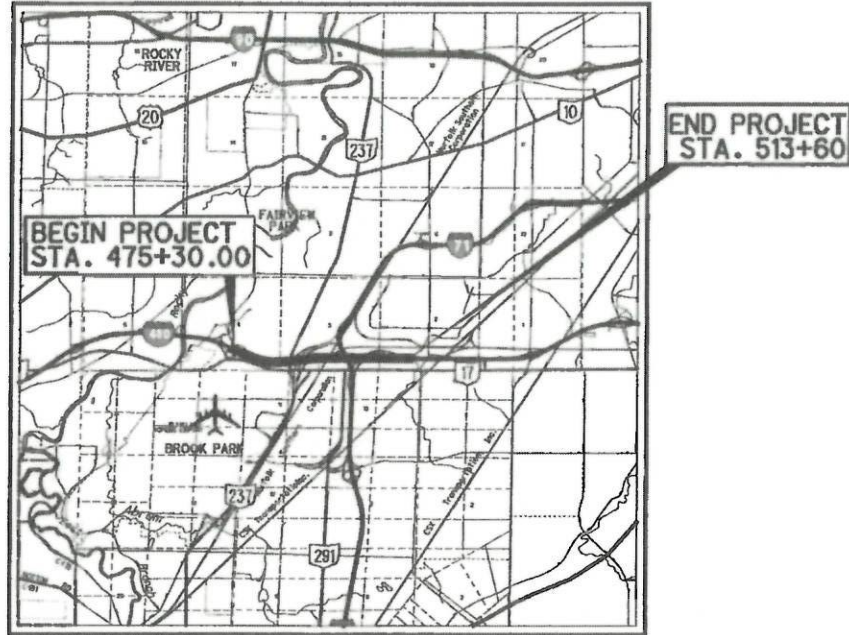


CUY - IR 480-07.14 WB Safety
220600 PID - 108482
Dist 12 11/17/2022

Sheet 1 of 1
CUY-480-07.14 WB Safety
PID - 108482
Dist 12
11/17/2022

Contract Proposal available @
www.contracts.dot.state.oh.us



LOCATION MAP
LATITUDE: 41°25'22" N LONGITUDE: 81°50'43" W



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

DESIGN DESIGNATION

CURRENT ADT (2021) 52,200
DESIGN YEAR ADT (2041) 57,400
DESIGN HOURLY VOLUME (2021) 2,206
DIRECTIONAL DISTRIBUTION 11%
TRUCKS (24 HOUR B&C) 5%
DESIGN SPEED 60 MPH
LEGAL SPEED 60 MPH
DESIGN FUNCTIONAL CLASSIFICATION:
URBAN INTERSTATE
NHS PROJECT YES

DESIGN EXCEPTIONS

DESIGN FEATURE APPROVAL DATE SHEET NUMBER:
LANE WIDTH 04/07/21 5-10, 67-83
SHOULDER WIDTH 04/07/21 5-10, 67-83
SUPERELEVATION 04/07/21 131-135

ENGINEERS SEAL: ENGINEERS SEAL: ENGINEERS SEAL:
STRUCTURES: ROADWAY: TRAFFIC:
SIGNED: [Signature] SIGNED: [Signature] SIGNED: [Signature]
DATE: 08/15/2022 DATE: 08/15/2022 DATE: 08/15/2022

STATE OF OHIO DEPARTMENT OF TRANSPORTATION CUY-480-07.14 WB CITY OF CLEVELAND CUYAHOGA COUNTY

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PLAN & PROFILE - RAMPS 84-86
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STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	1/21/22	MGS-4.2	7/19/13	HL-20.14	4/17/20	MT-102.20	4/19/19	TC-52.20	1/15/21	800-2019	7/15/22
		MGS-4.3	1/18/13	HL-30.41	1/21/22	MT-102.30	10/16/15	TC-61.30	7/19/19	907	1/21/22
DM-1.1	7/17/20	MGS-5.3	7/15/16			MT-103.10	1/21/22	TC-65.10	1/17/14	908	1/18/19
DM-1.2	7/16/21			MT-95.30	7/19/19	MT-104.10	10/16/15	TC-65.11	7/15/22	921	4/20/12
DM-4.3	1/15/16	RM-1.1	1/15/21	MT-95.45	1/17/20	MT-105.10	1/17/20	TC-72.20	7/20/18	932	10/19/18
DM-4.4	1/15/16	RM-4.2	4/17/20	MT-95.50	7/21/17					947	1/15/21
		RM-4.3	1/21/22	MT-98.10	1/17/20	TC-12.31	1/21/22			950	7/19/19
I-3B	7/16/21	RM-4.5	7/21/17	MT-98.11	1/17/20	TC-21.21	7/15/22			975	1/18/19
BP-5.1	7/15/22	AS-1-15	7/17/15	MT-98.20	1/17/20	TC-41.10	7/19/13			902	4/15/22
BP-9.1	1/18/19	AS-2-15	1/18/19	MT-99.20	4/19/19	TC-41.20	10/18/13			908	10/20/17
		EXJ-4-87	7/15/22	MT-99.30	1/17/20	TC-42.10	10/18/13			921	4/20/12
MGS-1.1	7/16/21			MT-101.70	1/17/20	TC-42.20	10/18/13				
MGS-2.1	1/19/18	GSD-1-19	1/15/21	MT-101.75	1/17/20	TC-51.11	1/15/16				
MGS-3.1	1/19/18	PCB-91	7/17/20	MT-101.90	7/17/20	TC-51.12	1/15/16				
MGS-3.2	1/18/13	SBP-1-20	7/17/20	MT-102.10	1/17/20	TC-52.10	10/18/13				

PROJECT DESCRIPTION

RECONFIGURING OF THE EXISTING WB LANE ASSIGNMENTS ALONG I-480 THROUGH THE I-71/SR 237/GRAYTON RD. INTERCHANGES TO PROVIDE 3 LANES ON THE EXISTING 2-LANE SECTION AND IMPROVE EXISTING WEAVES.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 4.92 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 1.00 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 5.92 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 SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES 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: [Signature]
DATE: 8/18/22 DISTRICT DEPUTY DIRECTOR

APPROVED: [Signature]
DATE: 9-28-22 DIRECTOR, DEPARTMENT OF TRANSPORTATION

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig

OHIO811. 8-1-1. or 1-800-362-2764 (Non-members must be called directly)

PLAN PREPARED BY:
PATRICK ENGINEERING
3650 OLENTANGY RIVER RD, SUITE 110
COLUMBUS, OHIO 43214

RAILROAD INVOLVEMENT

GCRTA AND NS

CUY-480-07.14 WB

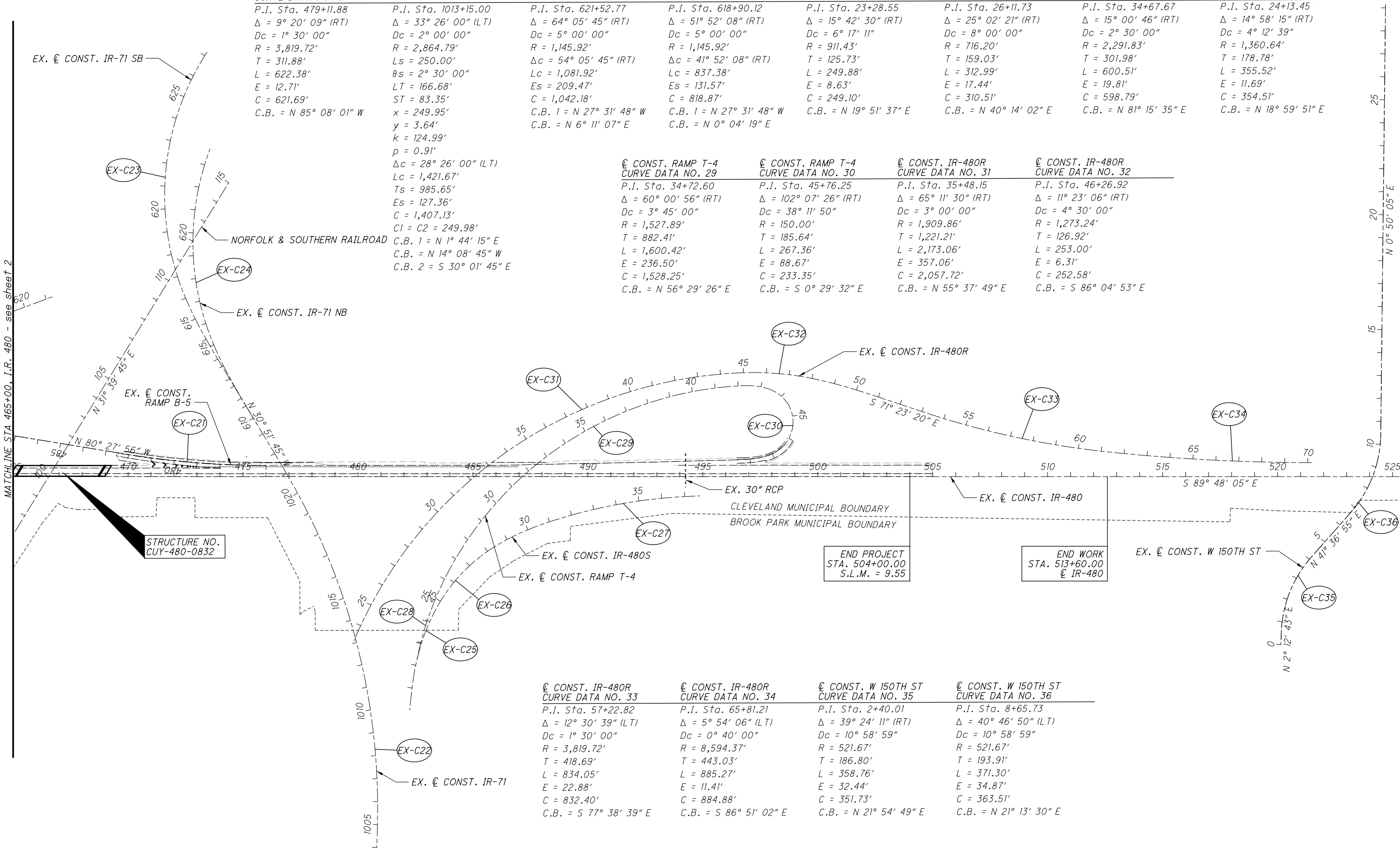
1
225

PID NO.
108482

CONSTRUCTION PROJECT NO.

FEDERAL PROJECT NO.
E210402





CONST. RAMP B-5 CURVE DATA NO. 21	CONST. IR-71 CURVE DATA NO. 22	CONST. IR-71 SB CURVE DATA NO. 23	CONST. IR-71 NB CURVE DATA NO. 24	CONST. IR-480S CURVE DATA NO. 25	CONST. IR-480S CURVE DATA NO. 26	CONST. IR-480S CURVE DATA NO. 27	CONST. RAMP T-4 CURVE DATA NO. 28
P.I. Sta. 479+11.88 $\Delta = 9^{\circ} 20' 09''$ (RT) $Dc = 1^{\circ} 30' 00''$ $R = 3,819.72'$ $T = 311.88'$ $L = 622.38'$ $E = 12.71'$ $C = 621.69'$ C.B. = N $85^{\circ} 08' 01''$ W	P.I. Sta. 1013+15.00 $\Delta = 33^{\circ} 26' 00''$ (LT) $Dc = 2^{\circ} 00' 00''$ $R = 2,864.79'$ $Ls = 250.00'$ $\theta s = 2^{\circ} 30' 00''$ $LT = 166.68'$ $ST = 83.35'$ $x = 249.95'$ $y = 3.64'$ $k = 124.99'$ $p = 0.91'$ $\Delta c = 28^{\circ} 26' 00''$ (LT) $Lc = 1,421.67'$ $Ts = 985.65'$ $Es = 127.36'$ $C = 1,407.13'$ $C1 = C2 = 249.98'$ C.B. 1 = N $1^{\circ} 44' 15''$ E C.B. = N $14^{\circ} 08' 45''$ W C.B. 2 = S $30^{\circ} 01' 45''$ E	P.I. Sta. 621+52.77 $\Delta = 64^{\circ} 05' 45''$ (RT) $Dc = 5^{\circ} 00' 00''$ $R = 1,145.92'$ $\Delta c = 54^{\circ} 05' 45''$ (RT) $Lc = 1,081.92'$ $Es = 209.47'$ $C = 1,042.18'$ C.B. 1 = N $27^{\circ} 31' 48''$ W C.B. = N $6^{\circ} 11' 07''$ E	P.I. Sta. 618+90.12 $\Delta = 51^{\circ} 52' 08''$ (RT) $Dc = 5^{\circ} 00' 00''$ $R = 1,145.92'$ $\Delta c = 41^{\circ} 52' 08''$ (RT) $Lc = 837.38'$ $Es = 131.57'$ $C = 818.87'$ C.B. 1 = N $27^{\circ} 31' 48''$ W C.B. = N $0^{\circ} 04' 19''$ E	P.I. Sta. 23+28.55 $\Delta = 15^{\circ} 42' 30''$ (RT) $Dc = 6^{\circ} 17' 11''$ $R = 911.43'$ $T = 125.73'$ $L = 249.88'$ $E = 8.63'$ $C = 249.10'$ C.B. = N $19^{\circ} 51' 37''$ E	P.I. Sta. 26+11.73 $\Delta = 25^{\circ} 02' 21''$ (RT) $Dc = 8^{\circ} 00' 00''$ $R = 716.20'$ $T = 159.03'$ $L = 312.99'$ $E = 17.44'$ $C = 310.51'$ C.B. = N $40^{\circ} 14' 02''$ E	P.I. Sta. 34+67.67 $\Delta = 15^{\circ} 00' 46''$ (RT) $Dc = 2^{\circ} 30' 00''$ $R = 2,291.83'$ $T = 301.98'$ $L = 600.51'$ $E = 19.81'$ $C = 598.79'$ C.B. = N $81^{\circ} 15' 35''$ E	P.I. Sta. 24+13.45 $\Delta = 14^{\circ} 58' 15''$ (RT) $Dc = 4^{\circ} 12' 39''$ $R = 1,360.64'$ $T = 178.78'$ $L = 355.52'$ $E = 11.69'$ $C = 354.51'$ C.B. = N $18^{\circ} 59' 51''$ E

CONST. RAMP T-4 CURVE DATA NO. 29	CONST. RAMP T-4 CURVE DATA NO. 30	CONST. IR-480R CURVE DATA NO. 31	CONST. IR-480R CURVE DATA NO. 32
P.I. Sta. 34+72.60 $\Delta = 60^{\circ} 00' 56''$ (RT) $Dc = 3^{\circ} 45' 00''$ $R = 1,527.89'$ $T = 882.41'$ $L = 1,600.42'$ $E = 236.50'$ $C = 1,528.25'$ C.B. = N $56^{\circ} 29' 26''$ E	P.I. Sta. 45+76.25 $\Delta = 102^{\circ} 07' 26''$ (RT) $Dc = 38^{\circ} 11' 50''$ $R = 150.00'$ $T = 185.64'$ $L = 267.36'$ $E = 88.67'$ $C = 233.35'$ C.B. = S $0^{\circ} 29' 32''$ E	P.I. Sta. 35+48.15 $\Delta = 65^{\circ} 11' 30''$ (RT) $Dc = 3^{\circ} 00' 00''$ $R = 1,909.86'$ $T = 1,221.21'$ $L = 2,173.06'$ $E = 357.06'$ $C = 2,057.72'$ C.B. = N $55^{\circ} 37' 49''$ E	P.I. Sta. 46+26.92 $\Delta = 11^{\circ} 23' 06''$ (RT) $Dc = 4^{\circ} 30' 00''$ $R = 1,273.24'$ $T = 126.92'$ $L = 253.00'$ $E = 6.31'$ $C = 252.58'$ C.B. = S $86^{\circ} 04' 53''$ E

CONST. IR-480R CURVE DATA NO. 33	CONST. IR-480R CURVE DATA NO. 34	CONST. W 150TH ST CURVE DATA NO. 35	CONST. W 150TH ST CURVE DATA NO. 36
P.I. Sta. 57+22.82 $\Delta = 12^{\circ} 30' 39''$ (LT) $Dc = 1^{\circ} 30' 00''$ $R = 3,819.72'$ $T = 418.69'$ $L = 834.05'$ $E = 22.88'$ $C = 832.40'$ C.B. = S $77^{\circ} 38' 39''$ E	P.I. Sta. 65+81.21 $\Delta = 5^{\circ} 54' 06''$ (LT) $Dc = 0^{\circ} 40' 00''$ $R = 8,594.37'$ $T = 443.03'$ $L = 885.27'$ $E = 11.41'$ $C = 884.88'$ C.B. = S $86^{\circ} 51' 02''$ E	P.I. Sta. 2+40.01 $\Delta = 39^{\circ} 24' 11''$ (RT) $Dc = 10^{\circ} 58' 59''$ $R = 521.67'$ $T = 186.80'$ $L = 358.76'$ $E = 32.44'$ $C = 351.73'$ C.B. = N $21^{\circ} 54' 49''$ E	P.I. Sta. 8+65.73 $\Delta = 40^{\circ} 46' 50''$ (LT) $Dc = 10^{\circ} 58' 59''$ $R = 521.67'$ $T = 193.91'$ $L = 371.30'$ $E = 34.87'$ $C = 363.51'$ C.B. = N $21^{\circ} 13' 30''$ E

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STATION EQUATIONS

- A

CONST. RAMP B-1 STA. 422+51.17 =
CONST. IR-480 STA. 422+56.80, 61.00' RT
- B

CONST. RAMP B-2 STA. 439+50.00 =
CONST. IR-480 STA. 439+50.00, 77.00' LT
- C

CONST. RAMP B-3 STA. 608+88.56 =
CONST. RAMP B-1 STA. 458+04.80, 12.00' RT
- D

CONST. RAMP B-4 STA. 460+00.00 =
CONST. IR-480 STA. 460+00.00, 78.07' RT
- E

CONST. NORFOLK & SOUTHERN RAILROAD STA. 100+00.00 =
CONST. IR-480 STA. 466+54.86
- F

CONST. IR-71 NB STA. 611+37.61 =
CONST. IR-71 SB STA. 609+99.69
- G

CONST. RAMP B-5 STA. 476+00.00 =
CONST. IR-480 STA. 476+00.00, 49.00' LT
- H

CONST. IR-480R STA. 32+22.36 =
CONST. IR-480 STA. 485+07.08
- I

CONST. IR-480S STA. 22+35.26 =
CONST. RAMP T-4 STA. 22+34.67
- J

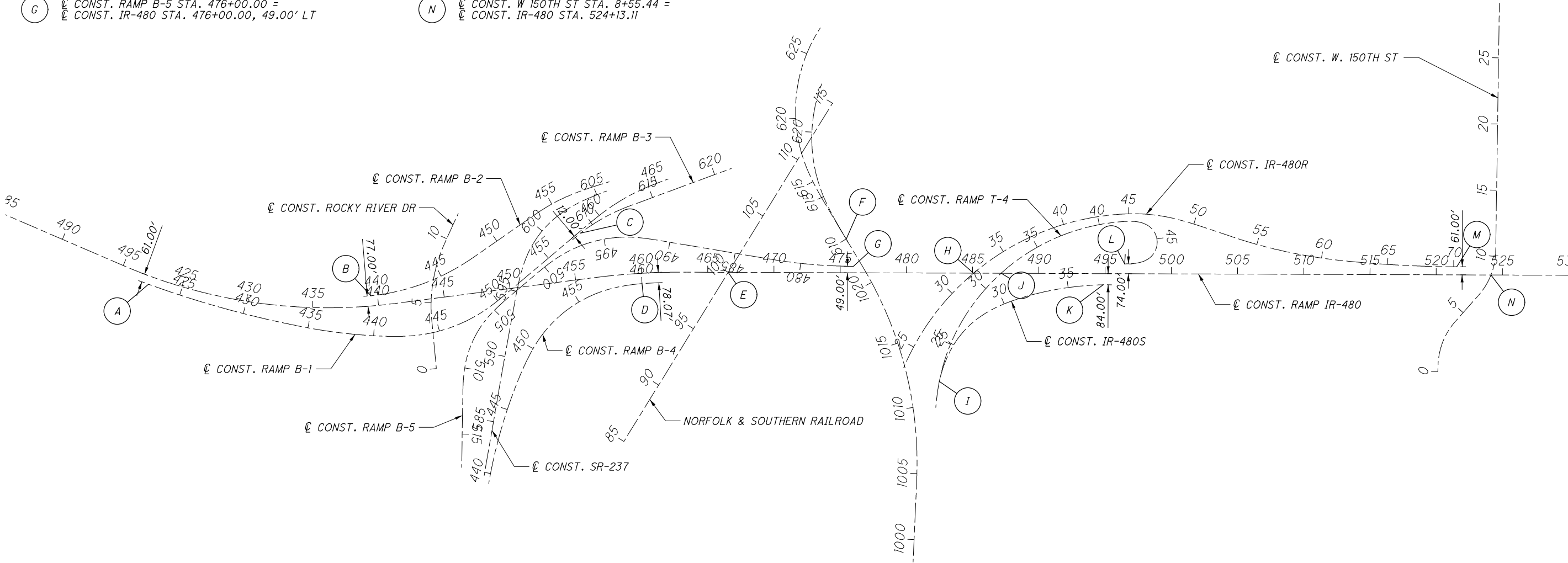
CONST. RAMP T-4 STA. 31+62.16 =
CONST. IR-480 STA. 487+14.76
- K

CONST. IR-480S STA. 37+66.20 =
CONST. IR-480 STA. 494+86.89, 84.044' RT
- L

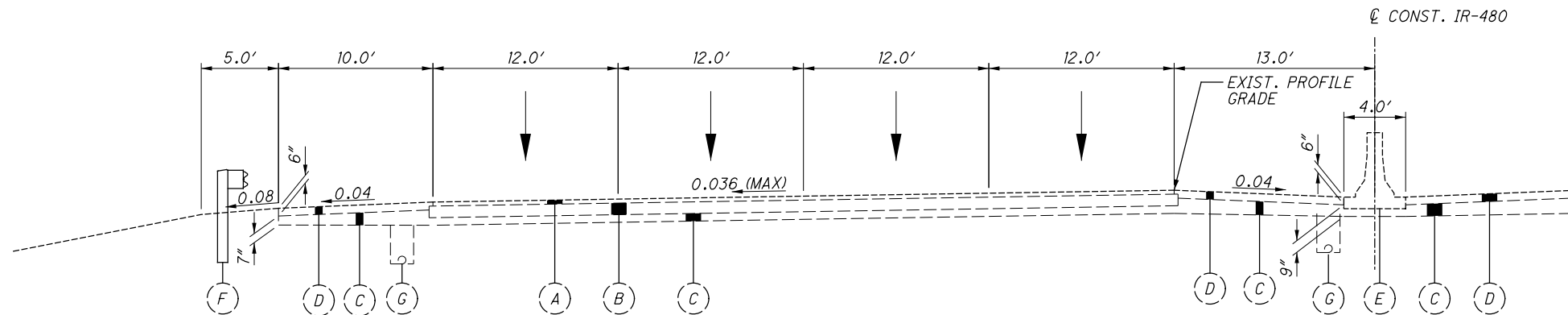
CONST. RAMP T-4 STA. 48+57.95 =
CONST. IR-480 STA. 496+47.93, 74.00' LT
- M

CONST. IR-480R STA. 70+23.45 =
CONST. IR-480 STA. 521+54.73, 61.00' LT
- N

CONST. W 150TH ST STA. 8+55.44 =
CONST. IR-480 STA. 524+13.11

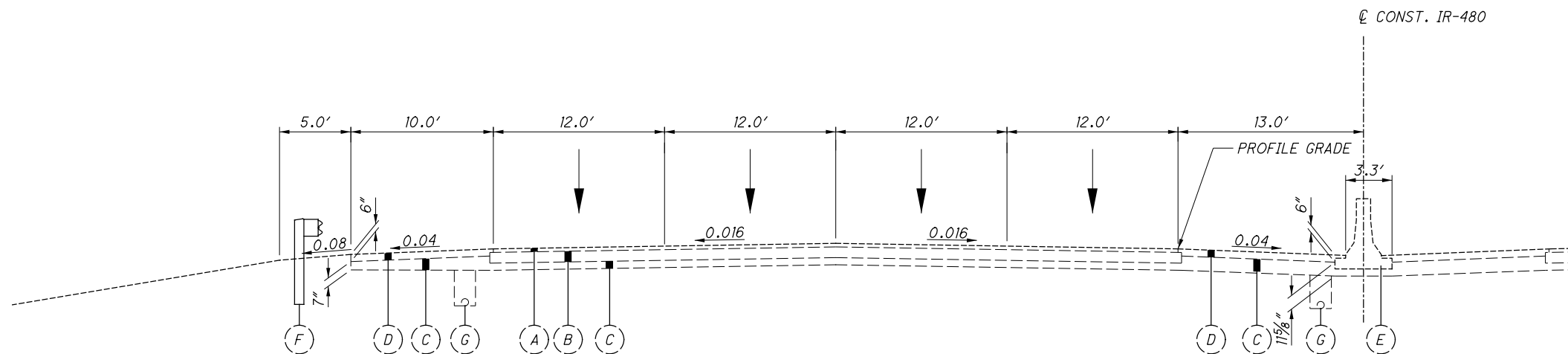


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SUPERELEVATED SECTION - IR-480

SECTION APPLIES:
STA. 492+00.00 TO STA. 495+01.76 - BACK
AHEAD - STA. 420+30.02 TO STA. 432+39.72

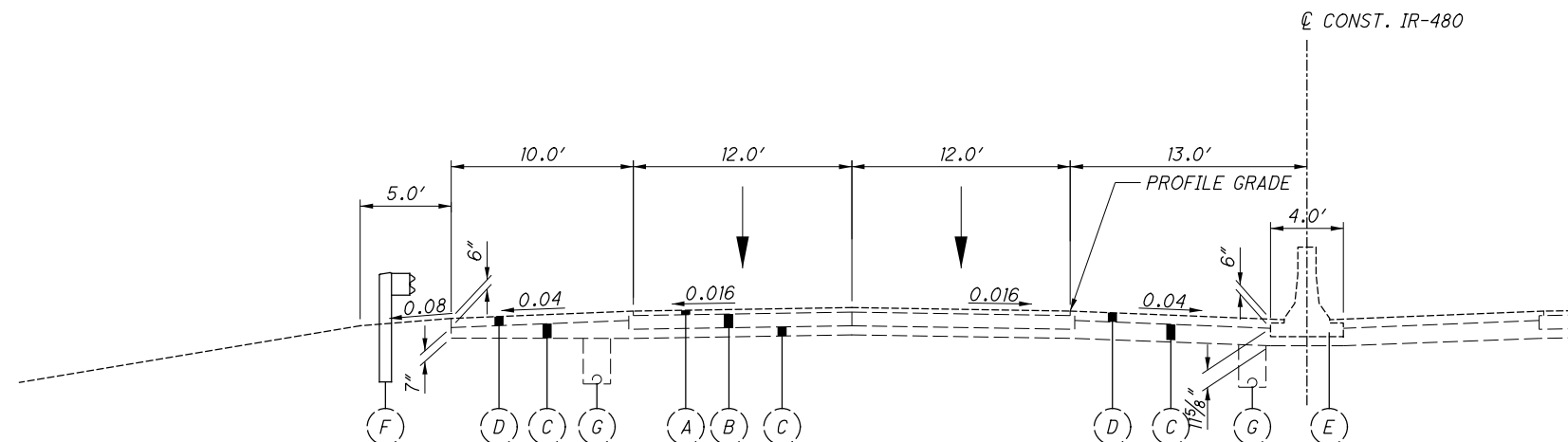


EXISTING NORMAL SECTION - IR-480

SECTION APPLIES:
STA. 484+21.76 TO STA. 492+00.00
STA. 432+39.72 TO STA. 432+43.10

EXISTING LEGEND

- (A) 3" ASPHALT CONCRETE SURFACE AND INTERMEDIATE COURSE
- (B) 9" REINFORCED CONCRETE BASE
- (C) AGGREGATE BASE - THICKNESS AS SHOWN
- (D) BITUMINOUS AGGREGATE BASE - THICKNESS AS SHOWN
- (E) CONCRETE BARRIER, TYPE H
- (F) GUARDRAIL
- (G) 6" PIPE UNDERDRAIN
- (H) 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT



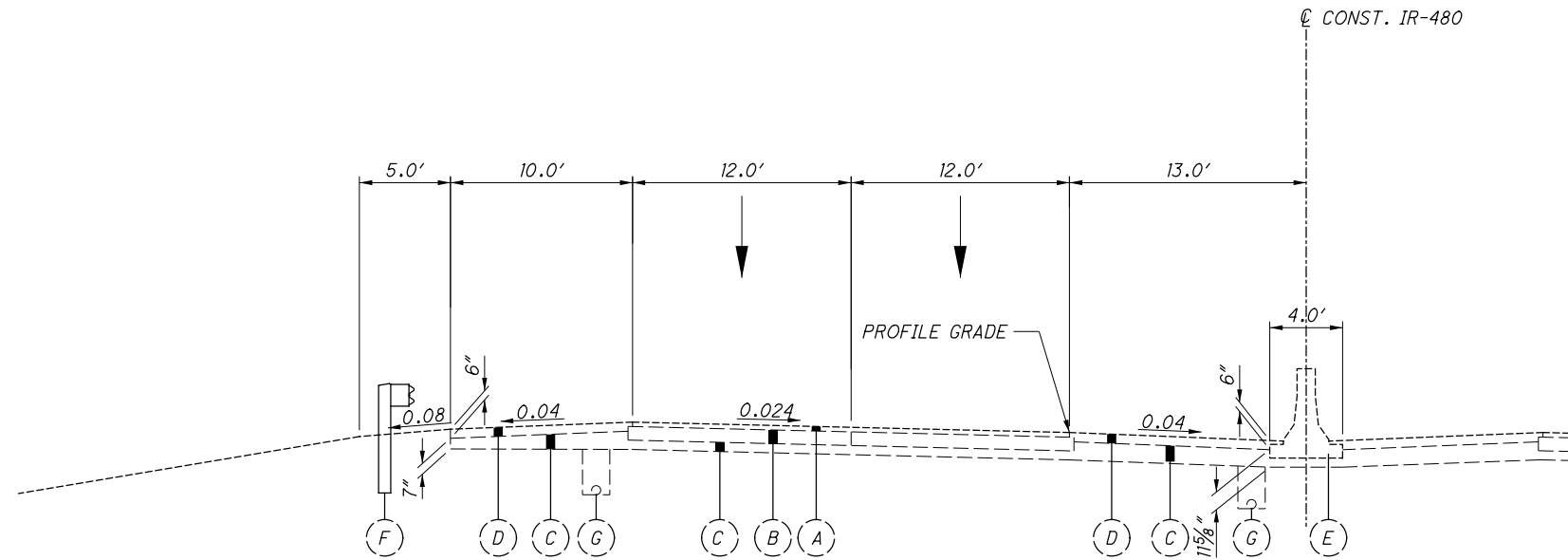
EXISTING NORMAL SECTION - IR-480

SECTION APPLIES:
STA. 441+22.08 TO STA. 455+91.61
STA. 463+49.90 TO STA. 474+02.40

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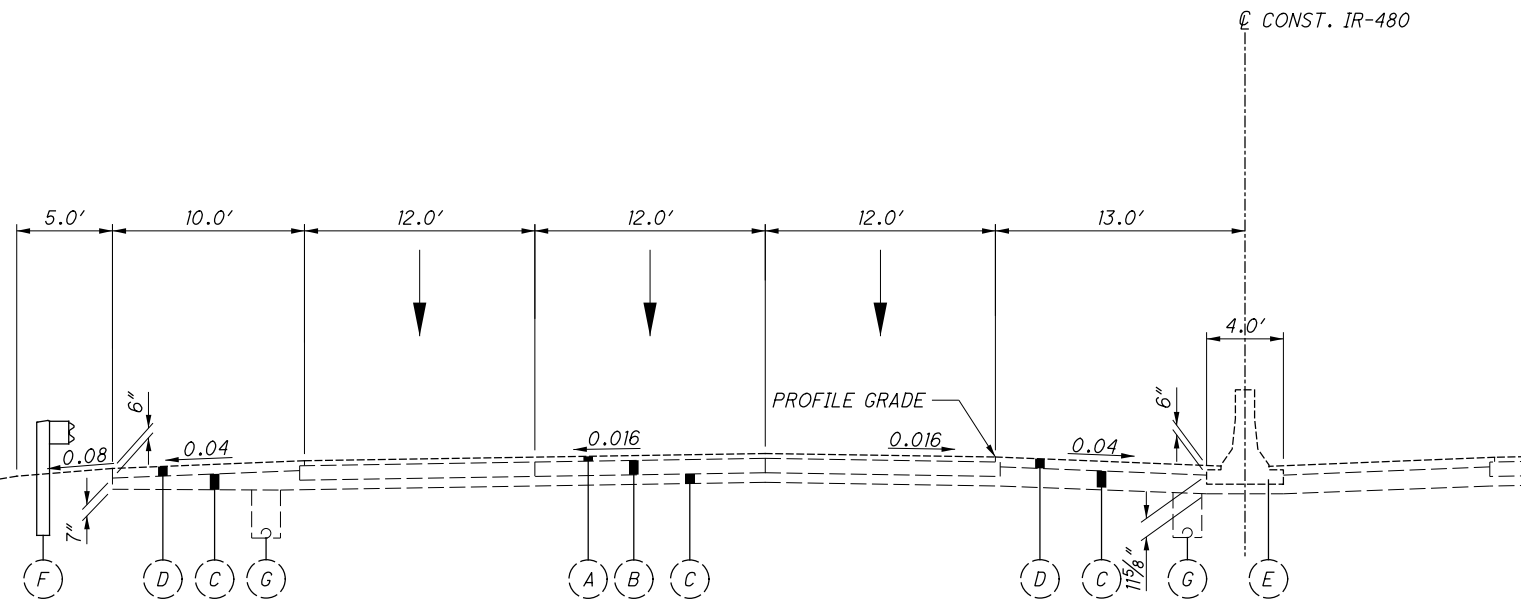
EXISTING LEGEND

- (A) 3" ASPHALT CONCRETE SURFACE AND INTERMEDIATE COURSE
- (B) 9" REINFORCED CONCRETE BASE
- (C) AGGREGATE BASE - THICKNESS AS SHOWN
- (D) BITUMINOUS AGGREGATE BASE - THICKNESS AS SHOWN
- (E) CONCRETE BARRIER, TYPE H
- (F) GUARDRAIL
- (G) 6" PIPE UNDERDRAIN
- (H) 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT



EXISTING SUPERELEVATED SECTION - IR-480

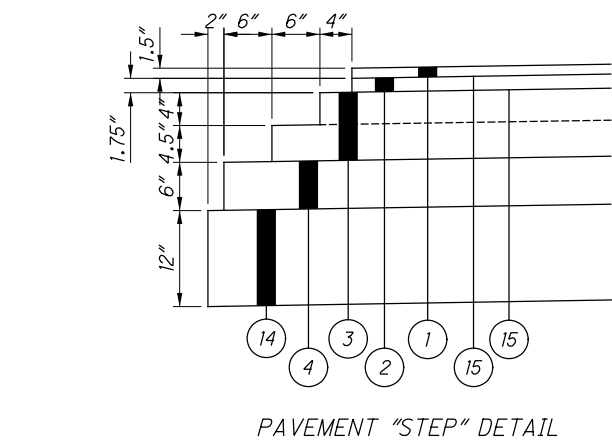
SECTION APPLIES:
STA. 432+43.10 TO STA. 441+22.08
STA. 455+91.61 TO STA. 463+49.90



EXISTING NORMAL SECTION - IR-480

SECTION APPLIES:
STA. 474+02.40 TO STA. 504+00.00

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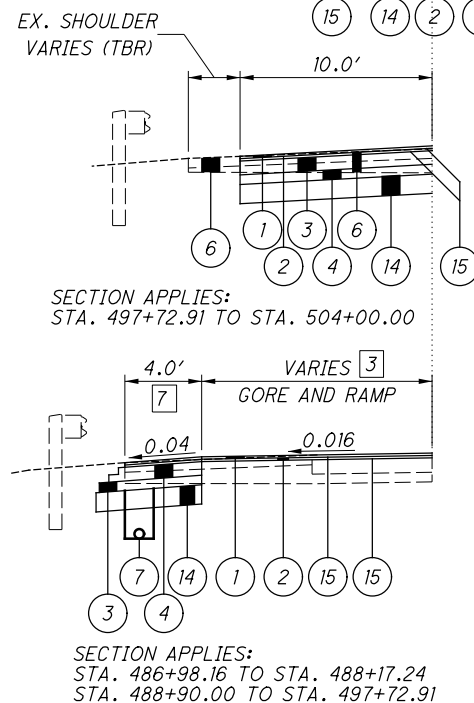
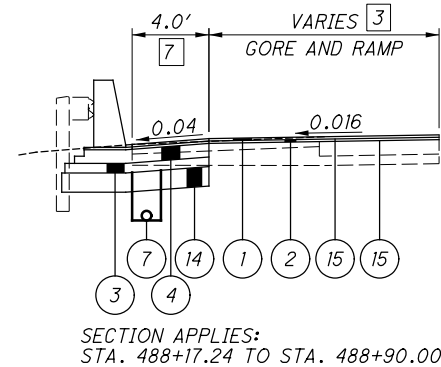
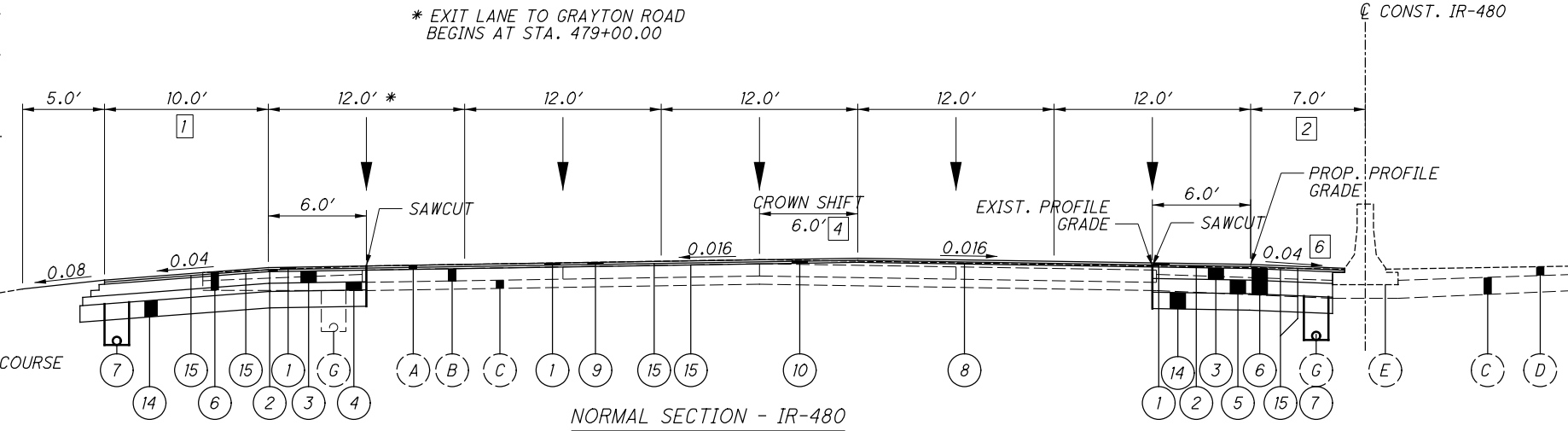


EXISTING LEGEND

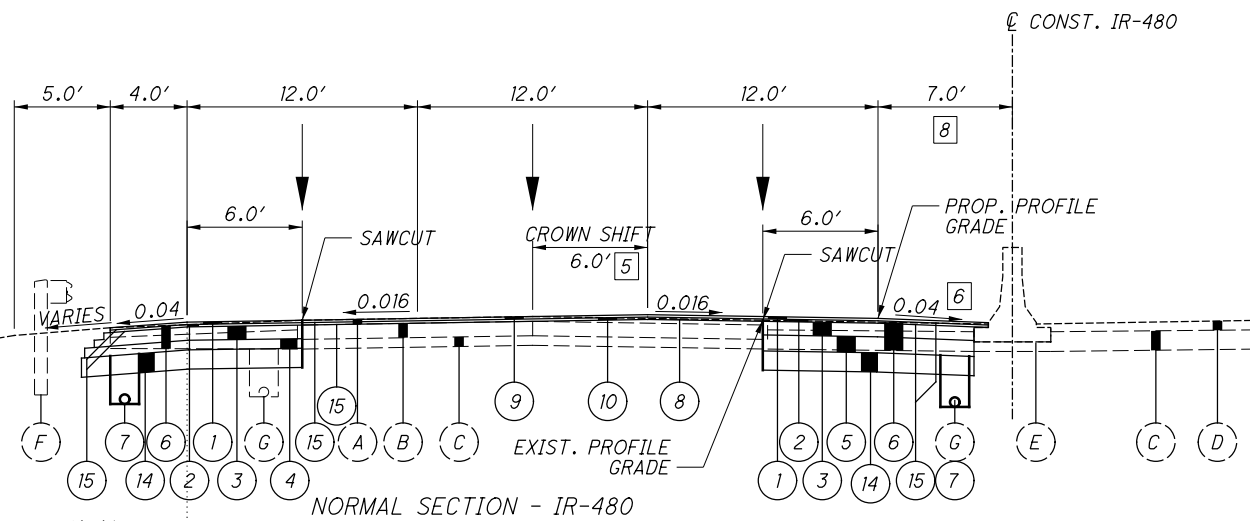
- (A) 3" ASPHALT CONCRETE SURFACE AND INTERMEDIATE COURSE
- (B) 9" REINFORCED CONCRETE BASE
- (C) AGGREGATE BASE - THICKNESS AS SHOWN
- (D) BITUMINOUS AGGREGATE BASE - THICKNESS AS SHOWN
- (E) CONCRETE BARRIER, TYPE H
- (F) GUARDRAIL
- (G) 6" PIPE UNDERDRAIN
- (H) 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

PROPOSED LEGEND

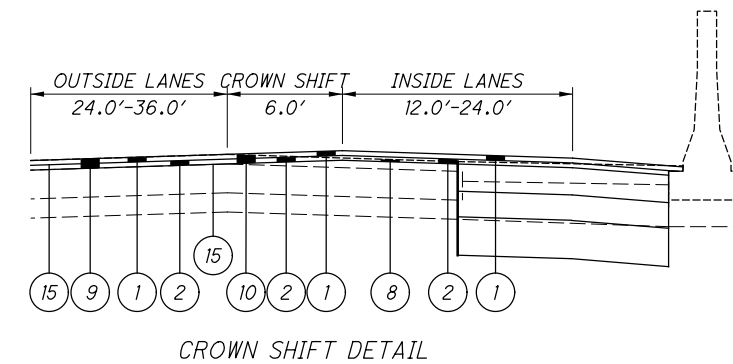
- 1 ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN, 1.5"
- 2 ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448), 1.75"
- 3 ITEM 302 - ASPHALT CONCRETE BASE, PG64-22, (449) 8.5" (2 LIFTS)
- 4 ITEM 304 - 6" AGGREGATE BASE
- 5 ITEM 304 - 10" AGGREGATE BASE
- 6 ITEM 202 - PAVEMENT REMOVED
- 7 ITEM 605 - 6" UNDERDRAIN
- 8 ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, 0.75"
- 9 ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, 3.25"
- 10 ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, VARIABLE DEPTH, 0.75" - 3.25"
- 11 ITEM 204 - SUBGRADE COMPACTION
- 12 ITEM 204 - PROOF ROLLING
- 13 ITEM 526 - REINFORCED CONCRETE APPROACH SLAB (SEE STRUCTURES FOR DETAILS)
- 14 ITEM 206 - CEMENT STABILIZED SUBGRADE, 12"
- 15 ITEM 407 - NON-TRACKING TACK COAT



SECTION APPLIES:
STA. 497+72.91 TO STA. 504+00.00



SECTION APPLIES:
STA. 445+11.58 TO STA. 447+73.81
STA. 453+29.53 TO STA. 453+55.94
STA. 468+98.81 TO STA. 473+08.60
STA. 486+98.16 TO STA. 504+00.00



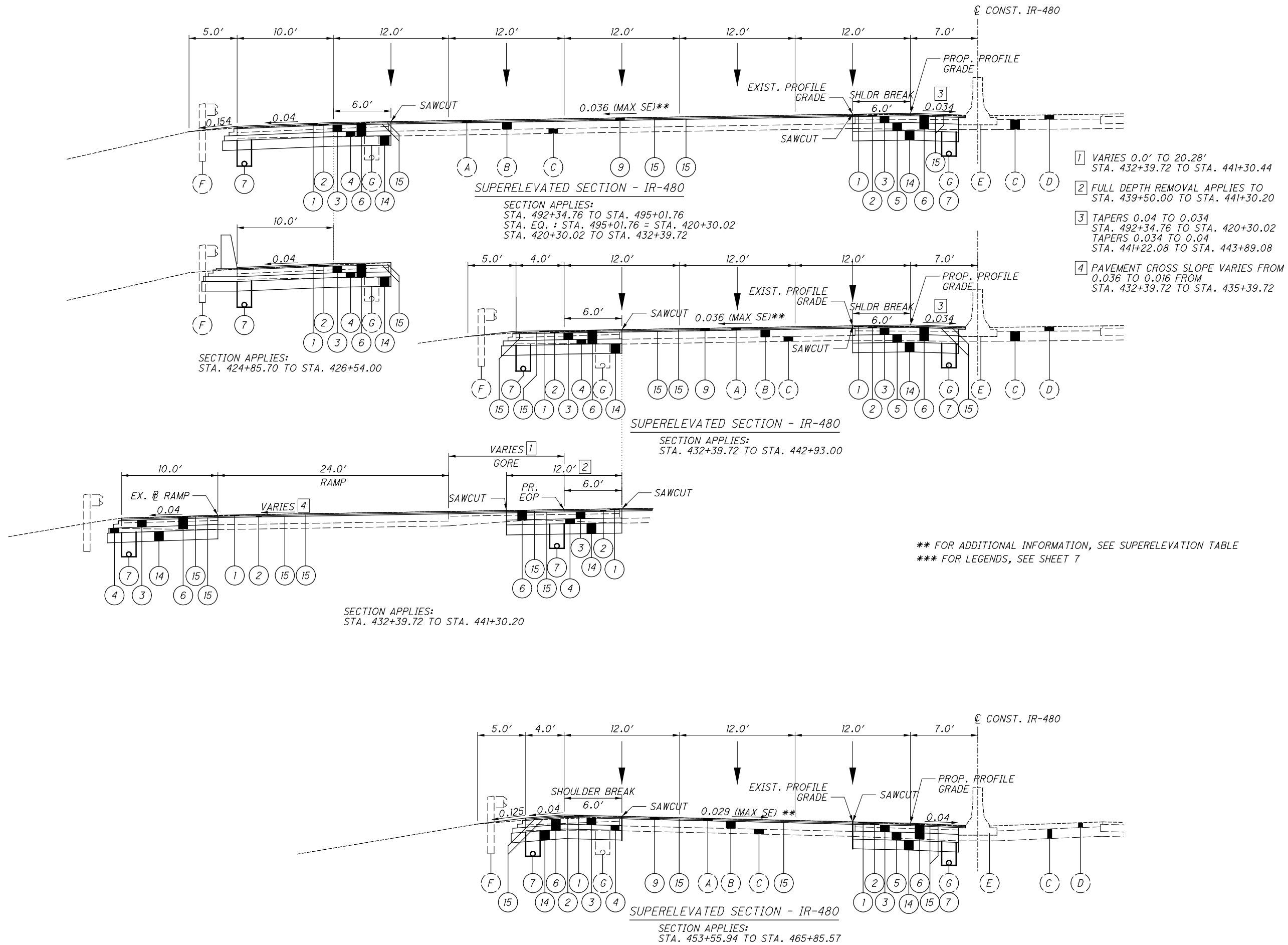
- 1 TAPER 10.0' TO 4.0'
STA. 424+45.00 TO STA. 424+75.00
4.0'
STA. 424+75.00 TO STA. 427+75.00
TAPER 4.0' TO 10.0'
STA. 427+75 TO STA. 429+75.00
- 2 TAPERS 13.24' TO 7'
STA. 484+21.76 TO STA. 488+70.00
- 3 VARIES 12.0' TO 45.2'
STA. 486+98.16 TO STA. 497+72.91
[ENTRANCE RAMP PAVEMENT IS 24.0',
OFFSET FROM PROP. RAMP T-4]
- 4 TAPERS 0.0' TO 6.0'
STA. 484+21.76 TO STA. 488+70.00
- 5 TAPERS 6.0' TO 0.0'
STA. 499+00.00 TO STA. 504+00.00
- 6 TAPERS 0.04 TO 0.034
STA. 492+34.76 TO STA. 420+30.02
TAPERS 0.034 TO 0.04
STA. 441+22.08 TO STA. 443+89.08
- 7 TAPER 4.0' TO 10.0'
STA. 488+20.00 TO STA. 491+40.00
- 8 TAPER 7.0' TO 13.16'
STA. 499+00.00 TO STA. 504+00.00

RESURFACING SECTIONS

SEE SHEET 66A FOR RESURFACING TYPICAL SECTION
STA. 475+30.00 TO STA. 484+21.76

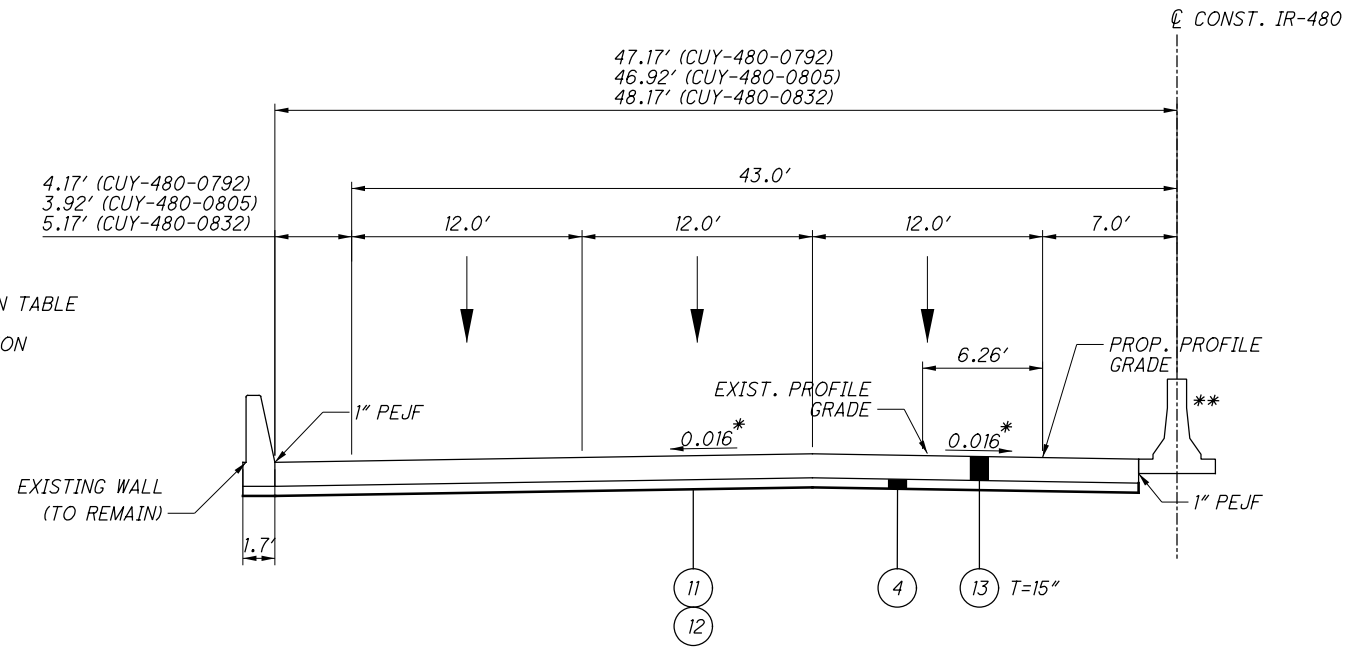
SEE SHEET 83A FOR RESURFACING TYPICAL SECTION
STA. 504+00.00 TO STA. 513+60.00

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* FOR ADDITIONAL INFORMATION, SEE SUPERELEVATION TABLE
** SEE BRIDGE PLANS FOR PAPAPET TYPE AND LOCATION



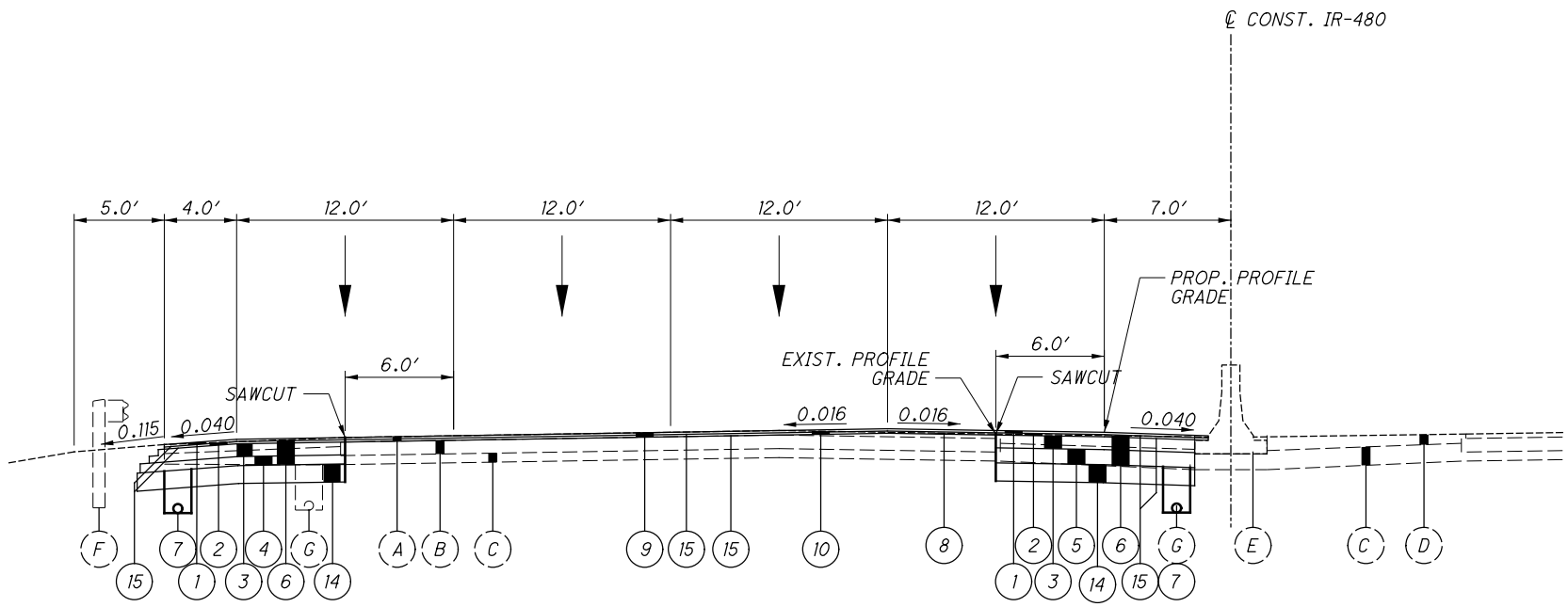
APPROACH SLAB SECTION - IR-480 (L=25')

SECTION APPLIES:

STA. 442+93.00 TO STA. 443+18.00
STRUCTURE CUY-480-0792
STA. 444+86.58 TO STA. 445+11.58

STA. 447+73.81 TO STA. 447+98.81
STRUCTURE CUY-480-0805
STA. 453+04.53 TO STA. 453+29.53

STA. 464+84.28 TO STA. 465+09.28
STRUCTURE CUY-480-0832
STA. 468+73.81 TO STA. 468+98.81



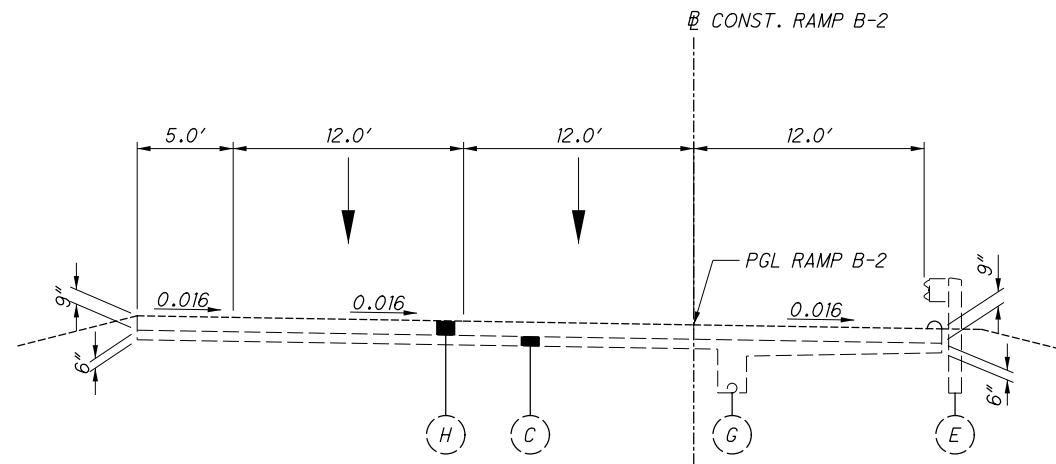
NORMAL SECTION - IR-480

SECTION APPLIES:

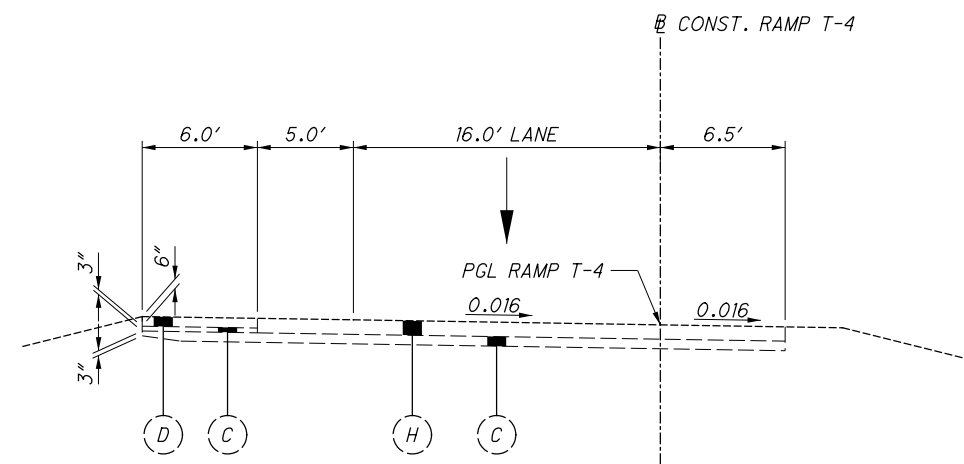
STA. 473+08.60 TO STA. 486+98.16

*** FOR LEGENDS, SEE SHEET 7

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EXISTING RAMP B-2 TYPICAL SECTION
SECTION APPLIES:
STA. 441+24.36 TO STA. 442+99.39



EXISTING RAMP T-4 TYPICAL SECTION
SECTION APPLIES:
STA. 46+50.03 TO STA. 48+61.28

* FOR ADDITIONAL INFORMATION, SEE CROSS SECTIONS
** FOR LEGENDS, SEE SHEET 7

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UTILITIES

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

GAS
BP PIPELINES
30 SOUTH WACKER DR, SUITE 900
CHICAGO, IL 60606
ATTN: KEITH BOYLE
PHONE: (312) 809-4708
EMAIL: KEITH.BOYLE@BP.COM

ELECTRIC
DOMINION ENERGY OHIO
320 SPRINGSIDE DR, SUITE 320
AKRON, OH 44333
ATTN: 2ND FLOOR RELOCATION DESIGN
PHONE: (330) 664-2409
FAX (888) 504-0126
EMAIL: RELOCATION@DOMINIONENERGY.COM

ODOT TRAFFIC MONITORING SECTION
1980 WEST BROAD STREET
COLUMBUS, OH 43223
ATTN: ED NEWMAYER (FIELD REP)
PHONE: (614) 204-0914
ATTN: SANDRA MAPEL (FIELD OPERATIONS)
PHONE: (614) 644-0291

CLEVELAND PUBLIC POWER 1300 LAKESIDE AVE. CLEVELAND, OH 44114 ATTN: WILLIAM HUNT III OFFICE: (216) 362-6370 FAX (216) 362-6370 MOBILE: (216) 645-5051	WATER CLEVELAND PUBLIC POWER 1300 LAKESIDE AVE. CLEVELAND, OH 44114 ATTN: WILLIAM HUNT III OFFICE: (216) 362-6370 FAX (216) 362-6370 MOBILE: (216) 645-5051
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ODOT DISTRICT 12 TRAFFIC 5500 TRANSPORTATION BLVD GARFIELD HEIGHTS, OH 44125 ATTN: KEITH HAMILTON 216-584-2220 keith.hamilton@dot.ohio.gov	RAILROAD NORFOLK SOUTHERN 4860 W 150TH ST. CLEVELAND, OH 44135
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THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

EXISTING PLANS

EXISTING PLANS LISTED BELOW MAY BE INSPECTED IN THE ODOT DISTRICT 12 OFFICE IN GARFIELD HEIGHTS, OHIO.

CUY-480-19.21	CUY-480-19.43
CUY-480-19.23	CUY-480-21.30

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

ASBESTOS NOTIFICATION

A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST SURVEYED THE BRIDGE STRUCTURE SCHEDULED FOR DEMOLITION AND/OR REHABILITATION; THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE.

ODOT SHALL PROVIDE A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO ONE OF THE ADDRESSES BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

ASBESTOS PROGRAM
OHIO EPA, DAPC
P.O. BOX 1049
COLUMBUS, OH 43216-1049
OR

ASBESTOS PROGRAM
OHIO EPA, DAPC
50 W. TOWN ST., SUITE 700
COLUMBUS, OH 43215

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION. THE FORM SHALL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. COPIES OF THE OEPA FORM AND BRIDGE INSPECTION REPORT ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 12 OFFICE, 5500 TRANSPORTATION BOULEVARD, GARFIELD HEIGHTS, OHIO 44125.

BASIS FOR PAYMENT - THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN
ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET NO. 3 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING VERTICAL POSITIONING AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD: STATIC GPS/ODOT VRS RTK GPS / CONVENTIONAL MONUMENT TYPE: ODOT TYPE B MONUMENTS AND MAG NAILS

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: GEOID 12B

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83(2011)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE NORTH ZONE (3401)
COMBINED SCALE FACTOR: 0.99992126
PROJECT ADJUSTMENT FACTOR: 3.28109168.
ORIGIN OF COORDINATE SYSTEM: X=0, Y=0

SURVEYING PARAMETERS, CONT.

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

ROUNDING

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

PART WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD DRAWING BP-3.1.

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204 - PROOF ROLLING	11 HOURS.
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WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

SEEDING AND MULCHING

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

659, SOIL ANALYSIS TEST	1 EACH
659, TOPSOIL	250 CU. YD.
659, SEEDING AND MULCHING	3286 SQ. YD.
659, REPAIR SEEDING AND MULCHING	330 SQ. YD.
659, INTER-SEEDING	330 SQ. YD.
659, COMMERCIAL FERTILIZER	1 TON
659, LIME	1 ACRES
659, WATER	0.1 M. GAL.
659, MOWING	0.1 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.

PROTECTION OF TRAFFIC MONITORING EQUIPMENT

PRIOR TO BEGINING ANY PAVEMENT ACTIVITIES OR ANY EXCVATION ACTIVITIES BETWEEN STA. 511+50.00 AND STA. 512+50.00 (ATR SITE #582) THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE FROM THE OWNER WILL COORDINATE A TIME FOR THE OWNER/MAINTAINING AGENCY TO DISCONNECT THE EQUIPMENT. FOLLOWING THE DISCONNECTION BY THE OWNER, THE CONTRACTOR WILL BE ALLOWED TO PERFORM THEIR PAVEMENT ACTIVITIES, INCLUDING PAVEMENT REMOVAL. THE REMOVED LOOPS AND SENSORS BECOME PROPERTY OF THE CONTRACTOR.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

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

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

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

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

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, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN

FOR ALL FREEWAYS, THE LATERAL POSITION OF EDGE LINE RUMBLE STRIPS SHOWN IN SCD BB-9.1 IS REVISED AS FOLLOWS:

- MEDIAN AND OUTSIDE SHOULDER OFFSET FOR SHOULDERS LESS THAN 6': DIMENSION A AND B ARE EQUAL TO 6".
- MEDIAN AND OUTSIDE SHOULDER OFFSET FOR SHOULDERS 6' TO 12': DIMENSION A AND B ARE EQUAL TO HALF THE SHOULDER WIDTH MINUS 12".
- MEDIAN AND OUTSIDE SHOULDER OFFSET FOR SHOULDERS GREATER THAN 12': DIMENSION A AND B ARE EQUAL TO 5'.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE FOLLOWING:

ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN	4.60 MI.
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ITEM 619 FIELD OFFICE, TYPE B, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 619, THE CONTRACTOR SHALL FURNISH AND SET UP A WI-FI ROUTER MEETING THE REQUIREMENTS OF IEEE 802.11AC FOR THE EXCLUSIVE USE OF THE DEPARTMENT.

ALL OTHER FIELD OFFICE ITEMS SUPPLIED SHALL MEET THE REQUIREMENTS OF A TYPE B FIELD OFFICE.

ITEM 619 FIELD OFFICE, TYPE B, AS PER PLAN: 14 MONTHS

CALCULATED	MAH
CHECKED	WAA

GENERAL NOTES

CUY-480-07.14 WB

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ITEM 206 – CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP

CEMENT STABILIZATION SHALL BE IMPLEMENTED FOR THE ENTIRE LENGTH OF THE PROJECT UNDER AREAS OF FULL-DEPTH REPLACEMENT ACCORDING TO ODOT GEOTECHNICAL BULLETIN GB-1. IN AREAS WHERE THE STABILIZATION TAPERS TO LESS THAN THE STANDARD EQUIPMENT WIDTH, STABILIZATION SHALL STILL OCCUR AS DESCRIBED IN ODOT GEOTECHNICAL BULLETIN GB-1.

ITEM 606 – ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING’S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER’S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER’S INSTRUCTIONS 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 31 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, MGS TYPE E, 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.

BAT TREE CUTTING RESTRICTIONS

ENSURE IMPACTS TO THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT ARE AVOIDED AND MINIMIZED. DO NOT REMOVE TREES FROM APRIL 1 THROUGH SEPTEMBER 30. PERFORM ALL NECESSARY TREE REMOVAL FROM OCTOBER 1 THROUGH MARCH 31. DEMARCAT E CLEARING LIMITS IN THE FIELD TO AVOID ANY UNAUTHORIZED TREE CLEARING. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

LONGITUDINAL JOINTS (FLEXIBLE PAVEMENT)

LONGITUDINAL JOINTS BETWEEN A PAVEMENT LANE AND ADJOINING SHOULDER OR SPEED CHANGE LANE, AND BETWEEN A SPEED CHANGE LANE AND THE ADJOINING SHOULDER SHALL BE MADE THE SAME DAY. ALL LONGITUDINAL JOINTS SHALL BE HOT WITH THE EXCEPTION OF ONE COLD JOINT PER ROADWAY. LOCATE THE COLD JOINT ALONG THE CENTERLINE OR A LANE LINE. LONGITUDINAL JOINT LOCATIONS SHALL BE AS APPROVED BY THE ENGINEER. EACH RAMP SHALL HAVE A MAXIMUM OF ONE LONGITUDINAL COLD JOINT LOCATED APPROXIMATELY HALFWAY ACROSS THE RAMP.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 25 FT. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND THE ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO FILE A NEW FAA FORM 7460-1, ADVISING THE FAA THAT AERONAUTICAL STUDY NUMBER 2021-AGL-1092-OE, 2021-AGL-1093-OE, 2021-AGL-1094-OE, 2021-AGL-1095-OE, 2021-AGL-1201-OE, 2021-AGL-1202-OE AND 2021-AGL-1203-OE ARE BEING RESUBMITTED AND THAT AN ALTERATION TO THE ORIGINAL SUBMISSION IS REQUESTED.

NOTIFY THE ODOT OFFICE OF AVIATION WHEN RESUBMITTING FAA FORM 7460-1. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

FAA APPROVAL MAY TAKE UP TO 45 DAYS. ALL SUBMISSIONS SHALL BE DIRECTED TO THESE OFFICES:

FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
OBSTRUCTION EVALUATION GROUP
10101 HILLWOOD PARKWAY
FORT WORTH, TX 76177
FAX: (817) 222-5920
HTTP://CEAAA.FAA.GOV

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235

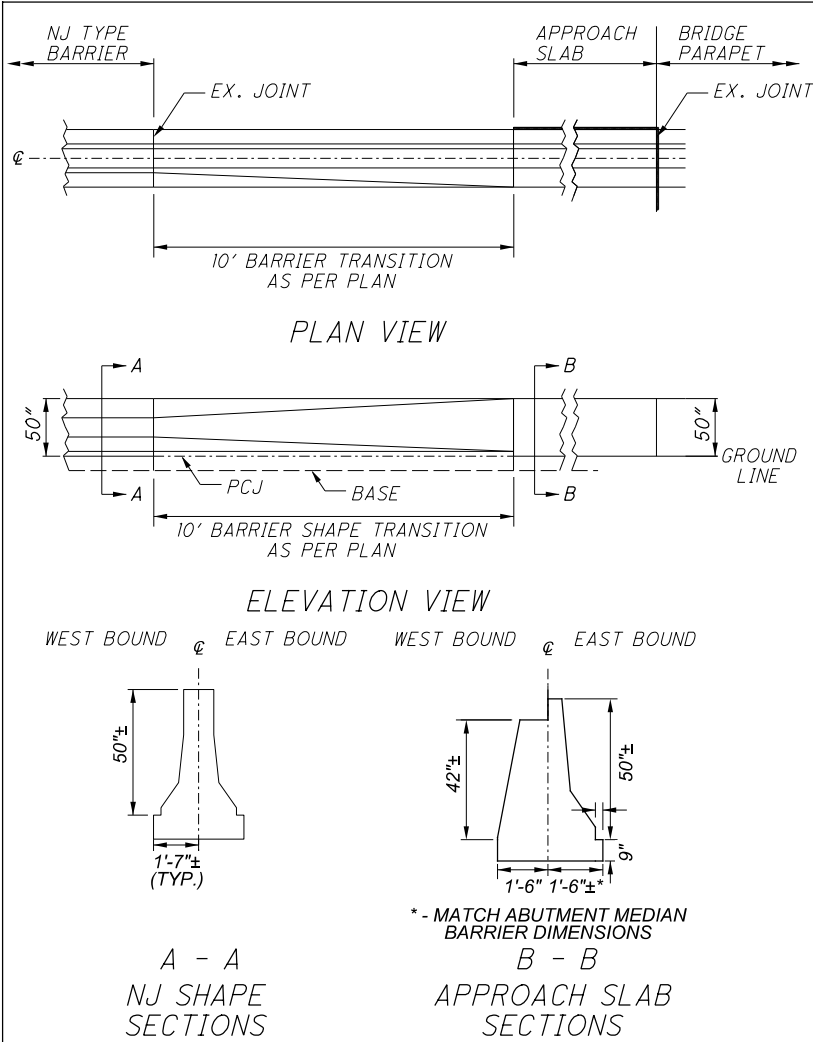
ADDITIONAL REQUIREMENTS FOR AIRPORT COORDINATION

1. AS A CONDITION OF DETERMINATION 2021-AGL-1203-OE, THE STRUCTURE (DUMP TRUCK) IS TO BE MARKED/LIGHTED IN ACCORDANCE WITH FAA ADVISORY CIRCULAR 70/7460-1 M, OBSTRUCTION MARKING AND LIGHTING, FLAGS/RED LIGHTS- CHAPTERS 3(MARKED), 4, 5(RED), 14(TEMPORARY), & 15.

ANY FAILURE OR MALFUNCTION THAT LASTS MORE THAN THIRTY (30) MINUTES AND AFFECTS A TOP LIGHT OR FLASHING OBSTRUCTION LIGHT, REGARDLESS OF ITS POSITION, SHOULD BE REPORTED IMMEDIATELY TO (877) 487-6867 SO A NOTICE TO AIRMEN (NOTAM) CAN BE ISSUED. AS SOON AS THE NORMAL OPERATION IS RESTORED, NOTIFY THE SAME NUMBER.

2. IT IS REQUIRED THAT THE FAA BE NOTIFIED 3 BUSINESS DAYS PRIOR TO THE TEMPORARY STRUCTURE (DUMP TRUCK) BEING ERECTED AND AGAIN WHEN THE STRUCTURE IS REMOVED FROM THE SITE. NOTIFICATION SHOULD BE MADE TO THIS OFFICE THROUGH YOUR REGISTERED E-FILING ACCOUNT. NOTIFICATION IS NECESSARY SO THAT AERONAUTICAL PROCEDURES CAN BE TEMPORARILY MODIFIED TO ACCOMMODATE THE STRUCTURE. NOTIFICATION IS REQUIRED AGAIN THROUGH YOUR REGISTERED E-FILING ACCOUNT WHEN THE TEMPORARY STRUCTURE IS REMOVED FROM THE SITE FOR NOTICE TO AIRMAN (NOTAM) CANCELLATION.

3. IT IS REQUIRED THAT THE MANAGER OF CLEVELAND-HOPKINS INTL, (216) 265-5030 BE NOTIFIED AT LEAST 3 BUSINESS DAYS PRIOR TO THE TEMPORARY STRUCTURE BEING ERECTED AND AGAIN WHEN THE STRUCTURE IS REMOVED FROM THE SITE.



STATIONING		BARRIER FACE TRANSITION LENGTH
FROM	TO	FT
442+83.32	442+93.32	10.00
445+11.90	445+21.90	10.00
447+64.30	447+74.30	10.00
453+30.03	453+40.30	10.00
464+75.28	464+85.28	10.00
468+99.80	469+09.80	10.00

DETAIL FOR BARRIER TRANSITION, AS PER PLAN

GENERAL: THIS INSERT DETAILS THE BARRIER TRANSITION, TO CONNECT EXISTING NJ CONCRETE BARRIER (SAFETY SHAPE) TO BRIDGE PARAPETS AT LOCATIONS SHOWN ON THE PLANS. FOR NJ BARRIER SHAPE AND REINFORCING ON EB FACE, SEE SCD MC-9.3, AND FOR WB BARRIER FACE GEOMETRY AND REINFORCING DETAILS, SEE SCD RM-4.3.

BARRIER FACE TRANSITION: TO PREVENT VEHICLE SNAGGING, A SMOOTH TRANSITION FROM THE SAFETY SHAPE FACE TO THE SINGLE SLOPE FACE IS MADE OVER A DESIGNATED LENGTH OF 10'. THE ACTUAL SHAPE OF THE TRANSITION IS DEPENDENT ON BOTH THE ADJACENT NJ BARRIER AND THE SINGLE SLOPE BARRIER TYPES, AS DETAILED ON THE PLANS. THE CONTRACTOR AND ENGINEER WILL AGREE ON A CONSTRUCTION METHOD TO ENSURE A SMOOTH BARRIER FACE. VERTICAL AND HORIZONTAL TRANSITIONS ARE WITHIN THE TRANSITION LENGTH ON WESTBOUND SIDE ONLY.

THIS ITEM INCLUDES A CONTINUED LENGTH OF BARRIER ADJACENT TO THE APPROACH SLAB BETWEEN THE 10' BARRIER FACE TRANSITION AND THE BRIDGE PARAPET.

MATERIALS: MATERIALS ARE SAME FOR THOSE SHOWN ON RM-4.3 AND RM-4.5, EXCEPT THAT CAST-IN-PLACE IS THE ONLY ACCEPTABLE METHOD. EDGES MAY BE CHAMFERED OR RADIUSD AS SHOWN ON THOSE DRAWINGS.

JOINTS: CONSTRUCT JOINTS AS SHOWN ON THE RESPECTIVE BARRIER DRAWINGS.

RACEWAYS: WHEN SPECIFIED, PLACE RACEWAY(S) TO MATCH RACEWAY ELEVATION IN ADJOINING SEGMENTS. PLACE TO OBTAIN MAXIMUM CONCRETE COVER.

PAYMENT: THIS BARRIER TRANSITION SHALL INCLUDE ALL MATERIAL AND LABOR NEEDED TO CONSTRUCT THIS SECTION, INCLUDING ANY RACEWAYS, REINFORCING STEEL, DOWELS AND OTHER NECESSARY INCIDENTALS. PAYMENT SHALL BE MADE AT THE UNIT PRICE FOR ITEM 622 - BARRIER TRANSITION, AS PER PLAN.

ADDITIONAL REQUIREMENTS FOR AIRPORT COORDINATION (CONT.)

4. IT IS REQUIRED THAT THE MANAGER OF CLEVELAND-HOPKINS INTL AIR TRAFFIC CONTROL AT 216-898-2020 BE NOTIFIED AT LEAST 3 BUSINESS DAYS PRIOR TO THE TEMPORARY STRUCTURE BEING ERECTED AND AGAIN WHEN THE STRUCTURE IS REMOVED FROM THE SITE. ADDITIONALLY, PLEASE PROVIDE CONTACT INFORMATION FOR THE ONSITE OPERATOR IN THE EVENT THAT AIR TRAFFIC CONTROL REQUIRES THE TEMPORARY STRUCTURE TO BE LOWERED IMMEDIATELY.

ITEM 254 – PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, 3.25"

DUE TO THE DEPTH OF THE EXISTING PAVEMENT, THIS ITEM MAY INCLUDE SOME PAVEMENT PLANING, PORTLAND CEMENT CONCRETE. THIS QUANTITY IS INCIDENTAL TO THE COST OF PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT BID PRICE FOR ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO PERFORM THE WORK.

ITEM 254 – PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, 0.75"-3.25"

THIS ITEM INCLUDES PAVEMENT PLANING AND PREPARATION FOR ASPHALT CONCRETE OVERLAY IN LOCATIONS WHERE THE ROADWAY CROWN IS BEING SHIFTED. THE PAVEMENT WILL BE PLANED TO MATCH THE PROPOSED PAVEMENT PLANING TO EITHER SIDE OF THE 6' WIDE CROWN SHIFT, ALLOWING A SMOOTH TRANSITION BETWEEN THE FIXED-DEPTH PLANING SECTIONS.

DUE TO THE DEPTH OF THE EXISTING PAVEMENT, THIS ITEM MAY INCLUDE SOME PAVEMENT PLANING, PORTLAND CEMENT CONCRETE. THIS QUANTITY IS INCIDENTAL TO THE COST OF PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT BID PRICE FOR ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO PERFORM THE WORK.

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ITEM 623 – CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE CMS, THIS ITEM OF WORK WILL INCLUDE THE FOLLOWING ADDITIONAL REQUIREMENTS.

AN OHIO PROFESSIONAL SURVEYOR SHALL DETERMINE THE MINIMUM VERTICAL CLEARANCES OF ALL EXISTING AND NEW BRIDGES WITHIN THE PROJECT LIMITS AFTER COMPLETION OF ALL THE WORK, BUT PRIOR TO FINAL ACCEPTANCE OF THE PROJECT. AT A MINIMUM, MEASUREMENTS SHALL BE TAKEN ALONG THE CENTERLINE OF EACH FASCIA BEAM AT THE EDGE OF SHOULDERS, EDGE LINES, LANE LINES, AND CROWN OF THE ROADWAY BELOW. THE MEASUREMENTS SHALL BE DOCUMENTED ON THE ODOT VERTICAL CLEARANCE SURVEY FORM. THE FORM SHALL BEAR THE STAMP OR SEAL OF THE OHIO PROFESSIONAL SURVEYOR WHO HAS TAKEN THE MEASUREMENTS. THE OHIO PROFESSIONAL SURVEYOR SHALL SUBMIT THE COMPLETED FORM TO THE PROJECT ENGINEER AND THE DISTRICT BRIDGE MAINTENANCE ENGINEER PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.

PAYMENT FOR ALL OF THE ABOVE WORK SHALL BE AT THE UNIT PRICE BID FOR ITEM 623 CONSTRUCTION LAYOUT STAKES, AS PER PLAN, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 442 ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (447), AS PER PLAN, PG 76-22M

THE COARSE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO A BLEND OF AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO AND LIMESTONE. THE CONTRACTOR SHALL USE A MINIMUM 60% OF ACBFS OR TRAP ROCK FROM ONTARIO WITH LIMESTONE COMPRISING THE REMAINING PERCENTAGE. AT LEAST 50% OF FINE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO ACBFS OR TRAP ROCK FROM ONTARIO.

TABLE 442.02-2 APPLIES EXCEPT NO. 4 SIEVE REQUIREMENTS ARE 52 TO 60 TOTAL PERCENT PASSING. FOR THE NO. 4 SIEVE DO NOT EXCEED 63 IN PRODUCTION.

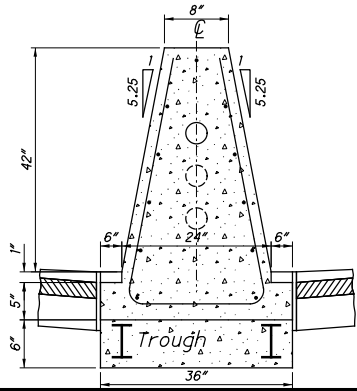
WHEN ACBFS IS USED FOR A FRACTION OF THE COARSE AGGREGATE, PROVIDE A TOTAL ASPHALT BINDER CONTENT GREATER THAN OR EQUAL TO 6.2 PERCENT. IF ACBFS MAKES UP 100% OF THE COARSE AGGREGATE, APPLY THE BINDER CONTENT REQUIREMENTS OF C&MS 442.

ITEM 611 – INLET, NO. 3B, AS PER PLAN

WHEN INSTALLING INLET, BACKFILL EXCAVATED SHOULDER AREA WITH LOW STRENGTH MORTAR UP THE EXISTING SUBGRADE LEVEL. RESTORATION OF ITEM 304 AGGREGATE AND ALL SHOULDER PAVEMENT REPLACED IN EASTBOUND DIRECTION SHALL BE INCIDENTAL TO THE COST OF THE INLET.

FOR INLET, NO. 3B LOCATED AT STATION 485+75.00, NO WINDOW SHALL BE CONSTRUCTED ON THE EASTBOUND SIDE OF THE BARRIER. BARRIER SHALL INCLUDE TAPER TO MATCH EXISTING CONDITIONS OVER A 5’ HORIZONTAL DISTANCE.

TO MAINTAIN TRANSVERSE WIDTH OF EXISTING BARRIER, THE BARRIER DIMENSIONS SHALL BE AS SHOWN BELOW:



REVIEW OF DRAINAGE FACILITIES (ODOT) FREEWAY SYSTEM

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 APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

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

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

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

ITEM 209 RESHAPING UNDER GUARDRAIL, AS PER PLAN

THIS ITEM OF WORK SHALL BE USED TO PREPARE PROPOSED AND EXISTING GUARDRAIL RUNS FOR PAVING UNDER GUARDRAIL, INCLUDING THE REMOVAL AND DISPOSAL OF EXISTING ASPHALT UNDER GUARDRAIL.

A SAWCUT WILL BE PERFORMED, WHEN APPLICABLE, TO ASSIST THE REMOVAL OF EXISTING ASPHALT UNDER GUARDRAIL AND MINIMIZE DAMAGE TO EXISTING SHOULDER ASPHALT. PAYMENT FOR SAWCUTTING WILL BE INCLUDED IN THE BID PRICE FOR ITEM 209 RESHAPING UNDER GUARDRAIL, AS PER PLAN.

FILL ALL HOLES REMAINING AFTER REMOVAL OF GUARDRAIL POSTS AND ANCHOR ASSEMBLIES WITH GRANULAR MATERIAL. DO NOT USE FILL MATERIAL CONTAINING SOD. ALL FILL MATERIAL SHALL BE APPROVED BY THE ENGINEER AND SHALL BE COMPACTED AS DIRECTED BY THE ENGINEER. PAYMENT FOR THE ABOVE IS INCLUDED IN THE APPLICABLE GUARDRAIL ITEM.

RESHAPE AND COMPACT SUBGRADE TO ENSURE POSITIVE DRAINAGE. ESTABLISH A CROSS-SLOPE OF 0.042 (HALF INCH PER FOOT). GRADE TO A MAXIMUM WIDTH OF 6’ TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE TRAVEL LANES.

ALL COLLECTED DEBRIS AND TOPSOIL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN SECTION 105.17 OF THE CMS.

IN AREAS WHERE ASPHALT UNDER GUARDRAIL WILL NOT BE REPLACED, THE REMOVED MATERIAL SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO 703.16 AND PLACED TO GRADE AS APPROVED BY THE ENGINEER. SEED AND MULCH THESE AREAS ACCORDING TO SECTION 659.

IN AREAS WHERE EXISTING PAVEMENT WILL NOT BE PLANED, AFTER THE EXISTING ASPHALT UNDER GUARDRAIL IS REMOVED, COMPACTED GRANULAR MATERIAL SHALL BE PLACED WITHIN 3” OF FINAL PAVEMENT ELEVATION IN PREPARATION OF THE ASPHALT UNDER GUARDRAIL.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT BID PRICE FOR ITEM 209 RESHAPING UNDER GUARDRAIL, AS PER PLAN AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO PERFORM THE WORK.

ITEM 441 – ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), UNDER GUARDRAIL, AS PER PLAN

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING ITEM 209 RESHAPING UNDER GUARDRAIL, AS PER PLAN AND PAVING UNDER THE GUARDRAIL USING ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1,(448), (UNDER GUARDRAIL), AS PER PLAN.

HERBICIDE SHALL BE EPA APPROVED FOR PAVING UNDER GUARDRAIL. IT SHALL BE APPLIED TO THE PREPARED AREA AFTER FINAL LEVELING AND GRADING HAS BEEN COMPLETED. THE APPLICATION SHALL BE JUST PRIOR TO PAVING AND SHALL STRICTLY ADHERE TO THE MANUFACTURER'S INSTRUCTIONS. DO NOT SPRAY WITHIN 1000 FT. OF A STATE SCENIC RIVER.

EACH SUCCESSFUL BIDDER MUST BE LICENSED BY THE OHIO DEPARTMENT OF AGRICULTURE AS A COMMERCIAL APPLICATOR AND ALL PERSONS INVOLVED IN THE ACTUAL SPRAYING SHALL BE LICENSED AS COMMERCIAL OPERATORS IN THE APPROPRIATE SPRAY CATEGORY.

HERBICIDE LABEL, MATERIAL SAFETY DATA SHEET AND COPY OF APPLICATORS LICENSES SHALL BE SUBMITTED TO THE ENGINEER FOR VERIFICATION PRIOR TO COMMENCING WORK.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 441 TO A DEPTH OF 3” AND A MAXIMUM WIDTH OF 4’ USING ONE OF THE FOLLOWING METHODS:

METHOD A:

1. SET GUARDRAIL POSTS
2. PLACE ITEM 441

METHOD B:

1. PLACE ITEM 441
2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
3. SET GUARDRAIL POSTS
4. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL), AS PER PLAN.

ITEM 251 PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN A

THIS ITEM SHALL BE USED FOR THE REPAIR UNSOUND, COLD PATCH, OR POP-OUT AREAS OF LONGITUDINAL JOINTS CONSISTING OF EXISTING ASPHALT OR CONCRETE AS DIRECTED BY THE ENGINEER. THE WORK SHALL BE PERFORMED PRIOR TO THE PLANING OPERATION. THE DEPTH OF THE REPAIR SHALL BE 5” BELOW THE TOP OF THE EXISTING ASPHALT SURFACE. THE WIDTH OF THE REPAIR SHALL BE 12” CENTERED OVER THE EXISTING JOINT.

USE REPLACEMENT MATERIALS CONFORMING TO THE REQUIREMENTS OF ITEM 442, 19MM.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 251 PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN A 200 SQ YD

ITEM 251 PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN B

THIS ITEM SHALL BE USED FOR THE REPAIR UNSOUND, COLD PATCH, OR POP-OUT AREAS OF TRANSVERSE JOINTS AND CRACKS OF EXISTING ASPHALT OR CONCRETE AS DIRECTED BY THE ENGINEER. THE WORK SHALL BE PERFORMED PRIOR TO THE PLANING OPERATION. THE DEPTH OF THE REPAIR SHALL BE 5” BELOW THE TOP OF THE EXISTING ASPHALT SURFACE. THE WIDTH OF THE REPAIR SHALL BE 12” CENTERED OVER THE EXISTING JOINT.

USE REPLACEMENT MATERIALS CONFORMING TO THE REQUIREMENTS OF ITEM 422, 19MM.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 251 PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN B 500 SQ YD

ASPHALT CONCRETE SURFACE COURSE SEALING REQUIREMENTS

IN ADDITION TO THE GUTTER SEALING REQUIREMENTS SPECIFIED IN SCD BP-3.1 AND C&MS 401.15, AFTER COMPLETION OF THE SURFACE COURSE, THE CONTRACTOR SHALL USE A CERTIFIED 702.01 PG BINDER TO SEAL THE FOLLOWING LOCATIONS:

- ALL CASTINGS INCLUDING BUT NOT LIMITED TO MONUMENTS, MANHOLES, WATER VALVES, CATCH BASINS, CURB INLETS.
- BUTT JOINTS AND FEATHER JOINTS INCLUDING BRIDGE APPROACHES.
- FORWARD JOINT FOR DRIVEWAY ASPHALT AND TRAILING JOINT WHEN BUTTING TO EXISTING ASPHALT DRIVE.
- PERIMETER OF ALL PAVEMENT REPAIRS OR OTHER ASPHALT INLAYS WHEN PAVEMENT REPAIRS/INLAYS ARE NOT OVERLAID WITH AN ASPHALT CONCRETE SURFACE COURSE.
- ALL COLD LONGITUDINAL JOINTS BETWEEN PAVED SHOULDERS AND GUARDRAIL ASPHALT.

THE MATERIAL USED SHALL BE A CERTIFIED 702.01 PG BINDER. THE WIDTH OF THE SEALER SHALL BE 2-3 INCHES.

ANY ADDITIONAL COSTS ASSOCIATED WITH THE WORK IDENTIFIED IN THIS NOTE SHALL BE INCLUDED IN THE APPROPRIATE ASPHALT CONCRETE SURFACE COURSE ITEM OF WORK.

ITEM 621 – RAISED PAVEMENT MARKER REMOVED

IN ORDER TO ENSURE PROPER PAVEMENT PLANING EQUIPMENT OPERATION, THE CONTRACTOR SHALL REMOVE RAISED PAVEMENT MARKERS IN THE AREAS TO BE PLANED PRIOR TO BEGINNING PLANING OPERATIONS. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 621 - RAISED PAVEMENT MARKER REMOVED 328 EACH

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COOPERATE AND COORDINATE OPERATIONS WITH THE CONTRACTORS ON OTHER PROJECTS THAT MAY BE IN FORCE DURING THE LIFE OF THE CONTRACT. SPECIFICALLY, WORK ON CUY-480-5.71, PID 87904, AND ON CUY-480-6.78, PID 85526, DURING THE 2023 SEASON. AND WORK ON CUY-480-10.38, PID 84019, DURING THE 2024 SEASON.

ITEM 611 – CONDUIT, BORED OR JACKED, AS PER PLAN, 15” TYPE B

THE USE OF 748.06 CONDUIT SHALL BE ALLOWED IN THE INSTALLATION OF ALL CONDUIT RUNS LABELED AS BORED OR JACKED IN THIS PLAN.

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ITEM 614 – MAINTAINING TRAFFIC

ALL EXISTING LANES SHALL REMAIN OPEN AND MAINTAINED, UNLESS OTHERWISE SPECIFIED IN THESE PLANS, THROUGH PHASE 3 BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, AND ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC.

I. NOTIFICATION

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER BY EMAIL AT (D12.PUBLIC.INFO@DOT.OHIO.GOV)

DISTRICT PERMIT SECTION BY EMAIL AT (DISTRICT12.PER@DOT.OHIO.GOV)

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY EMAIL AT (HAULING.PER@DOT.OHIO.GOV)

CITY OF CLEVELAND, ANDREW CROSS BY PHONE AT (216) 664-3197 OR EMAIL AT ACROSS@CITY.CLEVELAND.OH.US

GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY (GCTRA):
-CENTRAL COMMUNICATIONS: 216-565-5135
- TONY RICHARDSON, SERVICE QUALITY, ARICHARDSON@GCTRA.ORG
- HOWARD WESLEY, SERVICE QUALITY, HWESLEY@GCTRA.ORG
- WANDA WARE, SERVICE QUALITY, WWARE@GCTRA.ORG
- ROBERT FLEIG, SERVICE QUALITY COMMUNICATIONS SPECIALIST, ROBERT.FLEIG@GCTRA.ORG
- MARK RODRIGUEZ, SERVICE QUALITY OFFICE MANAGER, MARK.RODRIGUEZ@GCTRA.ORG
- JOEL FREILICH, SERVICE MANAGEMENT, JFREILICH@GCTRA.ORG
- JEFFERY MACKO, SERVICE MANAGEMENT, JMACKO@GCTRA.ORG

THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME TABLE		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMP & ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<= 12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

II. PAYMENT

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 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.

SEQUENCE OF CONSTRUCTION

PREPHASE 1 (NO PLAN SHEETS PROVIDED)

PREPHASE 1 THRU PHASE 3 SHALL BE COMPLETED DURING THE SAME CONSTRUCTION SEASON.

PRIOR TO BEGINNING WORK IN THE FIRST PHASE OF THE PROJECT, THE PROPOSED DRAINAGE INLETS AND DIRECTIONALLY BORED STORM SEWERS SHALL BE INSTALLED FOLLOWED BY REPLACEMENT OF THE EXISTING INSIDE SHOULDER FROM STA. 484+22 TO STA. 510+90 AND OUTSIDE SHOULDER FROM STA. 479+43 TO STA. 484+22 AND STA. 504+00 TO STA. 509+70 OF I.R. 480 WESTBOUND WITH PAVEMENT FOR MAINTAINING TRAFFIC.

PERMANENT SHOULDER CLOSURES ARE PERMITTED FOR THE DRAINAGE WORK AND SHOULDER REPLACEMENT WORK. LANE CLOSURES SHALL BE AS PER ALLOWED BY THE PERMITTED LANE CLOSURE SCHEDULE.

TO COMPLETE THE DRAINAGE WORK:

- PORTABLE BARRIER SHALL BE PLACED ALONG THE EASTBOUND AND WESTBOUND INSIDE SHOULDER TO ADEQUATELY PROTECT THE OPENINGS IN THE MEDIAN BARRIER WHILE REPLACING THE INLET STRUCTURES. PORTABLE BARRIER AND TEMPORARY SIGNAGE SHALL BE INSTALLED AS PER SCD MT-95.45.

- THE ADJACENT LANES MAY BE CLOSED TO COMPLETE THIS WORK AS ALLOWED BY THE PERMITTED LANE CLOSURE SCHEDULE. LANE CLOSURES SHALL BE AS PER SCD MT-95.30.

- THE RIGHT LANE MAY BE CLOSED TO COMPLETE JACKING/DRILLING OF THE PROPOSED DRAINAGE PIPE. LANE CLOSURES SHALL BE PER SCD MT-95.30. THESE SHALL NOT OCCUR SIMULTANEOUSLY WITH THE LEFT LANE CLOSURES REQUIRED FOR THE MEDIAN WORK.

FOLLOWING THE DRAINAGE WORK, THE EXISTING INSIDE WESTBOUND SHOULDER AND WESTBOUND OUTSIDE SHOULDER, AT THE WESTERN AND EASTERN PROJECT LIMITS, SHALL BE REPLACED WITH PAVEMENT FOR MAINTAINING TRAFFIC USING THE FOLLOWING STEPS:

- THE PORTABLE BARRIER PLACED IN THE SHOULDERS FOR DRAINAGE WORK SHALL BE COMPLETELY REMOVED.

- SHOULDER REPLACEMENT SHALL BE COMPLETED BY CLOSING THE ADJACENT LEFT LANE AS PER THE PERMITTED LANE CLOSURE SCHEDULE. LANE CLOSURES SHALL BE AS PER SCD MT-95.30.

- ALL DROP-OFFS ADJACENT TO THE TRAVEL LANE SHALL BE MAINTAINED AS PER SCD MT-101.90 DURING NON-WORKING HOURS.

PHASE 1 (SHEETS 23-34)

THIS PHASE SHALL COMPLETE THE BRIDGE REPAIR AND APPROACH SLAB REPLACEMENT WORK ON THE OUTSIDE OF I.R. 480. THE OUTSIDE SHOULDERS SHALL BE REPLACED WITH FULL-DEPTH PAVEMENT PER THE TYPICAL SECTION. THE TWO LANES OF TRAFFIC SHALL BE SHIFTED TO THE INSIDE AND LANE WIDTHS SHALL BE REDUCED TO 11 FEET. PORTABLE BARRIER SHALL BE USED TO PROTECT THE WORK AREA AT THE BRIDGES.

INTERMEDIATE COURSE SHALL BE USED FOR THE SURFACE COURSE LAYER AT THE OUTSIDE SHOULDERS. THIS INTERMEDIATE COURSE WILL BE MILLED AT PHASE 4. NO PAVEMENT WORK IS NEEDED WITHIN THE EXISTING LANES DURING THIS PHASE.

THE PAVEMENT WITHIN THE EXISTING GORE BETWEEN IR-480 AND THE RAMP FROM IR-71 SB TO IR-480 WB SHALL BE REPLACED IN THIS PHASE. THE LEFT RAMP LANE SHALL BE CLOSED TO COMPLETE THIS WORK. LANE CLOSURES SHALL BE AS PER THE DISTRICT 12 PERMITTED LANE CLOSURE TIMES LIST. LANE CLOSURES SHALL BE AS PER SCD MT-95.30.

PHASE 2 (SHEETS 35-44)

THIS PHASE SHALL COMPLETE THE BRIDGE REPAIR AND APPROACH SLAB REPLACEMENT WORK IN THE MIDDLE SECTION OF I.R. 480 WB. THIS WORK REQUIRES THE WESTBOUND LANES BE SPLIT THROUGH THE PROJECT AREA. THE INSIDE LANE WILL REMAIN IN ITS PHASE 1 LOCATION AND THE RIGHT LANE WILL BE SHIFTED TO THE OUTSIDE. LANE WIDTHS SHALL REMAIN AT 11 FEET AND PORTABLE BARRIER SHALL BE USED TO PROTECT THE WORK AREA AT THE BRIDGES.

IN SEGMENTS WHERE THE PAVEMENT CROWN IS BEING ADJUSTED EAST OF THE MERGE FROM IR-71 SB, VARIABLE DEPTH MILLING AND PLACEMENT OF THE VARIABLE DEPTH INTERMEDIATE COURSE SHALL OCCUR FROM THE EXISTING CROWN TO THE PHASE 2 CUT LINE. THIS WORK SHALL BE COMPLETED BY CLOSING OF THE INSIDE LANE AS PERMITTED BY THE PERMITTED LANE CLOSURE SCHEDULE. IN AREAS WHERE PORTABLE BARRIER IS LOCATED, THIS MILLING AND PAVING SHALL BE COMPLETED AT THE END OF PHASE 2 WHEN THE BARRIER CAN BE REMOVED AND REPLACED WITH DRUMS.

PHASE 3 (SHEETS 45-56)

THE PAVEMENT CROWN SHIFT WORK WEST OF THE BRIDGE OVER ROCKY RIVER DRIVE, AS SHOWN IN THE PHASE 3 PLAN SHEETS, SHALL BE COMPLETED AT THE BEGINNING OF THIS PHASE.

THIS PHASE SHALL COMPLETE THE BRIDGE REPAIR AND APPROACH SLAB REPLACEMENT WORK ON THE INSIDE OF I.R. 480 WB. THE TEMPORARY PAVEMENT PLACED ON THE INSIDE SHOULDER IN PREPHASE 1 SHALL BE REMOVED AND REPLACED WITH THE PERMANENT PAVEMENT TYPICAL SECTION. THE OUTSIDE LANE FROM PHASE 2 SHALL REMAIN IN ITS SAME LOCATION AND THE INSIDE LANE SHALL BE SHIFTED TO THE OUTSIDE. LANE WIDTHS SHALL REMAIN AT 11 FEET AND PORTABLE BARRIER SHALL BE USED TO PROTECT THE WORK AREA AT THE BRIDGES.

THE EXISTING LEFT LANE SHALL BE MILLED FROM THE PHASE 2 CUT LINE TO THE EXISTING EDGE OF PAVEMENT. ADDITIONAL MILLING PAST THE PHASE 2 CUT LINE WILL BE REQUIRED TO SET THE PROPOSED CROWN. INTERMEDIATE COURSE SHALL BE USED FOR THE SURFACE COURSE LAYER OVER ALL MILLED SURFACES. THIS INTERMEDIATE COURSE WILL BE MILLED AT PHASE 4.

ALL PHASE 3 WORK SHALL BE COMPLETED BY OCTOBER 15, 2023.

WINTER SHUTDOWN (NO SHEETS PROVIDED)

THE ROADWAY SHALL BE STRIPED FOR THE PROPOSED THREE LANE CONDITION AND MATCH THE PAVEMENT MARKINGS AS SHOWN IN THE TRAFFIC CONTROL PLANS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614, WORK ZONE LANE LINE, CLASS 1, 6", 807 PAINT --- 5.11 MILE

ITEM 614, WORK ZONE EDGE LINE, CLASS 1, 6", 807 PAINT --- 4.35 MILE

ITEM 614, WORK ZONE CHANNELIZING LINE, CLASS 1, 12", 807 PAINT --- 4,737 FT

ITEM 614, WORK ZONE DOTTED LINE, CLASS 1, 6" 807 PAINT --- 4,066 FT

ITEM 614, WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN --- 423 EACH

PHASE 4 (NO SHEETS PROVIDED)

THIS PHASE SHALL COMPLETE 3.25" MILLING AND RESURFACING OF THE EXISTING LANES AND 1.5" MILLING OF THE TEMPORARY INTERMEDIATE ASPHALT COURSE AND RESURFACING FOR IR-480 WB FROM GRAYTON ROAD (STA. 475+30) TO JUST EAST OF THE RAMP MERGE FROM IR-71 NB (STA. 513+60). THE PERMITTED LANE CLOSURE SCHEDULE SHALL BE REVISED SUCH THAT IT IS BASED ON A THREE LANE SECTION FOR ALL PHASE 4 WORK. A SINGLE LANE CLOSURE SHALL LEAVE TWO LANES OPEN.

LANE VALUE CONTRACT

THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES AS DESIGNATED IN THE LANE VALUE CONTRACT TABLE FOR EACH UNIT OF TIME THE DESCRIBED CRITICAL LANE/RAMP IS RESTRICTED FROM FULL USE BY THE TRAVELING PUBLIC WITHIN THE RESTRICTED TIME PERIOD. THE LANE VALUE CONTRACT TABLE IS LOCATED BELOW. THE DISINCENTIVES WILL BE ASSESSED FOR ALL RESTRICTIONS OF THE CRITICAL WORK.

CRITICAL WORK IS SHOWN IN THE LANE VALUE CONTRACT TABLE BELOW.

CRITICAL WORK IS DEFINED AS HAVING THE DESIGNATED SECTIONS OPEN TO UNRESTRICTED TRAFFIC AS SHOWN IN THE TABLE, OR THE ENTIRE PROJECT IF NOT OTHERWISE LISTED.

UNRESTRICTED TRAFFIC IS DEFINED AS ALL TRAFFIC LANES BEING AVAILABLE FOR USE WITH SPECIFIED STRIPING AND SAFETY FEATURES IN PLACE.

DESCRIPTION OF CRITICAL LANE/RAMP TO BE MAINTAINED	RESTRICTED TIME PERIOD	TIME UNIT	DISINCENTIVE \$ PER TIME UNIT PER LANE
CLAGUE RD TO I-71, EB & WB	AS PER THE D12 PERMITTED LANE CLOSURE SCHEDULE	EACH MINUTE	\$255
SR-237 MERGE TO I-71 MERGE, EB (3 LANE SECTION)	AS PER THE D12 PERMITTED LANE CLOSURE SCHEDULE	EACH MINUTE	\$230
SR-237 MERGE TO I-71 MERGE, EB (2 LANE SECTION)	AS PER THE D12 PERMITTED LANE CLOSURE SCHEDULE	EACH MINUTE	\$350
I-71 SPLIT TO SR-237 SPLIT, WB (3 LANE SECTION)	AS PER THE D12 PERMITTED LANE CLOSURE SCHEDULE	EACH MINUTE	\$300
I-71 SPLIT TO SR-237 SPLIT, WB (2 LANE SECTION)	AS PER THE D12 PERMITTED LANE CLOSURE SCHEDULE	EACH MINUTE	\$450
II-71 MERGE TO LANCASTER OVERPASS, EB & WB	AS PER THE D12 PERMITTED LANE CLOSURE SCHEDULE	EACH MINUTE	\$265

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PRE-PHASE SHOULDER CLOSURE

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED TO CONSTRUCT THE MEDIAN INLETS PRIOR TO PHASE I CONSTRUCTION UTILIZING A SHOULDER CLOSURE PER SCD MT-95.45. THE MEDIAN SHOULDER SHALL BE CLOSED IN BOTH DIRECTIONS WITH A MINIMUM 2 FT. OFFSET FROM THE EXISTING EDGE LINE TO THE FACE OF THE PORTABLE BARRIER.

ITEM 614, WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	6 EACH
ITEM 614, BARRIER REFLECTOR, TYPE I (ONE WAY)	45 EACH
ITEM 614, OBJECT MARKER, ONE WAY	45 EACH
ITEM 622, PORTABLE BARRIER, UNANCHORED	2,200 FT

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE PLANS FOR THE PRE-PHASE I CONSTRUCTION OF THE INSIDE SHOULDER AND CARRIED TO THE GENERAL SUMMARY:

ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	8,325 SY
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PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN

THIS ITEM SHALL BE AS PER C&MS 615 EXCEPT THAT THE PAVEMENT FOR MAINTAINING TRAFFIC SHALL BE ASPHALT AND LEFT IN PLACE AT THE END OF THE PROJECT.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE PLANS FOR THE PRE-PHASE I CONSTRUCTION OF THE OUTSIDE SHOULDER FROM STA. 479+43 TO STA. 484+22 AND STA. 504+00 TO STA. 509+70 AND THE INSIDE SHOULDER FROM STA. 504+00 TO STA. 510+90. THIS QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	1,951 SY
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PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, AND MAINTAINING EACH OF THE ABOVE ITEMS.

DUST CONTROL

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

ITEM 616, WATER	5 M GAL.
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WORK ZONE SPEED ZONES (WZSZS)

THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISION(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:

WZSZ REVISION NUMBER	COUNTY-ROUTE-SECTION	DIRECTION
WZ-65240	CUY-480-7.14	WB ONLY

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRE-CONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, CROSSOVER, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE I BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.

ALL WZSZS FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ.

WZSZS USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THIS NOTE, APPROVED LIST, SUPPLEMENTAL SPECIFICATIONS (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.

ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN OMUTCD PART 6.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRECONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE

EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.

TABLE 1: WARRANTED WORK ZONE SPEED LIMITS (MPH) FOR WORK ZONES ON HIGH-SPEED (55 MPH OR GREATER) MULTI-LANE HIGHWAYS

ORIGINAL POSTED SPEED LIMIT	WITH POSITIVE PROTECTION		WITHOUT POSITIVE PROTECTION	
	WORKERS PRESENT	WORKERS NOT PRESENT	WORKERS PRESENT	WORKERS NOT PRESENT
70	60	65	55	65
65	55	60	50	60
60	55	60	50	60
55	50	55	45	55

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 808, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	24 SIGN MNTH
[ASSUMING 2 DSL SIGN ASSEMBLIES FOR 12 MONTH(S)]	

ITEM 614, REPLACEMENT SIGN

FLATSHEET 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, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 10 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 615, ROADS FOR MAINTAINING TRAFFIC

THE FOLLOWING QUANTITIES ARE INCLUDED IN THE LUMP SUM BID FOR ITEM 615, ROADS FOR MAINTAINING TRAFFIC AND HAS BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY.

EXCAVATION FOR MAINTAINING TRAFFIC	1,427 CY
EXISTING PAVEMENT REMOVED	10,276 SY

SCHEDULE OF THROUGH LANES TO BE MAINTAINED

ALL LANE CLOSURES MAY ONLY BE IMPLEMENTED AT THE TIMES PERMITTED BY THE "DISTRICT 12 PERMITTED LANE CLOSURE TIMES" LIST, WHICH IS LOCATED ON THE ODOT WEBSITE:

https://www.dot.state.oh.us/districts/D12/HighwayManagement/Pages/PermittedLaneClosures.aspx

THE LATEST REVISION, AT 14 DAYS PRIOR TO THE BID DATE, SHALL BE IN EFFECT FOR THIS PROJECT.

NO LANE OR SHOULDER CLOSURES SHALL BE IN PLACE WHEN NO WORK IS BEING PERFORMED, UNLESS DIRECTED BY THE ENGINEER. SHOULDER CLOSURES SHALL ONLY BE ALLOWED AT THE TIMES SPECIFIED FOR LANE CLOSURES.

ANY ROADWAY NOT LISTED SHALL NOT HAVE ANY LANE CLOSURES ON WEEKDAYS FROM 6:30AM TO 9:00AM AND 3:00PM TO 6:00PM. CONTACT TROY ONESTI, DISTRICT 12 WORK ZONE TRAFFIC MANAGER, AT (216) 584-2204 IF THERE ARE ANY QUESTIONS.

ALL NOTES ON THE PERMITTED LANE CLOSURE TIMES SHALL BE PART OF THE PROJECT.

WORK ZONE MARKINGS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS PER THE REQUIREMENTS OF C&MS 614.II.

ITEM 614, WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT --- 5.11 MILE
ITEM 614, WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT --- 4.35 MILE
ITEM 614, WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT --- 4,737 FT
ITEM 614, WORK ZONE DOTTED LINE, CLASS III, 6" 642 PAINT --- 4,066 FT

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WORK ZONE INCREASED PENALTIES SIGN (R11-H5A)

R11-H5A-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 ON THE MAINLINE SHALL BE DUAL MOUNTED UNLESS NOT PHYSICALLY POSSIBLE. THE FIRST SIGN SHALL BE PLACED BETWEEN THE ROAD WORK AHEAD (W20-1) SIGN AND THE NEXT SIGN IN THE SEQUENCE. SIGNS SHALL BE ERECTED ON EACH ENTRANCE RAMP AND EVERY 2 MILES THROUGH THE CONSTRUCTION WORK LIMITS. SIGNS ON THE MAINLINE SHALL BE R11-H5A-48. SIGNS USED ON THE RAMPS SHALL BE R11-H5A-24. R11-H5A-24 SIGNS MAY BE USED IN THE MEDIAN IN LIEU OF R11-H5A-48 SIGNS IF IT IS NOT PHYSICALLY POSSIBLE TO PROVIDE R11-H5A-48 SIGNS IN THE MEDIAN.)

THE R11-H5A-48 SIGNS SHALL BE MOUNTED ON 2 NO. 3 POSTS WHEN LOCATED WITHIN CLEAR ZONES.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE RETROREFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF C&MS 730.19.

WORK ZONE INCREASED PENALTIES 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, WORK ZONE INCREASED PENALTIES SIGN 2 EACH

WORK ZONE INCREASED PENALTIES SIGNS WILL BE PLACED AT THE LOCATIONS SHOWN IN THE PLANS.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME 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.

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 0 INCHES 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.

ITEM 614. ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PLACED ON THE EXISTING PAVEMENT ADJACENT TO THE APPROACH SLABS TO PREVENT ANY SIGNIFICANT BUMPS THAT WILL OCCUR BETWEEN THE COMPLETED APPROACH SLABS AND THE EXISTING ADJACENT PAVEMENT DUE TO DIFFERENT CROSS SLOPES AND CROWN LOCATION.

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

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 100 CY

ITEM 614. PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS SHALL BE AS DIRECTED BY THE ENGINEER. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

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

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

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

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.) THE

PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

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

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 14 SIGN MONTH ASSUMING 2 PCMS SIGN(S) FOR 7 MONTHS

ITEM 614. WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN 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.

WORKSITE TRAFFIC SUPERVISOR

SUBJECT TO APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY (SOMEONE OTHER THAN THE SUPERINTENDENT) A PREQUALIFIED WORKSITE TRAFFIC SUPERVISOR (WTS) BEFORE STARTING WORK IN THE FIELD. THE WTS SHALL BE TRAINED IN ACCORDANCE WITH CMS 614.03, SHALL HAVE SUCCESSFULLY COMPLETED ODOT ADMINISTERED WTS TESTING (AND RE-TESTING WHEN APPLICABLE) AND BE LISTED ON THE ODOT PREQUALIFIED WTS ROSTER. PREQUALIFICATION EXPIRES EVERY 5 YEARS. RE-TESTING SHALL BE SUCCESSFULLY REPEATED EVERY 5 YEARS TO REMAIN PREQUALIFIED.

THE NAME OF THE PREQUALIFIED WTS AND RELATED 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE. IF THE DESIGNATED WTS WILL NOT BE AVAILABLE FULL TIME (24/7), THE CONTRACTOR MAY DESIGNATE AN ALTERNATE (SECONDARY) WTS TO BE AVAILABLE WHEN THE PRIMARY IS OFF DUTY; HOWEVER THE PRIMARY WTS SHALL REMAIN THE POINT OF CONTACT AT ALL TIMES. ANY ALTERNATE (SECONDARY) WTS IS SUBJECT TO THE SAME TRAINING, PREQUALIFICATION AND OTHER REQUIREMENTS OUTLINED WITHIN THIS PLAN NOTE. AT ALL TIMES THE ENGINEER, OR ENGINEER’S REPRESENTATIVES, MUST BE INFORMED OF WHO THE PRIMARY WTS (AND SECONDARY WTS, IF APPLICABLE) IS AT THE CURRENT TIME.

THE WTS POSITION HAS THE PRIMARY RESPONSIBILITY OF IMPLEMENTING THE TRAFFIC MANAGEMENT PLAN (TMP), MONITORING THE SAFETY AND MOBILITY OF THE ENTIRE WORK ZONE, AND CORRECTING TEMPORARY TRAFFIC CONTROL (TTC) DEFICIENCIES FOR THE ENTIRE WORK ZONE. THE WTS, AND ALTERNATE WTS WHEN ON DUTY, SHALL HAVE SUFFICIENT AUTHORITY TO EFFECTIVELY CARRY OUT THE IDENTIFIED WTS RESPONSIBILITIES AND DUTIES. THE DUTIES OF THE WTS ARE AS FOLLOWS:

1. BE AVAILABLE ON A 24-HOUR PER DAY BASIS.
2. BE ON SITE FOR ALL EMERGENCY TTC NEEDS WITHIN ONE HOUR OF NOTIFICATION BY POLICE OR PROJECT STAFF, AND EFFECT CORRECTIVE MEASURES IMMEDIATELY ON EXISTING WORK ZONE TTC DEVICES.
3. ATTEND PRECONSTRUCTION MEETING AND ALL PROJECT MEETINGS WHERE TTC MANAGEMENT IS DISCUSSED.
4. BE AVAILABLE ON SITE FOR OTHER MEETINGS OR DISCUSSIONS WITH THE ENGINEER UPON REQUEST.
5. BE AWARE OF ALL EXISTING AND PROPOSED TTC OPERATIONS OF THE CONTRACTOR, SUBCONTRACTORS AND SUPPLIERS, AND ENSURE COORDINATION OCCURS BETWEEN THEM TO ELIMINATE CONFLICTING TEMPORARY AND/OR PERMANENT TRAFFIC CONTROL.
6. COORDINATE PROJECT ACTIVITIES WITH ALL LAW ENFORCEMENT OFFICERS (LEOS). THE WTS SHALL ALSO BE THE MAIN CONTACT PERSON WITH THE LEOS WHILE LEOS ARE ON THE PROJECT.
7. COORDINATE AND FACILITATE MEETINGS WITH ODOT PERSONNEL, LEOS AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS THE WORK ZONE TTC FOR IMPLEMENTING THE PHASE SWITCH. SUBMIT A WRITTEN DETAIL OF MOT OPERATIONS AND SCHEDULE OF EVENTS TO IMPLEMENT THE SWITCH BETWEEN PHASE PLANS TO THE ENGINEER 5 CALENDAR DAYS PRIOR TO THIS MEETING.
8. BE PRESENT, ON SITE FOR, AND INVOLVED WITH, EACH TTC SET UP/TAKE DOWN AND EACH PHASE CHANGE IN ACCORDANCE WITH CMS 614.03.

9. ON A CONTINUAL BASIS ENSURE THAT THE TTC ZONE AND ALL RELATED DEVICES ARE INSTALLED, MAINTAINED AND REMOVED IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
 10. ON A CONTINUAL BASIS FACILITATE CORRECTIVE ACTION(S) NECESSARY TO BRING DEFICIENT TTC ZONES AND ALL RELATED DEVICES INTO COMPLIANCE WITH CONTRACT DOCUMENTS IN THE TIMEFRAME DETERMINED BY THE ENGINEER.
 11. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TTC DEVICES AND TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, PERFORM ONE WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:
 - A. INITIAL TTC SETUP (DAY AND NIGHT REVIEW).
 - B. DAILY TTC SETUP AND REMOVAL.
 - C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TTC SETUP.
 - D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA AND WITHIN THE INFLUENCE AREA(S) APPROACHING THE WORK ZONE.
 - E. REMOVAL OF TTC DEVICES AT THE END OF A PHASE OR PROJECT.
 - F. ALL OTHER EMERGENCY TTC NEEDS.
 12. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN # 11 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORKDAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TTC MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING. ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED OR COMPLETED CORRECTIVE ACTIONS AND THE DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THE CURRENT CA-D-8 DOCUMENT CAN BE FOUND ON THE OFFICE OF CONSTRUCTION ADMINISTRATION’S INSPECTION FORMS WEBSITE.
 13. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.
- THE DEPARTMENT WILL DEDUCT:
- A. THE PRORATED DAILY AMOUNT OF ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY IN WHICH THE WTS FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. THE PRORATED DAILY AMOUNT WILL BE EQUAL TO THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC DIVIDED BY THE DIFFERENCE BETWEEN THE ORIGINAL COMPLETION DATE AND THE FIRST DAY OF WORK, IN CALENDAR DAYS.
 - B. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY THAT A TTC ISSUE IS IDENTIFIED IN THE FIELD AND IS NOT CORRECTED IN THE GIVEN TIMEFRAME PER THE ENGINEER. DEDUCTION B SHALL NOT APPLY TO SITUATIONS COVERED BY DEDUCTION C.

- C. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY THAT A LANE OR RAMP IS BLOCKED (FULLY OR PARTIALLY) WITHOUT TTC, AS DETERMINED BY THE ENGINEER. THIS DEDUCTION SHALL BE IN ADDITION TO ANY OTHER DISINCENTIVES ESTABLISHED FOR UNAUTHORIZED LANE USE.
- FOR DAYS IN WHICH MORE THAN ONE DEDUCTION LISTED ABOVE OCCUR, THE HIGHEST DEDUCTION AMOUNT WILL APPLY.
- IF THREE OR MORE TOTAL DAYS RESULT IN TTC ISSUES DESCRIBED IN DEDUCTION B OR C ABOVE, THE PRIMARY WTS SHALL BE IMMEDIATELY REMOVED FROM THE WORK IN ACCORDANCE WITH C&MS 108.05. UPON REMOVAL THE ENGINEER SHALL NOTIFY ODOT CENTRAL OFFICE (WTSPREQUALIFICATION@DOT.OHIO.GOV) TO REGISTER A REMOVAL AGAINST THE STATEWIDE PREQUALIFICATION FOR THE PRIMARY WTS. THREE REMOVALS SHALL CAUSE STATEWIDE DISQUALIFICATION FOR ANY PREVIOUSLY PREQUALIFIED WTS.
- PAYMENT FOR THE ABOVE REQUIREMENTS, RESPONSIBILITIES AND DUTIES SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.
- TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT**
- OHIO TIM IS OHIO’S TRAFFIC INCIDENT MANAGEMENT PROGRAM WHICH IS COMMITTED TO MAINTAINING THE SAFE AND EFFECTIVE FLOW OF TRAFFIC DURING EMERGENCIES AS TO PREVENT FURTHER DAMAGE, INJURY OR UNDUE DELAY OF THE MOTORING PUBLIC. IN ADDITION TO COMPLYING WITH THE PROVISION OF OMUTCD CHAPTER 6I, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS, THE CONTRACTOR SHALL ACTIVELY PARTICIPATE IN TIM PLANNING AND IMPLEMENTATION AS OUTLINED BELOW.
1. SUPERINTENDENT SHALL IDENTIFY THE INDIVIDUAL PERSONS ON THE PROJECT WHO WILL, OR MAY NEED TO, PERFORM THE DUTIES HEREIN. AT A MINIMUM, INCLUDE THE SUPERINTENDENT, FOREMEN AND SUPERVISORS (OR EQUIVALENT) AS WELL AS THE WORKSITE TRAFFIC SUPERVISOR (WTS; IF APPLICABLE TO THE PROJECT). THESE INDIVIDUALLY IDENTIFIED PERSONS SHALL COLLECTIVELY BE KNOWN AS CONTRACTOR TRAFFIC INCIDENT MANAGEMENT (TIM) CONTACTS. NOTIFY THE PROJECT ENGINEER OF THE CONTRACTOR TIM CONTACTS (ALONG WITH CONTACT INFORMATION FOR EACH) AT OR BEFORE THE PRECONSTRUCTION MEETING.
 2. SUPERINTENDENT SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONTRACTOR TIM CONTACT IS ADDED, REMOVED OR THE CONTACT INFORMATION CHANGES OVER THE COURSE OF THE PROJECT.
 3. PRIOR THE FIRST DAY OF WORK IN THE FIELD, EACH CONTRACTOR TIM CONTACT ON THE PROJECT SHALL HAVE ATTENDED AND SUCCESSFULLY COMPLETED OHIO TIM TRAINING PROVIDED BY THE DEPARTMENT OR DESIGNEE. TRAINING INFORMATION CAN BE FOUND AT WWW.OHIOTIM.COM.
 4. SUPERINTENDENT, AT A MINIMUM, SHALL ATTEND AND ACTIVELY PARTICIPATE IN A DEPARTMENT SCHEDULED TIM MEETING BEFORE CONSTRUCTION WORK BEGINS AND BEFORE EACH PHASE CHANGE. THESE MEETINGS WILL RESULT IN A DEPARTMENT ISSUED PROJECT SPECIFIC TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP). AT THE TIM MEETINGS THE ATTENDING CONTRACTOR TIM CONTACTS SHALL:

- A. COLLABORATE WITH ODOT AND SAFETY FORCES;
 - B. SHARE PROJECT SPECIFIC DETAILS THAT IMPACT TIM RESPONDERS; AND
 - C. RECOMMEND WAYS TO INCORPORATE NECESSARY EMERGENCY ACCESS AND OTHER TIM ELEMENTS FOR TIM RESPONDERS GIVEN PROJECT SPECIFIC WORK BEING COMPLETED AND PROJECT SPECIFIC PHASING.
5. CONTRACTOR TIM CONTACTS SHALL IMPLEMENT COMPONENTS OF THE RESULTING TIMP (SUCH AS APPROVED EMERGENCY INGRESS/EGRESS POINTS, ETC), AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
 6. CONTRACTOR TIM CONTACTS SHALL PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS WHEN AN INCIDENT/CRASH OCCURS:
 - A. IF OBSERVED OR PRESENT WHEN OCCURS, CALL 911 AND THEN NOTIFY THE TRAFFIC MANAGEMENT CENTER (TMC) TO PROVIDE THE FOLLOWING:
 - I. LOCATION, INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL
 - II. NUMBER AND TYPE OF VEHICLES INVOLVED, IF KNOWN
 - III. ESTIMATED EXTENT OF DAMAGE OR INJURY, IF KNOWN
 - IV. ESTIMATED NUMBER OF PATIENTS INVOLVED, IF KNOWN
 - V. ANY POTENTIAL HAZARDOUS CONDITIONS, IF KNOWN
 - VI. THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE, IF APPLICABLE AND VISIBLE
 - B. FOLLOWING AN INCIDENT/CRASH:
 - I. INITIATE TRAFFIC MANAGEMENT/PROVIDE TEMPORARY TRAFFIC CONTROL AS INDICATED IN THE TIMP, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
 - II. RECOMMEND ROADWAY REPAIR NEEDS.
 - III. PROVIDE REPAIR RESOURCES AND INITIATE REPAIRS, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
 - IV. ATTEND AND PARTICIPATE IN AN AFTER ACTION REVIEW (AAR).

ALL COSTS, UNLESS OTHERWISE SPECIFIED, RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614, MAINTAINING TRAFFIC. FAILURE TO PERFORM THE REQUIREMENTS OF THIS PLAN NOTE WILL RESULT IN A DAILY FINE OF 2% OF ITEM 614, MAINTAINING TRAFFIC AND MAY RESULT IN ONE OR MORE CONTRACTOR TIM CONTACTS BEING REMOVED FROM THE LIST OF OHIO TIM TRAINED INDIVIDUALS (AT THE SOLE DISCRETION OF THE OHIO TIM EXECUTIVE COMMITTEE). IN THE EVENT AN INDIVIDUAL IS REMOVED FROM THE OHIO TIM TRAINED LIST, THE INDIVIDUAL WILL BE REMOVED FROM CONTRACTOR TIM CONTACT RESPONSIBILITIES ON ALL PROJECTS.

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1 (ONE WAY)	123 EACH
ITEM 614, OBJECT MARKER, ONE WAY	123 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL; AND, ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.

OBJECT MARKERS SHALL BE INSTALLED ON ALL TEMPORARY AND PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKERS SHALL CONFORM TO C&MS 614.03 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET WITH A 25 FOOT OFFSET FROM THE BARRIER REFLECTORS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 2 (ONE WAY)	62 EACH
ITEM 614, OBJECT MARKER, ONE WAY	62 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEM(S).

ITEM 614. LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

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

DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) MAY BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

FOR OPERATIONS WITHOUT POSITIVE PROTECTION OCCURRING WITHIN 10 FEET OF AN OPEN TRAVELED LANE THAT MEET ALL OF THE FOLLOWING CRITERIA:
ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY; AND
AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION; AND,
AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)

"WITHOUT POSITIVE PROTECTION" MEANS USE OF DRUMS, CONES, SHADOW VEHICLE, ETC, WITHOUT PROTECTION FROM PORTABLE BARRIER OR OTHER RIGID BARRIER ALONG THE WORK AREA. THIS PHRASE DOES NOT APPLY TO CASES WHERE POSITIVE PROTECTION IS REQUIRED. MOBILE OPERATIONS ARE REGARDED AS "WITHOUT POSITIVE PROTECTION". FOR WORK ZONES USING A COMBINATION OF BARRIER AND TEMPORARY TRAFFIC CONTROL DEVICES (CONES, DRUMS, ETC), THE DESIGNATION SHALL BE BASED UPON THE TYPE OF DEVICES USED IN THE AREA THAT WORKERS ARE LOCATED.

IF MULTIPLE ACTIVE LOCALIZED QUALIFYING WORK AREAS OCCUR WITHOUT POSITIVE PROTECTION, PER MAINLINE TRAFFIC DIRECTION, PROVIDE A UNIFORMED LEO AND OFFICIAL PATROL CAR IN ADVANCE OF:
THE FIRST ACTIVE WORK AREA THAT DRIVERS WILL ENCOUNTER; OR
THE ACTIVE WORK AREA Laterally Closest to the OPEN TRAVELED LANE; OR
OTHER LOCATION AS APPROVED BY THE ENGINEER.
THE UNIFORMED LEO AND OFFICIAL PATROL CAR MAY RELOCATE AMONG THE LISTED LOCATIONS AS APPROPRIATE AS THE OPERATIONS PROCEED IN THE LOCALIZED QUALIFYING WORK AREAS.

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION (OR AT THE POINT OF ROAD CLOSURE), AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE THAT SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

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

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 200 HOURS

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

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614. WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN

WORK ZONE RAISED PAVEMENT MARKERS, AS PER PLAN, AND THEIR INSTALLATION SHALL CONFORM TO C&MS 621 AND SHALL BE USED FOR THE OVER WINTER PHASE.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN, INCLUDING FILLING OF ANY DEPRESSIONS CREATED IN THE PAVEMENT AS PER C&MS 621.08.

ITEM 442. ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 MM, TYPE A (449), AS PER PLAN

THIS ITEM IS INTENDED FOR USE AS A TEMPORARY SURFACE COURSE TO BE PLACED AT THE SAME TIME AS THE ITEM 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM TYPE A (448). THIS TEMPORARY ASPHALT WILL BE MILLED DURING PHASE 4 AND WILL BE REPLACED WITH THE PERMANENT SURFACE COARSE.

THE VARIABLE DEPTH ASPHALT AND VARIABLE DEPTH MILLING ASSOCIATED WITH THE 7 FT. WEDGE CONSTRUCTED IN PHASE 2 ARE INCIDENTAL TO THE AS PER PLAN ITEM.

LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING
DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY THURSDAY (THANKSGIVING ONLY)
	6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

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REF NO.	SHEET NO.	STATION TO STATION			SIDE	614	614	614	614	614	614	614	614	614	614	614	614	622	622	630				
						WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER (ONE-WAY WHITE @ 20' C/C SPACING)	WORK ZONE RAISED PAVEMENT MARKER (TWO-WAY WHITE/RED @ 40' C/C SPACING)	WORK ZONE RAISED PAVEMENT MARKER (ONE-WAY YELLOW @ 20' C/C SPACING)	WORK ZONE RAISED PAVEMENT MARKER (TWO-WAY YELLOW/RED @ 80' C/C SPACING)	WORK ZONE RAISED PAVEMENT MARKER (ONE-WAY WHITE @ 120' C/C SPACING)	BARRIER REFLECTOR, TYPE 1 (ONE WAY)	OBJECT MARKER, ONE WAY	WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT (WHITE)	WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT (YELLOW)	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT			PORTABLE BARRIER, "Y" CONNECTOR	PORTABLE BARRIER, UNANCHORED		SIGN, TEMPORARY OVERLAY
		PHASE I				EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	MILE	MILE	MILE	FT	FT			EACH	FT		SF
DL-101	23	480+40	TO	483+50	LT												310							
DL-102	31-32	486+40	TO	496+10	LT												970							
PB-101	23-27	484+00	TO	442+85	LT							68	68									3360		
PB-102	26-28	439+00	TO	457+50	LT							38	38									1850		
PB-103	28-29	458+70	TO	463+50	LT							11	11									480		
PB-104	29-30	464+50	TO	472+20	LT							16	16							1		760		
PB-105	29	471+00	TO	472+00	LT							3	3									100		
PB-106	29-32	470+66	TO	497+60	LT							55	55									2700		
PB-107	32-33	497+60	TO	505+80	LT							17	17									820		
EW-101	23-27	480+40	TO	444+56	LT		16								0.73									
EW-102	26-29	441+00	TO	470+96	LT										0.57									
EW-103	29-32	470+66	TO	498+08	LT										0.52									
EW-104	32-33	497+60	TO	510+90	LT		50								0.25									
CH-101	23	477+40	TO	487+00	LT		49										960							
CH-102	23	477+40	TO	487+00	LT		49										960							
CH-103	23	477+40	TO	487+00	LT		49										960							
CH-104	25-26	431+00	TO	441+59	LT			28									1059							
CH-105	25-26	431+00	TO	441+00	LT		30										1000							
CH-106	26-27	438+15	TO	445+65	LT		38										750							
CH-107	26-27	441+59	TO	444+56	LT		16										300							
CH-108	29-30	470+96	TO	481+02	LT			10									1006							
CH-109	29-30	470+96	TO	474+41	LT			10									345							
CH-110	32	496+10	TO	497+60	LT												150							
CH-111	32	496+10	TO	497+73	LT			5									163							
CH-112	32-34	501+00	TO	513+60	LT		64										1260							
CH-113	32-34	501+00	TO	513+60	LT		64										1260							
EY-101	23-33	480+40	TO	510+90	LT				138							1.99								
EY-102	26-27	441+59	TO	444+56	LT				16							0.06								
EY-103	29	470+11	TO	470+66	LT					2						0.01								
EY-104	32	497+73	TO	498+15	LT					2						0.01								
LL-101	24-26	487+00	TO	441+59	LT						25			0.56										
LL-102	24-25	487+00	TO	431+00	LT						16			0.35										
LL-103	24-26	487+00	TO	438+15	LT						22			0.49										
LL-104	27-32	445+65	TO	501+00	LT						47			1.05										
LL-105	30-32	481+02	TO	501+00	LT						17			0.38										
IA-101	27	442+85	TO	443+10	LT	1																		
IA-102	28	457+50	TO	457+75	LT	1																		
IA-103	29	463+50	TO	463+75	LT	1																		
IA-104	30	472+20	TO	472+45	LT	1																		
IA-105	32	497+60	TO	497+85	LT	1																		
IA-106	33	505+80	TO	506+05	LT	1																		
S-101	30	481+00			LT																			14
S-102	31	489+00			LT																			6
TOTALS CARRIED TO GENERAL SUMMARY						6	425	53	154	4	127	208	208	2.84	2.07	2.07	10173	1280		1	10070		20	

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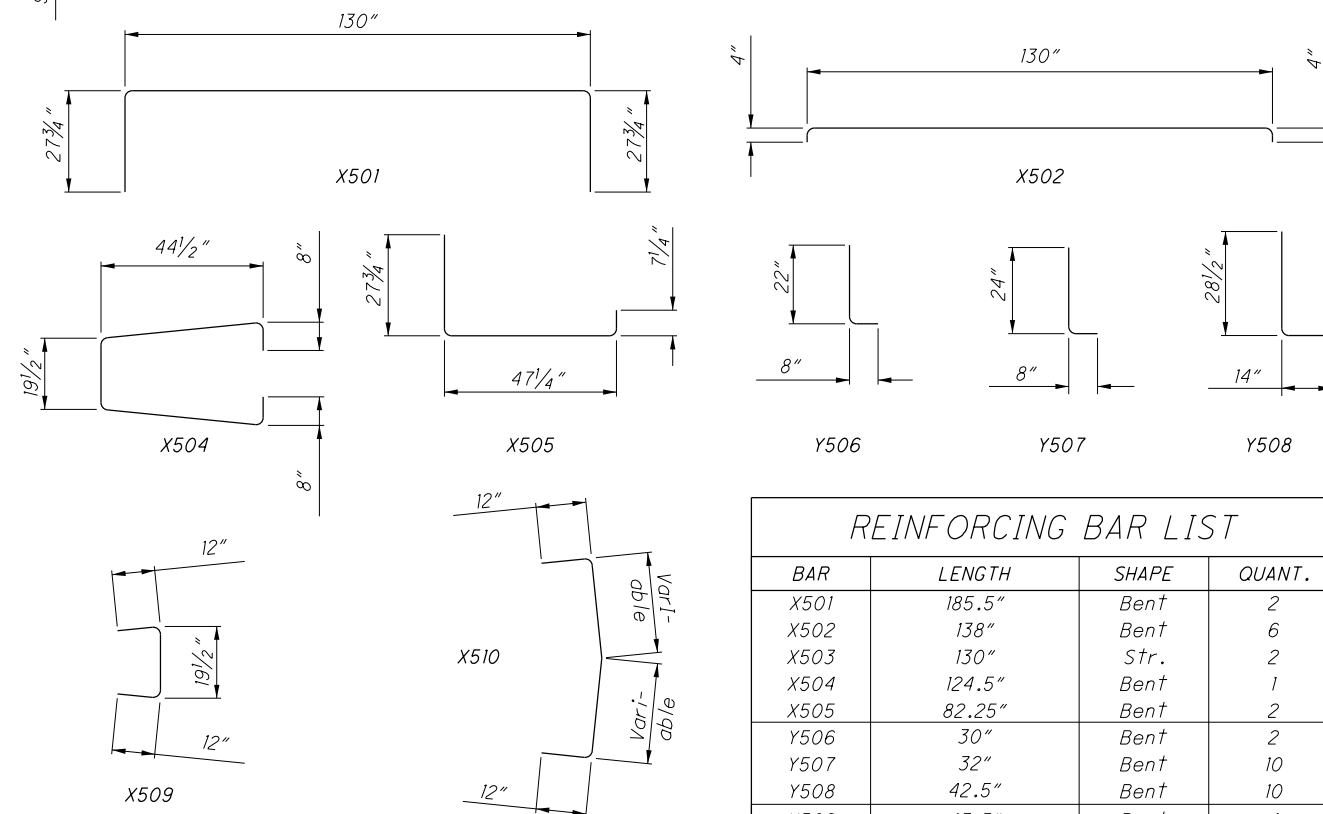
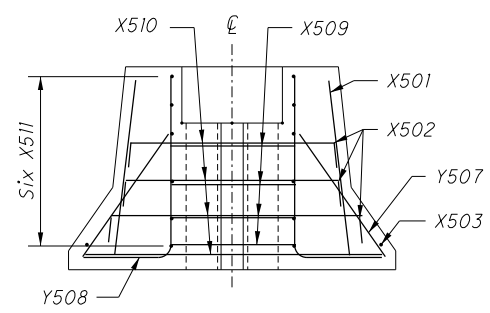
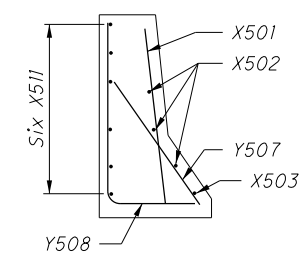
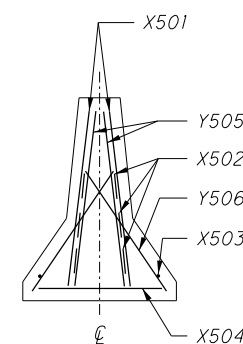
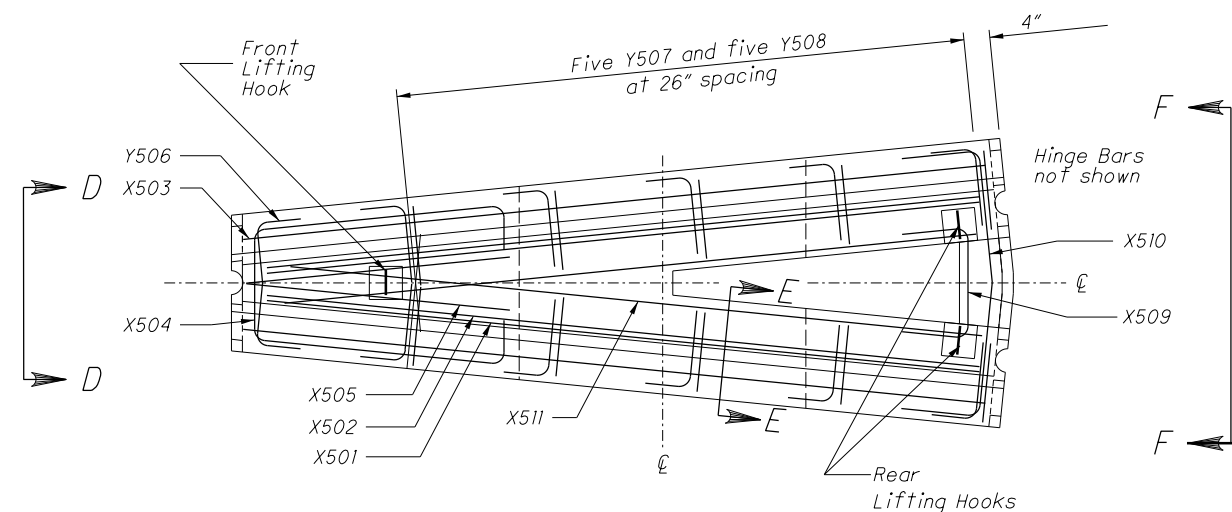
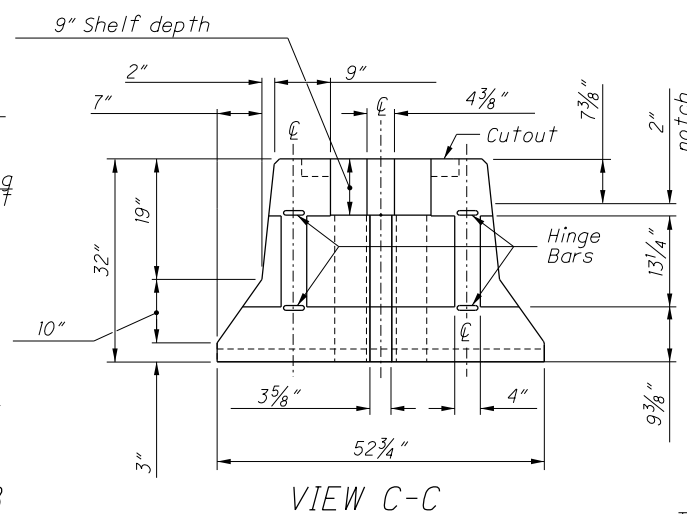
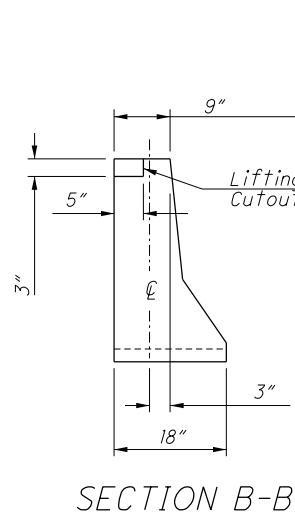
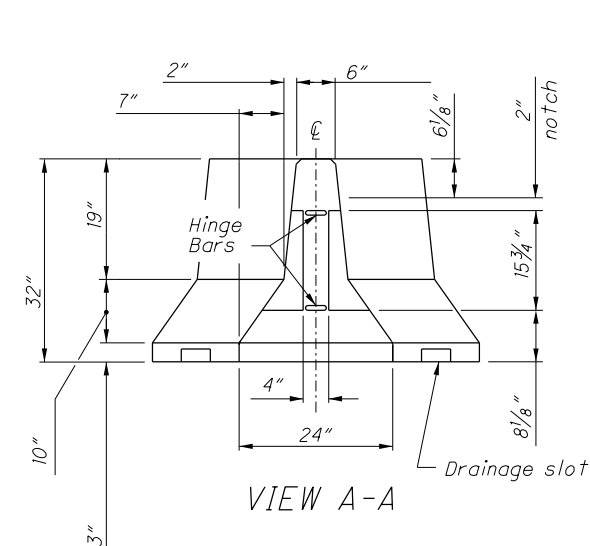
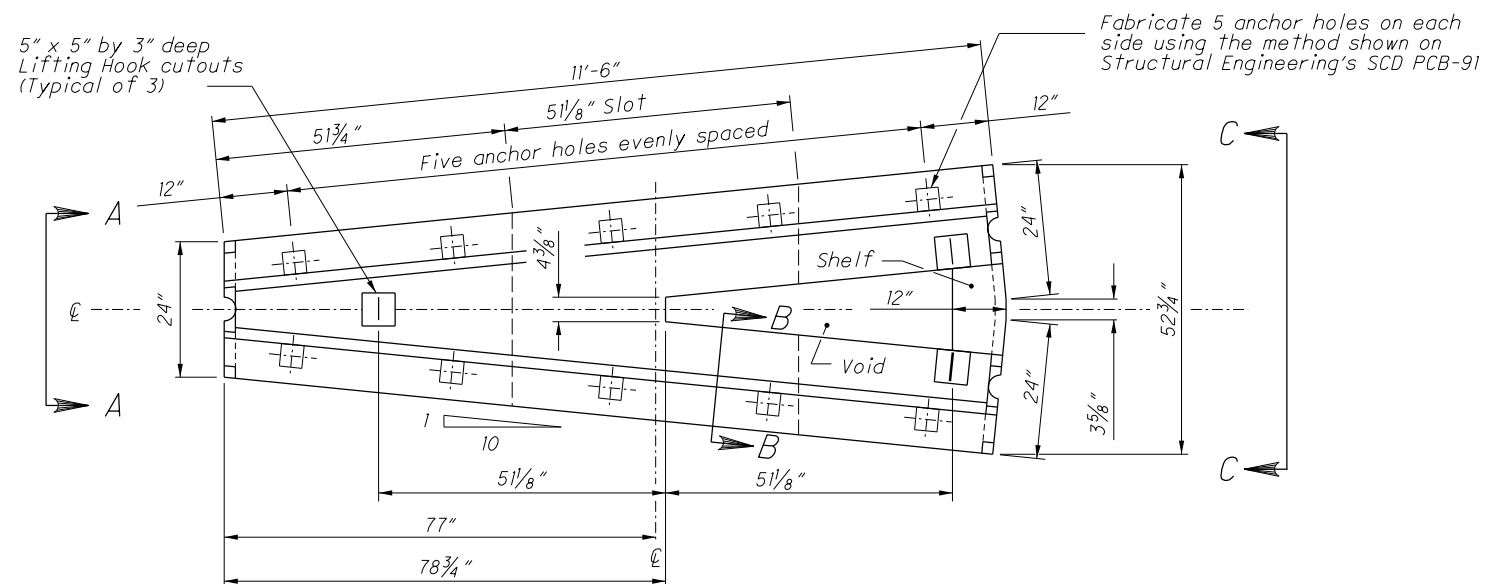
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MAINTENANCE OF TRAFFIC SUBSUMMARY

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MAINTENANCE OF TRAFFIC PAVEMENT CALCULATIONS



REINFORCING BAR LIST			
BAR	LENGTH	SHAPE	QUANT.
X501	185.5"	Bent	2
X502	138"	Bent	6
X503	130"	Str.	2
X504	124.5"	Bent	1
X505	82.25"	Bent	2
Y506	30"	Bent	2
Y507	32"	Bent	10
Y508	42.5"	Bent	10
X509	43.5"	Bent	4
X510	Varies	Bent	4
X511	124"	Str.	12

GENERAL: This barrier segment is used to split one run of portable concrete barrier into dual runs. Attach directly to ODOT's 32" PCB; however, other approved barrier shapes may be connected to this segment by the use of an appropriate transition unit. Attach at least one standard PCB segment in between this "Y" and an Impact Attenuator. Its field application is shown in MOT plans and on MT standard drawings. Do not use this barrier in an unanchored configuration next to bridge deck edges or similar dropoffs, anchor according to method shown on PCBDD or other approved method.

BARRIER DETAILS: Use SCD RM-4.2 for details not shown here, including the geometry of this pin and loop segment matches in every way the design of the end connections shown on the HINGED CONNECTION and JOINT CONNECTION Details (the alternate J-J Hooks connection design is permitted). Additionally, barrier edges may be radiused or chamfered as per the LEGEND Note, barrier is to be permanently marked as mentioned in the MARKINGS Note, and delineate as per the REFLECTORIZATION Note.

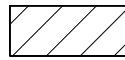
MATERIAL SPECIFICATIONS: The minimum design strength of the concrete is 4,000 psi and meets the requirements of CMS 499. For reinforcing steel, use ASTM A615 Grade 60 black steel and provide 2" min. rebar cover. Material specifications for the Hinge and Reinforcing Bars, as well as the Connecting Hardware may be found on SCD RM-4.2. For additional material specifications not shown here, see SCD RM-4.2 and CMS 622.

HANDLING: The fabricator is responsible for the design of a lifting system for handling segments. As a minimum, use three lifting points at the locations suggested in the Plan views, and design with a lifting factor of safety of 4. Any protrusions from the lifting hook design is not to affect the crash worthiness of the barrier. The calculations shall be signed, sealed and dated by a Registered Engineer and include these calculations with the Manufacturing Drawings required by Supplement 1073.12. Refer to Part 5 of the PCI Handbook. Approximate segment weight is 8,500 lbs [3850 kg].

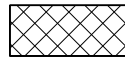
PAYMENT: Payment will be made under Item 622 - Portable Barrier, "Y" Connector, Each, and will include all forms, materials and labor to cast this segment.

ALTERNATE METHOD: Contractors may choose to use a wide Impact Attenuator in lieu of the concrete "Y" alternate. The chosen unit will be a Type 2 or 3 Impact Attenuator matching the product previously called for on the project plans at the expected installation location.

LEGEND



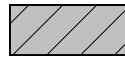
WORK TO BE PERFORMED
IN PHASE



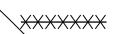
WORK TO BE PERFORMED
BETWEEN PHASES



WORK PERFORMED IN
A PREVIOUS PHASE



WORK ZONE PAVEMENT
COMPLETED PRIOR TO
PHASE 1



EXISTING PAVEMENT
MARKING REMOVED



LL
WORK ZONE LANE LINE, CLASS 1, 6", 807 PAINT



DL
WORK ZONE DOTTED LINE, CLASS 1, 6", 807 PAINT (WHITE)



EW
WORK ZONE EDGE LINE, CLASS 1, 6", 807 PAINT (WHITE)



EY
WORK ZONE EDGE LINE, CLASS 1, 6", 807 PAINT (YELLOW)



CH
WORK ZONE CHANNELIZING LINE, CLASS 1, 12", 807 PAINT



CV
WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS 1, 642 PAINT



PB
PORTABLE BARRIER,
UNANCHORED



IA
IMPACT ATTENUATOR



XX WORK ZONE ITEM PLACED IN PREVIOUS PHASE

DRUM SPACING CHART	
TANGENT	80' C/C
TAPER	40' C/C

EXIT 7

Clague Rd
Westlake
Fairview Pk

1 3/4 MILES

EXIT 9

Grayton Rd

END
ROAD WORK

G20-2-48
STA. 465+30
(DUAL)



Toledo

MEET EX. PAVEMENT MARKINGS
STA. 477+40

RAMP FROM IR-480 WB TO GRAYTON RD

PAVEMENT FOR MAINTAINING
TRAFFIC PLACED IN PREPHASE 1

MEET EX. PAVEMENT MARKINGS
STA. 480+40

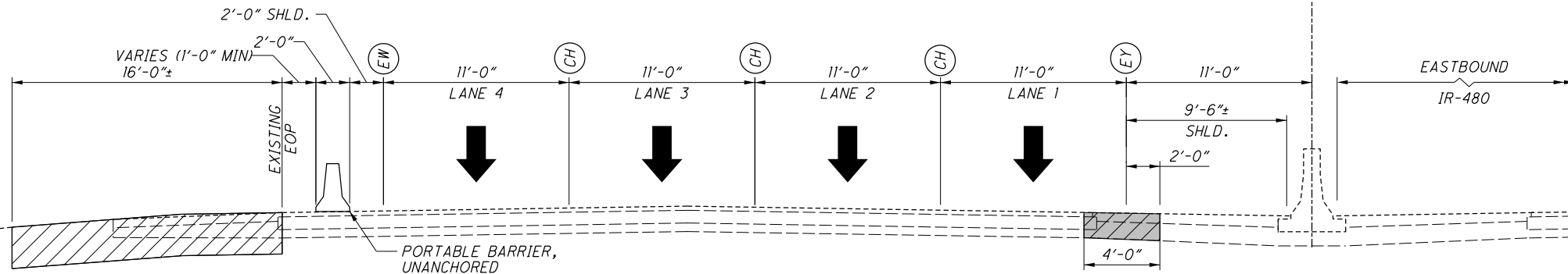
360' SHIFT TAPER (60:1)
LANE WIDTH TRANSITION 12' TO 11'

CONSTRUCTION IR-480

EXIT 9

Rental Car
Return

MATCH LINE STA. 487+00, SEE SHEET 24



TYPICAL SECTION A-A
(NORMAL)

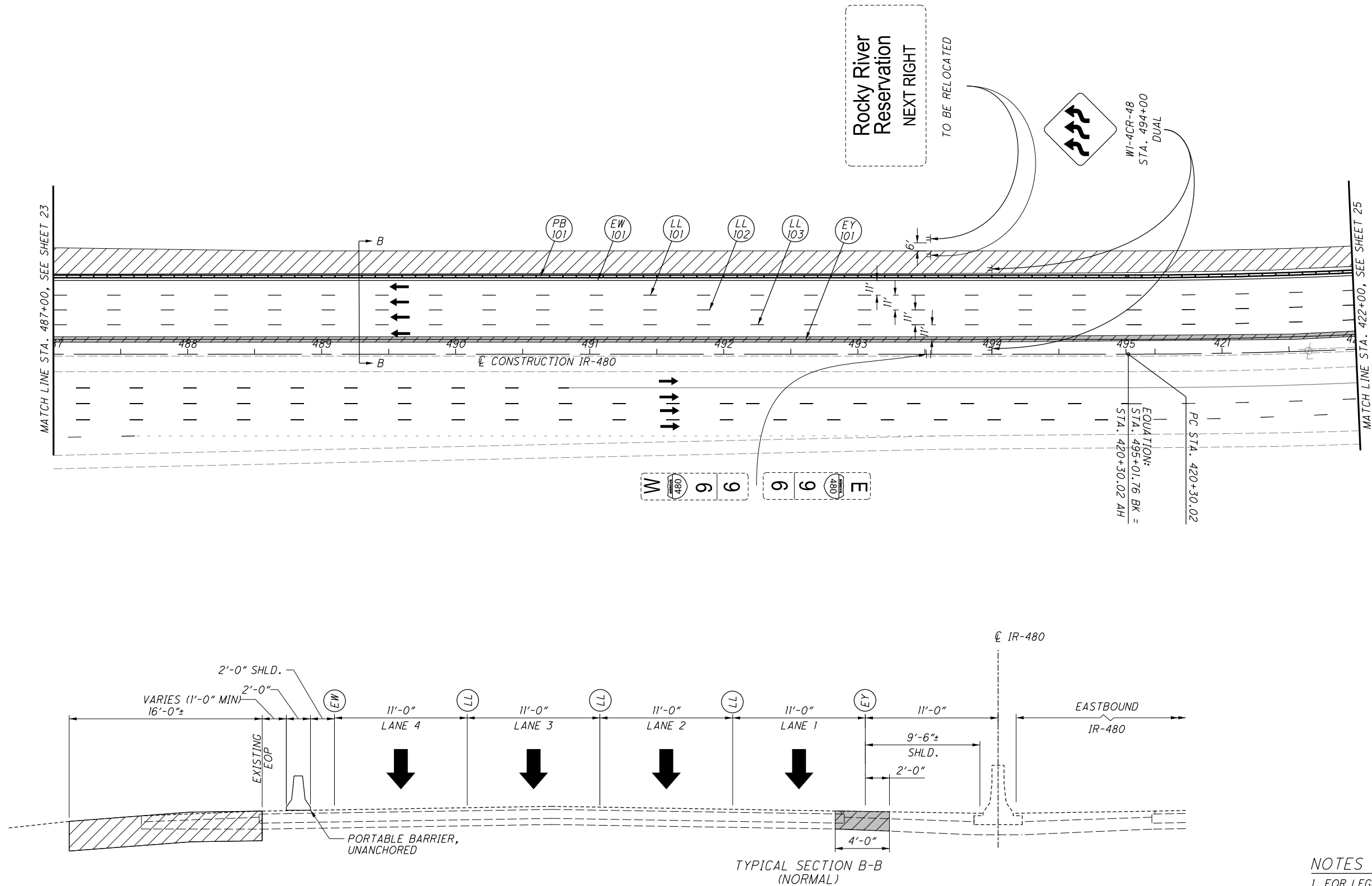


CALCULATED
DMG
CHECKED
NAU

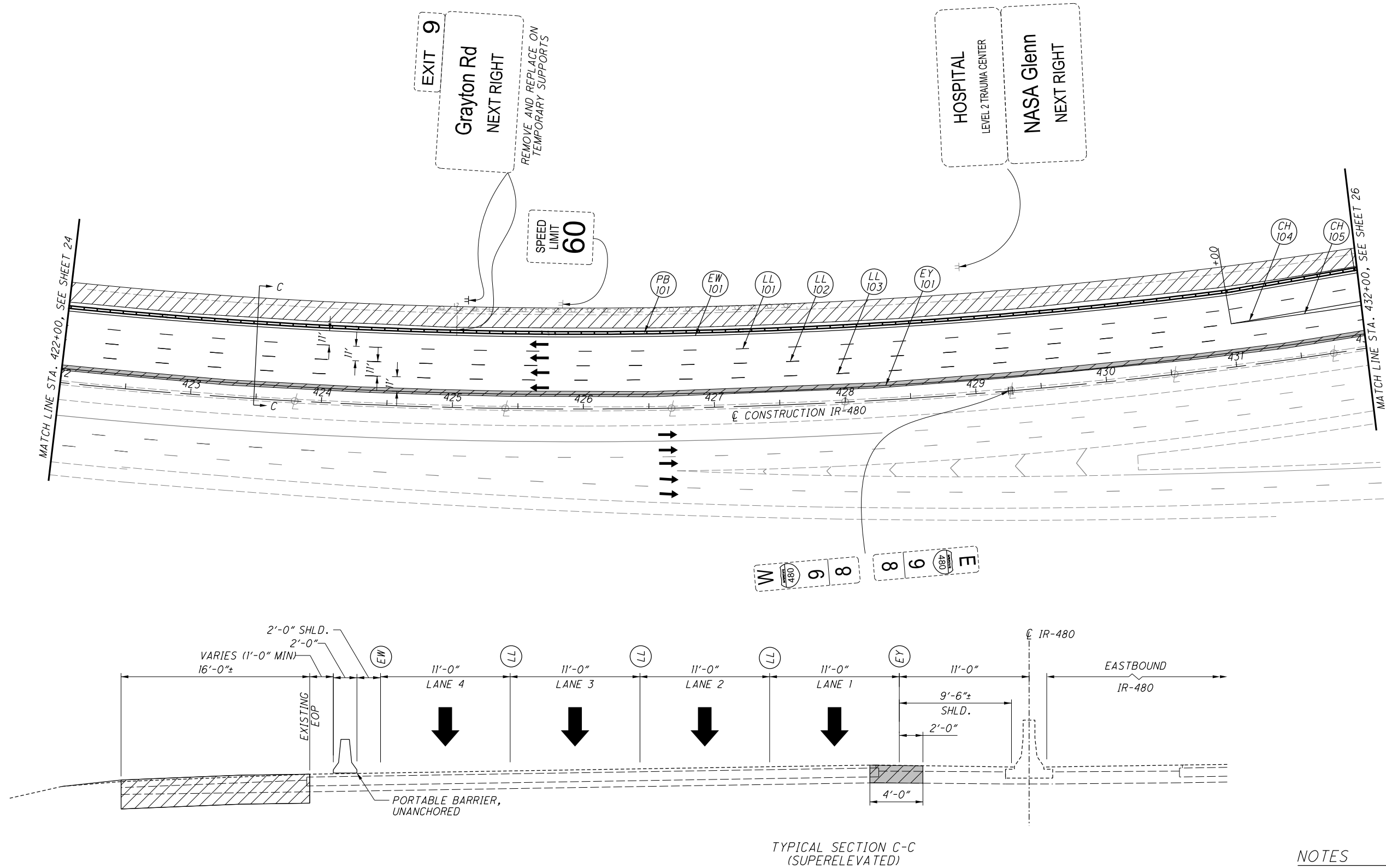
MAINTENANCE OF TRAFFIC - PHASE 1
STA. 477+00 TO STA. 487+00

CUY-480-07.14 WB

23
225

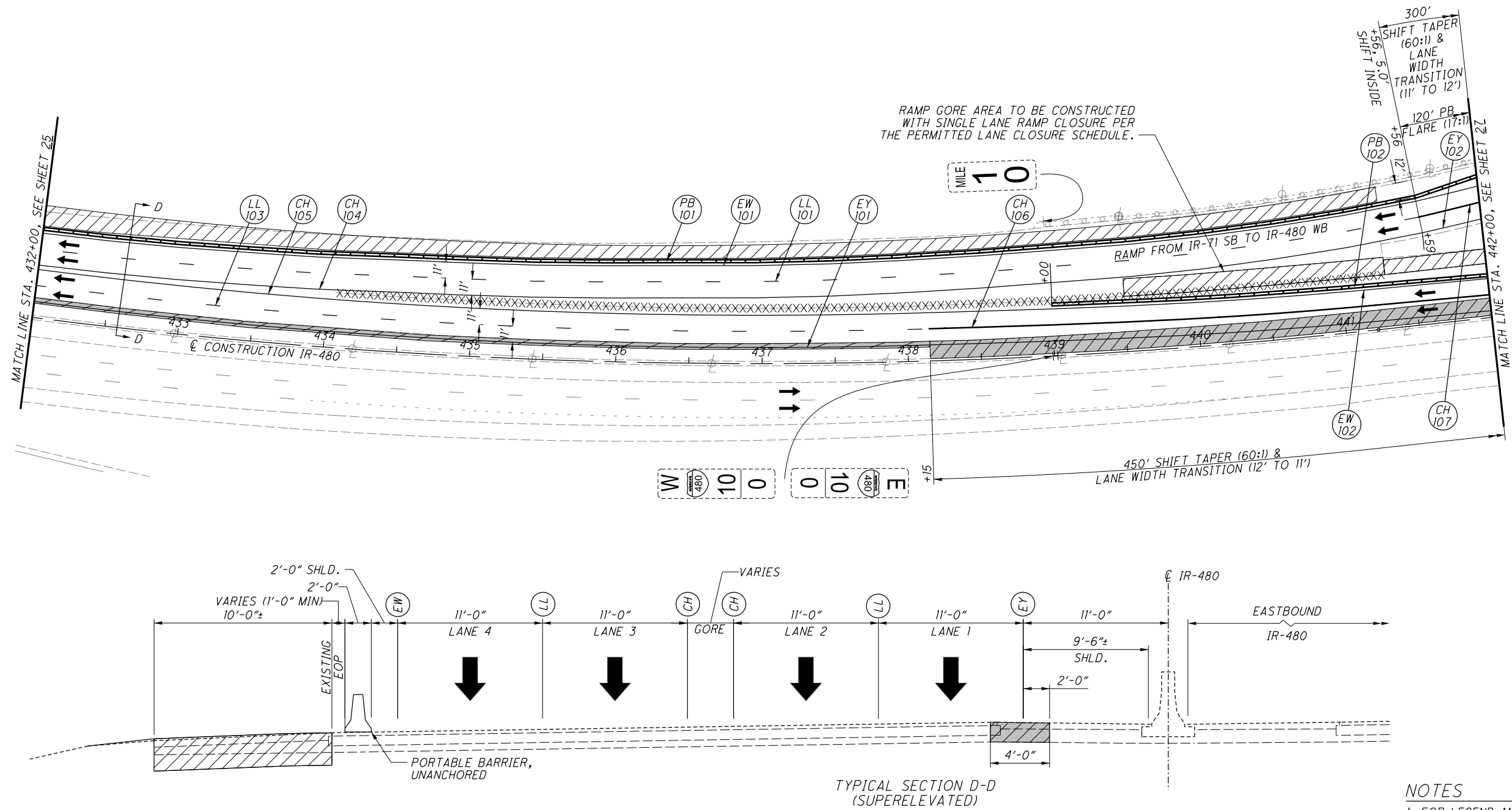


NOTES
1. FOR LEGEND AND DRUM SPACING
CHART, SEE SHEET 23.



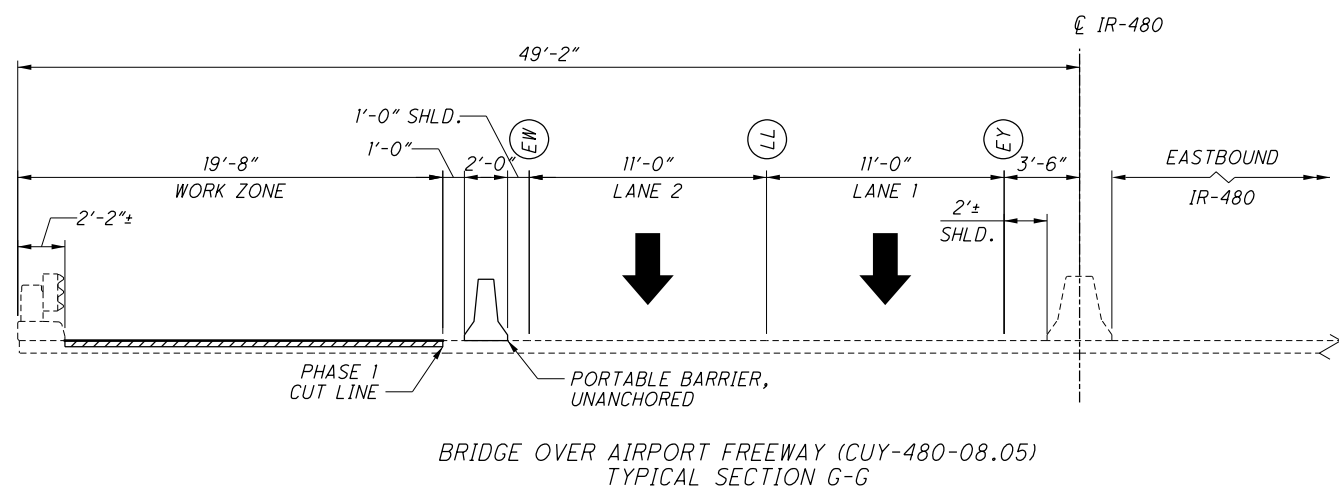
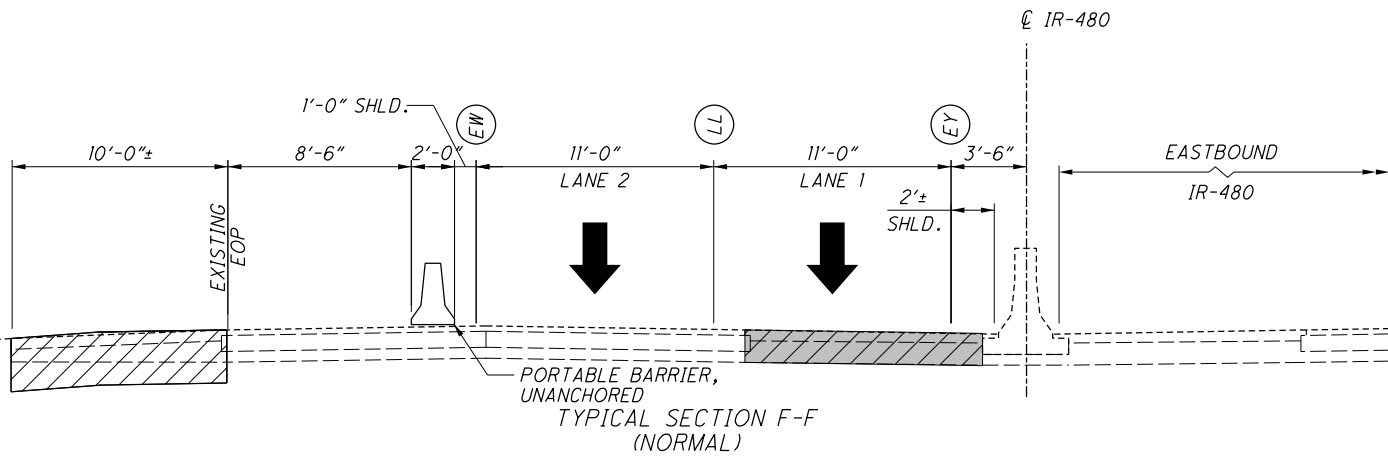
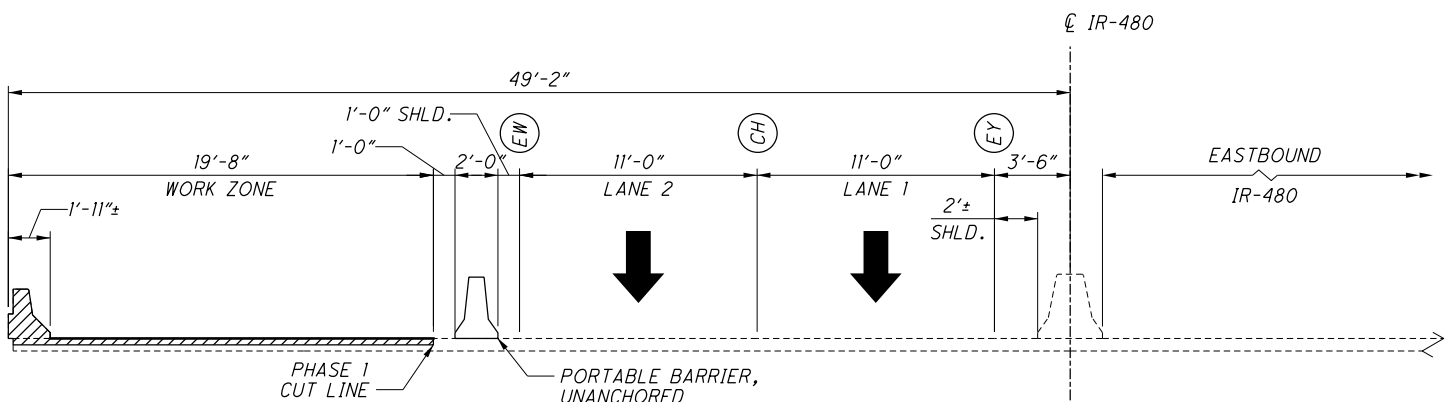
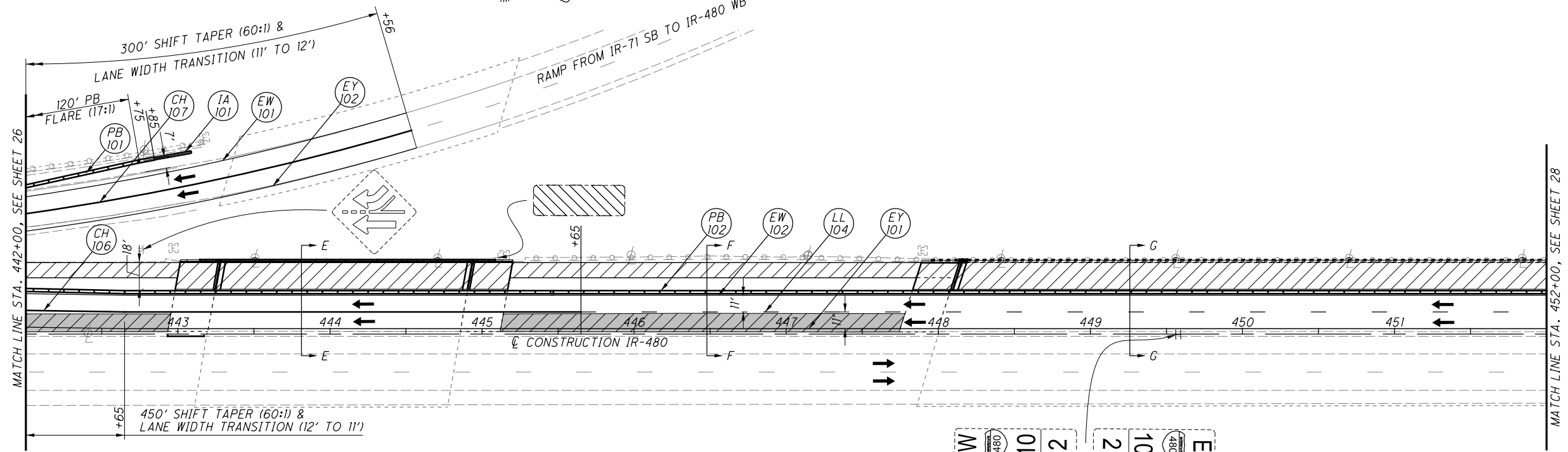
NOTES

1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.



NOTES
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.

P:\DDT\MP\0119_CUY-480-7.14 WB\108482\Design\DOT\Sheets\108482_MP105.dgn Sheet 8/3/2022 10:57:35 AM CMT008



NOTES
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.

CALCULATED
DMG

CHECKED
NAU

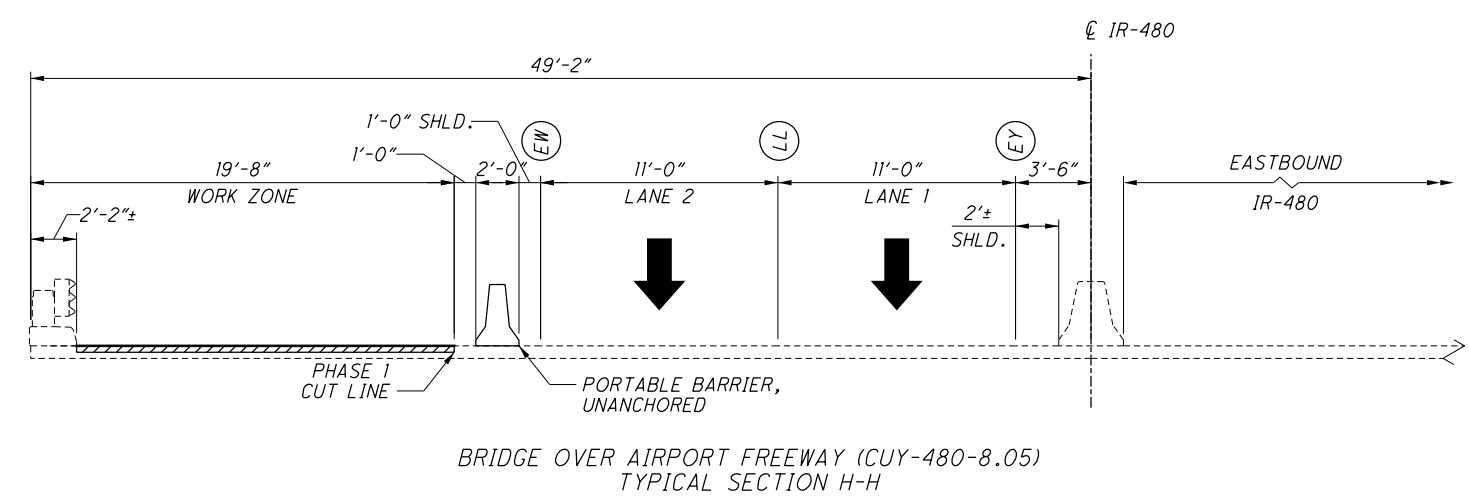
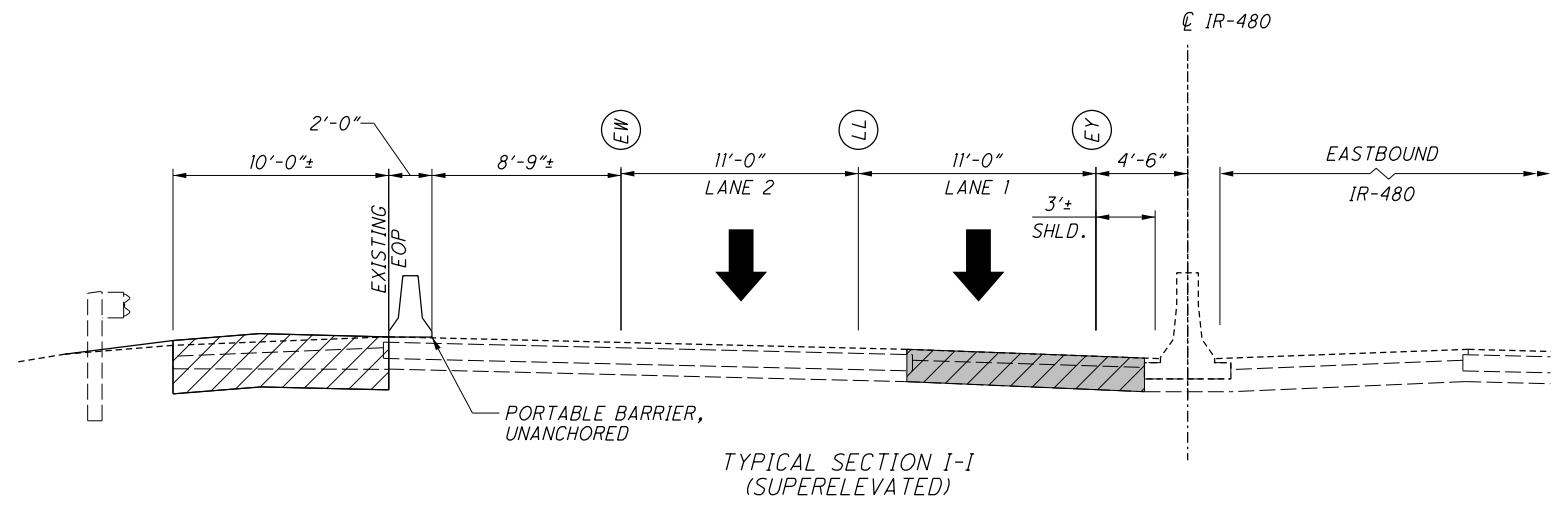
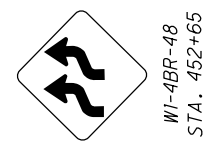
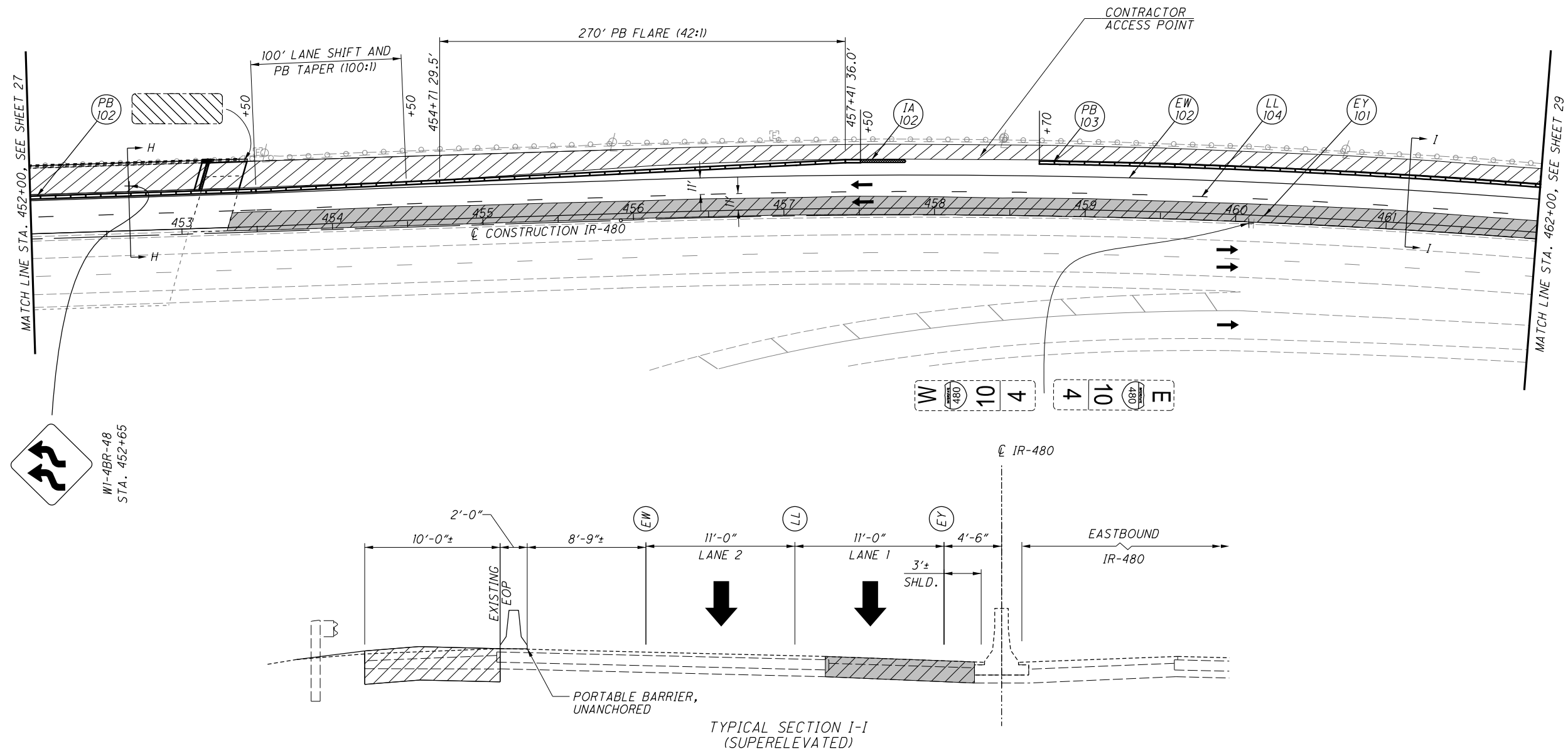
MAINTENANCE OF TRAFFIC - PHASE 1

STA. 442+00 TO STA. 452+00

CUY-480-07.14 WB

27
225

P:\ODD\MP\0119_CUY-480-7.14 WB\108482\Design\DOT\Sheets\108482_MP106.dgn Sheet 8/3/2022 10:57:36 AM CMT008



NOTES
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.

CUY-480-07.14 WB

28
225

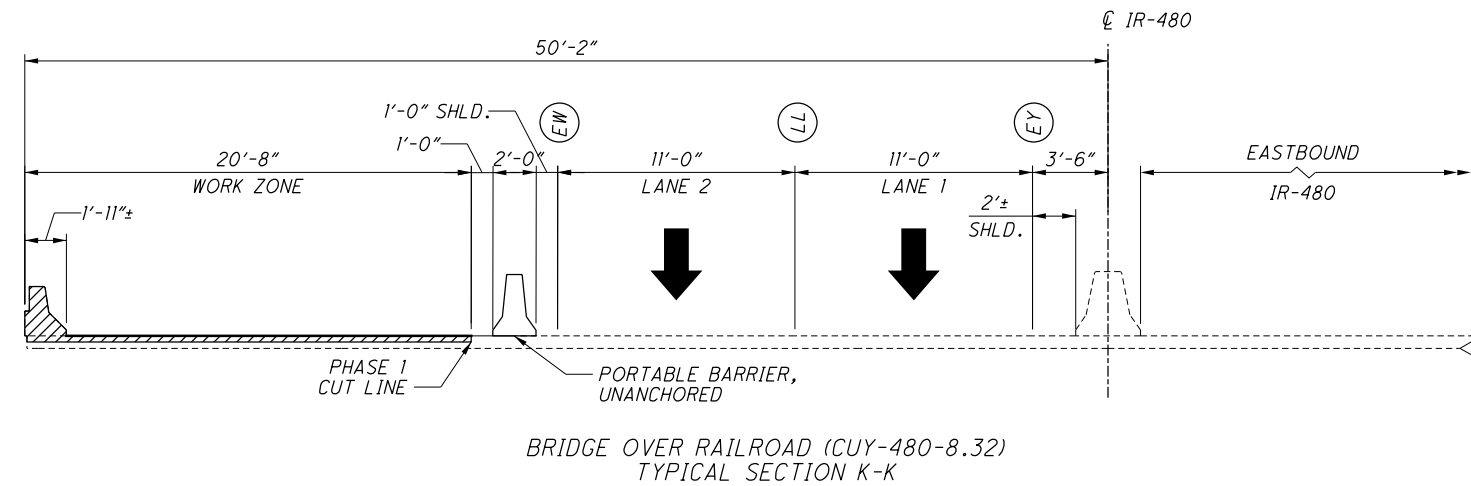
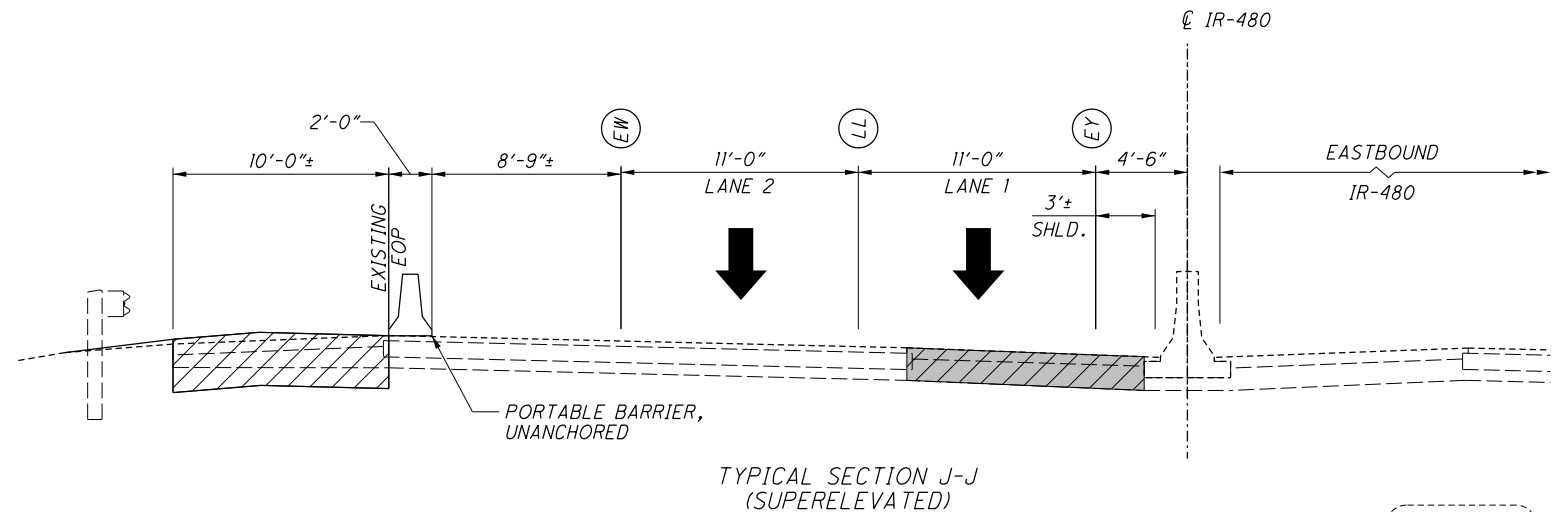
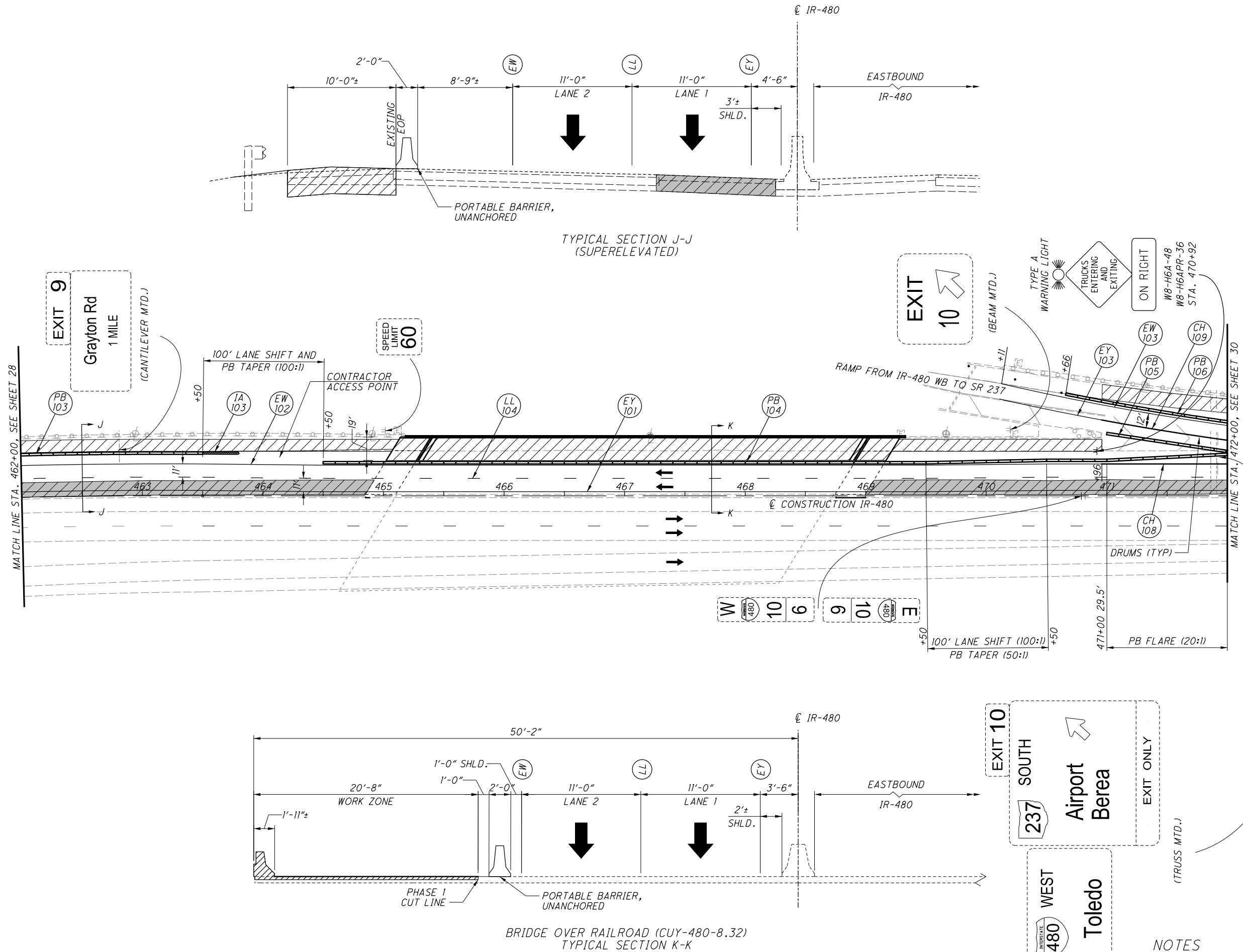
MAINTENANCE OF TRAFFIC - PHASE 1

STA. 452+00 TO STA. 462+00

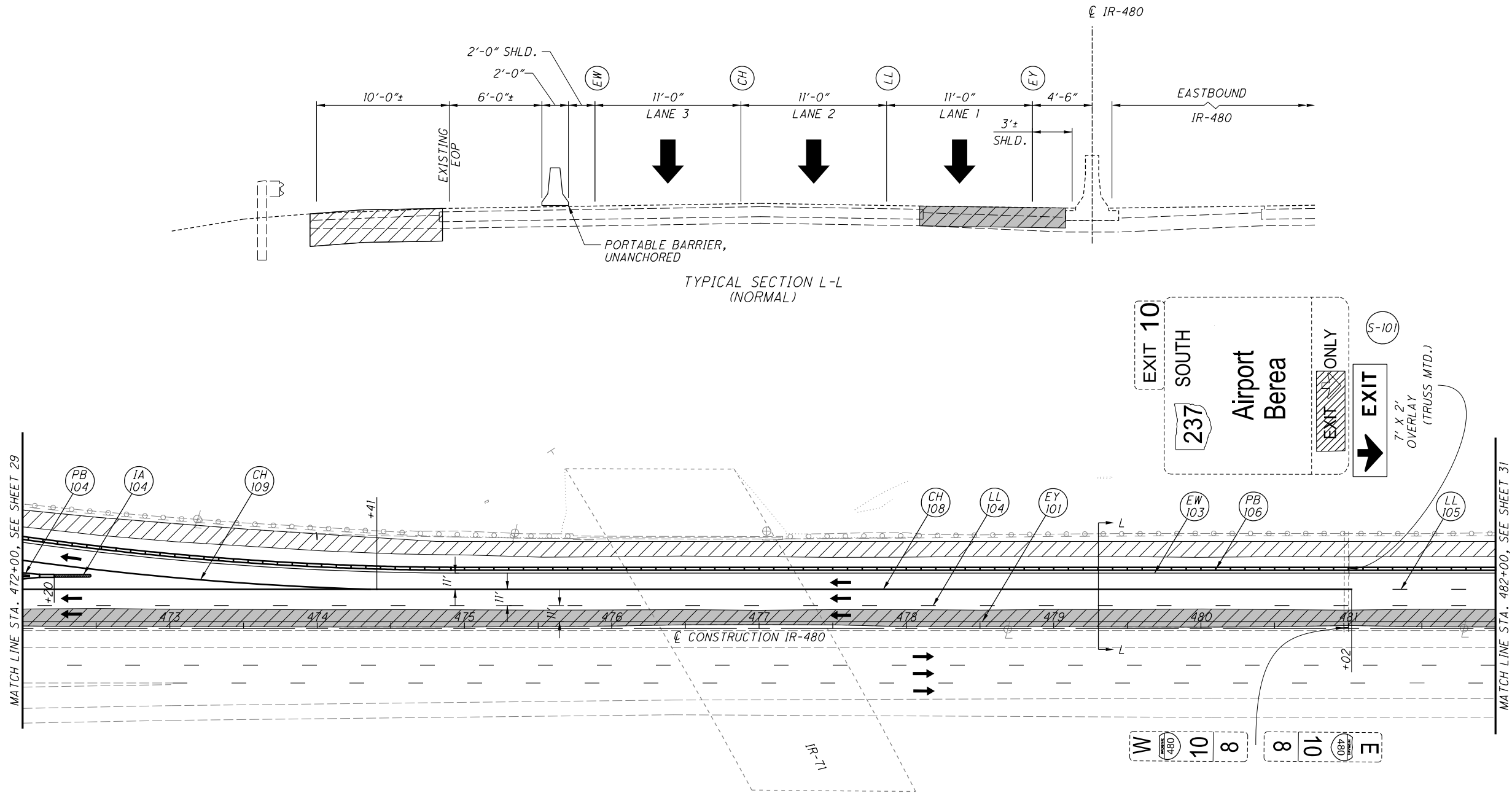
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CHECKED
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HORIZONTAL SCALE IN FEET



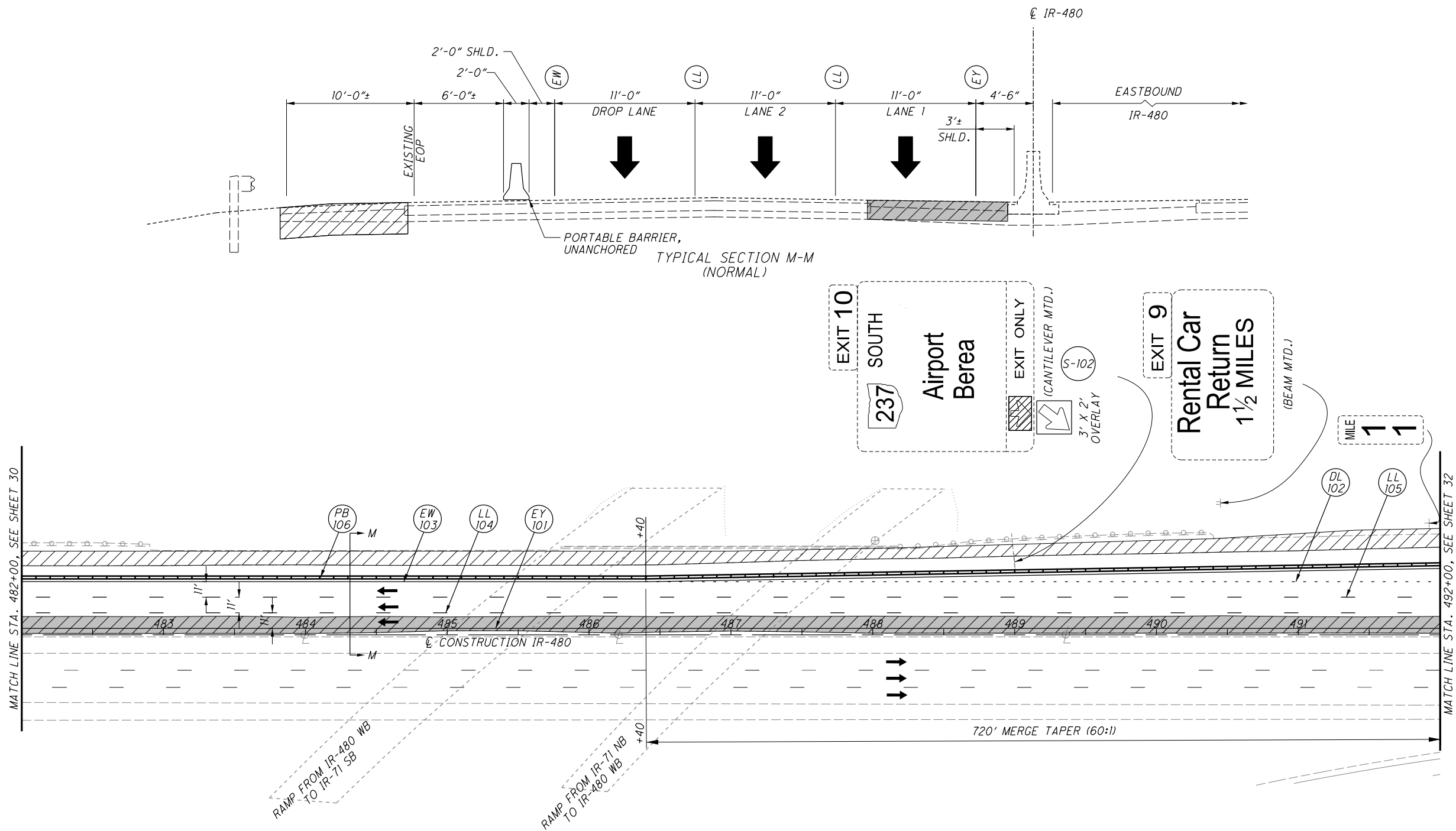
NOTES
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.



TYPICAL SECTION L-L
(NORMAL)

NOTES

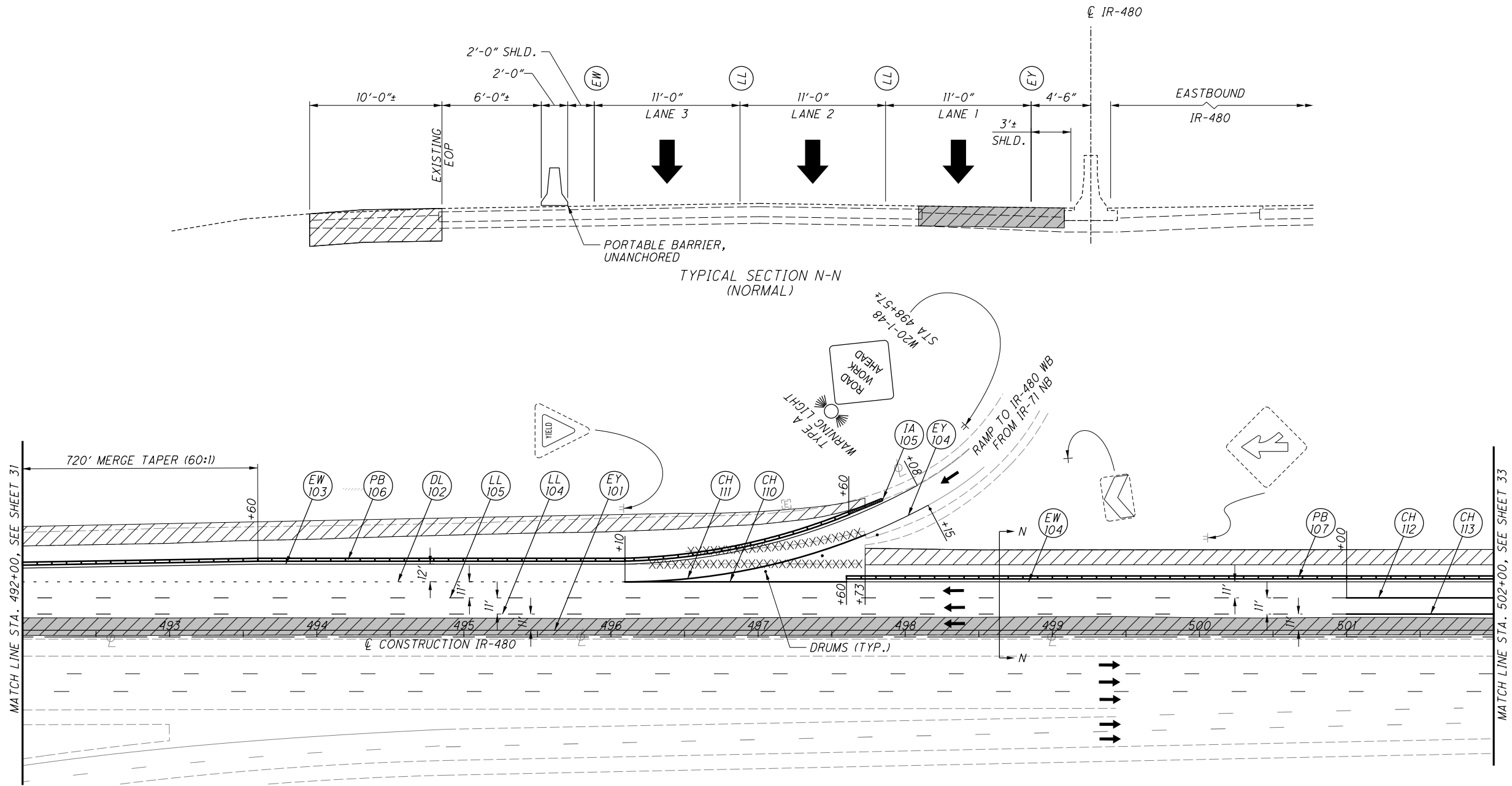
1. FOR LEGEND AND DRUM SPACING
CHART, SEE SHEET 23.



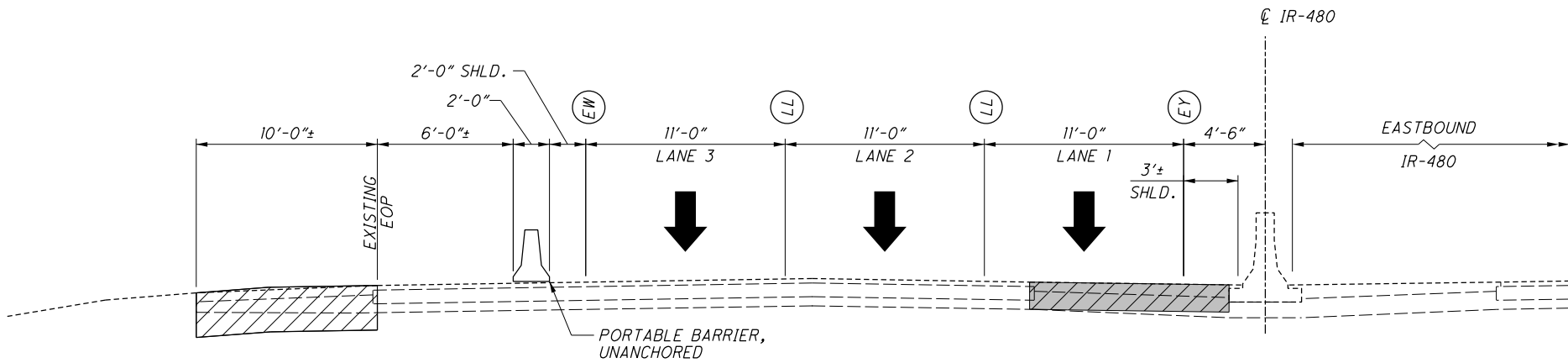
TYPICAL SECTION M-M (NORMAL)

NOTES

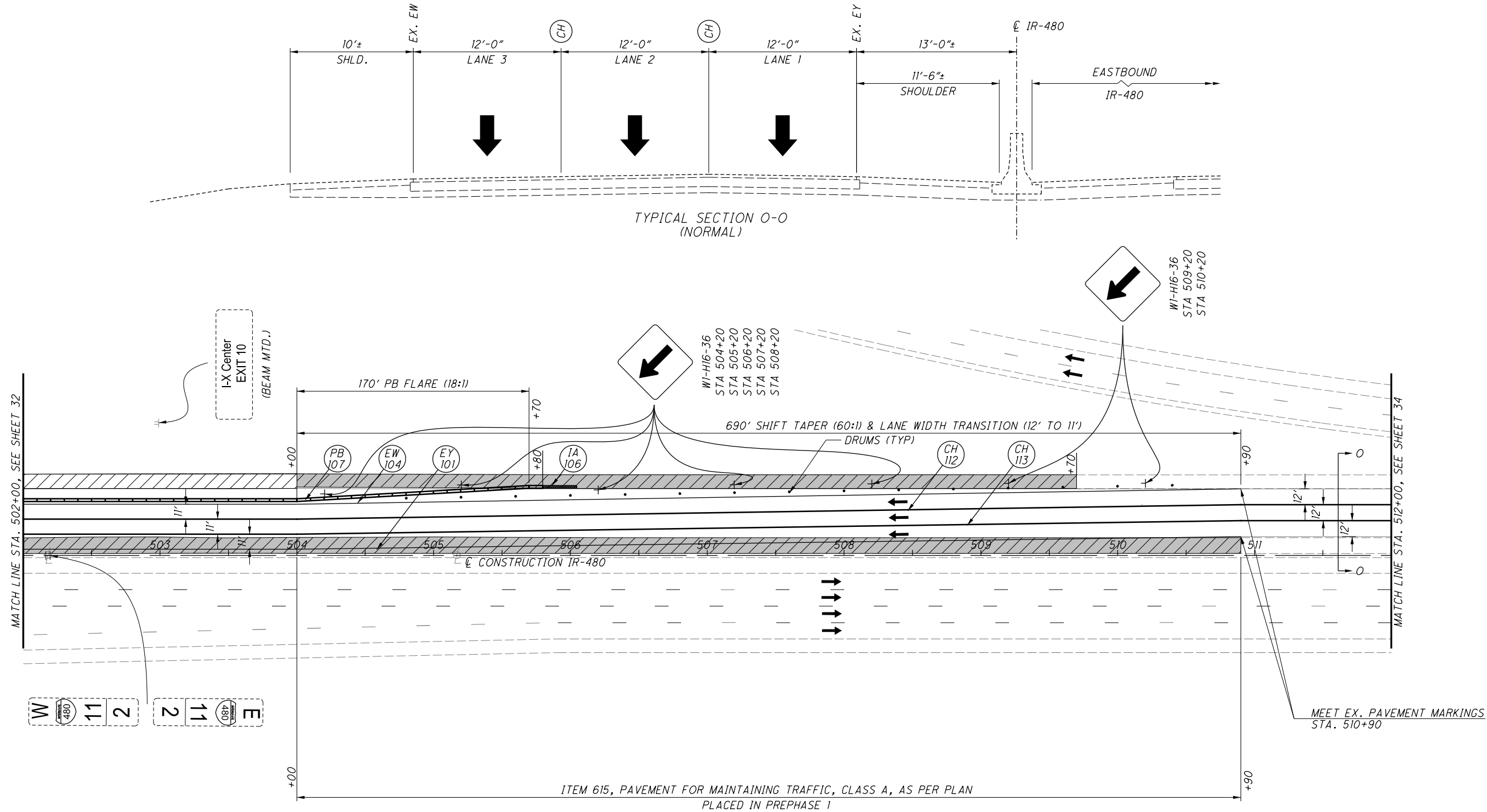
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.



TYPICAL SECTION N-N
(NORMAL)



NOTES
1. FOR LEGEND AND DRUM SPACING
CHART, SEE SHEET 23.



NOTES

1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.

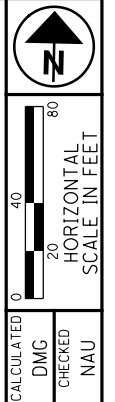


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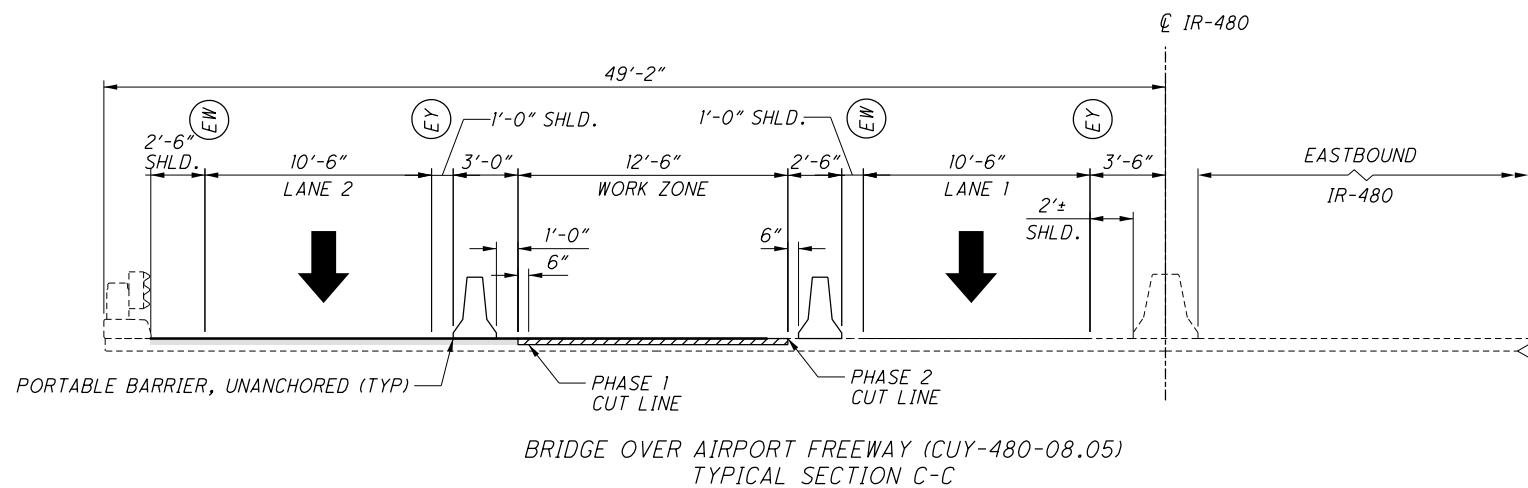
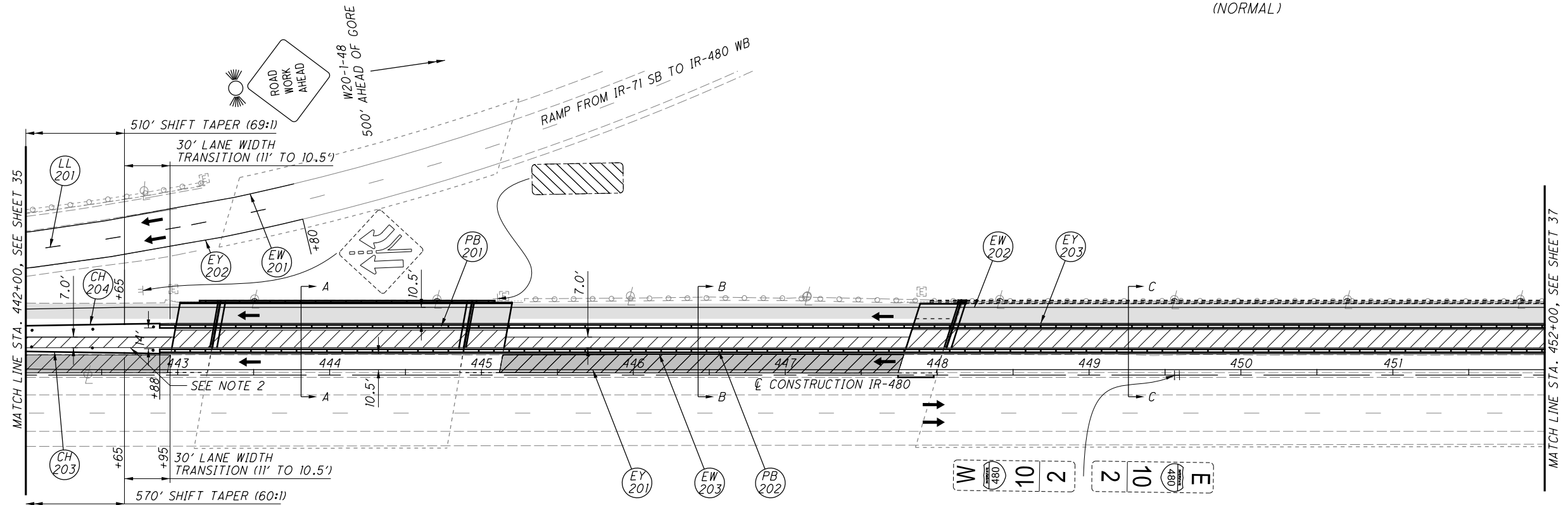
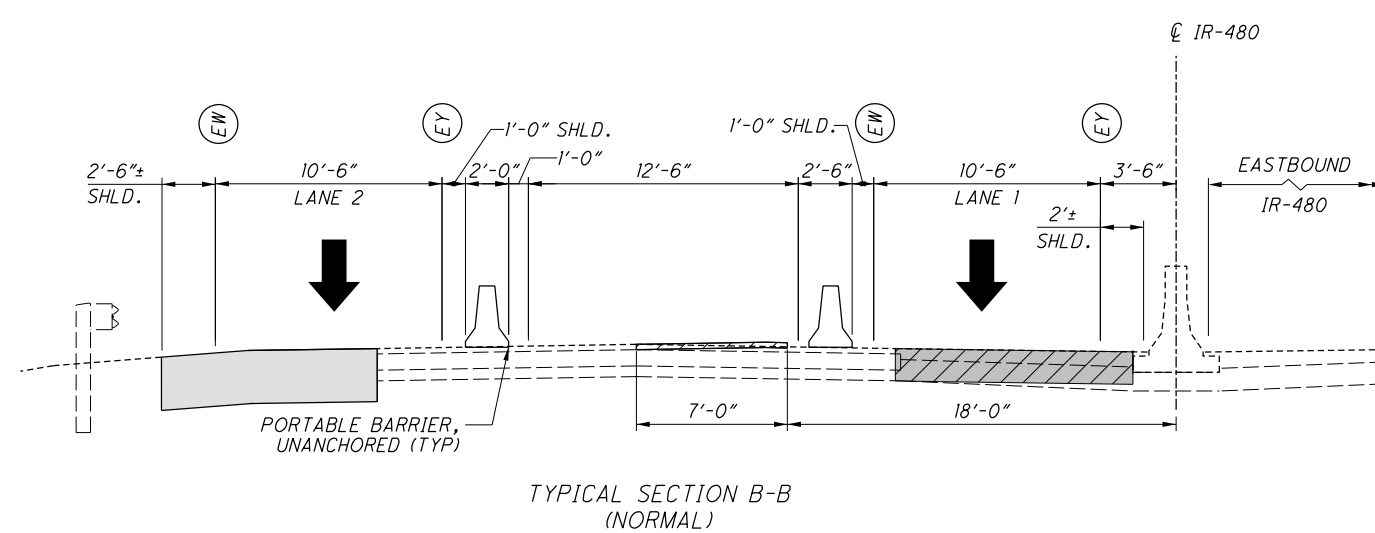
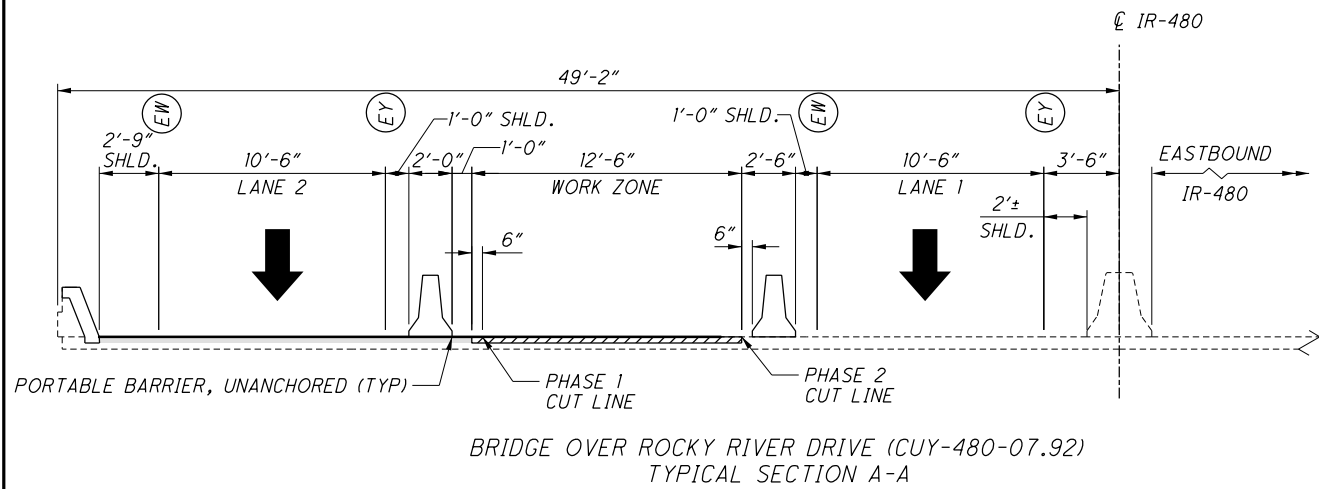
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.



3. INTERMEDIATE ASPHALT WEDGE PLACED DURING NIGHT TIME LANE CLOSURE.



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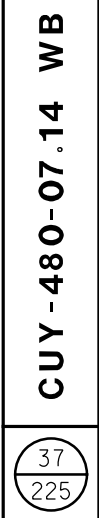


- NOTES
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.
 2. INTERMEDIATE ASPHALT WEDGE PLACED DURING NIGHT TIME LANE CLOSURE.

MAINTENANCE OF TRAFFIC - PHASE 2
STA. 442+00 TO STA. 452+00

CUY-480-07.14 WB

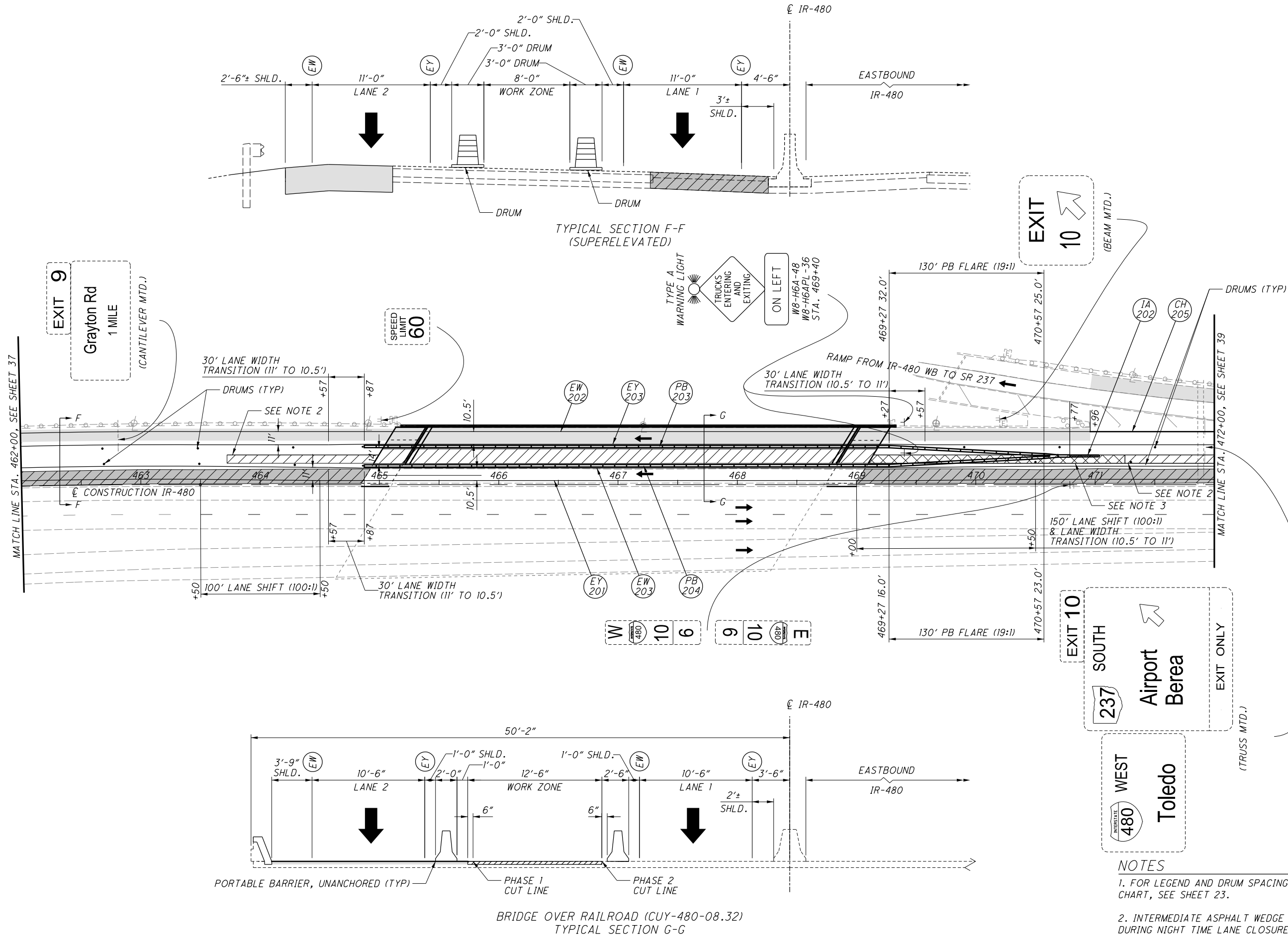
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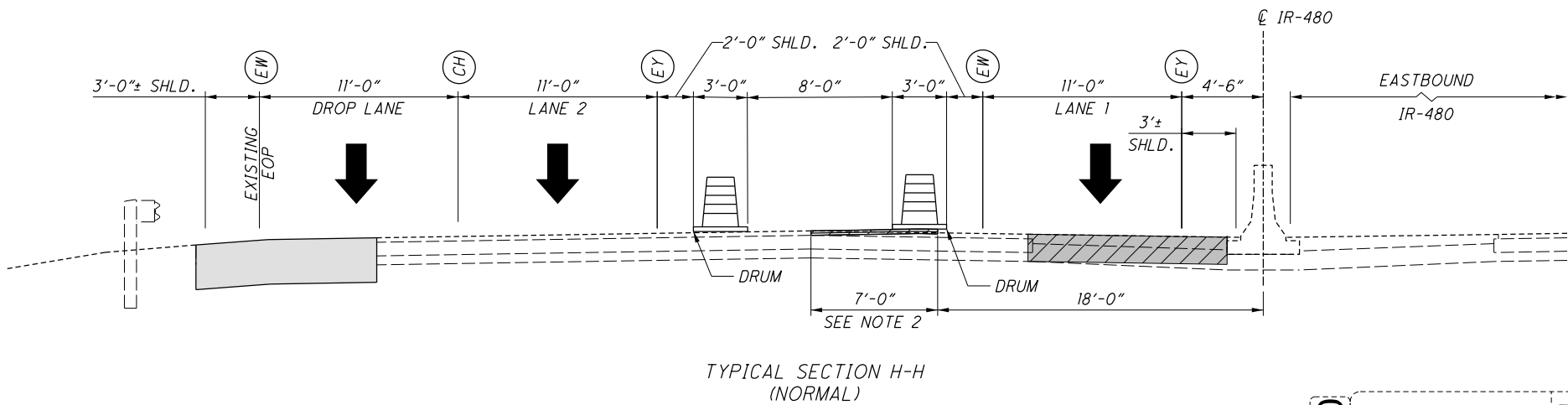
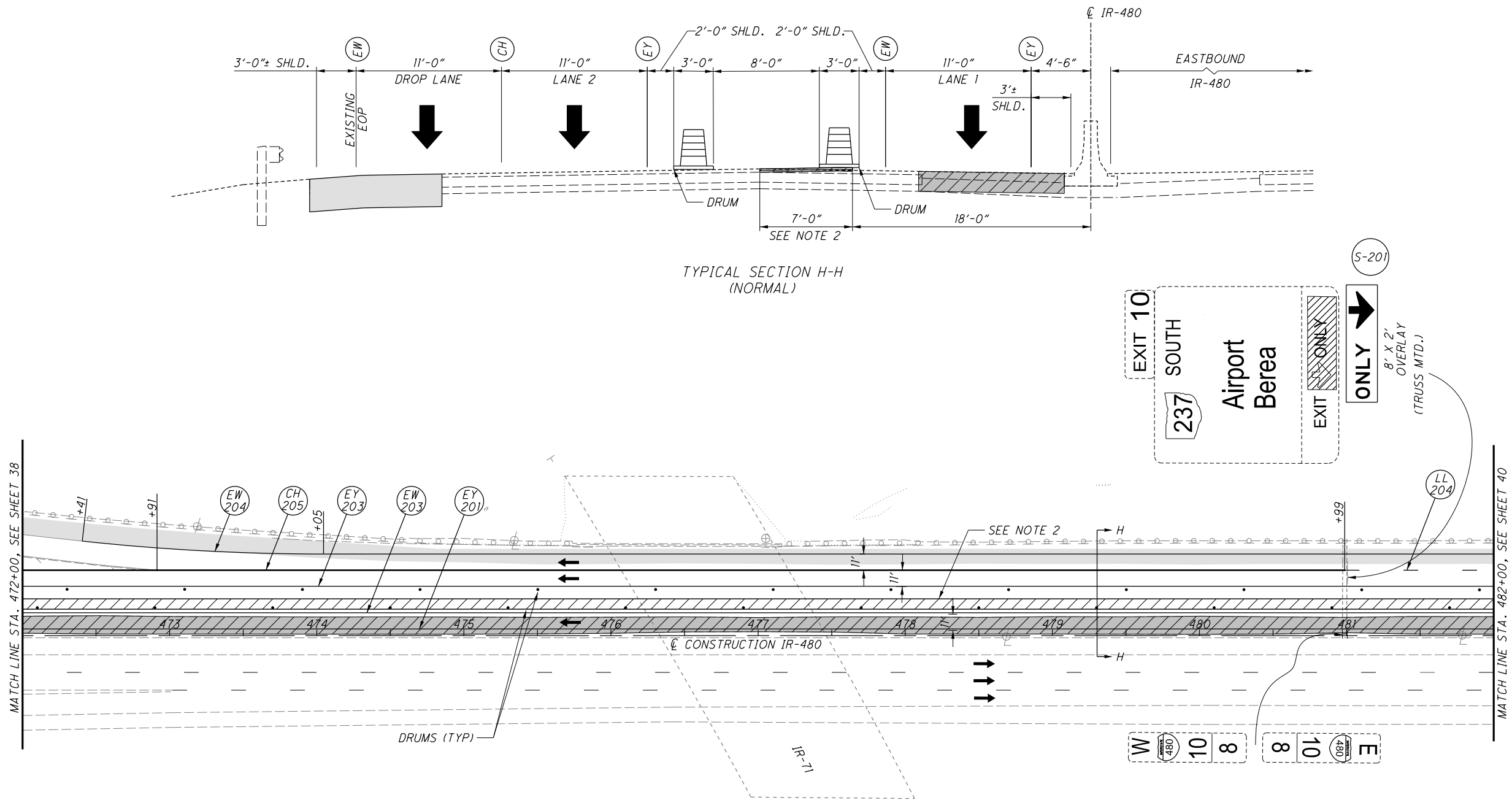


NOTES

1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.

2. INTERMEDIATE ASPHALT WEDGE PLACED AFTER THE COMPLETION OF BRIDGE WORK AND PORTABLE BARRIER HAS BEEN REMOVED.





- NOTES
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.
 2. INTERMEDIATE ASPHALT WEDGE PLACED DURING NIGHT TIME LANE CLOSURE.

39
225

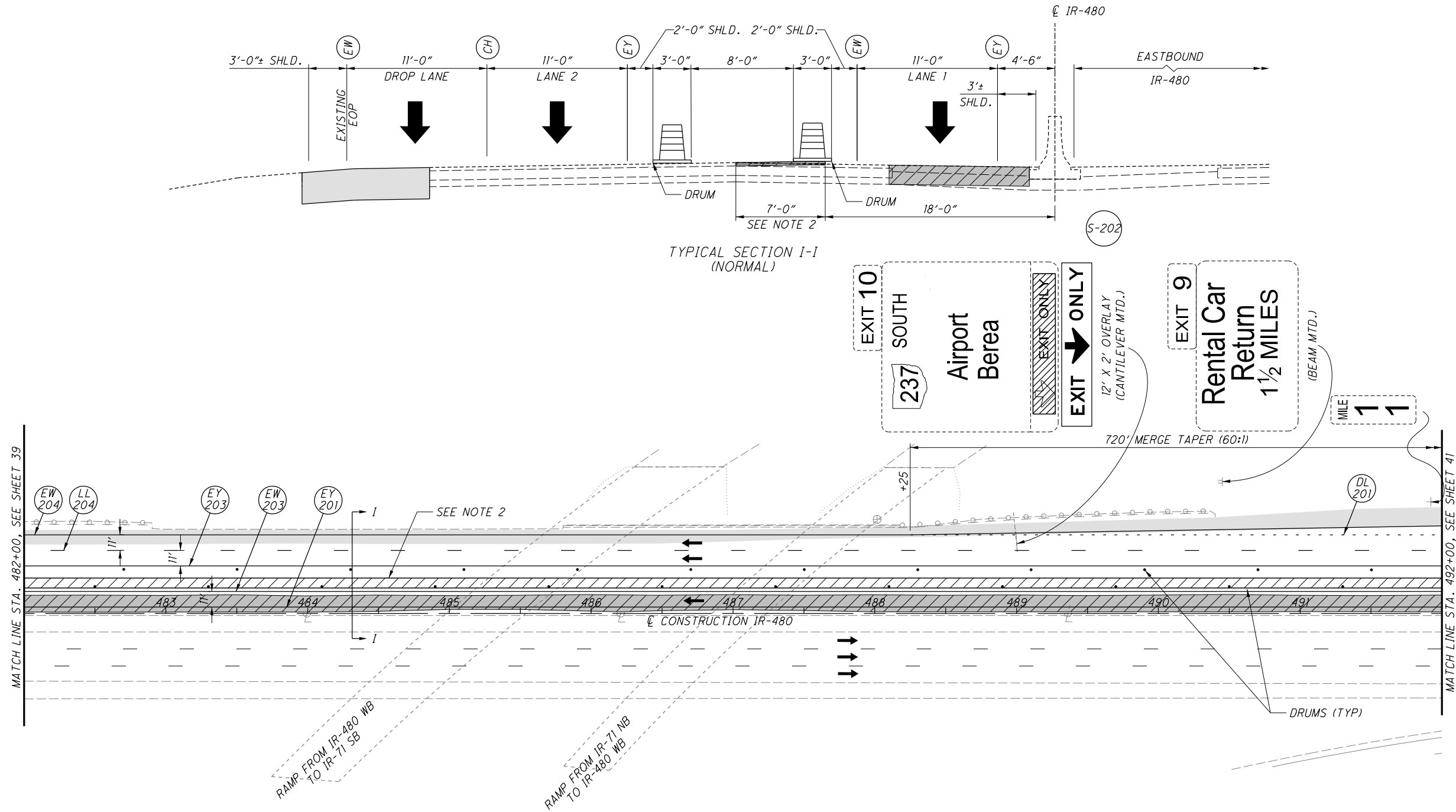
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MAINTENANCE OF TRAFFIC - PHASE 2
STA. 472+00 TO STA. 482+00

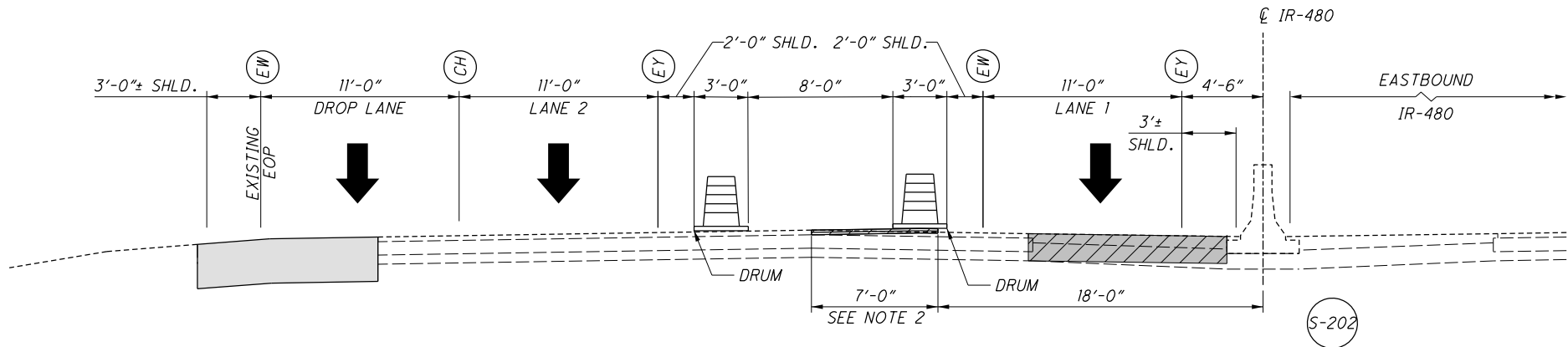
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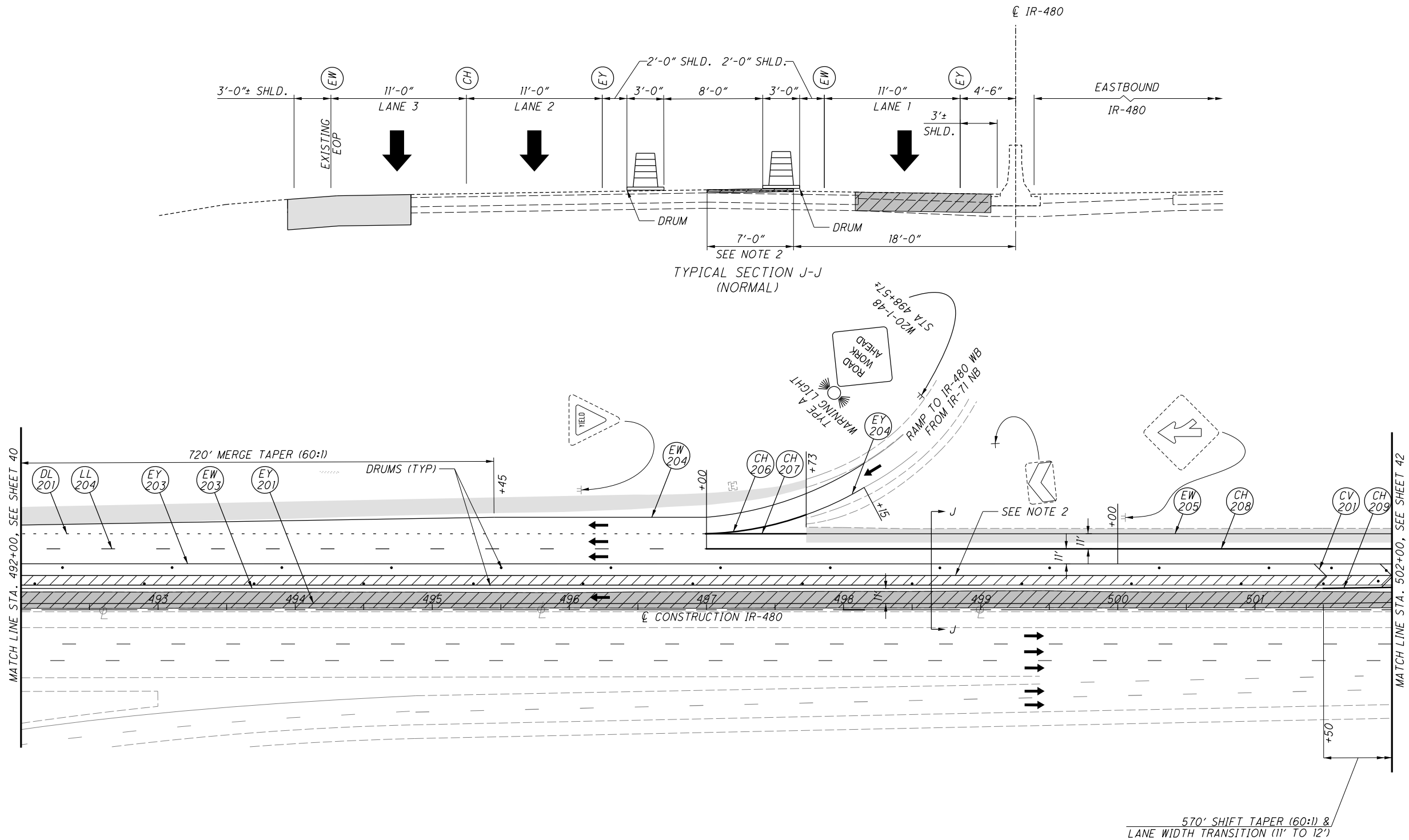
0 20 40 80
HORIZONTAL
SCALE IN FEET



TYPICAL SECTION I-I (NORMAL)



- NOTES
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.
 2. INTERMEDIATE ASPHALT WEDGE PLACED DURING NIGHT TIME LANE CLOSURE.



- NOTES
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.
 2. INTERMEDIATE ASPHALT WEDGE PLACED DURING NIGHT TIME LANE CLOSURE.

41

225

MAINTENANCE OF TRAFFIC - PHASE 2

STA. 492+00 TO STA. 502+00

CUY-480-07.14 WB

41

225

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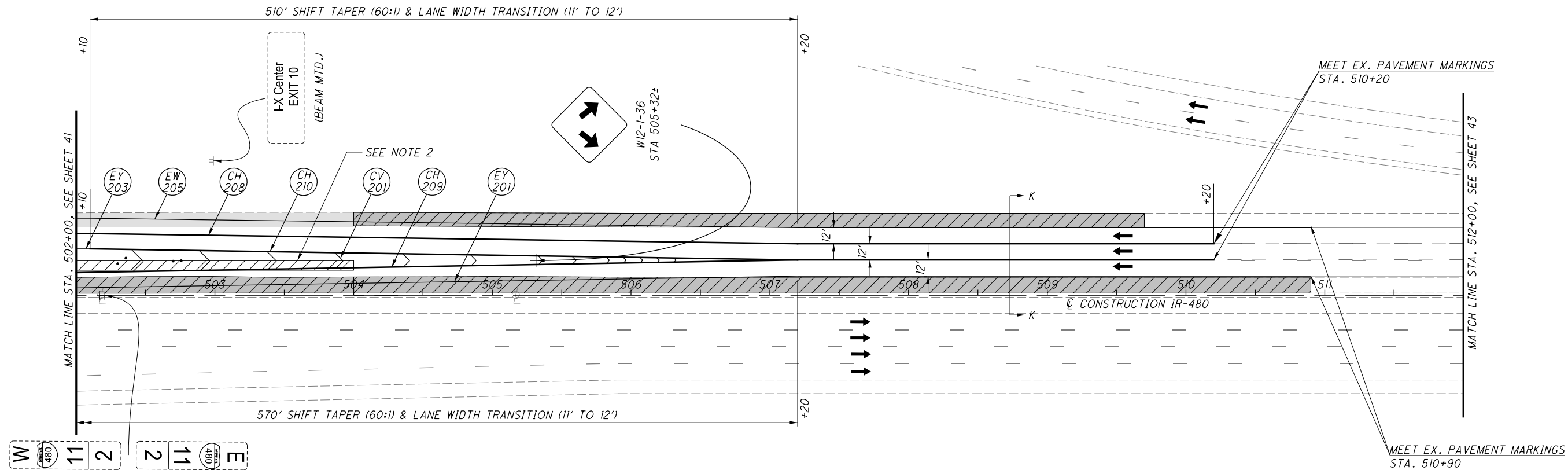
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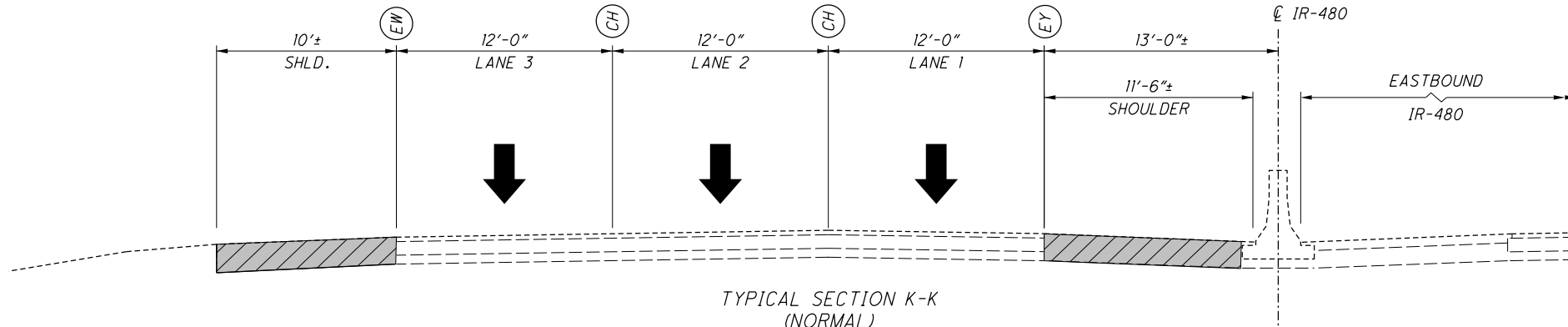
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HORIZONTAL

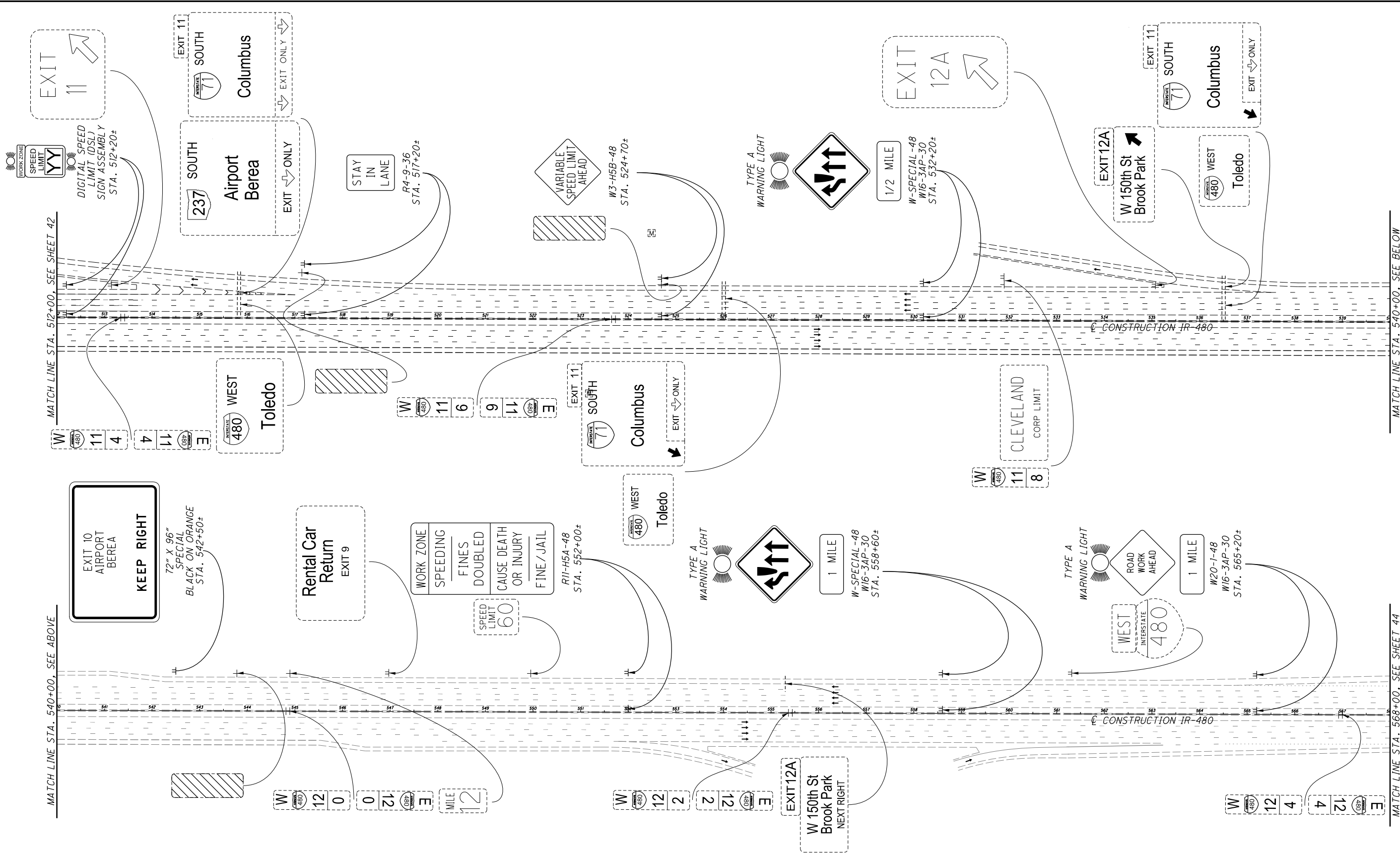
SCALE IN FEET

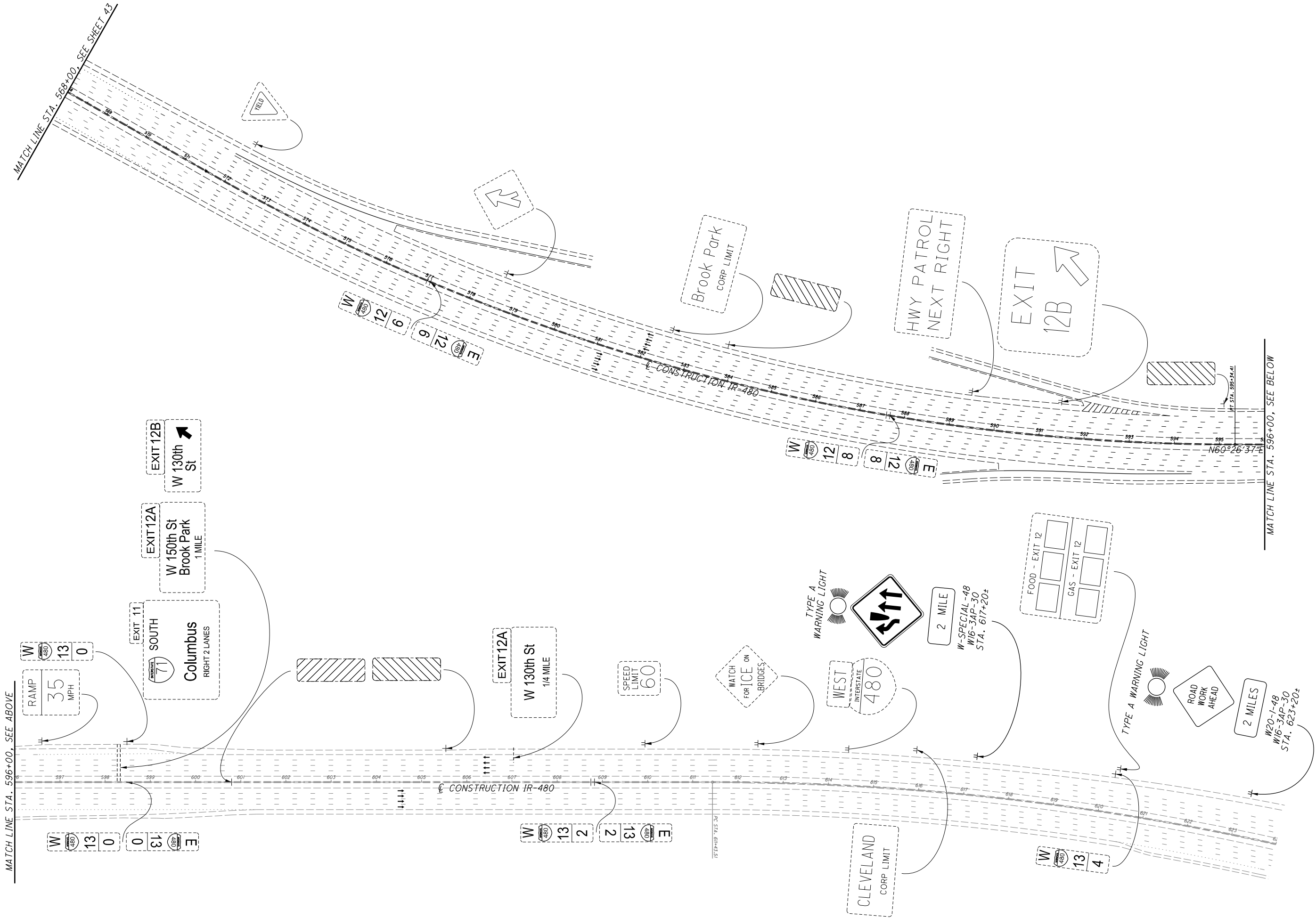




TYPICAL SECTION K-K
(NORMAL)

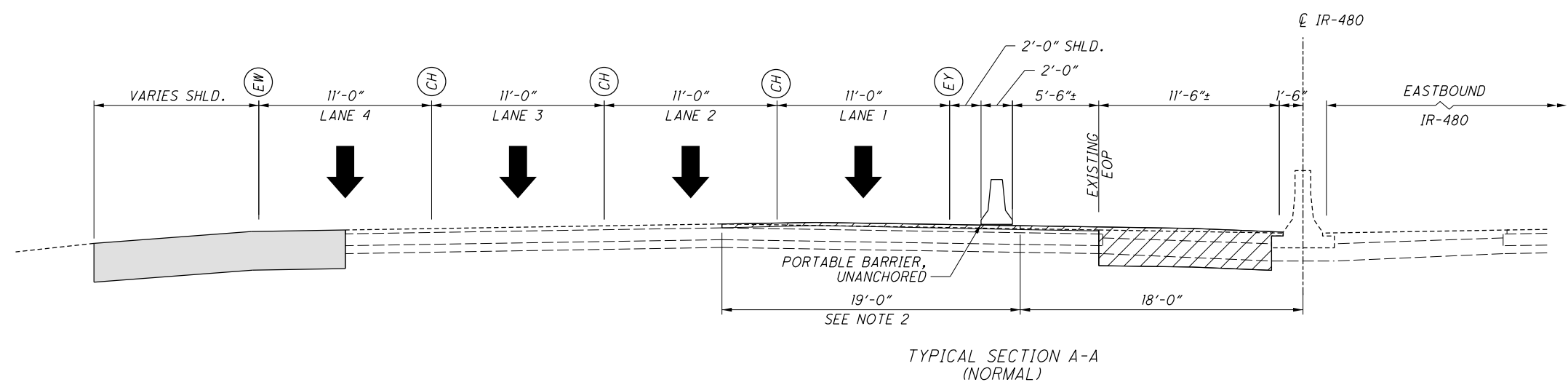
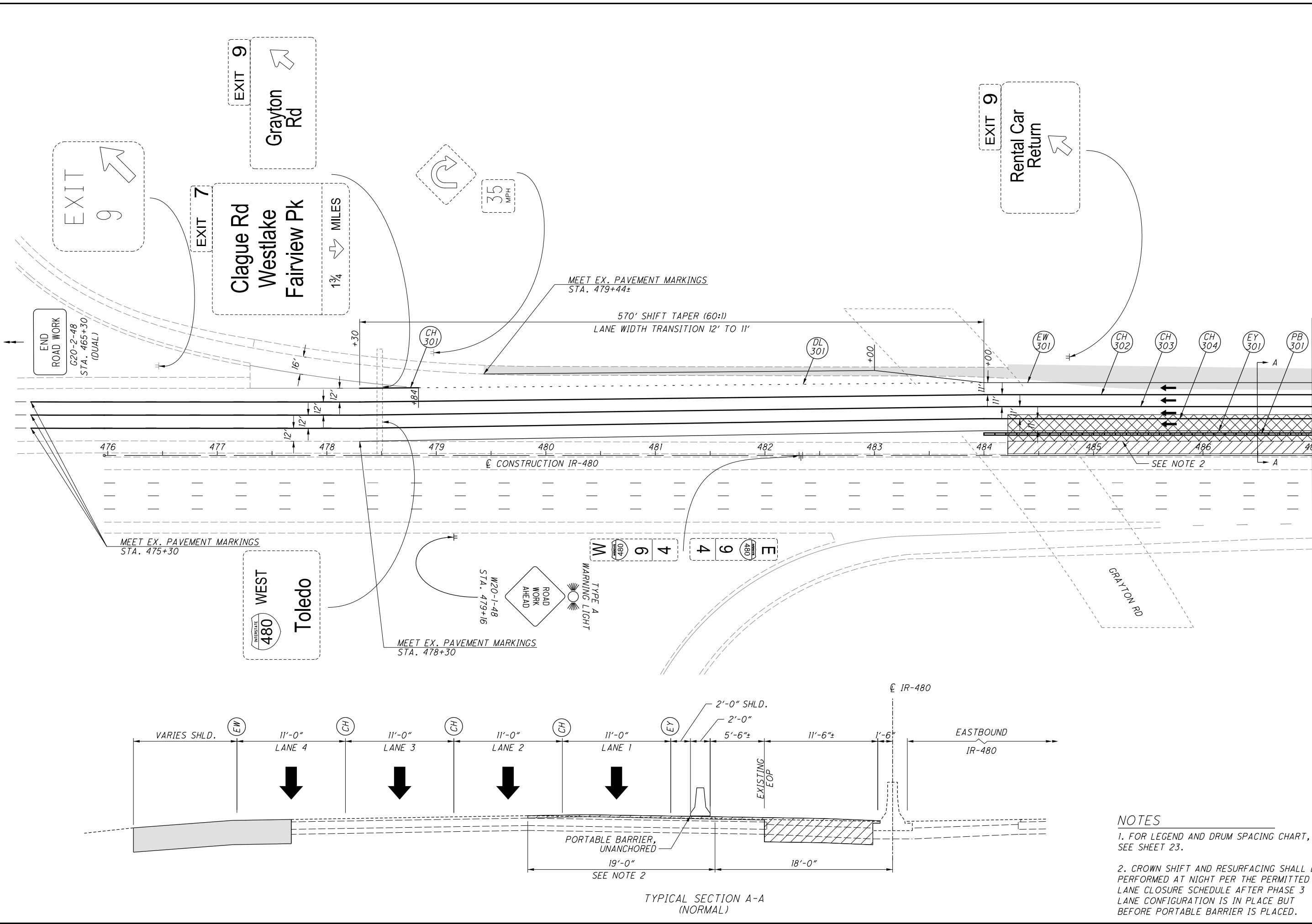


- NOTES
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.
 2. INTERMEDIATE ASPHALT WEDGE PLACED DURING NIGHT TIME LANE CLOSURE.





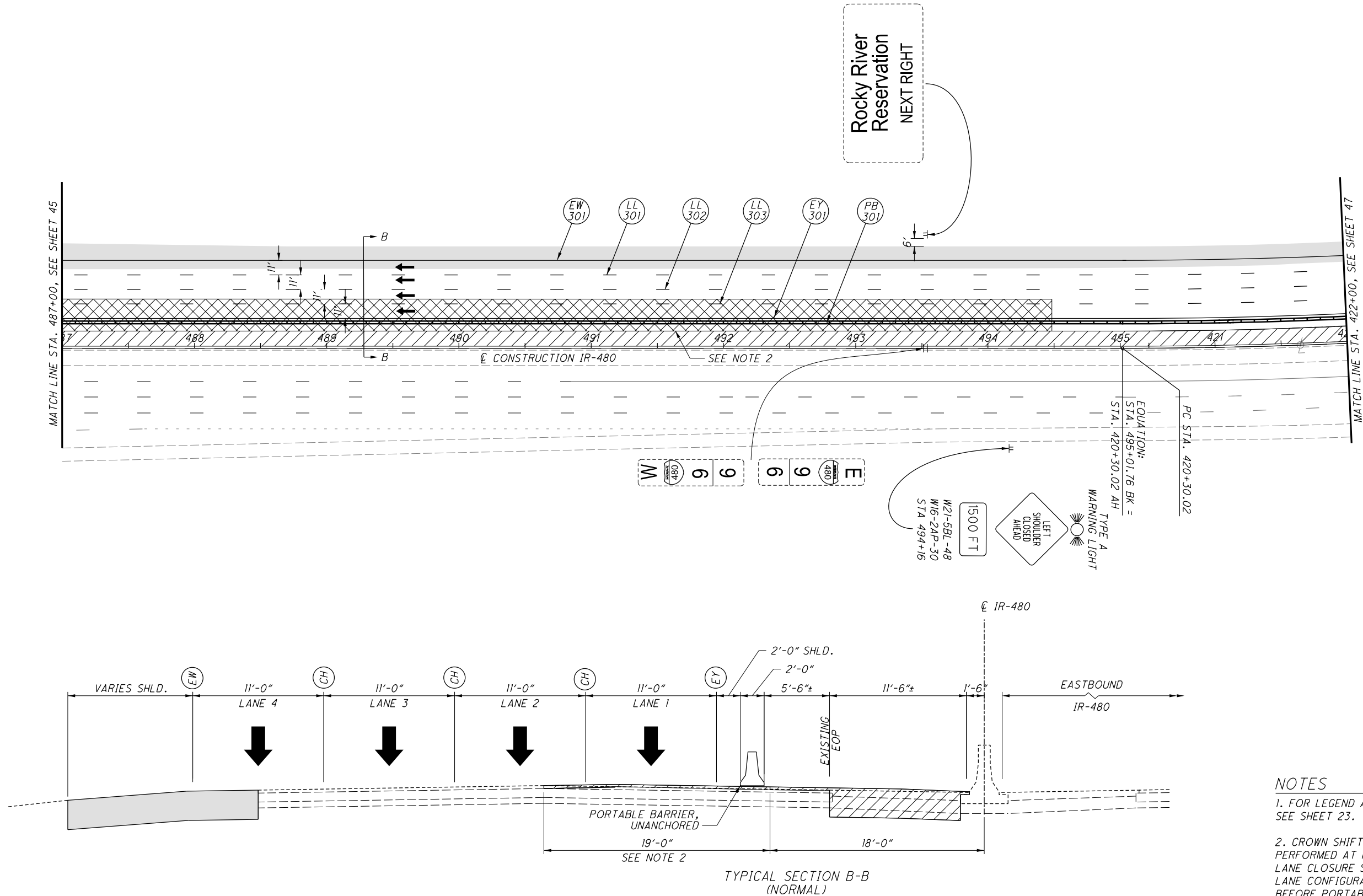
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		JUL	NAU
CHECKED		NAU	
CUY - 480-07.14 WB		MAINTENANCE OF TRAFFIC - PHASE 2	
44 225		STA. 568+00 TO 624+00	



NOTES

1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.

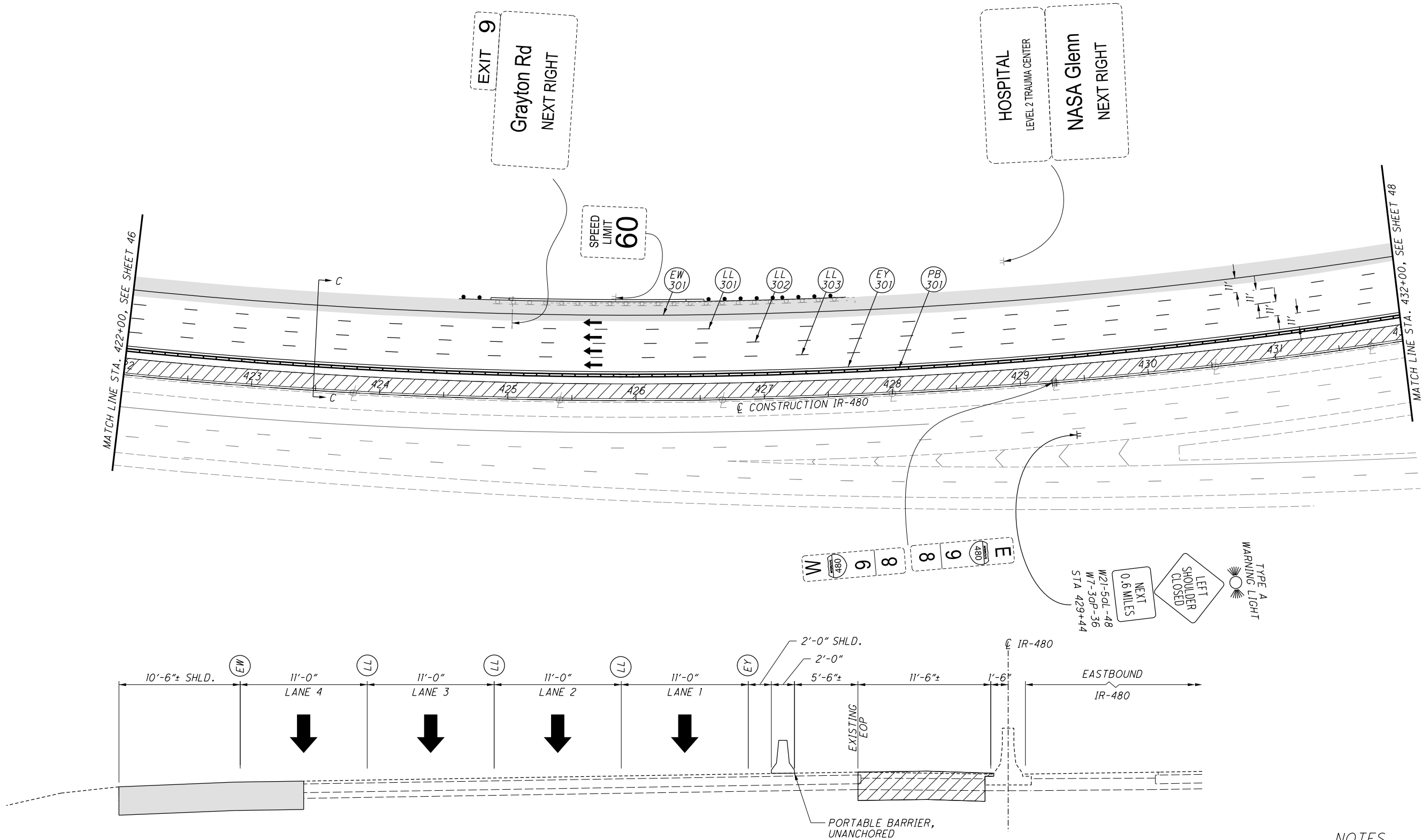
2. CROWN SHIFT AND RESURFACING SHALL BE PERFORMED AT NIGHT PER THE PERMITTED LANE CLOSURE SCHEDULE AFTER PHASE 3 LANE CONFIGURATION IS IN PLACE BUT BEFORE PORTABLE BARRIER IS PLACED.



NOTES

1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.

2. CROWN SHIFT AND RESURFACING SHALL BE PERFORMED AT NIGHT PER THE PERMITTED LANE CLOSURE SCHEDULE AFTER PHASE 3 LANE CONFIGURATION IS IN PLACE BUT BEFORE PORTABLE BARRIER IS PLACED.

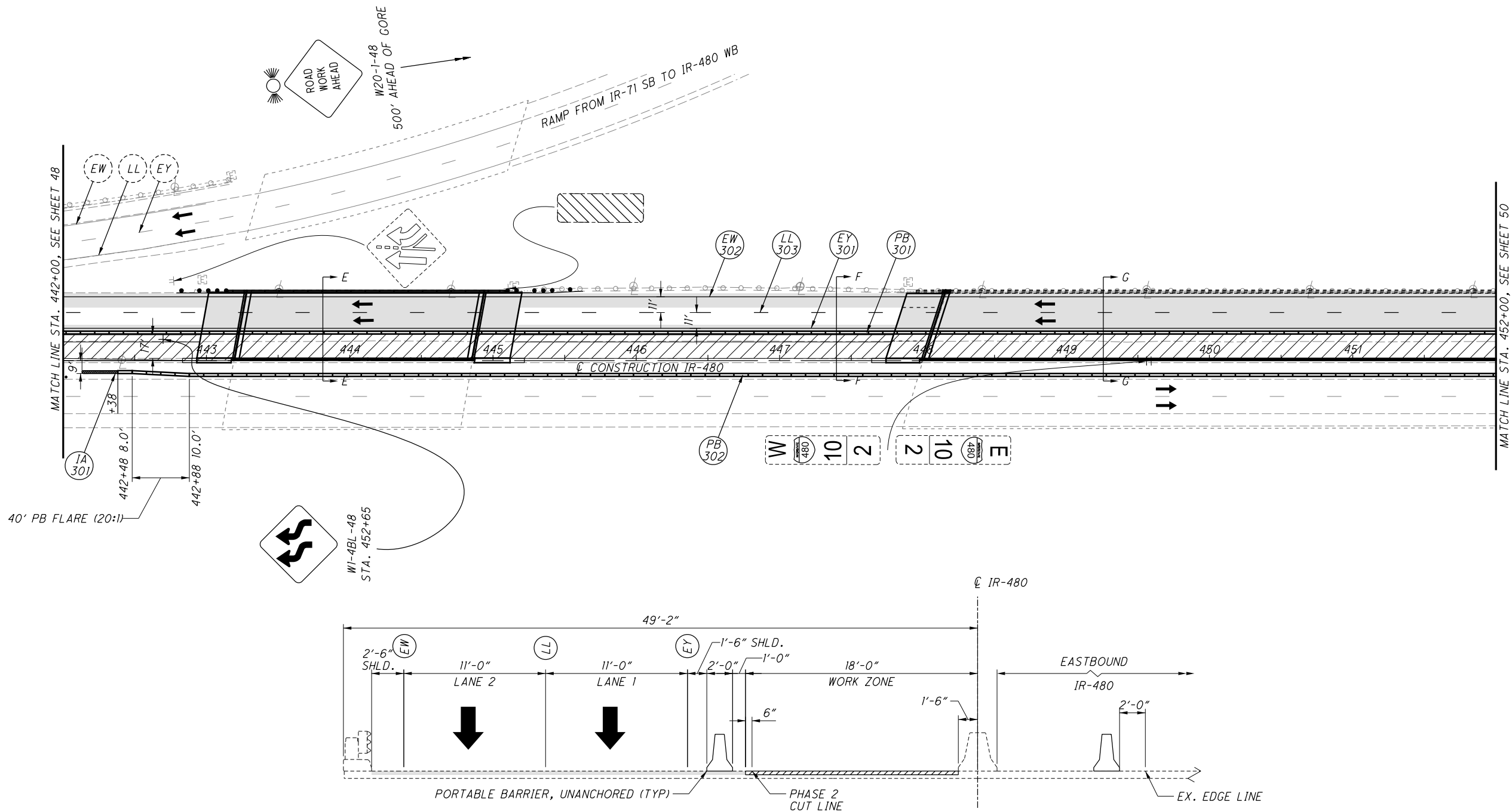
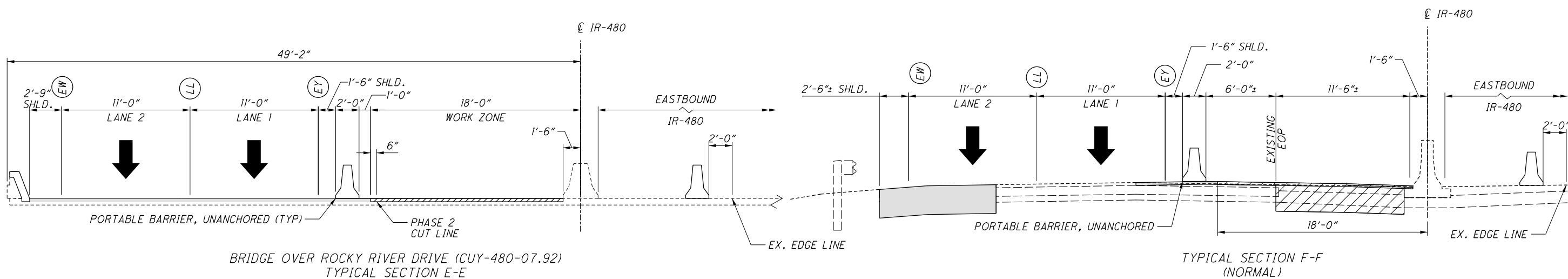


TYPICAL SECTION C-C
(SUPERELEVATED)

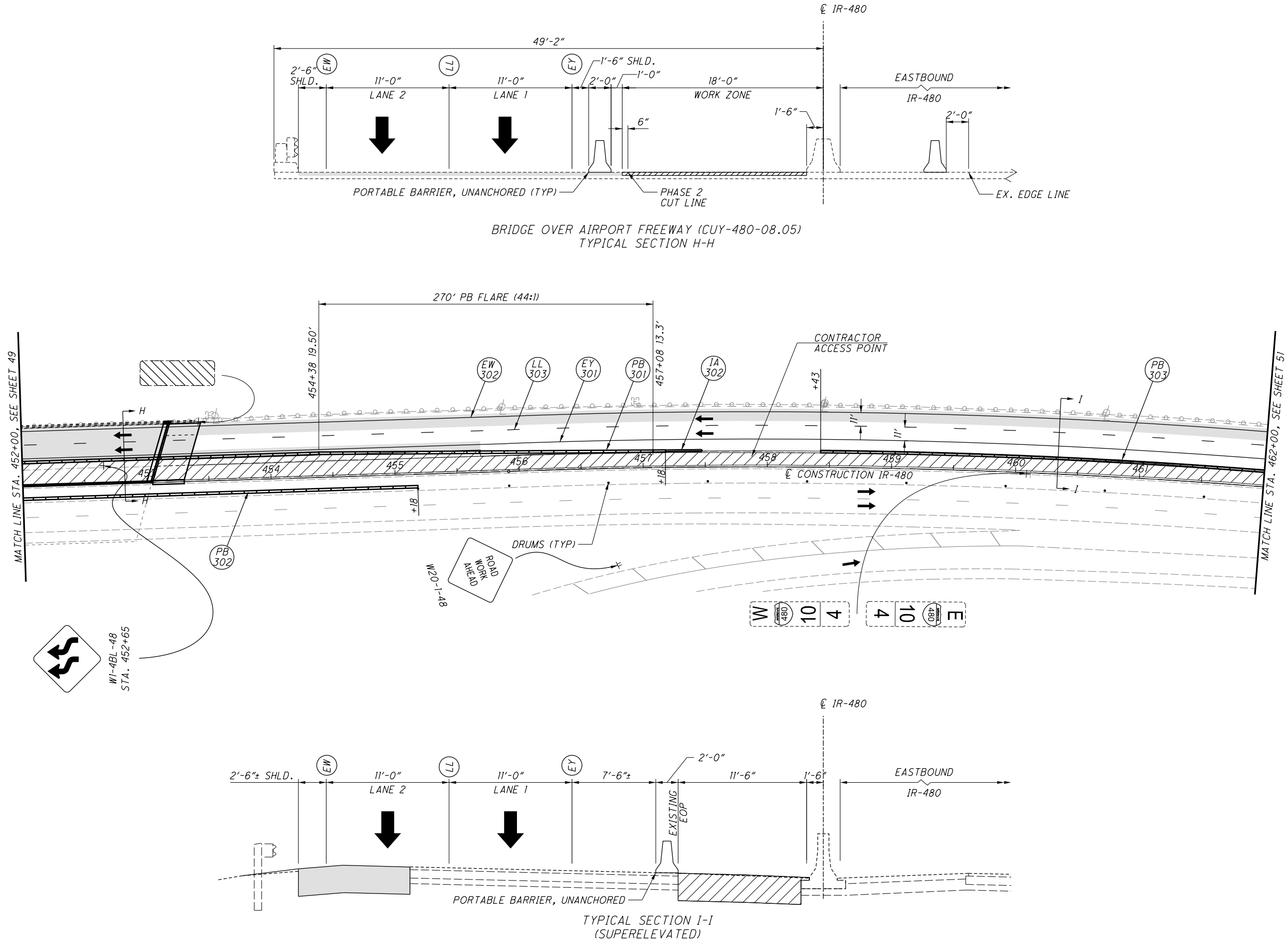
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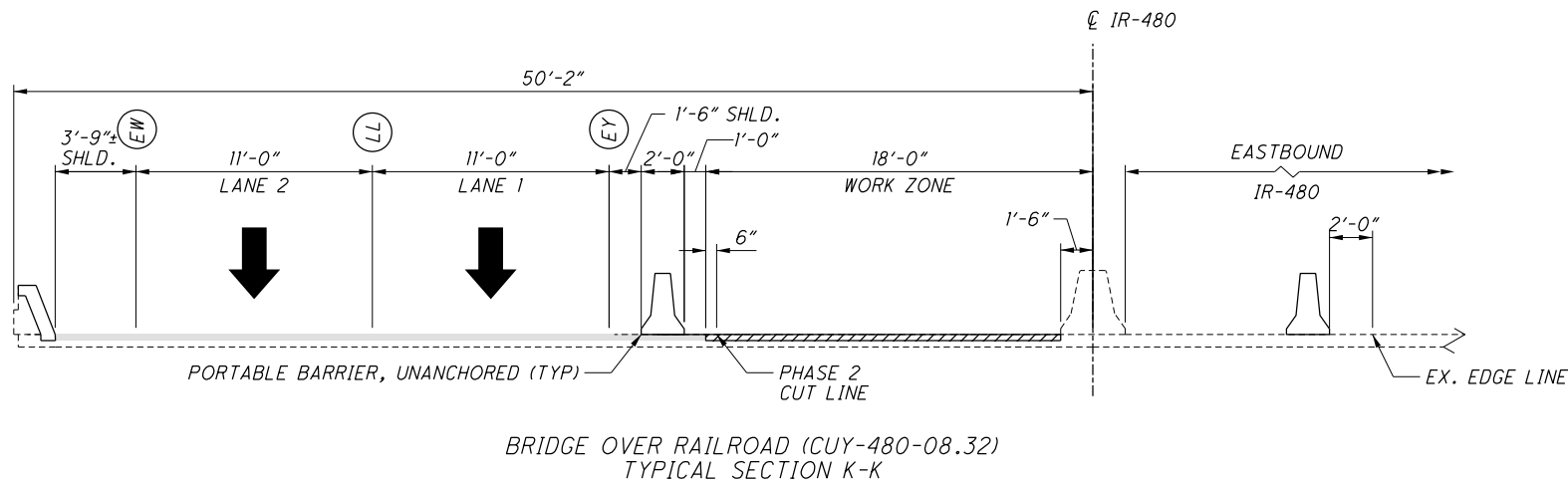
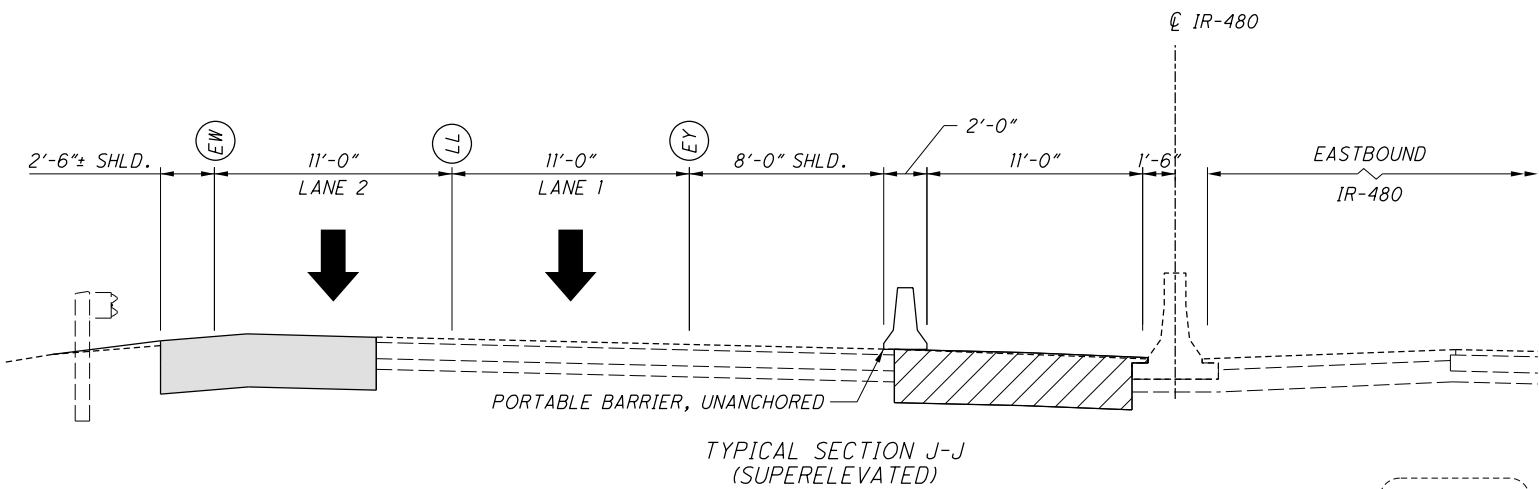
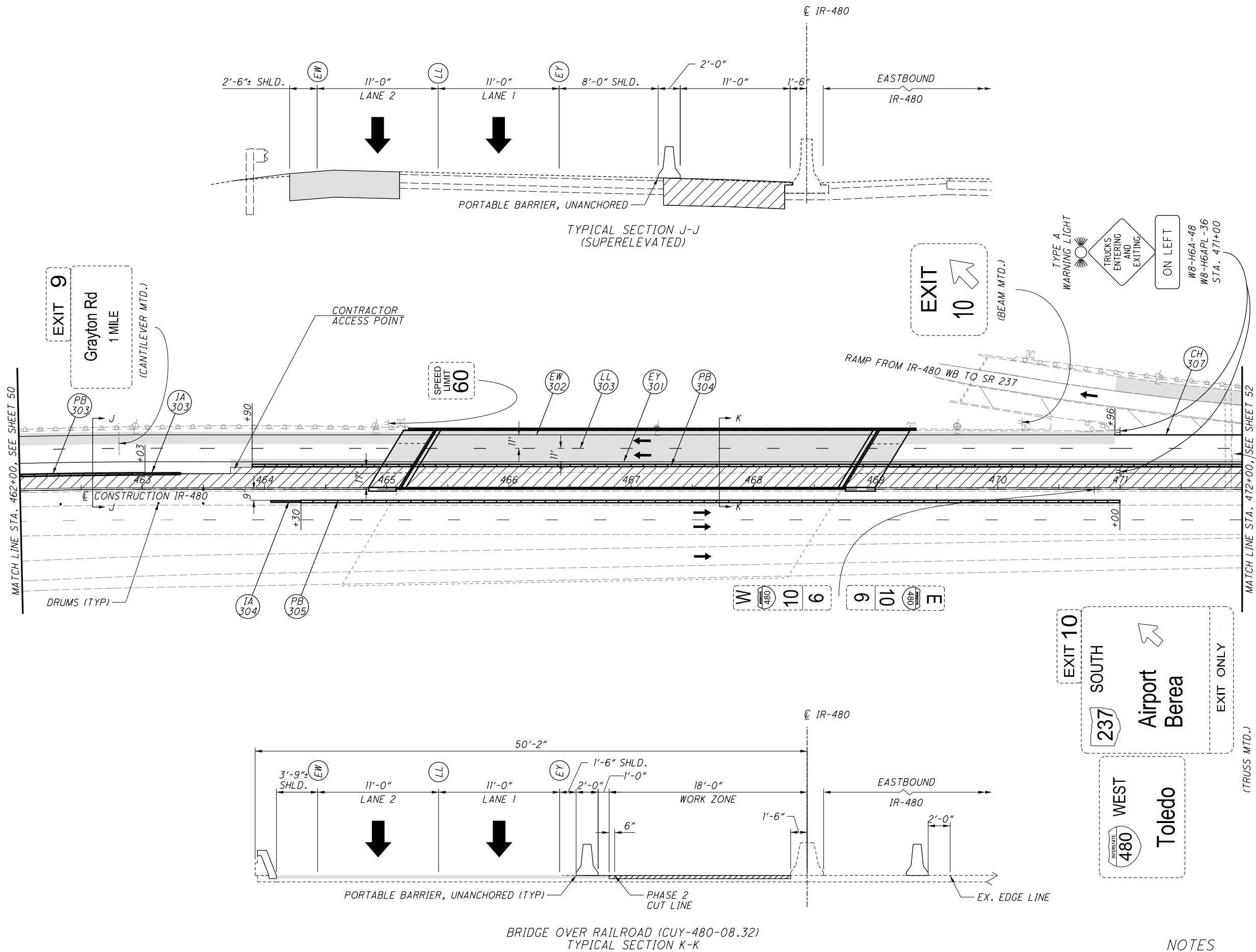
1. FOR LEGEND AND DRUM SPACING
CHART, SEE SHEET 23.



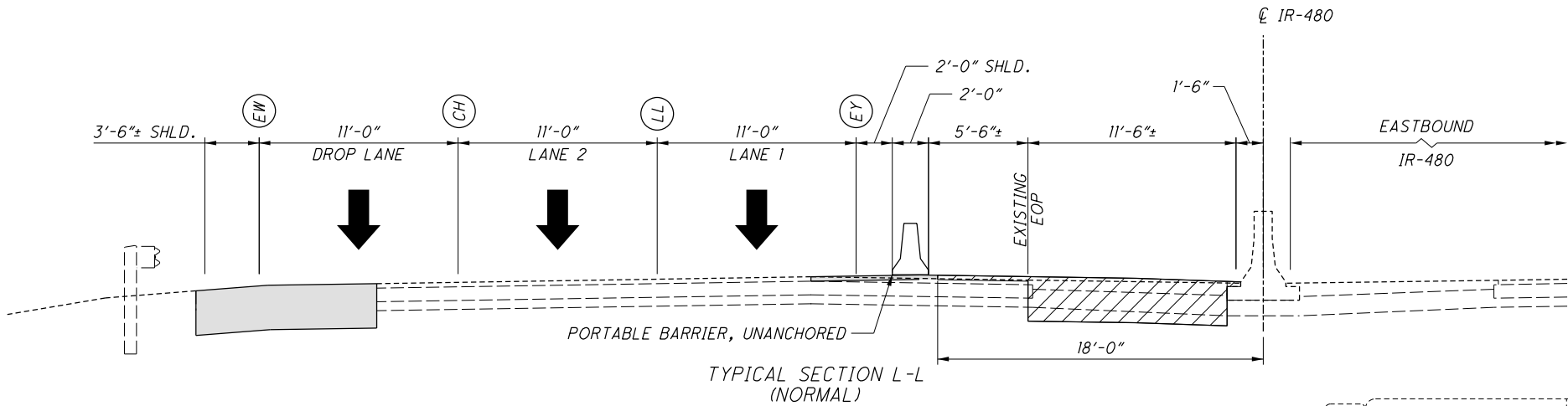
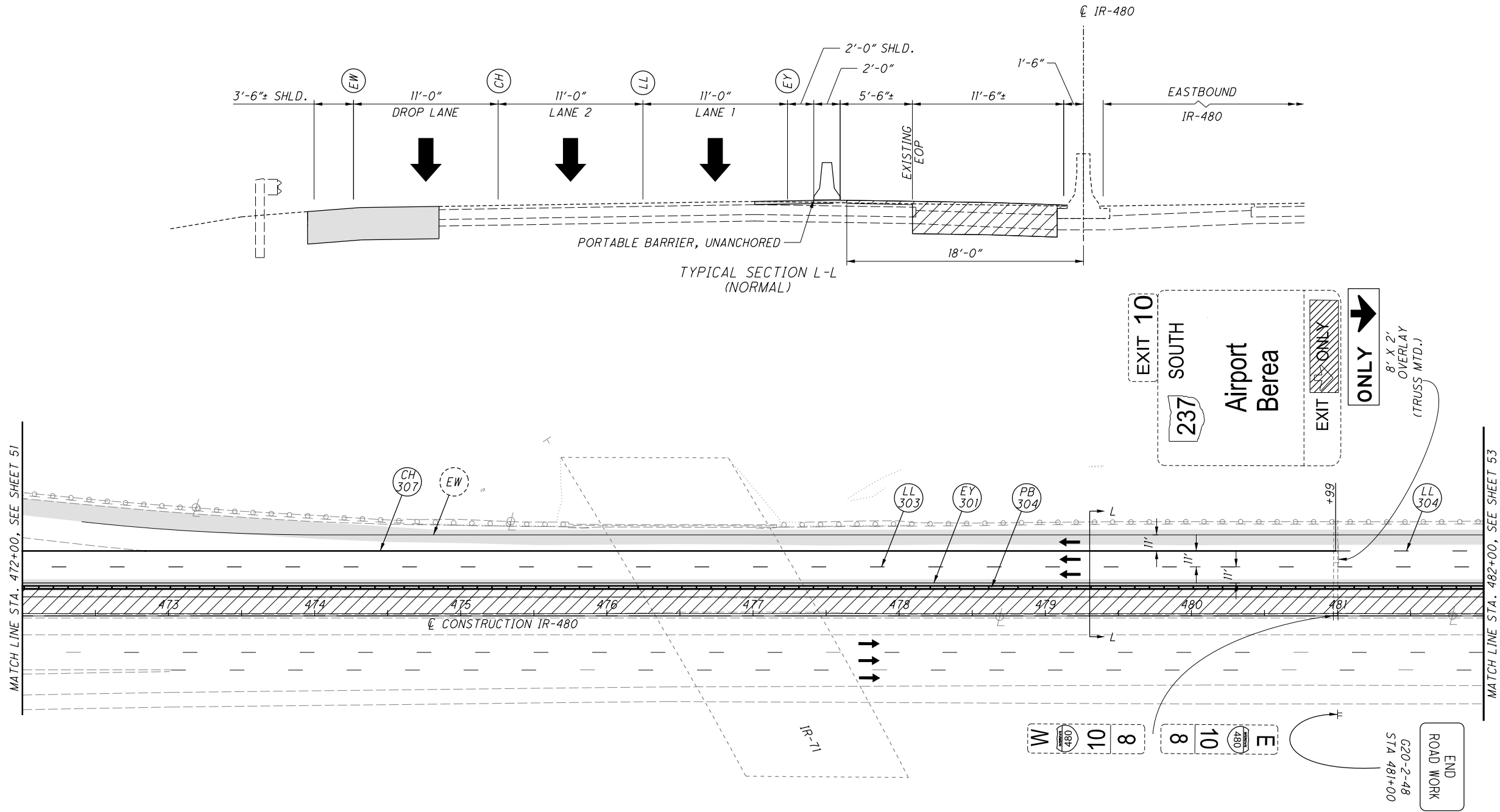


NOTES
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.



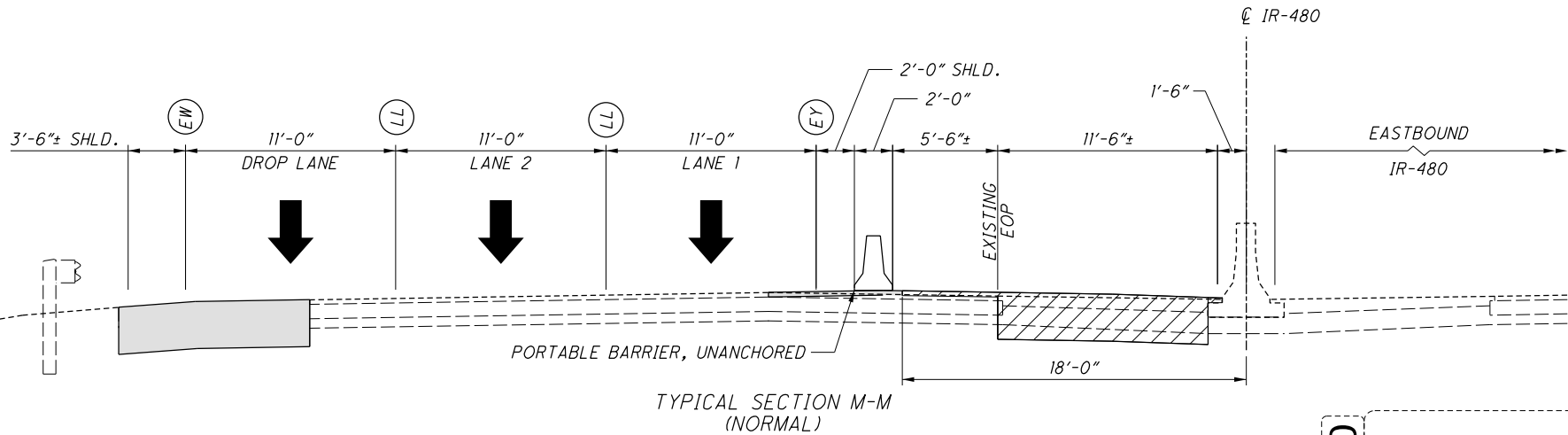
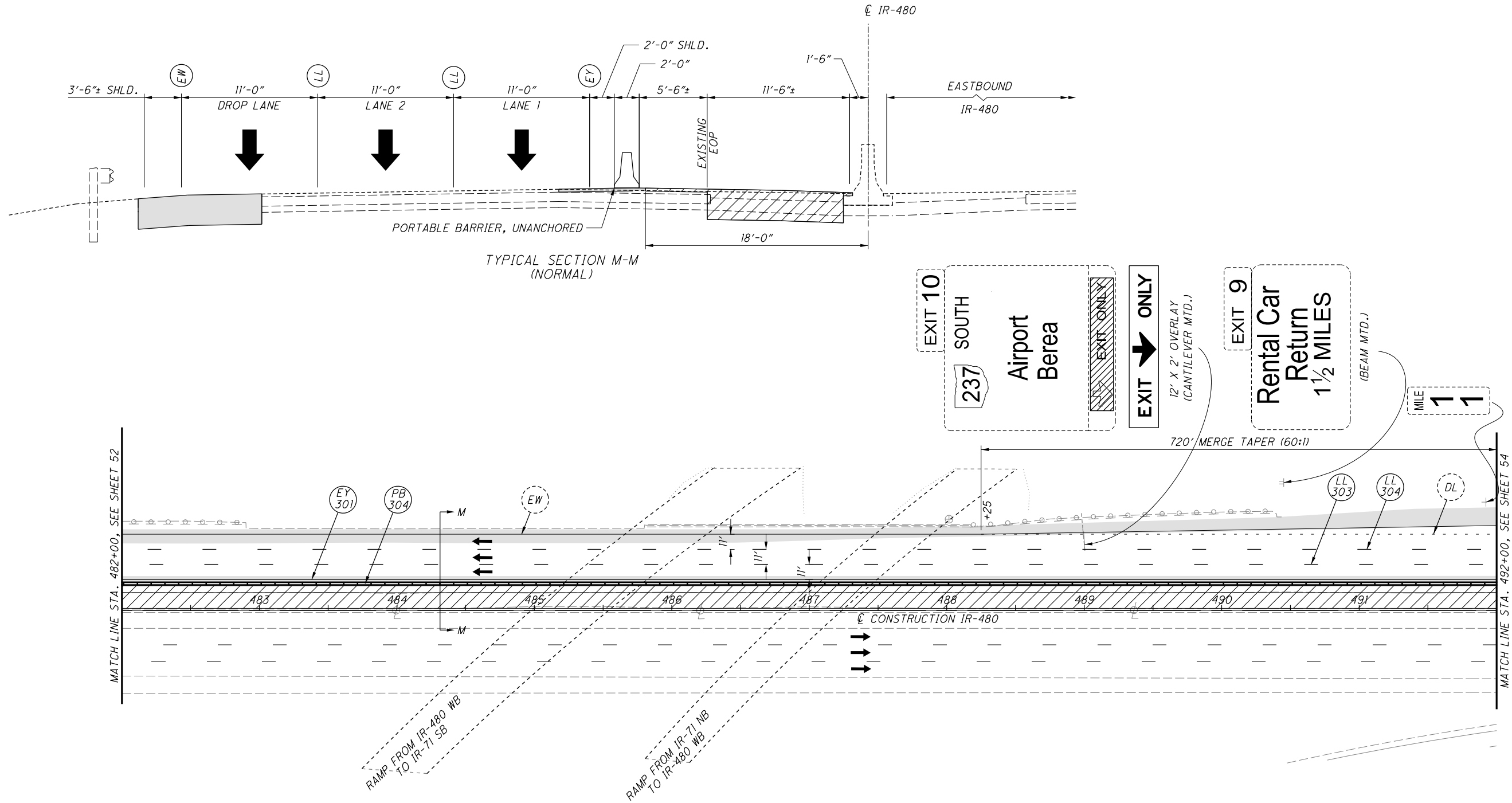


NOTES
 1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.

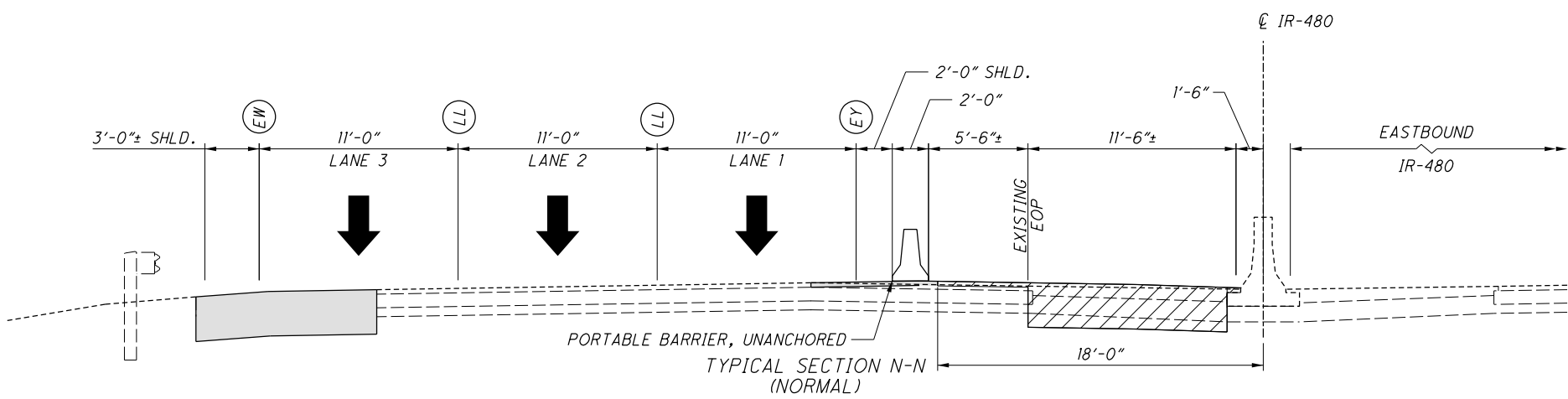
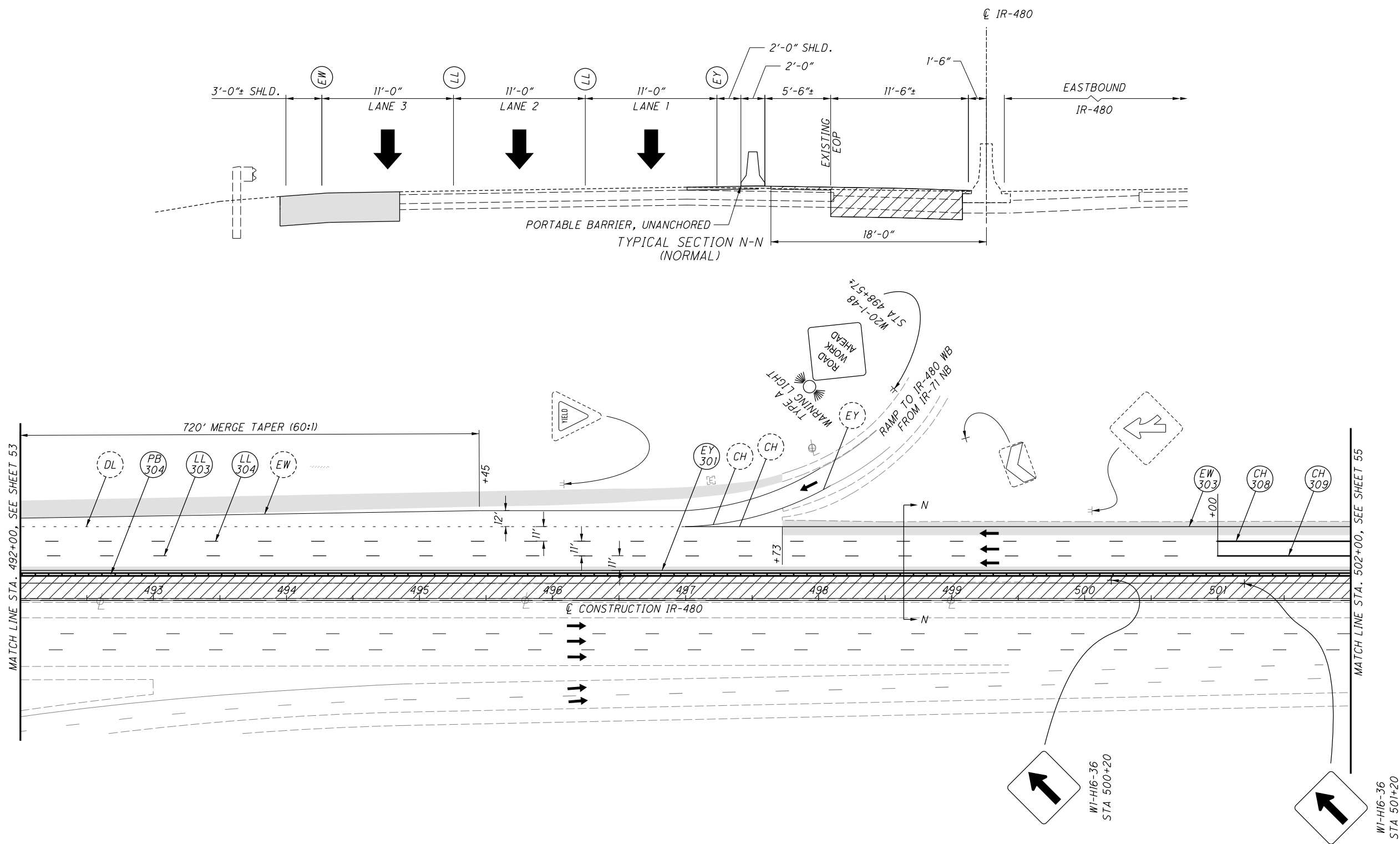


NOTES

1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.

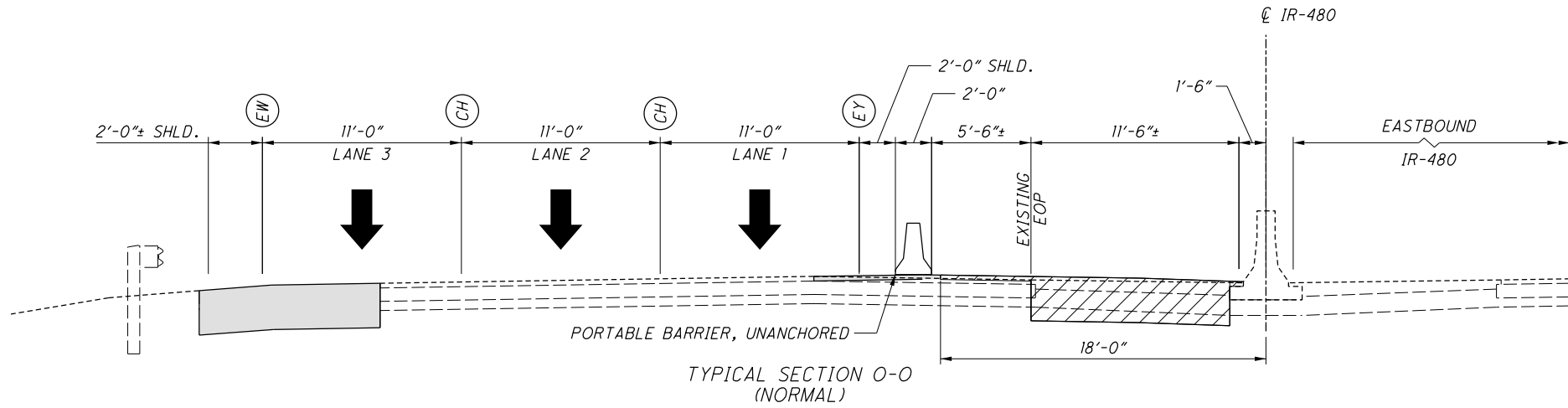
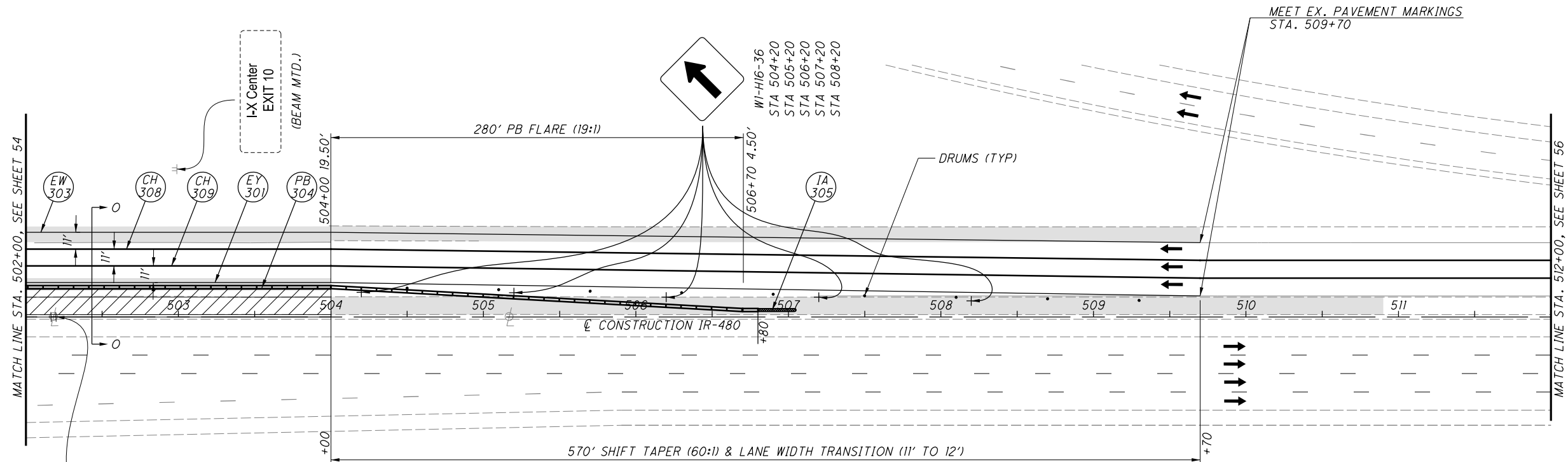


NOTES
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.



NOTES
1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.

W 11 2 2 11 E
480 480



NOTES

1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.



NOTES

1. FOR LEGEND AND DRUM SPACING CHART, SEE SHEET 23.

57
225

GENERAL SUMMARY

pw:\patrickco-pw.bentley.com\patrickco-pw-07\Documents\0001_SS4\08482\400-Engineering\Roadway\Sheets\08482_GG001.dgn_Sheet3 11/14/2022 2:23:06 PM dtroyer

SHEET NUM.									PART.		ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED MAH	CHECKED WAA
13	19	20	62	140	141	165			01/SAF/P V	02/SAF/B R		EXT	TOTAL					
			2						2		620	00500	2	EACH	TRAFFIC CONTROL			
				423					423		621	00101	423	EACH	RPM, AS PER PLAN	142		
328									328		621	54000	328	EACH	RAISED PAVEMENT MARKER REMOVED			
					2				2		625	32000	2	EACH	GROUND ROD			
			37						37		626	00110	37	EACH	BARRIER REFLECTOR, TYPE 2, ONE-WAY			
				62					62		630	03100	62	FT	GROUND MOUNTED SUPPORT, NO. 3 POST			
				28.4					28.4		630	06400	28.4	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, S4X7.7			
				2					2		630	09000	2	EACH	BREAKAWAY STRUCTURAL BEAM CONNECTION			
				2					2		630	72340	2	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 12			
				27					27		630	75000	27	EACH	SIGN ATTACHMENT ASSEMBLY			
					36				36		630	80100	36	SF	SIGN, FLAT SHEET			
				1,633					1,633		630	80224	1,633	SF	SIGN, OVERHEAD EXTRUSHEET			
					2				2		630	84500	2	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION			
					2				2		630	84510	2	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION			
					3				3		630	84900	3	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL			
					1				1		630	85600	1	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION			
					6				6		630	86002	6	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL			
					2				2		630	86292	2	EACH	REMOVAL OF GROUND MOUNTED WOODEN BOX BEAM SUPPORT AND DISPOSAL			
					2				2		630	87100	2	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION			
					19				19		630	87400	19	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL			
					2				2		630	89706	2	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30			
				339					339		646	10620	339	FT	CHEVRON MARKING			
				4.35					4.35		807	12010	4.35	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6"			
				5.11					5.11		807	12110	5.11	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"			
				4,737					4,737		807	12310	4,737	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"			
				4,066					4,066		807	12430	4,066	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 12"			
															STRUCTURE REPAIR (CUY-480-0792)			
						LS				LS	202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	162		
						254				254	202	22901	254	SY	APPROACH SLAB REMOVED, AS PER PLAN	176		
						11,605				11,605	509	10000	11,605	LB	EPOXY COATED REINFORCING STEEL			
						100				100	509	20001	100	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	162		
						4,326				4,326	509	30020	4,326	FT	NO. 4 GFRP DEFORMED BARS			
						922				922	510	10000	922	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT			
						9				9	511	34445	9	CY	CLASS QC2 CONCRETE, BRIDGE DECK, AS PER PLAN	174		
						48				48	511	34449	48	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN	172		
						13				13	511	44110	13	CY	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING			
						289				289	512	10100	289	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)			
						119				119	512	74000	119	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES			
						2,248				2,248	513	21501	2,248	LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN	162		
						98				98	516	11210	98	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			
						113				113	516	13600	113	SF	1" PREFORMED EXPANSION JOINT FILLER			
						8				8	518	12801	8	EACH	SCUPPER, MODIFICATION, AS PER PLAN	162		
						254				254	526	25000	254	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")			
						92				92	526	90010	92	FT	TYPE A INSTALLATION			
						2				2	625	29941	2	EACH	BARRIER JUNCTION BOX, AS PER PLAN	162		
						838				838	847	10200	838	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (T=1.75")			
						67				67	847	20201	67	CY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	167		
						LS				LS	847	30000	LS		TEST SLAB			
						841				841	847	30400	841	SY	EXISTING CONCRETE OVERLAY REMOVED (T=2.5")			
						84				84	847	50000	84	SY	HAND CHIPPING			

GENERAL SUMMARY

CUY - 480 - 07 . 14 WB

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$$\frac{61}{225}$$

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REF NO.	SHEET NO.	STATION TO STATION			202	202	202	209	254	254	254	254	441	606	606	606	606	606	609	620	622	622	622		626
					PAVEMENT REMOVED	CONCRETE BARRIER REMOVED	GUARDRAIL REMOVED	RESHAPING UNDER GUARDRAIL, AS PER PLAN	PAVEMENT PLANING, ASPHALT CONCRETE, 0.75"	PAVEMENT PLANING, ASPHALT CONCRETE, 1.5"	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, 3.25"	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, 0.75"-3.25"	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL), AS PER PLAN	GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE E, (MASH 2016)	ANCHOR ASSEMBLY, MGS TYPE T	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	CURB, TYPE 4-C	DELINEATOR, POST GROUND MOUNTED, TYPE C	BARRIER TRANSITION, AS PER PLAN	CONCRETE BARRIER, TYPE D	CONCRETE BARRIER END SECTION, TYPE D		BARRIER REFLECTOR, TYPE 2, (ONE WAY)
			TO		SY	FT	FT	MILE	SY	SY	SY	SY	CY	FT	EACH	EACH	EACH	EACH	FT	EACH	EACH	FT	EACH		EACH
R-1A	66A	475+30.00		484+21.76						7840															
R-1	67-72	484+21.76		441+30.22	3705																				
R-2	67-73	484+21.76		442+99.67					1626		15365	542													
R-3	67-73	484+21.76		438+15.00	2288																				
GR-1	69	424+59.20	-77	424+85.00	-77											1		1							
B-1	69-70	424+85.00	-77	426+54.00	-77																	138	2		
R-4	69-70	424+86.69	73.97	427+67.90	-74.29		276																		
GR-2	70	426+54.00	-77	427+66.96	-77									37.5	1		1		18	1					2
R-5	71-73	432+93.33		442+97.47	1163																				
R-101	72	438+87.65	-87.92	441+30.38	-99.11		229																		
GR-3	72	438+87.65	-87.92	441+30.38	-99.11			0.05					9	225		1									4
B-2	73	442+83.32	CL	443+17.41	CL		34														1				
B-3	73	444+87.17	CL	445+21.90	CL		35														1				
B-4	73	447+64.30	CL	447+99.30	CL		35														1				
R-6	NOT USED																								
R-7	73	445+13.96		447+85.65					174		328	182													
R-8	73	445+18.39		447+88.83	334																				
R-102	73	445+06.55	-47.25	447+99.65	-47.17		271																		
GR-4	73	445+06.55	-47.25	447+99.65	-47.17			0.06					11	260			1	1	18						4
B-5	74	453+05.03	CL	453+40.03	CL		35														1				
R-9	NOT USED																								
R-10	74-77	453+35.79		465+07.34					14		3044	14													
R-11	74-77	453+41.63		465+13.04	1759																				
R-103	74-77	453+26.79	-47.06	465+18.18	-48.25		1200																		
GR-5	74-77	453+26.79	-47.06	465+18.18	-48.25			0.23					45	1173			1	1	18						13
B-6	76-77	464+75.28	CL	465+09.28	CL		34														1				
B-7	77	468+73.81	CL	469+09.80	CL		36														1				
R-12	NOT USED																								
R-13	77-83	469+06.71		504+00.00					2329		10866	2329													
R-13A	83A	504+00.00		513+60.00						6120															
R-14	77-78	469+21.58			644																				
R-15	78-82	471+05.65		497+72.66	2714																				
R-104	78	470+98.13	-93.7	475+73.72	-61		477																		
GR-6	78	470+98.13	-93.7	475+73.72	-61			0.10					18	475				1							6
R-105	79-80	477+13.54	-60.7	482+87.24	-62.47		574																		
GR-7	79-80	477+13.54	-60.7	482+87.24	-62.47			0.11					22	495.625	1		1		18	1					6
R-16	80	484+09.00		484+29.00			20																		
R-17	80	485+63.73		485+83.73			20																		
B-8	81	488+17.24	-61.39	488+90.00	-65.66																	59	1		
GR-8	81	485+83.73	0	489+27.45	-67.52									12.5			1		18						2
R-18	81	488+17.11	-60.62	489+27.45	-67.52		110																		
R-19	81	490+90.00		491+10.00			20																		
R-20	82-83	496+48.36		504+00.00	1589																				
R-21	83	498+40.00	CL	498+60.00	CL		20																		
TOTALS CARRIED TO GENERAL SUMMARY					14196	289	3137	0.55	4143	13960	29603	3067	105	2679	2	2	5	4	90	2	6	197	3		37

ROADWAY SUBSUMMARY

CUY - 480-07.14 WB

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STATION RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	206	206	206	304	304	302	442	442	442		407	407							
									CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	CURING COAT	CEMENT	AGGREGATE BASE, 6"	AGGREGATE BASE, 10"	ASPHALT CONCRETE BASE, PG64-22, (449)	ANTI-SEGREGATION EQUIPMENT	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448), 1.75"	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN		NON-TRACKING TACK COAT	NON-TRACKING TACK COAT							
					FT	FT	SY	SY	SY	SY	TON	CY	CY	CY	CY	CY	CY		GAL	GAL							
TO																			FULL	PLANING							
MAINLINE CUY-480																											
475+30.00		484+21.76		RT				7840.02							326.67		326.67			1176.00							
484+21.76		495+01.76		RT	1080.00	18.62		2234.77	2234.77	2234.77	57.82																
					1080.00	18.46		2214.77					615.21														
					1080.00	17.96		2154.77						508.77													
					1080.00	17.62		2114.77									102.80	88.12		634.43							
				WB	1080.00	48.55		5826.50							526.00	283.23	242.77			873.97							
				LT	1080.00	10.32		1238.10	1238.10	1238.10	32.04	206.35		292.33		60.19	51.59			371.43							
420+30.02		432+39.72		RT	1209.70	13.51		1816.11	1816.11	1816.11	46.99																
					1209.70	13.34		1793.70					498.25														
					1209.70	13.34		1793.70						423.51													
					1209.70	13.02		1749.76									85.06	72.91		524.93							
				WB	1209.70	47.87		6434.72							580.91	312.80	268.11			965.21							
				LT	1209.70	11.70		1572.93	1572.93	1572.93	40.70	268.92		380.96		78.43	65.54			471.88							
432+39.72		442+93.32		RT	1053.60	12.81		1499.76	1499.76	1499.76	38.81																
(INCLUDES RAMP B-2)					1053.60	12.64		1480.25					411.18														
					1053.60	12.15		1422.36						335.84													
					1053.60	11.82		1383.78									67.27	57.66		415.13							
				WB	1053.60	53.34		6244.80							563.77	303.57	260.20			936.72							
				LT	1053.60	11.64		1363.18	1363.18	1363.18	35.27	227.20		321.86		66.27	56.80			408.96							
442+93.32		443+18.32		WB	25.00	45.39		126.10				21.02															
STR. NO. CUY-480-0792S																											
444+86.90		445+11.90		WB	25.00	45.39		126.10				21.02															
445+11.90		447+74.37		RT	262.47	11.24		327.65	327.65	327.65	8.48																
					262.47	11.07		322.79					89.66														
					262.47	10.56		307.85						72.69													
					262.47	10.21		297.90									14.48	12.41		89.37							
				WB	262.47	24.30		708.60							63.97	34.45	29.53			106.29							
				LT	262.47	11.28		329.07	329.07	329.07	8.51	54.85		77.70		16.00	13.71			98.72							
447+74.37		447+99.37		WB	25.00	45.50		126.39				21.07															
STR. NO. CUY-480-0805S																											
453+05.09		453+30.09			25.00	45.50		126.39				21.07															
453+30.09		464+85.35		RT	1155.26	10.67		1369.63	1369.63	1369.63	35.44																
					1155.26	10.50		1348.23					374.51														
					1155.26	10.50		1348.23						318.33													
					1155.26	10.16		1304.72									63.42	54.36		391.42							
				WB	1155.26	24.67		3167.11							285.92	153.96	131.96			475.07							
				LT	1155.26	10.80		1385.97	1385.97	1385.97	35.86	231.00		327.24		67.37	57.75			415.79							
464+85.35		465+10.35			25.00	45.50		129.86				21.64															
STR. NO. CUY-480-0832S																											
468+74.88		468+99.88			25.00	45.50		129.86				21.64															
468+99.83		470+95.90		RT	196.07	9.28		202.25	202.25	202.25	5.23																
					196.07	9.12		198.62					55.17														
					196.07	8.69		189.28						44.69													
					196.07	8.40		183.05									8.90	7.63		54.92							
				WB	196.07	22.48		489.73							44.21	23.81	20.41			73.46							
				LT	196.07	11.16		243.17	243.17	243.17	6.29	40.53		57.42		11.82	10.13			72.95							
SUBTOTALS									13582.59	13582.59	351.45	1156.28	2043.99	3161.33	2391.45	1753.81	1828.25		3949.93	4606.72							
TOTALS CARRIED TO GENERAL SUMMARY									13583	13583	352	3200		3162	2392	1754	1829		8557								

PAVEMENT SUBSUMRY

CALCULATED MAH	CHECKED WAA	63 225

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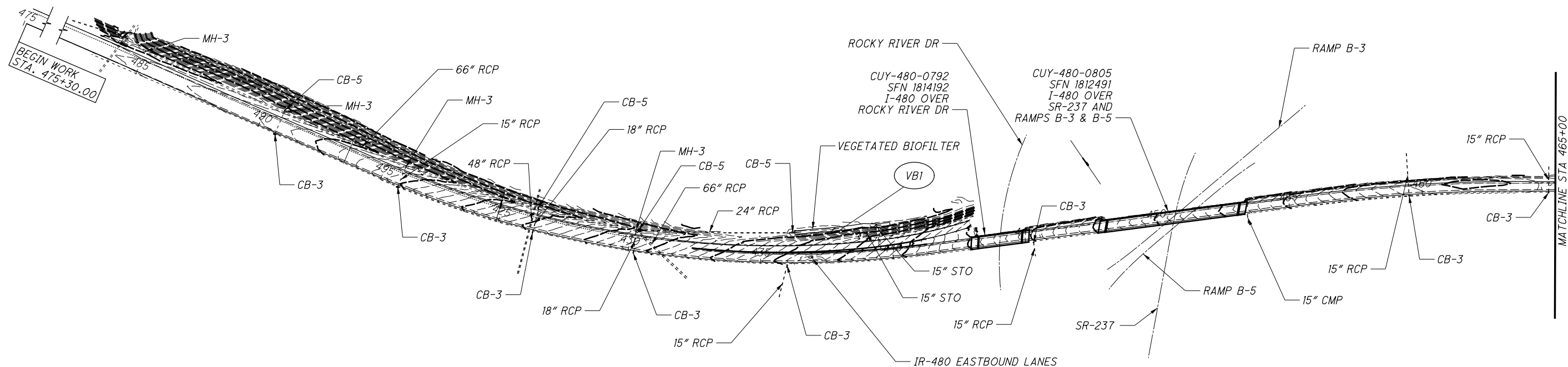
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REF NO.	SHEET NO.	STATION TO STATION			TO		605	605		611		611		670		602	611	611				FOR INFORMATION ONLY					CALCULATED MAH
							6" UNCLASSIFIED PIPE UNDERDRAINS	6" BASE PIPE UNDERDRAINS		6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS		PRECAST REINFORCED CONCRETE OUTLET		VEGETATED SWALE EROSION PROTECTION		CONCRETE MASONRY	INLET, NO. 3B, AS PER PLAN	CONDUIT, BORED OR JACKED, AS PER PLAN, 15" TYPE B				6" X 45° BEND	6" X 90° BEND	6" X 6" TEE	6" X 6" WYE	6" X 6" CROSS	
							FT	FT		FT		EACH		SY		CY	EACH	FT				EACH	EACH	EACH	EACH	EACH	
UD-1	67-68	485+00.00	-81.91		490+67.13	-76.75		568		-														1			
UD-2	67-68	485+00.00	-94.45		490+65.93	-2		566		10													1				
UD-3	68-69	490+69.17	-88.69		420+98.98	-76.75		496		13												1	1				
UD-4	68-69	490+68.93	-2		420+96.21	-2		492		8																	
UD-5	69-70	421+00.00	-82		426+32.96	-76.75		519		8													1				
UD-6	69-70	420+99.21	-2		426+32.25	-2		525		8																	
UD-7	70	426+35.00	-82		430+15.69	-76.75		367		8												1					
UD-8	70	426+34.22	2.42		430+18.97	-2		379		8													1				
UD-9	70-71	430+27.75	-86.06		433+71.17	-77.09		324		16												1					
UD-10	70-71	430+19.97	2.4		435+98.84	-2		573		8													1				
UD-11	71	433+72.00	-111		436+20.72	-79.6		243		34													1				
UD-12	71-73	435+99.84	2.54		443+19.26	-2		715		8													1				
UD-13	71-72	436+21.11	-119.2		441+30.46	-91.04		497		40													1				
EC-1	71-72	436+29.00	-120.7		440+00.00	-134.7							541														
UD-14	72-73	439+55.77	-46.75		443+27.25	-46.75		361		8																	
UD-15	73-74	445+14.26	-60.44		44814.77	-46.75		295		15		1										1					
UD-16	73-74	445+29.67	2.24		448+00.66	-2		267		8														1			
UD-17	74-76	453+39.17	1.17		459+48.77	-46.75		612		48													1				
UD-18	74-76	453+39.17	-2		459+47.57	-2		609		-															1		
UD-19	76	459+52.73	-89.65		461+48.02	-46.75		567		43		1											1				
UD-20	76	459+50.74	-2		461+48.00	-2		189		8																	
UD-21	76-77	461+50.00	-46.75		465+00.10	-65		351		18		1															
UD-22	76	461+50.00	-2		464+74.84	-2		317		8																	
UD-23	77-78	468+74.23	-2		473+99.80	2.6		522		8													1				
UD-24	77-78	469+01.44	-46.75		470+83.75	-43.88		176		8												1					
UD-25	78	470+95.90	-83.15		473+99.83	-70.54		302		8													1				
UD-26	78-79	474+00.41	-63.86		477+30.22	-62.74		325		8													1				
UD-27	78-79	474+00.80	-2		480+17.82	2.67		613		8													1				
UD-28	79-80	477+31.22	-58.75		485+00.00	-93.92		768		35		1											1				
UD-29	79-80	480+18.82	-2		484+19.00	-2		385		8													1				
EC-2	79-80	480+86.56	-99.42		484+82.00	-98.12							610														
DR-1	80	484+21.00	-0.75		484+21.00	-80.14										0.27	1	79									
DR-2	80	485+75.00	-0.75		485+24.44	-102.4										0.27	1	110									
UD-30	80	484+21.00	-2		485+75.00	-2		153		8																	
UD-31	80-82	485+01.00	-58.75		494+22.65	-100.8		922		21																	
UD-32	80-81	485+77.00	-2		488+13.19	2.65		232		8																	
UD-33	81	488+14.19	-2		491+00.00	-2		278		8																	
UD-34	81-82	491+02.00	-2		494+24.91	-2		215		8																	
EC-3	81-82	489+51.31	-89.74		497+00.00	-106							885														
DR-3	81	491+00.00	-0.75		491+00.00	-91.55										0.27	1	90									
UD-35	82	494+26.71	-79.33		497+67.58	-110.4		346		17		1												1			
UD-36	82-83	494+28.08	-2		498+50.00	-2		414		8													1				
UD-37	82-83	497+72.69	-52.75		504+00.00	-79.37		628		20		1													1		
DR-4	83	498+50.00	-0.75		498+00.00	-127.5										0.27	1	135									
UD-38	83	498+52.00	-2		502+41.96	1.96		385		8															1		
UD-39	83	502+41.96	-2		504+00.00	-2		150		8																	
TOTALS CARRIED TO GENERAL SUMMARY							150	16496		522		6		2036		2	4	414									

DRAINAGE SUBSUMMARY

CUY - 480 - 07 - 14 WB

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THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

THIS PLAN UTILIZES VEGETATED BIOFILTER(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AS SHOWN IN THE PLANS TO ANY DISTURBED AREA ON THE SHOULDER AND FORESLOPE DRAINING TO A VEGETATED BIOFILTER. THE DITCH FOR EACH VEGETATED BIOFILTER SHALL BE TRAPEZOIDAL, AS SHOWN IN THE PLAN CROSS SECTIONS. PROVIDE ITEM 670 AS SPECIFIED IN THE PLANS.

NAME	STATION	SIDE	BOTTOM WIDTH	LAT/LONG	EDA TREATMENT CREDIT (ACRES)
VEGETATED BIOFILTER 1	BEGIN 436+29.00	LT.	5.0'	41.420427, -81.83120	1.22
	END 440+00.00	LT.	5.0'	41.420508, -81.831817	
VEGETATED BIOFILTER 2	BEGIN 480+86.56	LT.	5.0'	41.420996, -81.816915	1.05
	END 484+82.00	LT.	5.0'	41.420979, -81.815473	
VEGETATED BIOFILTER 3	BEGIN 489+51.31	LT.	5.0'	41.420942, -81.813758	2.25
	END 497+00.00	LT.	5.0'	41.420964, -81.811032	

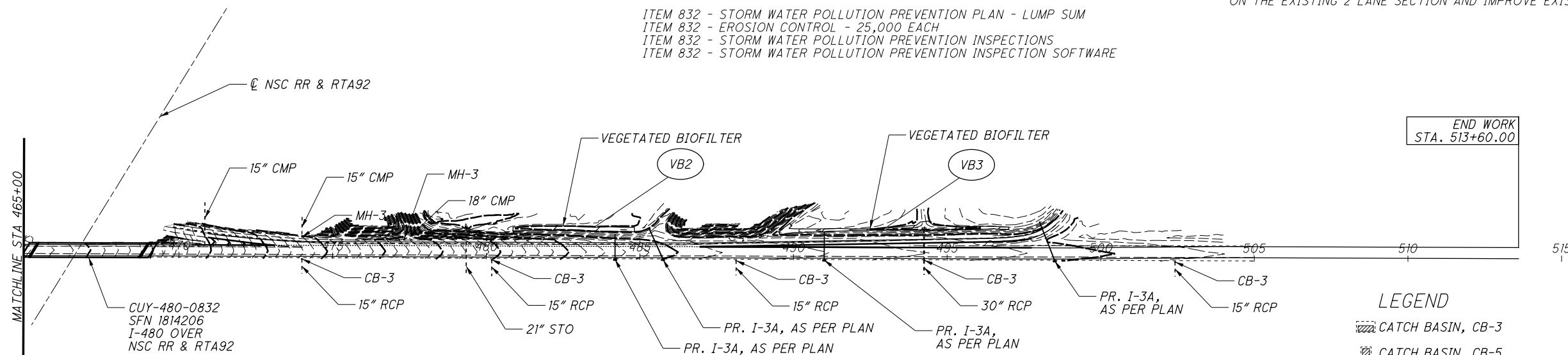
THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR PAYMENT:

ITEM 832 - STORM WATER POLLUTION PREVENTION PLAN - LUMP SUM
ITEM 832 - EROSION CONTROL - 25,000 EACH
ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTIONS
ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE

PROJECT DATA	
TOTAL AREA (R/W)	104 ACRES
PROJECT EARTH DISTURBED AREA (EDA)	4.92 ACRES
ESTIMATED CONTRACTOR EDA	1.00 ACRES
NOTICE OF INTENT (NOI) EDA	5.92 ACRES
PRE-CONSTRUCTION IMPERVIOUS (PAVED) AREA	13.96 ACRES
POST-CONSTRUCTION IMPERVIOUS (PAVED) AREA	13.85 ACRES
PRE-CONSTRUCTION RUNOFF COEFFICIENT	0.68
POST-CONSTRUCTION RUNOFF COEFFICIENT	0.68
POST-CONSTRUCTION BMPS	VEGETATED BIOFILTER
IMMEDIATE RECEIVING WATERS	ROCKY RIVER
SUBSEQUENT RECEIVING WATER	LAKE ERIE

PROJECT DESCRIPTION

PROJECT INCLUDES RECONFIGURING OF THE EXISTING WB LANE ASSIGNMENTS ALONG I-480 THROUGH THE I-71/SR-237/GRAYTON RD. INTERCHANGES TO PROVIDE 3 LANES ON THE EXISTING 2 LANE SECTION AND IMPROVE EXISTING WEAVES.



LEGEND

- CATCH BASIN, CB-3
- CATCH BASIN, CB-5
- MANHOLE, MH-3
- VEGETATED BIOFILTER, VB1

ABBREVIATIONS

- I INLET
- MH MANHOLE
- SS SINGLE SLOPE
- CB CATCH BASIN
- APP AS PER PLAN
- ATG ADJUST TO GRADE
- RTG RECONSTRUCT TO GRADE
- CI, B1 BARRIER TYPE

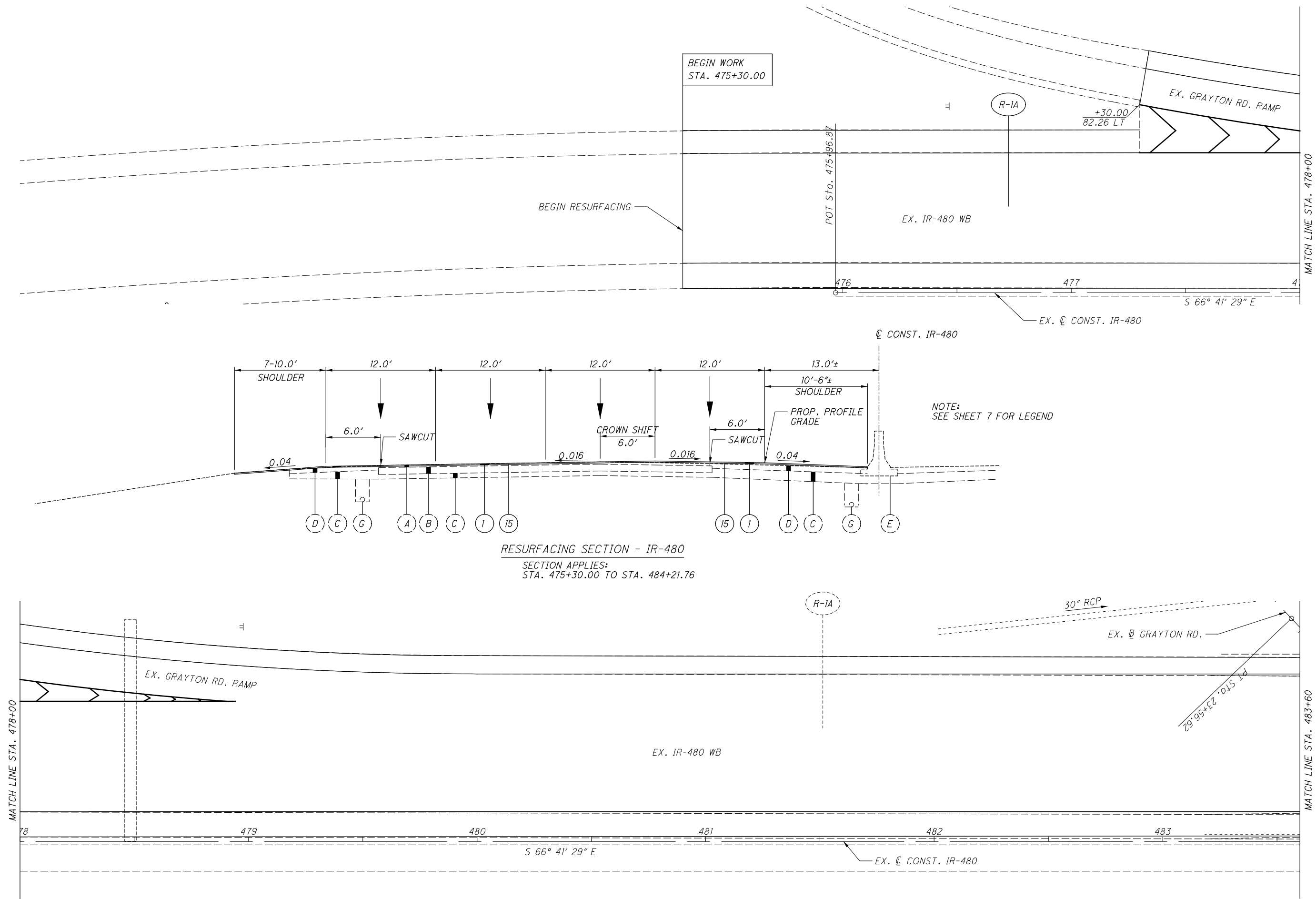


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PROJECT SITE PLAN

CUY-480-07.14 WB

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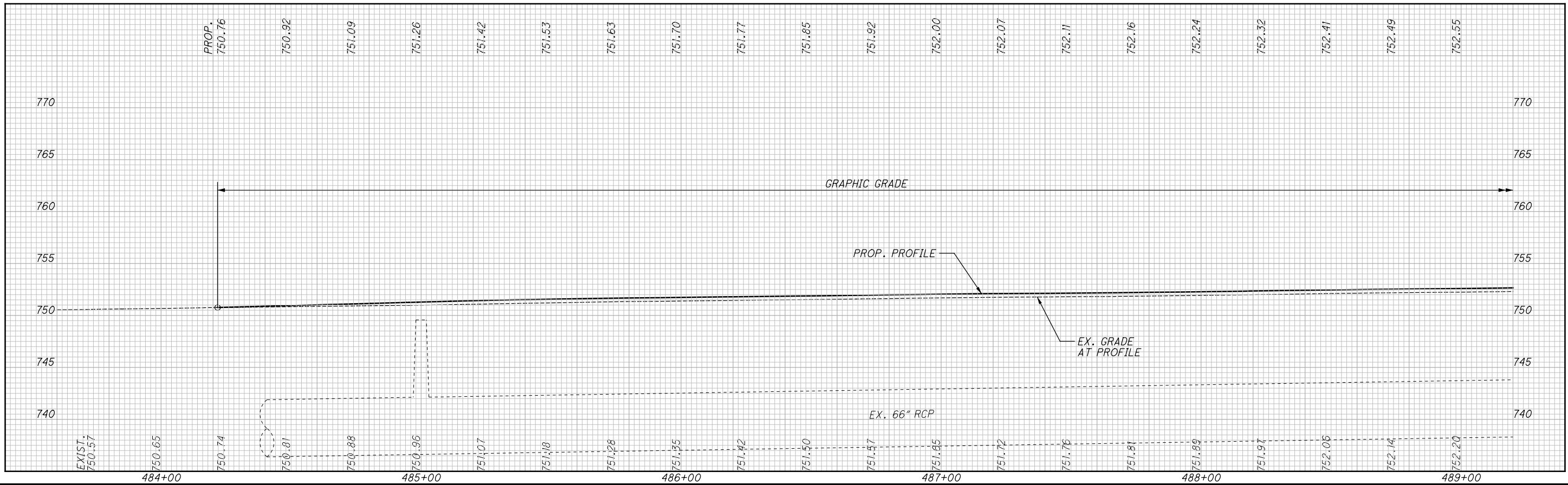
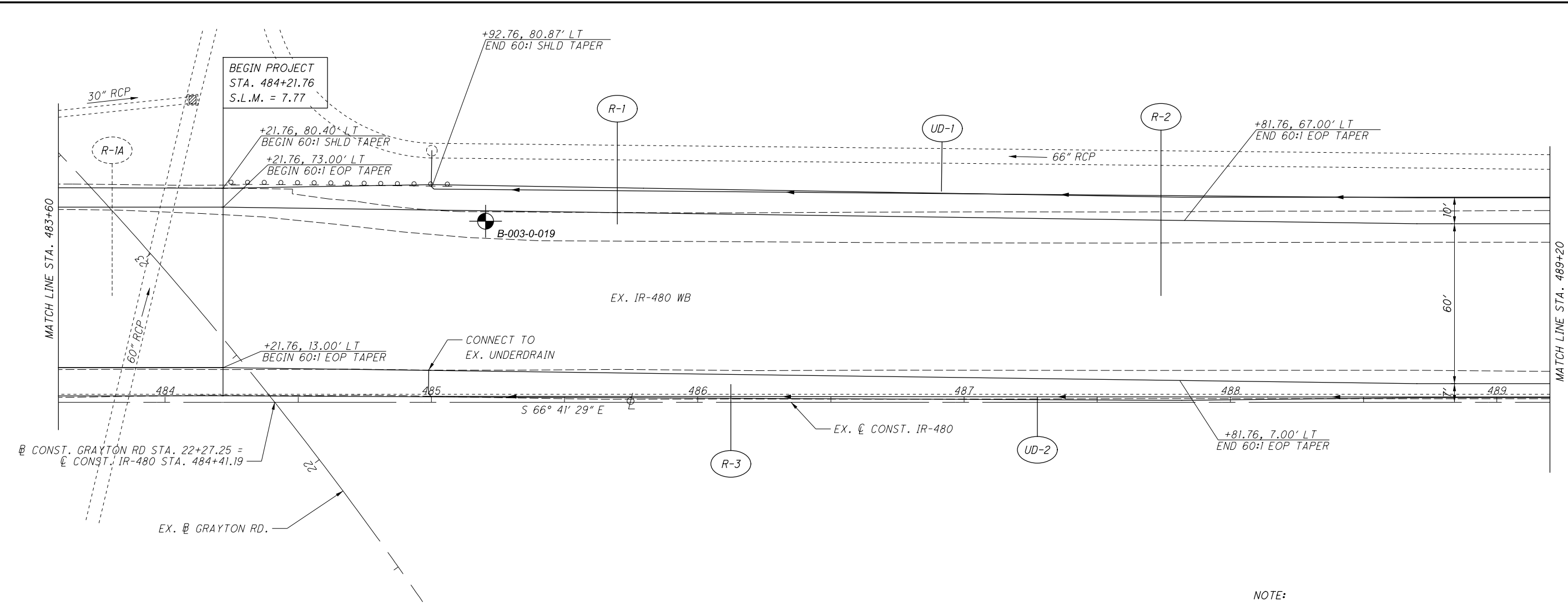
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STA. 475+30 TO STA. 483+60

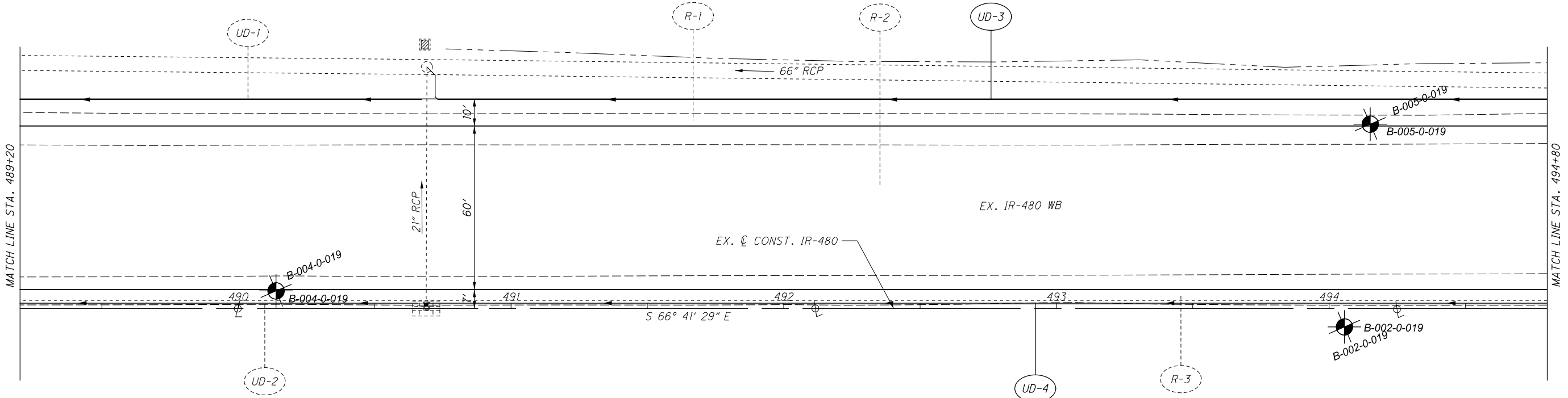
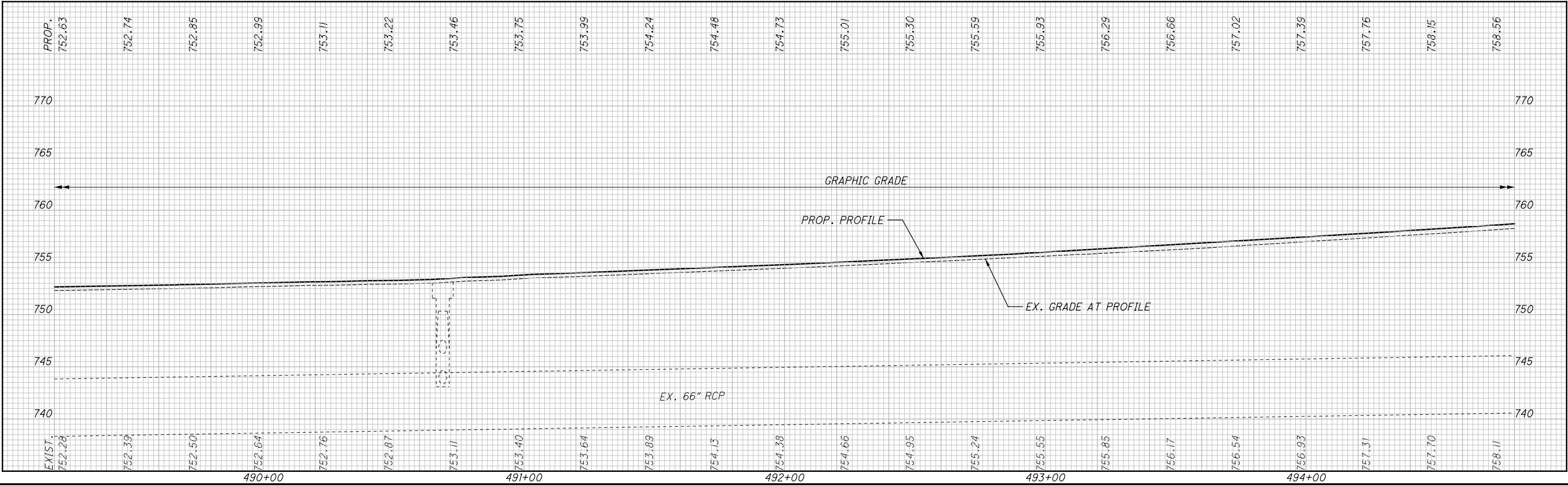
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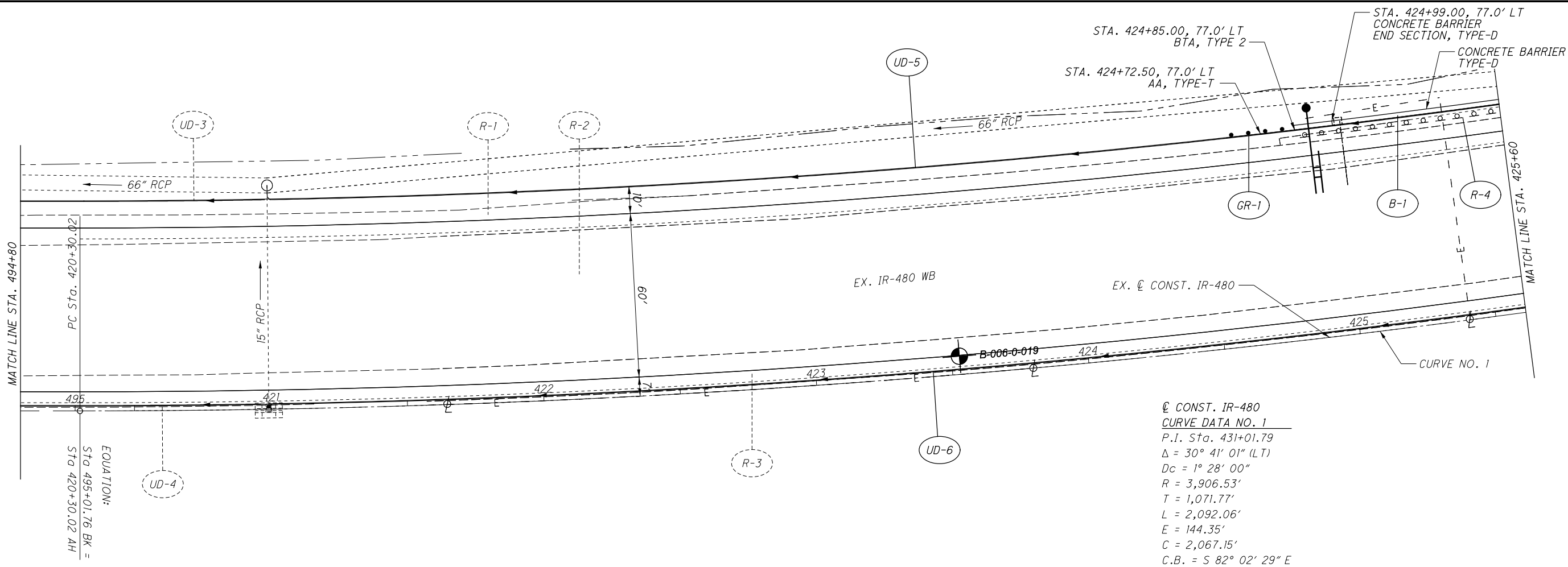
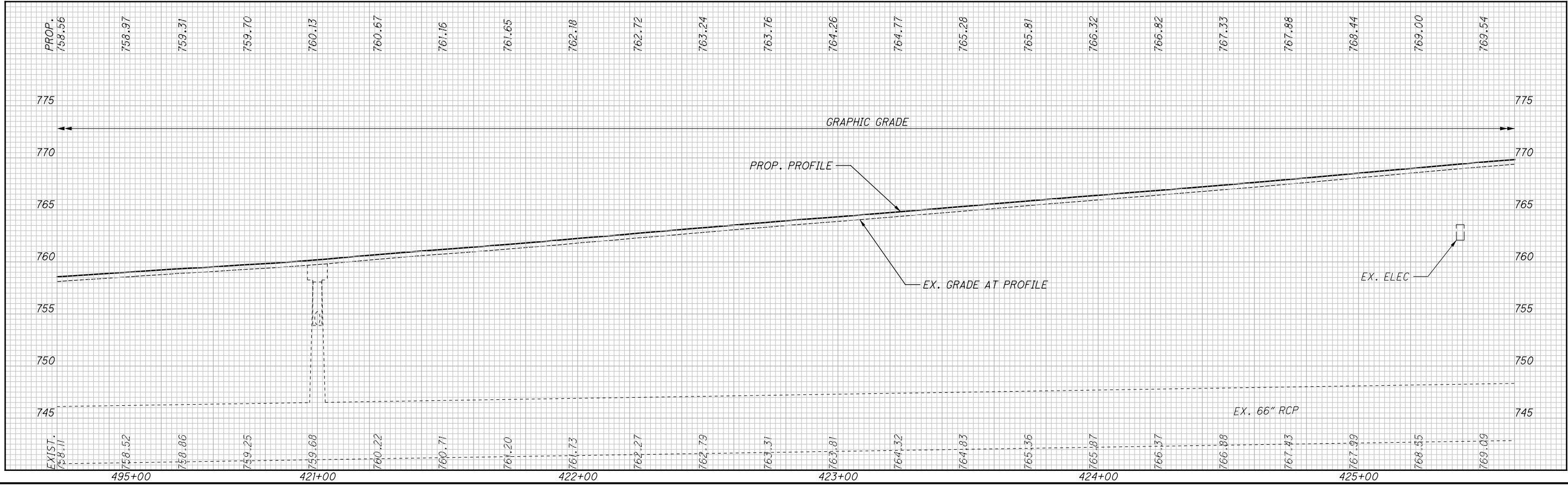
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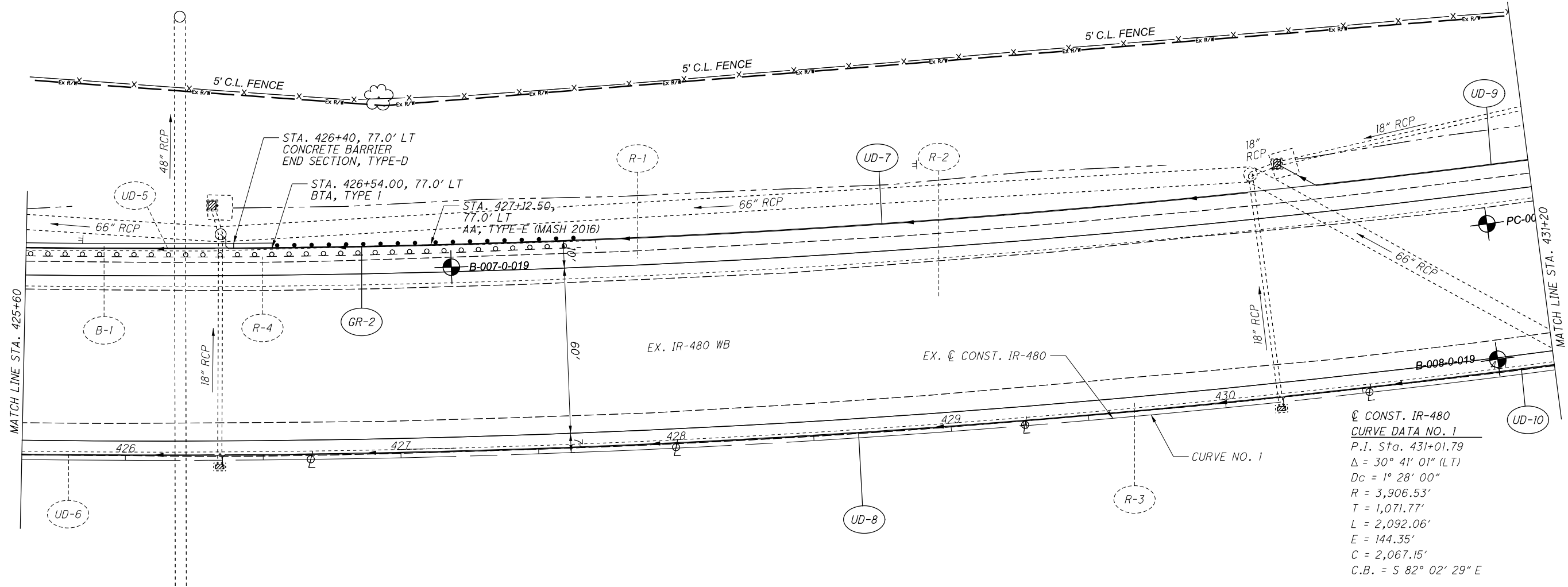
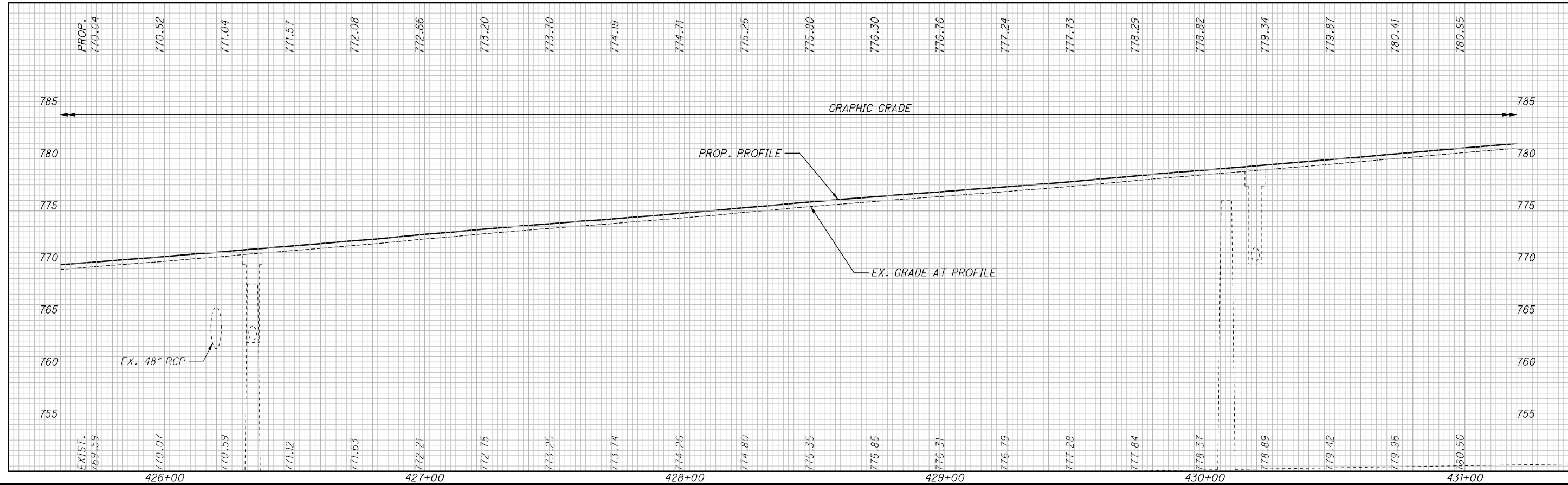


NOTE:
PROPOSED SHOULDER TAPERS TO MEET EXISTING.



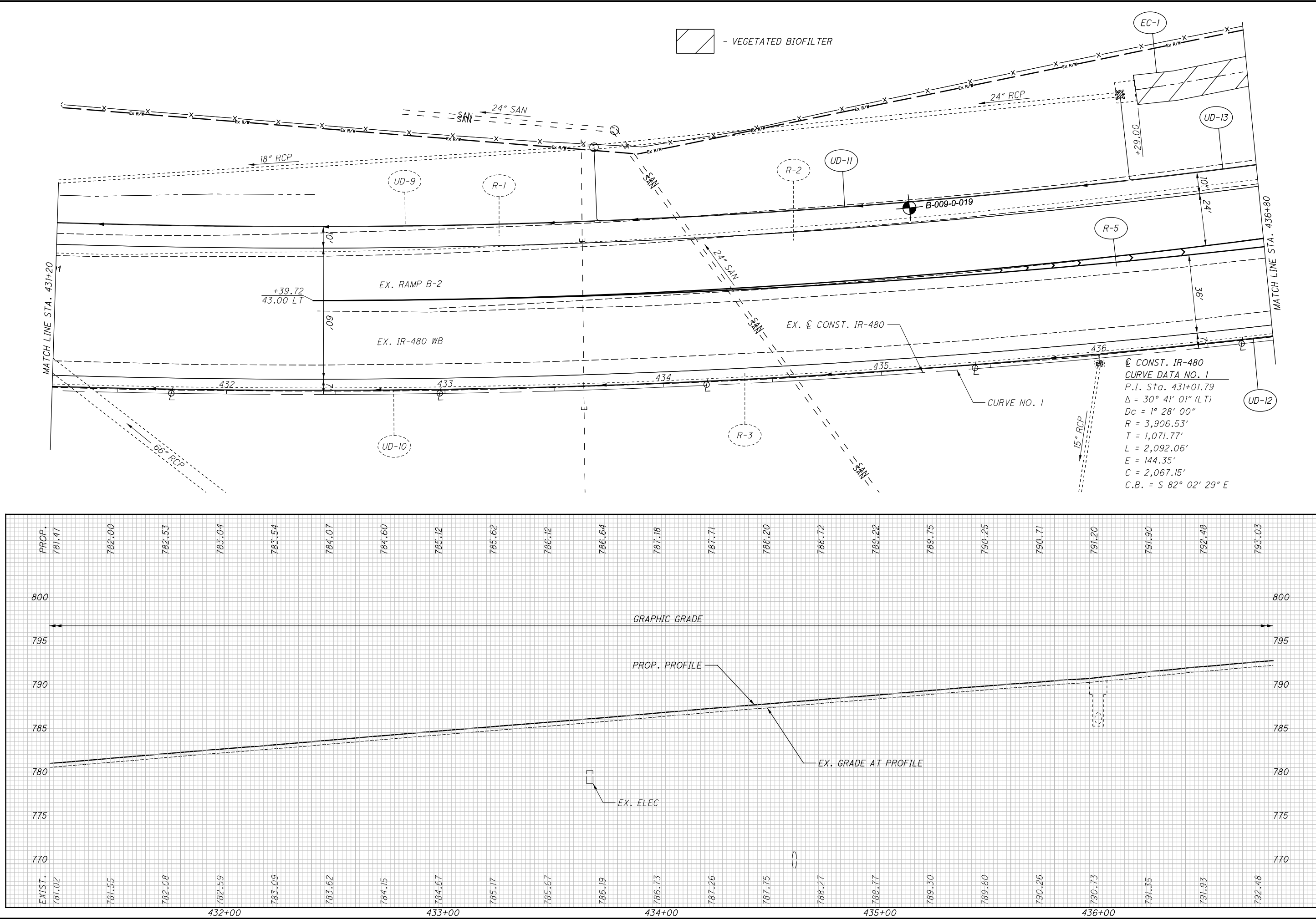


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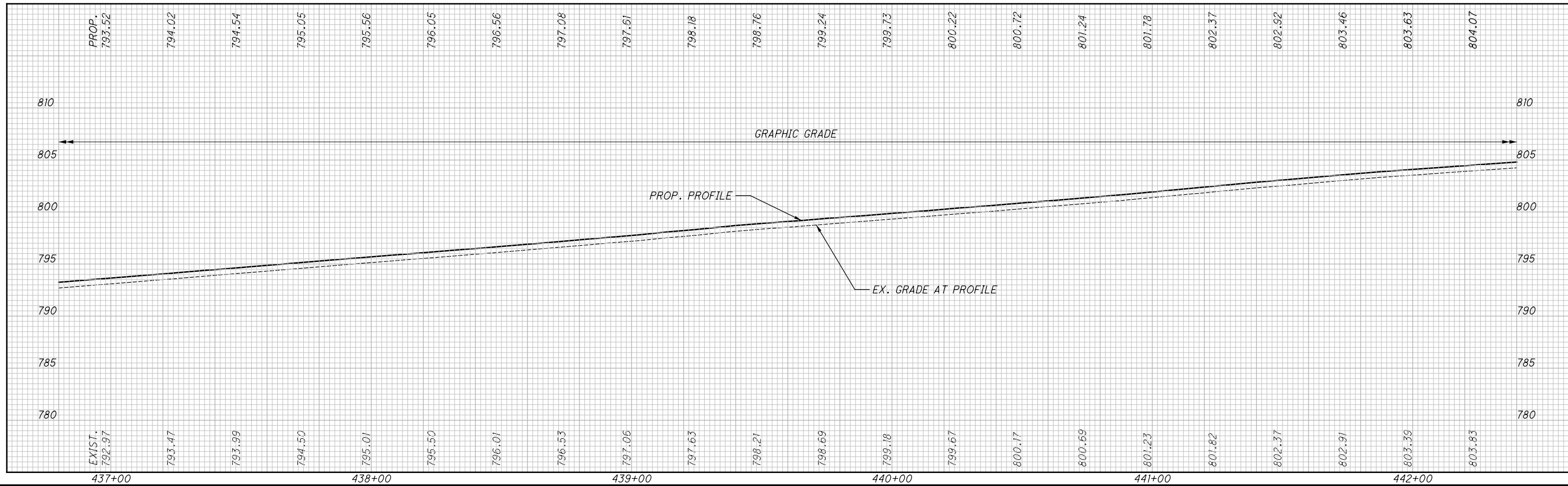
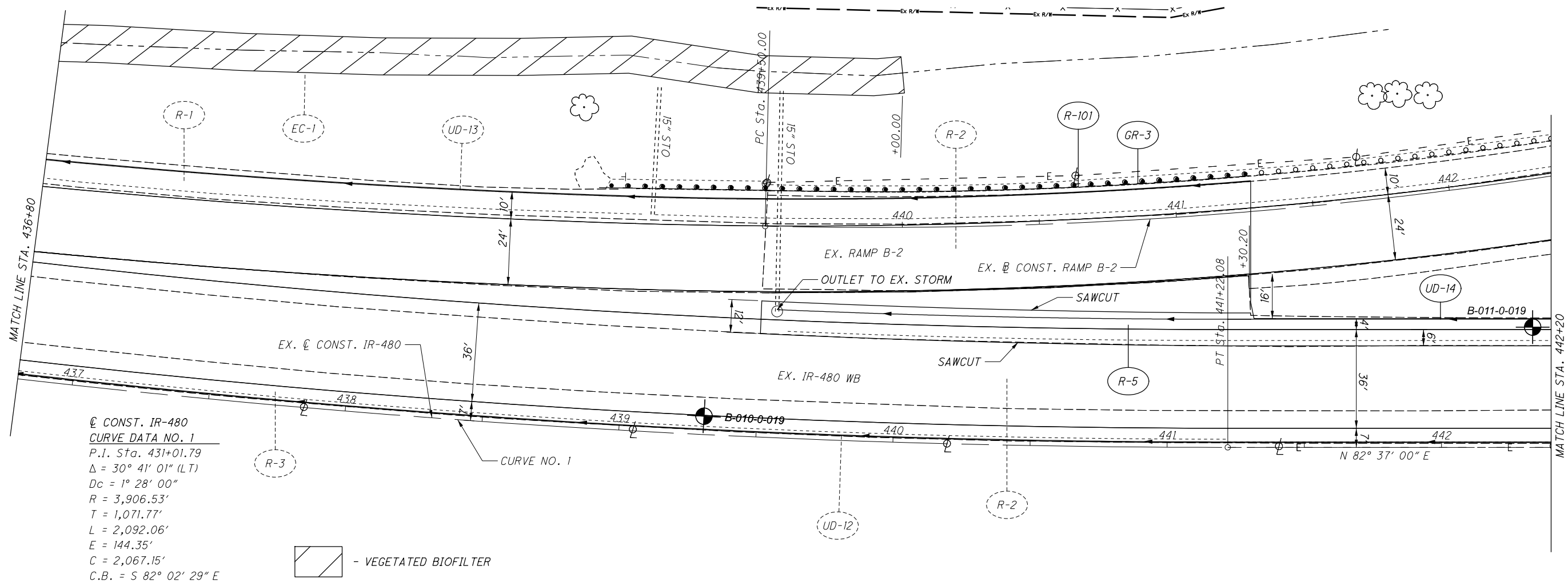


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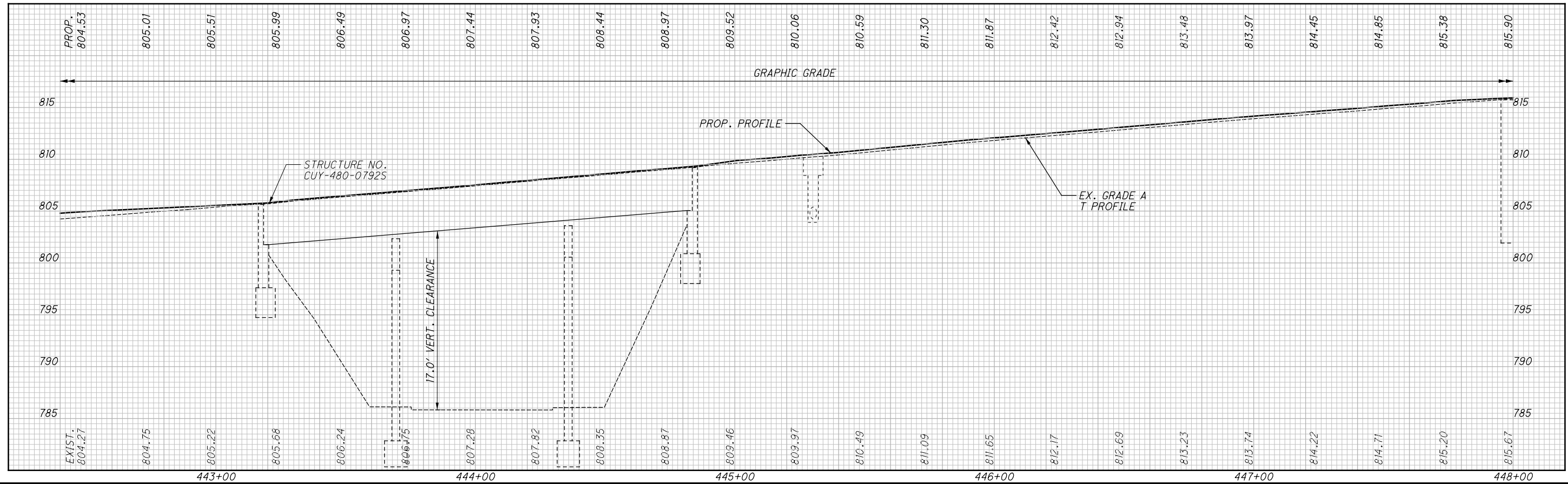
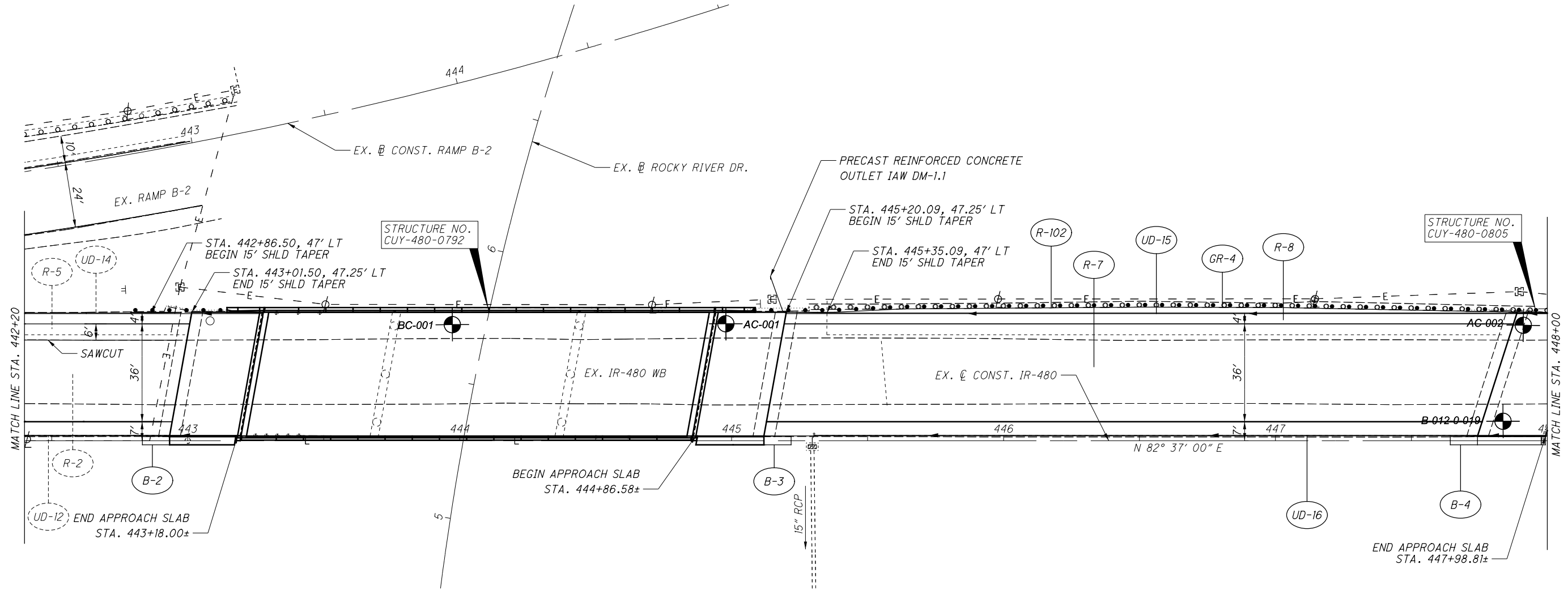
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CUY-480-07.14 WB

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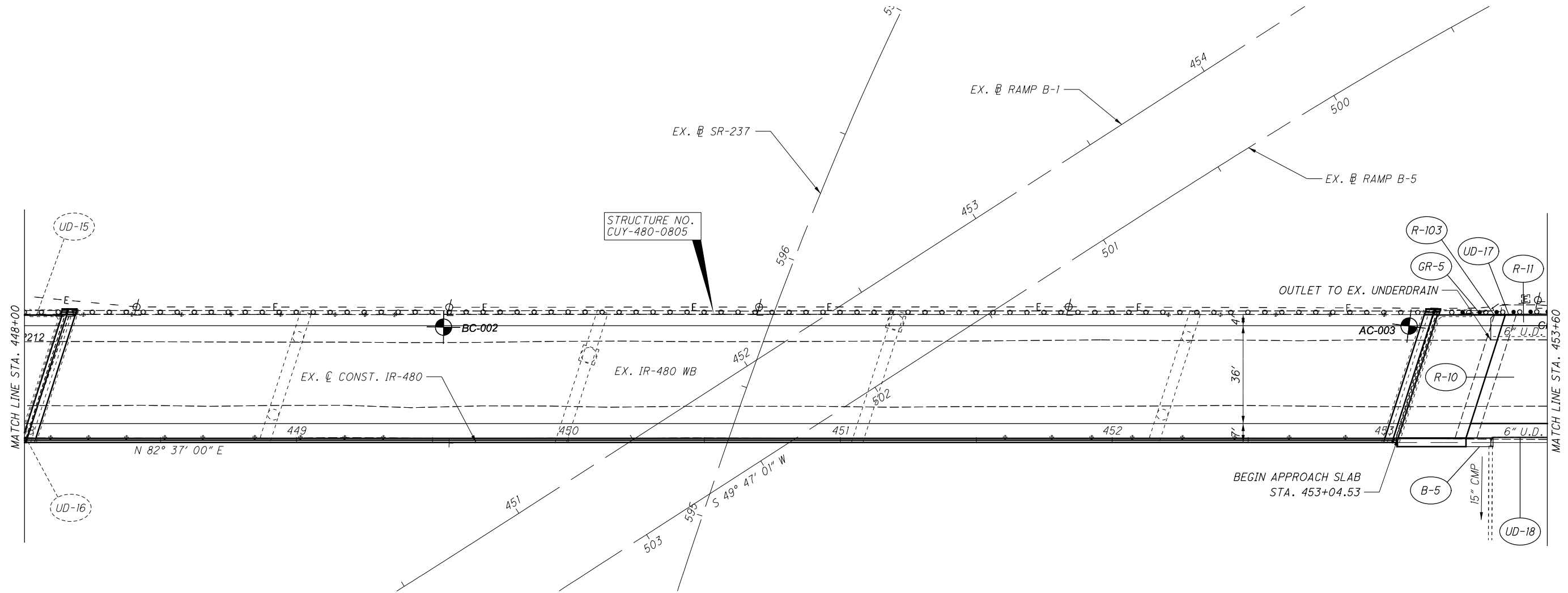
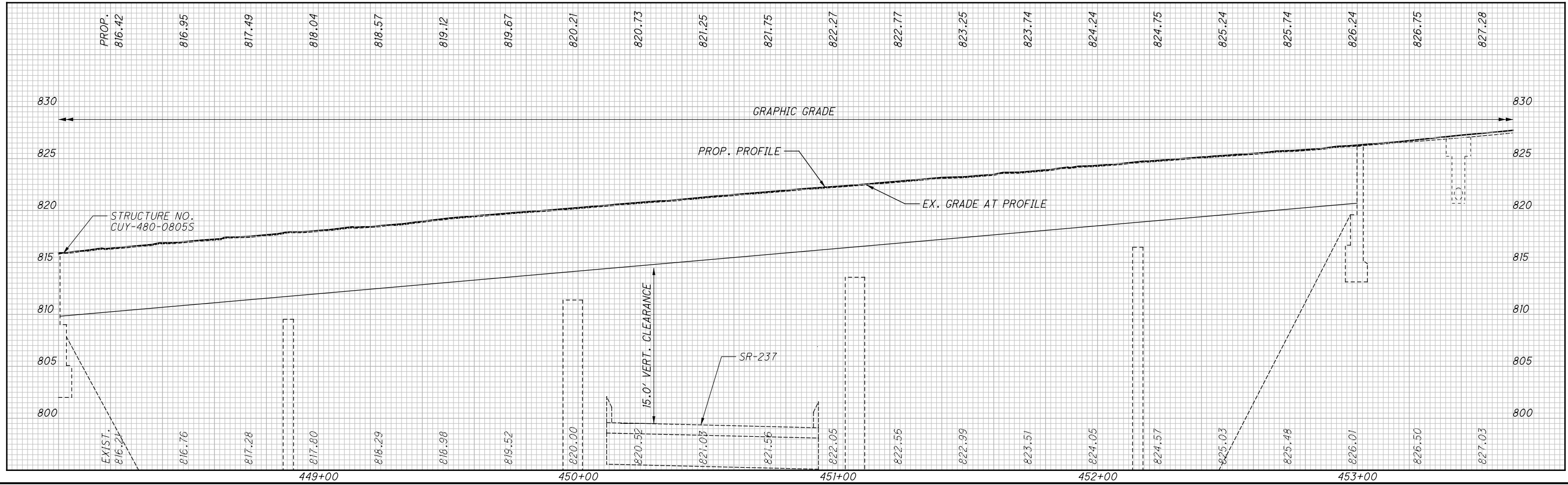
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CUY-480-07.14 WB

PLAN AND PROFILE

STA. 448+00 TO STA. 453+60

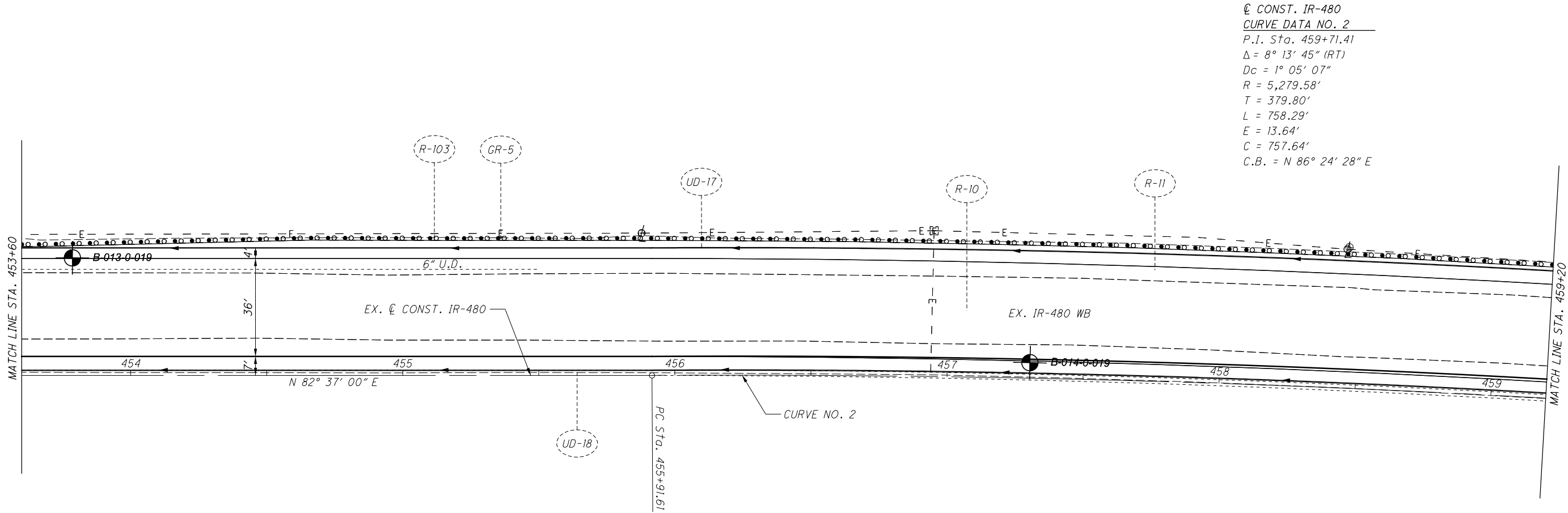
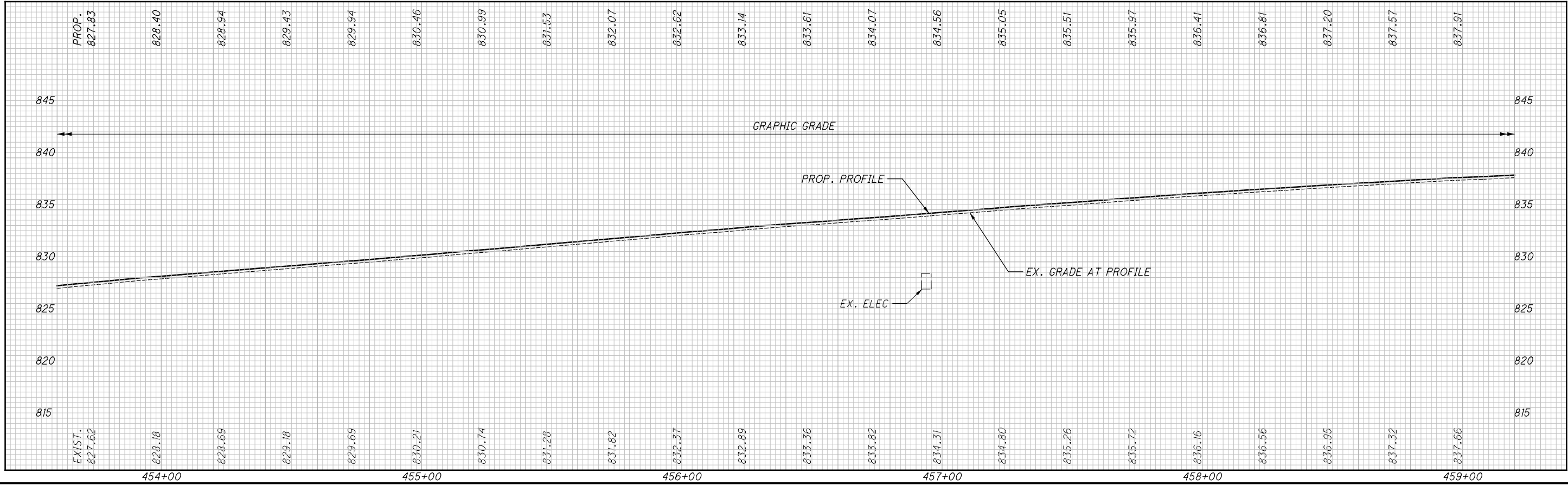
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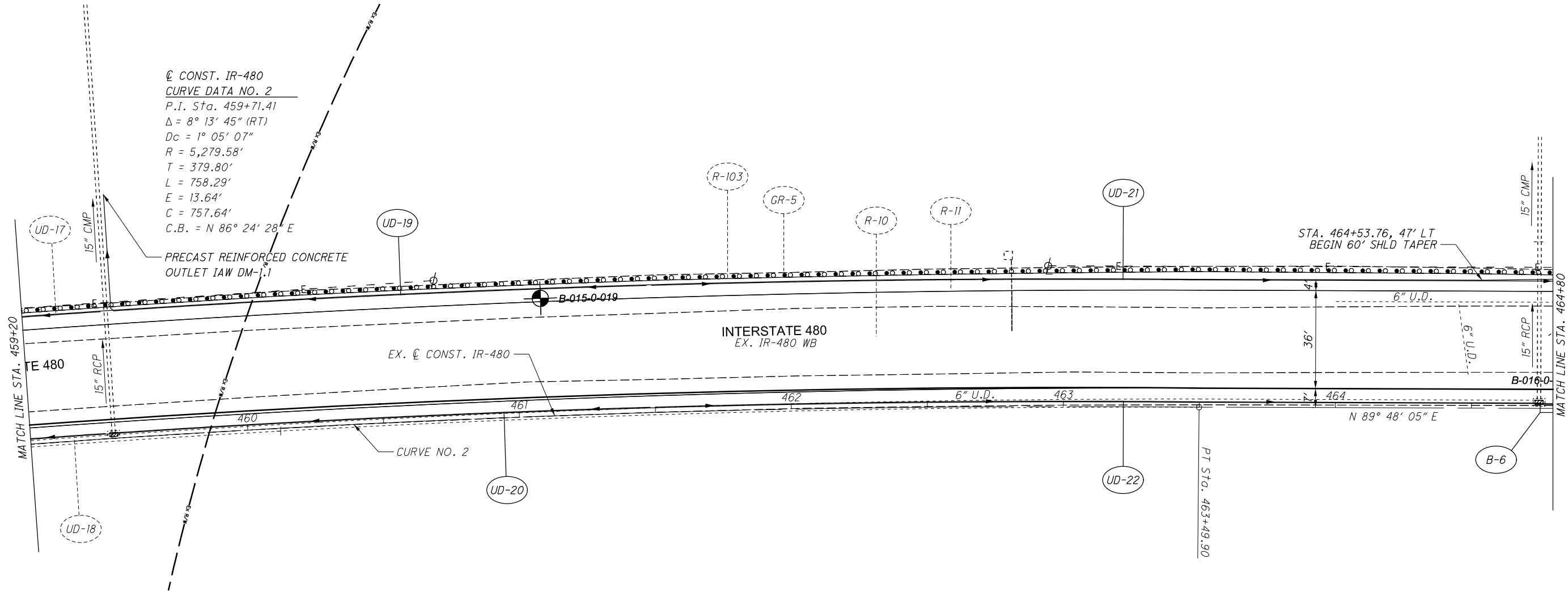
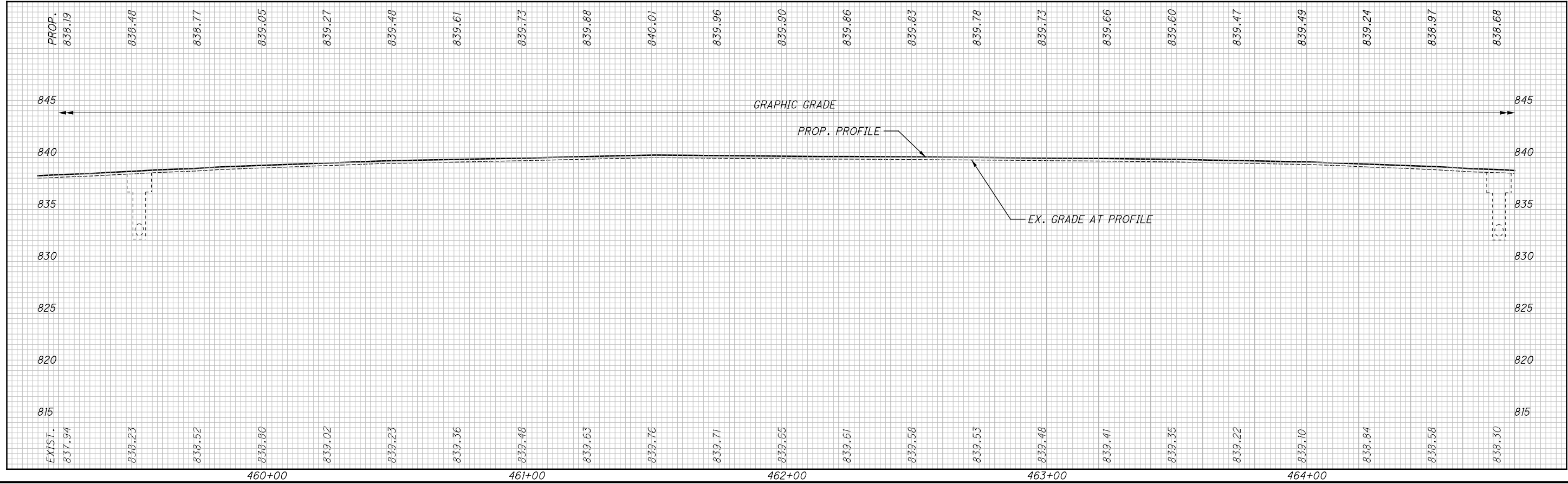
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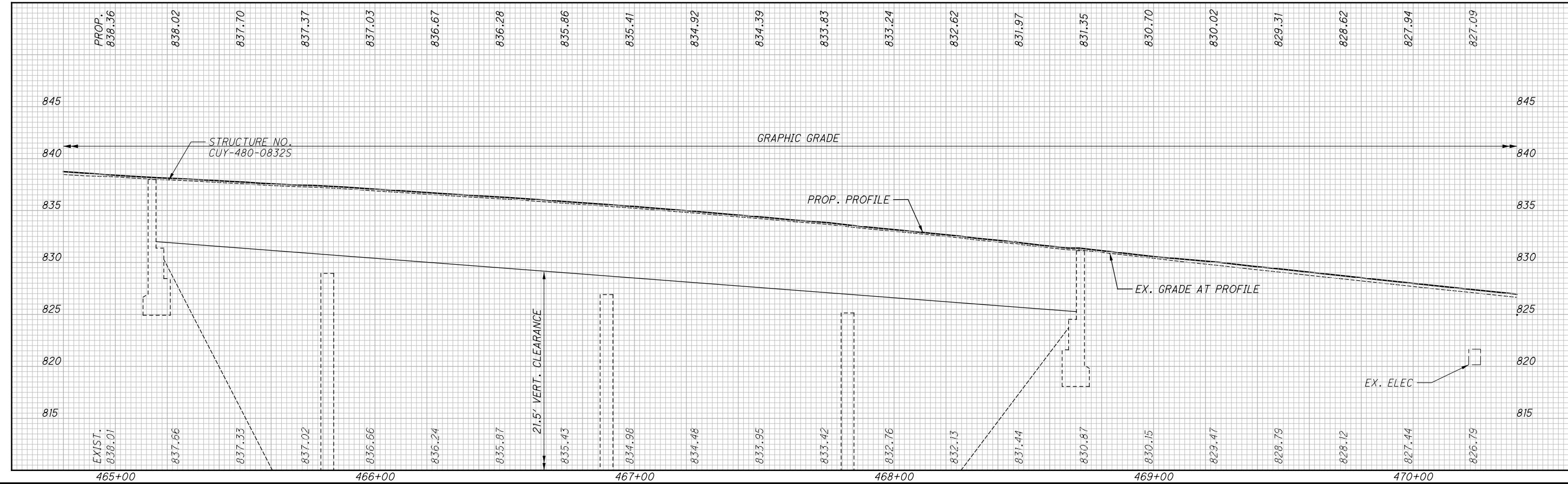
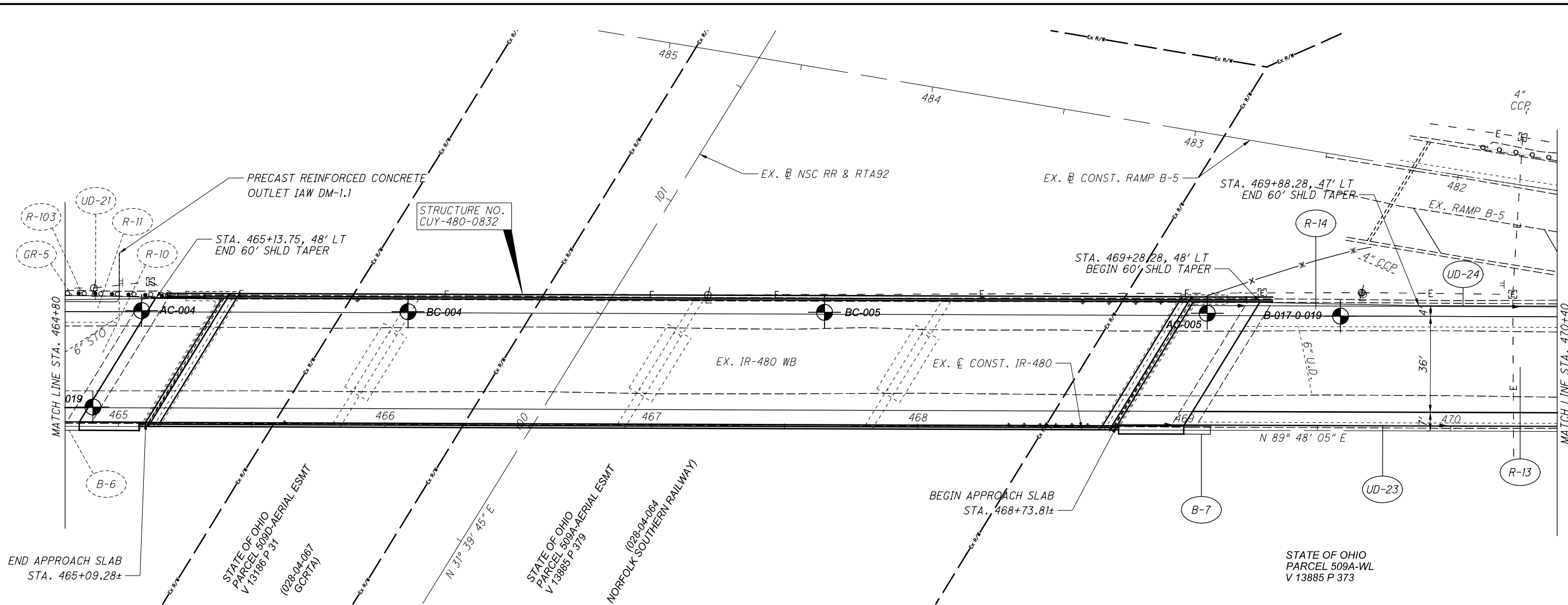
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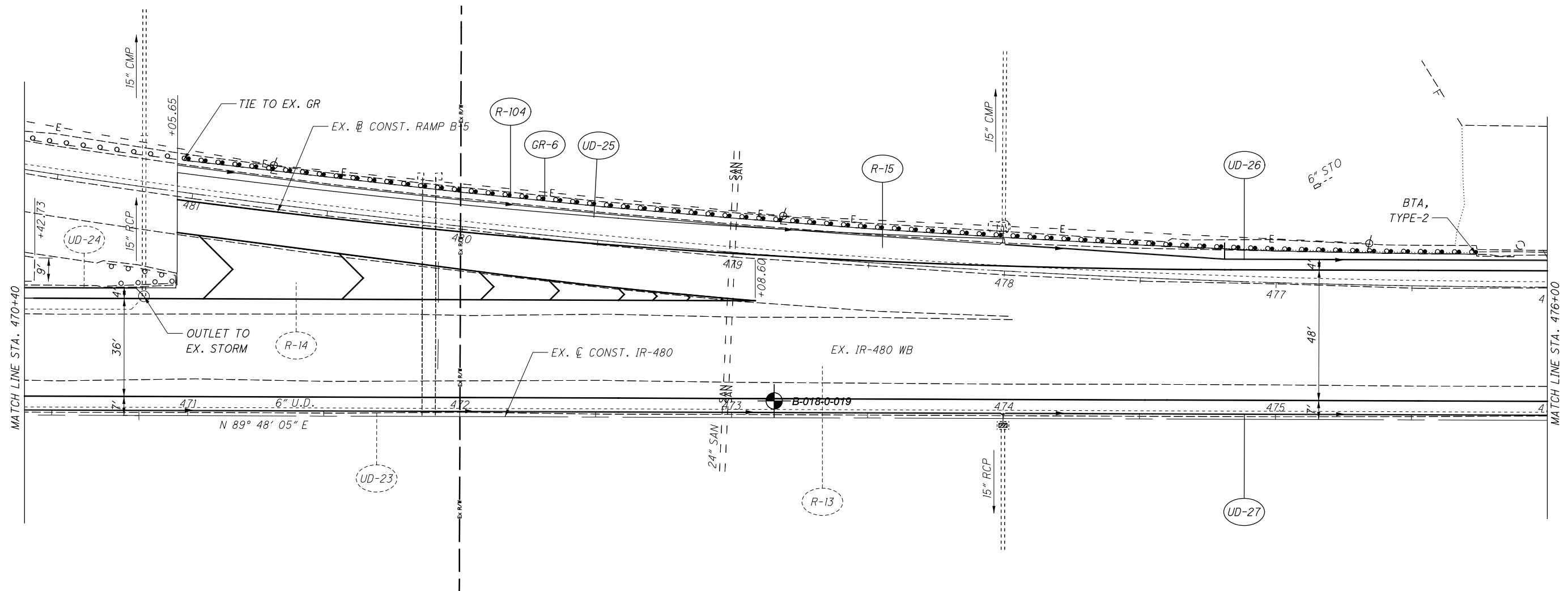
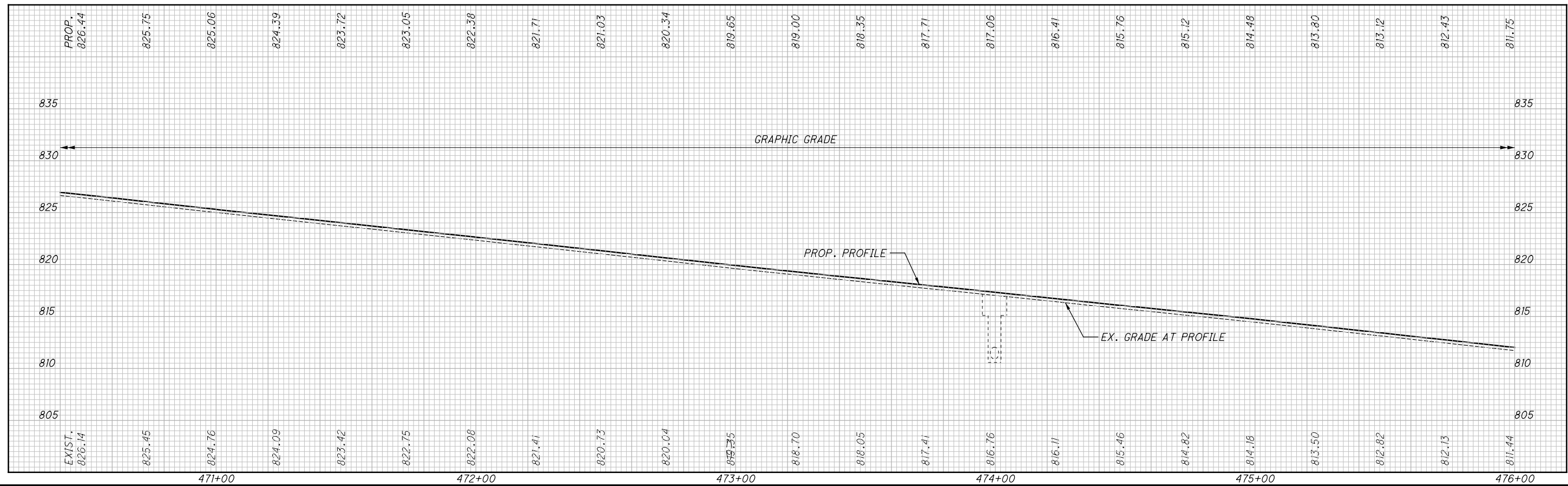
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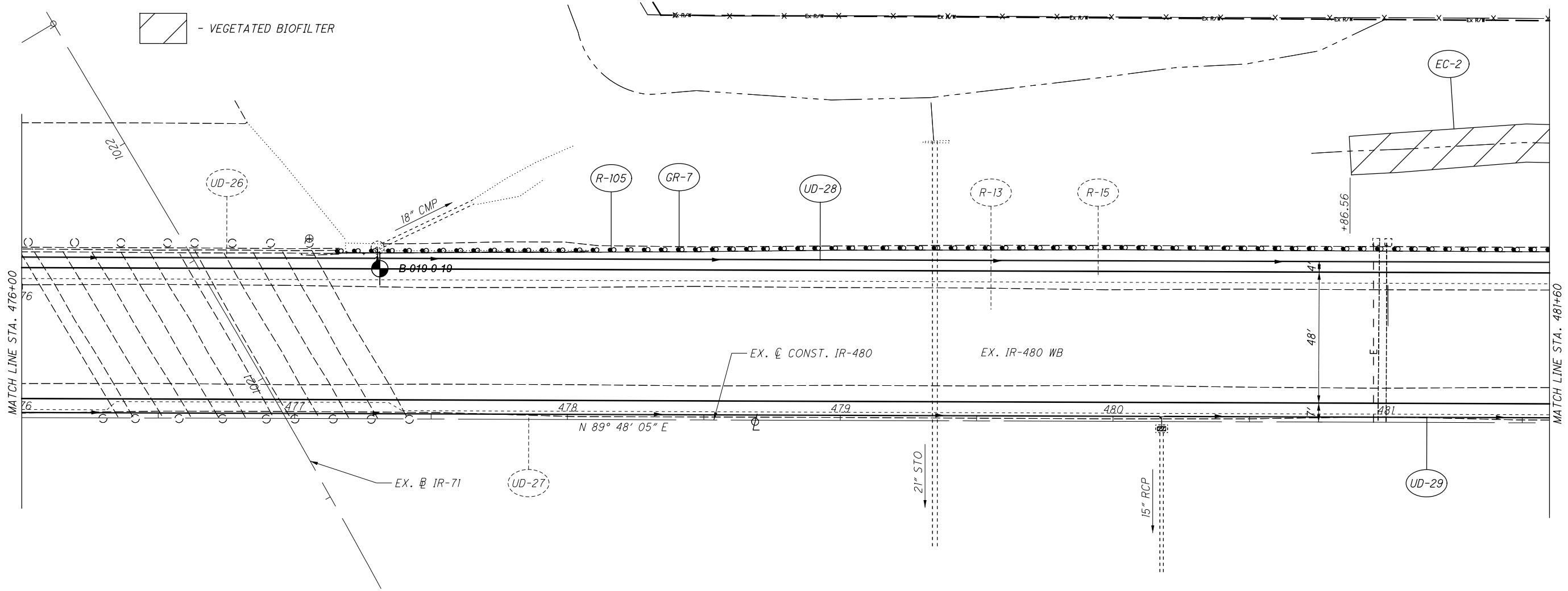
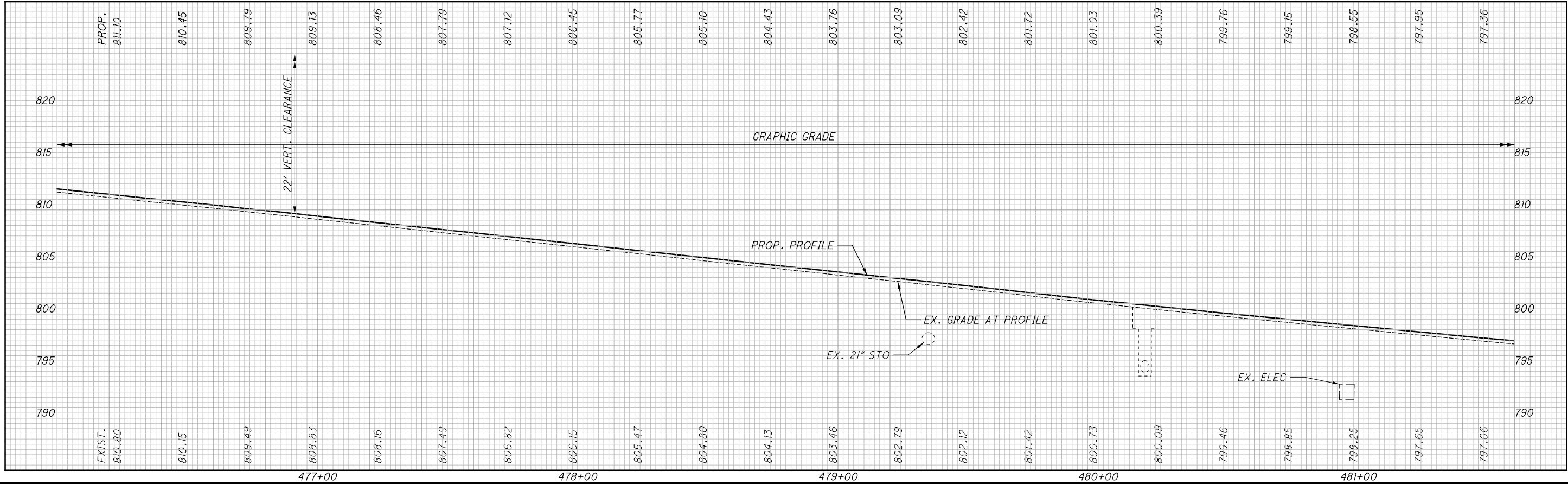
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STA. 464+80 TO STA. 470+40

CUY-480-07.14 WB

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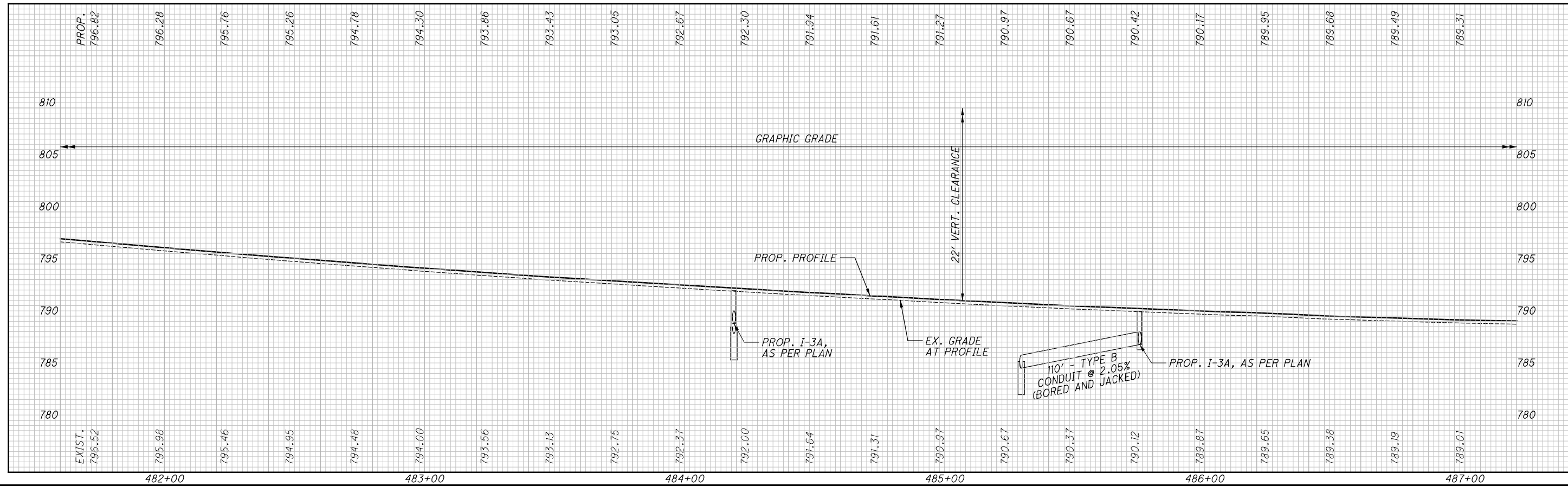
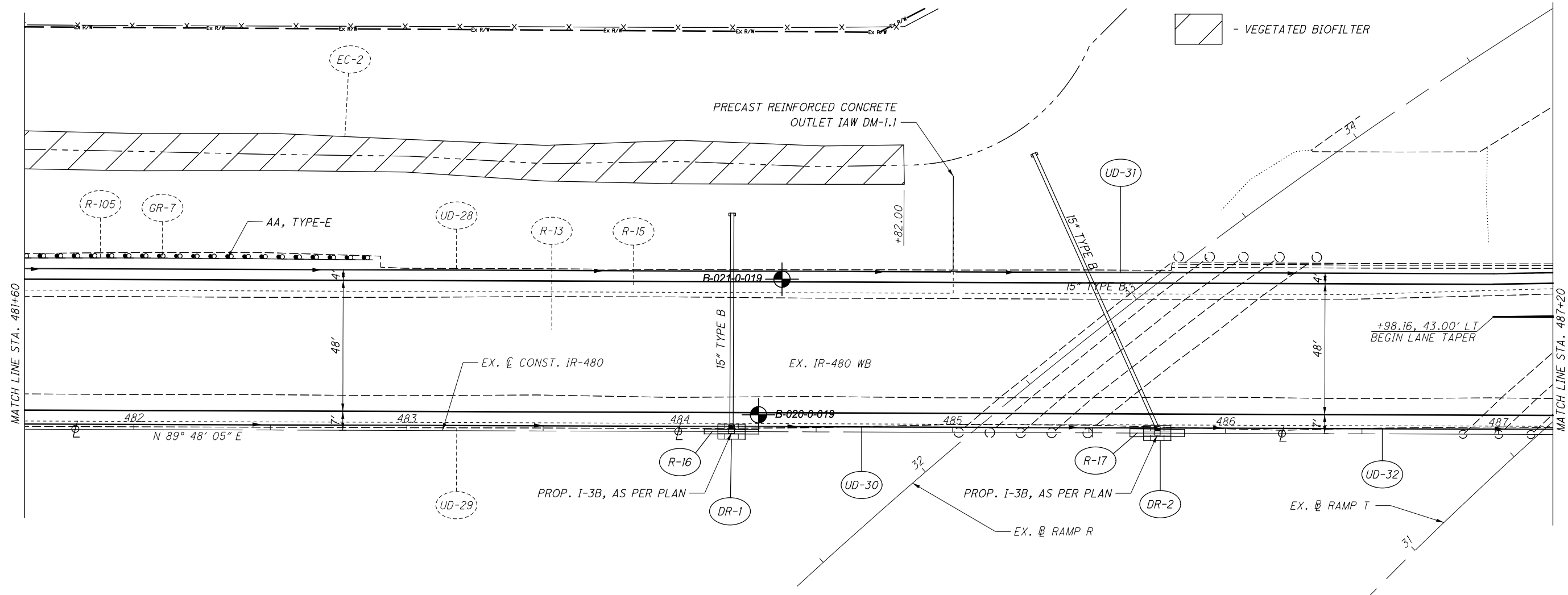
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PLAN AND PROFILE
STA. 476+00 TO STA. 481+60
CUY-480-07.14 WB

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CUY-480-07.14 WB

PLAN AND PROFILE

STA. 481+60 TO STA. 487+20

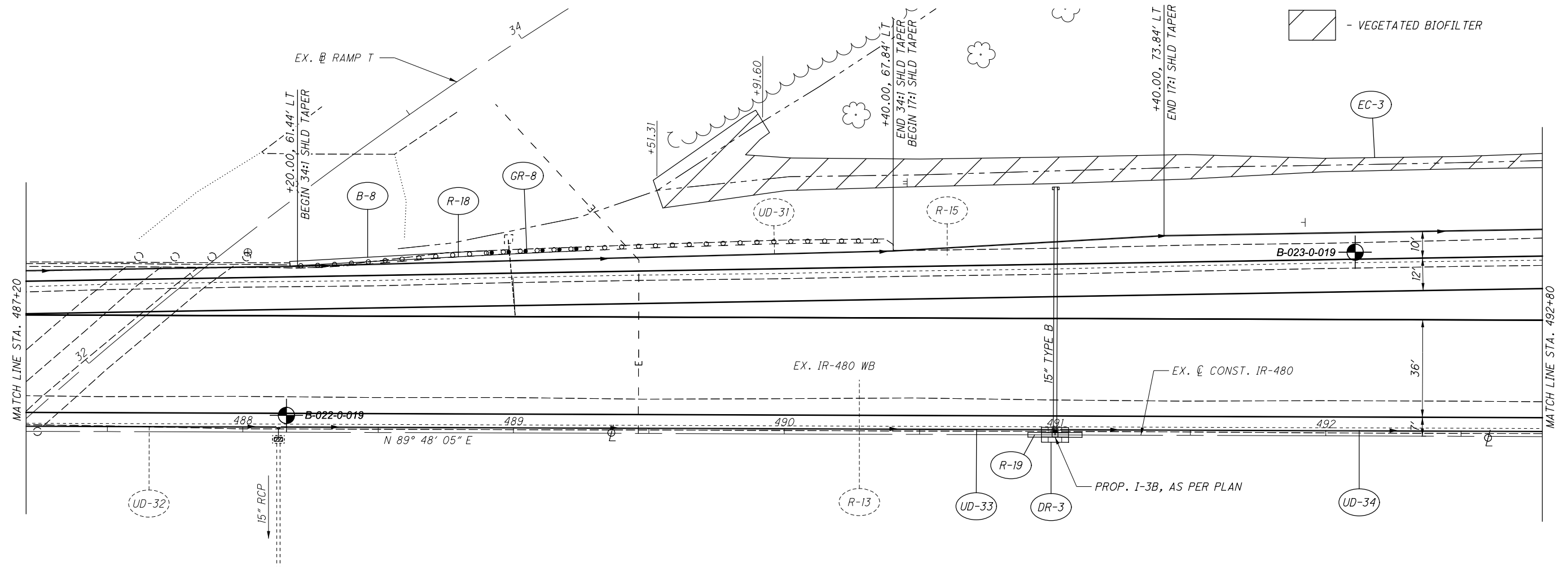
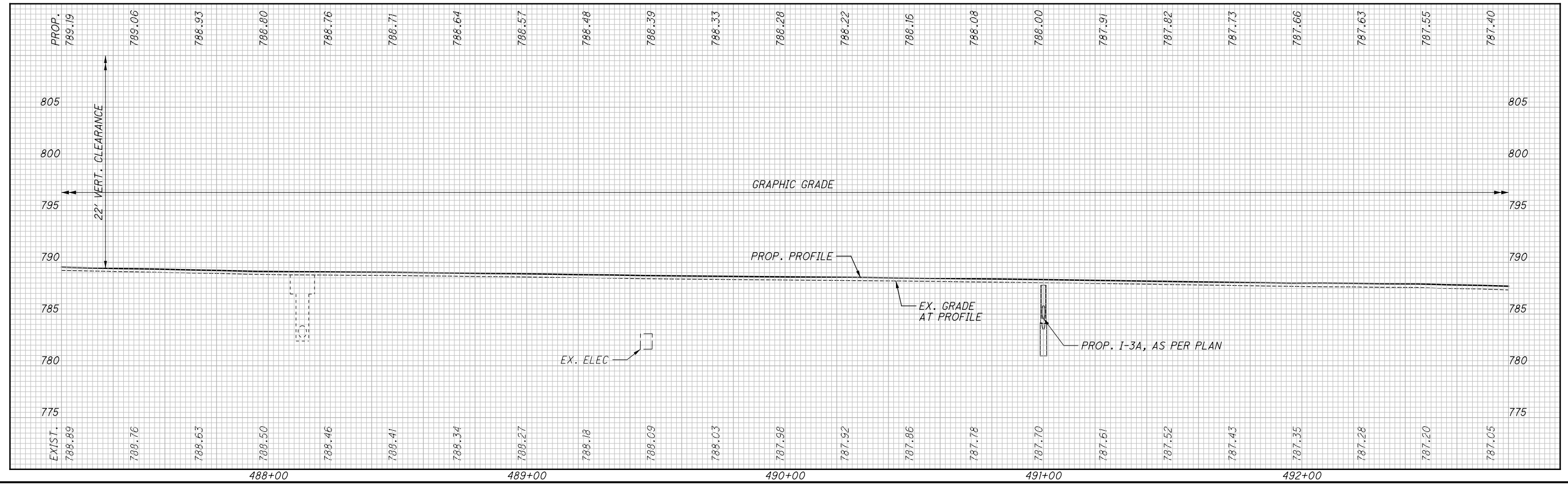
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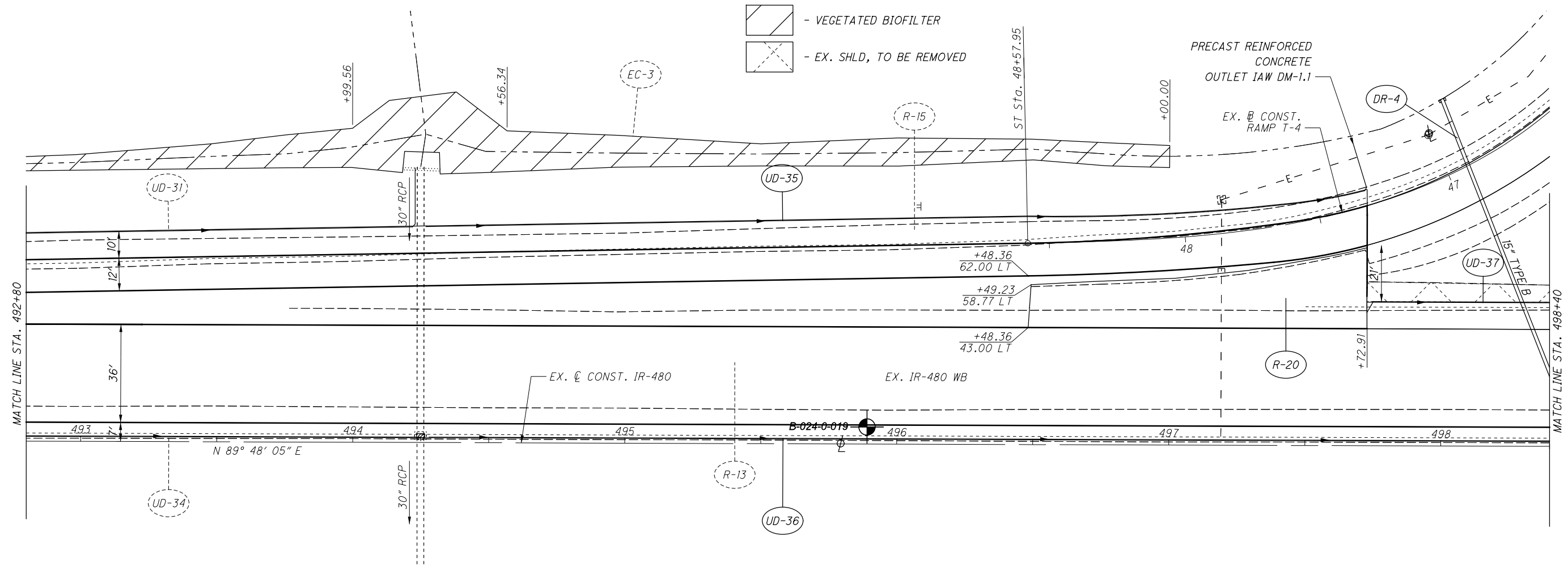
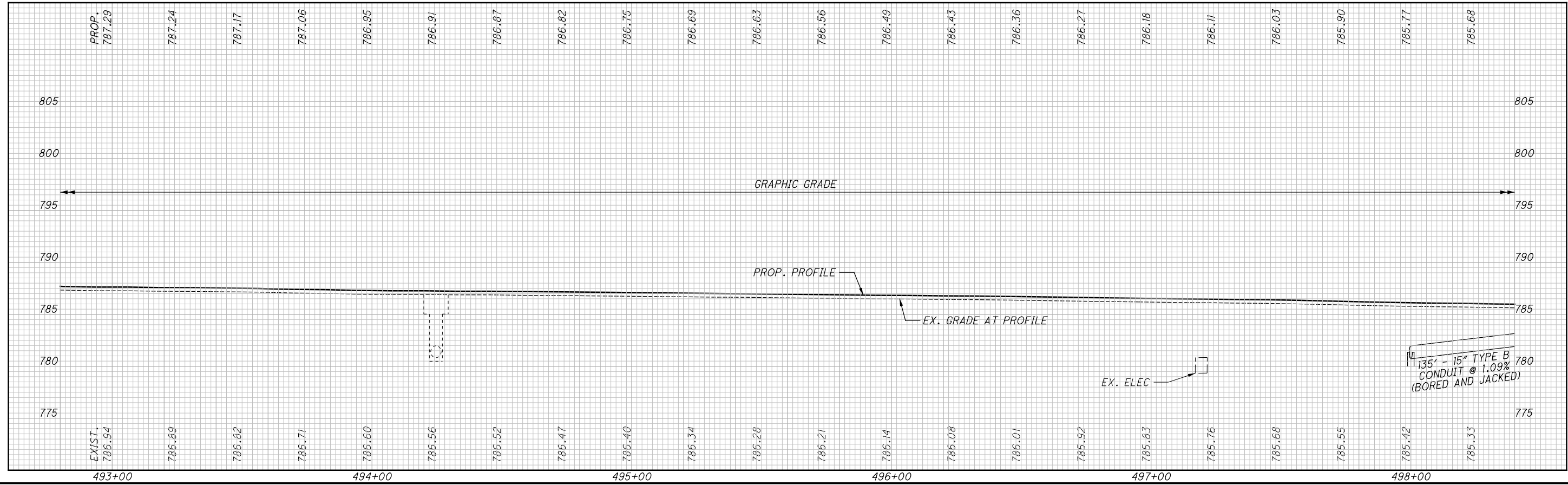
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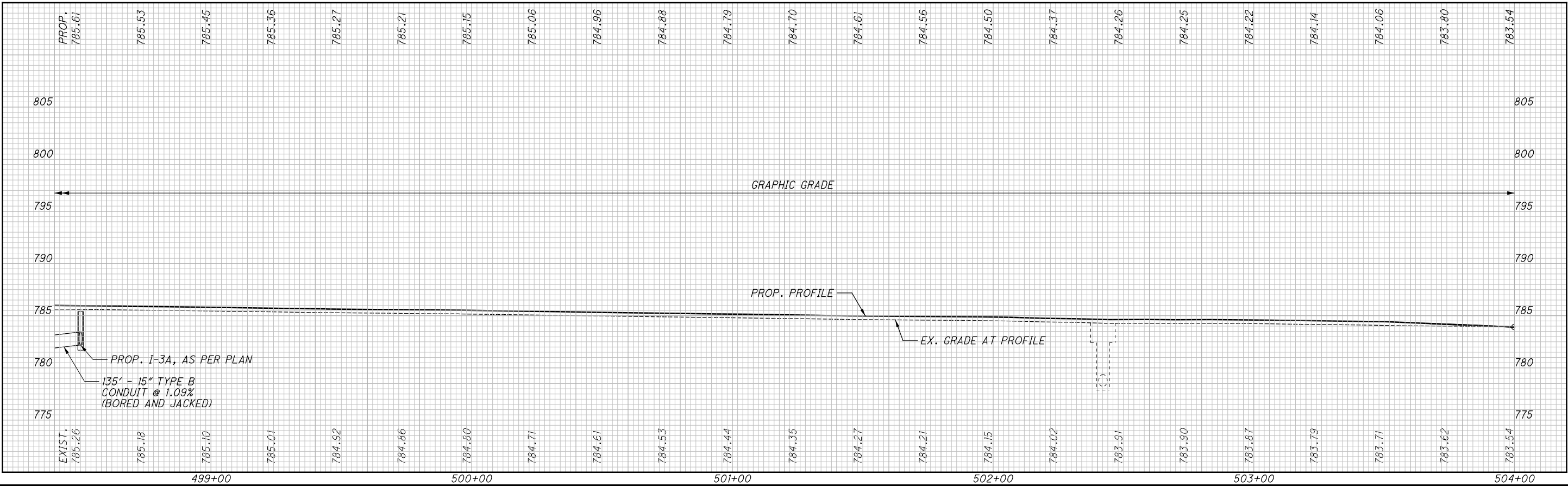
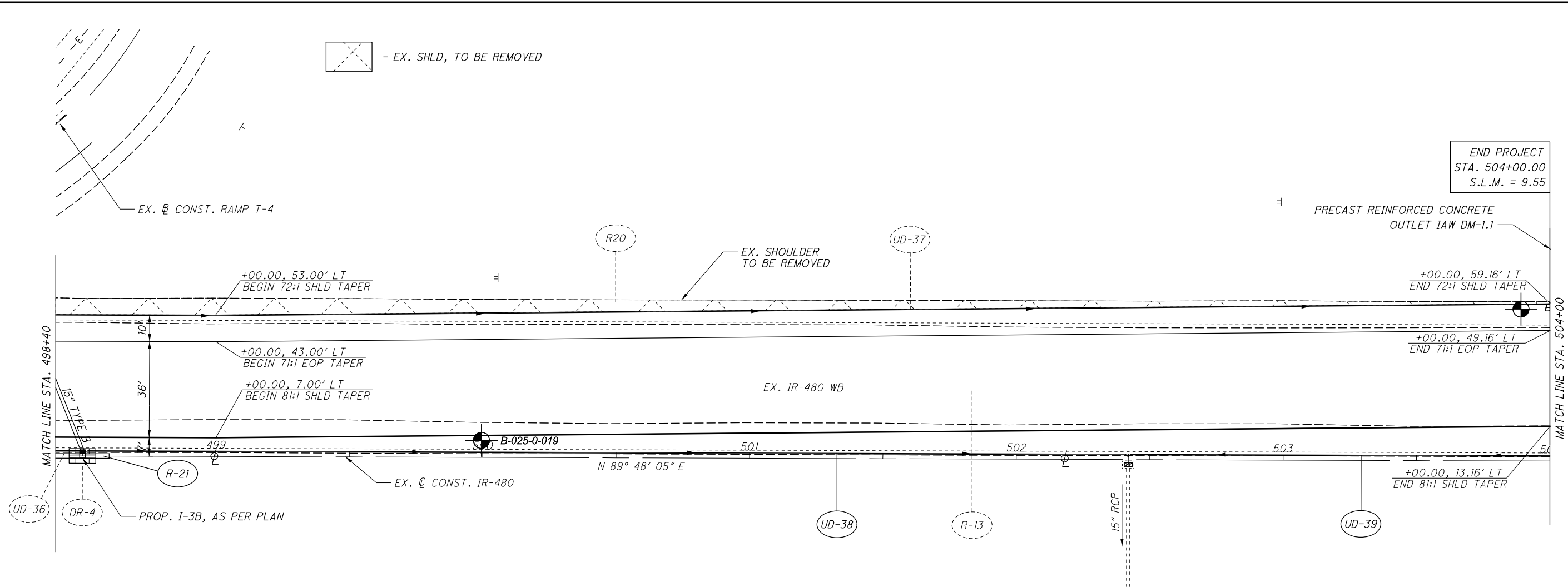
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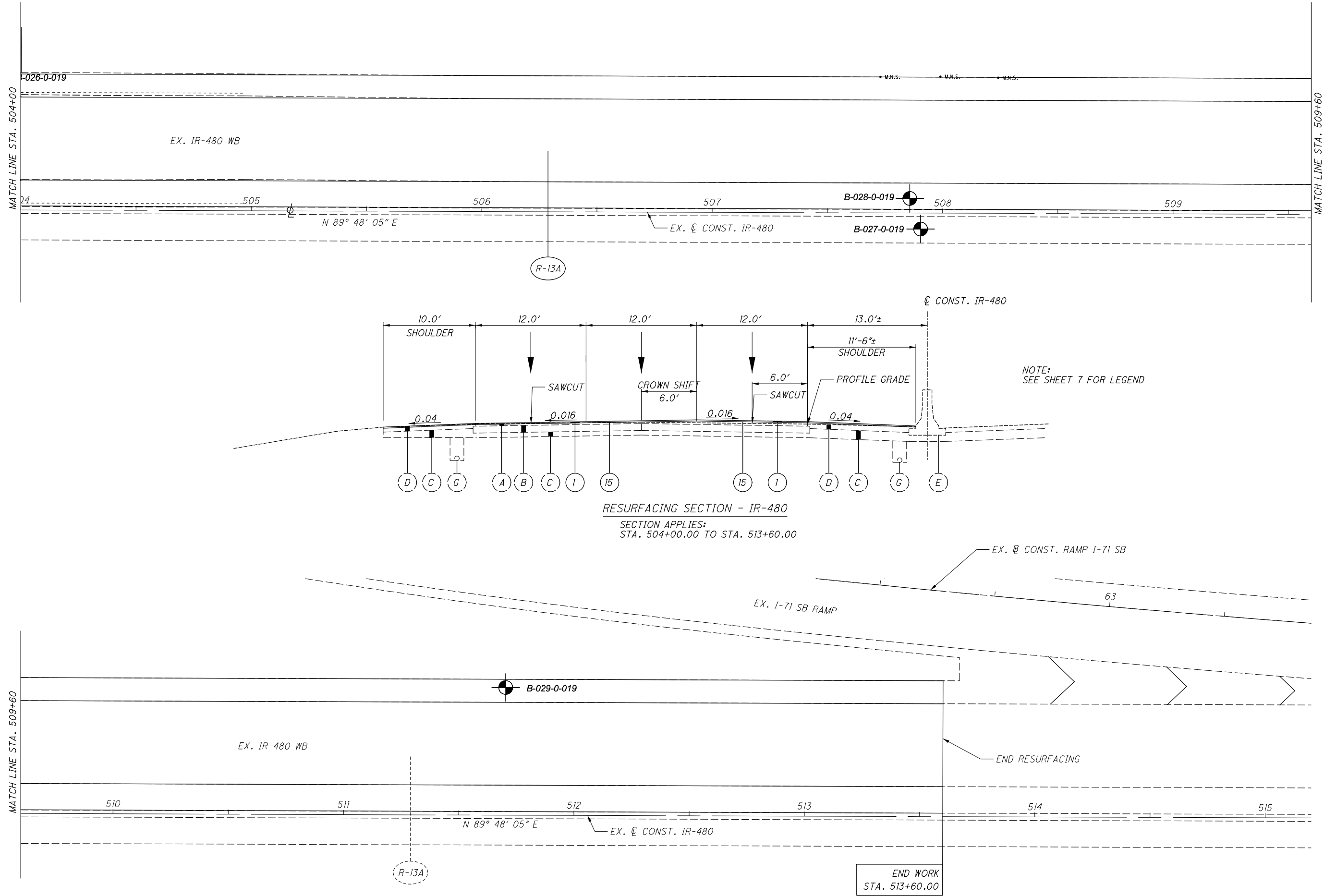
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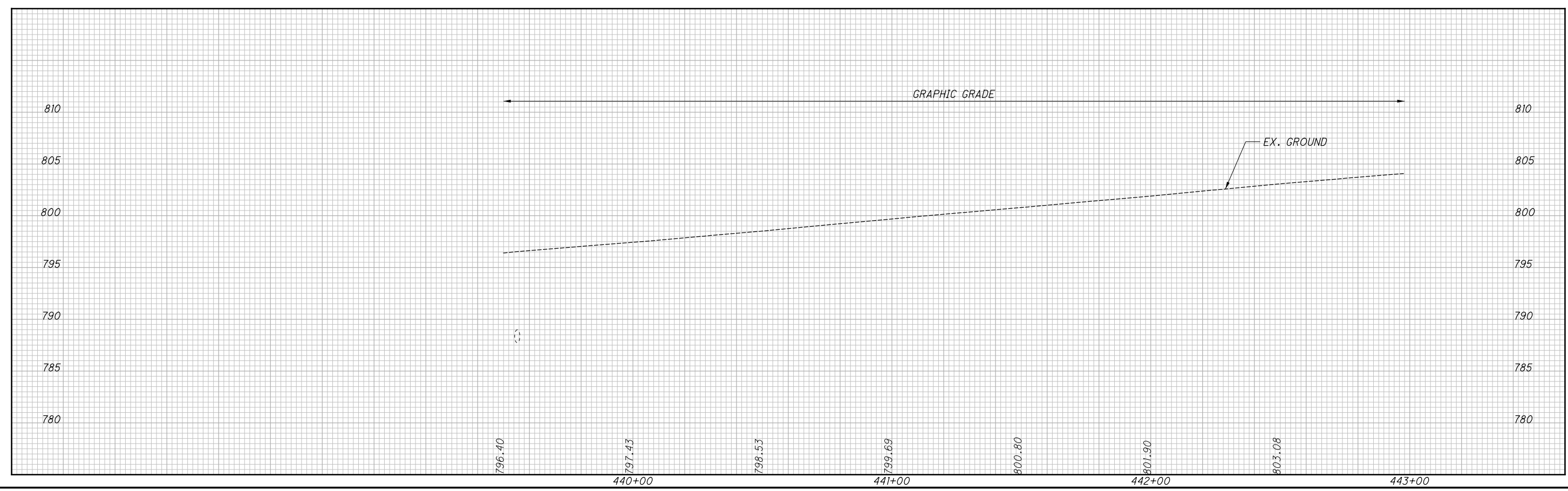


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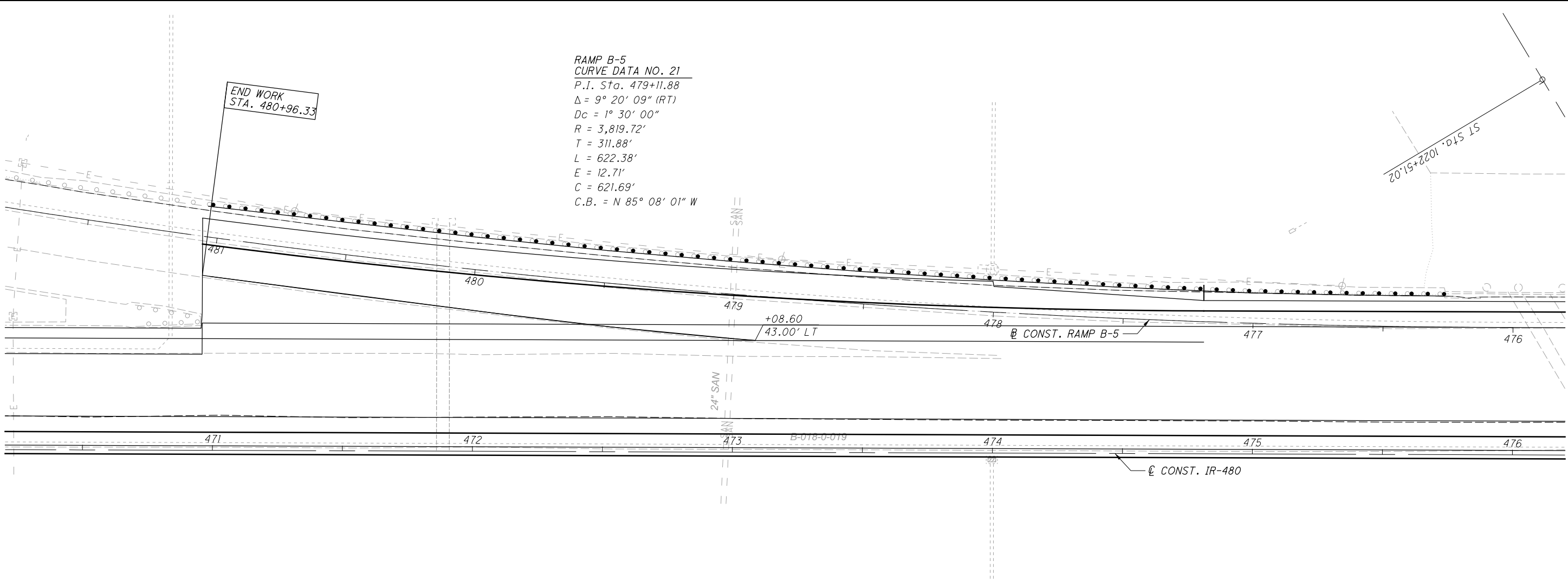


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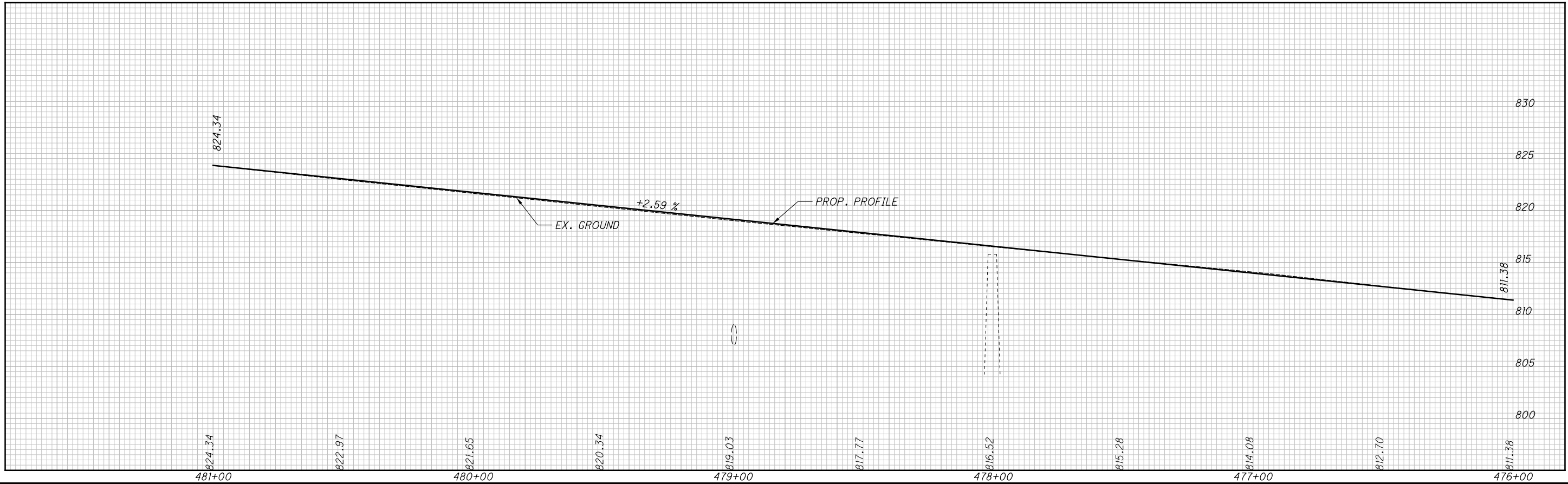




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 $L = 622.38'$
 $E = 12.71'$
 $C = 621.69'$
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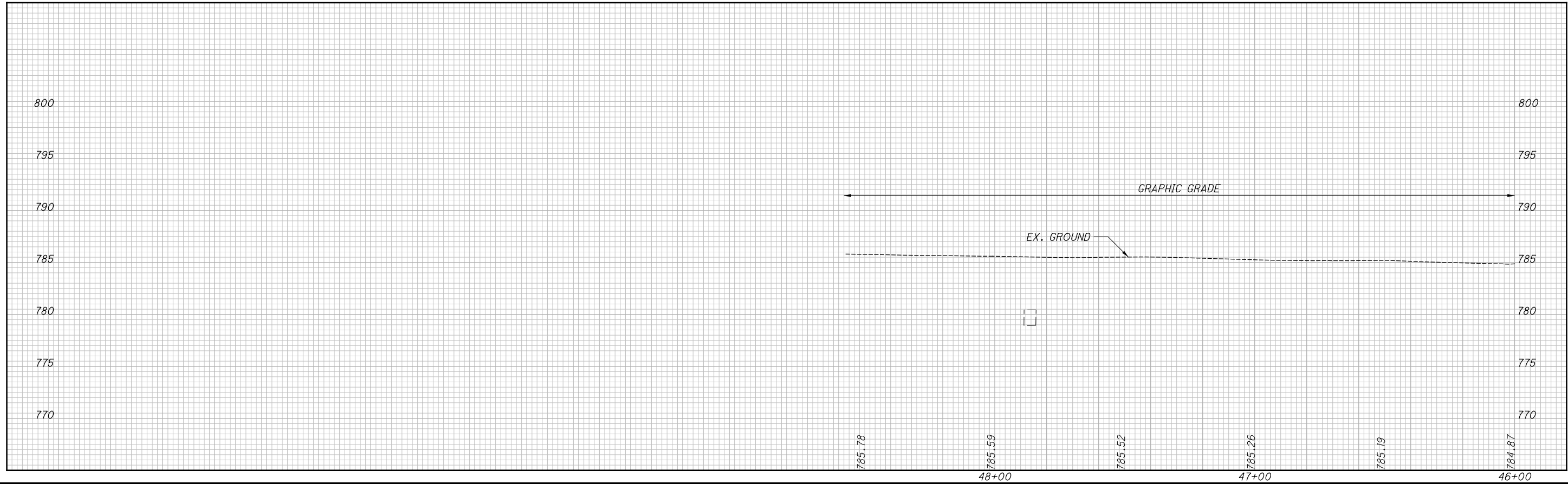
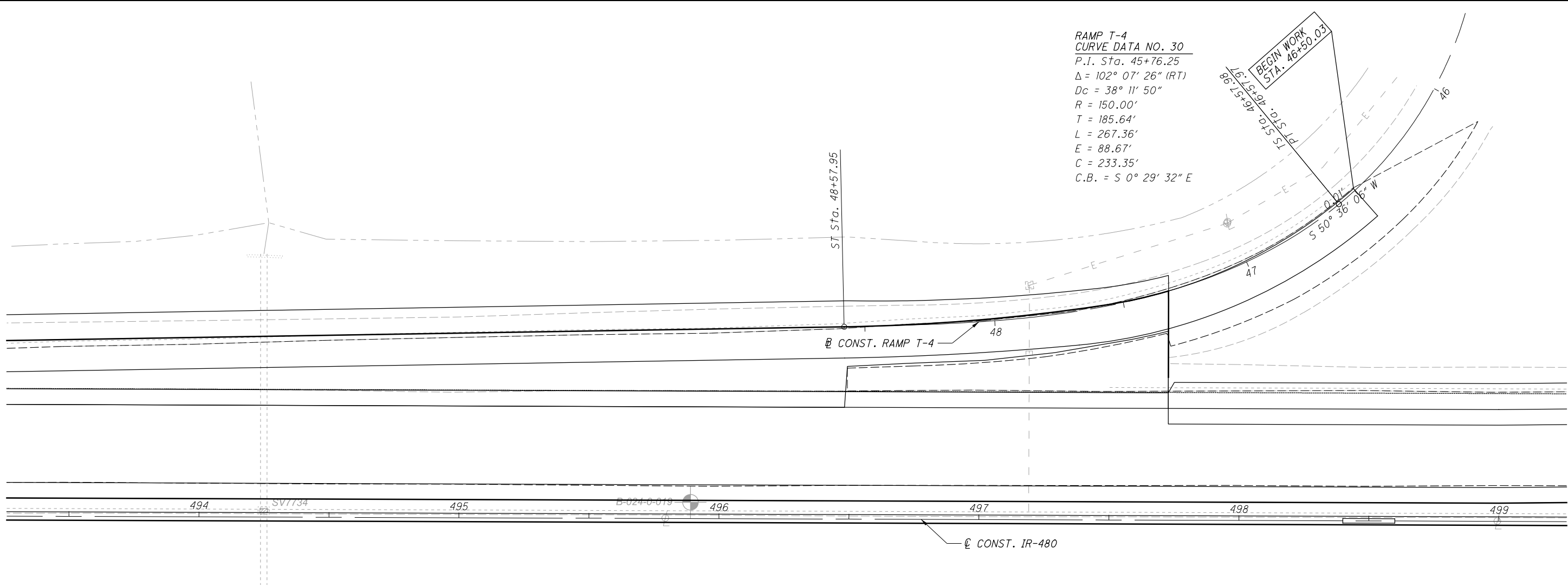
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BEGIN RAMP B-5 TO STA. 481+00.80

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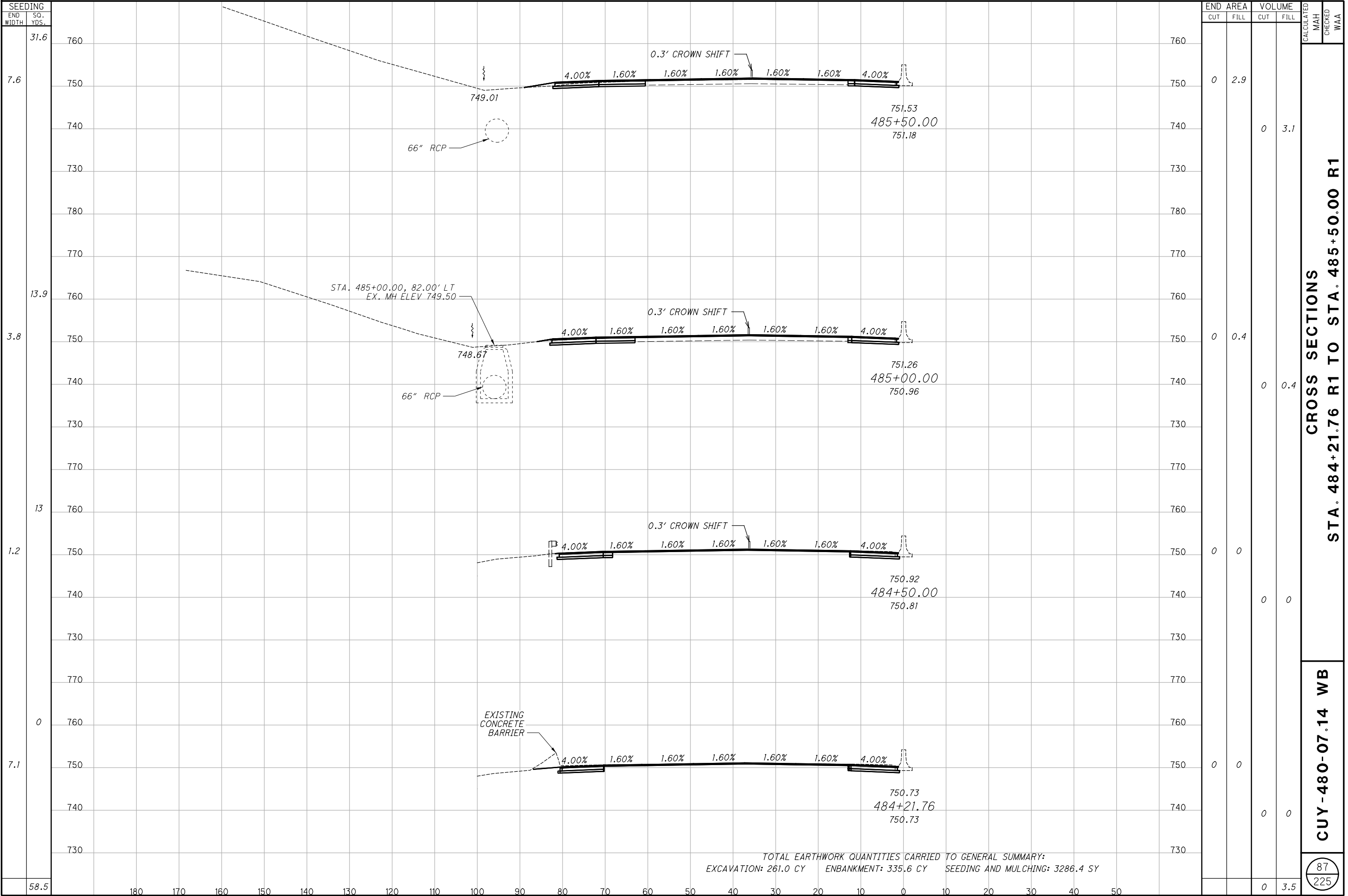
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STA. 46+50.03 TO END RAMP T-4

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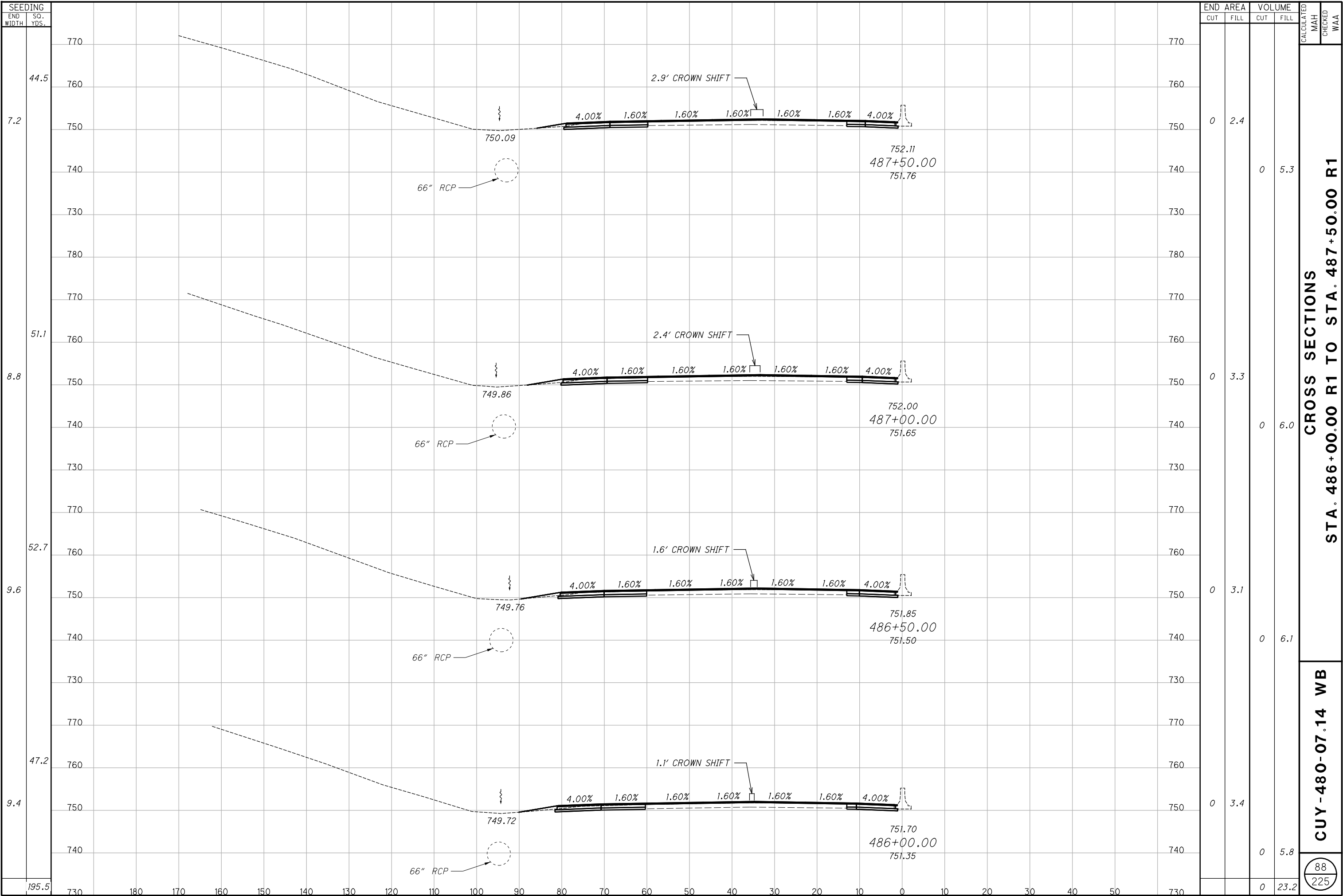
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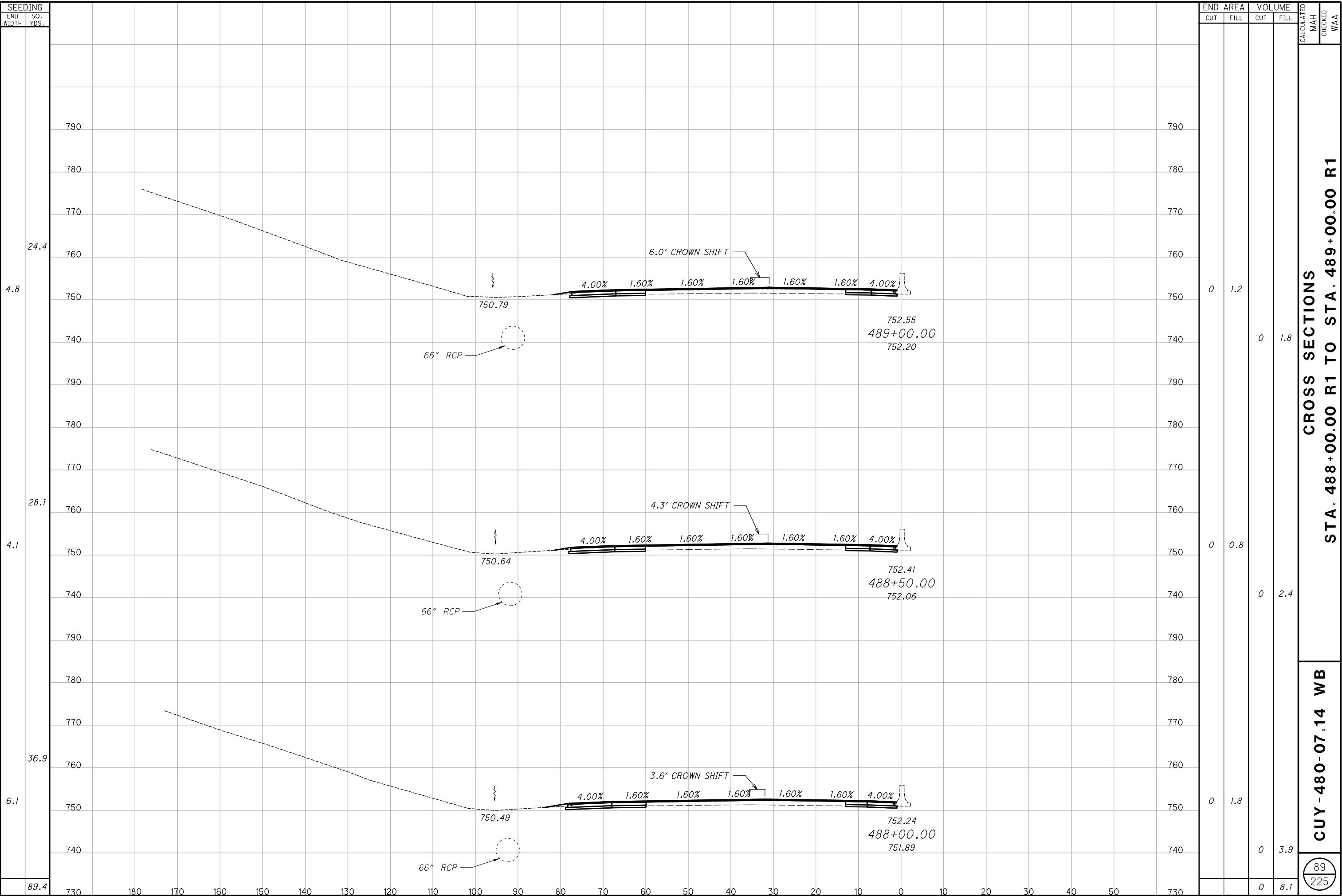
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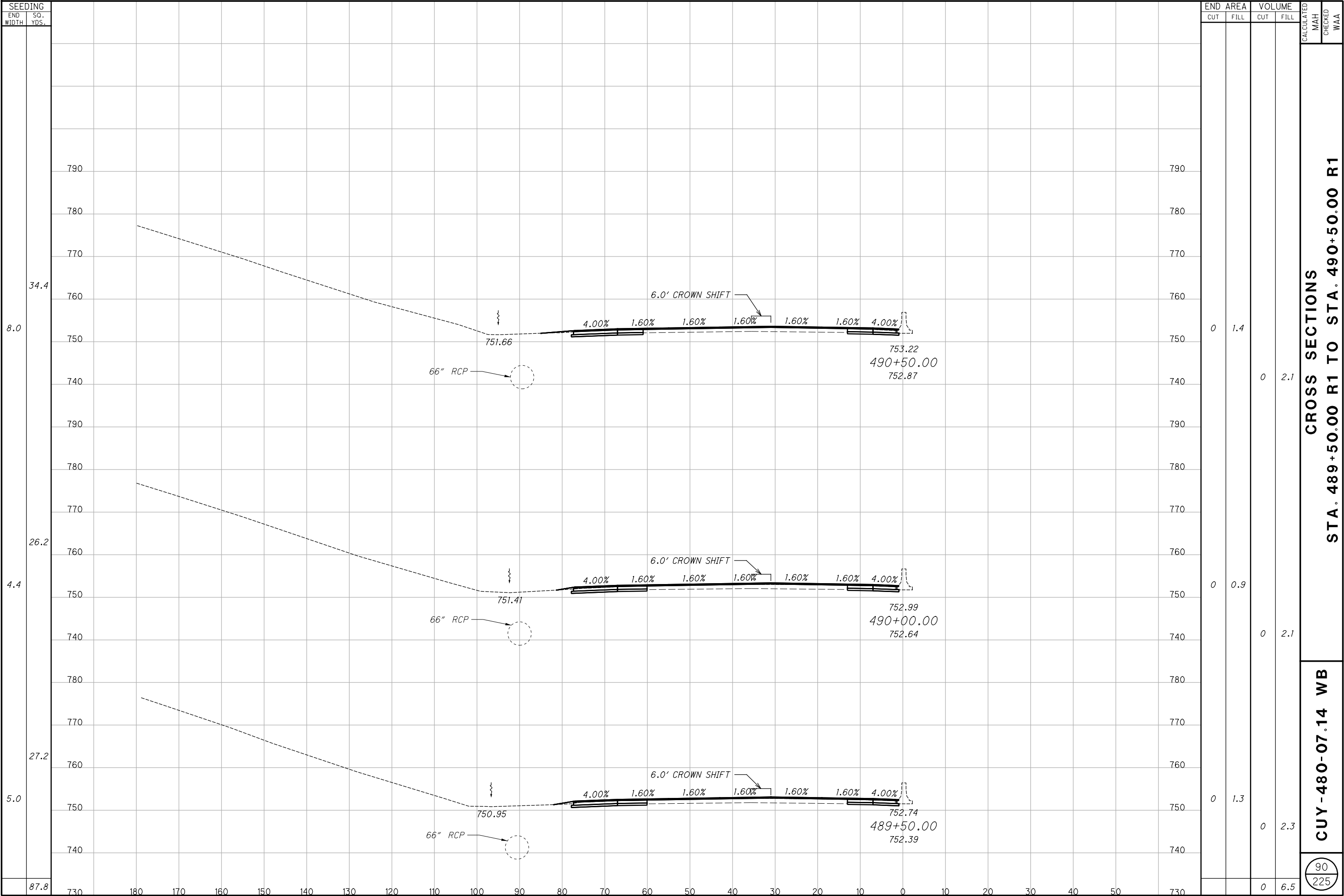
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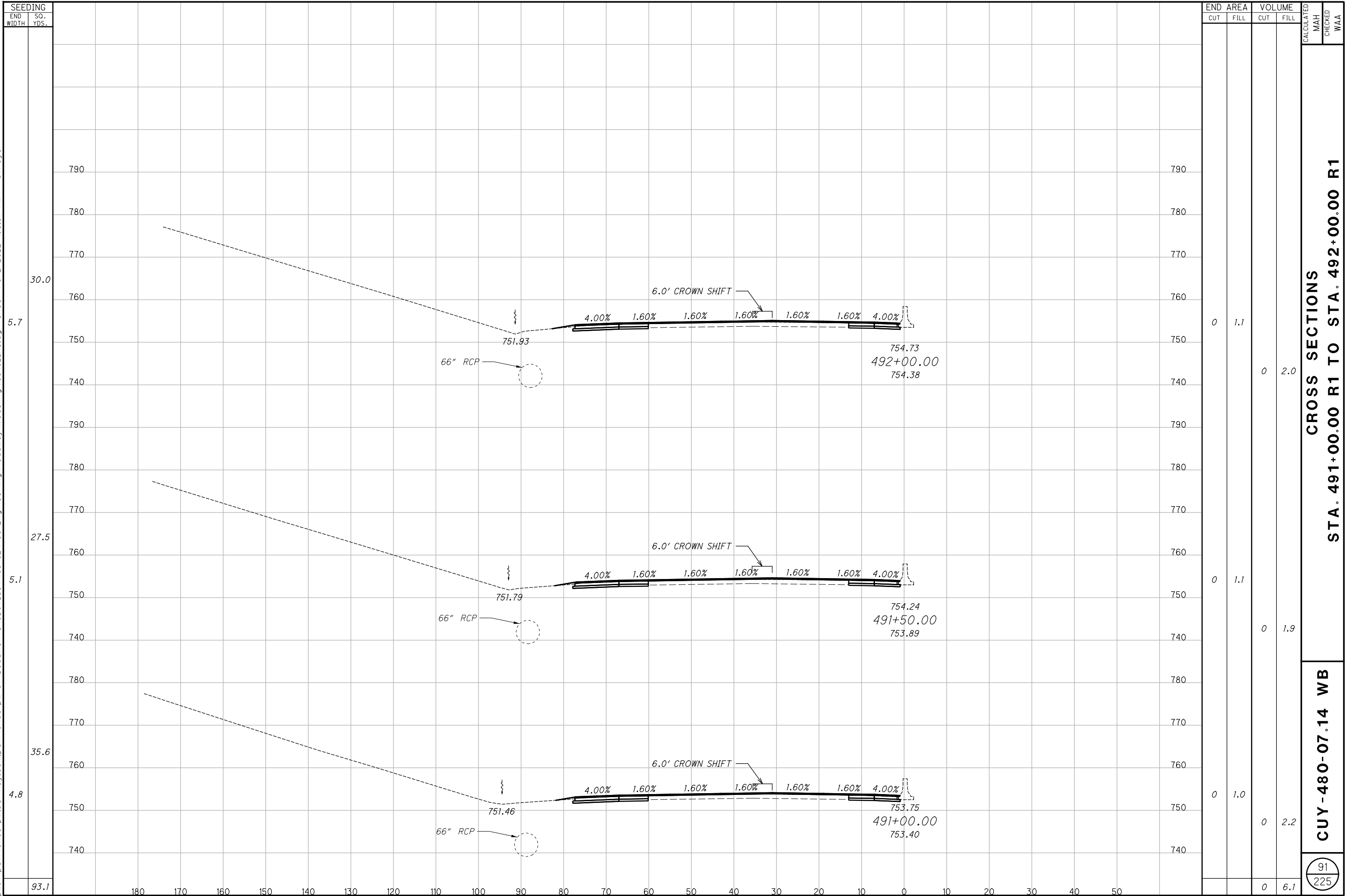
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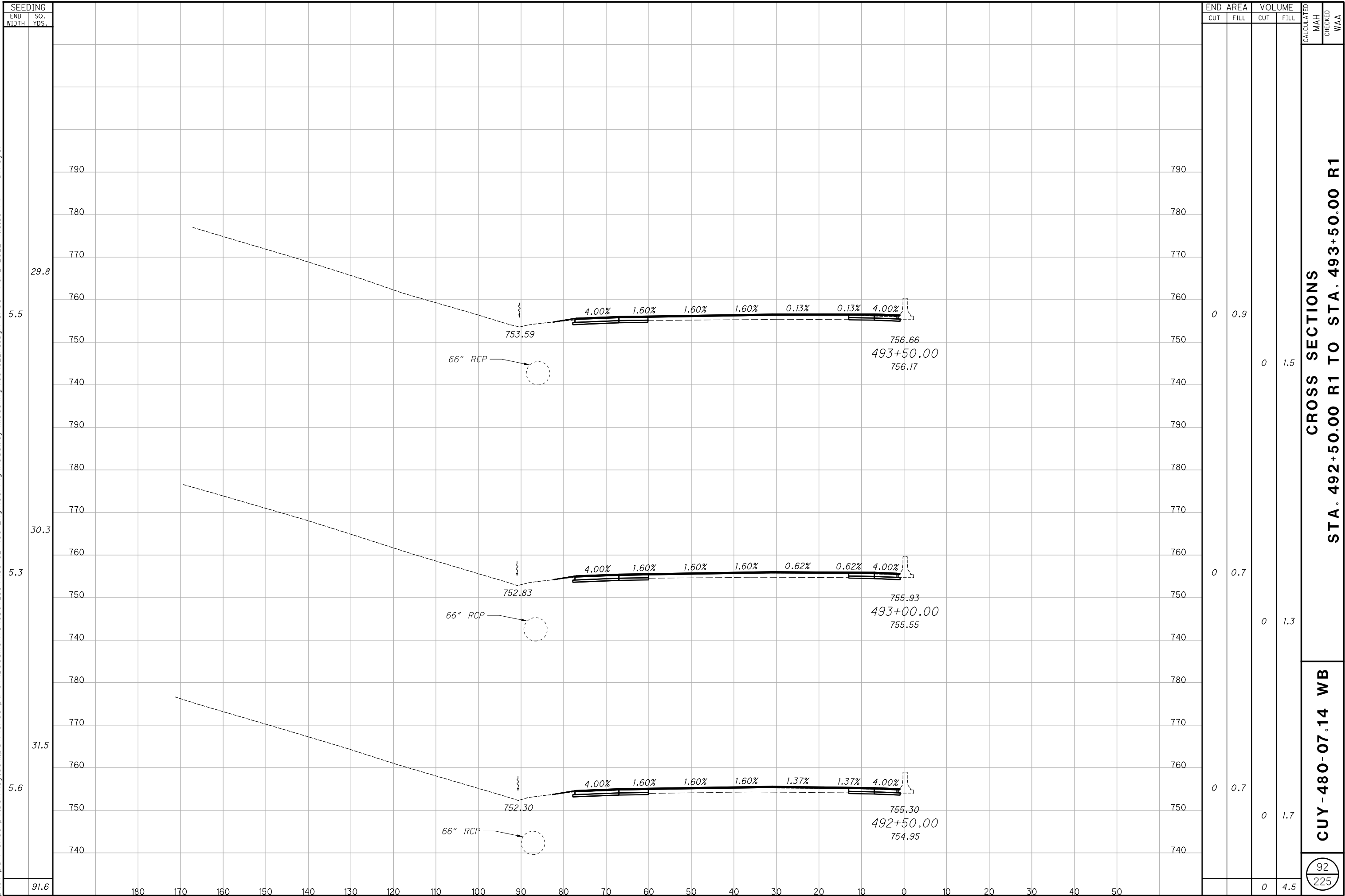
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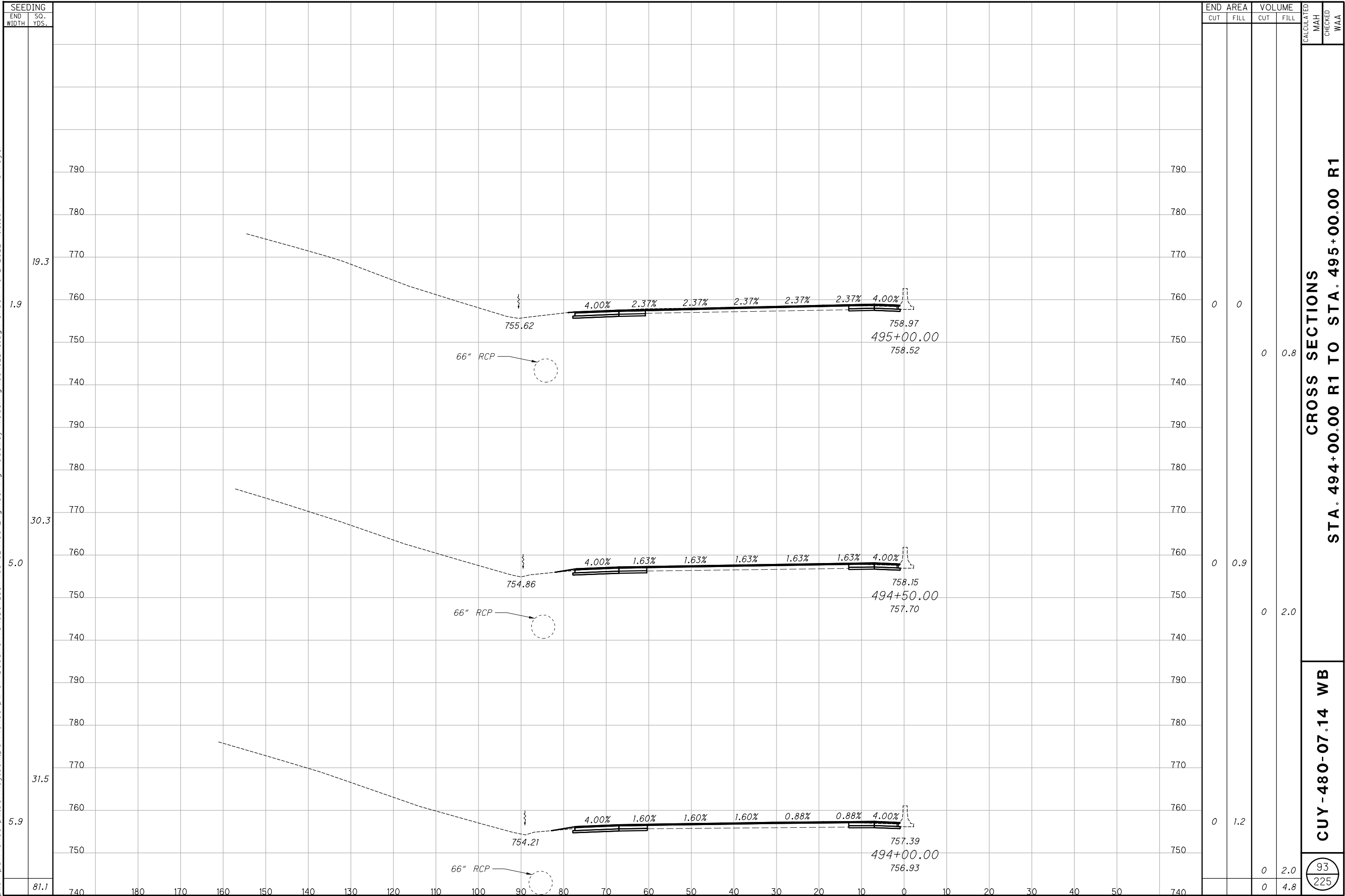
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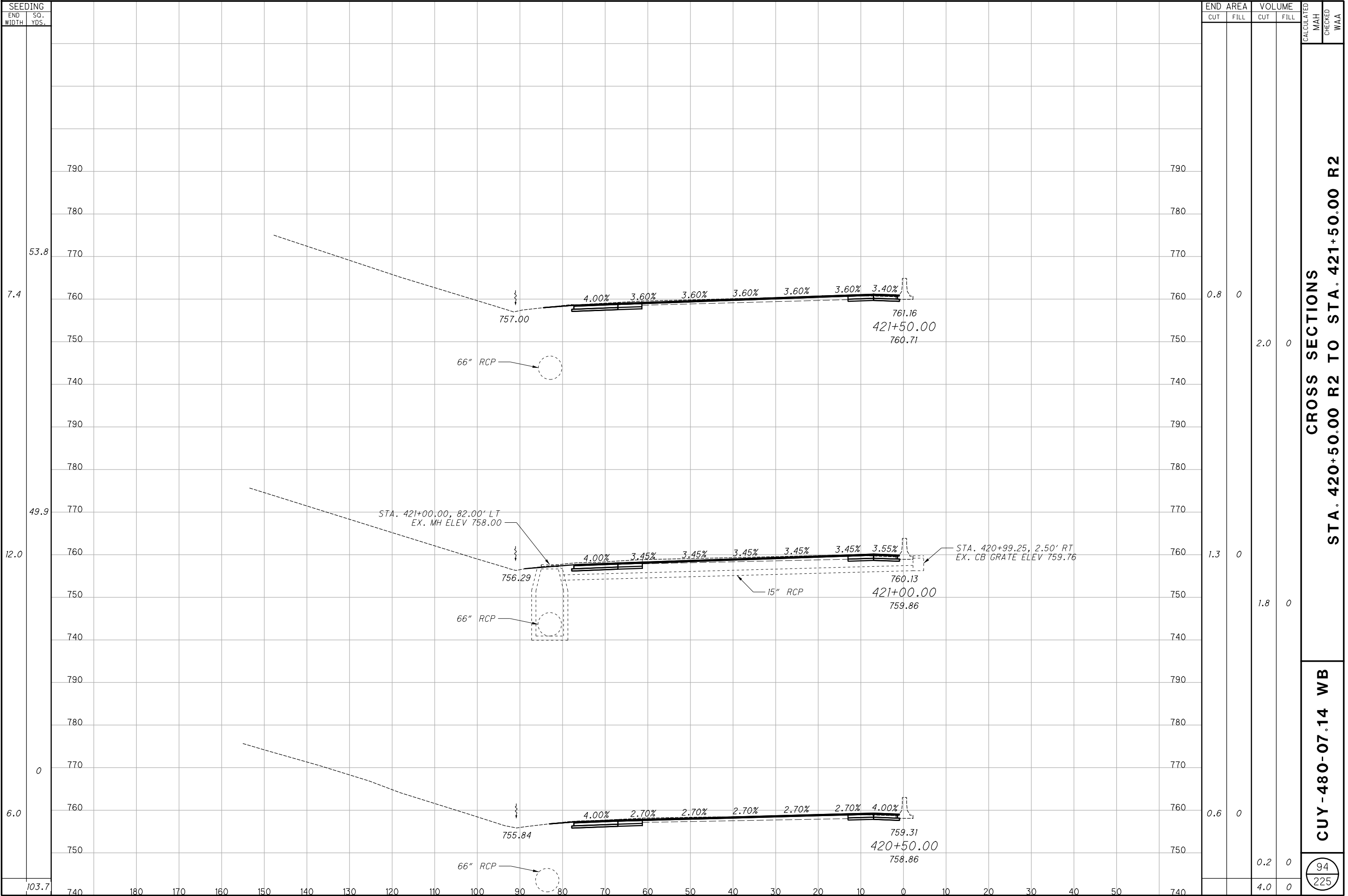
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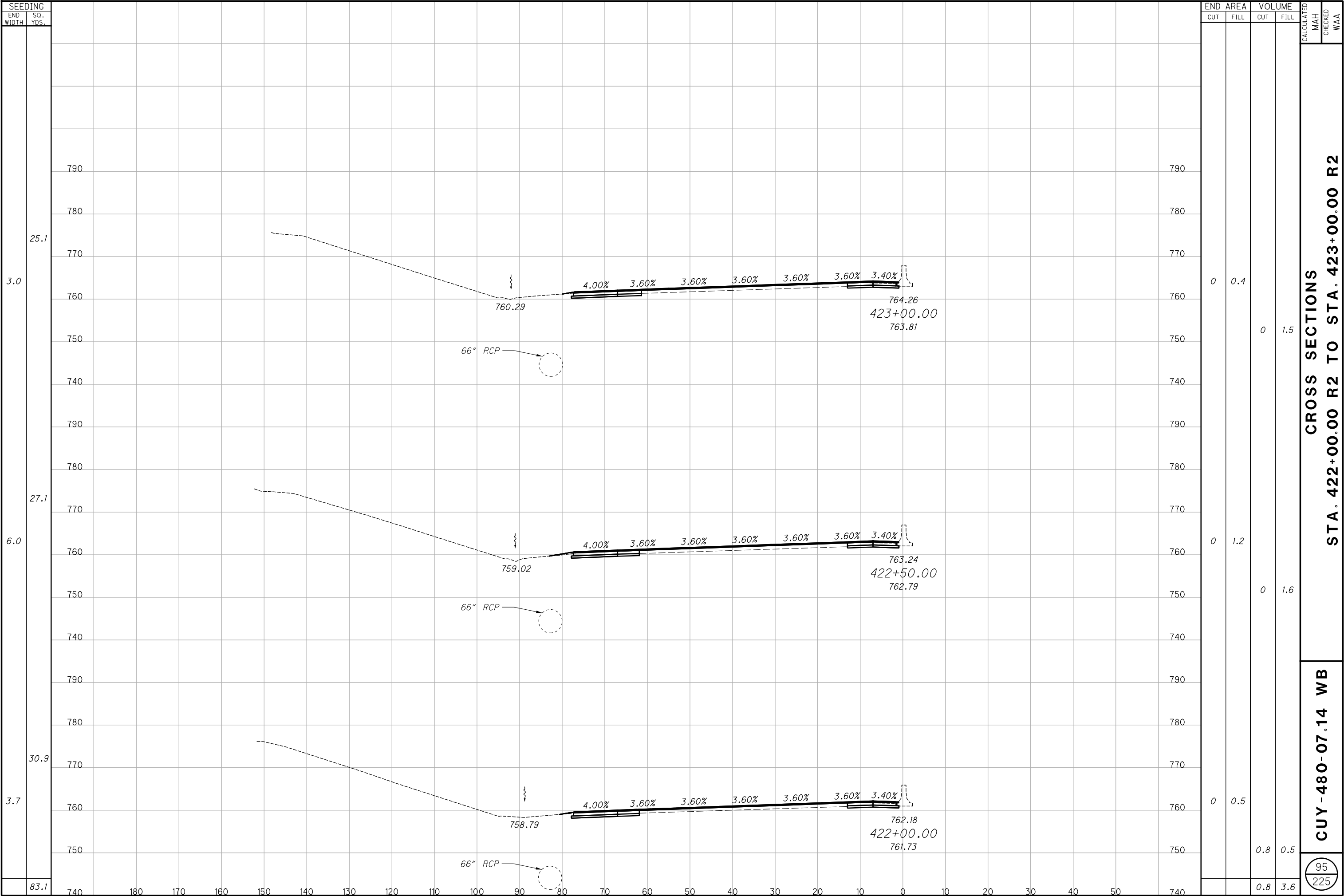


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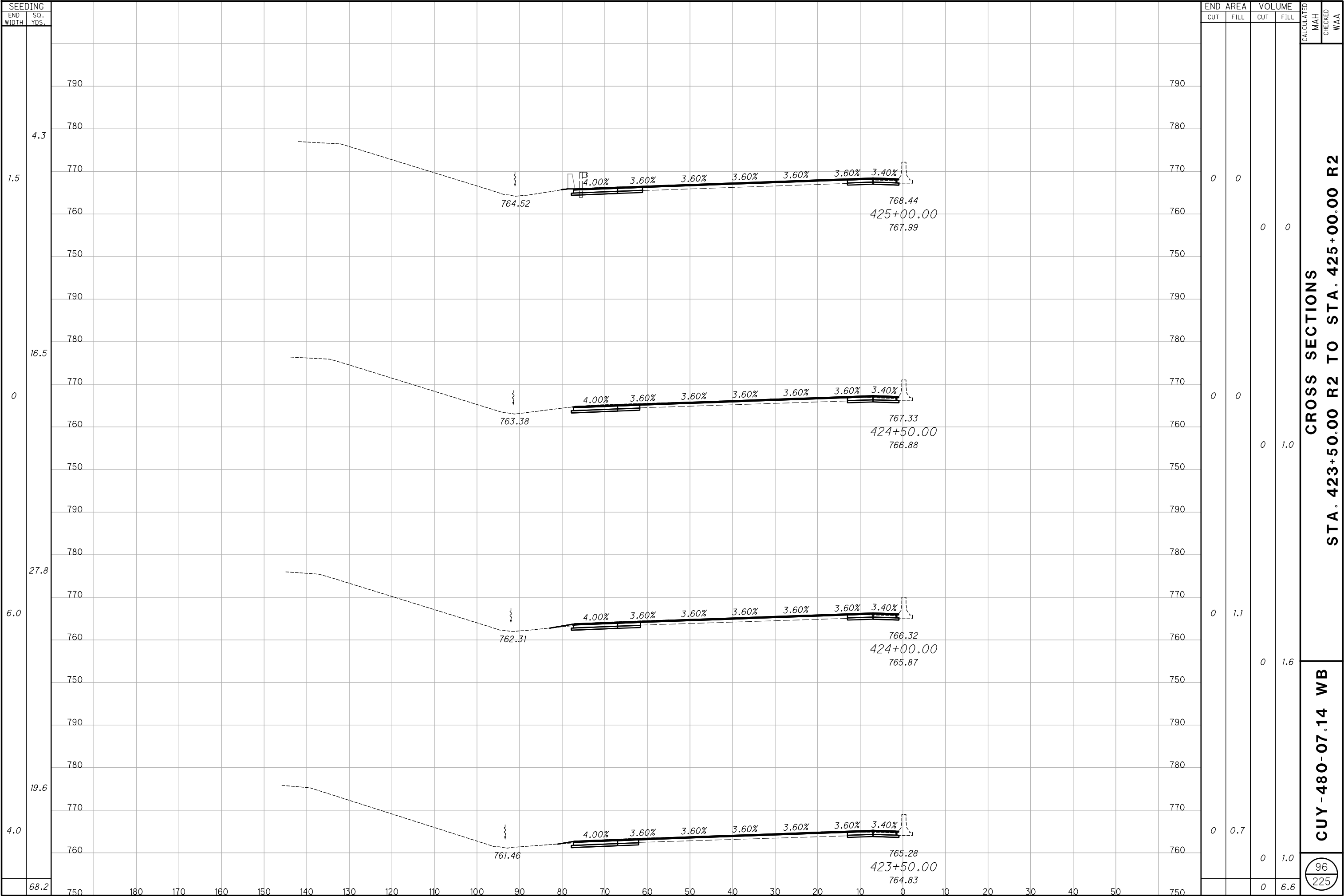


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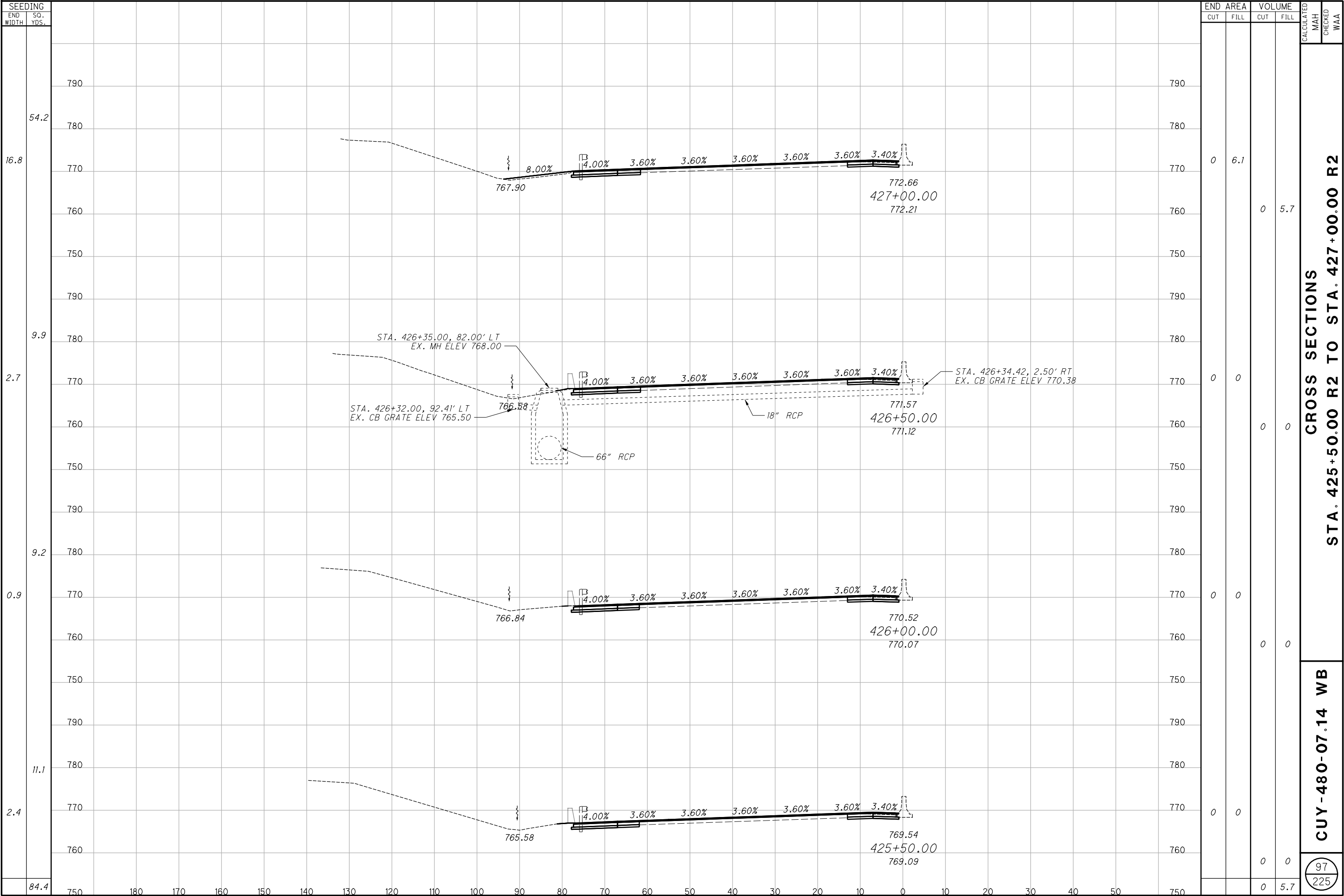
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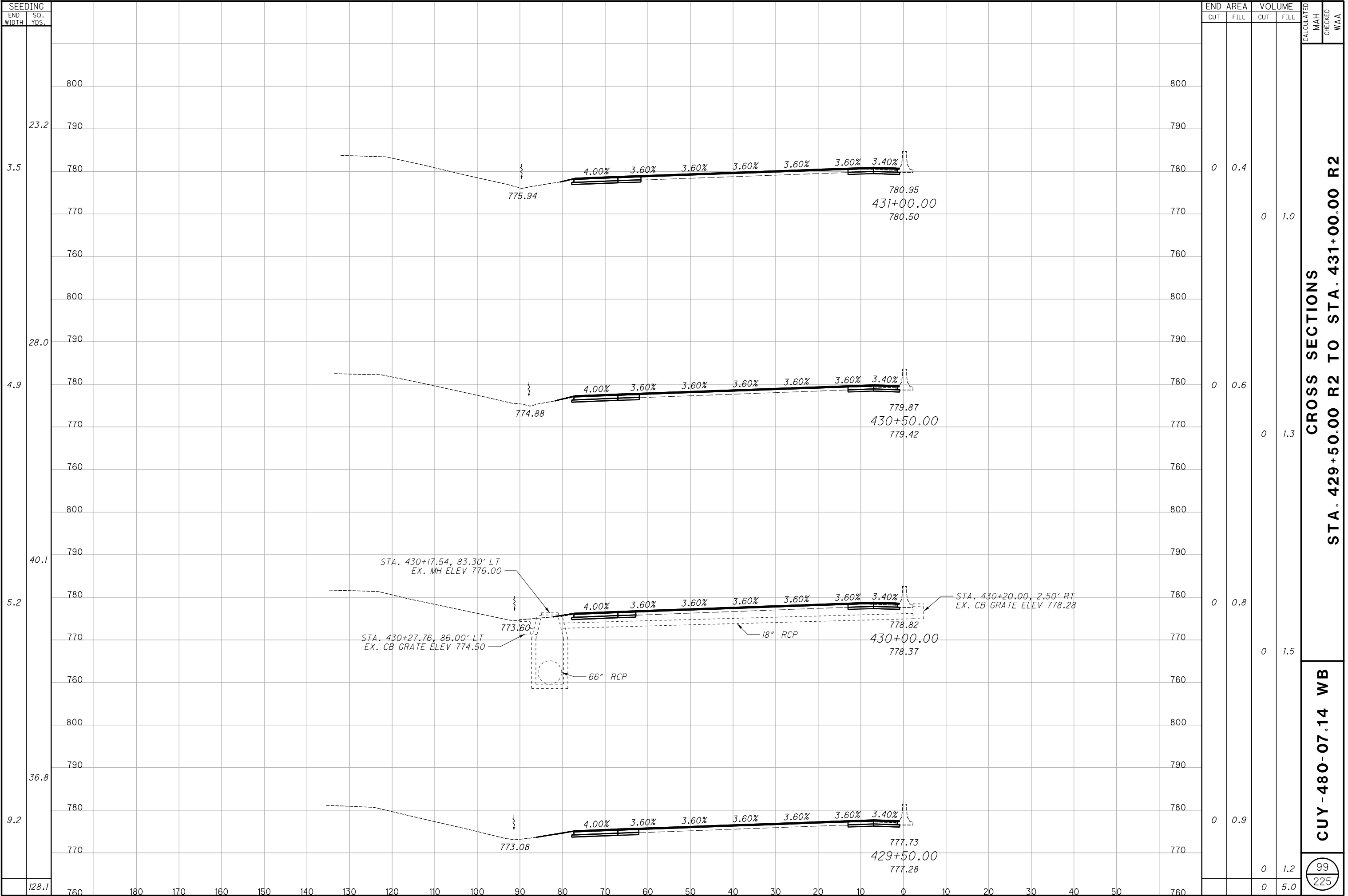


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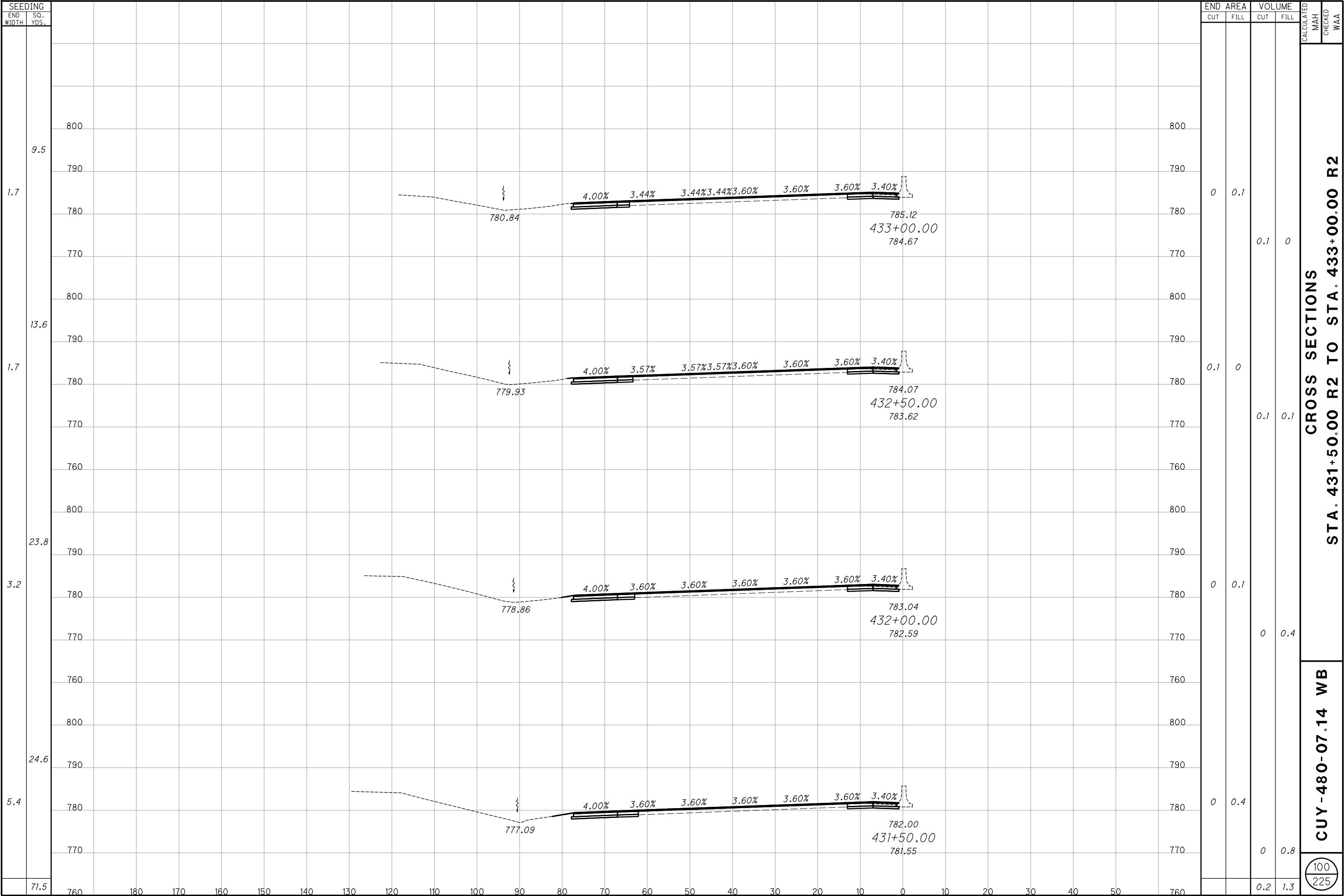


$$\frac{98}{225}$$

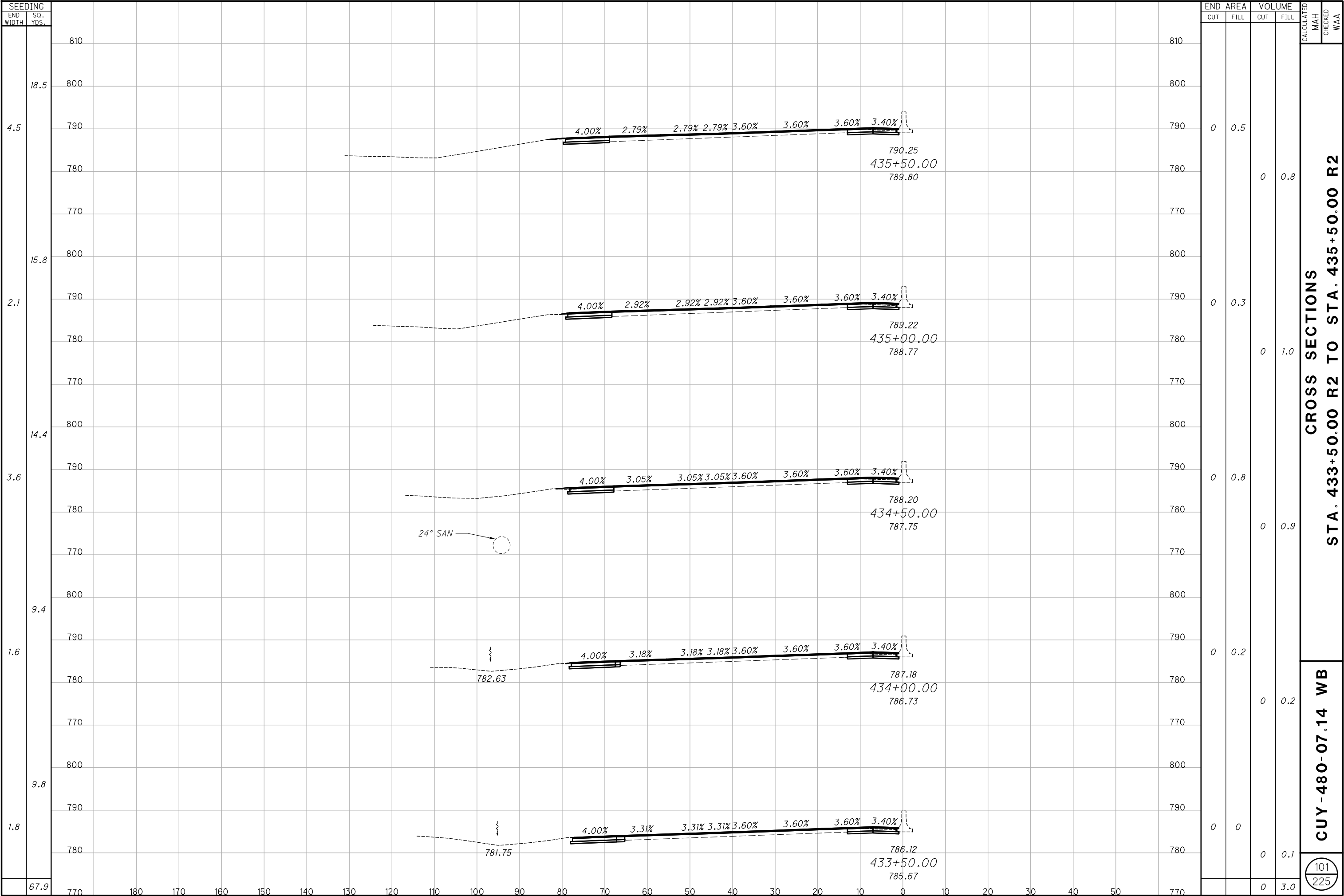
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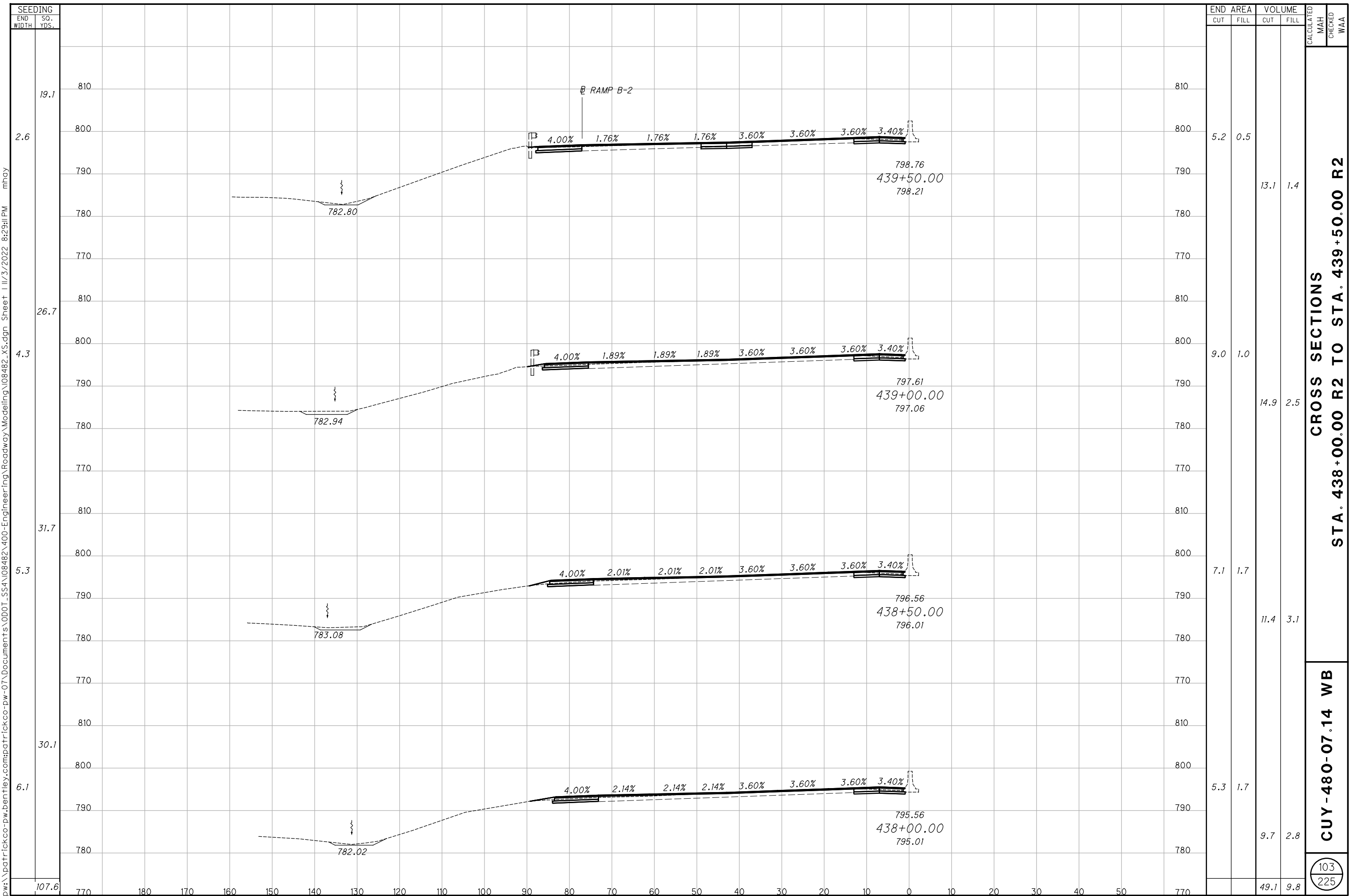


CROSS SECTIONS
STA. 433+50.00 R2 TO STA. 435+50.00 R2

CUY-480-07.14 WB

101
225



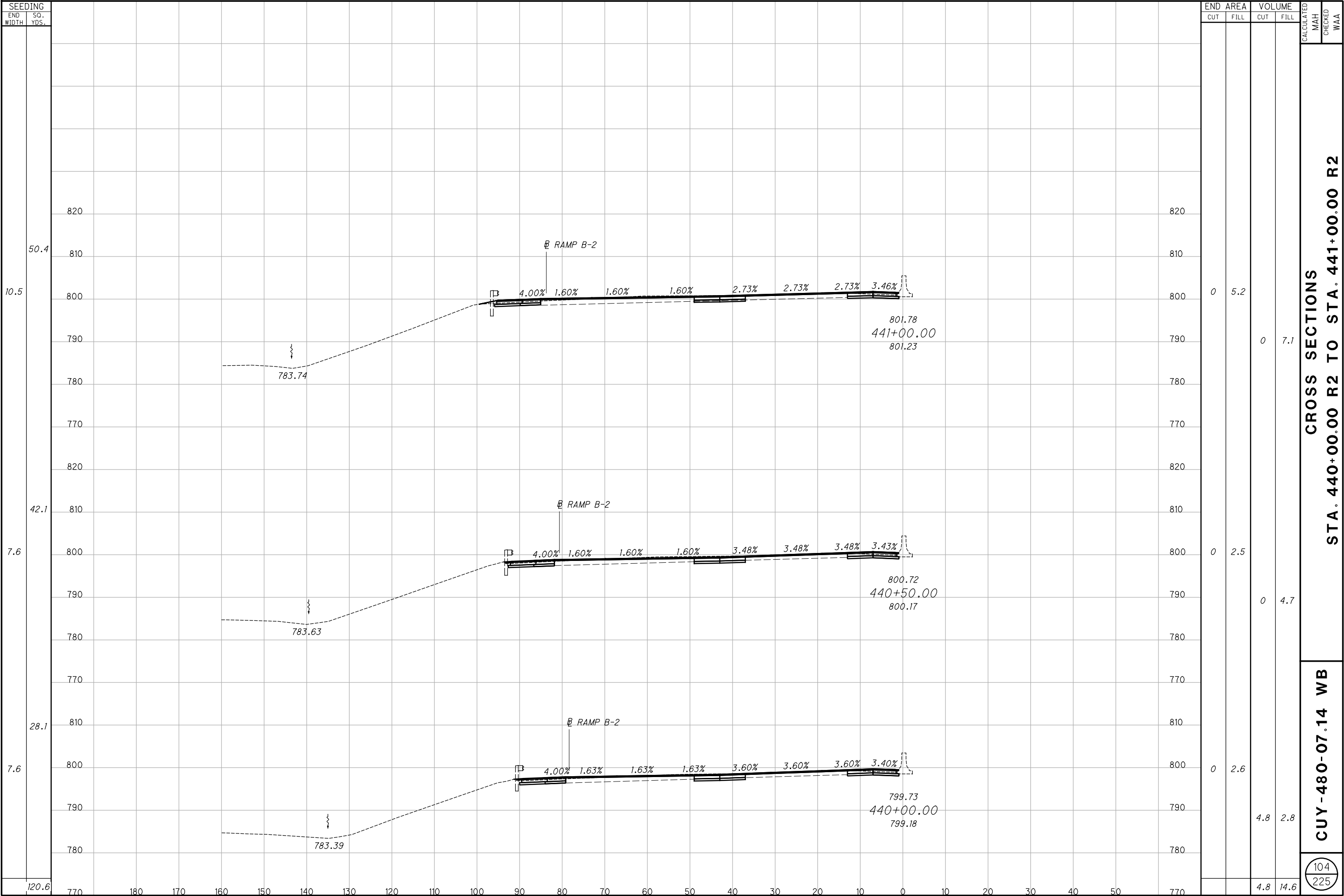


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CUY-480-07.14 WB

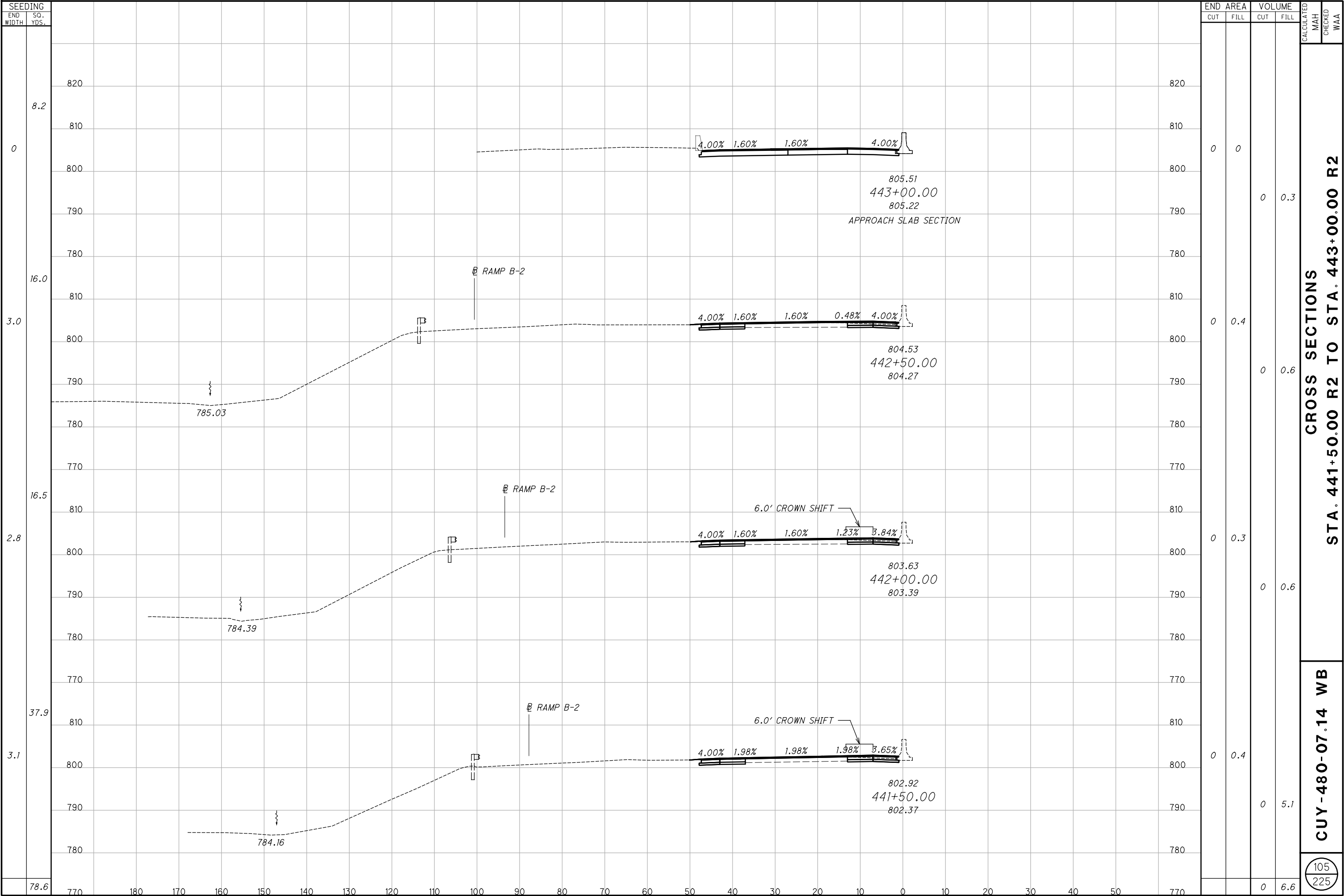
103
225

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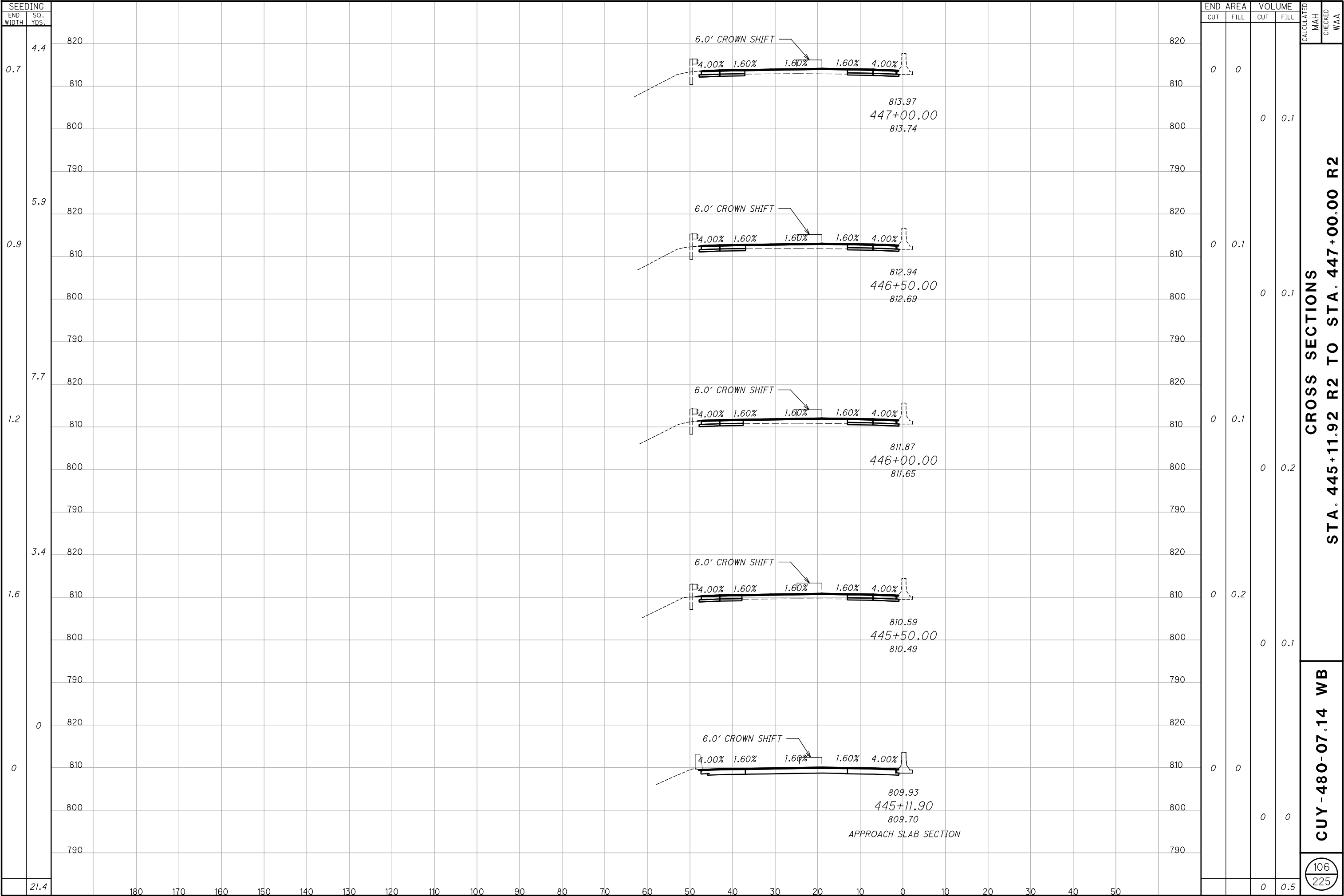


CROSS SECTIONS
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CUY-480-07.14 WB

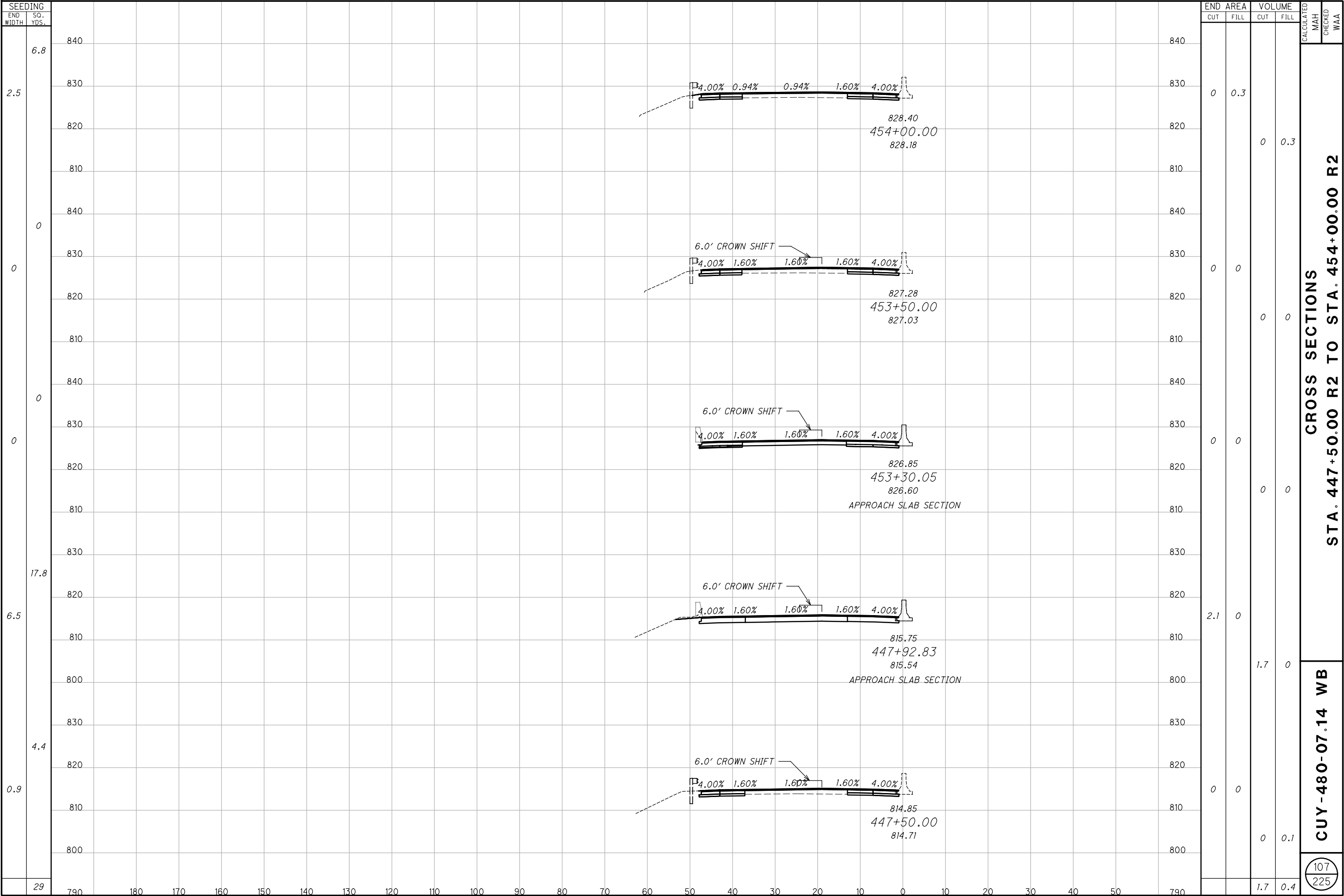
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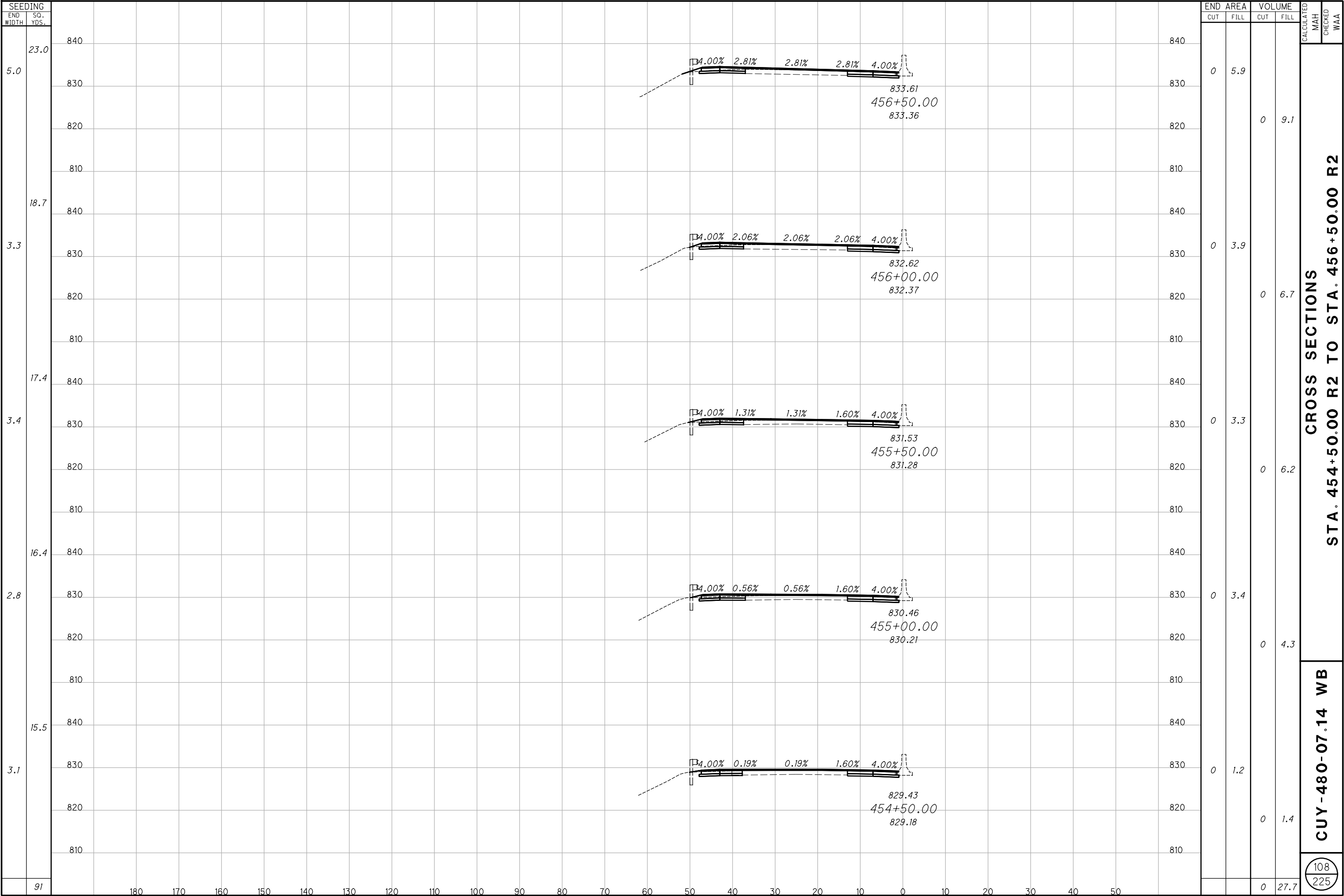
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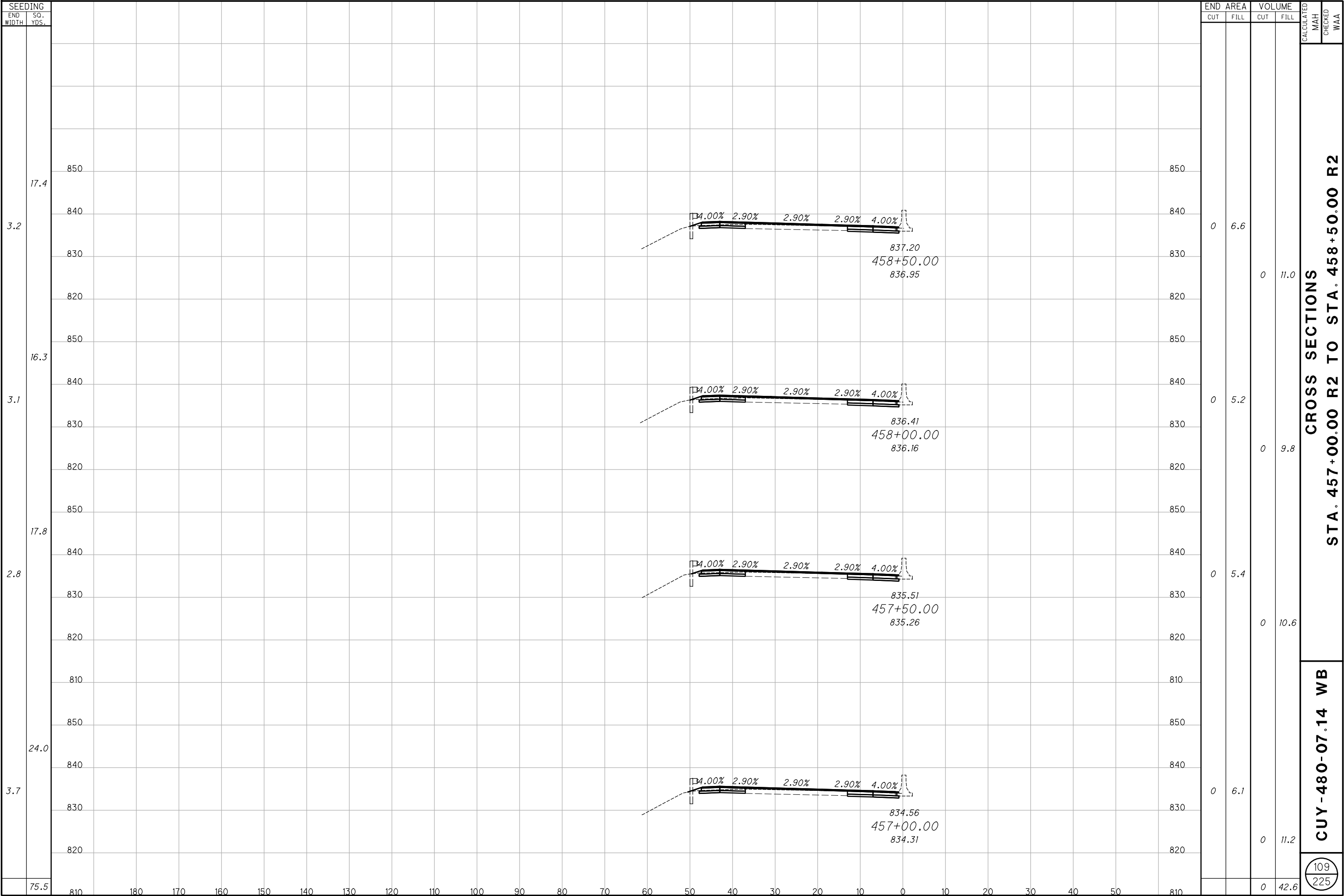
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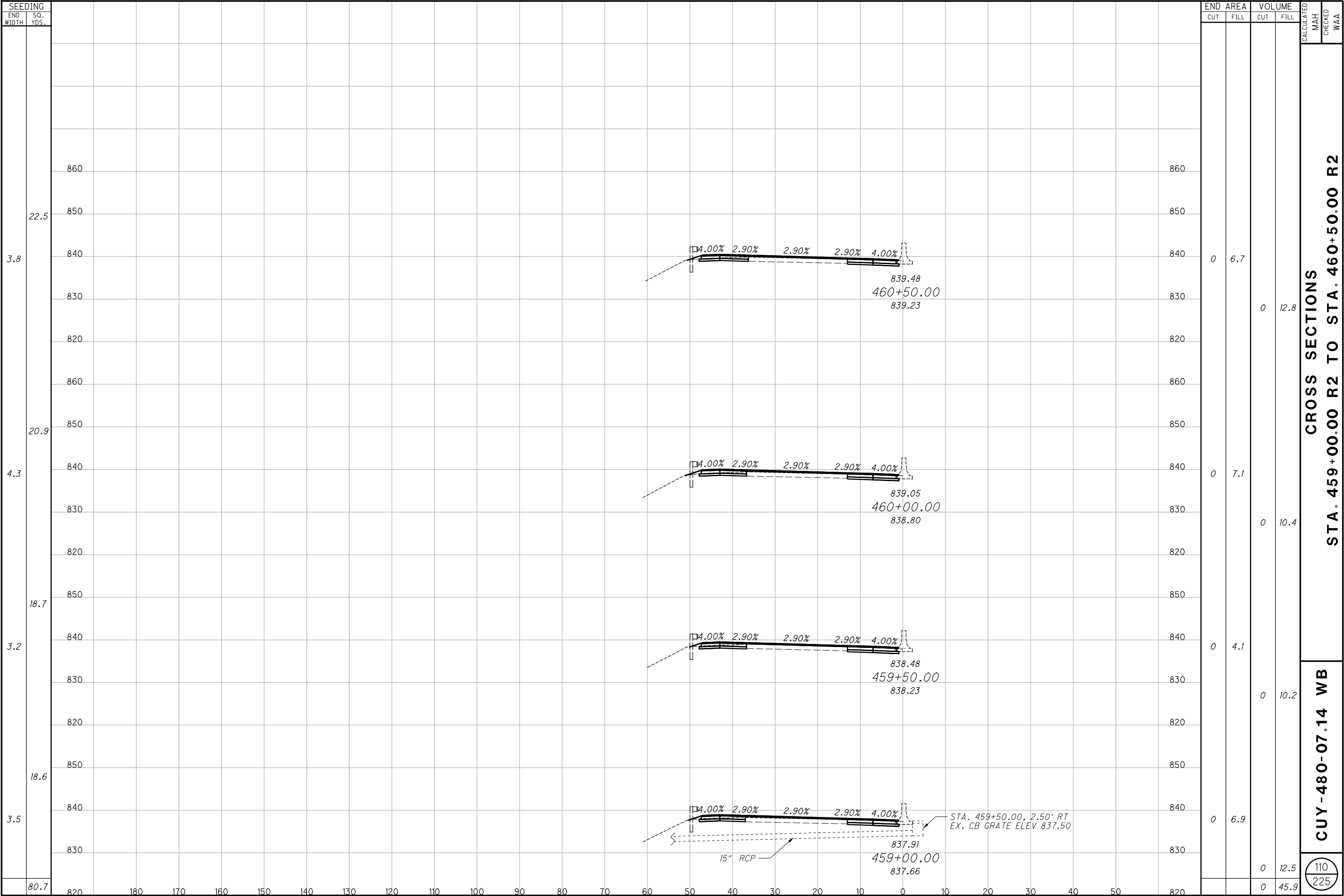
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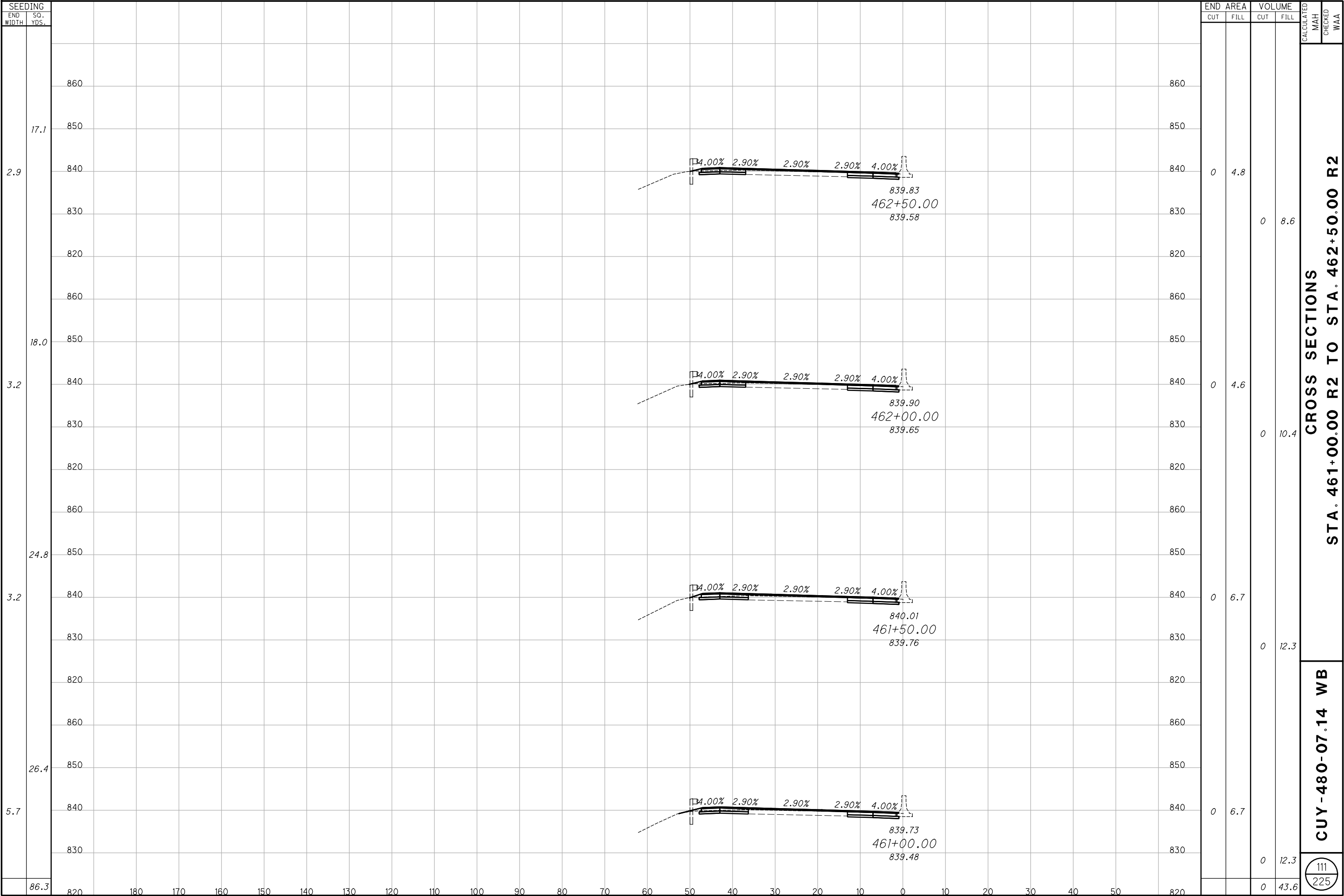
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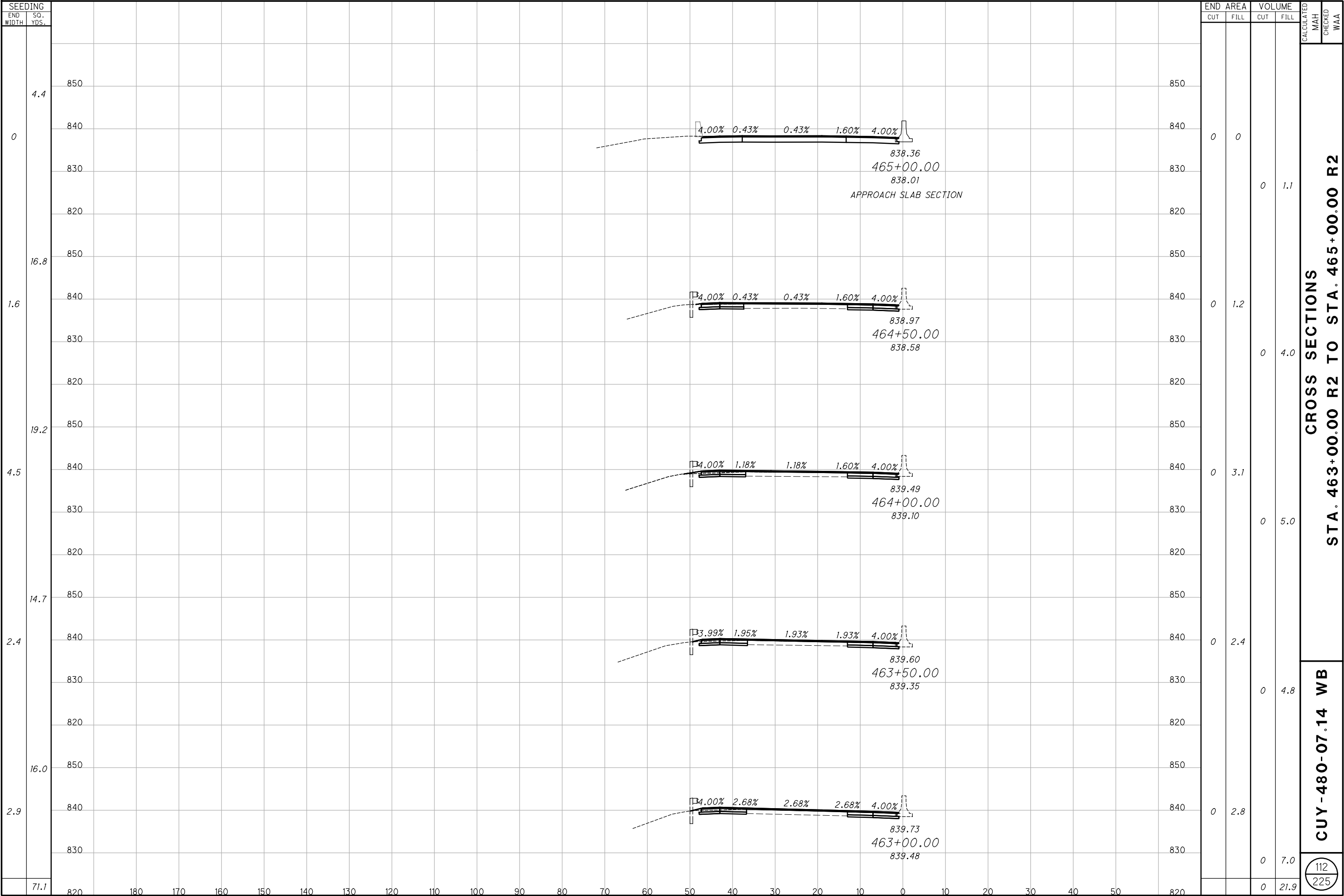
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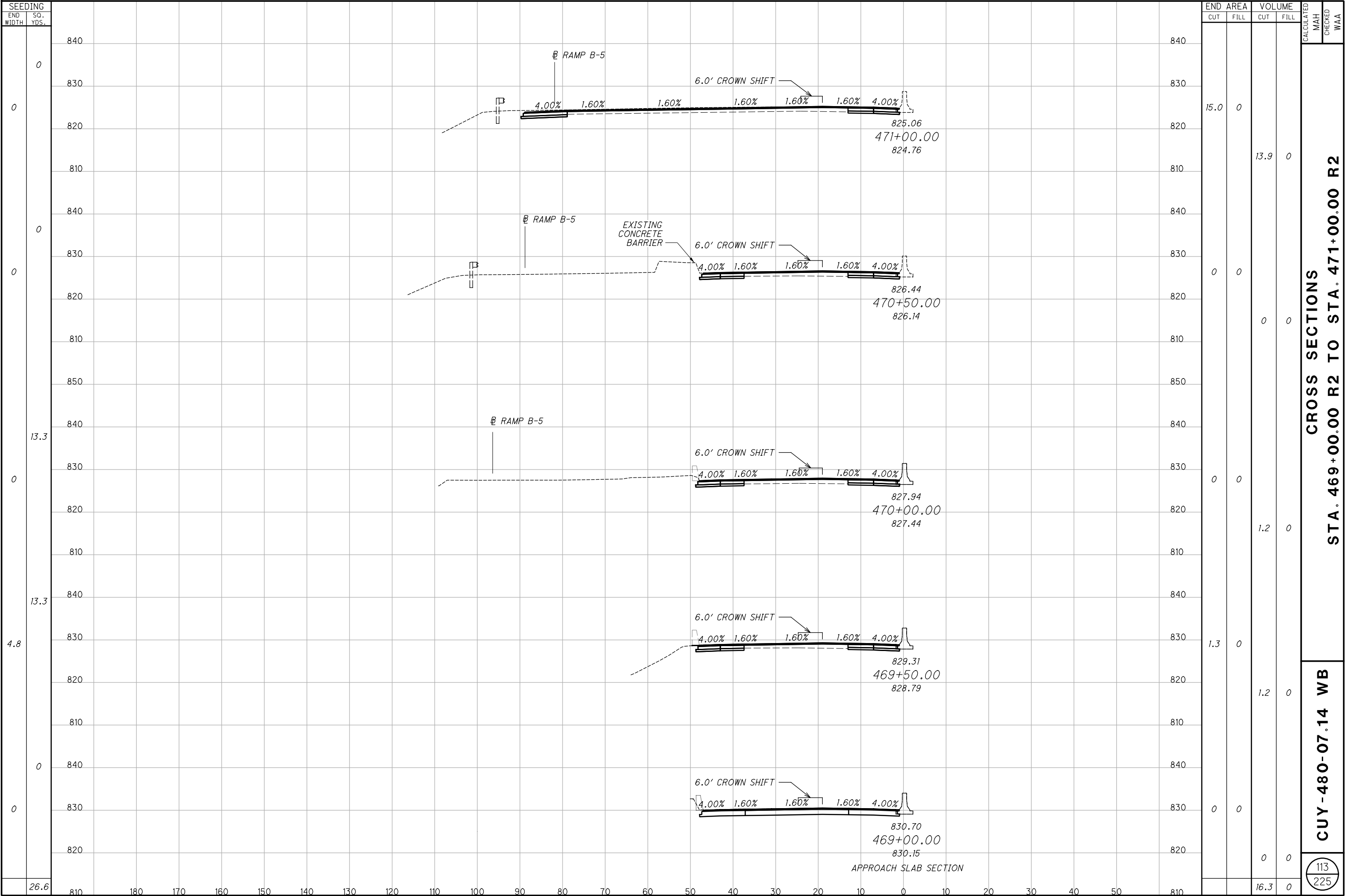
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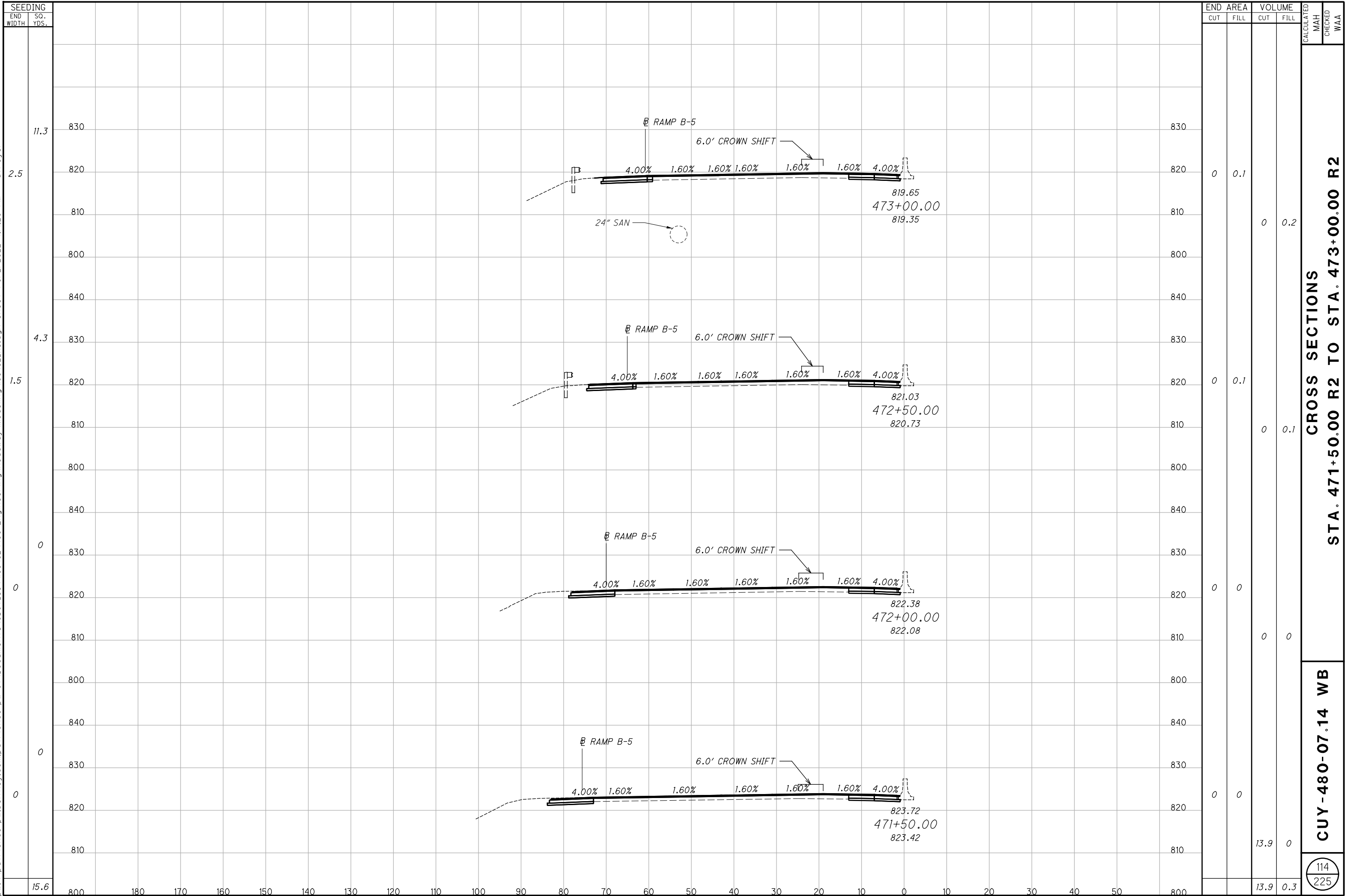
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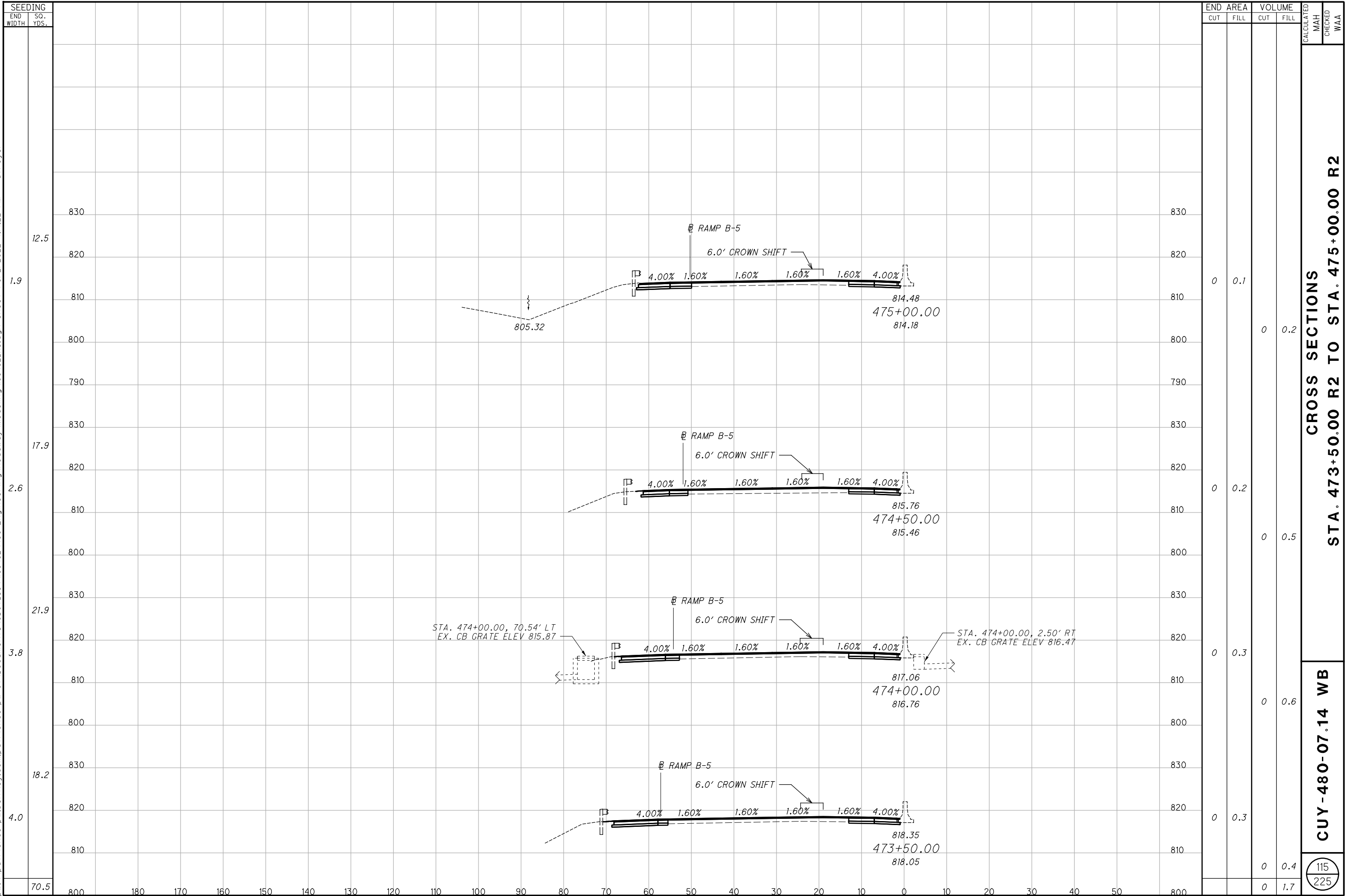
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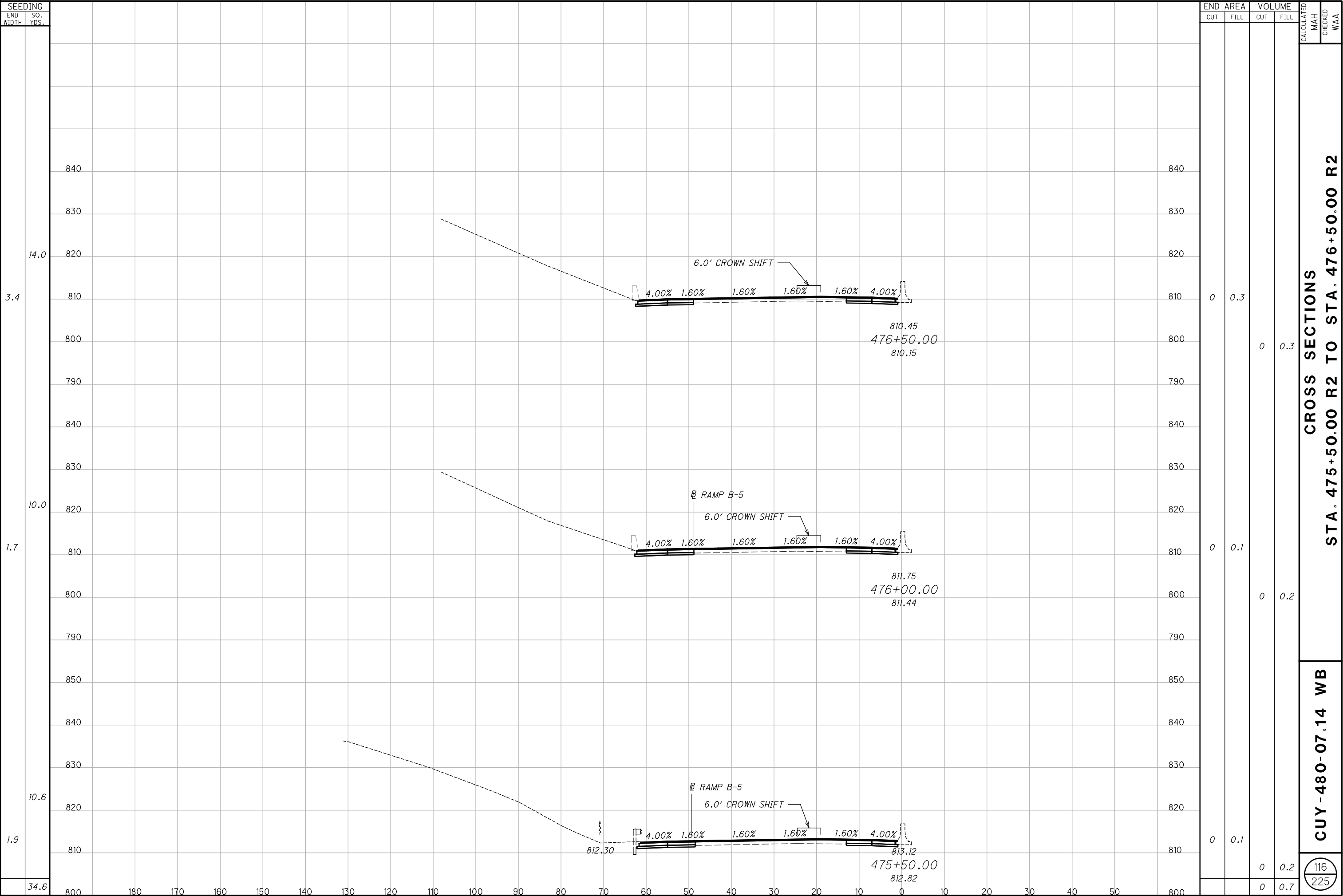
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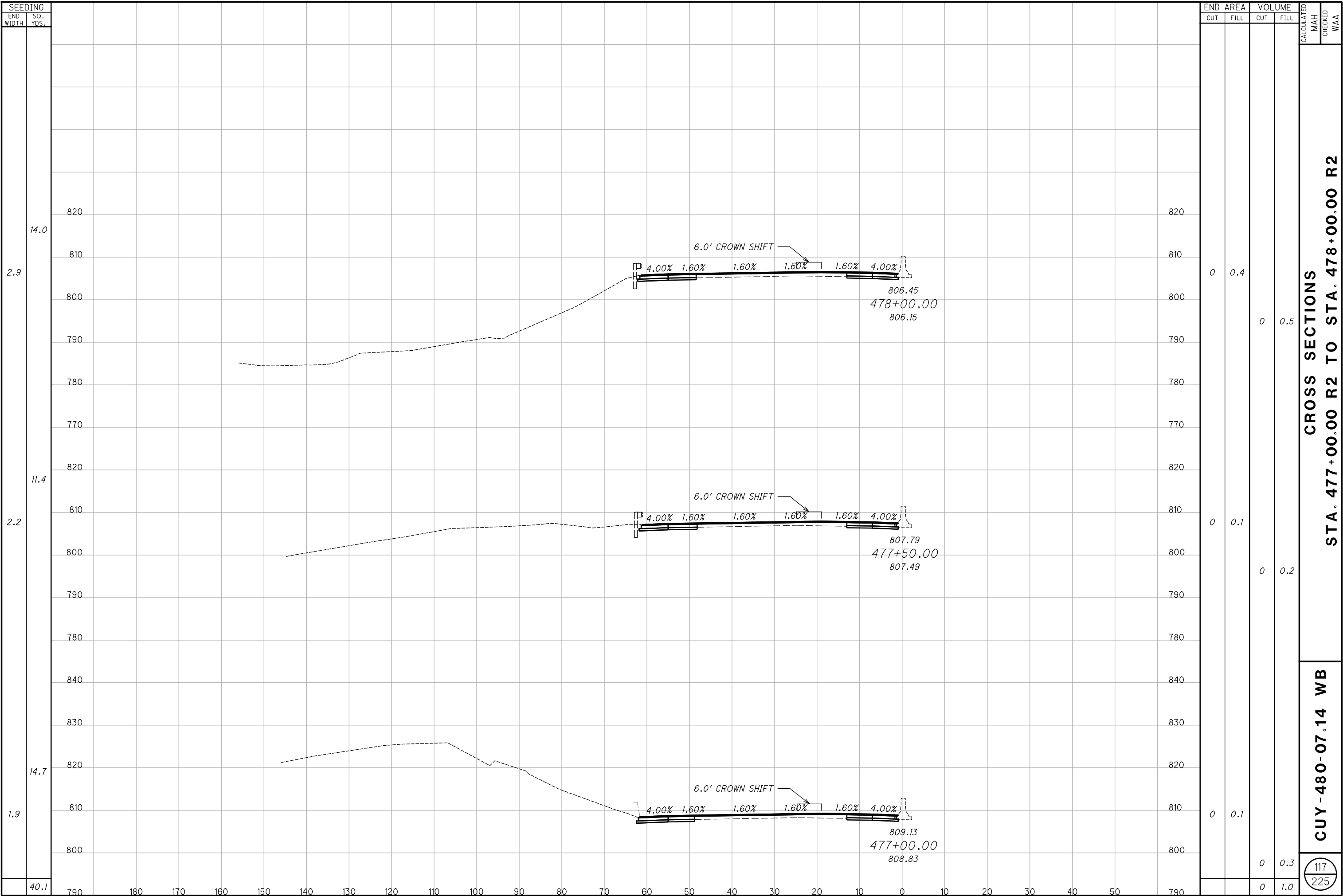
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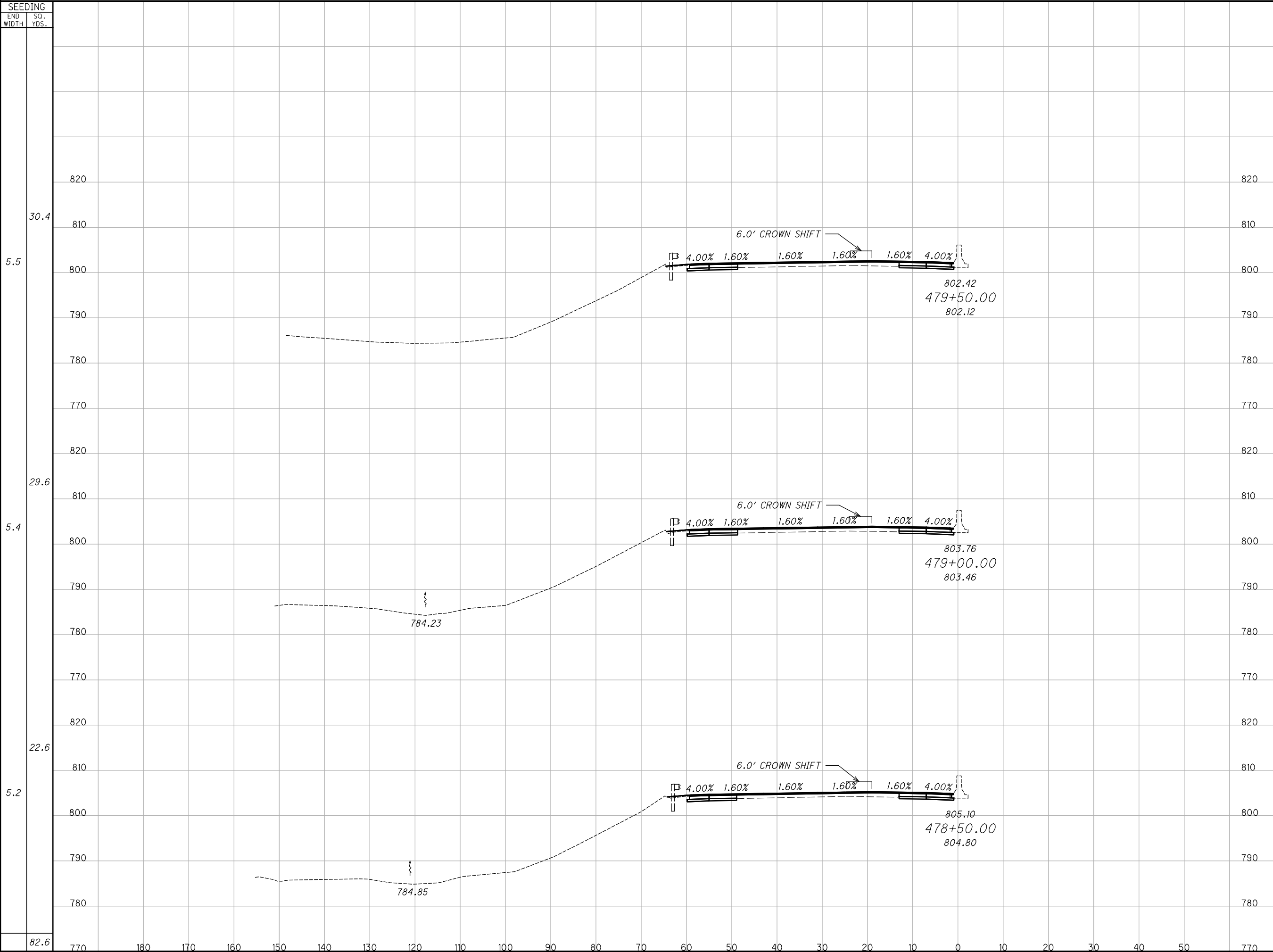
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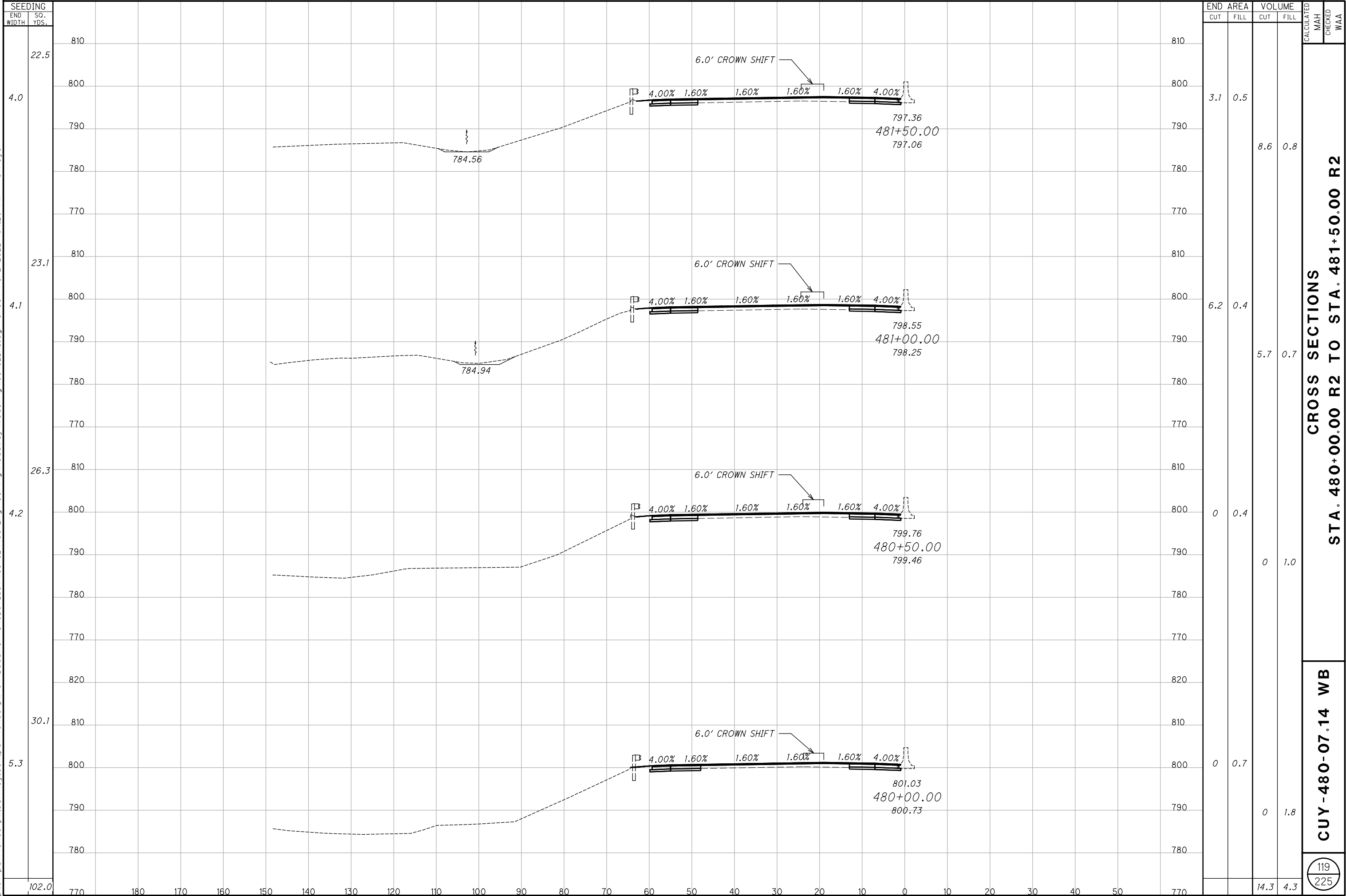


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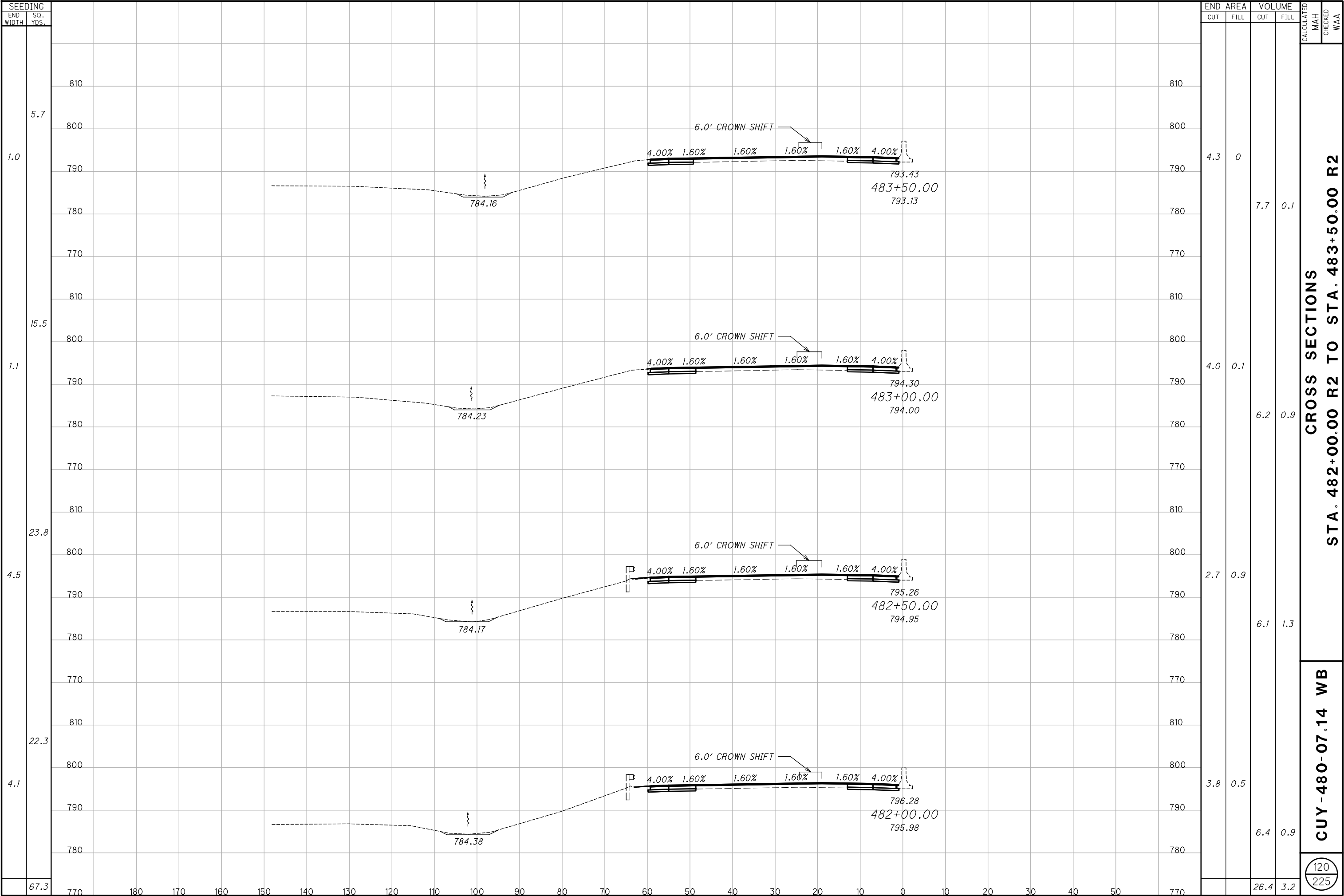


END AREA		VOLUME		CALCULATED	MAH CHECKED	WAA
CUT	FILL	CUT	FILL			
0	1.3	0	2.5	CROSS SECTIONS STA. 478+50.00 R2 TO STA. 479+50.00 R2		
0	1.4	0	2.5			
0	1.3	0	1.6			
		0	6.6	CUY-480-07.14 WB		
				<div>118 225</div>		

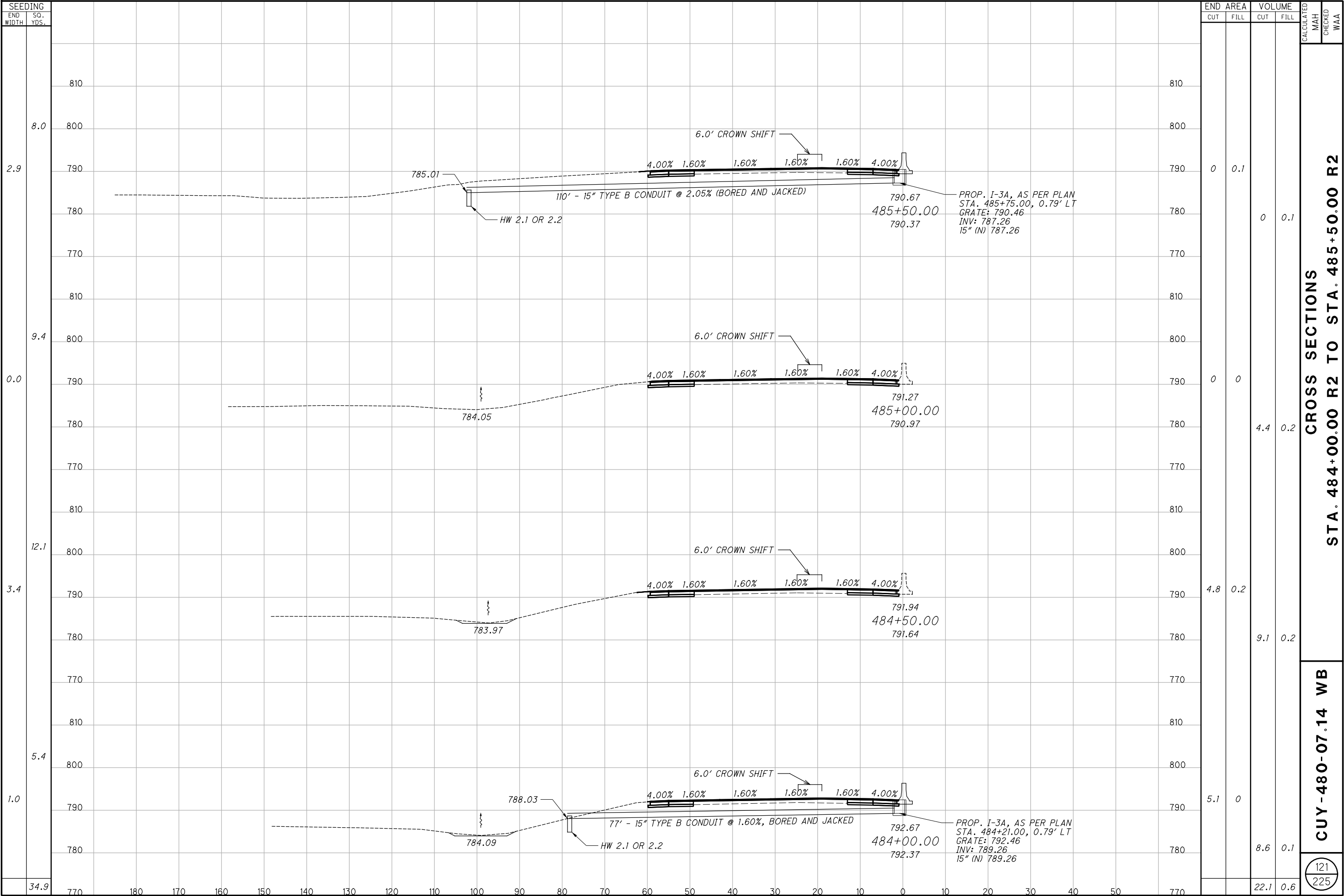
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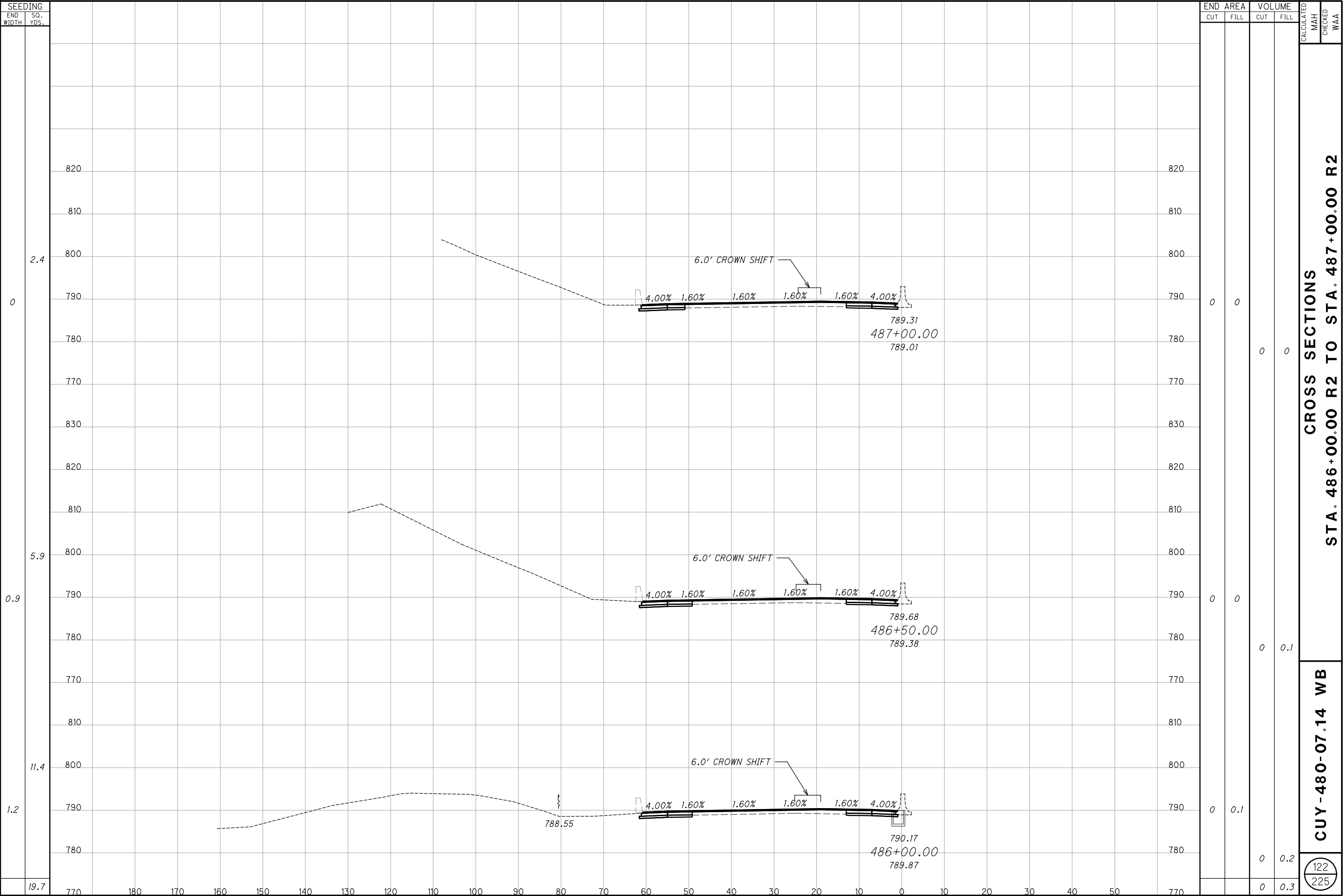
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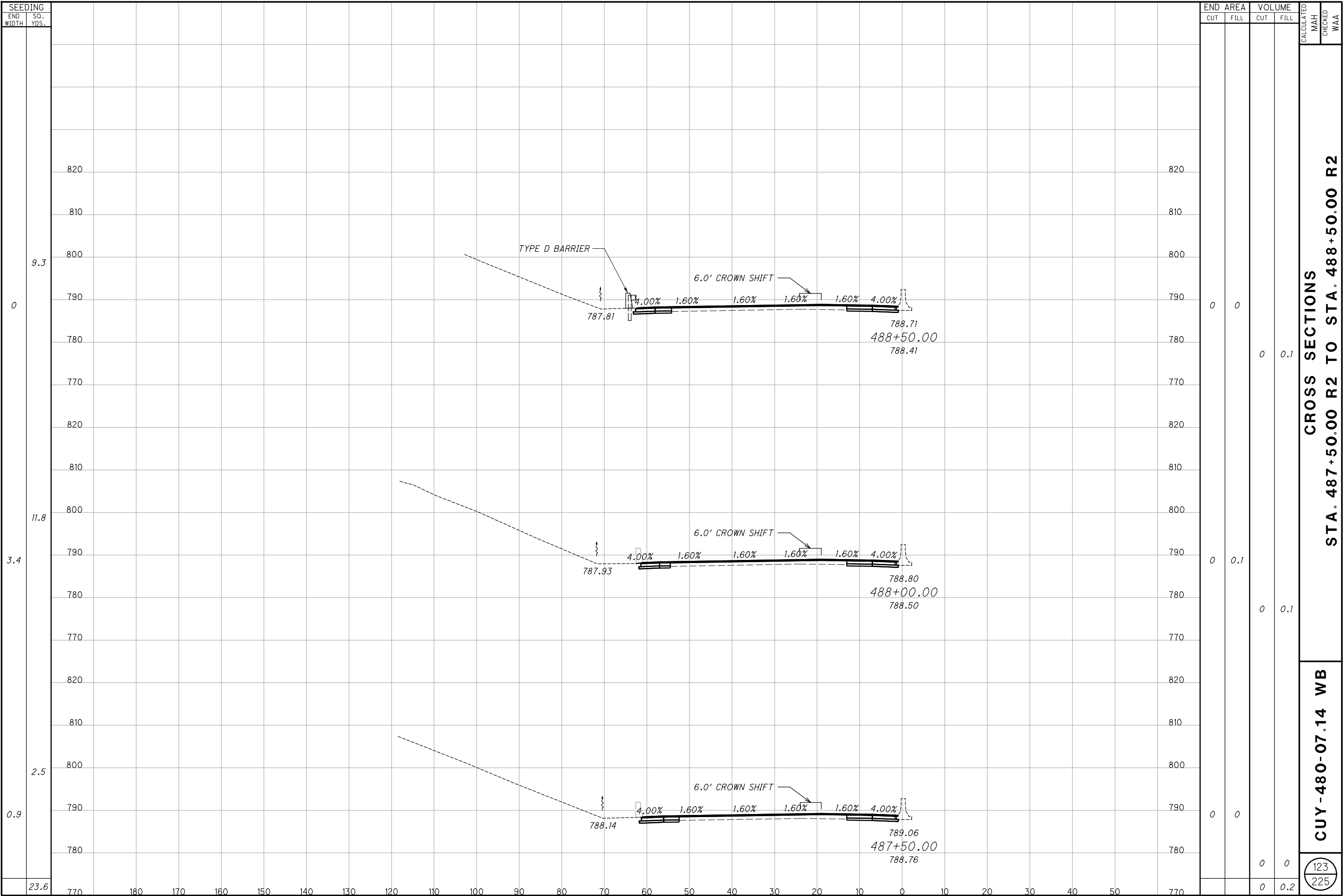
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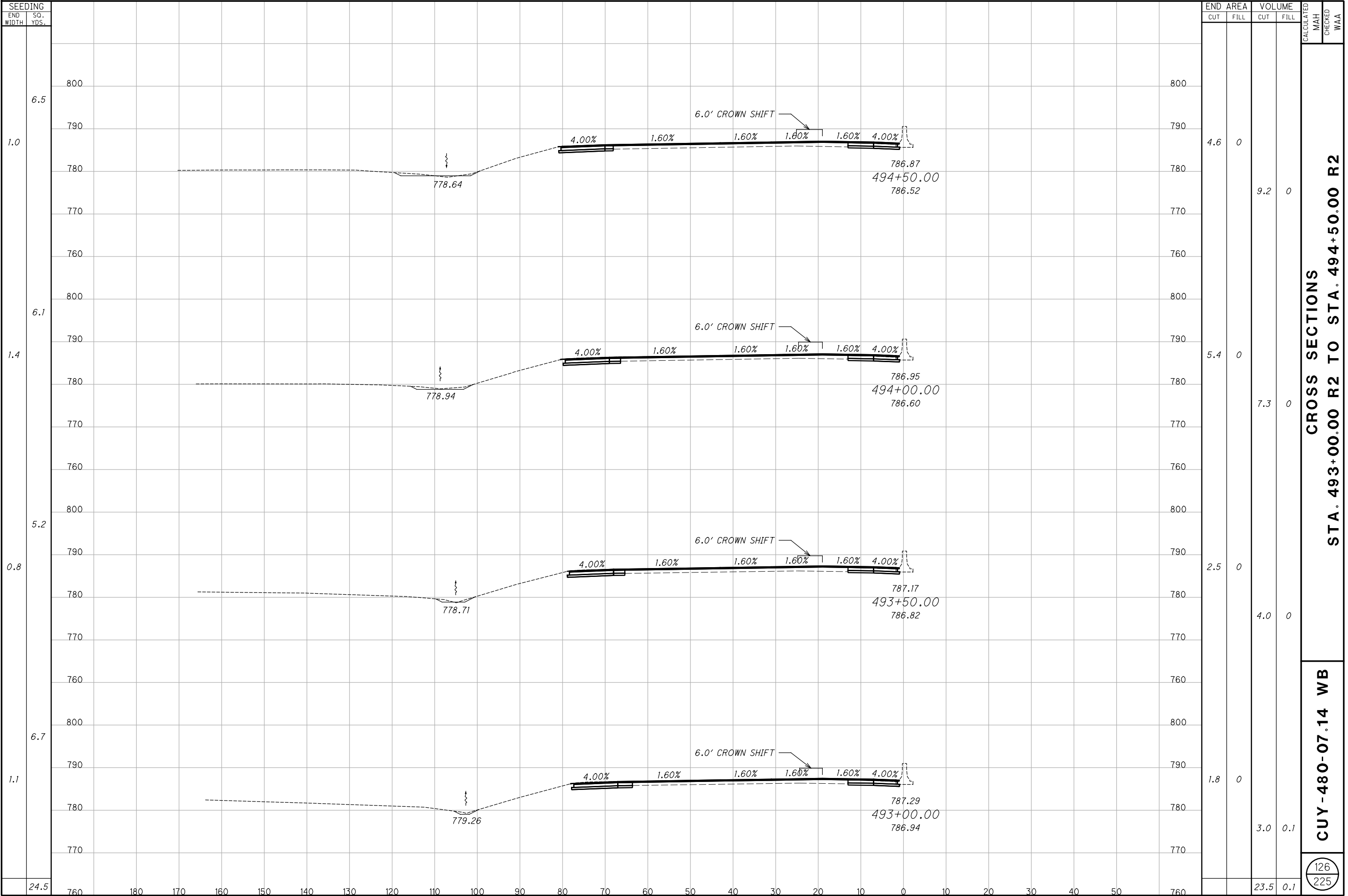


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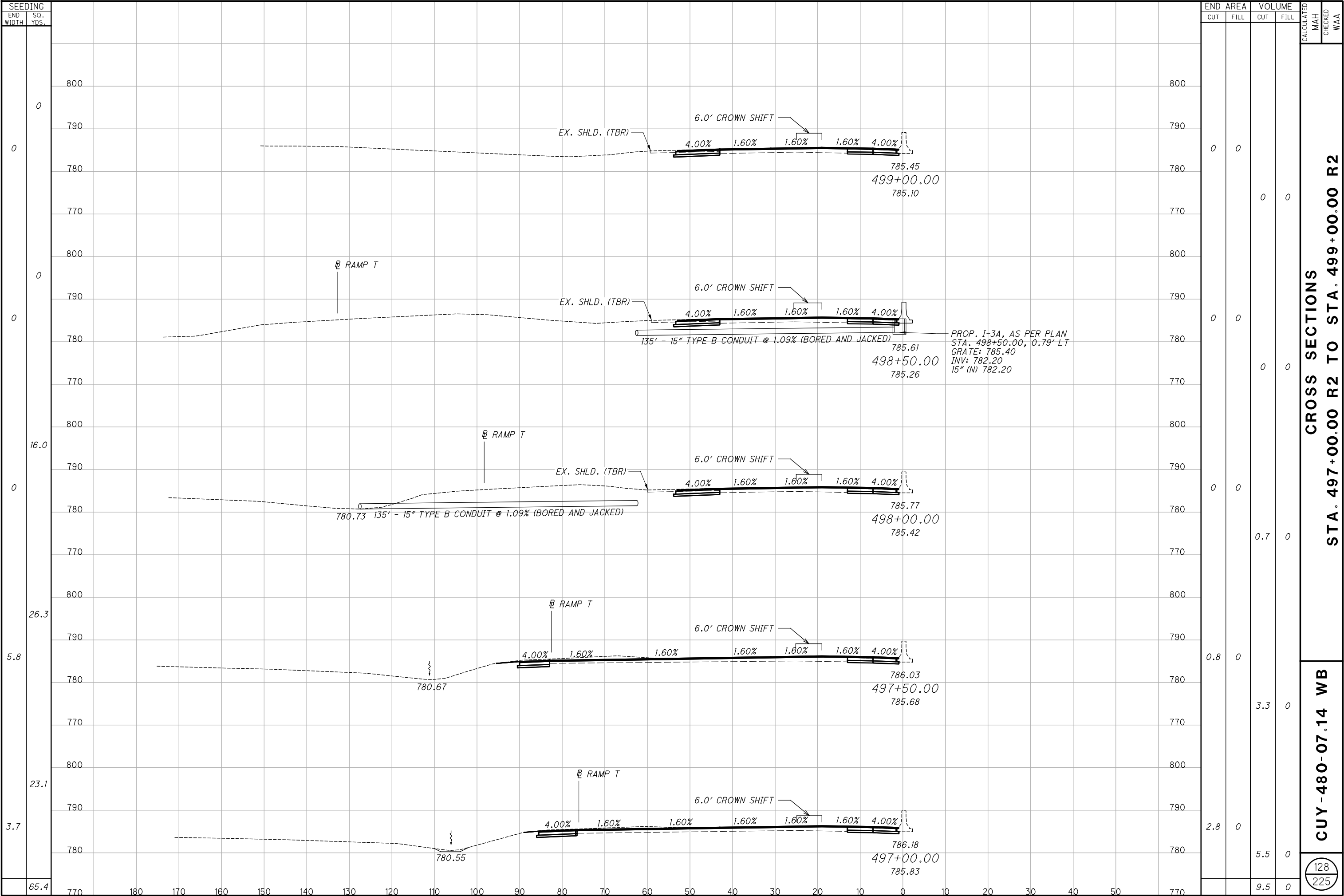
$$\frac{125}{225}$$

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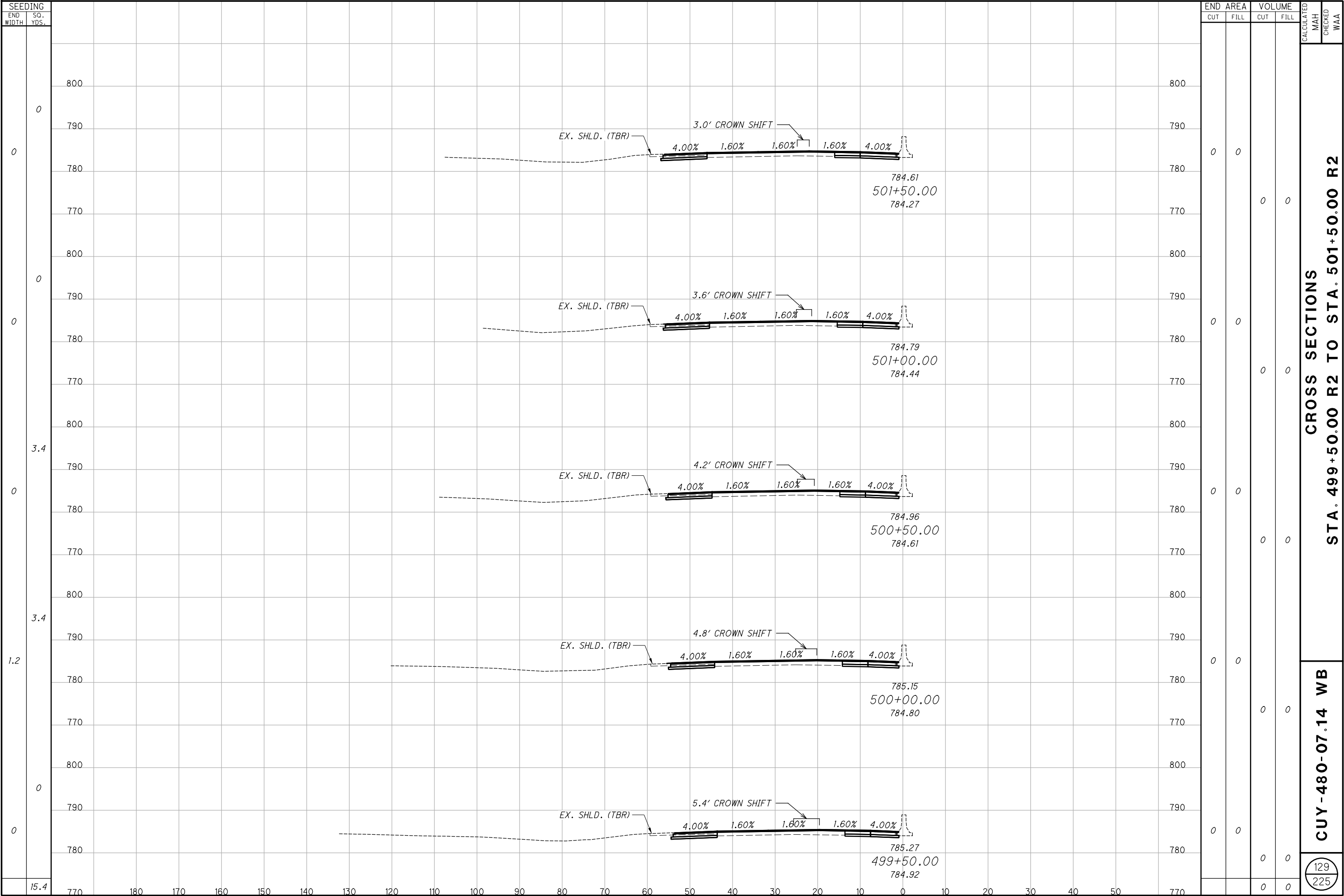


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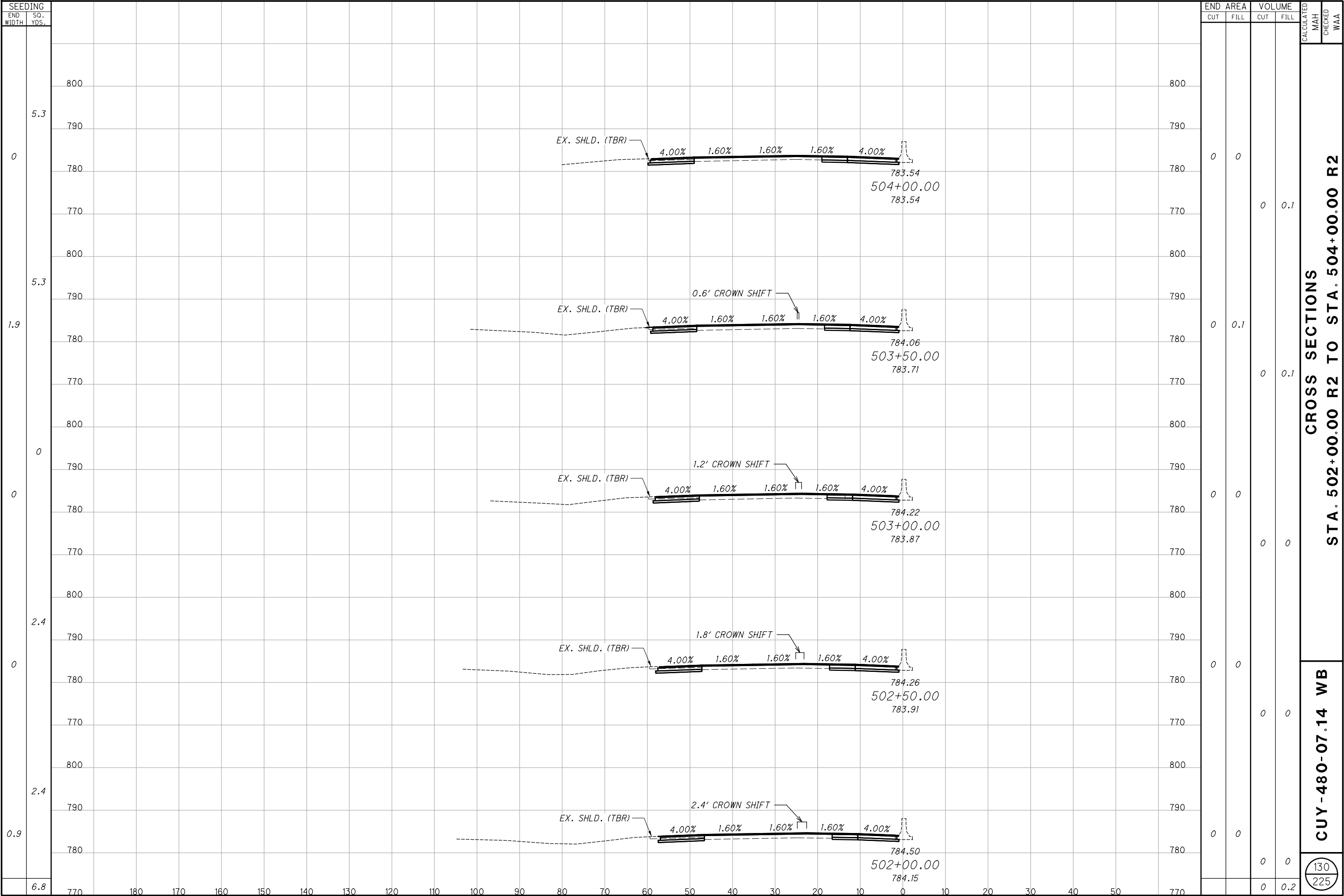
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SUPERELEVATION TABLE																												CALCULATED	MAH	CHECKED	WAA		
P.I. STATION 428+72.24 R2														Dc = 1°28'00"																			
				P.I. Station 428+72.24																													
				Left Side - Transition Rate 222:1																													
Outside Edge of Shoulder				Lanes 4 & 5				Lane 3				Lane 2				Lane 1				Profile Grade Line/Inside EOP				Inside Edge of Shoulder									
Edge Elevation	Elevation Correctio	Cross Slope	Width	Edge Elevation	Elevation Correction	Cross Slope	Width	Edge Elevation	Elevation Correction	Cross Slope	Width	Edge Elevation	Elevation Correction	Cross Slope	Width	Edge Elevation	Elevation Correction	Cross Slope	Width	Station		Profile Grade	Remarks	Edge Elevation	Elevation Correction	Cross Slope	Width						
754.53	-0.40	-0.040	10	754.93	-0.38	-0.016	24	755.31	-0.19	-0.016	12	755.50	0.19	0.016	12	755.31	0.19	0.016	12	492+34.76	R1	755.12	N.C.	754.90	-0.22	-0.040	5.5						
754.66	-0.40	-0.040	10	755.06	-0.38	-0.016	24	755.44	-0.19	-0.016	12	755.64	0.17	0.014	12	755.47	0.17	0.014	12	492+50.00	R1	755.30		755.08	-0.22	-0.040	5.5						
754.85	-0.40	-0.040	10	755.25	-0.38	-0.016	24	755.64	-0.19	-0.016	12	755.83	0.12	0.010	12	755.71	0.12	0.010	12	492+75.00	R1	755.59		755.37	-0.22	-0.040	5.5						
755.10	-0.40	-0.040	10	755.50	-0.38	-0.016	24	755.88	-0.19	-0.016	12	756.07	0.07	0.006	12	756.00	0.07	0.006	12	493+00.00	R1	755.93		755.71	-0.22	-0.040	5.5						
755.36	-0.40	-0.040	10	755.76	-0.38	-0.016	24	756.15	-0.19	-0.016	12	756.34	0.02	0.002	12	756.31	0.02	0.002	12	493+25.00	R1	756.29		756.07	-0.22	-0.040	5.5						
755.55	-0.40	-0.040	10	755.95	-0.38	-0.016	24	756.34	-0.19	-0.016	12	756.53	0.00	0.000	12	756.53	0.00	0.000	12	493+41.53	R1	756.53		756.31	-0.22	-0.040	5.5						
755.66	-0.40	-0.040	10	756.06	-0.38	-0.016	24	756.44	-0.19	-0.016	12	756.64	-0.01	-0.001	12	756.65	-0.01	-0.001	12	493+50.00	R1	756.66		756.44	-0.22	-0.040	5.5						
755.92	-0.40	-0.040	10	756.32	-0.38	-0.016	24	756.71	-0.19	-0.016	12	756.90	-0.06	-0.005	12	756.96	-0.06	-0.005	12	493+75.00	R1	757.02		756.80	-0.22	-0.040	5.5						
756.20	-0.40	-0.040	10	756.60	-0.38	-0.016	24	756.98	-0.19	-0.016	12	757.17	-0.11	-0.009	12	757.28	-0.11	-0.009	12	494+00.00	R1	757.39		757.17	-0.22	-0.040	5.5						
756.47	-0.40	-0.040	10	756.87	-0.38	-0.016	24	757.26	-0.19	-0.016	12	757.45	-0.16	-0.013	12	757.60	-0.16	-0.013	12	494+25.00	R1	757.76		757.54	-0.22	-0.040	5.5						
756.76	-0.40	-0.040	10	757.16	-0.38	-0.016	24	757.54	-0.19	-0.016	12	757.74	-0.19	-0.016	12	757.93	-0.19	-0.016	12	494+48.30	R1	758.12		757.90	-0.22	-0.040	5.5						
756.79	-0.40	-0.040	10	757.19	-0.38	-0.016	24	757.57	-0.19	-0.016	12	757.77	-0.19	-0.016	12	757.96	-0.19	-0.016	12	494+50.00	R1	758.15		757.93	-0.22	-0.040	5.5						
756.96	-0.40	-0.040	10	757.36	-0.48	-0.020	24	757.84	-0.24	-0.020	12	758.08	-0.24	-0.020	12	758.32	-0.24	-0.020	12	494+75.00	R1	758.56		758.34	-0.22	-0.040	5.5						
757.13	-0.40	-0.040	10	757.53	-0.58	-0.024	24	758.11	-0.29	-0.024	12	758.39	-0.29	-0.024	12	758.68	-0.29	-0.024	12	495+00.00	R1	758.97		758.75	-0.22	-0.040	5.5						
757.16	-0.40	-0.040	10	757.56	-0.58	-0.024	24	758.14	-0.29	-0.024	12	758.42	-0.29	-0.024	12	758.71	-0.29	-0.024	12	420+30.02	R2	759.00	P.C.	758.78	-0.22	-0.040	5.5						
757.29	-0.40	-0.040	10	757.69	-0.65	-0.027	24	758.34	-0.32	-0.027	12	758.66	-0.32	-0.027	12	758.99	-0.32	-0.027	12	420+50.00	R2	759.31		759.09	-0.22	-0.040	5.5						
757.44	-0.40	-0.040	10	757.84	-0.74	-0.031	24	758.58	-0.37	-0.031	12	758.96	-0.37	-0.031	12	759.33	-0.37	-0.031	12	420+75.00	R2	759.70		759.49	-0.21	-0.038	5.5						
757.69	-0.40	-0.040	10	758.09	-0.82	-0.034	24	758.91	-0.41	-0.034	12	759.31	-0.41	-0.034	12	759.72	-0.41	-0.034	12	421+00.00	R2	760.13		759.93	-0.20	-0.036	5.5						
757.78	-0.40	-0.040	10	758.18	-0.86	-0.036	24	759.04	-0.43	-0.036	12	759.48	-0.43	-0.036	12	759.91	-0.43	-0.036	12	421+10.02	R2	760.34	F.S.	760.15	-0.19	-0.034	5.5						
758.11	-0.40	-0.040	10	758.51	-0.86	-0.036	24	759.37	-0.43	-0.036	12	759.81	-0.43	-0.036	12	760.24	-0.43	-0.036	12	421+25.00	R2	760.67		760.48	-0.19	-0.034	5.5						
758.60	-0.40	-0.040	10	759.00	-0.86	-0.036	24	759.86	-0.43	-0.036	12	760.30	-0.43	-0.036	12	760.73	-0.43	-0.036	12	421+50.00	R2	761.16		760.97	-0.19	-0.034	5.5						
759.09	-0.40	-0.040	10	759.49	-0.86	-0.036	24	760.35	-0.43	-0.036	12	760.79	-0.43	-0.036	12	761.22	-0.43	-0.036	12	421+75.00	R2	761.65		761.46	-0.19	-0.034	5.5						
759.62	-0.40	-0.040	10	760.02	-0.86	-0.036	24	760.88	-0.43	-0.036	12	761.32	-0.43	-0.036	12	761.75	-0.43	-0.036	12	422+00.00	R2	762.18		761.99	-0.19	-0.034	5.5						
760.16	-0.40	-0.040	10	760.56	-0.86	-0.036	24	761.42	-0.43	-0.036	12	761.86	-0.43	-0.036	12	762.29	-0.43	-0.036	12	422+25.00	R2	762.72		762.53	-0.19	-0.034	5.5						
760.68	-0.40	-0.040	10	761.08	-0.86	-0.036	24	761.94	-0.43	-0.036	12	762.38	-0.43	-0.036	12	762.81	-0.43	-0.036	12	422+50.00	R2	763.24		763.05	-0.19	-0.034	5.5						
760.71	-0.40	-0.040	10	761.11	-0.86	-0.036	24	761.97	-0.43	-0.036	12	762.41	-0.43	-0.036	12	762.84	-0.43	-0.036	12	422+51.17	R2	763.27		763.08	-0.19	-0.034	5.5						
761.20	-0.40	-0.040	10	761.60	-0.86	-0.036	24	762.46	-0.43	-0.036	12	762.90	-0.43	-0.036	12	763.33	-0.43	-0.036	12	422+75.00	R2	763.76		763.57	-0.19	-0.034	5.5						
761.70	-0.40	-0.040	10	762.10	-0.86	-0.036	24	762.96	-0.43	-0.036	12	763.40	-0.43	-0.036	12	763.83	-0.43	-0.036	12	423+00.00	R2	764.26		764.07	-0.19	-0.034	5.5						
762.21	-0.40	-0.040	10	762.61	-0.86	-0.036	24	763.47	-0.43	-0.036	12	763.91	-0.43	-0.036	12	764.34	-0.43	-0.036	12	423+25.00	R2	764.77		764.58	-0.19	-0.034	5.5						
762.72	-0.40	-0.040	10	763.12	-0.86	-0.036	24	763.98	-0.43	-0.036	12	764.42	-0.43	-0.036	12	764.85	-0.43	-0.036	12	423+50.00	R2	765.28		765.09	-0.19	-0.034	5.5						
763.25	-0.40	-0.040	10	763.65	-0.86	-0.036	24	764.51	-0.43	-0.036	12	764.95	-0.43	-0.036	12	765.38	-0.43	-0.036	12	423+75.00	R2	765.81		765.62	-0.19	-0.034	5.5						
763.76	-0.40	-0.040	10	764.16	-0.86	-0.036	24	765.02	-0.43	-0.036	12	765.46	-0.43	-0.036	12	765.89	-0.43	-0.036	12	424+00.00	R2	766.32		766.13	-0.19	-0.034	5.5						
764.26	-0.40	-0.040	10	764.66	-0.86	-0.036	24	765.52	-0.43	-0.036	12	765.96	-0.43	-0.036	12	766.39	-0.4																

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SUPERELEVATION TABLE																																	
P.I. STATION 428+72.24 R2														Dc = 1°28'00"																			
				P.I. Station 428+72.24																													
				Left Side - Transition Rate 222:1																													
Outside Edge of Shoulder				Lanes 4 & 5				Lane 3				Lane 2				Lane 1				Profile Grade Line/Inside EOP				Inside Edge of Shoulder									
Edge Elevation	Elevation Correctio	Cross Slope	Width	Edge Elevation	Elevation Correction	Cross Slope	Width	Edge Elevation	Elevation Correction	Cross Slope	Width	Edge Elevation	Elevation Correction	Cross Slope	Width	Edge Elevation	Elevation Correction	Cross Slope	Width	Station	Profile Grade	Remarks	Edge Elevation	Elevation Correction	Cross Slope	Width							
772.69	-0.40	-0.040	10	773.09	-0.86	-0.036	24	773.95	-0.43	-0.036	12	774.39	-0.43	-0.036	12	774.82	-0.43	-0.036	12	428+25.00	R2	775.25		775.06	-0.19	-0.034	5.5						
773.24	-0.40	-0.040	10	773.64	-0.86	-0.036	24	774.50	-0.43	-0.036	12	774.94	-0.43	-0.036	12	775.37	-0.43	-0.036	12	428+50.00	R2	775.80		775.61	-0.19	-0.034	5.5						
773.74	-0.40	-0.040	10	774.14	-0.86	-0.036	24	775.00	-0.43	-0.036	12	775.44	-0.43	-0.036	12	775.87	-0.43	-0.036	12	428+75.00	R2	776.30		776.11	-0.19	-0.034	5.5						
774.20	-0.40	-0.040	10	774.60	-0.86	-0.036	24	775.46	-0.43	-0.036	12	775.90	-0.43	-0.036	12	776.33	-0.43	-0.036	12	429+00.00	R2	776.76		776.57	-0.19	-0.034	5.5						
774.68	-0.40	-0.040	10	775.08	-0.86	-0.036	24	775.94	-0.43	-0.036	12	776.38	-0.43	-0.036	12	776.81	-0.43	-0.036	12	429+25.00	R2	777.24		777.05	-0.19	-0.034	5.5						
775.17	-0.40	-0.040	10	775.57	-0.86	-0.036	24	776.43	-0.43	-0.036	12	776.87	-0.43	-0.036	12	777.30	-0.43	-0.036	12	429+50.00	R2	777.73		777.54	-0.19	-0.034	5.5						
775.73	-0.40	-0.040	10	776.13	-0.86	-0.036	24	776.99	-0.43	-0.036	12	777.43	-0.43	-0.036	12	777.86	-0.43	-0.036	12	429+75.00	R2	778.29		778.10	-0.19	-0.034	5.5						
776.26	-0.40	-0.040	10	776.66	-0.86	-0.036	24	777.52	-0.43	-0.036	12	777.96	-0.43	-0.036	12	778.39	-0.43	-0.036	12	430+00.00	R2	778.82		778.63	-0.19	-0.034	5.5						
776.78	-0.40	-0.040	10	777.18	-0.86	-0.036	24	778.04	-0.43	-0.036	12	778.48	-0.43	-0.036	12	778.91	-0.43	-0.036	12	430+25.00	R2	779.34		779.15	-0.19	-0.034	5.5						
777.31	-0.40	-0.040	10	777.71	-0.86	-0.036	24	778.57	-0.43	-0.036	12	779.01	-0.43	-0.036	12	779.44	-0.43	-0.036	12	430+50.00	R2	779.87		779.68	-0.19	-0.034	5.5						
777.85	-0.40	-0.040	10	778.25	-0.86	-0.036	24	779.11	-0.43	-0.036	12	779.55	-0.43	-0.036	12	779.98	-0.43	-0.036	12	430+75.00	R2	780.41		780.22	-0.19	-0.034	5.5						
778.39	-0.40	-0.040	10	778.79	-0.86	-0.036	24	779.65	-0.43	-0.036	12	780.09	-0.43	-0.036	12	780.52	-0.43	-0.036	12	431+00.00	R2	780.95		780.76	-0.19	-0.034	5.5						
778.91	-0.40	-0.040	10	779.31	-0.86	-0.036	24	780.17	-0.43	-0.036	12	780.61	-0.43	-0.036	12	781.04	-0.43	-0.036	12	431+25.00	R2	781.47		781.28	-0.19	-0.034	5.5						
779.44	-0.40	-0.040	10	779.84	-0.86	-0.036	24	780.70	-0.43	-0.036	12	781.14	-0.43	-0.036	12	781.57	-0.43	-0.036	12	431+50.00	R2	782.00		781.81	-0.19	-0.034	5.5						
779.97	-0.40	-0.040	10	780.37	-0.86	-0.036	24	781.23	-0.43	-0.036	12	781.67	-0.43	-0.036	12	782.10	-0.43	-0.036	12	431+75.00	R2	782.53		782.34	-0.19	-0.034	5.5						
780.48	-0.40	-0.040	10	780.88	-0.86	-0.036	24	781.74	-0.43	-0.036	12	782.18	-0.43	-0.036	12	782.61	-0.43	-0.036	12	432+00.00	R2	783.04		782.85	-0.19	-0.034	5.5						
780.98	-0.40	-0.040	10	781.38	-0.86	-0.036	24	782.24	-0.43	-0.036	12	782.68	-0.43	-0.036	12	783.11	-0.43	-0.036	12	432+25.00	R2	783.54		783.35	-0.19	-0.034	5.5						
Ramp Departure				Ramp Departure				782.77	-0.43	-0.036	12	783.21	-0.43	-0.036	12	783.64	-0.43	-0.036	12	432+50.00	R2	784.07		783.88	-0.19	-0.034	5.5						
								783.30	-0.43	-0.036	12	783.74	-0.43	-0.036	12	784.17	-0.43	-0.036	12	432+75.00	R2	784.60		784.41	-0.19	-0.034	5.5						
								783.82	-0.43	-0.036	12	784.26	-0.43	-0.036	12	784.69	-0.43	-0.036	12	433+00.00	R2	785.12		784.93	-0.19	-0.034	5.5						
								784.32	-0.43	-0.036	12	784.76	-0.43	-0.036	12	785.19	-0.43	-0.036	12	433+25.00	R2	785.62		785.43	-0.19	-0.034	5.5						
								784.82	-0.43	-0.036	12	785.26	-0.43	-0.036	12	785.69	-0.43	-0.036	12	433+50.00	R2	786.12		785.93	-0.19	-0.034	5.5						
								785.34	-0.43	-0.036	12	785.78	-0.43	-0.036	12	786.21	-0.43	-0.036	12	433+75.00	R2	786.64		786.45	-0.19	-0.034	5.5						
								785.88	-0.43	-0.036	12	786.32	-0.43	-0.036	12	786.75	-0.43	-0.036	12	434+00.00	R2	787.18		786.99	-0.19	-0.034	5.5						
								786.41	-0.43	-0.036	12	786.85	-0.43	-0.036	12	787.28	-0.43	-0.036	12	434+25.00	R2	787.71		787.52	-0.19	-0.034	5.5						
								786.90	-0.43	-0.036	12	787.34	-0.43	-0.036	12	787.77	-0.43	-0.036	12	434+50.00	R2	788.20		788.01	-0.19	-0.034	5.5						
								787.42	-0.43	-0.036	12	787.86	-0.43	-0.036	12	788.29	-0.43	-0.036	12	434+75.00	R2	788.72		788.53	-0.19	-0.034	5.5						
								787.92	-0.43	-0.036	12	788.36	-0.43	-0.036	12	788.79	-0.43	-0.036	12	435+00.00	R2	789.22		789.03	-0.19	-0.034	5.5						
								788.45	-0.43	-0.036	12	788.89	-0.43	-0.036	12	789.32	-0.43	-0.036	12	435+25.00	R2	789.75		789.56	-0.19	-0.034	5.5						
								788.95	-0.43	-0.036	12	789.39	-0.43	-0.036	12	789.82	-0.43	-0.036	12	435+50.00	R2	790.25		790.06	-0.19	-0.034	5.5						
								789.41	-0.43	-0.036	12	789.85	-0.43	-0.036	12	790.28	-0.43	-0.036	12	435+75.00	R2	790.71		790.52	-0.19	-0.034	5.5						
								789.90	-0.43	-0.036	12	790.34	-0.43	-0.036	12	790.77	-0.43	-0.036	12	436+00.00	R2	791.20		791.01	-0.19	-0.034	5.5						
								790.60	-0.43	-0.036	12	791.04	-0.43	-0.036	12	791.47	-0.43	-0.036	12	436+25.00	R2	791.90		791.71	-0.19	-0.034	5.5						
								791.18	-0.43	-0.036	12	791.62	-0.43	-0.036	12	792.05	-0.43	-0.036	12	436+50.00	R2	792.48		792.29	-0.19	-0.034	5.5						
								791.73	-0.43	-0.036	12	792.17	-0.43	-0.036	12	792.60	-0.43	-0.036	12	436+75.00	R2	793.03		792.84	-0.19	-0.034	5.5						
								792.22	-0.43	-0.036	12	792.66	-0.43	-0.036	12	793.09	-0.43	-0.036	12	437+00.00	R2	793.52		793.33	-0.19	-0.034	5.5						
								792.72	-0.43	-0.036	12	793.16	-0.43	-0.036	12	793.59	-0.43	-0.036	12	437+25.00	R2	794.02		793.83	-0.19	-0.034	5.5						
								793																									

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SUPERELEVATION TABLE

P.I. STATION 428+72.24 R2 Dc = 1°28'00"

				P.I. Station 428+72.24																							
				Left Side - Transition Rate 222:1																							
Outside Edge of Shoulder				Lanes 4 & 5				Lane 3				Lane 2				Lane 1				Profile Grade Line/Inside EOP				Inside Edge of Shoulder			
Edge Elevation	Elevation Correctio	Cross Slope	Width	Edge Elevation	Elevation Correction	Cross Slope	Width	Edge Elevation	Elevation Correction	Cross Slope	Width	Edge Elevation	Elevation Correction	Cross Slope	Width	Edge Elevation	Elevation Correction	Cross Slope	Width	Station		Profile Grade	Remarks	Edge Elevation	Elevation Correction	Cross Slope	Width
								798.92	-0.43	-0.036	12	799.36	-0.43	-0.036	12	799.79	-0.43	-0.036	12	440+25.00	R2	800.22		800.03	-0.19	-0.034	5.5
								799.25	-0.43	-0.036	12	799.69	-0.43	-0.036	12	800.12	-0.43	-0.036	12	440+42.08	R2	800.55	F.S.	800.36	-0.19	-0.034	5.5
								799.46	-0.42	-0.035	12	799.88	-0.42	-0.035	12	800.30	-0.42	-0.035	12	440+50.00	R2	800.72		800.53	-0.19	-0.034	5.5
								800.11	-0.37	-0.031	12	800.49	-0.37	-0.031	12	800.86	-0.37	-0.031	12	440+75.00	R2	801.23		801.04	-0.19	-0.035	5.5
								800.81	-0.32	-0.027	12	801.13	-0.32	-0.027	12	801.46	-0.32	-0.027	12	441+00.00	R2	801.78		801.59	-0.19	-0.035	5.5
								801.44	-0.29	-0.024	12	801.72	-0.29	-0.024	12	802.01	-0.29	-0.024	12	441+22.08	R2	802.30	P.T.	802.11	-0.19	-0.035	5.5
								801.51	-0.29	-0.024	12	801.79	-0.29	-0.024	12	802.08	-0.29	-0.024	12	441+25.00	R2	802.37		802.17	-0.20	-0.036	5.5
								802.20	-0.24	-0.020	12	802.44	-0.24	-0.020	12	802.68	-0.24	-0.020	12	441+50.00	R2	802.92		802.72	-0.20	-0.037	5.5
								802.88	-0.19	-0.016	12	803.08	-0.19	-0.016	12	803.27	-0.19	-0.016	12	441+75.00	R2	803.46		803.25	-0.21	-0.038	5.5
								802.89	-0.19	-0.016	12	803.09	-0.19	-0.016	12	803.28	-0.19	-0.016	12	441+75.54	R2	803.47		803.26	-0.21	-0.038	5.5
								803.10	-0.19	-0.016	12	803.29	-0.19	-0.016	12	803.49	-0.14	-0.012	12	442+00.00	R2	803.63		803.42	-0.21	-0.038	5.5
								803.58	-0.19	-0.016	12	803.77	-0.19	-0.016	12	803.96	-0.11	-0.009	12	442+25.00	R2	804.07		803.85	-0.22	-0.039	5.5
								804.09	-0.19	-0.016	12	804.28	-0.19	-0.016	12	804.47	-0.06	-0.005	12	442+50.00	R2	804.53		804.31	-0.22	-0.040	5.5
								804.61	-0.19	-0.016	12	804.81	-0.19	-0.016	12	805.00	-0.01	-0.001	12	442+75.00	R2	805.01		804.79	-0.22	-0.040	5.5
								804.98	-0.19	-0.016	12	805.17	-0.19	-0.016	12	805.36	0.00	0.000	12	442+82.31	R2	805.36		805.14	-0.22	-0.040	5.5
								805.16	-0.19	-0.016	12	805.35	-0.19	-0.016	12	805.55	0.04	0.003	12	443+00.00	R2	805.51		805.29	-0.22	-0.040	5.5
								805.68	-0.19	-0.016	12	805.87	-0.19	-0.016	12	806.06	0.07	0.006	12	443+25.00	R2	805.99		805.77	-0.22	-0.040	5.5
								806.23	-0.19	-0.016	12	806.42	-0.19	-0.016	12	806.61	0.12	0.010	12	443+50.00	R2	806.49		806.27	-0.22	-0.040	5.5
								806.75	-0.19	-0.016	12	806.95	-0.19	-0.016	12	807.14	0.17	0.014	12	443+75.00	R2	806.97		806.75	-0.22	-0.040	5.5
								807.01	-0.19	-0.016	12	807.20	-0.19	-0.016	12	807.39	0.19	0.016	12	443+89.08	R2	807.20	N.C.	806.98	-0.22	-0.040	5.5

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SUPERELEVATION TABLE
IR-480 CURVE NO. 1

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SUPERELEVATION TABLE

P.I. STATION 459+71.41 R2 Dc = 1°05'07"

				P.I. Station 459+71.41															
				Left Side - Transition Rate 222:1															
Outside Edge of Shoulder				Lanes 2 & 3				Lane 1				Profile Grade Line				Inside Edge of Shoulder			
Edge Elevation	Elevation Correctio	Cross Slope	Width	Edge Elevation	Elevation Correction	Cross Slope	Width	Edge Elevation	Elevation Correction	Cross Slope	Width	Station		Profile Grade	Remarks	Edge Elevation	Elevation Correction	Cross Slope	Width
827.07	-0.16	-0.040	4	827.23	-0.38	-0.016	24	827.61	0.19	0.016	12	453+55.94	R2	827.42	N.C.	827.20	-0.22	-0.040	5.5
827.59	-0.16	-0.040	4	827.75	-0.31	-0.013	24	828.06	0.19	0.016	12	453+75.00	R2	827.87		827.65	-0.22	-0.040	5.5
828.25	-0.16	-0.040	4	828.41	-0.22	-0.009	24	828.62	0.19	0.016	12	454+00.00	R2	828.43		828.21	-0.22	-0.040	5.5
828.83	-0.16	-0.040	4	828.99	-0.14	-0.006	24	829.13	0.19	0.016	12	454+25.00	R2	828.94		828.72	-0.22	-0.040	5.5
829.41	-0.16	-0.040	4	829.57	-0.05	-0.002	24	829.62	0.19	0.016	12	454+50.00	R2	829.43		829.21	-0.22	-0.040	5.5
829.72	-0.16	-0.040	4	829.88	0.00	0.000	24	829.88	0.19	0.016	12	454+62.61	R2	829.69		829.47	-0.22	-0.040	5.5
830.02	-0.16	-0.040	4	830.18	0.05	0.002	24	830.13	0.19	0.016	12	454+75.00	R2	829.94		829.72	-0.22	-0.040	5.5
830.64	-0.16	-0.040	4	830.80	0.14	0.006	24	830.65	0.19	0.016	12	455+00.00	R2	830.46		830.24	-0.22	-0.040	5.5
831.24	-0.16	-0.040	4	831.40	0.22	0.009	24	831.18	0.19	0.016	12	455+25.00	R2	830.99		830.77	-0.22	-0.040	5.5
831.87	-0.16	-0.040	4	832.03	0.31	0.013	24	831.72	0.19	0.016	12	455+50.00	R2	831.53		831.31	-0.22	-0.040	5.5
832.37	-0.16	-0.040	4	832.53	0.38	0.016	24	832.14	0.19	0.016	12	455+69.28	R2	831.95		831.73	-0.22	-0.040	5.5
832.52	-0.16	-0.040	4	832.68	0.41	0.017	24	832.27	0.20	0.017	12	455+75.00	R2	832.07		831.85	-0.22	-0.040	5.5
832.95	-0.16	-0.040	4	833.11	0.46	0.019	24	832.66	0.23	0.019	12	455+91.61	R2	832.43	P.C.	832.21	-0.22	-0.040	5.5
833.22	-0.16	-0.040	4	833.38	0.50	0.021	24	832.87	0.25	0.021	12	456+00.00	R2	832.62		832.40	-0.22	-0.040	5.5
833.84	-0.16	-0.040	4	834.00	0.58	0.024	24	833.43	0.29	0.024	12	456+25.00	R2	833.14		832.92	-0.22	-0.040	5.5
834.46	-0.16	-0.040	4	834.62	0.67	0.028	24	833.95	0.34	0.028	12	456+50.00	R2	833.61		833.39	-0.22	-0.040	5.5
834.60	-0.16	-0.040	4	834.76	0.70	0.029	24	834.07	0.35	0.029	12	456+55.94	R2	833.72	F.S.	833.50	-0.22	-0.040	5.5
834.95	-0.16	-0.040	4	835.11	0.70	0.029	24	834.42	0.35	0.029	12	456+75.00	R2	834.07		833.85	-0.22	-0.040	5.5
835.44	-0.16	-0.040	4	835.60	0.70	0.029	24	834.91	0.35	0.029	12	457+00.00	R2	834.56		834.34	-0.22	-0.040	5.5
835.93	-0.16	-0.040	4	836.09	0.70	0.029	24	835.40	0.35	0.029	12	457+25.00	R2	835.05		834.83	-0.22	-0.040	5.5
836.39	-0.16	-0.040	4	836.55	0.70	0.029	24	835.86	0.35	0.029	12	457+50.00	R2	835.51		835.29	-0.22	-0.040	5.5
836.85	-0.16	-0.040	4	837.01	0.70	0.029	24	836.32	0.35	0.029	12	457+75.00	R2	835.97		835.75	-0.22	-0.040	5.5
837.29	-0.16	-0.040	4	837.45	0.70	0.029	24	836.76	0.35	0.029	12	458+00.00	R2	836.41		836.19	-0.22	-0.040	5.5
837.69	-0.16	-0.040	4	837.85	0.70	0.029	24	837.16	0.35	0.029	12	458+25.00	R2	836.81		836.59	-0.22	-0.040	5.5
838.08	-0.16	-0.040	4	838.24	0.70	0.029	24	837.55	0.35	0.029	12	458+50.00	R2	837.20		836.98	-0.22	-0.040	5.5
838.45	-0.16	-0.040	4	838.61	0.70	0.029	24	837.92	0.35	0.029	12	458+75.00	R2	837.57		837.35	-0.22	-0.040	5.5
838.79	-0.16	-0.040	4	838.95	0.70	0.029	24	838.26	0.35	0.029	12	459+00.00	R2	837.91		837.69	-0.22	-0.040	5.5
839.07	-0.16	-0.040	4	839.23	0.70	0.029	24	838.54	0.35	0.029	12	459+25.00	R2	838.19		837.97	-0.22	-0.040	5.5
839.36	-0.16	-0.040	4	839.52	0.70	0.029	24	838.83	0.35	0.029	12	459+50.00	R2	838.48		838.26	-0.22	-0.040	5.5
839.65	-0.16	-0.040	4	839.81	0.70	0.029	24	839.12	0.35	0.029	12	459+75.00	R2	838.77		838.55	-0.22	-0.040	5.5
839.93	-0.16	-0.040	4	840.09	0.70	0.029	24	839.40	0.35	0.029	12	460+00.00	R2	839.05		838.83	-0.22	-0.040	5.5
840.15	-0.16	-0.040	4	840.31	0.70	0.029	24	839.62	0.35	0.029	12	460+25.00	R2	839.27		839.05	-0.22	-0.040	5.5
840.36	-0.16	-0.040	4	840.52	0.70	0.029	24	839.83	0.35	0.029	12	460+50.00	R2	839.48		839.26	-0.22	-0.040	5.5
840.49	-0.16	-0.040	4	840.65	0.70	0.029	24	839.96	0.35	0.029	12	460+75.00	R2	839.61		839.39	-0.22	-0.040	5.5
840.61	-0.16	-0.040	4	840.77	0.70	0.029	24	840.08	0.35	0.029	12	461+00.00	R2	839.73		839.51	-0.22	-0.040	5.5
840.76	-0.16	-0.040	4	840.92	0.70	0.029	24	840.23	0.35	0.029	12	461+25.00	R2	839.88		839.66	-0.22	-0.040	5.5
840.89	-0.16	-0.040	4	841.05	0.70	0.029	24	840.36	0.35	0.029	12	461+50.00	R2	840.01		839.79	-0.22	-0.040	5.5
840.84	-0.16	-0.040	4	841.00	0.70	0.029	24	840.31	0.35	0.029	12	461+75.00	R2	839.96		839.74	-0.22	-0.040	5.5
840.78	-0.16	-0.040	4	840.94	0.70	0.029	24	840.25	0.35	0.029	12	462+00.00	R2	839.90		839.68	-0.22	-0.040	5.5
840.74	-0.16	-0.040	4	840.90	0.70	0.029	24	840.21	0.35	0.029	12	462+25.00	R2	839.86		839.64	-0.22	-0.040	5.5
840.71	-0.16	-0.040	4	840.87	0.70	0.029	24	840.18	0.35	0.029	12	462+50.00	R2	839.83		839.61	-0.22	-0.040	5.5
840.66	-0.16	-0.040	4	840.82	0.70	0.029	24	840.13	0.35	0.029	12	462+75.00	R2	839.78		839.56	-0.22	-0.040	5.5
840.63	-0.16	-0.040	4	840.79	0.70	0.029	24	840.10	0.35	0.029	12	462+85.57	R2	839.75	F.S.	839.53	-0.22	-0.040	5.5
840.54	-0.16	-0.040	4	840.70	0.65	0.027	24	840.05	0.32	0.027	12	463+00.00	R2	839.73		839.51	-0.22	-0.040	5.5
840.33	-0.16	-0.040	4	840.49	0.55	0.023	24	839.94	0.28	0.023	12	463+25.00	R2	839.66		839.44	-0.22	-0.040	5.5
840.12	-0.16	-0.040	4	840.28	0.46	0.019	24	839.83	0.23	0.019	12	463+49.90	R2	839.60	P.T.	839.38	-0.22	-0.040	5.5
840.12	-0.16	-0.040	4	840.28	0.46	0.019	24	839.83	0.23	0.019	12	463+50.00	R2	839.60		839.38	-0.22	-0.040	5.5
839.91	-0.16	-0.040	4	840.07	0.38	0.016	24	839.68	0.19	0.016	12	463+72.23	R2	839.49		839.27	-0.22	-0.040	5.5

pw:\patrickco-pw.bentley.com:patrickco-pw-07\Documents\000T_S54\08482\400-Engineering\Roadway\Sheets\08482_GE001.dgn Sheet 1 8/2/2022 4:17:32 PM dtroyer

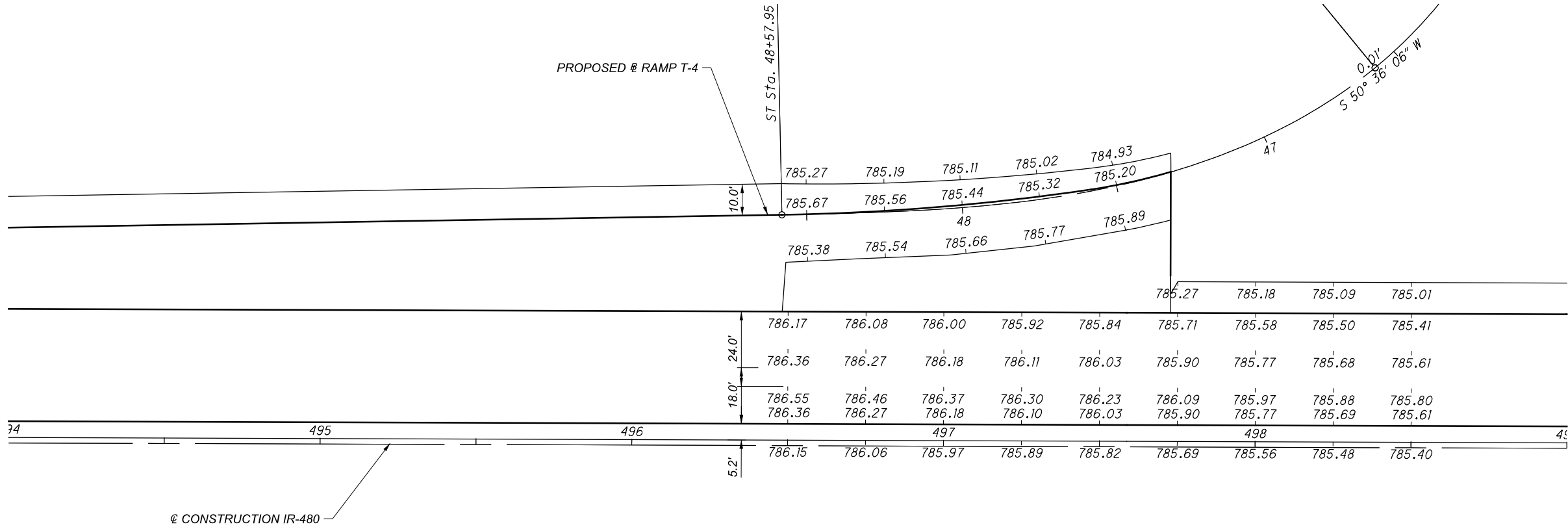
SUPERELEVATION TABLE

P.I. STATION 459+71.41 R2 Dc = 1°05'07"

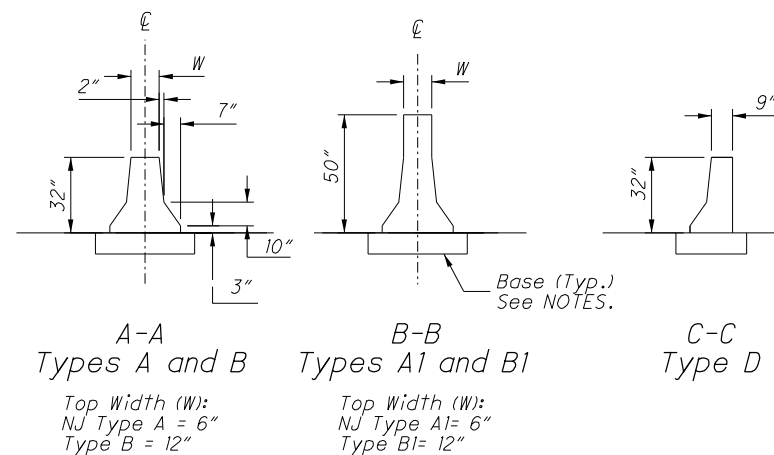
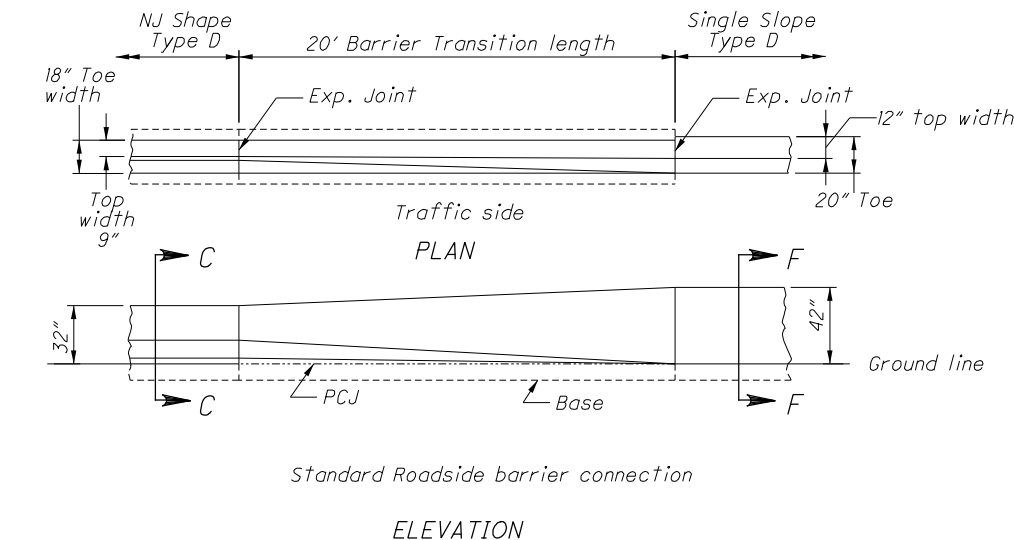
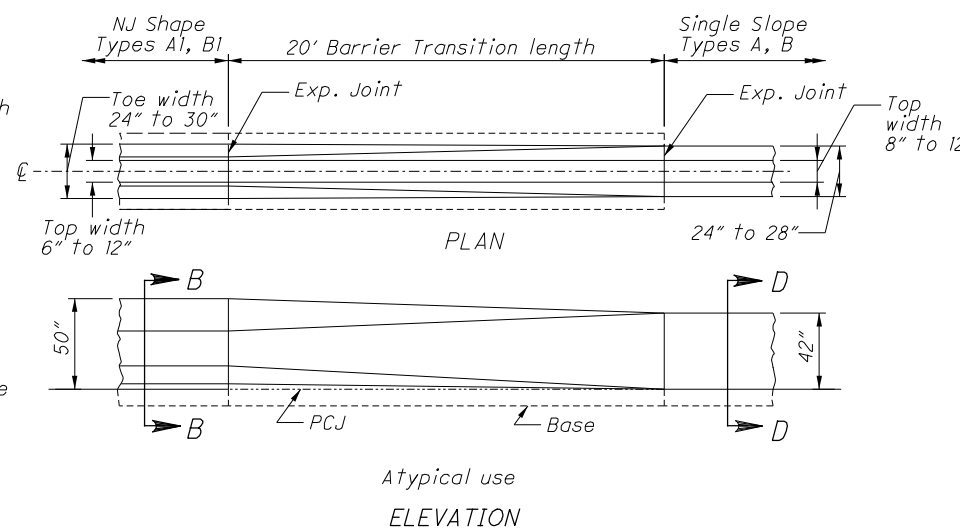
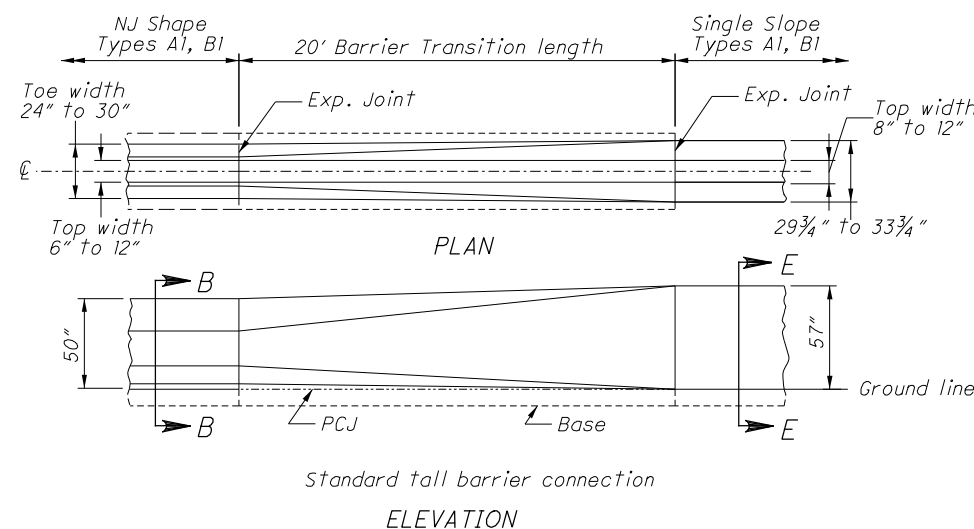
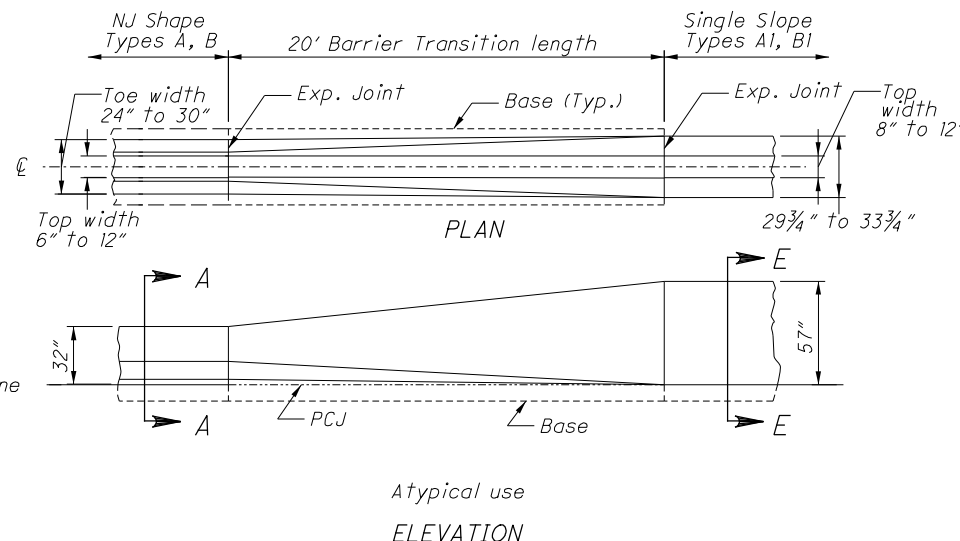
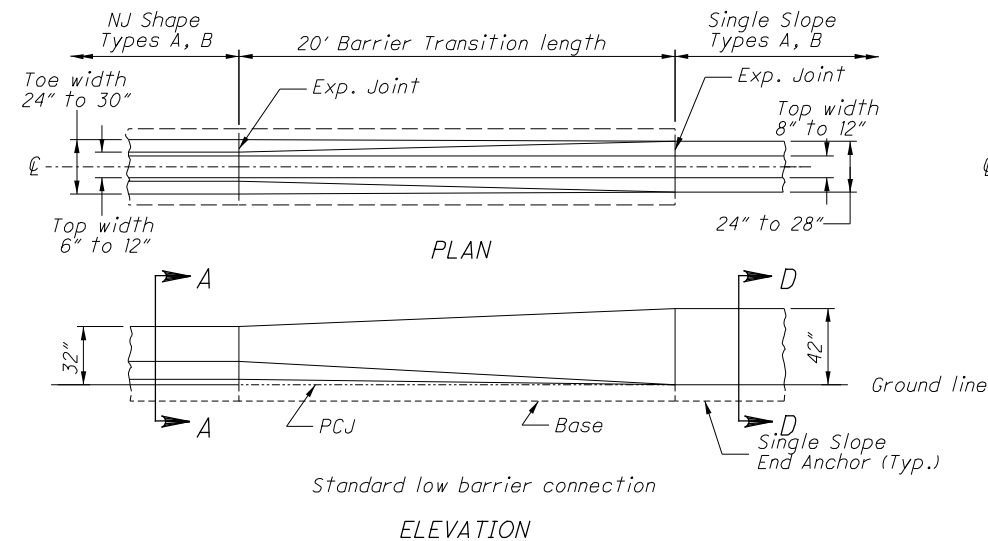
				P.I. Station 459+71.41															
				Left Side - Transition Rate 222:1															
Outside Edge of Shoulder				Lanes 2 & 3				Lane 1				Profile Grade Line			Inside Edge of Shoulder				
Edge Elevation	Elevation Correctio	Cross Slope	Width	Edge Elevation	Elevation Correction	Cross Slope	Width	Edge Elevation	Elevation Correction	Cross Slope	Width	Station		Profile Grade	Remarks	Edge Elevation	Elevation Correction	Cross Slope	Width
839.89	-0.16	-0.040	4	840.05	0.38	0.016	24	839.66	0.19	0.016	12	463+75.00	R2	839.47		839.25	-0.22	-0.040	5.5
839.81	-0.16	-0.040	4	839.97	0.29	0.012	24	839.68	0.19	0.016	12	464+00.00	R2	839.49		839.27	-0.22	-0.040	5.5
839.46	-0.16	-0.040	4	839.62	0.19	0.008	24	839.43	0.19	0.016	12	464+25.00	R2	839.24		839.02	-0.22	-0.040	5.5
839.10	-0.16	-0.040	4	839.26	0.10	0.004	24	839.16	0.19	0.016	12	464+50.00	R2	838.97		838.75	-0.22	-0.040	5.5
838.74	-0.16	-0.040	4	838.90	0.02	0.001	24	838.87	0.19	0.016	12	464+75.00	R2	838.68		838.46	-0.22	-0.040	5.5
838.66	-0.16	-0.040	4	838.82	0.00	0.000	24	838.82	0.19	0.016	12	464+78.90	R2	838.63		838.41	-0.22	-0.040	5.5
838.32	-0.16	-0.040	4	838.48	-0.07	-0.003	24	838.55	0.19	0.016	12	465+00.00	R2	838.36		838.14	-0.22	-0.040	5.5
837.88	-0.16	-0.040	4	838.04	-0.17	-0.007	24	838.21	0.19	0.016	12	465+25.00	R2	838.02		837.80	-0.22	-0.040	5.5
837.47	-0.16	-0.040	4	837.63	-0.26	-0.011	24	837.89	0.19	0.016	12	465+50.00	R2	837.70		837.48	-0.22	-0.040	5.5
837.07	-0.16	-0.040	4	837.23	-0.34	-0.014	24	837.56	0.19	0.016	12	465+75.00	R2	837.37		837.15	-0.22	-0.040	5.5
836.88	-0.16	-0.040	4	837.04	-0.38	-0.016	24	837.42	0.19	0.016	12	465+85.57	R2	837.23	N.C.	837.01	-0.22	-0.040	5.5



pw:\patrickco-pw.bentley.com\patrickco-pw-07\Documents\000T_SS4\08482\400-Engineering\Roadway\Sheets\08482_GI002.dgn Sheet 2 8/2/2022 4:17:51PM dtrayer

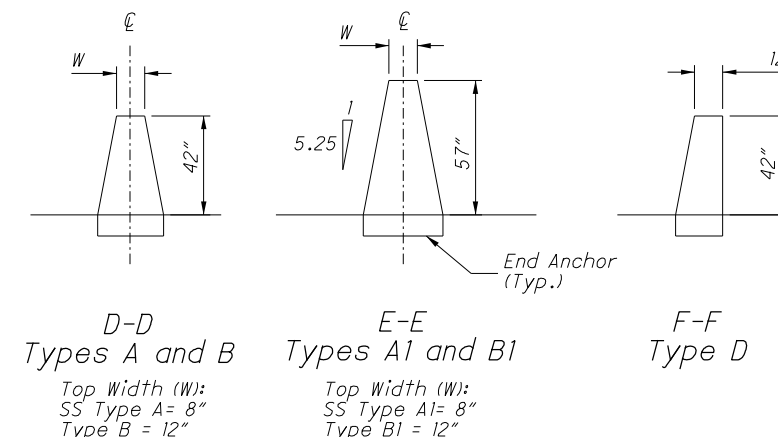


INTERCHANGE DETAILS
IR-480 WB AND RAMP T-4



NJ SHAPE SECTIONS

See Plan Insert sheets for specific NJ Shape Concrete barrier details.



SINGLE SLOPE SECTIONS

See SCD RM-4.3 and RM-4.5 for specific Single Slope concrete barrier details.

NOTES

GENERAL: This insert details the Barrier Transition, to connect existing NJ Concrete Barrier (safety shape) to a new run of Single Slope Concrete Barrier at locations shown on the plans. For NJ barrier shape and other details see the respective plan insert sheets. For Single Slope barrier details, see SCD RM-4.3 (RM-4.5 for Type D).

ADJACENT CONCRETE BARRIER RUNS: Remove any tapered end sections, Impact attenuators, or other guardrail hardware from existing barrier end. The barrier to barrier transition is not intended to be used at transition sections (those shown on SCD RM-4.4), Inlets, or on Type C or CI Barrier. If proposed adjacent single slope barrier is Type A or A1, the Barrier Transition should contain horizontal reinforcing steel similar to that required in the respective single slope barrier. Reinforcement is not shown and should be detailed separately. The adjacent single slope end should be terminated with a reinforced End Anchor as detailed on the SCDs.

BARRIER FACE TRANSITION: To prevent vehicle snagging, a smooth transition from the safety shape face to the single slope face is made over a 20' length. The actual shape of the Transition is dependent on both the adjacent NJ barrier and the single slope barrier Types, as detailed on the plans. The contractor and Engineer will agree on a construction method to ensure a smooth barrier face.

MATERIALS: Materials are same for those shown on RM-4.3 and RM-4.5, except that cast-in-place is the only acceptable method. Edges may be chamfered or radiused as shown on those drawings.

CONCRETE BASE: Construct base as shown on the NJ shape insert sheets, including the methods detailing the footing joint, Permissible Construction Joint (PCJ), and Dowelling requirements. The width of the base matches the existing NJ barrier.

JOINTS: Construct joints as shown on respective barrier drawings.

RACEWAYS: When specified, place raceway(s) to match raceway elevation in adjoining segments. Place to obtain maximum concrete cover.

METRIC UNITS: Refer to respective barrier drawings or inserts for metric dimensions.

PAYMENT: This Barrier Transition shall include all material and labor needed to construct this 20' section, including any raceways, reinforcing steel, dowels and other necessary incidentals. Payment shall be made at the unit price for Item 622 - Barrier Transition, Each.

JOINTS: Unsealed contraction joints spaced at 20' max. shall be constructed throughout the run of Concrete Barrier except that expansion joints shall be used at the center line of and around each bridge pier column and on either side of overhead sign supports, inlets and light pole foundations. If inlet top is sllp formed, the expansion joints adjacent to it may be omitted.

BASE JOINTS: The vertical walls between the barrier base and a concrete pavement or concrete base shall be provided with a sealed, grooved joint as shown on Std. Const. Dwg. BP-2.1. Sealing material shall conform with CMS 705.04.

P.C.J. = Permissible Construction Joint

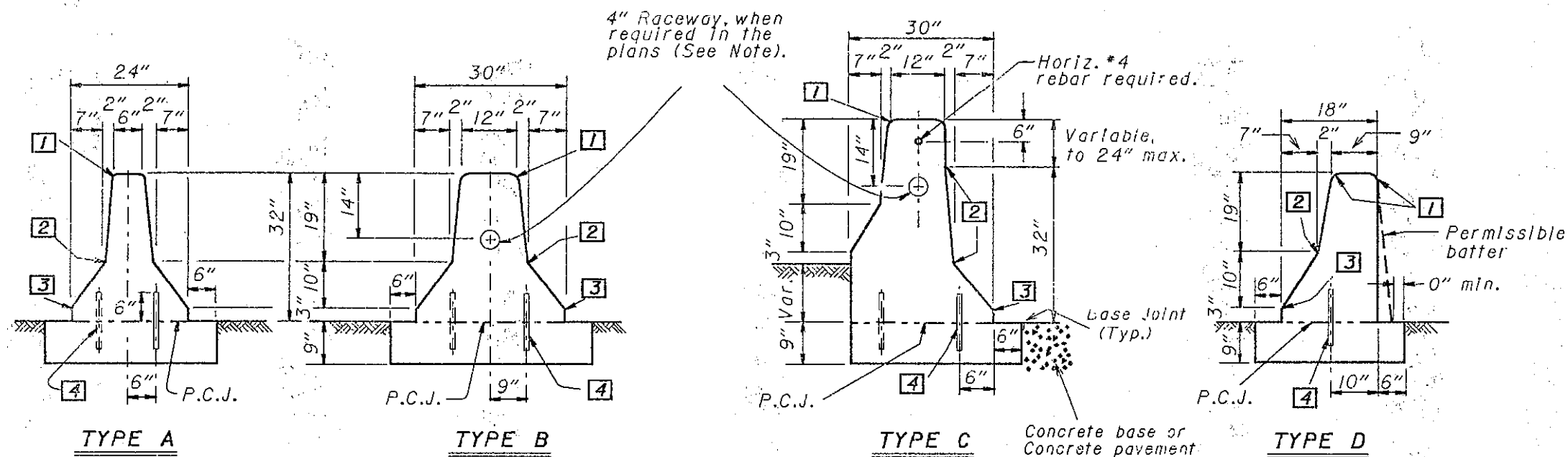
MEASUREMENT: 622 Concrete Barrler, including transitions and pier sections as per Standard Const. Drawing, MC-9.4, is paid for in linear feet as one of the four types (A,B,C or D) or as Type A50 and B50, (for 50" high barrier), with appropriate deductions for other items such as:

604 1-3 Median Inlet	20 Lin.Ft.
625 Light pole foundation or pullbox	2.5 Lin.Ft.
630 Overhead sign support foundation	10 Lin.Ft.
630 Barrier wall assembly	10 Lin.Ft.

50 INCH HIGH BARRIER shall be built in locations specified in the plans. Construct the lower 32" of the barrier and the barrier base using the same dimensions as shown in the corresponding Normal Section. The upper 18" may be constructed integral with the bottom, or separately with No. 4 rebar dowels at 4 foot maximum spacing. Start and end dowels 6" from barrier contraction joints.

RACEWAY: The contractor shall insure that the electrical raceway is clear of internal obstructions. Cost of the 4 inch polyvinyl chloride raceway and No.10 AWG copper-clad or aluminum-clad wire if needed for future installation of circuits shall be included in the unit cost per lineal foot for item 622, Concrete Barrier.

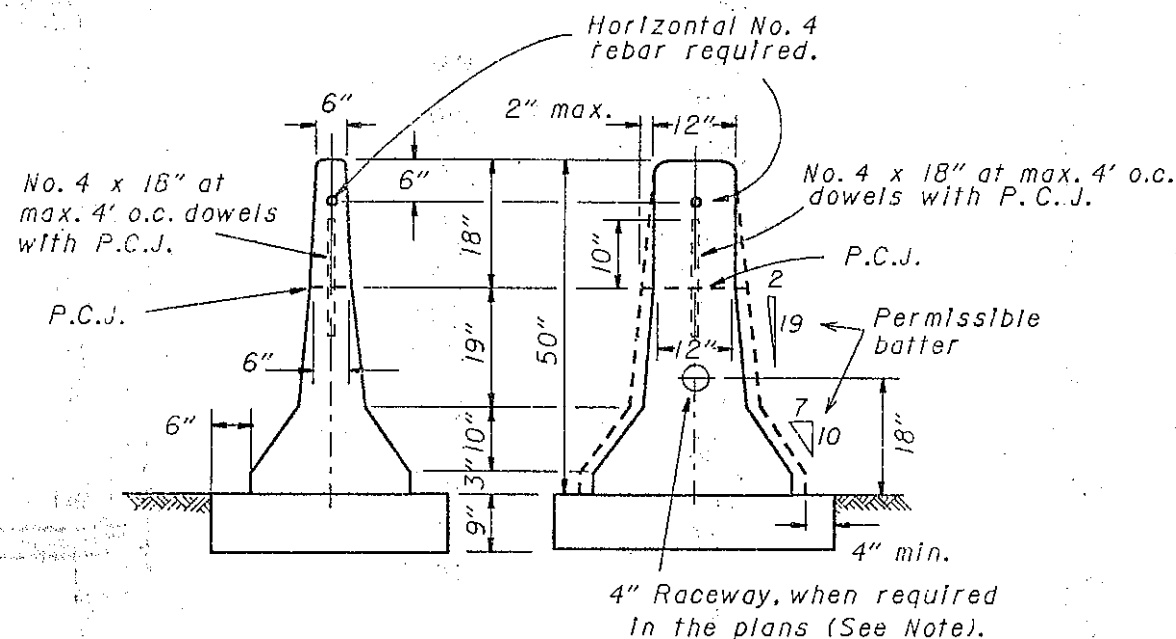
STATION MARKING shall be impressed in the "green" concrete on both sides at the top of the barrier if specified in the plans, which cost shall be incidental to the unit cost per linear foot bid for Item 622, Concrete Barrier.



NORMAL SECTIONS

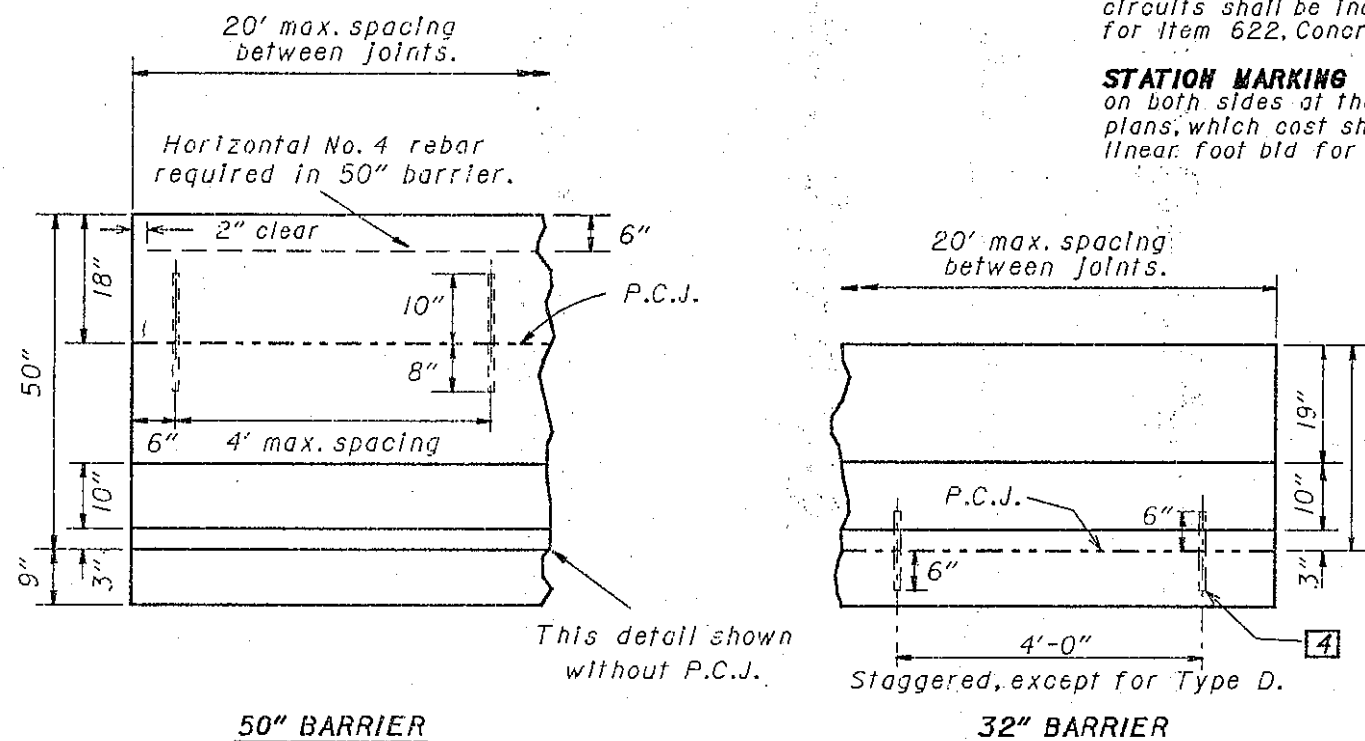
LEGEND

- 1 1" Radius or 3/4" chamfer.
- 2 Permissible 10" radius.
- 3 Permissible 1" radius.
- 4 No. 8 epoxy coated deformed steel bars, 12" long, spaced 4' between successive bars on a staggered (except Type D) pattern. Omit dowels when top is constructed integral with the base.



TYPE A50 TYPE B50

50" BARRIERS - TYPICAL SECTIONS

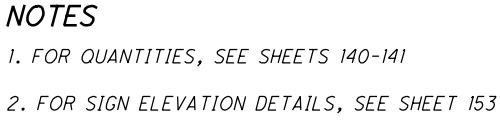


BARRIER ELEVATIONS

BUREAU OF LOCATION AND DESIGN OHIO DEPARTMENT OF TRANSPORTATION	
CONCRETE BARRIER	DATE 10-30-92
STANDARD CONSTRUCTION DRAWING	MC-9.3
APPROVED <i>E.K. Hollman</i> ENGR. L & D	<div style="border: 1px solid black; border-radius: 50%; padding: 10px; text-align: center;">139 225</div>

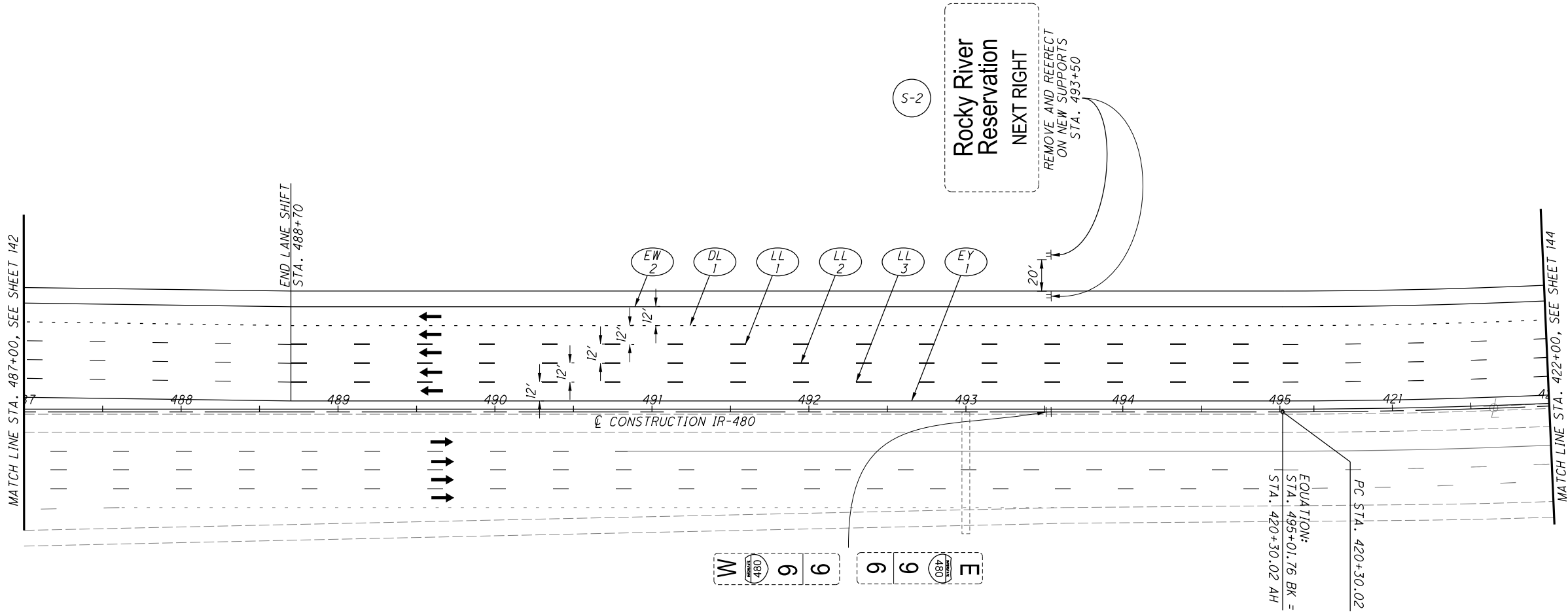
PAVEMENT MARKING SUBSUMMARY

141
225

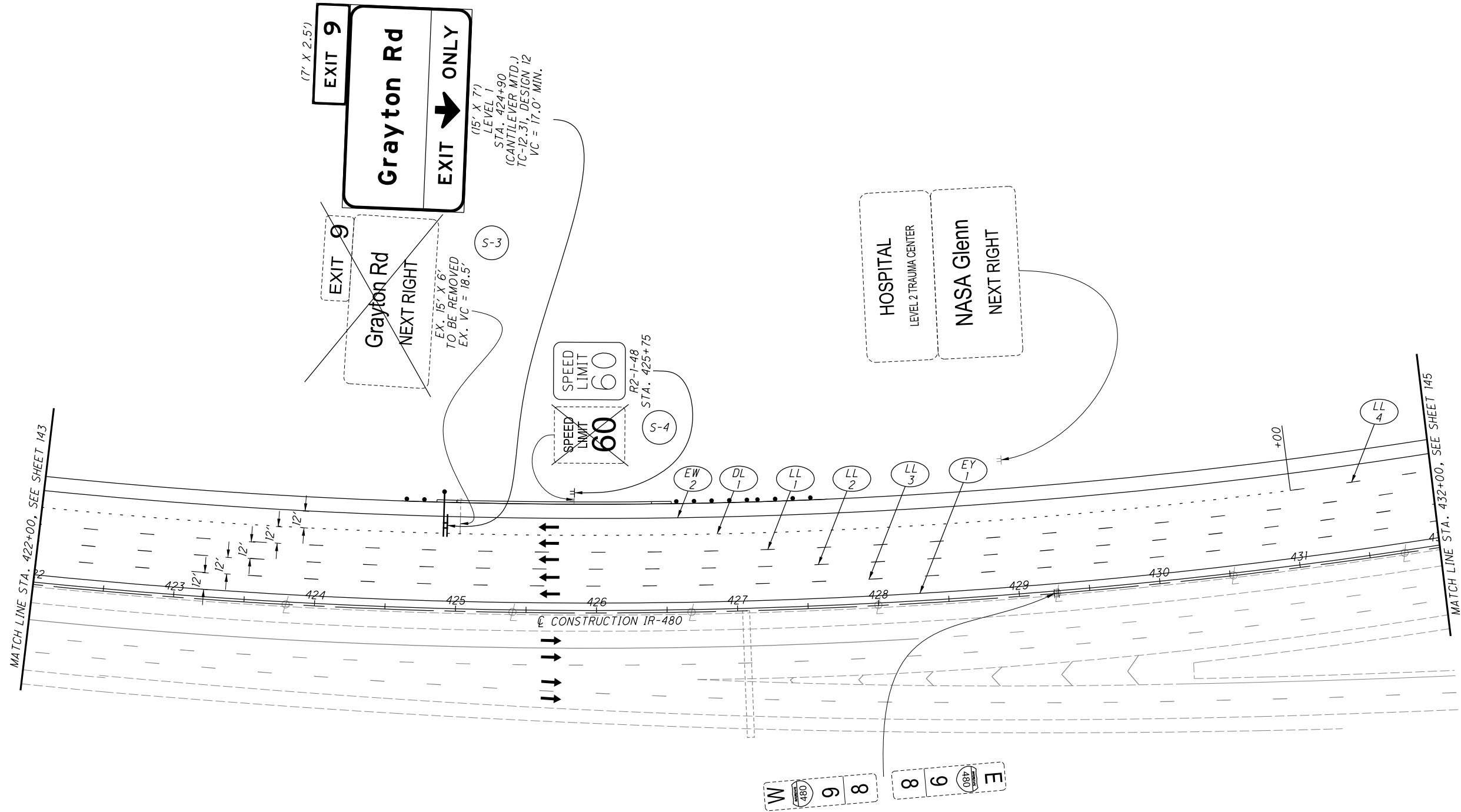


THIS ITEM SHALL BE PAID FOR AT THE UNIT BID PRICE EACH FOR ITEM 621 - RPM, AS PER PLAN. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE INSTALLATION.

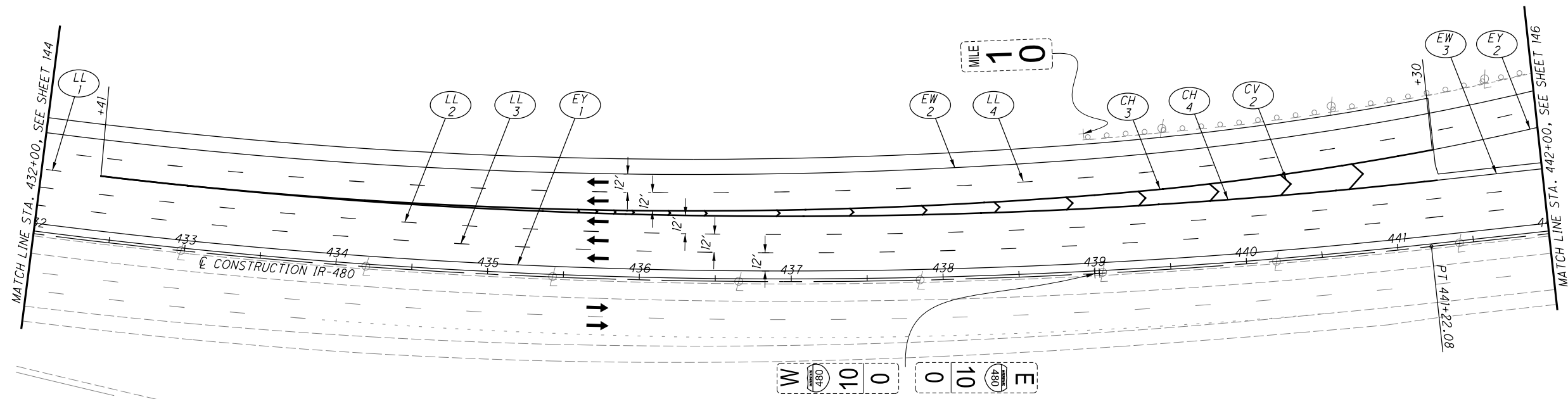




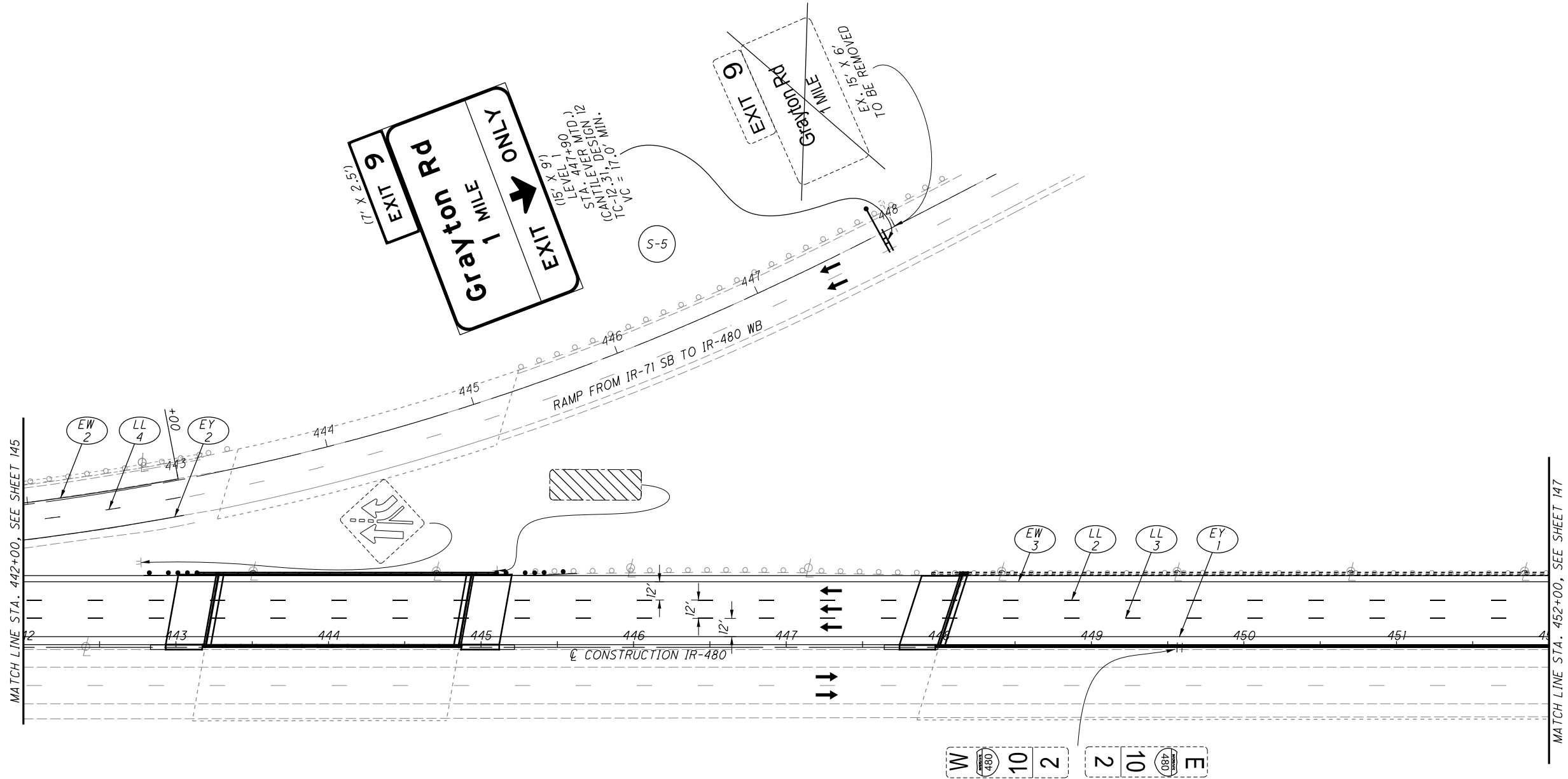
- NOTES**
1. FOR LEGEND, SEE SHEET 142
 2. FOR QUANTITIES, SEE SHEETS 140-141
 3. FOR SIGN ELEVATION DETAILS, SEE SHEET 154



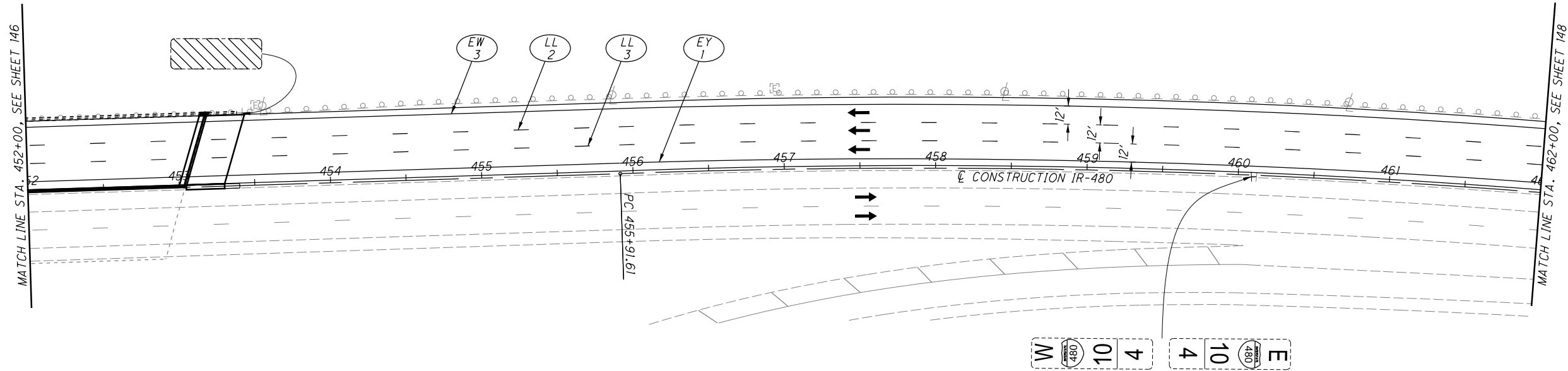
- NOTES
1. FOR LEGEND, SEE SHEET 142
 2. FOR QUANTITIES, SEE SHEETS 140-141
 3. FOR SIGN ELEVATION DETAILS, SEE SHEET 155



- NOTES
1. FOR LEGEND, SEE SHEET 142
 2. FOR QUANTITIES, SEE SHEET 140-141



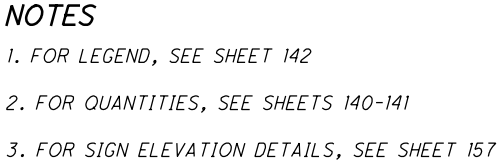
- NOTES
- 1. FOR LEGEND, SEE SHEET 142
 - 2. FOR QUANTITIES, SEE SHEETS 140-141
 - 3. FOR SIGN ELEVATION DETAILS, SEE SHEET 156

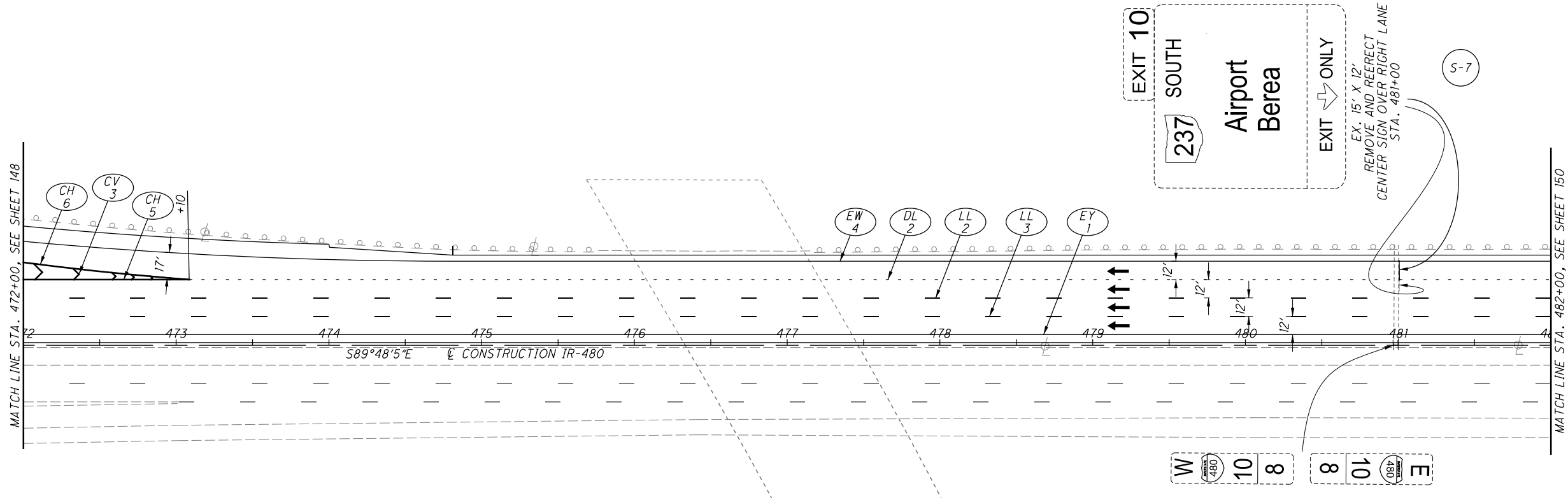


NOTES

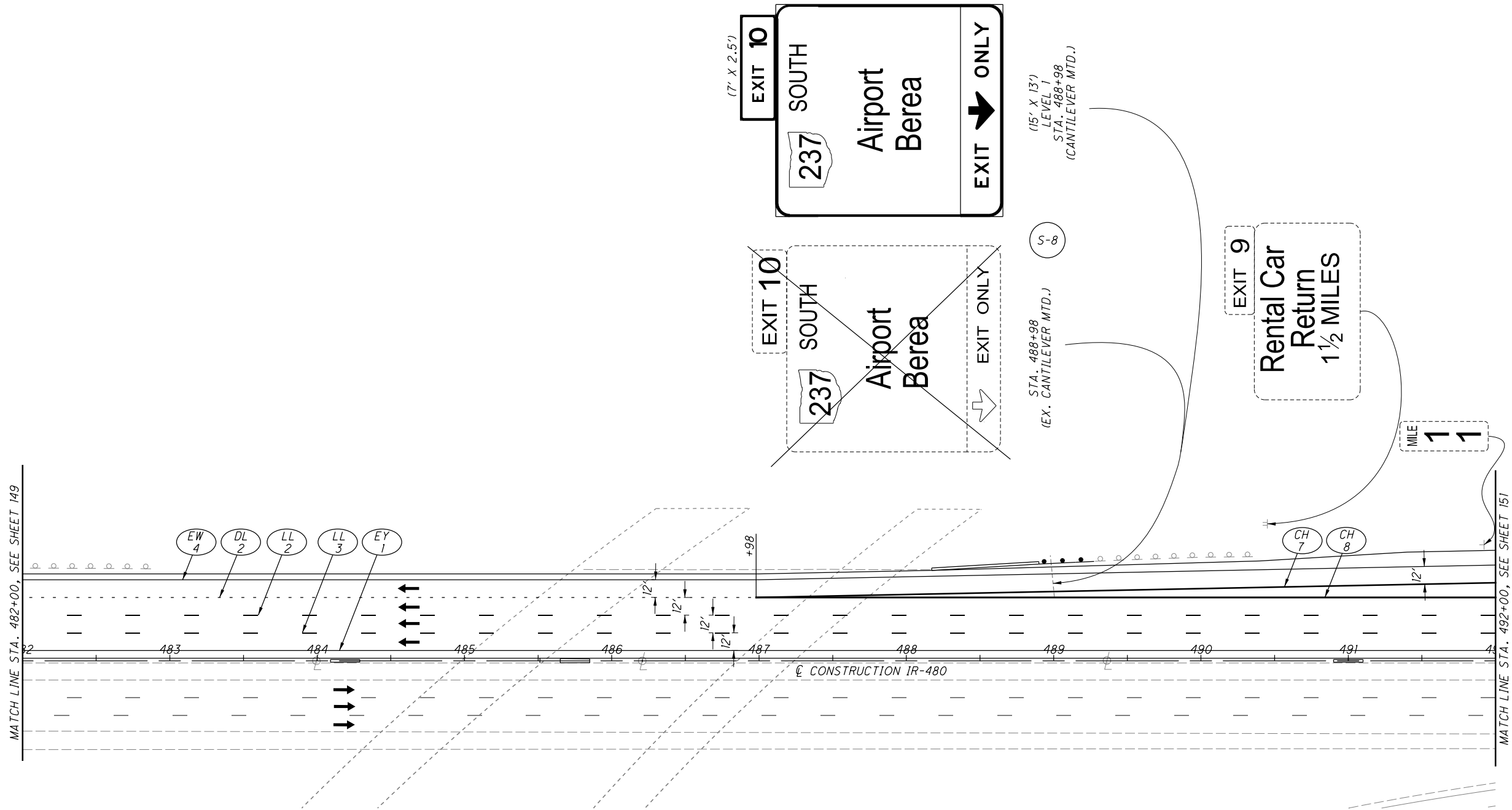
1. FOR LEGEND, SEE SHEET 142

2. FOR QUANTITIES, SEE SHEET 140-141

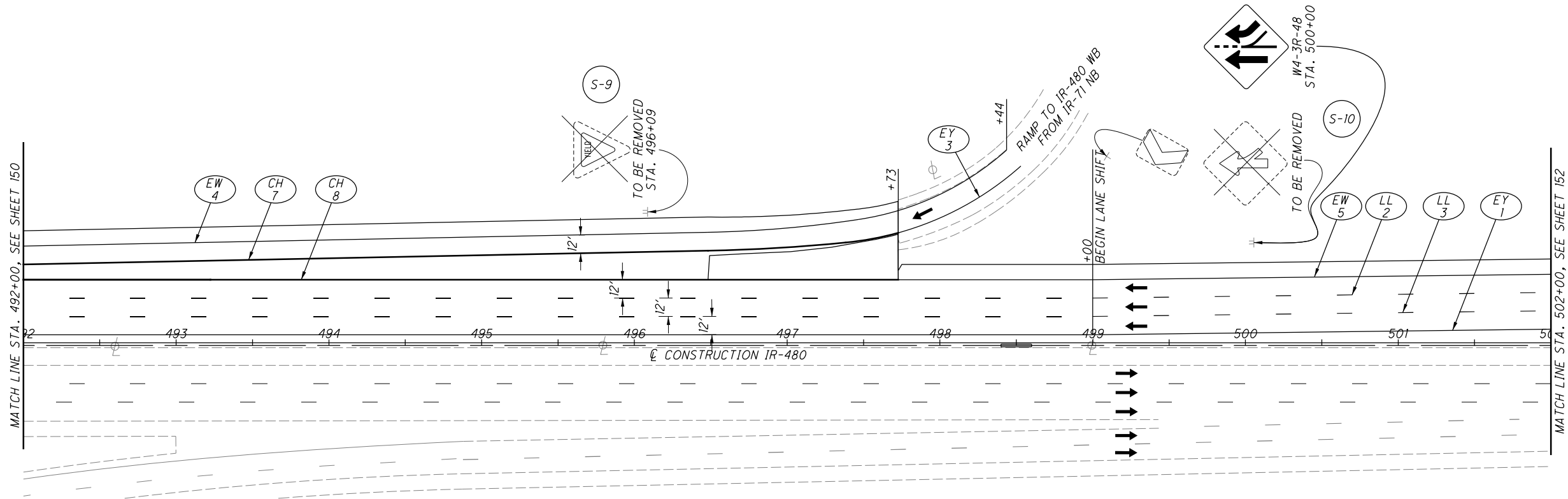




- NOTES
- 1. FOR LEGEND, SEE SHEET 142
 - 2. FOR QUANTITIES, SEE SHEETS 140-141



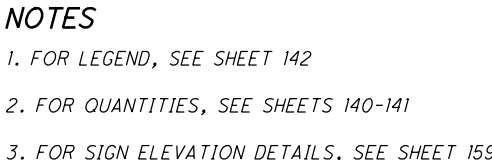
- NOTES
- 1. FOR LEGEND, SEE SHEET 142
 - 2. FOR QUANTITIES, SEE SHEETS 140-141
 - 3. FOR SIGN ELEVATION DETAILS, SEE SHEET 158

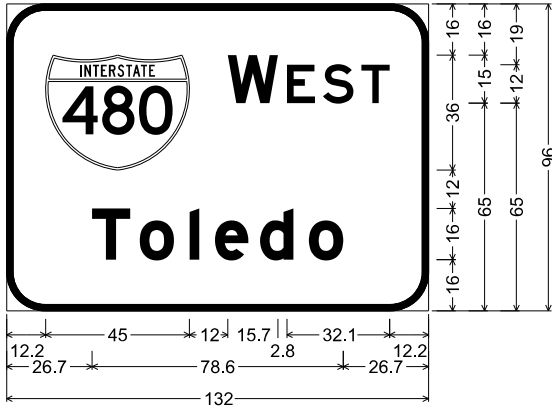


NOTES


1. FOR LEGEND, SEE SHEET 142

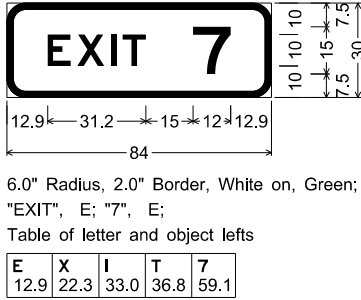
2. FOR QUANTITIES, SEE SHEETS 140-141





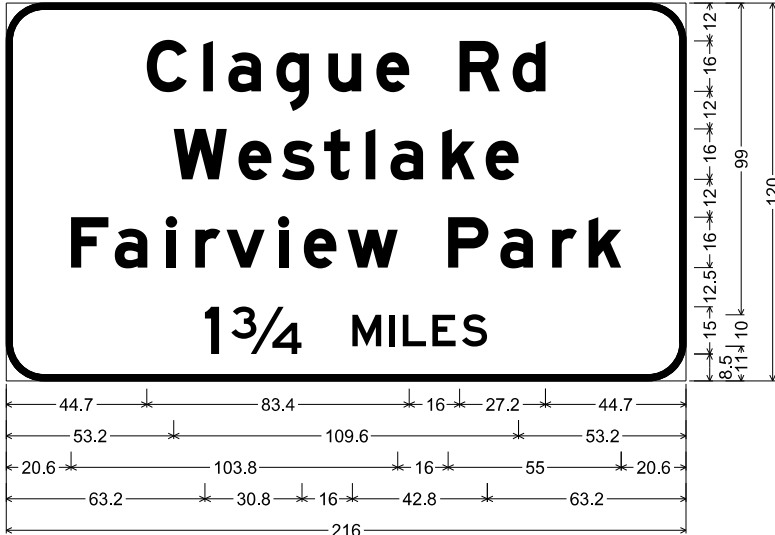
12.0" Radius, 2.0" Border, White on Green;
Interstate 480 M1-1; "WEST", E;
"Toledo", E Mod;
Table of letter and object lefts

	W	E	S	T	
12.2	69.2	87.7	99.0	111.0	
T	o	l	e	d	o
26.7	41.6	57.2	65.2	79.3	94.6



6.0" Radius, 2.0" Border, White on, Green;
"EXIT", E; "7", E;
Table of letter and object lefts

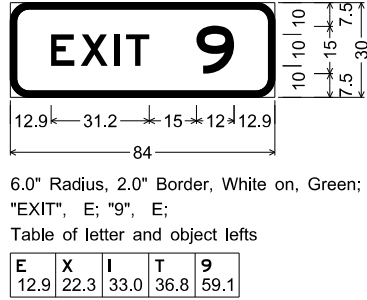
E	X	I	T	7
12.9	22.3	33.0	36.8	59.1



12.0" Radius, 2.0" Border, White on Green;
"Clague Rd", E Mod; "Westlake", E Mod; "Fairview Park", E Mod;
"1¾ MILES", E;

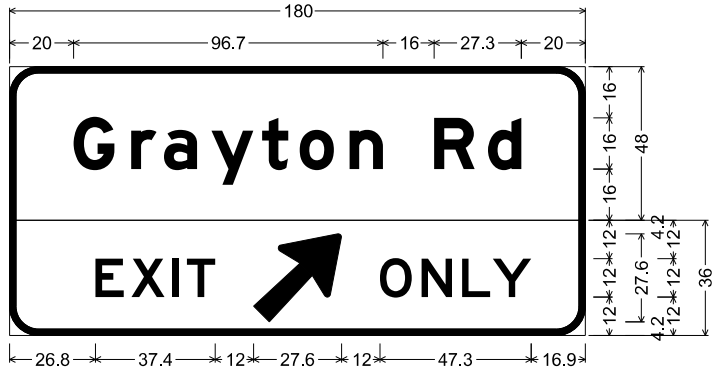
Table of letter and object lefts

C	I	a	g	u	e	R	d				
44.7	62.7	70.6	85.8	102.3	117.7	144.1	160.9				
W	e	s	t	l	a	k	e				
53.2	73.8	87.6	101.0	114.2	122.1	138.6	152.4				
F	a	i	r	v	i	e	w	P	a	r	k
20.6	34.5	50.9	60.1	70.0	86.6	94.5	108.4	140.4	157.0	173.5	185.1
l	¾	M	I	L	E	S					
63.2	71.5	110.0	121.7	126.0	135.4	144.9					



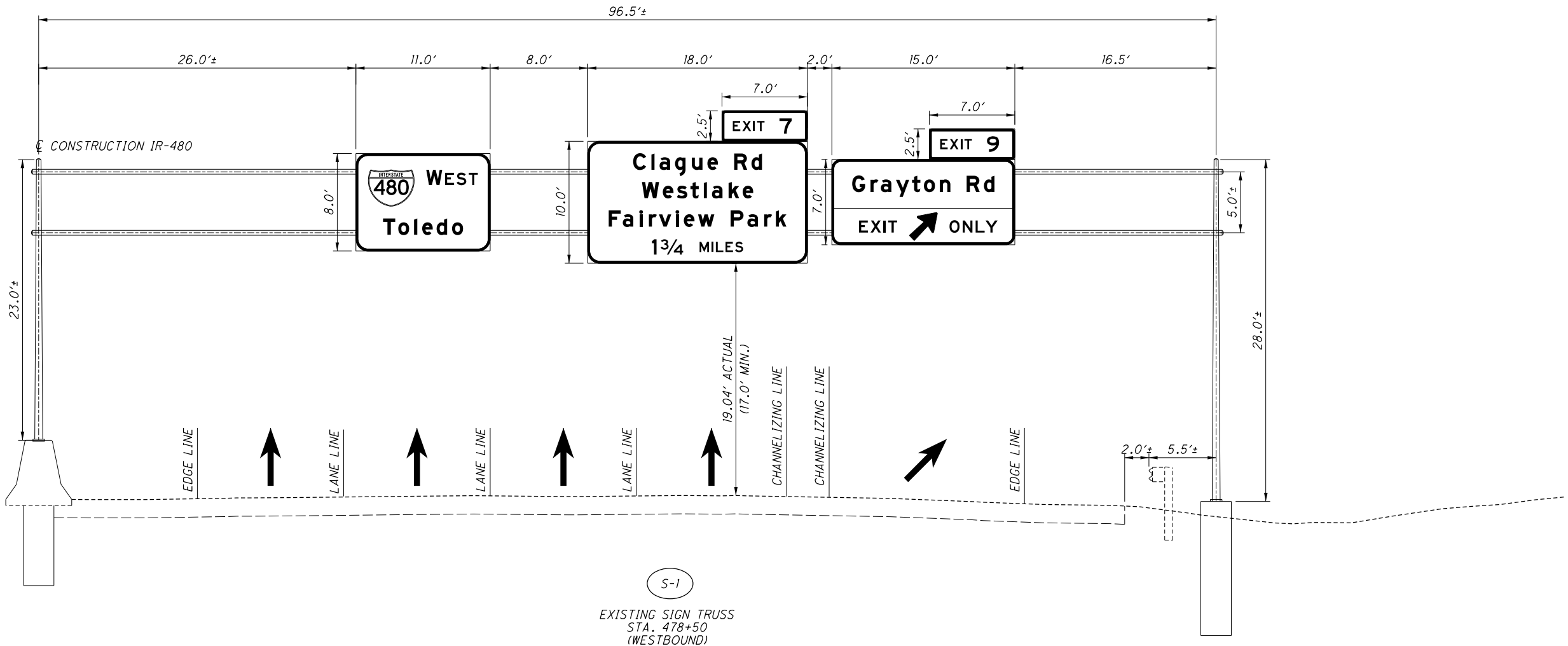
6.0" Radius, 2.0" Border, White on, Green;
"EXIT", E; "9", E;
Table of letter and object lefts

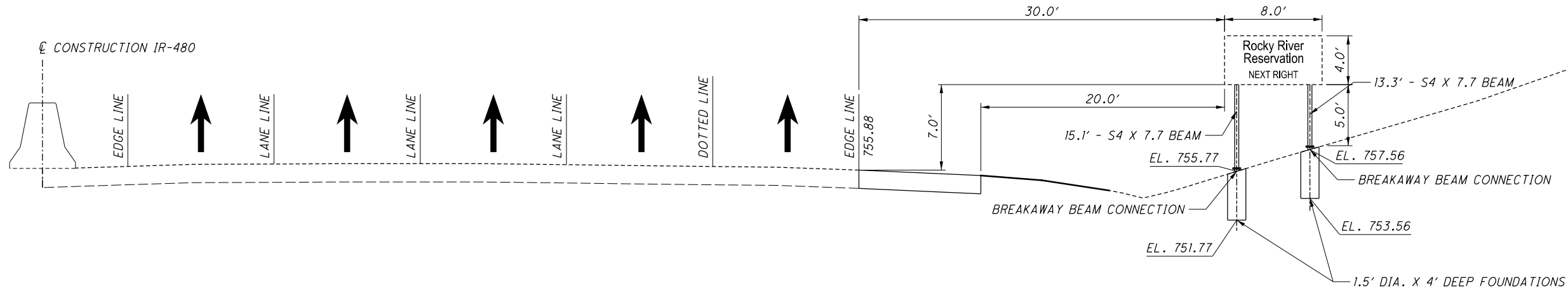
E	X	I	T	9
12.9	22.3	33.0	36.8	59.1



9.0" Radius, 2.0" Border, White on Green;
"Grayton Rd", E Mod;
9.0" Radius, 2.0" Border, Black on Yellow;
"EXIT", E; Arrow A-1 - 35.0" 45"; "ONLY", E;
Table of letter and object lefts

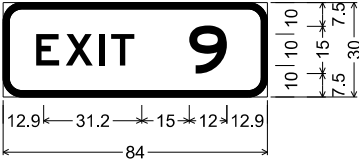
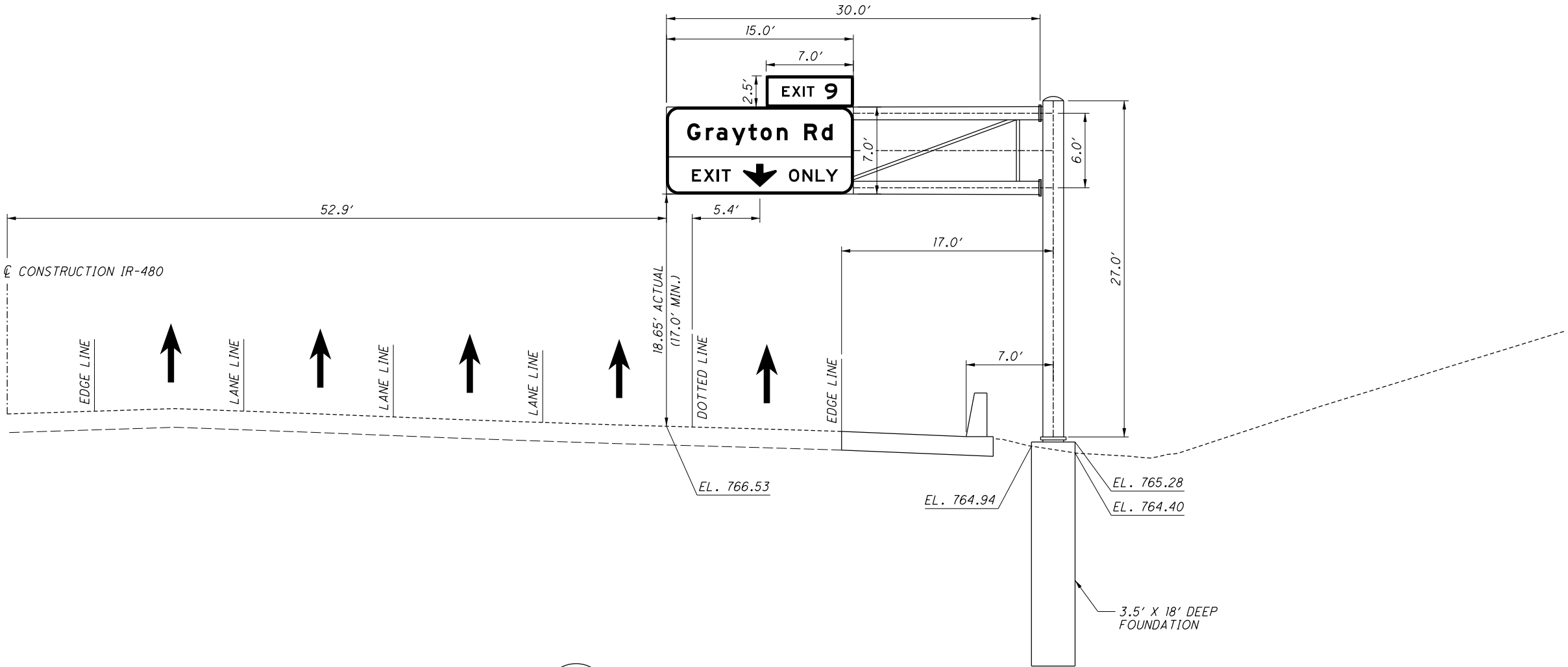
G	r	a	y	t	o	n	R	d
20.0	38.0	48.3	63.1	78.9	90.7	106.3	132.7	149.6
E	X	I	T	↑	O	N	L	Y
26.8	38.1	50.9	55.4	76.2	115.8	128.8	141.4	151.1





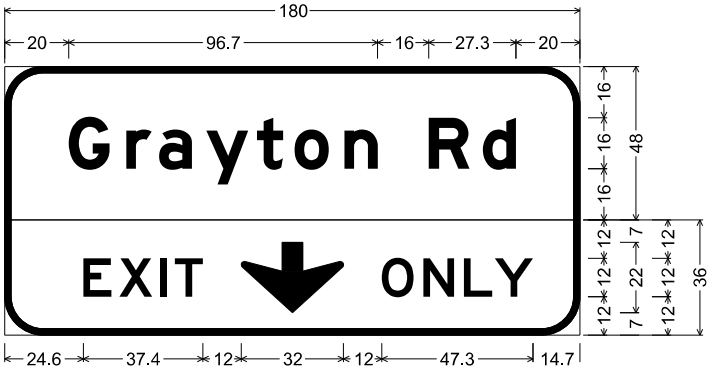
S-2
REMOVE AND REERECT
EXISTING SIGN
S4 X 7.7 BEAMS
15.1' & 13.3'
STA. 493+50
(WESTBOUND)

P:\ODT\MP\0119_CUY-480-7.14_WB\108482\Design\Roadway\Sheets\108482_TE003.dgn Sheet 8/3/2022 10:58:26 AM CMT008



6.0" Radius, 2.0" Border, White on, Green;
"EXIT", E; "9", E;
Table of letter and object lefts

E	X	I	T	9
12.9	22.3	33.0	36.8	59.1

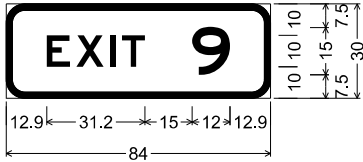
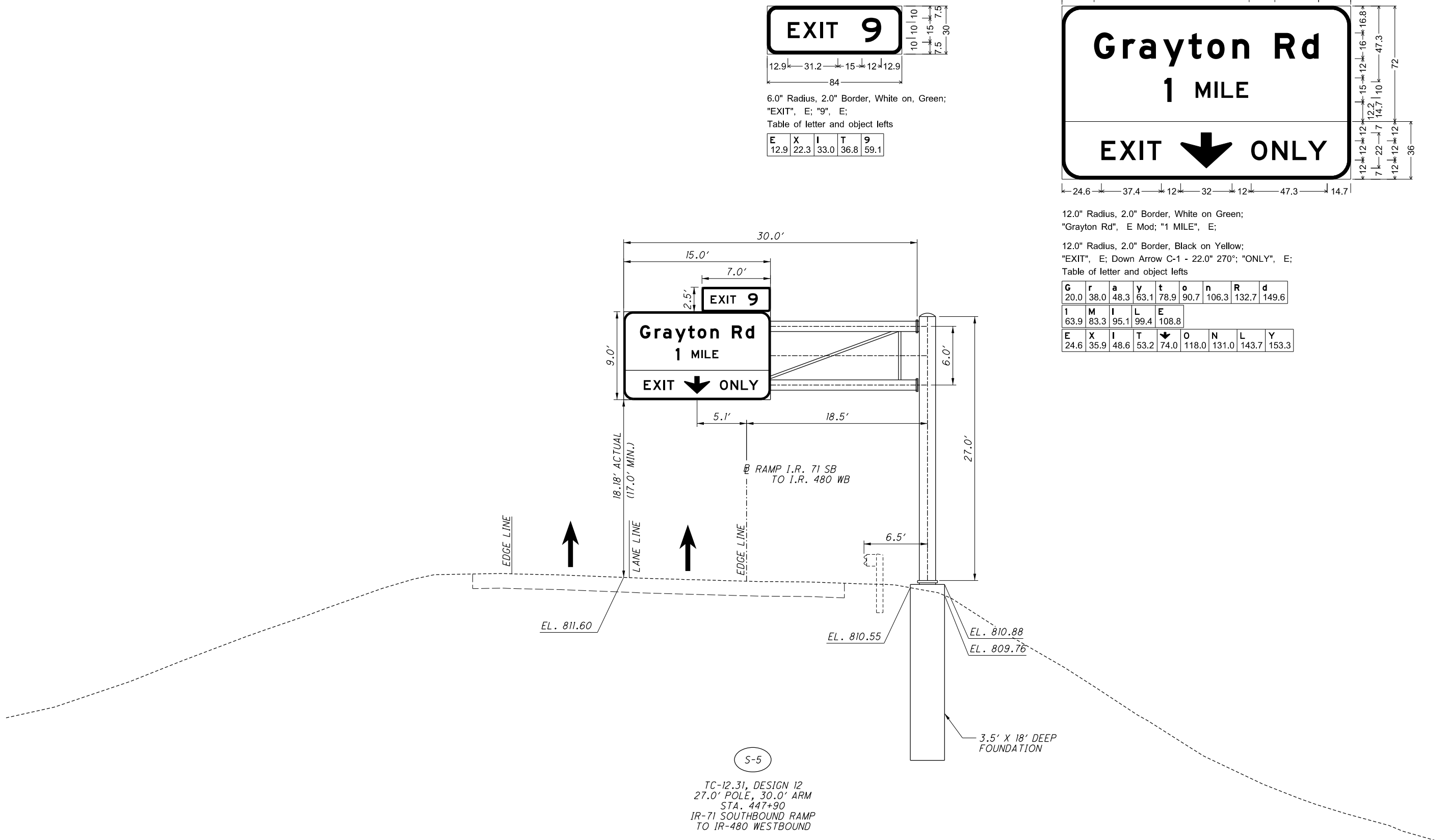


12.0" Radius, 2.0" Border, White on Green;
"Grayton Rd", E Mod;

12.0" Radius, 2.0" Border, Black on Yellow;
"EXIT", E; Down Arrow C-1 - 22.0" 270°; "ONLY", E;
Table of letter and object lefts

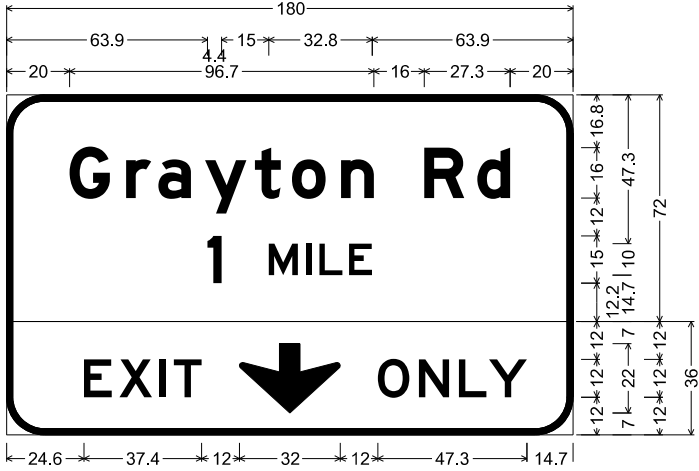
G	r	a	y	t	o	n	R	d
20.0	38.0	48.3	63.1	78.9	90.7	106.3	132.7	149.6
E	X	I	T	↓	O	N	L	Y
24.6	35.9	48.6	53.2	74.0	118.0	131.0	143.7	153.3

S-3
TC-12.31, DESIGN 12
27.0' POLE, 30.0' ARM
STA. 424+90
(WESTBOUND)



6.0" Radius, 2.0" Border, White on, Green;
"EXIT", E; "9", E;
Table of letter and object lefts

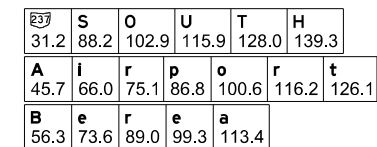
E	X	I	T	9
12.9	22.3	33.0	36.8	59.1



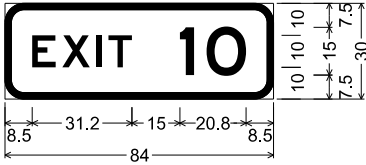
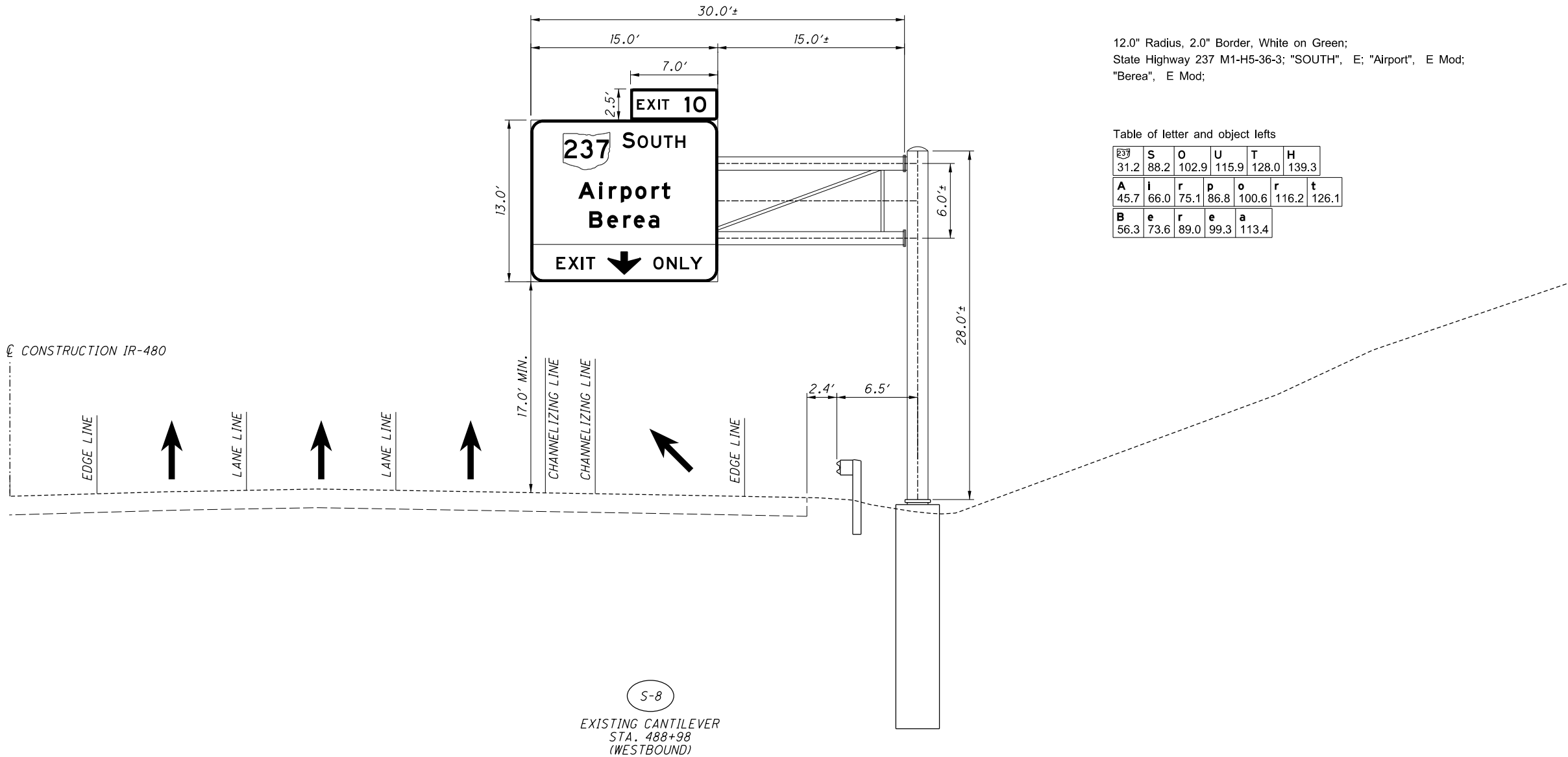
12.0" Radius, 2.0" Border, White on Green;
"Grayton Rd", E Mod; "1 MILE", E;

12.0" Radius, 2.0" Border, Black on Yellow;
"EXIT", E; Down Arrow C-1 - 22.0" 270°; "ONLY", E;
Table of letter and object lefts

G	r	a	y	t	o	n	R	d
20.0	38.0	48.3	63.1	78.9	90.7	106.3	132.7	149.6
I	M	I	L	E				
63.9	83.3	95.1	99.4	108.8				
E	X	I	T	↓	O	N	L	Y
24.6	35.9	48.6	53.2	74.0	118.0	131.0	143.7	153.3



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6.0" Radius, 2.0" Border, White on Green;
"EXIT 10", E;
Table of letter and object lefts

E	X	I	T	1	0
8.5	17.9	28.6	32.4	54.7	63.0

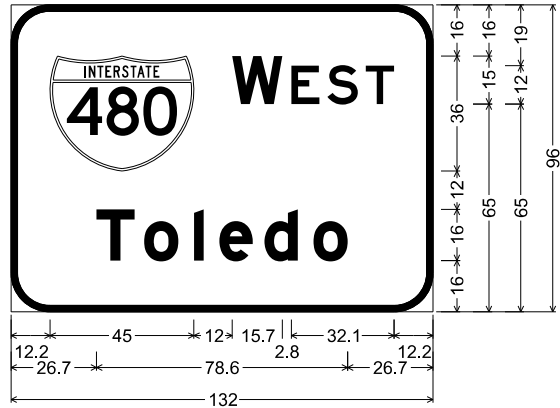


12.0" Radius, 2.0" Border, White on Green;
State Highway 237 M1-H5-36-3; "SOUTH", E; "Airport", E Mod;
"Berea", E Mod;

Table of letter and object lefts


237	S	O	U	T	H	
31.2	88.2	102.9	115.9	128.0	139.3	
A	i	r	p	o	r	t
45.7	66.0	75.1	86.8	100.6	116.2	126.1
B	e	r	e	a		
56.3	73.6	89.0	99.3	113.4		

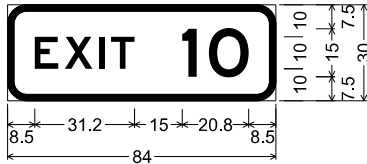
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12.0" Radius, 2.0" Border, White on Green;
Interstate 480 M1-1; "WEST", E;
"Toledo", E Mod;

Table of letter and object lefts

	W	E	S	T	
12.2	69.2	87.7	99.0	111.0	
T	o	l	e	d	o
26.7	41.6	57.2	65.2	79.3	94.6

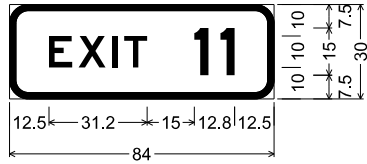


6.0" Radius, 2.0" Border, White on Green;
"EXIT 10", E;
Table of letter and object lefts

E	X	I	T	1	0
8.5	17.9	28.6	32.4	54.7	63.0

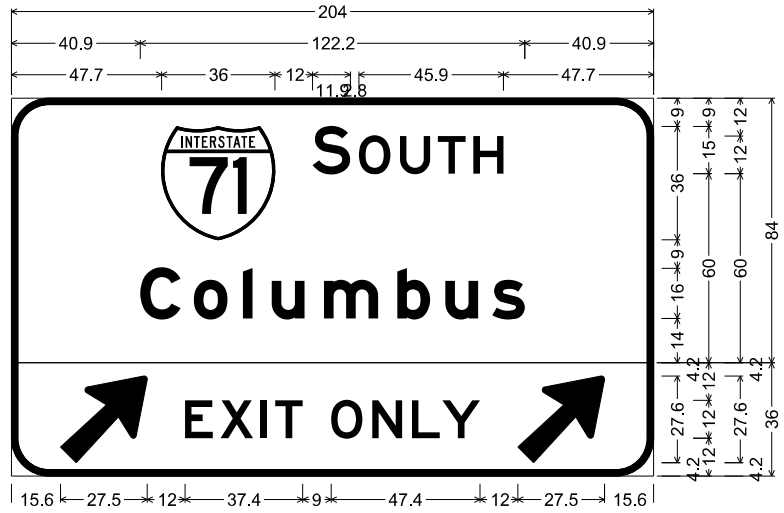


13.2	45	12	11.9	45.9	13.2
27.7		88.6	2.8		27.7
38.3		67.4			38.3
39.4	22.4	10	32.8		39.4
144					



6.0" Radius, 2.0" Border, White on, Green;
"EXIT", E; "11", E;
Table of letter and object lefts




E	X	I	T	1	1
12.5	21.9	32.6	36.4	58.7	67.0

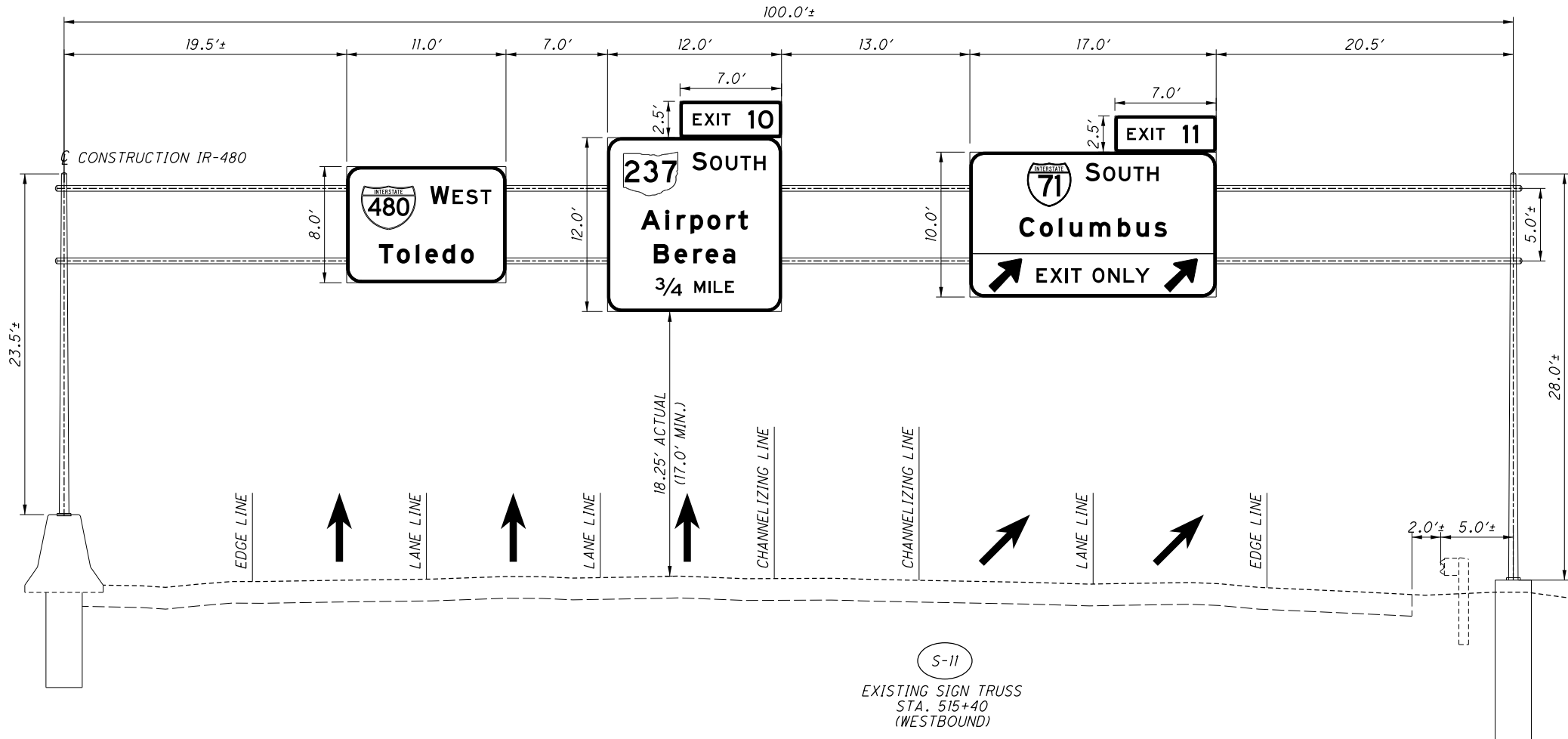


12.0" Radius, 2.0" Border, White on Green;
Interstate 71 M1-1; "SOUTH", E; "Columbus", E Mod;

12.0" Radius, 2.0" Border, Black on Yellow;
Arrow A-0 - 35.0" 45°; "EXIT", E; "ONLY", E; Arrow A-0 - 35.0" 45°;

Table of letter and object lefts

	S	O	U	T	H				
47.7	95.7	110.4	123.4	135.5	146.8				
C	o	l	u	m	b	u	s		
40.9	57.9	73.5	82.7	99.2	122.6	137.9	152.8		
	E	X	I	T	O	N	L	Y	
15.6	55.1	66.4	79.2	83.7	101.5	114.6	127.2	136.9	160.9



S-II
EXISTING SIGN TRUSS
STA. 515+40
(WESTBOUND)

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PROPOSED LIGHTING WORK

PLAN NOTES AND CONTINGENCY QUANTITIES HAVE BEEN PROVIDED TO REPLACE LIGHTING CIRCUIT CABLE AND CABLE THAT WILL BE DAMAGED/REMOVED DURING CONSTRUCTION ACTIVITIES.

BRIDGE REPAIRS

THE FOLLOWING BRIDGES WILL HAVE REPAIRS COMPLETED AS PART OF THIS PROJECT:

CUY-480-0792 (BRIDGE OVER ROCKY RIVER DRIVE)
CUY-480-0805 (BRIDGE OVER AIRPORT FREEWAY AND RAMPS)
CUY-480-0832 (BRIDGE OVER NORFOLK SOUTHERN RAILROAD)

THE PARAPETS AT EACH END OF THE BRIDGES WILL BE REPLACED AND AN EXPANSION FITTING WILL BE PROVIDED FOR THE EXISTING CONDUITS BETWEEN THE SUPERSTRUCTURE AND WINGWALL BARRIER. THIS WORK WILL REQUIRE THE LIGHTING CIRCUIT CABLE TO BE REPLACED WITHIN THE BRIDGE IN ITS ENTIRETY. THE CABLE SHALL BE REPLACED FROM THE FIRST LIGHT POLE OR PULL BOX EAST OF THE BRIDGE LIMITS TO THE FIRST LIGHT POLE OR PULL BOX WEST OF THE BRIDGE LIMITS.

AN ESTIMATED QUANTITY OF CIRCUIT CABLE HAS BEEN PROVIDED IN THE LIGHTING SUBSUMMARY.

MEDIAN INLET REPLACEMENT

NEW MEDIAN INLETS WILL BE INSTALLED AT STA. 484+20, STA. 485+75, STA. 491+00, AND 498+50. THIS WORK WILL REMOVE APPROXIMATELY 20 FEET OF MEDIAN BARRIER. THE EXISTING CONDUIT WILL NEED TO BE REPLACED WITHIN THIS SECTION OF REMOVED MEDIAN BARRIER. THE EXISTING CIRCUIT CABLE SHALL BE REPLACED IN THIS ENTIRE SECTION OF MEDIAN INLET REPLACEMENT.

THIS WORK WILL REQUIRE THE LIGHTING CIRCUIT CABLE TO BE REPLACED WITHIN THE BRIDGE IN ITS ENTIRETY. THE CABLE SHALL BE REPLACED FROM THE FIRST LIGHT POLE OR PULL BOX EAST OF THE BRIDGE LIMITS TO THE FIRST LIGHT POLE OR PULL BOX WEST OF THE BRIDGE LIMITS.

AN ESTIMATED QUANTITY OF LIGHTING CABLE AND CONDUIT HAVE BEEN PROVIDED IN THE LIGHTING SUBSUMMARY.

EXISTING REFERENCE PLANS

THE FOLLOWING EXISTING PLANS WERE USED AS A REFERENCE FOR THE LIGHTING QUANTITIES:

CUY-480-6.78 (1978)
CUY-480-8.00 (1972)
CUY-480-8.26 (1977)
CUY-480-8.54 (1978)

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 THE EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF ODOT, 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 EXISTING LIGHTING SHALL BE MADE BY ODOT’S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, 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 ODOT, 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 THE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT SHALL BE MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL 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 KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED DOWNED 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 IMPROVEMENT.

WHEN THE SEQUENCE OF CONSTRUCTION ACTIVITIES REQUIRES, OR SHOULD THE CONTRACTOR DESIRE, THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING OF THIS PORTION OF THE ROADWAY.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR SETS OF THE TEMPORARY LIGHTING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL. THIS PLAN SHALL SHOW LOCATIONS OF POLES, LENGTHS OF BRACKET ARMS, STYLES OF LUMINAIRES, MOUNTING HEIGHTS, 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 3:1. MOUNTING HEIGHT OF TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 30 FEET, AND THE MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE “B” FOR STRENGTH REQUIREMENTS 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 MATERIALS 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 OF THE LIGHTING WORK. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

THE LUMP SUM PRICE BID FOR ITEM SPECIAL “MAINTAIN EXISTING LIGHTING” SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, 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.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL, REPLACEMENT OF EXISTING LIGHTING UNIT 5 EACH

ITEM 625. PULL BOX CLEANED

THIS ITEM OF WORK SHALL CONSIST OF CLEANING AN EXISTING PULL BOX BY REMOVING ANY EXISTING CABLES NOT BEING RECONNECTED, AND DEBRIS SO THAT NEW CABLES CAN BE INSTALLED. ANY UNUSED OPENINGS SHALL BE CLOSED. DISTURBED AREAS NEAR THE PULL BOX SHALL BE CLEARED OF WEEDS OR DEBRIS AND SHALL BE FULLY RESTORED. MATERIAL REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF OF THE PROJECT SITE.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER C&MS ITEM 625, “PULL BOX CLEANED” FOR EACH PULL BOX CLEANED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625. CONDUIT CLEANED AND CABLES REMOVED

THIS ITEM SHALL CONSIST OF CLEANING AN EXISTING CONDUIT BY REMOVING EXISTING CABLES, MUD AND DEBRIS SO THAT NEW CABLE CAN BE INSTALLED. INCIDENTAL TO THE CLEANING IS THE INSTALLATION OF BUSHINGS AND/OR COUPLINGS ON THE ENDS OF EXISTING CONDUIT AS REQUIRED. MATERIALS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR PROPER DISPOSAL OFF OF THE PROJECT SITE. DISTURBED AREAS SHALL BE PROPERLY RESTORED.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER C&MS ITEM 625, “CONDUIT CLEANED AND CABLES REMOVED” PER FOOT OF CONDUIT CLEANED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER

CALCULATED	GRS
CHECKED	NAU

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REFER TO THE FOLLOWING STANDARD DRAWINGS:

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
EXJ-4-87	REVISED	01-19-18
GSD-1-19	REVISED	01-15-21
PCB-91	REVISED	07-17-20
SBR-1-20	REVISED	07-17-20
RM-4.2	REVISED	04-17-20
HL-30.41	REVISED	04-17-20

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

800	DATED	07-16-21
847	DATED	01-15-21

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020. AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING:

CUY-480-0792 (SFN 1814192) & CUY-480-0805 (SFN 1812491):
C.F. - 2000 (1957) & ALTERNATE MILITARY LOADING

CUY-480-0832 (SFN 1814206)
HS20-44 AND ALTERNATE MILITARY LOADING.

DESIGN DATA:

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4500 P.S.I.
(SUPERSTRUCTURE)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4000 P.S.I.
(SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615, OR A996
GRADE 60 MINIMUM YIELD STRENGTH 60,000 P.S.I.

STRUCTURAL STEEL (NEW END CROSSFRAMES) -
ASTM A709 GRADE 50W - YIELD STRENGTH 50.0 KSI

STRUCTURAL STEEL (EXISTING STEEL TO REMAIN) -
GRADE A36 - YIELD STRENGTH 36.0 KSI

PROPOSED WORK:

SEE PROPOSED WORK NOTES ON SITE PLANS OF THE FOLLOWING STRUCTURES:
CUY-480-0792 (SFN 1814192)
CUY-480-0805 (SFN 1812491)
CUY-480-0832 (SFN 1814206)

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

UTILITY LINES:

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

SUBSTRUCTURE CONCRETE REMOVAL

REMOVE CONCRETE AT THE TOP OF THE ABUTMENT BACKWALL TO THE ELEVATIONS SPECIFIED ON PLANS BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

CUT LINE CONSTRUCTION JOINT PREPARATION:

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1" DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:

THIS WORK CONSISTS OF THE REMOVAL OF EXISTING MEDIAN PARAPETS, PORTIONS OF OUTSIDE PARAPETS, PORTIONS OF DECK AND DECK JOINTS IN STAGES, AS PER PLAN. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING THE REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

PROTECTION OF TRAFFIC: PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, RAILROAD, PEDESTRIAN, ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE ENGINEER FOR APPROVAL.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES [50 MM] OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE ENGINEER'S APPROVAL BEFORE PERFORMING REPAIR.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS (STEEL GIRDER), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS.

DUE TO THE POSSIBLE PRESENCE OF ATTACHMENTS (E.G., FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE ENGINEER'S APPROVAL BEFORE PERFORMING REPAIR.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVAL ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHICH DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPOND COST TO CLEAN-UP ANY AND ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING ANY REMOVAL OPERATIONS. THE COST TO CLEAR AND CLEAN-UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN:

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

AN ESTIMATE OF 100 LB FOR EACH BRIDGE HAVE BEEN INCLUDED IN THE ESTIMATED QUANTITIES FOR THE ABOVE ITEM OF WORK.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

ITEM 513, REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN:

ALL SPECIFICATIONS OF ITME 513 SHALL APPLY EXCEPT AS MODIFIED HEREIN. THE NEW CROSSFRAMES SHALL BE FABRICATED FROM A709 GRADE 50W WEATHERING STEEL. REMOVAL OF EXISTING CROSSFRAMES SHALL BE PAID UNDER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN. CONTRACTOR SHALL TAKE CARE WHEN REMOVING/INSTALLING CROSSFRAMES TO MINIMIZE DAMAGE TO THE EXISTING STRUCTURE PROTECTIVE COATING SYSTEM.

ITEM 518, SCUPPER MODIFICATION, AS PER PLAN:

THE EXISTING SCUPPER MUST BE MODIFIED TO MEET THE TOP OF THE PROPOSED OVERLAY. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING FOR REVIEW PRIOR TO FABRICATION. CONSTRUCTION OF THE MODIFIED SCUPPER SHALL FOLLOW THE REQUIREMENTS OF ODOT CMS 518. EXISTING GRATING BARS MUST BE REMOVED. SEE STANDARD DRAWING GSD-1-19 FOR PLACEMENT OF PROPOSED GRATING BARS AND OTHER APPLYING REQUIREMENTS.

EXISTING SCUPPER DETAILS:
ALL EXISTING SCUPPERS DETAILS FOLLOW STD. DWG. SD-1-69 SHEET 3 OF 4 WITH THE FOLLOWING EXCEPTIONS:
ALL EXISTING SCUPPERS EXTEND 8" BELOW THE BOTTOM FLANGE INSTEAD OF 2".

SCUPPER TYPES ARE DEFINED PER THE EXISTING PLAN NOMENCLATURE. EXISTING SCUPPER WIDTHS AND GRATING BAR SPACING ARE AS FOLLOWS:

BRIDGE CUY-480-0792:
8 @ 1'-10" WIDTH AND 3 1/8" GRATING BAR SPACING (ALL SCUPPERS).
SEE EXISTING PLAN SHEET [10/11] FOR ADDITIONAL DETAILS.

BRIDGE CUY-480-0805:
17 @ 1'-3" WIDTH AND 3" GRATING BAR SPACING (STANDARD SCUPPER);
13 @ 2'-3" WIDTH AND 3" GRATING BAR SPACING (TYPE 3 SCUPPER).
SEE EXISTING PLAN SHEET [19/24] FOR ADDITIONAL DETAIL.

BRIDGE CUY-480-0832:
5 @ 2'-3" WIDTH AND 3" GRATING BAR SPACING (TYPE 2 SCUPPER);
7 @ 1'-6" WIDTH AND 3" GRATING BAR SPACING (TYPE 3 SCUPPER).
SEE EXISTING PLAN SHEET [18/22] FOR ADDITIONAL DETAIL.

ITEM 519, PATCHING CONCRETE STRUCTURES, AS PER PLAN:

FOR BRIDGE NUMBER CUY-480-0832 (SFN 1814206) ONLY:
THIS WORK CONSISTS OF CONCRETE PATCHING OF SPALLED CONCRETE SURFACES PER CMS 519. THE SPALLED AREA IS THE FRONT FACE OF THE ABUTMENT SEAT AT THE NORTHEAST CORNER. ESTIMATED AREA IS 5 FEET LONG x 2 FEET HIGH. THE ESTIMATED QUANTITY OF PATCHING REQUIRED IS BASED ON FIELD MEASUREMENTS OF DETERIORATION ABOVE TOP OF SLOPE. THE CONTRACTOR SHALL FIELD VERIFY THE REPAIR AREA AND EXCAVATE BELOW THE EXISTING GROUND LINE TO EXPOSED ALL POSSIBLE DETERIORATED CONCRETE SURFACES. THE ENGINEER SHALL DETERMINE THE EXTENT OF BELOW GROUND REPAIR BASED ON THE CONTRACTOR'S EXCAVATION.

PRIOR TO THE SURFACE CLEANING SPECIFIED IN CMS 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING ALL EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

THE CONTRACTOR SHALL INCLUDE THIS EXCAVATION, PERFORMED IN ACCORDANCE WITH ITEM 503, IN THE UNIT PRICE BID FOR ITEM 519, PATCHING CONCRETE STRUCTURE, AS PER PLAN.

ITEM 625 BARRIER JUNCTION BOX, AS PER PLAN

THE EXISTING JUNCTION BOX(ES) IN THE OUTSIDE PARAPET SHALL BE EXTENDED TO MEET THE NEW PARAPET FACE AFTER THE REFACING. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION PER THE REQUIREMENTS OF ODOT CMS 725.10. SEE ODOT STANDARD DRAWING HL-30.41 FOR OTHER APPLYING REQUIREMENTS.

ITEM 847 SUPERPLASTICIZED DENSE CONCRETE OVERLAY, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF SUPPLEMENT SPECIFICATION 847, THE REMOVAL OF THE TOP 1" OF THE EXISTING DECK FOR BRIDGE CUY-480-0832 USING SCARIFICATION SHALL BE INCLUDED WITH THIS ITEM FOR PAYMENT. ALL LABOR, EQUIPMENT, MATERIALS, TOOLS AND INCIDENTALS REQUIRED FOR THE 1" REMOVAL SHALL BE INCLUDED WITH THIS ITEM FOR PAYMENT. SEE SHEET 195/225 FOR DETAILS.

DESIGN AGENCY PATRICK ENGINEERING INC. 3650 OLENTANGY RIVER ROAD COLUMBUS, OHIO 43214	
DATE 8/20/21	REVIEWED BMG
DRAWN JCP	STRUCTURE FILE NUMBER
DESIGNED JH	CHECKED SAP
STRUCTURE GENERAL NOTES BRIDGE NO. CUY-480-0792, BRIDGE NO. CUY-480-0805 & BRIDGE NO. CUY-480-0832	
CUY-480-07-14 WB PID No. 108482	
1 / 2	
162 225	

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GCRTA RAILROAD OPERATIONS AND/OR REQUIREMENTS

THE CONTRACTOR'S WORK SHALL NOT INTERRUPT GCRTA OPERATIONS (BUS & RAIL) WITHOUT PRIOR APPROVAL OF THE GCRTA.

ALL WORK OVER, ADJACENT AND WITHIN THE GCRTA RAIL ROW SHALL BE COORDINATED WITH GCRTA AUTHORITY PERSONNEL AND MUST COMPLY WITH THE FOLLOWING GCRTA SPECIFICATIONS:
SECTION 014500 SAFETY
SECTION 015010 MAINTENANCE OF RAIL TRAFFIC AND RESUMPTION OF RAIL SERVICE
SECTION 015020 STANDARD RAIL FLAGGING PROCEDURES
SECTION 015020 WORK ZONE APPENDIX.

PRIOR TO THE START OF ANY WORK, THE CONTRACTOR MUST ENTER INTO AND EXECUTE A TEMPORARY RIGHT-OF-ENTRY AGREEMENT WITH THE GCRTA. INCLUDED IN THE TEMPORARY RIGHT-OF-ENTRY AGREEMENT ARE THE REQUIREMENTS FOR INSURANCE COVERAGE. IN ADDITIONAL TO STANDARD INSURANCE COVERAGES, THE CONTRACTOR SHALL CARRY ADDITIONAL LIABILITY INSURANCE COVERING RAILROAD PROTECTIVE PUBLIC LIABILITY AND PROPERTY DAMAGE LIABILITY. ALL WORK OVER AND ON THE GCRTA ROW SHALL BE COORDINATED WITH GCRTA PERSONNEL.

ITEM SPECIAL -- PREMIUM ON RAILROAD'S PROTECTIVE PUBLIC LIABILITY AND PROPERTY DAMAGE LIABILITY INSURANCE (GCRTA AND OTHER RR'S) -- THE CONTRACTOR SHALL CARRY ADDITIONAL LIABILITY INSURANCE COVERING RAILROAD'S PROTECTIVE PUBLIC LIABILITY AND PROPERTY DAMAGE LIABILITY FOR THE GCRTA AND OTHER RR'S.

AFTER THE TEMPORARY RIGHT-OF-ENTRY HAS BEEN FULLY EXECUTED, AND PRIOR TO THE START OF ANY WORK, ODOT AND CONTRACTOR PROJECT PERSONNEL MUST COMPLETE GCRTA CONTRACTOR RULEBOOK C TRAINING, OBTAIN GCRTA CONTRACTOR ID BADGES, AND BE ASSIGNED A GCRTA RADIO.

THE CONTRACTOR MUST SUBMIT WEEKLY RAIL OUTAGE REQUESTS TO GCRTA FOR APPROVAL TO ENTER AND WORK WITHIN THE GCRTA ROW. REQUESTS ARE APPROVED ON WEEKLY BASIS AND ARE WHOLLY DEPENDENT ON THE GCRTA OPERATIONAL REQUIREMENTS. REQUESTS TO GCRTA FOR TOTAL SHUTDOWNS MUST BE SUBMITTED FOUR WEEKS IN ADVANCE AND EVER WEEK THEREAFTER UNTIL APPROVAL. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DISRUPTIONS TO REGULAR, CONTINUOUS RAPID TRANSIT SERVICE CAUSED AS A RESULT OF CONSTRUCTION ACTIVITIES.

EXTREME CARE WILL BE EXERCISED AT ALL TIMES TO SAFELY WORK AROUND AND PROTECT THE GCRTA OVERHEAD CATENARY LINES. GCRTA OVERHEAD CATENARY AND TRACK SYSTEM IS CONTINUOUSLY ENERGIZED AT 600-VOLTS, DIRECT CURRENT.

THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 15.75- FEET VERTICAL CLEARANCE AND A MINIMUM OF 6.5- FEET HORIZONTAL CLEARANCE FROM THE CENTERLINE OF TRACK AT ALL TIMES WHEN TRAINS ARE OPERATING. GCRTA APPROVED FLAGGED WILL BE REQUIRED WHEN WORKING WITHIN 10- FEET OF THE CENTERLINE OF AN ACTIVE TRACK. NO CONSTRUCTION ACTIVITY SHALL TAKE PLACE WITHIN GCRTA CLEARANCE LIMITS WHILE TRACK IS ACTIVE UNLESS A TEMPORARY PROTECTIVE STRUCTURE (OR CONTAINMENT SYSTEM) IS ERECTED TO PROTECT GCRTA TRAFFIC. DETAILS OF THE PROTECTIVE STRUCTURE (OR CONTAINMENT SYSTEM) SHALL PREPARED BY A PROFESSIONAL ENGINEER AND SUBMITTED TO THE GCRTA FOR APPROVAL AT LEAST THIRTY (30) DAYS PRIOR TO STARTING ANY WORK. PROTECTIVE STRUCTURE (OR CONTAINMENT SYSTEM) SHALL BE DESIGNED FOR A MINIMUM LOADING OF 125 POUNDS PER SQUARE FOOT. THE PROTECTIVE STRUCTURE (OR CONTAINMENT SYSTEM) MUST BE DESIGNED TO BE FULLY-INSULATED, BONDED AND GROUNDED ELECTRICALLY FOR ISOLATION FROM THE GCRTA OVERHEAD CATENARY SYSTEMS. WHEN CONDITIONS WARRANT, THE CONTRACTOR SHALL PLACE FILTER FABRIC WRAP OVER THE GCRTA BALLAST WITHIN THE CONSTRUCTION LIMITS. THE FABRIC SHALL BE ATTACHED TO THE EXISTING TIES.

DURING WORK, THE GCRTA TRACKS SHALL ALSO BE PROTECTED FROM FALLING DEBRIS WITH PLYWOOD AND/OR OTHER SUITABLE MATERIAL. SUBMIT DETAILED DRAWINGS FOR THE PROTECTION PLAN TO THE GCRTA FOR APPROVAL.

FLAGGERS SHALL BE PROVIDED AND PAID FOR BY THE CONTRACTOR, EITHER THROUGH COMPANIES WHO SUPPLY CERTIFIED FLAGGERS (OBTAIN LIST FROM GCRTA) OR BY TRAINING AND CERTIFYING ITS OWN EMPLOYEES THROUGH GCRTA. FLAGGING PROCEDURES, FLAGGER TRAINING, ANDSET-UP OF WORK ZONES. SEE GCRTA STANDARD 015020 STANDARD FLAGGING PROCEDURES AND WORK ZONES.

ONLY SUITABLE, RUBBER-TIRED EQUIPMENT WILL BE ALLOWED TO ACCESS THE GCRTA RIGHT-OF-WAY AND TRACKS. THE CONTRACTOR WILL BE REQUIRED TO EMPLOY THE USE OF SUITABLE CROSSING/CRIBBING MATERIALS FOR THE MOVEMENT OF SAID EQUIPMENT ONTO, OVER AND AROUND THE TRACKS. THE CONTRACTOR SHALL PROVIDE THEIR PLAN PROTECTION OF THE TRACKS FOR APPROVAL BY GCRTA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATION OF THE GCRTA RIGHT-OF-WAY TO ORIGINAL CONDITIONS AS APPROVED BY THE ENGINEER AND GCRTA.

NORFOLK SOUTHERN RAILROAD REQUIREMENTS

ALL WORK ON, OVER, UNDER, OR ADJACENT TO NORFOLK SOUTHERN RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE NORFOLK SOUTHERN "SPECIAL PROVISIONS FOR THE PROTECTION OF RAILWAY INTERESTS" (NS SPECIAL PROVISIONS).

FOR PROJECTS EXCEEDING 30 DAYS OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE FLAGMAN A SMALL WORK AREA WITH A DESK/COUNTER AND CHAIR WITHIN THE FIELD/SITE TRAILER, INCLUDING THE USE OF BATHROOM FACILITIES, WHERE THE FLAGMAN CAN CHECK IN/OUT WITH THE PROJECT, AS WELL AS TO THE FLAGMAN'S HOME TERMINAL. THE WORK AREA SHOULD PROVIDE ACCESS TO TWO (2) ELECTRICAL OUTLETS FOR RECHARGING RADIO(S), AND A LAPTOP COMPUTER; AND HAVE THE ABILITY TO PRINT OFF NEEDED DOCUMENTATION AND ORDERS AS NEEDED AT THE FIELD/SITE TRAILER. THIS SHOULD AID IN MAXIMIZING THE FLAGMAN'S TIME AND EFFICIENCY ON THE PROJECT.

THE CONTRACTOR SHALL PROVIDE CONSTRUCTION SUBMITTALS, DETAILING MEANS AND METHODS OF THE PROPOSED WORK, IN ACCORDANCE WITH THE PUBLIC PROJECT MANUAL.

THE MINIMUM ALLOWABLE TEMPORARY VERTICAL CLEARANCE IS 22'-0" ABOVE TOP OF HIGHEST RAIL AND THE MINIMUM HORIZONTAL CLEARANCE IS 14'-0". THESE CLEARANCES SHALL BE MAINTAINED AT ALL TIMES.

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PID No. 108482

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225

STRUCTURE GENERAL NOTES
BRIDGE NO. CUY-480-0792, BRIDGE NO. CUY-480-0805
& BRIDGE NO. CUY-480-0832

DESIGNED
JH

CHECKED
SAP

DRAWN
JCP

REVIEWED
BMG

DATE
8/20/21

DESIGN AGENCY
PATRICK ENGINEERING INC.
3650 OLENTANGY RIVER ROAD
COLUMBUS, OHIO 43214

PLAN

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BRIDGE CUY-480-0792 (SFN 1814192)

BRIDGE CUY-480-0792 (SFN 1814192)					MADE BY: JCP		DATE: 06/25/21		
					CHECKED BY: SAP		DATE: 06/25/21		
ITEM	EXTENSION	TOTAL	UNIT	ESTIMATED QUANTITIES (BRIDGE CUY-480-0792)					SEE SHEET NO.
				DESCRIPTION	ABUT.	PIER	SUPER.	GEN.	
202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN				LS	162/225
202	22901	254	SY	APPROACH SLAB REMOVED, AS PER PLAN				254	13/14
509	10000	11605	LB	EPOXY COATED REINFORCING STEEL	3087		8518		
509	20001	100	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN			100		162/225
509	30020	4326	FT	NO. 4 GFRP DEFORMED BARS			4326		
510	10000	922	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	280		642		
511	34445	9	CY	CLASS QC2 CONCRETE, BRIDGE DECK, AS PER PLAN			9		11/14
511	34449	48	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN			48		9/14
511	44110	13	CY	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING	13				
512	10100	289	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)			289		
512	74000	119	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES			119		
513	21501	2248	LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN			2248		162/225
516	11210	98	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			98		
516	13600	113	SF	1" PREFORMED EXPANSION JOINT FILLER			113		
518	12801	8	EACH	SCUPPER, MODIFICATION, AS PER PLAN			8		162/225
526	25000	254	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")				254	
526	90010	92	FT	TYPE A INSTALLATION				92	
625	29941	2	EACH	BARRIER JUNCTION BOX, AS PER PLAN			2		162/225
847	10200	838	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (T=1.75")			838		
847	20201	67	CY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN			67		4/14
847	30000	LS		TEST SLAB			LS		
847	30400	841	SY	EXISTING CONCRETE OVERLAY REMOVED (T=2.5")			841		
847	50000	84	SY	HAND CHIPPING			84		

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ESTIMATED QUANTITIES
BRIDGE NO. CUY-480-0792
IR-480 WB OVER ROCKY RIVER DRIVE

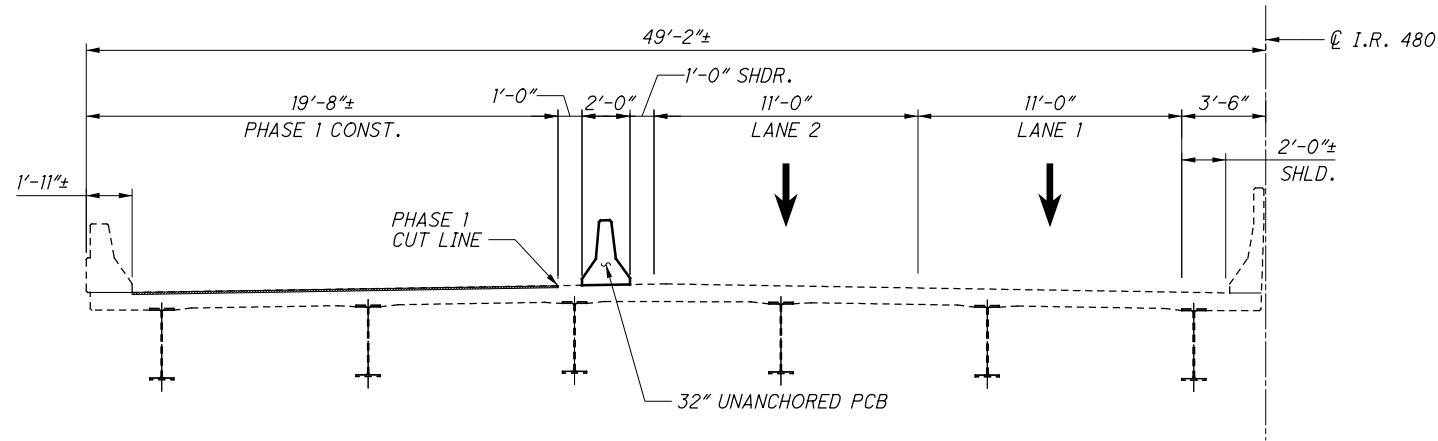
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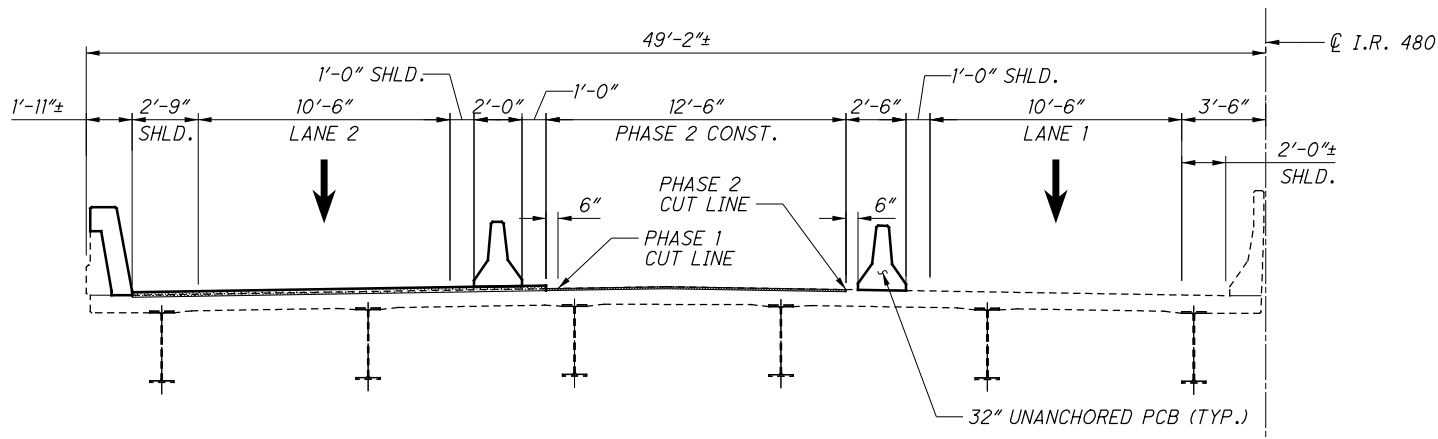
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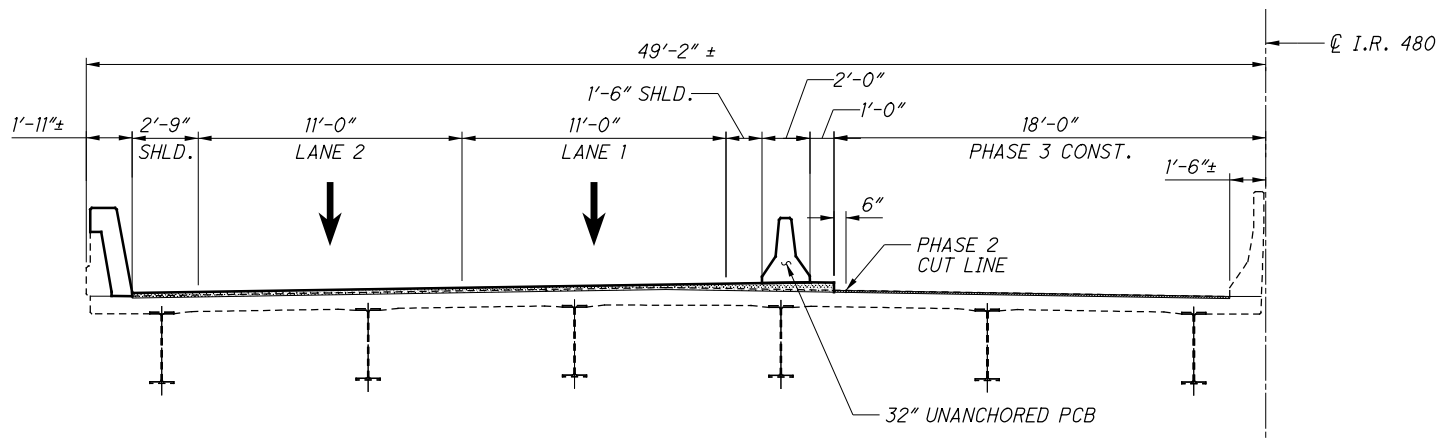
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PHASE 1 CONSTRUCTION AND TRAFFIC



PHASE 2 CONSTRUCTION AND TRAFFIC



PHASE 3 CONSTRUCTION AND TRAFFIC

NOTES:

1. SEE SHEET 4/14 FOR PROPOSED FINAL TRANSVERSE SECTION.

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PID No. 108482

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PHASED CONSTRUCTION SEQUENCE
BRIDGE NO. CUY-480-0792
IR-480 WB OVER ROCKY RIVER DRIVE

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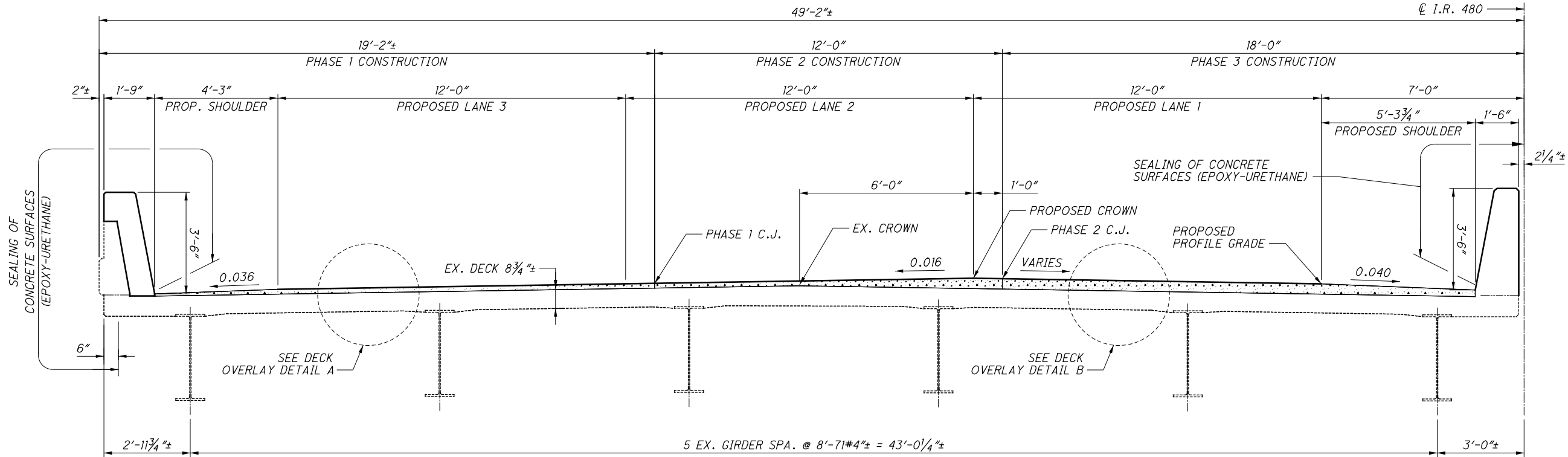
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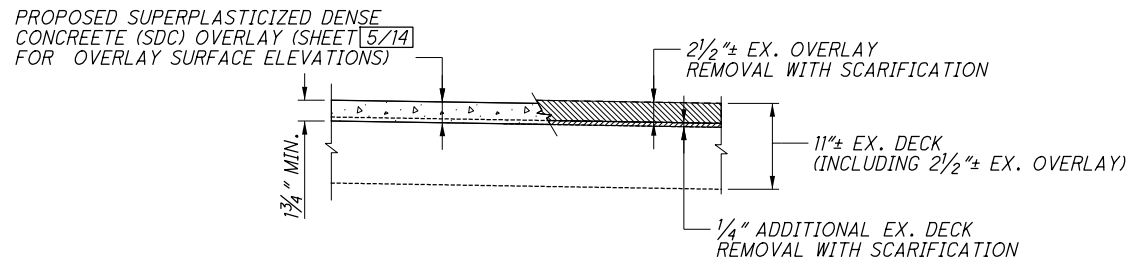
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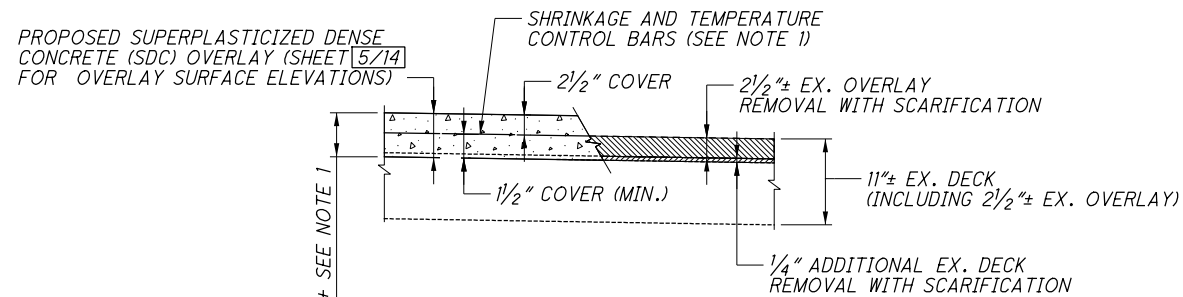
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TYPICAL TRANSVERSE SECTION



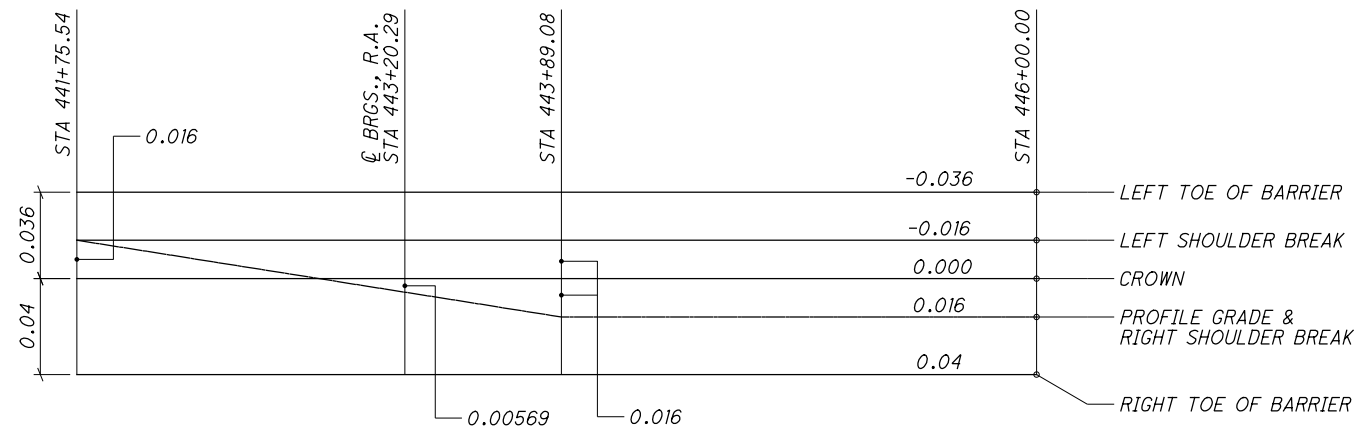
DECK OVERLAY DETAIL A



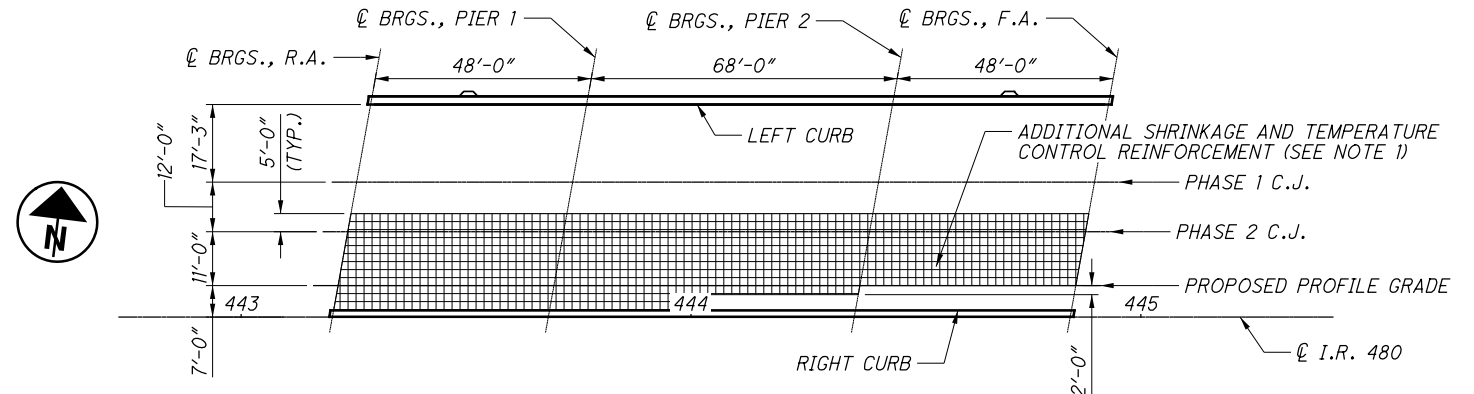
DECK OVERLAY DETAIL B

NOTES:

1. ADDITIONAL SHRINKAGE AND TEMPERATURE CONTROL REINFORCEMENT SHALL BE PROVIDED WHERE THE SUPERPLASTICIZED DENSE CONCRETE (SDC) OVERLAY THICKNESS IS OVER 5". PLACE 12X12 - D12XD12 EPOXY COATED OR GALVANIZED WELDED WIRE REINFORCEMENT (WWR) IN THE AREA SPECIFIED ON THE PLAN. CUT WWR AS REQUIRED TO MISS CONCRETE FORMS AT PHASED CONSTRUCTION LINES. INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, TOOLS AND INCIDENTALS FOR PLACING ADDITIONAL REINFORCEMENT WITH ITEM 847, SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS) MATERIAL ONLY, AS PER PLAN FOR PAYMENT.



SUPERELEVATION TRANSITION DIAGRAM



DECK REINFORCING PLAN

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TYPICAL TRANSVERSE SECTION & DECK REINFORCING PLAN

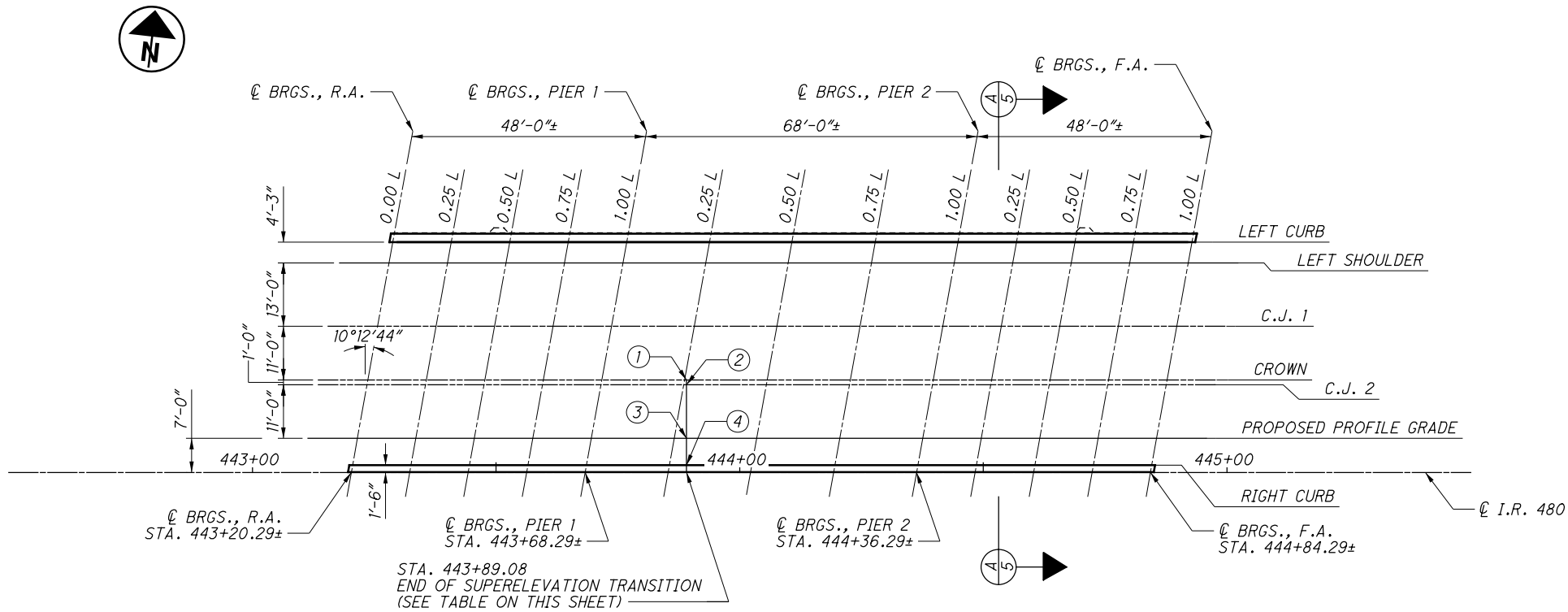
BRIDGE NO. CUY-480-0792
IR-480 WB OVER ROCKY RIVER DRIVE

CUY-480-07.14 WB
PID No. 108482

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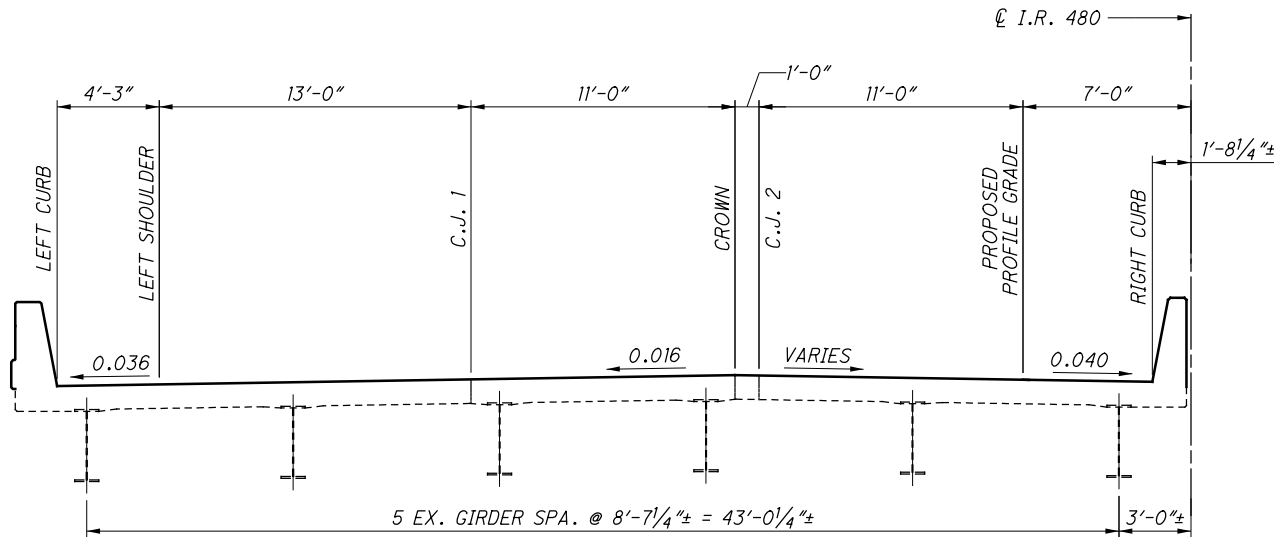
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SCREED LINE LAYOUT

L = SPAN LENGTH



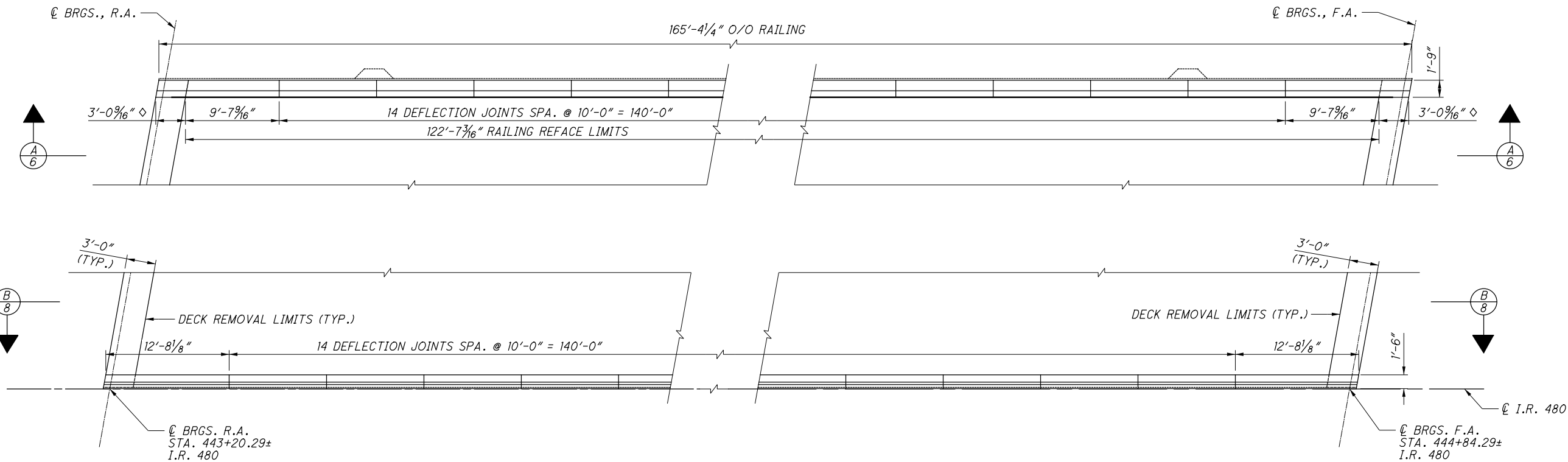
SCREED LINE LOCATION (SECTION A-A)

ELEVATIONS AT END OF SUPERELEVATION TRANSITION								
LOCATION	1		2		3		4	
	CROWN		C.J. 2		P/G		RIGHT CURB	
OFFSET	19.00 FT		18.00 FT		7.00 FT		1.69 FT	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
	443+89.08	807.43	443+89.08	807.41	443+89.08	807.23	443+89.08	807.02

PORPOSED OVERLAY SURFACE ELEVATIONS															
		LEFT CURB		LEFT SHOULDER		C.J. 1		CROWN		C.J. 2		P/G		RIGHT CURB	
	OFFSET *	47.25 FT		43.00 FT		30.00 FT		19.00 FT		18.00 FT		7.00 FT		1.69 FT	
	LOCATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
SPAN 1	0.00 L	443+28.80	805.61	443+28.04	805.75	443+25.69	805.91	443+23.71	806.04	443+23.53	806.03	443+21.55	805.92	443+20.59	805.69
	0.25 L	443+40.80	805.87	443+40.04	806.01	443+37.69	806.17	443+35.71	806.30	443+35.53	806.29	443+33.55	806.16	443+32.59	805.93
	0.50 L	443+52.80	806.13	443+52.04	806.27	443+49.69	806.43	443+47.71	806.56	443+47.53	806.55	443+45.55	806.40	443+44.59	806.17
	0.75 L	443+64.80	806.39	443+64.04	806.52	443+61.69	806.68	443+59.71	806.82	443+59.53	806.80	443+57.55	806.64	443+56.59	806.40
	1.00 L	443+76.80	806.64	443+76.04	806.77	443+73.69	806.93	443+71.71	807.07	443+71.53	807.05	443+69.55	806.87	443+68.59	806.63
SPAN 2	0.25 L	443+93.80	806.98	443+93.04	807.12	443+90.69	807.28	443+88.71	807.42	443+88.53	807.40	443+86.55	807.19	443+85.59	806.96
	0.50 L	444+10.80	807.31	444+10.04	807.44	444+07.69	807.61	444+05.71	807.74	444+05.53	807.72	444+03.55	807.51	444+02.59	807.28
	0.75 L	444+27.80	807.64	444+27.04	807.78	444+24.69	807.94	444+22.71	808.08	444+22.53	808.06	444+20.55	807.84	444+19.59	807.61
	1.00 L	444+44.80	807.99	444+44.04	808.13	444+41.69	808.29	444+39.71	808.42	444+39.53	808.40	444+37.55	808.19	444+36.59	807.95
SPAN 3	0.25 L	444+56.80	808.24	444+56.04	808.38	444+53.69	808.53	444+51.71	808.67	444+51.53	808.65	444+49.55	808.43	444+48.59	808.20
	0.50 L	444+68.80	808.49	444+68.04	808.63	444+65.69	808.79	444+63.71	808.92	444+63.53	808.90	444+61.55	808.68	444+60.59	808.45
	0.75 L	444+80.80	808.75	444+80.04	808.89	444+77.69	809.05	444+75.71	809.18	444+75.53	809.16	444+73.55	808.94	444+72.59	808.71
	1.00 L	444+92.80	809.02	444+92.04	809.15	444+89.69	809.31	444+87.71	809.44	444+87.53	809.42	444+85.55	809.20	444+84.59	808.97

* - OFFSET FROM C I.R. 480
L = SPAN LENGTH

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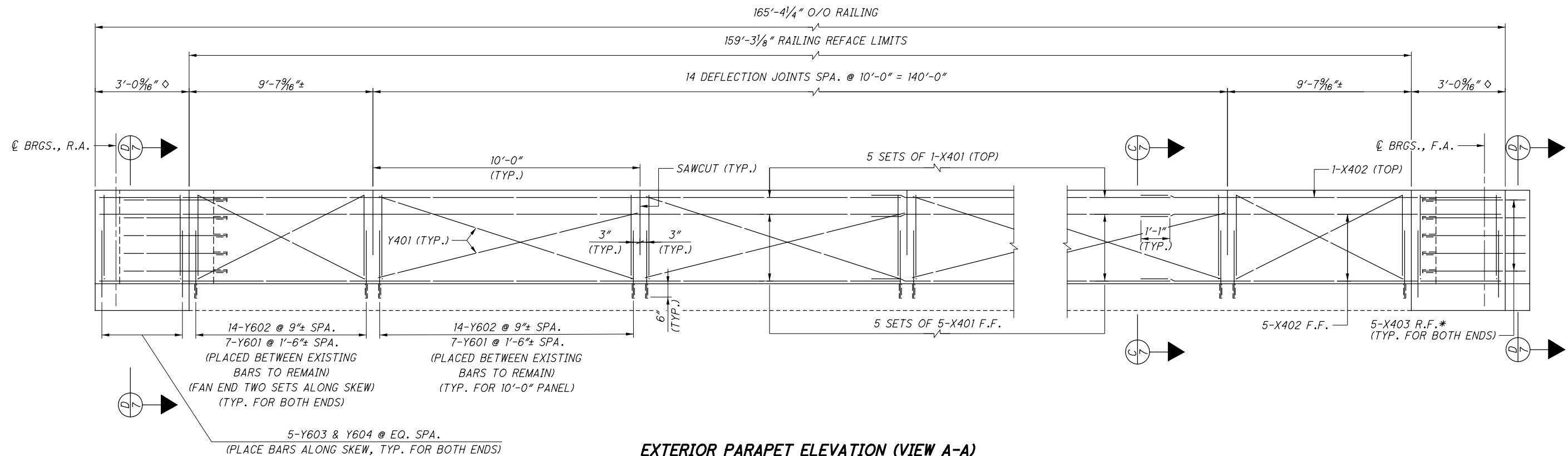


RAILING PLAN

◇ - FULL REMOVAL

LEGEND:

E.F. - EACH FACE
F.F. - FRONT FACE
R.F. - REAR FACE



EXTERIOR PARAPET ELEVATION (VIEW A-A)

LOOKING NORTH
◇ - FULL REMOVAL
* - DOWEL BARS 1'-0" INTO EXISTING PARAPET

DESIGN AGENCY
PATRICK ENGINEERING INC.
3650 OLENTANGY RIVER ROAD
COLUMBUS, OHIO 43214

DATE
8/20/21
REVIEWED
BMG
STRUCTURE FILE NUMBER
1814192

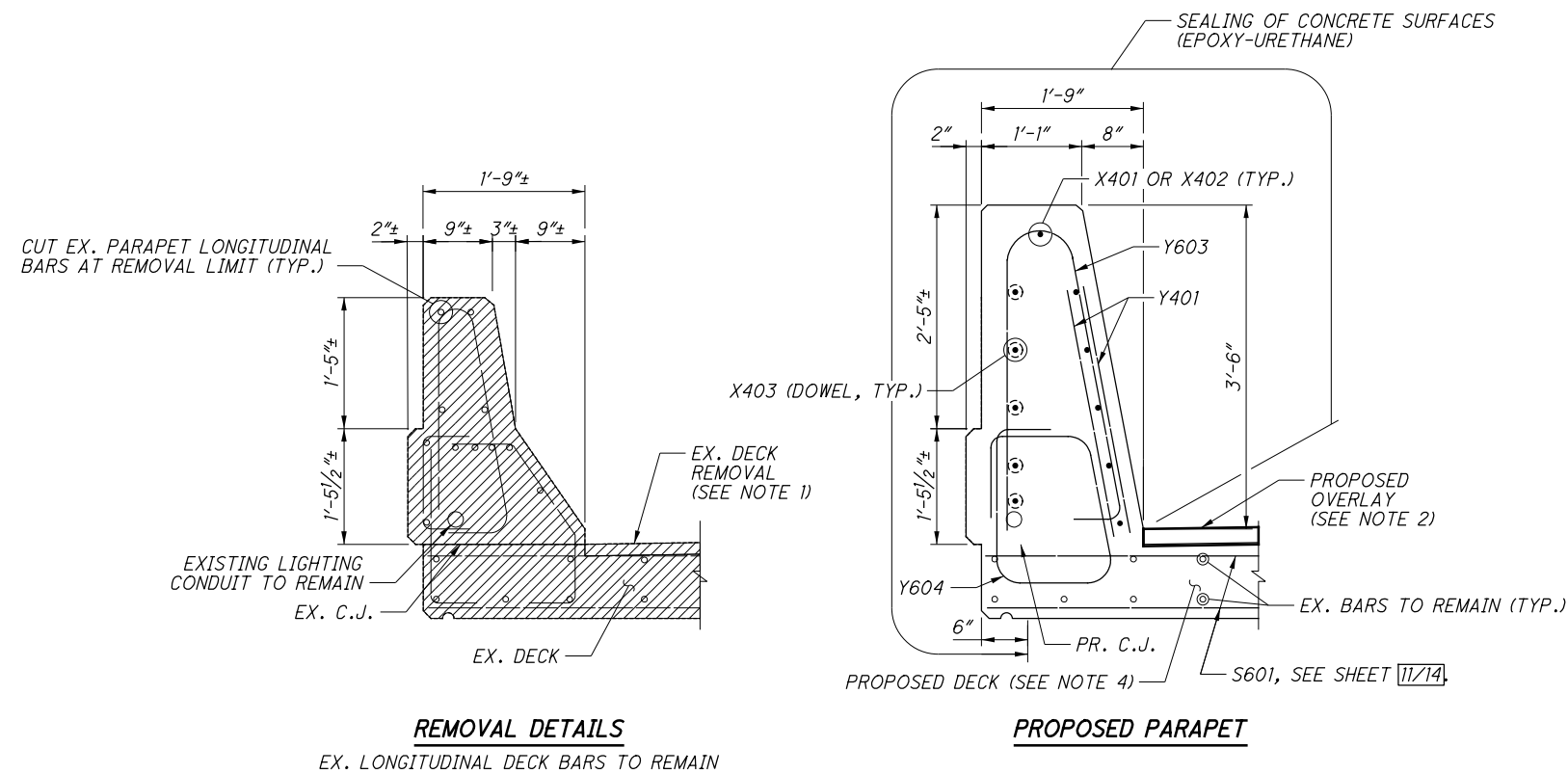
DRAWN
JCP
CHECKED
SAP
REVISED

PARAPET DETAILS-1
BRIDGE NO. CUY-480-0792
IR-480 WB OVER ROCKY RIVER DRIVE

CUY-480-07.14 WB
PID No. 108482

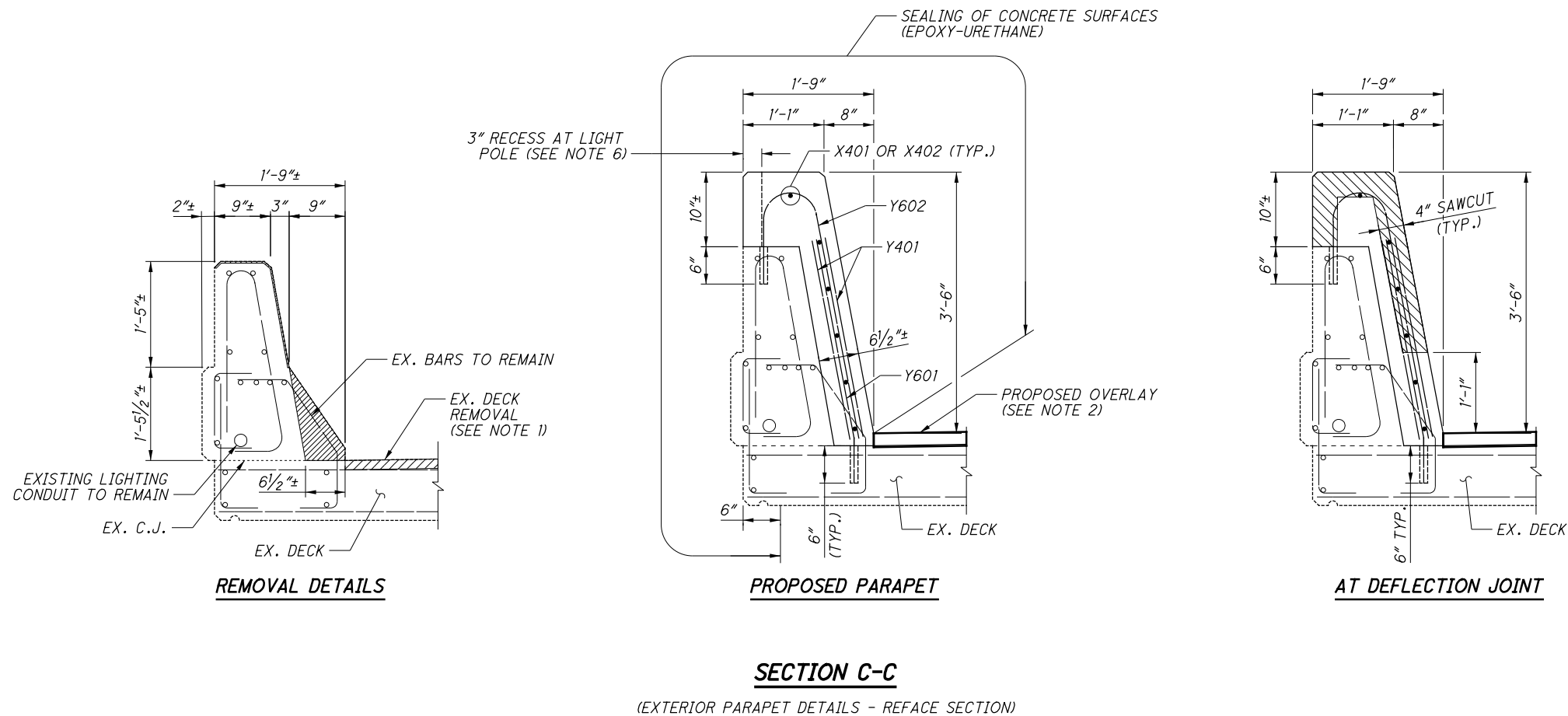
6 / 14

169
225





SECTION D-D

(EXTERIOR PARAPET DETAILS - FULL REMOVAL SECTION)
(TYP. FOR BOTH ENDS)

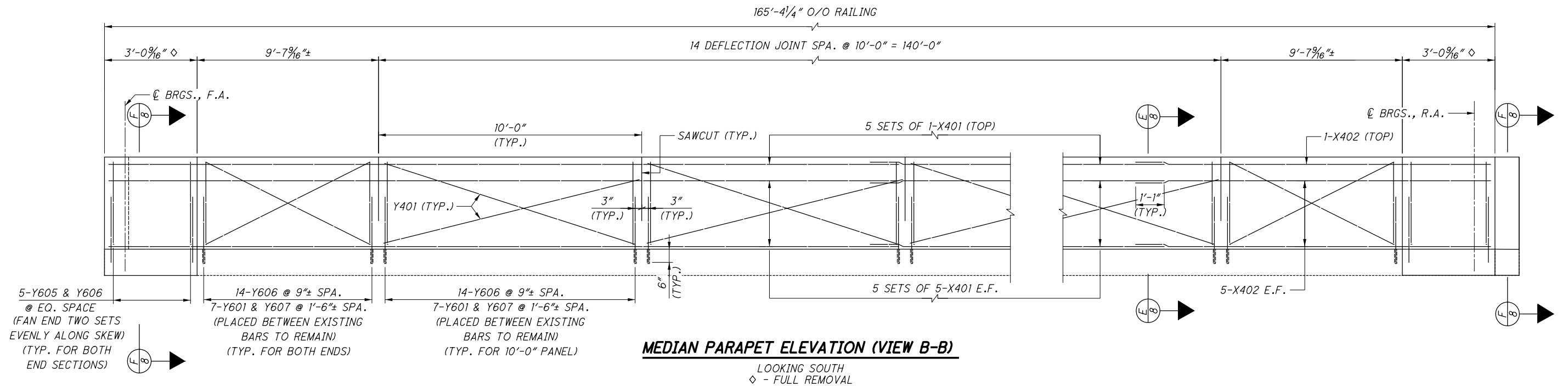


LEGEND:

-  - REMOVAL
 - SAWCUT

- ## NOTES:
1. SEE SHEET 4/14 FOR EXISTING DECK WEARING SURFACE REMOVAL DETAILS.
 2. SEE SHEET 5/14 FOR NEW DECK OVERLAY THICKNESS DETAILS.
 3. SEE SHEET 6/14 FOR LOCATION OF SECTIONS C-C AND D-D.
 4. SEE SHEET 11/14 FOR PROPOSED DECK REINFORCING STEEL DETAILS.
 5. LIGHT POLE AND PILASTER (AT STA. 443+50.64± AND 444+70.73±) SHALL NOT BE DISTURBED DURING CONSTRUCTION. BUILD A 3" RECESS AT THE TOP OF THE BUILD-BACK PARAPET IN THE PILASTER LIMIT (4'-6"± LONG).

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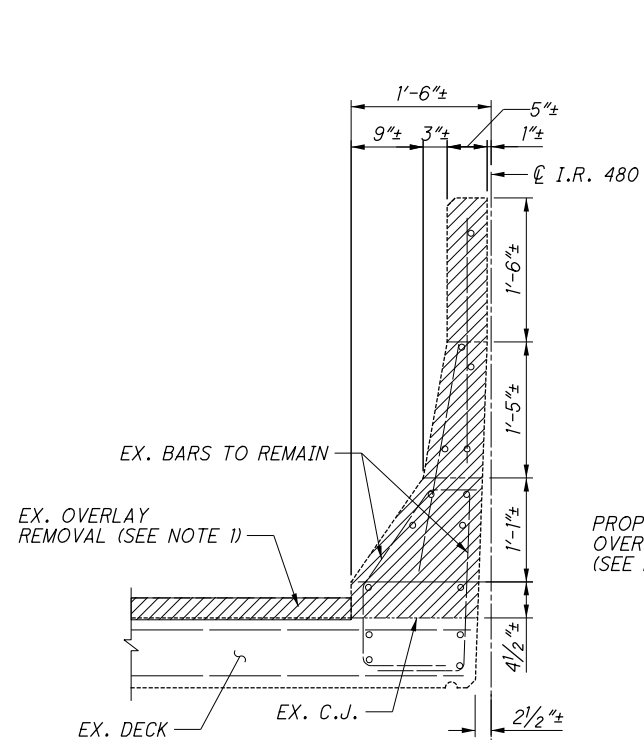


NOTES:

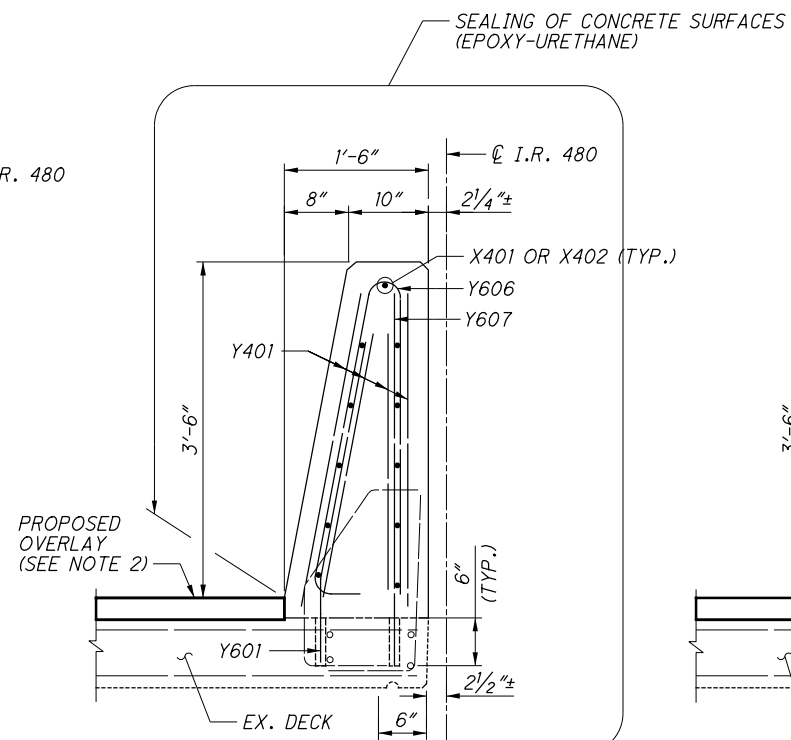
- SEE SHEET [4/14] FOR EXISTING DECK WEARING SURFACE REMOVAL DETAILS.
- SEE SHEET [5/14] FOR NEW DECK OVERLAY THICKNESS DETAILS.
- SEE SHEET [6/14] FOR LOCATION OF VIEW B-B.

LEGEND:

- E.F. - EACH FACE
F.F. - FRONT FACE
R.F. - REAR FACE
- ▨ - REMOVAL
▨ - SAWCUT

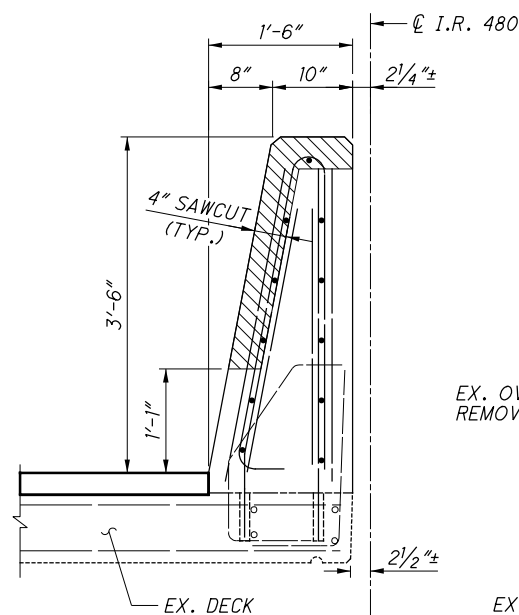


REMOVAL DETAILS

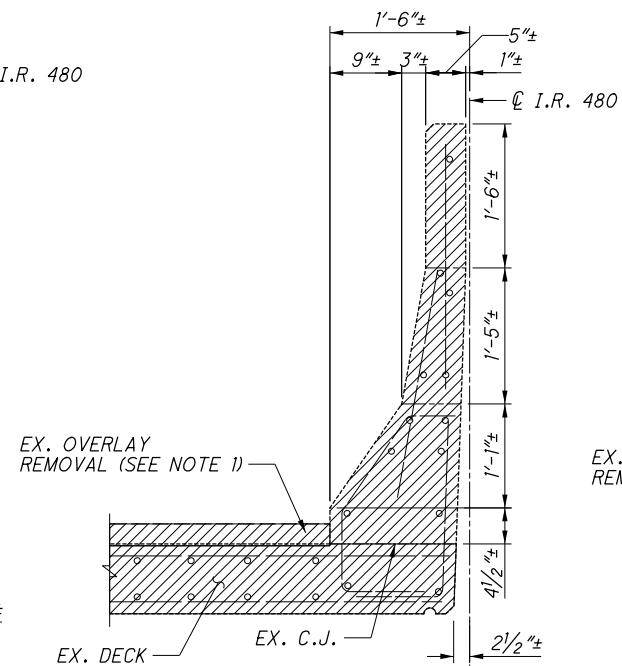


PROPOSED PARAPET

SECTION E-E
(MEDIAN PARAPET DETAILS - BARRIER REPLACEMENT SECTION)

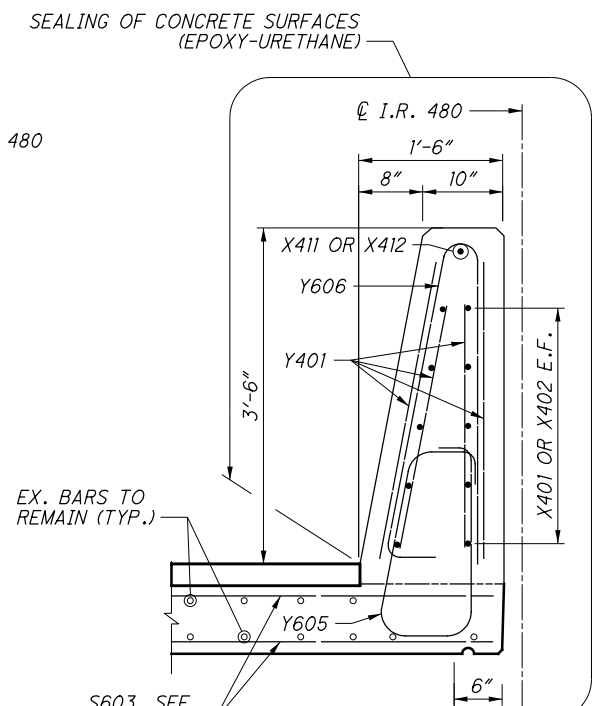


AT DEFLECTION JOINT



REMOVAL DETAILS

EX. LONGITUDINAL DECK BARS TO REMAIN



PROPOSED PARAPET

SECTION F-F
(MEDIAN PARAPET DETAILS - FULL REMOVAL SECTION)
(DECK REMOVAL TYP. BOTH SECTIONS)

PARAPET DETAILS-III

BRIDGE NO. CUY-480-0792
IR-480 WB OVER ROCKY RIVER DRIVE

CUY-480-07.14 WB
PID No. 108482

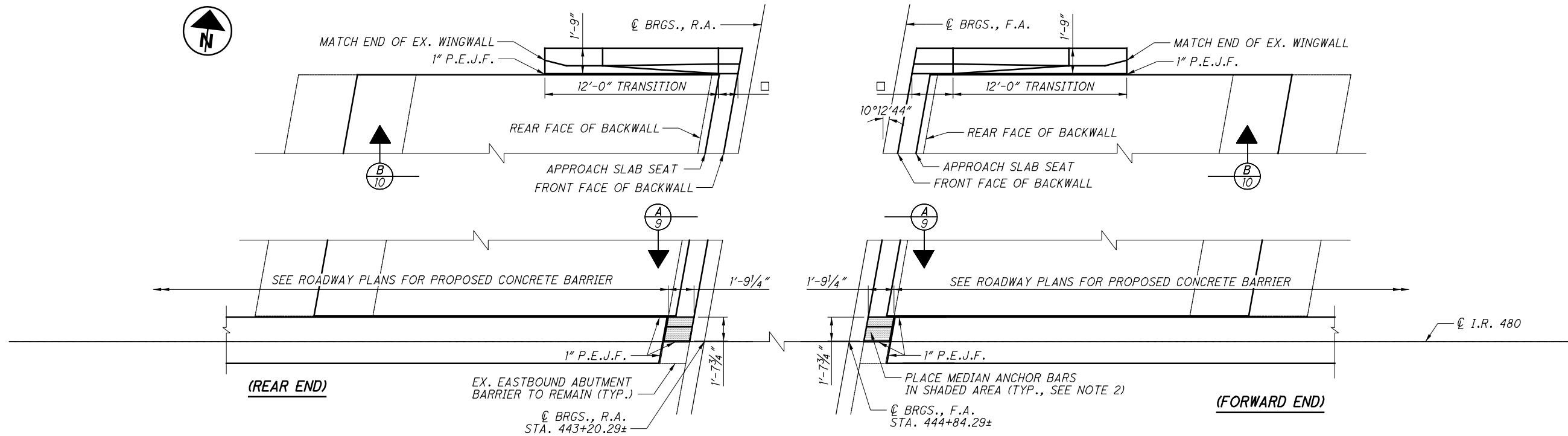
8 / 14

171
225

DESIGN AGENCY
PATRICK ENGINEERING INC.
3650 OLENTANGY RIVER ROAD
COLUMBUS, OHIO 43214

DESIGNED	DRAWN	REVIEWED	DATE
JH	JCP	BMG	8/20/21
CHECKED	REVISED	STRUCTURE FILE NUMBER	1814192
SAP			

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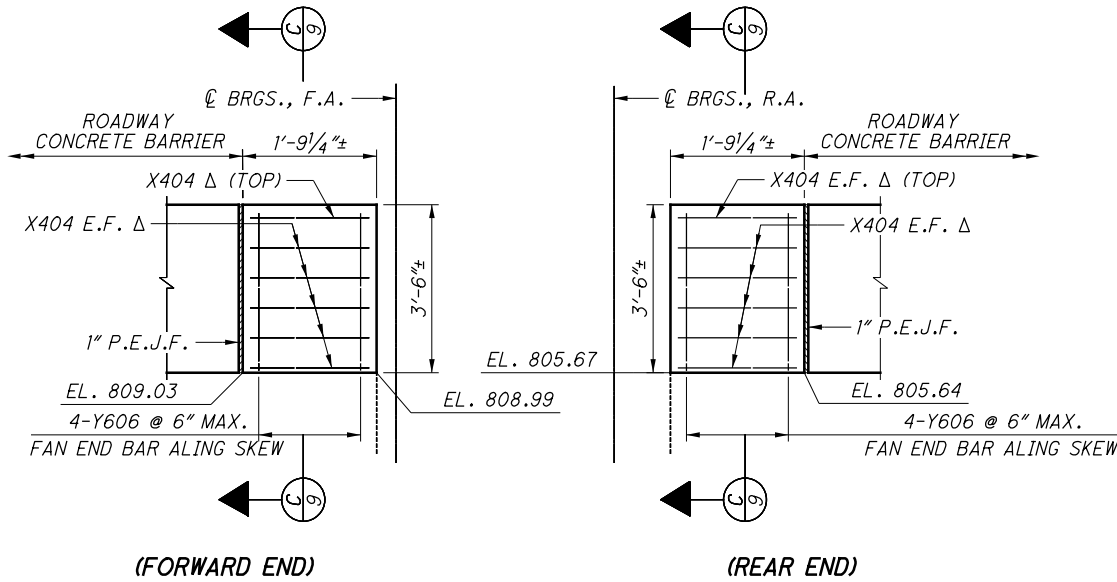
NOTES:

1. SEE STANDARD DRAWING SBR-I-20 FOR ADDITIONAL SINGLE SLOPE CONCRETE BRIDGE RAILING DETAILS AND NOTES.
2. THE SHADED AREA IS THE LIMIT WHERE THE NEW END DECK MEDIAN AND EXISTING ABUTMENT BACKWALL INTERSECT. DOWEL FOUR #6 BARS EVENLY IN THE AREA INTO THE EXISTING BACKWALL FOR ANCHORING THE NEW MEDIAN WITH THE ABUTMENT. INCLUDE THESE WITH ITEM 511, CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN, FOR PAYMENT.
3. □ - DIMENSIONS GIVEN ALONG TOE OF PARAPET IN THE ELEVATION VIEW.
4. CONTRACTOR MUST REPLACE PORTION OF WINGWALL LIGHTING CONDUIT AS REQUIRED TO CONNECT TO EXISTING LIGHTING CONDUIT LOCATION IN THE BRIDGE PARAPET AND PROVIDE AN EXPANSION FITTING TO ALLOW FOR CONDUIT EXPANSION BETWEEN THE SUPERSTRUCTURE AND WINGWALL PARAPET. SEE EXISTING PLANS FOR CONDUIT LOCATION. COST INCLUDED WITH ITEM 511, CLASS QC2 CONCRETE, BRIDGE DECK PARAPET, AS PER PLAN. FOR WIRING DETAILS SEE LIGHTING PLANS.

ABUTMENT BACKWALL AND WINGWALL PARAPET PLAN

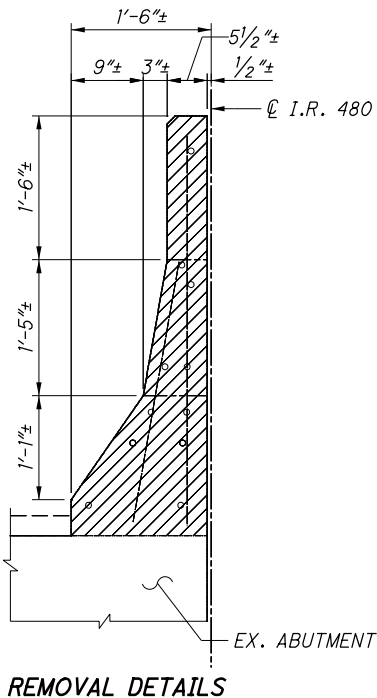
LEGEND:

E.F. - EACH FACE
F.F. - FRONT FACE
R.F. - REAR FACE
□ - REMOVAL



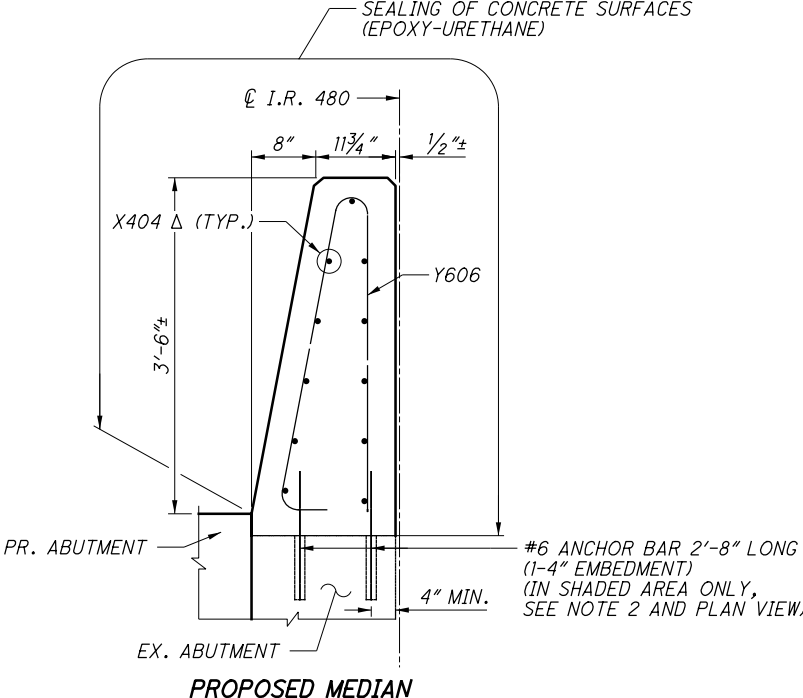
ABUTMENT BACKWALL MEDIAN ELEVATION (VIEW A-A)

LOOKING SOUTH
Δ - FIELD CUT BAR AS NEEDED

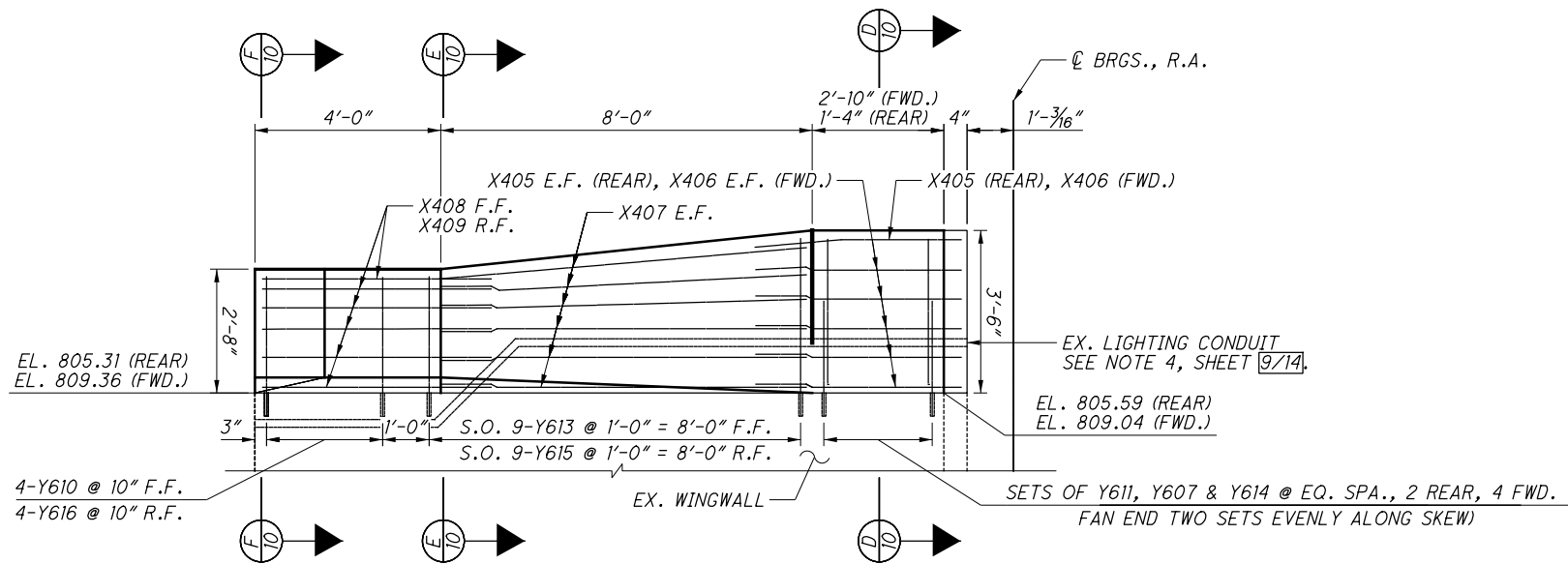


ABUTMENT BACKWALL MEDIAN SECTIONS (SECTION C-C)

Δ - FIELD CUT BAR AS NEEDED



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EXTERIOR ABUTMENT WINGWALL PARAPET ELEVATION (VIEW B-B)

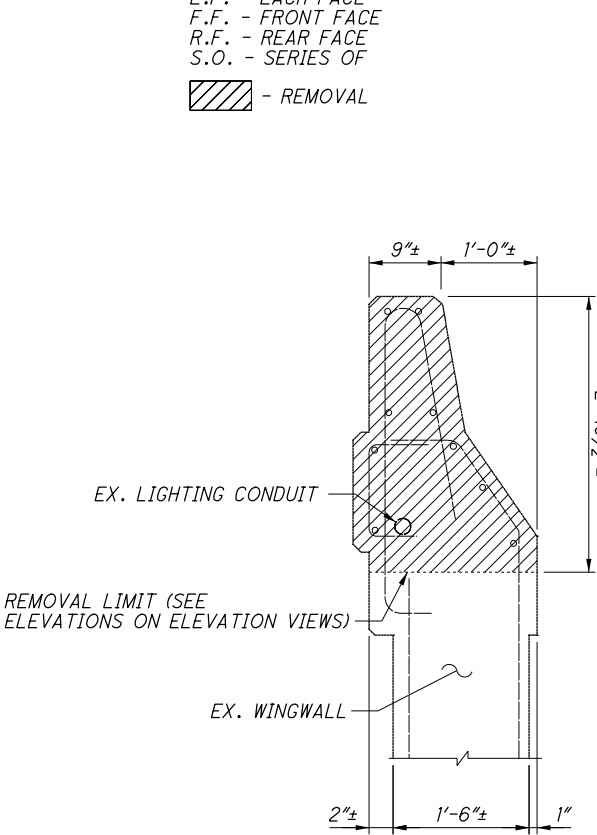
REAR PARAPET SHOWN, FRONT PARAPET SIMILAR

NOTES:

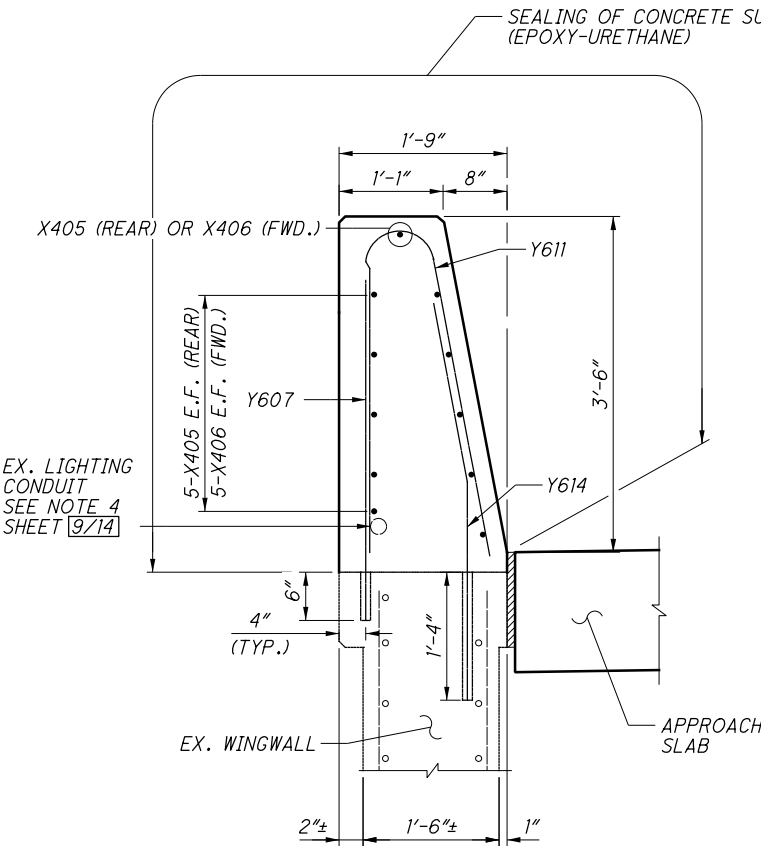
1. SEE STANDARD DRAWING SBR-1-20 FOR ADDITIONAL SINGLE SLOPE CONCRETE BRIDGE RAILING DETAILS AND NOTES.
2. FOR LOCATION OF VIEW B-B SEE SHEET 9/14.

LEGEND:

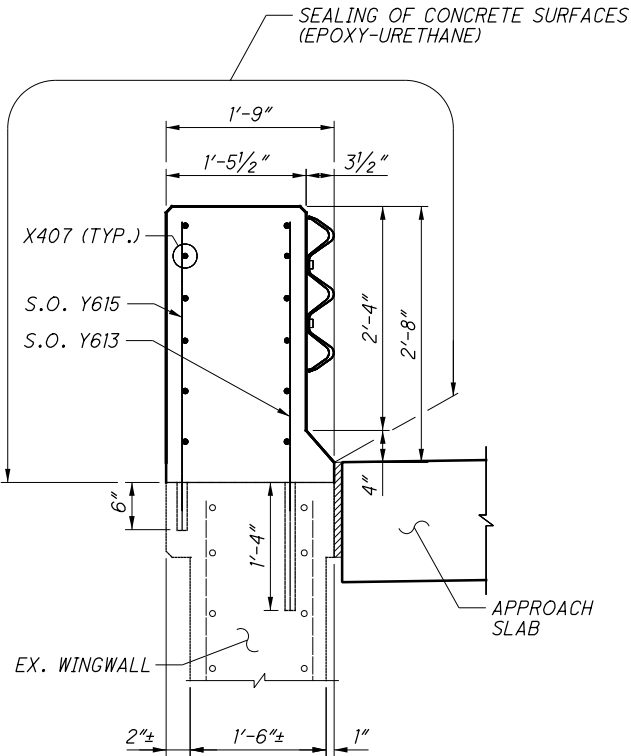
E.F. - EACH FACE
F.F. - FRONT FACE
R.F. - REAR FACE
S.O. - SERIES OF
- REMOVAL



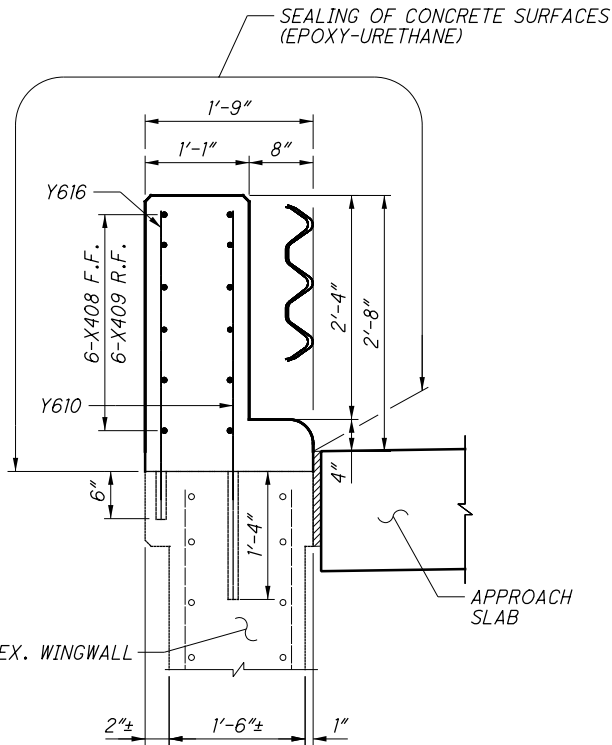
TYPICAL PARAPET REMOVAL SECTION



SECTION D-D

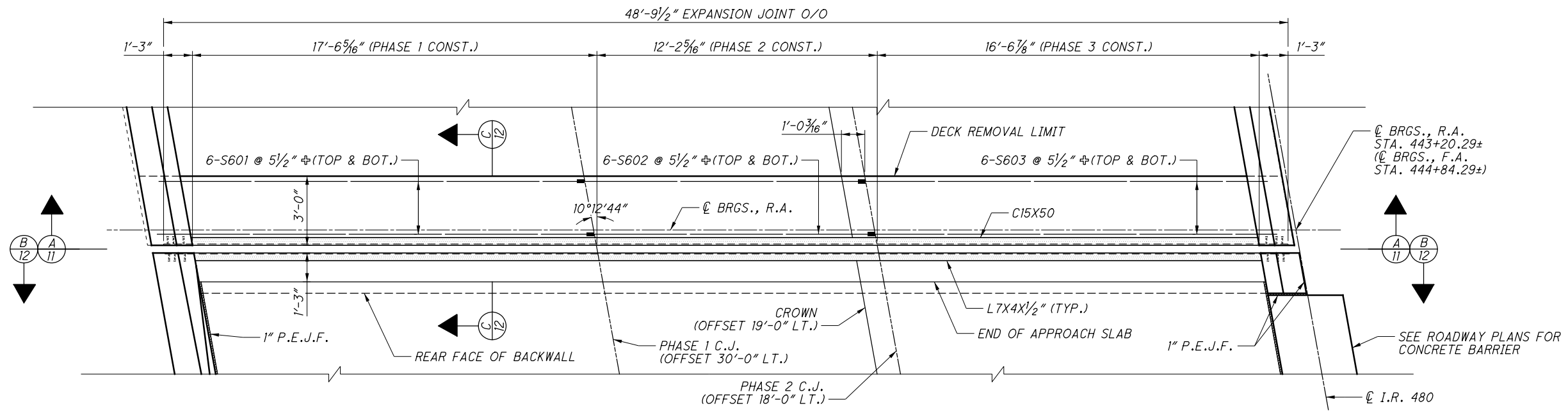
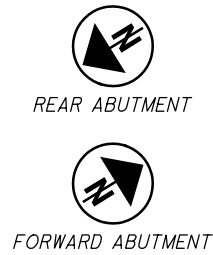


SECTION E-E



SECTION F-F

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LEGEND:

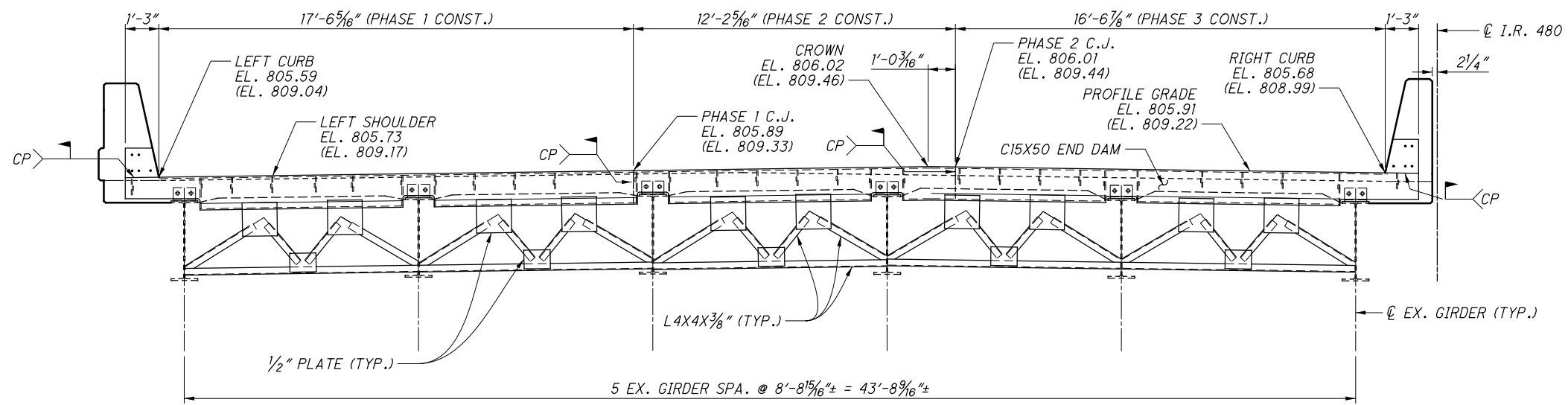
⊕ - BARS WITH MECHANICAL CONNECTORS

EXPANSION JOINT PLAN

REAR ABUTMENT JOINT SHOWN, FORWARD ABUTMENT JOINT SIMILAR

NOTES:

1. END CROSSFRAME STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50W, YIELDING STRENGTH 50 KSI.
2. SEE ADDITIONAL NOTES ON SHEET 12/14.

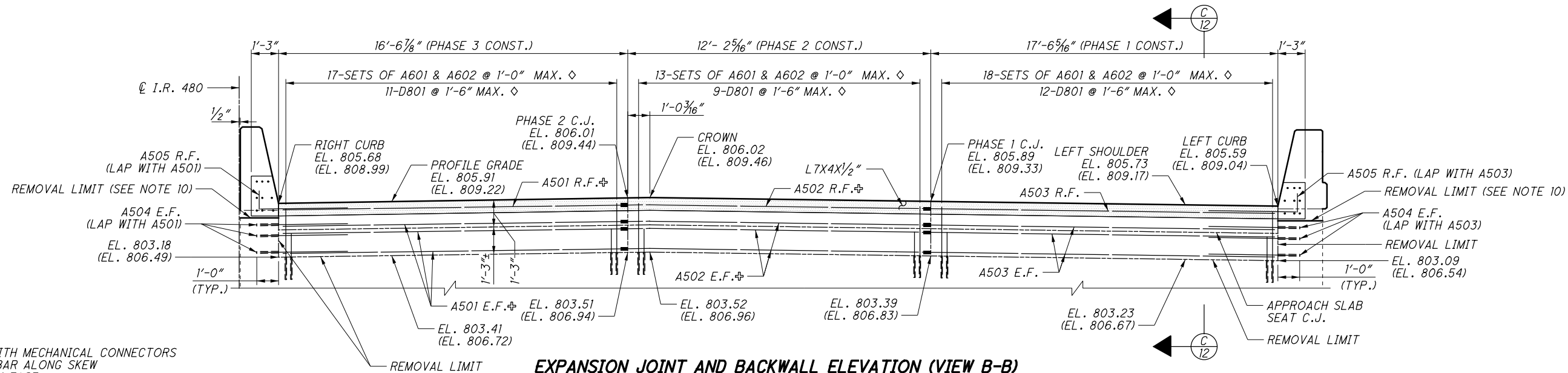


EXPANSION JOINT END DAM AND END CROSSFRAME ELEVATION (VIEW A-A)

REAR ABUTMENT SHOWN, FORWARD ABUTMENT SIMILAR
ELEVATIONS SHOWN IN () ARE FOR FORWARD ABUTMENT
LOOKING UP-STATION

CUY-480-07.14 WB PID No. 108482	EXPANSION JOINT DETAILS - I			DESIGN AGENCY
	BRIDGE NO. CUY-480-0792			PATRICK ENGINEERING INC.
	IR-480 WB OVER ROCKY RIVER DRIVE			3650 OLENTANGY RIVER ROAD
				COLUMBUS, OHIO 43214
11 / 14	DESIGNED	DRAWN	REVIEWED	DATE
	JH	JCP	BMG	8/20/21
	CHECKED	REVISED	STRUCTURE FILE NUMBER	
	SAP		1814192	
174 225				

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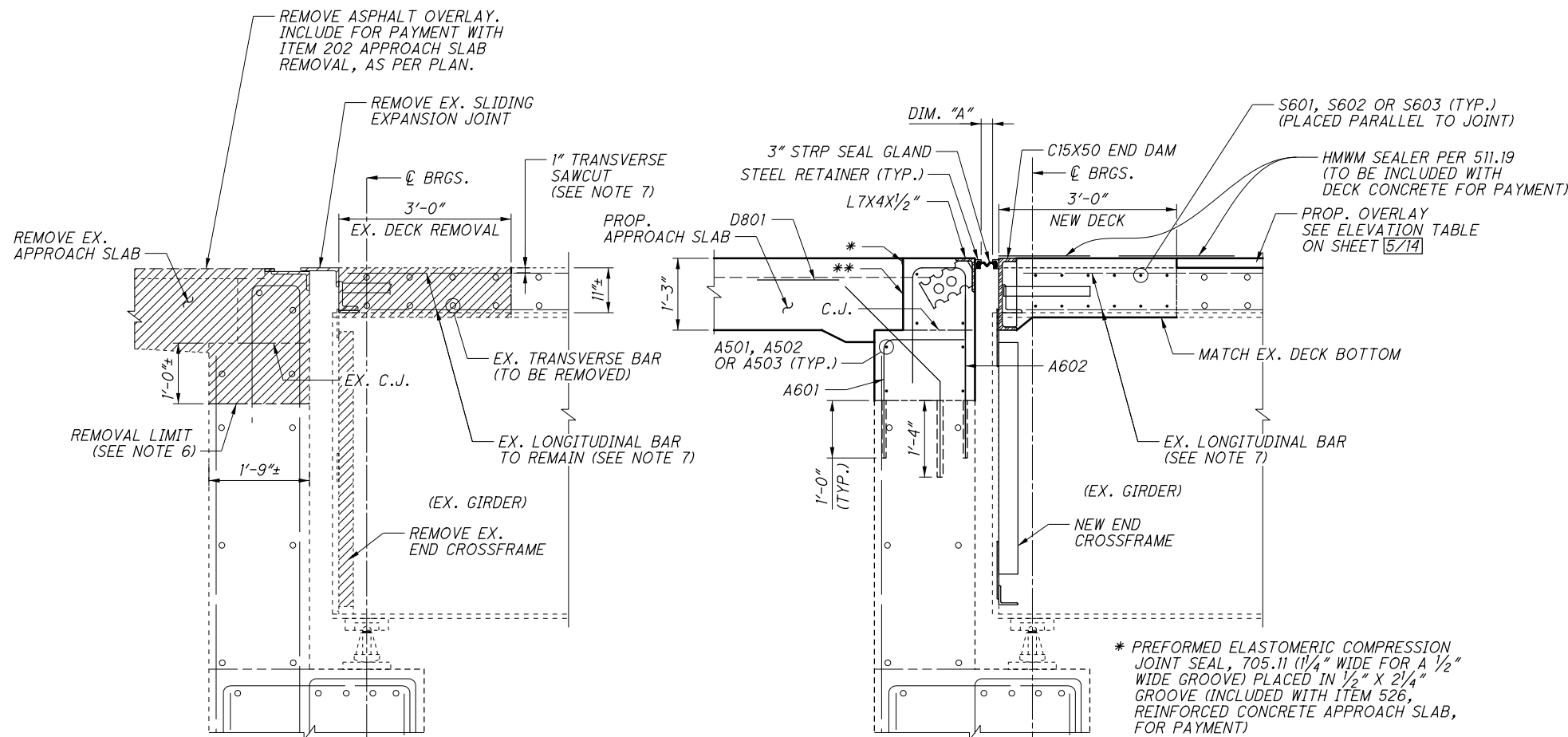
LEGEND:

- ⊕ - BARS WITH MECHANICAL CONNECTORS
- ◇ - PLACE BAR ALONG SKEW
- E.F. - EACH FACE
- R.F. - REAR FACE
- ▨ - REMOVAL

EXPANSION JOINT AND BACKWALL ELEVATION (VIEW B-B)

REAR ABUTMENT SHOWN, FORWARD ABUTMENT SIMILAR
ELEVATIONS SHOWN IN () ARE FOR FORWARD ABUTMENT
LOOKING DOWN-STATION

AMBIENT TEMPERATURE °F	DIMENSION "A"
30°	1 7/8"
40°	1 3/8"
50°	1 3/4"
60°	1 1/2"
70°	1 5/8"
80°	1 1/2"
90°	1 7/8"



REMOVAL
SECTION WITH APPROACH SLAB SHOWN,
SECTIONS OUTSIDE APPROACH SLAB SIMILAR

SECTION C-C

PROPOSED

* PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL, 705.11 (1 1/4" WIDE FOR A 1/2" WIDE GROOVE) PLACED IN 1/2" X 2 1/4" GROOVE (INCLUDED WITH ITEM 526, REINFORCED CONCRETE APPROACH SLAB, FOR PAYMENT)

** TYPE A WATERPROOFING (INCLUDED WITH ITEM 526, REINFORCED CONCRETE APPROACH SLAB, FOR PAYMENT)

NOTES:

- STRIP SEAL GLAND SIZE IS 3" FOR BOTH EXPANSION JOINTS.
- SEE STD. DWG. EXJ-4-87 FOR ADDITIONAL STRIP SEAL EXPANSION JOINT NOTES & DETAILS.
- SEE STD. DWG. GSD-1-19 FOR ADDITIONAL END CROSSFRAME NOTES & DETAILS.
- THE COSTS INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, TOOLS AND INCIDENTALS FOR FURNISHING AND INSTALLING STRIP SEAL EXPANSION JOINT (INCLUDING END DAMS AND END PLATES) AS SPECIFIED IN THE PLANS ARE INCLUDED IN ITEM 516, STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, FOR PAYMENT.
- THE COSTS INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, TOOLS AND INCIDENTALS FOR FURNISHING AND INSTALLING STEEL END CROSSFRAMES AS SPECIFIED IN THE PLANS ARE INCLUDED IN ITEM 513, REPLACEMENT OF DETERIORATED END CROSSFRAMES, FOR PAYMENT.
- SEE ELEVATION VIEWS FOR REMOVAL LIMIT ELEVATIONS.
- AREAS OF THE EXISTING DECK SPECIFIED TO BE REMOVED ON THE PLANS SHALL BE REMOVED FULL DEPTH. AFTER THE OVERLAY REMOVAL IS COMPLETE, REMOVE DECK CONCRETE PER CUT LINE CONSTRUCTION JOINT PREPARATION NOTE ON SHEET 162/225. ALL EXPOSED EXISTING LONGITUDINAL BARS SHALL BE CLEANED AND STRAIGHTENED FOR REUSE.
- THE APPROACH SLAB SEAT AND BACKWALL CONCRETE SHALL BE PROPERLY CURED FOR AT LEAST THREE DAYS BEFORE THE APPROACH SLAB AND WATERPROOFING CAN BE PLACED.
- FOR LOCATION OF VIEW B-B, SEE SHEET 1/14.
- CONTRACTOR MUST ADJUST REMOVAL LIMIT AT THE TOP OF THE WINGWALL OR ABUTMENT BACKWALL TO ASSURE THAT THE NEW EXPANSION JOINT END PLATE CAN BE INSTALLED PROPERLY.

DESIGN AGENCY
PATRICK ENGINEERING INC.
3650 OLENTANGY RIVER ROAD
COLUMBUS, OHIO 43214

DATE
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1814192

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JCP
CHECKED
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REVISION

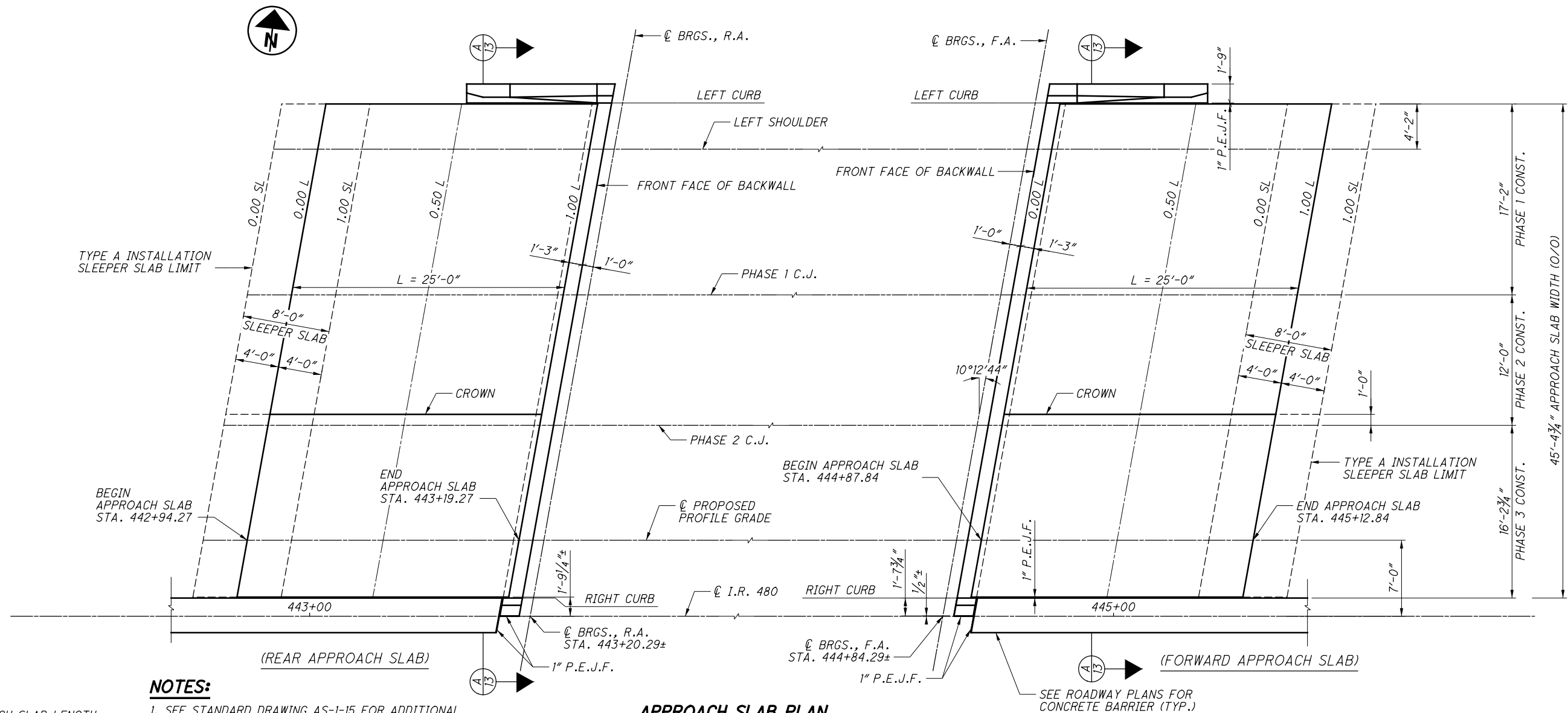
EXPANSION JOINT DETAILS - II
BRIDGE NO. CUY-480-0792
IR-480 WB OVER ROCKY RIVER DRIVE

CUY-480-07.14 WB
PID No. 108482

12 / 14

175
225

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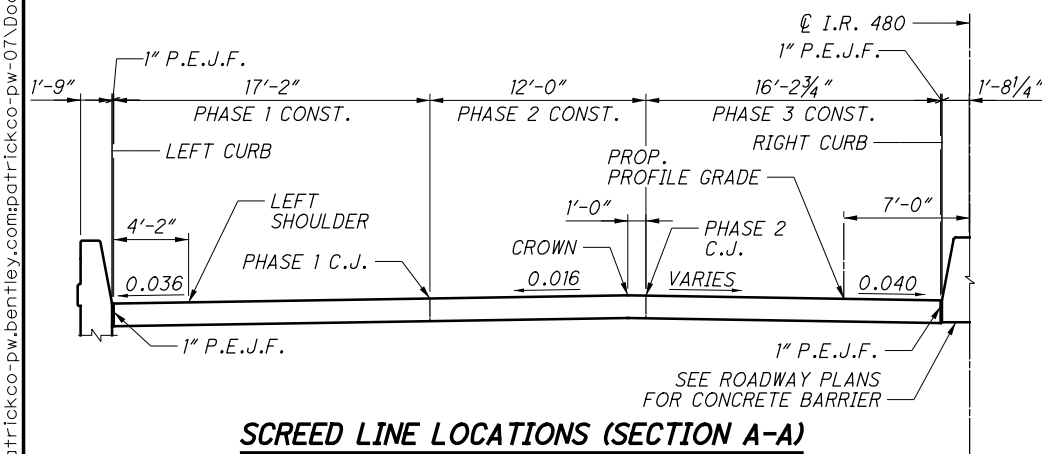
LEGEND:

L = APPROACH SLAB LENGTH
SL = SLEEPER SLAB LENGTH

NOTES:

- SEE STANDARD DRAWING AS-1-15 FOR ADDITIONAL REINFORCED CONCRETE APPROACH SLAB NOTES AND DETAILS.
- SEE STANDARD DRAWING AS-2-15 FOR ADDITIONAL APPROACH SLAB INSTALLATION NOTES AND DETAILS.

APPROACH SLAB PLAN



APPROACH SLAB ELEVATIONS

OFFSET *	LEFT CURB *		LEFT SHOULDER		C.J. 1		CROWN		C.J. 2		P/G		RIGHT CURB **	
	47.25 FT		43.00 FT		30.00 FT		19.00 FT		18.00 FT		7.00 FT		1.69 FT	
LOCATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
0.00 L	443+01.52	805.04	443+00.75	805.17	442+98.41	805.33	442+96.43	805.46	442+96.25	805.46	442+94.26	805.40	442+93.31	805.16
0.50 L	443+14.02	805.30	443+13.25	805.44	443+10.91	805.59	443+08.93	805.73	443+08.75	805.72	443+06.76	805.64	443+05.81	805.41
1.00 L	443+26.52	805.56	443+25.75	805.70	443+23.41	805.86	443+21.43	805.99	443+21.25	805.98	443+19.26	805.88	443+18.31	805.65
0.00 L	444+95.09	809.07	444+94.32	809.20	444+91.98	809.36	444+90.00	809.49	444+89.82	809.47	444+87.84	809.25	444+86.88	809.02
0.50 L	445+07.59	809.34	445+06.82	809.48	445+04.48	809.63	445+02.50	809.77	445+02.32	809.75	445+00.34	809.53	444+99.38	809.29
1.00 L	445+20.09	809.61	445+19.32	809.75	445+16.98	809.90	445+15.00	810.04	445+14.82	810.02	445+12.84	809.80	445+11.88	809.56

SLEEPER SLAB ELEVATIONS

OFFSET *	LEFT CURB *		LEFT SHOULDER		C.J. 1		CROWN		C.J. 2		P/G		RIGHT CURB **	
	47.25 FT		43.00 FT		30.00 FT		19.00 FT		18.00 FT		7.00 FT		1.69 FT	
LOCATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
0.00 L	442+97.45	803.70	442+96.69	803.84	442+94.34	803.99	442+92.36	804.13	442+92.18	804.12	442+90.20	804.06	442+89.24	803.83
1.00 L	443+05.58	803.87	443+04.81	804.01	443+02.47	804.17	443+00.49	804.30	443+00.31	804.30	442+98.33	804.23	442+97.37	803.99
0.00 L	445+16.02	808.27	445+15.26	808.41	445+12.92	808.57	445+10.93	808.70	445+10.75	808.68	445+08.77	808.46	445+07.82	808.23
1.00 L	445+24.15	808.45	445+23.39	808.58	445+21.05	808.74	445+19.06	808.87	445+18.88	808.85	445+16.90	808.64	445+15.94	808.40

*- ELEVATIONS GIVEN AT FRONT OF PARAPETS
**- OFFSET FROM \varnothing I.R. 480

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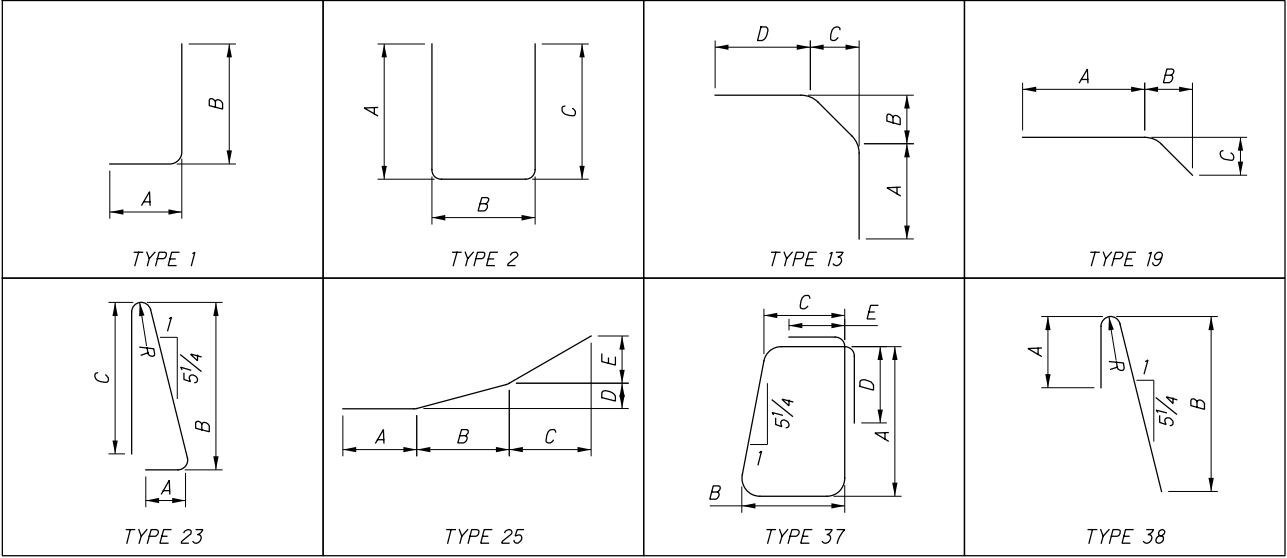
BRIDGE CUY-480-0792 (SFN 1814192)

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
BRIDGE 0792 ABUTMENT REBAR											
A501 ⚡	14	16'-5"	240	STR							
A502 ⚡	14	12'-2"	178	STR							
A503 ⚡	14	17'-4"	254	STR							
A504 ⬤	24	3'-8"	92	STR							
A505	4	4'-5"	19	1	3'-8"	0'-10"					
A601 ⬤	96	3'-4"	481	1	2'-1"	1'-5"					
A602 ⬤	96	5'-11"	854	2	3'-3"	0'-11"	2'-1"				
D801 ⬤	64	5'-8"	969	13	1'-6"	2'-0"	2'-0"	1'-5"			
SUB-TOTAL =			3087 LBS								
BRIDGE 0792 DECK REBAR											
S601 ⚡	24	19'-2"	691	STR							
S602 ⚡	24	12'-2"	439	STR							
S603 ⚡	24	17'-11"	646	STR							
SUB-TOTAL =			1776 LBS								
BRIDGE 0792 PARAPET REBAR											
Y601 ⬤	224	4'-0"	1346	19	0'-7"	3'-4"	0'-7 1/2"				
Y602 ⬤	224	4'-2"	1402	38	1'-2"	3'-2"				0'-3 1/2"	
Y603	10	7'-3"	109	23	0'-6"	3'-3"	3'-3"			0'-3 1/2"	
Y604	10	8'-0"	121	37	2'-3"	1'-5 1/2"	1'-0 1/2"	1'-0"	0'-10"		
Y605	10	7'-3"	109	37	2'-3"	1'-2 1/2"	0'-9 1/2"	1'-0"	0'-7"		
Y606	242	7'-0"	2545	23	0'-6"	3'-3"	3'-3"			0'-2"	
Y607 ⬤	118	4'-0"	709	STR							
Y610 ⬤	8	3'-11"	48	STR							
Y611	6	6'-10"	62	38	3'-2"	3'-2"				0'-3 1/2"	
	2 SR	3'-11"									
Y613 ⬤	OF	TO	118	STR							0'-1 1/4"
	9	4'-9"									
Y614 ⬤	6	4'-5"	40	19	1'-5"	3'-0"	0'-7"				
	2 SR	3'-1"									
Y615 ⬤	OF	TO	95	STR							0'-1 1/4"
	9	3'-11"									
Y616 ⬤	8	3'-1"	38	STR							
SUB-TOTAL =			6742 LBS								
REBAR TOTAL =			11605 LBS								

⚡ - REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR. BAR LENGTH ADJUSTMENT AND/OR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF CONNECTOR USED.

⬤ - REINFORCING BARS WITH DOWELS

MARK	NUMBER	LENGTH	TOTAL LENGTH	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
BRIDGE 0792 PARAPET GFRP											
X401	85	30'-0"	2550	STR							
X402	17	20'-6"	349	STR							
X403	10	3'-10"	39	STR							
X404	22	1'-5"	32	STR							
X405	11	2'-3"	25	STR							
X406	11	3'-9"	42	STR							
X407	24	8'-0"	192	STR							
X408	12	6'-4"	76	25	2'-6"	2'-5"	1'-4"	0'-1 1/2"	0'-6 1/2"		
X409	12	5'-1"	61	STR							
Y401	96	10'-0"	960	STR							
GFRP TOTAL =			4326 FT								



NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK 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, S501 IS A NO. 5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
3. "STR" IN THE TYPE COLUMN INDICATES STRAIGHT BARS.
4. "S.O." DENOTES SERIES OF.
5. REFER TO C.M.S. SECTION 509.05 FOR STANDARD BEND DIMENSIONS.
6. ALL REINFORCING STEEL CLEARANCES ARE 2" UNLESS OTHERWISE NOTED.
7. GLASS FIBER REINFORCED POLYMER (GFRP) REINFORCEMENT SHALL BE PAID FOR BY TOTAL LENGTH IN FEET AND SHALL BE INCLUDED WITH CONTRACT PRICE FOR ITEM 509 - NO. 4 GFRP DEFORMED BARS FOR PAYMENT.

REINFORCING STEEL LIST

BRIDGE NO. CUY-480-0792
IR-480 WB OVER ROCKY RIVER DRIVE

CUY-480-07.14 WB
PID No. 108482

14 / 14

177
225

DESIGNED
JH
CHECKED
SAP

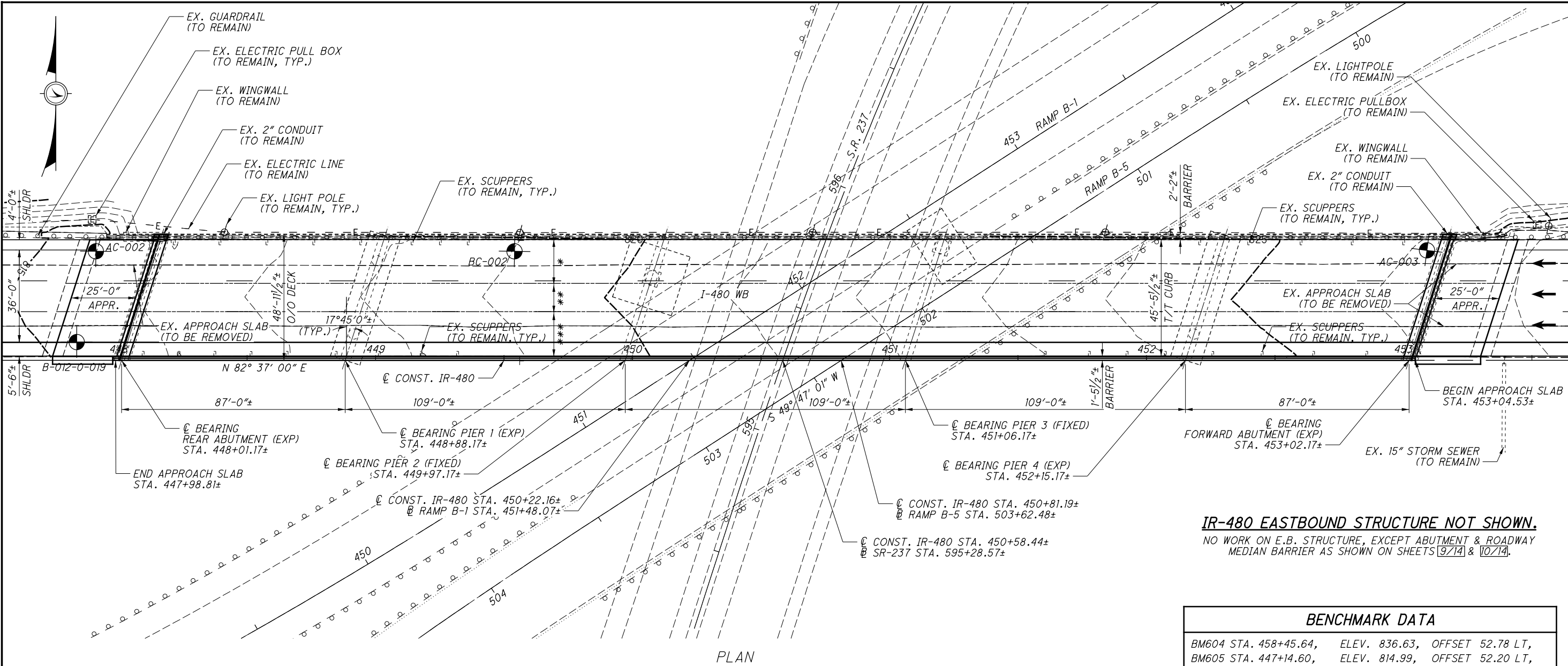
DRAWN
JCP
REVISED

REVIEWED
BMG
STRUCTURE FILE NUMBER
1814192

DATE
8/20/21

DESIGN AGENCY
PATRICK ENGINEERING INC.
3650 OLENTANGY RIVER ROAD
COLUMBUS, OHIO 43214

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PLAN

NOTES:

- FOR BRIDGE MOT SECTIONS, SEE MOT PLAN SHEETS.
- FOR PROFILE INFORMATION, SEE ROADWAY SHEETS 58 & 59 OF 175.

DESIGN TRAFFIC:
2021 ADT = 52,200 2021 ADTT = 2,610
2051 ADT = 60,000 2051 ADTT = 3,000
DIRECTIONAL DISTRIBUTION = 11%

LEGEND

- ◆ BORING LOCATION
- * - PHASE 1 CONSTRUCTION (19'-2"±)
- ** - PHASE 2 CONSTRUCTION (12'-0"±)
- *** PHASE 3 CONSTRUCTION (18'-0")

PROPOSED WORK:

- REMOVE ABUTMENT BACKWALL TO 1 FOOT BELOW APPROACH SLAB SEAT, EXISTING DECK 3 FEET FROM EXPANSION END DAM, END STEEL CROSSFRAMES AND EXPANSION JOINTS. REMOVE EXISTING WEARING SURFACE AND 1/4" OF EXISTING DECK WITH SCARIFICATION PER SS847. REMOVE MEDIAN BARRIER AND PORTIONS OF FASCIA BARRIER. MODIFY BARRIER JUNCTION BOX TO MATCH BARRIER FACE.
- CONSTRUCT EXPANSION JOINT ASSEMBLY AND END CROSSFRAMES. CLEAN OUT EXISTING SCUPPERS. MODIFY EXISTING SCUPPER GRATES TO MATCH PROPOSED DECK ELEVATIONS.
- FORM AND PLACE CONCRETE FOR PROPOSED BACKWALL AND 3 FEET OF DECK ENDS. PLACE CONCRETE FOR DECK AND BARRIER RECONSTRUCTION.
- PLACE 1.75" MINIMUM VARIABLE DEPTH SUPERPLASTICIZED DENSE CONCRETE (SDC) OVERLAY.
- REMOVE UNSOUND CONCRETE AND PATCH SUBSTRUCTURES.
- PLACE NEW 25' LONG APPROACH SLABS PER AS-1-15 AND TYPE A INSTALLATION PER AS-2-15.

IR-480 EASTBOUND STRUCTURE NOT SHOWN.
NO WORK ON E.B. STRUCTURE, EXCEPT ABUTMENT & ROADWAY MEDIAN BARRIER AS SHOWN ON SHEETS 9/14 & 10/14.

BENCHMARK DATA

BM604 STA. 458+45.64, ELEV. 836.63, OFFSET 52.78 LT,
BM605 STA. 447+14.60, ELEV. 814.99, OFFSET 52.20 LT,

FOR ADDITIONAL BENCHMARK INFORMATION.
SEE ROADWAY PLAN SHEETS.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND REINFORCED CONCRETE SUBSTRUCTURE

SPANS: 87'-0"±, 109'-0"±, 109'-0"±, 109'-0"±, 87'-0"±, C/C BRG.
ROADWAY: 45'-6"± T/T BARRIER WITH TYPE 1 RAILING WESTBOUND
LOADING: C.F.-2000 (1957)
SKEW: 17°-45'-0"± LEFT FORWARD
WEARING SURFACE: 2.5"± MICRO-SILICA MODIFIED CONCRETE
APPROACH SLABS: AS-1-72 (25'± LONG)
ALIGNMENT: TANGENT
CROWN: 3/8"± IN/FT
STRUCTURAL FILE NUMBER: 1812491
DATE BUILT: 7/1/1975
DISPOSITION: SEE PROPOSED WORK NOTE
COORDINATES: LATITUDE: 41°25'13.03"
LONGITUDE: 81°49'46.20"

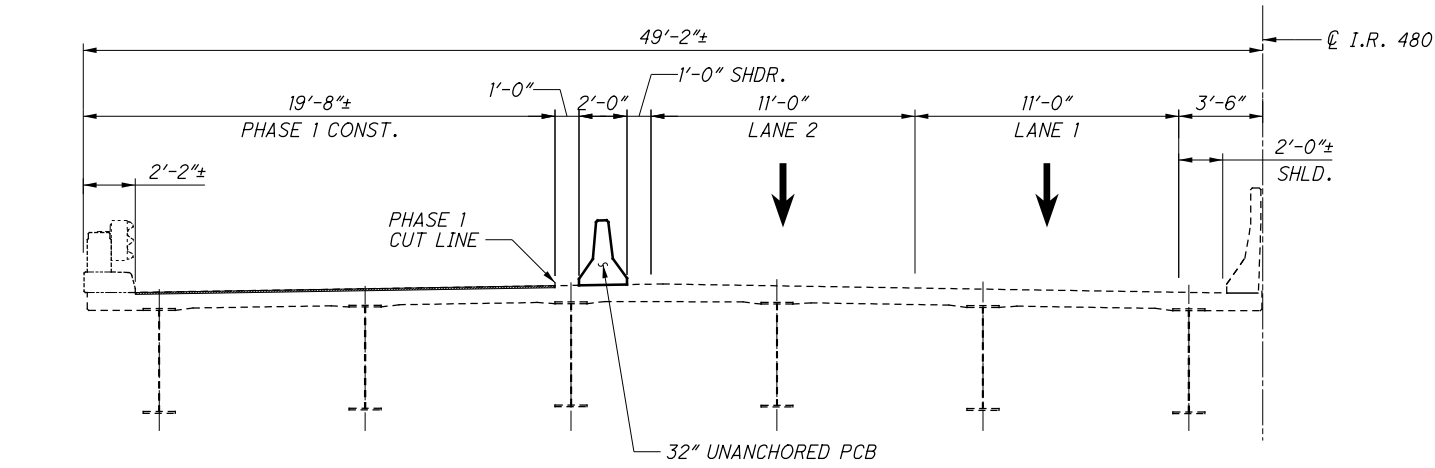
GENERAL PLAN	DESIGNED	JH	CHECKED	SAP	CUYAHOGA COUNTY	STA. 447+98.81+/- STA. 453+04.53+/-
	DRAWN	JCP	REVISED			
	REVIEWED	BMG	STRUCTURE FILE NUMBER	1812491		
	DATE	8/20/21				
	DESIGN AGENCY	PATRICK ENGINEERING INC. 3650 OLENTANGY RIVER ROAD COLUMBUS, OHIO 43214				

BRIDGE NO. CUY 480-0805
IR-480 WB OVER AIRPORT FREEWAY AND RAMPS

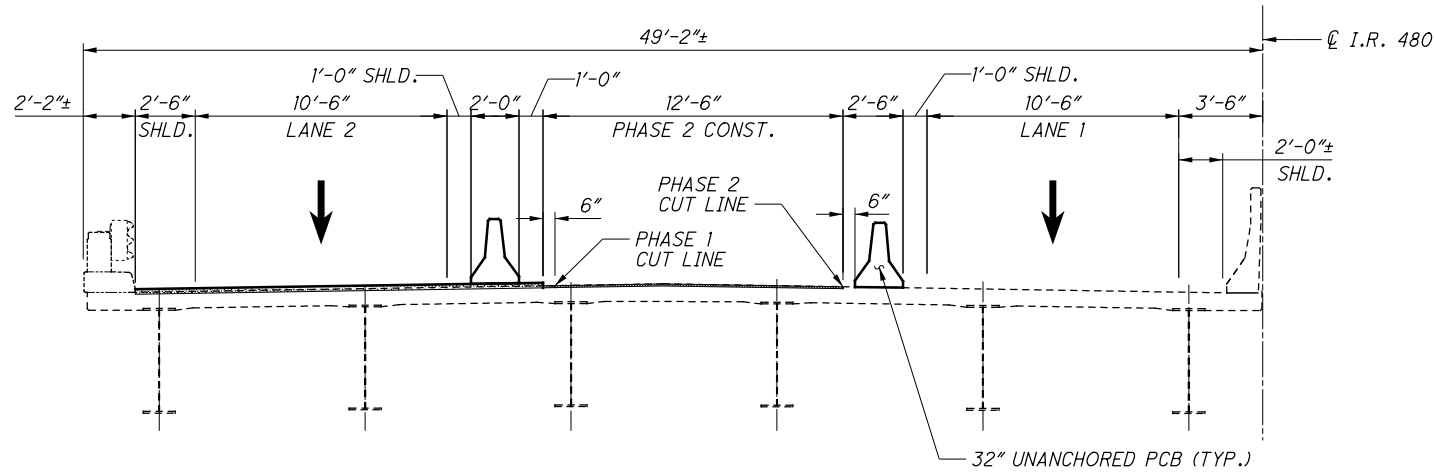
BRIDGE CUY-480-0805 (SFN 1812491)

BRIDGE CUY-480-0805 (SFN 1812491)					MADE BY: JH		DATE: 06/25/21		
					CHECKED BY: SAP		DATE: 06/25/21		
ITEM	EXTENSION	TOTAL	UNIT	ESTIMATED QUANTITIES (BRIDGE CUY-480-0805)				SEE SHEET NO.	
				DESCRIPTION	ABUT.	PIER	SUPER.		GEN.
202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN				LS	162/225
202	22901	134	SY	APPROACH SLAB REMOVED, AS PER PLAN				134	12/14
509	10000	17287	LB	EPOXY COATED REINFORCING STEEL	3223		14064		
509	20001	100	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				100	162/225
509	30020	7726	FT	NO. 4 GFRP DEFORMED BARS			7726		
510	10000	1014	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	292		722		
511	34445	13	CY	CLASS QC2 CONCRETE, BRIDGE DECK, AS PER PLAN			13		11/14
511	34449	88	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN			88		9/14, 10/14
511	44110	14	CY	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING	14				
512	10100	263	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)			263		
513	21501	2645	LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN			2645		162/225
516	11210	101	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			101		
516	13600	113	SF	1" PREFORMED EXPANSION JOINT FILLER			113		
518	12801	30	EACH	SCUPPER, MODIFICATION, AS PER PLAN			30		162/225
526	25000	252	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")				252	
526	90010	96	FT	TYPE A INSTALLATION				96	
847	10200	2538	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (T = 1.75")			2538		
847	20201	193	CY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN			193		4/14
847	30000	LS		TEST SLAB			LS		
847	30400	2539	SY	EXISTING CONCRETE OVERLAY REMOVED (T = 2.5")			2539		
847	50000	254	SY	HAND CHIPPING			254		

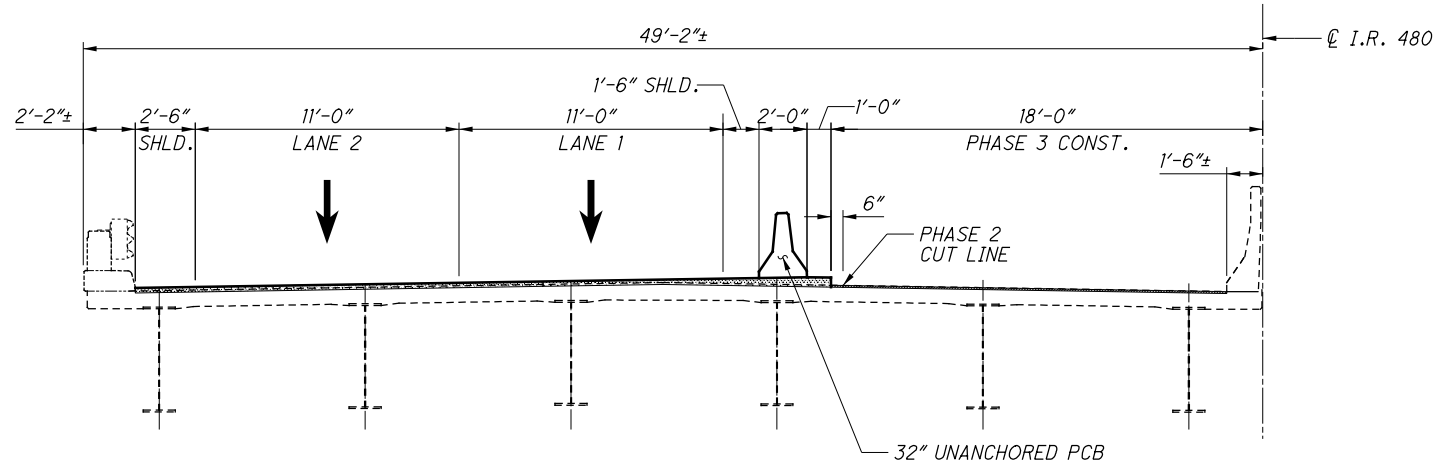
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PHASE 1 CONSTRUCTION AND TRAFFIC



PHASE 2 CONSTRUCTION AND TRAFFIC

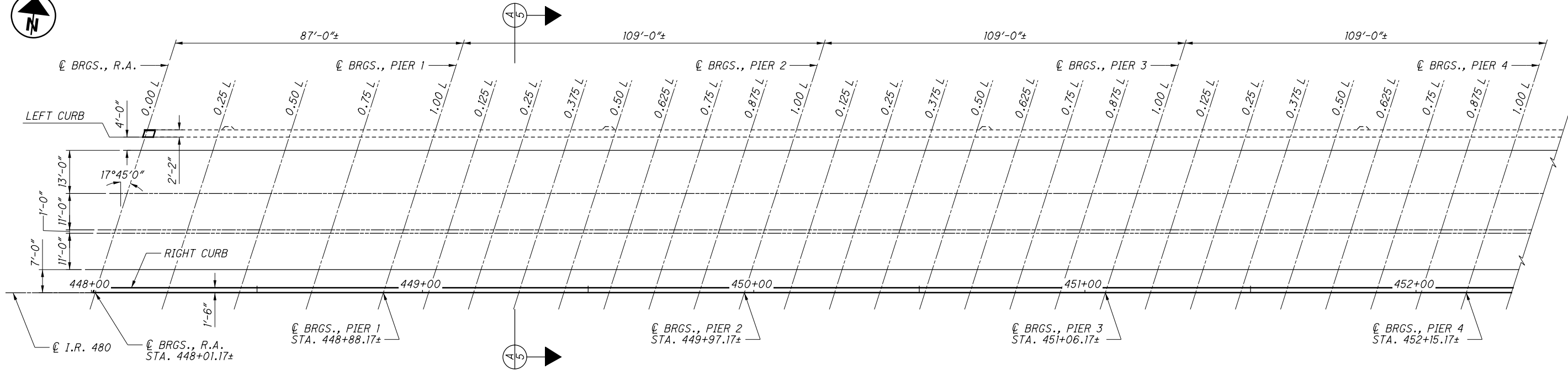


PHASE 3 CONSTRUCTION AND TRAFFIC

NOTES:
1. SEE SHEET 4/14 FOR PROPOSED FINAL TRANSVERSE SECTION.

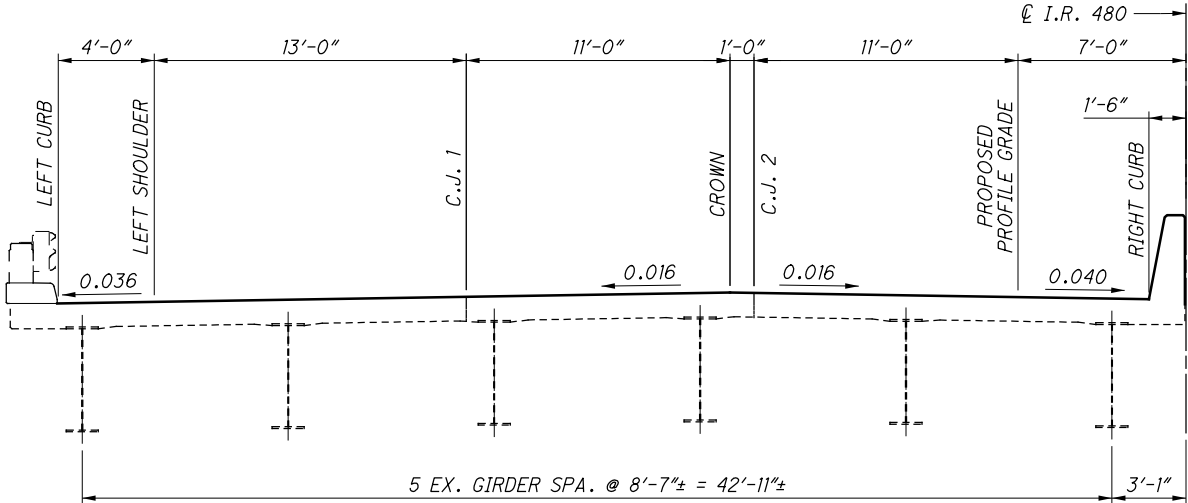
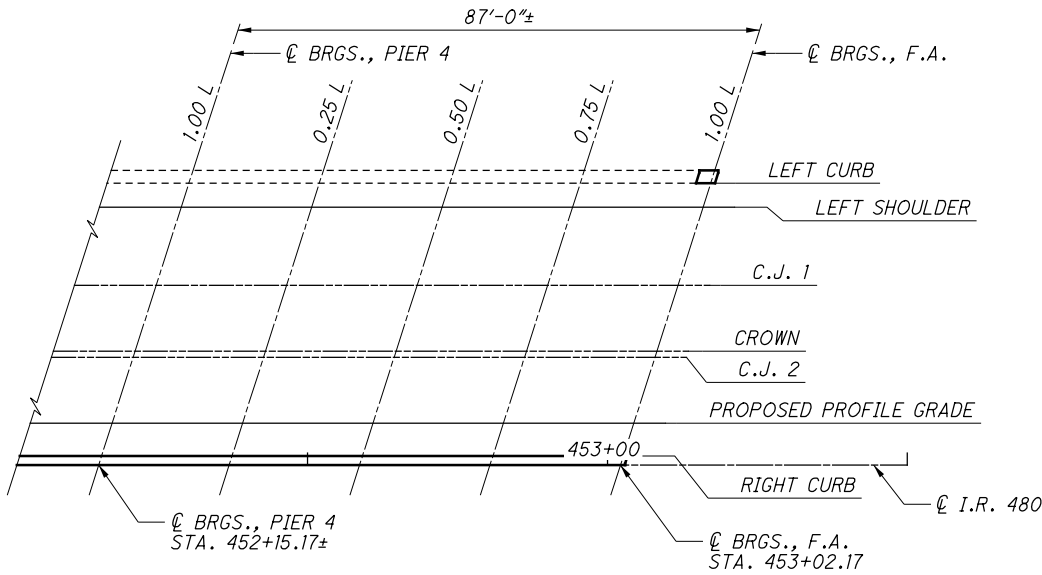
CUY-480-07.14 WB PID No. 108482	PHASED CONSTRUCTION SEQUENCE BRIDGE NO. CUY-480-0805 IR-480 WB OVER AIRPORT FREEWAY AND RAMPS				DESIGNED JH	DRAWN JCP	REVIEWED BMG	DATE 8/20/21	DESIGN AGENCY PATRICK ENGINEERING INC. 3650 OLENTANGY RIVER ROAD COLUMBUS, OHIO 43214
					CHECKED SAP	REVISED	STRUCTURE FILE NUMBER 1812491		

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SCREED LINE LAYOUT
L = SPAN LENGTH

NOTES:
1. SEE PROPOSED OVERLAY SURFACE ELEVATIONS TABLE ON SHEET 6/14.



SCREED LINE LOCATION (SECTION A-A)

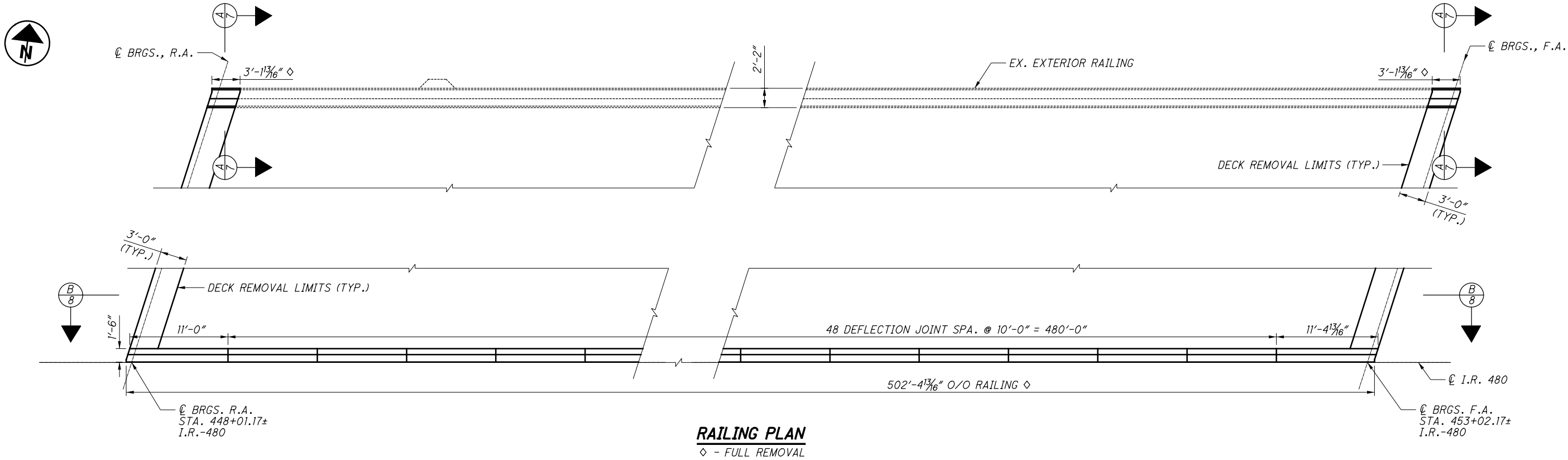
PORPOSED OVERLAY SURFACE ELEVATIONS															
		LEFT CURB		LEFT SHOULDER		C.J. 1		CROWN		C.J. 2		P/G		RIGHT CURB	
	OFFSET	47.00 FT		43.00 FT		30.00 FT		19.00 FT		18.00 FT		7.00 FT		1.54 FT	
	LOCATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
SPAN 1	0.00 L	448+16.21	815.90	448+14.93	816.02	448+10.77	816.14	448+07.25	816.24	448+06.93	816.22	448+03.41	815.97	448+01.66	815.72
	0.25 L	448+37.96	816.36	448+36.68	816.48	448+32.52	816.60	448+29.00	816.70	448+28.68	816.67	448+25.16	816.42	448+23.41	816.17
	0.50 L	448+59.71	816.82	448+58.43	816.94	448+54.27	817.06	448+50.75	817.16	448+50.43	817.14	448+46.91	816.88	448+45.16	816.63
	0.75 L	448+81.46	817.30	448+80.18	817.41	448+76.02	817.53	448+72.50	817.63	448+72.18	817.61	448+68.66	817.35	448+66.91	817.10
	1.00 L	449+03.21	817.77	449+01.93	817.89	448+97.77	818.01	448+94.25	818.11	448+93.93	818.08	448+90.41	817.83	448+88.66	817.57
SPAN 2	0.125 L	449+16.84	818.06	449+15.56	818.18	449+11.40	818.30	449+07.88	818.40	449+07.56	818.38	449+04.04	818.13	449+02.29	817.87
	0.250 L	449+30.46	818.35	449+29.18	818.47	449+25.02	818.59	449+21.50	818.69	449+21.18	818.67	449+17.66	818.41	449+15.91	818.16
	0.375 L	449+44.09	818.65	449+42.81	818.77	449+38.65	818.89	449+35.13	818.98	449+34.81	818.96	449+31.29	818.71	449+29.54	818.45
	0.500 L	449+57.71	818.95	449+56.43	819.07	449+52.27	819.19	449+48.75	819.28	449+48.43	819.26	449+44.91	819.01	449+43.16	818.75
	0.625 L	449+71.34	819.25	449+70.06	819.37	449+65.90	819.49	449+62.38	819.58	449+62.06	819.56	449+58.54	819.31	449+56.79	819.05
	0.750 L	449+84.96	819.55	449+83.68	819.67	449+79.52	819.78	449+76.00	819.88	449+75.68	819.86	449+72.16	819.61	449+70.41	819.35
	0.875 L	449+98.59	819.84	449+97.31	819.96	449+93.15	820.08	449+89.63	820.18	449+89.31	820.16	449+85.79	819.90	449+84.04	819.65
	1.00 L	450+12.21	820.13	450+10.93	820.25	450+06.77	820.37	450+03.25	820.47	450+02.93	820.45	449+99.41	820.20	449+97.66	819.94
SPAN 3	0.125 L	450+25.84	820.41	450+24.56	820.53	450+20.40	820.65	450+16.88	820.75	450+16.56	820.73	450+13.04	820.48	450+11.29	820.23
	0.250 L	450+39.46	820.69	450+38.18	820.81	450+34.02	820.93	450+30.50	821.04	450+30.18	821.01	450+26.66	820.76	450+24.91	820.51
	0.375 L	450+53.09	820.98	450+51.81	821.09	450+47.65	821.22	450+44.13	821.32	450+43.81	821.30	450+40.29	821.05	450+38.54	820.79
	0.500 L	450+66.71	821.25	450+65.43	821.37	450+61.27	821.49	450+57.75	821.60	450+57.43	821.57	450+53.91	821.33	450+52.16	821.07
	0.625 L	450+80.34	821.53	450+79.06	821.64	450+74.90	821.76	450+71.38	821.87	450+71.06	821.85	450+67.54	821.60	450+65.79	821.35
	0.750 L	450+93.96	821.81	450+92.68	821.93	450+88.52	822.05	450+85.00	822.15	450+84.68	822.13	450+81.16	821.88	450+79.41	821.62
	0.875 L	451+07.59	822.09	451+06.31	822.20	451+02.15	822.33	450+98.63	822.43	450+98.31	822.41	450+94.79	822.16	450+93.04	821.91
	1.00 L	451+21.21	822.36	451+19.93	822.48	451+15.77	822.60	451+12.25	822.71	451+11.93	822.68	451+08.41	822.44	451+06.66	822.18
SPAN 4	0.125 L	451+34.84	822.62	451+33.56	822.74	451+29.40	822.87	451+25.88	822.98	451+25.56	822.96	451+22.04	822.71	451+20.29	822.46
	0.250 L	451+48.46	822.88	451+47.18	823.00	451+43.02	823.13	451+39.50	823.24	451+39.18	823.22	451+35.66	822.97	451+33.91	822.72
	0.375 L	451+62.09	823.15	451+60.81	823.27	451+56.65	823.40	451+53.13	823.50	451+52.81	823.48	451+49.29	823.24	451+47.54	822.98
	0.500 L	451+75.71	823.42	451+74.43	823.54	451+70.27	823.66	451+66.75	823.77	451+66.43	823.75	451+62.91	823.50	451+61.16	823.25
	0.625 L	451+89.34	823.69	451+88.06	823.81	451+83.90	823.93	451+80.38	824.04	451+80.06	824.02	451+76.54	823.77	451+74.79	823.52
	0.750 L	452+02.96	823.96	452+01.68	824.08	451+97.52	824.21	451+94.00	824.31	451+93.68	824.29	451+90.16	824.04	451+88.41	823.79
	0.875 L	452+16.59	824.24	452+15.31	824.36	452+11.15	824.48	452+07.63	824.59	452+07.31	824.57	452+03.79	824.32	452+02.04	824.06
	1.00 L	452+30.21	824.52	452+28.93	824.64	452+24.77	824.76	452+21.25	824.87	452+20.93	824.84	452+17.41	824.60	452+15.66	824.34
SPAN 5	0.25 L	452+51.96	824.94	452+50.68	825.06	452+46.52	825.19	452+43.00	825.29	452+42.68	825.27	452+39.16	825.03	452+37.41	824.78
	0.50 L	452+73.71	825.38	452+72.43	825.50	452+68.27	825.62	452+64.75	825.73	452+64.43	825.70	452+60.91	825.46	452+59.16	825.20
	0.75 L	452+95.46	825.81	452+94.18	825.93	452+90.02	826.06	452+86.50	826.16	452+86.18	826.14	452+82.66	825.89	452+80.91	825.64
	1.00 L	453+17.21	826.26	453+15.93	826.37	453+11.77	826.50	453+08.25	826.60	453+07.93	826.58	453+04.41	826.33	453+02.66	826.08

* - OFFSET FROM C I.R. 480
L = SPAN LENGTH

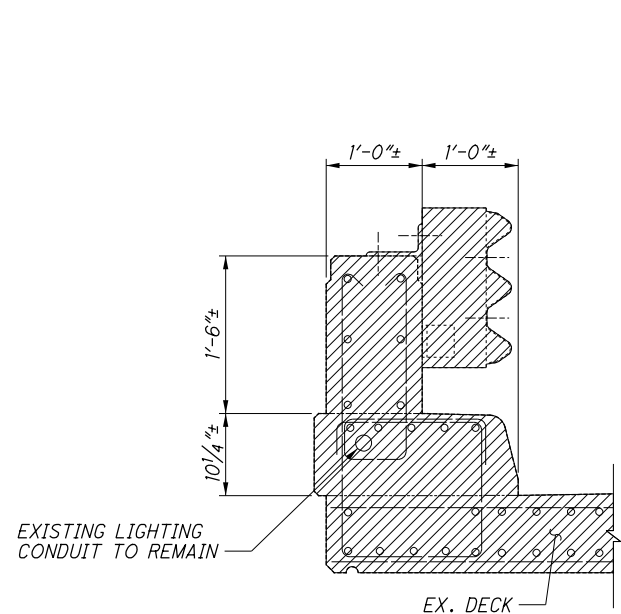
NOTES:

1. SEE SCREED LINE LAYOUT PLAN AND LOCATION SECTION ON SHEET [5/14].

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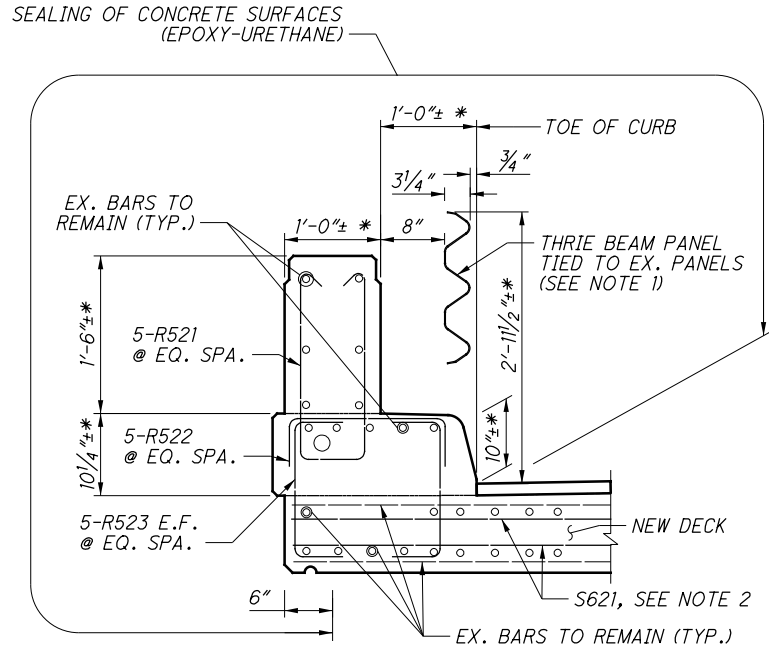


RAILING PLAN
◇ - FULL REMOVAL



REMOVAL DETAILS

ALL EXPOSED EX. LONGITUDINAL BARS ABOVE DECK TO REMAIN
EX. LONGITUDINAL AND TRANSVERSE BARS IN DECK TO REMAIN



PROPOSED PARAPET

* - MATCH EX. PARAPET DIMENSIONS

NOTES:

1. THRIE BEAM PANEL TO BE REUSED AND INCORPORATED IN THE PROPOSED STRUCTURE. PAYMENT INCLUDED WITH ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.
2. SEE EXPANSION JOINT PLANS ON SHEETS 11/14 AND 12/14 FOR DETAILS.

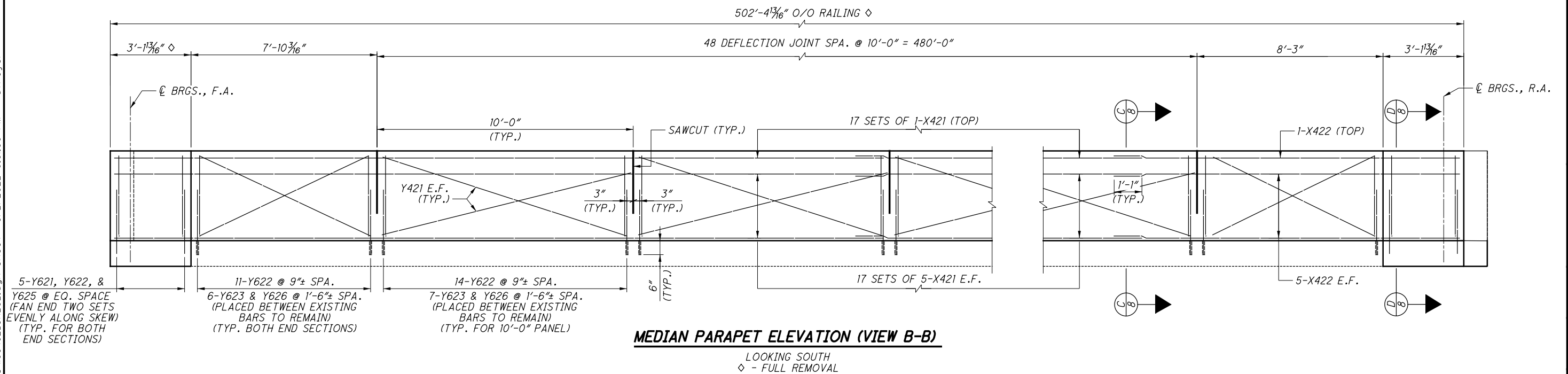
LEGEND:

E.F. - EACH FACE
F.F. - FRONT FACE
R.F. - REAR FACE
[Hatched Box] - REMOVAL

SECTION A-A

(EXTERIOR PARAPET DETAILS - FULL REMOVAL SECTION)
(TYP. FOR BOTH ENDS)

CUY-480-07.14 WB PID No. 108482	PARAPET DETAILS-1 BRIDGE NO. CUY-480-0805 IR-480 WB OVER AIRPORT FREEWAY AND RAMPS				DESIGN AGENCY PATRICK ENGINEERING INC. 3650 OLENTANGY RIVER ROAD COLUMBUS, OHIO 43214	
	DESIGNED JH		DRAWN JCP		REVIEWED BMG	
	CHECKED SAP		STRUCTURE FILE NUMBER 1812491		DATE 8/20/21	
	184 225		9 / 14			

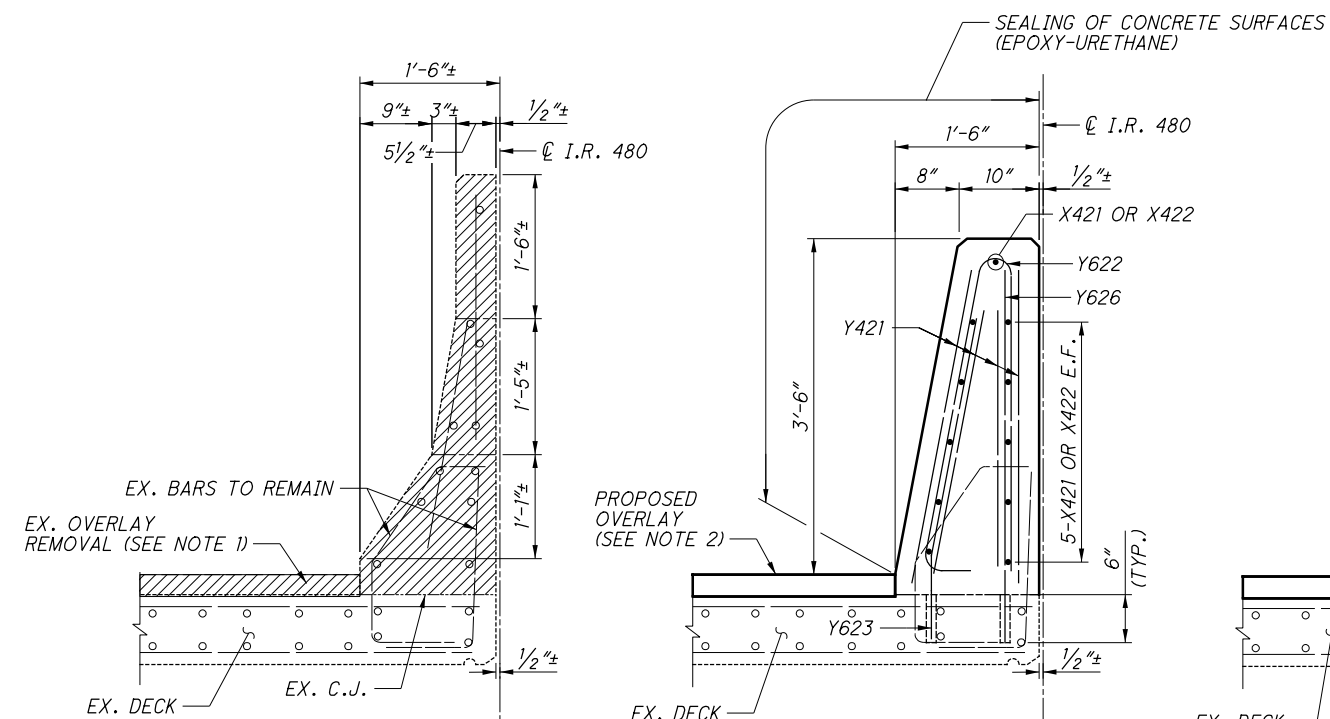


LEGEND:

E.F. - EACH FACE
F.F. - FRONT FACE
R.F. - REAR FACE
 - REMOVAL
 - SAWCUT

NOTES:

1. SEE SHEET 4/14 FOR EXISTING DECK WEARING SURFACE REMOVAL DETAILS.
2. SEE SHEET 6/14 FOR NEW DECK OVERLAY THICKNESS DETAILS.
3. SEE SHEET 7/14 FOR LOCATION OF VIEW B-B.

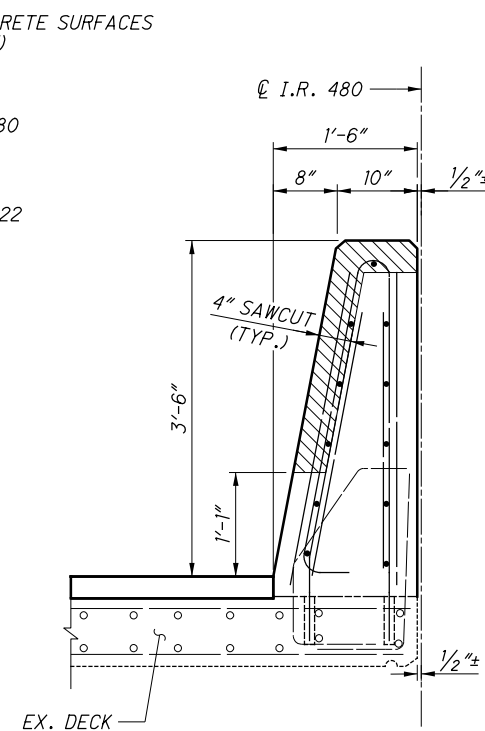


REMOVAL DETAILS

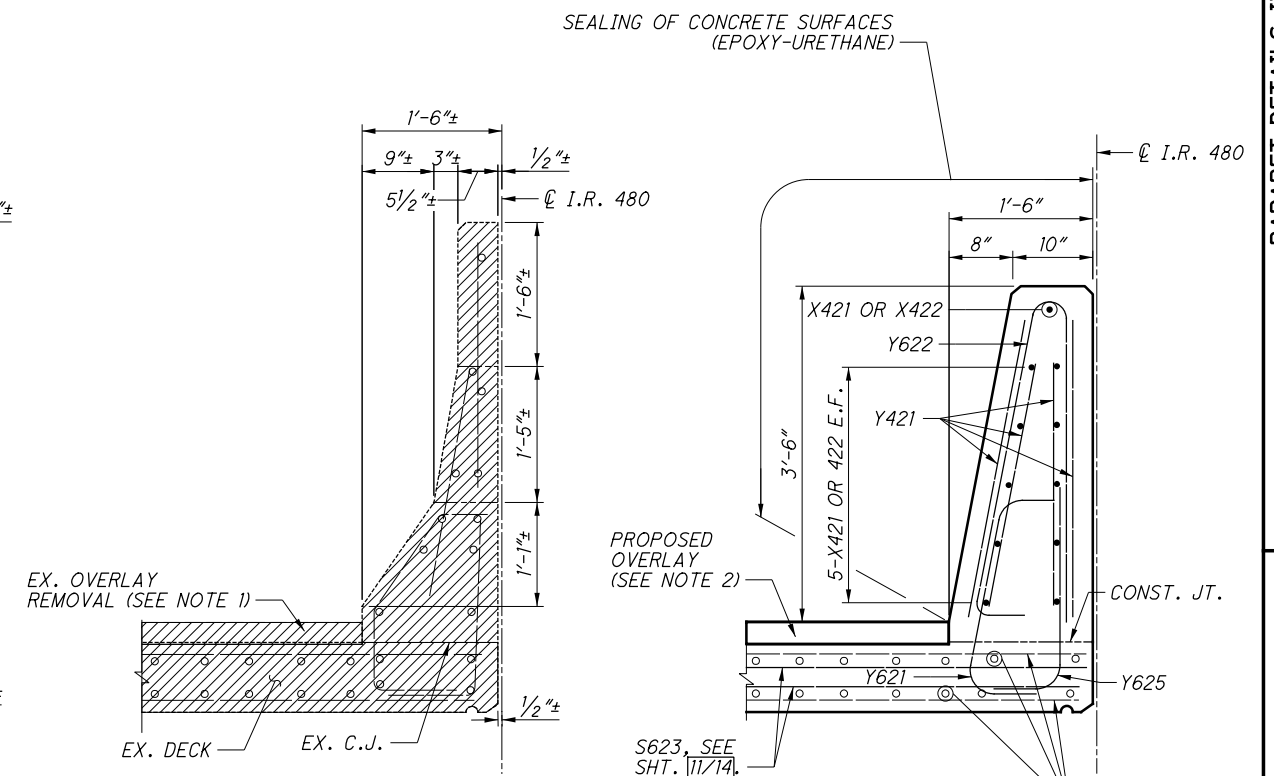
PROPOSED PARAPET

SECTION C-C

(MEDIAN PARAPET DETAILS - FULL REMOVAL SECTION)



AT DEFLECTION JOINT



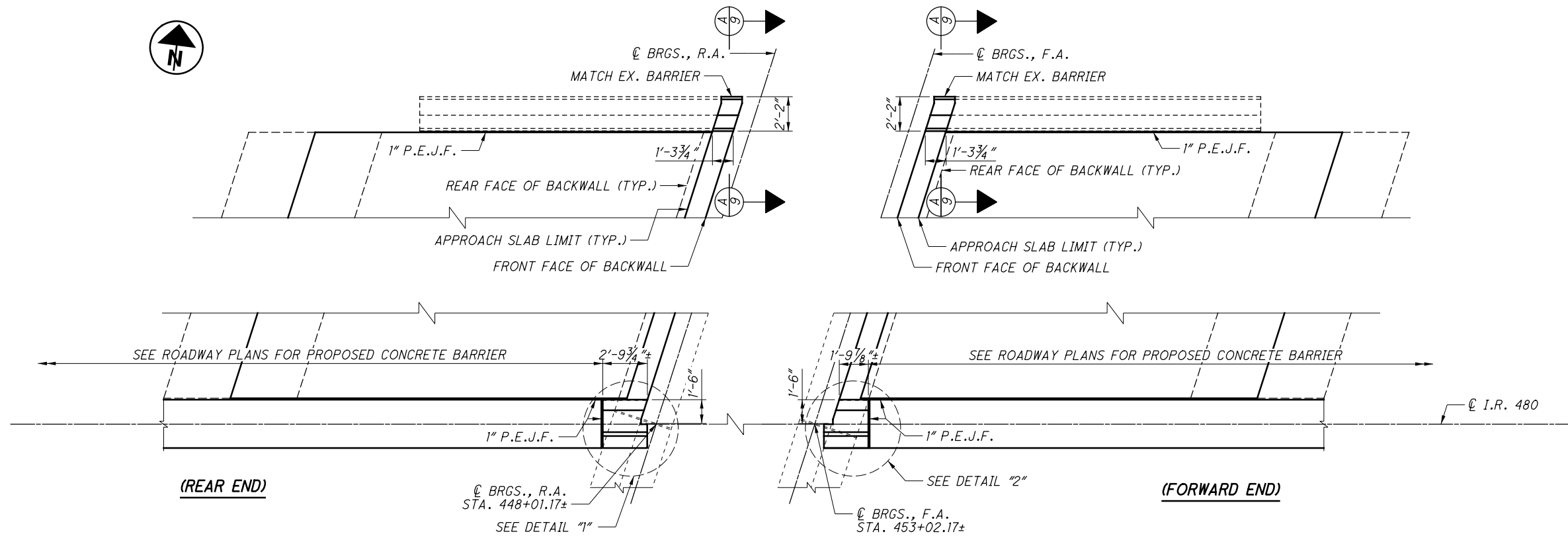
REMOVAL DETAILS

PROPOSED PARAPET

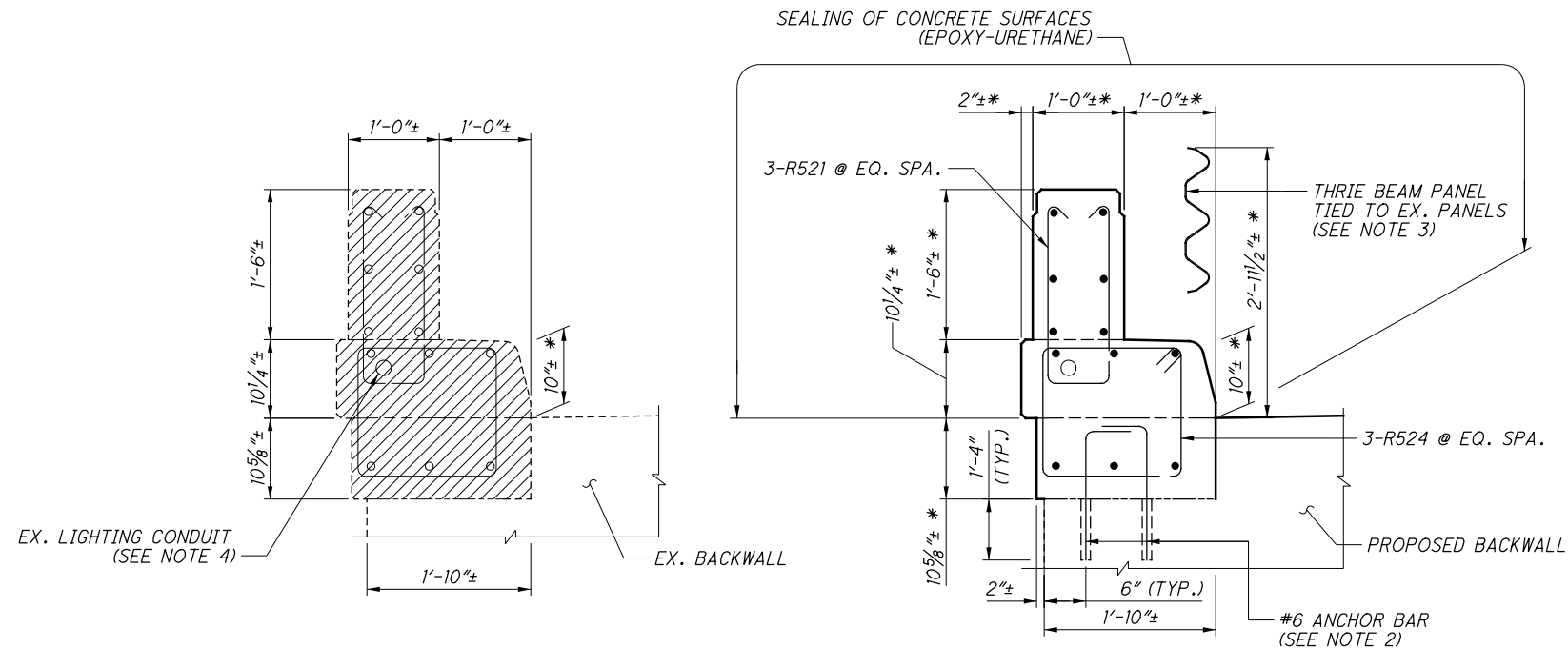
SECTION D-D

(MEDIAN PARAPET DETAILS - FULL REMOVAL SECTION)
(DECK REMOVAL TYP. BOTH SECTIONS)

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ABUTMENT BACKWALL AND WINGWALL PARAPET PLAN



ABUTMENT WINGWALL REMOVAL DETAILS

ALL EXPOSED EX. LONGITUDINAL BARS ARE TO REMAIN

PROPOSED ABUTMENT BACKWALL PARAPET

* - MATCH EX. PARAPET DIMENSIONS

NOTES:

- SEE PAGE 10/14 FOR DETAIL 1 AND DETAIL 2.
- DOWEL 4 #6 BARS WITH STANDARD HOOK INTO THE EXISTING BACKWALL FOR ANCHORING THE NEW BARRIER WITH THE ABUTMENT. INCLUDE DOWELS WITH ITEM 511, CLASS QC2 CONCRETE, BRIDGE DECK PARAPET, AS PER PLAN, FOR PAYMENT.
- THRIE BEAM PANEL TO BE REUSED AND INCORPORATED IN PROPOSED STRUCTURE. PAYMENT INCLUDED WITH ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.
- CONTRACTOR MUST REPLACE PORTION OF WINGWALL LIGHTING CONDUIT AS REQUIRED TO CONNECT TO EXISTING LIGHTING CONDUIT LOCATION IN THE BRIDGE PARAPET AND PROVIDE AN EXPANSION FITTING TO ALLOW FOR CONDUIT EXPANSION BETWEEN SUPERSTRUCTURE AND WINGWALL PARAPET. SEE EXISTING PLANS FOR CONDUIT LOCATION. COST INCLUDED WITH ITEM 511, CLASS QC2 CONCRETE, BRIDGE DECK PARAPET, AS PER PLAN. FOR WIRING DETAILS SEE LIGHTING PLANS.

SECTION A-A

(EXTERIOR APPROACH PARAPET DETAILS - FULL REMOVAL SECTION)
(TYP. FOR BOTH ENDS)

DESIGN AGENCY
PATRICK ENGINEERING INC.
3650 OLENTANGY RIVER ROAD
COLUMBUS, OHIO 43214

DATE
8/20/21
REVIEWED
BMG
STRUCTURE FILE NUMBER
1812491

DRAWN
JCP
CHECKED
SAP
REVISED

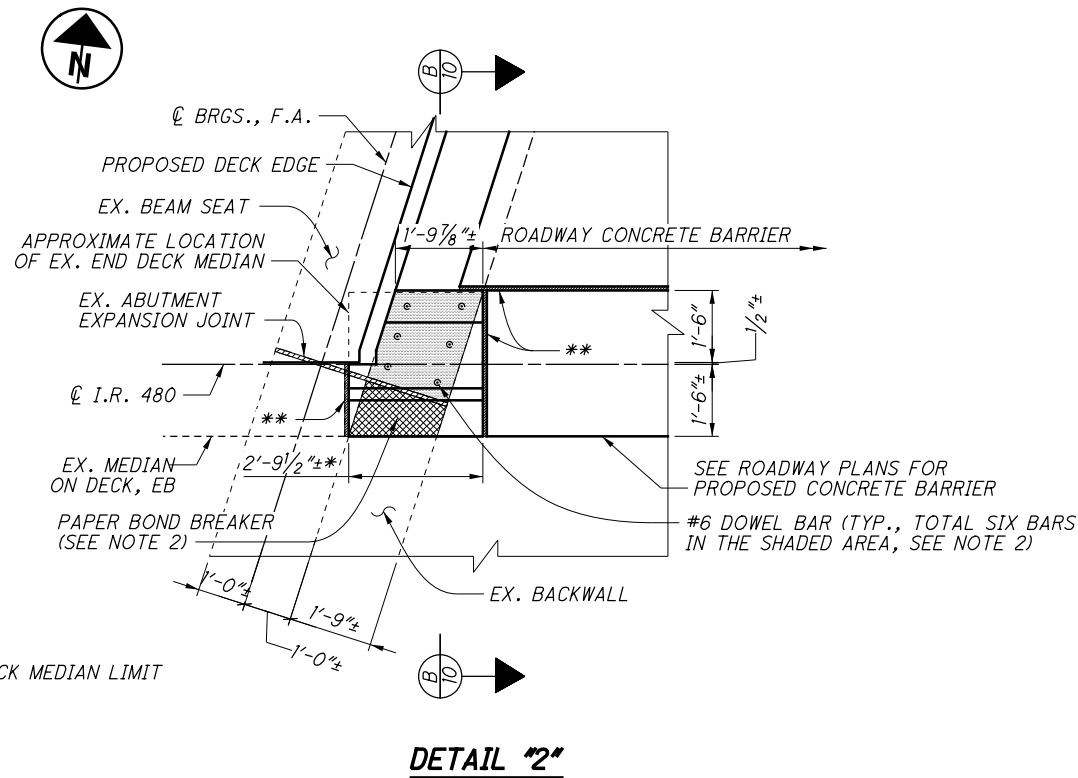
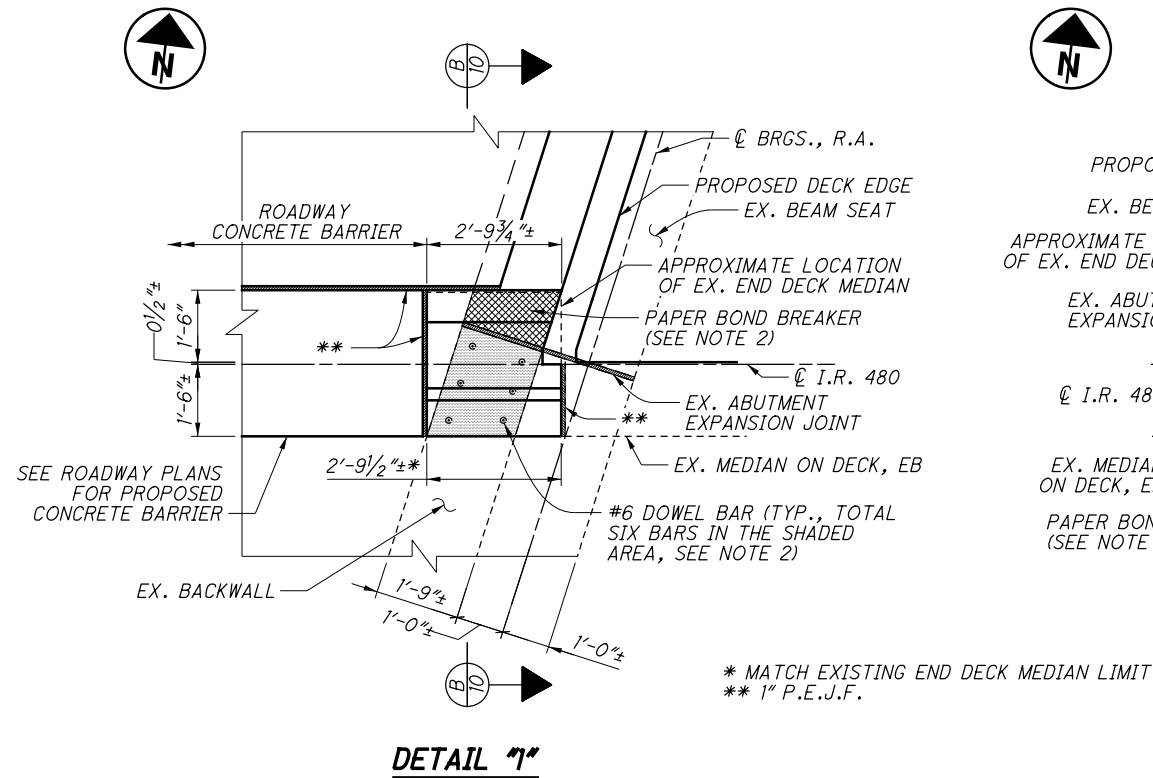
ABUTMENT BACKWALL AND WINGWALL RAILING DETAILS - I
BRIDGE NO. CUY-480-0805
IR-480 WB OVER AIRPORT FREEWAY AND RAMPS

CUY-480-07.14 WB
PID No. 108482

9/14

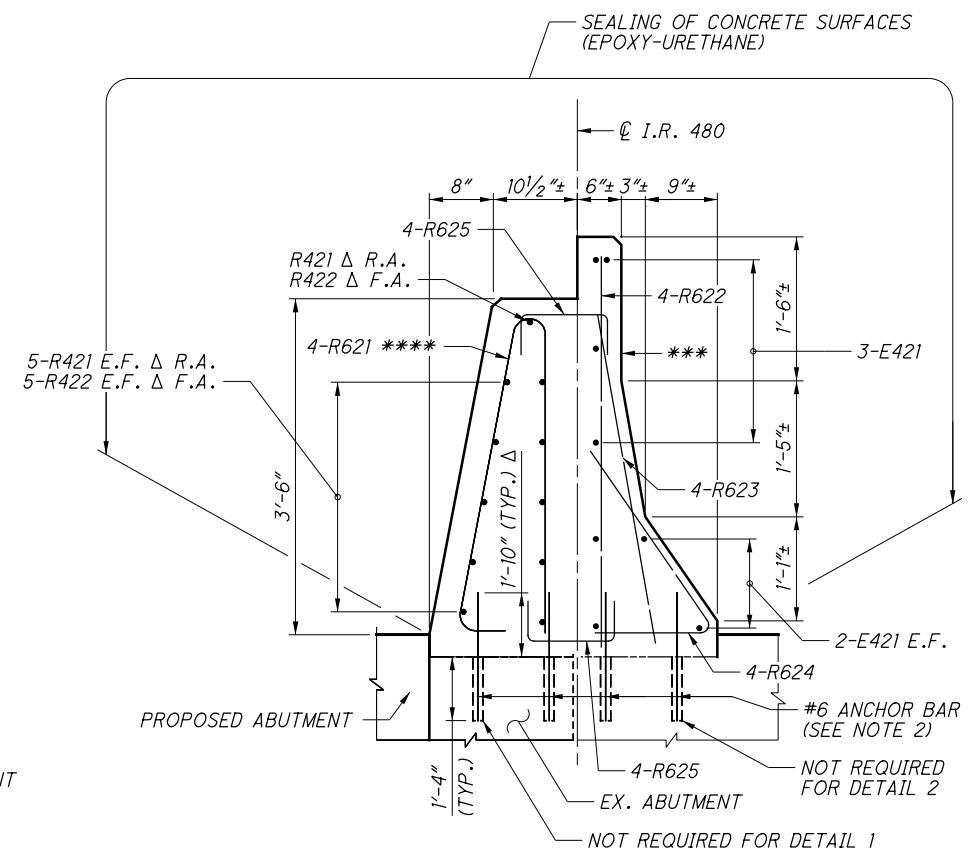
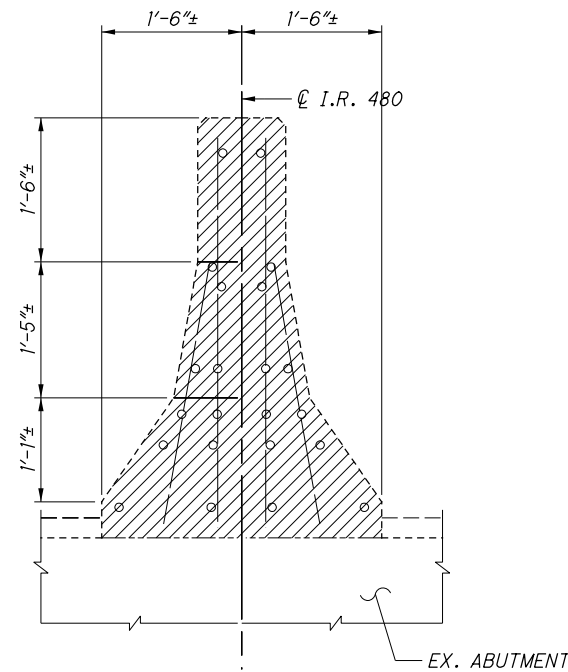
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LEGEND:

- E.F. - EACH FACE
F.F. - FRONT FACE
R.F. - REAR FACE
- REMOVAL
- AREAS FOR ADDITIONAL DOWEL BARS (SEE NOTE 2)
- AREAS FOR PAPER BOND BREAKER (SEE NOTE 2)



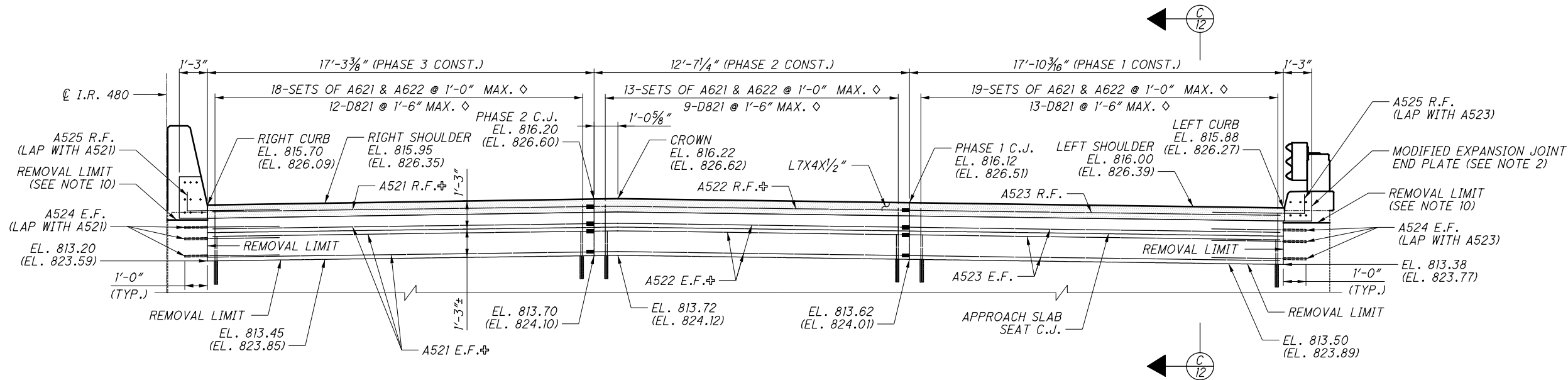
NOTES:

1. SEE STANDARD DRAWING SBR-1-20 FOR ADDITIONAL SINGLE SLOPE CONCRETE BRIDGE RAILING DETAILS AND NOTES.
2. THE SHADED AREA IS THE LIMIT WHERE THE NEW END DECK MEDIAN AND EXISTING ABUTMENT BACKWALL INTERSECT. DOWEL SIX #6 BARS EVENLY IN THE AREA AS SPECIFIED INTO THE EXISTING BACKWALL FOR ANCHORING THE NEW MEDIAN WITH THE ABUTMENT. PLACE PAPER BOND BREAKER IN THE AREA SPECIFIED BETWEEN THE MEDIAN BARRIER AND THE EXISTING ABUTMENT BACKWALL. INCLUDE THESE WITH ITEM 511, CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN, FOR PAYMENT.

ABUTMENT BACKWALL MEDIAN SECTIONS (SECTION B-B)

- Δ - FIELD CUT AS NECESSARY
*** - MATCH EX. EAST BOUND MEDIAN PROFILE
**** - PLACE BAR CLOSEST TO EXPANSION JOINT ALONG SKEW

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LEGEND:

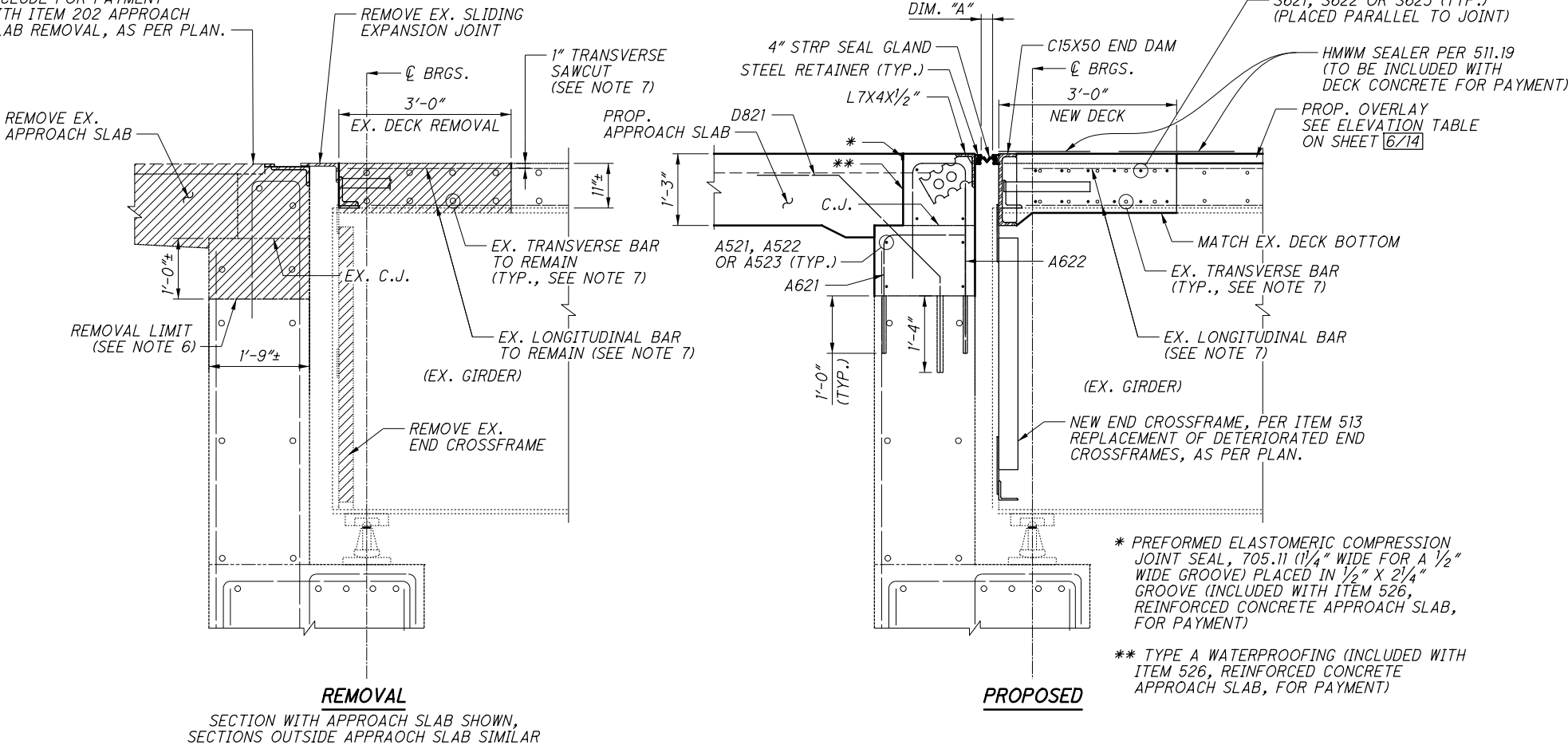
- ⊕ - BARS WITH MECHANICAL CONNECTORS
- ◇ - PLACE BAR ALONG SKEW
- E.F. - EACH FACE
- R.F. - REAR FACE
- ▨ - REMOVAL

AMBIENT TEMPERATURE °F	DIMENSION "A"
30°	2 9/16"
40°	2 3/8"
50°	2 3/16"
60°	1 5/16"
70°	1 1/2"
80°	1 9/16"
90°	1 3/8"

EXPANSION JOINT AND BACKWALL ELEVATION (VIEW B-B)

REAR ABUTMENT SHOWN, FORWARD ABUTMENT SIMILAR
ELEVATIONS SHOWN IN () ARE FOR FORWARD ABUTMENT
LOOKING DOWN-STATION

REMOVE ASPHALT OVERLAY.
INCLUDE FOR PAYMENT
WITH ITEM 202 APPROACH
SLAB REMOVAL, AS PER PLAN.



NOTES:

- STRIP SEAL GLAND SIZE IS 4" FOR BOTH EXPANSION JOINTS.
- SEE STD. DWG. EXJ-4-87 FOR ADDITIONAL STRIP SEAL EXPANSION JOINT NOTES & DETAILS. THE EXPANSION JOINT END PLATE AT THE EXTERIOR PARAPET SHALL BE MODIFIED TO BE FLUSH WITH THE TOP AND FRONT EDGES OF THE EXISTING SAFETY CURB (BR-I-65). ADJUST THE STEEL RATAINER BEND UP ANGLE AS NEEDED TO LEAVE A 1" MINIMUM CLEARANCE FROM THE PLATE TOP EDGE.
- SEE STD. DWG. GSD-I-19 FOR ADDITIONAL END CROSSFRAME NOTES & DETAILS.
- THE COSTS INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, TOOLS AND INCIDENTALS FOR FURNISHING AND INSTALLING STRIP SEAL EXPANSION JOINT (INCLUDING END DAMS AND END PLATES) AS SPECIFIED IN THE PLANS ARE INCLUDED IN ITEM 516, STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, FOR PAYMENT.
- THE COSTS INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, TOOLS AND INCIDENTALS FOR FURNISHING AND INSTALLING STEEL END CROSSFRAMES AS SPECIFIED IN THE PLANS ARE INCLUDED IN ITEM 513, REPLACEMENT OF DETERIORATED END CROSSFRAMES, FOR PAYMENT.
- SEE ELEVATION VIEWS FOR REMOVAL LIMIT ELEVATIONS.
- AREAS OF THE EXISTING DECK SPECIFIED TO BE REMOVED ON THE PLANS SHALL BE REMOVED FULL DEPTH. AFTER THE OVERLAY REMOVAL IS COMPLETE, REMOVE DECK CONCRETE PER CUT LINE CONSTRUCTION JOINT PREPARATION NOTE ON SHEET 162/225 . ALL EXPOSED EXISTING LONGITUDINAL AND TRANSVERSE BARS SHALL BE CLEANED AND STRAIGHTENED FOR REUSE.
- THE APPROACH SLAB SEAT AND BACKWALL CONCRETE SHALL BE PROPERLY CURED FOR AT LEAST THREE DAYS BEFORE THE APPROACH SLAB AND WATERPROOFING CAN BE PLACED.
- FOR LOCATION OF VIEW B-B, SEE SHEET 171/14.
- CONTRACTOR MUST ADJUST REMOVAL LIMIT AT THE TOP OF THE WINGWALL OR ABUTMENT BACKWALL TO ASSURE THAT THE NEW EXPANSION JOINT END PLATE CAN BE INSTALLED PROPERLY.

SECTION C-C

DESIGN AGENCY
PATRICK ENGINEERING INC.
3650 OLENTANGY RIVER ROAD
COLUMBUS, OHIO 43214

DATE
8/20/21
REVIEWED
BMG
STRUCTURE FILE NUMBER
1812491

DRAWN
JCP
REVIS
SAP

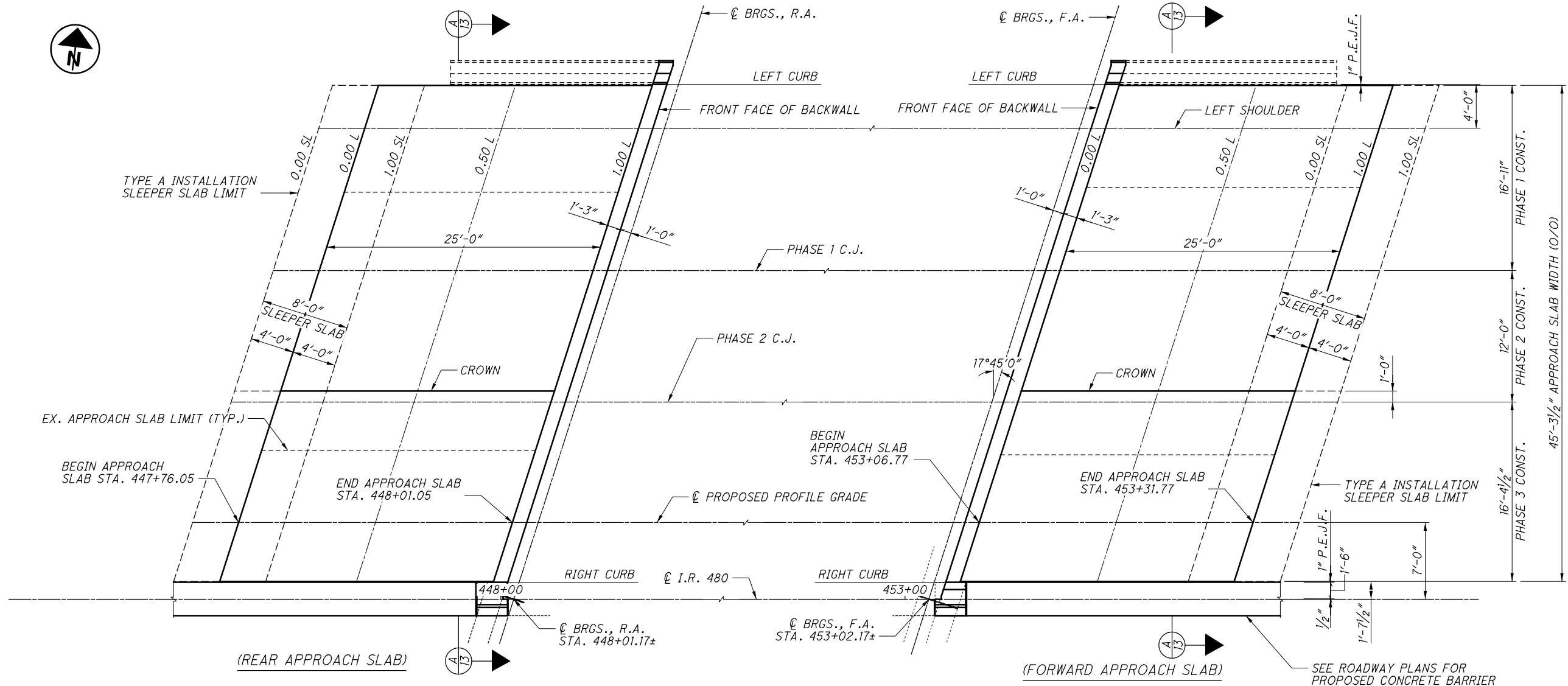
EXPANSION JOINT DETAILS - II
BRIDGE NO. CUY-480-0805
IR-480 WB OVER AIRPORT FREEWAY AND RAMPS

CUY-480-07-14 WB
PID No. 108482

12 / 14

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LEGEND:

L = APPROACH SLAB LENGTH
SL = SLEEPER SLAB LENGTH

NOTES:

- SEE STANDARD DRAWING AS-1-15 FOR ADDITIONAL REINFORCED CONCRETE APPROACH SLAB NOTES AND DETAILS.
- SEE STANDARD DRAWING AS-2-15 FOR ADDITIONAL APPROACH SLAB INSTALLATION NOTES AND DETAILS.

APPROACH SLAB PLAN

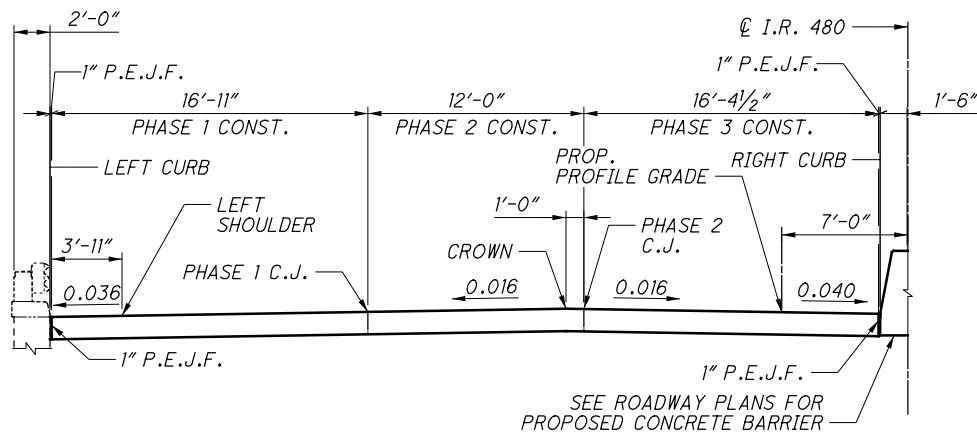
APPROACH SLAB ELEVATIONS

OFFSET **	LEFT CURB *		LEFT SHOULDER		C.J. 1		CROWN		C.J. 2		P/G		RIGHT CURB *	
	47.00 FT		43.00 FT		30.00 FT		19.00 FT		18.00 FT		7.00 FT		1.54 FT	
LOCATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
0.00 L	447+88.85	815.33	447+87.57	815.45	447+83.41	815.57	447+79.89	815.67	447+79.57	815.65	447+76.05	815.40	447+74.30	815.15
0.50 L	448+01.35	815.59	448+00.07	815.71	447+95.91	815.83	447+92.39	815.93	447+92.07	815.91	447+88.55	815.66	447+86.80	815.41
1.00 L	448+13.85	815.85	448+12.57	815.97	448+08.41	816.09	448+04.89	816.19	448+04.57	816.17	448+01.05	815.92	447+99.30	815.67
0.00 L	453+19.58	826.30	453+18.30	826.42	453+14.14	826.54	453+10.61	826.65	453+10.29	826.63	453+06.77	826.38	453+05.03	826.12
0.50 L	453+32.08	826.56	453+30.80	826.68	453+26.64	826.80	453+23.11	826.90	453+22.79	826.88	453+19.27	826.63	453+17.53	826.38
1.00 L	453+44.58	826.83	453+43.30	826.95	453+39.14	827.07	453+35.61	827.17	453+35.29	827.14	453+31.77	826.89	453+30.03	826.64

SLEEPER SLAB ELEVATIONS

OFFSET **	LEFT CURB *		LEFT SHOULDER		C.J. 1		CROWN		C.J. 2		P/G		RIGHT CURB *	
	47.00 FT		43.00 FT		30.00 FT		19.00 FT		18.00 FT		7.00 FT		1.54 FT	
LOCATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
0.00 L	447+84.65	813.99	447+83.37	814.11	447+79.21	814.23	447+75.69	814.34	447+75.37	814.31	447+71.85	814.06	447+70.10	813.81
1.00 L	447+93.05	814.17	447+91.77	814.29	447+87.61	814.41	447+84.09	814.51	447+83.77	814.49	447+80.25	814.24	447+78.50	813.98
0.00 L	453+40.38	825.49	453+39.10	825.61	453+34.94	825.73	453+31.41	825.83	453+31.09	825.81	453+27.57	825.55	453+25.83	825.30
1.00 L	453+48.78	825.67	453+47.50	825.78	453+43.34	825.90	453+39.81	826.01	453+39.49	825.98	453+35.97	825.73	453+34.23	825.48

*- ELEVATIONS GIVEN AT FRONT OF PARAPETS
**- OFFSET FROM \varnothing I.R. 480



SCREED LINE LOCATIONS (SECTION A-A)

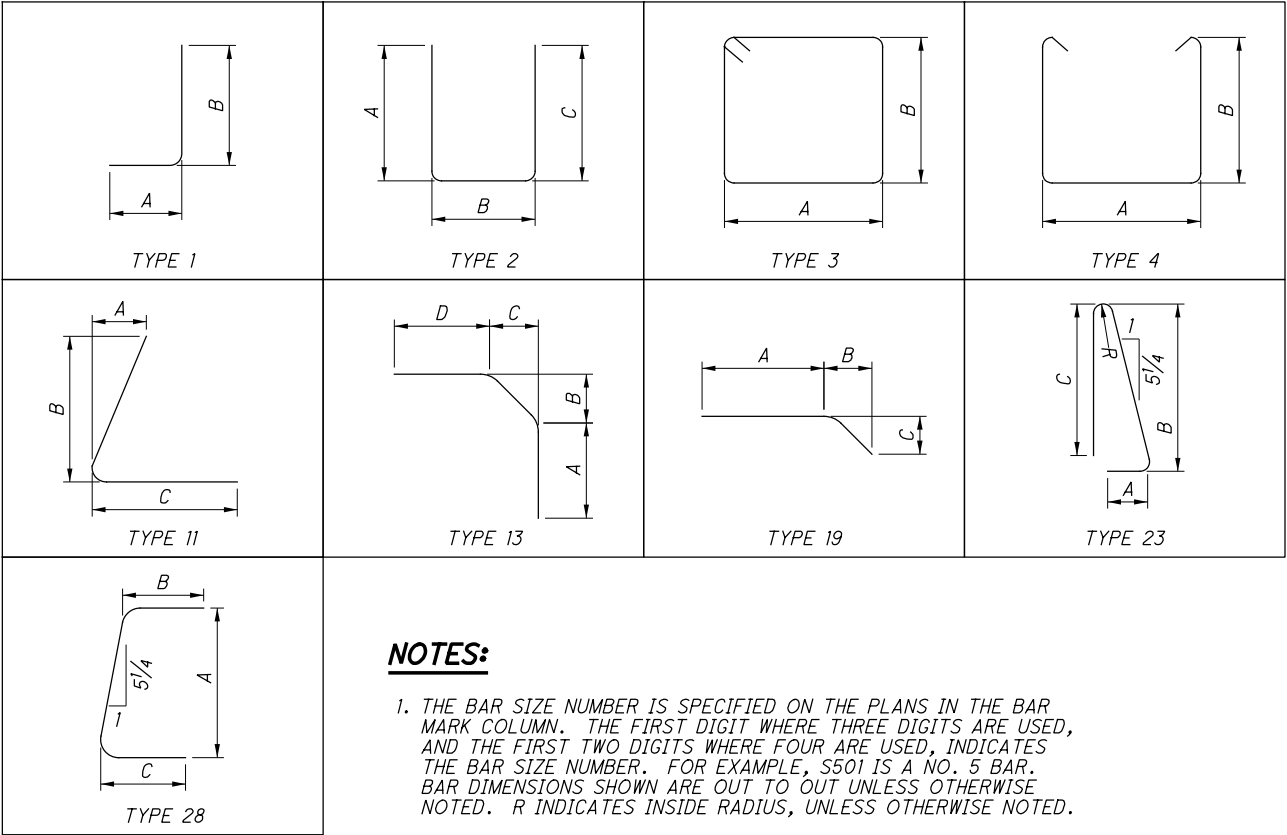
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BRIDGE CUY-480-0805 (SFN 1812491)

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
BRIDGE 0805 ABUTMENT REBAR											
A521 ⚡	14	17'-2"	251	STR							
A522 ⚡	14	12'-7"	184	STR							
A523 ⚡	14	17'-8"	258	STR							
A524 ⬤	24	3'-8"	92	STR							
A525	4	4'-5"	19	1	3'-8"	0'-10"					
A621 ⬤	100	3'-4"	501	1	2'-1"	1'-5"					
A622 ⬤	100	5'-11"	889	2	3'-3"	0'-11"	2'-1"				
D821 ⬤	68	5'-8"	1029	13	1'-6"	2'-0"	2'-0"	1'-5"			
SUB-TOTAL = 3223 LBS											
BRIDGE 0805 DECK REBAR											
S621 ⚡	24	19'-11"	718	STR							
S622 ⚡	24	12'-7"	454	STR							
S623 ⚡	24	18'-10"	679	STR							
SUB-TOTAL = 1851 LBS											
BRIDGE 0805 PARAPET REBAR											
E421	14	2'-5"	23	STR							
R421	11	2'-5"	18	STR							
R422	11	1'-10"	14	STR							
R521	16	5'-4"	90	4	0'-8"	2'-0"					
R522	10	2'-3"	24	2	0'-6"	1'-6"	0'-6"				
R523	20	2'-3"	47	2	0'-8"	1'-2"	0'-8"				
R524	6	6'-4"	40	3	1'-4"	1'-6"					
R621	8	7'-0"	85	23	0'-6"	3'-3"	3'-3"			0'-2"	
R622	8	4'-0"	49	STR							
R623	8	3'-4"	41	STR							
R624	8	3'-1"	38	11	1'-2"	1'-8"	1'-2"				
R625	16	2'-8"	65	2	1'-0"	1'-0"	1'-0"				
Y621	10	3'-5"	52	28	1'-11"	0'-9"	1'-1"				
Y622	704	7'-0"	7402	23	0'-6"	3'-3"	3'-3"			0'-2"	
Y623 ⬤	348	4'-0"	2091	19	0'-7"	3'-4"	0'-7 1/2"				
Y625	10	2'-10"	43	1	1'-1"	1'-11"					
Y626 ⬤	348	4'-0"	2091	STR							
SUB-TOTAL = 12213 LBS											
REBAR TOTAL = 17287 LBS											

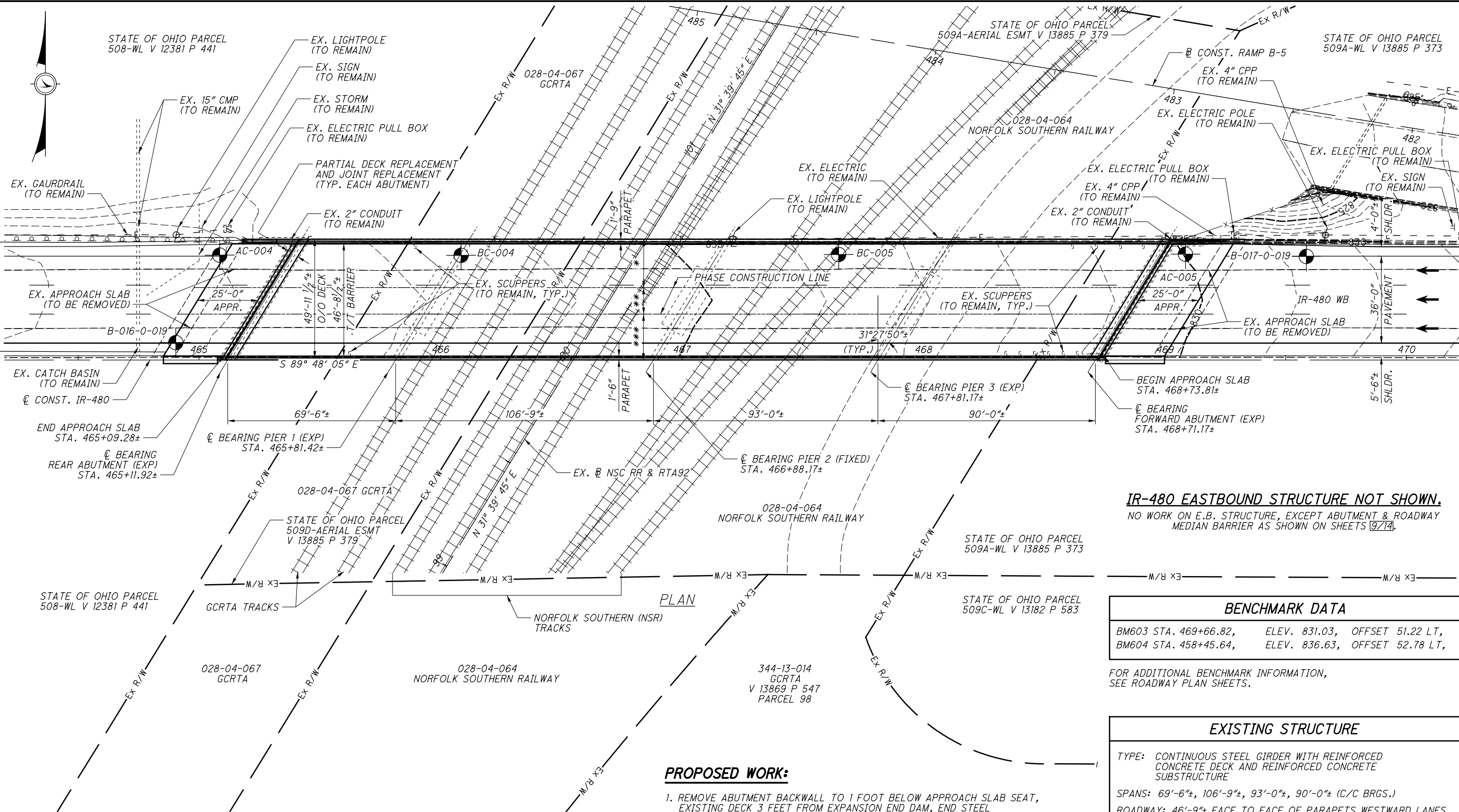
- ⚡ - REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR. BAR LENGTH ADJUSTMENT AND/OR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF CONNECTOR USED.
- ⬤ - REINFORCING BARS WITH DOWELS

MARK	NUMBER	LENGTH	TOTAL LENGTH	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
BRIDGE 0805 PARAPET GFRP											
X421	187	30'-0"	5610	STR							
X422	11	10'-6"	116	STR							
Y421	200	10'-0"	2000	STR							
GFRP TOTAL =			7726 FT								



- NOTES:**
- THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK 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, S501 IS A NO. 5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.
 - ALL REINFORCING STEEL SHALL BE EPOXY COATED.
 - "STR" IN THE TYPE COLUMN INDICATES STRAIGHT BARS.
 - "S.O." DENOTES SERIES OF.
 - REFER TO C.M.S. SECTION 509.05 FOR STANDARD BEND DIMENSIONS.
 - ALL REINFORCING STEEL CLEARANCES ARE 2" UNLESS OTHERWISE NOTED.
 - GLASS FIBER REINFORCED POLYMER (GFRP) REINFORCEMENT SHALL BE PAID FOR BY TOTAL LENGTH IN FEET AND SHALL BE INCLUDED WITH CONTRACT PRICE FOR ITEM 509 - NO. 4 GFRP DEFORMED BARS FOR PAYMENT.

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IR-480 EASTBOUND STRUCTURE NOT SHOWN.
NO WORK ON E.B. STRUCTURE, EXCEPT ABUTMENT & ROADWAY
MEDIAN BARRIER AS SHOWN ON SHEETS 9/14.

BENCHMARK DATA			
BM603 STA. 469+66.82,	ELEV. 831.03,	OFFSET 51.22 LT,	
BM604 STA. 458+45.64,	ELEV. 836.63,	OFFSET 52.78 LT,	

FOR ADDITIONAL BENCHMARK INFORMATION,
SEE ROADWAY PLAN SHEETS.

EXISTING STRUCTURE	
TYPE: CONTINUOUS STEEL GIRDER WITH REINFORCED CONCRETE DECK AND REINFORCED CONCRETE SUBSTRUCTURE	
SPANS: 69'-6"±, 106'-9"±, 93'-0"±, 90'-0"± (C/C BRGS.)	
ROADWAY: 46'-9"± FACE TO FACE OF PARAPETS WESTWARD LANES	
LOADING: HS20-44	
SKEW: 31°-27'-50"± LEFT FORWARD	
WEARING SURFACE: 1.2"± MONOLITHIC CONCRETE	
APPROACH SLABS: AS-1-72 (25'± LONG)	
ALIGNMENT: TANGENT	
CROWN: 3/8"± IN/FT	
STRUCTURAL FILE NUMBER: 1814206	
DATE BUILT: 7/01/1980	
DISPOSITION: SEE PROPOSED WORK NOTE	
COORDINATES: LATITUDE: 41°25'14.35" LONGITUDE: 81°49'23.77"	

PROPOSED WORK:

1. REMOVE ABUTMENT BACKWALL TO 1 FOOT BELOW APPROACH SLAB SEAT, EXISTING DECK 3 FEET FROM EXPANSION END DAM, END STEEL CROSSFRAMES AND EXPANSION JOINTS. REMOVE 1" OF EXISTING WEARING SURFACE WITH SCARIFICATION PER SS847. REMOVE MEDIAN BARRIER AND PORTIONS OF FASCIA BARRIER. MODIFY BARRIER JUNCTION BOX TO MATCH BARRIER FACE.
2. CONSTRUCT ABUTMENT EXPANSION JOINT ASSEMBLY AND END CROSSFRAMES. CLEAN OUT EXISTING SCUPPERS. MODIFY EXISTING SCUPPER GRATES TO MATCH PROPOSED DECK ELEVATIONS.
3. FORM AND PLACE CONCRETE FOR PROPOSED BACKWALL AND 3 FEET OF DECK ENDS. PLACE CONCRETE FOR DECK AND BARRIER RECONSTRUCTION.
4. PLACE 1.75" MINIMUM VARIABLE DEPTH SUPERPLASTICIZED DENSE CONCRETE (SDC) OVERLAY.
5. REMOVE UNSOUND CONCRETE AND PATCH ABUTMENTS.
6. PLACE NEW 25' LONG APPROACH SLABS PER AS-1-15 AND TYPE A INSTALLATION PER AS-2-15.

NOTES:

1. FOR BRIDGE MOT SECTIONS, SEE MOT PLAN SHEETS.
2. FOR PROFILE INFORMATION, SEE ROADWAY SHEET 77 OF 225.
3. ALL WORK EXCEPT THE JOINT REPAIRS AND PATCHING AT ABUTMENTS ARE TO BE COMPLETED FROM THE TOP OF DECK. ABUTMENT JOINT WORK WILL BE LIMITED TO ODOT PROPERTY. NO PERMANENT OR TEMPORARY RAILROAD EASEMENTS ARE EXPECTED.
4. FOR ADDITIONAL RAILROAD NOTES, SEE SHEET 163 OF 225.

DESIGN TRAFFIC:
2021 ADT = 52,200 2021 ADTT = 2,610
2051 ADT = 60,000 2051 ADTT = 3,000
DIRECTIONAL DISTRIBUTION = 11%

LEGEND

- ⊕ BORING LOCATION
- * - PHASE 1 CONSTRUCTION (20'-2"±)
- ** - PHASE 2 CONSTRUCTION (12'-0"±)
- *** PHASE 3 CONSTRUCTION (18'-0")

GENERAL PLAN	DESIGNED	JH	CHECKED	SAP	CUYHOGA COUNTY	STA. 465+09.28+/-	STA. 468+73.81+/-
	DRAWN	JCP	REVISED				
	REVIEWED	BMG	DATE	8/20/21	STRUCTURE FILE NUMBER	1814206	
	DESIGN ENGINEER	PATRICK ENGINEERING INC. 3650 OLENTANGY RIVER ROAD COLUMBUS, OHIO 43214					
BRIDGE NO. CUY-480-0832		CUY-480-07.14 WB		PID No. 108482		192	
IR-480 WB OVER NSC RR & GCRTA						225	

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BRIDGE CUY-480-0832 (SFN 1814206)

BRIDGE CUY-480-0832 (SFN 1814206)					MADE BY: JH		DATE: 06/25/21		
					CHECKED BY: SAP		DATE: 06/25/21		
ITEM	EXTENSION	TOTAL	UNIT	ESTIMATED QUANTITIES (BRIDGE CUY-480-0832)				SEE SHEET NO.	
				DESCRIPTION	ABUT.	PIER	SUPER.		GEN.
202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN				LS	162/225
202	22901	134	SY	APPROACH SLAB REMOVED, AS PER PLAN				134	13/14
509	10000	20350	LB	EPOXY COATED REINFORCING STEEL	3614		16736		
509	20001	100	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				100	162/225
509	30020	9254	FT	NO. 4 GFRP DEFORMED BARS			9254		
510	10000	1678	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	324		1354		
511	34445	10	CY	CLASS QC2 CONCRETE, BRIDGE DECK, AS PER PLAN			10		11/14
511	34449	102	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN			102		9/14
511	44110	17	CY	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING	17				
512	10100	614	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)			614		
513	21501	3128	LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN			3128		162/225
516	11210	115	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			115		
516	13600	141	SF	1" PREFORMED EXPANSION JOINT FILLER			141		
518	12801	12	EACH	SCUPPER, MODIFICATION, AS PER PLAN			12		162/225
519	11101	60	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	60				162/225
526	25000	260	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")				260	
526	90010	109	FT	TYPE A INSTALLATION				109	
847	10201	1875	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (T=1.75"), AS PER PLAN			1875		162/225
847	20201	160	CY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN			160		4/14
847	30000	LS		TEST SLAB			LS		
847	50000	188	SY	HAND CHIPPING			188		

CUY-480-07.14 WB
PID No. 108482

2 / 14

193
225

ESTIMATED QUANTITIES
BRIDGE NO. GUY-480-0832
IR-480 WB OVER NSC RR & GCRTA

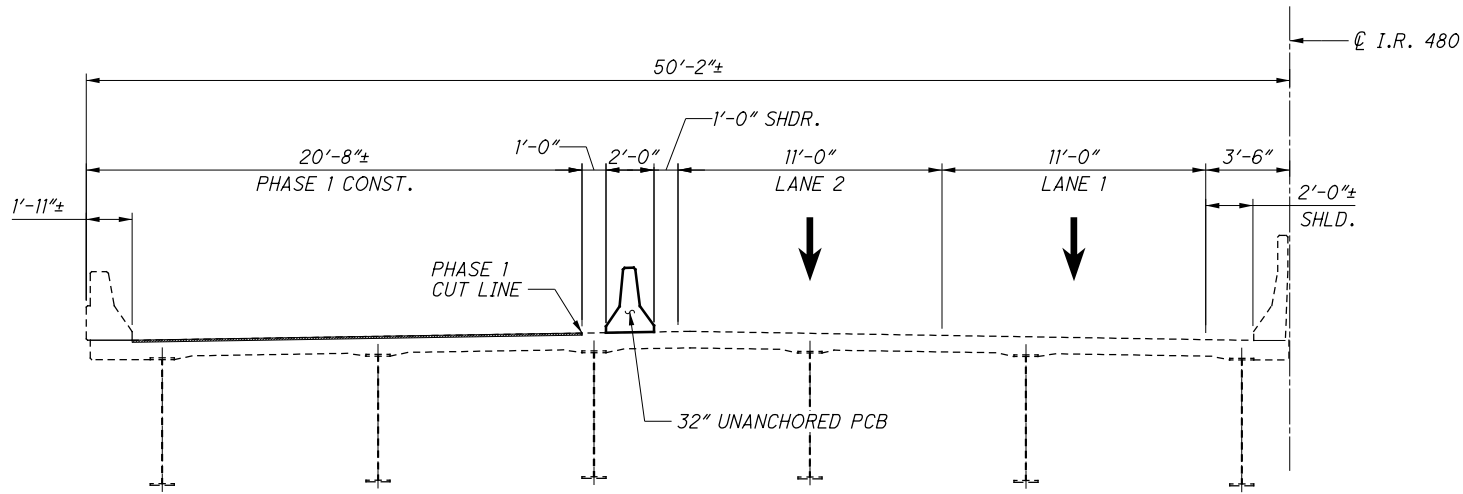
DESIGNED
JH
CHECKED
SAP

DRAWN
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REVISED
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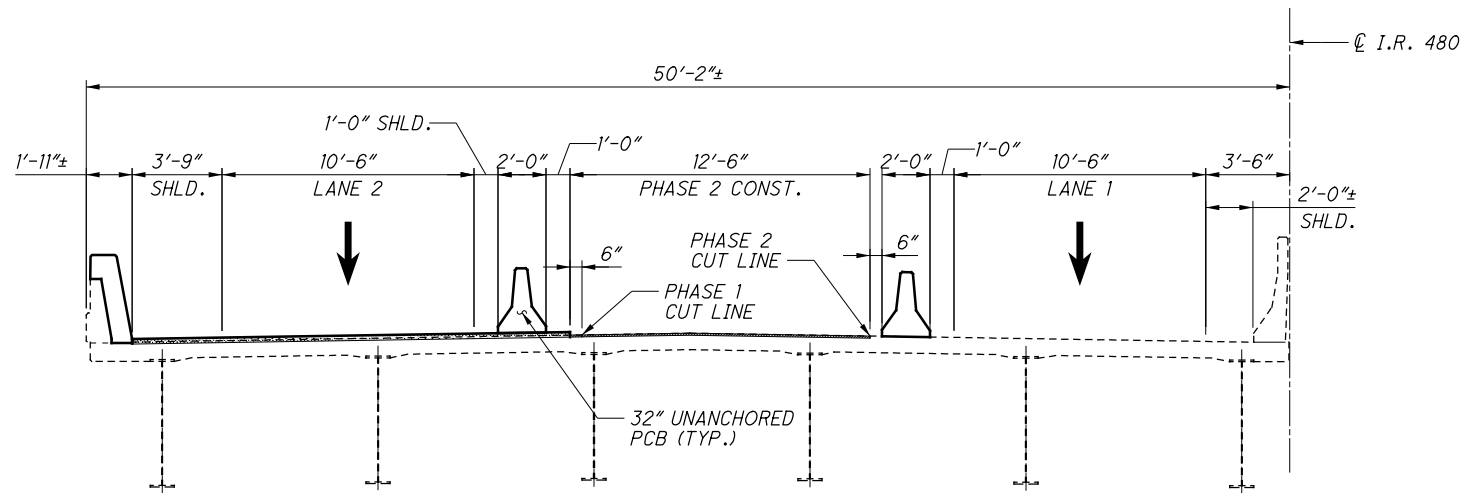
REVIEWED
BMG
DATE
8/20/21
STRUCTURE FILE NUMBER
1814206

DESIGN AGENCY
PATRICK ENGINEERING INC.
3650 OLENTANGY RIVER ROAD
COLUMBUS, OHIO 43214

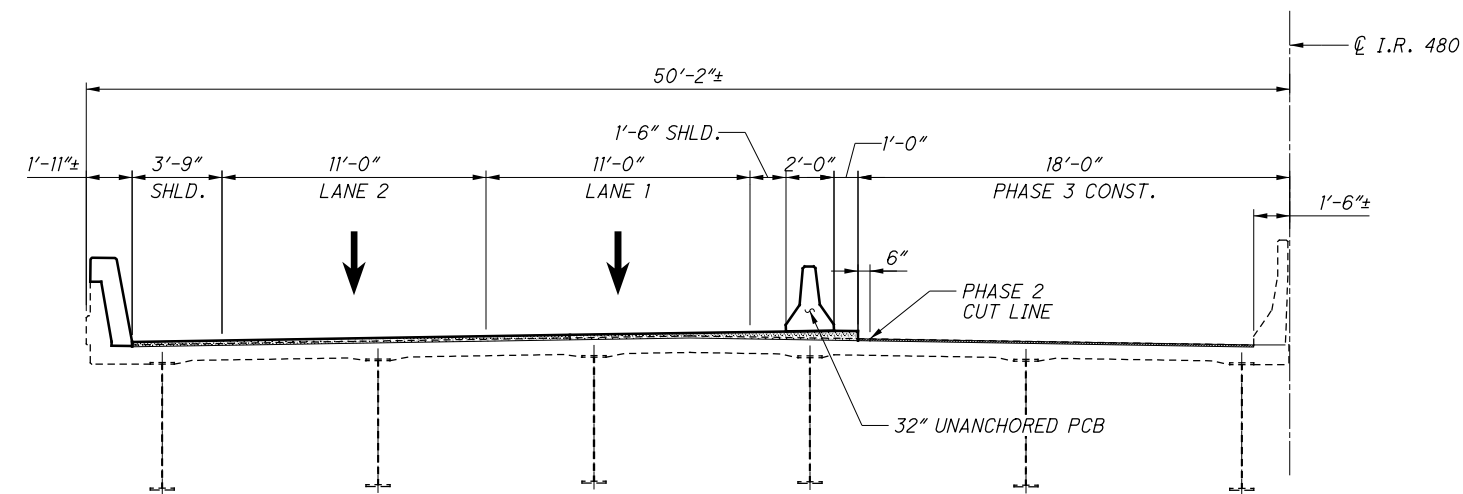
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PHASE 1 CONSTRUCTION AND TRAFFIC



PHASE 2 CONSTRUCTION AND TRAFFIC

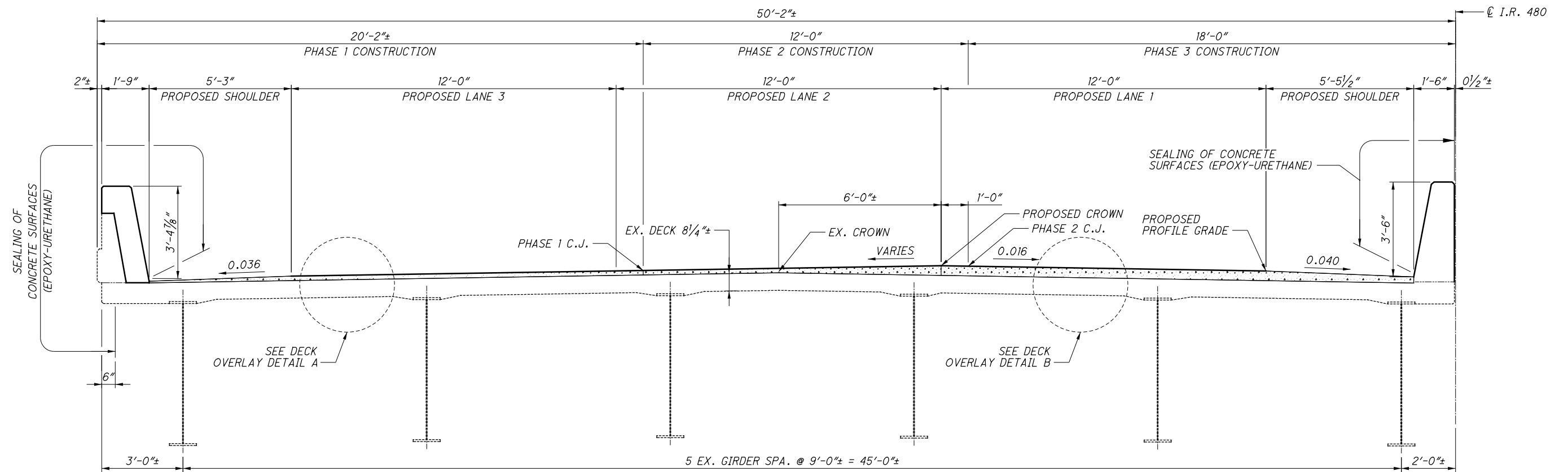


PHASE 3 CONSTRUCTION AND TRAFFIC

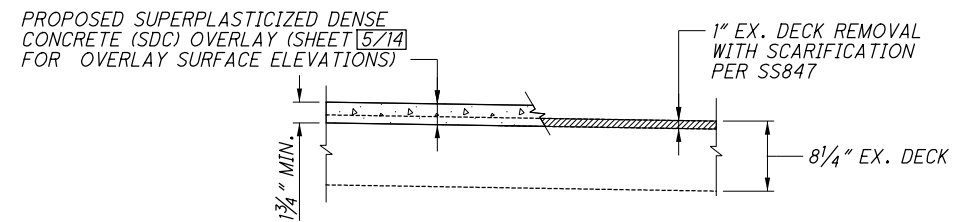
NOTES:

1. SEE SHEET 4/14 FOR PROPOSED FINAL TRANSVERSE SECTION.

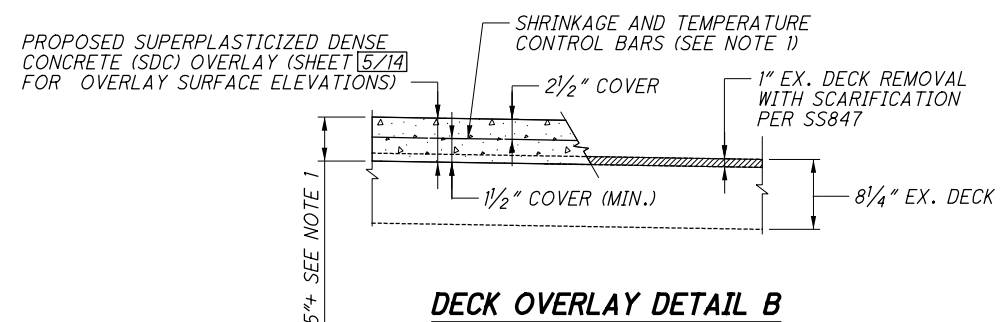
DESIGNED JH		DRAWN JH		REVIEWED BMG		DATE 8/20/21		DESIGN AGENCY PATRICK ENGINEERING INC. 3650 OLENTANGY RIVER ROAD COLUMBUS, OHIO 43214	
CHECKED SAP		REVISED		STRUCTURE FILE NUMBER 1814206		BRIDGE NO. CUY-480-0832		PHASED CONSTRUCTION SEQUENCE	
3		14		CUY-480-07.14 WB		IR-480 WB OVER NSC RR & GCRTA		PID No. 108482	
194		225							



TYPICAL TRANSVERSE SECTION



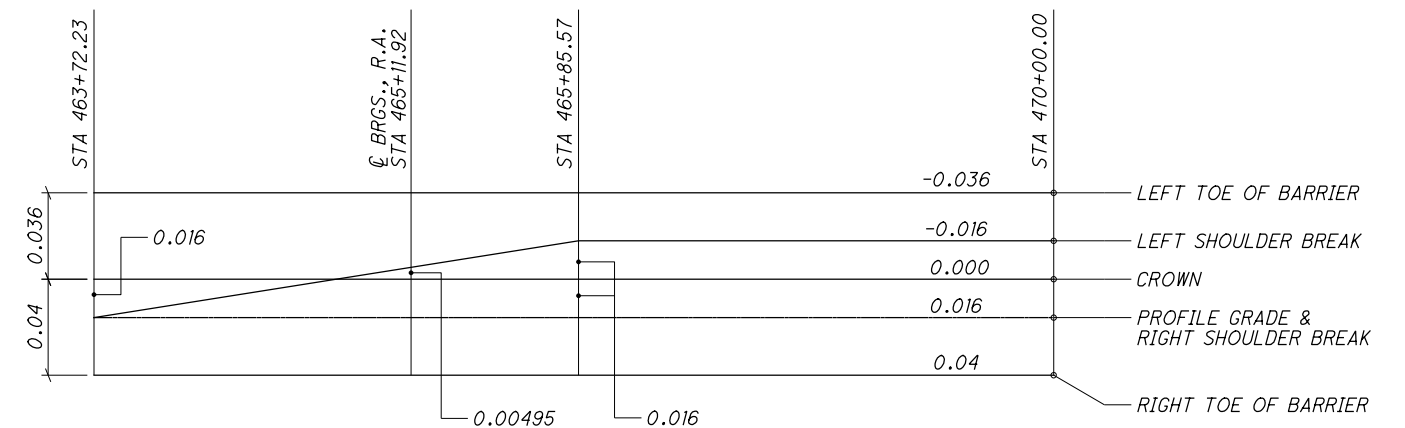
DECK OVERLAY DETAIL A



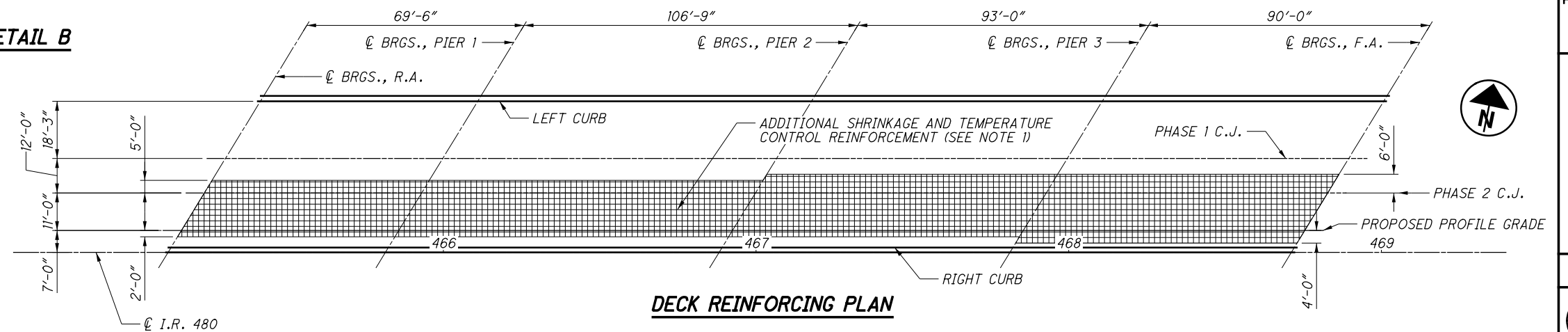
DECK OVERLAY DETAIL B

NOTES:

1. ADDITIONAL SHRINKAGE AND TEMPERATURE CONTROL REINFORCEMENT SHALL BE PROVIDED WHERE THE SUPERPLASTICIZED DENSE CONCRETE (SDC) OVERLAY THICKNESS IS OVER 5". PLACE 12X12 - D12XD12 EPOXY COATED OR GALVANIZED WELDED WIRE REINFORCEMENT (WWR) IN THE AREA SPECIFIED ON THE PLAN. CUT WWR AS REQUIRED TO MISS CONCRETE FORMS AT PHASED CONSTRUCTION LINES. INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, TOOLS AND INCIDENTALS FOR PLACING ADDITIONAL REINFORCEMENT WITH ITEM 847, SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS) MATERIAL ONLY, AS PER PLAN FOR PAYMENT.

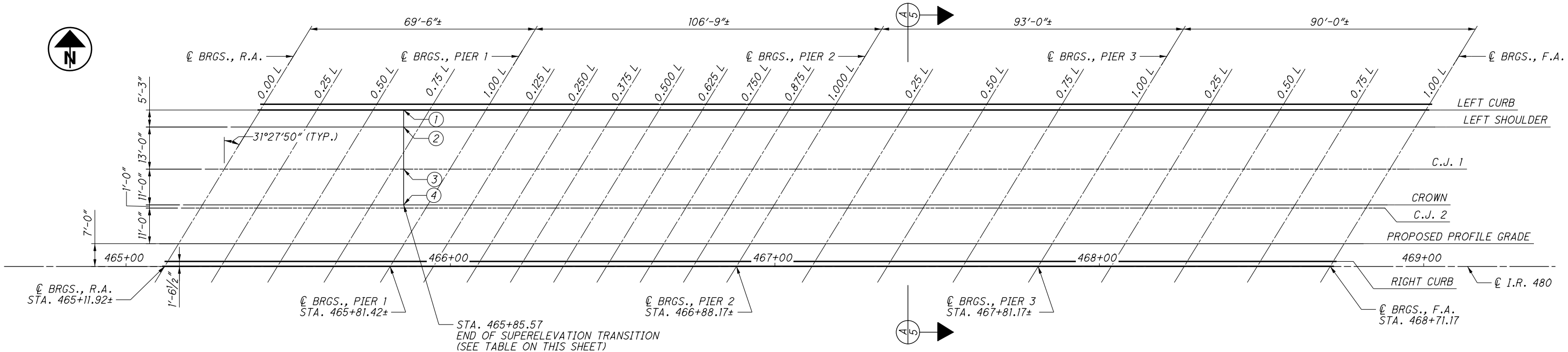


SUPERELEVATION TRANSITION DIAGRAM



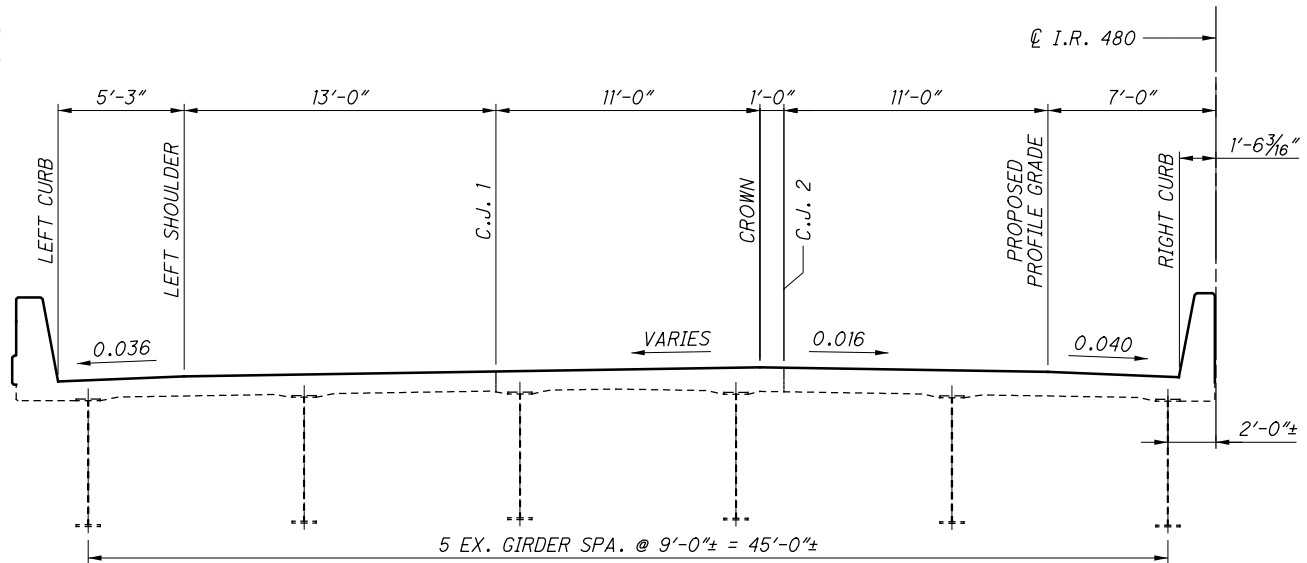
DECK REINFORCING PLAN

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SCREED LINE LAYOUT

L = SPAN LENGTH



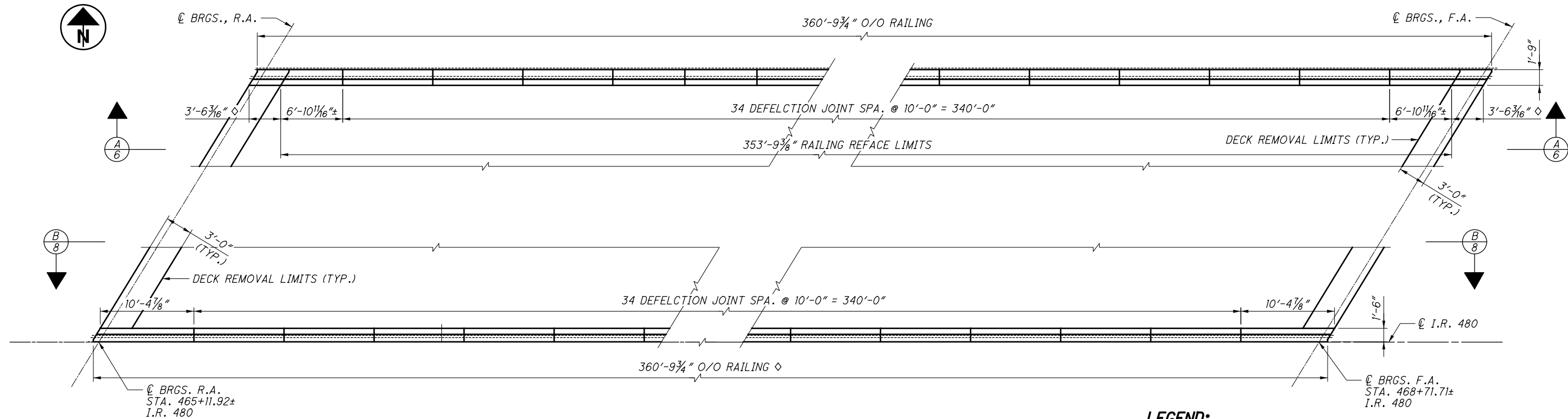
SCREED LINE LOCATION (SECTION A-A)

ELEVATIONS AT END OF SUPERELEVATION TRANSITION							
LOCATION	1		2		3		4
	LEFT CURB		LEFT SHOULDER		C.J. 1		CROWN
OFFSET	48.25 FT		43.00 FT		30.00 FT		19.00 FT
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION ELEVATION
	465+85.57	836.85	465+85.57	837.03	465+85.57	837.24	465+85.57 837.42

PORPOSED OVERLAY SURFACE ELEVATIONS															
		LEFT CURB		LEFT SHOULDER		C.J. 1		CROWN		C.J. 2		P/G		RIGHT CURB	
	OFFSET *	48.25 FT		43.00 FT		30.00 FT		19.00 FT		18.00 FT		7.00 FT		1.69 FT	
	LOCATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION		
SPAN 1	0.00 L	465+41.45	837.59	465+38.23	837.83	465+30.28	838.06	465+23.55	838.23	465+22.93	838.22	465+16.20	838.14	465+12.86	837.97
	0.25 L	465+58.82	837.30	465+55.61	837.54	465+47.65	837.81	465+40.92	838.01	465+40.31	838.00	465+33.58	837.91	465+30.24	837.73
	0.50 L	465+76.20	837.01	465+72.98	837.25	465+65.03	837.55	465+58.30	837.78	465+57.68	837.77	465+50.95	837.69	465+47.61	837.51
	0.75 L	465+93.57	836.74	465+90.36	836.97	465+82.40	837.29	465+75.67	837.55	465+75.06	837.55	465+68.33	837.46	465+64.99	837.28
	1.00 L	466+10.95	836.49	466+07.73	836.73	465+99.78	837.05	465+93.05	837.32	465+92.43	837.31	465+85.70	837.22	465+82.36	837.05
SPAN 2	0.125 L	466+24.29	836.30	466+21.08	836.53	466+13.12	836.86	466+06.39	837.13	466+05.78	837.12	465+99.05	837.04	465+95.71	836.87
	0.250 L	466+37.63	836.09	466+34.42	836.33	466+26.47	836.66	466+19.73	836.94	466+19.12	836.93	466+12.39	836.85	466+09.05	836.68
	0.375 L	466+50.98	835.88	466+47.76	836.12	466+39.81	836.46	466+33.08	836.74	466+32.47	836.73	466+25.73	836.66	466+22.39	836.49
	0.500 L	466+64.32	835.66	466+61.11	835.90	466+53.15	836.24	466+46.42	836.53	466+45.81	836.52	466+39.08	836.45	466+35.74	836.28
	0.625 L	466+77.66	835.43	466+74.45	835.68	466+66.50	836.02	466+59.77	836.31	466+59.15	836.30	466+52.42	836.24	466+49.08	836.08
	0.750 L	466+91.01	835.19	466+87.80	835.44	466+79.84	835.79	466+73.11	836.08	466+72.50	836.08	466+65.77	836.02	466+62.43	835.85
	0.875 L	467+04.35	834.94	467+01.14	835.20	466+93.18	835.55	466+86.45	835.85	466+85.84	835.84	466+79.11	835.79	466+75.77	835.63
	1.00 L	467+17.70	834.68	467+14.48	834.93	467+06.53	835.30	466+99.80	835.61	466+99.18	835.60	466+92.45	835.55	466+89.11	835.39
SPAN 3	0.25 L	467+40.95	834.20	467+37.73	834.46	467+29.78	834.83	467+23.05	835.15	467+22.43	835.15	467+15.70	835.10	467+12.36	834.95
	0.50 L	467+64.20	833.69	467+60.98	833.95	467+53.03	834.34	467+46.30	834.66	467+45.68	834.66	467+38.95	834.62	467+35.61	834.48
	0.75 L	467+87.45	833.16	467+84.23	833.42	467+76.28	833.82	467+69.55	834.14	467+68.93	834.14	467+62.20	834.12	467+58.86	833.97
	1.00 L	468+10.70	832.59	468+07.48	832.86	467+99.53	833.27	467+92.80	833.60	467+92.18	833.60	467+85.45	833.58	467+82.11	833.44
SPAN 4	0.25 L	468+33.20	832.03	468+29.98	832.30	468+22.03	832.71	468+15.30	833.05	468+14.68	833.05	468+07.95	833.04	468+04.61	832.91
	0.50 L	468+55.70	831.45	468+52.48	831.72	468+44.53	832.13	468+37.80	832.48	468+37.18	832.48	468+30.45	832.48	468+27.11	832.35
	0.75 L	468+78.20	830.89	468+74.98	831.16	468+67.03	831.56	468+60.30	831.91	468+59.68	831.91	468+52.95	831.90	468+49.61	831.76
	1.00 L	469+00.70	830.30	468+97.48	830.57	468+89.53	830.99	468+82.80	831.34	468+82.18	831.34	468+75.45	831.34	468+72.11	831.20

* - OFFSET FROM \varnothing I.R. 480
L = SPAN LENGTH

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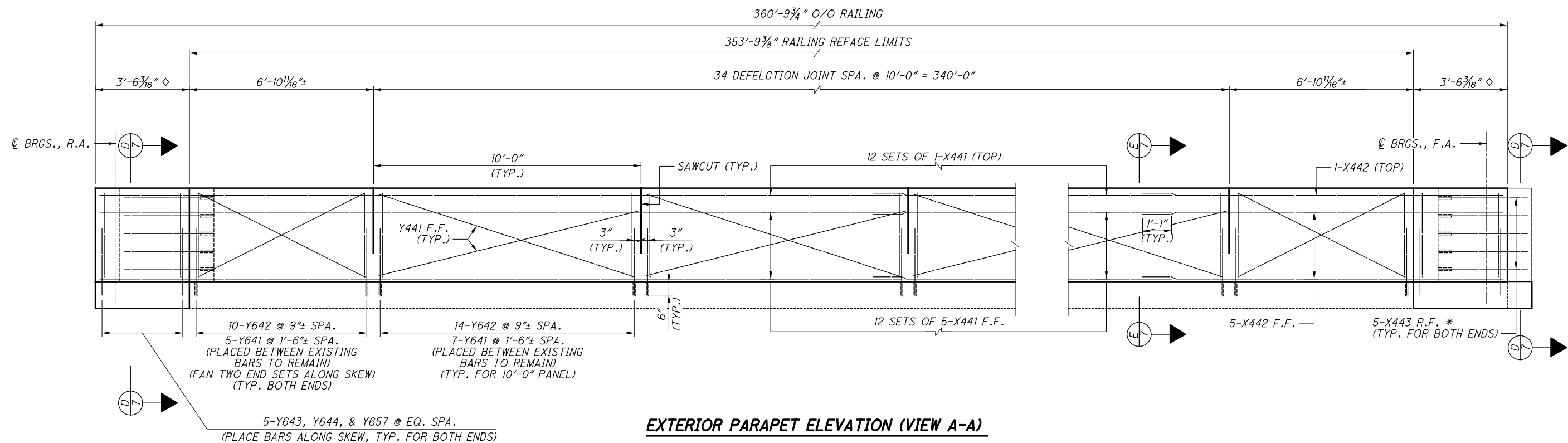


RAILING PLAN

◇ - FULL REMOVAL

LEGEND:

E.F. - EACH FACE
F.F. - FRONT FACE
R.F. - REAR FACE



EXTERIOR PARAPET ELEVATION (VIEW A-A)

LOOKING NORTH
◇ - FULL REMOVAL
* - DOWEL BARS 1'-0" INTO EXISTING PARAPET

DESIGN AGENCY
PATRICK ENGINEERING INC.
3650 OLENTANGY RIVER ROAD
COLUMBUS, OHIO 43214

DATE
8/20/21
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BMG
STRUCTURE FILE NUMBER
1814206

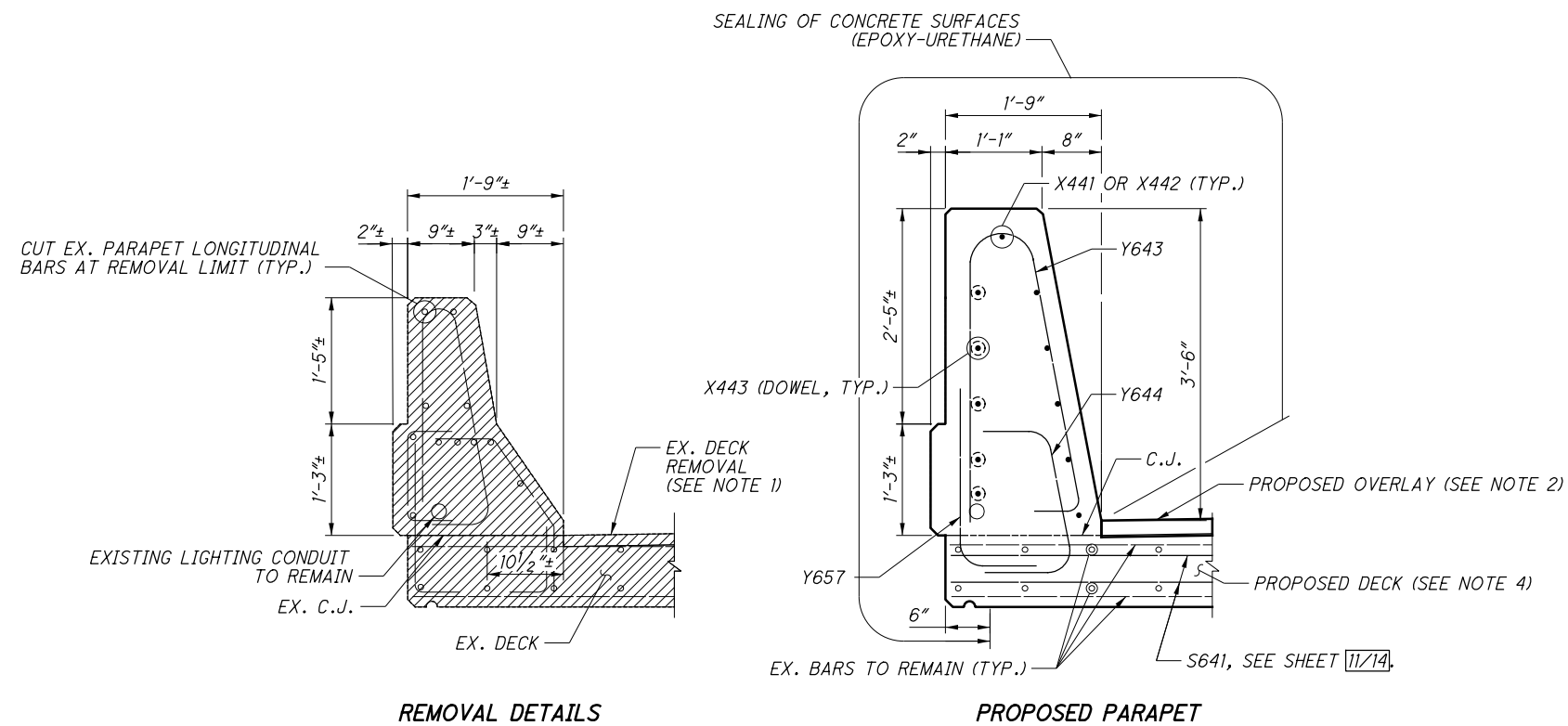
DRAWN
JH
CHECKED
SAP
REVISED

PARAPET DETAILS - I
BRIDGE NO. CUY-480-0832
IR-480 WB OVER NSC RR & GCRTA

CUY-480-07.14 WB
PID No. 108482

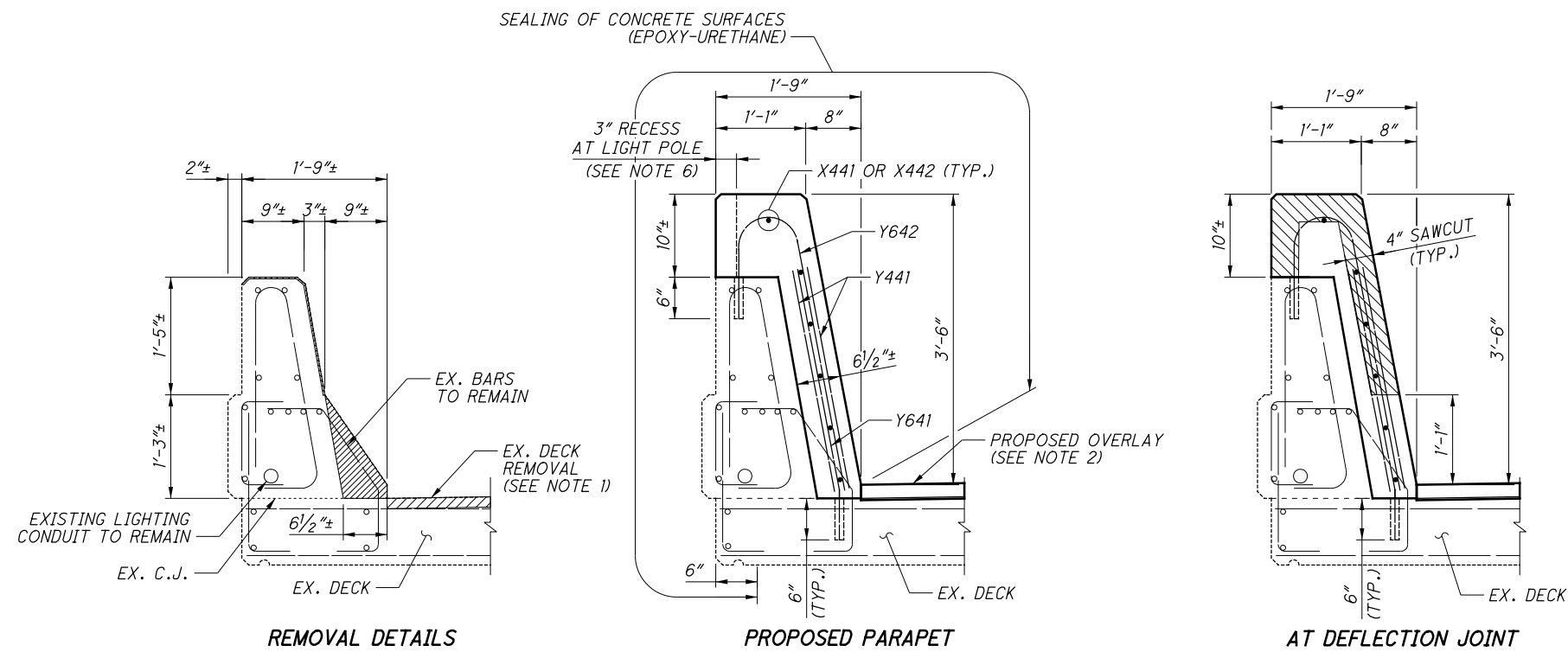
6/14

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225



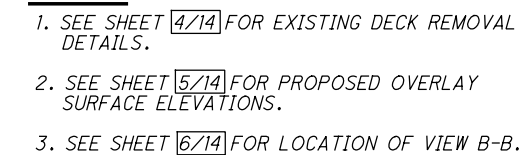
SECTION D-D

(EXTERIOR PARAPET DETAILS - FULL REMOVAL SECTION)
(TYP. FOR BOTH ENDS)



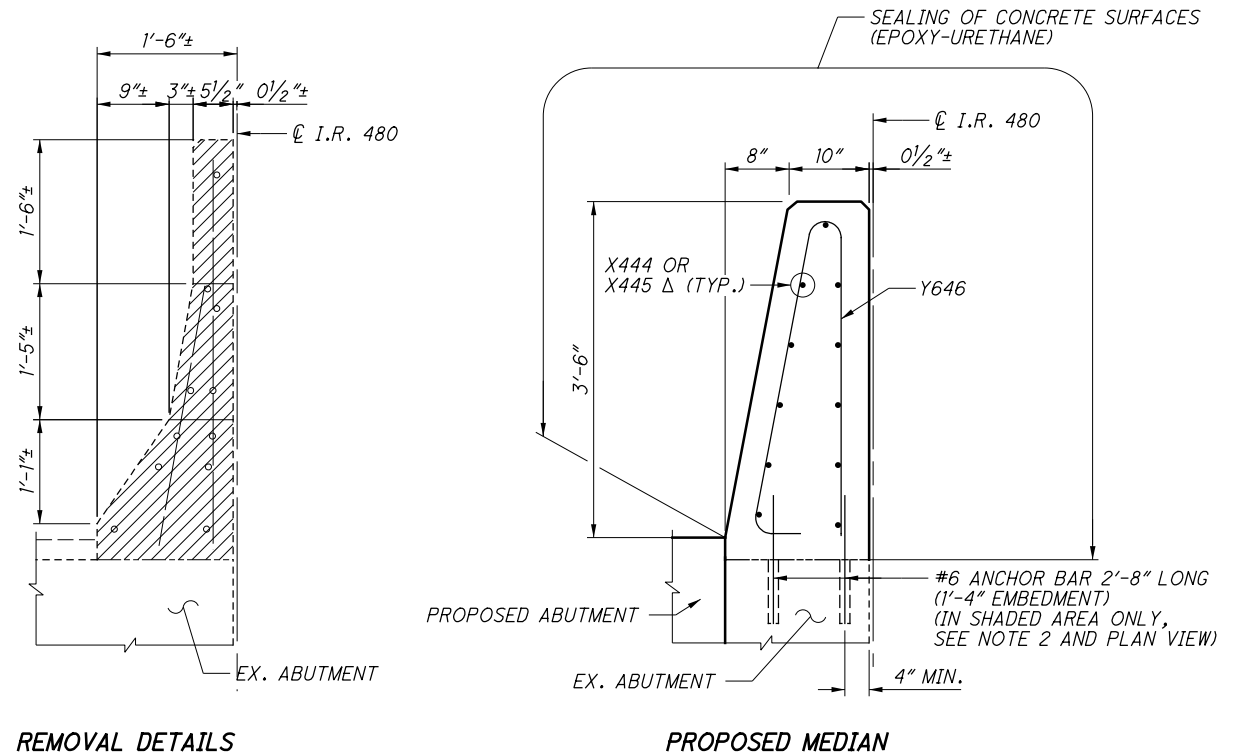
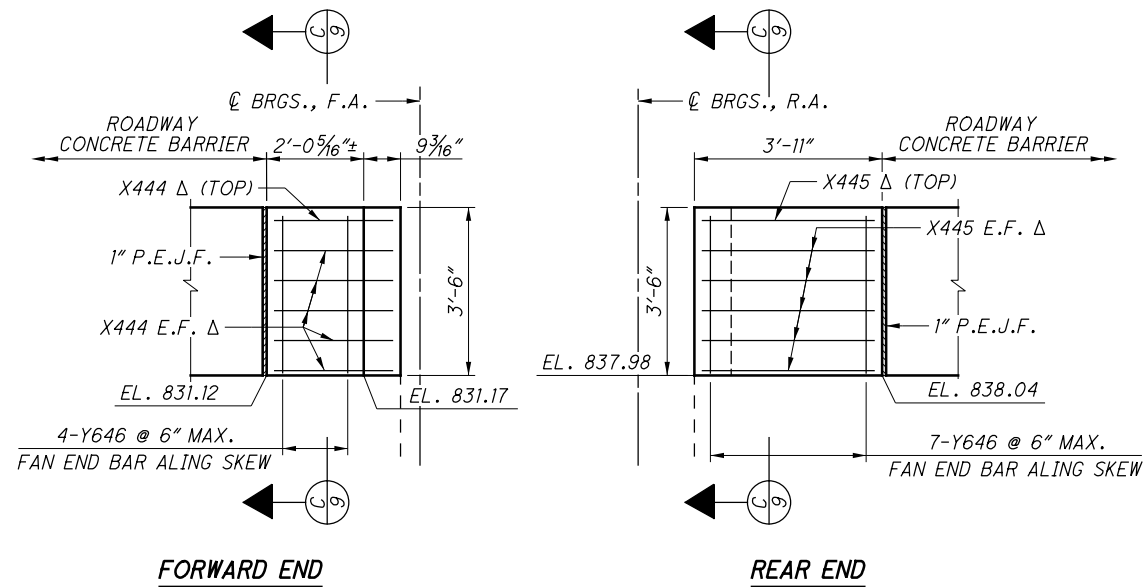
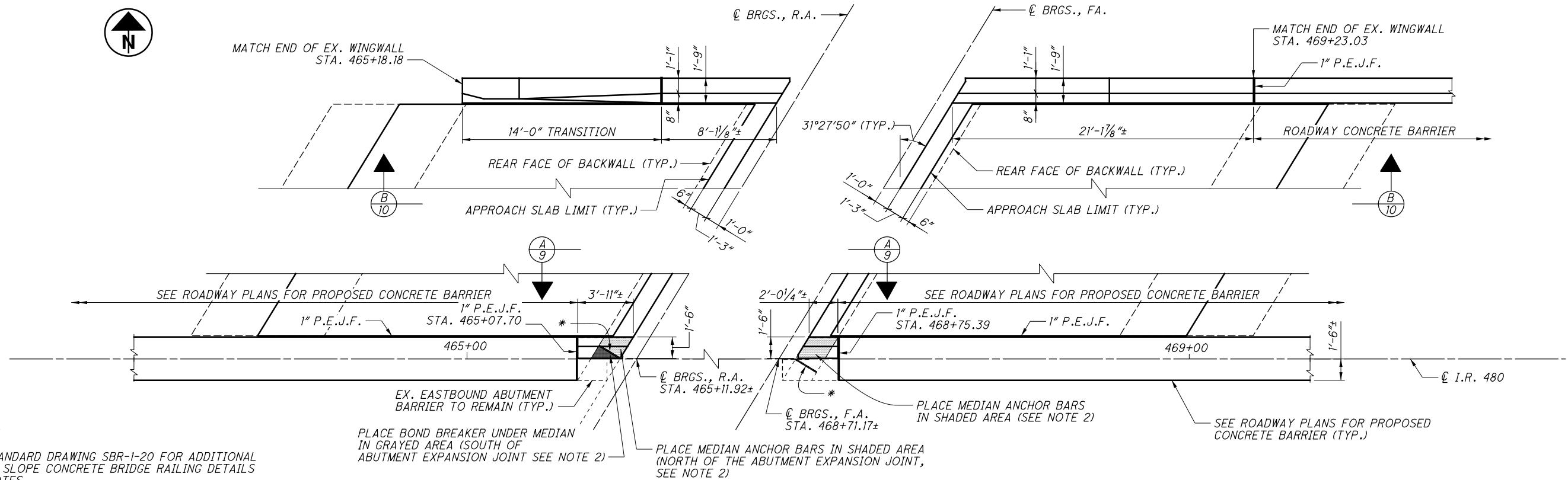
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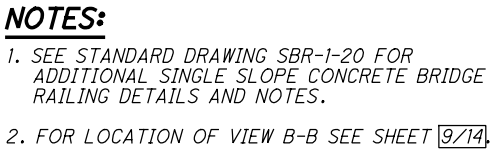
(EXTERIOR PARAPET DETAILS - REFACE SECTION)



(MEDIAN PARAPET DETAILS - FULL DEPTH REMOVAL SECTION)
(DECK REMOVAL TYP. BOTH SECTIONS)

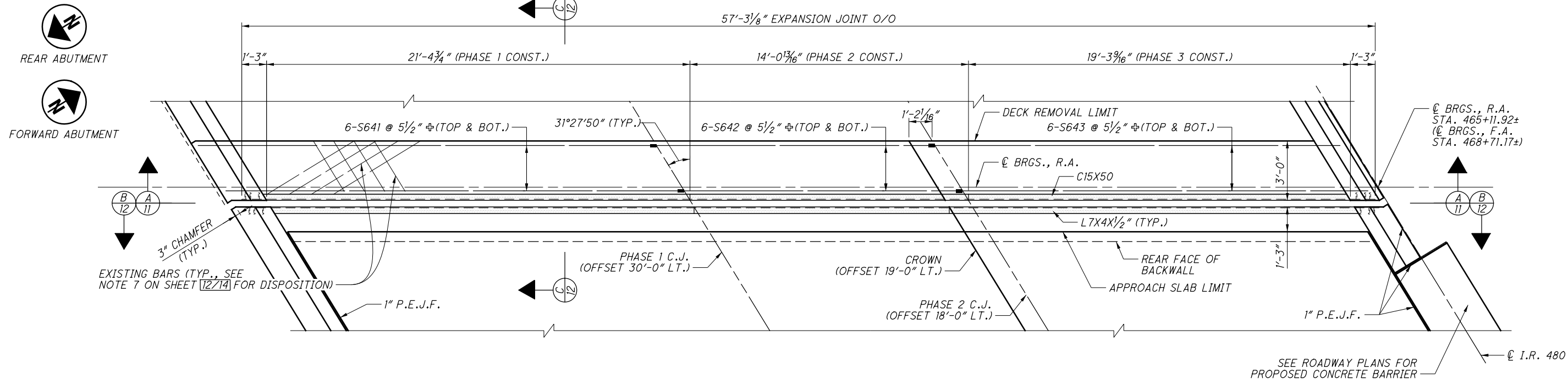
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SECTION F-F

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LEGEND:

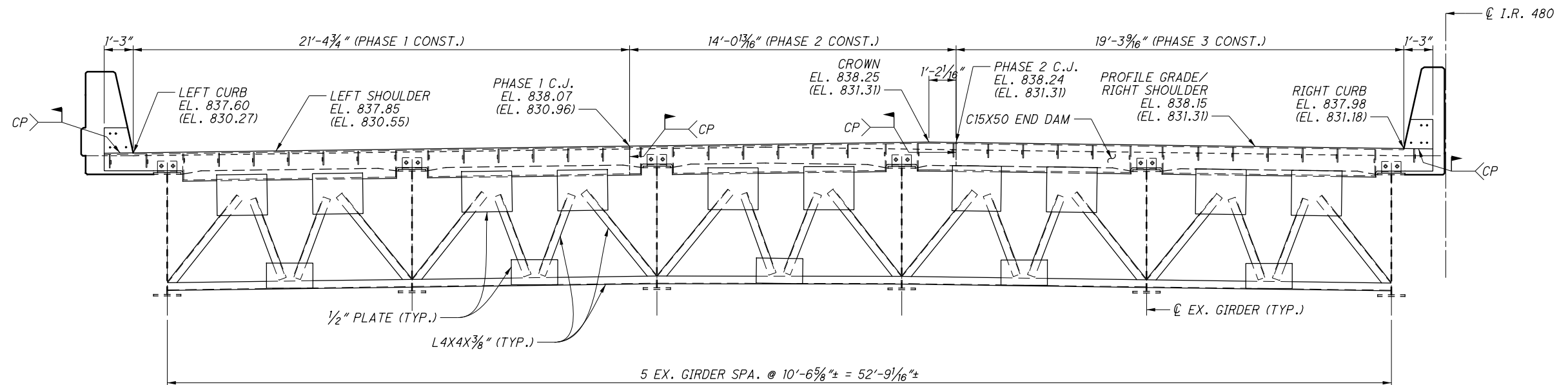
⊕ - BARS WITH MECHANICAL CONNECTORS

EXPANSION JOINT PLAN

REAR ABUTMENT JOINT SHOWN, FORWARD ABUTMENT JOINT SIMILAR

NOTES:

1. END CROSSFRAME STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50W, YIELDING STRENGTH 50 KSI.
2. SEE ADDITIONAL NOTES ON SHEET 12/14.



EXPANSION JOINT END DAM AND END CROSSFRAME ELEVATION (VIEW A-A)

ELEVATIONS SHOWN IN () ARE FOR FORWARD ABUTMENT
LOOKING UP-STATION

DESIGN AGENCY
PATRICK ENGINEERING INC.
3650 OLENTANGY RIVER ROAD
COLUMBUS, OHIO 43214

DATE
8/20/21
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STRUCTURE FILE NUMBER
1814206
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SAP

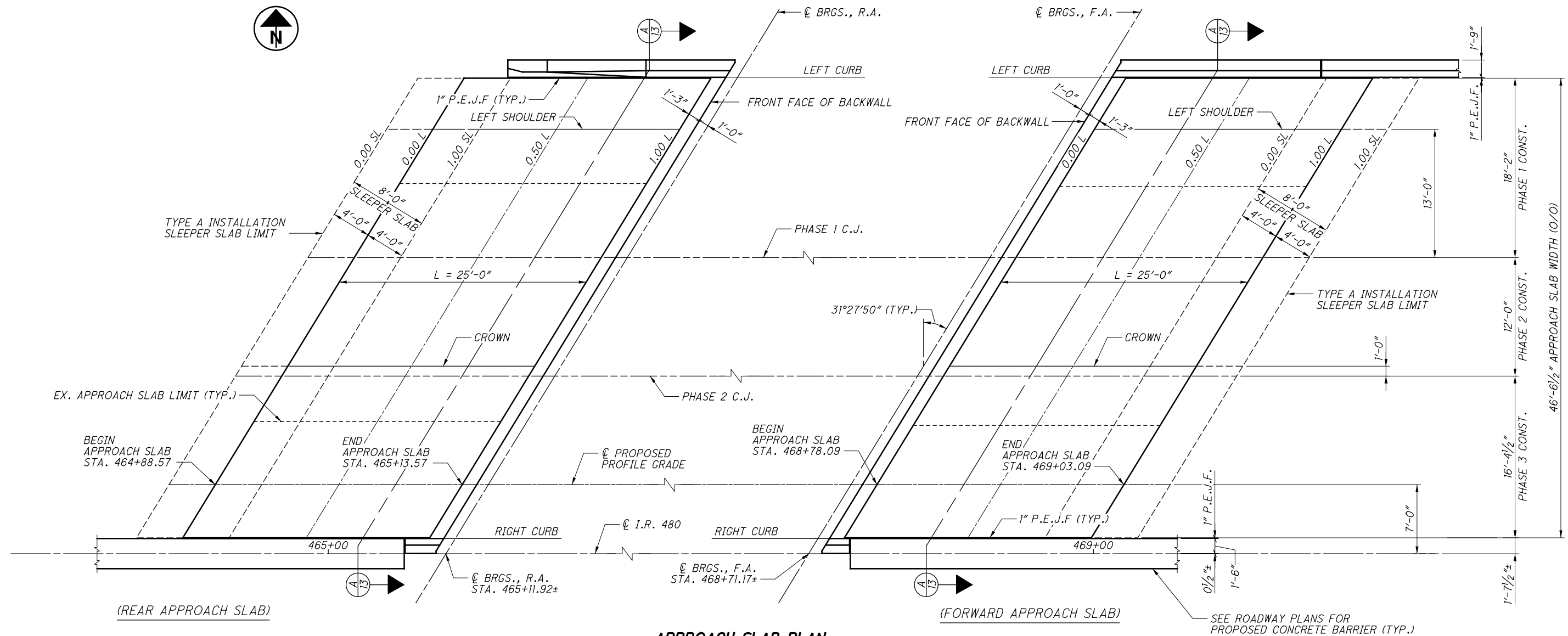
EXPANSION JOINT DETAILS - I
BRIDGE NO. CUY-480-0832
IR-480 WB OVER NSC RR & GCRTA

CUY-480-07.14 WB
PID No. 108482

11 / 14

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225

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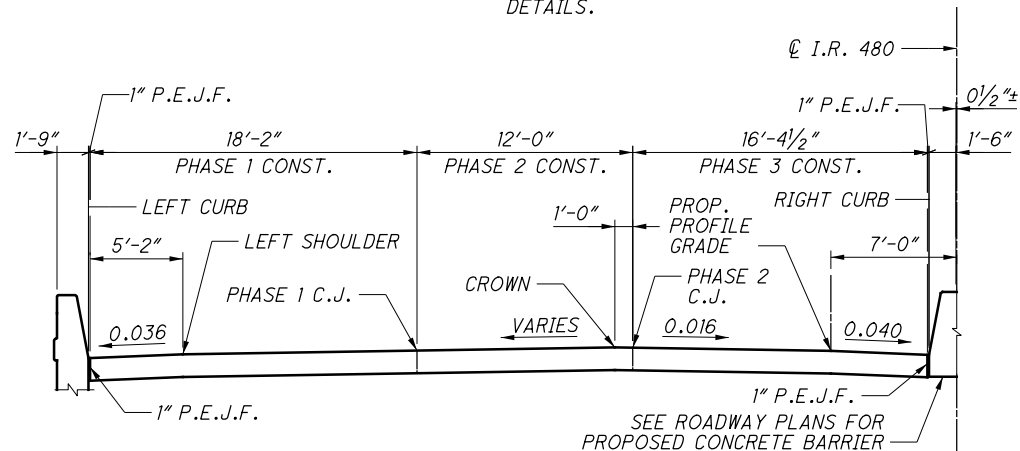
APPROACH SLAB PLAN

LEGEND:

L = APPROACH SLAB LENGTH
SL = SLEEPER SLAB LENGTH

NOTES:

- SEE STANDARD DRAWING AS-1-15 FOR ADDITIONAL REINFORCED CONCRETE APPROACH SLAB NOTES AND DETAILS.
- SEE STANDARD DRAWING AS-2-15 FOR ADDITIONAL APPROACH SLAB INSTALLATION NOTES AND DETAILS.



SCREED LINE LOCATIONS (SECTION A-A)

APPROACH SLAB ELEVATIONS

	LEFT CURB *		LEFT SHOULDER		C.J. 1		CROWN		C.J. 2		P/G		RIGHT CURB *	
OFFSET **	48.25 FT		43.00 FT		30.00 FT		19.00 FT		18.00 FT		7.00 FT		1.69 FT	
LOCATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
0.00 L	465+13.81	838.05	465+10.60	838.29	465+02.64	838.48	464+95.91	838.60	464+95.30	838.60	464+88.57	838.51	464+85.23	838.33
0.50 L	465+26.31	837.84	465+23.10	838.08	465+15.14	838.29	465+08.41	838.44	465+07.80	838.43	465+01.07	838.35	464+97.73	838.17
1.00 L	465+38.81	837.63	465+35.60	837.87	465+27.64	838.10	465+20.91	838.27	465+20.30	838.26	465+13.57	838.18	465+10.23	838.00
0.00 L	469+03.33	830.23	469+00.12	830.50	468+92.17	830.92	468+85.43	831.27	468+84.82	831.27	468+78.09	831.27	468+74.75	831.14
0.50 L	469+15.83	829.89	469+12.62	830.16	469+04.67	830.59	468+97.93	830.95	468+97.32	830.95	468+90.59	830.94	468+87.25	830.81
1.00 L	469+28.33	829.54	469+25.12	829.82	469+17.17	830.25	469+10.43	830.61	469+09.82	830.61	469+03.09	830.62	468+99.75	830.49

SLEEPER SLAB ELEVATIONS

	LEFT CURB *		LEFT SHOULDER		C.J. 1		CROWN		C.J. 2		P/G		RIGHT CURB *	
OFFSET **	48.25 FT		43.00 FT		30.00 FT		19.00 FT		18.00 FT		7.00 FT		1.69 FT	
LOCATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
0.00 L	465+09.12	836.88	465+05.91	837.12	464+97.95	837.30	464+91.22	837.41	464+90.61	837.41	464+83.88	837.32	464+80.54	837.14
1.00 L	465+18.50	836.72	465+15.28	836.96	465+07.33	837.16	465+00.60	837.29	464+99.99	837.29	464+93.26	837.20	464+89.92	837.02
0.00 L	469+23.64	828.43	469+20.43	828.70	469+12.48	829.13	469+05.75	829.49	469+05.13	829.49	468+98.40	829.49	468+95.06	829.36
1.00 L	469+33.02	828.16	469+29.81	828.44	469+21.86	828.87	469+15.12	829.23	469+14.51	829.23	469+07.78	829.24	469+04.44	829.11

*- ELEVATIONS GIVEN AT FRONT OF PARAPETS
**- OFFSET FROM C I.R. 480

DESIGN AGENCY
PATRICK ENGINEERING INC.
3650 OLENTANGY RIVER ROAD
COLUMBUS, OHIO 43214

DATE
8/20/21
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1814206

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JH
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APPROACH SLAB DETAILS
BRIDGE NO. CUY-480-0832
IR-480 WB OVER NSC RR & GCRTA

CUY-480-07.14 WB
PID No. 108482

13 / 14

204
225

⊕ - REINFORCING BARS WITH DOWELS

205

225

BARS FOR PAYMENT.

BARS FOR PAYMENT. 205
225



BARS FOR PAYMENT. 205
225

- BARS FOR PAYMENT. 205
225

205
225

PROJECT DESCRIPTION

THE PROJECT SITE IS LOCATED IN CUYAHOGA COUNTY, OHIO. THE PROPOSED IMPROVEMENTS INCLUDE THE RECONSTRUCTION AND WIDENING ALONG APPROXIMATELY 2 MILES OF IR-480 WESTBOUND BETWEEN WEST 150TH STREET AND GRAYTON ROAD. THE PROPOSED IMPROVEMENTS INCLUDE THE CONVERSION OF INSIDE AND OUTSIDE SHOULDERS TO HARD RUNNING SHOULDERS, REDUCING THE WIDTH OF THE SHOULDERS TO ADD ADDITIONAL THROUGH LANES AND CONVERSION OF THE MERGE AND DROP LANE FOR NORTHBOUND IR-71 TRAFFIC TO AN AUXILIARY LANE AND WEAVE AREA.

HISTORIC RECORDS

THE SOIL PROFILE FOR CUY-480-6.48 FROM 1965 WAS FOUND IN THE ODOT TIMS. THE SOILS ENCOUNTERED WERE PREDOMINATELY A-6A, A-6B, AND A-7-6 DESCRIBED AS HAVING MOISTURE CONTENTS IN THE LOWER PORTION OF THE PLASTIC RANGE. FOR THE PURPOSES OF CLARITY, THESE BORINGS ARE NOT PRESENTED IN THE SOIL PROFILE

GEOLOGY

THE PROJECT IS LOCATED WITHIN THE GLACIATED REGION OF THE STATE. BASED ON OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR), THE SURFICIAL GEOLOGY AT THE PROJECT SITE INCLUDES LAKE PLANE MORAINE AND BEACH SAND FORMATIONS. LAKE PLANE MORAINE FORMATION IS A CLAYEY GLACIAL TILL MATERIAL WHICH HAS BEEN PLANED BY WAVES IN GLACIAL LAKE AND CONSISTS OF SMALL PATCHES OF SAND, SILT OR CLAY ON SURFACE. BEACH SAND DEPOSITS ARE BEACH RIDGES ALONG SHORES OF FORMER GLACIAL LAKES, CONSISTING OF FINE SAND TO COURSE GRAVEL AND COBBLE DEPOSITS. BASED ON THE UNITED STATE GEOLOGICAL SURVEY (USGS), THE BEDROCK AT THE PROJECT SITE CONSISTS OF OHIO SHALE, AND BERA SANDSTONE AND BEDFORD SHALE FORMATIONS. OHIO SHALE CAN BE CHARACTERIZED BY ITS BROWNISH BLACK TO GREENISH GRAY COLOR THAT WEATHERS TO BROWN. THE OHIO SHALE EXHIBITS CARBONACEOUS TO CLAYEY CHARACTERISTICS, LAMINATED TO THIN BEDDING, FISSILE PARTING, CARBONATE AND/OR SIDERITE CONCRETIONS IN LOWERMOST 50 FEET AND PETROLIFEROUS CHARACTERISTICS. THE BERA SANDSTONE AND BEDFORD SHALE CONSISTS OF SANDSTONE IN THE UPPER PORTION OF THE FORMATION, WHICH IS BROWN AND WEATHERS TO LIGHT BROWN TO REDDISH BROWN. THE BERA SANDSTONE IS THIN TO THICK BEDDED AND EXHIBITS PLANAR TO LENTICULAR BEDDING. THE FORMATION INCLUDES MINOR SHALE INTERBEDS AS THE SECONDARY BEDROCK TYPE. THE TERTIARY ROCK TYPE ENCOUNTERED IN THE BERA SANDSTONE AND BEDFORD SHALE FORMATION IS SILTSTONE.

RECONNAISSANCE

SITE RECONNAISSANCE WAS PERFORMED BY TERRACON ON FEBRUARY 10, 2020. AT THE TIME OF OUR SITE RECONNAISSANCE VISIT, THE EXISTING IR-480 WESTBOUND WAS OBSERVED TO BE A FOUR-LANE ROADWAY BETWEEN WEST 150TH STREET AND THE EXIT RAMP TO IR-71 SOUTH (EXIT 11). A THREE-LANE ROADWAY BETWEEN THE EXIT RAMP TO IR-71 SOUTH AND THE EXIT RAMP TO BERA SOUTH (EXIT 10). A TWO-LANE ROADWAY BETWEEN THE EXIT RAMP TO BERA SOUTH AND THE ENTRANCE RAMP FROM BERA SOUTH, AND A FOUR-LANE ROADWAY BETWEEN THE ENTRANCE RAMP FROM BERA SOUTH TO THE ENTRANCE RAMP FROM GRAYTON ROAD. THE EXISTING PAVEMENT APPEARED TO BE IN POOR TO FAIR CONDITION. SEVERAL AREAS OF PAVEMENT DISTRESS, CRACKS AND POTHOLES WERE OBSERVED ON THIS SEGMENT OF IR-480 DURING THE SITE RECONNAISSANCE VISIT.

SUBSURFACE EXPLORATION

A TOTAL OF THIRTY (30) BORINGS WERE PERFORMED BETWEEN MARCH 9 AND MARCH 12, 2020 DESIGNATED AS B-001-0-19 THROUGH B-030-0-19. THE BORINGS WERE PERFORMED ON THE EXISTING ROADWAY SHOULDERS TO DEPTHS OF APPROXIMATELY 7 TO 9.5 FEET BELOW THE EXISTING GROUND SURFACES IN GENERAL ACCORDANCE WITH SECTION 303.3 OF THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT) SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS (SGE) FOR ROADWAY RENOVATIONS WITH WIDENING. THE PAVEMENT WAS CORED AT EACH OF THE BORING LOCATIONS. IN ADDITION, PAVEMENT CORES WERE OBTAINED AT TWELVE (12) ADDITIONAL LOCATIONS DESIGNATED AS PC-001, PC-002, AC-001 THROUGH AC-005 AND BC-001 THROUGH BC-005.

EXPLORATION FINDINGS

THE BORINGS WERE PERFORMED ON THE EXISTING PAVEMENTS AND ENCOUNTERED APPROXIMATELY 3 TO 10 INCHES OF ASPHALT CONCRETE OVER GRANULAR BASE MATERIALS. AT LOCATIONS B-023-0-19, AC-001, AC-002, PC-001 AND PC-002, APPROXIMATELY 9 TO 10.5-INCH-THICK LAYERS OF CONCRETE WERE ENCOUNTERED UNDERLYING BY ASPHALT, WHICH WERE IN-TURN UNDERLAIN BY AGGREGATE BASE MATERIAL. BORINGS B-003-0-19, B-009-0-19, B-011-0-19 THROUGH B-019-0-19, B-021-0-19 AND B-026-0-19 ENCOUNTERED FILL BENEATH THE PAVEMENT MATERIALS TO A DEPTH RANGE OF ABOUT 2.5 TO 8.5 FEET BELOW THE EXISTING GROUND SURFACES, CONSISTING OF GRAVEL AND/OR STONE FRAGMENTS (A-1-A), GRAVEL AND/OR STONE FRAGMENTS WITH SAND (A-1-B), SILT AND CLAY (A-6A), SILTY CLAY (A-6B), GRAVEL AND/OR STONE FRAGMENTS WITH SAND, SILT AND CLAY (A-2-6), SANDY SILT (A-4A), GRAVEL AND/OR STONE FRAGMENTS WITH SAND AND SILT (A-2-4), FINE SAND (A-3). THE COHESIVE FILL EXHIBITED CONSISTENCIES RANGING FROM MEDIUM STIFF TO HARD. GRANULAR FILL EXHIBITED RELATIVE DENSITIES RANGING FROM DENSE TO VERY DENSE.

BELOW THE GRANULAR BASE MATERIAL AND FILL, THE TEST BORINGS GENERALLY ENCOUNTERED NATIVE COHESIVE AND GRANULAR SOILS TO THE TERMINATION DEPTHS OF THE BORINGS. THE COHESIVE SOILS ENCOUNTERED IN THE BORINGS INCLUDED SILT AND CLAY (A-6A), SILTY CLAY (A-6B) AND CLAY (A-7-6) EXHIBITING CONSISTENCIES RANGING FROM MEDIUM STIFF TO HARD. THE GRANULAR SOILS ENCOUNTERED IN THE BORINGS INCLUDED SANDY SILT (A-4A), GRAVEL AND/OR STONE FRAGMENTS WITH SAND (A-1-B), COARSE AND FINE SAND (A-3A), AND GRAVEL AND/OR STONE FRAGMENTS WITH SAND, SILT AND CLAY (A-2-6). THE GRANULAR SOILS ENCOUNTERED IN THE BORINGS EXHIBITED RELATIVE DENSITIES RANGING FROM MEDIUM DENSE TO VERY DENSE.

GRANULAR AND COHESIVE SOILS WITH NATURAL MOISTURE CONTENTS MORE THAN 3 PERCENT ABOVE THE OPTIMUM MOISTURE CONTENTS WERE OBSERVED WITHIN 6 FEET OF THE SUBGRADE IN TWENTY-THREE BORINGS INDICATING WET SUBGRADE CONDITIONS. UNSUITABLE SOILS WERE NOT ENCOUNTERED IN THE BORINGS.

GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING OF THE BORINGS AND FOR THE SHORT DURATION THE BORINGS REMAINED OPEN AFTER COMPLETION OF DRILLING.

SPECIFICATIONS

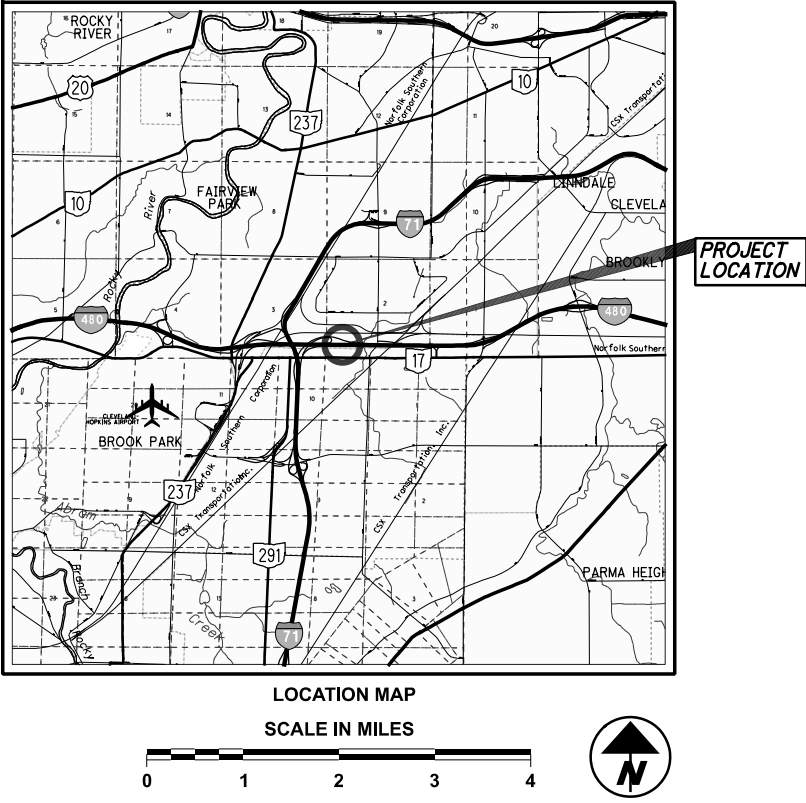
THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JANUARY, 2019.

AVAILABLE INFORMATION

THE SOIL, BEDROCK, AND GROUNDWATER INFORMATION COLLECTED FOR THIS SUBSURFACE EXPLORATION THAT CAN BE CONVENIENTLY DISPLAYED ON THE SOIL PROFILE SHEETS HAS BEEN PRESENTED. GEOTECHNICAL REPORTS, IF PREPARED, ARE AVAILABLE FOR REVIEW ON THE OFFICE OF CONTRACT SALES WEBSITE.

LEGEND

DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
GRAVEL AND/OR STONE FRAGMENTS	A-1-a	1	1
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-b	2	2
GRAVEL AND/OR STONE FRAGMENTS WITH SAND & SILT	A-2-4	1	-
GRAVEL AND/OR STONE FRAGMENTS WITH SAND, SILT & CLAY	A-2-6	2	-
FINE SAND	A-3	1	-
COARSE AND FINE SAND	A-3a	-	1
SANDY SILT	A-4a	11	12
SILT AND CLAY	A-6a	28	35
SILTY CLAY	A-6b	9	11
CLAY	A-7-6	2	2
	TOTAL	57	64
PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	VISUAL		
BORING LOCATION - PLAN VIEW.			
DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.			
WC	INDICATES WATER CONTENT IN PERCENT.		
N₆₀	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.		
X/Y/Z	NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X= NUMBER OF BLOWS FOR FIRST 6 INCHES. Y= NUMBER OF BLOWS FOR SECOND 6 INCHES. Z= NUMBER OF BLOWS FOR THIRD 6 INCHES.		
W	INDICATES FREE WATER ELEVATION.		
	INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.		
SS	INDICATES A SPLIT SPOON SAMPLE.		
NP	INDICATES A NON-PLASTIC SAMPLE.		



PARTICLE SIZE DEFINITIONS						
12"	3"	2.0 mm	0.42 mm	0.074 mm	0.005 mm	
BOULDERS	COBBLES	GRAVEL	COARSE SAND	FINE SAND	SILT	CLAY
		No. 10 SIEVE	No. 40 SIEVE	No. 200 SIEVE		

RECON. - JWW 02/10/20
DRILLING - CTB 03/12/20
DRAWN - KJM 09/13/20
REVIEWED - KME 09/22/20

DESIGN AGENCY

Terracon
Consulting Engineers and Scientists

DESIGNER

AKM

REVIEWER

KME 09-22-20

PROJECT ID

108482

SUBSET

1

TOTAL

20

SHEET

206

TOTAL

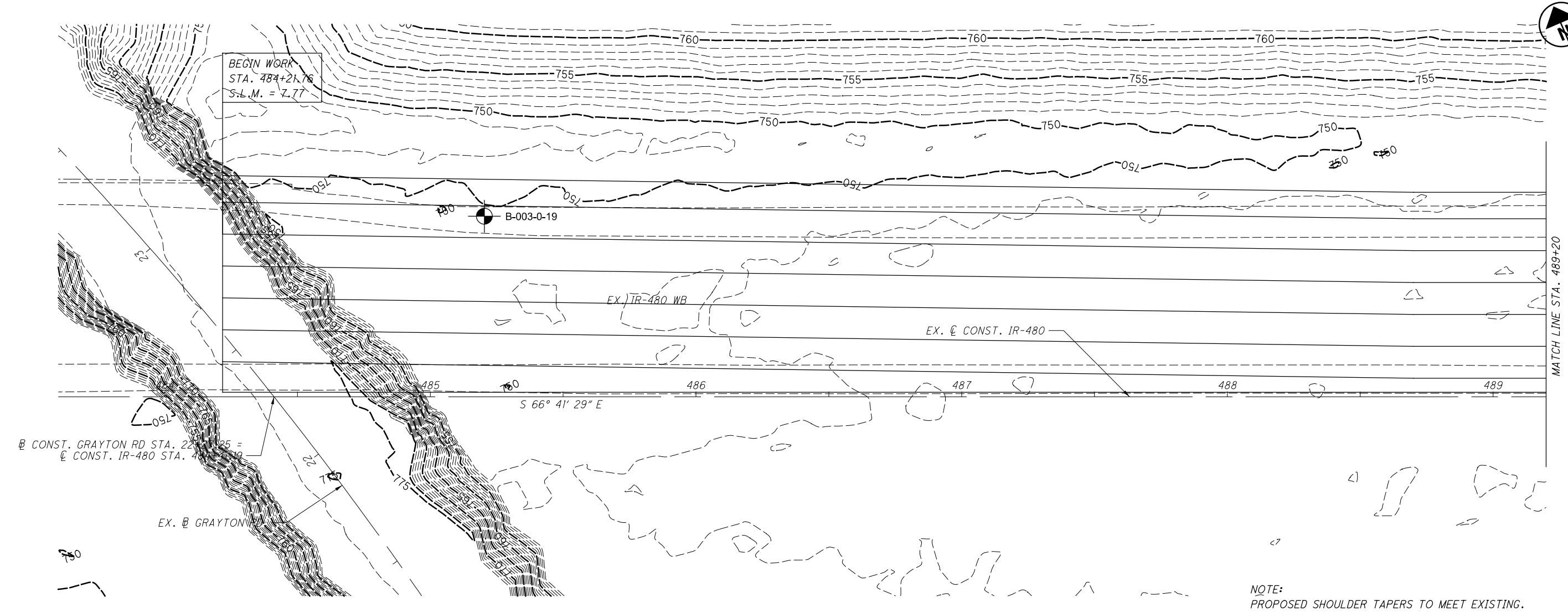
225

SUMMARY OF SOIL TEST DATA
IR-480

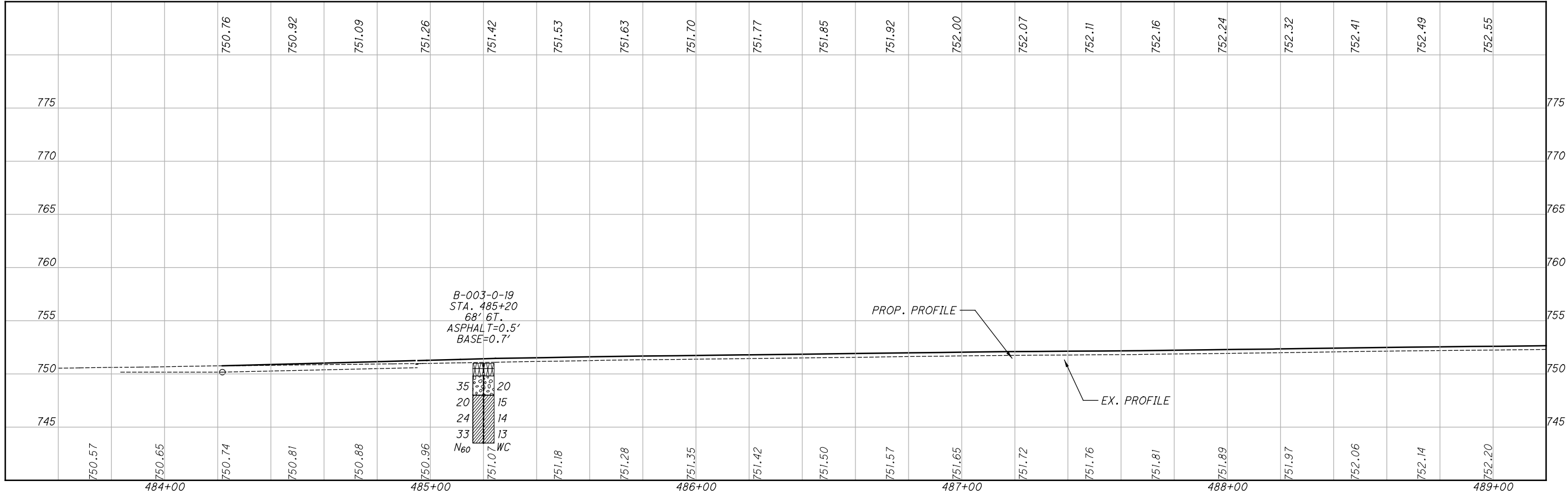
EXPLORATION ID., STATION & OFFSET	FROM - TO	SAMPLE ID	N ₆₀	% REC	tsf HP	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS	ppm SO ₄
B-001-0-19 472+84, 18' RT. LATITUDE: 41.423283 LONGITUDE: -81.846801	01.50 - 03.00	SS-1	44	33	-	-	-	SAME AS SS-2			-	-	-	11	A-4a (VISUAL)	1403
	03.00 - 04.50	SS-2	38	100	-	9	11	13	39	28	22	14	8	11	A-4a (6)	-
	04.50 - 06.00	SS-3	29	100	-	-	-	SAME AS SS-4			-	-	-	10	A-4a (VISUAL)	-
	06.00 - 07.50	SS-4	48	100	-	12	14	15	39	20	21	14	7	10	A-4a (5)	-
B-002-0-19 494+06, 7' RT. LATITUDE: 41.420965 LONGITUDE: -81.838698	01.50 - 03.00	SS-1	36	22	-	-	-	SAME AS SS-3			-	-	-	14	A-4a (VISUAL)	-
	03.00 - 04.50	SS-2	32	56	-	-	-	SAME AS SS-3			-	-	-	13	A-4a (VISUAL)	1015
	04.50 - 06.00	SS-3	29	78	-	8	10	12	43	27	22	14	8	11	A-4a (7)	-
	06.00 - 07.50	SS-4	35	100	-	9	10	12	43	26	22	14	8	11	A-4a (7)	-
B-003-0-19 485+20, 68' LT. LATITUDE: 41.422131 LONGITUDE: -81.842543	01.50 - 03.00	SS-1	35	33	-	58	23	12	4	3	NP	NP	NP	20	A-1-a (0)	-
	03.00 - 04.50	SS-2	20	44	2.50	-	-	SAME AS SS-4			-	-	-	15	A-6a (VISUAL)	1385
	04.50 - 06.00	SS-3	24	56	4.50	-	-	SAME AS SS-4			-	-	-	13	A-6a (VISUAL)	-
	06.00 - 07.50	SS-4	33	100	4.50	6	10	10	32	42	28	15	13	14	A-6a (9)	-
B-004-0-19 490+14, 7' LT. LATITUDE: 41.421431 LONGITUDE: -81.840986	01.50 - 03.00	SS-1	38	44	-	-	-	SAME AS SS-2			-	-	-	15	A-4a (VISUAL)	1355
	03.00 - 04.50	SS-2	35	78	-	6	10	14	42	29	-	14	9	14	A-4a (7)	-
	04.50 - 06.00	SS-3	32	67	4.50	-	-	SAME AS SS-4			-	-	-	12	A-6a (VISUAL)	-
	06.00 - 07.50	SS-4	45	100	4.50	13	18	25	18	26	24	12	12	21	A-6a (2)	-
B-005-0-19 494+15, 68' LT. LATITUDE: 41.421142 LONGITUDE: -81.839558	01.50 - 03.00	SS-1	50	11	-	-	-	SAME AS SS-3			-	-	-	18	A-1-b (VISUAL)	1571
	03.00 - 04.50	SS-2	42	89	-	5	10	14	42	30	23	15	8	11	A-4a (7)	-
	04.50 - 06.00	SS-3	35	78	-	7	10	13	41	29	23	15	8	10	A-4a (7)	-
	06.00 - 07.50	SS-4	41	100	-	-	-	SAME AS SS-3			-	-	-	12	A-4a (VISUAL)	-
B-006-0-19 423+63, 7' LT. LATITUDE: 41.420571 LONGITUDE: -81.838264	01.50 - 03.00	SS-1	35	33	4.50	7	11	12	34	36	25	14	11	9	A-6a (7)	-
	03.00 - 04.50	SS-2	24	56	2.50	-	-	SAME AS SS-1			-	-	-	13	A-6a (VISUAL)	1294
	04.50 - 06.00	SS-3	29	89	4.50	-	-	SAME AS SS-1			-	-	-	10	A-6a (VISUAL)	-
	06.00 - 07.50	SS-4	35	100	-	10	10	13	39	28	23	14	9	11	A-4a (6)	-
B-007-0-19 427+20, 69' LT. LATITUDE: 41.420183 LONGITUDE: -81.836928	01.50 - 03.00	SS-1	41	17	-	45	31	19	-5-	-	NP	NP	NP	21	A-1-b (0)	-
	03.00 - 04.50	SS-2	21	44	1.00	-	-	SAME AS SS-3			-	-	-	15	A-6a (VISUAL)	1082
	04.50 - 06.00	SS-3	29	78	4.50	7	9	14	32	38	31	16	15	14	A-6a (9)	-
	06.00 - 07.50	SS-4	33	100	4.50	-	-	SAME AS SS-3			-	-	-	15	A-6a (VISUAL)	-
B-008-0-19 431+00, 7' LT. LATITUDE: 41.420092 LONGITUDE: -81.835624	01.50 - 03.00	SS-1	35	33	2.00	-	-	SAME AS SS-2			-	-	-	17	A-6a (VISUAL)	2545
	03.00 - 04.50	SS-2	21	22	2.00	10	10	12	30	38	31	16	15	16	A-6a (9)	-
	04.50 - 06.00	SS-3	51	67	4.50	-	-	SAME AS SS-2			-	-	-	14	A-6b (VISUAL)	-
	06.00 - 07.50	SS-4	29	33	-	33	19	13	16	19	31	16	15	18	A-2-6 (1)	-
B-009-0-19 435+33, 44' LT. LATITUDE: 41.420183 LONGITUDE: -81.834100	01.50 - 03.00	SS-1	32	33	-	45	31	13	-11-	-	NP	NP	NP	22	A-1-b (0)	-
	03.00 - 04.50	SS-2	23	100	2.50	-	-	SAME AS SS-3			-	-	-	20	A-7-6 (VISUAL)	241
	04.50 - 06.00	SS-3	23	100	2.00	2	5	10	34	49	42	19	23	19	A-7-6 (14)	-
	06.00 - 07.50	SS-4	30	100	4.50	-	-	SAME AS SS-3			-	-	-	17	A-7-6 (VISUAL)	-
B-010-0-19 439+31, 7' LT. LATITUDE: 41.420015 LONGITUDE: -81.832608	01.50 - 03.00	SS-1	27	22	3.50	-	-	SAME AS SS-4			-	-	-	13	A-6b (VISUAL)	4548
	03.00 - 04.50	SS-2	23	56	-	8	12	14	39	27	22	14	8	13	A-4a (6)	-
	04.50 - 06.00	SS-3	12	78	-	-	-	SAME AS SS-2			-	-	-	11	A-4a (VISUAL)	-
	06.00 - 07.50	SS-4	29	100	4.50	6	5	8	36	45	31	14	17	13	A-6b (11)	-
B-011-0-19 442+33, 44' LT. LATITUDE: 41.420204 LONGITUDE: -81.831529	01.50 - 03.00	SS-1	41	44	1.50	23	21	17	22	17	32	20	12	12	A-6a (1)	-
	03.00 - 04.50	SS-2	29	100	4.50	-	-	SAME AS SS-1			-	-	-	13	A-6a (VISUAL)	795
	04.50 - 06.00	SS-3	20	89	4.50	-	-	SAME AS SS-4			-	-	-	15	A-6a (VISUAL)	-
	06.00 - 07.50	SS-4	36	100	4.50	7	8	13	32	40	30	15	15	14	A-6a (9)	-
B-012-0-19 447+30, 6' LT. LATITUDE: 41.420287 LONGITUDE: -81.823920	01.50 - 03.00	SS-1	48	17	3.50	-	-	SAME AS SS-2			-	-	-	17	A-6b (VISUAL)	265
	03.00 - 04.50	SS-2	18	44	4.50	7	7	12	30	44	32	16	16	16	A-6b (10)	-
	04.50 - 06.00	SS-3	21	56	4.50	-	-	SAME AS SS-4			-	-	-	14	A-6b (VISUAL)	-
	06.00 - 07.50	SS-4	33	89	4.50	7	7	11	30	45	38	15	23	16	A-6b (13)	-
B-013-0-19 453+79, 43' LT. LATITUDE: 41.420582 LONGITUDE: -81.827383	01.50 - 03.00	SS-1	81	44	-	46	25	10	9	10	33	22	11	17	A-2-6 (0)	-
	03.00 - 04.50	SS-2	23	67	4.50	-	-	SAME AS SS-3			-	-	-	16	A-4a (VISUAL)	970
	04.50 - 06.00	SS-3	24	89	4.50	8	11	15	38	28	22	12	10	10	A-4a (6)	-
	06.00 - 07.50	SS-4	29	100	4.50	-	-	SAME AS SS-3			-	-	-	13	A-4a (VISUAL)	-
B-014-0-19 457+30, 6' LT. LATITUDE: 41.420594 LONGITUDE: -81.826093	01.50 - 03.00	SS-1	38	67	1.75	16	12	14	26	32	31	16	15	12	A-6a (7)	-
	03.00 - 04.50	SS-2	11	67	0.50	-	-	SAME AS SS-1			-	-	-	17	A-6a (VISUAL)	1140
	04.50 - 06.00	SS-3	18	89	1.50	-	-	SAME AS SS-1			-	-	-	17	A-6a (VISUAL)	-
	06.00 - 07.50	SS-4	24	100	4.50	6	6	11	35	42	30	14	16	12	A-6b (10)	-
B-015-0-19 461+59, 43' LT. LATITUDE: 41.420764 LONGITUDE: -81.824717	01.50 - 03.00	SS-1	21	33	3.00	13	16	14	27	30	30	16	14	17	A-6a (6)	-
	03.00 - 04.50	SS-2	15	44	3.00	-	-	SAME AS SS-1			-	-	-	21	A-6a (VISUAL)	953
	04.50 - 06.00	SS-3	21	78	1.50	-	-	SAME AS SS-4			-	-	-	17	A-6a (VISUAL)	-
	06.00 - 07.50	SS-4	23	89	3.00	6	8	11	34	41	29	14	15	14	A-6a (10)	-
B-016-0-19 464+30, 6' LT. LATITUDE: 41.420685 LONGITUDE: -81.823323	01.50 - 03.00	SS-1	66	28	4.50	14	25	14	22	25	27	16	11	14	A-6a (3)	-
	03.00 - 04.50	SS-2	27	22	4.50	-	-	SAME AS SS-1			-	-	-	7	A-6a (VISUAL)	2123
	04.50 - 06.00	SS-3	23	67	4.50	-	-	SAME AS SS-4			-	-	-	10	A-6a (VISUAL)	-
	06.00 - 07.50	SS-4	23	100	4.50	8	8	15	36	33	30	15	15	17	A-6a (9)	-
B-017-0-19 469+31, 43' LT. LATITUDE: 41.420749 LONGITUDE: -81.821615	01.50 - 03.00	SS-1	20	44	1.50	34	14	11	23	18	27	16	11	22	A-6a (1)	853
	03.00 - 04.50	SS-2	38	56	4.50	-	-	SAME AS SS-1			-	-	-	12	A-6a (VISUAL)	-
	04.50 - 06.00	SS-3	38	78	4.50	39	12	9	23	17	27	14	13	10	A-6a (2)	-
	06.00 - 07.50	SS-4	30	100	4.50	-	-	SAME AS SS-3			-	-	-	14	A-6a (VISUAL)	-
B-018-0-19 473+16, 6' LT. LATITUDE: 41.420637 LONGITUDE: -81.818798	01.50 - 03.00	SS-1	111	17	-	-	-	SAME AS SS-3			-	-	-	11	A-1-a (VISUAL)	1729
	03.00 - 04.50	SS-2	32	78	4.50	7	8	13	31	41	31	15	16	12	A-6b (10)	-
	04.50 - 06.00	SS-3	23	78	4.50	-	-	SAME AS SS-2			-	-	-	13	A-6b (VISUAL)	-
	06.00 - 07.50	SS-4	29	100	2.50	8	8	15	34	35	30	16	14	15	A-6a (8)	-
B-019-0-19 477+31, 55' LT. LATITUDE: 41.420758 LONGITUDE: -81.818798	01.00 - 02.50	SS-1	33	22	-	59	7	2	-32-	-	NP	NP	NP	16	A-2-4 (0)	-
	02.50 - 04.00	SS-2	24	56	1.50	-	-	SAME AS SS-4			-	-	-	17	A-6a (VISUAL)	1177
	04.00 - 05.50	SS-3	18	100	3.00	-	-	SAME AS SS-4			-	-	-	20	A-6a (VISUAL)	-
	05.50 - 07.00	SS-4	21	100	2.50	14	11	15	34	26	27	13	14	15	A-6a (7)	-

SUMMARY OF SOIL TEST DATA
IR-480 (CONT.)

EXPLORATION ID., STATION & OFFSET	FROM - TO	SAMPLE ID	N ₆₀	% REC	tsf HP	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS	ppm SO ₄
B-020-0-19 484+29, 6' LT. LATITUDE: 41.420602 LONGITUDE: -81.816256	01.50 - 03.00	SS-1	107	67	4.50			SAME AS SS-2						14	A-6a (VISUAL)	1019
	03.00 - 04.50	SS-2	53	100	4.50	9	11	17	31	32	26	13		12	A-6a (7)	-
	04.50 - 06.00	SS-3	56	17	4.50			SAME AS SS-2						16	A-6a (VISUAL)	-
	06.00 - 07.50	SS-4	39	11	-									9	A-3a (VISUAL)	-
	08.00 - 09.50	SS-5	18	67	2.50	10	2	10	37	41	42	17	25	24	A-7-6 (14)	-
B-021-0-19 484+37, 56' LT. LATITUDE: 41.420739 LONGITUDE: -81.816223	01.00 - 02.50	SS-1	29	44	1.50	12	13	20	28	27	25	14	11	14	A-6a (4)	-
	02.50 - 04.00	SS-2	47	44	4.50									12	A-6b (VISUAL)	1433
	04.00 - 05.50	SS-3	39	78	-	1	17	77	2	3	NP	NP	NP	11	A-3 (0)	-
	05.50 - 07.00	SS-4	26	100	2.00									18	A-6b (VISUAL)	-
B-022-0-19 488+16, 6' LT. LATITUDE: 41.420590 LONGITUDE: -81.814844	01.50 - 03.00	SS-1	38	33	3.00	22	7	14	32	25	24	13	11	16	A-6a (5)	711
	03.00 - 04.50	SS-2	32	78	2.00			SAME AS SS-1						14	A-6a (VISUAL)	-
	04.50 - 06.00	SS-3	12	56	1.50			SAME AS SS-4						14	A-6b (VISUAL)	-
	06.00 - 07.50	SS-4	17	100	3.00	13	3	11	35	38	40	15	25	21	A-6b (14)	-
B-023-0-19 492+00, 68' LT. LATITUDE: 41.420747 LONGITUDE: -81.813403	01.50 - 03.00	SS-1	20	33	1.50			SAME AS SS-2						21	A-6a (VISUAL)	805
	03.00 - 04.50	SS-2	23	78	3.00	23	11	22	21	23	26	14	12	9	A-6a (2)	-
	04.50 - 06.00	SS-3	15	78	4.50			SAME AS SS-4						17	A-6b (VISUAL)	-
	06.00 - 07.50	SS-4	18	100	1.00	13	2	8	32	45	38	17	21	25	A-6b (12)	-
B-024-0-19 495+89, 6' LT. LATITUDE: 41.420566 LONGITUDE: -81.812026	01.50 - 03.00	SS-1	75	33	4.50	8	9	16	34	33	25	14	11	13	A-6a (7)	-
	03.00 - 04.50	SS-2	24	44	4.50			SAME AS SS-1						16	A-6a (VISUAL)	187
	04.50 - 06.00	SS-3	15	78	4.50	10	2	12	36	40	31	16	15	19	A-6a (10)	-
	06.00 - 07.50	SS-4	38	100	4.50			SAME AS SS-3						17	A-6a (VISUAL)	-
B-025-0-19 500+00, 6' LT. LATITUDE: 41.420554 LONGITUDE: -81.810530	01.50 - 03.00	SS-1	78	33	1.00			SAME AS SS-2						21	A-6a (VISUAL)	52
	03.00 - 04.50	SS-2	23	78	4.00	13	11	14	30	32	31	16	15	17	A-6a (7)	-
	04.50 - 06.00	SS-3	18	67	4.50			SAME AS SS-4						16	A-6a (VISUAL)	-
	06.00 - 07.50	SS-4	32	100	4.50	5	10	13	38	34	29	16	13	16	A-6a (9)	-
B-026-0-19 503+89, 57' LT. LATITUDE: 41.420680 LONGITUDE: -81.808108	01.00 - 02.50	SS-1	35	11	-			SAME AS SS-3						21	A-1-b (VISUAL)	-
	02.50 - 04.00	SS-2	24	100	4.50			SAME AS SS-2						21	A-6a (VISUAL)	84
	04.00 - 05.50	SS-3	21	44	1.50	6	5	11	42	36	31	16	15	22	A-6a (10)	-
	05.50 - 07.00	SS-4	35	100	3.50			SAME AS SS-3						22	A-6a (VISUAL)	-
B-027-0-19 507+91, 7' RT. LATITUDE: 41.420493 LONGITUDE: -81.807647	01.50 - 03.00	SS-1	38	22	4.50			SAME AS SS-2						14	A-6b (VISUAL)	55
	03.00 - 04.50	SS-2	21	56	3.00	10	6	13	48	23	32	16	16	19	A-6b (10)	-
	04.50 - 06.00	SS-3	21	67	4.50	5	8	13	38	36	30	15	15	15	A-6a (10)	-
	06.00 - 07.50	SS-4	22	100	4.50			SAME AS SS-3						16	A-6a (VISUAL)	-
B-028-0-19 507+86, 6' LT. LATITUDE: 41.420529 LONGITUDE: -81.807663	01.50 - 03.00	SS-1	60	33	4.50	18	13	16	27	26	29	15	14	14	A-6a (5)	-
	03.00 - 04.50	SS-2	33	44	4.50			SAME AS SS-1						16	A-6a (VISUAL)	97
	04.50 - 06.00	SS-3	29	67	4.50	4	10	9	40	37	30	17	13	15	A-6a (9)	-
	06.00 - 07.50	SS-4	42	100	4.50			SAME AS SS-3						16	A-6a (VISUAL)	-
B-029-0-19 511+70, 55' LT. LATITUDE: 41.420652 LONGITUDE: -81.806260	01.00 - 02.50	SS-1	17	44	-	6	10	15	36	33	25	16	9	16	A-4a (7)	-
	02.50 - 04.00	SS-2	27	78	-			SAME AS SS-1						15	A-4a (VISUAL)	61
	04.00 - 05.50	SS-3	33	100	-			SAME AS SS-1						15	A-4a (VISUAL)	-
	05.50 - 07.00	SS-4	48	100	-			SAME AS SS-1						15	A-4a (VISUAL)	-
B-030-0-19 515+57, 7' RT. LATITUDE: 41.420468 LONGITUDE: -81.804851	01.50 - 03.00	SS-1	33	22	1.00			SAME AS SS-2						23	A-6b (VISUAL)	239
	03.00 - 04.50	SS-2	17	78	1.50	6	5	13	37	39	39	18	21	25	A-6b (12)	-
	04.50 - 06.00	SS-3	11	67	1.25			SAME AS SS-4						24	A-6a (VISUAL)	-
	06.00 - 07.50	SS-4	33	100	1.50	16	13	16	26	29	35	20	15	20	A-6a (6)	-

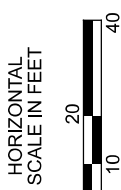
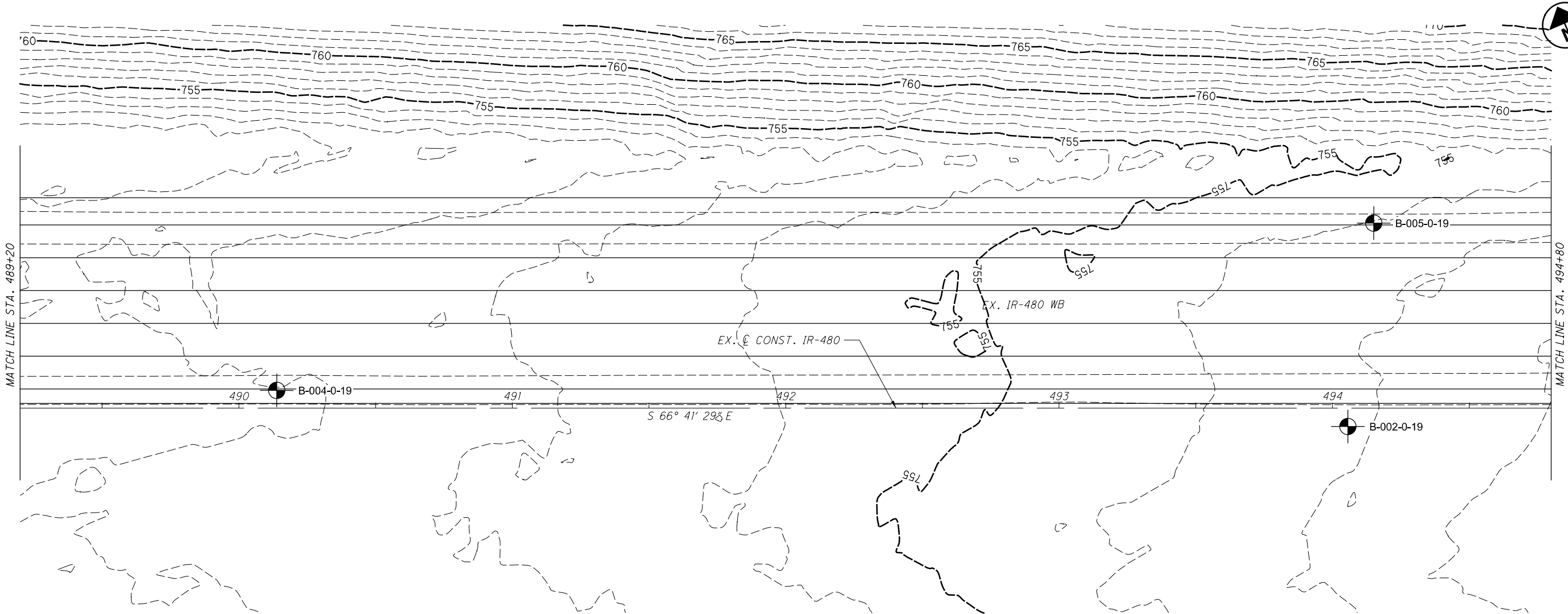
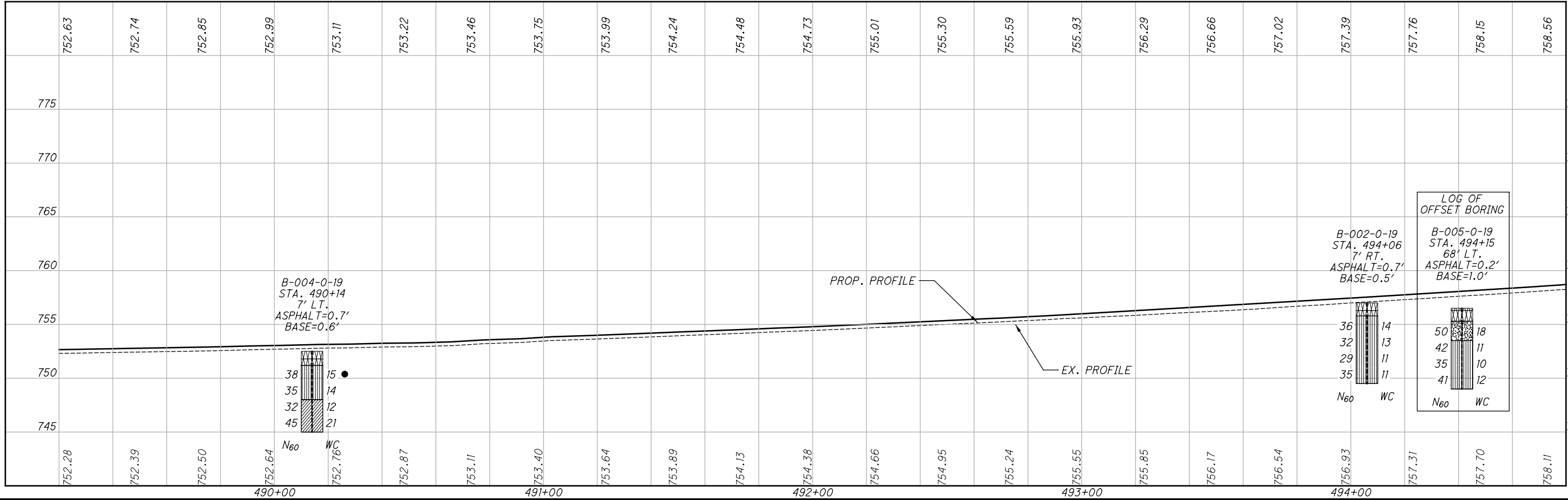


NOTE:
PROPOSED SHOULDER TAPERS TO MEET EXISTING.



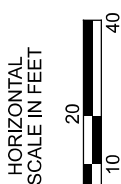
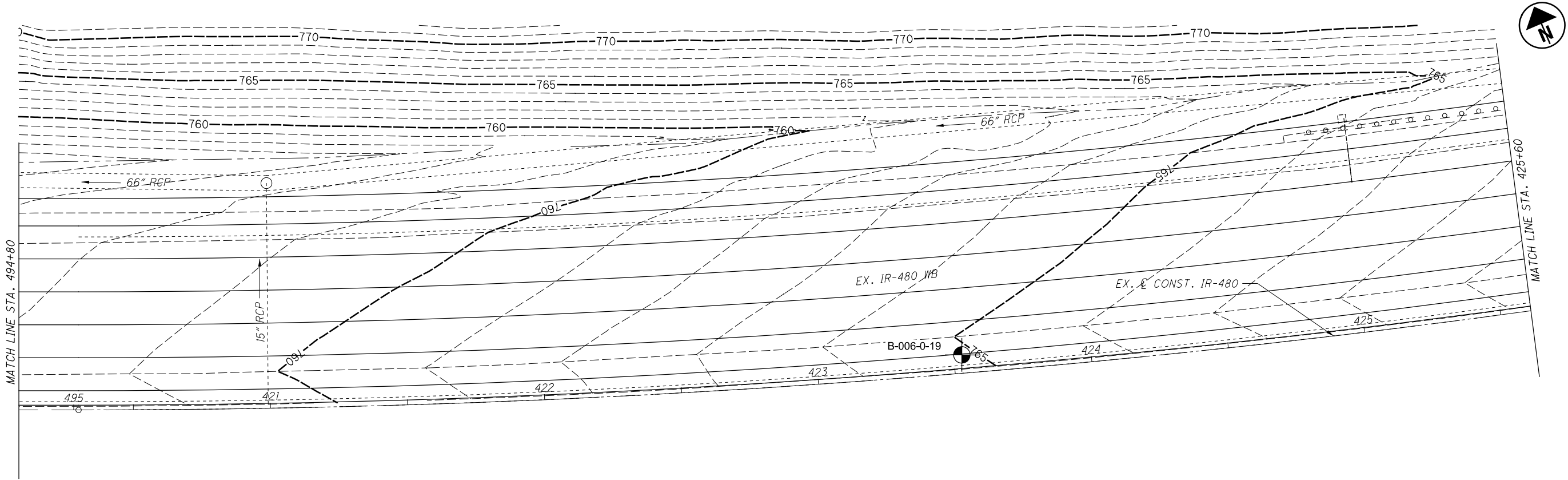
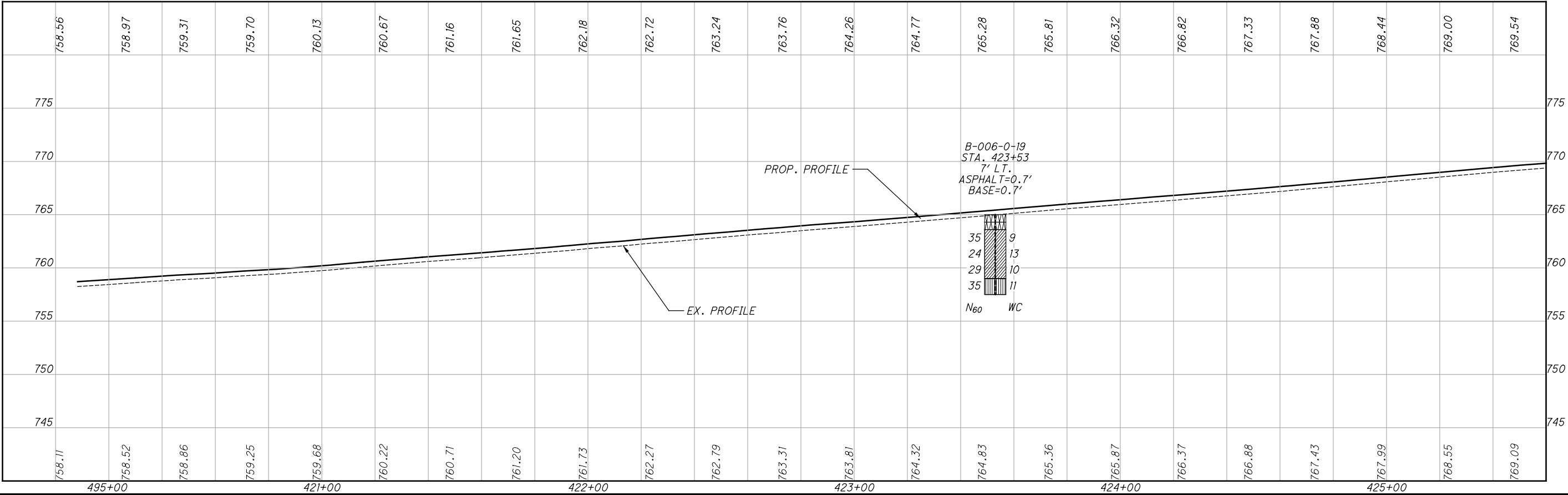
SOIL PROFILE IR-480
STA. 485+00 TO STA. 489+20

DESIGN AGENCY	
Terracon Consulting Engineers and Scientists	
DESIGNER	
MR	
REVIEWER	
KME 09-22-20	
PROJECT ID	
108482	
SUBSET	TOTAL
4	20
SHEET	TOTAL
209	225



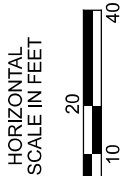
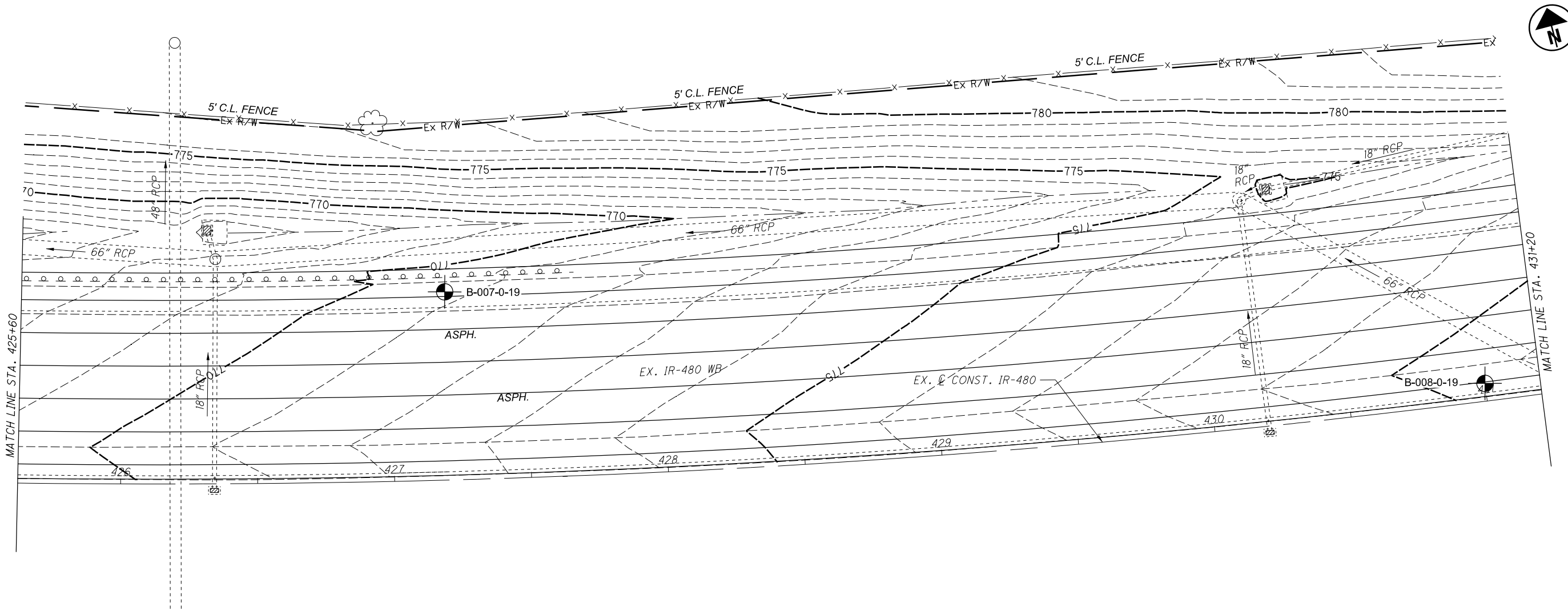
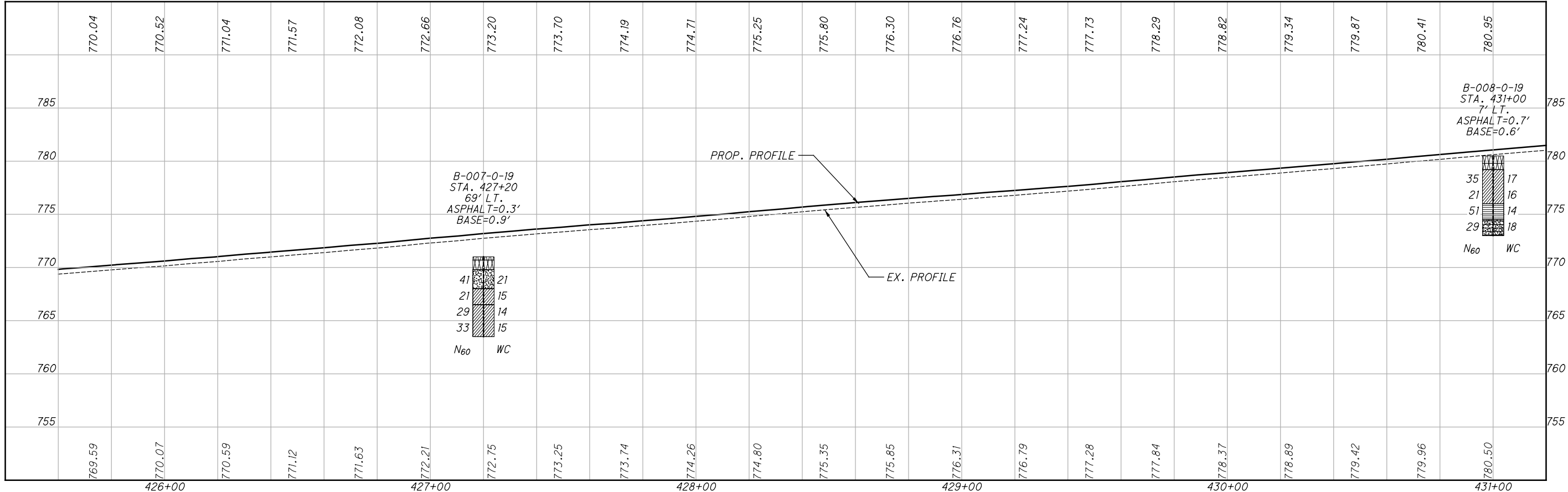
SOIL PROFILE IR-480
STA. 489+20 TO STA. 494+80

DESIGN AGENCY	
Terracon Consulting Engineers and Scientists	
DESIGNER	
MR	
REVIEWER	
KME 09-22-20	
PROJECT ID	
108482	
SUBSET	TOTAL
5	20
SHEET	TOTAL
210	225



SOIL PROFILE IR-480
STA. 494+80 BACK TO STA. 425+60 AHEAD

DESIGN AGENCY	
Terracon Consulting Engineers and Scientists	
DESIGNER	
MR	
REVIEWER	
KME 09-22-20	
PROJECT ID	
108482	
SUBSET	TOTAL
6	20
SHEET	TOTAL
211	225



SOIL PROFILE IR-480
STA. 425+60 TO STA. 431+20

DESIGN AGENCY

Terracon
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DESIGNER

MR

REVIEWER

KME 09-22-20

PROJECT ID

108482

SUBSET

7

TOTAL

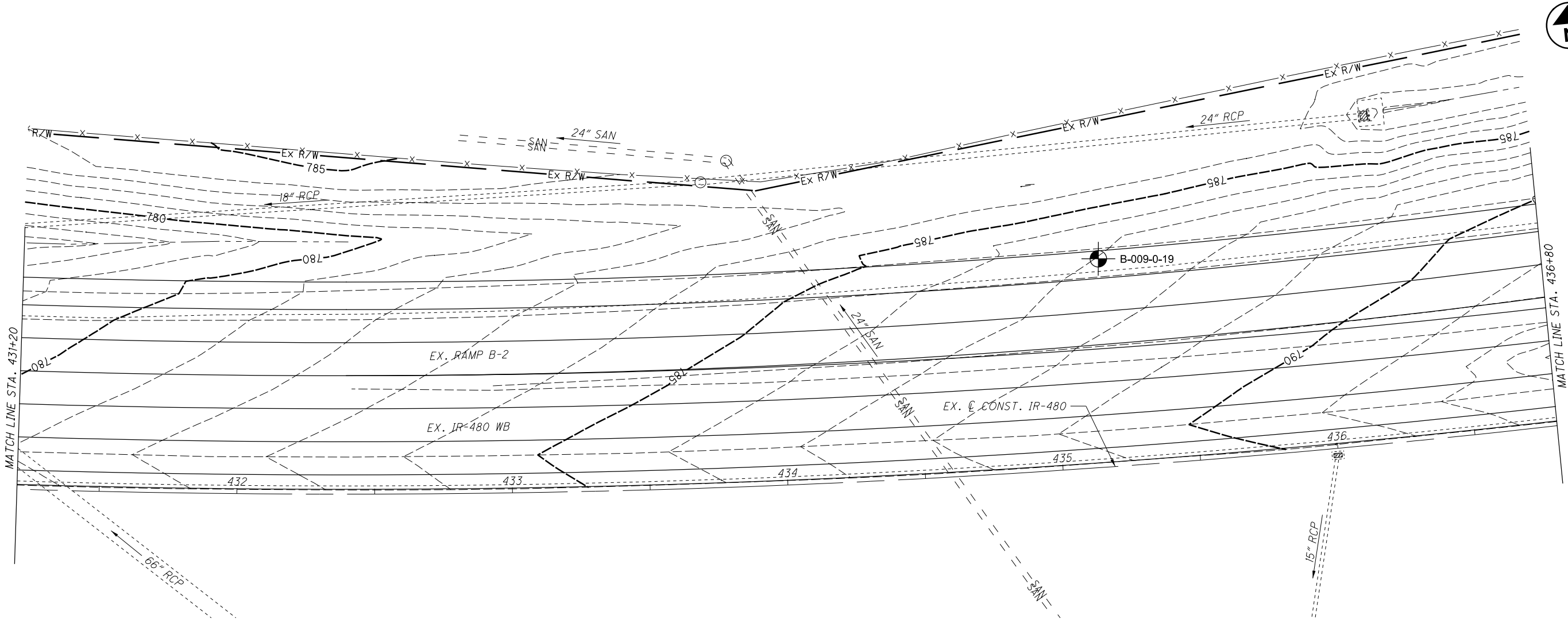
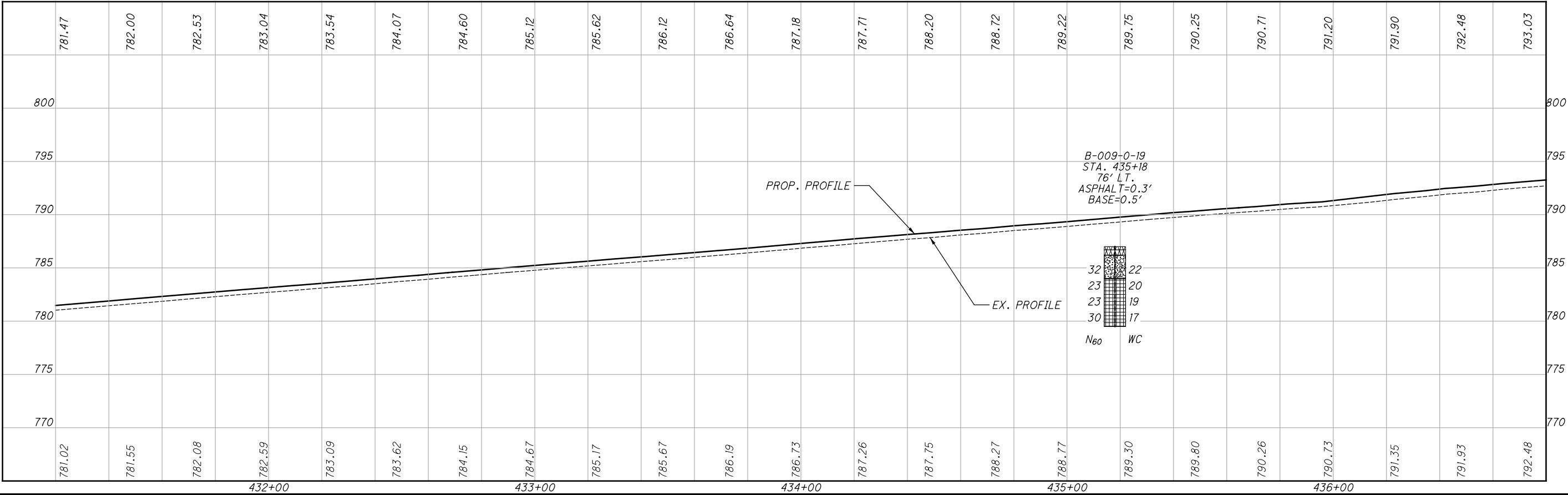
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SHEET

212

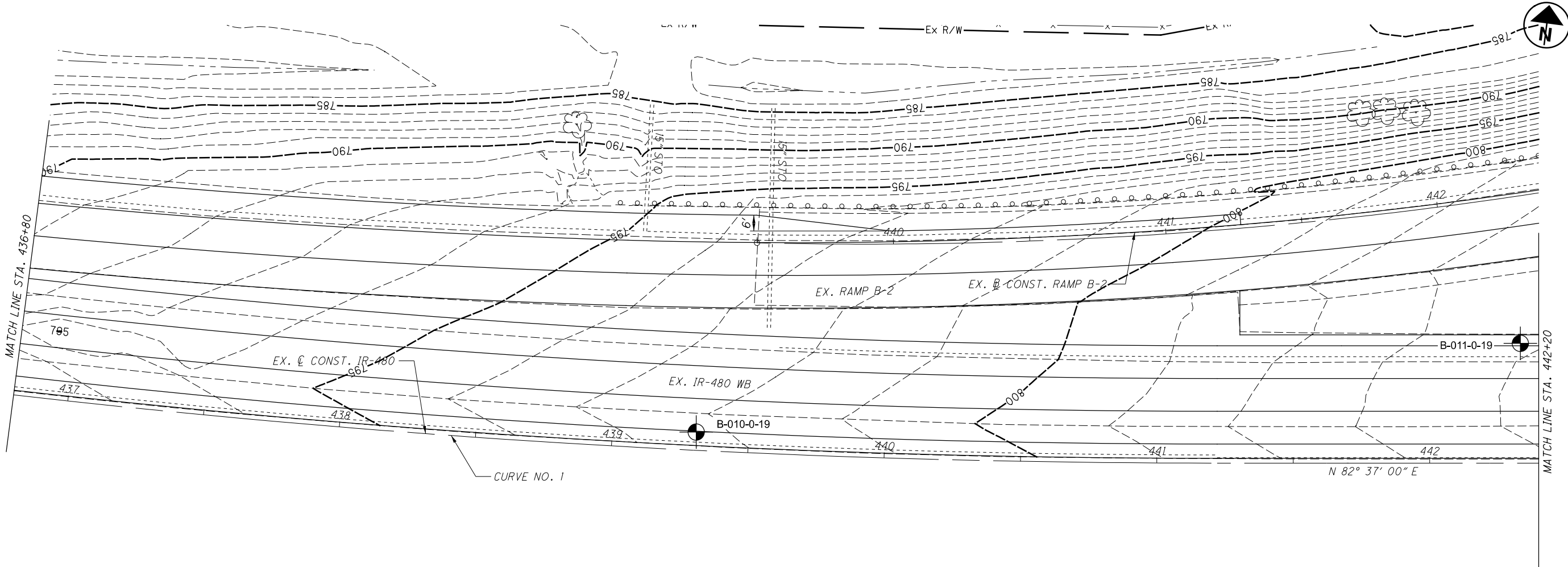
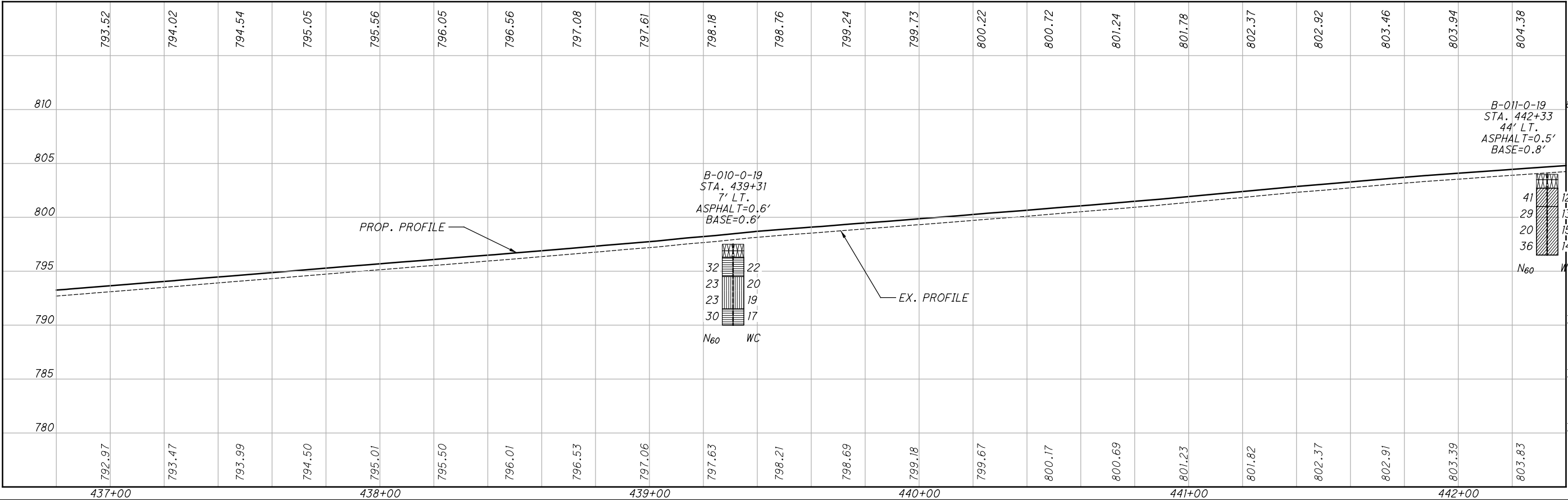
TOTAL

225



SOIL PROFILE IR-480
STA. 431+20 TO STA. 436+80

DESIGN AGENCY	
Terracon Consulting Engineers and Scientists	
DESIGNER	
MR	
REVIEWER	
KME 09-22-20	
PROJECT ID	
108482	
SUBSET	TOTAL
8	20
SHEET	TOTAL
213	225



HORIZONTAL SCALE IN FEET

0 10 20 40

SOIL PROFILE IR-480

STA. 436+80 TO STA. 442+40

DESIGN AGENCY

Terracon

Consulting Engineers and Scientists

DESIGNER

MR

REVIEWER

KME 09-22-20

PROJECT ID

108482

SUBSET

9

TOTAL

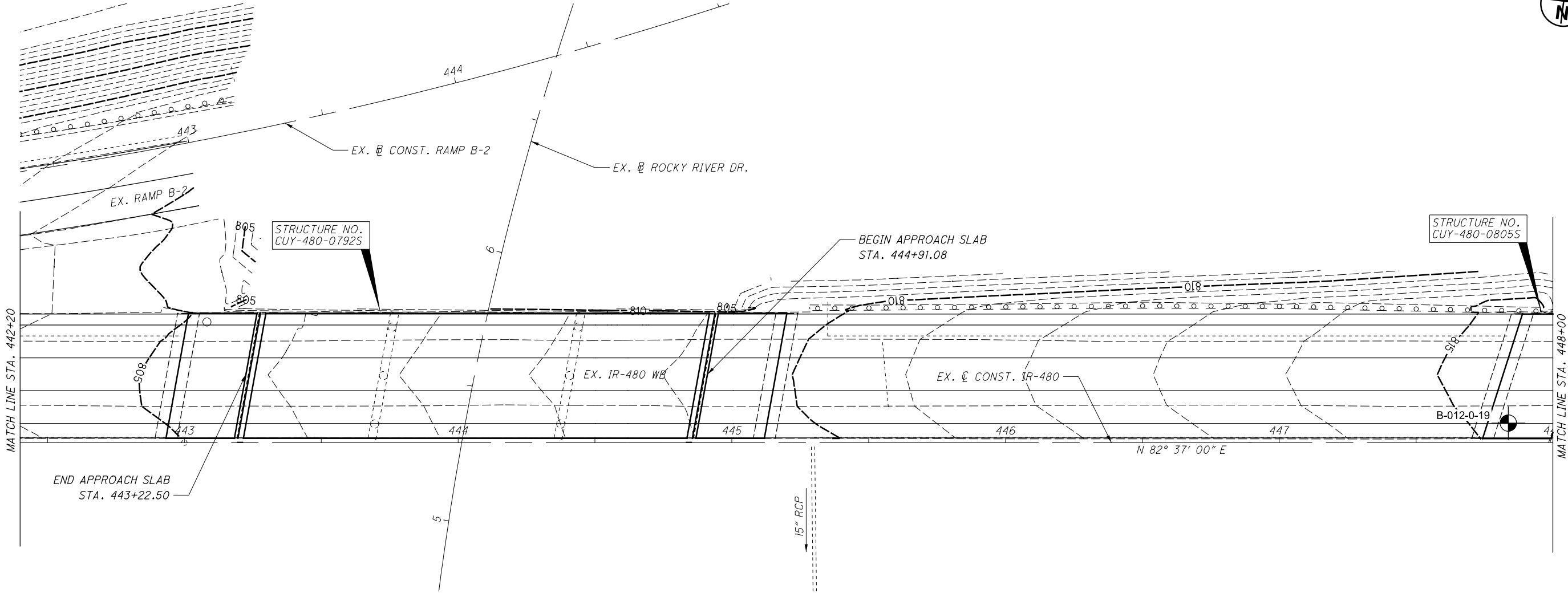
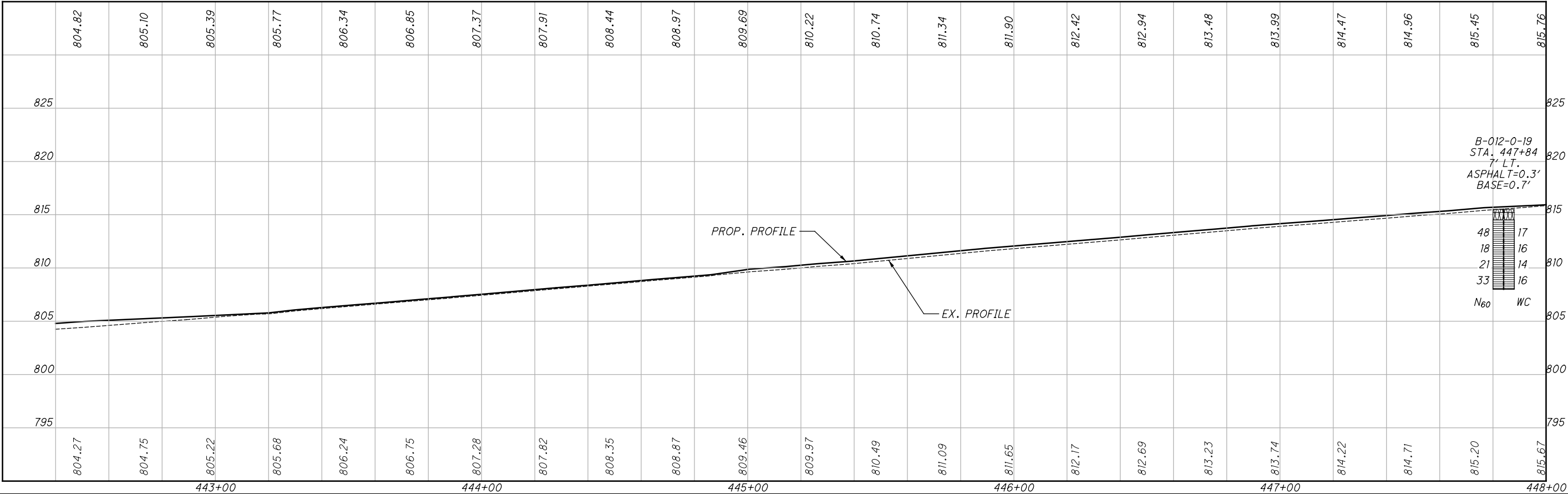
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SHEET

214

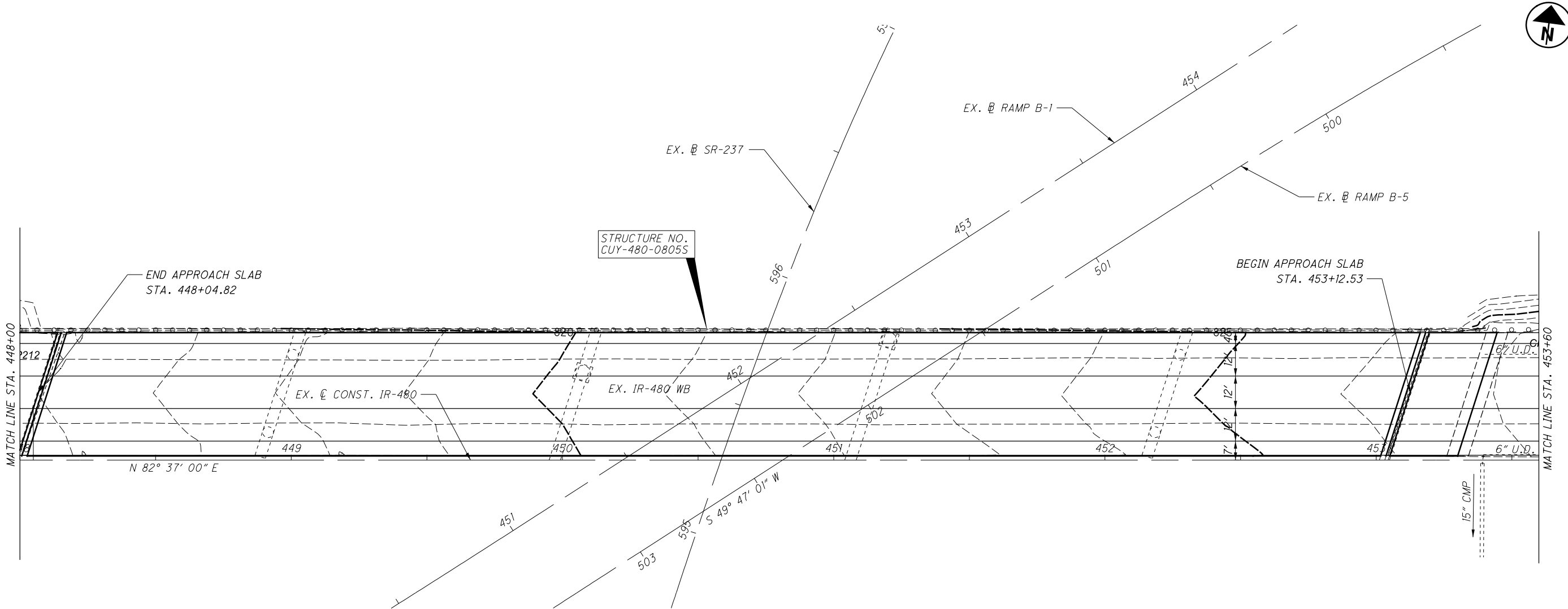
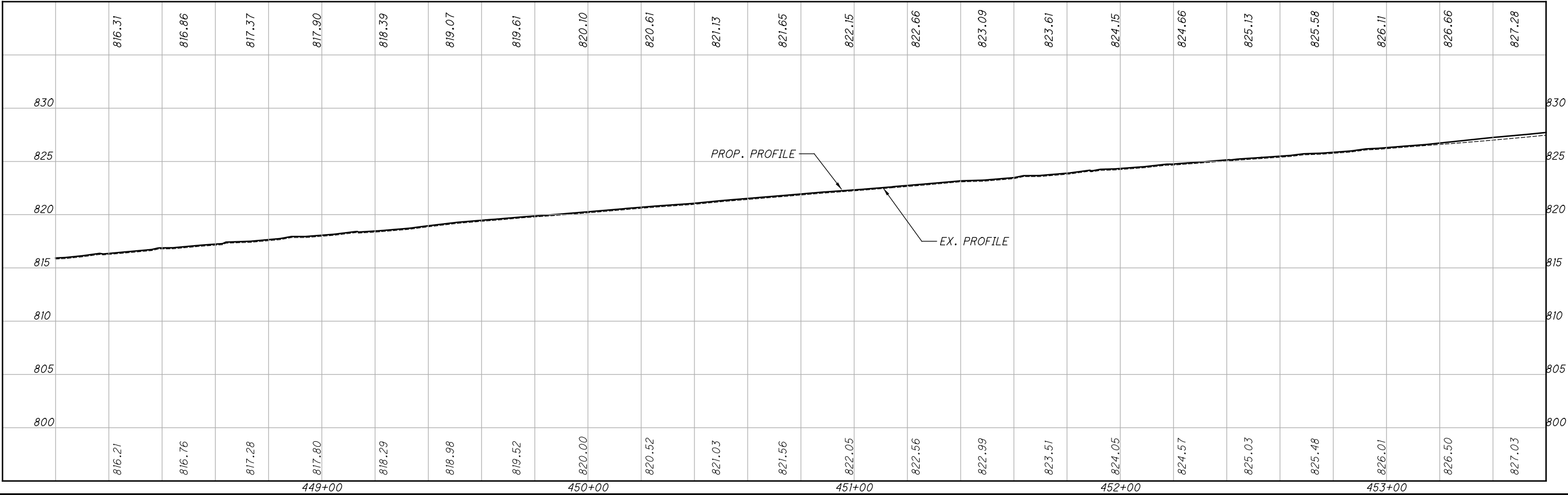
TOTAL

225



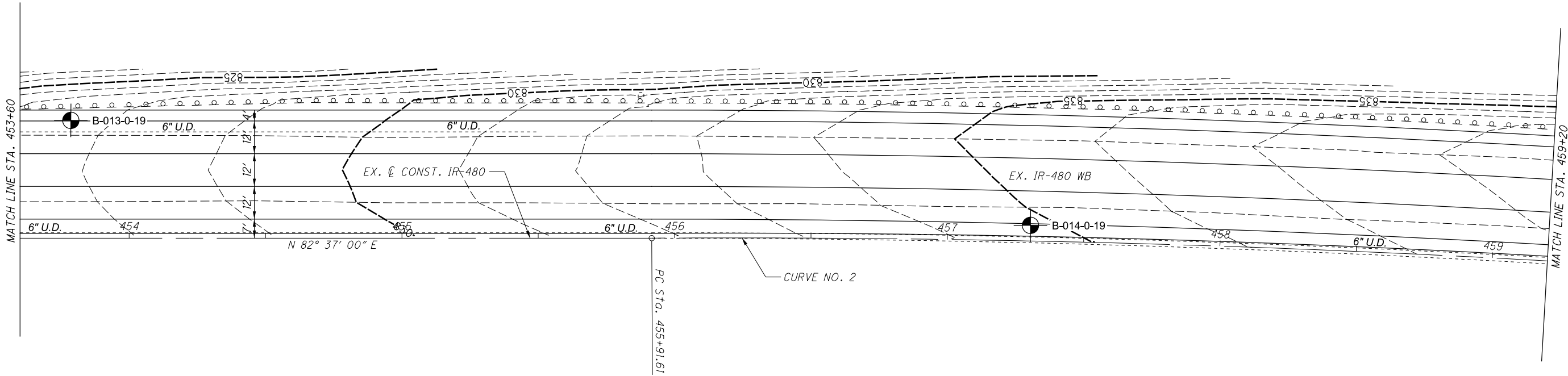
SOIL PROFILE IR-480
STA. 442+20 TO STA. 448+00

DESIGN AGENCY	
Terracon Consulting Engineers and Scientists	
DESIGNER	
MR	
REVIEWER	
KME 09-22-20	
PROJECT ID	
108482	
SUBSET	TOTAL
10	20
SHEET	TOTAL
215	225



SOIL PROFILE IR-480
STA. 448+00 TO STA. 453+60

DESIGN AGENCY	
Terracon Consulting Engineers and Scientists	
DESIGNER	
MR	
REVIEWER	
KME 09-22-20	
PROJECT ID	
108482	
SUBSET	TOTAL
11	20
SHEET	TOTAL
216	225



HORIZONTAL
SCALE IN FEET

A horizontal scale bar with alternating black and white segments. The scale is marked at 0, 10, 20, and 40 feet. The segments are: 0-5 (black), 5-10 (white), 10-15 (black), 15-20 (white), 20-25 (black), 25-30 (white), 30-35 (black), 35-40 (white).

SOIL PROFILE IR-480
STA. 453+60 TO STA. 459+20

DESIGN AGENCY



DESIGNER

MR

REVIEWER

KME 09-22-20

PROJECT ID

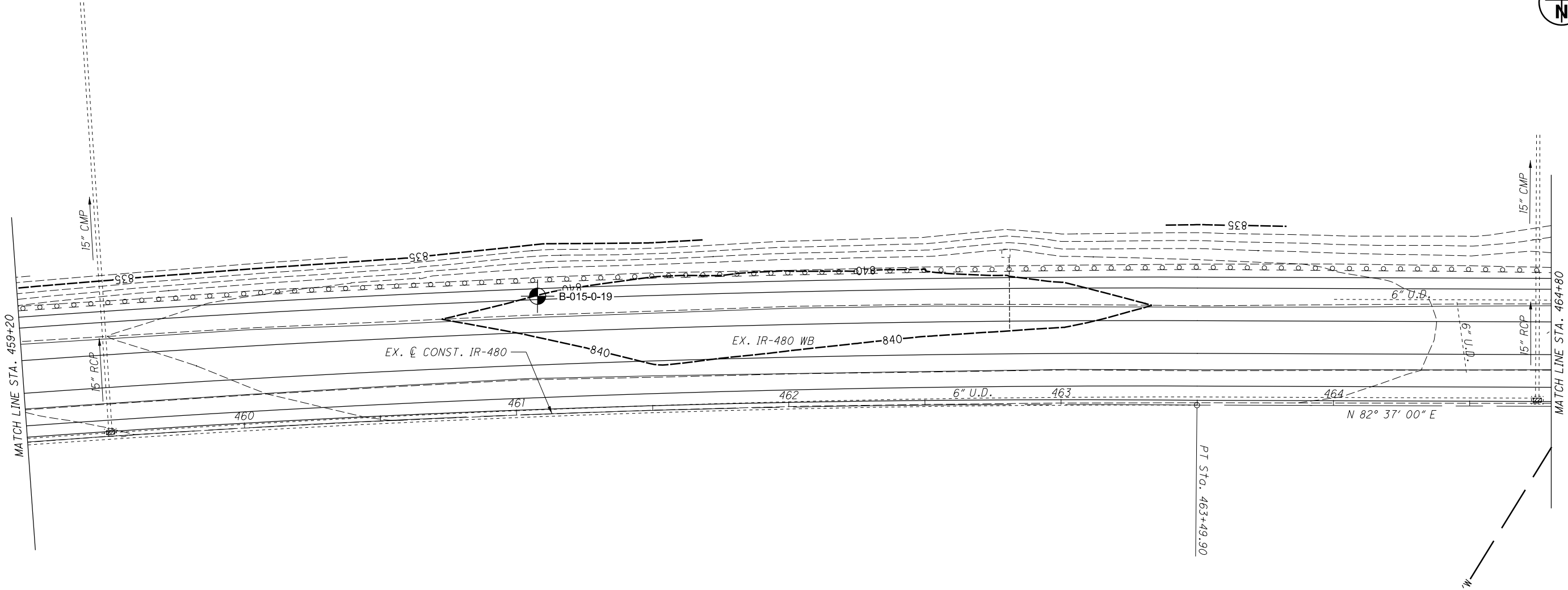
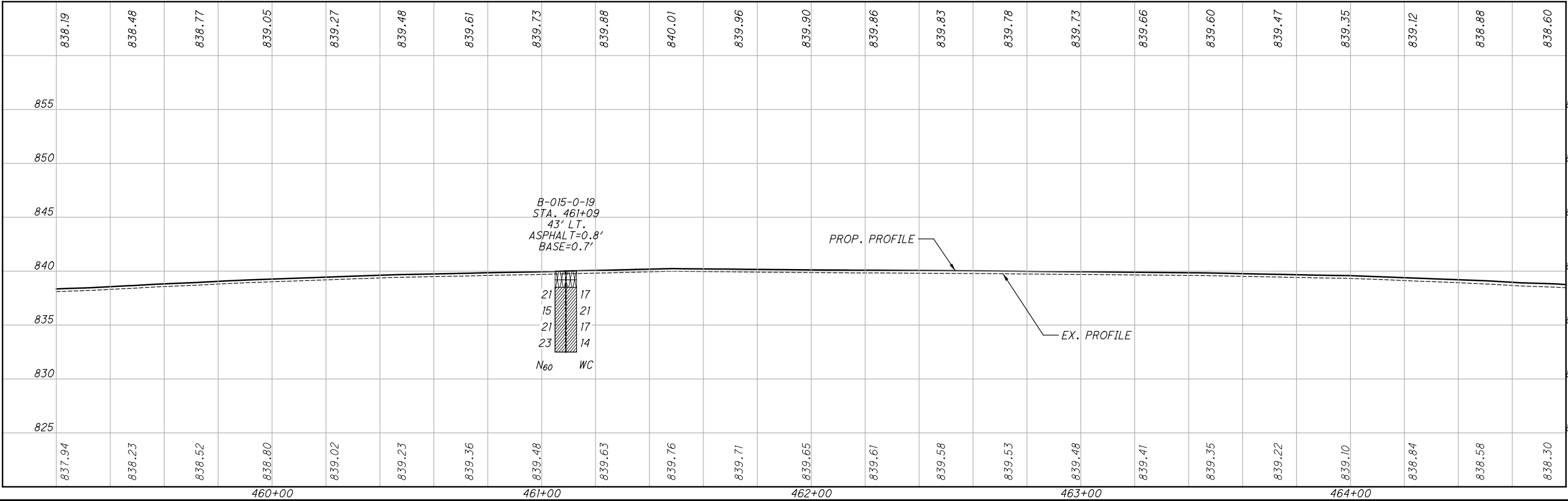
108482

SUBSET

12	2
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SHEET

TOTAL



HORIZONTAL
SCALE IN FEET
0 10 20 40

SOIL PROFILE IR-480
STA. 459+20 TO STA. 464+80

DESIGN AGENCY

Terracon
Consulting Engineers and Scientists

DESIGNER

MR

REVIEWER

KME 09-22-20

PROJECT ID

108482

SUBSET

13

TOTAL

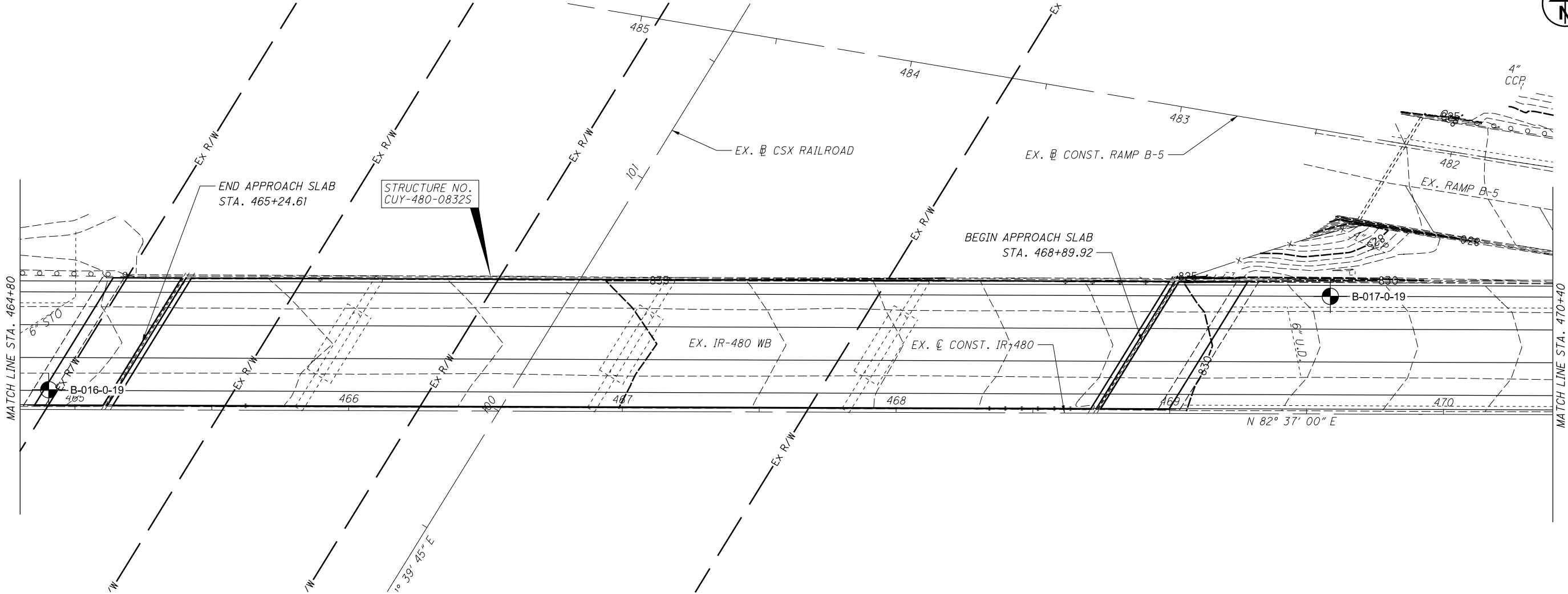
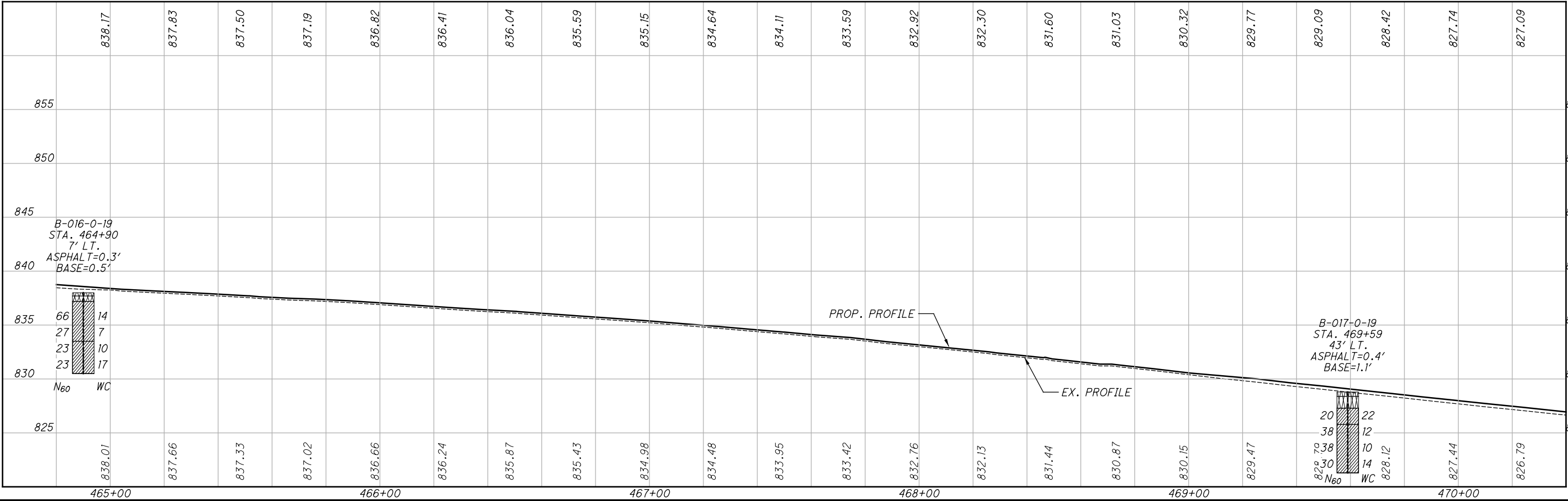
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SHEET

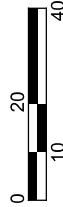
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TOTAL

225



HORIZONTAL
SCALE IN FEET



SOIL PROFILE IR-480
STA. 464+80 TO STA. 470+40

DESIGN AGENCY

Terracon
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DESIGNER

MR

REVIEWER

KME 09-22-20

PROJECT ID

108482

SUBSET

14

TOTAL

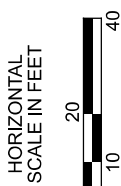
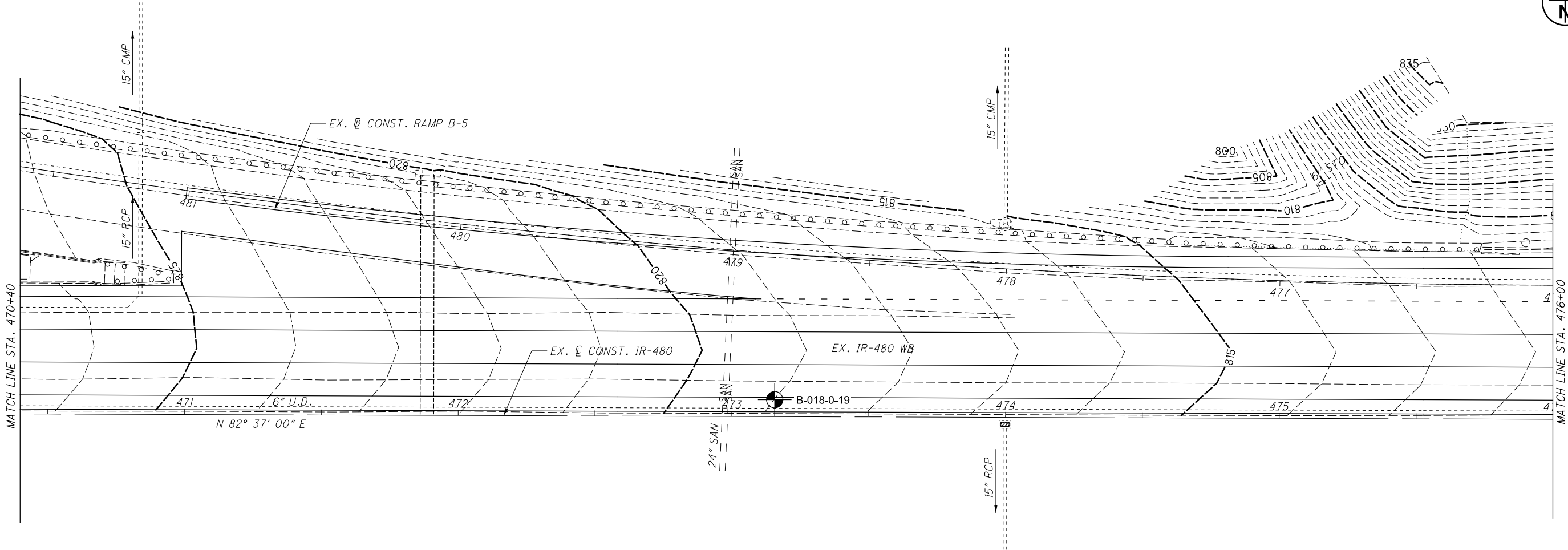
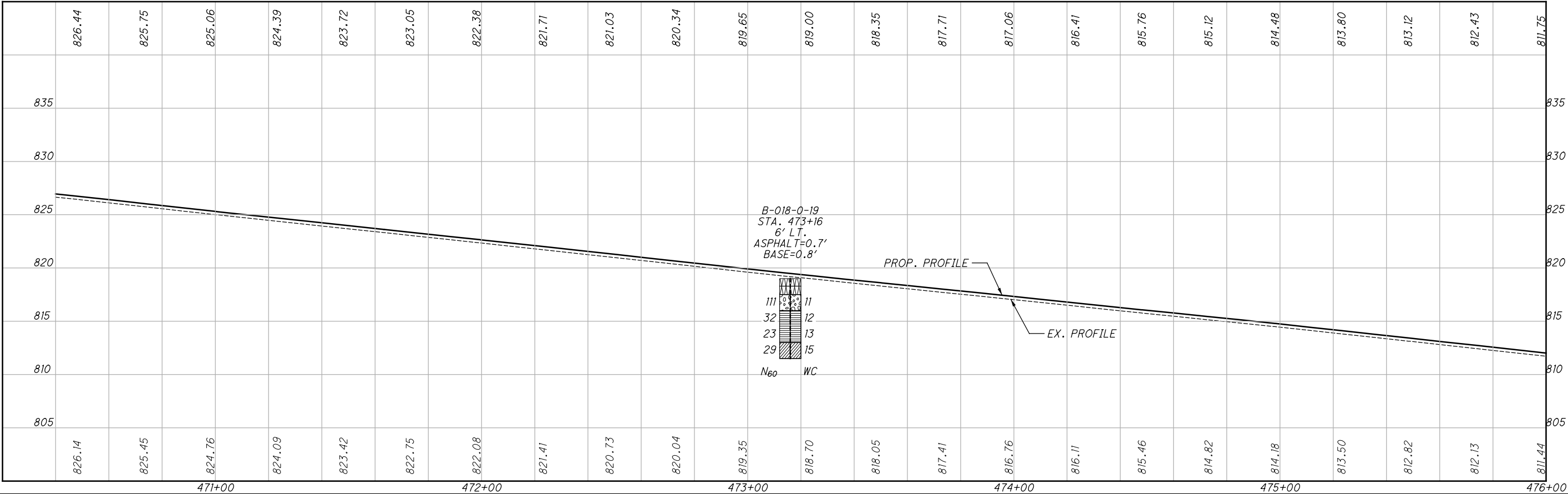
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SHEET

219

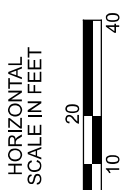
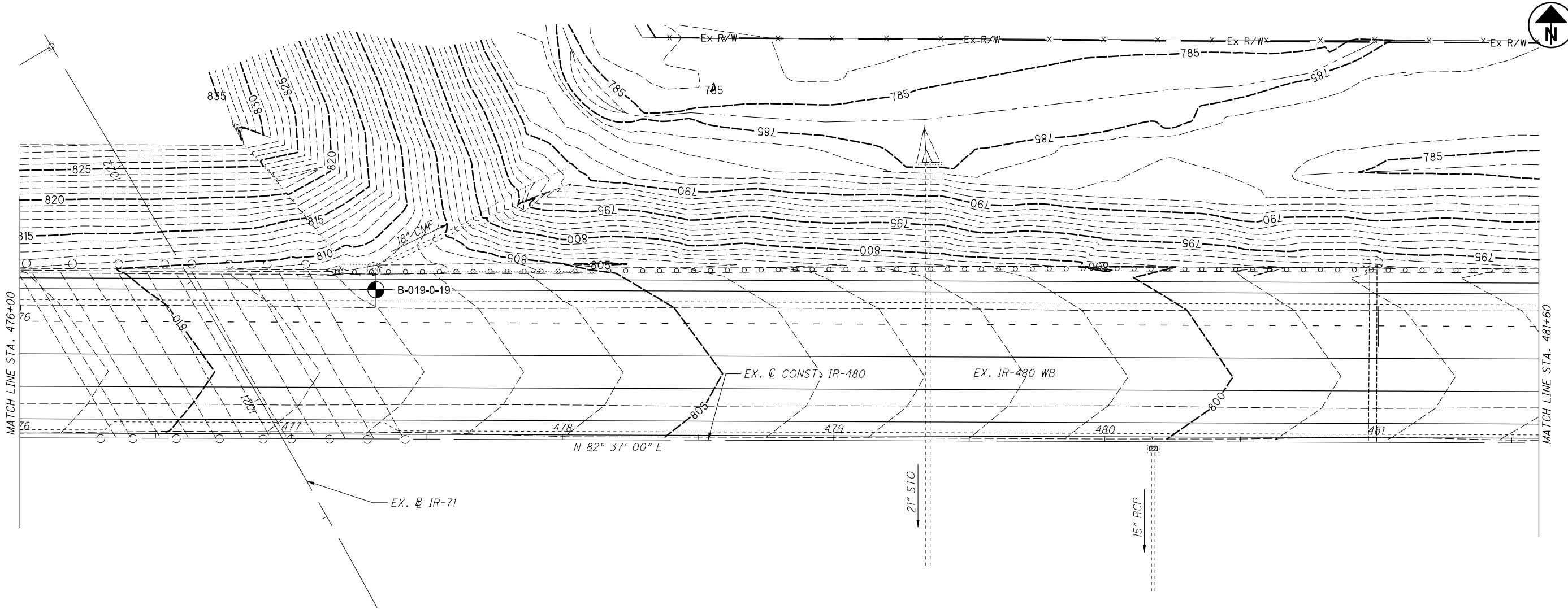
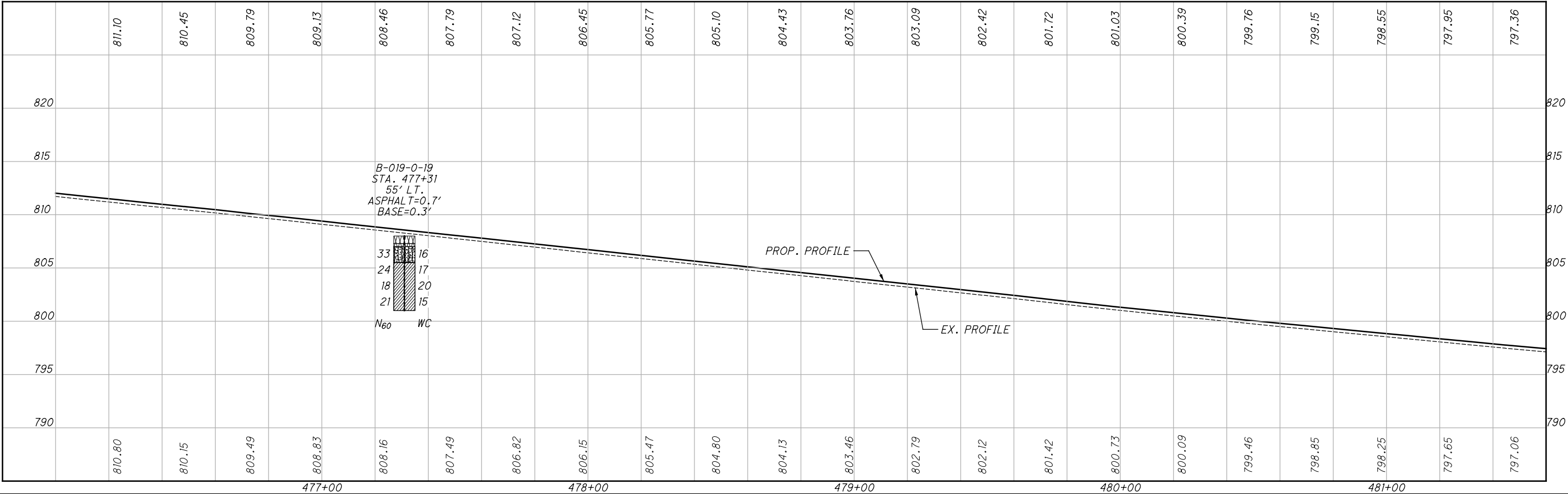
TOTAL

225



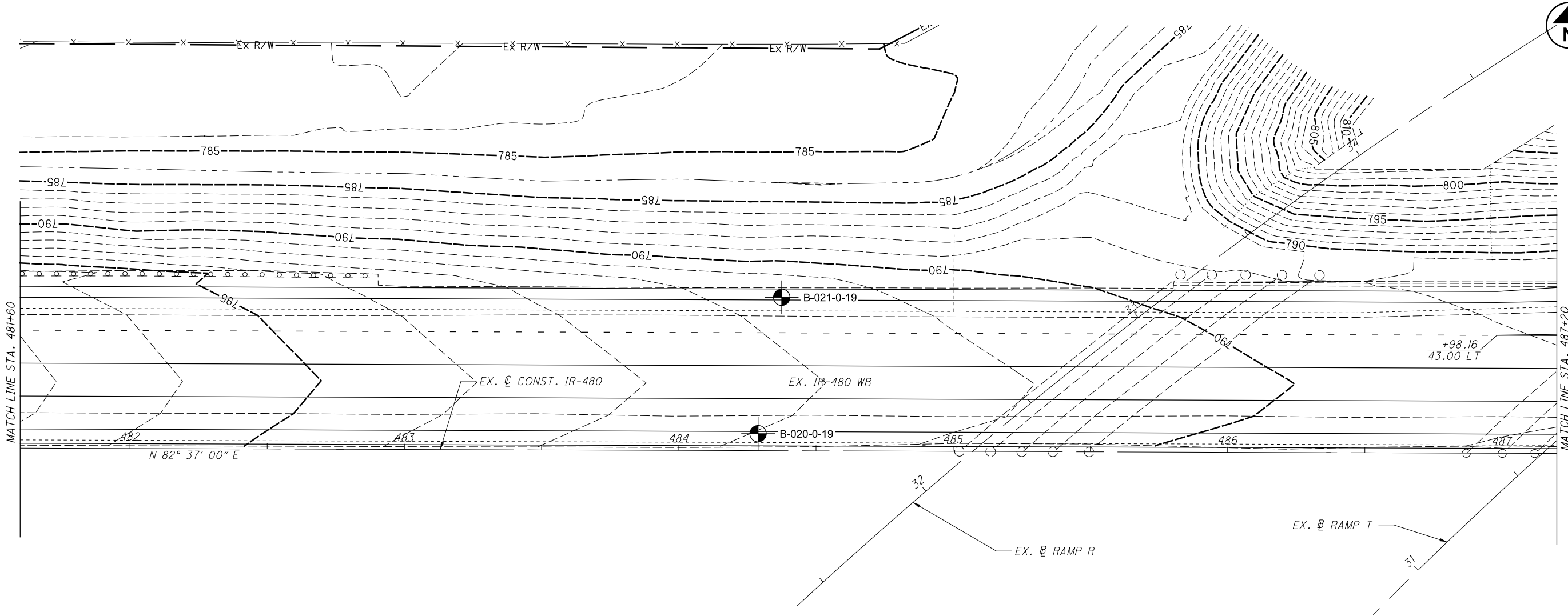
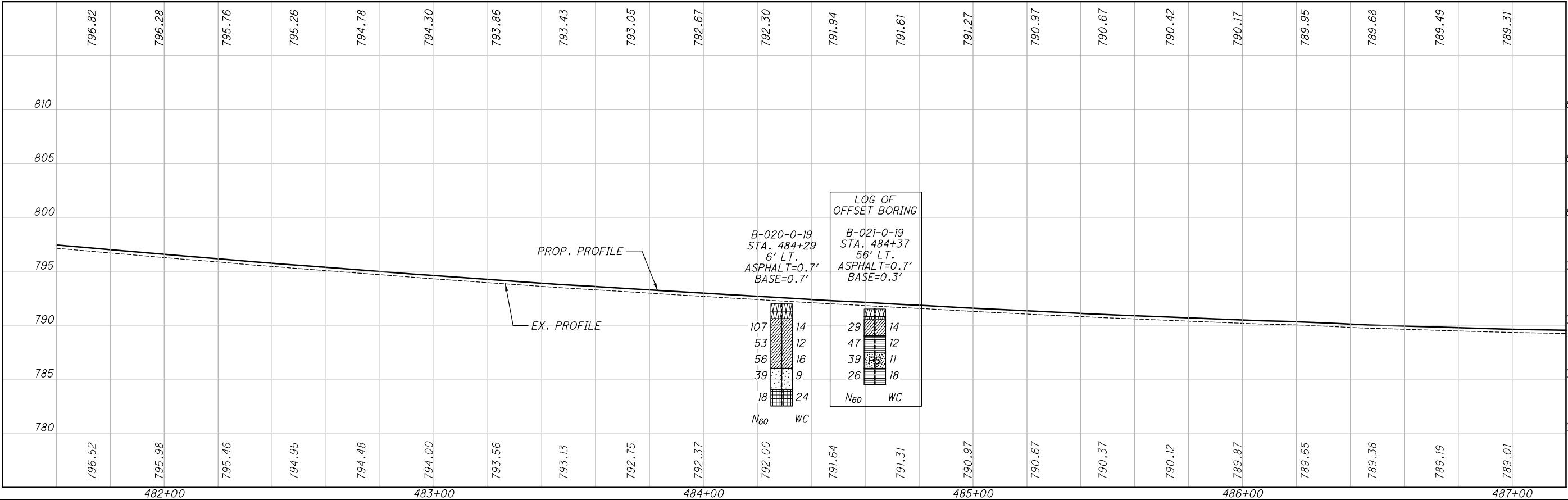
SOIL PROFILE IR-480
STA. 470+40 TO STA. 476+00

DESIGN AGENCY	
Terracon Consulting Engineers and Scientists	
DESIGNER	
MR	
REVIEWER	
KME 09-22-20	
PROJECT ID	
108482	
SUBSET	TOTAL
15	20
SHEET	TOTAL
220	225



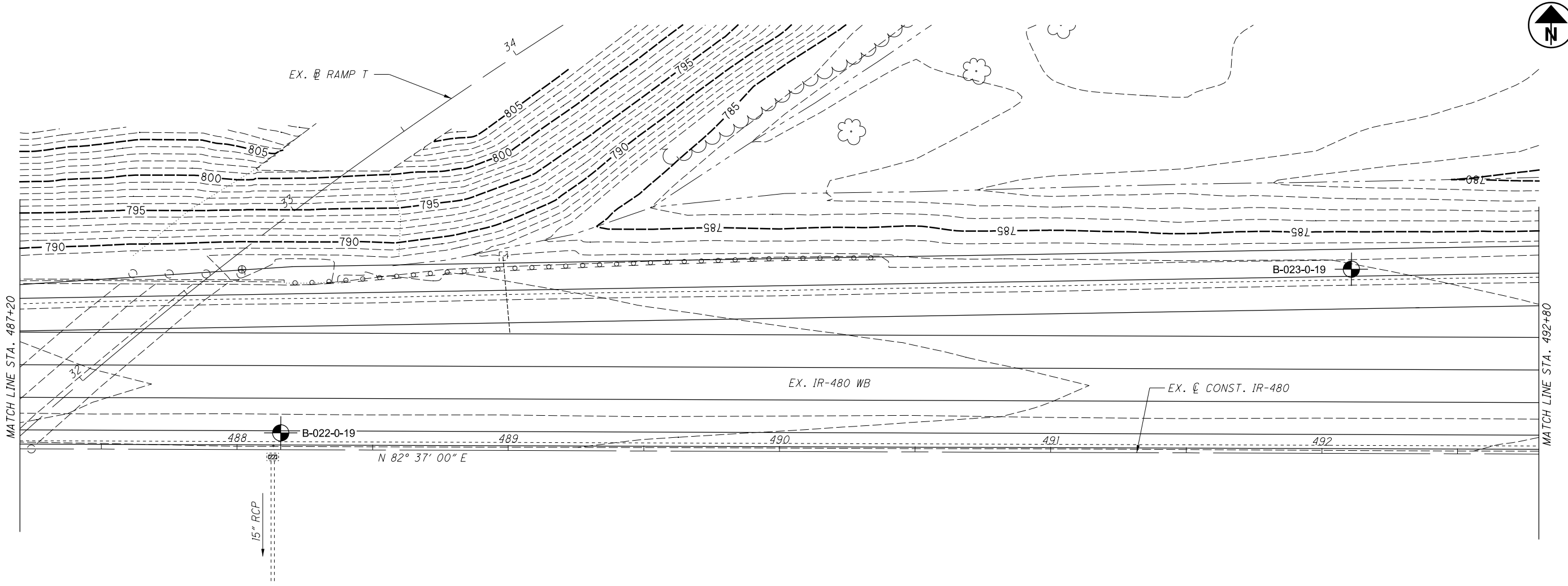
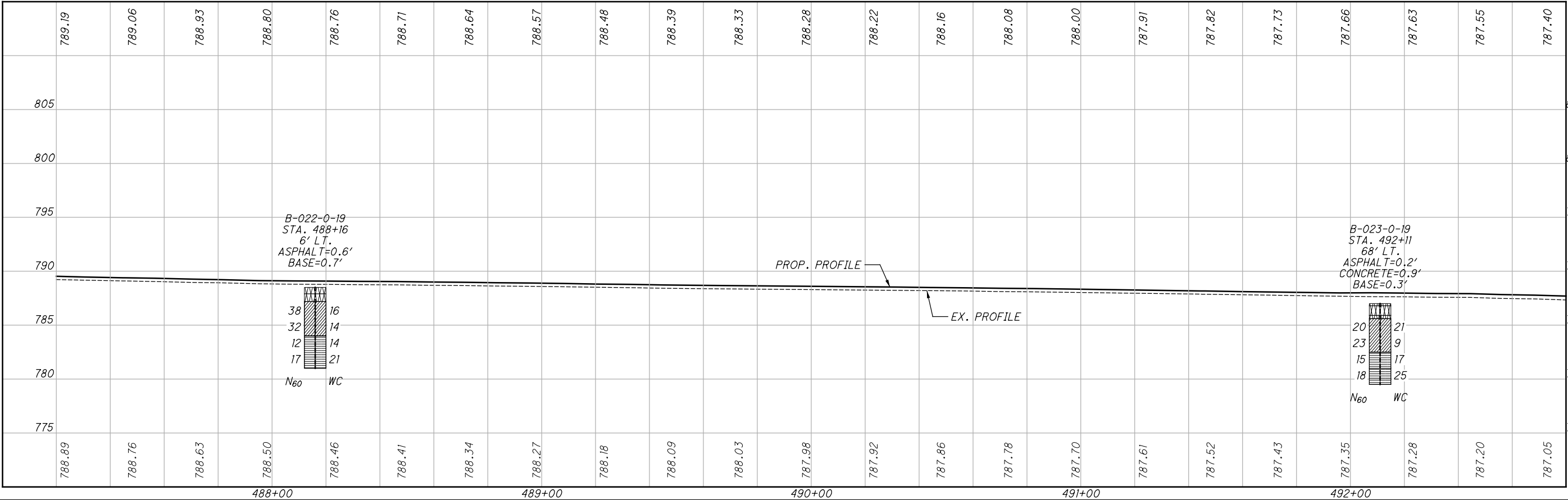
SOIL PROFILE IR-480
STA. 476+00 TO STA. 481+60

DESIGN AGENCY	
Terracon Consulting Engineers and Scientists	
DESIGNER	
MR	
REVIEWER	
KME 09-22-20	
PROJECT ID	
108482	
SUBSET	TOTAL
16	20
SHEET	TOTAL
221	225



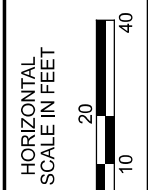
SOIL PROFILE IR-480
STA. 481+60 TO STA. 487+20

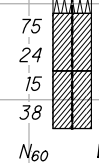
DESIGN AGENCY	
Terracon Consulting Engineers and Scientists	
DESIGNER	
MR	
REVIEWER	
KME 09-22-20	
PROJECT ID	
108482	
SUBSET	TOTAL
17	20
SHEET	TOTAL
222	225



SOIL PROFILE IR-480
STA. 487+20 TO STA. 492+80

DESIGN AGENCY	
Terracon Consulting Engineers and Scientists	
DESIGNER	
MR	
REVIEWER	
KME 09-22-20	
PROJECT ID	
108482	
SUBSET	TOTAL
18	20
SHEET	TOTAL
223	225



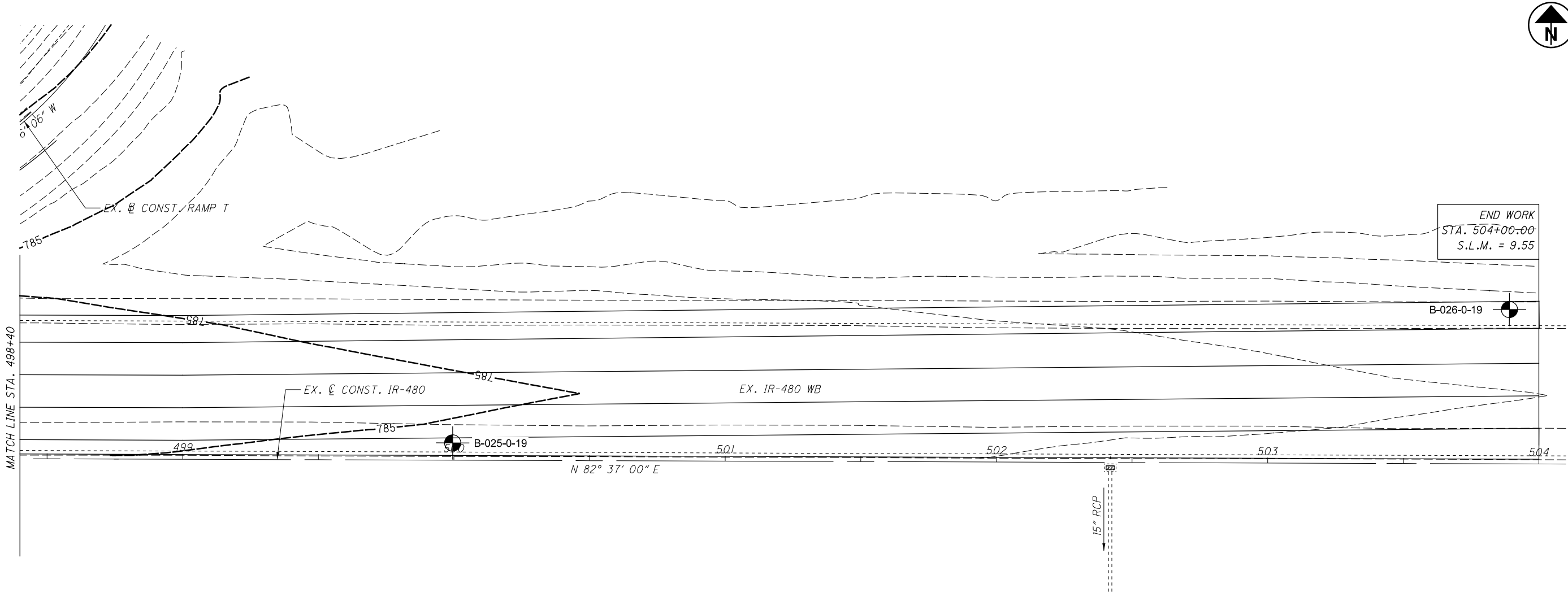
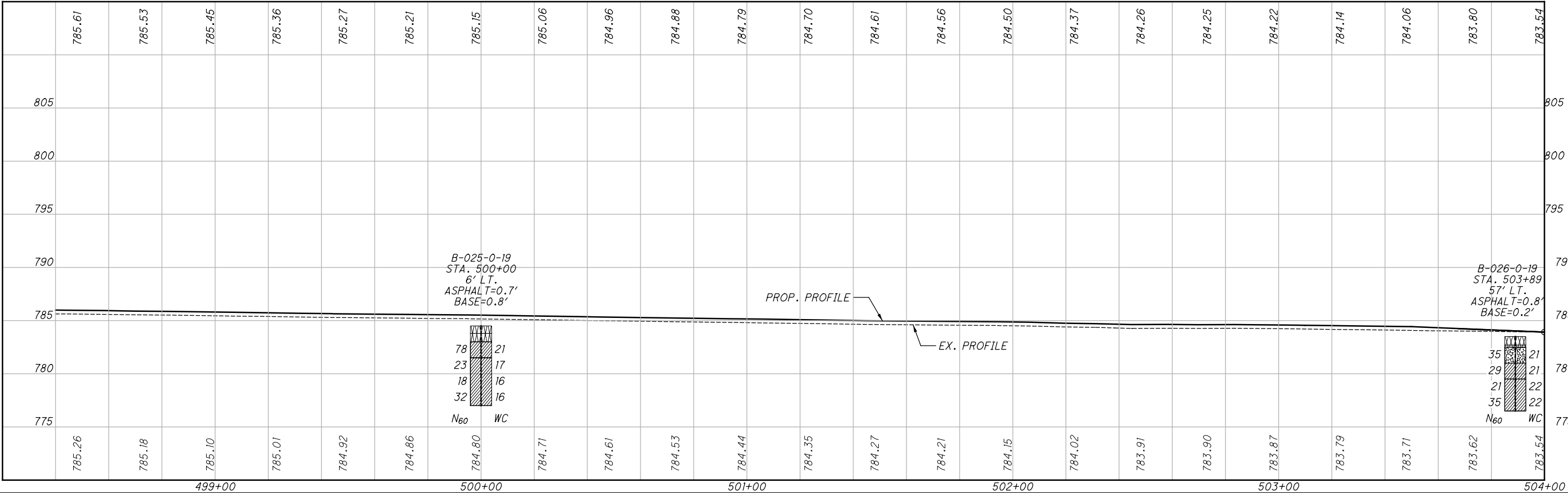


HORIZONTAL
SCALE IN FEET

0 10 20 30 40

SOIL PROFILE IR-480
STA. 492+80 TO STA. 498+40

DESIGN AGENCY Terracon Consulting Engineers and Scientists	
DESIGNER	
MR	
REVIEWER	
KME 09-22-2	
PROJECT ID	
108482	
SUBSET	TOTAL
19	20
SHEET	TOTAL
224	225



SOIL PROFILE IR-480
STA. 498+40 TO STA. 504+00

DESIGN AGENCY	
Terracon Consulting Engineers and Scientists	
DESIGNER	
MR	
REVIEWER	
KME 09-22-20	
PROJECT ID	
108482	
SUBSET	TOTAL
20	20
SHEET	TOTAL
225	225

