

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

# FRA-71-0.00 (PIC)

(DARBY TOWNSHIP)  
JACKSON TOWNSHIP  
PLEASANT TOWNSHIP  
FRANKLIN COUNTY  
(PICKAWAY COUNTY)

**PROJECT DESCRIPTION**

THIS PROJECT WILL CONSIST OF WIDENING 4.98 MILES OF I-71 FROM THE FRANKLIN/PICKAWAY COUNTY LINE NORTH TO JUST SOUTH OF THE I-71 AND SR 665 INTERCHANGE. THE PROJECT INCLUDES ADDING A THIRD LANE TO THE MEDIAN SIDE IN BOTH DIRECTIONS, REPLACING TWIN SUPERSTRUCTURES OVER THE INDIANA & OHIO RAILWAY COMPANY RAILROAD TRACKS AND US 62, AND ASSOCIATED ROADWAY, SIGNING AND DRAINAGE IMPROVEMENTS. THE PROJECT ALSO INCLUDES RECONSTRUCTION OF ALL THE RAMPS AT THE US 62 INTERCHANGE. THE PROJECT DOES NOT INCLUDE 0.31 MILE OF PREVIOUSLY CONSTRUCTED IMPROVEMENTS AT THE BIG DARBY CREEK.

PROJECT EARTH DISTURBED AREA: 139 ACRES  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 14 ACRES  
NOTICE OF INTENT EARTH DISTURBED AREA: 153 ACRES

**LIMITED ACCESS**

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

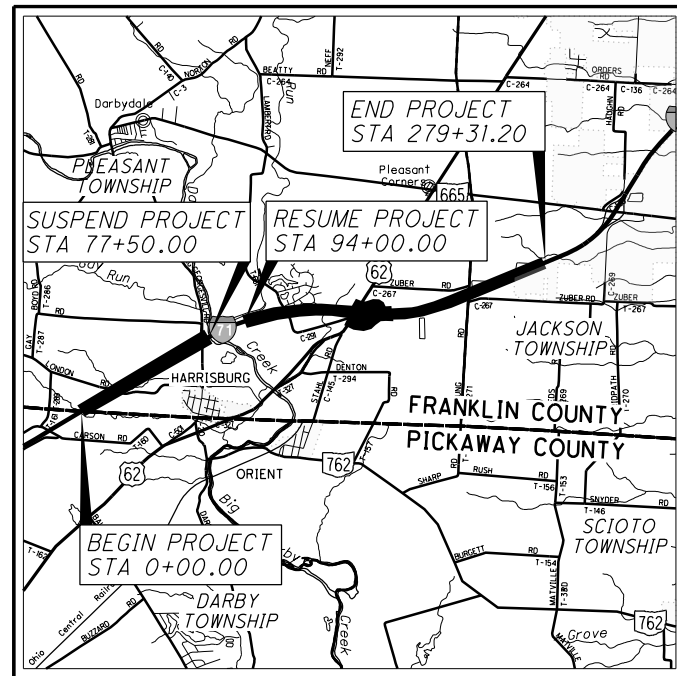
**2019 SPECIFICATIONS**

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

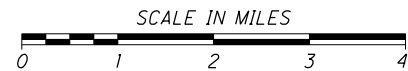
APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DISTRICT DEPUTY DIRECTOR

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DIRECTOR, DEPARTMENT OF TRANSPORTATION



LOCATION MAP

LATITUDE: 39°49'30" LONGITUDE: 83°09'00"



PORTION TO BE IMPROVED	—————
INTERSTATE HIGHWAY	—————
FEDERAL ROUTES	—————
STATE ROUTES	—————
COUNTY & TOWNSHIP ROADS	—————
OTHER ROADS	—————

**DESIGN DESIGNATION AND DESIGN EXCEPTIONS**

SEE SHEET 2

**UNDERGROUND UTILITIES**



PLAN PREPARED BY:

**Mead & Hunt**  
4700 LAKEHURST CT, STE 110  
COLUMBUS, OH 43016  
(614) 792-5900 PHONE

**ENGINEERS SEAL:**

STRUCTURES

SIGNED: *Balasubramanyam V.*  
DATE: 4/9/2020

**ENGINEERS SEAL:**

ROADWAY

SIGNED: *Daniel C. Barnhart*  
DATE: 4/9/2020

**ENGINEERS SEAL:**

MOT AND LIGHTING

SIGNED: *Shawn M. McPherson*  
DATE: 4/9/2020

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**STANDARD CONSTRUCTION DRAWINGS**

STANDARD CONSTRUCTION DRAWINGS												SUPPLEMENTAL SPECIFICATIONS			
BP-1.1	7/28/00	DM-1.1	7/21/17	MGS-5.2	7/15/16	HL-10.11	4/17/20	MT-95.30	7/19/19	MT-100.00	1/15/16	TC-41.50	10/18/13	800-2019	4/17/20
BP-2.1	7/17/15	DM-1.2	1/18/13	MGS-5.3	7/15/16	HL-10.12	1/20/17	MT-95.40	1/17/20	MT-101.60	1/17/20	TC-42.10	10/18/13	807	4/17/20
BP-2.2	7/18/08	DM-4.1	7/20/18	MGS-6.1	1/19/18	HL-10.13	4/17/20	MT-95.45	1/17/20	MT-101.70	1/17/20	TC-42.20	10/18/13	808	1/18/19
BP-2.3	7/18/14	DM-4.2	7/20/12	MGS-6.2	7/19/19	HL-10.31	4/17/20	MT-95.70	1/17/20	MT-101.75	1/17/20	TC-51.11	1/15/16	813	10/19/18
BP-3.1	1/17/20	DM-4.3	1/15/16			HL-20.11	4/17/20	MT-95.71	1/17/20	MT-101.80	1/17/20	TC-52.10	10/18/13	821	4/20/12
BP-5.1	1/18/19	DM-4.4	1/15/16	RM-1.1	7/18/14	HL-20.21	1/19/18	MT-95.72	1/17/20	MT-101.90	7/21/17	TC-52.20	7/20/18	832	10/19/18
BP-6.1	7/19/13			RM-4.3	7/18/14	HL-30.11	4/17/20	MT-95.82	7/19/13	MT-102.10	1/17/20	TC-61.10	1/17/20	833	7/19/19
BP-9.1	1/18/19	F-2.1	7/20/18	RM-4.5	7/21/17	HL-30.21	4/17/20	MT-98.10	1/17/20	MT-102.20	4/19/19	TC-64.10	1/17/20	836	1/19/18
		F-3.1	7/19/13	RM-4.6	7/19/13	HL-30.22	4/17/20	MT-98.11	1/17/20	MT-102.30	10/16/15	TC-65.10	1/17/14	837	7/19/19
CB-2.1	7/20/18	F-3.3	7/19/13			HL-30.31	4/17/20	MT-98.20	4/19/19	MT-103.10	1/19/18	TC-65.11	7/21/17	846	4/17/15
CB-2.2	7/20/18	F-3.4	7/19/13	AS-1-15	7/17/15	HL-30.32	4/17/20	MT-98.21	1/17/20	MT-104.10	10/16/15	TC-71.10	1/19/18	848	1/20/17
CB-2.3	1/15/16			AS-2-15	1/18/19	HL-40.20	1/17/20	MT-98.22	1/17/20	MT-105.10	1/17/20	TC-72.20	7/20/18	878	1/17/20
CB-3.2	1/15/16	MGS-1.1	1/19/18	GSD-1-19	1/18/19	HL-50.21	4/17/20	MT-98.28	1/17/20			TC-73.20	1/17/20	899	1/17/20
CB-3.3	1/15/16	MGS-2.1	1/19/18	PCB-91	1/18/13	HL-60.11	7/21/17	MT-98.29	1/17/20	TC-12.30	1/19/18			905	4/17/20
CB-3.4	1/15/16	MGS-3.1	1/19/18	SBR-1-13	7/20/18	HL-60.12	4/17/20	MT-98.30	7/19/19	TC-21.20	7/20/18			908	10/20/17
I-2.2	7/19/19	MGS-3.2	1/18/13	SICD-1-96	7/18/14	HL-60.21	7/20/18	MT-99.20	4/19/19					913	4/21/17
		MGS-4.2	7/19/13	SICD-2-14	7/18/14	HL-60.31	1/17/20	MT-99.30	1/17/20	TC-41.20	10/18/13			921	4/20/12
MH-1.2	1/15/16	MGS-4.3	1/18/13	VPF-1-90	7/20/18			MT-99.60	7/15/16	TC-41.30	10/18/13			938	1/19/18

**SPECIAL PROVISIONS**

JORY PPM APRIL 2019  
C&W Track Monitoring 01/18

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FEDERAL PROJECT NO. **E180 (796)**  
CONSTRUCTION PROJECT NO. **107201**  
RAILROAD INVOLVEMENT **INDIANA & OHIO RAILWAY COMPANY**  
**FRA-71-0.00**  
1/1312

NOTES:  
 1. SEE TABLE 3 ON SHEET 7 FOR STATION RANGE OF WHEN EXCAVATION OF SUBGRADE WITH GEOTEXTILE FABRIC AND GRANULAR MATERIAL, TYPE B ARE USED INSTEAD OF CEMENT STABILIZED SUBGRADE.

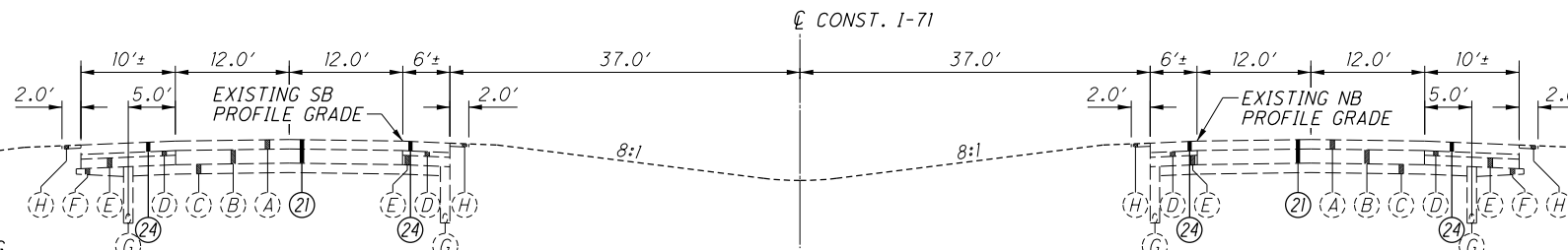
2. THE SUPERELEVATED SECTION EDGE OF PAVEMENT UNDERDRAINS SHIFT LATERAL LOCATIONS WHEN THE TRANSITIONING LANE EXCEEDS 0.000, NOT AT WHERE THE PAVEMENT FIRST BEGINS THE CROSS SLOPE TRANSITION.

3. THE SOUTHBOUND (SB) AND NORTHBOUND (NB) PROFILE GRADES ARE IDENTICAL EXCEPT FOR THE FOLLOWING STATION RANGES:  
 73+83.80 - 77+50.00  
 94+00.00 - 151+50.00  
 153+05.00 - 171+12.50  
 274+77.50 - 279+31.20

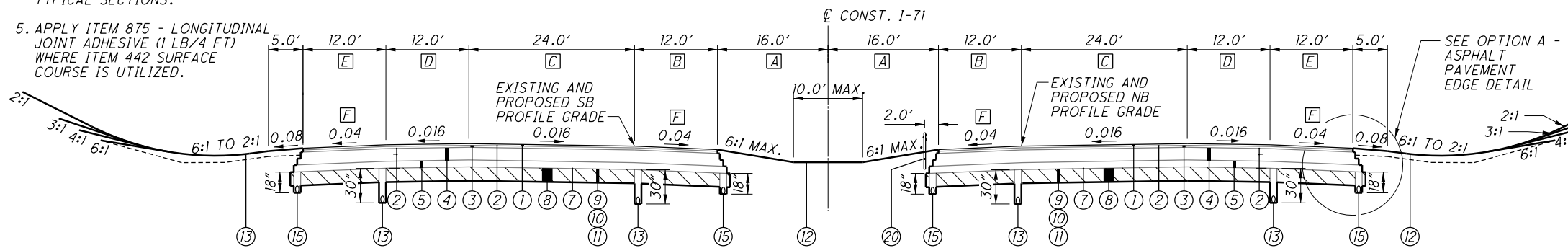
4. SEE SHEET 9 FOR OPTION B - CONCRETE PAVEMENT BUILDUP TYPICAL SECTIONS.

5. APPLY ITEM 875 - LONGITUDINAL JOINT ADHESIVE (1 LB/4 FT) WHERE ITEM 442 SURFACE COURSE IS UTILIZED.

SUBGRADE STABILIZATION - SEE NOTE 1  
 ITEM 204 - EXCAVATION OF SUBGRADE, 12" DEEP  
 OR  
 ITEM 206 - CEMENT STABILIZED SUBGRADE, 12" DEEP



EXISTING NORMAL SECTION - I-71

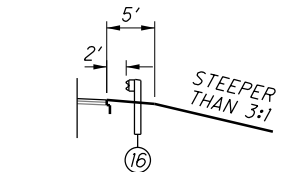


NORMAL SECTION - I-71 - OPTION A - ASPHALT

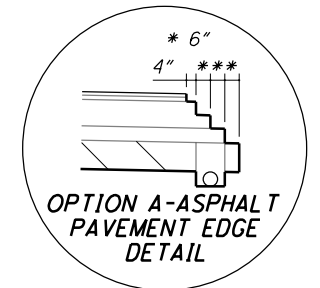
SOUTHBOUND  
 STA 0+00.00 TO STA 74+37.03  
 STA 156+83.16 TO STA 157+24.60  
 STA 159+38.16 TO STA 163+61.21  
 STA 165+86.69 TO STA 170+03.84  
 STA 218+41.28 TO STA 279+31.20

NORTHBOUND  
 STA 0+00.00 TO STA 74+37.03  
 STA 156+83.16 TO STA 156+95.89  
 STA 159+09.45 TO STA 163+32.83  
 STA 165+58.31 TO STA 170+03.84  
 STA 218+41.28 TO STA 279+31.20

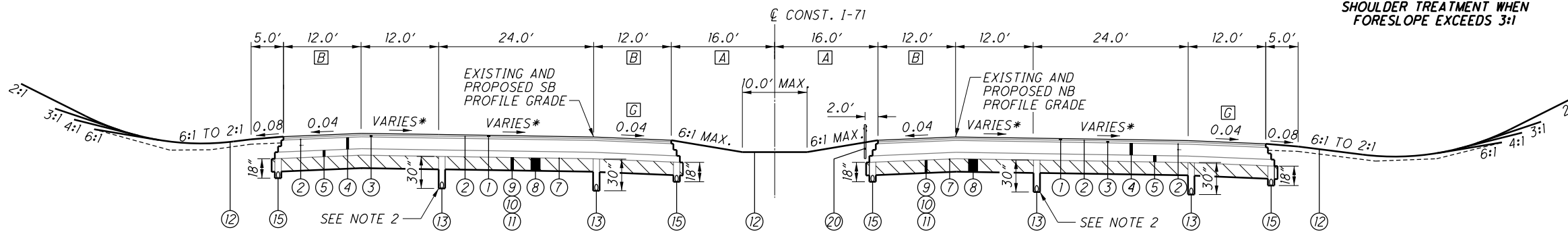
\* SEE SHEETS 903-908 FOR SUPERELEVATION DETAILS



TYPICAL OUTSIDE GRADED SHOULDER TREATMENT WHEN FORESLOPE EXCEEDS 3:1



OPTION A-ASPHALT PAVEMENT EDGE DETAIL



SUPERELEVATED SECTION - I-71 - OPTION A - ASPHALT

SOUTHBOUND  
 STA 74+37.03 TO STA 74+50.00 (\*0.016 - 0.015)  
 STA 94+00.00 TO STA 156+83.16 (\*0.020 - 0.016)

NORTHBOUND  
 STA 74+37.03 TO STA 74+50.00 (\*0.016 - 0.015)  
 STA 94+00.00 TO STA 156+83.16 (\*0.020 - 0.016)

LEGEND

- (A) EXISTING ASPHALT OVERLAY (6" AVERAGE DEPTH)
- (B) EXISTING REINFORCED PCC (9" AVERAGE DEPTH)
- (C) EXISTING AGGREGATE BASE (6" AVERAGE DEPTH)
- (D) EXISTING BITUMINOUS AGGREGATE (3" AVERAGE DEPTH)
- (E) EXISTING STABILIZED AGGREGATE SHOULDER (VARIABLE DEPTH)
- (F) EXISTING AGGREGATE BASE (VARIABLE DEPTH)
- (G) EXISTING 6" PIPE UNDERDRAIN
- (H) EXISTING COMPACTED AGGREGATE (2" AVERAGE DEPTH)
- (I) EXISTING CONCRETE BARRIER, TYPE A
- (J) EXISTING ASPHALT SURFACE COURSE (VARIABLE DEPTH)
- (K) EXISTING ASPHALT INTERMEDIATE COURSE (1 3/4" AVERAGE DEPTH)
- (L) EXISTING ASPHALT BASE (11" AVERAGE DEPTH)
- (M) EXISTING NON-REINFORCED CONCRETE (13 1/2" AVERAGE DEPTH)

- (1) ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A, (447), AS PER PLAN
- (2) ITEM 407 - NON-TRACKING TACK COAT
- (3) ITEM 442 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A, (446)
- (4) ITEM 302 - ASPHALT CONCRETE BASE, AS PER PLAN, 11" (2 LIFTS)
- (5) ITEM 304 - 6" AGGREGATE BASE
- (6) ITEM 526 - APPROACH SLAB (T=17")
- (7) ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING
- (8) ITEM 206 - CEMENT STABILIZED SUBGRADE, 12" DEEP
- (9) ITEM 204 - EXCAVATION OF SUBGRADE, 12" DEEP
- (10) ITEM 204 - GEOTEXTILE FABRIC
- (11) ITEM 204 - 12" GRANULAR MATERIAL, TYPE B
- (12) ITEM 659 - SEEDING AND MULCHING
- (13) ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS
- (14) ITEM 605 - 6" UNCLASSIFIED PIPE UNDERDRAINS

- (15) ITEM 605 - 6" BASE PIPE UNDERDRAINS
- (16) ITEM 606 - GUARDRAIL, TYPE MGS
- (17) ITEM 622 - SINGLE SLOPE CONCRETE BRIDGE RAILING
- (18) ITEM 452 - 12 1/2" NON-REINFORCED CONCRETE PAVEMENT CLASS QC IP WITH OC/QA
- (19) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C1
- (20) ITEM 606 - CABLE BARRIER (ONLY ON NORTHBOUND SIDE)
- (21) ITEM 202 - PAVEMENT REMOVED, AS PER PLAN
- (22) ITEM 452 - 13 1/2" NON-REINFORCED CONCRETE PAVEMENT CLASS QC IP WITH OC/QA
- (23) ITEM 526 - APPROACH SLAB (T=15")
- (24) ITEM 202 - PAVEMENT REMOVED
- (25) LONGITUDINAL JOINT
- (26) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE
- (27) ITEM 254 - PAVEMENT PLANING, PORTLAND CEMENT CONCRETE
- (28) ITEM 848 - OVERLAY, MISC.: CONCRETE PAVEMENT CLASS QC IP WITH OC/QA

(A) VARIES FROM 16' AT STA 72+00.00 TO 13.41' AT STA 74+50.00. VARIES FROM 16' AT STA 177+00.00 TO 18' AT STA 179+00.00. 18' FROM STA 179+00.00 TO STA 279+31.20.

(B) PLEASE SEE TABLE 1 ABOVE.

(C) VARIES FROM 25.93' (NB) AND 25.55' (SB) AT STA 0+00.00 TO 24' AT STA 1+00.00 (SB) AND STA 1+50.00 (NB).

(D) VARIES FROM 11.84' (NB) AND 11.64' (SB) AT STA 0+00.00 TO 12' AT STA 1+00+00 (SB) AND STA 1+50.00 (NB).

(E) VARIES FROM 10.23' (NB) AND 10.81' (SB) AT STA 0+00.00 TO 12' AT STA 1+00.00 (SB) AND STA 1+50.00 (NB). ALSO, PLEASE SEE TABLE 1 ABOVE.

(F) TRANSITION BETWEEN 0.04 ON NORMAL SECTION TO 0.016 AT APPROACH SLABS OVER 90'. SEE TABLE 2, NEXT SHEET.

(G) TRANSITION BETWEEN 0.04 ON SUPER-ELEVATED SECTION TO 0.020 AT APPROACH SLABS. SEE TABLE 2, NEXT SHEET.

TABLE 1 PAVED SHOULDER WIDTH TRANSITIONS	
SB OUTSIDE SHOULDER	NB OUTSIDE SHOULDER
12' AT STA 20+20.00 TO	12' AT STA 21+81.85 TO
14' AT STA 20+70.00	14' AT STA 21+91.85
14' AT STA 21+63.15 TO	14' AT STA 23+00.00 TO
12' AT STA 21+73.15	12' AT STA 23+50.00
12' AT STA 125+00.00 TO	12' AT STA 125+96.74 TO
14' AT STA 125+50.00	14' AT STA 126+06.74
14' AT STA 126+43.03 TO	14' AT STA 126+95.00 TO
12' AT STA 126+53.03	12' AT STA 127+45.00
12' AT STA 142+80.00 TO ***	12' AT STA 156+25.00 TO
14' AT STA 143+30.00	14' AT STA 156+35.00
14' AT STA 148+20.00 TO ***	14' AT STA 158+83.79 TO
12' AT STA 148+30.00	12' AT STA 159+33.79
12' AT STA 155+50.26 TO	12' AT STA 161+00.00 TO
8' AT STA 158+77.76	8' AT STA 162+00.00 (DECEL LANE)
8' AT STA 163+42.83 TO	8' AT STA 162+75.00 TO
10' AT STA 163+92.78 (ACCEL LANE)	10' AT STA 162+85.00 (DECEL LANE)
10' AT STA 166+55.00 TO	10' AT STA 165+27.82 TO
8' AT STA 166+65.00 (ACCEL LANE)	8' AT STA 165+77.85 (DECEL LANE)
SB MEDIAN SHOULDER	NB MEDIAN SHOULDER
12' AT STA 156+67.42 TO	12' AT STA 155+59.46 TO **
14' AT STA 157+17.42	14' AT STA 156+84.93
14' AT STA 159+49.12 TO	14' AT STA 159+16.64 TO
12' AT STA 159+59.12	12' AT STA 160+39.50 **
12' AT STA 163+04.11 TO	12' AT STA 162+36.48 TO **
14' AT STA 163+54.11	14' AT STA 163+21.78
14' AT STA 166+12.00 TO	14' AT STA 165+65.41 TO
12' AT STA 166+22.00	12' AT STA 166+65.41 **

\*\* REQUIRED FOR MAINTENANCE OF TRAFFIC  
 \*\*\* REQUIRED FOR NOISE BARRIER

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TYPICAL SECTIONS

FRA-71-0.00

**EXISTING UNDERDRAINS**

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDER-DRAINS THAT OUTLET TO A SLOPE.

UNDER-DRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDER-DRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDER-DRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

- 601, TIED CONCRETE BLOCK MAT, TYPE 1 3.6 SQ. YD.
- 611 6" CONDUIT, TYPE F 50 FT.
- 611, PRECAST REINFORCED CONCRETE OUTLET 2 EACH
- 605 6" UNCLASSIFIED PIPE UNDER-DRAINS 50 FT.

**ASPHALT SURFACE COURSE, AS PER PLAN LONGITUDINAL JOINTS (FLEXIBLE PAVEMENT)**

LOCATE LONGITUDINAL JOINTS IN THE SURFACE COURSE SUBJECT TO THE FOLLOWING REQUIREMENTS:

PLACE THE MAINLINE PAVEMENT SURFACE COURSE WITH A SINGLE COLD LONGITUDINAL JOINT LOCATED BETWEEN LANES 2 AND 3. A COLD LONGITUDINAL JOINT IS PERMITTED BETWEEN THE SHOULDER AND MAINLINE PAVEMENT. NO OTHER COLD JOINTS ARE PERMITTED IN THE SURFACE COURSE OF MAINLINE PAVEMENT.

**ITEM 442, ANTI-SEGREGATION**

PROVIDE ANTI-SEGREGATION EQUIPMENT FOR ALL COURSES OF UNIFORM THICKNESS IN ACCORDANCE WITH CMS 401.12.

**ITEM 622, CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN**

REINFORCED END ANCHORAGE LENGTH WILL BE EXTENDED FROM INLET EXPANSION JOINT TO INLET EXPANSION JOINT FOR INLETS WITH LESS THAN 30 FEET CLEAR. ALL OTHER DETAILS OF THE REINFORCED END ANCHORAGES WILL BE PER RPM-4.3

**PROJECT STANDARD OPERATING PROCEDURE FOR SUBGRADE TREATMENT**

CHEMICAL STABILIZATION OF SUBGRADE SHALL NOT BE PERFORMED WITHIN HIGH SULFATE SOILS WITHOUT THE APPROVAL BY THE ENGINEER AND CONSULTING THE DISTRICT GEOTECHNICAL ENGINEER.

SULFATE READINGS ENCOUNTERED DURING THE SUPPLEMENT 1120 MIXTURE DESIGN TESTING THAT ARE ABOVE 5000PPM ARE CONSIDERED "HIGH".

AREAS NOT BEING CHEMICALLY STABILIZED SHALL BE TREATED ACCORDING TO ITEM 204 EXCAVATION OF SUBGRADE, 12" DEEP, ITEM 204 GEOTEXTILE FABRIC, ITEM 204 12" GRANULAR MATERIAL, TYPE B AND ITEM 204 SUBGRADE COMPACTION AND PROOF ROLLING.

**ITEM 206 - MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS, AS PER PLAN**

ALL SAMPLING AND TESTING FOR ITEM 206 MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS SHALL BE PERFORMED ACCORDING TO CMS ITEM 206 AND SUPPLEMENT 1120 EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES.

ALL SAMPLING AND TESTING OF ITEM 206 MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS FOR THE PROJECT SHALL BE COMPLETED PRIOR TO TRAFFIC SHIFTING INTO PHASE 1.

SAMPLING AND TESTING SHALL BE IN ACCORDANCE WITH ODOT SUPPLEMENT 1120 AND AS SPECIFIED HEREIN. A MINIMUM OF ONE SOIL SAMPLE FOR EVERY 5000 SQUARE YARDS OF PROPOSED CHEMICALLY STABILIZED SUBGRADE AREA, BUT NOT LESS THAN A TOTAL OF FOUR (4) SOIL SAMPLES FOR EACH CONSTRUCTION PHASE OF THE PROJECT SHALL BE PERFORMED.

IF ADDITIONAL HIGH SULFATE CONTENTS ARE ENCOUNTERED DURING THE ITEM 206 MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS, THEN CONTACT THE DISTRICT GEOTECHNICAL ENGINEER IMMEDIATELY.

**ITEM 619, FIELD OFFICE, TYPE C, AS PER PLAN**

IN ADDITION TO THE REQUIREMENTS PROVIDED IN CMS FOR THE TYPE OF FIELD OFFICE SPECIFIED, PROVIDE THE FOLLOWING ITEMS.

- FOR EACH TELEPHONE AND/OR COMPUTER STATION SPECIFIED, PROVIDE ALL ETHERNET WIRING NECESSARY TO CONNECT THE PHONE AND/OR COMPUTER AND MULTI-FUNCTION COPIER TO THE INTERNET COMPANY SYSTEM.
- PROVIDE A BROADBAND INTERNET CONNECTION CAPABLE OF MINIMUM DOWNLOAD SPEEDS AS FOLLOWS:
  - 30 MBPS DOWNLOAD 5 MBPS UPLOAD - NETWORK LATENCY LESS THAN 50 MILLISECOND. IF SPEEDS ARE NOT AVAILABLE THROUGH AN INDIVIDUAL OR SINGULAR CIRCUIT, PROVIDE THE HIGHEST SPEED AVAILABLE IN THE AREA AND INSTALL MULTIPLE CIRCUITS TO ACHIEVE THE SPECIFIED SPEEDS. WHEN MULTIPLE BROADBAND SERVICES ARE AVAILABLE. THE FOLLOWING IS THE DESCENDING ORDER OF PRECEDENCE: CABLE, DSL, CELLULAR, AND WIRELESS RADIO (SATELLITE COMMUNICATION IS NOT COMPATIBLE WITH ODOT VPN CONNECTION AND WILL NOT BE ACCEPTED). SUPPLY MODEMS CAPABLE OF BEING CONFIGURED IN BRIDGE MODE. IF A CELLULAR NETWORK IS USED, PROVIDE THE CELLULAR EQUIPMENT, INCLUDING SOFTWARE AND ROUTER EQUIPMENT TO CONNECT TO THE ODOT PROVIDED CISCO ASA 5505 FIREWALL. SUPPLY ODOT WITH ALL DOCUMENTATION FOR THE BROADBAND CIRCUIT INCLUDING ALL USERNAME/USER IDS, PASSWORDS AND ACCOUNT INFORMATION. VERIFY THAT THE BROADBAND INTERNET CONNECTION IS ACTIVE AND WORKING AS SPECIFIED. ODOT IT PERSONNEL WILL CONFIRM THAT BANDWIDTH AND NETWORK LATENCY ARE COMPLIANT WITH THE REQUIRED FIELD OFFICE SPECIFICATIONS. ALL FIELD OFFICE INTERNET CONNECTIONS ARE FOR ODOT USE ONLY.

**ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 1:**

ALL REPAIR AREAS ARE TO BE DETERMINED BY THE PROJECT ENGINEER BEFORE THE BEGINNING OF THE WORK. THE REPAIR AREAS SHALL BE OF VARYING LENGTH AND HAVE AN AVERAGE WIDTH OF NOT LESS THAN 2 FEET. THE AVERAGE DEPTH OF REPAIRS SHALL BE 2.0 INCHES AS DETAILED ON THIS SHEET.

REPAIR AREAS SHALL BE REFILLED WITH 2.0 INCHES OF ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448). GREAT CARE SHALL BE TAKEN TO MAINTAIN THE EXISTING PAVEMENT CROSS SLOPE (CROWN) AS WELL AS ALL LONGITUDINAL SLOPES. NO MORE PARTIAL DEPTH PAVEMENT REPAIR SHALL BE STARTED AND PERFORMED THAN CAN BE COMPLETED IN THE SAME WORKING DAY.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

- 251, PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 1 225 SY

**ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 2:**

ALL REPAIR AREAS ARE TO BE DETERMINED BY THE PROJECT ENGINEER BEFORE THE BEGINNING OF THE WORK. THE REPAIR AREAS SHALL BE OF VARYING LENGTH AND HAVE AN AVERAGE WIDTH OF NOT LESS THAN 4 FEET. THE AVERAGE DEPTH OF REPAIRS SHALL BE 3.0 INCHES AS DETAILED ON THIS SHEET.

REPAIR AREAS SHALL BE REFILLED WITH 3.0 INCHES OF ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448) (2 LIFTS). GREAT CARE SHALL BE TAKEN TO MAINTAIN THE EXISTING PAVEMENT CROSS SLOPE (CROWN) AS WELL AS ALL LONGITUDINAL SLOPES. NO MORE PARTIAL DEPTH PAVEMENT REPAIR SHALL BE STARTED AND PERFORMED THAN CAN BE COMPLETED IN THE SAME WORKING DAY.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

- 251, PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 2 900 SY

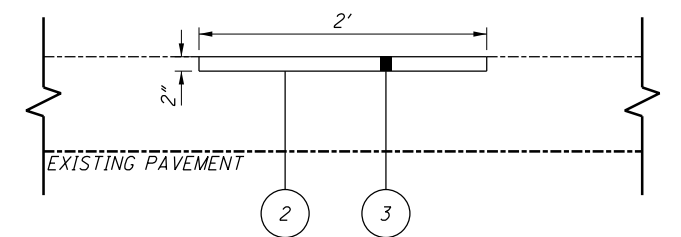
**ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 3:**

ALL REPAIR AREAS ARE TO BE DETERMINED BY THE PROJECT ENGINEER BEFORE THE BEGINNING OF THE WORK. THE REPAIR AREAS SHALL BE OF VARYING LENGTH AND HAVE AN AVERAGE WIDTH OF NOT LESS THAN 6 FEET. THE AVERAGE DEPTH OF REPAIRS SHALL BE 6.0 INCHES AS DETAILED ON THIS SHEET.

REPAIR AREAS SHALL BE REFILLED WITH 1.5 INCHES OF ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448) AND 4.5 INCHES OF ITEM 301 - ASPHALT CONCRETE BASE. GREAT CARE SHALL BE TAKEN TO MAINTAIN THE EXISTING PAVEMENT CROSS SLOPE (CROWN) AS WELL AS ALL LONGITUDINAL SLOPES. NO MORE PARTIAL DEPTH PAVEMENT REPAIR SHALL BE STARTED AND PERFORMED THAN CAN BE COMPLETED IN THE SAME WORKING DAY.

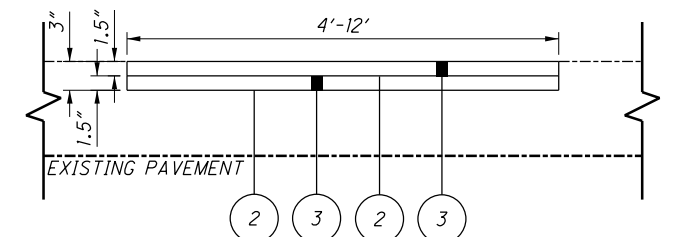
THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

- 251, PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 3 4500 SY



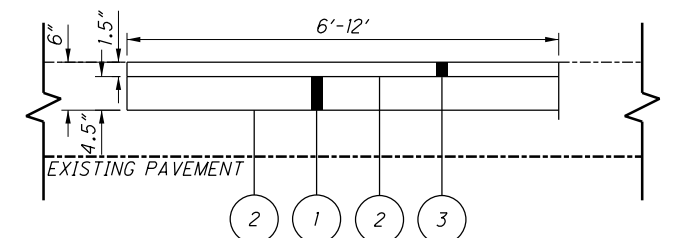
**TYPE 1 DETAIL**

PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 1 FOR MORE INFORMATION REGARDING ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 1, SEE NOTE TO THE LEFT.



**TYPE 2 DETAIL**

PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 2 FOR MORE INFORMATION REGARDING ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 2, SEE NOTE TO THE LEFT.



**TYPE 3 DETAIL**

PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 3 FOR MORE INFORMATION REGARDING ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 3, SEE NOTE TO THE LEFT.

**LEGEND:**

- 1 ITEM 301 - ASPHALT CONCRETE BASE, PG64-22
- 2 ITEM 407 - NON-TRACKING TACK COAT (RATE PER CMS TABLE 407.06-1)
- 3 ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448)

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GENERAL NOTES

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**302 ASPHALT CONCRETE BASE, AS PER PLAN**

MIX DESIGN - FOLLOW THE REQUIREMENTS OF 302.02 EXCEPT AS MODIFIED BELOW:

- USE A MAXIMUM F/A RATIO OF 1.4
- MINIMUM TSR IS 0.70 AS DETERMINED USING SUPPLEMENT 1051. ADD ANTISTRIP ADDITIVE AS SPECIFIED IN 441.04 IF REQUIRED BASED ON TSR.

**NOTIFICATION:**

NOTIFY ERIC BIEHL AT 614-275-1380 AND JULIE MILLER AT 614-466-3165 ONE WEEK PRIOR TO PLANNED BEGINNING PRODUCTION AND PLACEMENT.

**QUALITY CONTROL AND ACCEPTANCE:**

FOLLOW THE REQUIREMENTS OF 403 USING 446 ACCEPTANCE EXCEPT AS MODIFIED BELOW:

- REPLACE MSG COMPARISON IN TABLE 403.06-1 WITH 0.015.

THE REQUIREMENTS OF 441.09 AND 441.10 APPLY, EXCEPT AS MODIFIED BELOW:

- MAINTAIN THE F/A RATIO LESS THAN 1.4.
- IF THE F/A RATIO IS GREATER THAN 1.2, RECALCULATE THE F/A RATIO USING THE EFFECTIVE ASPHALT BINDER CONTENT AND ENSURE THE RECALCULATED F/A RATIO IS LESS THAN 1.4.
- COMPACT AIR VOIDS SPECIMENS USING A SIX-INCH MARSHALL HAMMER WITH 70 BLOWS ON EACH SIDE ACCORDING TO 302.02. OUT-OF-SPECIFICATION LIMITS FOR AIR VOIDS IS 2.5 TO 5.5 PERCENT (DESIGN AIR VOIDS OF 4.0 PERCENT).
- FOR INFORMATION PURPOSES ONLY: COMPACT THREE SPECIMENS USING THE SUPERPAVE GYRATORY AT 50 GYRATIONS AND THREE AT 65 GYRATIONS FOR THE FIRST FIVE PRODUCTION DAYS AND FOR PRODUCTION DAYS 10, 20, 30, AND SO ON THAT ARE SAMPLED WITH A QC OR VA SAMPLE. IF THE PRODUCTION DAY IS SMALL QUANTITY, USE THE FOLLOWING PRODUCTION DAY. USE THE SAME SAMPLE FOR BOTH GYRATORY LEVELS AS WELL AS THE QC AIR VOID SAMPLES. PROPERLY LABEL EACH WITH GYRATORY LEVEL AND LOT SPLIT SAMPLE ID AND SET ASIDE FOR DISTRICT TESTING TO TAKE POSSESSION. DO NOT DISPOSE OF SPECIMENS.

**DENSITY ACCEPTANCE:**

FOLLOW THE REQUIREMENTS OF 446 ASPHALT CONCRETE CORE DENSITY ACCEPTANCE, INCLUDING JOINT CORES, EXCEPT AS MODIFIED BELOW:

- OBTAIN 6-INCH DIAMETER CORES ON EACH LIFT PLACED.
- OBTAIN JOINT CORES AT COLD LONGITUDINAL JOINTS SUCH THAT THE CORE'S CLOSEST EDGE IS 6 INCHES (152 MM) FROM THE EDGE OF THE MAT.
- PAY FACTORS FOR EACH LIFT OF 302 AS PER PLAN WILL BE AS SPECIFIED IN THE FOLLOWING TABLE.

**302 ASPHALT CONCRETE BASE, AS PER PLAN (CONTINUED)**

MEAN OF LOT CORE DENSITY [1]	PAY FACTOR
	302, AS PER PLAN
>98.0%	[2]
>97.0% TO 98.0%	[3]
92.0% TO 97.0%	1.00
91.0% TO 91.9%	0.90
90.0% TO 90.9%	0.80
89.0% TO 89.9%	0.70
<89.0%	[4]

[1] MEAN OF CORES AS PERCENT OF AVERAGE MSG FOR THE PRODUCTION DAY.

[2] THE DISTRICT WILL DETERMINE WHETHER THE MATERIAL MAY REMAIN IN PLACE. THE PAY FACTOR FOR MATERIAL ALLOWED TO REMAIN IN PLACE IS 0.50.

[3] THE DISTRICT WILL DETERMINE WHETHER THE MATERIAL MAY REMAIN IN PLACE. THE PAY FACTOR FOR MATERIAL ALLOWED TO REMAIN IN PLACE IS 0.70.

[4] THE DISTRICT WILL DETERMINE WHETHER THE MATERIAL MAY REMAIN IN PLACE. THE PAY FACTOR FOR MATERIAL ALLOWED TO REMAIN IN PLACE IS 0.50.

IF MATERIAL IS REMOVED AND REPLACED, REMOVE AND REPLACE THE FULL LIFT AND ALL COURSES PAVED ON THE LIFT.

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**GENERAL NOTES**

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**ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN CONSTRUCTION SEQUENCE**

RECONSTRUCTION AND WIDENING OF I-71 SHALL BE COMPLETED OVER 3 PRIMARY PHASES AS FOLLOWS:

**PRE-PHASE 1 WORK**

PRIOR TO THE START OF PHASE 1, THE NORTHBOUND OUTSIDE SHOULDER AND PARTS OF THE SOUTHBOUND INSIDE AND OUTSIDE SHOULDERS MUST BE RECONSTRUCTED IN ORDER TO CARRY SHIFTED PRE-PHASE 1 AND PHASE 1 TRAFFIC. ADDITIONALLY, A 1 FOOT WIDE SECTION OF EXISTING PAVEMENT (ADJACENT TO THE SHOULDER RECONSTRUCTION) SHALL BE MILLED AND RESURFACED. SHOULDER RECONSTRUCTION AND ADJACENT RESURFACING WORK SHALL BE LIMITED TO THAT WHICH CAN BE COMPLETED IN TWO NIGHTS AS DETAILED IN THE PRE-PHASE 1 TYPICAL SECTIONS.

THE MAINLINE CROSSOVER AT THE SOUTH END OF THE PROJECT AND THE CULVERT CROSSOVERS LOCATED NEAR YOUNG RD. SHALL BE CONSTRUCTED IN CONJUNCTION WITH THE SHOULDER REPLACEMENT. ADDITIONALLY, THE EXISTING PAVEMENT JOINT UNDER THE NORTHBOUND LANE SHALL BE REPAIRED AS IT WILL FALL IN OR NEAR THE PHASE 1 WHEEL PATH (SEE ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 2). PRE-PHASE 1 WORK WILL ALSO INCLUDE REPAIRS TO THE EXISTING PAVEMENT AS DETAILED ON SHEET 13. REPAIRS MUST BE COMPLETE BY 10/15/2020 (SEE INCENTIVE/DISINCENTIVE CONTRACT TABLE ON THIS SHEET). ANY PRE-PHASE 1 WORK THAT IMPACTS TRAVEL LANES SHALL BE COMPLETED BY UTILIZING NIGHTTIME LANE CLOSURES PER ODOT SCD MT-95.30. THE LANE CLOSURES MAY ONLY BE IMPLEMENTED DURING HOURS ALLOWED AS LISTED IN THIS PLAN.

**WINTER RESTRICTION**

TRAFFIC SHALL NOT BE PLACED INTO PRE-PHASE 1 PART A OR B BEFORE APRIL 1<sup>ST</sup> 2021 WITHOUT APPROVAL FROM THE PROJECT ENGINEER. THE CONTRACTOR MAY SUBMIT HIS OWN METHOD OF OPERATION TO ENTER INTO PHASE 1 SOUTH OF STATION 192+00 PRIOR TO APRIL 1<sup>ST</sup> 2021, IN WRITING AND WITH DETAILED PLAN SHEETS TO THE PROJECT ENGINEER FOR REVIEW. THE CONTRACTOR SHALL RECEIVE APPROVAL FROM THE PROJECT ENGINEER AND DISTRICT WORK ZONE TRAFFIC ENGINEER BEFORE PROCEEDING WITH ANY MODIFIED PHASE 1.

**PRE-PHASE 1 PARTS A AND B**

UPON COMPLETION OF PRE-PHASE 1 TEMPORARY PAVEMENT WORK, THE CULVERT CROSSING OF NORTHBOUND I-71, JUST SOUTH OF YOUNG ROAD SHALL BE REPLACED. THIS WORK SHALL BE COMPLETED IN TWO PARTS, WITH ONE NORTHBOUND LANE MAINTAINED ON THE EXISTING NORTHBOUND SIDE, AND THE OTHER NORTHBOUND LANE MAINTAINED IN CONTRAFLOW WITH SOUTHBOUND TRAFFIC VIA THE CULVERT CROSSOVER THAT WAS CONSTRUCTED PRIOR.

**PHASE 1**

PHASE 1 CONSTRUCTS THE WESTERN HALF OF NORTHBOUND I-71 (PROPOSED RUMBLE STRIPS SHALL BE NON-PERFORMED). THIS WORK IS COMPLETED WITH NORTHBOUND TRAFFIC SHIFTED AWAY FROM THE WORKZONE, UTILIZING THE RECENTLY REPLACED OUTSIDE SHOULDER. ADDITIONALLY 2-LANE CROSSOVER SHALL BE CONSTRUCTED AT THE NORTH PROJECT TERMINI, AS WELL AS 2-RAMP CROSSOVERS AT THE SOUTHBOUND EXIT TO US 62. SOUTHBOUND TRAFFIC (INCLUDING RAMPS) SHALL BE MAINTAINED IN EXISTING LANES FOR THE DURATION OF PHASE 1 WORK. ALL RAMPS AT THE US 62 INTERCHANGE SHALL REMAIN OPEN DURING PHASE 1. ALL MEDIAN GRADING, SHALL BE COMPLETED IN PHASE 1. ADDITIONALLY, THE TEMPORARY PAVEMENT ADJACENT TO NB-71 THAT WAS LEFT IN PLACE FROM PROJECT FRA-71-5.29 PID 84868 SHALL BE REMOVED.

**PHASE 2**

PHASE 2 CONSTRUCTS THE REMAINING EASTERN HALF OF NORTHBOUND I-71 (PROPOSED RUMBLE STRIPS SHALL BE NON-PERFORMED). THIS WORK IS COMPLETED WITH NORTHBOUND TRAFFIC SHIFTED AWAY FROM THE WORKZONE, UTILIZING THE RECENTLY CONSTRUCTED WESTERN HALF OF I-71. ALL SOUTHBOUND TRAFFIC (INCLUDING RAMPS) SHALL BE MAINTAINED IN EXISTING LANES FOR THE DURATION OF PHASE 2. RAMP D (NORTHBOUND EXIT RAMP TO US 62) SHALL BE CONSTRUCTED UNDER FULL CLOSURE WITH TRAFFIC DETOURED AS DETAILED WITHIN. THIS RAMP SHALL THEN BE OPENED PRIOR TO THE START OF PHASE 2A. THE NORTHBOUND ENTRANCE RAMP FROM US 62 (RAMP B) SHALL REMAIN OPEN DURING PHASE 2. RAMP B AND D CAN BE CLOSED FOR ONE WEEKEND TO COMPLETE INTERSECTION WORK.

**SUB-PHASE 2A**

SUB-PHASE 2A CONSTRUCTS RAMP B UNDER CLOSURE (NORTHBOUND ENTRANCE RAMP FROM US 62). THIS SHALL BE COMPLETED CONCURRENTLY WITH PHASE 2, BUT SHALL NOT BE CONSTRUCTED AT THE SAME TIME RAMP D IS CLOSED. THE PHASE 2A CLOSURE SHALL BE LIMITED TO 30 DAYS MAXIMUM. THE DETOUR ROUTE HAS BEEN DETAILED WITHIN. RAMP D SHALL REMAIN OPEN WITH THE EXCEPTION OF THE PHASE 2A 30-DAY CLOSURE.

**WINTERIZATION**

AT THE CONCLUSION OF PHASE 2A, THE PROJECT SHALL ENTER A WINTERIZATION MODE. SOUTHBOUND TRAFFIC SHALL REMAIN IN EXISTING LANES, WHILE NORTHBOUND TRAFFIC SHALL BE OPENED TO THREE LANES AS DETAILED WITHIN. ALL RAMPS SHALL BE OPEN DURING THE WINTER SET-UP WITH THE EXCEPTION OF PRE-PHASE 3 WORK. THE WINTERIZATION SET-UP SHALL BE IN PLACE BY 10/01/2021 (SEE INCENTIVE/DISINCENTIVE CONTRACT TABLE ON THIS SHEET).

**PRE-PHASE 3 WORK**

DURING PRE-PHASE 3, THE RAMP A/US 62 INTERSECTION SHALL BE CONSTRUCTED UTILIZING TWO WEEKEND CLOSURES. RAMP A (SOUTHBOUND EXIT TO US 62) AND RAMP C (SOUTHBOUND ENTRANCE RAMP FROM US 62) WILL BE DETOURED DURING THE TWO WEEKENDS AS DETAILED WITHIN. ADDITIONALLY, TEMPORARY PAVEMENT SLONG RAMP A SHALL BE CONSTRUCTED FOR USE IN PHASE 3.

IF THE CONCRETE PAVEMENT OPTION IS ULTIMATELY IMPLEMENTED, TEMPORARY PAVEMENT FROM PHASE 2 (ALONG NB INSIDE SHOULDER) SHALL BE REMOVED DURING PRE-PHASE 3. THIS WORK SHALL BE COMPLETED UNDER SHOULDER CLOSURE. THE SHOULDER CLOSURES SHALL BE PER ODOT SCD MT-95.45 EXCEPT DRUMS MAY BE USED IN PLACE OF PCB AS LONG AS DROP-OFF REQUIREMENTS ARE MET (PER ODOT SCD MT-101.90).

**PHASE 3**

PHASE 3 CONSTRUCTS THE MAJORITY OF SOUTHBOUND I-71. BOTH LANES OF SOUTHBOUND TRAFFIC ARE MAINTAINED BY CROSSING OVER ONTO THE NORTHBOUND SIDE OF THE FREEWAY. RAMP A (SOUTHBOUND EXIT RAMP TO US 62) SHALL ALSO BE CONSTRUCTED WITH TRAFFIC BEING MAINTAINED ON TEMPORARY PAVEMENT AND EXISTING RAMP C (SOUTHBOUND ENTRANCE RAMP FROM US 62). RAMP C (SOUTHBOUND ENTRANCE RAMP FROM US 62) SHALL REMAIN CLOSED FOR THE DURATION OF THIS PHASE. THE DETOUR ROUTE HAS BEEN DETAILED WITHIN. ADDITIONALLY, THE TEMPORARY PAVEMENT ADJACENT TO NB-71 THAT WAS LEFT IN PLACE FROM PROJECT FRA-71-5.29 PID 84868 SHALL BE REMOVED. WITH THE EXCEPTION OF THE CROSSOVERS, THE FINAL WEARING COURSE FOR SOUTHBOUND I-71 SHALL BE PLACED AT THE CONCLUSION OF PHASE 3

**SUB-PHASE 3A**

SUB PHASE 3A CONSTRUCTS THE REMAIN PORTION OF I-71 IN THE VICINITY OF RAMP C. ALL LANES SHALL REMAIN IN THE PHASE 3 SET-UP EXCEPT THAT RAMP A IS MAINTAINED UTILIZING THE NEWLY CONSTRUCTED PAVEMENT. RAMP C (SOUTHBOUND ENTRANCE RAMP FROM US 62) SHALL REMAIN CLOSED FOR THE DURATION OF THIS PHASE. THE DETOUR ROUTE HAS BEEN DETAILED WITHIN.

**POST PHASE 3**

AT THE CONCLUSION OF PHASE 3 AND 3A, TRAFFIC SHALL BE PLACED INTO THEIR FINAL CONDITION AND THE REMAINING EXISTING I-71 PAVEMENT THAT IS TO BE RESURFACED (OUTSIDE THE FULL DEPTH LIMITS) SHALL BE MILLED TO THE DEPTH SPECIFIED IN THE ROADWAY PLANS. THE FINAL WEARING COURSE OF BOTH NEWLY CONSTRUCTED AND EXISTING MILLED PAVEMENTS SHALL THEN BE INSTALLED UNLESS PREVIOUSLY CONSTRUCTED. ONCE COMPLETED, FINAL PAVEMENT MARKINGS SHALL BE APPLIED PER THE TRAFFIC CONTROL PLANS AND NON-PERFORMED RUMBLE STRIPS FROM PHASE 1 AND PHASE 2 SHALL BE INSTALLED. THIS WORK SHALL BE COMPLETED BY UTILIZING ODOT SCD MT-97.11. IN ADDITION TO THIS WORK, THE MEDIAN CABLE BARRIER SHALL BE INSTALLED PER THE ROADWAY PLANS AND TEMPORARY PAVEMENT SHALL BE REMOVED BY UTILIZING ODOT SCD MT-95.45 EXCEPT DRUMS MAY BE USED IN PLACE OF PCB AS LONG AS DROP-OFF REQUIREMENTS ARE MET (PER ODOT SCD MT-101.90).

**GENERAL**

ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (CURRENT EDITION), COPIES OF WHICH ARE AVAILABLE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, OFFICE OF TRAFFIC ENGINEERING, 1980 WEST BROAD STREET, COLUMBUS, OHIO 43223.

THE ROADWAY SHALL NOT BE OPENED TO TRAFFIC UNTIL PERMANENT TRAFFIC CONTROLS ARE IN PLACE, OR UNTIL TEMPORARY TRAFFIC CONTROLS, APPROVED BY THE ENGINEER, ARE INSTALLED. THE CONTRACTOR ASSUMES ALL LIABILITY FOR THE PREMATURE REMOVAL OF TEMPORARY TRAFFIC CONTROLS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REINSTALLATION AND/OR REPLACEMENT OF ALL PERMANENT TRAFFIC CONTROL DEVICES DAMAGED OR REMOVED DURING THE CONSTRUCTION. PERMANENT TRAFFIC CONTROL THAT IS NO LONGER IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SHALL BE REPLACED IMMEDIATELY. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR MISSING, DAMAGED AND IMPROPERLY PLACED TRAFFIC CONTROL DEVICES.

THE CONTRACTOR SHALL PROVIDE A 24 HOUR CONTACT WHO WILL BE RESPONSIBLE FOR MAINTENANCE OF TRAFFIC FOR THE DURATION OF THE PROJECT.

CONSTRUCTION OPERATIONS SHALL NOT BEGIN UNTIL ALL TEMPORARY TRAFFIC CONTROL DEVICES ARE IN PLACE AND APPROVED BY THE ENGINEER AND THE DISTRICT.

MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES INCLUDING DRUMS, SIGNS, BARRICADES, SIGN BOARDS, DETOUR SIGNAGE, ETC., SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

STEADY-BURNING TYPE "C" LIGHTS SHALL BE REQUIRED ON ALL BARRICADES IN USE AT NIGHT. ALL ADVANCE SIGNING SHALL BE EQUIPPED WITH TYPE "A" FLASHING LIGHTS AND (2) ORANGE FLAGS (24"X24"). CONES ARE NOT APPROVED FOR USE AT NIGHT. LIGHTS ARE NOT REQUIRED ON SIGNS IN PLACE DURING DAYLIGHT HOURS.

FOR AREAS ADJACENT TO VEHICULAR TRAFFIC, OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH THE PROPER TRAFFIC CONTROL DEVICES AT ALL TIMES. DROP OFFS WITHIN THE WORK ZONE SHALL CONFORM TO THE REQUIREMENTS SET FORTH ON ODOT STANDARD CONSTRUCTION DRAWING MT-101.90.

**TEMPORARY PAVEMENT WEDGE**

TEMPORARY PAVEMENT WEDGES SHALL BE PROVIDED AT ALL TIMES WHERE TRAFFIC IS REQUIRED TO TRAVEL FROM OR ONTO A PAVEMENT SURFACE OF A DIFFERENT ELEVATION, AROUND MANHOLES, AT CATCH BASINS, ETC. THE MINIMUM SLOPE OF THE TEMPORARY PAVEMENT WEDGE SHALL BE 3:1 ALONG LONGITUDINAL JOINTS AND 120:1 AT TRANSVERSE JOINTS. THESE WEDGES SHALL BE REMOVED PRIOR TO PLACING THE SPECIFIED FINAL PAVEMENT COURSE. PAYMENT FOR ALL WORK, MATERIALS, ETC. ASSOCIATED WITH THIS ITEM SHALL BE PAID FOR UNDER THE ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN LUMP SUM.

**WEEKLY MAINTENANCE OF TRAFFIC MEETING**

AFTER THE INITIAL PRE-MAINTENANCE OF TRAFFIC MEETING, THE CONTRACTOR SHALL MEET WITH THE PROJECT ENGINEER ON A WEEKLY BASIS TO GO OVER A DETAILED MAINTENANCE OF TRAFFIC REPORT OF AT LEAST 7 CALENDAR DAYS. THIS MEETING SHOULD BE HELD ON THE SAME DAY AND TIME OF EACH WEEK.

THE CONTRACTOR WILL PROVIDE TO THE PROJECT ENGINEER A WRITTEN DETAIL OF THE INFORMATION REQUIRED BY THE NOTIFICATION OF TRAFFIC RESTRICTIONS NOTE PRIOR TO THE MEETING.

IN ADDITION TO THE DETAILED MAINTENANCE OF TRAFFIC REPORT THE CONTRACTOR SHALL GIVE A GENERAL LOOK AHEAD OF AN ADDITIONAL 2 WEEKS OF UPCOMING WORK ACTIVITIES. THIS WILL INCLUDE ANY NOTIFICATION REQUIREMENTS FOR RESTRICTIONS THAT HAVE A DURATION GREATER THAN 12 HOURS.

**TIME LIMITATION ON A DETOUR**

INTERCHANGE RAMPS SHALL BE MAINTAINED AT ALL TIMES, EXCEPT WHERE SPECIFIED IN THE PLANS AS OUTLINED IN THE CHART BELOW. FOR EACH RESPECTIVE DETOUR AND CLOSURE, A DISINCENTIVE SHALL BE ASSESSED FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

WINDOW CONTRACT TABLE			
RAMP (MOVEMENT)	PHASE	MAXIMUM DURATION OF CLOSURE	DISINCENTIVE PER DAY
RAMP A (I-71 SB TO US 62)	PRE-PHASE 3	2-WEEKENDS (7PM FRI-7AM MON)	\$4,600
RAMP B (US-62 TO I-71 NB)	PHASE 2A	30 DAYS	\$7,400
RAMP C (US 62 TO I-71 SB)	PRE-PHASE 3	2-WEEKENDS	\$1,100

INCENTIVE/DISINCENTIVE CONTRACT TABLE			
DESCRIPTION OR LOCATION OF CRITICAL WORK	COMPLETION DATE	TIME PERIOD	DISINCENTIVE \$ PER TIME PERIOD
PRE-PHASE 1 PAVEMENT REPAIRS COMPLETED	10/15/2020	DAY	\$3,200
COMPLETE PHASE 2 AND IMPLEMENT WINTERIZATION SET-UP	10/01/2021	DAY	\$6,000

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MAINTENANCE OF TRAFFIC GENERAL NOTES

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**MAINTENANCE OF TRAFFIC MARKING PAVEMENT REPAIRS**

PROVIDE LANE CLOSURES AS PER THE MAINTENANCE OF TRAFFIC NOTES IN THESE PLANS A MINIMUM OF 24 HOURS PRIOR TO PERFORMING PAVEMENT REPAIRS TO ALLOW THE ENGINEER TO IDENTIFY AND MARK THE AREAS OF THE PAVEMENT IN NEED OF REPAIRS.

PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, LEO HOURS, AND INCIDENTALS NEEDED TO PERFORM THE ABOVE LISTED WORK IS CONSIDERED INCIDENTAL TO MAINTAINING TRAFFIC ON THE PROJECT AND WILL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC, AS PER PLAN.

- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 1:
- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 2:
- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 3:
- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 4:

THIS ITEM SHALL BE UTILIZED FOR THE PAVEMENT REPAIRS NEEDED DURING THIS CONSTRUCTION PROCESS. ALL AREAS TO BE REPAIRED SHALL BE LOCATED BY THE ENGINEER. IT IS LIKELY THAT REPAIRS WILL BE NEEDED PRIOR TO EACH PHASE SWITCH. GREAT CARE SHALL BE TAKEN TO MAINTAIN THE EXISTING PAVEMENT CROSS SLOPE AS WELL AS ALL LONGITUDINAL SLOPES. THE TYPE OF REPAIR SHALL BE DETERMINED BY THE PROJECT ENGINEER. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED FOR MAINTENANCE OF TRAFFIC FOR PAVEMENT REPAIRS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

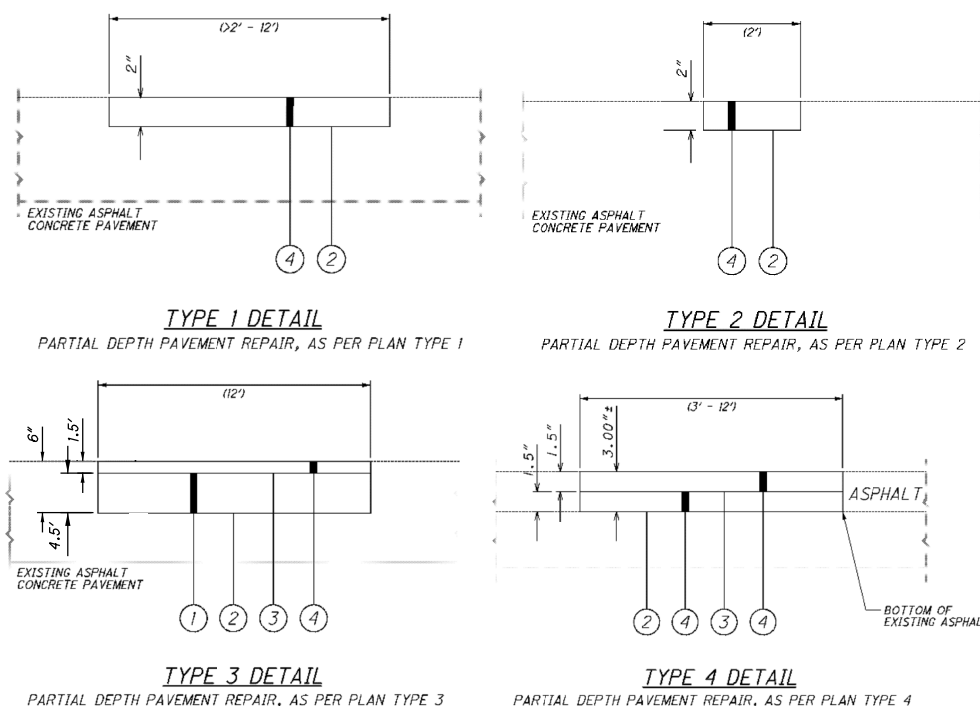
TYPE 1 - IS TO BE USED WHEN YOU NEED TO MILL & FILL AN AREA OF VARYING LENGTH AND HAVE AN AVERAGE WIDTH OF NOT LESS THAN 2 FEET.

TYPE 2 - IS TO BE USED FOR FIXING THE LONGITUDINAL JOINT ISSUES OF VARYING LENGTH AND HAVE A CONSISTENT WIDTH OF 2 FEET. THE JOINT UNDER THE EXISTING NORTHBOUND LANE LINE IS EXPECTED TO BE WITHIN THE PHASE 1 WHEELPATH AND SHALL BE REPAIRED PRIOR TO SHIFTING TRAFFIC.

TYPE 3 - IS TO BE USED FOR DEEPER REPAIRS OF VARYING LENGTH AND WILL HAVE AN AVERAGE WIDTH OF NOT LESS THAN 4 FEET.

TYPE 4 - IS TO BE USED FOR COMPOSITE PAVEMENT REPAIRS OF VARYING LENGTH AND WILL HAVE AN AVERAGE WIDTH OF NOT LESS THAN 3 FEET.

ALL COSTS ASSOCIATED WITH REMOVING AND REPLACING PAVEMENT AND TACK COAT FOR THE REPAIRS SHALL BE INCIDENTAL TO ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN.



- LEGEND:**
- ① ITEM 301 - ASPHALT CONCRETE BASE, PG64-22
  - ② ITEM 407 - TACK COAT @ 0.075 PER SY. YD.
  - ③ ITEM 407 - TACK COAT FOR INTERMEDIATE @ 0.05 PER SY. YD.
  - ④ ITEM 441 - TYPE 1 (AS DESCRIBED IN C&MS 615.05)

- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 1 = 300 S.Y.
- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 2 = 6844 S.Y.
- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 3 = 2000 S.Y.
- ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, APP, TYPE 4 = 500 S.Y.

**MATERIAL DELIVERY AND INSTALLATION**

BRIDGE BEAM, NOISE WALL PANELS AND OTHER LARGE MATERIALS THAT ARE TYPICALLY INSTALLED DIRECTLY FROM DELIVERY TRUCKS MAY ARRIVE UP TO 12 HOURS BEFORE INSTALLATION.

DELIVERY TRUCKS WILL BE PERMITTED TO PARK ON THE SHOULDER WITH A SHOULDER CLOSURES AS DETAILED IN MT-95.45. A TRUCK MOUNTED ATTENUATOR SHOULD BE USED IF VEHICLES WILL BE OCCUPYING THE SHOULDER FOR 2 HOURS OR MORE.

NOISE WALL PANELS SHALL NOT BE INTALLED DURING PEAK HOURS IF ANY EQUIPMENT/VECHILES WILL BE WITH IN 12 FEET OF A TRAVEL LANE UNLESS SEPARATED BY PORTABLE BARRIER.

PORTABLE BARRIER SHALL NOT BE DELIVERED OR INSTALLED DURING PEAK HOURS.

MATERIAL DELIVERY TRUCKS SHALL NOT EGRESS THE WORKSITE DURING PEAK HOURS

PEAK HOURS ARE CONSIDERED TO BE 5AM-9AM AND 3PM-6PM MONDAY-FRIDAY.

REFER TO CMS 614.035 FOR ALL OTHER STORAGE OF EQUIPMENT, VEHICLES AND MATERIALS

**SPEED MEASUREMENT MARKINGS**

THE CONTRACTOR SHALL PLACE A SERIES OF SPEED MEASUREMENT MARKINGS ON THE ROADWAY TO ASSIST IN THE ENFORCEMENT OF SPEED REGULATIONS WITHIN THE WORK ZONE. EACH SPEED MEASUREMENT MARKING SHALL CONSIST OF ONE WHITE TRANSVERSE 24-INCH LINE, 4 FOOT IN LENGTH. THE MARKINGS SHALL BE PLACED AT ONE-QUARTER MILE INTERVALS FOR A MINIMUM OF 1 MILE LENGTH ALONG THE ROADWAY, AT LOCATIONS AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER. SPEED MEASUREMENT MARKINGS SHALL NOT BE LOCATED WITHIN 0.5 MILE OF A TAPER, SHIFT, CROSSOVER, ENTRANCE OR EXIT RAMP. SPEED MEASUREMENT MARKINGS ARE TYPICALLY LOCATED SUCH THAT THEY EXTEND 2 FEET ON EITHER SIDE OF THE CENTER LINE OR THE EDGE LINE, OR ARE LOCATED ENTIRELY ON THE SHOULDER; HOWEVER, IN WORK ZONES IT MAY BE NECESSARY TO CENTER THESE MARKINGS WITHIN A LANE.

THE MARKINGS SHALL BE LAID OUT BY A REGISTERED SURVEYOR. A RECORD IS TO BE KEPT AND ONE ORIGINAL SIGNED AND SEALED DOCUMENT IS TO BE SENT TO THE DISTRICT TRAFFIC ENGINEER AND ONE COPY IS TO BE SENT TO THE DISTRICT CONSTRUCTION ENGINEER.

PAYMENT WILL BE FOR EACH 24 INCH WIDE BY 4 FEET LONG MARKING AND SHALL INCLUDE THE PAVEMENT MARKING MATERIAL USED AND THE SURVEYING WORK. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

<b>CONCRETE OPTION</b>	
ITEM 646 SPECIAL - AIR SPEED ZONE MARKING (PHASE 3)	18 EACH
<b>ASPHALT OPTION</b>	
ITEM 644 SPECIAL - AIR SPEED ZONE MARKING (PHASE 3)	18 EACH

**WEEKLY MAINTENANCE OF TRAFFIC MEETING**

AFTER THE INITIAL PRE-MAINTENANCE OF TRAFFIC MEETING, THE CONTRACTOR SHALL MEET WITH THE PROJECT ENGINEER ON A WEEKLY BASIS TO GO OVER A DETAILED MAINTENANCE OF TRAFFIC REPORT OF AT LEAST 7 CALENDAR DAYS. THIS MEETING SHOULD BE HELD ON THE SAME DAY AND TIME OF EACH WEEK.

THE CONTRACTOR WILL PROVIDE TO THE PROJECT ENGINEER A WRITTEN DETAIL OF THE INFORMATION REQUIRED BY THE NOTIFICATION OF TRAFFIC RESTRICTIONS NOTE PRIOR TO THE MEETING.

IN ADDITION TO THE DETAILED MAINTENANCE OF TRAFFIC REPORT THE CONTRACTOR SHALL GIVE A GENERAL LOOK AHEAD OF AN ADDITIONAL 2 WEEKS OF UPCOMING WORK ACTIVITES. THIS WILL INCLUDE ANY NOTIFICATION REQUIREMENTS FOR RESTRICTIONS THAT HAVE A DURATION GREATER THAN 12 HOURS.

**PRE-MAINTENANCE OF TRAFFIC MEETING**

A PRE-MAINTENANCE OF TRAFFIC MEETING SHALL BE HELD (MINIMUM 14 WORK DAYS) PRIOR TO WORK BEGINNING OR ANY CHANGE OF PHASING. THIS MEETING SHALL INCLUDE THE DISTRICT WORK ZONE TRAFFIC MANAGER (d06.mot@dot.ohio.gov) AS WELL AS THE CONTRACTOR AND ANY OF HIS SUB-CONTRACTORS INVOLVED WITH TEMPORARY TRAFFIC CONTROL. FOR COLUMBUS SECTIONS OF ROADWAY, ALSO INCLUDE THE TEMPORARY CONTROL COORDINATOR (614-645-6269 OR 614-645-5845) FROM THE CITY OF COLUMBUS TRANSPORTATION DIVISION.

**PERMITS**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS IN ADVANCE OF ANY WORK BEING DONE IN ALL LOCAL AGENCIES RIGHT OF WAY BY THE CONTRACTOR OR SUB-CONTRACTORS AS REQUIRED BY CMS 107.02.

CITY OF COLUMBUS PERMITS CAN BE OBTAINED FROM THE DIVISION OF PLANNING AND OPERATIONS PERMIT OFFICE: PHONE NUMBER IS 614-645-7497 (THIS PART WOULD ONLY BE USED FOR PROJECTS IN COLUMBUS)



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SHEET NUM.										PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
13	400	402	1103	ASPH CALC	CONC CALC	RAMP CALC				01/IMS/PV	02/NHS/PV	03/IMS/BR	04/IMS/BR						
<b>PAVEMENT</b>																			
225										225				251	01021	225	SY	PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 1	13
900										900				251	01021	900	SY	PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 2	13
4,500										4,500				251	01021	4,500	SY	PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, TYPE 3	13
										3,871				304	20000	3,871	CY	AGGREGATE BASE	
										21,896				452	15060	21,896	SY	12.5" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P WITH QC/QA	
	350									350				609	24510	350	FT	CURB, TYPE 4-C	
<b>PAVEMENT OPTIONS</b>																			
										43,290				254	01000	43,290	SY	ASPHALT OPTION PAVEMENT PLANING, ASPHALT CONCRETE (1.5" THICK)	
										108,694		35,869		302	46001	108,694	CY	ASPHALT CONCRETE BASE, AS PER PLAN	13A
										60,969		20,120		304	20000	60,969	CY	AGGREGATE BASE	
										63,362		21,121		407	20000	63,362	GAL	NON-TRACKING TACK COAT	
										31,730		10,471		442	00100	31,730	CY	ANTI-SEGREGATION EQUIPMENT	
										16,977		5,602		442	10100	16,977	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	
										16,360		5,453		442	10301	16,360	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN	13
	19.58									13.12		6.46		618	40600	19.58	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
	400									264		136		618	40200	400	FT	RUMBLE STRIPS, SHOULDER (CONCRETE)	
<b>CONCRETE OPTION</b>																			
										32,208				254	01000	32,208	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.5" THICK)	
										11,083		3,694		254	01010	11,083	SY	PAVEMENT PLANING, PORTLAND CEMENT CONCRETE (1.5" THICK)	
										59,389		19,598		304	20000	59,389	CY	AGGREGATE BASE	
										4,511		1,504		407	20000	4,511	GAL	NON-TRACKING TACK COAT	
										8		3		442	10100	8	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	
										1,354		451		442	10300	1,354	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447)	
										349,075		115,195		452	16060	349,075	SY	13.5" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P WITH QC/QA	
	19.66									12.98		6.68		618	40700	19.66	MILE	RUMBLE STRIPS, SHOULDER (CONCRETE)	
										11,083		3,694		848	90000	11,083	SY	OVERLAY, MISC.:CONCRETE PAVEMENT CLASS QC 1P WITH QC/QA	
<b>LIGHTING</b>																			
										12				625	00450	12	EACH	CONNECTION, FUSED PULL APART	
										21				625	00480	21	EACH	CONNECTION, UNFUSED PERMANENT	
										6				625	10490	6	EACH	LIGHT POLE, CONVENTIONAL, AT15B35	
										4				625	13200	4	EACH	LIGHT TOWER, BBBB100	
										6				625	14000	6	EACH	LIGHT POLE FOUNDATION, 24" X 6' DEEP	
										4				625	15200	4	EACH	LIGHT TOWER FOUNDATION, 36" X 25' DEEP	
										7,191				625	23200	7,191	FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	
										696				625	23400	696	FT	NO. 10 AWG POLE AND BRACKET CABLE	
										2,768				625	24320	2,768	FT	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES	
										1,417				625	25400	1,417	FT	CONDUIT, 2", 725.04	
										257				625	25401	257	FT	CONDUIT, 2", 725.04, AS PER PLAN	1101
										389				625	25500	389	FT	CONDUIT, 3", 725.04	
										166				625	25902	166	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"	
										6				625	26253	6	EACH	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, 480V	1101
										16				625	26263	16	EACH	LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN, 480V	1101
										2				625	27503	2	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN, 480V	1101
										4,299				625	29000	4,299	FT	TRENCH	
										4				625	29920	4	EACH	STRUCTURE JUNCTION BOX	
										8				625	30700	8	EACH	PULL BOX, 725.08, 18"	
										2				625	30706	2	EACH	PULL BOX, 725.08, 24"	
										14				625	32000	14	EACH	GROUND ROD	
										1				625	33000	1	EACH	STRUCTURE GROUNDING SYSTEM	
										1				625	34001	1	EACH	POWER SERVICE, AS PER PLAN	1101
										4,299				625	36000	4,299	FT	PLASTIC CAUTION TAPE	
										LS				625	37001	LS		SERVICE TO UNDERPASS LIGHTING, AS PER PLAN	1101

GENERAL SUMMARY

FRA - 71 - 0:00



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SHEET NO.	606	606	606	606	606	606	606	606	606	606	607	609	611	611	611	611	611	611	611	611	611	611	611	611	
	GUARDRAIL, BARRIER DESIGN, TYPE MGS	GUARDRAIL REBUILT, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE B	ANCHOR ASSEMBLY, MGS TYPE T	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL), 75 MPH, 36"	IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL), 35MPH, 36"	GUARDRAIL, MISC.: TENSIONED CABLE WITH CONCRETE FOUNDATION LINE POSTS (SOCKETED)	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL	FENCE, TYPE 47RA	CURB, TYPE 4-C	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	15" CONDUIT, TYPE B	15" CONDUIT, TYPE B, 706.02	15" CONDUIT, TYPE C	15" CONDUIT, TYPE C, 706.02	15" CONDUIT, TYPE F, 707.05, TYPE C OR 707.21	15" CONDUIT, TYPE F, 707.05, TYPE C	18" CONDUIT, TYPE B	18" CONDUIT, TYPE B, 706.02	18" CONDUIT, TYPE C	18" CONDUIT, TYPE C, 706.02	18" CONDUIT, TYPE C, 706.08	18" CONDUIT, TYPE F, 707.05, TYPE C OR 707.21
	FT	FT	EACH	EACH	EACH	EACH	EACH	FT	EACH	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	
626								3050	2																
629																				115		293			
632																									
635																				116		292			
638																									
641																									
644																							292		
647																									
653										1				188	357										
659										1				182	20						39				
665																									
670															53										
945													526												
946													698												
947													778												
948													527												
949													343												
950													238												
951													666												
952													634												
953													438												
954													474												
955													719												
956													628												
957													567												
958													581												
959													607												
960													152												
961													187												
962													143												
963													213												
964													252												
TOTALS FROM THIS SHEET	0	0	0	0	0	0	0	2	3050	2	0	0	9371	370	430	0	0	0	0	231	39	877	0	0	0
TOTALS FROM SHEET 396	687.5	600	20	20	13	6	5	0	22,916	24	498	350	0	323	260	5757	90	210	88	859	187	1569	56	20	50
TOTALS CARRIED TO GENERAL SUMMARY	687.5	600	20	20	13	6	5	2	25,966	26	498	350	9371	693	690	5757	90	210	88	1090	226	2446	56	20	50

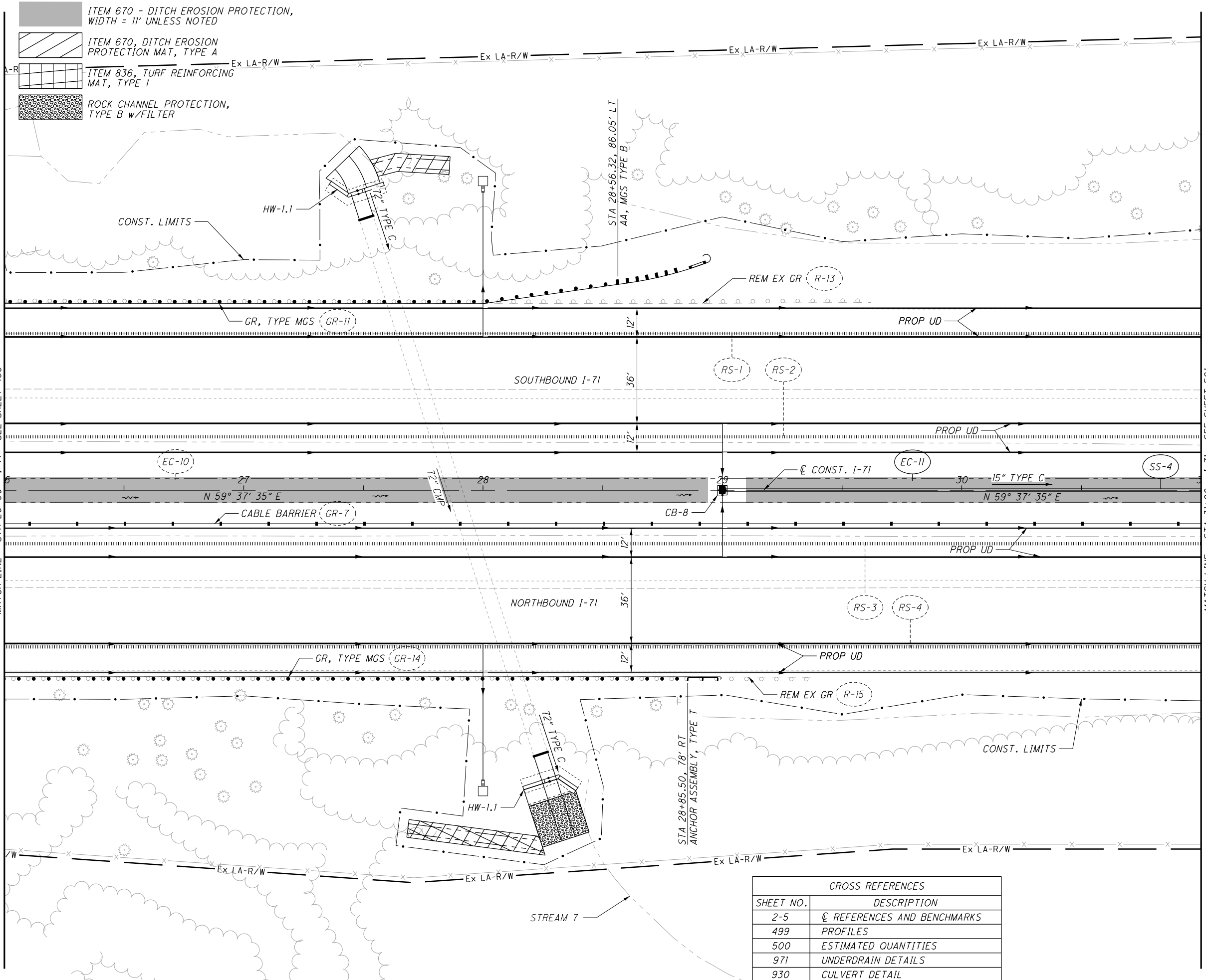
ROADWAY SUBSUMMARY	CALCULATED
	DCB
FRA - 71 - 0.00	CHECKED
	SJS

400  
1312

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MATCH LINE - STA 26+00 - I-71 - SEE SHEET 495

MATCH LINE - STA 31+00 - I-71 - SEE SHEET 501



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
499	PROFILES
500	ESTIMATED QUANTITIES
971	UNDERDRAIN DETAILS
930	CULVERT DETAIL

CALCULATED  
DCB  
CHECKED  
SJS



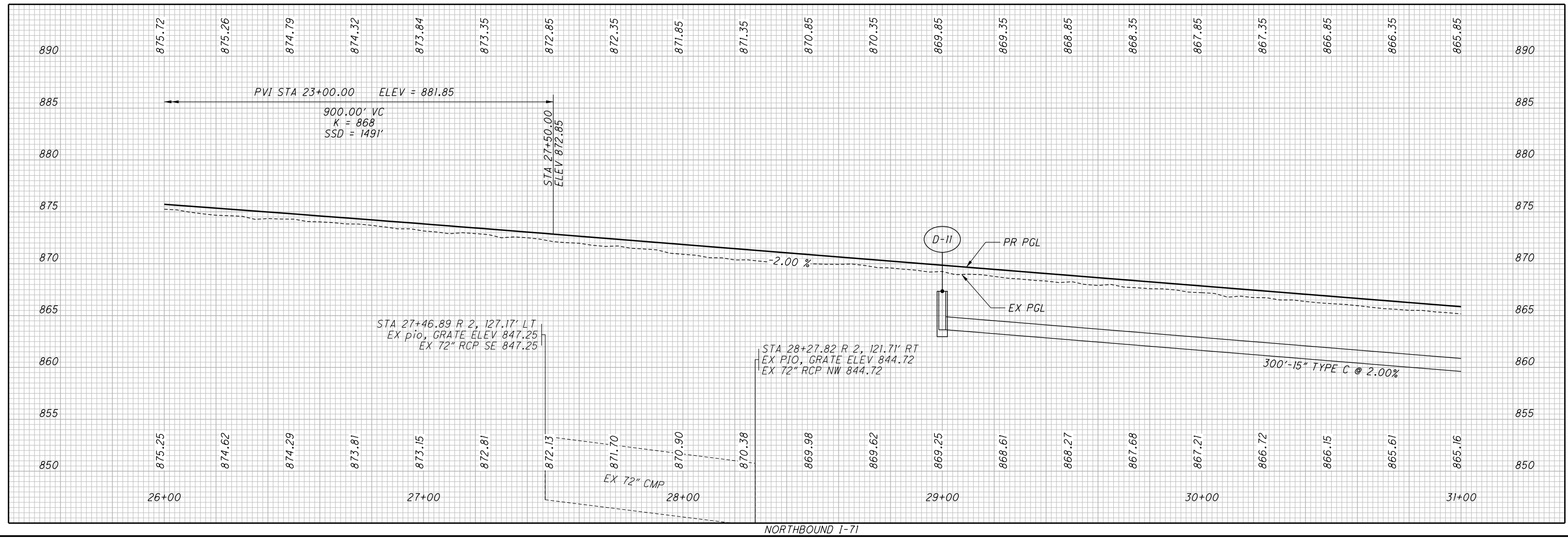
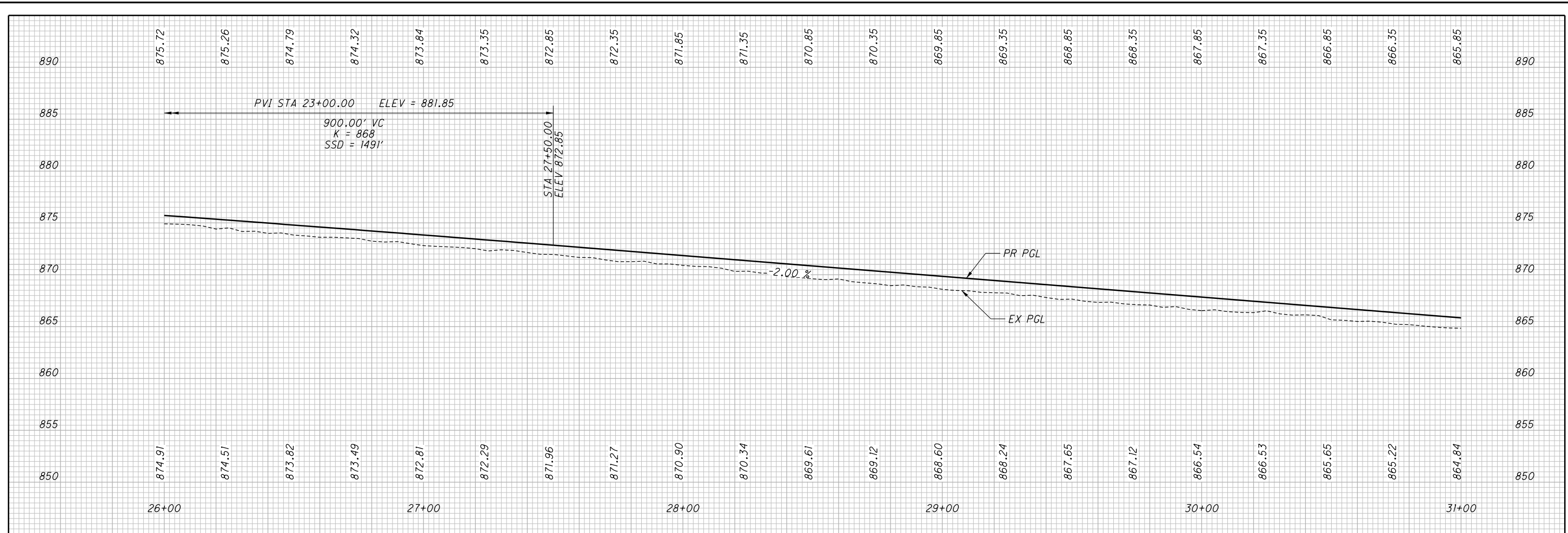
10  
HORIZONTAL  
SCALE IN FEET

PLAN - I-71  
STA 26+00 TO STA 31+00

FRA-71-0.00

498  
1312

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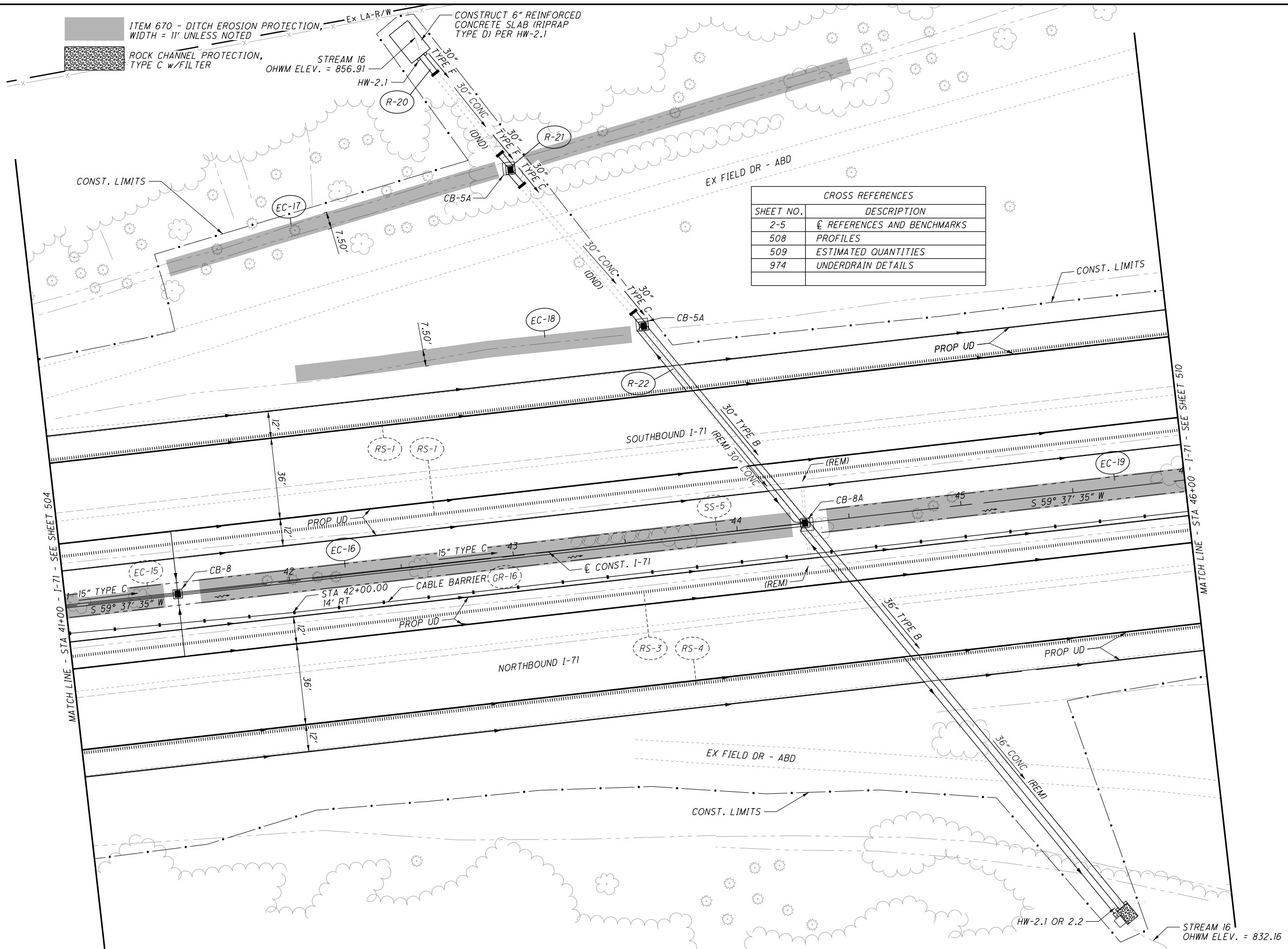
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DCB  
CHECKED  
SJS

PROFILE - I-71  
STA 26+00 TO STA 31+00

FRA-71-0.00

499  
1312

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ITEM 670 - DITCH EROSION PROTECTION,  
WIDTH = 11' UNLESS NOTED

ROCK CHANNEL PROTECTION,  
TYPE C w/FILTER

CONSTRUCT 6" REINFORCED  
CONCRETE SLAB (RIPRAP  
TYPE D) PER HW-2.1

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
508	PROFILES
509	ESTIMATED QUANTITIES
974	UNDERDRAIN DETAILS

CALCULATED 0  
DCB  
CHECKED SJS

HORIZONTAL  
SCALE IN FEET

PLAN - I-71  
STA 41+00 TO STA 46+00

FRA-71-0.00

507  
1312

MATCH LINE - STA 41+00 - I-71 - SEE SHEET 504

MATCH LINE - STA 46+00 - I-71 - SEE SHEET 510

STREAM 16  
OHWM ELEV. = 832.16

STA 42+00.00  
14' RT

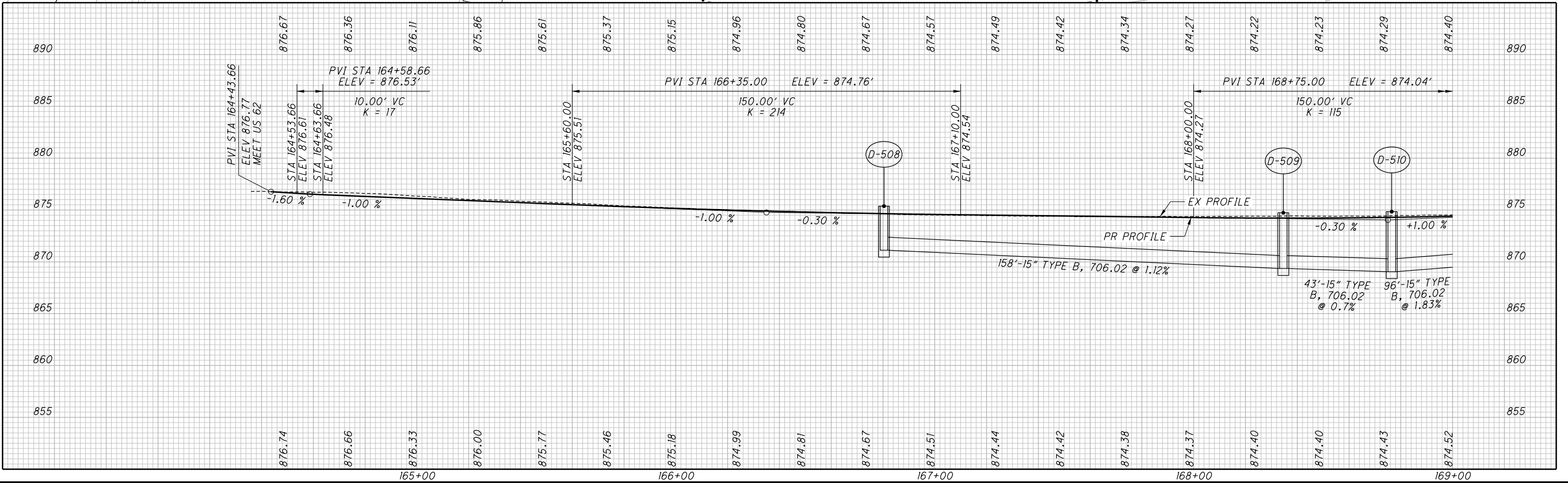
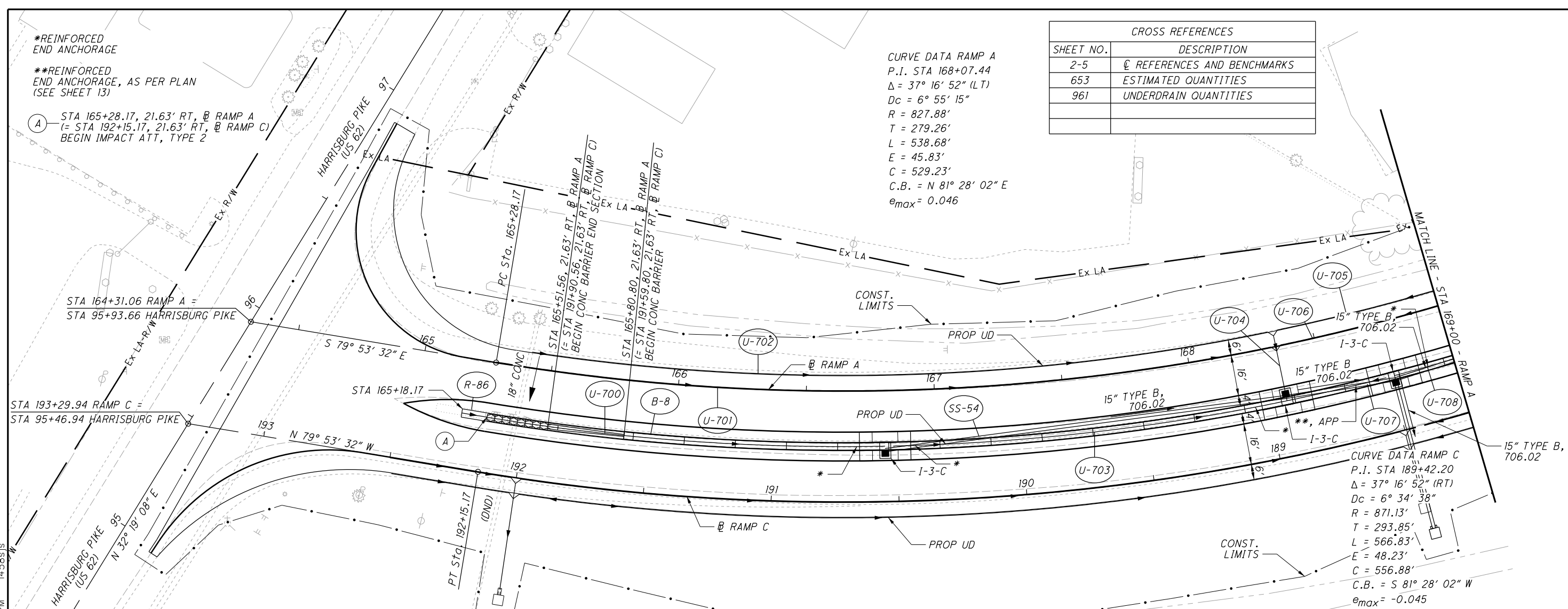
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\*REINFORCED END ANCHORAGE  
 \*\*REINFORCED END ANCHORAGE, AS PER PLAN (SEE SHEET 13)

(A) STA 165+28.17, 21.63' RT, @ RAMP A (= STA 192+15.17, 21.63' RT, @ RAMP C) BEGIN IMPACT ATT, TYPE 2

CURVE DATA RAMP A  
 P.I. STA 168+07.44  
 $\Delta = 37^\circ 16' 52''$  (LT)  
 $D_c = 6^\circ 55' 15''$   
 $R = 827.88'$   
 $T = 279.26'$   
 $L = 538.68'$   
 $E = 45.83'$   
 $C = 529.23'$   
 $C.B. = N 81^\circ 28' 02'' E$   
 $e_{max} = 0.046$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☒ REFERENCES AND BENCHMARKS
653	ESTIMATED QUANTITIES
961	UNDERDRAIN QUANTITIES



PLAN AND PROFILE - RAMP A  
 STA 164+00 TO STA 169+00

FRA-71-0.00

648  
 1312

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
653	ESTIMATED QUANTITIES
961	UNDERDRAIN QUANTITIES

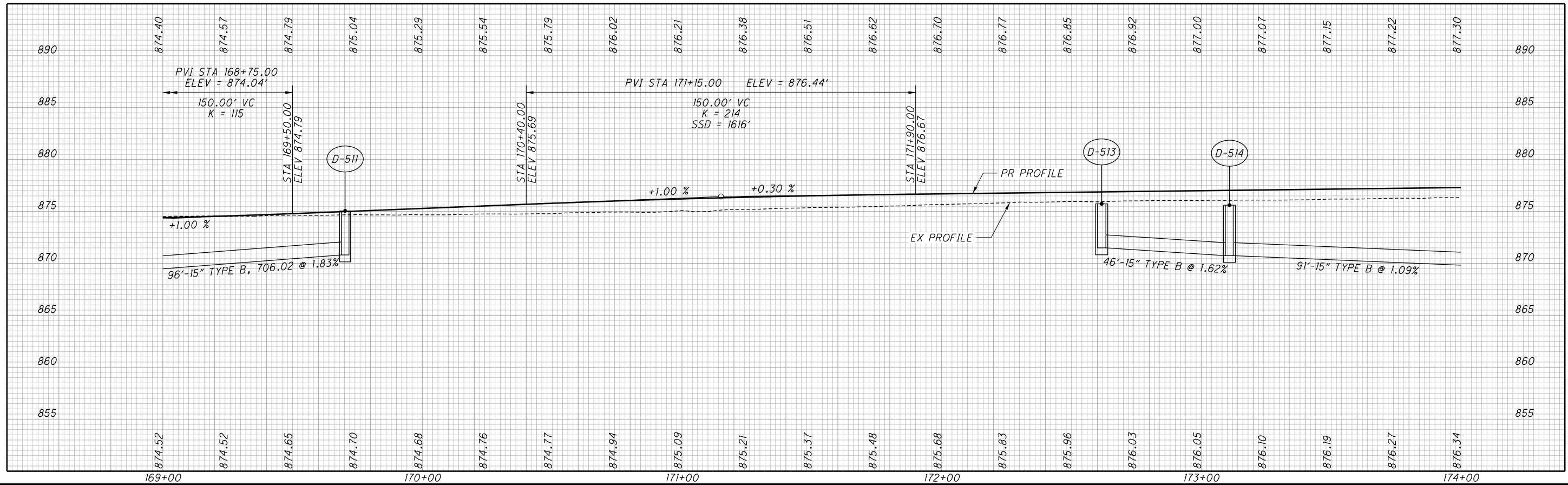
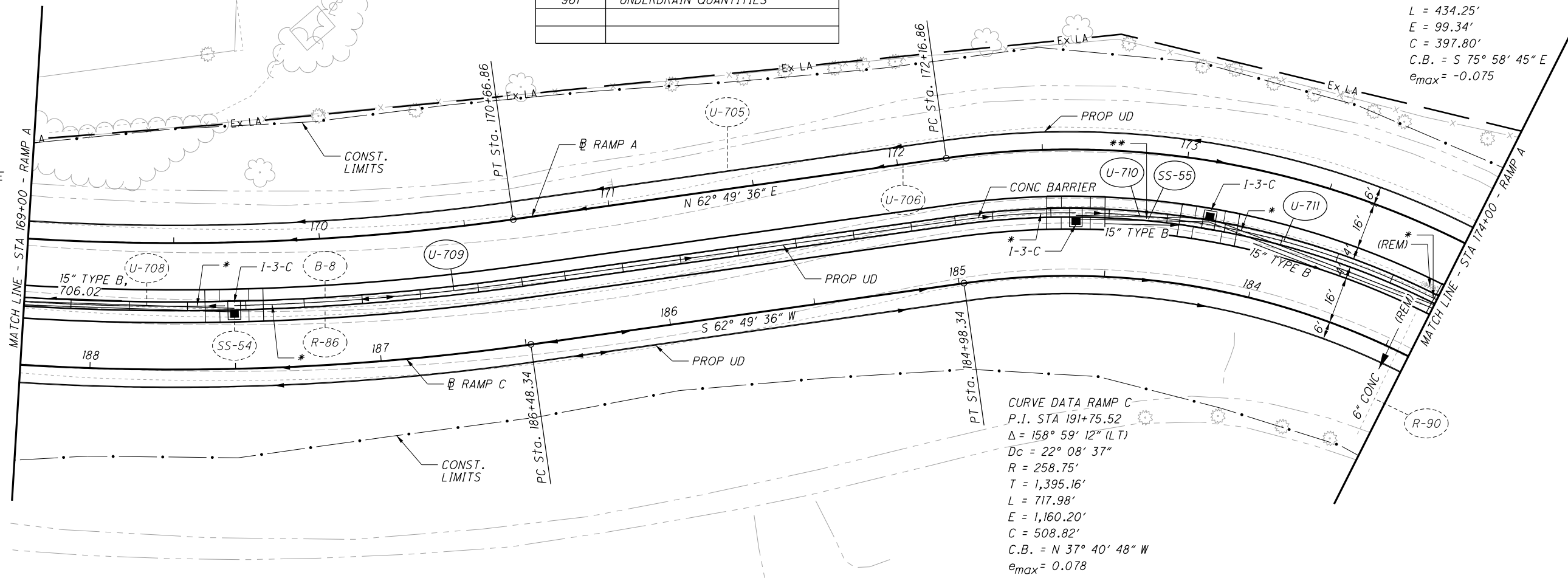
CURVE DATA RAMP A  
P.I. STA 174+81.18  
 $\Delta = 82^\circ 23' 17''$  (RT)  
 $D_c = 18^\circ 58' 20''$   
 $R = 302.00'$   
 $T = 264.32'$   
 $L = 434.25'$   
 $E = 99.34'$   
 $C = 397.80'$   
C.B. = S  $75^\circ 58' 45''$  E  
 $e_{max} = -0.075$

\*REINFORCED  
END ANCHORAGE

\*\*REINFORCED  
END ANCHORAGE, AS PER PLAN  
(SEE SHEET 13)

CURVE DATA RAMP A  
P.I. STA 168+07.44  
 $\Delta = 37^\circ 16' 52''$  (LT)  
 $D_c = 6^\circ 55' 15''$   
 $R = 827.88'$   
 $T = 279.26'$   
 $L = 538.68'$   
 $E = 45.83'$   
 $C = 529.23'$   
C.B. = N  $81^\circ 28' 02''$  E  
 $e_{max} = 0.046$

CURVE DATA RAMP C  
P.I. STA 189+42.20  
 $\Delta = 37^\circ 16' 52''$  (RT)  
 $D_c = 6^\circ 34' 38''$   
 $R = 871.13'$   
 $T = 293.85'$   
 $L = 566.83'$   
 $E = 48.23'$   
 $C = 556.88'$   
C.B. = S  $81^\circ 28' 02''$  W  
 $e_{max} = -0.045$



CALCULATED  
ANN  
CHECKED  
SJS

PLAN AND PROFILE - RAMP A  
STA 169+00 TO STA 174+00

FRA-71-0.00

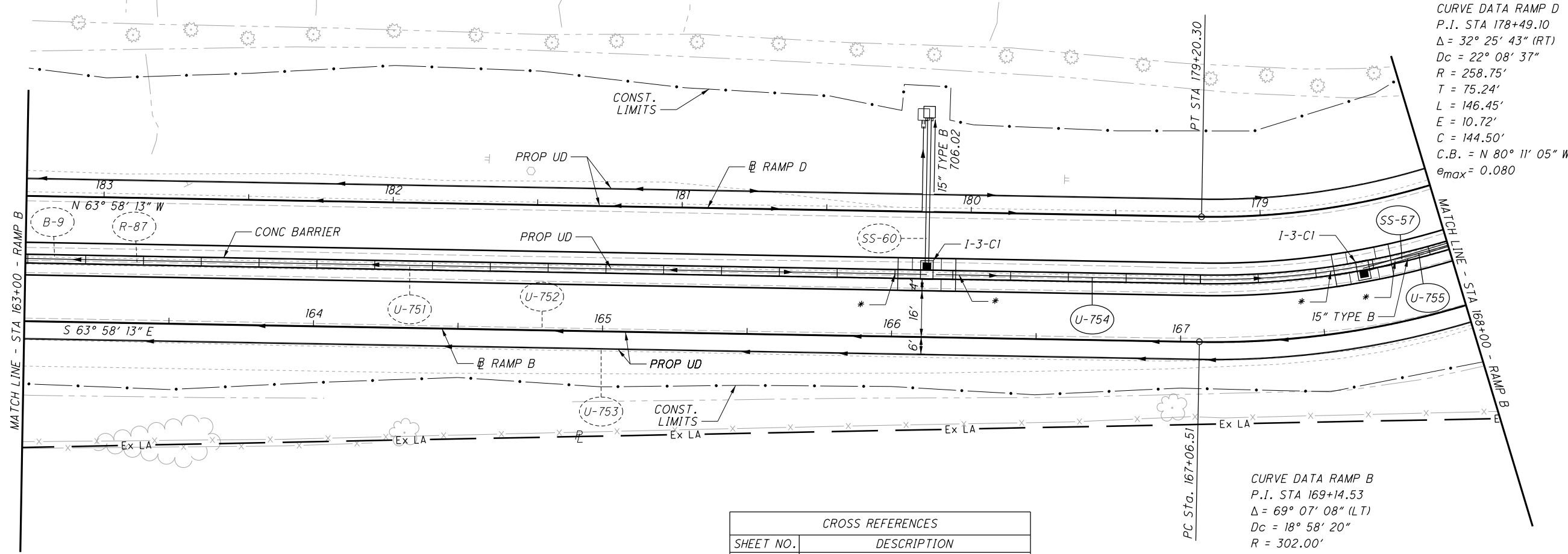
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REF. NO.	SHEET NO.	STATION		SIDE	202		202		202		601		602		606		611		611		611		622		622		622		622		626	
		FROM	TO		CONCRETE MEDIUM REMOVED SY	CONCRETE BARRIER REMOVED FT	IMPACT ATTENUATOR REMOVED EACH	TIED CONCRETE BLOCK MAT, TYPE 1 SY	CONCRETE MASONRY CY	IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL), 35 MPH, 36" EACH	15" CONDUIT, TYPE B FT	15" CONDUIT, TYPE B, 706.02 FT	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1 EACH	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1 FT	CONCRETE BARRIER END SECTION, TYPE C1 EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1 EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN EACH	BARRIER REFLECTOR, TYPE 1, TWO WAY EACH														
R-86	648-650	165+08	177+92	RT	10	1217			1																							
B-8	648-650	165+28	177+53	RT									1								808	1	11	2	25							
SS-54	648-649	166+80	169+70	RT					1.78	0.27							357	4														
SS-55	649-650	172+61	174+09	RT					1.78	0.27			188					3														
<b>TOTALS CARRIED TO SHEETS 399-402</b>					10	1217			1	3.56		0.54	1	188	357	7	808	1	11	2	25											

CALCULATED DCB CHECKED SJS	<b>ESTIMATED QUANTITIES</b>	<b>FRA-71-0.00</b>	
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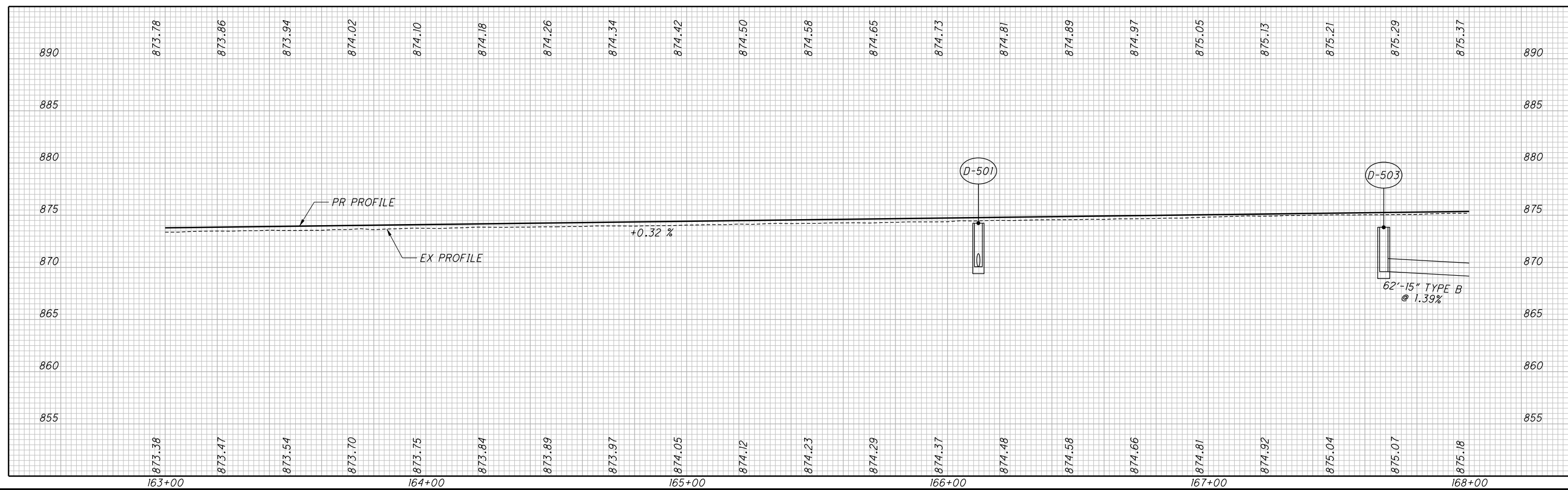
\*REINFORCED  
END ANCHORAGE



CURVE DATA RAMP D  
P.I. STA 178+49.10  
 $\Delta = 32^\circ 25' 43''$  (RT)  
 $Dc = 22^\circ 08' 37''$   
 $R = 258.75'$   
 $T = 75.24'$   
 $L = 146.45'$   
 $E = 10.72'$   
 $C = 144.50'$   
C.B. = N 80° 11' 05" W  
 $e_{max} = 0.080$

CURVE DATA RAMP B  
P.I. STA 169+14.53  
 $\Delta = 69^\circ 07' 08''$  (LT)  
 $Dc = 18^\circ 58' 20''$   
 $R = 302.00'$   
 $T = 208.02'$   
 $L = 364.31'$   
 $E = 64.71'$   
 $C = 342.62'$   
C.B. = N 81° 28' 13" E  
 $e_{max} = -0.075$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
659	ESTIMATED QUANTITIES
962	UNDERDRAIN QUANTITIES



10 HORIZONTAL SCALE IN FEET

CALCULATED	
ANN	
CHECKED	
SJS	

**PLAN AND PROFILE - RAMP B**

**STA 163+00 TO STA 168+00**

**FRA-71-0:00**

655  
1312





0 20 40  
HORIZONTAL  
SCALE IN FEET

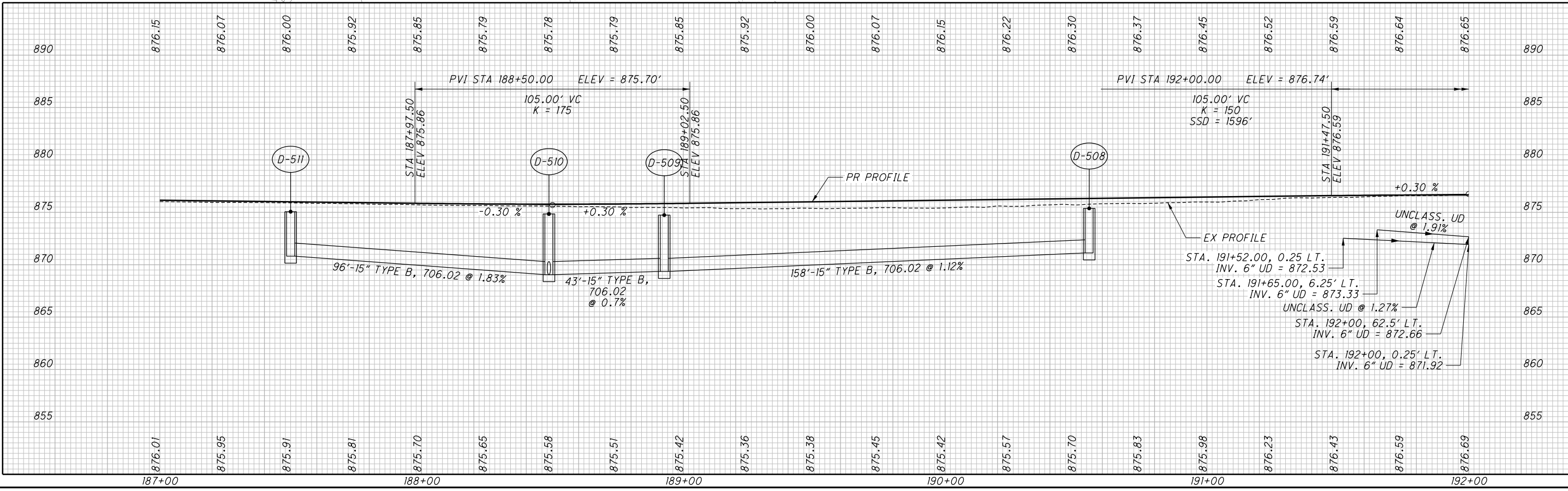
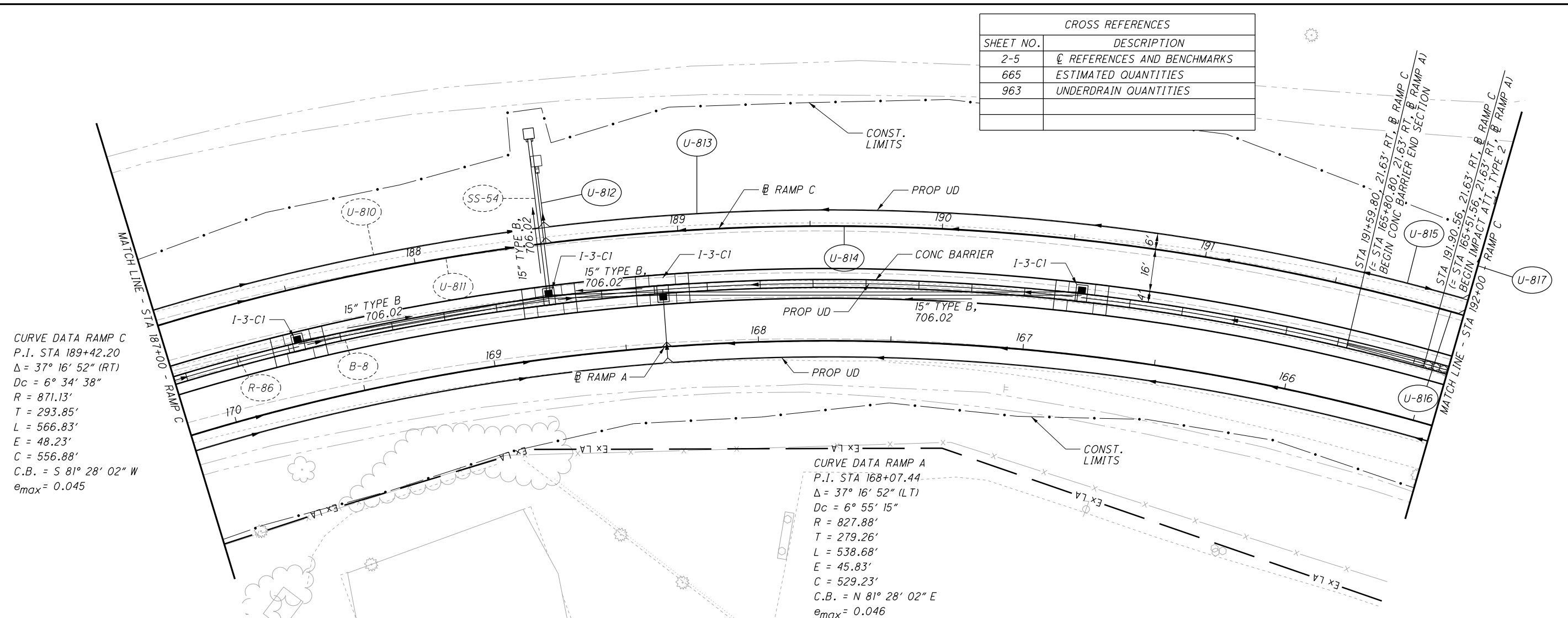
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ANN  
CHECKED  
SJS

PLAN AND PROFILE - RAMP C  
STA 187+00 TO STA 192+00

FRA-71-0.00

663  
1312

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☒ REFERENCES AND BENCHMARKS
665	ESTIMATED QUANTITIES
963	UNDERDRAIN QUANTITIES



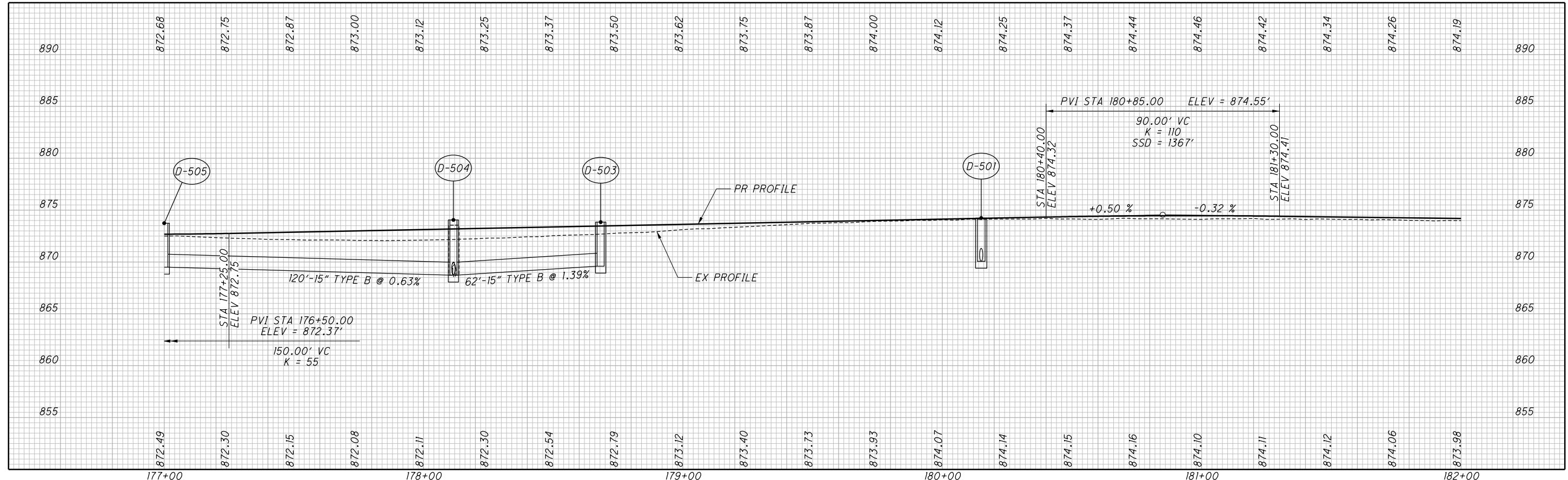
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CURVE DATA RAMP B  
 P.I. STA 169+14.53  
 $\Delta = 69^\circ 07' 08''$  (LT)  
 $D_c = 18^\circ 58' 20''$   
 $R = 302.00'$   
 $T = 208.02'$   
 $L = 364.31'$   
 $E = 64.71'$   
 $C = 342.62'$   
 $C.B. = N 81^\circ 28' 13'' E$   
 $e_{max} = -0.075$

CURVE DATA RAMP D  
 P.I. STA 179+75.80  
 $\Delta = 147^\circ 19' 49''$  (RT)  
 $D_c = 23^\circ 51' 00''$   
 $R = 240.23'$   
 $T = 819.69'$   
 $L = 617.74'$   
 $E = 613.93'$   
 $C = 461.07'$   
 $C.B. = S 9^\circ 56' 09'' W$   
 $e_{max} = 0.080$

CURVE DATA RAMP D  
 P.I. STA 178+49.10  
 $\Delta = 32^\circ 25' 43''$  (RT)  
 $D_c = 22^\circ 08' 37''$   
 $R = 258.75'$   
 $T = 75.24'$   
 $L = 146.45'$   
 $E = 10.72'$   
 $C = 144.50'$   
 $C.B. = N 80^\circ 11' 05'' W$   
 $e_{max} = 0.080$

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☉ REFERENCES AND BENCHMARKS
670	ESTIMATED QUANTITIES
964	UNDERDRAIN QUANTITIES



PLAN AND PROFILE - RAMP D  
 STA 177+00 TO STA 182+00

FRA-71-0.00

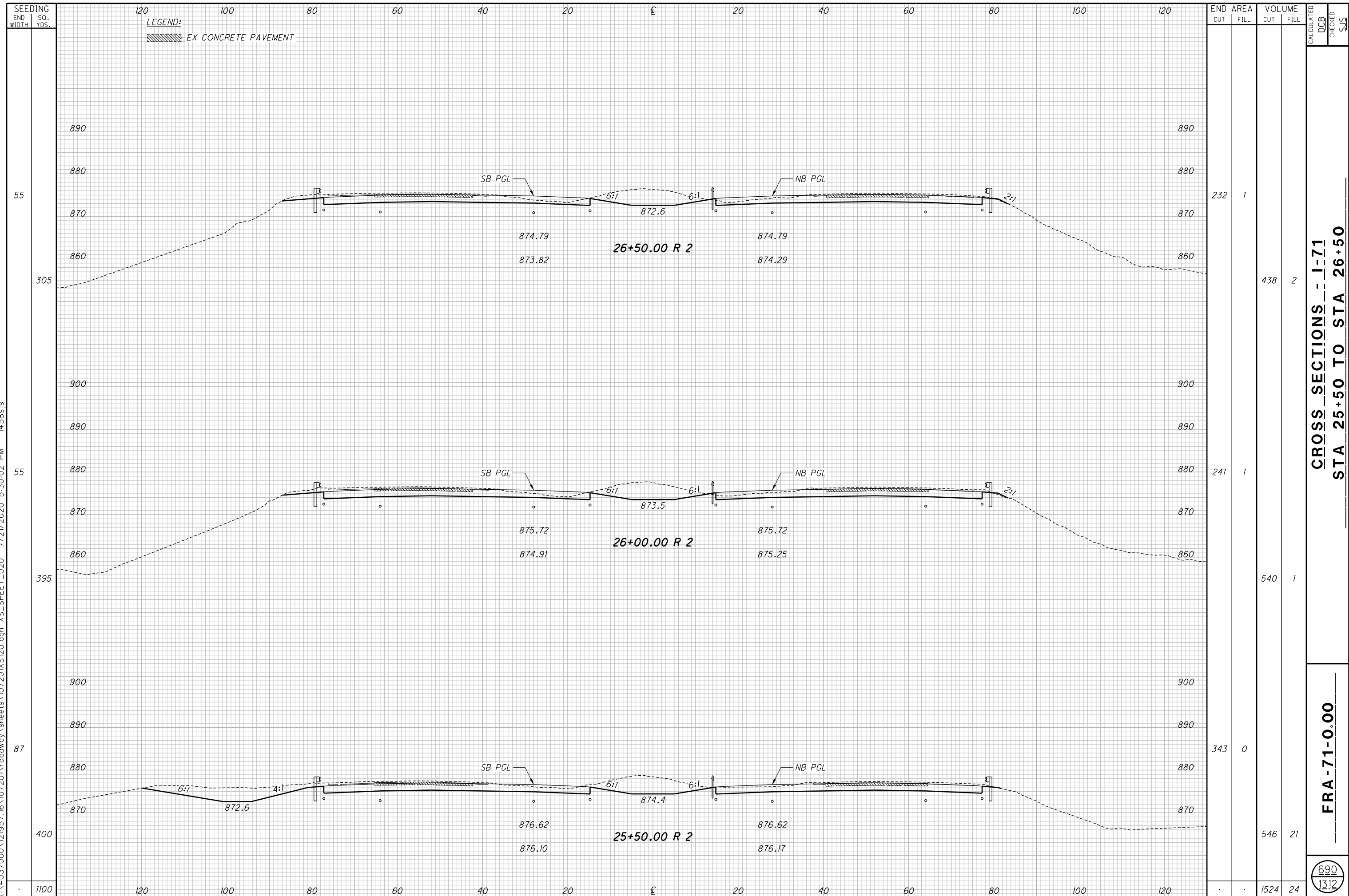
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X:\4037000\121957.16\107201\roadway\sheets\107201G0400.dgn Sheet 7/21/2020 8:24:15 PM 1458sjs

REF. NO.	SHEET NO.	STATION		SIDE	202				601		602		611		611		611	
		FROM	TO		HEADWALL REMOVED EACH	GUTTER REMOVED SY	PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	TIED CONCRETE BLOCK MAT, TYPE I SY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	15" CONDUIT, TYPE B, 706.02 FT	24" CONDUIT, TYPE A, 706.02 OR 30" CONDUIT, TYPE A, GALVANIZED 707.01 AND 707.02 (0.188), ALUMINIZED 707.01 AND 707.02(0.064), 707.04(0.064), 707.05(0.064), 707.07(0.064) OR 707.21 FT	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1 EACH				
R-91	667	174+64	174+64	LT/RT	2	5	69											
R-92	668	178+12		RT			11	1										
SS-59	667	174+50	175+00	LT/RT						2.08	1.2				100			
SS-60	668	180+15		LT/RT					1.78		0.27		53					1
<b>TOTALS CARRIED TO SHEETS 399-402</b>					2	5	80	1	1.78	2.08	1.47		53		100			1

CALCULATED	DCB
	CHECKED
SJS	
<b>ESTIMATED QUANTITIES</b>	
<b>FRA - 71 - 0:00</b>	
670	1312

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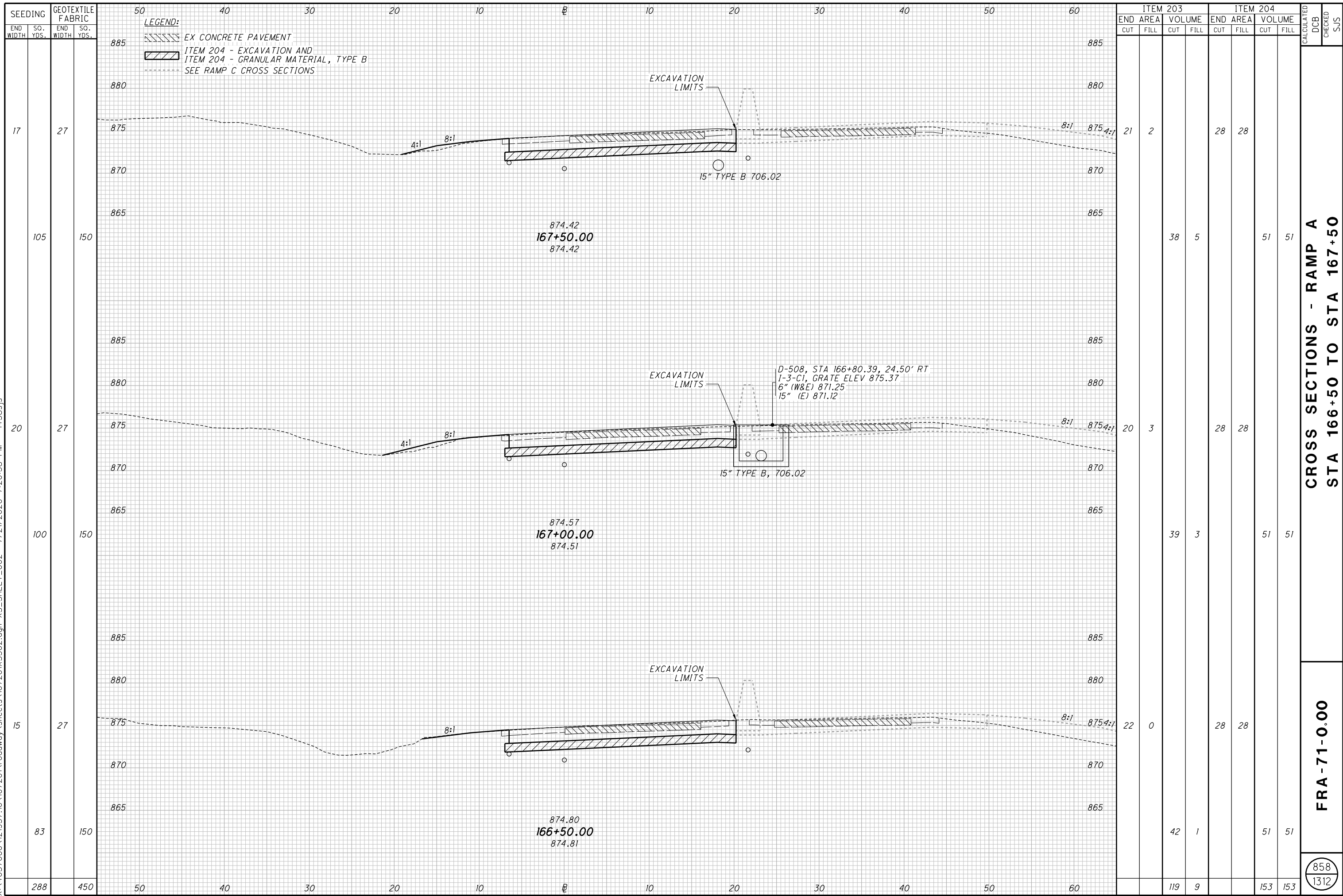


**CROSS SECTIONS - I-71**  
**STA 25+50 TO STA 26+50**

**FRA-71-0.00**

690  
1312

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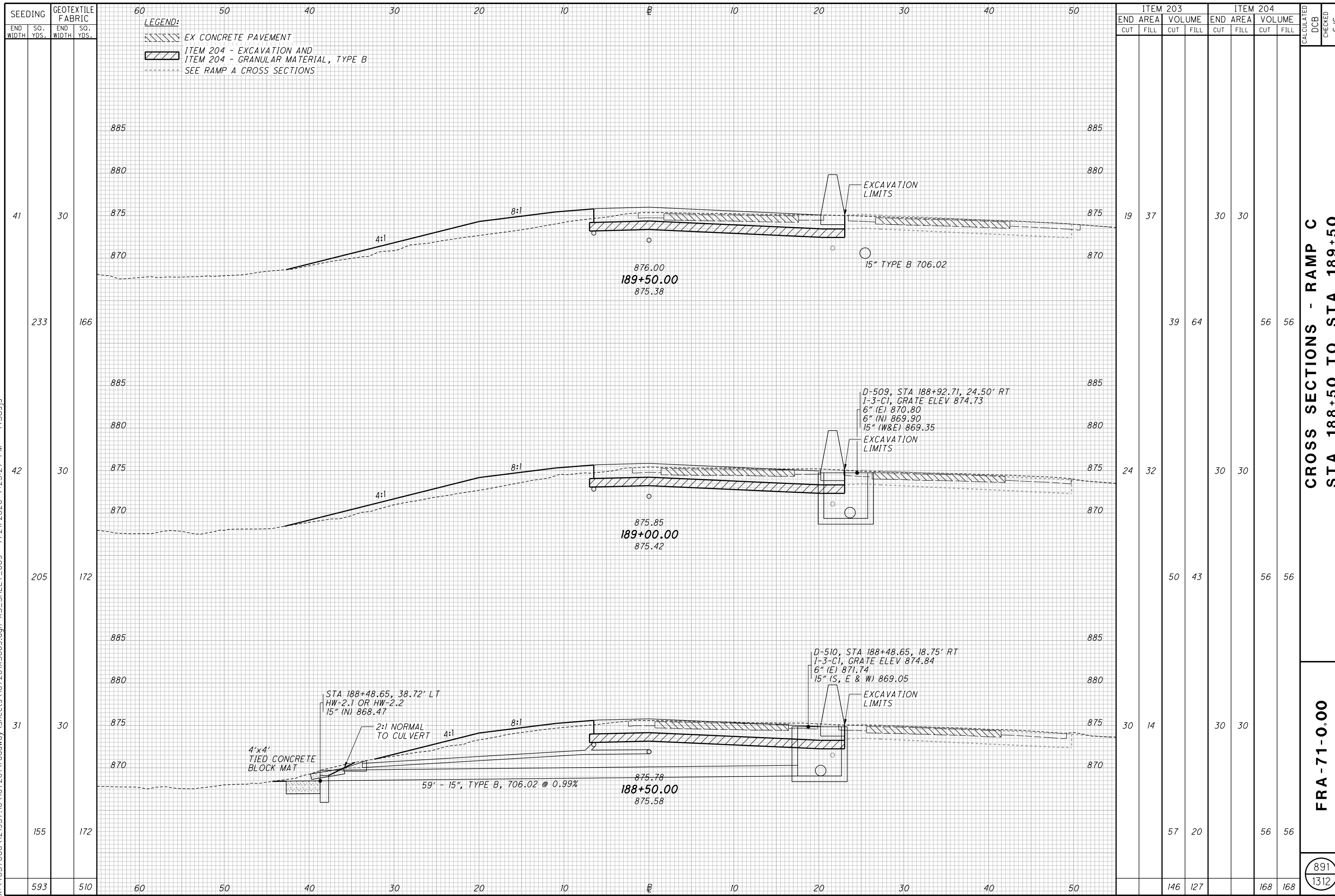


**CROSS SECTIONS - RAMP A  
 STA 166+50 TO STA 167+50**

**FRA-71-0:00**

858  
1312

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BARRIER TAPER LOCATIONS			
BEGIN TAPER		END TAPER	
12+90	14.00'	13+40	12.33'
14+00	12.33'	14+50	14.00'
147+80	14.00'	148+30	12.33'
149+00	12.33'	149+50	14.00'
200+50	16.00'	201+00	14.33'
201+90	14.33'	202+40	16.00'

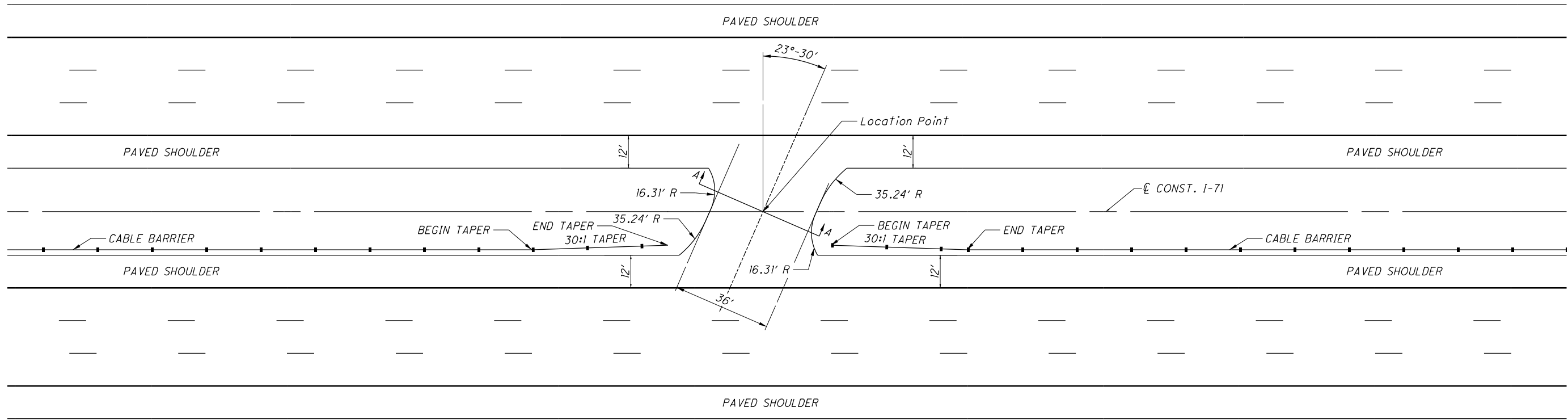


CALCULATED  
MAH  
CHECKED  
JMB

MEDIAN CROSSOVER DETAILS  
STA 13+75, 148+70 AND 201+40

FRA-71-0.00

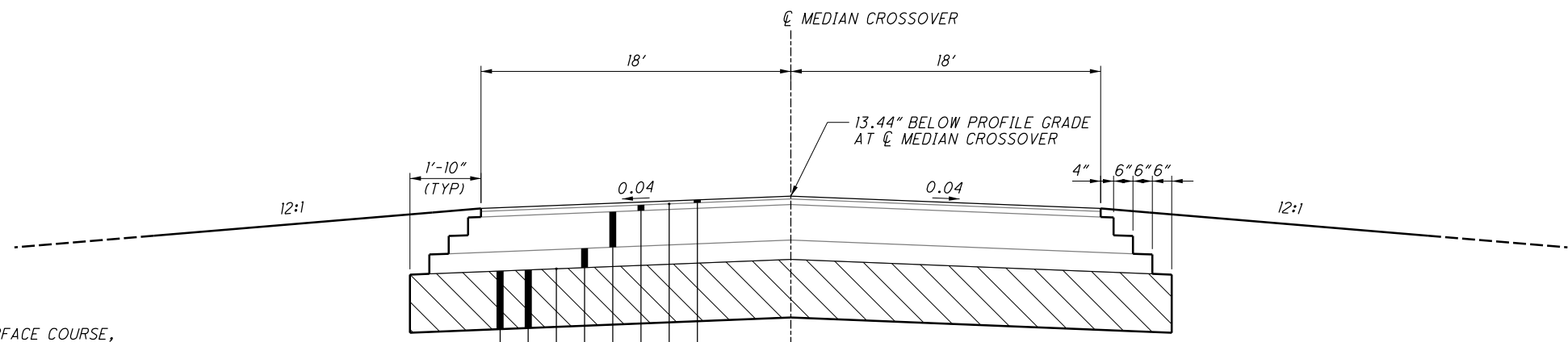
1020  
1312



TYPICAL MEDIAN CROSSOVER DETAIL

APPLIES: STA 13+75, 148+70 AND 201+40

NOTES:  
1. SEE SHEET 7 FOR STATION RANGE OF WHEN EXCAVATION OF SUBGRADE WITH GEOTEXTILE FABRIC AND GRANULAR MATERIAL, TYPE B ARE USED INSTEAD OF CEMENT STABILIZED SUBGRADE.



SECTION A-A

LEGEND

- ① ITEM 806 - 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A, AS PER PLAN
- ② ITEM 407 - NON-TRACKING TACK COAT
- ③ ITEM 442 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A, (446)
- ④ ITEM 302 - ASPHALT CONCRETE BASE, AS PER PLAN, 11" (2 EQUAL LIFTS)
- ⑤ ITEM 304 - 6" AGGREGATE BASE
- ⑥ ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING
- ⑦ ITEM 206 - CEMENT STABILIZED SUBGRADE, 12" DEEP
- ⑧ ITEM 204 - EXCAVATION OF SUBGRADE, 12" DEEP
- ⑨ ITEM 204 - GEOTEXTILE FABRIC
- ⑩ ITEM 204 - 12" GRANULAR MATERIAL, TYPE B

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