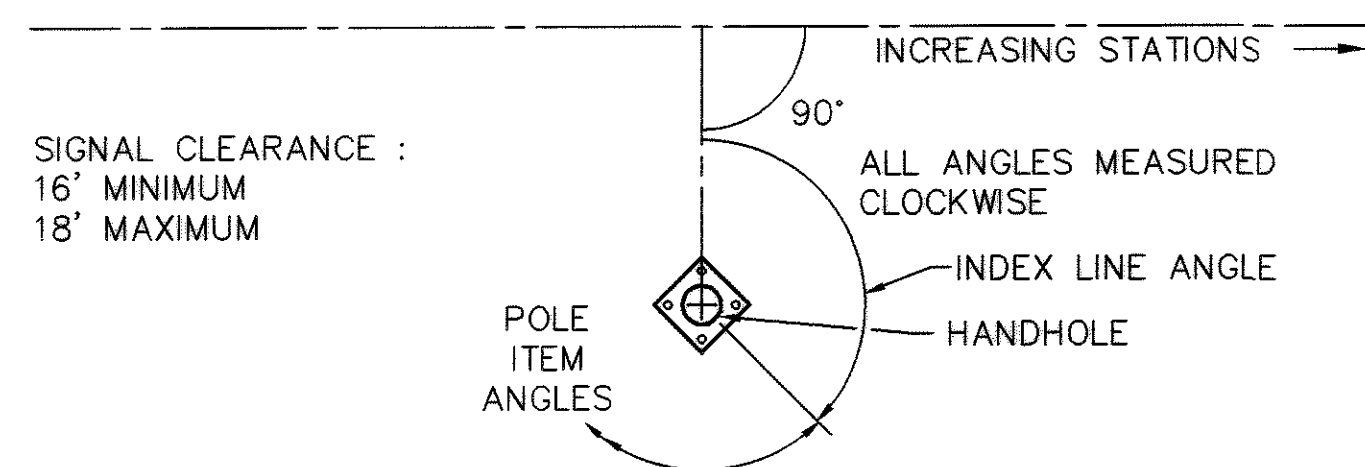
| DETECTOR | SIZE | NO. OF TURNS | PULSE OR PRESENCE | DELAY OR EXTENSION (SEC.) | DET. UNIT NO. | PHASE | REMARKS |
|----------|----------|--------------|-------------------|---------------------------|---------------|-------|-------------|
| L1 | 6' x 30' | 3 | PRESENCE | - | 1 | 5 | - |
| L2 | 6' x 30' | 3 | PRESENCE | - | 1 | 5 | - |
| L3 | 6' x 30' | 3 | PRESENCE | DELAY 10 | 2 | 6 | - |
| L4 | 6' x 30' | 3 | PRESENCE | DELAY 10 | 2 | 6 | - |
| L5 | 6' x 30' | 3 | PRESENCE | - | 3 | 3+8 | - |
| L6 | 6' x 30' | 3 | PRESENCE | DELAY 10 | 3 | 3+8 | - |
| L7 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 4 | 2 | - |
| L8 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 4 | 2 | - |
| L9 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 5 | 2 | - |
| L10 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 6 | 6 | - |
| L11 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 6 | 6 | - |
| L12 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 7 | 6 | - |
| L13 | 6' x 6' | 4 | PRESENCE | - | 8 | - | SYSTEM LOOP |
| L14 | 6' x 6' | 4 | PRESENCE | - | 9 | - | SYSTEM LOOP |
| L15 | 6' x 6' | 4 | PRESENCE | - | 10 | - | SYSTEM LOOP |
| L16 | 6' x 6' | 4 | PRESENCE | - | 11 | - | SYSTEM LOOP |
| L17 | 6' x 6' | 4 | PRESENCE | - | 12 | - | SYSTEM LOOP |
| L18 | 6' x 6' | 4 | PRESENCE | - | 13 | - | SYSTEM LOOP |

COORDINATION TIMING (1)

| | DIAL 1 | DIAL 2 | DIAL 3 |
|----------------------|---------------------|---------|------------|
| CYCLE LENGTH | 90 | 100 | 120 |
| PHASE 1 SPLIT | 0% | 0% | 0% |
| PHASE 2 SPLIT | 76% | 74% | 70% |
| PHASE 3 SPLIT | 24% | 26% | 30% |
| PHASE 4 SPLIT | 0% | 0% | 0% |
| PHASE 5 SPLIT | 34% | 34% | 35% |
| PHASE 6 SPLIT | 42% | 40% | 35% |
| PHASE 7 SPLIT | 0% | 0% | 0% |
| PHASE 8 SPLIT | 24% | 26% | 30% |
| PERMISSIVE YIELD (2) | 5% | 5% | 5% |
| OFFSET (3) | 6% | 6% | 6% |
| TIME OF DAY SCHEDULE | 9AM-3PM 7PM-10PM | 3PM-7PM | 6:30AM-9AM |

NOTES:

- 1.) PHASE SPLITS INCLUDE GREEN, YELLOW AND ALL RED TIME.
- 2.) PERMISSIVE YIELDS SHALL START AT THE ZERO POINT OF THE CYCLE.
- 3.) OFFSETS SHALL BE REFERENCED TO PHASE 4+8, BEGINNING OF YELLOW, S.R. 18/NORMANDY DRIVE/EASTPOINTE DRIVE INTERSECTION.



SIGNAL SUPPORT TYPE TC-81.10

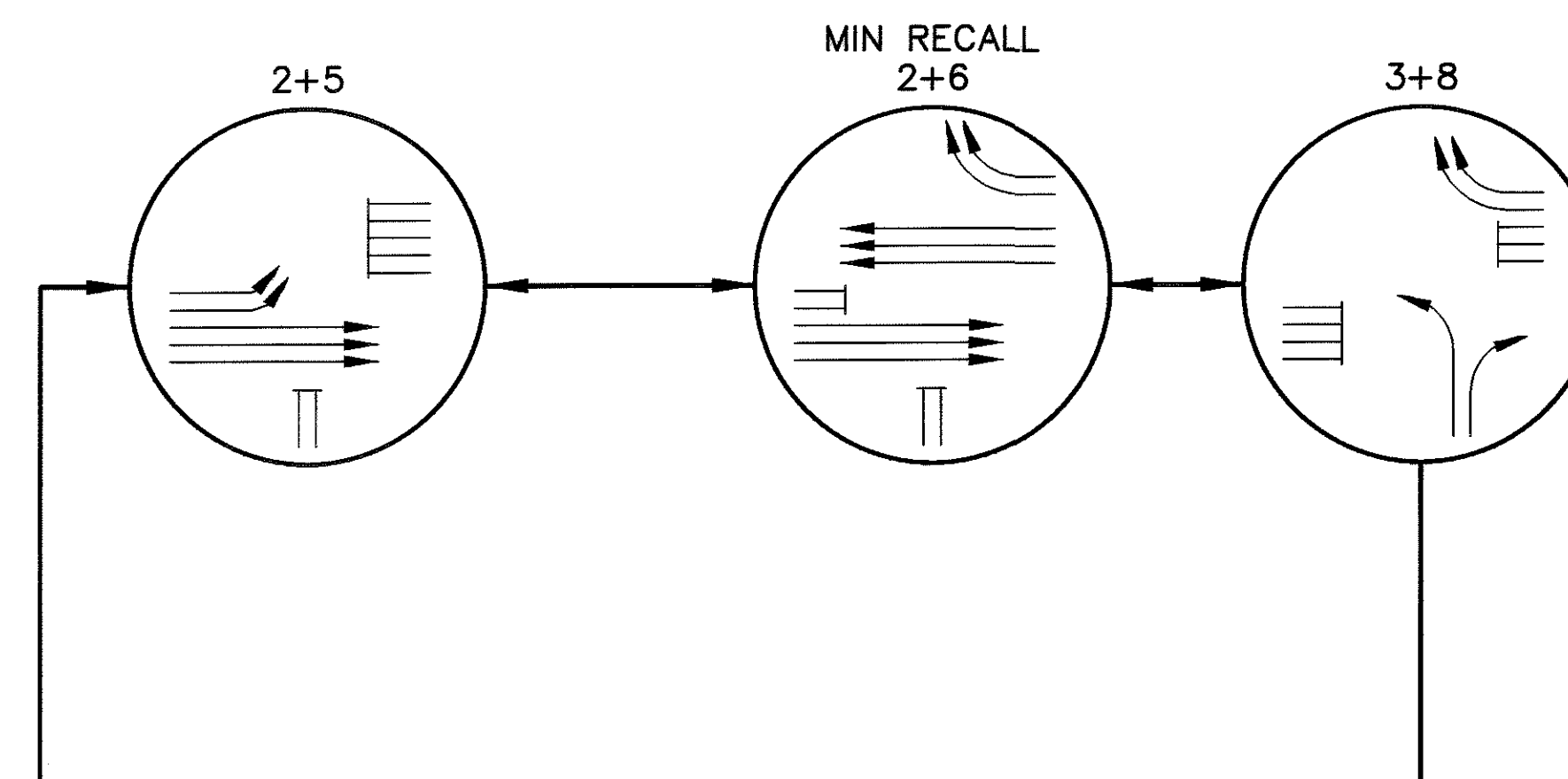
| POLE NO. | DESIGN NO. | POLE HEIGHT (FT.) | FOUNDATION ELEVATION | GROUND AT FOUNDATION ELEVATION | MESSENGER WIRE ATTACHMENT HEIGHT | INDEX LINE ANGLE (HANDHOLE) | ANGLES (DEG.) FROM INDEX LINE | |
|----------|------------|-------------------|----------------------|--------------------------------|----------------------------------|-----------------------------|-------------------------------|-------------------|
| | | | | | | | CABLE ENTRANCE (12" FROM TOP) | LUMINAIRE BRACKET |
| SP1 | 10 | 38 | 1099.74 | 1099.49 | 26.37' | 161° | 180 | 199° |
| SP2 | 10 | 32 | 1100.51 | 1100.26 | 25.60' | 195° | 180 | - |
| SP3 | 10 | 34 | 1101.69 | 1100.69 | 31.69' | 200° | 180 | - |
| SP4 | 10 | 38 | 1103.44 | 1103.19 | 29.94' | 156° | 180 | 204° |

DISPLAY CHART

| PHASE | 2+5 | | | 2+6 | | | 3+8 | | | FLASH |
|-------|-----|----|----|-----|----------------|----------------|-----|----------------|----------------|-------|
| | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | |
| 1,2 | <G | <Y | R | R | R | R | R | R | R | R |
| 3,4 | G | G | G | G | Y ^① | R ^① | R | R | R | Y |
| 5,6 | R | R | R | G | Y | R | R | R | R | Y |
| 7,8 | R | R | R | G-> | Y ^② | R ^② | G-> | Y ^③ | R ^③ | Y |
| 9,10 | R | R | R | R | R | R | G | Y | R | R |
| 11 | R | R | R | R | R | R | G | Y | R | R |

- ①-REMAINS G IF FOLLOWED BY PHASE 2+5
- ②-REMAINS G-> IF FOLLOWED BY PHASE 3+8
- ③-REMAINS G-> IF FOLLOWED BY PHASE 2+6

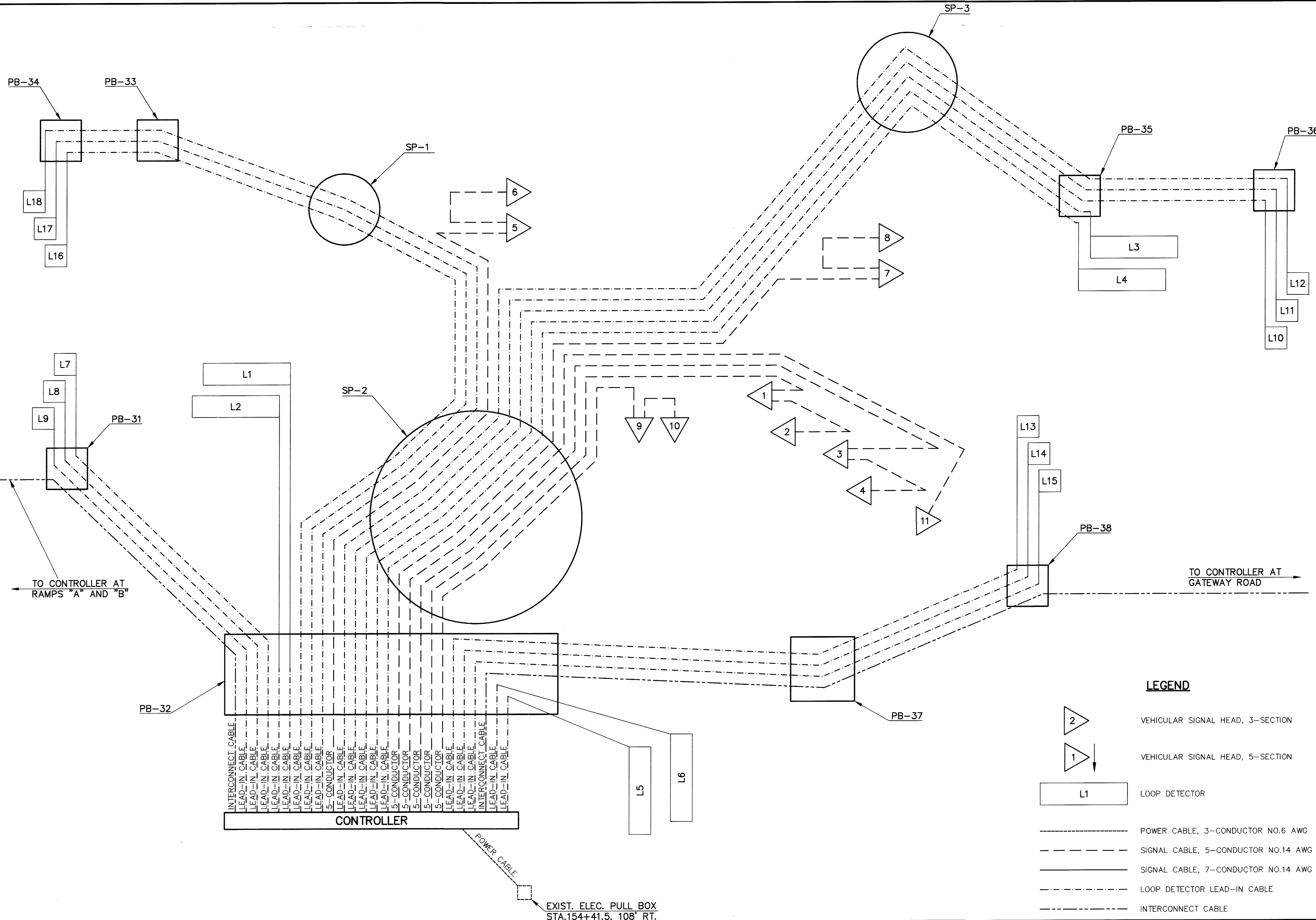
PHASING DIAGRAM



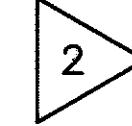
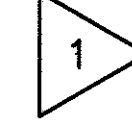






TIMING CHART

| INTERVAL OR FEATURE | NEMA PHASE NO. | | | | | | | |
|--------------------------------|----------------|-----|-------|----|-------|-----|-------|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| INTERSECTION MOVEMENT | WB/LT | EB | NB/LT | SB | EB/LT | WB | SB/LT | NB |
| MINIMUM GREEN (INITIAL) (SEC.) | 20 | 20 | | | 7 | 20 | | 20 |
| ADDED INITIAL (SEC./ACT.) | | 1.0 | - | | - | 1.0 | | - |
| PASSAGE TIME (SEC.) | | 4.0 | 2.5 | | 2.5 | 4.0 | | 2.5 |
| MAXIMUM INITIAL (SEC.) | | 30 | - | | - | 30 | | - |
| MAXIMUM GREEN (SEC.) | | 70 | 40 | | 25 | 60 | | 40 |
| YELLOW CHANGE (SEC.) | | 4.5 | 4.5 | | 4.5 | 4.5 | | 4.5 |
| ALL RED CLEARANCE (SEC.) | | 2.0 | 2.5 | | 2.0 | 2.0 | | 2.5 |
| RECALL | | | | | | | | |
| MAXIMUM (ON/OFF) | | OFF | OFF | | OFF | OFF | | OFF |
| MINIMUM (ON/OFF) | | ON | OFF | | OFF | ON | | OFF |
| PEDESTRIAN (ON/OFF) | | OFF | OFF | | OFF | OFF | | OFF |
| MEMORY (ON/OFF) | | OFF | OFF | | OFF | OFF | | OFF |

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LEGEND

-  VEHICULAR SIGNAL HEAD, 3-SECTION
-  VEHICULAR SIGNAL HEAD, 5-SECTION
-  LOOP DETECTOR
-  POWER CABLE, 3-CONDUCTOR NO.6 AWG
-  SIGNAL CABLE, 5-CONDUCTOR NO.14 AWG
-  SIGNAL CABLE, 7-CONDUCTOR NO.14 AWG
-  LOOP DETECTOR LEAD-IN CABLE
-  INTERCONNECT CABLE

| | |
|------------|--------|
| CALCULATED | T.K.L. |
| CHECKED | K.P.W. |

**WIRING DIAGRAM
S.R.18 AT I-71 RAMPS 'C' AND 'D'**

MED - 18 - 15.13

319
362

TRAFFIC SIGNAL QUANTITY SUB-SUMMARY

| SHEET No. | REFERENCE No. | LOCATION | | ITEM NUMBERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|---------------|----------------------------------|-----|--------------|-------------------------|-----------------------|-----------------------|---------------------|-----|---------------------|---------------------|---------------------|--|---|---------------|------------------------|---------------------------------------|---|---|--|---|-------------------------------------|---|-----------------------------|-----------------------------------|----------------------------|---|-----------------------------------|--|--|---------------------------------|---------------------|----------|----------|--|--|
| | | | | 625 | | | | | | | | | | | | | | 632 | | | | | | | | | | 633 | | | | | | | | |
| | | | | GROUND ROD | GROUND ROD, AS PER PLAN | PULL BOX, 725.08, 18" | PULL BOX, 725.08, 24" | TRENCH, AS PER PLAN | | CONDUIT, 725.04, 2" | CONDUIT, 725.04, 3" | CONDUIT, 725.04, 4" | VEHICULAR SIGNAL HEAD, 3 SECTION, 12" LENS, 1-WAY, AS PER PLAN | LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN | DETECTOR LOOP | STRAIN POLE FOUNDATION | STRAIN POLE, TYPE TC-81.10, DESIGN 10 | COMBINATION STRAIN POLE, TYPE TC-81.10, DESIGN 10 | COMBINATION STRAIN POLE, TYPE TC-81.10 AND SIGN SUPPORT, TYPE TC-91.10 W/LIGHT POLE EXTENSION | MESSENGER WIRE, 7 STRAND 3/8" DIA., WITH ACCESSORIES | MESSENGER WIRE, 7 STRAND 1/4" DIA., WITH ACCESSORIES, AS PER PLAN | SIGNAL CABLE, 5 CONDUCTOR NO.14 AWG | INTERCONNECT CABLE, 6 PAIR, NO.19 AWG, SOLID, REA (PE-39) | LOOP DETECTOR LEAD-IN CABLE | POWER CABLE, 3 CONDUCTOR NO.6 AWG | POWER SERVICE, AS PER PLAN | SIGNALIZATION, MISC.: METER BASE, 100 AMP WITH BYPASS | COVERING OF VEHICULAR SIGNAL HEAD | REMOVAL OF TRAFFIC SIGNAL INSTALLATION | CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET TYPE TS1, AS PER PLAN | CABINET FOUNDATION, AS PER PLAN | CONTROLLER WORK PAD | | | | |
| | | | | EACH | EACH | EACH | EACH | FT. | | FT. | FT. | FT. | EACH | EACH | EACH | EACH | EACH | EACH | EACH | FT. | FT. | FT. | FT. | FT. | EACH | EACH | EACH | | EACH | EACH | EACH | EACH | | | | |
| 317 | C-1 | 153+50 | RT. | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | | | | | |
| | PB-32 | 153+50 TO 153+50 | RT. | | | 1 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SP-2 | 153+50 TO 153+43 | RT. | 1 | | | 7 | | | | | | 1 | 1 | | | | | | 375 | 375 | | | | | | | | | | | | | | | |
| | PB-31 | 153+50 TO 150+75 | RT. | | | 1 | 275 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-37 | 153+50 TO 154+40 | RT. | | | 1 | 90 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 317 | PB-38 | 154+40 TO 155+95 | RT. | | | 1 | 155 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 287 | PB-39 | 155+95 TO 157+90 | RT. | | | 1 | 195 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 321 | | 157+90 TO 160+80 (PB-40) | RT. | | | | 290 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 317 | SP-1 | 153+44 | LT. | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-33 | 153+44 TO 153+40 | LT. | | | 1 | 9 | | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-34 | 153+40 TO 152+40 | LT. | | | 1 | 100 | | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SP-3 | 154+36 | LT. | 1 | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| | PB-35 | 154+36 TO 153+50 | LT. | | | 1 | 18 | | 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PB-36 | 153+50 TO 157+00 | LT. | | | 1 | 261 | | 261 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 317 | SP-4 | 154+34 | RT. | 1 | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| | | POWER SERVICE | | | | | 101 | | | | | | | | | | | | | | | | 111 | 1 | 1 | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 1 AND 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 3 AND 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 5 AND 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 7 AND 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 9 AND 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L1 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L3 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L5 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L7 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L9 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L10 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L12 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L13 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L14 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L15 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L16 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L17 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L18 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO PB-31 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | C-1 TO PB-40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL | | | | 4 | 1 | 8 | 1 | 1506 | | 388 | 1015 | 7 | | 11 | 13 | 18 | 4 | 2 | 1 | 1 | 375 | 375 | 1233 | 1055 | 5194 | 111 | 1 | 1 | 11 | | 1 | 1 | 1 | 1 | | |

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TRAFFIC SIGNAL SUB-SUMMARY S.R.18 AT I-71 RAMPS 'C' AND RAMP 'D'

MED - 18 - 15.13

CALCULATED T.K.I. CHECKED R.P.W.

320
362

J:\Proj3\7050600\TRAFFIC\70506CP05.DWG User: jmb05689 Jun 26, 2003 - 8:38am

LEGEND

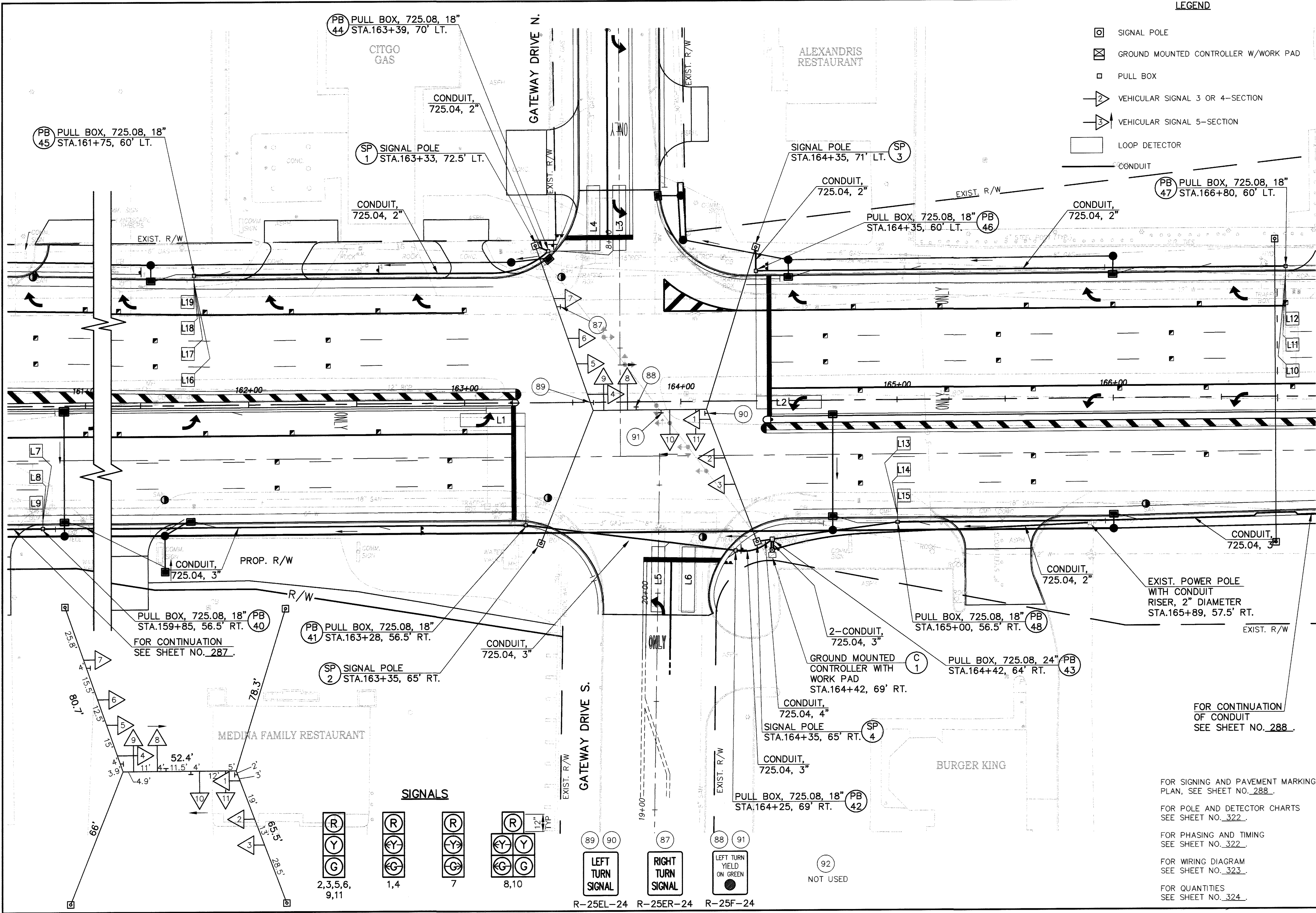
- SIGNAL POLE
- GROUND MOUNTED CONTROLLER W/WORK PAD
- PULL BOX
- VEHICULAR SIGNAL 3 OR 4-SECTION
- VEHICULAR SIGNAL 5-SECTION
- LOOP DETECTOR
- CONDUIT

CALCULATED
T.C.L.
CHECKED
K.P.W.

TRAFFIC SIGNAL PLAN
S.R.18 AT GATEWAY DRIVE

MED - 18 - 15.13

321
362



FOR CONTINUATION
SEE SHEET NO. 287.

FOR CONTINUATION
OF CONDUIT
SEE SHEET NO. 288.

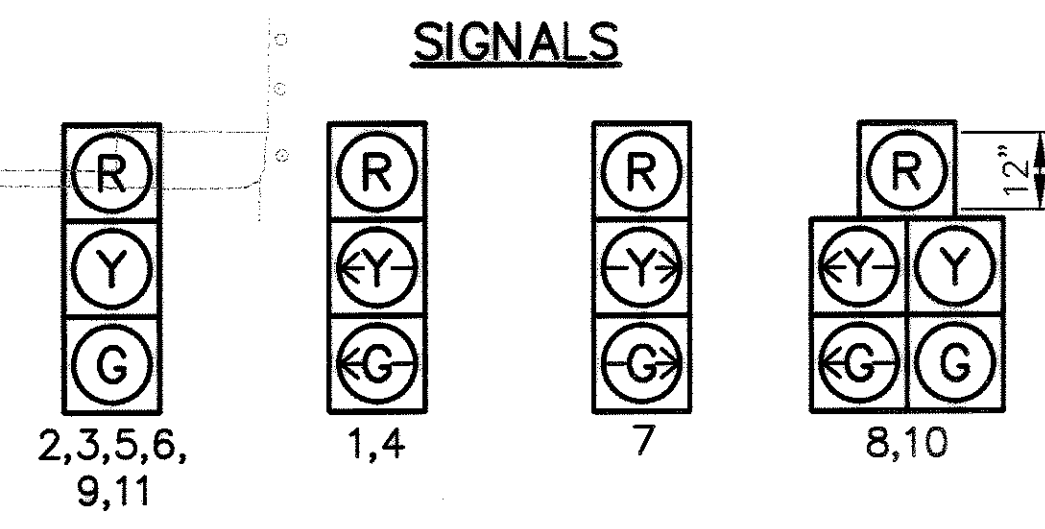
FOR SIGNING AND PAVEMENT MARKING
PLAN, SEE SHEET NO. 288.

FOR POLE AND DETECTOR CHARTS
SEE SHEET NO. 322.

FOR PHASING AND TIMING
SEE SHEET NO. 322.

FOR WIRING DIAGRAM
SEE SHEET NO. 323.

FOR QUANTITIES
SEE SHEET NO. 324.



R-25EL-24 R-25ER-24 R-25F-24

TRAFFIC SIGNAL DETECTORS

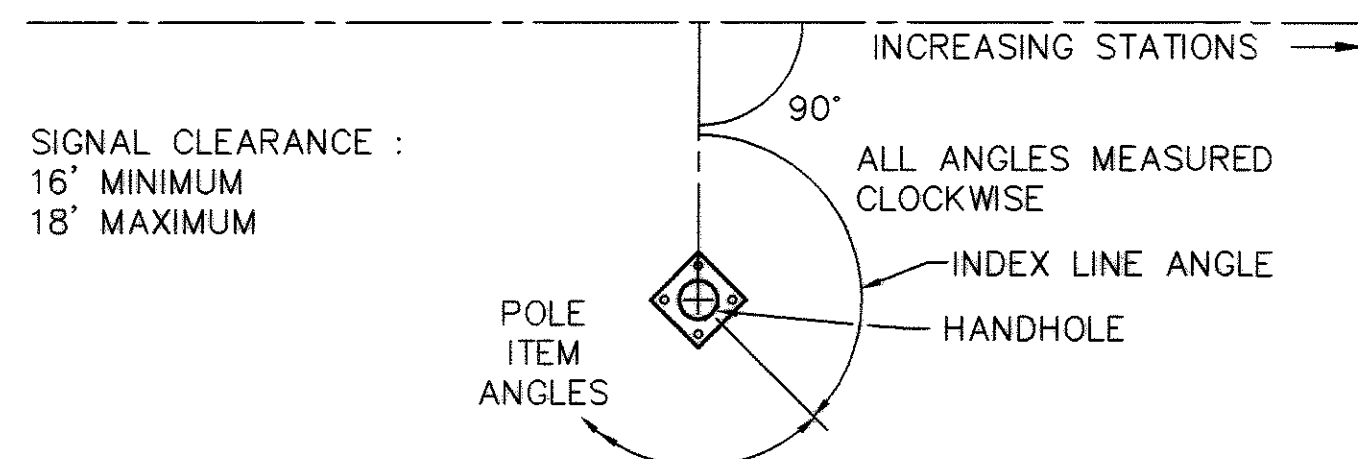
| DETECTOR | SIZE | NO. OF TURNS | PULSE OR PRESENCE | DELAY OR EXTENSION (SEC.) | DET. UNIT NO. | PHASE | REMARKS |
|----------|----------|--------------|-------------------|---------------------------|---------------|-------|-------------|
| L1 | 6' x 30' | 3 | PRESENCE | - | 1 | 1+5 | - |
| L2 | 6' x 30' | 3 | PRESENCE | - | 2 | 1+5 | - |
| L3 | 6' x 30' | 3 | PRESENCE | - | 3 | 3+7 | - |
| L4 | 6' x 30' | 3 | PRESENCE | DELAY 10 | 4 | 4+8 | - |
| L5 | 6' x 30' | 3 | PRESENCE | - | 5 | 3+7 | - |
| L6 | 6' x 30' | 3 | PRESENCE | DELAY 10 | 6 | 4+8 | - |
| L7 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 7 | 2 | - |
| L8 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 7 | 2 | - |
| L9 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 8 | 2 | - |
| L10 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 9 | 6 | - |
| L11 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 9 | 6 | - |
| L12 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 10 | 6 | - |
| L13 | 6' x 6' | 4 | PRESENCE | - | 11 | - | SYSTEM LOOP |
| L14 | 6' x 6' | 4 | PRESENCE | - | 12 | - | SYSTEM LOOP |
| L15 | 6' x 6' | 4 | PRESENCE | - | 13 | - | SYSTEM LOOP |
| L16 | 6' x 6' | 4 | PRESENCE | - | 14 | - | SYSTEM LOOP |
| L17 | 6' x 6' | 4 | PRESENCE | - | 15 | - | SYSTEM LOOP |
| L18 | 6' x 6' | 4 | PRESENCE | - | 16 | - | SYSTEM LOOP |
| L19 | 6' x 6' | 4 | PRESENCE | - | 17 | - | SYSTEM LOOP |

COORDINATION TIMING (1)

| | DIAL 1 | DIAL 2 | DIAL 3 |
|----------------------|---------------------|---------|------------|
| CYCLE LENGTH | 90 | 100 | 120 |
| PHASE 1 SPLIT | 30% | 31% | 30% |
| PHASE 2 SPLIT | 35% | 33% | 35% |
| PHASE 3 SPLIT | 14% | 13% | 11% |
| PHASE 4 SPLIT | 21% | 23% | 23% |
| PHASE 5 SPLIT | 20% | 21% | 30% |
| PHASE 6 SPLIT | 45% | 43% | 35% |
| PHASE 7 SPLIT | 14% | 13% | 11% |
| PHASE 8 SPLIT | 21% | 23% | 23% |
| PERMISSIVE YIELD (2) | 5% | 5% | 5% |
| OFFSET (3) | 84% | 87% | 87% |
| TIME OF DAY SCHEDULE | 9AM-3PM 7PM-10PM | 3PM-7PM | 6:30AM-9AM |

NOTES:

- 1.) PHASE SPLITS INCLUDE GREEN, YELLOW AND ALL RED TIME.
- 2.) PERMISSIVE YIELDS SHALL START AT THE ZERO POINT OF THE CYCLE.
- 3.) OFFSETS SHALL BE REFERENCED TO PHASE 2+6, BEGINNING OF YELLOW, S.R. 18/NORMANDY DRIVE/EASTPOINTE DRIVE INTERSECTION.



SIGNAL SUPPORT TYPE TC-81.10

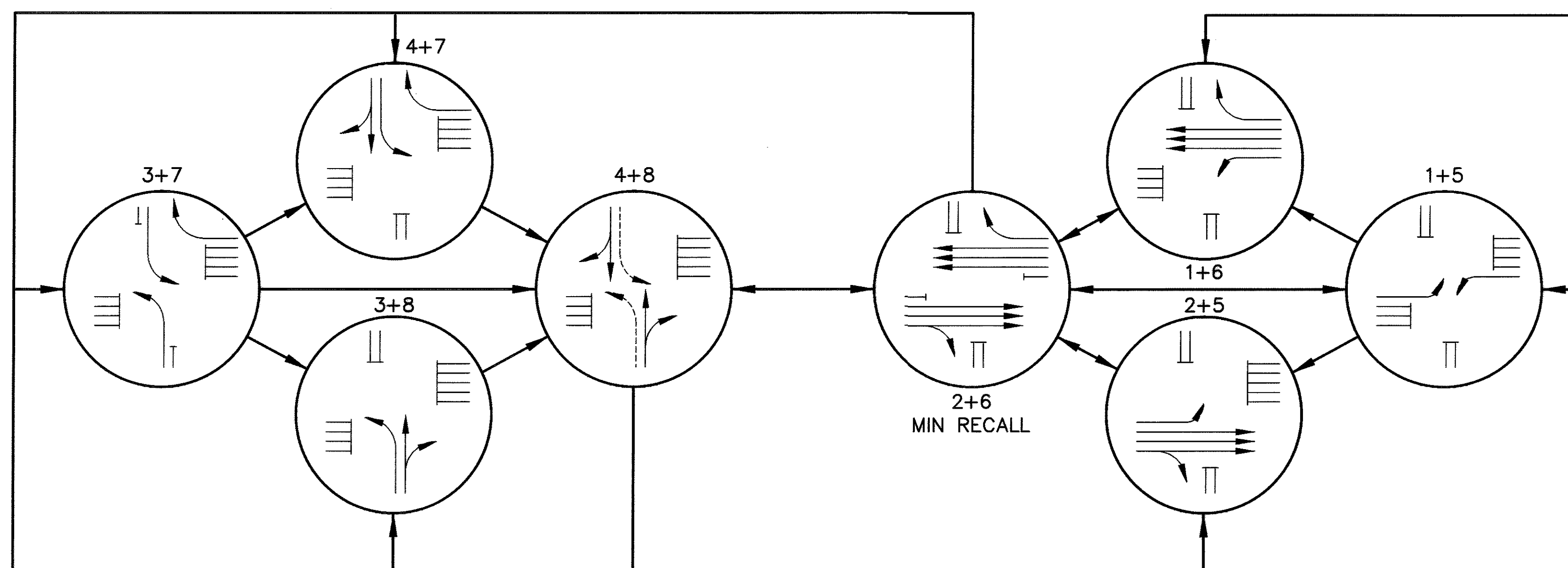
| POLE NO. | DESIGN NO. | POLE HEIGHT (FT.) | FOUNDATION ELEVATION | GROUND AT FOUNDATION ELEVATION | MESSENGER WIRE ATTACHMENT HEIGHT | INDEX LINE ANGLE (HANDHOLE) | ANGLES (DEG.) FROM INDEX LINE | | | |
|----------|------------|-------------------|----------------------|--------------------------------|----------------------------------|-----------------------------|-------------------------------|-------------------|--|--|
| | | | | | | | CABLE ENTRANCE (12" FROM TOP) | LUMINAIRE BRACKET | | |
| SP1 | 10 | 34 | 1142.39 | 1142.14 | 31.81' | 161° | 180 | - | | |
| SP2 | 10 | 34 | 1141.66 | 1141.41 | 32.54' | 202° | 180 | - | | |
| SP3 | 10 | 32 | 1147.35 | 1147.10 | 25.61' | 197° | 180 | - | | |
| SP4 | 10 | 32 | 1145.84 | 1145.59 | 27.12' | 159° | 180 | - | | |

DISPLAY CHART

| PHASE | 3+7 | | | 4+7 | | | 3+8 | | | 4+8 | | | 1+5 | | | 1+6 | | | 2+5 | | | 2+6 | | | FLASH | | | | | | |
|---------|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-------|---|---|---|---|---|---|
| DISPLAY | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | | | | | | | |
| 1 | R | R | R | R | R | R | R | R | R | R | R | R | ←G | ←Y | R | R | R | R | R | R | ←G | ←Y | R | R | R | R | R | R | R | R | |
| 2,3 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Y |
| 4 | R | R | R | R | R | R | R | R | R | R | R | R | ←G | ←Y | R | ←G | ←Y | R | R | R | R | R | R | R | R | R | R | R | R | R | R |
| 5,6 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | G | Y | R | R | R | R | R | R | R | R | R | R | R | R | R | Y |
| 7 | G→ | Y→ | R | G→ | Y→ | R | R | R | R | R | R | R | R | R | R | G→ | G→ | G→ | R | R | R | R | R | R | R | R | R | R | R | R | Y |
| 8 | ←G | ←Y | R | ←G | ←Y | R | G | G | G | R | R | R | G | Y | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R |
| 9 | R | R | R | G | G | G | R | R | R | R | R | R | G | Y | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R |
| 10 | ←G | ←Y | R | R | R | R | ←G | ←Y | R | G | Y | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R |
| 11 | R | R | R | R | R | R | G | G | G | G | Y | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R |

- ①-REMAINS G→ WHEN FOLLOWED BY PHASE 4+7
 ②-REMAINS ←G/R WHEN FOLLOWED BY PHASE 4+7
 ③-REMAINS ←G/R WHEN FOLLOWED BY PHASE 3+8
 ④-REMAINS ←G WHEN FOLLOWED BY PHASE 2+5
 ⑤-REMAINS ←G WHEN FOLLOWED BY PHASE 1+6
 ⑥-REMAINS G WHEN FOLLOWED BY PHASE 2+5
 ⑦-REMAINS G WHEN FOLLOWED BY PHASE 1+6
 ⑧-REMAINS G→ WHEN FOLLOWED BY PHASE 3+7 OR PHASE 4+7
 ⑨-REMAINS G WHEN FOLLOWED BY PHASE 2+6

PHASING DIAGRAM

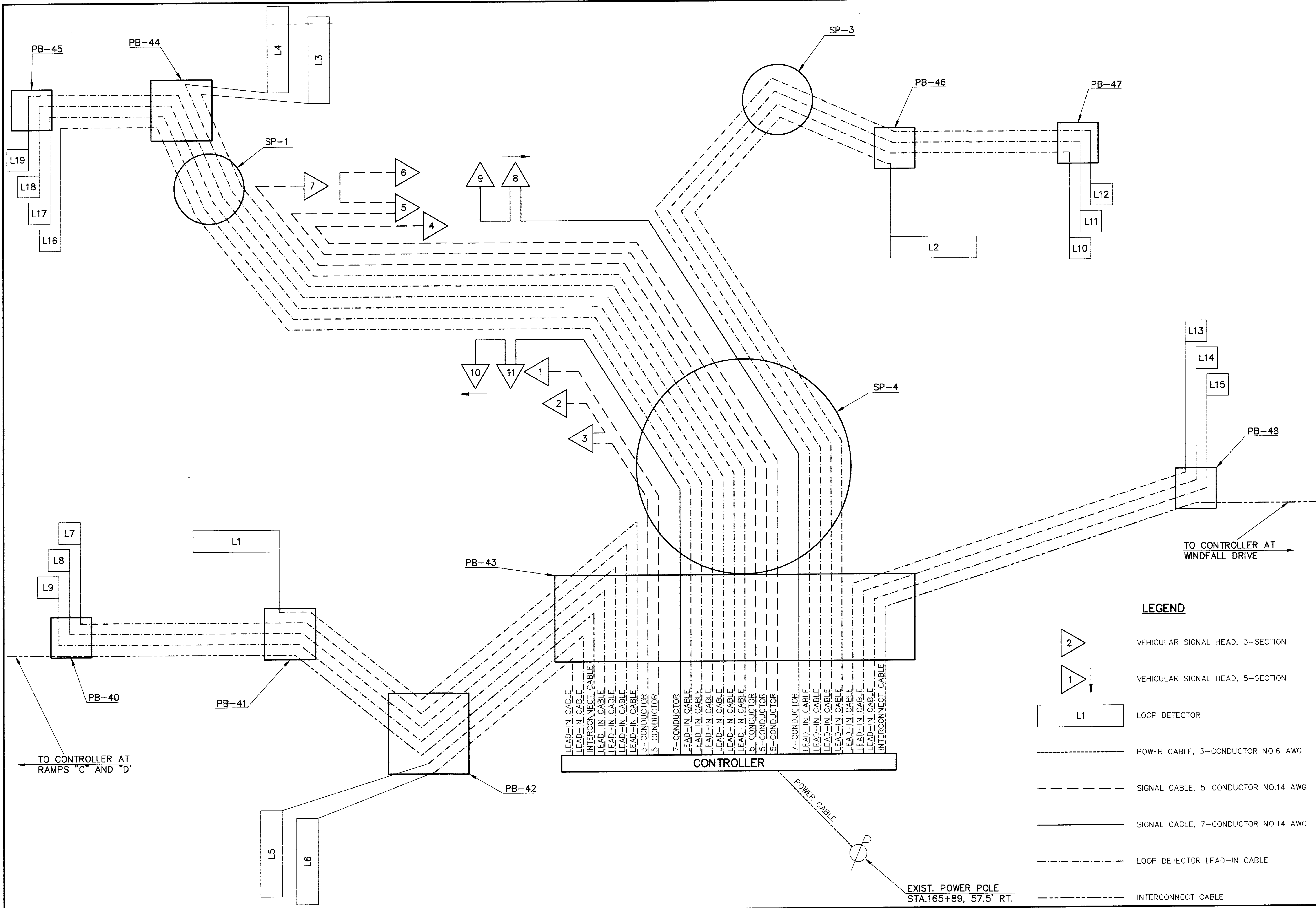


NOTE: OMIT PHASE 3 WHEN PHASE 4 IS ON
 OMIT PHASE 7 WHEN PHASE 8 IS ON

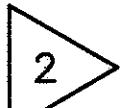
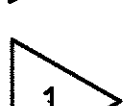

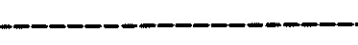


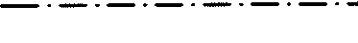

TIMING CHART

| INTERVAL OR FEATURE | NEMA PHASE NO. | | | | | | | |
|--------------------------------|---------------------|-----|-------|-----|-------|-----|-------|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| INTERSECTION MOVEMENT | WB/LT | EB | NB/LT | SB | EB/LT | WB | SB/LT | NB |
| MINIMUM GREEN (INITIAL) (SEC.) | 7 | 25 | 7 | 10 | 7 | 25 | 7 | 10 |
| ADDED INITIAL (SEC./ACT.) | - | 1.0 | - | - | - | 1.0 | - | - |
| PASSAGE TIME (SEC.) | 2.5 | 3.0 | 2.5 | 2.5 | 4.0 | 2.5 | 2.5 | 2.5 |
| MAXIMUM INITIAL (SEC.) | - | 45 | - | - | - | 45 | - | - |
| MAXIMUM GREEN (SEC.) | 25 | 60 | 20 | 25 | 30 | 60 | 20 | 30 |
| YELLOW CHANGE (SEC.) | 4.5 | 4.5 | 3.6 | 3.6 | 4.5 | 4.5 | 3.6 | 3.6 |
| ALL RED CLEARANCE (SEC.) | 2.0 | 2.0 | 2.5 | 2.5 | 2.0 | 2.0 | 2.5 | 2.5 |
| RECALL | MAXIMUM (ON/OFF) | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| | MINIMUM (ON/OFF) | OFF | ON | OFF | OFF | OFF | ON | OFF |
| | PEDESTRIAN (ON/OFF) | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| MEMORY (ON/OFF) | OFF | OFF | OFF | OFF | OFF | OFF | OFF | OFF |

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LEGEND

-  VEHICULAR SIGNAL HEAD, 3-SECTION
-  VEHICULAR SIGNAL HEAD, 5-SECTION
-  LOOP DETECTOR
-  POWER CABLE, 3-CONDUCTOR NO.6 AWG
-  SIGNAL CABLE, 5-CONDUCTOR NO.14 AWG
-  SIGNAL CABLE, 7-CONDUCTOR NO.14 AWG
-  LOOP DETECTOR LEAD-IN CABLE
-  INTERCONNECT CABLE








EXIST. POWER POLE
STA.165+89, 57.5' RT.

| | |
|------------|--------|
| CALCULATED | T.K.I. |
| CHECKED | K.P.W. |

**WIRING DIAGRAM
SR.18 AT GATEWAY DRIVE**

MED - 18 - 15.13

LEGEND

-  SIGNAL POLE
-  GROUND MOUNTED CONTROLLER W/WORK PAD
-  PULL BOX
-  VEHICULAR SIGNAL 3 OR 4-SECTION
-  VEHICULAR SIGNAL 5-SECTION
-  LOOP DETECTOR
-  CONDUIT



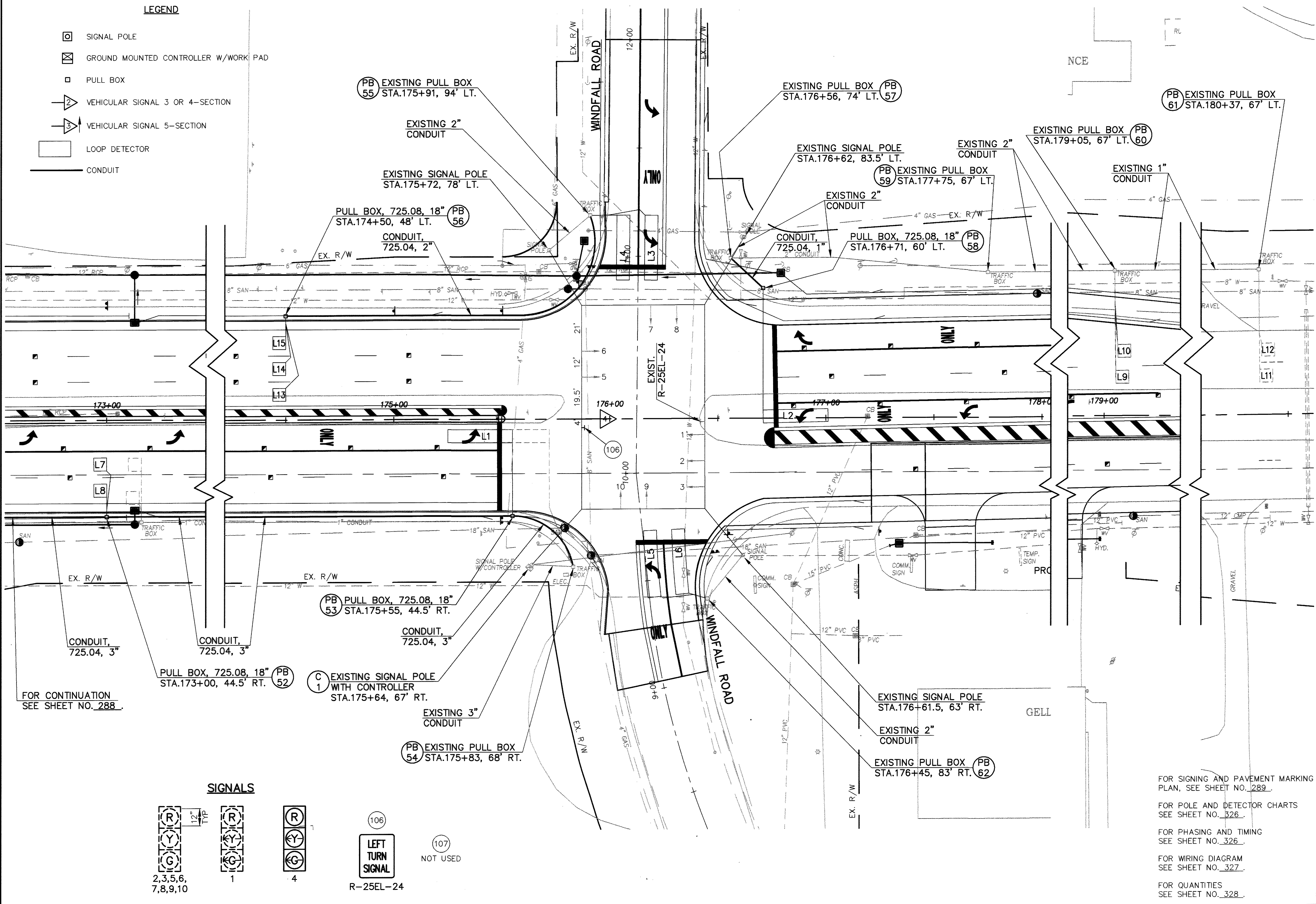


 CALCULATED T.K.L. _____
 CHECKED K.P.W. _____

**TRAFFIC SIGNAL PLAN
S.R.18 AT WINDFALL ROAD**

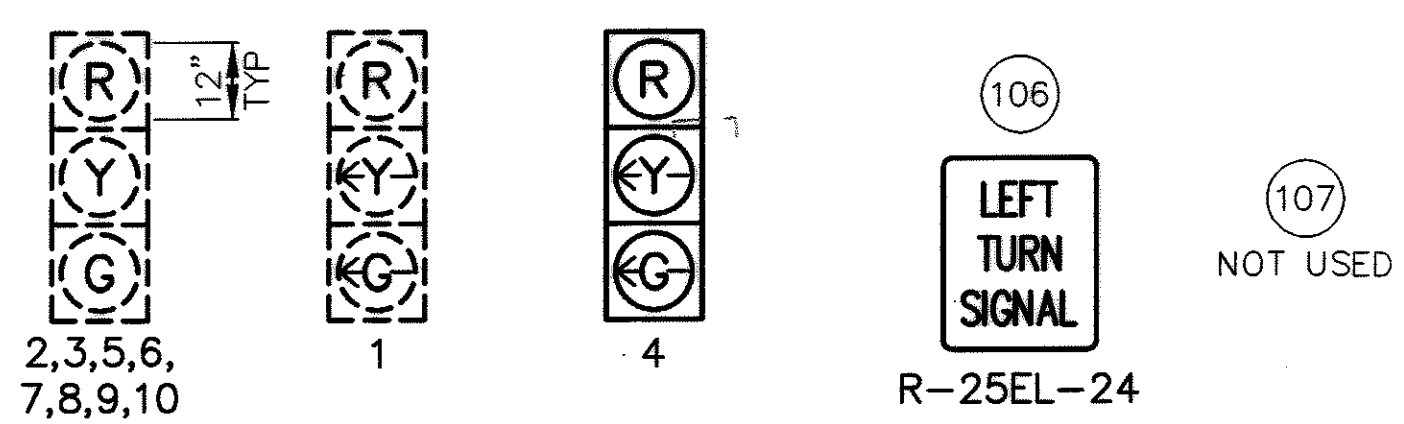
MED - 18 - 15.13

325
362



FOR CONTINUATION
SEE SHEET NO. 288.

SIGNALS



FOR SIGNING AND PAVEMENT MARKING PLAN, SEE SHEET NO. 289.
 FOR POLE AND DETECTOR CHARTS SEE SHEET NO. 326.
 FOR PHASING AND TIMING SEE SHEET NO. 326.
 FOR WIRING DIAGRAM SEE SHEET NO. 327.
 FOR QUANTITIES SEE SHEET NO. 328.

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TRAFFIC SIGNAL DETECTORS

| DETECTOR | SIZE | NO. OF TURNS | PULSE OR PRESENCE | DELAY OR EXTENSION (SEC.) | DET. UNIT NO. | PHASE | REMARKS |
|----------|----------|--------------|-------------------|---------------------------|---------------|-------|-------------|
| L1 | 6' x 30' | 3 | PRESENCE | - | 1 | 1+5 | - |
| L2 | 6' x 30' | 3 | PRESENCE | - | 2 | 1+5 | - |
| L3 | 6' x 30' | 3 | PRESENCE | - | 3 | 4+8 | - |
| L4 | 6' x 30' | 3 | PRESENCE | DELAY 10 | 3 | 4+8 | - |
| L5 | 6' x 30' | 3 | PRESENCE | - | 4 | 4+8 | - |
| L6 | 6' x 30' | 3 | PRESENCE | DELAY 10 | 4 | 4+8 | - |
| L7 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 5 | 2 | - |
| L8 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 5 | 2 | - |
| L9 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 6 | 6 | - |
| L10 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 6 | 6 | - |
| L11 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 7 | 6 | - |
| L12 | 6' x 6' | 4 | PRESENCE | EXT. 4 | 7 | 6 | - |
| L13 | 6' x 6' | 4 | PRESENCE | - | 8 | - | SYSTEM LOOP |
| L14 | 6' x 6' | 4 | PRESENCE | - | 9 | - | SYSTEM LOOP |
| L15 | 6' x 6' | 4 | PRESENCE | - | 10 | - | SYSTEM LOOP |

COORDINATION TIMING (1)

| | DIAL 1 | DIAL 2 | DIAL 3 |
|----------------------|---------------------|---------|------------|
| CYCLE LENGTH | 90 | 100 | 120 |
| PHASE 1 SPLIT | 21% | 18% | 18% |
| PHASE 2 SPLIT | 56% | 57% | 57% |
| PHASE 3 SPLIT | 0% | 0% | 0% |
| PHASE 4 SPLIT | 23% | 25% | 25% |
| PHASE 5 SPLIT | 21% | 18% | 18% |
| PHASE 6 SPLIT | 56% | 57% | 57% |
| PHASE 7 SPLIT | 0% | 0% | 0% |
| PHASE 8 SPLIT | 23% | 25% | 25% |
| PERMISSIVE YIELD (2) | 5% | 5% | 5% |
| OFFSET (3) | 58% | 57% | 93% |
| TIME OF DAY SCHEDULE | 9AM-3PM 7PM-10PM | 3PM-7PM | 6:30AM-9AM |

NOTES:

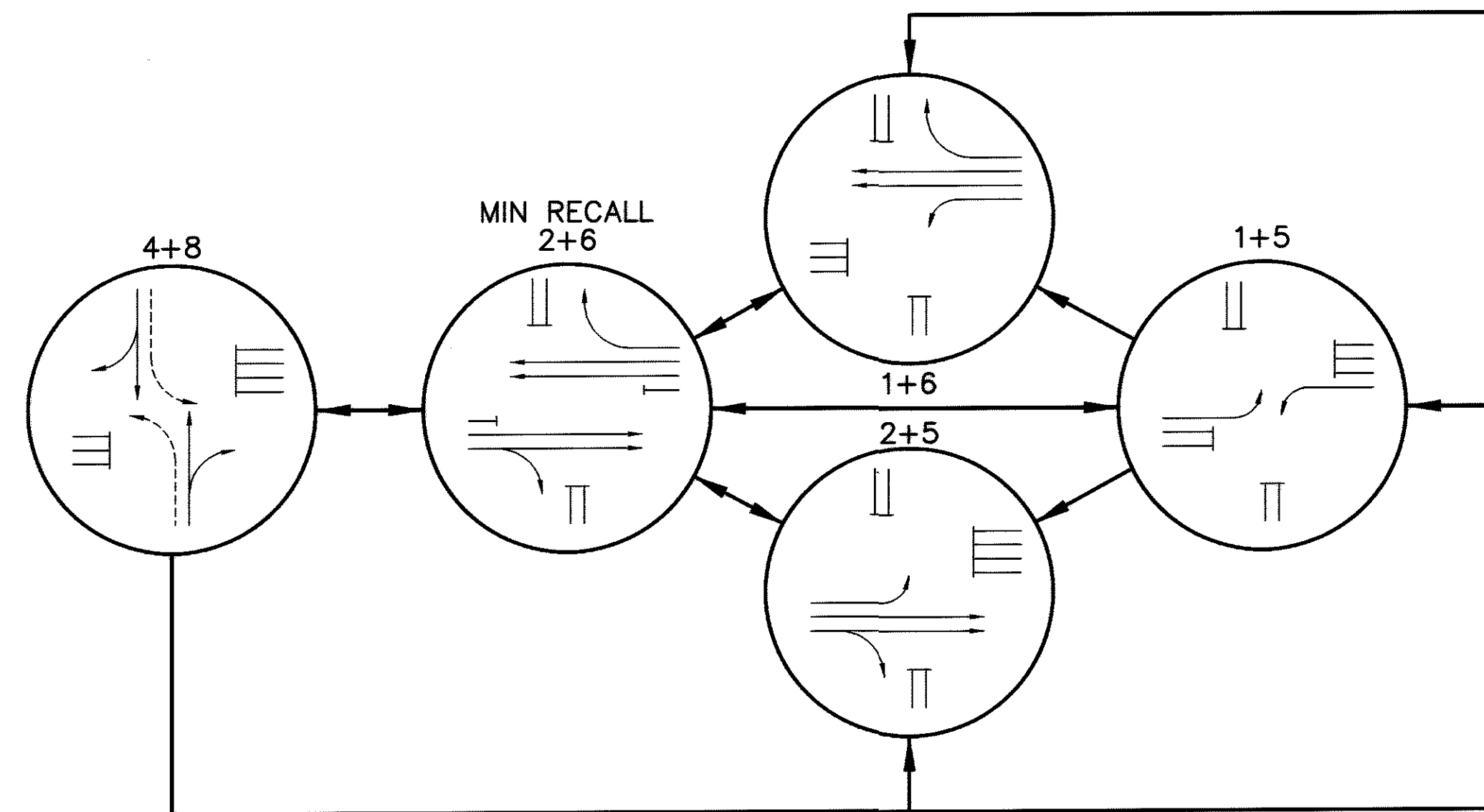
- 1.) PHASE SPLITS INCLUDE GREEN, YELLOW AND ALL RED TIME.
- 2.) PERMISSIVE YIELDS SHALL START AT THE ZERO POINT OF THE CYCLE.
- 3.) OFFSETS SHALL BE REFERENCED TO PHASE 2+6, BEGINING OF YELLOW, S.R. 18/NORMANDY DRIVE/EASTPOINTE DRIVE INTERSECTION.

DISPLAY CHART

| PHASE DISPLAY SIGNAL | 4+8 | | | 2+6 | | | 1+5 | | | 1+6 | | | 2+5 | | | FLASH |
|----------------------------|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-----|----|----|-------|
| | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | R/W | C1 | C2 | |
| 1 | R | R | R | R | R | R | <G | <Y | R | R | R | R | R | R | R | R |
| 2,3 | R | R | R | G | Y | R | R | R | R | R | R | R | G | Y | R | Y |
| 4 | R | R | R | R | R | R | <G | <Y | R | <G | <Y | R | R | R | R | R |
| 5,6 | R | R | R | G | Y | R | R | R | R | G | Y | R | R | R | R | Y |
| 7,8,9,10 | G | Y | R | R | R | R | R | R | R | R | R | R | R | R | R | R |

- ①-REMAINS G IF FOLLOWED BY PHASE 2+5
- ②-REMAINS G IF FOLLOWED BY PHASE 1+6
- ③-REMAINS <G IF FOLLOWED BY PHASE 2+5
- ④-REMAINS <G IF FOLLOWED BY PHASE 1+6
- ⑤-REMAINS G IF FOLLOWED BY PHASE 2+6

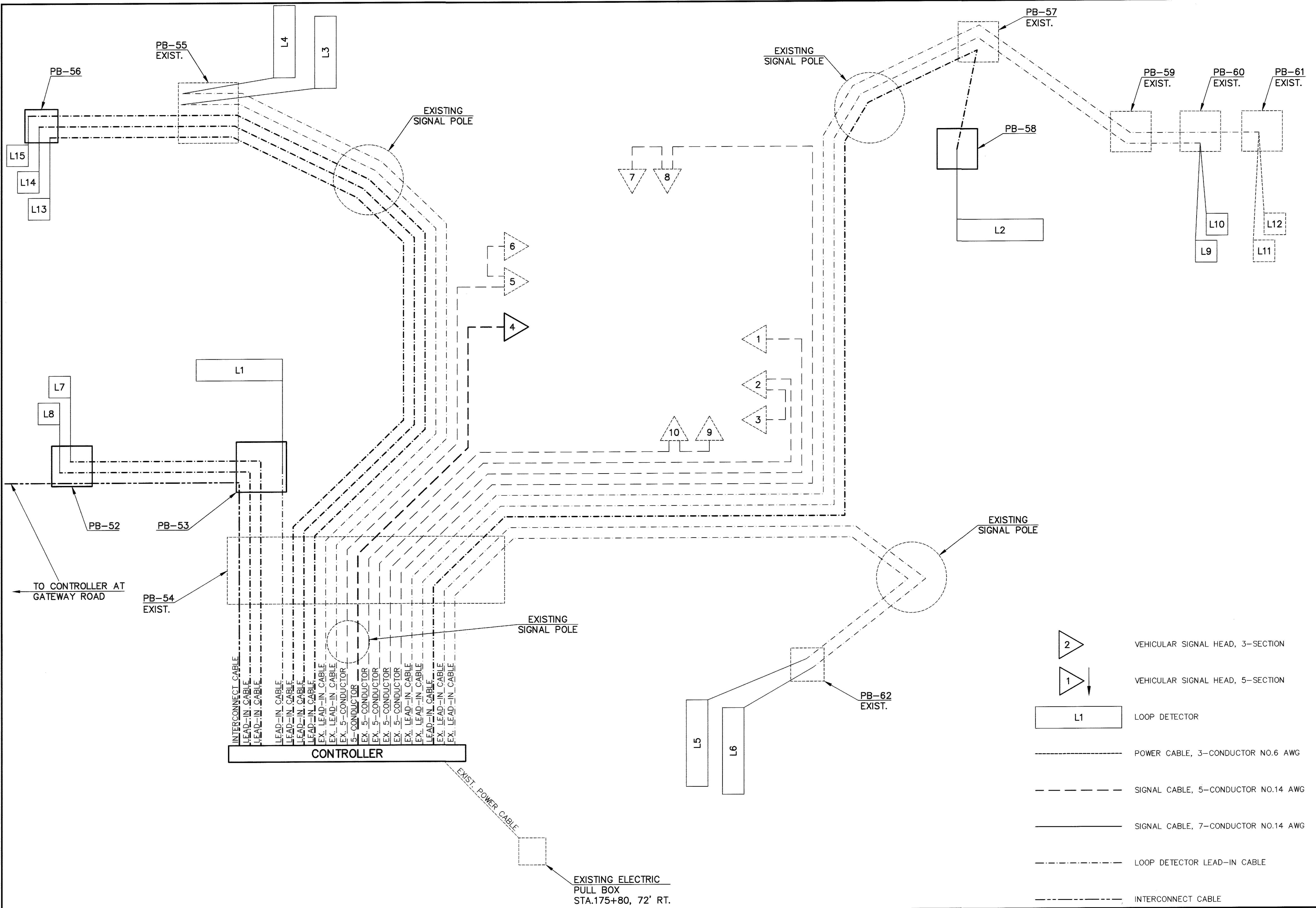
PHASING DIAGRAM

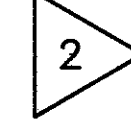
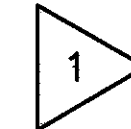
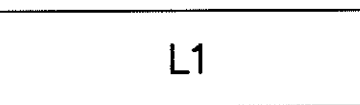
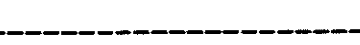


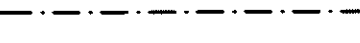



TIMING CHART

| INTERVAL OR FEATURE | NEMA PHASE NO. | | | | | | | |
|--------------------------------|---------------------|-----|-------|-----|-------|-----|-------|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| INTERSECTION MOVEMENT | WB/LT | EB | NB/LT | SB | EB/LT | WB | SB/LT | NB |
| MINIMUM GREEN (INITIAL) (SEC.) | 7 | 25 | | 10 | 7 | 25 | | 10 |
| ADDED INITIAL (SEC./ACT.) | - | 1.0 | | - | - | 1.0 | | - |
| PASSAGE TIME (SEC.) | 2.5 | 4.0 | | 2.5 | 2.5 | 4.0 | | 2.5 |
| MAXIMUM INITIAL (SEC.) | - | 35 | | - | - | 45 | | - |
| MAXIMUM GREEN (SEC.) | 14 | 60 | | 25 | 14 | 60 | | 25 |
| YELLOW CHANGE (SEC.) | 4.3 | 4.3 | | 3.6 | 4.3 | 4.3 | | 3.6 |
| ALL RED CLEARANCE (SEC.) | 2.0 | 2.0 | | 2.5 | 2.0 | 2.0 | | 2.5 |
| RECALL | MAXIMUM (ON/OFF) | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| | MINIMUM (ON/OFF) | OFF | ON | OFF | OFF | ON | OFF | OFF |
| | PEDESTRIAN (ON/OFF) | OFF | OFF | OFF | OFF | OFF | OFF | OFF |
| MEMORY (ON/OFF) | OFF | ON | | OFF | OFF | ON | | OFF |

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-  VEHICULAR SIGNAL HEAD, 3-SECTION
-  VEHICULAR SIGNAL HEAD, 5-SECTION
-  LOOP DETECTOR
-  POWER CABLE, 3-CONDUCTOR NO.6 AWG
-  SIGNAL CABLE, 5-CONDUCTOR NO.14 AWG
-  SIGNAL CABLE, 7-CONDUCTOR NO.14 AWG
-  LOOP DETECTOR LEAD-IN CABLE
-  INTERCONNECT CABLE

| | |
|------------|--------|
| CALCULATED | T.K.L. |
| CHECKED | K.P.W. |

**WIRING DIAGRAM
S.R.18 AT WINDFALL ROAD**

MED - 18 - 15.13

TRAFFIC SIGNAL QUANTITY SUB-SUMMARY

| LOCATION | | | | ITEM NUMBERS | | | | | | | | | | | | | | |
|--------------|---------------|-----------------------------------|------|-----------------------|---------------------|---------------------|---------------------|---------------------|--|---|---------------|-------------------------------------|---|-----------------------------|---|---|-----------------------------------|--|
| | | | | 625 | | | | | 632 | | | | | 633 | | | | |
| SHEET No. | REFERENCE No. | STATION TO STATION | SIDE | PULL BOX, 725.08, 18" | TRENCH, AS PER PLAN | CONDUIT, 725.04, 1" | CONDUIT, 725.04, 2" | CONDUIT, 725.04, 3" | VEHICULAR SIGNAL HEAD, 3 SECTION, 12" LENS, 1-WAY, AS PER PLAN | LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN | DETECTOR LOOP | SIGNAL CABLE, 5 CONDUCTOR NO.14 AWG | INTERCONNECT CABLE, 6 PAIR, NO.19 AWG, SOLID, REA (PE-39) | LOOP DETECTOR LEAD-IN CABLE | SIGNALIZATION, MISC.: DETECTOR WIRE SPLICES | SIGNALIZATION, MISC.: LASHING AND UNLASHING SIGNAL WIRE | COVERING OF VEHICULAR SIGNAL HEAD | CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET TYPE TSI, AS PER PLAN |
| | | | | EACH | FT. | FT. | FT. | FT. | EACH | EACH | EACH | FT. | FT. | FT. | EACH | EACH | EACH | EACH |
| 325 | C-1 | EXISTING CONTROLLER 175+64 | RT. | | | | | | | | | | | | | | | 1 |
| | PB-53 | 175+83 (EXISTING PB-54) TO 175+55 | RT. | 1 | 40 | | | 40 | | | | | | | | | | |
| | PB-52 | 175+55 TO 173+00 | RT. | 1 | 255 | | | 255 | | | | | | | | | | |
| | PB-56 | 175+91 (EXISTING PB-55) TO 174+50 | LT. | 1 | 175 | | 175 | | | | | | | | | | | |
| 325 | PB-58 | 176+56 (EXISTING PB-57) TO 176+71 | LT. | 1 | 21 | 21 | | | | | | | | | | | | |
| | | C-1 TO VEHICULAR SIGNAL 4 | | | | | | | 1 | | | 110 | | | 1 | 1 | | |
| | | C-1 TO LOOP DETECTOR L1 | | | | | | | 1 | 1 | | | | 81 | | | | |
| | | C-1 TO LOOP DETECTOR L2 | | | | | | | 1 | 1 | | | | 307 | | | | |
| | | C-1 TO LOOP DETECTOR L3 | | | | | | | 1 | 1 | | | | | 1 | | | |
| | | C-1 TO LOOP DETECTOR L4 | | | | | | | | 1 | | | | | 1 | | | |
| | | C-1 TO LOOP DETECTOR L5 | | | | | | | 1 | 1 | | | | | 1 | | | |
| | | C-1 TO LOOP DETECTOR L6 | | | | | | | | 1 | | | | | 1 | | | |
| | | C-1 TO LOOP DETECTOR L7 | | | | | | | 1 | 1 | | | | 341 | | | | |
| | | C-1 TO LOOP DETECTOR L8 | | | | | | | | 1 | | | | 341 | | | | |
| | | C-1 TO LOOP DETECTOR L9 | | | | | | | 1 | 1 | | | | | 1 | | | |
| | | C-1 TO LOOP DETECTOR L10 | | | | | | | | 1 | | | | | 1 | | | |
| | | C-1 TO LOOP DETECTOR L11 | | | | | | | 1 | | | | | | | | | |
| | | C-1 TO LOOP DETECTOR L12 | | | | | | | | 1 | 1 | | | 428 | | | | |
| | | C-1 TO LOOP DETECTOR L13 | | | | | | | 1 | 1 | | | | 428 | | | | |
| | | C-1 TO LOOP DETECTOR L14 | | | | | | | 1 | 1 | | | | 428 | | | | |
| | | C-1 TO LOOP DETECTOR L15 | | | | | | | 1 | 1 | | | | 428 | | | | |
| | | C-1 TO PB-52 | | | | | | | | | | | 336 | | | | | |
| TOTAL | | | | 4 | 491 | 21 | 175 | 295 | 1 | 10 | 13 | 110 | 336 | 2354 | 6 | 1 | 1 | 1 |

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CALCULATED
T.K.L.
CHECKED
K.P.W.

TRAFFIC SIGNAL SUB-SUMMARY
S.R.18 AT WINDFALL ROAD

MED - 18 - 15.13

328
362

POWER SERVICE

THE POWER SUPPLYING AGENCIES FOR THIS PROJECT IS:

OHIO EDISON CO.
6326 LAKE AVENUE
ELYRIA, OHIO 44035
(440) 324-0231

POWER SUPPLIED SHALL BE 240/480 VOLT, SINGLE PHASE, THREE-WIRE GROUNDED NEUTRAL SERVICE. THE SERVICE SHALL BE METERED.

THE CONTRACTOR SHALL PAY ANY CHARGES MADE BY THE POWER COMPANY IN CONJUNCTION WITH ESTABLISHING NEW SERVICES OR REARRANGING EXISTING SERVICES.

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 SERVICES ESTABLISHED BY THIS PROJECT. UPON COMPLETION OF THIS PROJECT, POWER SERVICE ELECTRICAL ENERGY ACCOUNTS SHALL BE TRANSFERRED TO THE MAINTAINING AGENCIES NOTED IN THE PLANS. THIS SHALL INCLUDE NEW POWER SERVICE ESTABLISHED BY THIS PROJECT AS WELL AS REASSIGNMENT OF THE EXISTING SERVICE DUE TO WORK PERFORMED BY THIS PROJECT.

ITEM 202 - DISCONNECT EXISTING CIRCUIT

THIS ITEM OF WORK SHALL CONSIST OF THE DISCONNECTION OF AN EXISTING LIGHT CIRCUIT AT A PULL BOX OR AT A LIGHT POLE.

DISCONNECTION AT A PULL BOX OR POLE BASE SHALL INVOLVE CUTTING THE EXISTING CIRCUIT AND REMOVING ALL SPLICE KITS. ANY CABLE THAT IS TO BE ABANDONED SHALL BE TERMINATED IN A MANNER SUCH THAT NO CABLE IS LEFT IN THE PULL BOX OR POLE BASE. ANY CABLE TO BE REUSED SHALL BE CUT IN A MANNER SO THAT THERE IS A SUFFICIENT LENGTH OF CABLE LEFT FOR RECONNECTION. CONNECTOR KITS SHALL BE PAID FOR SEPARATELY UNDER THE EACH ITEM 625-CABLE SPLICING KIT.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE FOR EACH ITEM 202 - DISCONNECT EXISTING CIRCUIT, AND SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THE DISCONNECTION.

ITEM 202 - LIGHT POLE FOUNDATION REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE REMOVING THE LIGHT POLE, CONCRETE FOUNDATION TO A DEPTH OF ONE FOOT (1') BELOW GROUND LEVEL, TWO FEET (2') BELOW GROUND LEVEL WHERE IT WOULD INTERFERE WITH PROPOSED TRENCHING AND THREE FEET (3') BELOW GROUND LEVEL WHERE THE FOUNDATION IS TO BE REPLACED BY A PULL BOX, AND BACKFILLING THE RESULTANT DEPRESSION WITH COMPACTED SOIL AND RESTORING THE DISTURBED AREA.

PAYMENT WILL BE MADE FOR EACH ITEM 202 - LIGHT POLE FOUNDATION REMOVED, AS PER PLAN.

ITEM 202 - LUMINAIRE REMOVED, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING LUMINAIRE. THE LUMINAIRE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF OFF THE PROJECT SITE.

PAYMENT WILL BE MADE FOR EACH ITEM 202 - LUMINAIRE REMOVED, AS PER PLAN.

ITEM 202 - LIGHT POLE REMOVED, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING LIGHT POLE INCLUDING THE BRACKET ARM(S) AND THE TRANSFORMER BASED (IF ANY). THE POLE, BRACKET ARM(S), BASE AND WIRING, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF THE PROJECT SITE.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH ITEM 202 - LIGHT POLE REMOVED, AS PER PLAN.

ITEM 202 - PULL BOX REMOVED

THIS ITEM SHALL INCLUDE REMOVING THE PULL BOX TO ONE FOOT (1') BELOW THE GROUND LEVEL [THREE FEET (3') BELOW THE GROUND LEVEL WHERE THE PULL BOX IS TO BE REPLACED WITH A NEW CONCRETE PULL BOX] AND RESTORING THE DISTURBED AREA. WHERE A PULL BOX IS TO BE REPLACED WITH A NEW CONCRETE PULL BOX, IT IS THE INTENT OF THIS NOTE TO CUT ALL CONDUITS IN A NEAT FASHION IN ORDER TO REUSE THE EXISTING CONDUITS IN PLACE. CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING CIRCUIT CONDUCTORS IF THEY ARE TO BE REUSED.

PAYMENT SHALL BE MADE PER EACH ITEM 202 - PULL BOX REMOVED.

ITEM 202 - POWER SERVICE REMOVED, AS PER PLAN

THIS ITEM OF WORK INCLUDES THE REMOVAL OF THE EXISTING POWER SERVICE COMPONENTS AND STORAGE FOR RELOCATION. EXISTING UNDERGROUND CONDUIT AND WIRING MAY BE ABANDONED IN PLACE. REMOVED MATERIALS NOT IDENTIFIED FOR RELOCATION (REFER TO "POWER SERVICE, AS PER PLAN") SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT SITE. ALL DISTURBED AREAS SHALL BE RESTORED AS TO MATCH THE SURROUNDING AREA.

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 ITEMS BELONGING TO THEM THAT WERE REMOVED BY THE CONTRACTOR, SUCH AS THE METER BASE.

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 INSTALLATION IN A SATISFACTORY WORKMAN-LIKE MANNER.

ITEM 202 - LIGHTING MISC.: BRACKET ARM REMOVED, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING BRACKET ARM ON A COMBINATION SIGN POLE. THE BRACKET ARM INCLUDING THE POLE AND BRACKET CABLE, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF OFF THE PROJECT SITE.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH ITEM 202 - LIGHTING MISC.: BRACKET ARM REMOVED, AS PER PLAN.

UNDERDRAINS FOR PULL BOXES

REFERENCE IS MADE TO STANDARD DRAWING HL-30.11 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 20 FT. AN ESTIMATED QUANTITY OF 300 LINEAR FEET OF ITEM 603, 4 IN. CONDUIT. TYPE 'E' IS INCLUDED IN THE LIGHTING GENERAL SUMMARY FOR THIS PURPOSE.

HIGH-PRESSURE SODIUM LAMPS

HIGH-PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC 'LUCALOX', SYLVANIA 'LUMANUX', WESTINGHOUSE 'CERAMALUX', OR EQUAL APPROVED BY THE ENGINEER AND SHALL CONFORM TO SECTION 713.14 OF THE SPECIFICATIONS.

ELECTRICAL SERVICE FOR ILLUMINATED SIGNS

THE PAY ITEMS IN THE LIGHTING GENERAL SUMMARY INCLUDE THE PULL BOX OR JUNCTION BOX ADJACENT TO EACH LIGHTED SIGN AND THE ELECTRICAL SERVICE CONNECTIONS LEADING INTO THE BOX. QUANTITIES FOR ELECTRICAL SERVICE FROM THE CONNECTION IN THE PULL BOX OR JUNCTION BOX TO THE SIGN ARE INCLUDED IN THE TRAFFIC CONTROL GENERAL SUMMARY (SEE SHEETS 270-272.)

PADLOCKS AND KEYS

PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE, MASTER NO. 4 BKA, WILSON BOHANNAN 660A, OR APPROVED EQUAL 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 SPECIAL - MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF ANY EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF THE STATE, THE MAINTAINING AGENCY, AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF THE EXISTING LIGHTING SHALL BE MADE BY THE STATE'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL POLES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF THE STATE, THE MAINTAINING AGENCY, AND THE CONTRACTOR. IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL THEN BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCK-DOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED-DOWN UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED-DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENTS.

SHOULD THE CONTRACTOR DESIRE THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL THEN BE RESPONSIBLE FOR ADEQUATE TEMPORARY LIGHTING OF THAT PORTION OF THE EXISTING ROADWAY AFFECTED BY THE REMOVAL OF THE EXISTING LIGHTING.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR (4) SETS OF THE TEMPORARY LIGHTING PLAN TO THE DIRECTOR FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATION OF POLES, LENGTH OF BRACKET ARMS, STYLE OF LUMINAIRES, MOUNTING HEIGHT, WIRING METHODS, AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 4:1. MOUNTING HEIGHT FOR TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 27 FT. TEMPORARY OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FT. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "A" FOR STRENGTH REQUIREMENT AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIAL NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL, AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

THE LUMP SUM PRICE BID FOR ITEM SPECIAL - MAINTAINING EXISTING LIGHTING, SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS, AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

THE UNIT PRICE BID FOR ITEM SPECIAL - REPLACEMENT OF EXISTING LIGHTING UNIT SHALL BE FULL PAYMENT FOR THE REPLACEMENT OF AN EXISTING LIGHTING UNIT WHICH HAS BEEN KNOCKED DOWN AFTER THE AFOREMENTIONED INSPECTION AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE A REPLACEMENT FOR SUCH UNIT. AN ESTIMATED QUANTITY OF ONE IS INCLUDED IN THE LIGHTING GENERAL SUMMARY FOR THIS PURPOSE.

LOW MAST LUMINAIRES

THE LUMINAIRES ARRAYS AND ASSOCIATED ILLUMINATION TEST AREAS SPECIFIED IN SECTION 713.21 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS ARE HEREBY WAIVED FOR THIS PROJECT. INSTEAD, THE LUMINAIRES FOR LOW MAST LIGHTING SHALL MEET THE FOLLOWING REQUIREMENTS.

ASYMMETRIC, TYPE II OR TYPE III, LUMINAIRES FOR LOW MAST LIGHTING MAY BE HOLOPHANE "HMST" TEST #36648, OR GENERAL ELECTRIC "HM" TEST #7349, OR COOPER "HMC" TEST #764130.

SYMMETRIC, TYPE V, LUMINAIRES FOR LOW MAST LIGHTING MAY BE HOLOPHANE "HMST" TEST #36383, OR GENERAL ELECTRIC "HM" TEST #6312, OR COOPER "HAL" TEST #48381.

IN ADDITION, OTHER LUMINAIRES WILL BE CONSIDERED IF THE DESIGNED INTENSITY AND UNIFORMITY ARE PROVIDED USING THE DESIGNED POLE LOCATIONS AND THE TYPE OF FIXTURE PER POLE.

CONVENTIONAL LUMINAIRES

STYLE B LUMINAIRES SHALL HAVE A SINGLE RATED 480V, 400W, INTEGRAL REGULATOR BALLASTS FOR USE WITH HIGH PRESSURE SODIUM LAMPS AND SHALL BE:

GENERAL ELECTRIC M-400; FOR 200W-400W, TYPE II OR TYPE III, TEST 1014, OR 1015.

COOPER LIGHTING "OVD"; FOR 200W-250W, TYPE II OR TYPE III, OVD2S2F, OR OVD2S3F. FOR 310W-400W TYPE II OR TYPE III, OVD452C OR OVD453F.

AMERICAN ELECTRIC SERIES 125/126; FOR 200W-400W, TYPE II OR TYPE III, AE3849I, OR AE3846I.

HIGH-PRESSURE SODIUM LAMPS

UNDERPASS LUMINAIRES SHALL BE AMERICAN ELECTRIC "SIDELITE SERIES 582" (TEST No. AE2081I), COOPER LIGHTING "WALL LIGHT-LOW BEAM" (TEST No. WPK15SXX), OR GENERAL ELECTRIC "VERSAFLOOD II WALLLIGHTER" (8578) UNDERPASS UNIT OR EQUAL APPROVED BY THE ENGINEER, AND SHALL BE FURNISHED WITH AN INTEGRAL FUSE HOLDER AND 10-AMPERE FUSE. THE INTEGRAL HIGH PRESSURE SODIUM BALLAST SHALL BE OF A REGULATOR TYPE RATED FOR 480 VOLTS, 70 WATTS.

ITEM 625 - CONDUIT JACKED OR DRILLED UNDER PAVEMENT, 3", 725.04

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING CONDUIT OF THE SIZE OR SIZES INDICATED UNDER EXISTING PAVEMENT AND CONTIGUOUS SHOULDERS BY AN APPROVED METHOD SUCH AS "DRILLING" OR "JACKING".

THE CONTRACTOR SHALL PLACE THE CONDUIT WITH THE LEAST AMOUNT OF DISTURBANCE TO THE EXISTING PAVEMENT, SUBBASE, BERM PAVEMENT, OR SHOULDERS OF THE ROADWAY. ALL PUSH PITS OR ANY NECESSARY EXCAVATIONS SHALL BE BACKFILLED AND RESTORED IN ACCORDANCE WITH 603.09.

ITEM 625 - POWER SERVICE, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF THE CAREFUL REMOVAL, CLEANING, AND REINSTALLATION OF THE EXISTING POWER SERVICE CONTACTOR, ENCLOSURE, PHOTO ELECTRIC CONTROL AND RELATED EQUIPMENT TO THE LOCATION SHOWN ON THE PLANS. IN ADDITION TO THIS WORK, THE 60 AMP CIRCUIT BREAKER SHALL BE REPLACED WITH 2-30 AMP OUTPUT CIRCUIT BREAKERS 2-POLE, FOR THE ADDITIONAL CIRCUIT REQUIRED FOR THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THIS WORK WITH THE POWER COMPANY. THE UNIT PRICE FOR EACH ITEM - 625 POWER SERVICE, AS PER PLAN SHALL INCLUDE PAYMENT FOR ALL EQUIPMENT, LABOR AND MATERIALS NECESSARY TO COMPLETE THE WORK SPECIFIED. COMPONENT PARTS NOT SPECIFICALLY MENTIONED BUT REQUIRED FOR SATISFACTORY OPERATION OF THIS ITEM SHALL BE FURNISHED AND CONSIDERED PAID FOR AS PART OF THE ITEM.

ITEM 625 - SERVICE TO UNDERPASS LIGHTING, AS PER PLAN

THIS ITEM SHALL CONSIST OF PROVIDING COMPLETE ELECTRICAL SERVICE, EXCEPT FOR LUMINAIRES AND STRUCTURE GROUNDING, FOR AN UNDERPASS LIGHTING SYSTEM ON THE FOLLOWING BRIDGES:

(MED-71-1685L & MED-71-1685R) I.R. 71 OVER S.R. 18

THE INSTALLATION WORK SHALL INCLUDE CONDUITS, CONDUIT GROUNDING, MOUNTINGS, FITTINGS, JUNCTION BOXES, CABLES, FUSIBLE DISCONNECT SWITCH, FUSES, AND ALL INCIDENTALS NECESSARY TO COMPLETE THE WORK READY FOR USE AS SPECIFIED HEREIN AND AS SHOWN ON THE UNDERPASS LIGHTING DETAILS.

THE UNIT PRICE BID FOR EACH ITEM 625 - SERVICE TO UNDERPASS LIGHTING, AS PER PLAN, SHALL INCLUDE PAYMENT FOR ALL EQUIPMENT, LABOR AND MATERIALS NECESSARY TO COMPLETE THE WORK SPECIFIED. COMPONENT PARTS NOT SPECIFICALLY MENTIONED BUT REQUIRED FOR SATISFACTORY OPERATION OF THIS ITEM SHALL BE FURNISHED AND CONSIDERED PAID FOR AS PART OF THE ITEM.

LIGHT POLE MOUNTING HEIGHTS

LIGHT POLE MOUNTING HEIGHTS AS SHOWN ON THE DRAWINGS INDICATE MOUNTING HEIGHT AS MEASURED FROM THE CENTERLINE OF THE BRACKET ARM AT THE LUMINAIRE, TO THE TOP OF THE CONCRETE LIGHT POLE FOUNDATION, MEDIAN LIGHT POLE FOUNDATION, OR BRIDGE PILASTER.

ITEM 625 - HIGH VOLTAGE TEST

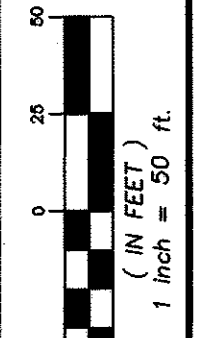
A LUMP SUM FOR PERFORMING THE HIGH VOLTAGE TEST REQUIRED BY THE ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS HAS BEEN INCLUDED IN THE GENERAL SUMMARY.

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| ITEM NO. | SHEET NUMBER | | | ITEM NO. | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | AS PER PLAN SHEET REF. |
|----------|--------------|-------|-----|----------|-----------|-------------|------|--|------------------------|
| | 336 | 332 | 329 | | | | | | |
| 202 | 4 | | | 202 | 75300 | 4 | EACH | PULL BOX REMOVED | |
| 202 | 1 | | | 202 | 75401 | 1 | EACH | LIGHT POLE REMOVED, AS PER PLAN | 329 |
| 202 | 1 | | | 202 | 75501 | 1 | EACH | LIGHT POLE FOUNDATION, REMOVED, AS PER PLAN | 329 |
| 202 | 3 | | | 202 | 75507 | 3 | EACH | LUMINAIRE REMOVED, AS PER PLAN | 329 |
| 202 | 1 | | | 202 | 75511 | 1 | EACH | POWER SERVICE REMOVED, AS PER PLAN | 329 |
| 202 | 2 | | | 202 | 75800 | 2 | EACH | DISCONNECT EXISTING CIRCUIT | |
| 202 | 1 | | | 202 | 98100 | 1 | EACH | REMOVAL MISC.: BRACKET ARM REMOVED, AS PER PLAN | 329 |
| 603 | | | 300 | 603 | 00400 | 300 | FT. | 4" CONDUIT, TYPE E | |
| 625 | | 102 | | 625 | 00500 | 102 | EACH | CONNECTOR KIT, TYPE II | |
| 625 | | 54 | | 625 | 01500 | 54 | EACH | CABLE SPLICING KIT | |
| 625 | | 4 | | 625 | 06200 | 4 | EACH | LIGHT POLE DESIGN AT10B41.7 | |
| 625 | | 1 | | 625 | 06300 | 1 | EACH | LIGHT POLE DESIGN A12B41.7 | |
| 625 | | 24 | | 625 | 09500 | 24 | EACH | LIGHT POLE, DESIGN AT18B51.7 | |
| 625 | | 5 | | 625 | 10470 | 5 | EACH | LOW MAST LIGHT POLE, DESIGN ATON 51.7 | |
| 625 | | 4 | | 625 | 10500 | 4 | EACH | LIGHT POLE, MISC.: LOW MAST LIGHT POLE, DESIGN AON50 | |
| 625 | | 5 | | 625 | 10500 | 5 | EACH | LIGHT POLE, MISC.: LOW MAST LIGHT POLE, DESIGN AON55 | |
| 625 | | 2 | | 625 | 10500 | 2 | EACH | LIGHT POLE, MISC.: DESIGN A30B50 | |
| 625 | | 5 | | 625 | 14100 | 5 | EACH | LIGHT POLE FOUNDATION 24 IN. X 8' DEEP | |
| 625 | | 40 | | 625 | 14200 | 40 | EACH | LIGHT POLE FOUNDATION 24 IN. X 10' DEEP | |
| 625 | | 6 | | 625 | 18000 | 6 | EACH | BRACKET ARM = 10' | |
| 625 | | 2103 | | 625 | 23300 | 2103 | FT. | NO. 2 AWG, 5000 VOLT DISTRIBUTION CABLE | |
| 625 | | 6384 | | 625 | 23400 | 6384 | FT. | NO. 10 AWG, POLE AND BRACKET CABLE | |
| 625 | | 11369 | | 625 | 24330 | 11369 | FT. | 1-1/2" DUCT CABLE WITH THREE NO. 2 AWG, 5000 VOLT CABLES | |
| 625 | | 737 | | 625 | 25500 | 737 | FT. | CONDUIT, 3", 725.04 | |
| 625 | | 463 | | 625 | 25900 | 463 | FT. | CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 3", 725.04 | |
| 625 | | 12 | | 625 | 26250 | 12 | EACH | LUMINAIRE CONVENTIONAL, STYLE B TYPE II, 200 W. H.P.S., 725.11, 480 VOLT | |
| 625 | | 26 | | 625 | 26250 | 26 | EACH | LUMINAIRE CONVENTIONAL, STYLE B TYPE II, 310 W. H.P.S., 725.11, 480 VOLT | |
| 625 | | 13 | | 625 | 26270 | 13 | EACH | LUMINAIRE LOW MAST, STYLE C TYPE III, 400 W. H.P.S., 480 VOLT | |
| 625 | | 8 | | 625 | 27500 | 8 | EACH | LUMINAIRE UNDERPASS 70 W. H.P.S. 480VOLT, 725.13 | |
| 625 | | 11039 | | 625 | 29002 | 11039 | FT. | TRENCH, 24" DEEP | |
| 625 | | 40 | | 625 | 29600 | 40 | FT. | TRENCH IN PAVED AREAS, TYPE B | |
| 625 | | 14 | | 625 | 30700 | 14 | EACH | PULL BOX, 725.08, 18" | |
| 625 | | 45 | | 625 | 32000 | 45 | EACH | GROUND ROD | |
| 625 | | 2 | | 625 | 33000 | 2 | EACH | STRUCTURE GROUNDING SYSTEM | |
| 625 | | 1 | | 625 | 34001 | 1 | EACH | POWER SERVICE, AS PER PLAN | 329 |
| 625 | | 4 | | 625 | 37101 | 4 | EACH | SERVICE TO UNDERPASS LIGHTING, AS PER PLAN | 329, 339 |
| 625 | LUMP | | | 625 | 38000 | LUMP | | HIGH VOLTAGE TEST | |
| SPECIAL | LUMP | | | SPECIAL | 62540000 | LUMP | | MAINTAIN EXISTING LIGHTING | |
| SPECIAL | 1 | | | SPECIAL | 62540010 | 1 | EACH | REPLACEMENT OF EXISTING LIGHTING UNIT | |

LIGHTING SUMMARY

| SHEET NO. | REFERENCE NO. | STATION | | SIDE | 625 | | | | | | | | | | | | | | | | | | | | | | CONDUIT, 3", 725.04 | CONDUIT, JACKED OR DRILLED UNDER PAVT, 3", 725.04 | LUMINAIRE CONVENTIONAL, STYLE B TYPE II, 200 W. H.P.S., 725.11, 480 V. | LUMINAIRE CONVENTIONAL, STYLE B TYPE II, 310 W. H.P.S., 725.11, 480 V. | LUMINAIRE LOW MAST, TYPE III, 400 W. H.P.S., 480 V. | LUMINAIRE UNDERPASS 70W. H.P.S. 480V., 725.13 | TRENCH, 24 IN. DEEP | TRENCH IN PAVED AREAS, TYPE B | PULL BOX, 725.08, 18" | GROUND ROD | STRUCTURE GROUNDING SYSTEM | SERVICE TO UNDERPASS LIGHTING, AS PER PLAN | POWER SERVICE, AS PER PLAN | | |
|----------------------------------|---------------|----------|----------|------|------------------------|--------------------|-----------------------------|-----------------------------|------------------------------|--|----------------------------------|--|---|---|--|----------------------|--|---------------------------------------|---|------|-----|------|-----|-----|------|-------|---------------------|---|---|---|--|---|---------------------|-------------------------------|-----------------------|------------|----------------------------|---|-------------------------------|------|------|
| | | FROM | TO | | CONNECTOR KIT, TYPE II | CABLE SPlicing KIT | LIGHT POLE DESIGN AT10B41.7 | LIGHT POLE DESIGN AT12B41.7 | LIGHT POLE, DESIGN AT18B51.7 | LOW MAST LIGHT POLE DESIGN ATON51.7 | LIGHT POLE, MISC.: DESIGN A30B50 | LIGHT POLE, MISC.: LOW MAST LIGHT POLE, AON50 | LIGHT POLE, MISC.: LOW MAST LIGHT POLE, DESIGN AON55 | LIGHT POLE FOUNDATION 24 IN. X 8" DEEP | LIGHT POLE FOUNDATION 24 IN. X 10" DEEP | BRACKET ARM = 10 FT. | NO. 2 AWG, 5000 V. DISTRIBUTION CABLE | NO. 10 AWG, POLE AND BRACKET CABLE | 1-1/2" DUCT CABLE W/ 3 NO. 2 AWG, 5000 V. CABLES | FT. | FT. | EACH | FT. | FT. | EACH | EACH | | | | | | | | | | | | | | EACH | EACH |
| | | S.R. 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | AB1 | | 145+95 | RT. | 2 | | 1 | | | | | 1 | | | | | 124 | | | 1 | | | | | | | | | | | | | | | | | 1 | | | | |
| 335 | AB1 & PB2 | 145+95 | 146+59 | RT. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | PB2 & PB1 | 146+59 | 147+36 | RT. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | PB1 & PS | 147+36 | 147+35 | RT. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | PS & AB2 | 147+35 | 147+44.5 | RT. | 2 | | | | | | | | | | | 96 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | PS & AB3 | 147+35 | 149+05 | RT. | 2 | | | 1 | | | | | | | | | 100 | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | AB3 & PB8 | 149+05 | 149+40 | RT. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | PB8 & PB8A | 149+40 | 150+65 | RT. | | | | | | | | | | | | | 375 | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | DB10 | | 146+05 | LT. | 2 | | 1 | | | | | | | | | | 104 | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | DB10 & PB17 | 146+05 | 146+50 | LT. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | PB17 & PB16 | 146+50 | 147+51.5 | LT. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | PB16 & PB9 | | 147+51.5 | LT. | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | PB16 & DB8 | 147+51.5 | 149+23 | LT. | 2 | | 1 | | | | | | | | | | 100 | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| 335 | DB8 & PB15 | 149+23 | 149+82 | LT. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | PB15 & PB14 | 149+82 | 151+00 | LT. | | | | | | | | | | | | | 384 | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | PB17 & DB11 | 146+50 | 1+60 B | LT. | 2 | | | | | | | | 1 | | | | 140 | 85 | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | DB11 & DB12 | 1+60 B | 4+05 B | LT. | 2 | | | | | | | | 1 | | | | 140 | 255 | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | DB 12 & DB13 | 4+05 B | 6+54 B | LT. | 2 | | | | | | | | 1 | | | | 140 | 259 | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | DB13 & DB14 | 6+54 B | 8+72 B | LT. | 2 | | | | | | | | 1 | | | | 140 | 228 | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | DB14 & PB18 | 8+72 B | 9+20 B | LT. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | PB18 & DB20 | 9+20 B | 985+62 | LT. | 2 | | | | | | 1 | | | | | | 225 | 104 | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | DB22 | | 980+12 | LT. | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | DB22 & DB21 | 980+12 | 982+87 | LT. | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | DB21 & DB20 | 982+87 | 985+62 | LT. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 335 | PB18 & DB15 | 9+20 B | 11+18 | LT. | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 336 | DB15 & DB16 | 11+18 B | 13+75 B | LT. | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 336 | DB16 & DB17 | 13+75 B | 992+90 | LT. | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 336 | DB17 & DB 18 | 992+90 | 995+60 | LT. | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 336 | DB18 & DB19 | 995+60 | 998+30 | LT. | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 336 | DC3 & DC4 | 7+19 D | 9+80 D | RT. | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUBTOTALS THIS SHEET | | | | | 38 | 18 | 3 | 1 | 9 | 1 | | | | 2 | 4 | 12 | 2 | 1080 | 2204 | 3867 | 482 | 137 | 6 | 9 | 3 | 4 | 3923 | | | | | | | | | | | | | | |
| SUBTOTALS FROM SHEET 331 | | | | | 64 | 36 | 1 | | 15 | 4 | 2 | 4 | 3 | 1 | 28 | 4 | 1023 | 4180 | 7502 | 255 | 326 | 6 | 17 | 10 | 4 | 7116 | 40 | 9 | 29 | 1 | 2 | 1 | | | | | | | | | |
| GRAND TOTAL CARRIED TO SHEET 330 | | | | | 102 | 54 | 4 | 1 | 24 | 5 | 2 | 4 | 5 | 5 | 40 | 6 | 2103 | 6384 | 11369 | 737 | 463 | 12 | 26 | 13 | 8 | 11039 | 40 | 14 | 45 | 2 | 4 | 1 | | | | | | | | | |

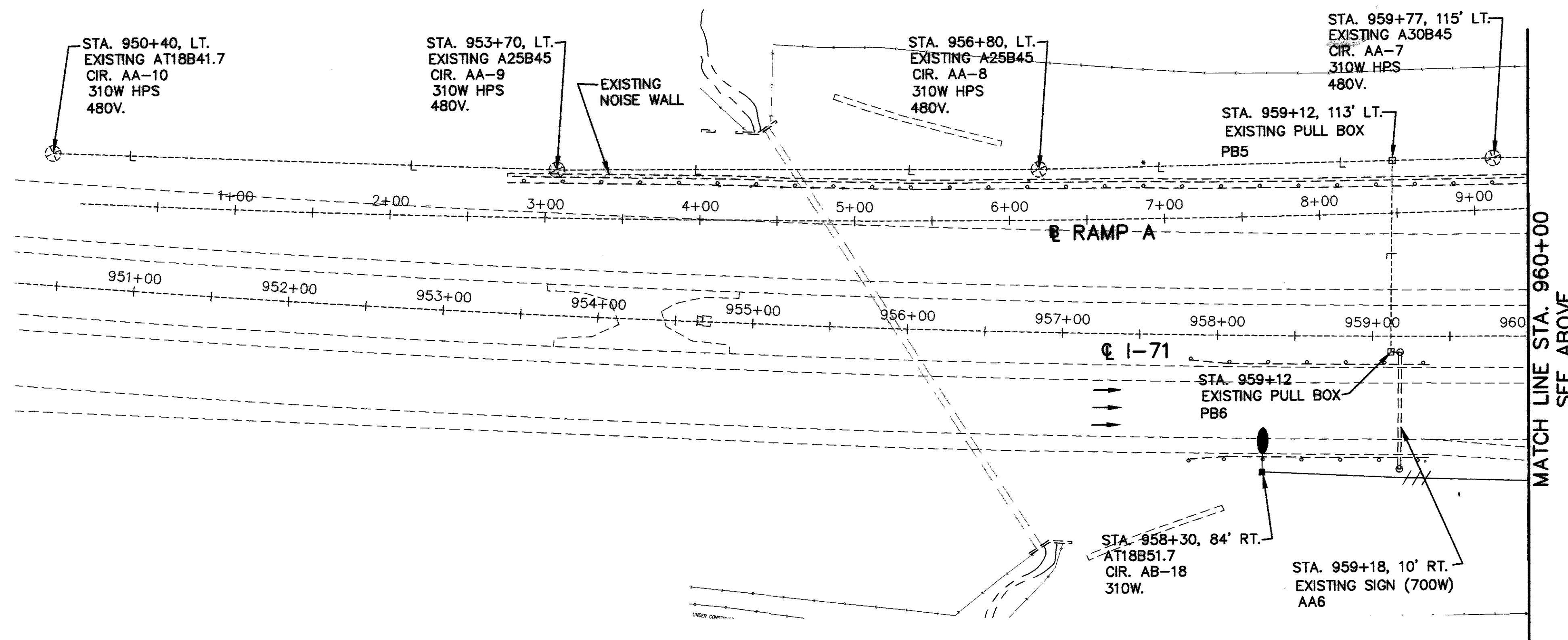
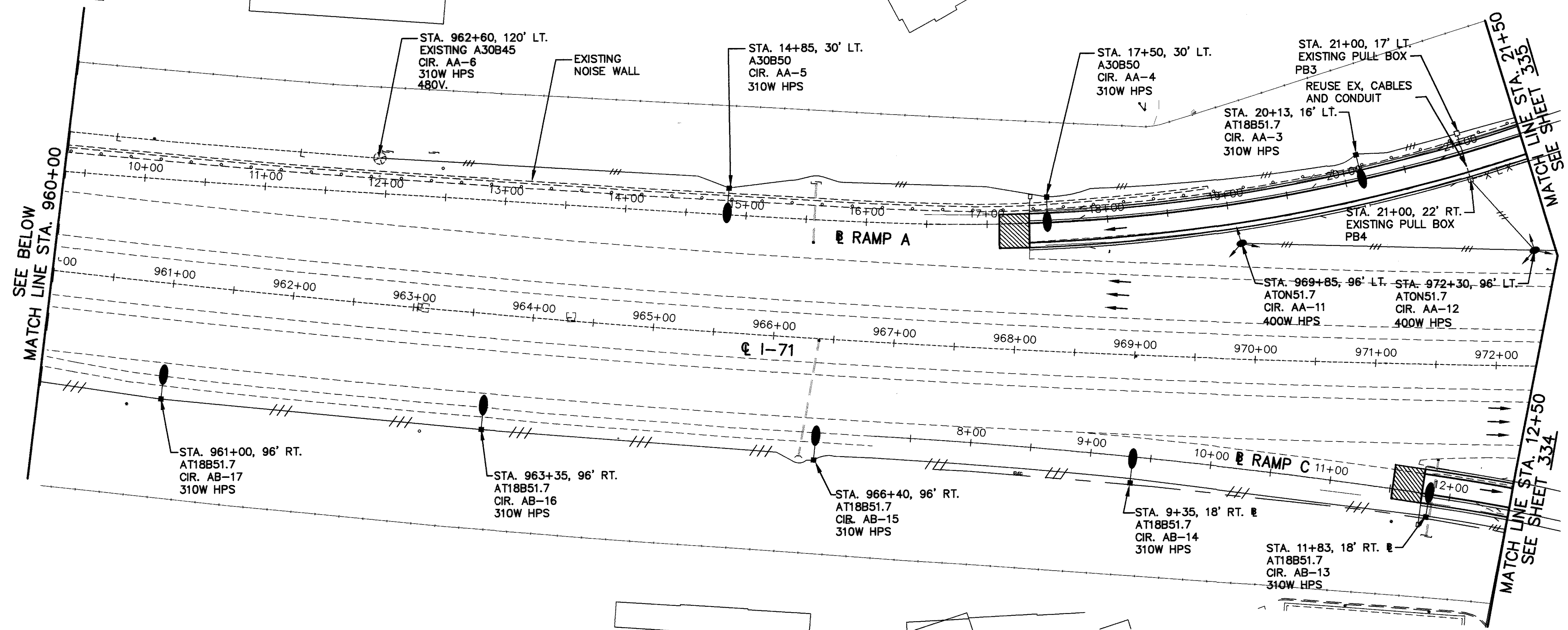


CALCULATED
CHECKED

LIGHTING PLAN
STA. 955+50 TO STA. 972+00

MED - 18 - 15.13

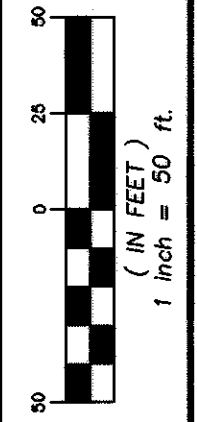
333
362



LEGEND

- ⊕ EXISTING LIGHT POLE
 - EXISTING OVERHEAD GUIDE SIGN
 - LUMINAIRE CONVENTIONAL, 200W HPS (SR 18)
 - LUMINAIRE CONVENTIONAL, 310W HPS (RAMPS)
 - PULL BOX, 725.08, 18" (EXISTING)
 - PULL BOX, 725.08, 18"
 - ⊕ EXISTING POWER SERVICE
 - PROPOSED POWER SERVICE
 - ⊕ PROPOSED SERVICE POLE
 - 1 1/2" DUCT CABLE W/3 CABLES
 - CONDUIT, 725.04, 2"
 - CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 3", 725.04
 - CONDUIT, 725.04, 3"
 - UP UNDERPASS LIGHTING
 - ⊕ STRUCTURE GROUNDING
 - LOW MAST, 400W HPS, 50' MOUNTING HEIGHT
 - X-L-X- EXISTING LIGHTING CIRCUIT, TO BE ABANDONED
 - (R) TO BE REMOVED
 - 2" CONDUIT FOR FUTURE USE
 - EXISTING LIGHTING CIRCUIT TO REMAIN
- FOR LIGHTING QUANTITIES
SEE SHEET NO. 331.
- FOR LIGHTING GENERAL NOTES
SEE SHEET NO. 329.

J:\Proj3\7050600\lighting\70506LPA.DWG User: jan81152 Jul 18, 2003 - 10:20am

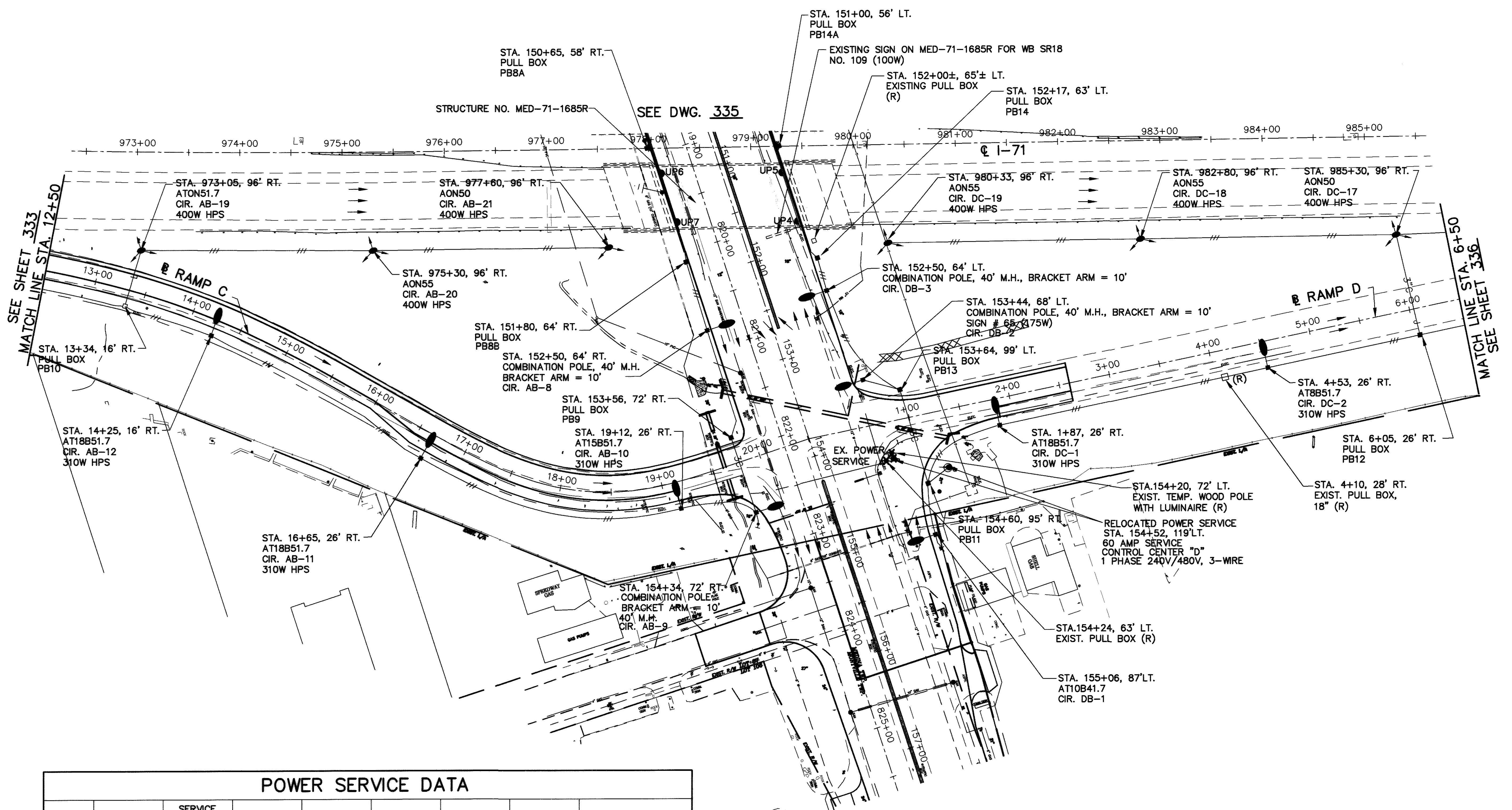


CALCULATED
CHECKED

LIGHTING PLAN
STA. 972+00 TO STA. 986+50

MED - 18 - 15.13

334
362



POWER SERVICE DATA

| POWER SERVICE | CONNECTED LOAD -KVA | SERVICE ENTRANCE CONDUCTOR SIZE - AWG | ENCLOSURE RATING -AMPS | CIRCUIT NUMBER | CIRCUIT LOAD -AMPS | CIRCUIT FUSE SIZE -AMPS | MAINTAINING AGENCY | REMARKS |
|---------------|---------------------|---------------------------------------|------------------------|----------------|--------------------|-------------------------|--------------------|--|
| SR-18 | | | | | | | | OHIO EDISON CO. POWER SUPPLYING AGENCY |
| D | 18.41 | 4 | 60 | DB DC | 15.72 22.64 | 30 30 | ODOT | |

FOR LEGEND
SEE SHEET NO. 333

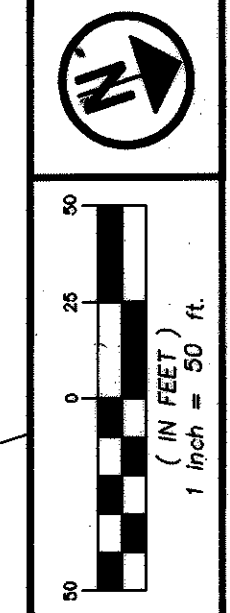
FOR LIGHTING QUANTITIES
SEE SHEET NO. 331

FOR LIGHTING GENERAL NOTES
SEE SHEET NO. 329

FOR UNDERPASS LIGHTING
SEE SHEET NO. 339

J:\Pro3\7050600\lighting\70506LBPB.DWG User: jrn81152 Jul 20, 2003 - 2:03pm

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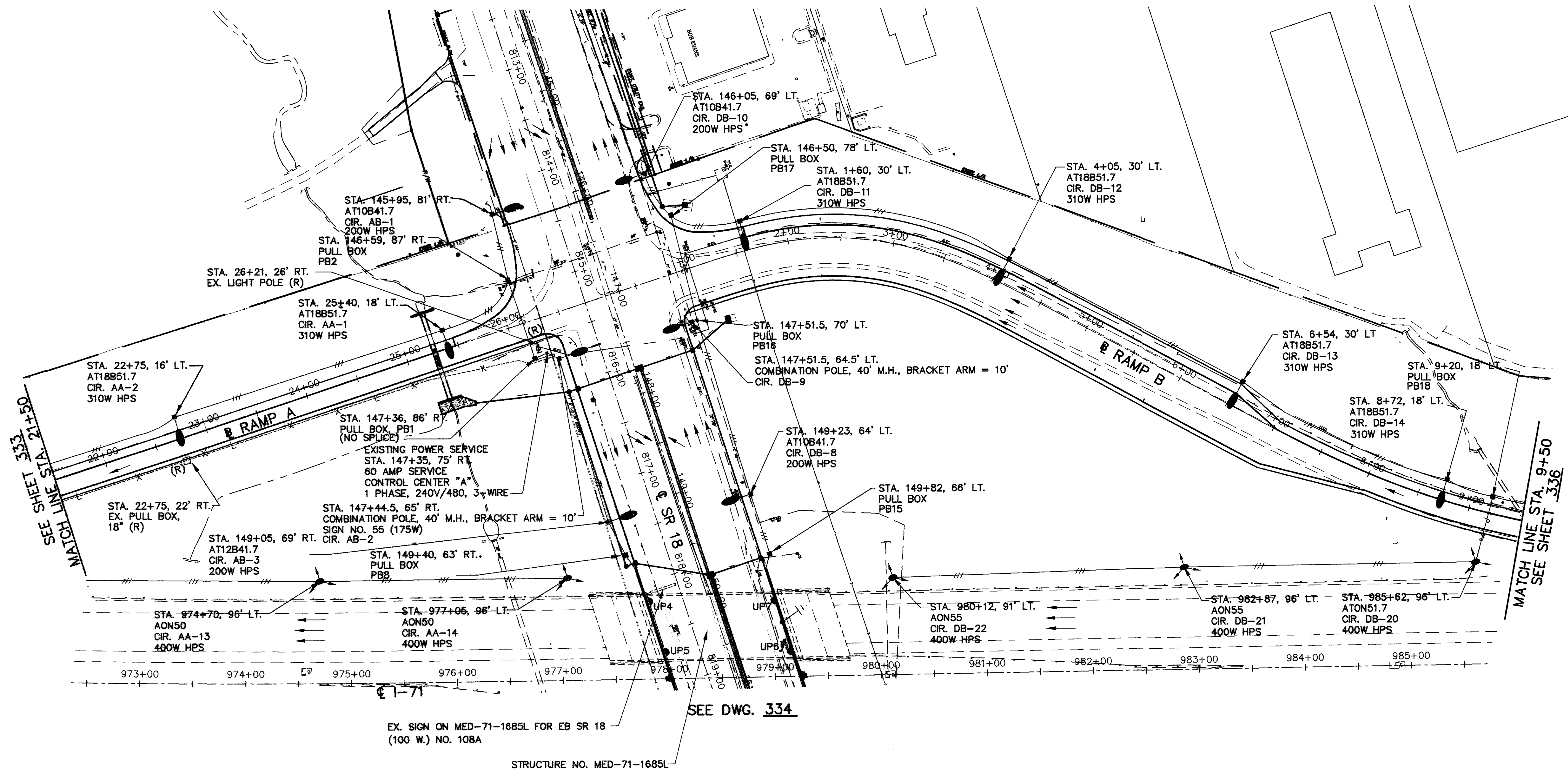


CALCULATED
CHECKED

LIGHTING PLAN
STA. 972+00 TO STA. 986+50

MED - 18 - 15.13

335
362

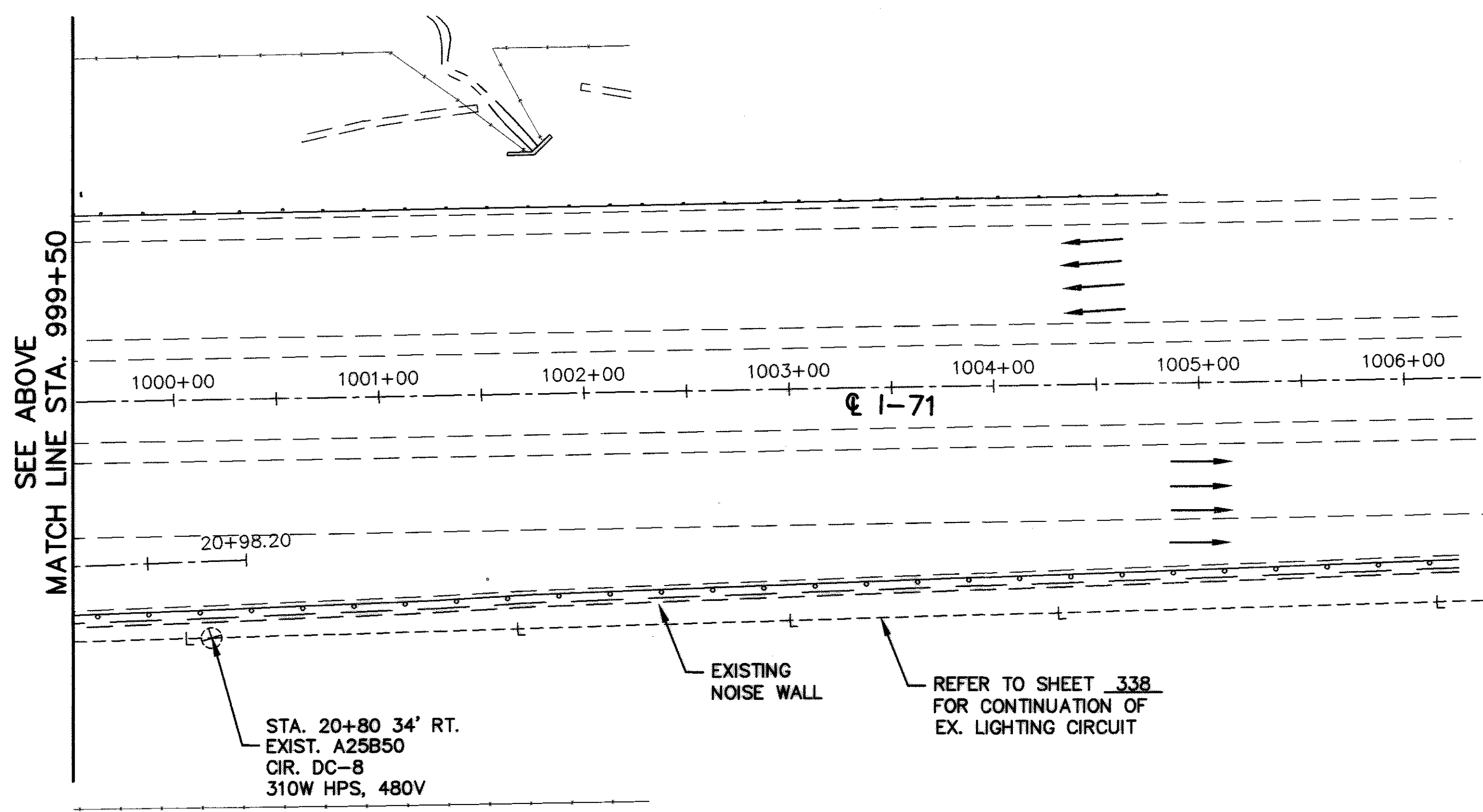
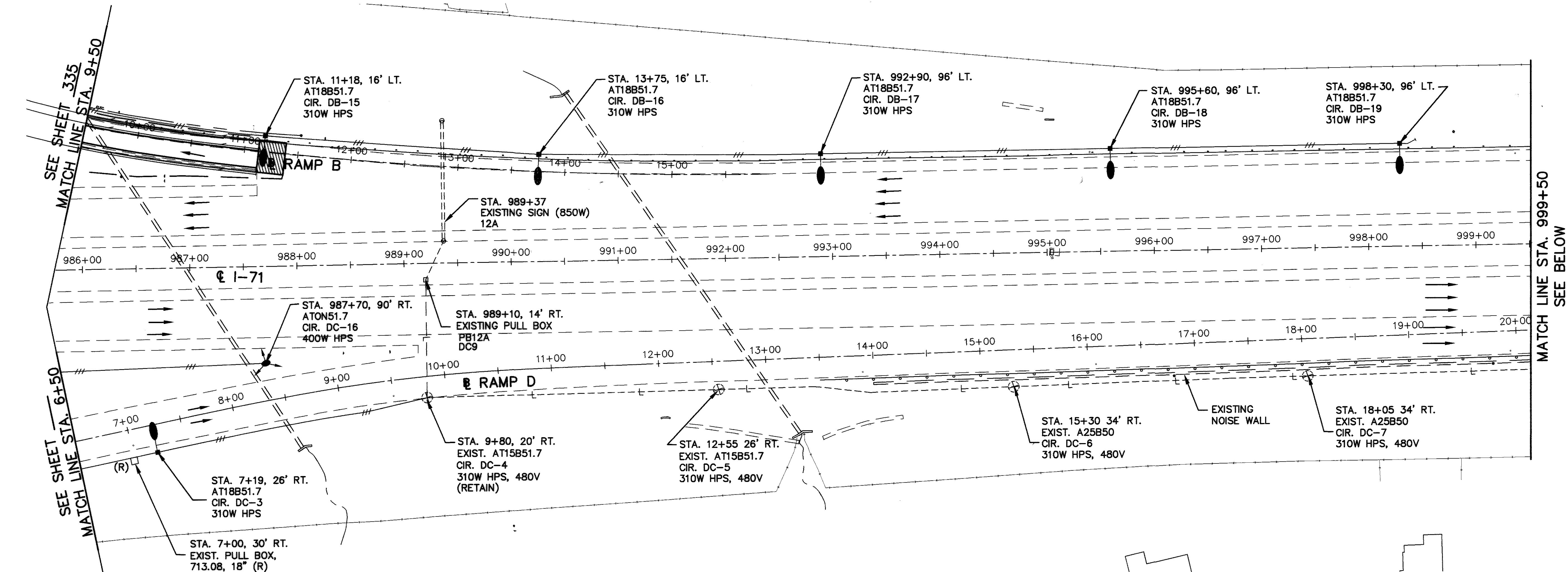


POWER SERVICE DATA

| POWER SERVICE | CONNECTED LOAD -KVA | SERVICE ENTRANCE CONDUCTOR SIZE - AWG | ENCLOSURE RATING -AMPS | CIRCUIT NUMBER | CIRCUIT LOAD -AMPS | CIRCUIT FUSE SIZE -AMPS | MAINTAINING AGENCY | REMARKS |
|---------------|---------------------|---------------------------------------|------------------------|----------------|--------------------|-------------------------|--------------------|--|
| SR-18 | | | | | | | | OHIO EDISON CO. POWER SUPPLYING AGENCY |
| A | 13.72 | 4 | 60 | AA AC | 13.40 15.19 | 30 30 | ODOT | |

FOR LEGEND
SEE SHEET NO. 333.
FOR LIGHTING QUANTITIES
SEE SHEET NO. 331 - 332.
FOR LIGHTING GENERAL NOTES
SEE SHEET NO. 329.
FOR UNDERPASS LIGHTING
SEE SHEET NO. 339.

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| LOCATION | 202 | | | | | | |
|-------------------------------|--|--------------------------------|-------------------|---------------------------------|---|-----------------------------|------------------------------------|
| | REMOVAL MISC.: BRACKET ARM, REMOVED, AS PER PLAN | LUMINAIRE REMOVED, AS PER PLAN | PULL BOX, REMOVED | LIGHT POLE REMOVED, AS PER PLAN | LIGHT POLE, FOUNDATION REMOVED, AS PER PLAN | DISCONNECT EXISTING CIRCUIT | POWER SERVICE REMOVED, AS PER PLAN |
| | EACH | EACH | EACH | EACH | EACH | EACH | EACH |
| STA. 22+75, 22' RT., RAMP 'A' | | | 1 | | | | |
| STA. 26+21, 26' RT., RAMP 'A' | 1 | 1 | | | | | |
| STA. 154+20, 72' RT., S.R.18 | | 1 | | | | | |
| STA. 154+24, 68' LT., S.R.18 | | | | | | | 1 |
| STA. 959+40, 104' RT., I-71 | | 1 | | 1 | 1 | | |
| STA. 4+10, 28' RT., RAMP 'D' | | | 1 | | | | |
| STA. 7+00, 30' RT., RAMP 'D' | | | 1 | | | | |
| STA. 152+00, 65' LT., SR18 | | | 1 | | | | |
| CIRCUIT A | | | | | | 1 | |
| CIRCUIT D | | | | | | 1 | |
| SUBTOTAL | 1 | 3 | 4 | 1 | 1 | 2 | 1 |

FOR LEGEND SEE SHEET NO. 333.
 FOR LIGHTING QUANTITIES SEE SHEET NO. 332.
 FOR LIGHTING GENERAL NOTES SEE SHEET NO. 329.

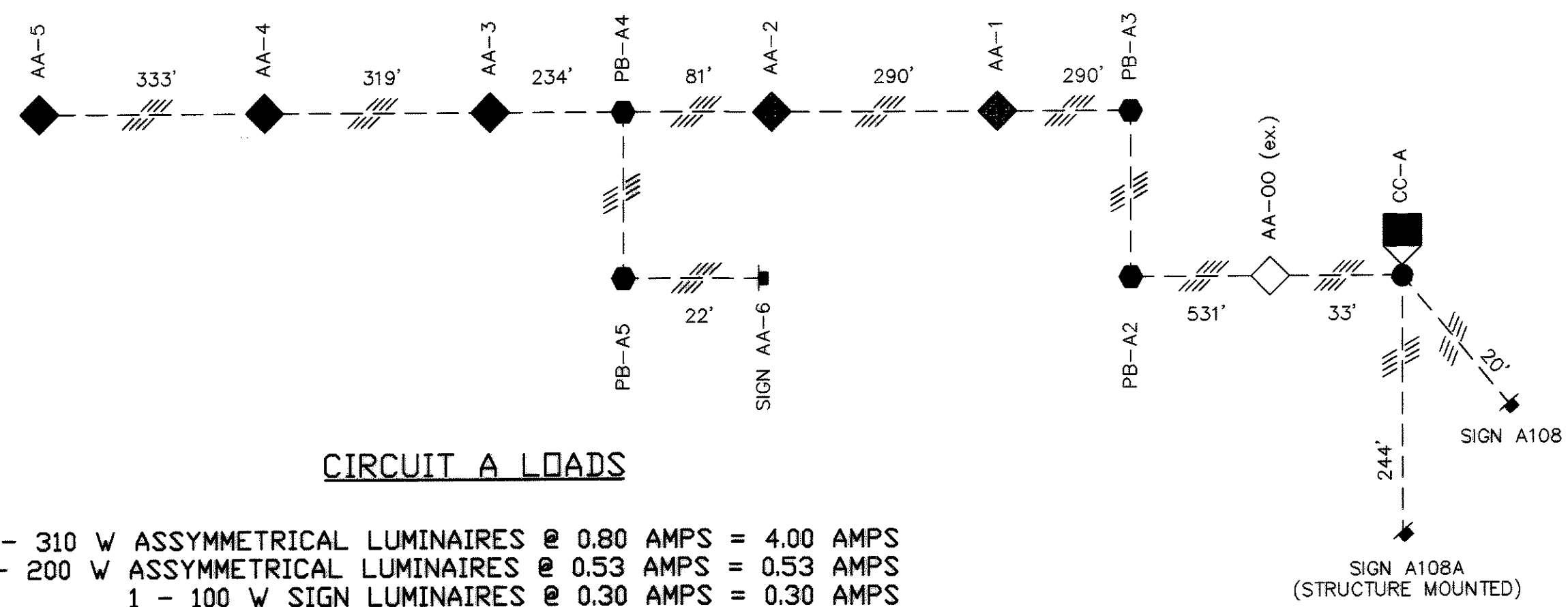
CALCULATED
 EDR
 CHECKED
 RER

LIGHTING PLAN
 STA. 986+50 TO STA. 1001+00

MED - 18 - 15.13

336
 362

SR-18 CIRCUIT A



CIRCUIT A LOADS

5 - 310 W ASSYMMETRICAL LUMINAIRES @ 0.80 AMPS = 4.00 AMPS
 1 - 200 W ASSYMMETRICAL LUMINAIRES @ 0.53 AMPS = 0.53 AMPS
 1 - 100 W SIGN LUMINAIRES @ 0.30 AMPS = 0.30 AMPS
 6 - 175 W SIGN LUMINAIRES @ 0.40 AMPS = 2.40 AMPS
TOTAL LOAD ON CIRCUIT A = 7.23 AMPS

CIRCUIT DIAGRAMS

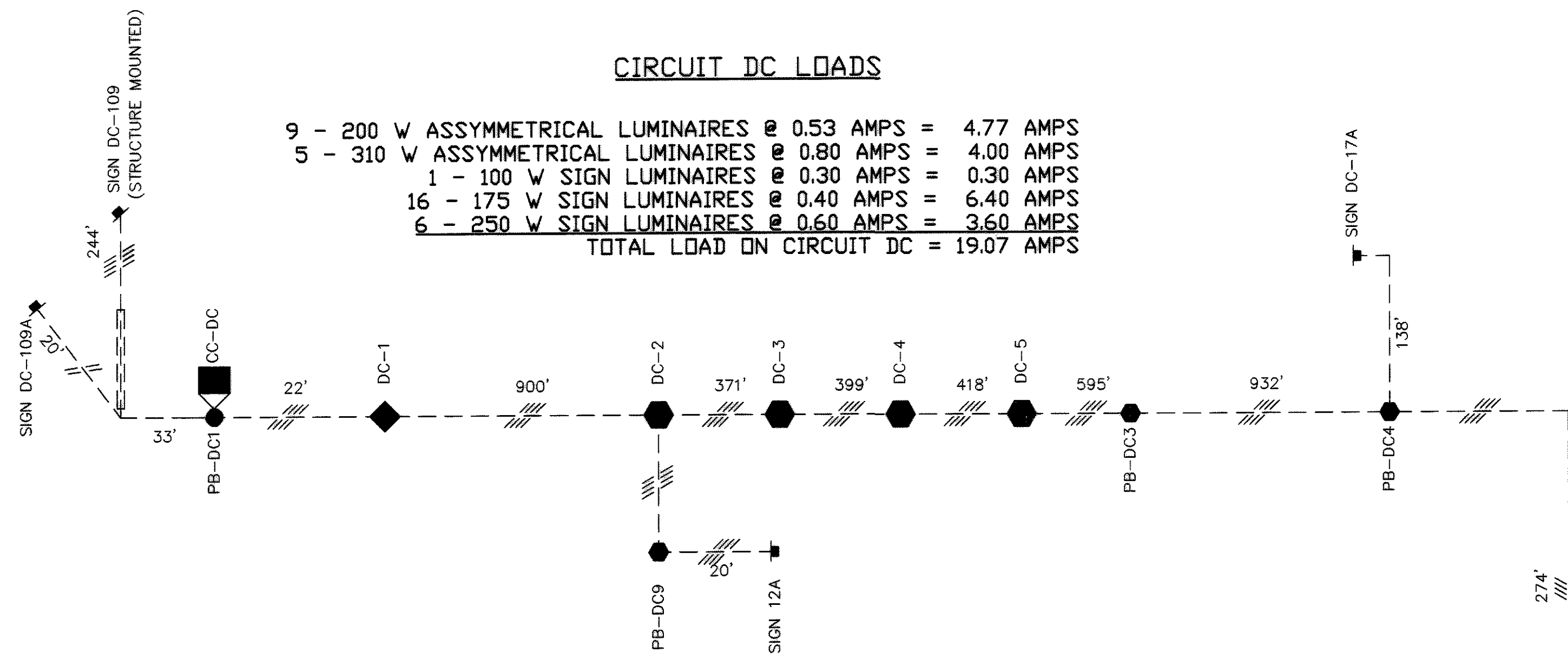
- //--- 1-1/2" DUCT CABLE W/3 NO. 4 AWG WIRE
- //--- 1-1/2" DUCT CABLE W/3 NO. 2 AWG WIRE
- 3 NO. 4 AWG DISTRIBUTION CABLE
- ==== 3 NO. 2 AWG DISTRIBUTION CABLE

CONTROL CENTER DATA

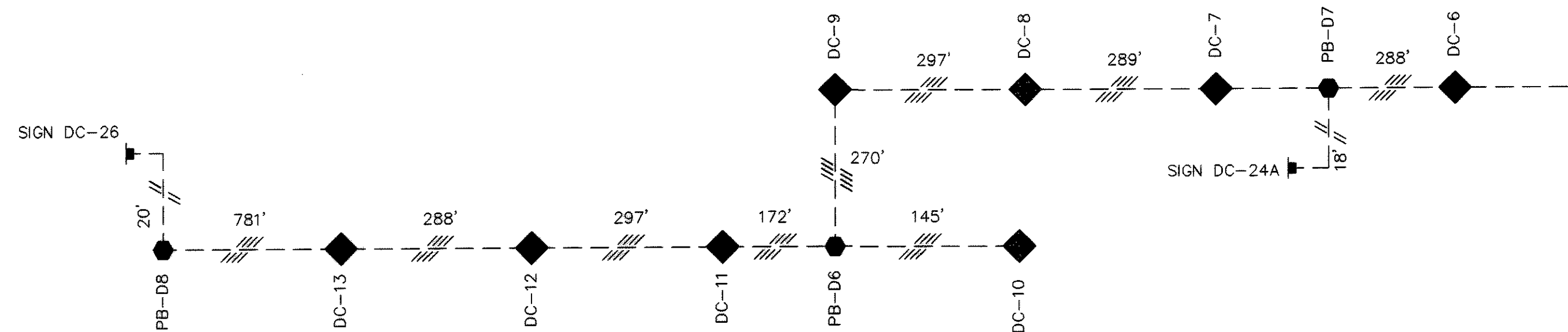
| CONTROL CENTER | CONNECTED LOAD -KVA | SERVICE ENTRANCE CONDUCTOR SIZE - AWG | ENCLOSURE RATING -AMPS | CIRCUIT NUMBER | CIRCUIT LOAD -AMPS | CIRCUIT FUSE SIZE -AMPS | MAINTAINING AGENCY |
|----------------|---------------------|---------------------------------------|------------------------|----------------|--------------------|-------------------------|--------------------|
| SR-18 | | | | | | | |
| A | 3.47 | 4 | 60 | A | 7.23 | 60 | ODOT |

CIRCUIT DC LOADS

9 - 200 W ASSYMMETRICAL LUMINAIRES @ 0.53 AMPS = 4.77 AMPS
 5 - 310 W ASSYMMETRICAL LUMINAIRES @ 0.80 AMPS = 4.00 AMPS
 1 - 100 W SIGN LUMINAIRES @ 0.30 AMPS = 0.30 AMPS
 16 - 175 W SIGN LUMINAIRES @ 0.40 AMPS = 6.40 AMPS
 6 - 250 W SIGN LUMINAIRES @ 0.60 AMPS = 3.60 AMPS
TOTAL LOAD ON CIRCUIT DC = 19.07 AMPS



SR-18 CIRCUIT DC



CONTROL CENTER DATA

| CONTROL CENTER | CONNECTED LOAD -KVA | SERVICE ENTRANCE CONDUCTOR SIZE - AWG | ENCLOSURE RATING -AMPS | CIRCUIT NUMBER | CIRCUIT LOAD -AMPS | CIRCUIT FUSE SIZE -AMPS | MAINTAINING AGENCY |
|----------------|---------------------|---------------------------------------|------------------------|----------------|--------------------|-------------------------|--------------------|
| SR-18 | | | | | | | |
| D | 9.15 | 2 | 60 | DC | 19.07 | 60 | ODOT |

NOTE: THIS SHEET INTENDED FOR REFERENCE ONLY.

CIRCUIT AA
 10 - 310 W H.P.S. LUMINAIRES @ 0.80 AMPS = 8.00 AMPS
 4 - 400 W H.P.S. LUMINAIRES @ 1.00 AMPS = 4.00 AMPS
 EX. SIGN #AA6 700W, SIGN LUMINAIRES = 1.40 AMPS
TOTAL CIRCUIT A = 13.40 AMPS

CIRCUIT AB
 5 - 200 W H.P.S. LUMINAIRES @ 0.53 AMPS = 2.65 AMPS
 4 - 70 W UNDERPASS LUMINAIRES @ 0.31 AMPS = 1.24 AMPS
 9 - 310 W H.P.S. LUMINAIRES @ 0.80 AMPS = 7.20 AMPS
 3 - 400 W H.P.S. LOW MAST LUMINAIRES @ 1.00 AMPS = 3.00 AMPS
 EX. SIGN #108A 100 W SIGN LUMINAIRES = 0.30 AMPS
 SIGN #55 350 W SIGN LUMINAIRES = 0.80 AMPS
TOTAL CIRCUIT AB = 15.19 AMPS

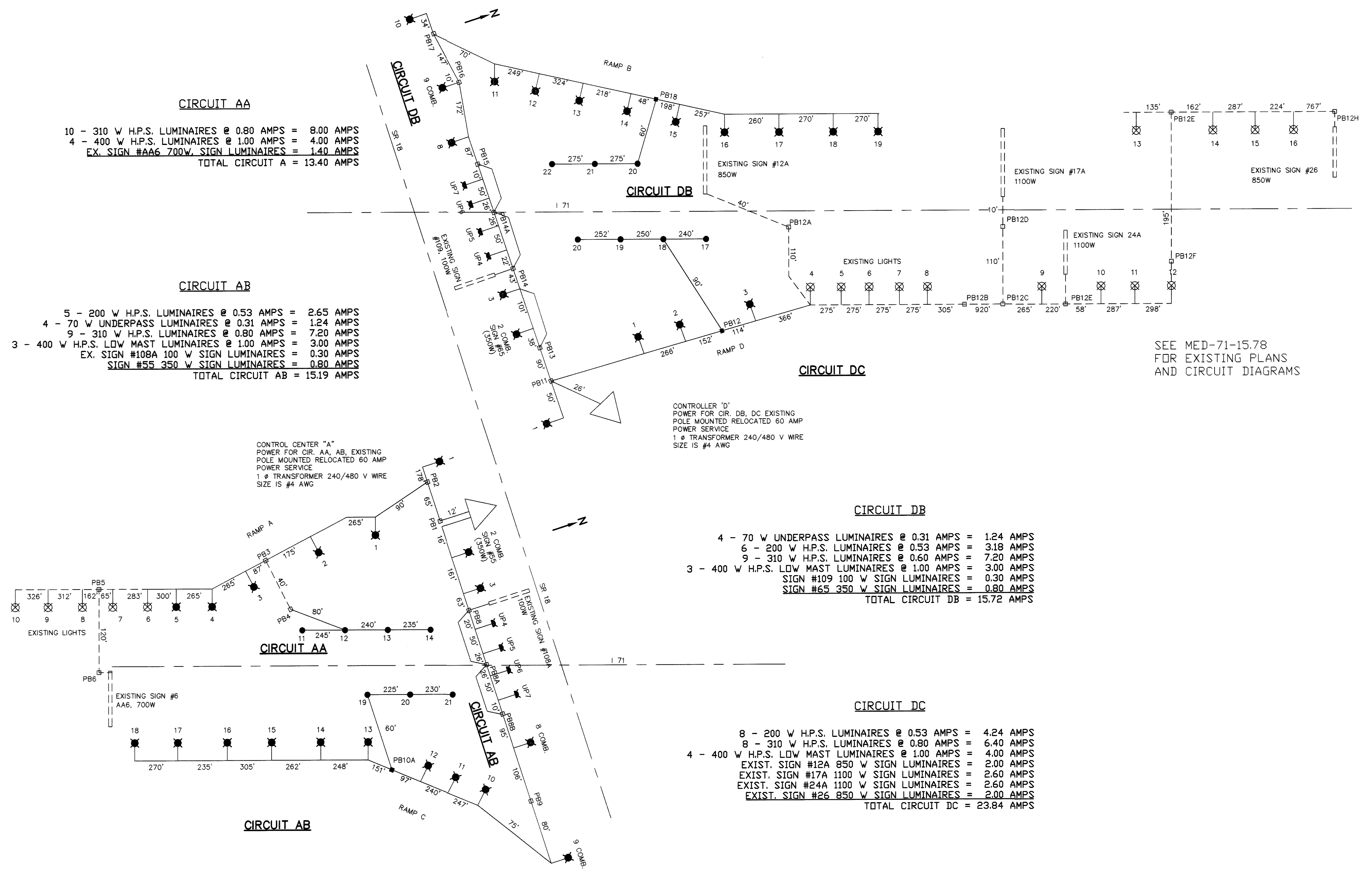
CIRCUIT DB
 4 - 70 W UNDERPASS LUMINAIRES @ 0.31 AMPS = 1.24 AMPS
 6 - 200 W H.P.S. LUMINAIRES @ 0.53 AMPS = 3.18 AMPS
 9 - 310 W H.P.S. LUMINAIRES @ 0.60 AMPS = 7.20 AMPS
 3 - 400 W H.P.S. LOW MAST LUMINAIRES @ 1.00 AMPS = 3.00 AMPS
 SIGN #109 100 W SIGN LUMINAIRES = 0.30 AMPS
 SIGN #65 350 W SIGN LUMINAIRES = 0.80 AMPS
TOTAL CIRCUIT DB = 15.72 AMPS

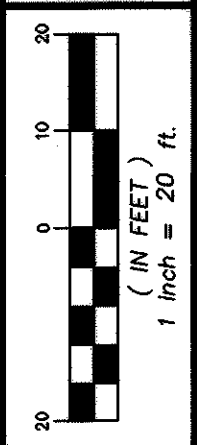
CIRCUIT DC
 8 - 200 W H.P.S. LUMINAIRES @ 0.53 AMPS = 4.24 AMPS
 8 - 310 W H.P.S. LUMINAIRES @ 0.80 AMPS = 6.40 AMPS
 4 - 400 W H.P.S. LOW MAST LUMINAIRES @ 1.00 AMPS = 4.00 AMPS
 EXIST. SIGN #12A 850 W SIGN LUMINAIRES = 2.00 AMPS
 EXIST. SIGN #17A 1100 W SIGN LUMINAIRES = 2.60 AMPS
 EXIST. SIGN #24A 1100 W SIGN LUMINAIRES = 2.60 AMPS
 EXIST. SIGN #26 850 W SIGN LUMINAIRES = 2.00 AMPS
TOTAL CIRCUIT DC = 23.84 AMPS

SEE MED-71-15.78
 FOR EXISTING PLANS
 AND CIRCUIT DIAGRAMS

CONTROL CENTER "A"
 POWER FOR CIR. AA, AB, EXISTING
 POLE MOUNTED RELOCATED 60 AMP
 POWER SERVICE
 1 Ø TRANSFORMER 240/480 V WIRE
 SIZE IS #4 AWG

CONTROLLER "D"
 POWER FOR CIR. DB, DC EXISTING
 POLE MOUNTED RELOCATED 60 AMP
 POWER SERVICE
 1 Ø TRANSFORMER 240/480 V WIRE
 SIZE IS #4 AWG

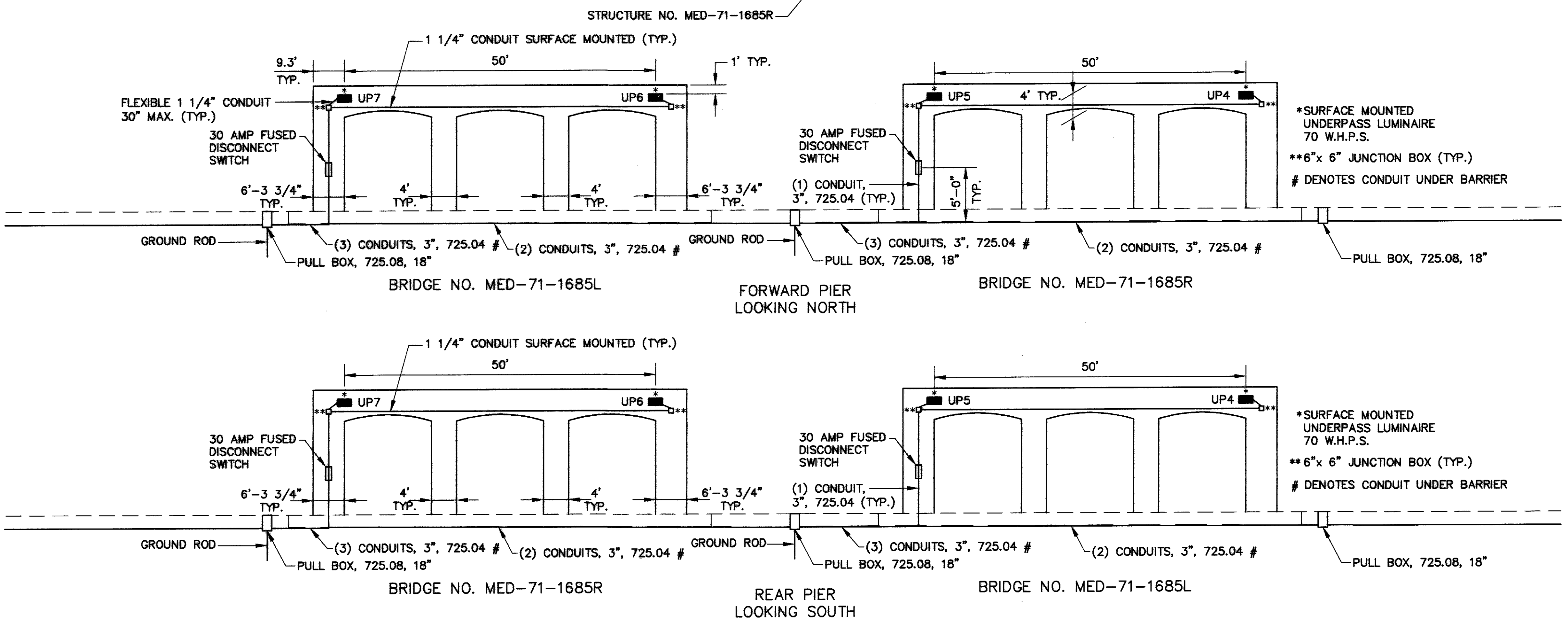
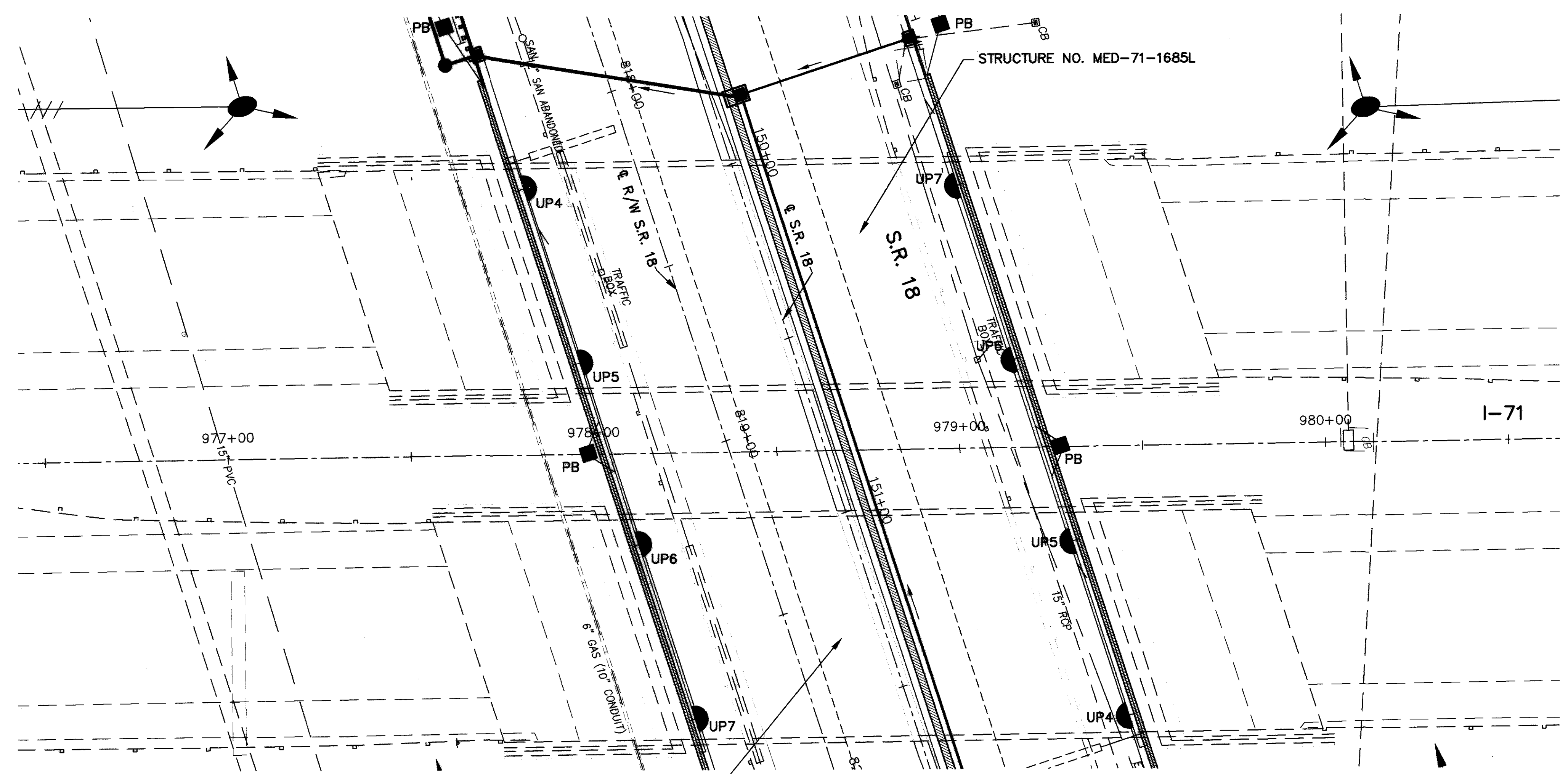




CALCULATED
CHECKED

**UNDERPASS LIGHTING DETAIL
I-71 OVER S.R. 18**

MED - 18 - 15.13



J:\Proj3\7050600\lighting\705061DA.DWG User: jon81152 Jul 21, 2003 - 11:24am

T 3 N, R 14 W
 LOTS 74 AND 75
 MEDINA TOWNSHIP
 MEDINA COUNTY

BASIS OF BEARINGS

ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE PLANE COORDINATE GRID SYSTEM, NORTH ZONE, NAD 83, AS DETERMINED BY GPS.

NOTE: THE EXISTING CENTERLINE OF R/W WAS DETERMINED FROM R/W PLAN S.H. 95, SEC. A & B, R/W PLAN MED-18-14.99, R/W PLAN MED-18-16.08, MONUMENTS FOUND, DEEDS, AND TAX MAPS.

| MONUMENT TO BE SET DURING CONSTRUCTION | | | |
|--|------------------|--------|----------|
| STATION | DIST. FROM C R/W | | NO. |
| | LT. C | RT. C | |
| P.C. 777+55.09 | 50.00 | 35.00 | 2 |
| P.T. 783+08.56 | 60.00 | | 1 |
| P.O.T. 783+50.00 | | 35.00 | 1 |
| P.O.T. 792+00.00 | 80.00 | 70.00 | 2 |
| P.I. 798+87.08 | 91.46 | | EX. MON. |
| P.O.T. 807+00.00 | 80.00 | 50.00 | 2 |
| P.O.T. 814+50.00 | 110.00 | 100.00 | 2 |
| P.O.T. 823+00.00 | 130.00 | | 1 |
| P.O.T. 823+73.30 | | 84.93 | EX. MON. |
| P.O.T. 832+00.09 | 150.09 | | EX. MON. |
| P.O.T. 834+20.31 | | 40.64 | EX. MON. |
| P.O.T. 839+00.00 | 90.00 | | 1 |
| P.O.T. 842+00.00 | | 40.00 | 1 |
| P.O.T. 845+00.00 | 100.00 | | 1 |
| TOTAL PROPOSED MONUMENTS | | | 14 |
| TOTAL EXISTING MONUMENTS | | | 4 |
| TOTAL MONUMENTS | | | 18 |

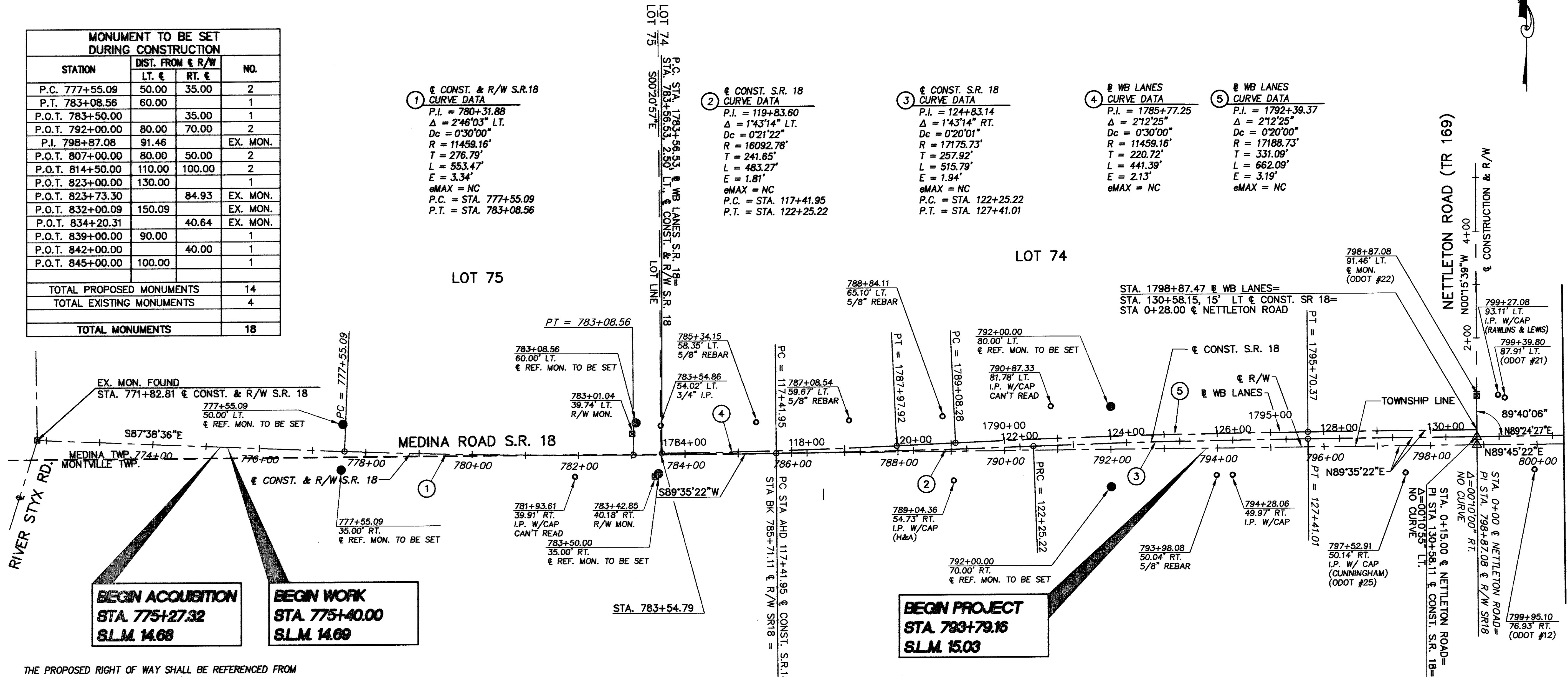
① **CONST. & R/W S.R. 18 CURVE DATA**
 P.I. = 780+31.88
 $\Delta = 2'46'03''$ LT.
 $Dc = 0'30'00''$
 $R = 11459.16'$
 $T = 276.79'$
 $L = 553.47'$
 $E = 3.34'$
 $eMAX = NC$
 P.C. = STA. 777+55.09
 P.T. = STA. 783+08.56

② **CONST. S.R. 18 CURVE DATA**
 P.I. = 119+83.60
 $\Delta = 1'43'14''$ RT.
 $Dc = 0'21'22''$
 $R = 16092.78'$
 $T = 241.65'$
 $L = 483.27'$
 $E = 1.81'$
 $eMAX = NC$
 P.C. = STA. 117+41.95
 P.T. = STA. 122+25.22

③ **CONST. S.R. 18 CURVE DATA**
 P.I. = 124+83.14
 $\Delta = 1'43'14''$ RT.
 $Dc = 0'20'01''$
 $R = 17175.73'$
 $T = 257.92'$
 $L = 515.79'$
 $E = 1.94'$
 $eMAX = NC$
 P.C. = STA. 122+25.22
 P.T. = STA. 127+41.01

④ **WB LANES CURVE DATA**
 P.I. = 1785+77.25
 $\Delta = 2'12'25''$
 $Dc = 0'30'00''$
 $R = 11459.16'$
 $T = 220.72'$
 $L = 441.39'$
 $E = 2.13'$
 $eMAX = NC$

⑤ **WB LANES CURVE DATA**
 P.I. = 1792+39.37
 $\Delta = 2'12'25''$
 $Dc = 0'20'00''$
 $R = 17188.73'$
 $T = 331.09'$
 $L = 662.09'$
 $E = 3.19'$
 $eMAX = NC$



BEGIN ACQUISITION
 STA. 775+27.32
 S.L.M. 14.68

BEGIN WORK
 STA. 775+40.00
 S.L.M. 14.69

BEGIN PROJECT
 STA. 793+79.16
 S.L.M. 15.03

SEE SHEET 2
 MATCHLINE STA. 800+50

CENTERLINE PLAT
 STA. 774+82.81 TO STA. 800+50

THE PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE CENTERLINE OF RIGHT OF WAY.

ADJUSTABLE CENTERLINE MONUMENTS, RIGHT OF WAY MONUMENTS, AND CENTERLINE MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM 1.1 (REV. 4-29-99) OF THE OHIO DEPARTMENT OF TRANSPORTATION. THE PLACING OF MONUMENTS SHALL BE UNDER THE DIRECTION OF A REGISTERED SURVEYOR AND ARE TO BE SET, AS SHOWN BY THE HIGHWAY CONTRACTOR AT THE TIME OF CONSTRUCTION, ANY ALTERATIONS, WITH PRIOR APPROVAL OF THE OHIO DEPARTMENT OF TRANSPORTATION, SHALL BE NOTED AND O.D.O.T. SHALL BE NOTIFIED OF THE NEW LOCATIONS.

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF TRANSPORTATION IN 1999 BY URS CORPORATION.

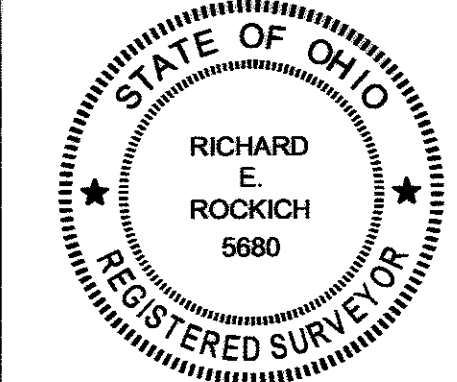
THE ESTABLISHMENT OF THE PROPERTY LINES AND EXISTING RIGHT OF WAY LINES SHOWN ON THIS PLAN AS OF THIS DATE WAS PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

MONUMENT LEGEND

- I.P. FOUND
- EXISTING IRON PIN FOUND
- 3/4" x 30" REBAR SET WITH I.D. CAP MARKED "ODOT R/W" URS CORPORATION P.S. NO. 5680
- MONUMENT FOUND
- REFERENCE MONUMENT TO BE SET

T 2 N, R 14 W
 LOT 86
 MONTVILLE TOWNSHIP
 MEDINA COUNTY

RECEIVED _____ 2000
 RECORDED _____ 2000
 BOOK _____ PAGE _____
 COUNTY RECORDER _____



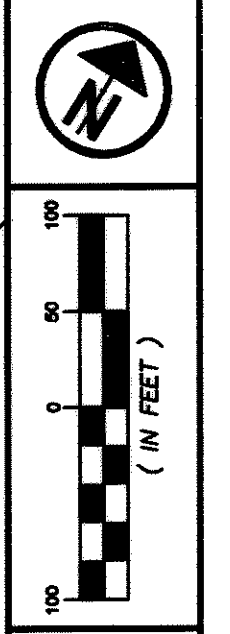
PID NO. 20397
 R/W DESIGNER BHB
 R/W REVIEWER RER

SEE SHEET 2
 MATCHLINE STA. 800+50

MED - 18 - 15.13

1 / 3
 1 / 23
 340
 362

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PID NO. 20397

R/W DESIGNER BHB
R/W REVIEWER RER

CENTERLINE PLAT
STA. 800+50 TO STA. 830+00

MED - 18 - 15.13

2 / 3
2 / 23

341
362

T 3 N, R 14 W LOTS 73 AND 74 MEDINA TOWNSHIP MEDINA COUNTY

**EASTPOINTE DR. W.
CURVE DATA**
P.I. STA. 13+42.40
 $\Delta = 40^\circ 46' 35''$
 $Dc = 10^\circ 32' 26''$
 $R = 543.57'$
 $T = 202.03'$
 $L = 386.85'$
 $E = 36.33'$
 $eMAX = NC$

**RAMP B
CURVE DATA**
P.I. STA. 2+76.65
 $\Delta = 46^\circ 31' 22''$
 $Dc = 20^\circ 00' 00''$
 $R = 286.48'$
 $Ls1 = 100.00'$ $Ls2 = 150.00'$
 $\theta1 = 10^\circ 00' 00''$ $\theta2 = 15^\circ 00' 00''$
 $LT1 = 66.77'$ $LT2 = 100.36'$
 $ST1 = 33.43'$ $ST2 = 50.33'$
 $\Delta c = 21^\circ 31' 22''$
 $Lc = 107.61'$
 $Ts1 = 176.22'$
 $Ts2 = 196.88'$
 $Es = 27.92'$

**RAMP B
COMPOUND SPIRAL
CURVE DATA**
P.I. STA. 9+74.72
 $\Delta = 9^\circ 00' 00''$
 $Dc1 = 7^\circ 30' 00''$
 $R1 = 763.94'$
 $Dc2 = 1^\circ 30' 00''$
 $R2 = 3819.72'$
 $Ls = 200.00'$
 $\theta1 = 9^\circ 00' 00''$
 $P = 2.79'$
 $\Delta1 = 7^\circ 30' 02''$
 $\Delta2 = 1^\circ 29' 58''$
 $T1 = 77.96'$
 $T2 = 122.42'$

**RAMP B
CURVE DATA**
P.I. = 13+44.15
 $\Delta = 7^\circ 24' 41''$
 $Dc = 1^\circ 30' 00''$
 $R = 3819.72'$
 $T = 247.39'$
 $L = 494.09'$
 $E = 8.00'$

**RAMP D
CURVE DATA**
P.I. STA. 9+48.48
 $\Delta = 10^\circ 00' 01''$
 $Dc = 4^\circ 00' 00''$
 $R = 1432.39'$
 $Ls = 200.00'$
 $\theta = 4^\circ 00' 00''$
 $LT = 133.37'$
 $ST = 66.70'$
 $\Delta c = 2^\circ 00' 01''$
 $Lc = 50.01'$
 $Ts = 225.41'$
 $Es = 6.64'$

**RAMP A
CURVE DATA**
P.I. STA. 18+81.17
 $\Delta = 21^\circ 55' 34''$
 $Dc = 3^\circ 56' 21''$
 $R = 1454.52'$
 $Ls = 200.00'$
 $\theta = 3^\circ 56' 21''$
 $LT = 133.37'$
 $ST = 66.70'$
 $\Delta c = 14^\circ 02' 52''$
 $Lc = 356.62'$
 $Ts = 381.96'$
 $Es = 28.21'$

**I-71
CURVE DATA**
P.I. = 961+75.34
 $\Delta = 13^\circ 36' 15''$
 $Dc = 0^\circ 28' 00''$
 $R = 12277.67'$
 $T = 1464.48'$
 $L = 2915.18'$
 $E = 87.03'$

**RAMP C
CURVE DATA**
P.I. STA. 18+25.95
 $\Delta = 48^\circ 00' 08''$
 $Dc = 24^\circ 00' 00''$
 $R = 238.73'$
 $Ls1 = 150.00'$ $Ls2 = 100.00'$
 $\theta1 = 18^\circ 00' 00''$ $\theta2 = 12^\circ 00' 00''$
 $LT1 = 100.52'$ $LT2 = 66.82'$
 $ST1 = 50.47'$ $ST2 = 33.47'$
 $\Delta c = 18^\circ 00' 08''$
 $Lc = 75.01'$
 $Ts1 = 179.87'$
 $Ts2 = 159.92'$
 $Es = 25.70'$

**RAMP C
CURVE DATA**
P.I. = 9+36.13
 $\Delta = 4^\circ 48' 44''$
 $Dc = 1^\circ 06' 25''$
 $R = 5176.03'$
 $T = 217.49'$
 $L = 434.72'$
 $E = 4.57'$

**RAMP C
COMPOUND SPIRAL
CURVE DATA**
P.I. STA. 12+78.29
 $\Delta = 8^\circ 36' 25''$
 $Dc1 = 1^\circ 06' 25''$
 $R1 = 5176.03'$
 $Dc2 = 7^\circ 30' 00''$
 $R2 = 763.94'$
 $Ls = 200.00'$
 $\theta1 = 8^\circ 36' 25''$
 $P = 2.68'$
 $\Delta1 = 1^\circ 06' 23''$
 $\Delta2 = 7^\circ 30' 02''$
 $T1 = 124.93'$
 $T2 = 75.40'$

**RAMP C
CURVE DATA**
P.I. STA. 14+43.88
 $\Delta = 12^\circ 41' 19''$
 $Dc = 7^\circ 30' 00''$
 $R = 763.94'$
 $\Delta c = 7^\circ 03' 49''$ $Ls = 150.00'$
 $Lc = 94.18'$ $\theta = 5^\circ 37' 30''$
 $T1 = 90.52'$ $LT = 100.05'$
 $T2 = 154.47'$ $ST = 50.05'$

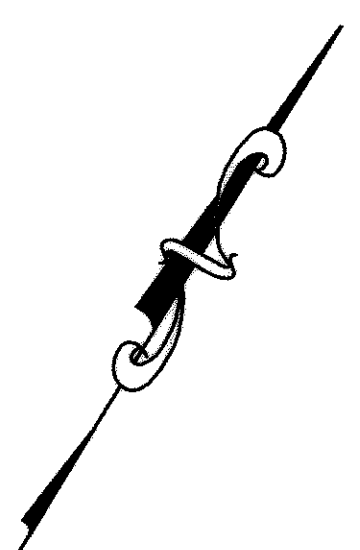
SEE SHEET
MATCHLINE STA. 800+50

MATCHLINE STA. 830+00
SEE SHEET 13

T 2 N, R 14 W LOTS 86, 87 AND 106 MONTVILLE TOWNSHIP MEDINA COUNTY

MONUMENT LEGEND

- I.P. FOUND
- 3/4" x 30" REBAR SET WITH I.D. CAP MARKED
- ⊠ ODOT R/W
- ⊞ MONUMENT FOUND
- ⊞ REFERENCE MONUMENT TO BE SET



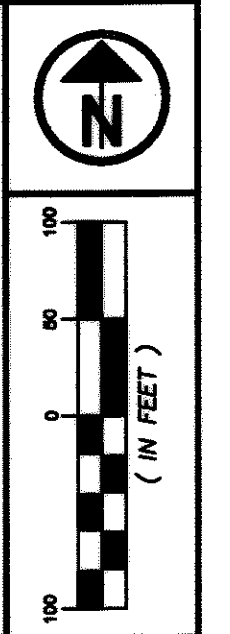
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T 3 N, R 14 W
LOT 73
MEDINA TOWNSHIP
MEDINA COUNTY

T 3 N, R 13 W
LOT 10
GRANGER TOWNSHIP
MEDINA COUNTY

T 2 N, R 14 W
LOT 106
MONTVILLE TOWNSHIP
MEDINA COUNTY

T 2 N, R 13 W
LOT 1
SHARON TOWNSHIP
MEDINA COUNTY



PID NO.
20397

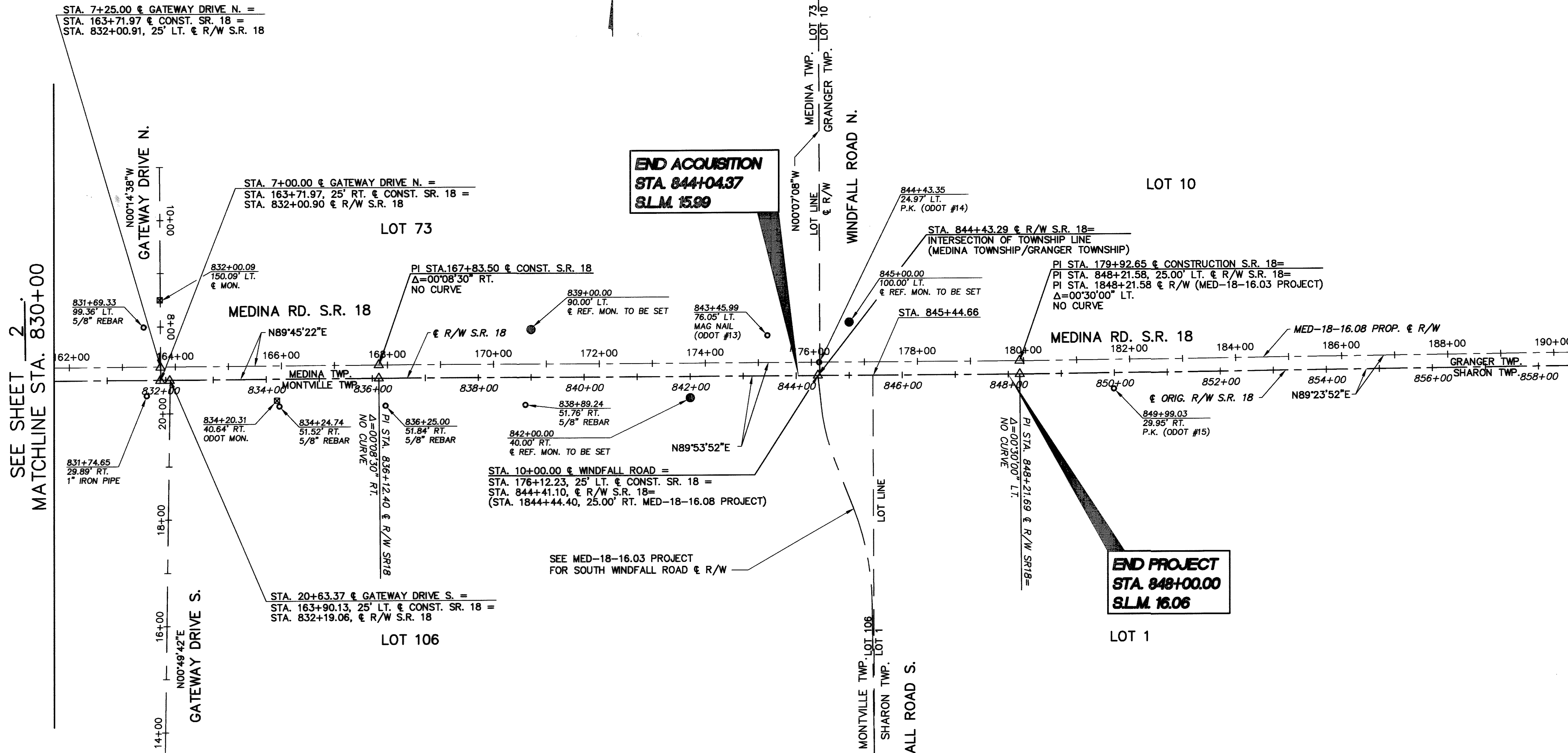
R/W DESIGNER
BHB
R/W REVIEWER
REF

CENTERLINE PLAT
STA. 830+00 TO STA. 848+25.21

MED - 18 - 15.13

3 / 3
3 / 23

342
362



END ACQUISITION
STA. 844+04.37
S.L.M. 15.99

END PROJECT
STA. 848+00.00
S.L.M. 16.06

STA. 10+00.00 & WINDFALL ROAD =
STA. 176+12.23, 25' LT. & CONST. SR. 18 =
STA. 844+41.10, & R/W S.R. 18 =
(STA. 1844+44.40, 25.00' RT. MED-18-16.08 PROJECT)

SEE MED-18-16.03 PROJECT
FOR SOUTH WINDFALL ROAD & R/W

SEE SHEET 2
MATCHLINE STA. 830+00

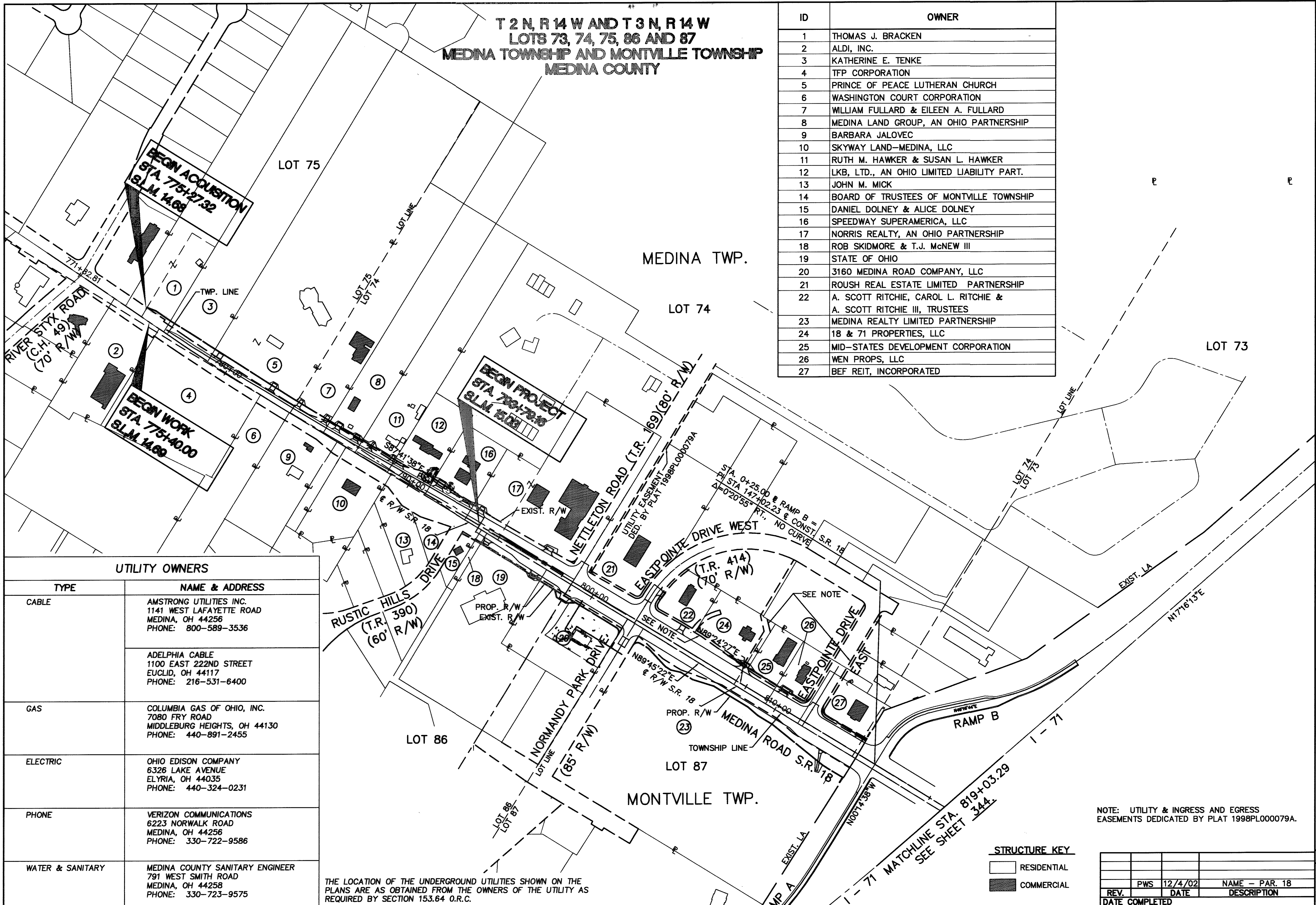
MONUMENT LEGEND

- I.P. FOUND
- 3/4" x 30" REBAR SET WITH I.D. CAP MARKED
- ⊠ ODOT R/W "URS CORPORATION P.S. NO. 5680"
- ⊞ MONUMENT FOUND
- ⊙ & REFERENCE MONUMENT TO BE SET

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T 2 N, R 14 W AND T 3 N, R 14 W
 LOTS 73, 74, 75, 86 AND 87
 MEDINA TOWNSHIP AND MONTVILLE TOWNSHIP
 MEDINA COUNTY

| ID | OWNER |
|----|--|
| 1 | THOMAS J. BRACKEN |
| 2 | ALDI, INC. |
| 3 | KATHERINE E. TENKE |
| 4 | TFP CORPORATION |
| 5 | PRINCE OF PEACE LUTHERAN CHURCH |
| 6 | WASHINGTON COURT CORPORATION |
| 7 | WILLIAM FULLARD & EILEEN A. FULLARD |
| 8 | MEDINA LAND GROUP, AN OHIO PARTNERSHIP |
| 9 | BARBARA JALOVEC |
| 10 | SKYWAY LAND-MEDINA, LLC |
| 11 | RUTH M. HAWKER & SUSAN L. HAWKER |
| 12 | LKB, LTD., AN OHIO LIMITED LIABILITY PART. |
| 13 | JOHN M. MICK |
| 14 | BOARD OF TRUSTEES OF MONTVILLE TOWNSHIP |
| 15 | DANIEL DOLNEY & ALICE DOLNEY |
| 16 | SPEEDWAY SUPERAMERICA, LLC |
| 17 | NORRIS REALTY, AN OHIO PARTNERSHIP |
| 18 | ROB SKIDMORE & T.J. McNEW III |
| 19 | STATE OF OHIO |
| 20 | 3160 MEDINA ROAD COMPANY, LLC |
| 21 | ROUSH REAL ESTATE LIMITED PARTNERSHIP |
| 22 | A. SCOTT RITCHIE, CAROL L. RITCHIE & A. SCOTT RITCHIE III, TRUSTEES |
| 23 | MEDINA REALTY LIMITED PARTNERSHIP |
| 24 | 18 & 71 PROPERTIES, LLC |
| 25 | MID-STATES DEVELOPMENT CORPORATION |
| 26 | WEN PROPS, LLC |
| 27 | BEF REIT, INCORPORATED |



UTILITY OWNERS

| TYPE | NAME & ADDRESS |
|------------------|--|
| CABLE | AMSTRONG UTILITIES INC. 1141 WEST LAFAYETTE ROAD MEDINA, OH 44256 PHONE: 800-589-3536 |
| | ADELPHIA CABLE 1100 EAST 222ND STREET EUCLID, OH 44117 PHONE: 216-531-6400 |
| GAS | COLUMBIA GAS OF OHIO, INC. 7080 FRY ROAD MIDDLEBURG HEIGHTS, OH 44130 PHONE: 440-891-2455 |
| ELECTRIC | OHIO EDISON COMPANY 6326 LAKE AVENUE ELYRIA, OH 44035 PHONE: 440-324-0231 |
| PHONE | VERIZON COMMUNICATIONS 6223 NORWALK ROAD MEDINA, OH 44256 PHONE: 330-722-9586 |
| WATER & SANITARY | MEDINA COUNTY SANITARY ENGINEER 791 WEST SMITH ROAD MEDINA, OH 44258 PHONE: 330-723-9575 |


THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 O.R.C.

NOTE: UTILITY & INGRESS AND EGRESS EASEMENTS DEDICATED BY PLAT 1998PLO00079A.

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL

| | | | |
|----------------|-----|---------|----------------|
| REV. | PWS | 12/4/02 | NAME - PAR. 18 |
| DATE COMPLETED | | | DESCRIPTION |



PID NO. 20397

R/W DESIGNER: BHB
R/W REVIEWER: RER

PROPERTY MAP
STA. 776+00 TO STA. 819+03.29

MED - 18 - 15.13

4 / 23

343
362

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T 3 N, R 14 W
 LOT 73
 MEDINA TOWNSHIP
 MEDINA COUNTY

| ID | OWNER |
|----|---|
| 28 | TRUE NORTH ENERGY LLC |
| 29 | THE SUBURBANITE MOTEL PARTNERSHIP |
| 30 | MICHAELS DEVELOPMENT CO. A GENERAL PART. |
| 31 | EMRO MARKETING COMPANY |
| 32 | BP EXPLORATION & OIL, INCORPORATED |
| 33 | M.J. PASTIS & MENELAOS J. PASTIS |
| 34 | GEORGE M. WHITSON |
| 35 | J.M. QUALITY ENTERPRISES, LTD. |
| 36 | HARI OM ASSOCIATES-MEDINA, LLC AN OHIO LIMITED LIABILITY COMPANY |
| 37 | ELIAS L. CORPAS |
| 38 | CHU BROTHERS MOTELS, INCORPORATED |
| 39 | GREGORY J. SHUE & CHRISTINE M. SHUE |
| 40 | ANASTASSIOS ALEXANDRIS AND LINDA ALEXANDRIS |
| 41 | ANASTASSIOS ALEXANDRIS AND LINDA ALEXANDRIS |
| 42 | EDWARD T. TOTH & MARCIA L. TOTH |
| 44 | RENUART LEASING COMPANY |
| 45 | MEDINA REALTY LIMITED PARTNERSHIP |
| 46 | PLAZA 71 ASSOCIATES, LIMITED |
| 47 | JOHN N. TEEPLE, TRUSTEE |
| 48 | RICHARD L. MUGRAGE & BEVERLY J. MUGRAGE, TRUSTEES |
| 49 | GLEN A. BARENSFELD |
| 50 | JAMES L. JOHNSON & HAROLD E. JOHNSON |

N

200
100
0
100
200
(IN FEET)

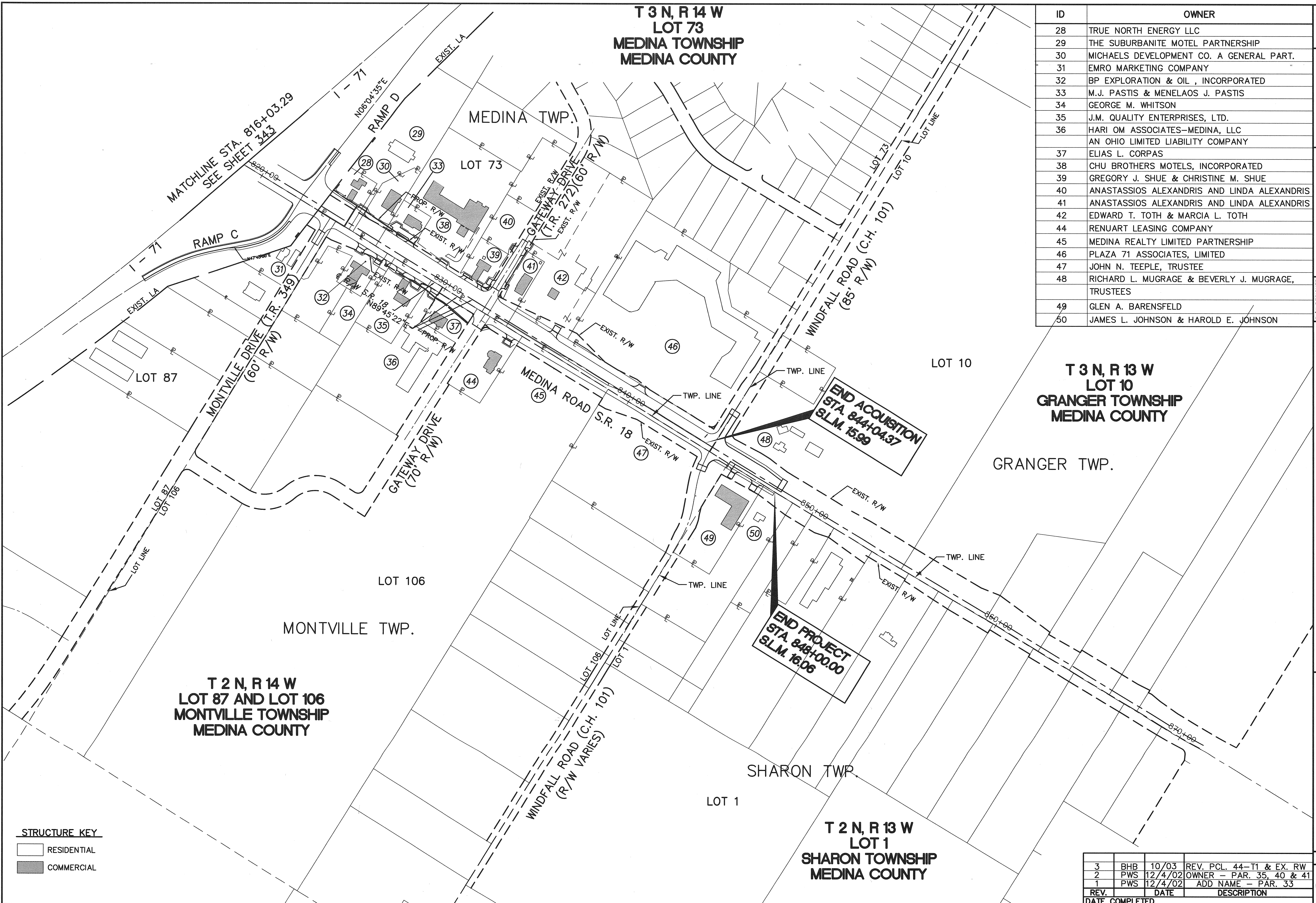
PID NO.
20397

R/W DESIGNER
BHB
R/W REVIEWER
RER

T 3 N, R 13 W
 LOT 10
 GRANGER TOWNSHIP
 MEDINA COUNTY

T 2 N, R 14 W
 LOT 87 AND LOT 106
 MONTVILLE TOWNSHIP
 MEDINA COUNTY

T 2 N, R 13 W
 LOT 1
 SHARON TOWNSHIP
 MEDINA COUNTY



STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL

| REV. | DATE | DESCRIPTION |
|------|-------------|--------------------------|
| 3 | BHB 10/03 | REV. PCL. 44-T1 & EX. RW |
| 2 | PWS 12/4/02 | OWNER - PAR. 35, 40 & 41 |
| 1 | PWS 12/4/02 | ADD NAME - PAR. 33 |

DATE COMPLETED

PROPERTY MAP
 STA. 816+03.29 TO STA. 845+00

MED - 18 - 15.13

| |
|--------|
| 5 / 23 |
| 344 |
| 362 |

TOTAL NUMBER OF:

37 OWNERSHIPS 0 OWNERSHIPS WITH STRUCTURES INVOLVED
72 PARCELS 9 OWNERSHIPS WITH "P" ITEMS
0 TOTAL TAKES

NET RESIDUE = RECORD AREA - TOTAL P.R.O. - NET TAKE
ALL AREAS IN ACRES

GRANTEE: ALL RIGHT OF WAY TO BE ACQUIRED IN THE NAME OF THE STATE OF OHIO, UNLESS OTHERWISE SHOWN.

* - DENOTES RIGHT OF WAY ENCROACHMENT

Table with columns: PARCEL NO., OWNER, SHEET NO., OWNERS RECORD BOOK/PAGE, AUDITOR'S PARCEL, RECORD AREA(A.C), TOTAL P.R.O., GROSS TAKE, P.R.O. IN TAKE, NET TAKE, STRUC., NET RESIDUE LEFT/RIGHT, TYPE FUND, REMARKS AND PERSONALTY, AS ACQUIRED DOC. NO.

NOTE: ALL TEMPORARY PARCELS TO BE OF 24 MONTHS DURATION.
NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

(C) = CALCULATED AREA
(0.000) = DEED AREA

Table with columns: REV. DATE, DESCRIPTION, DATE COMPLETED

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FEDERAL PROJECT NO.

STATE JOB NO. 43253(0)

PID NO. 20397

R/W DESIGNER BHB R/W REVIEWER RER

SUMMARY OF ADDITIONAL RIGHT OF WAY

MED - 18 - 15.13

TOTAL NUMBER OF:

37 OWNERSHIPS 0 OWNERSHIPS WITH STRUCTURES INVOLVED
 72 PARCELS 9 OWNERSHIPS WITH "P" ITEMS
 0 TOTAL TAKES

NET RESIDUE = RECORD AREA - TOTAL P.R.O. - NET TAKE
 ALL AREAS IN ACRES

GRANTEE: ALL RIGHT OF WAY TO BE ACQUIRED
 IN THE NAME OF THE STATE OF OHIO, UNLESS
 OTHERWISE SHOWN.

* - DENOTES RIGHT OF WAY ENCROACHMENT

| PARCEL NO. | OWNER | SHEET NO. | OWNERS RECO.R.D | | AUDITOR'S PARCEL | RECORD AREA(A.C) | TOTAL P.R.O. | GROSS TAKE | P.R.O. IN TAKE | NET TAKE | STRUC. | NET RESIDUE | | TYPE FUND | REMARKS AND PERSONALTY | AS ACQUIRED DOC. NO. |
|------------------------|---|-------------------|---------------------------|------------|----------------------------------|------------------|--------------|----------------------------|----------------------------|----------------------------|----------------|----------------|--------|---|--|----------------------|
| | | | BOOK | PAGE | | | | | | | | LEFT | RIGHT | | | |
| 25-WD 25-T | MID-STATES DEVELOPMENT CORP. | 14 14 | 19990.R.043173 | | 026-06D-34-050 | 0.8805 | 0.0000 | 0.0348 0.0093 | 0.0000 0.0000 | 0.0348 0.0093 | NO NO | 0.8457 | | LOT 11, EASTPOINTE SUBDIVISION PHASE II, 1998PLO00079 | 2003 OR 027762 | |
| 26-WD 26-T | WEN PROPS LLC. | 14,15,22 14 | 19980.R.018942 | | 026-06D-34-009 | 1.596 | 0.4993 | 0.5310 0.0304 | 0.4993 0.0000 | 0.0317 0.0304 | S*(2) NO | 1.0650 | | RECONSTRUCT DRIVE & RELOCATE CURB | 2003 OR 066099 | |
| 27-WD | BEF REIT, INC. | 15 | O.R.1155 | 95 | 026-06D-34-021 | 1.169 | 0.0000 | 0.0459 | 0.0000 | 0.0459 | NO | 1.1231 | | LOT 6, EASTPOINTE SUBDIVISION (1.1692 Ac.) PHASE I, P.B 22, P. 108 | 2003 OR 011276 | |
| 28-WL 28-WD | TRUE NORTH ENERGY, LLC. | 17 17 | 19990.R.037344 | | 026-06D-35-068 | 0.896 | 0.2866 | 0.3633 0.0541 | 0.2866 0.0541 | 0.0767 0.0142 | S(2) NO | | | COMM. SIGN | 2004 OR 005153 | |
| 28-T | GRAND TOTAL | 17 | | | | | 0.3407 | 0.4316 | 0.3407 | 0.0909 | | 0.4644 | | | | |
| 29-WD 29-T | THE SUBURBANITE MOTEL PARTNERSHIP A PARTNERSHIP CONSISTING OF KAUSHIK PATEL AND VEENA PATEL, GENERAL PARTNERS | 17 17 | O.R.1013 | 175 | 026-06D-35-072 | 3.334 | 0.0413 | 0.0282 0.0519 0.0077 | 0.0000 0.0413 0.0000 | 0.0282 0.0106 0.0077 | NO NO | 3.2821 | | RECONSTRUCT DRIVE & GRADING RECONSTRUCT DRIVE (3.3348 Ac.) | 2004 OR 001592 | |
| 30-WD 30-T | MICHAELS DEVELOPMENT COMPANY, A GENERAL PARTNERSHIP | 17 17 | O.R.411 | 403 | 026-06D-35-071 | 1.015 | 0.2634 | 0.3137 0.0185 | 0.2634 0.0000 | 0.0503 0.0185 | S NO | 0.7013 | | *STONE/BLOCK PLANTER, COMM. SIGN (1.0152 Ac.) GRADING | 2003 OR 044698 | |
| 31 | EMRO MARKETING CO. | 17 | O.R.505 | 21 | 030-11B-10-001 | 0.740 | | | | | | | | LOT 1, INTERSTATE SUBDIVISION P.B. 21, P. 246, NO R/W REQ. | | |
| 32-T | BP EXPLORATION & OIL, INC. | 17 | O.R.1304 | 75 | 030-11B-05-002 | 1.2115 | 0.4240 | 0.0373 | 0.0000 | 0.0373 | NO | | 0.7875 | RECONSTRUCT DRIVES | 2003 OR 020813 | |
| 33-WD 33-T | M.J. PASTIS MENELAOS J. PASTIS | 17,18 17,18 | O.R.432 20010.R.046273 | 53 | 026-06D-35-065 | 0.516 | 0.0000 | 0.0140 0.1283 | 0.0000 0.0000 | 0.0140 0.1283 | S(3*) NO | 0.5020 | | BLOCK A, WINDFALL HEIGHTS (0.5165 Ac.) SUBDIVISION P.B. 12, P. 55 | 2003 OR 027763 | |
| 34-T | GEORGE M. WHITSON | 17,18 | O.R.1014 | 178 | 030-11B-05-011 | 0.8743 | 0.0460 | 0.0230 | 0.0000 | 0.0230 | NO | | 0.8283 | RECONSTRUCT DRIVE | | |
| 35-WD 35-T 35-TI | J.M. QUALITY ENTERPRISES, LTD. | 18 18 18 | 20020.R.026150 | | 030-11B-05-003 | 1.607 | 0.2083 | 0.2293 0.0184 0.0323 | 0.2083 0.0000 0.0000 | 0.0210 0.0184 0.0323 | S* NO NO | 1.3777 | | *REMOVE 47 L.F. OF SPLIT RAIL FENCE, *COMMERCIAL SIGN RECONSTRUCT DRIVE RECONSTRUCT DRIVE | | |
| 36-WD 36-T | HARI OM ASSOCIATES - MEDINA LLC., AN OHIO LIMITED LIABILITY COMPANY | 18 18 | 19980.R.026512 | | 030-11B-05-004 | 4.808 | 0.0421 | 0.0770 0.0180 | 0.0421 0.0000 | 0.0349 0.0180 | NO NO | | 4.7310 | RECONSTRUCT DRIVE | | |
| 37-WD | ELIAS L. CORPAS | 18 | O.R.786 | 716 | 030-11B-05-005 | 0.815 | 0.1300 | 0.2978 | 0.1300 | 0.1678 | S(2) | | 0.5172 | | 2003 OR 040104 | |
| 38-T | CHU BROTHERS MOTELS, INC. | 18 | O.R.644 | 168 | 026-06D-35-076 | 4.3503 | 0.0000 | 0.0526 | 0.0000 | 0.0526 | S* | 4.3503 | | BLOCK A, WINDFALL HEIGHTS SUBDIVISION (4.534 Ac.) P.B. 12, P. 55 *LANDSCAPE TIMBERS | 2003 OR 020814 | |
| 39-WD 39-T 39-TI | GREGORY J. SHUE & CHRISTINE M. SHUE | 18 18 18,23 | 20000.R.001763 | | 026-06D-35-109 | 0.6611 | 0.0000 | 0.0031 0.0177 0.0693 | 0.0000 0.0000 0.0000 | 0.0031 0.0177 0.0693 | NO NO NO | 0.6580 | | *ROCKS(2) RECONSTRUCT DRIVE RECONSTRUCT DRIVE & GRADING | 2003 OR 027765 2003 OR 027766 2003 OR 027767 | |
| 40-T | ANASTASSIOS ALEXANDRIS AND LINDA ALEXANDRIS | 23 | 20020.R.033303 | | 026-06D-35-111 | 0.8092 | 0.0000 | 0.0159 | 0.0000 | 0.0159 | NO | 0.8092 | | RECONSTRUCT DRIVE, REMOVE PORTABLE CONCRETE BARRIER (2 DEEDS LISTED FOR TOTAL OF 0.892 Ac.) | | |
| 41-SH 41-T | ANASTASSIOS ALEXANDRIS AND LINDA ALEXANDRIS | 18 18,23 | 20020.R.033303 | | 026-06D-35-057 | 0.8034 | 0.0000 | 0.0025 0.0527 | 0.0000 0.0000 | 0.0025 0.0527 | NO NO | 0.8009 | | RECONSTRUCT DRIVES & GRADING | 2003 OR 009147 | |
| 42-T | EDWARD T. TOTH & MARCIA L. TOTH | 23 | O.R.915 O.R.915 | 872 874 | 026-06D-35-056 026-06D-35-055 | 4.073 0.286 | 0.0000 | 0.0126 | 0.0000 | 0.0126 | S* | 4.073 0.286 | | RECONSTRUCT DRIVE *RR TIES *4" STEEL POSTS, *LIGHT POSTS, *COMM. SIGN AND *CONC. PARKING LOT | | |
| 43 | GRAND TOTAL NOT USED | | | | | 4.359 | | | | | | 4.359 | | | | |
| 44-SH 44-T 44-TI | RENUART LEASING CO. | 18 18 19 | O.R.405 | 121 | 030-11B-05-006 | 1.486 | 0.1996 | 0.0046 0.0072 0.0287 | 0.0000 0.0000 0.0000 | 0.0046 0.0072 0.0287 | S* NO NO | 1.2818 | | *ROCK, *POSTS, *ROCK, *ROCK, *SHRUBS, *COMM. SIGN, *PARKING LOT, GRADING (1.4863 Ac.) RECONSTRUCT DRIVE | | |
| 45 | MEDINA REALTY LIMITED PARTNERSHIP | 19,20 | O.R.1194 | 915 | 030-11B-05-007 | 63.943 | | | | | | | | NO R/W REQUIRED | | |
| 46-WD | PLAZA 71 ASSOCIATES, LTD. | 21 | O.R.1199 | 983 | 026-06D-35-054 | 11.793 | 0.0000 | 0.0031 | 0.0000 | 0.0031 | S | 11.7899 | | *COMM. SIGN, *ROCK, *RAILROAD TIES, *PARKING LOT (11.7939 Ac.) | 2003 OR 040105 | |
| 47 | JOHN N. TEEPLE, TRUSTEE | 20,21 | O.R.1127 | 147 | 030-11B-05-009 | 7.0448 | | | | | | | | NO R/W REQUIRED | | |
| 48 | RICHARD L. MUGRAGE & BEVERLY J. MUGRAGE, TRUSTEES | 21 | O.R.1048 | 63 | 007-07C-38-018 | 46.022 | | | | | | | | NO R/W REQUIRED | | |
| 49 | GLEN A. BARENSFELD | 21 | O.R.590 | 452 | 034-12A-01-001 | 2.170 | | | | | S*(3) | | | NO R/W REQUIRED | | |
| 50 | JAMES L. JOHNSON & HAROLD E. JOHNSON | 21 | O.R.122 | 109 | 034-12A-01-018 | 3.722 | | | | | | | | NO R/W REQUIRED | | |

NOTE:
ALL TEMPORARY PARCELS TO BE OF 24 MONTHS DURATION.

NOTE:
UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO
BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY
THE CONTRACTOR UNLESS NOTED OTHERWISE.

(0.000) = DEED AREA

| | | | |
|----------------|------|-------------|--------------------------|
| Δ | BHB | 10/03 | REV. PCL. 44-TI, 44 PRO |
| | BHB | 1/03 | REVISED PARCEL 39-T1 |
| | PWS | 12/02 | OWNER - PAR.35, 40 & 41 |
| | PWS | 10/02 | OWNER - PAR. 33 |
| | PWS | 10/02 | OWNER'S REC. - PAR. 44 |
| Δ | BHB | 10/02 | REVISED PARCEL 26-T |
| Δ | BHB | 4/02 | REV. PARCEL 28WL, WD & T |
| REV. | DATE | DESCRIPTION | |
| DATE COMPLETED | | | |

FEDERAL PROJECT NO. 49253(0)
 STATE JOB NO. 20397
 PID NO. 20397
 R/W DESIGNER BHB
 BHB
 R/W REVIEWER RER
 SUMMARY OF ADDITIONAL RIGHT OF WAY
 MED - 18 - 1513
 7 / 23
 346
 362

J:\7050600\ROW\70506RPA.DWG User: jan81152 Dec 22, 2003 - 5:42pm

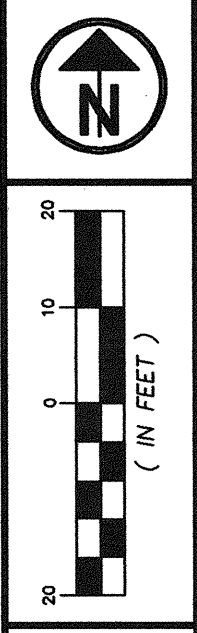
T 3 N, R 14 W
LOT 75

MEDINA TOWNSHIP
MEDINA COUNTY

T 2 N, R 14 W
LOT 86
MONTVILLE TOWNSHIP
MEDINA COUNTY

SET IRON PINS:

ALL SET IRON PINS ARE 3/4"x30" REBARS WITH 1-1/2" ALUMINUM CAP INSCRIBED "ODOT R/W" URS CORPORATION P.S. NO. 5680"



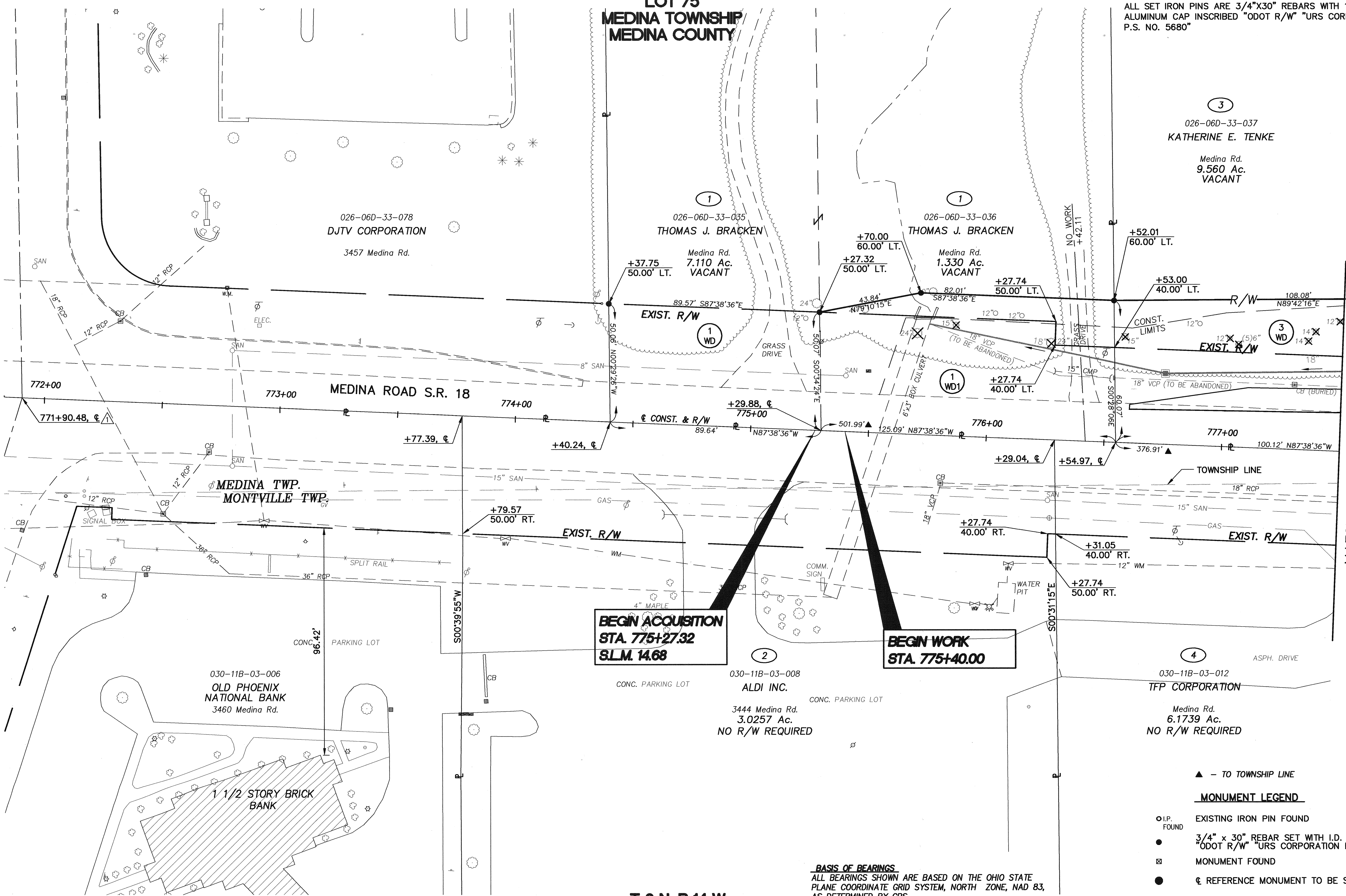
PID NO.
20397

R/W DESIGNER
BHB
R/W REVIEWER
REF

**RIGHT OF WAY PLAN
STA. 771+50 TO STA. 777+50**

MED - 18 - 15.13

8 / 23
347
362



**BEGIN ACQUISITION
STA. 775+27.32
SLM. 14.68**

**BEGIN WORK
STA. 775+40.00**

▲ - TO TOWNSHIP LINE

MONUMENT LEGEND

- I.P. FOUND
- 3/4" x 30" REBAR SET WITH I.D. CAP MARKED "ODOT R/W" URS CORPORATION P.S. NO. 5680"
- ⊠ MONUMENT FOUND
- ⊕ REFERENCE MONUMENT TO BE SET

STRUCTURE KEY

- RESIDENTIAL
- ▨ COMMERCIAL

BASIS OF BEARINGS
ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE PLANE COORDINATE GRID SYSTEM, NORTH ZONE, NAD 83, AS DETERMINED BY GPS.

NOTE: THE EXISTING CENTERLINE OF R/W WAS DETERMINED FROM R/W PLAN S.H. 95, SEC. A & B, R/W PLAN MED-18-14.99, R/W PLAN MED-18-16.08, MONUMENTS FOUND, DEEDS, AND, TAX MAPS.

| REV. | DATE | DESCRIPTION |
|------|----------|---|
| 1 | 12/22/03 | EX. MON. STA. REVISED RIVER STYX & SR18 |
| | | |
| | | |
| | | |

1) CONST. & R/W S.R.18
 CURVE DATA
 P.I. = 780+31.88
 $\Delta = 2^{\circ}46'03''$ LT.
 Dc = 0'30'00"
 R = 11459.16'
 T = 276.79'
 L = 553.47'
 E = 3.34'
 eMAX = NC
 P.C. = STA. 777+55.09
 P.T. = STA. 783+08.56

3
 026-06D-33-037
 KATHERINE E. TENKE
 Medina Rd.
 9.560 Ac.
 VACANT

T 3 N, R 14 W
 LOT 75
 MEDINA TOWNSHIP
 MEDINA COUNTY

5
 026-06D-33-101
 PRINCE OF PEACE
 LUTHERAN CHURCH
 3349 Medina Rd.
 18.000 Ac.

SEE SHEET 8.
 MATCHLINE STA. 777+50

MATCHLINE STA. 783+00
 SEE SHEET 10.

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▲ - TO S.W. CORNER OF LOT 75

BASIS OF BEARINGS
 ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE
 PLANE COORDINATE GRID SYSTEM, NORTH ZONE, NAD 83,
 AS DETERMINED BY GPS.
 NOTE: THE EXISTING CENTERLINE OF R/W WAS DETERMINED
 FROM R/W PLAN S.H. 95, SEC. A & B, R/W PLAN
 MED-18-14.99, R/W PLAN MED-18-16.08, MONUMENTS
 FOUND, DEEDS, AND, TAX MAPS.

MONUMENT LEGEND

- I.P. FOUND
- EXISTING IRON PIN FOUND
- 3/4" x 30" REBAR SET WITH I.D. CAP MARKED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"
- MONUMENT FOUND
- € REFERENCE MONUMENT TO BE SET

T 2 N, R 14 W
 LOT 86
 MONTVILLE TOWNSHIP
 MEDINA COUNTY

SET IRON PINS:
 ALL SET IRON PINS ARE 3/4"x30" REBARS WITH 1-1/2"
 ALUMINUM CAP INSCRIBED "ODOT R/W" "URS CORPORATION
 P.S. NO. 5680"

STRUCTURE KEY

- RESIDENTIAL
- ▨ COMMERCIAL

| | | |
|------|------|-------------|
| REV. | DATE | DESCRIPTION |
| | | |
| | | |
| | | |

N
 (IN FEET)

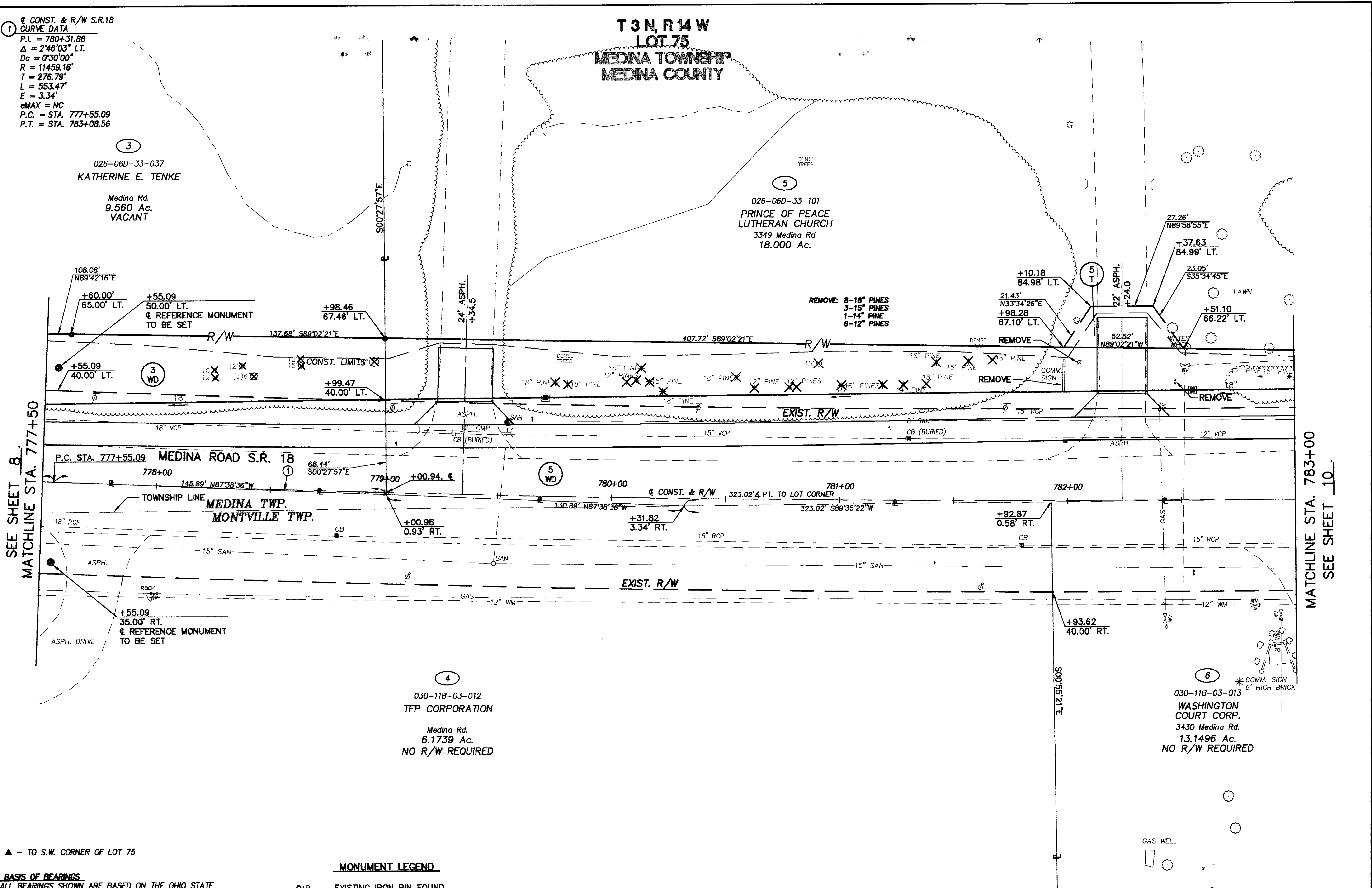
PID NO. 20397

R/W DESIGNER BHB
 R/W REVIEWER RER

RIGHT OF WAY PLAN
 STA. 777+50 TO STA. 783+00

MED - 18 - 15.13

9 / 23
 348
 362

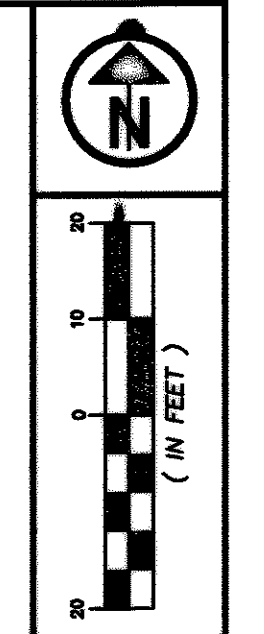


T 3 N, R 14 W
LOT 75
MEDINA TOWNSHIP
MEDINA COUNTY

T 3 N, R 14 W
LOT 74
MEDINA TOWNSHIP
MEDINA COUNTY

T 2 N, R 14 W
LOT 86
MONTVILLE TOWNSHIP
MEDINA COUNTY

CONST. S.R. 18
CURVE DATA
P.I. = 119+83.60
 $\Delta = 1'43''14''$ LT.
Dc = 0'21'22"
R = 16092.78'
T = 241.65'
L = 483.27'
E = 1.81'
eMAX = NC
P.C. = STA. 117+41.95
P.T. = STA. 122+25.22



PID NO.
20397

R/W DESIGNER
BHB
R/W REVIEWER
RER

RIGHT OF WAY PLAN
STA. 783+00 TO STA. 788+50

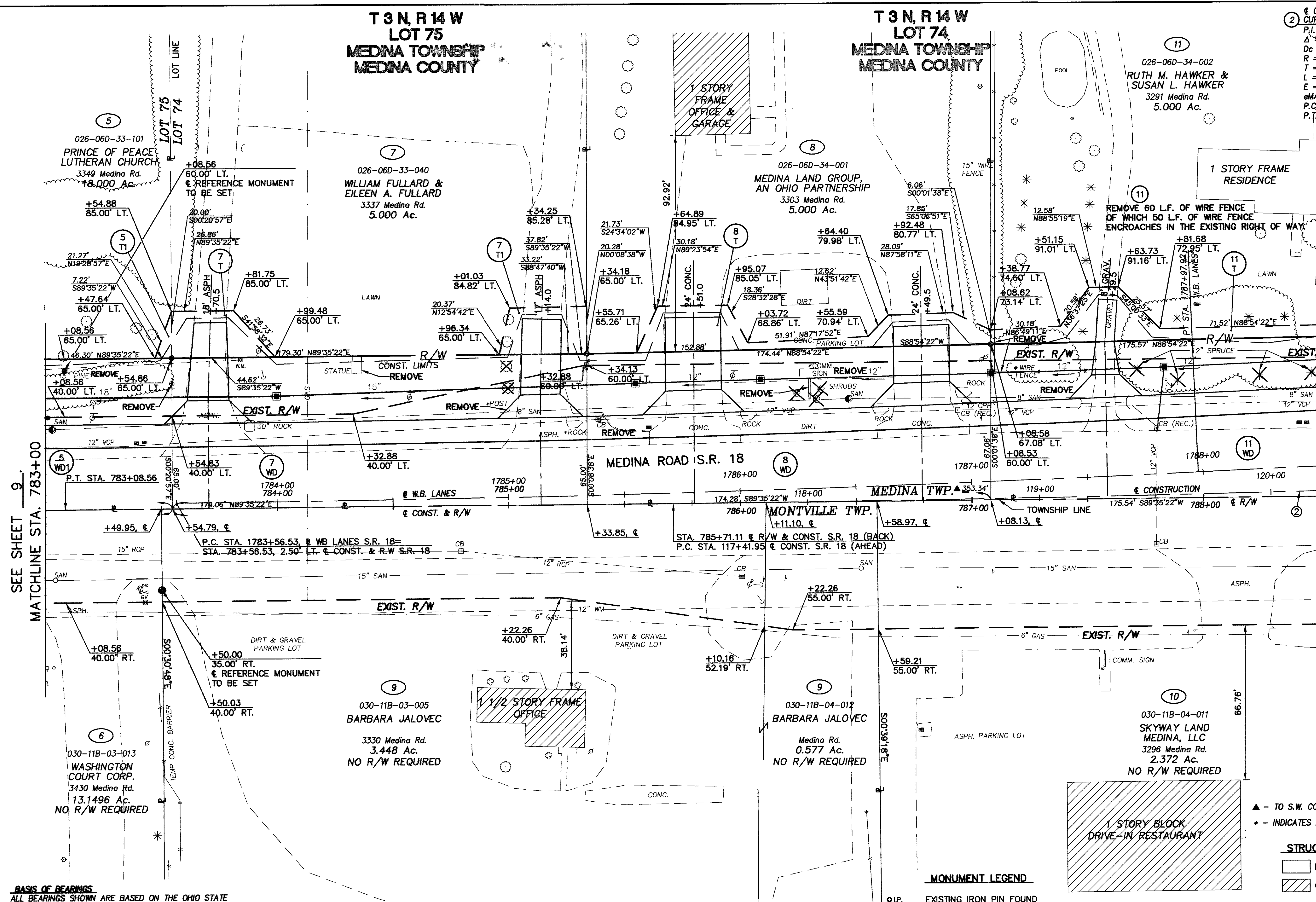
MED - 18 - 15.18

10 / 23

349
362

SEE SHEET 9
MATCHLINE STA. 783+00

MATCHLINE STA. 788+50
SEE SHEET 11



BASIS OF BEARINGS:
ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE PLANE COORDINATE GRID SYSTEM, NORTH ZONE, NAD 83, AS DETERMINED BY GPS.
NOTE: THE EXISTING CENTERLINE OF R/W WAS DETERMINED FROM R/W PLAN S.H. 95, SEC. A & B, R/W PLAN MED-18-14.99, R/W PLAN MED-18-16.08, MONUMENTS FOUND, DEEDS, AND, TAX MAPS.

SET IRON PINS:
ALL SET IRON PINS ARE 3/4"X30" REBARS WITH 1-1/2" ALUMINUM CAP INSCRIBED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"

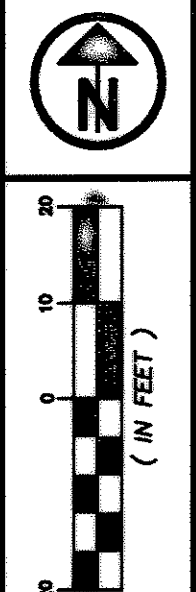
MONUMENT LEGEND
O.I.P. FOUND
● EXISTING IRON PIN FOUND
● 3/4" x 30" REBAR SET WITH I.D. CAP MARKED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"
■ MONUMENT FOUND
● REFERENCE MONUMENT TO BE SET

▲ - TO S.W. CORNER OF LOT 74
* - INDICATES R/W ENCROACHMENT

STRUCTURE KEY
RESIDENTIAL
COMMERCIAL

| REV. | DATE | DESCRIPTION |
|------|------|-------------|
| | | |
| | | |
| | | |

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PID NO. 20397

R/W DESIGNER BHB
R/W REVIEWER RER

RIGHT OF WAY PLAN
STA. 788+50 TO STA. 794+00

MED - 18 - 15.13

11 / 23

350
362

T 3 N, R 14 W

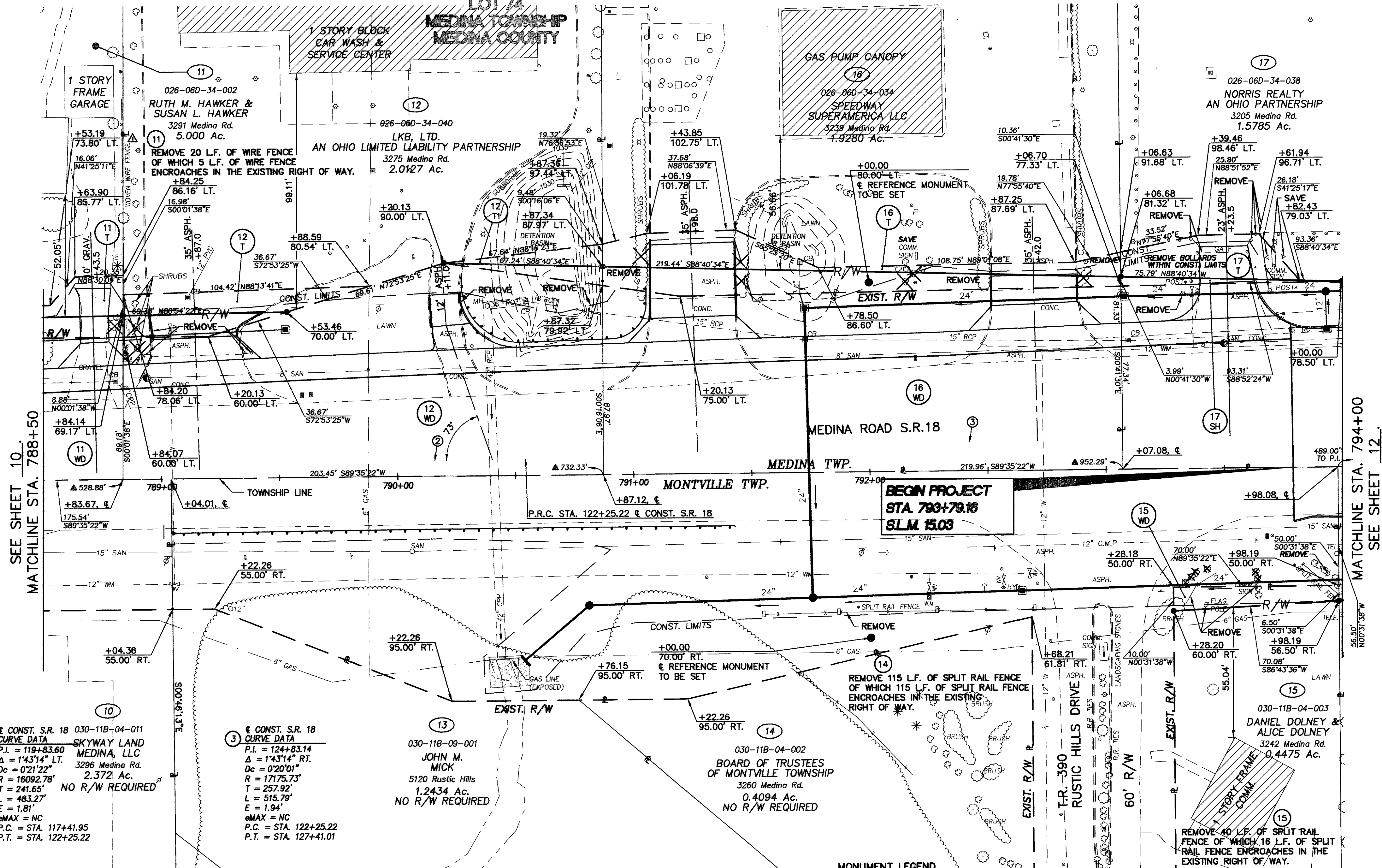
LOT 74

MEDINA TOWNSHIP
MEDINA COUNTY

T 2 N, R 14 W

LOT 86

MONTVILLE TOWNSHIP
MEDINA COUNTY



SEE SHEET 10
MATCHLINE STA. 788+50

MATCHLINE STA. 794+00
SEE SHEET 12

② ϵ CONST. S.R. 18 030-11B-04-011
 CURVE DATA SKYWAY LAND
 P.I. = 119+83.60 MEDINA, LLC
 Δ = 1'43"14" LT. 3296 Medina Rd.
 Dc = 0'21'22" 2.372 Ac.
 R = 16092.78'
 T = 241.65' NO R/W REQUIRED
 L = 483.27'
 E = 1.81'
 eMAX = NC
 P.C. = STA. 117+41.95
 P.T. = STA. 122+25.22

③ ϵ CONST. S.R. 18
 CURVE DATA
 P.I. = 124+83.14
 Δ = 1'43"14" RT.
 Dc = 0'20'01"
 R = 17175.73'
 T = 257.92'
 L = 515.79'
 E = 1.94'
 eMAX = NC
 P.C. = STA. 122+25.22
 P.T. = STA. 127+41.01

⑬ 030-11B-09-001
 JOHN M. MICK
 5120 Rustic Hills
 1.2434 Ac.
 NO R/W REQUIRED

⑭ 030-11B-04-002
 BOARD OF TRUSTEES
 OF MONTVILLE TOWNSHIP
 3260 Medina Rd.
 0.4094 Ac.
 NO R/W REQUIRED

⑮ 030-11B-04-003
 DANIEL DOLNEY &
 ALICE DOLNEY
 3242 Medina Rd.
 0.4475 Ac.

BASIS OF BEARINGS
 ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE
 PLANE COORDINATE GRID SYSTEM, NORTH ZONE, NAD 83,
 AS DETERMINED BY GPS.

NOTE: THE EXISTING CENTERLINE OF R/W WAS DETERMINED
 FROM R/W PLAN S.H. 95, SEC. A & B, R/W PLAN
 MED-18-14.99, R/W PLAN MED-18-16.08, MONUMENTS
 FOUND, DEEDS, AND, TAX MAPS.

SET IRON PINS:
 ALL SET IRON PINS ARE 3/4"X30" REBARS WITH 1-1/2"
 ALUMINUM CAP INSCRIBED "ODOT R/W" URS CORPORATION
 P.S. NO. 5680"

MONUMENT LEGEND

- I.P. FOUND
- 3/4" x 30" REBAR SET WITH I.D. CAP MARKED "ODOT R/W" URS CORPORATION P.S. NO. 5680"
- ⊠ MONUMENT FOUND
- ⊕ ϵ REFERENCE MONUMENT TO BE SET

STRUCTURE KEY

- ▭ RESIDENTIAL
- ▨ COMMERCIAL

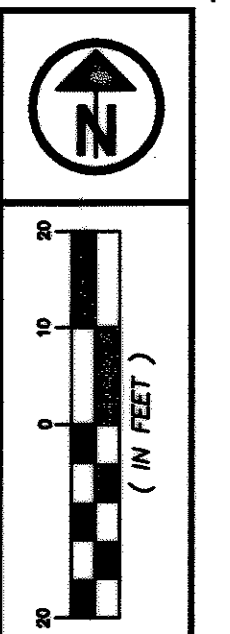
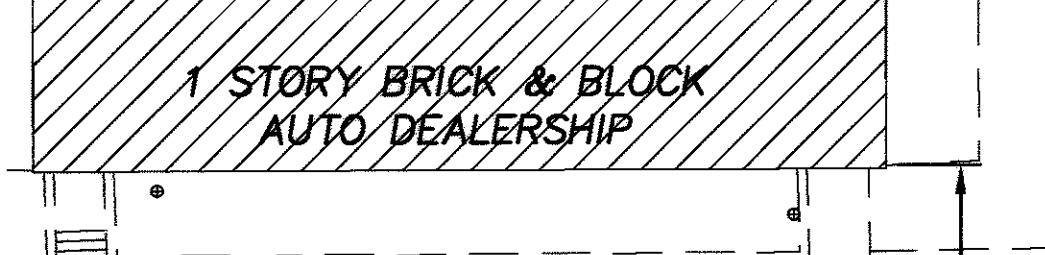
| REV. | DATE | DESCRIPTION |
|------|-----------------------|-------------|
| 7/02 | ADDED FENCE PARCEL 11 | |
| | | |
| | | |

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RIGHT OF WAY CURVE DATA

| CURVE | RADIUS | LENGTH | CHORD | |
|-------|--------|--------|--------|-------------|
| | | | LENGTH | BEARING |
| A | 25.00' | 38.42' | 34.75' | N43°45'33"E |
| B | 25.00' | 40.13' | 35.96' | S46°14'27"E |

T 3 N, R 14 W
LOT 74
MEDINA TOWNSHIP
MEDINA COUNTY



PID NO.
20397

R/W DESIGNER
BHB
R/W REVIEWER
RR

RIGHT OF WAY PLANS
STA. 794+00 TO STA. 799+50

MED - 18 - 15.13

12 / 23
351
362

3
CONST. S.R. 18
CURVE DATA
P.I. = 124+83.14
Δ = 1°43'14" RT.
Dc = 0°20'01"
R = 17175.73'
T = 257.92'
L = 515.79'
E = 1.94'
eMAX = NC
P.C. = STA. 122+25.22
P.T. = STA. 127+41.01

17
026-06D-34-038
NORRIS REALTY
AN OHIO PARTNERSHIP
3205 Medina Rd.
1.5785 Ac.

17
026-06D-34-004
NORRIS REALTY
AN OHIO PARTNERSHIP
3200 Medina Rd.
7.3516 Ac.

18
030-11B-04-004
ROB SKIDMORE
& T J MCNEW III
Medina Rd.
0.211 Ac.

19
030-11B-04-005
STATE OF
OHIO
3220 Medina Rd.
8.000 Ac.

20
030-11B-04-010
3160 MEDINA ROAD
COMPANY LLC
3182 Medina Rd.
4.0404 Ac.

SEE SHEET 11
MATCHLINE STA. 794+00

MATCHLINE STA. 799+50
SEE SHEET 13

BASIS OF BEARINGS:
ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE
PLANE COORDINATE GRID SYSTEM, NORTH ZONE, NAD 83,
AS DETERMINED BY GPS.
NOTE: THE EXISTING CENTERLINE OF R/W WAS DETERMINED
FROM R/W PLAN S.H. 95, SEC. A & B, R/W PLAN
MED-18-14.99, R/W PLAN MED-18-16.08, MONUMENTS
FOUND, DEEDS, AND, TAX MAPS.

SET IRON PINS:
ALL SET IRON PINS ARE 3/4"x30" REBARS WITH 1-1/2"
ALUMINUM CAP INSCRIBED "ODOT R/W" "URS CORPORATION
P.S. NO. 5680"

T 2 N, R 14 W
LOT 86
MONTVILLE TOWNSHIP
MEDINA COUNTY

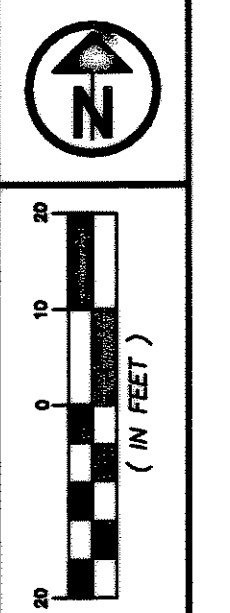
MONUMENT LEGEND
○ I.P. FOUND
● EXISTING IRON PIN FOUND
● 3/4" x 30" REBAR SET WITH I.D. CAP MARKED
"ODOT R/W" "URS CORPORATION P.S. NO. 5680"
⊠ MONUMENT FOUND
● REFERENCE MONUMENT TO BE SET

STRUCTURE KEY
RESIDENTIAL
COMMERCIAL

1494.30' - TO S.E. CORNER OF LOT 74
▲ - TO S.W. CORNER OF LOT 74
* - INDICATES R/W ENCROACHMENT

| REV. | DATE | DESCRIPTION |
|------|--------------|----------------|
| | PWS 12/04/02 | NAME - PAR. 18 |
| | | |
| | | |

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PID NO. **20397**
 R/W DESIGNER: BHB
 R/W REVIEWER: RER

RIGHT OF WAY PLANS
STA. 799+50 TO STA. 805+00

MED - 18 - 15.13

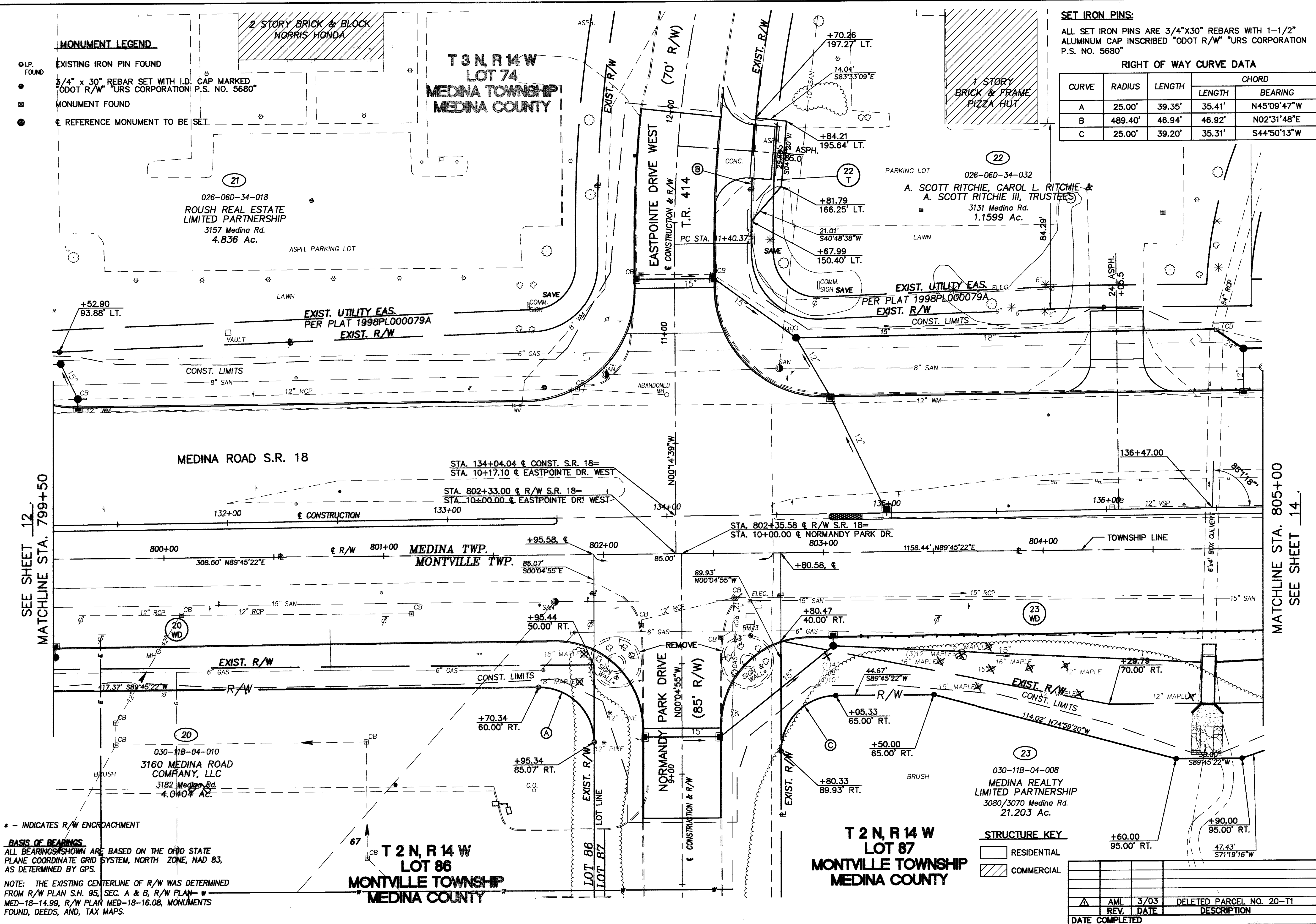
13 / 23
 352
 362

SET IRON PINS:
 ALL SET IRON PINS ARE 3/4"X30" REBARS WITH 1-1/2" ALUMINUM CAP INSCRIBED "ODOT R/W" URS CORPORATION P.S. NO. 5680"

RIGHT OF WAY CURVE DATA

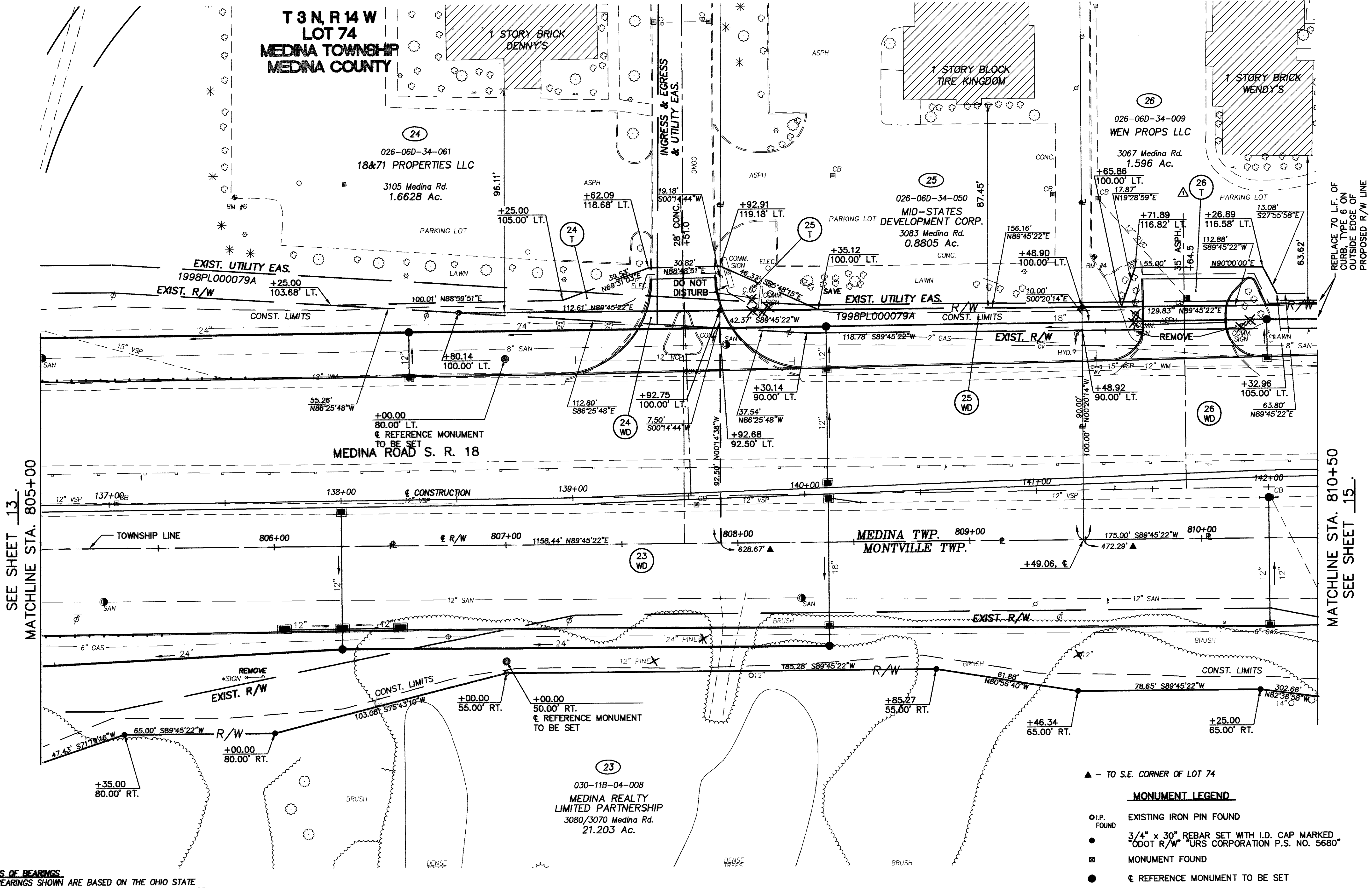
| CURVE | RADIUS | LENGTH | CHORD | |
|-------|---------|--------|--------|-------------|
| | | | LENGTH | BEARING |
| A | 25.00' | 39.35' | 35.41' | N45°09'47"W |
| B | 489.40' | 46.94' | 46.92' | N02°31'48"E |
| C | 25.00' | 39.20' | 35.31' | S44°50'13"W |

- MONUMENT LEGEND**
- I.P. FOUND
 - EXISTING IRON PIN FOUND
 - 3/4" x 30" REBAR SET WITH I.D. CAP MARKED "ODOT R/W" URS CORPORATION P.S. NO. 5680"
 - MONUMENT FOUND
 - REFERENCE MONUMENT TO BE SET



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SEE SHEET 13
MATCHLINE STA. 805+00

MATCHLINE STA. 810+50
SEE SHEET 15

BASIS OF BEARINGS
ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE PLANE COORDINATE GRID SYSTEM, NORTH ZONE, NAD 83, AS DETERMINED BY GPS.

NOTE: THE EXISTING CENTERLINE OF R/W WAS DETERMINED FROM R/W PLAN S.H. 95, SEC. A & B, R/W PLAN MED-18-14.99, R/W PLAN MED-18-16.08, MONUMENTS FOUND, DEEDS, AND, TAX MAPS.

SET IRON PINS:
ALL SET IRON PINS ARE 3/4"X30" REBARS WITH 1-1/2" ALUMINUM CAP INSCRIBED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"

**T 2 N, R 14 W
LOT 87
MONTVILLE TOWNSHIP
MEDINA COUNTY**

- ▲ - TO S.E. CORNER OF LOT 74
- MONUMENT LEGEND**
- I.P. FOUND EXISTING IRON PIN FOUND
 - 3/4" x 30" REBAR SET WITH I.D. CAP MARKED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"
 - MONUMENT FOUND
 - € REFERENCE MONUMENT TO BE SET

- STRUCTURE KEY**
- ▭ RESIDENTIAL
 - ▨ COMMERCIAL

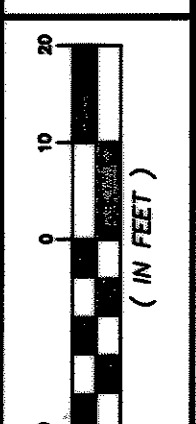
* - INDICATES R/W ENCROACHMENT

| | | |
|----------------|---------------------|---------|
| 10/02 | REVISED PARCEL 26-T | 14 / 23 |
| REV. DATE | DESCRIPTION | 353 |
| DATE COMPLETED | | 362 |

PID NO. **20397**

R/W DESIGNER: BHB
R/W REVIEWER: RER

MED - 18 - 15.13



PID NO. 20397

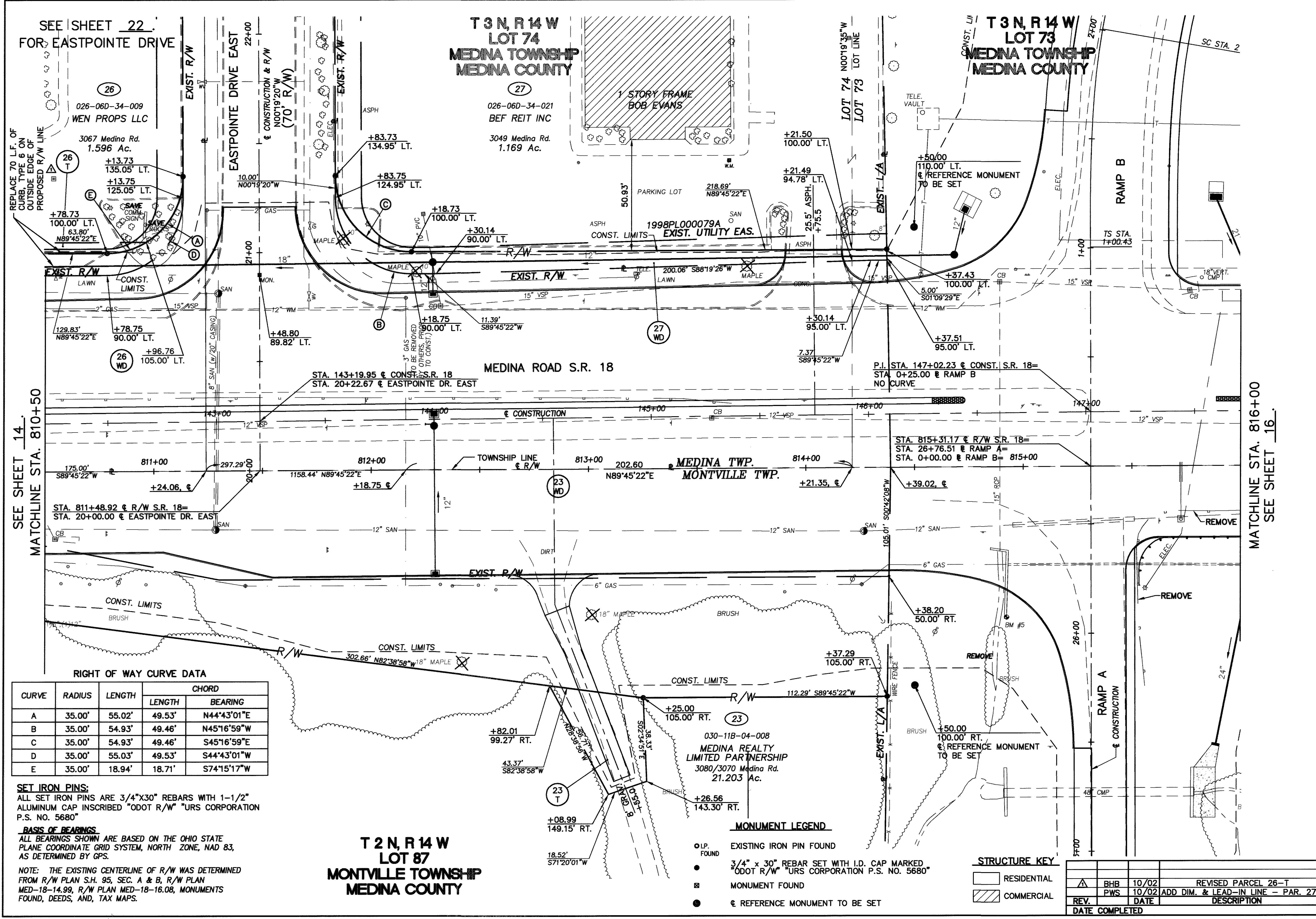
R/W DESIGNER BHB
R/W REVIEWER PWS

RIGHT OF WAY PLAN
STA. 810+50 TO STA. 816+00

MED - 18 - 15.13

15 / 23

354
362



SEE SHEET 22 FOR EASTPOINTE DRIVE

SEE SHEET 14 MATCHLINE STA. 810+50

MATCHLINE STA. 816+00 SEE SHEET 16

T 3 N, R 14 W
LOT 74
MEDINA TOWNSHIP
MEDINA COUNTY

T 3 N, R 14 W
LOT 73
MEDINA TOWNSHIP
MEDINA COUNTY

T 2 N, R 14 W
LOT 87
MONTVILLE TOWNSHIP
MEDINA COUNTY

26
026-06D-34-009
WEN PROPS LLC
3067 Medina Rd.
1.596 Ac.
+13.73
135.05' LT.
+13.75
125.05' LT.
+78.73
100.00' LT.
63.80'
N89°45'22"E

27
026-06D-34-021
BEF REIT INC
3049 Medina Rd.
1.169 Ac.
+83.73
134.95' LT.
+83.75
124.95' LT.
+18.73
100.00' LT.
+30.14
90.00' LT.

1 STORY FRAME
BOB EVANS
218.69'
N89°45'22"E
50.93'
PARKING LOT
1998PL000079A
EXIST. UTILITY EAS.

LOT 74
LOT 73
+21.50
100.00' LT.
+21.49
94.78' LT.
+50.00
110.00' LT.
REFERENCE MONUMENT
TO BE SET
+37.43
100.00' LT.
+37.51
95.00' LT.
+30.14
95.00' LT.
+39.02
50.00' RT.
+38.20
50.00' RT.
+37.29
105.00' RT.
+25.00
105.00' RT.
+26.56
143.30' RT.
+08.99
149.15' RT.
+18.52
571'20'01"W

RIGHT OF WAY CURVE DATA

| CURVE | RADIUS | LENGTH | CHORD | |
|-------|--------|--------|--------|-------------|
| | | | LENGTH | BEARING |
| A | 35.00' | 55.02' | 49.53' | N44°43'01"E |
| B | 35.00' | 54.93' | 49.46' | N45°16'59"W |
| C | 35.00' | 54.93' | 49.46' | S45°16'59"E |
| D | 35.00' | 55.03' | 49.53' | S44°43'01"W |
| E | 35.00' | 18.94' | 18.71' | S74°15'17"W |

SET IRON PINS:
ALL SET IRON PINS ARE 3/4"x30" REBARS WITH 1-1/2" ALUMINUM CAP INSCRIBED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"

BASES OF BEARINGS:
ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE PLANE COORDINATE GRID SYSTEM, NORTH ZONE, NAD 83, AS DETERMINED BY GPS.

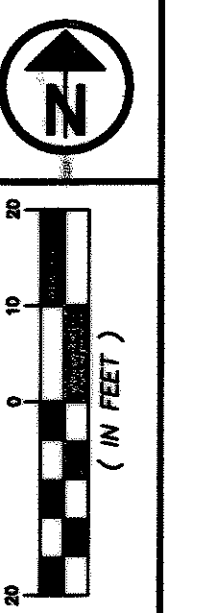
NOTE: THE EXISTING CENTERLINE OF R/W WAS DETERMINED FROM R/W PLAN S.H. 95, SEC. A & B, R/W PLAN MED-18-14.99, R/W PLAN MED-18-16.08, MONUMENTS FOUND, DEEDS, AND, TAX MAPS.

- MONUMENT LEGEND**
- I.P. FOUND
 - 3/4" x 30" REBAR SET WITH I.D. CAP MARKED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"
 - MONUMENT FOUND
 - REFERENCE MONUMENT TO BE SET
- STRUCTURE KEY**
- RESIDENTIAL
 - ▨ COMMERCIAL

| REV. | DATE | DESCRIPTION |
|------|-------|-------------------------------------|
| 1 | 10/02 | REVISED PARCEL 26-T |
| 2 | 10/02 | ADD DIM. & LEAD-IN LINE - PAR. 27WD |

DATE COMPLETED

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PID NO.
20397

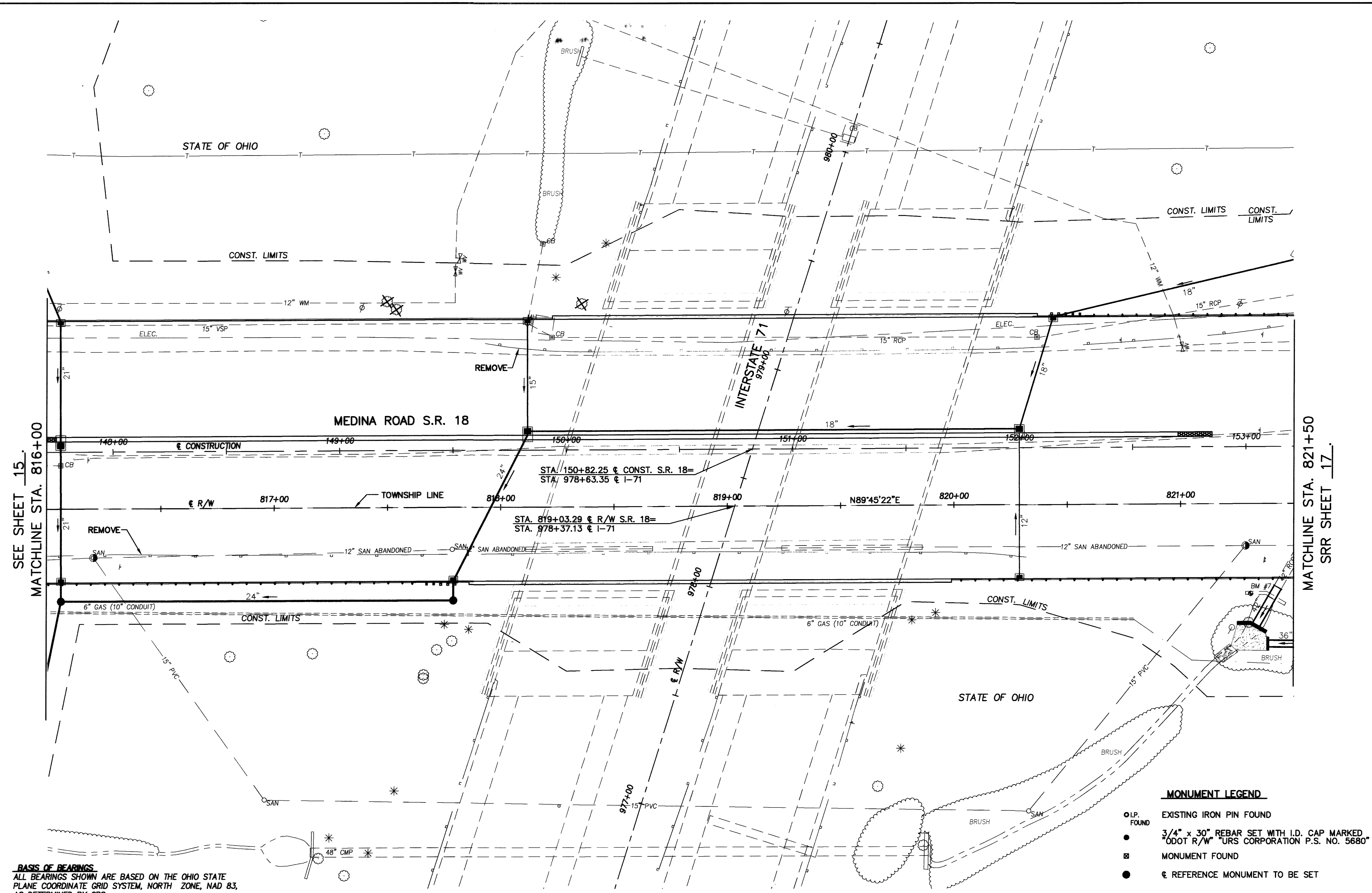
R/W DESIGNER
BHB
R/W REVIEWER
RER

RIGHT OF WAY PLAN
STA. 816+00 TO STA. 821+50

MED - 18 - 15.13

16 / 23

355
362



BASIS OF BEARINGS
ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE PLANE COORDINATE GRID SYSTEM, NORTH ZONE, NAD 83, AS DETERMINED BY GPS.
NOTE: THE EXISTING CENTERLINE OF R/W WAS DETERMINED FROM R/W PLAN S.H. 95, SEC. A & B, R/W PLAN MED-18-14.99, R/W PLAN MED-18-16.08, MONUMENTS FOUND, DEEDS, AND, TAX MAPS.

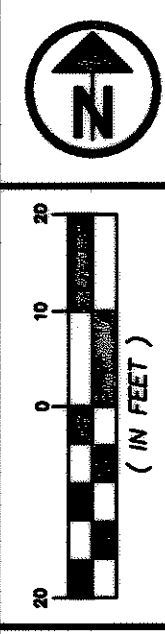
SET IRON PINS:
ALL SET IRON PINS ARE 3/4"x30" REBARS WITH 1-1/2" ALUMINUM CAP INSCRIBED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"

STRUCTURE KEY
RESIDENTIAL
COMMERCIAL

MONUMENT LEGEND
 ○ I.P. FOUND
 ● 3/4" x 30" REBAR SET WITH I.D. CAP MARKED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"
 ⊠ MONUMENT FOUND
 ⊕ REFERENCE MONUMENT TO BE SET

| REV. | DATE | DESCRIPTION |
|------|------|-------------|
| | | |
| | | |
| | | |

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PID NO. 20397

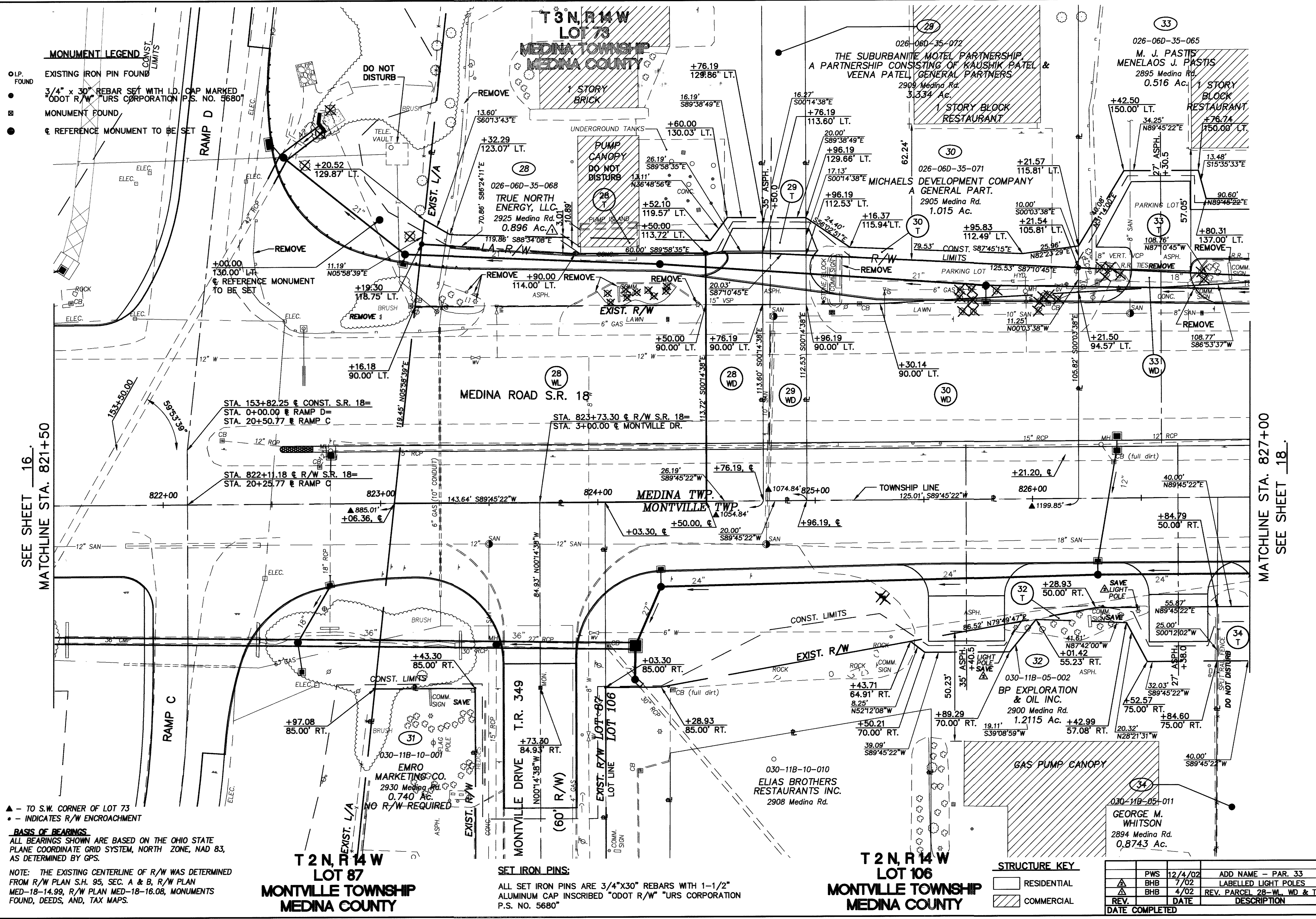
R/W DESIGNER BHB
R/W REVIEWER RER

RIGHT OF WAY PLAN
STA. 821+50 TO STA. 827+00

MED - 18 - 15.13

17 / 23

356
362



MONUMENT LEGEND

- I.P. FOUND
- EXISTING IRON PIN FOUND
- ⊠ MONUMENT FOUND
- ⊕ REFERENCE MONUMENT TO BE SET

3/4" x 30" REBAR SET WITH I.D. CAP MARKED "ODOT R/W" URS CORPORATION P.S. NO. 5680"

SEE SHEET 16. MATCHLINE STA. 821+50

STA. 153+82.25 & CONST. S.R. 18=

STA. 0+00.00 & RAMP D=

STA. 20+50.77 & RAMP C

STA. 822+11.18 & R/W S.R. 18=

STA. 20+25.77 & RAMP C

STA. 823+73.30 & R/W S.R. 18=

STA. 3+00.00 & MONTVILLE DR.

SEE SHEET 18. MATCHLINE STA. 827+00

▲ - TO S.W. CORNER OF LOT 73

* - INDICATES R/W ENCROACHMENT

BASIS OF BEARINGS

ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE PLANE COORDINATE GRID SYSTEM, NORTH ZONE, NAD 83, AS DETERMINED BY GPS.

NOTE: THE EXISTING CENTERLINE OF R/W WAS DETERMINED FROM R/W PLAN S.H. 95, SEC. A & B, R/W PLAN MED-18-14.99, R/W PLAN MED-18-16.08, MONUMENTS FOUND, DEEDS, AND, TAX MAPS.

SET IRON PINS:

ALL SET IRON PINS ARE 3/4"x30" REBAR WITH 1-1/2" ALUMINUM CAP INSCRIBED "ODOT R/W" URS CORPORATION P.S. NO. 5680"

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL

| REV. | DATE | DESCRIPTION |
|------|-------------|---------------------------|
| | PWS 12/4/02 | ADD NAME - PAR. 33 |
| | BHB 7/02 | LABELLED LIGHT POLES |
| | BHB 4/02 | REV. PARCEL 28-WL, WD & T |

DATE COMPLETED

T 2 N, R 14 W
LOT 87
MONTVILLE TOWNSHIP
MEDINA COUNTY

T 2 N, R 14 W
LOT 106
MONTVILLE TOWNSHIP
MEDINA COUNTY

T 3 N, R 14 W
LOT 73
MEDINA TOWNSHIP
MEDINA COUNTY

030-11B-05-011
GEORGE M. WHITSON
2894 Medina Rd.
0.8743 Ac.

030-11B-05-002
BP EXPLORATION & OIL INC.
2900 Medina Rd.
1.2115 Ac.

030-11B-10-010
ELIAS BROTHERS RESTAURANTS INC.
2908 Medina Rd.

030-11B-10-001
EMRO MARKETING CO.
2930 Medina Rd.
0.740 Ac.

026-06D-35-068
TRUE NORTH ENERGY, LLC
2925 Medina Rd.
0.896 Ac.

026-06D-35-071
MICHAELS DEVELOPMENT COMPANY
A GENERAL PART.
2905 Medina Rd.
1.015 Ac.

026-06D-35-065
M. J. PASTIS
MENELOS J. PASTIS
2895 Medina Rd.
0.516 Ac.

026-06D-35-072
THE SUBURBANITE MOTEL PARTNERSHIP
A PARTNERSHIP CONSISTING OF KAUSHIK PATEL & VEENA PATEL, GENERAL PARTNERS
2909 Medina Rd.
3.334 Ac.

SEE SHEET 17
MATCHLINE STA. 827+00

BASIS OF BEARINGS
ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE PLANE COORDINATE GRID SYSTEM, NORTH ZONE, NAD 83, AS DETERMINED BY GPS.

NOTE: THE EXISTING CENTERLINE OF R/W WAS DETERMINED FROM R/W PLAN S.H. 95, SEC. A & B, R/W PLAN MED-18-14.99, R/W PLAN MED-18-16.08, MONUMENTS FOUND, DEEDS, AND, TAX MAPS.

RIGHT OF WAY CURVE DATA

| CURVE | RADIUS | LENGTH | CHORD | |
|-------|--------|--------|--------|-------------|
| | | | LENGTH | BEARING |
| A | 25.00' | 39.27' | 35.36' | S44°45'22"W |
| B | 20.00' | 33.65' | 29.82' | S48°27'01"E |
| C | 25.00' | 43.69' | 38.34' | S50°53'47"W |

**T 3 N, R 14 W
LOT 73
MEDINA TOWNSHIP
MEDINA COUNTY**

**GATEWAY DRIVE
SEE SHEET 23.**

026-06D-35-065
**M. J. PASTIS
MENELAOS J. PASTIS**
2895 Medina Rd.
0.516 Ac.
1 STORY BLOCK
RESTAURANT

026-06D-35-076
**CHU BROTHERS
MOTEL, INC.**
2875 Medina Rd.
4.3503 Ac.

026-06D-35-109
**GREGORY J. SHUE &
CHRISTINE M. SHUE**
2855 Medina Rd.
0.6611 Ac.
PUMP
CANOPY

108.76' N87°10'45"W
108.77' S86°53'37"W
37.99' S00°03'38"E
90.60' N89°45'22"E
40.66' S89°45'22"W
191.66' S89°45'22"W
121.65' S85°15'29"E
114.83' LT
114.83' LT
191.66' S89°45'22"W
121.65' S85°15'29"E
108.77' S86°53'37"W
108.76' N87°10'45"W
37.99' S00°03'38"E
90.60' N89°45'22"E
40.66' S89°45'22"W
191.66' S89°45'22"W
121.65' S85°15'29"E
114.83' LT
114.83' LT
191.66' S89°45'22"W
121.65' S85°15'29"E

MEDINA ROAD S.R. 18

**MEDINA TWP.
MONTVILLE TWP.**

030-11B-05-011
**GEORGE M.
WHITSON**
2894 Medina Rd.
0.8743 Ac.
1 STORY BLOCK

030-11B-05-003
**J.M. QUALITY
ENTERPRISES, LTD.**
2884 Medina Rd.
1.607 Ac.

030-11B-05-004
**HARI OM ASSOCIATES-MEDINA LLC
AND OHIO LIMITED LIABILITY COMPANY**
2866 Medina Rd.
4.808 Ac.

030-11B-05-005
**ELIAS L.
CORPAS**
2860 Medina Rd.
0.815 Ac.
1 STORY FRAME
RESTAURANT

030-11B-05-006
**RENUART
LEASING CO.**
2828 Medina Rd.
1.486 Ac.

STRUCTURE KEY
RESIDENTIAL
COMMERCIAL

MONUMENT LEGEND
EXISTING IRON PIN FOUND
3/4" x 30" REBAR SET WITH I.D. CAP MARKED "ODOT R/W" URS CORPORATION P.S. NO. 5680
MONUMENT FOUND
REFERENCE MONUMENT TO BE SET

| REV. | DATE | DESCRIPTION |
|------------------|-------|------------------------------------|
| 39-T1 | 1/03 | REV 39-T1 ADDED DRIVE |
| 35 | 12/04 | OWNER - PAR. 35 |
| 33 | 12/04 | ADD NAME - PAR. 33 |
| 33WD, 35WD, 44SH | 10/02 | ADD DIMS. - PARS. 33WD, 35WD, 44SH |
| 33WD, 35WD, 44SH | 7/02 | LABELED LIGHT POLES |

SET IRON PINS:
ALL SET IRON PINS ARE 3/4"x30" REBARS WITH 1-1/2" ALUMINUM CAP INSCRIBED "ODOT R/W" URS CORPORATION P.S. NO. 5680"

REMOVE 47' L.F. OF SPLIT RAIL FENCE OF WHICH 17' L.F. OF SPLIT RAIL FENCE ENCLOSED IN THE EXISTING RIGHT OF WAY.

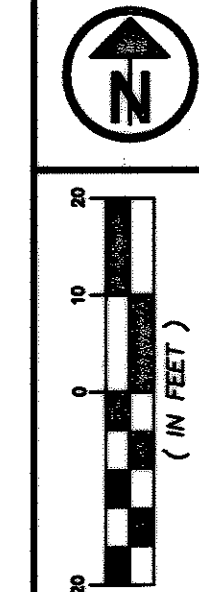
**T 2 N, R 14 W
LOT 106
MONTVILLE TOWNSHIP
MEDINA COUNTY**

MATCHLINE STA. 832+75
SEE SHEET 19.

**RIGHT OF WAY PLAN
STA. 827+00 TO STA. 832+75**

MED - 18 - 15.13

18 / 23
357
362

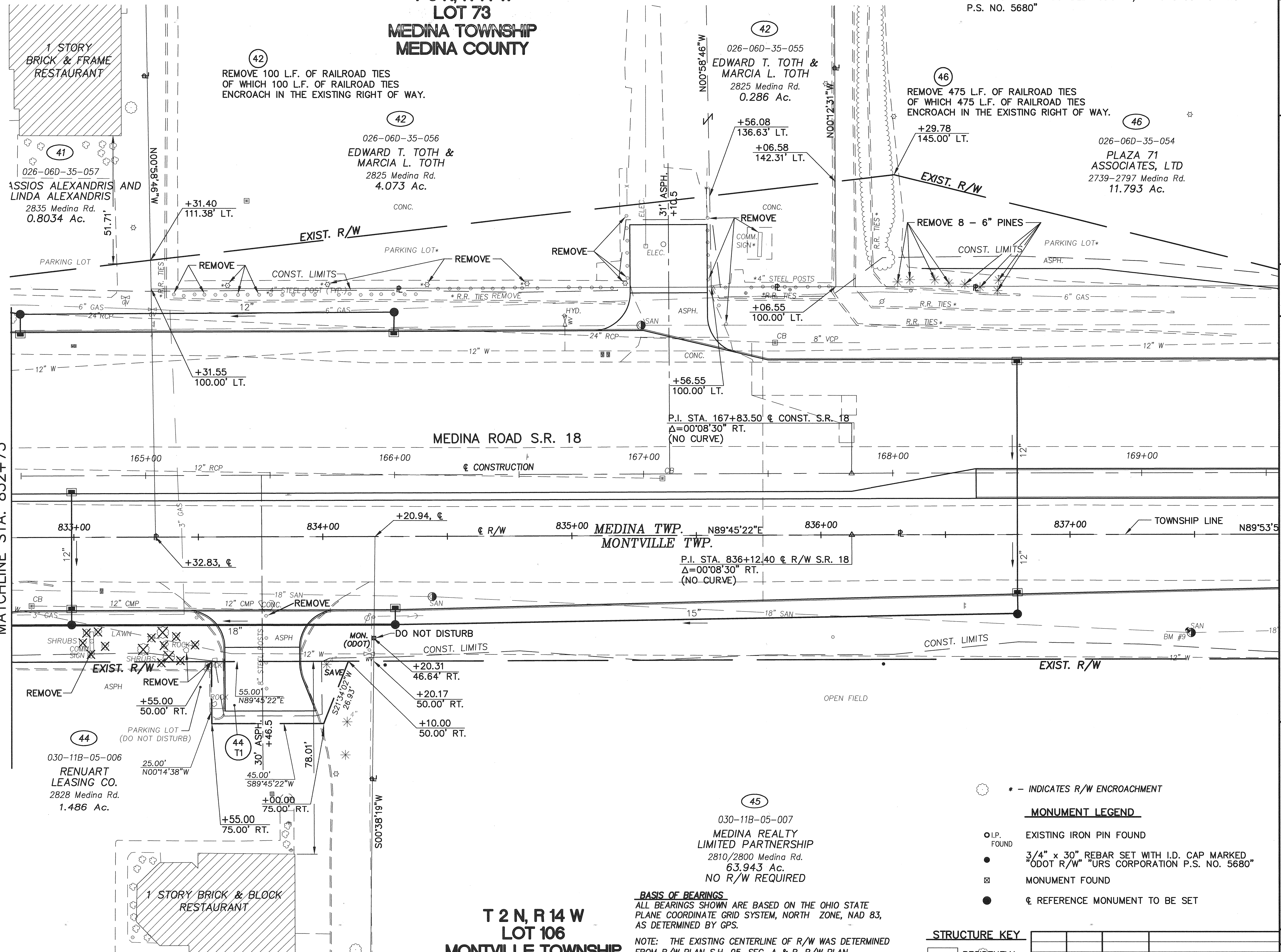


PID NO. 20397
R/W DESIGNER BHB
R/W REVIEWER REC

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SEE SHEET 18.

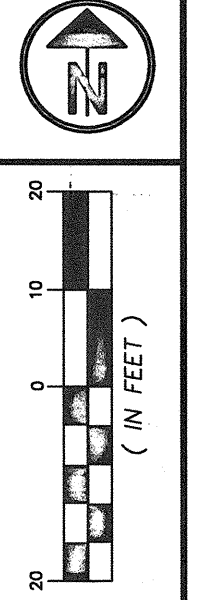
MATCHLINE STA. 832+75



**T 3 N, R 14 W
LOT 73
MEDINA TOWNSHIP
MEDINA COUNTY**

**T 2 N, R 14 W
LOT 106
MONTVILLE TOWNSHIP
MEDINA COUNTY**

SET IRON PINS:
ALL SET IRON PINS ARE 3/4"x30" REBARS WITH 1-1/2" ALUMINUM CAP INSCRIBED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"



PID NO. **20397**

R/W DESIGNER BHB
R/W REVIEWER RER

**RIGHT OF WAY
STA. 832+75 TO STA. 838+00**

MED - 18 - 15.13

19 / 23

358
362

42 REMOVE 100 L.F. OF RAILROAD TIES OF WHICH 100 L.F. OF RAILROAD TIES ENCROACH IN THE EXISTING RIGHT OF WAY.

42 026-06D-35-055 EDWARD T. TOTH & MARCIA L. TOTH 2825 Medina Rd. 0.286 Ac.

46 REMOVE 475 L.F. OF RAILROAD TIES OF WHICH 475 L.F. OF RAILROAD TIES ENCROACH IN THE EXISTING RIGHT OF WAY.

46 026-06D-35-054 PLAZA 71 ASSOCIATES, LTD 2739-2797 Medina Rd. 11.793 Ac.

41 026-06D-35-057 ASSIOS ALEXANDRIS AND LINDA ALEXANDRIS 2835 Medina Rd. 0.8034 Ac.

42 026-06D-35-056 EDWARD T. TOTH & MARCIA L. TOTH 2825 Medina Rd. 4.073 Ac.

44 030-11B-05-006 RENUART LEASING CO. 2828 Medina Rd. 1.486 Ac.

45 030-11B-05-007 MEDINA REALTY LIMITED PARTNERSHIP 2810/2800 Medina Rd. 63.943 Ac. NO R/W REQUIRED

BASIS OF BEARINGS:
ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE PLANE COORDINATE GRID SYSTEM, NORTH ZONE, NAD 83, AS DETERMINED BY GPS.

NOTE: THE EXISTING CENTERLINE OF R/W WAS DETERMINED FROM R/W PLAN S.H. 95, SEC. A & B, R/W PLAN MED-18-14.99, R/W PLAN MED-18-16.08, MONUMENTS FOUND, DEEDS, AND, TAX MAPS.

- * - INDICATES R/W ENCROACHMENT
- I.P. FOUND EXISTING IRON PIN FOUND
- 3/4" x 30" REBAR SET WITH I.D. CAP MARKED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"
- ⊠ MONUMENT FOUND
- ⊙ ⊕ REFERENCE MONUMENT TO BE SET

STRUCTURE KEY

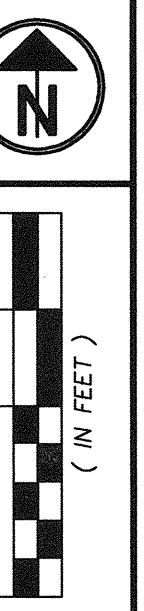
- ▭ RESIDENTIAL
- ▨ COMMERCIAL

| REV. | DATE | DESCRIPTION |
|----------------|--------------|------------------------|
| 2 | BHB 10/22/03 | REV. PCL 44T-1 & EX.RW |
| 1 | PWS 12/04/02 | OWNER - PAR. 41 |
| DATE COMPLETED | | |

T 3 N, R 14 W
 LOT 73
 MEDINA TOWNSHIP
 MEDINA COUNTY

SET IRON PINS:

ALL SET IRON PINS ARE 3/4"X30" REBARS WITH 1-1/2" ALUMINUM CAP INSCRIBED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"



PID NO.
20397

R/W DESIGNER
BHB
R/W REVIEWER
RER

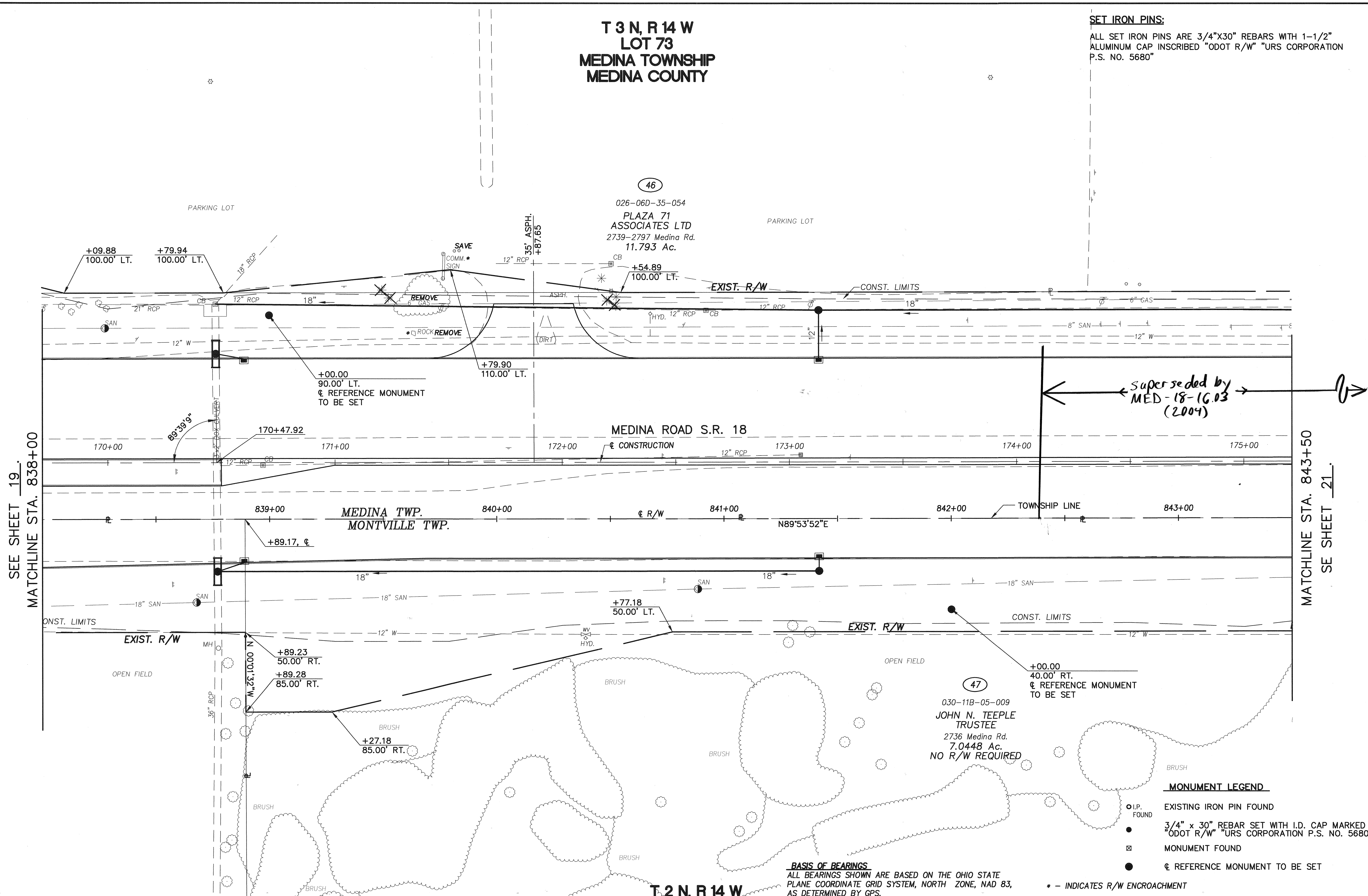
RIGHT OF PLAN
 STA. 838+00 TO STA. 843+50

MED - 18 - 15.13

20 / 23

359
362

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BASIS OF BEARINGS
 ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE PLANE COORDINATE GRID SYSTEM, NORTH ZONE, NAD 83, AS DETERMINED BY GPS.

NOTE: THE EXISTING CENTERLINE OF R/W WAS DETERMINED FROM R/W PLAN S.H. 95, SEC. A & B, R/W PLAN MED-18-14.99, R/W PLAN MED-18-16.08, MONUMENTS FOUND, DEEDS, AND, TAX MAPS.

- MONUMENT LEGEND**
- I.P. FOUND
 - EXISTING IRON PIN FOUND
 - ⊗ 3/4" x 30" REBAR SET WITH I.D. CAP MARKED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"
 - ⊕ MONUMENT FOUND
 - ⊙ ⊕ REFERENCE MONUMENT TO BE SET
- * - INDICATES R/W ENCROACHMENT

STRUCTURE KEY

| | |
|----------|-------------|
| [Symbol] | RESIDENTIAL |
| [Symbol] | COMMERCIAL |

| REV. | DATE | DESCRIPTION |
|------|-------|----------------|
| 1 | 10/03 | REV. EX. RW |
| | | DATE COMPLETED |

T 3 N, R 14 W
LOT 73
MEDINA TOWNSHIP
MEDINA COUNTY

026-06D-35-054
PLAZA 71
ASSOCIATES LTD
2739-2797 Medina Rd.
11.793 Ac.

T 3 N, R 13 W
LOT 10
GRANGER TOWNSHIP
MEDINA COUNTY

007-07C-38-018
RICHARD L. MUGRAGE &
BEVERLY J. MUGRAGE TRUSTEES
2691 Medina Rd.
46.022 Ac.
NO R/W REQUIRED

SET IRON PINS:

ALL SET IRON PINS ARE 3/4"x30" REBARS WITH 1-1/2" ALUMINUM CAP INSCRIBED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"

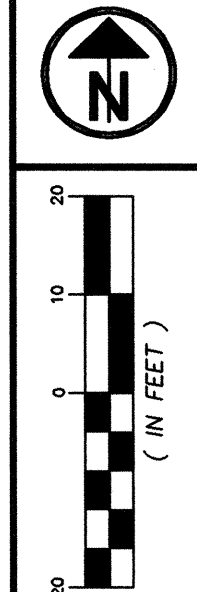
BASIS OF BEARINGS

ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE PLANE COORDINATE GRID SYSTEM, NORTH ZONE, NAD 83, AS DETERMINED BY GPS.

NOTE: THE EXISTING CENTERLINE OF R/W WAS DETERMINED FROM R/W PLAN S.H. 95, SEC. A & B, R/W PLAN MED-18-14.99, R/W PLAN MED-18-16.08, MONUMENTS FOUND, DEEDS, AND, TAX MAPS.

* - INDICATES R/W ENCROACHMENT
RIGHT OF WAY CURVE DATA

| CURVE | RADIUS | LENGTH | CHORD | |
|-------|--------|--------|--------|-------------|
| | | | LENGTH | BEARING |
| A | 25.00' | 39.28' | 35.36' | N44°53'22"E |



PID NO.
20397

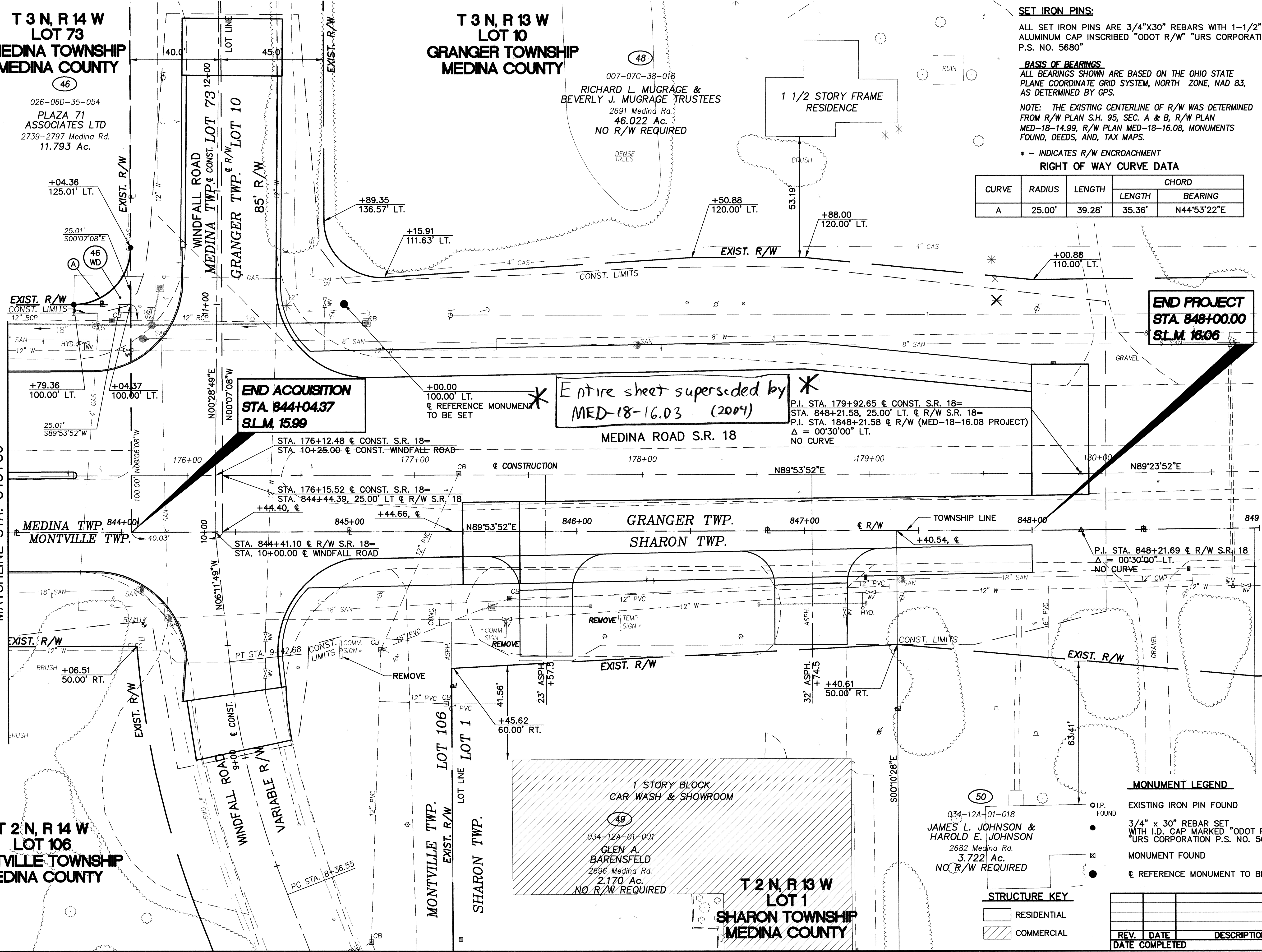
R/W DESIGNER
BHB
R/W REVIEWER

RIGHT OF WAY PLAN
STA. 843+50 TO STA. 849+100

MED - 18 - 15.13

| |
|---------|
| 21 / 23 |
| 360 |
| 362 |

SEE SHEET 20
MATCHLINE STA. 843+50



END ACQUISITION
STA. 844+04.37
S.L.M. 15.99

Entire sheet superseded by
MED-18-16.03 (2004)

END PROJECT
STA. 848+00.00
S.L.M. 16.06

P.I. STA. 179+92.65 & CONST. S.R. 18=
STA. 848+21.58, 25.00' LT. & R/W S.R. 18=
P.I. STA. 1848+21.58 & R/W (MED-18-16.08 PROJECT)
Δ = 00°30'00" LT.
NO CURVE

P.I. STA. 848+21.69 & R/W S.R. 18
Δ = 00°30'00" LT.
NO CURVE

MONUMENT LEGEND

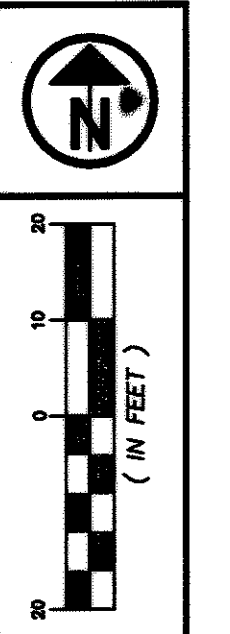
- I.P. FOUND
- EXISTING IRON PIN FOUND
- 3/4" x 30" REBAR SET WITH I.D. CAP MARKED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"
- ⊠ MONUMENT FOUND
- ⊞ & REFERENCE MONUMENT TO BE SET

STRUCTURE KEY

- ▭ RESIDENTIAL
- ▨ COMMERCIAL

| REV. | DATE | DESCRIPTION |
|------|------|-------------|
| | | |
| | | |

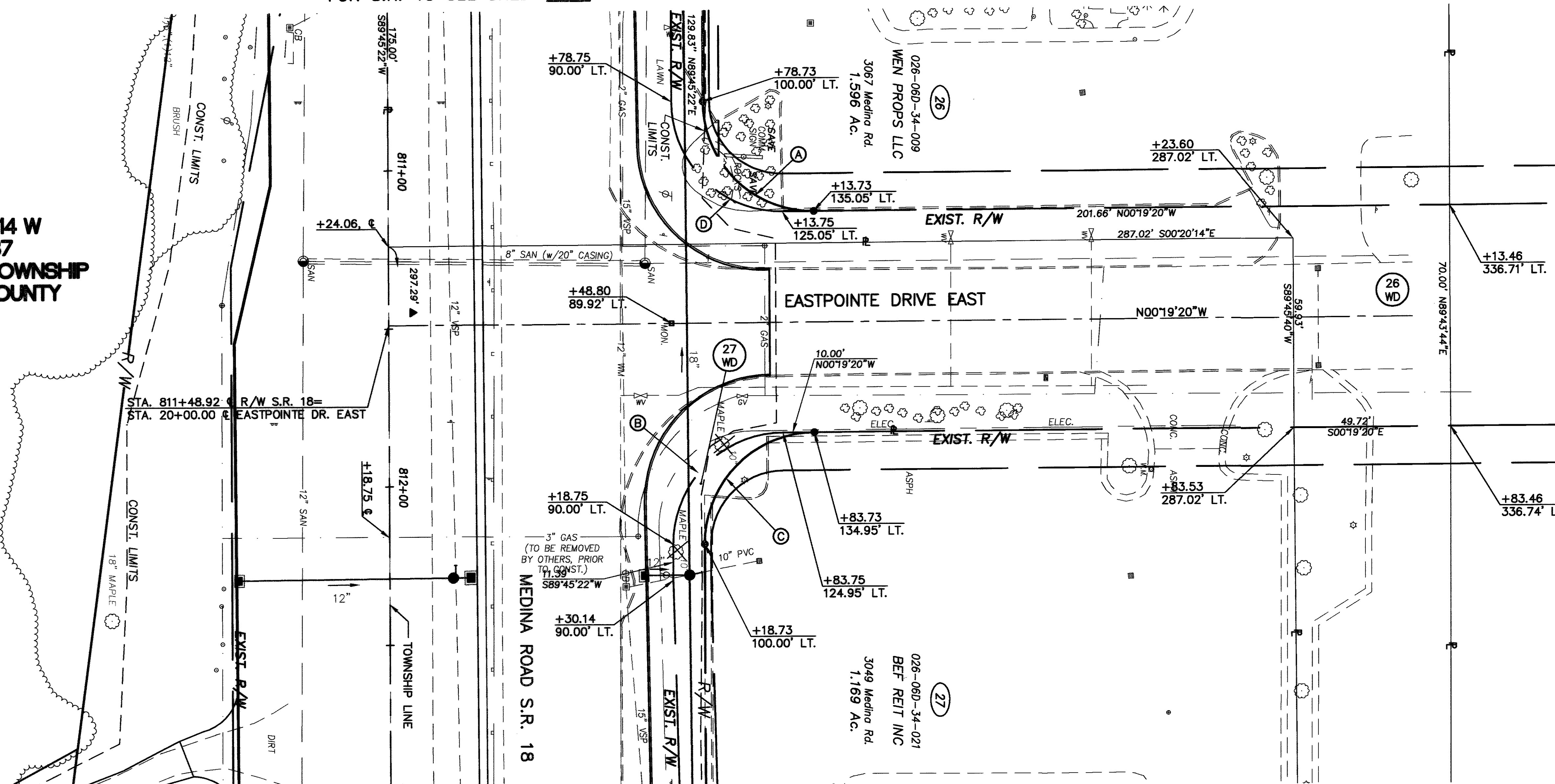
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T 3 N, R 14 W
 LOT 74
 MEDINA TOWNSHIP
 MEDINA COUNTY

FOR S.R. 18 SEE SHEET 14

T 2 N, R 14 W
 LOT 87
 MONTVILLE TOWNSHIP
 MEDINA COUNTY



FOR S.R. 18 SEE SHEET 15

RIGHT OF WAY CURVE DATA

| CURVE | RADIUS | LENGTH | CHORD | |
|-------|--------|--------|--------|-------------|
| | | | LENGTH | BEARING |
| A | 35.00' | 55.02' | 49.53' | N44°43'01"E |
| B | 35.00' | 54.93' | 49.46' | N45°16'59"W |
| C | 35.00' | 54.93' | 49.46' | S45°16'59"E |
| D | 35.00' | 55.03' | 49.53' | S44°43'01"E |

SET IRON PINS:

ALL SET IRON PINS ARE 3/4"x30" REBARS WITH 1-1/2" ALUMINUM CAP INSCRIBED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"

BASIS OF BEARINGS:

ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE PLANE COORDINATE GRID SYSTEM, NORTH ZONE, NAD 83, AS DETERMINED BY GPS.

NOTE: THE EXISTING CENTERLINE OF R/W WAS DETERMINED FROM R/W PLAN S.H. 95, SEC. A & B, R/W PLAN MED-18-14.99, R/W PLAN MED-18-16.08, MONUMENTS FOUND, DEEDS, AND, TAX MAPS.

MONUMENT LEGEND

- I.P. FOUND
- 3/4" x 30" REBAR SET WITH I.D. CAP MARKED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"
- ⊠ MONUMENT FOUND
- ⊕ REFERENCE MONUMENT TO BE SET

STRUCTURE KEY

- ▭ RESIDENTIAL
- ▨ COMMERCIAL

▲ - TO S.E. CORNER OF LOT 74

| | | |
|------|------|-------------|
| REV. | DATE | DESCRIPTION |
| | | |
| | | |
| | | |

PID NO. 20397

R/W DESIGNER BHB
 R/W REVIEWER RER

RIGHT OF WAY PLAN
 EASTPOINTE DRIVE EAST

MED - 18 - 15.13

22 / 23
 361
 362

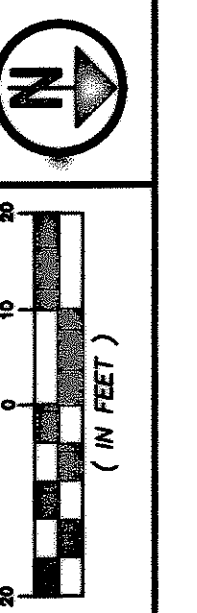
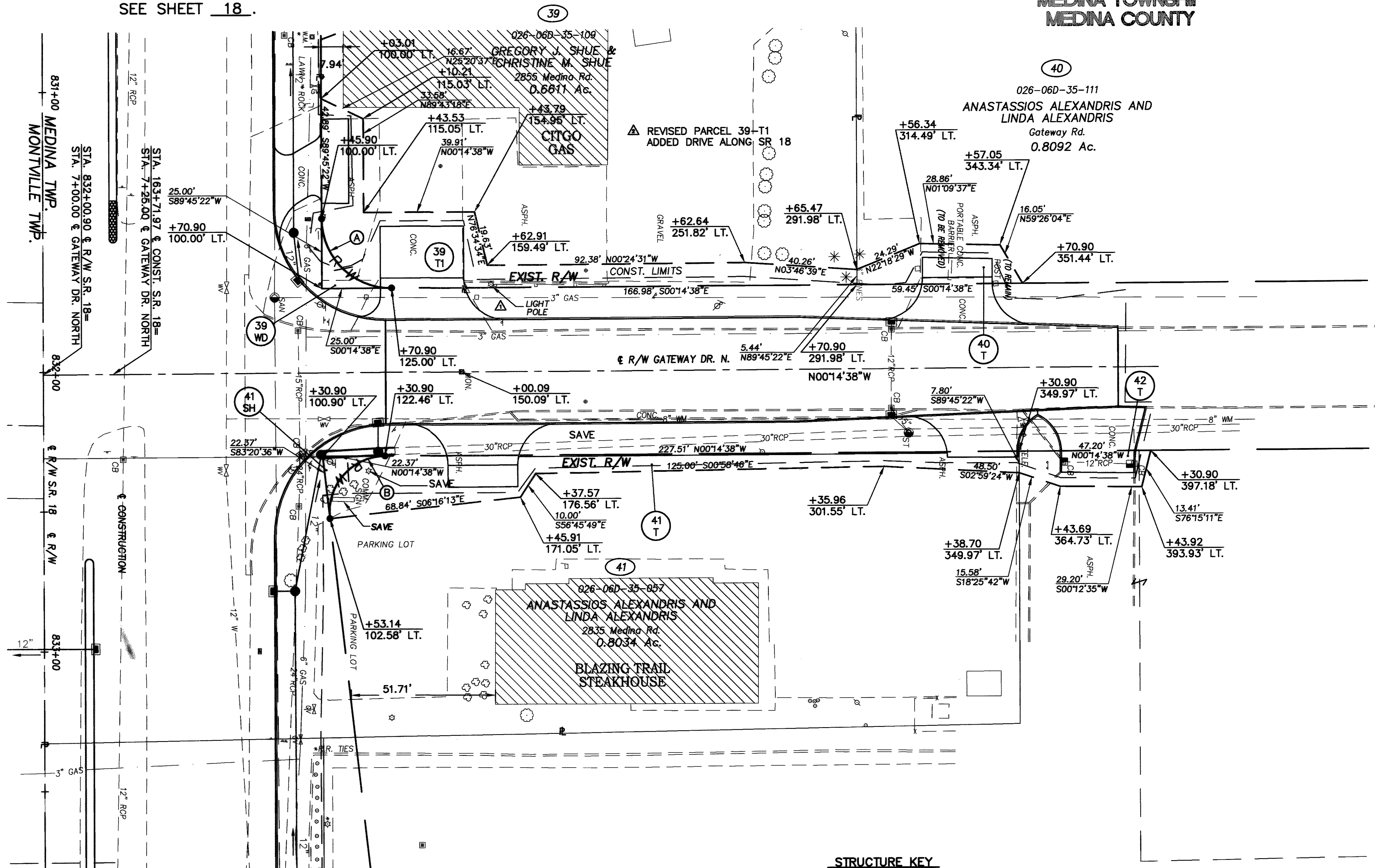
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SET IRON PINS:
 ALL SET IRON PINS ARE 3/4"x30" REBARS WITH 1-1/2"
 ALUMINUM CAP INSCRIBED "ODOT R/W" "URS CORPORATION
 P.S. NO. 5680"

**T 3 N, R 14 W
 LOT 74
 MEDINA TOWNSHIP
 MEDINA COUNTY**

FOR S.R. 18
 SEE SHEET 18.

FOR S.R. 18
 SEE SHEET 19.



PID NO.
20397

R/W DESIGNER
BHB
R/W REVIEWER
RER

**RIGHT OF WAY PLAN
 GATEWAY DRIVE NORTH**

MED - 18 - 15.13

23 / 23
 362
 362

RIGHT OF WAY CURVE DATA

| CURVE | RADIUS | LENGTH | CHORD | |
|-------|--------|--------|--------|-------------|
| | | | LENGTH | BEARING |
| A | 25.00' | 39.27' | 35.36' | S44°45'22"W |
| B | 20.00' | 33.65' | 29.82' | S48°27'01"E |

- MONUMENT LEGEND**
- I.P. FOUND
 - EXISTING IRON PIN FOUND
 - 3/4" x 30" REBAR SET WITH I.D. CAP MARKED "ODOT R/W" "URS CORPORATION P.S. NO. 5680"
 - ⊠ MONUMENT FOUND
 - ⊞ REFERENCE MONUMENT TO BE SET

- STRUCTURE KEY**
- RESIDENTIAL
 - ▨ COMMERCIAL

BASIS OF BEARINGS
 ALL BEARINGS SHOWN ARE BASED ON THE OHIO STATE PLANE COORDINATE GRID SYSTEM, NORTH ZONE, NAD 83, AS DETERMINED BY GPS.
 NOTE: THE EXISTING CENTERLINE OF R/W WAS DETERMINED FROM R/W PLAN S.H. 95, SEC. A & B, R/W PLAN MED-18-14.99, R/W PLAN MED-18-16.08, MONUMENTS FOUND, DEEDS, AND, TAX MAPS.

| REV. | DATE | DESCRIPTION |
|----------------|-------------|--------------------------------|
| △ | BHB 1/03 | REV. PARCEL 39-TI ADDED DRIVE |
| | PWS 12/4/02 | OWNER - PAR. 40 & 41 |
| | PWS 11/02 | LABELLED LIGHT POLES - PAR. 41 |
| | 8/02 | ADD P.C.B. REMOVAL - PAR. 40 |
| △ | BHB 7/02 | LABELLED LIGHT POLE |
| REV. | DATE | DESCRIPTION |
| DATE COMPLETED | | |

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NOTES

GRATE: See details on **SCD CB-1.1**.
 If necessary, bicycle safe grates shall be specified in the plans. Bicycle safe grates shall be Neenah No. R-4859-C or East Jordan No. 5110 Type M3 or approved equals.
 As of January 1, 2003, the following text shall be cast into the top of the grate:

"DUMP NO WASTE" and "DRAINS TO WATERWAY"

Text shall be printed in bold, capital letters with a minimum height of 1/2". "WATERWAY" may be substituted with "STREAM", "RIVER", "LAKE", etc. Actual placement and logo may vary per manufacturer.

WALLS: Brick or cast-in-place walls shall have a nominal thickness of 8" [200]. Precast walls shall have a minimum thickness of 6" [150] and be reinforced sufficiently to permit shipping and handling without damage. Precast tops shall be 8" [200] thick.

STEPS: Steps shall be provided where the depth exceeds 6' [1.8 m] and shall meet the requirements of **SCD MH-1.1**.

CONCRETE: Cast-in-place concrete is to be Class C. All precast concrete shall meet the requirements of CMS 706.13 and be marked with the catch basin number.

REINFORCEMENT: Reinforcing in the top is to be #4 [#13M] bars spaced at 6" [150] center to center. For Catch Basin No. 2-3 use eight bars and for Catch Basin No. 2-4 use twelve bars.

INLETS OVER 12 FEET [3.5 m] IN DEPTH: Shall be precast or cast-in place concrete; reinforced with #4 [#13M] bars on 12" [300] centers both vertically and horizontally with 2" [50] clearance from inside wall face.

PRECAST BASE: If a precast base is used, it shall be set deep enough so that the top can be placed on the base to provide the grate elevation specified in the plans. Layers of brick shall not be used to adjust the top elevation.

LOCATION AND ELEVATION: When given on the plans, the location and the elevation are at the top center of the grate. When side openings are provided, the elevation shall be at the flow line of the side inlet.

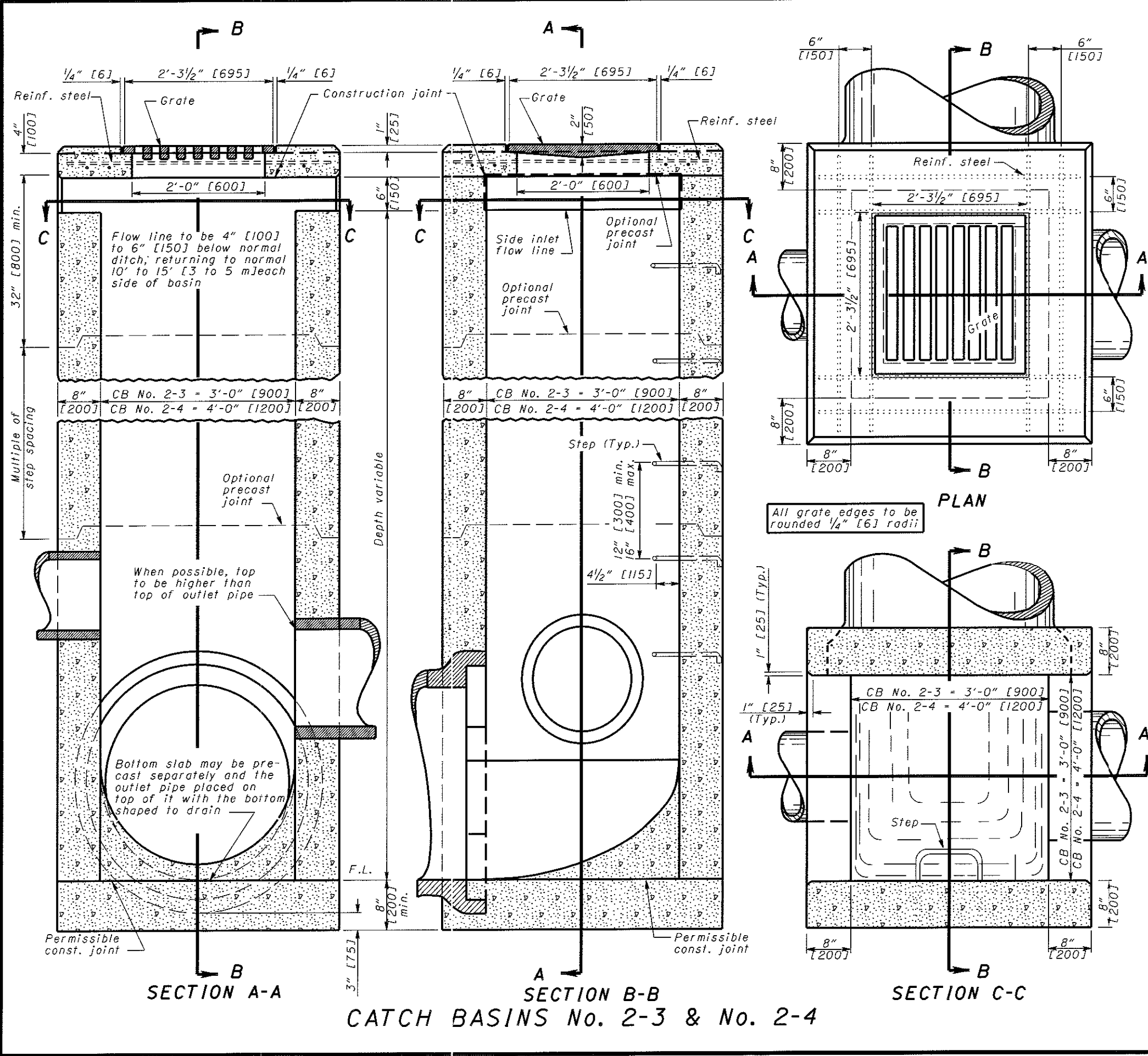
MINIMUM DEPTH: The minimum depth of CB No. 2-3 and CB No. 2-4 shall be the outside diameter (O.D.) of the outlet pipe plus 7" [175].

OPENINGS: Pipe openings shall be the O.D. of the pipe being supplied plus 2" [50] when prefabricated or field cut. The interstitial space shall be filled with grout per CMS 601.

SIDE INLETS: Inlets shall be provided on both sides of the No. 2-3 and 2-4 catch basin in sags and on upstream side only where the ditch has a continuous down grade past the catch basin. Catch basins with side inlets shall not be used within the Clear Zone.

PAYMENT: All materials and labor, including excavation and backfill, shall be paid for under **Item 604 - Catch Basin, No. 2-3 or Item 604 - Catch Basin No. 2-4.**

| CATCH BASIN | OUTLET PIPE SIZE |
|-------------|--------------------------|
| 2-3 | 12" to 33" [300 to 825] |
| 2-4 | 36" to 42" [900 to 1050] |



SECTION A-A
SECTION B-B
SECTION C-C
CATCH BASINS No. 2-3 & No. 2-4

OHIO DEPARTMENT OF TRANSPORTATION
 ENGINEER OF BRIDGES
 DATE
 7-20-01
 7-19-02
 HYDRAULIC ENGINEER
 D. Gruver
 All metric dimensions (in brackets []) are in millimeters unless otherwise noted.
 OFFICE OF STRUCTURAL ENGINEERING
 STANDARD HYDRAULIC CONSTRUCTION DRAWING
 CATCH BASINS No's 2-3 & 2-4
 NUMBER
 CB-1.2
 1/1

INTRODUCTION

THIS REPORT IS A PRESENTATION OF THE SUBSURFACE INVESTIGATION PERFORMED FOR MED-18-15.13. THE PROJECT CONSISTS OF IMPROVEMENTS TO STATE ROUTE 18 (SR 18) FROM 4,250± FEET WEST OF THE I-71 INTERCHANGE (CENTERLINE RIGHT-OF-WAY STATION 776+60.32), TO 2,900± FEET EAST OF THE I-71 INTERCHANGE (CENTERLINE SURVEY & CONSTRUCTION STATION 179+71.13). THE PROPOSED IMPROVEMENTS ARE DESCRIBED IN THE FOLLOWING BULLETS.

- WIDENING APPROXIMATELY 1,800 FEET OF THE WESTBOUND LANE OF SR 18 BETWEEN 2,300 FEET AND 500 FEET WEST OF NETTLETON ROAD.
- WIDENING APPROXIMATELY 5,400 FEET OF BOTH THE EASTBOUND AND WESTBOUND LANES OF SR 18 FROM 500 FEET WEST OF NETTLETON ROAD TO 400 FEET EAST OF WINDFALL ROAD.
- WIDENING APPROXIMATELY 800 FEET OF RAMP B, THE EXIT RAMP FROM I-71 SOUTHBOUND TO SR 18.
- WIDENING APPROXIMATELY 400 FEET OF RAMP C, THE EXIT RAMP FROM I-71 NORTHBOUND TO SR 18.
- WIDENING APPROXIMATELY 360 FEET OF GATEWAY DRIVE FROM SR 18 NORTH. CONSTRUCTION OF TWO (2) MEDIAN WALLS ALONG SR 18, ONE (1) WEST OF I-71 AND ONE (1) EAST OF I-71. MEDIAN WALL #1, TO BE LOCATED WEST OF I-71, WILL BE 938± FEET IN LENGTH, EXTENDING BETWEEN STATIONS 135+47 AND 144+84.91. MEDIAN WALL #2, TO BE LOCATED EAST OF I-71, WILL BE 616.0 FEET IN LENGTH, EXTENDING BETWEEN STATIONS 156+22.50 AND 162+38.50.
- CONSTRUCTION OF A 150.0-FOOT LONG RETAINING WALL ON THE SOUTH SIDE OF SR 18 JUST WEST OF GATEWAY DRIVE, BETWEEN APPROXIMATELY STATIONS 162+00 AND 163+50. A SECOND RETAINING WALL, APPROXIMATELY 100.0 FEET IN LENGTH, IS PROPOSED ON THE SOUTH SIDE OF SR 18 BETWEEN APPROXIMATELY STATIONS 804+25 AND 805+25 (CENTERLINE RIGHT-OF-WAY STATIONING), HOWEVER, AT THE TIME OF THIS REPORT, THE DESIGN OF THE WALL HAD NOT BEEN AUTHORIZED. THREE (3) CULVERTS WILL BE LENGTHENED. IN PARTICULAR, THE OUTLET OF A 6.0-FOOT BY 4.0-FOOT REINFORCED CONCRETE BOX CULVERT, LOCATED APPROXIMATELY 240 FEET EAST OF NORMANDY PARK, WILL BE LENGTHENED SOUTH OF SR 18. THE COMBINED OUTLET FOR A 36.0-INCH CMP AND A 42.0-INCH RCP, LOCATED APPROXIMATELY 80 FEET WEST OF RAMP C, WILL BE LENGTHENED SOUTH OF SR 18. THE INLET OF THE 42.0-INCH RCP, LOCATED APPROXIMATELY 40 FEET EAST OF RAMP D, WILL ALSO BE LENGTHENED NORTH OF SR 18.

GEOLOGY AND OBSERVATIONS OF THE PROJECT

A MAJORITY OF THE PROJECT IS LOCATED ON THE BOUNDARY BETWEEN MEDINA TOWNSHIP AND MONTVILLE TOWNSHIP, IN MEDINA COUNTY, OHIO. THE 400-FOOT SEGMENT OF SR 18 EAST OF WINDFALL ROAD IS LOCATED ON THE BOUNDARY BETWEEN GRANGER TOWNSHIP AND SHARON TOWNSHIP, IN MEDINA COUNTY. THE LAND USAGE ALONG SR 18 WEST OF I-71 IS A COMBINATION OF COMMERCIAL AND RESIDENTIAL. EAST OF I-71, THE LAND USAGE ALONG SR 18 IS EXCLUSIVELY COMMERCIAL.

THE EXISTING PAVEMENT GRADE ALONG SR 18 RISES TO THE EAST ACROSS THE PROJECT LENGTH, RANGING FROM ELEVATION 993± FEET AT THE WEST END OF THE PROJECT, TO ELEVATION 1191± FEET AT THE EAST END. THE EXISTING PAVEMENT SECTION IS IN GOOD CONDITION, EXHIBITING OCCASIONAL, LOW TO MODERATE SEVERITY, BLOCK AND TRANSVERSE CRACKING AND RUTTING. THE RUTTING IS PRIMARILY LOCATED ALONG THE DRIVE LANES OF SR 18 NEAR THE I-71 INTERCHANGE RAMPS.

GEOLOGICALLY, THE SITE LIES IN THE PROXIMITY OF THE ALLEGHENY ESCARPMENT, ON THE BOUNDARY OF THE GALION GLACIATED LOW PLATEAU AND THE KILLBUCK-GLACIATED PITTSBURGH PLATEAU. THE PROJECT SITE WAS ABRADED BY THE LATE WISCONSINAN ICE SHEET. THE SUBSURFACE SOIL AT THE SITE CONSISTS OF A COMBINATION OF GROUND MORAINIC TILL AND END MORAINIC TILL, WITH SCATTERED AREAS OF LACUSTRINE SAND. THE UNDERLYING BEDROCK IS MISSISSIPPIAN-AGE SHALE AND INTERBEDDED SANDSTONE OF THE CUYAHOGA FORMATION. BASED ON THE BEDROCK TOPOGRAPHY MAP OF THE MEDINA, OHIO QUADRANGLE, OBTAINED FROM THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR), AND THE BORINGS DRILLED, THE TOP OF BEDROCK AT THE SITE FOLLOWS THE SITE TERRAIN, GENERALLY SLOPING DOWNWARD TO THE WEST WITH SLIGHT INFLECTIONS ALONG THE ALIGNMENT. THE TOP OF BEDROCK RANGES FROM APPROXIMATELY ELEVATION 1100 FEET AT THE EAST END OF THE PROJECT, TO APPROXIMATELY ELEVATION 1000 FEET AT THE WEST END.

EXPLORATION

TWENTY-ONE (21) ROADWAY BORINGS, DESIGNATED R-1 THROUGH R-21, AND EIGHTEEN (18) STRUCTURAL BORINGS, DESIGNATED B-1 THROUGH B-18, WERE DRILLED AT THE LOCATIONS ILLUSTRATED ON THE BORING LOGS IN APPENDIX 3. THE BORING LOCATIONS WERE DESIGNATED AND FIELD STAKED BY REPRESENTATIVES OF RESOURCE INTERNATIONAL, INC. (RII). THE STATIONS, OFFSETS, AND GROUND ELEVATIONS WERE ESTIMATED FROM THE PLANS PROVIDED BY URS CORPORATION. THE BORING ELEVATIONS WERE ESTIMATED TO THE NEAREST FOOT.

THE ROADWAY BORINGS WERE DESIGNATED, AND ARE REFERENCED, AS PRESENTED IN TABLE 1. R-1 THROUGH R-17 WERE DRILLED AT APPROXIMATELY 400-FOOT INTERVALS ALONG SR 18. A MAJORITY OF THE BORINGS WERE DRILLED TO A DEPTH OF 10.0 FEET. R-11 WAS EXTENDED TO A DEPTH OF 15.0 FEET DUE TO THE PRESENCE OF FILL SOIL IN THE TOP 7± FEET OF THE BORING. R-15 OBTAINED REFUSAL WITH THE GEOPROBE AT 6.0 FEET.

TABLE 1. ROADWAY BORINGS

| ROADWAY | BORING NUMBERS |
|------------|----------------|
| ST RT 18 | R-1 THRU R-17 |
| RAMP B | R-18 THRU R-19 |
| RAMP C | R-20 |
| GATEWAY DR | R-21 |

TABLE 2. STRUCTURAL BORING LOCATIONS

| STRUCTURE | BORING NUMBERS |
|--------------------------|----------------|
| 6.0' x 4.0' BOX CULVERT | B-1 |
| 36" CMP & 42" RCP OUTLET | B-2 |
| 42" RCP INLET | B-3 |
| MEDIAN WALL #1 | B-4 THRU B-9 |
| MEDIAN WALL #2 | B-10 THRU B-14 |
| RETAINING WALL #3 | B-17 AND B-18 |

LEGEND FOR PROJECT AVERAGE RESULTS OF TESTS - 41 SAMPLES TESTED

| DESCRIPTION | ODOT CLASS | % AGG. | % C. SAND | % F. SAND | % SILT | % CLAY | LIQUID LIMIT | PLASTICITY INDEX | WATER CONTENT | SAMPLES TESTED |
|---|------------|--------|-----------|-----------|--------|--------|--------------|------------------|---------------|----------------|
| GRAVEL AND/OR STONE FRAGMENTS | A-1-a(0) | | | | | | | | | |
| VISUALLY CLASSIFIED | | | | | | | | | | |
| COARSE AND FINE SAND | A-3a(0) | 21 | 10 | 40 | | | | | 17 | 2 |
| SANDY SILT | A-4a(3) | 19 | 11 | 20 | 24 | 26 | 29 | 10 | 17 | 2 |
| SILT | A-4b(0) | | | | | | | | | |
| VISUALLY CLASSIFIED | | | | | | | | | | |
| SILT AND CLAY | A-6a(8) | 12 | 6 | 12 | 34 | 35 | 22 | 13 | 16 | 18 |
| SILTY CLAY | A-6b(11) | 10 | 6 | 12 | 31 | 41 | 38 | 18 | 16 | 18 |
| CLAY | A-7-6(13) | 16 | 3 | 9 | 29 | 43 | 42 | 22 | 21 | 1 |
| WEATHERED SHALE | | | | | | | | | | |
| VISUALLY CLASSIFIED | | | | | | | | | | |
| RANDOM FILL | | | | | | | | | | |
| VISUALLY CLASSIFIED | | | | | | | | | | |
| ASPHALT | | | | | | | | | | |
| SOD AND/OR TOPSOIL | | | | | | | | | | |
| BERM MATERIAL | | | | | | | | | | |
| CONCRETE | | | | | | | | | | |
| SAND AND GRAVEL | | | | | | | | | | |
| DRIVE SAMPLE/GEOPROBE BORING - PLAN VIEW | | | | | | | | | | |
| DRIVE SAMPLE/GEOPROBE BORING PLOTTED TO VERTICAL SCALE ONLY | | | | | | | | | | |
| X/Y/Z NUMBER OF BLOWS FOR STANDARD PENETRATION TEST | | | | | | | | | | |
| X = NUMBER OF BLOWS FOR FIRST 6 INCHES Y = NUMBER OF BLOWS FOR SECOND 6 INCHES Z = NUMBER OF BLOWS FOR THIRD 6 INCHES | | | | | | | | | | |
| • WATER CONTENT NEARLY EQUAL TO OR GREATER THAN LIQUID LIMIT. | | | | | | | | | | |
| ⊕ INDICATES A NON-PLASTIC MATERIAL WITH A HIGH WATER CONTENT. | | | | | | | | | | |
| —w FREE WATER | | | | | | | | | | |
| —v STATIC WATER LEVEL | | | | | | | | | | |
| —TR TOP OF ROCK | | | | | | | | | | |
| NOTE: FIGURES BESIDE BORINGS INDICATE WATER CONTENT IN PERCENT. E.G. 15 | | | | | | | | | | |

(CONT'D) EXPLORATION

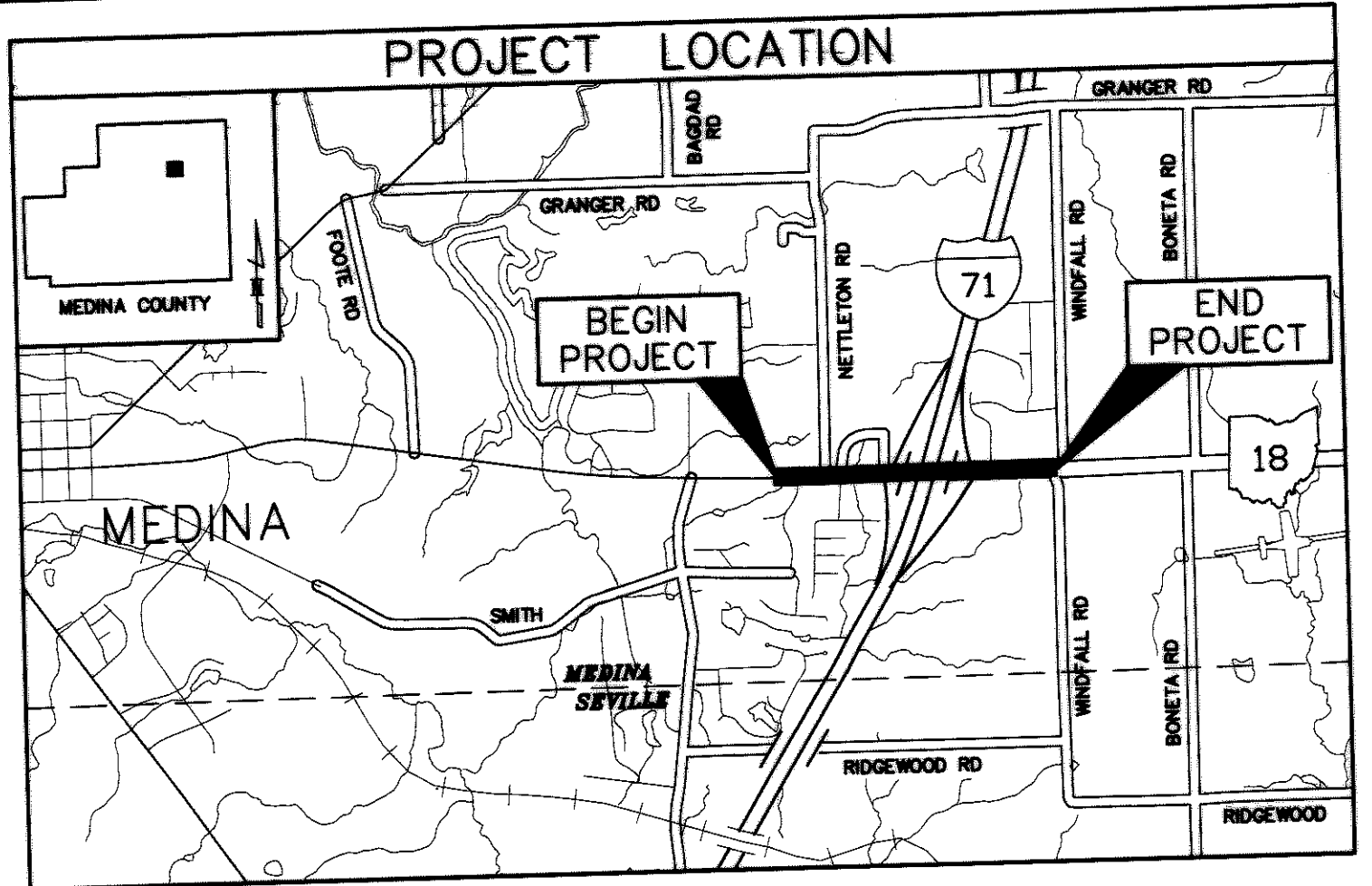
TWO (2) ADDITIONAL BORINGS, B-15 AND B-16, WERE DRILLED IN REFERENCE TO THE 100± FOOT RETAINING WALL ON THE SOUTH SIDE OF SR 18 THAT HAD NOT BEEN AUTHORIZED AT THE TIME OF THIS REPORT.

THE BORINGS DRILLED IN REFERENCE TO THE CULVERT EXTENSIONS WERE DRILLED TO DEPTHS RANGING FROM 22.5 FEET (B-1) TO 40.0 FEET (B-3). THE BORINGS DRILLED IN REFERENCE TO THE MEDIAN WALLS WERE DRILLED TO DEPTHS RANGING FROM 15.0 FEET TO 25.0 FEET. THE BORINGS DRILLED IN REFERENCE TO THE RETAINING WALLS WERE DRILLED TO DEPTHS RANGING FROM 20.0 FEET (B-17 AND B-18) TO 27.5 FEET (B-15).

THE STRUCTURAL BORINGS AND THE PAVEMENT BORINGS DRILLED THROUGH THE EXISTING ROADWAY WERE DRILLED WITH EITHER A TRUCK-MOUNTED OR ATV-MOUNTED ROTARY DRILLING RIG, UTILIZING HOLLOW-STEM CONTINUOUS FLIGHT AUGERS TO ADVANCE THE HOLES. A DOUBLE TUBE DIAMOND BIT CORE BARREL WAS USED TO CORE THE BEDROCK ENCOUNTERED IN BORINGS B-1 AND B-16. CORING PRODUCED NX-SIZED (2.1-INCH DIAMETER) CORES, FROM WHICH THE TYPE OF ROCK AND ITS GEOLOGICAL CHARACTERISTICS WERE DETERMINED. THE ROADWAY BORINGS LOCATED OFF THE EDGE OF PAVEMENT WERE ADVANCED WITH A GEOPROBE MODEL 4220, A VEHICLE-MOUNTED, HYDRAULICALLY-POWERED MACHINE THAT UTILIZES STATIC FORCE AND PERCUSSION TO ADVANCE A 4.0-FOOT LONG BY 2.0-INCH DIAMETER SOIL SAMPLER. A MOBILE, THIN-WALLED, PAVEMENT CORE MACHINE WAS USED TO CORE THROUGH THE EXISTING PAVEMENT IN ROADWAY BORINGS R-4, R-8, R-13, R-16, R-18, R-20, AND R-21. DRILLING TOOK PLACE BETWEEN MAY 31 AND JUNE 19, 2001.

INVESTIGATIONAL FINDINGS

SEVEN (7) OF THE ROADWAY BORINGS WERE LOCATED WITHIN THE EXISTING ROADWAY AND RAMPS TO DETERMINE THE EXISTING PAVEMENT SECTIONS. IN ADDITION TO THE ROADWAY BORINGS, SIX (6) OF THE STRUCTURAL BORINGS DRILLED IN REFERENCE TO THE PROPOSED MEDIAN RETAINING WALLS WERE DRILLED THROUGH THE WESTBOUND LANES OF SR 18. THE BORINGS EXHIBITED THE EXISTING PAVEMENT SECTIONS PRESENTED IN TABLE 3.



NOTE

THE SOIL PROFILE AND/OR STRUCTURE FOUNDATION INVESTIGATION SHEETS CONTAIN ALL AVAILABLE SOIL AND BEDROCK INFORMATION WHICH CAN BE CONVENIENTLY SHOWN. ADDITIONAL SUBSURFACE INVESTIGATIONS MAY HAVE BEEN MADE TO STUDY SOME ASPECT OF THE PROJECT. MORE INFORMATION, IF ANY MAY BE OBTAINED IN DISTRICT 3, THE OFFICE OF MATERIALS MANAGEMENT, 1600 WEST BROAD STREET, COLUMBUS, OHIO 43223, OR THE OFFICE OF STRUCTURAL ENGINEERING AT 1980 WEST BROAD STREET, COLUMBUS, OHIO 43223.

| PROJECT INDEX | | | | | |
|-----------------------------|-------------|-----------------|---------------|----------|----------------|
| STATIONS FROM | STATIONS TO | PLAN VIEW SHEET | PROFILE SHEET | CUT MAX. | FILL EMB. MAX. |
| MEDINA RD (SR 18) | | | | | |
| 778+00 | 785+00 | 4 | 4 | --- | --- |
| EB-MEDINA RD (SR 18) | | | | | |
| 118+00 | 137+50 | 4 | 4 | 1 FT | 4 FT |
| 137+50 | 165+00 | 5 | 5 | 1 FT | 3 FT |
| 165+00 | 185+00 | 6 | 6 | --- | --- |
| WB-MEDINA RD (SR 18) | | | | | |
| 118+00 | 137+50 | 4 | 4 | 1 FT | 1 FT |
| 137+50 | 165+00 | 5 | 5 | 1 FT | --- |
| 165+00 | 185+00 | 6 | 6 | 1 FT | 1 FT |
| RAMP B | | | | | |
| 0+00 | 10+00 | 7 | 7 | 1 FT | --- |
| RAMP C | | | | | |
| 15+00 | 20+00 | 7 | 7 | --- | 1 FT |
| GATEWAY DR | | | | | |
| 5+00 | 11+00 | 7 | 7 | 1 FT | 1 FT |

TABLE 3. EXISTING PAVEMENT CONDITIONS

| CORE NO. | ROADWAY | LOCATION | APPROX. LOC. | ASPHALT | CONCRETE | SAND & GRAVEL BASE |
|----------|------------|--------------|--------------|---------|----------|--------------------|
| R-4 | WB SR18 | DRIVE LANE | 791+50 | 12.0 IN | 8.5 IN | --- |
| B-5 | WB SR18 | PASSING LANE | 805+30 | 11.0 IN | 10.0 IN | 3.0 IN |
| R-8 | WB SR18 | DRIVE LANE | 806+50 | 13.5 IN | 8.0 IN | --- |
| B-6 | WB SR18 | PASSING LANE | 807+30 | 11.0 IN | 10.0 IN | 3.0 IN |
| B-7 | WB SR18 | PASSING LANE | 809+30 | 9.0 IN | 10.0 IN | 1.0 IN |
| B-12 | WB SR18 | PASSING LANE | 827+00 | 12.0 IN | 6.0 IN | --- |
| B-13 | WB SR18 | PASSING LANE | 829+00 | 8.0 IN | 10.0 IN | --- |
| R-13 | WB SR18 | TURN LANE | 829+50 | 10.0 IN | --- | 10.0 IN |
| B-14 | WB SR18 | PASSING LANE | 831+00 | 9.0 IN | 10.0 IN | --- |
| R-16 | EB SR18 | DRIVE LANE | 842+00 | 11.0 IN | --- | 6.0 IN |
| R-18 | RAMP B | N/A | 3+00 | 17.0 IN | 9.0 IN | --- |
| R-20 | RAMP C | N/A | 18+00 | 6.0 IN | 10.0 IN | 6.0 IN |
| R-21 | GATEWAY DR | N/A | 10+00 | --- | 9.0 IN | --- |

FILENAME: 1066-01-CVR.DWG
 DATE: 8/7/01
 PROJECT NO. W-1066
 RESOURCE INTERNATIONAL, INC.

RESOURCE INTERNATIONAL, INC.
 281 ENTERPRISE DR.
 WEST COLUMBUS, OHIO 43081
 (614) 895-1800

| DATE | BY | DATE | BY |
|--------|----------|--------|-----|
| 8/1/01 | KAL | 8/1/01 | GPH |
| | REVIEWED | | |
| | DATE | | |

SOIL PROFILE

MEDINA COUNTY
 MED-18-15.13

(CONT'D) INVESTIGATIONAL FINDINGS

R-13 WAS ORIGINALLY PLANNED IN THE DRIVE LANE OF SR 18, HOWEVER, DUE TO THE CONGESTED TRAFFIC PATTERN AT THE BORING LOCATION, THE BORING WAS OFFSET TO THE OUTSIDE TURN LANE.

A MAJORITY OF THE BORINGS NOT DRILLED THROUGH THE PAVEMENT EXHIBITED BETWEEN 2.0 AND 12.0 INCHES OF TOPSOIL AT THE GROUND SURFACE. THE TOPSOIL IS GENERALLY DESCRIBED AS DARK BROWN, CLAYEY SILT (SILTY CLAY) WITH THE PRESENCE OF ORGANICS. BORINGS R-1, R-9, AND R-13, DRILLED JUST OFF THE EDGE OF PAVEMENT, EXHIBITED BETWEEN 12.0 AND 18.0 INCHES OF SAND AND GRAVEL BERM. R-11, DRILLED JUST NORTH OF SR 18 AND JUST WEST OF RAMP D, EXHIBITED LOOSE FILL SOIL IN THE TOP 6.8 FEET, DESCRIBED AS GRAY, COARSE TO FINE GRAVEL WITH "SOME" SAND. TOPSOIL WAS MIXED WITH THE GRANULAR FILL BETWEEN 3.5 AND 4.4 FEET.

THE SUBSURFACE IS PRIMARILY COHESIVE, PREDOMINANTLY DESCRIBED AS BROWN AND/OR GRAY, SILTY CLAY (CLAYEY SILT) WITH LESSER PERCENTAGES OF SAND AND FINE GRAVEL (ODOT A-6A AND A-6B). OTHER SOIL STRATA ENCOUNTERED ALONG THE PROPOSED ROUTE ARE DESCRIBED (AND QUANTIFIED) IN THE FOLLOWING BULLETS.

- R-3 EXHIBITED BROWN CHANGING TO MOTTLED BROWN AND GRAY, MODERATE TO HIGH PLASTICITY, CLAY WITH "SOME" (20% TO 35%) SILT (ODOT A-7-6) IN THE TOP 8.5 FEET OF THE BORING.
- SEVEN (7) OF THE STRUCTURAL BORINGS EXHIBITED LAYERS/LENSES OF BROWN AND/OR GRAY, COARSE TO FINE SANDY SILT (SILTY SAND) WITH VARYING PERCENTAGES OF CLAY AND LESSER AMOUNTS OF FINE GRAVEL (ODOT A-4A) AT VARYING DEPTHS.
- B-2 EXHIBITED TWO (2) LENSES OF GRAY, LOW PLASTICITY, SILT WITH LESSER AMOUNTS OF CLAY AND SAND (ODOT A-4B).
- SIX (6) OF THE STRUCTURAL BORINGS EXHIBITED LAYERS/LENSES OF BROWN CHANGING TO GRAY, COARSE TO FINE SAND WITH "SOME" SILT (ODOT A-3A) AT VARYING DEPTHS.
- R-10 AND R-11 EACH EXHIBITED A LAYER/LENS OF BROWN OR GRAY, COARSE TO FINE GRAVEL WITH "LITTLE" (10% TO 20%) SILT (ODOT A-1-A) AT VARYING DEPTHS.

A MORE COMPREHENSIVE DESCRIPTION OF THE SOIL ENCOUNTERED DURING THE DRILLING PROGRAM CAN BE FOUND ON THE SUMMARY OF SOIL TEST DATA SHEETS.

MANY SOIL PROPERTIES, INCLUDING SOIL CONSISTENCY AND SHEAR STRENGTH (OF COHESIVE SAMPLES), ARE PRIMARILY DERIVED FROM STANDARD PENETRATION BLOW COUNTS AND HAND PENETROMETER READINGS (PERFORMED ON COHESIVE SAMPLES IF APPLICABLE). THE STANDARD PENETRATION BLOW COUNTS RECORDED DURING THE DRILLING PROCESS RANGED FROM 4 BLOWS PER FOOT (BPF) TO REFUSAL. THE BLOW COUNTS INDICATE THAT THE RELATIVE CONSISTENCY OF THE COHESIVE SOIL RANGES FROM MEDIUM STIFF (N = 4 TO 8 BLOWS PER FOOT [BPF]) TO HARD (N > 30 BPF), BUT PREDOMINANTLY RANGES FROM STIFF (N = 8 TO 15 BPF) TO VERY STIFF (N = 15 TO 30 BPF). THE BLOW COUNTS INDICATE THAT THE RELATIVE COMPACTNESS OF THE GRANULAR SOIL IS LOOSE (N = 4 TO 10 BPF) TO DENSE (N = 30 TO 50 BPF), BUT IS PREDOMINANTLY LOOSE TO MEDIUM DENSE (N = 10 TO 30 BPF). REFUSAL IS DEFINED AS OBTAINING IN EXCESS OF 50 BLOWS WITH LESS THAN 6 INCHES OF PENETRATION, AND WAS ENCOUNTERED PRIMARILY WITHIN THE SURFICIAL, AUGERABLE, SHALE BEDROCK.

NATURAL MOISTURE CONTENTS OF THE SOIL SAMPLES TESTED RANGED FROM 8% TO 29%, BUT WERE PRIMARILY LESS THAN 20%. THE NATURAL MOISTURE CONTENTS OF THE SOIL SAMPLES TESTED FOR PLASTICITY INDEX RANGED FROM 8% BELOW TO 7% ABOVE THEIR CORRESPONDING PLASTIC LIMITS, BUT WERE PRIMARILY BELOW THEIR CORRESPONDING PLASTIC LIMITS. IN GENERAL, THE SOIL EXHIBITED NATURAL MOISTURE CONTENTS ESTIMATED TO BE SLIGHTLY BELOW TO SIGNIFICANTLY ABOVE OPTIMUM MOISTURE LEVELS.

THIRTEEN (13) OF THE TEST BORINGS ENCOUNTERED GROUNDWATER DURING THE DRILLING PROCESS, AS PRESENTED IN TABLE 4.

TABLE 4. GROUNDWATER

| BORING NO. | BORING ELEVATION | ELEVATION GROUNDWATER INITIALLY ENCOUNTERED | ELEVATION GROUNDWATER AT COMPLETION | CAVE-IN ELEVATION |
|------------|------------------|---|-------------------------------------|-------------------|
| R-7 | 1068.0 FT | 1064.0 FT | SEEPAGE | N/A |
| R-8 | 1075.0 FT | 1067.0 FT | SEEPAGE | N/A |
| R-10 | 1088.0 FT | 1084.0 FT | SEEPAGE | N/A |
| R-11 | 1100.0 FT | 1093.2 FT | SEEPAGE | 1091.0 FT |
| R-20 | 1100.0 FT | 1091.5 FT | SEEPAGE | 1092.4 FT |
| B-1 | 1057.0 FT | 1042.0 FT | N/A | N/A |
| B-2 | 1085.8 FT | 1077.8 FT | 1076.8 FT | N/A |
| B-3 | 1099.6 FT | 1086.1 FT | 1087.6 FT | 1091.1 FT |
| B-5 | 1073.0 FT | 1053.0 FT | 1055.5 FT | 1054.5 FT |
| B-9 | 1084.0 FT | 1075.5 FT | SEEPAGE | 1073.5 FT |
| B-14 | 1138.0 FT | 1120.5 FT | 1123.5 FT | 1122.5 FT |
| B-15 | 1069.6 FT | 1046.1 FT | 1054.6 FT | N/A |
| B-16 | 1069.0 FT | 1063.0 FT | N/A | N/A |

THE GROUNDWATER WAS PRIMARILY ENCOUNTERED WITHIN SANDY SILT (SILTY SAND) LAYERS OR SAND AND/OR GRAVEL LAYERS/LENSES. IN A FEW OF THE BOREHOLES, CAVE-IN OCCURRED (AFTER REMOVING THE AUGERS) BELOW THE GROUNDWATER LEVEL UPON COMPLETION, AND MAY HAVE INFLUENCED THE GROUNDWATER LEVEL (THE CAVED-IN MATERIAL MAY HAVE DISPLACED THE WATER IN THE BOREHOLE). IN B-15, WHERE GROUNDWATER WAS ENCOUNTERED AT THE SOIL/BEDROCK INTERFACE, THE GROUNDWATER READING UPON COMPLETION OF THE DRILLING PROCESS WAS AT A HIGHER ELEVATION THAN WHERE GROUNDWATER WAS INITIALLY ENCOUNTERED DURING THE DRILLING PROCESS. THIS RISE IN GROUNDWATER LEVEL MAY INDICATE THE PRESENCE OF WATER UNDER HYDROSTATIC PRESSURE.

DUE TO THE USE OF WASH WATER DURING THE ROCK CORING PROCESS, AN ACCURATE DEPTH TO GROUNDWATER COULD NOT BE DETERMINED UPON COMPLETION OF THE DRILLING PROCESS IN B-1 AND B-16. GROUNDWATER LEVELS AND/OR THE PRESENCE OF GROUNDWATER ARE CONSIDERED TO BE DEPENDENT ON SEASONAL FLUCTUATIONS IN PRECIPITATION. AT THE TIME OF THIS INVESTIGATION, RECENT PRECIPITATION WAS CONSIDERED TO BE NORMAL.

BEDROCK WAS ENCOUNTERED IN FOUR (4) STRUCTURAL BORINGS, AS PRESENTED IN TABLE 5.

TABLE 5. BEDROCK

| BORING NO. | STATION & OFFSET | GROUND ELEVATION | TOP OF ROCK |
|------------|------------------|------------------|-------------|
| B-1 | 804+50, 125' RT | 1057.0 FT | 1045.1 FT |
| B-3 | 822+60, 185' LT | 1099.6 FT | 1062.6 FT |
| B-15 | 804+25, 45' RT | 1046.1 FT | 1046.1 FT |
| B-16 | 805+05, 50' RT | 1052.0 FT | 1052.0 FT |

THE SURFICIAL BEDROCK IS DESCRIBED AS GRAY, SILICEOUS, WEATHERED, AUGERABLE SHALE. THE BEDROCK WAS CORED IN B-1 BETWEEN ELEVATIONS 1039.5 FEET AND 1034.5 FEET, AND IN B-16 BETWEEN ELEVATIONS 1050.5 FEET AND 1045.5 FEET. THE CORED BEDROCK IS DESCRIBED AS GRAY, HARD, HIGHLY BROKEN, SLIGHTLY JOINTED, WEATHERED SHALE. THE QUALITY OF THE BEDROCK WAS VERY POOR, WITH RQD VALUES OF 0% IN BOTH BORINGS.

RESOURCE INTERNATIONAL, INC. FILENAME: 1066-01A-CVR.DWG
 PROJECT NO. W-1066 DATE: 8/1/01

RESOURCE INTERNATIONAL, INC.
 281 ENTERPRISE DR.
 WESTERVILLE, OHIO 43081
 (614) 885-1986



DRAWN: KAL
 REVIEWED: GPH

DATE: 8/1/01

DATE: 8/1/01

SOIL PROFILE

MEDINA COUNTY
 MED-18-15.13

1A/8



SUMMARY OF SOIL TEST DATA

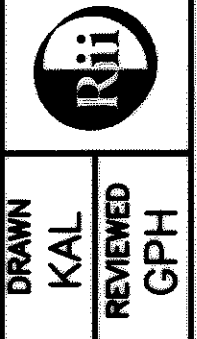
NOTE: NP SHOWN IN LIQUID LIMIT AND PLASTIC INDEX COLUMNS INDICATES THAT THE SAMPLE IS NON-PLASTIC

| Location & Offset | From To | % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT CLASS | | |
|--|----------------|-----------|---|--------|--------|--------|------|------|------|------------|--------|--------|
| <u>BORINGS REFERENCED TO CENTERLINE OF SURVEY/CONSTR & R/W - S.R. 18</u> | | | | | | | | | | | | |
| R-1 | 779+20, 37' LT | 0-1.0 | SAND AND GRAVEL BERM | | | | | | | | VISUAL | |
| | | 1.0-4.0 | 9 | 5 | 10 | 33 | 43 | 32 | 14 | 15 | A-6a | |
| | | 4.0-7.0 | SAME AS 1.0-4.0 | | | | | | | | 18 | VISUAL |
| | | 7.0-8.5 | SAME AS 1.0-4.0 | | | | | | | | 18 | VISUAL |
| | | 8.5-10.0 | SAME AS 1.0-4.0 | | | | | | | | 18 | VISUAL |
| R-2 | 783+82, 43' LT | 0-1.0 | DARK BROWN CLAYEY SILT, SOME SAND, LITTLE ORGANICS (TOPSOIL) | | | | | | | | VISUAL | |
| | | 1.0-4.0 | 5 | 4 | 10 | 30 | 51 | 38 | 19 | 22 | A-6b | |
| | | 4.0-7.0 | SAME AS 1.0-4.0 | | | | | | | | 16 | VISUAL |
| | | 7.0-10.0 | SAME AS 1.0-4.0 | | | | | | | | 16 | VISUAL |
| <u>BORINGS REFERENCED TO CENTERLINE OF SURVEY/CONSTR. - S.R. 18</u> | | | | | | | | | | | | |
| R-3 | 119+36, 34' LT | 0-0.5 | DARK BROWN CLAYEY SILT, LITTLE SAND, TRACE TO FINE GRAVEL (TOPSOIL) | | | | | | | | VISUAL | |
| | | 0.5-3.5 | 16 | 3 | 9 | 29 | 43 | 42 | 22 | 21 | A-7-6 | |
| | | 3.5-6.5 | SAME 0.5-3.5 | | | | | | | | 16 | VISUAL |
| | | 6.5-8.5 | SAME 0.5-3.5 | | | | | | | | 16 | VISUAL |
| | | 8.5-10.0 | GRAY SILTY CLAY, TRACE SAND, TRACE GRAVEL | | | | | | | | 16 | VISUAL |
| R-4 | 123+21, 25' LT | 1.7-3.2 | 11 | 5 | 8 | 41 | 35 | 32 | 16 | 15 | A-6b | |
| | | 3.2-5.0 | SAME AS 1.7-3.2 | | | | | | | | 12 | VISUAL |
| | | 6.0-7.5 | SAME AS 1.7-3.2 | | | | | | | | 12 | VISUAL |
| | | 8.5-10.0 | SAME AS 1.7-3.2 | | | | | | | | 12 | VISUAL |
| R-5 | 126+41, 49' RT | 0-1.0 | DARK BROWN CLAYEY SILT, LITTLE SAND, LITTLE ORGANICS (TOPSOIL) | | | | | | | | VISUAL | |
| | | 1.0-4.0 | 9 | 6 | 13 | 32 | 40 | 28 | 12 | 15 | A-6a | |
| | | 4.0-7.0 | SAME AS 1.0-4.0 | | | | | | | | 14 | VISUAL |
| | | 7.0-10.0 | SAME AS 1.0-4.0 | | | | | | | | 14 | VISUAL |
| R-6 | 130+16, 67' LT | 0-0.5 | DARK BROWN CLAYEY SILT, LITTLE SAND, LITTLE ORGANICS (TOPSOIL) | | | | | | | | VISUAL | |
| | | 0.5-3.5 | 7 | 6 | 14 | 36 | 37 | 28 | 11 | 16 | A-6a | |
| | | 3.5-6.5 | SAME 0.5-3.5 | | | | | | | | 12 | VISUAL |
| | | 6.5-10.0 | SAME 0.5-3.5 | | | | | | | | 12 | VISUAL |
| R-7 | 133+86, 55' RT | 0-1.0 | DARK BROWN CLAYEY SILT, LITTLE SAND, LITTLE ORGANICS (TOPSOIL) | | | | | | | | VISUAL | |
| | | 1.0-4.0 | 8 | 6 | 18 | 31 | 37 | 32 | 14 | 23 | A-6a | |
| | | 4.0-5.5 | 19 | 12 | 28 | 17 | 24 | | | 23 | VISUAL | |
| | | 5.5-7.0 | BROWN SILTY CLAY, LITTLE SAND, TRACE GRAVEL | | | | | | | | 14 | VISUAL |
| | | 7.0-8.5 | BROWN CLAYEY SAND, LITTLE SILT, LITTLE GRAVEL | | | | | | | | 14 | VISUAL |
| | | 8.5-10.0 | BROWN SILTY CLAY, TRACE SAND, TRACE GRAVEL | | | | | | | | 14 | VISUAL |
| R-8 | 138+21, 45' LT | 1.0-2.5 | 6 | 6 | 12 | 35 | 41 | 32 | 13 | 17 | A-6a | |
| | | 3.5-5.0 | SAME AS 1.0-2.5 | | | | | | | | 16 | VISUAL |
| | | 6.0-7.5 | SAME AS 1.0-2.5 | | | | | | | | 16 | VISUAL |
| | | 8.5-10.0 | SAME AS 1.0-2.5 | | | | | | | | 16 | VISUAL |
| R-9 | 142+71, 55' RT | 0-1.5 | SAND AND GRAVEL BERM | | | | | | | | VISUAL | |
| | | 1.5-3.0 | 6 | 3 | 16 | 36 | 39 | 40 | 22 | 25 | A-6b | |
| | | 3.5-5.0 | SAME AS 1.5-3.0 | | | | | | | | 16 | VISUAL |
| | | 5.0-8.0 | SAME AS 1.5-3.0 | | | | | | | | 16 | VISUAL |
| | | 8.0-10.0 | SAME AS 1.5-3.0 | | | | | | | | 16 | VISUAL |
| R-10 | 145+01, 1' LT | 0-2.0 | 11 | 9 | 14 | 41 | 25 | 28 | 12 | 15 | A-6a | |
| | | 2.0-4.0 | SAME AS 0-2.0 | | | | | | | | 14 | VISUAL |
| | | 4.0-6.0 | BROWN GRAVEL, LITTLE SILT | | | | | | | | 14 | VISUAL |
| | | 6.0-8.0 | BROWN CLAYEY SILT, SOME TO LITTLE SAND, TRACE GRAVEL | | | | | | | | 14 | VISUAL |
| | | 8.0-10.0 | SAME AS 6.0-8.0 | | | | | | | | 14 | VISUAL |
| R-11 | 153+36, 50' LT | 1.0-2.5 | GRAY GRAVEL, SOME SAND, LITTLE SILT, TRACE CLAY (FILL) | | | | | | | | VISUAL | |
| | | 3.5-5.0 | SAME AS 1.0-2.5 | | | | | | | | 15 | VISUAL |
| | | 6.0-7.5 | SAME AS 1.0-2.5 | | | | | | | | 15 | VISUAL |
| | | 8.5-10.0 | BROWN SILTY CLAY, SOME SAND, LITTLE GRAVEL | | | | | | | | 15 | VISUAL |
| | | 11.0-12.5 | GRAY GRAVEL, LITTLE SILT, LITTLE SAND, TRACE CLAY | | | | | | | | 15 | VISUAL |
| | | 13.5-15.0 | SAME AS 11.0-12.5 | | | | | | | | 15 | VISUAL |
| R-12 | 157+56, 70' RT | 1.0-2.5 | 3 | 8 | 30 | 24 | 35 | 37 | 18 | 17 | A-6b | |
| | | 3.5-5.0 | SAME AS 1.0-2.5 | | | | | | | | 17 | VISUAL |
| | | 6.0-7.5 | SAME AS 1.0-2.5 | | | | | | | | 17 | VISUAL |
| | | 8.5-10.0 | SAME AS 1.0-2.5 | | | | | | | | 17 | VISUAL |
| R-13 | 161+23, 47' LT | 1.0-2.5 | SAME AS 3.5-5.0 | | | | | | | | 16 | VISUAL |
| | | 3.5-5.0 | 2 | 5 | 10 | 37 | 46 | 36 | 15 | 16 | A-6b | |
| | | 6.0-7.5 | SAME AS 3.5-5.0 | | | | | | | | 18 | VISUAL |
| | | 8.5-10.0 | SAME AS 3.5-5.0 | | | | | | | | 18 | VISUAL |
| | | 11.0-12.5 | SAME AS 3.5-5.0 | | | | | | | | 18 | VISUAL |
| | | 13.5-15.0 | SAME AS 3.5-5.0 | | | | | | | | 18 | VISUAL |
| R-14 | 165+76, 55' RT | 0-1.0 | DARK BROWN SILTY CLAY, LITTLE SAND, LITTLE ORGANICS | | | | | | | | VISUAL | |
| | | 1.0-4.0 | 13 | 6 | 11 | 29 | 41 | 34 | 14 | 16 | A-6a | |
| | | 4.0-7.0 | SAME AS 1.0-4.0 | | | | | | | | 14 | VISUAL |
| | | 7.0-10.0 | SAME AS 1.0-4.0 | | | | | | | | 14 | VISUAL |
| R-15 | 169+71, 50' LT | 0-1.0 | SAND AND GRAVEL BERM | | | | | | | | VISUAL | |
| | | 1.0-3.5 | 11 | 8 | 11 | 32 | 38 | 31 | 12 | 17 | A-6a | |
| | | 3.5-6.0 | SAME AS 1.0-3.5 | | | | | | | | 15 | VISUAL |
| R-16 | 173+71, 35' RT | 1.0-2.5 | SAME AS 3.5-5.0 | | | | | | | | 15 | VISUAL |
| | | 3.5-5.0 | 7 | 8 | 12 | 30 | 43 | 30 | 12 | 15 | A-6a | |
| | | 6.0-7.5 | SAME AS 3.5-5.0 | | | | | | | | 15 | VISUAL |
| | | 8.5-10.0 | SAME AS 3.5-5.0 | | | | | | | | 15 | VISUAL |

| Location & Offset | From To | % Agg | % C.S. | % F.S. | % Silt | % Clay | L.L. | P.I. | W.C. | ODOT CLASS | | |
|--|----------------|----------|--|--------|--------|--------|------|------|------|------------|--------|--------|
| <u>(CONT'D) BORINGS REFERENCED TO CENTERLINE OF SURVEY/CONSTR. - S.R. 18</u> | | | | | | | | | | | | |
| R-17 | 177+72, 55' LT | 0-0.5 | DARK BROWN CLAYEY SILT, LITTLE SAND, LITTLE ORGANICS (TOPSOIL) | | | | | | | | VISUAL | |
| | | 0.5-3.5 | 1 | 7 | 10 | 37 | 45 | 34 | 16 | 16 | A-6b | |
| | | 3.5-6.5 | SAME AS 0.5-3.5 | | | | | | | | 15 | VISUAL |
| | | 6.5-10.0 | SAME AS 0.5-3.5 | | | | | | | | 15 | VISUAL |
| <u>BORINGS REFERENCED TO BASELINE OF RAMP B</u> | | | | | | | | | | | | |
| R-18 | 3+00, 5' RT | 2.2-3.7 | 9 | 5 | 9 | 24 | 53 | 37 | 15 | 17 | A-6b | |
| | | 3.7-5.2 | SAME AS 2.2-3.7 | | | | | | | | 14 | VISUAL |
| | | 6.0-7.5 | SAME AS 2.2-3.7 | | | | | | | | 14 | VISUAL |
| | | 8.5-10.0 | SAME AS 2.2-3.7 | | | | | | | | 14 | VISUAL |
| R-19 | 6+50, 25' RT | 1.1-2.6 | 12 | 11 | 12 | 29 | 36 | 29 | 11 | 15 | A-6a | |
| | | 3.5-5.0 | SAME AS 1.1-2.6 | | | | | | | | 15 | VISUAL |
| | | 6.0-7.5 | SAME AS 1.1-2.6 | | | | | | | | 15 | VISUAL |
| | | 8.5-10.0 | SAME AS 1.1-2.6 | | | | | | | | 15 | VISUAL |
| <u>BORINGS REFERENCED TO BASELINE OF RAMP C</u> | | | | | | | | | | | | |
| R-20 | 18+00, 3' LT | 2.2-3.7 | 10 | 7 | 10 | 37 | 36 | 33 | 15 | 20 | A-6a | |
| | | 3.7-5.2 | SAME AS 2.2-3.7 | | | | | | | | 15 | VISUAL |
| | | 6.0-7.5 | SAME AS 2.2-3.7 | | | | | | | | 15 | VISUAL |
| | | 8.5-10.0 | SAME AS 2.2-3.7 | | | | | | | | 15 | VISUAL |
| <u>BORINGS REFERENCED TO CENTERLINE OF GATEWAY DRIVE</u> | | | | | | | | | | | | |
| R-21 | 10+00, CL | 0.8-3.0 | 4 | 6 | 12 | 37 | 41 | 30 | 12 | 17 | A-6a | |
| | | 3.0-5.0 | SAME AS 0.8-3.0 | | | | | | | | 17 | VISUAL |
| | | 5.0-7.5 | SAME AS 0.8-3.0 | | | | | | | | 17 | VISUAL |
| | | 7.5-10.0 | SAME AS 0.8-3.0 | | | | | | | | 17 | VISUAL |

RESOURCE INTERNATIONAL INC. FILENAME: 1066-02-DATA.DWG
 PROJECT NO. W-1066 DATE: 8/1/01

RESOURCE INTERNATIONAL INC.
 281 ENTERPRISE DR.
 WESTERVILLE, OHIO 43081
 (614) 885-1859



DRAWN: KAL
 CHECKED: GPH
 DATE: 8/1/01

DATE: 8/1/01
 REVIEWED: GPH

MEDINA COUNTY
 MED-18-15.13
 SOIL PROFILE
 2/8

SUMMARY OF SOIL TEST DATA

NOTE: NP SHOWN IN LIQUID LIMIT AND PLASTIC INDEX COLUMNS INDICATES THAT THE SAMPLE IS NON-PLASTIC

Table with columns: Location & Offset, From To, % Agg, % C.S., % F.S., % Silt, % Clay, L.L., P.I., W.C., ODOT CLASS, and descriptive soil notes. Includes BORINGS REFERENCED TO CENTERLINE OF SURVEY/CONSTR. - S.R. 18.

RESOURCE INTERNATIONAL INC. PROJECT NO. W-1066 FILENAME: 1066-03-DATA.DWG DATE: 8/1/01

RESOURCE INTERNATIONAL INC. 281 ENTERPRISE DR. WESTERVILLE, OHIO 43081 (614) 886-1969



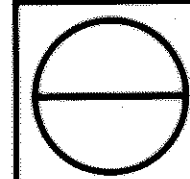
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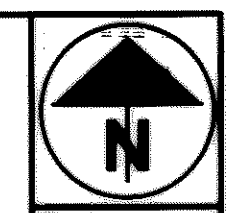
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MEDINA COUNTY SOIL PROFILE

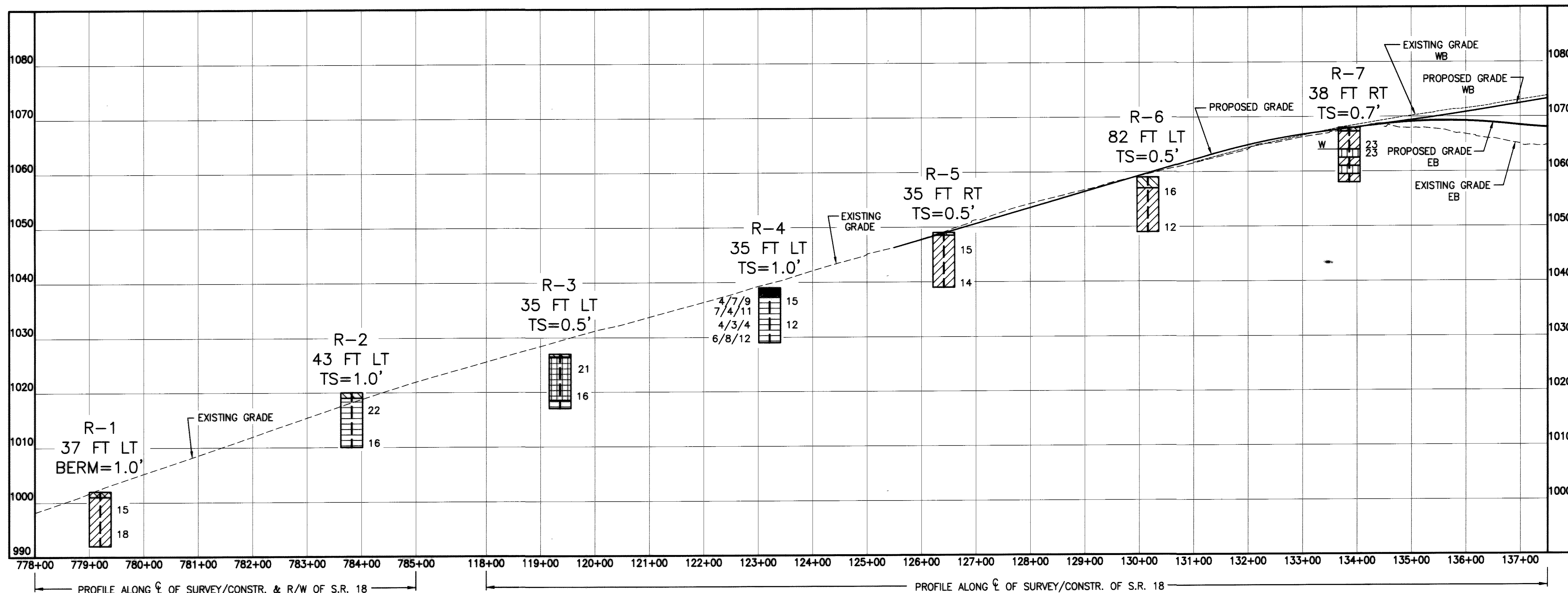
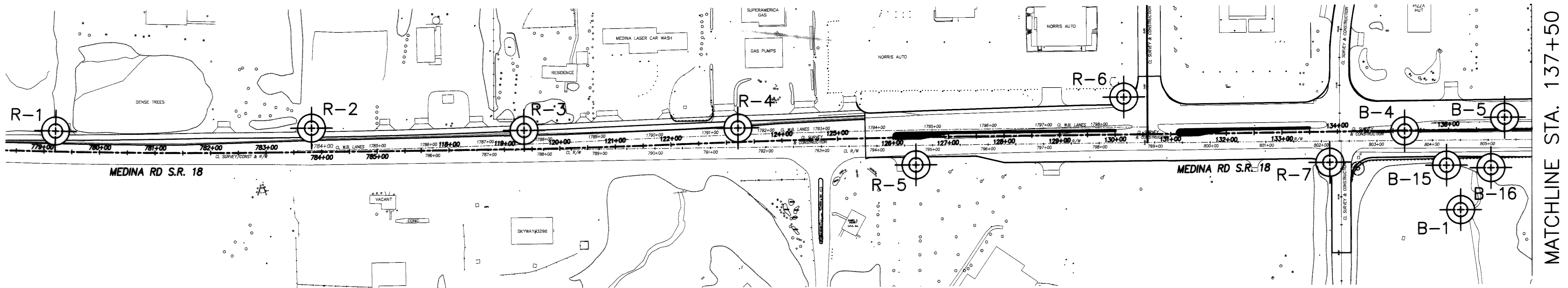
MED-18-15.13

3/8





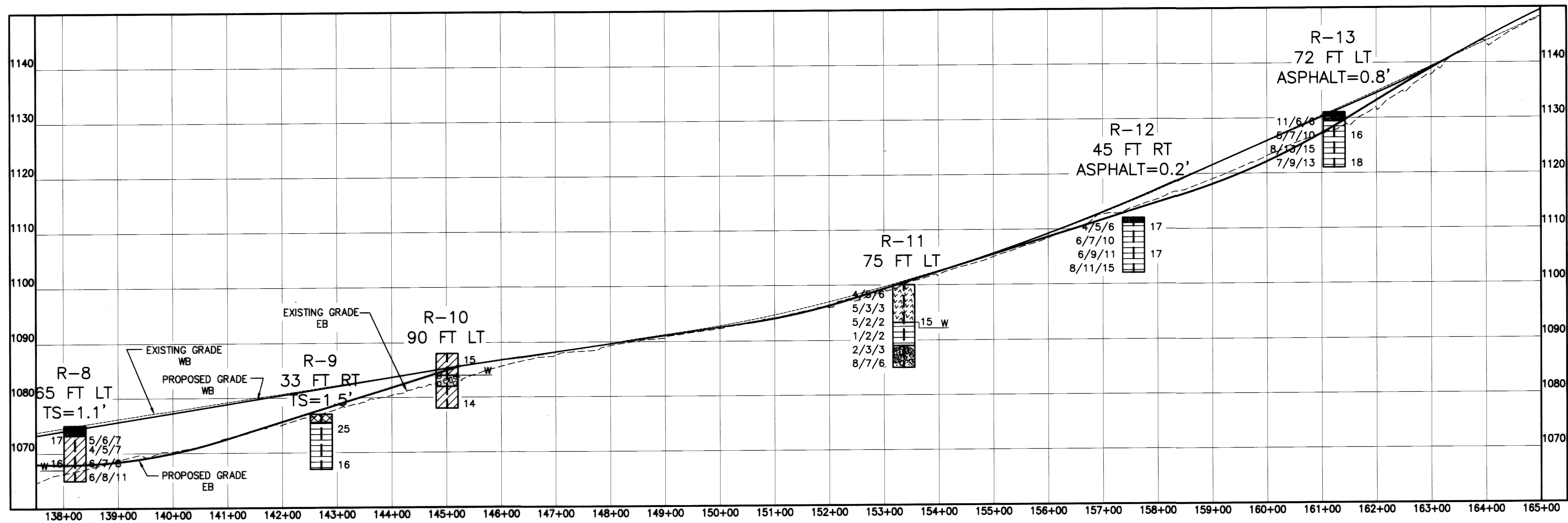
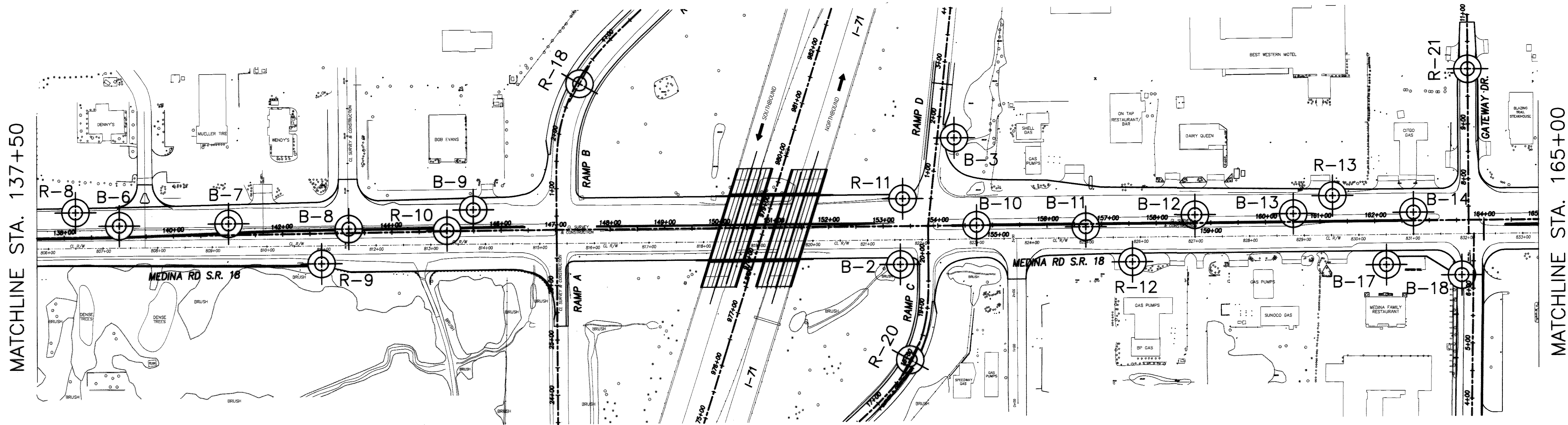
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| KAL | GPH | | |
| DRAWN | | | |
| KAL | | | |



RESOURCE INTERNATIONAL, INC. FILENAME: 1066-04-PP.DWG
 PROJECT NO. W-1066 DATE: 8/1/01

STA. 778+00 TO STA. 137+50
 SOIL PROFILE

MEDINA COUNTY
 MED-18-15.13



200
100
0
HORIZONTAL
SCALE IN FEET

| DATE | DATE | DATE | DATE |
|----------|---------|--------|--------|
| 8/1/01 | 8/1/01 | 8/1/01 | 8/1/01 |
| REVIEWED | CHECKED | GPH | |

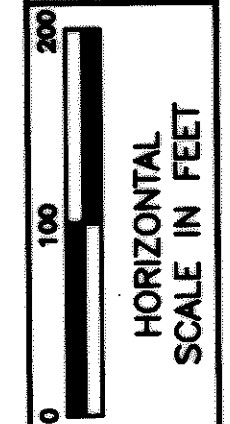
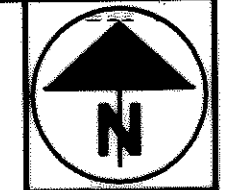
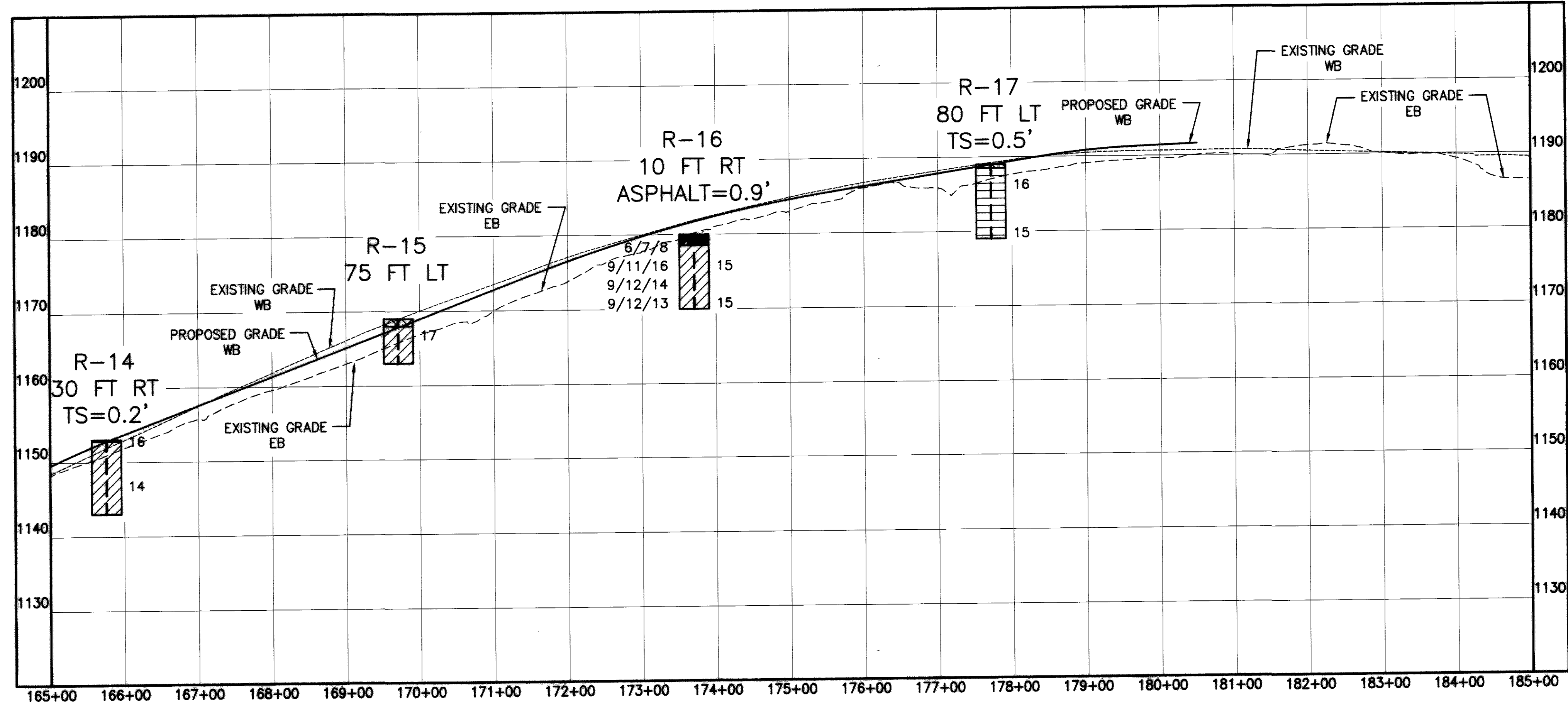
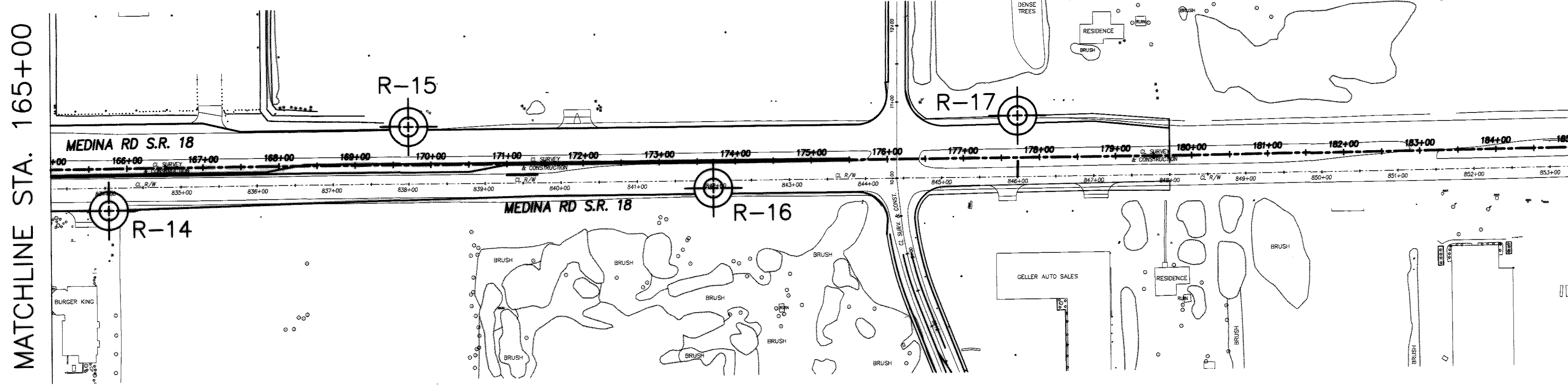
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MEDINA COUNTY

MED-18-15.13

SOIL PROFILE

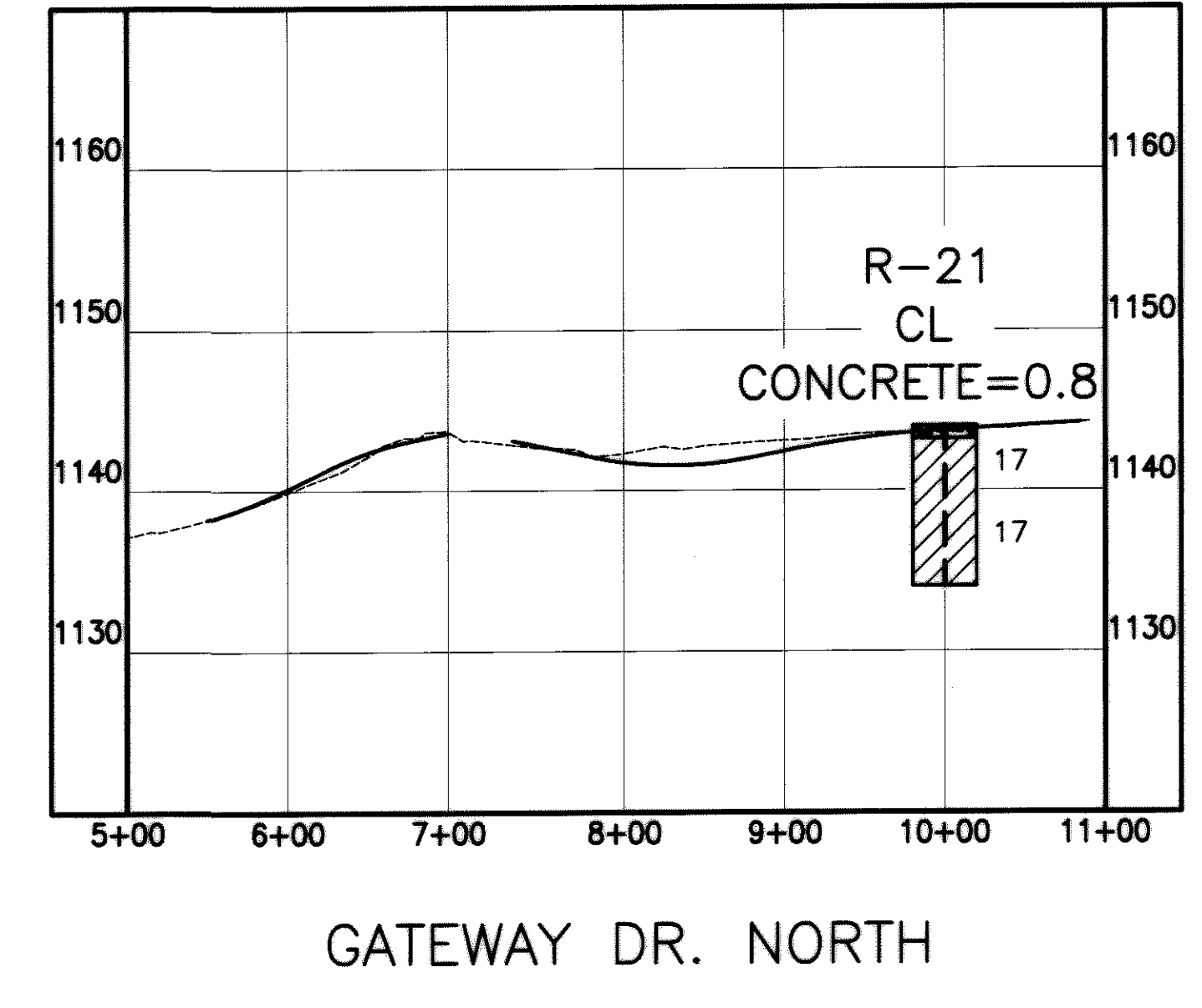
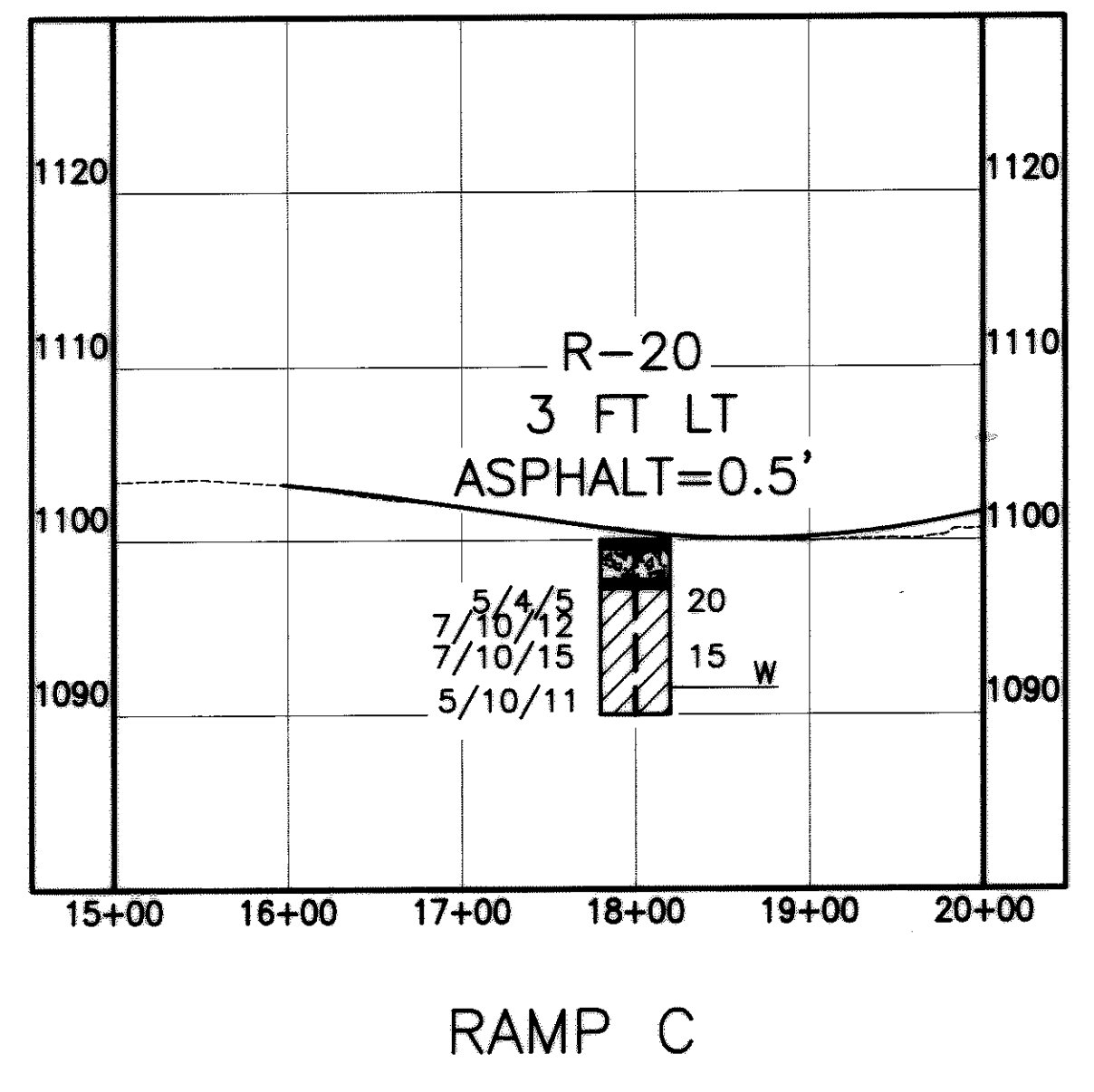
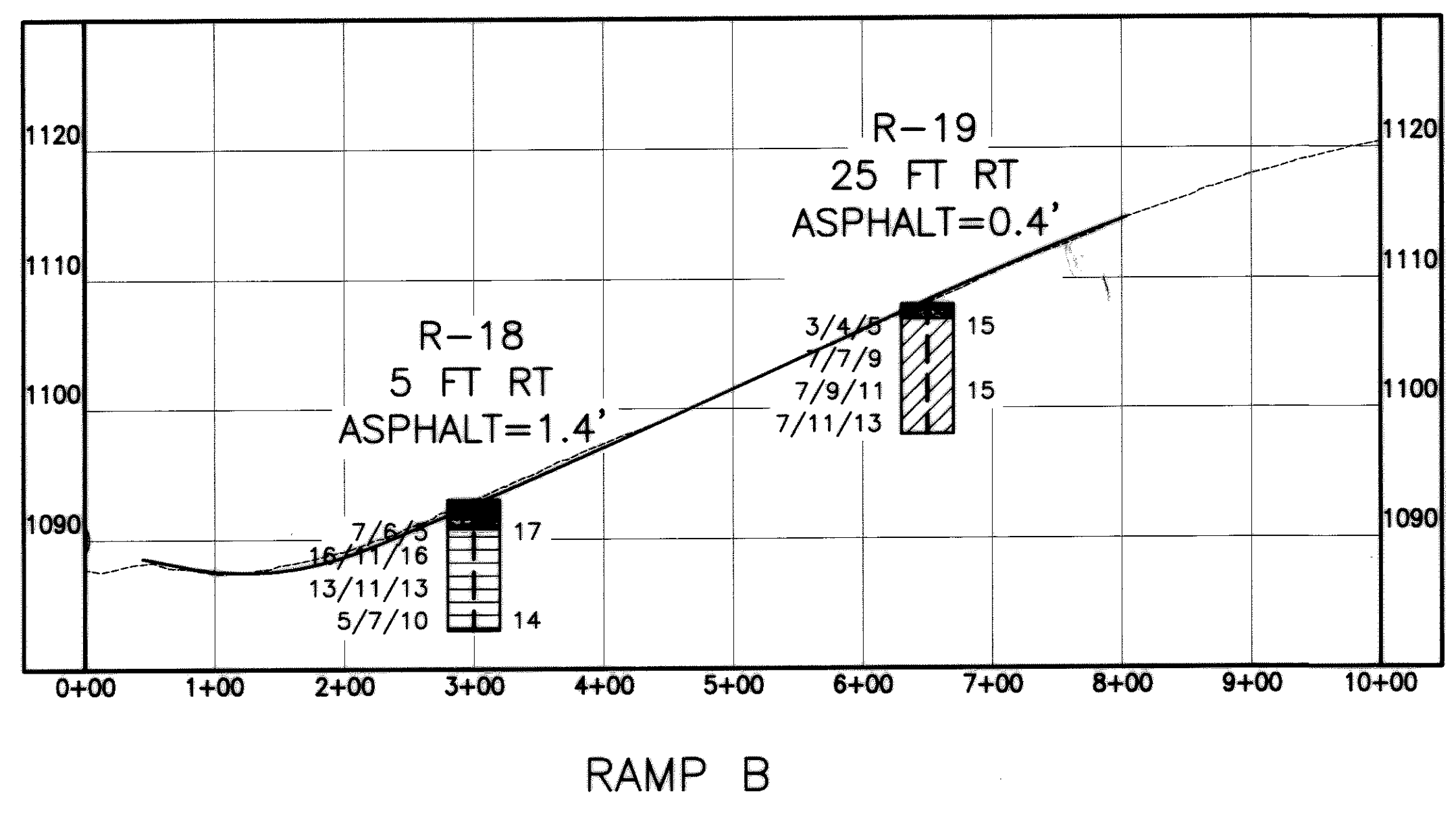
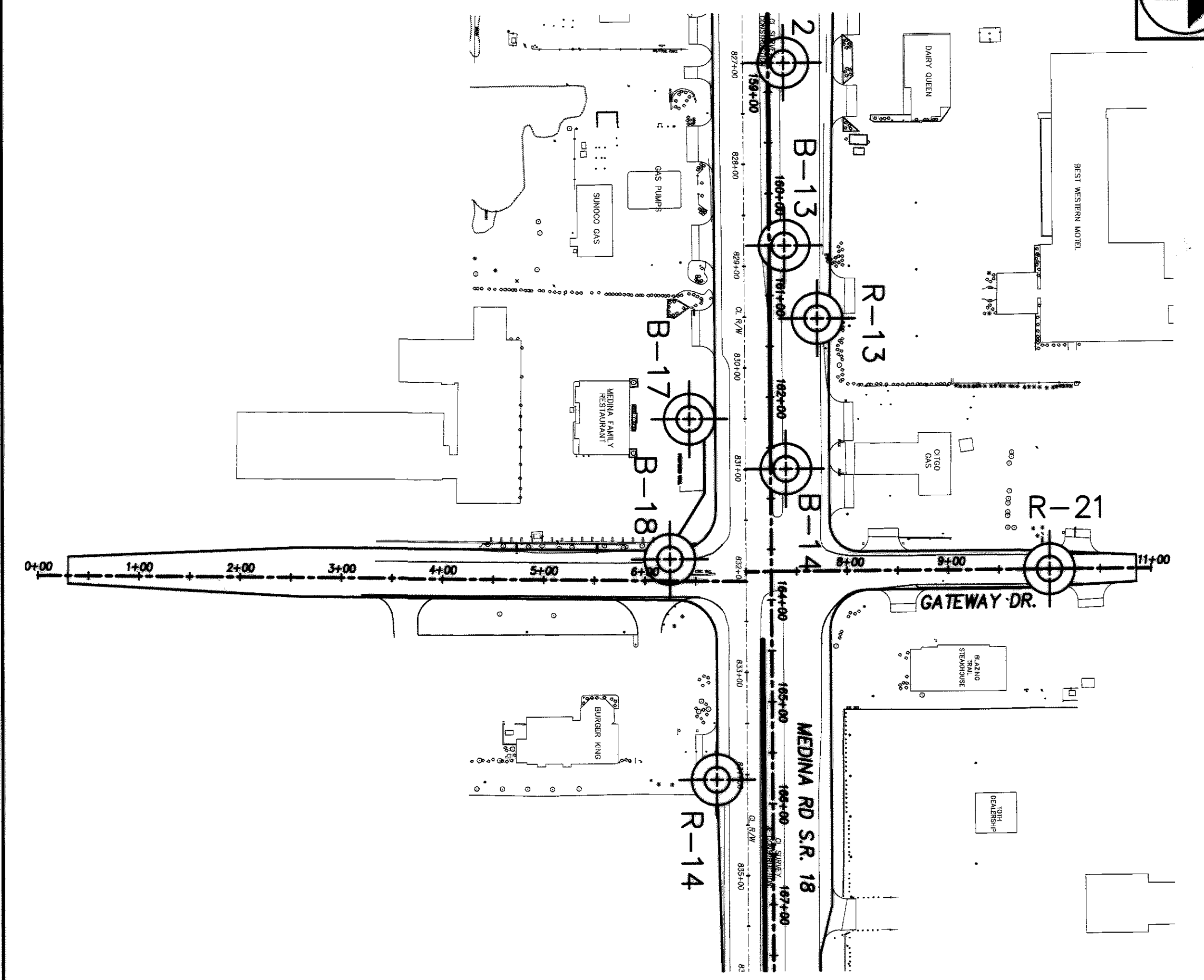
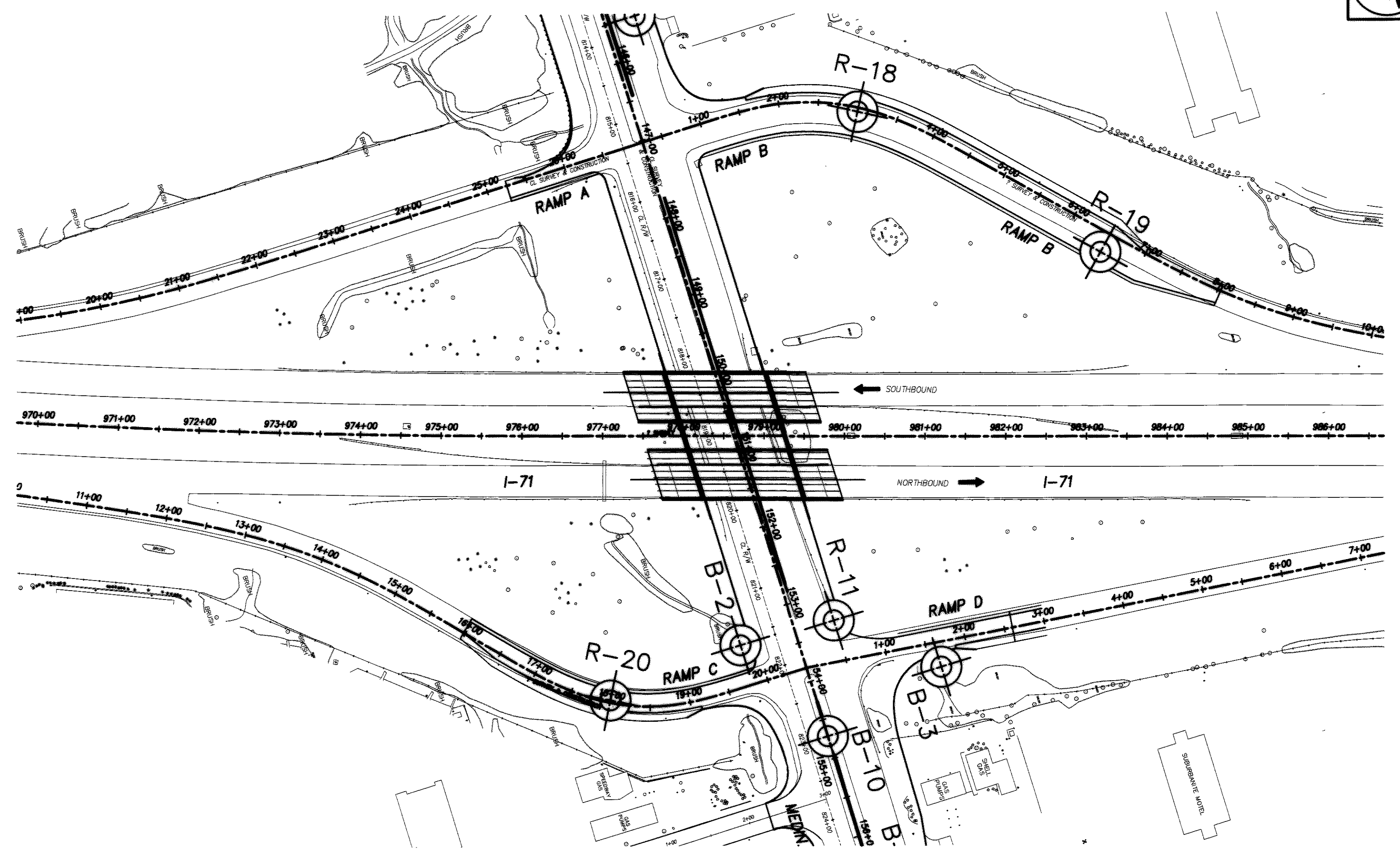
5/8



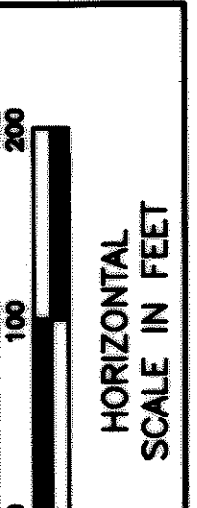
| DATE | REVIEWED | DATE | CHECKED |
|--------|----------|--------|---------|
| 8/1/01 | | 8/1/01 | GPH |
| | KAL | | |

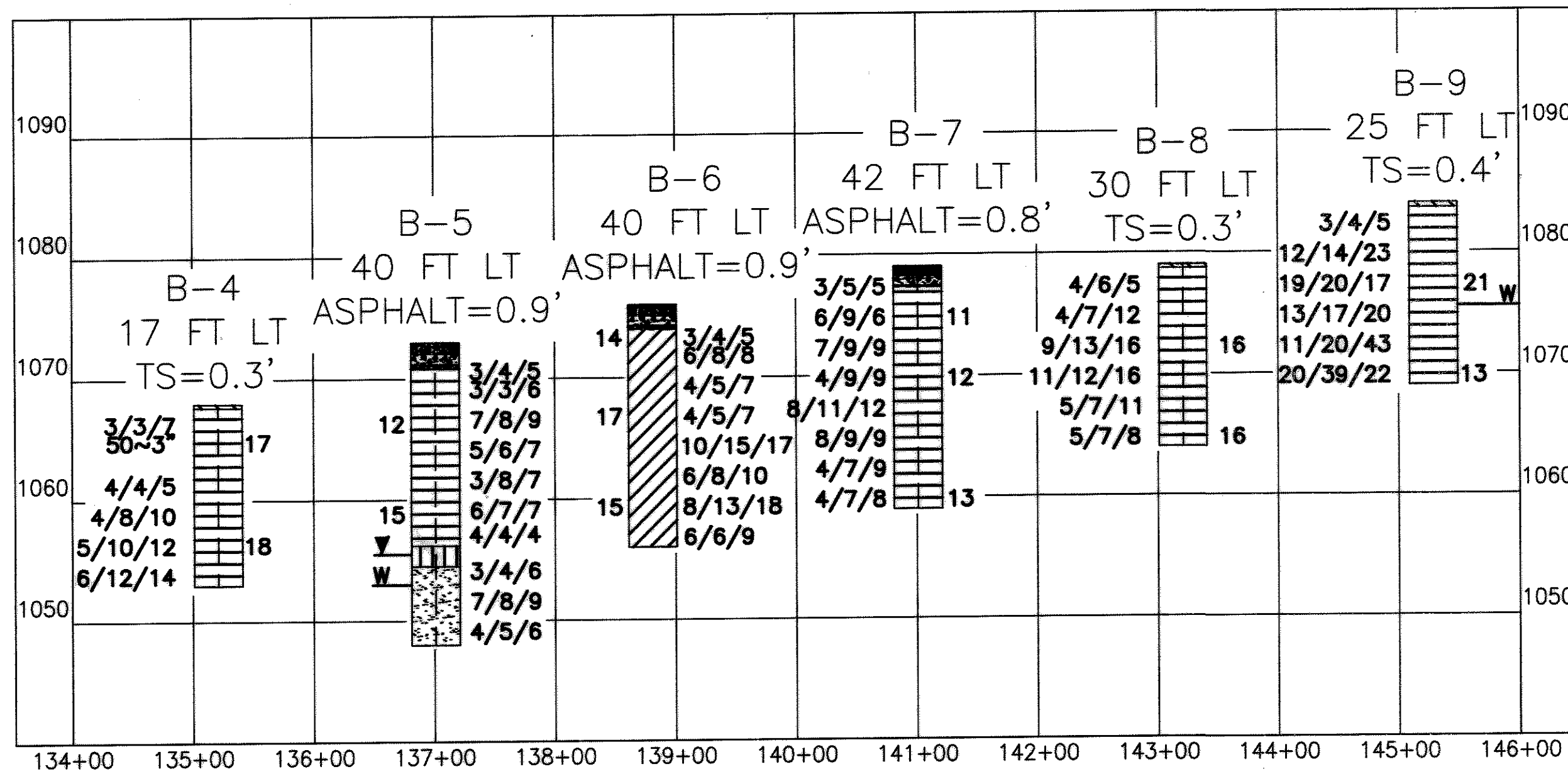
STA. 165+00 TO STA. 185+00
 SOIL PROFILE

MEDINA COUNTY
 MED-18-15.13

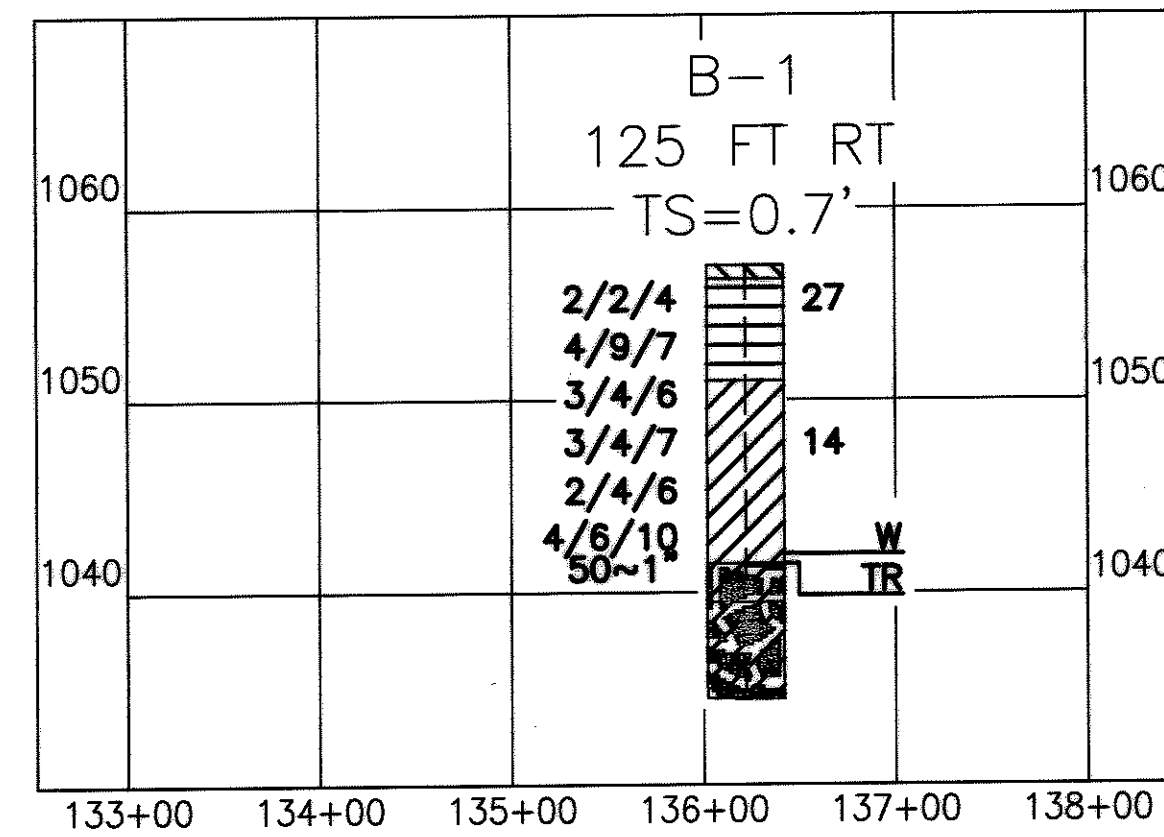


| | | | | |
|-------------------------------|----------|--|--------|--------|
| DRAWN KAL | REVIEWED | DATE | DATE | DATE |
| | | | 8/1/01 | 8/1/01 |
| MEDINA COUNTY MED-18-15.13 | | RAMPS B, C & GATEWAY DR. NORTH SOIL PROFILE | | |
| 7/8 | | | | |

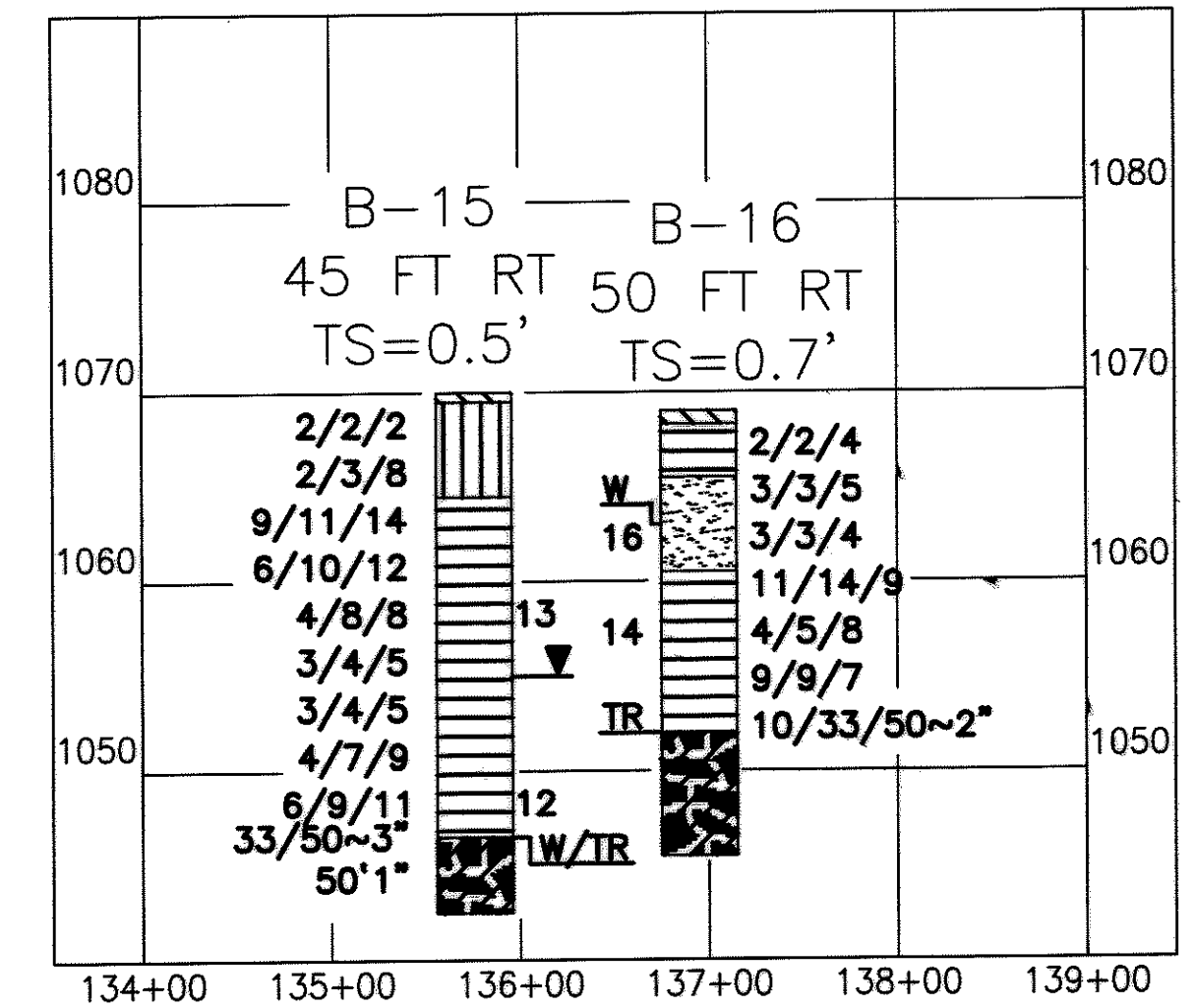




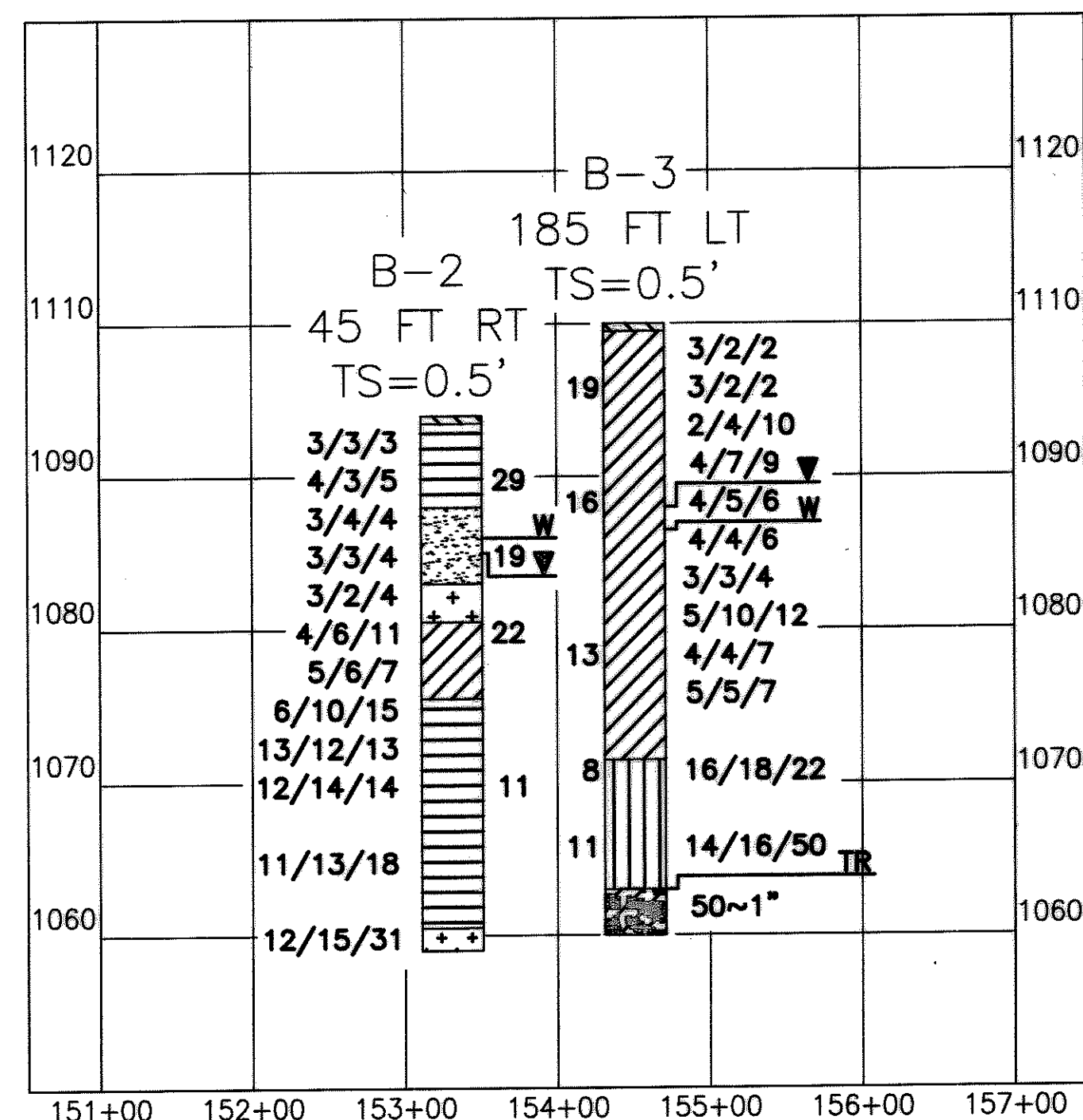
BORINGS B-4, B-5, B-6, B-7, B-8, B-9
(MEDIAN WALL - STA. 135+00 TO 146+50)



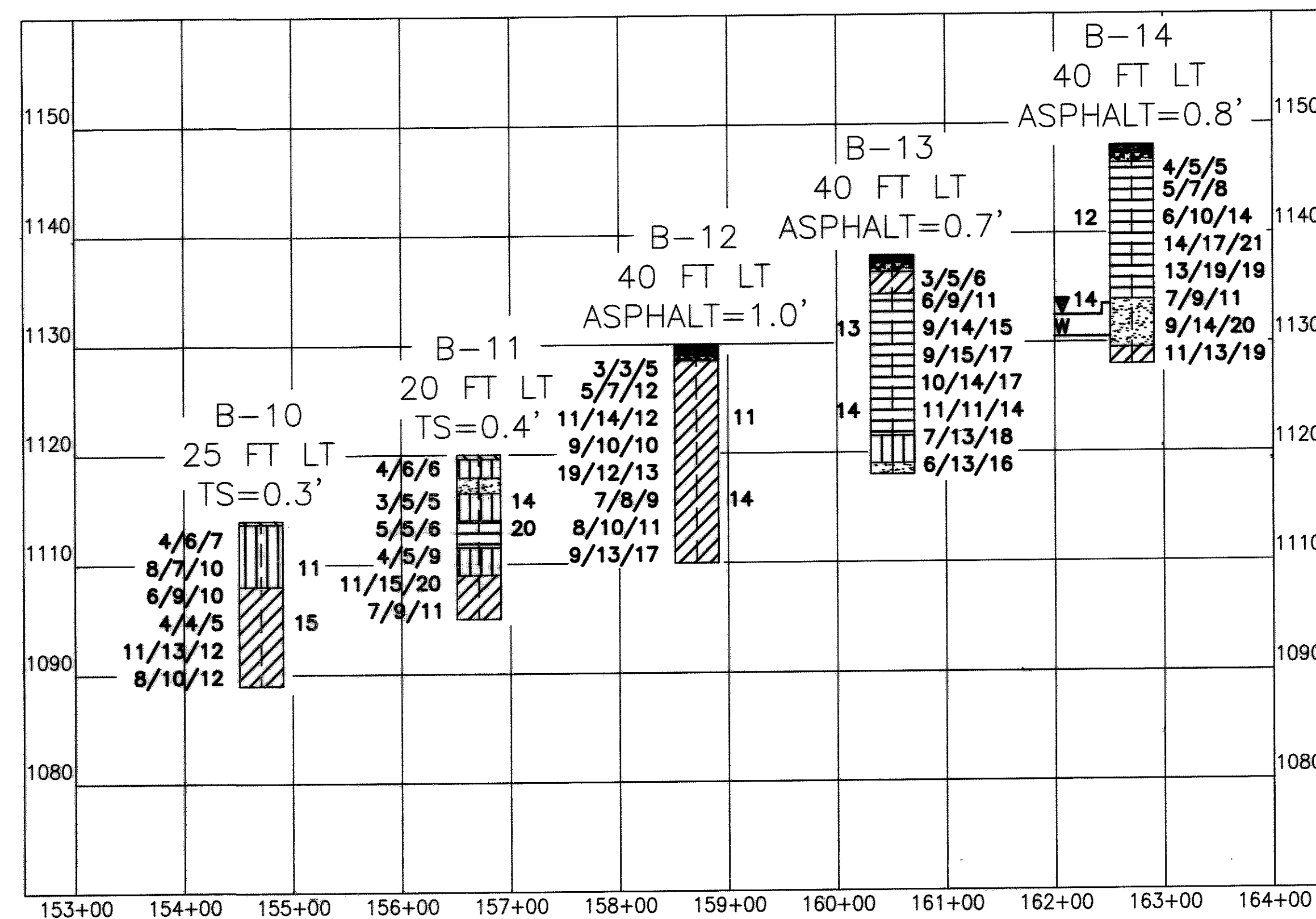
BORING B-1
(CULVERT - STA. 136+25)



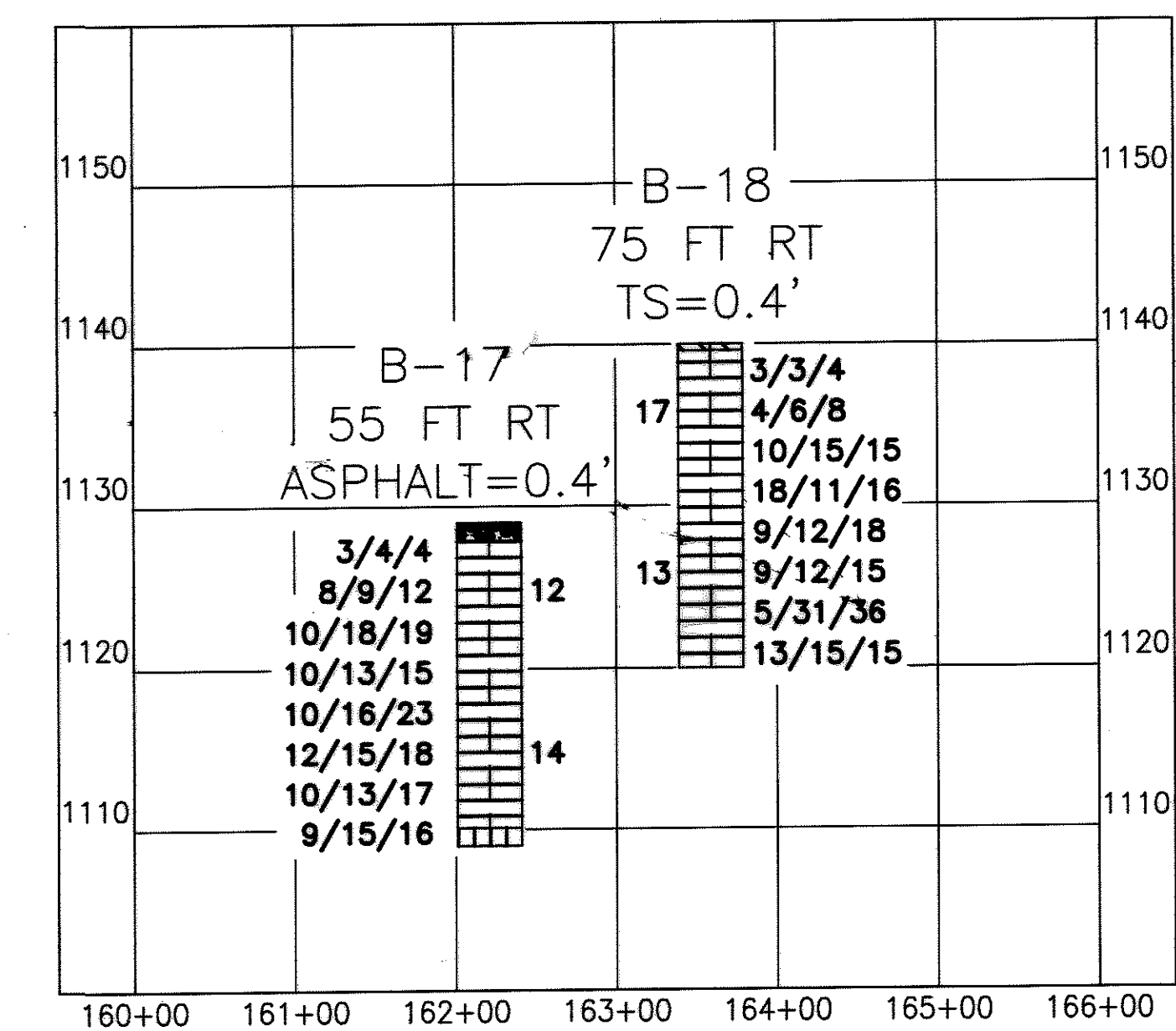
BORING B-15, B-16
(RETAINING WALL - STA. 135+50 - 136+75)



BORINGS B-2, B-3
(CULVERT - STA. 153+25)



BORING B-10, B-11, B-12, B-13, B-14
(MEDIAN WALL #2 - STA. 154+50 - 163+00)



BORING B-17, B-18
(RETAINING WALL #2 - STA. 162+00 - 163+50)