

SEQUENCE OF CONSTRUCTION

PHASE 1 (SHEETS P.80-P.114)

PHASE 1A - STEP 1

1. SHIFT I-680 NB & SB LANES AS SHOWN IN THE PLANS TO REMOVE THE EXISTING MEDIAN BARRIER AND INSTALL TEMPORARY PAVEMENT FOR THE Crossovers AT THE NORTH AND SOUTH ENDS OF PHASE 1A.

PHASE 1A - STEP 2

SOUTHBOUND RAMPS CLOSED:

- SILLIMAN ST. TO I-680 SB (RAMP C)
- S.R. 193 TO I-680 SB (RAMP C)
- MAHONING AVE. TO I-680 SB (RAMP E)
- I-680 SB TO GLENWOOD/MAHONING AVE. (RAMP F)
- GLENWOOD/MAHONING AVE. TO I-680 SB (RAMP H)
- I-680 SB TO MARKET ST. SB (RAMP K)
- I-680 SB TO MARKET ST. NB (RAMP M)
- I-680 SB TO U.S. 62 EB /S.R. 7 NB (RAMP BX)

NORTHBOUND RAMPS CLOSED:

- I-680 NB TO S.R. 193 (RAMP B-3)
- I-680 NB TO SALT SPRINGS RD. (RAMP D)
- MARSHALL ST. TO I-680 NB (RAMP G)
- I-680 NB TO GLENWOOD/MAHONING AVE. (RAMP J)
- MARKET ST. TO I-680 NB (RAMP L)
- WOODLAND AVE. TO I-680 NB (RAMP N)
- U.S. 62 WB/S.R. 7 SB TO I-680 NB (RAMP BY)

1. CLOSE AND DETOUR NORTHBOUND I-680 USING U.S. 62, U.S. 422, AND S.R. 193.

2. CROSS THE TWO SOUTHBOUND LANES OF I-680 OVER TO THE NORTHBOUND LANES JUST SOUTH OF THE S.R. 193 INTERCHANGE.

3. CONSTRUCT THE I-680 SB LANES AND PROPOSED MEDIAN BARRIER. CONSTRUCT ALL SB EXIT AND ENTRANCE RAMPS. CONSTRUCT ALL PROPOSED PAVEMENT UP THROUGH THE INTERMEDIATE COURSE.

PHASE 1B - STEP 1

NORTHBOUND RAMPS CLOSED:

- I-680 NB TO S.R. 193 (RAMP B-3)
- I-680 NB TO SALT SPRINGS RD. (RAMP D)
- MARSHALL ST. TO I-680 NB (RAMP G)
- I-680 NB TO GLENWOOD/MAHONING AVE. (RAMP J)
- MARKET ST. TO I-680 NB (RAMP L)
- WOODLAND AVE. TO I-680 NB (RAMP N)
- U.S. 62 WB/S.R. 7 SB TO WOODLAND AVE. (RAMP CA)
- U.S. 62 WB/S.R. 7 SB TO I-680 NB (RAMP BY)

1. MAINTAIN I-680 NB CLOSURE AND DETOUR FROM PHASE 1A.

2. MAINTAIN I-680 SB TRAFFIC ON THE RECENTLY CONSTRUCTED SB LANES.

3. CONSTRUCT I-680 NB BETWEEN S.R. 193 AND U.S. 62 INCLUDING ALL NB EXIT AND ENTRANCE RAMPS. RAMP CA CONSTRUCTION WILL BEGIN AT STA. 14+00 IN ORDER TO MAINTAIN 2 LANES ON RAMP SB. CONSTRUCT ALL PROPOSED PAVEMENT UP THROUGH THE INTERMEDIATE COURSE. LEAVE A GAP IN THE PROPOSED BARRIER BETWEEN STA. 1034+50 AND STA. 1037+50 FOR FUTURE CROSSOVER USE.

WINTER SHUTDOWN SEASON 1

DURING THE WINTER MONTHS AFTER THE FIRST CONSTRUCTION SEASON, KEEP ALL TRAFFIC IN THE PHASE 1B - STEP 1 CONFIGURATION. CONTINUE WORK ON MAH-680-04.886 STRUCTURE.

PHASE 1B - STEP 1

1. TRAFFIC SHALL BE MAINTAINED ON I-680 AS SHOWN IN PHASE 1B - STEP 1.

2. ONCE THE WORK TO I-680 NB IS COMPLETE AND READY TO OPEN, REDUCE U.S. 62 WB/S.R. 7 SB TO ONE LANE IN ORDER TO CONSTRUCT THE REMAINING PORTION OF RAMP CA THAT WAS NOT BUILT IN PHASE 1B - STEP 1. ONCE WORK IS COMPLETE IN THIS AREA, OPEN UP TO TRAFFIC AND MOVE TO PHASE 2A - STEP 1.

PHASE 2 (SHEETS P.115-P.155)

PHASE 2A - STEP 1

1. SHIFT I-680 NB & SB LANES AS SHOWN IN THE PLANS TO REMOVE THE EXISTING MEDIAN BARRIER AND INSTALL TEMPORARY PAVEMENT FOR THE Crossovers AT THE NORTH AND SOUTH END OF PHASE 2.

PHASE 2A - STEP 2

NORTHBOUND RAMPS CLOSED:

- I-680 NB TO U.S. 62/S.R. 7 (RAMP NB)
- SOUTH AVE. TO I-680 NB (RAMP B)
- I-680 NB TO SOUTH AVE. (RAMP D)
- POWERSDALE AVE. TO I-680 NB (RAMP F)

1. CROSS ONE NB I-680 LANE OVER TO THE SB I-680 PAVEMENT WHILE MAINTAINING THE OTHER NB I-680 LANE ON THE NB I-680 PAVEMENT.

2. CONSTRUCT THE OUTSIDE LANE(S) OF THE I-680 NB AND ALL NB ENTRANCE/EXIT RAMPS BETWEEN U.S. 62 AND THE END OF THE PROJECT. CONSTRUCT ALL PROPOSED PAVEMENT UP THROUGH THE INTERMEDIATE COURSE.

PHASE 2B

SOUTHBOUND RAMPS CLOSED:

- U.S. 62 WB/S.R. 7 SB TO I-680 SB (RAMP SB)
- I-680 SB TO SOUTH AVE. (RAMP A)
- SOUTH AVE. TO I-680 SB (RAMP C)

1. CROSS ONE SB I-680 LANE OVER TO THE NB I-680 PAVEMENT WHILE MAINTAINING THE OTHER SB I-680 LANE ON THE SB I-680 PAVEMENT.

2. CONSTRUCT THE OUTSIDE LANE(S) OF THE I-680 SB PAVEMENT BETWEEN U.S. 62 AND THE END OF THE PROJECT. CONSTRUCT ALL PROPOSED PAVEMENT UP THROUGH THE INTERMEDIATE COURSE.

PHASE 2C

1. SHIFT I-680 NB AND I-680 SB LANES TO THE OUTSIDE AND CONSTRUCT THE INSIDE LANES AND MEDIAN BARRIER FOR I-680. CONSTRUCT ALL PROPOSED PAVEMENT UP THROUGH THE INTERMEDIATE COURSE.

2. REBUILD THE MEDIAN BARRIER AT THE CROSSOVER LOCATIONS.

PHASE 3 (NO SHEETS PROVIDED)

CONSTRUCT THE FINAL SURFACE COURSE, INCLUDING MILL AND OVERLAY FOR ALL THE RAMPS, FOR THE ENTIRE PROJECT AND INSTALL ALL FINAL PAVEMENT MARKINGS AND TRAFFIC CONTROL DEVICES UTILIZING ALLOWABLE LANE CLOSURES IN ACCORDANCE WITH THE PERMITTED LANE CLOSURE SCHEDULE (PLCS).

DRUM REQUIREMENTS

IN ADDITION TO THE REQUIREMENTS OF THE PLANS, SPECIFICATION AND PROPOSAL, DRUMS FURNISHED BY THE CONTRACTOR SHALL BE NEW AND UNUSED AT THE TIME OF ARRIVAL ON THE PROJECT. ANY DRUMS BROUGHT ON THE PROJECT, WHICH HAVE PREVIOUSLY BEEN USED ELSEWHERE, WILL NOT BE ACCEPTED.

PAYMENT FOR DRUMS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED.

METHOD OF PAYMENT

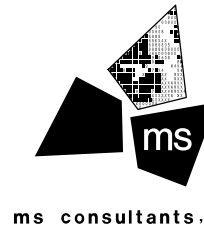
ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING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

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 160 M. GAL.

DESIGN AGENCY



DESIGNER

KJF

REVIEWER

KWR 06/02/25

PROJECT ID

121474

SHEET

P.53

TOTAL

655



01-22-2026, REMOVED INTERIM COMPLETION DATE

MAH-680-4.58

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MAH-680-4.58

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SHEET NUMBER															PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
P.47	P.49	P.50	P.51	P.178	P.179	P.180	P.181		P.192	P.193	P.194	P.197									
																				EROSION CONTROL	
	8								80						88	601	21050	88	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
										142					142	601	32000	142	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER	
25											161				186	601	32100	186	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	
				5	3										8	601	32200	8	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
		3													3	659	00100	3	EACH	SOIL ANALYSIS TEST	
															25,442	659	00300	25,442	CY	TOPSOIL	
1,670	43,147	184,386													229,203	659	10000	229,203	SY	SEEDING AND MULCHING	
		11,460													11,460	659	14000	11,460	SY	REPAIR SEEDING AND MULCHING	
		11,460													11,460	659	15000	11,460	SY	INTER-SEEDING	
		31.96													31.96	659	20000	31.96	TON	COMMERCIAL FERTILIZER	
															47.36	659	31000	47.36	ACRE	LIME	
		47.36													1,269	659	35000	1,269	MGAL	WATER	
		1,269													515.71	659	40000	515.71	MSF	MOWING	
		515.71													10,836	660	25000	10,836	SY	SODDING STAKED	
										6,001	3,353	10,836			13,872	670	00720	13,872	SY	DITCH EROSION PROTECTION MAT, TYPE B	
															LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
															LS	832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
															LS	832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
															350,000	832	30000	350,000	EACH	EROSION CONTROL	
										1,540					1,540	836	10000	1,540	SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1	
																				ENVIRONMENTAL / REMEDIATION	
				210											210	SPECIAL	69065016	210	TON	WORK INVOLVING PETROLEUM CONTAMINATED SOIL	P.51
				100											100	SPECIAL	69065022	100	GAL	WORK INVOLVING NON-REGULATED WATER	P.51
				100											100	SPECIAL	69065024	100	GAL	WORK INVOLVING REGULATED WATER	P.51
																				DRAINAGE	
					1.5	1.5	0.3	0.6							3.9	602	20000	3.9	CY	CONCRETE MASONRY	
															80,824	605	11110	80,824	FT	6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
	25														25	605	13300	25	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
															47,144	605	14020	47,144	FT	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
	300														2,756	611	01500	3,056	FT	6" CONDUIT, TYPE F	
					49		51	209							309	611	04400	309	FT	12" CONDUIT, TYPE B	
							48	17							65	611	04400	65	FT	12" CONDUIT, TYPE B, 706.02	
								9							9	611	04400	9	FT	12" CONDUIT, TYPE B, 707.45	
							32								32	611	04600	32	FT	12" CONDUIT, TYPE C	
				14											14	611	04600	14	FT	12" CONDUIT, TYPE C, 706.2	
				46											46	611	05201	46	FT	12" CONDUIT, TYPE F, AS PER PLAN, 707.33	P.50
			</																		

GENERAL SUMMARY

DESIGN AGENCY	
 ms consultants, inc.	
DESIGNER	
MSN	
REVIEWER	
CMN 08/29/25	
PROJECT ID	
121474	
SHEET	TOTAL
P.158	655

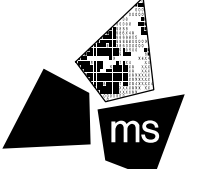
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P.48	P.173	P.177	P.428	P.467	P.468	P.469	P.470	P.471	P.472	P.473	P.474				CALC	01/IMS							
	367	276															643	609	24510	643	FT	PAVEMENT (CONT.)	
		6,388															6,388	609	26000	6,388	FT	CURB, TYPE 6	
		369															369	609	72000	369	SY	CONCRETE MEDIAN	
															9.73	9.73	618	40600	9.73	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)		

R4 01-22-2026, QUANTITIES AND DESCRIPTION REVISED

33
11
1,370

GENERAL SUMMARY

DESIGN AGENCY


ms consultants, inc.

DESIGNER

MSN

REVIEWER

CMN 08/29/25

PROJECT ID

121474

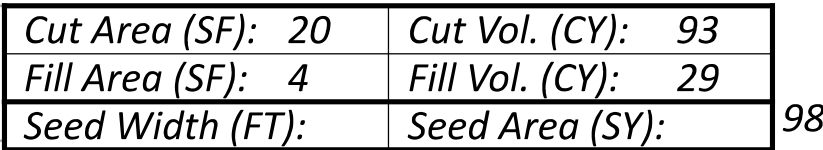
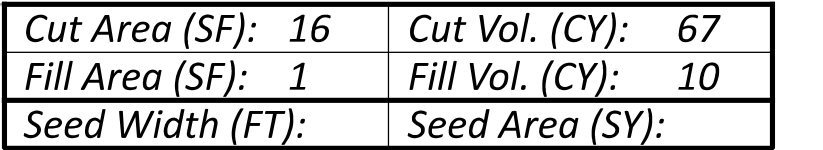
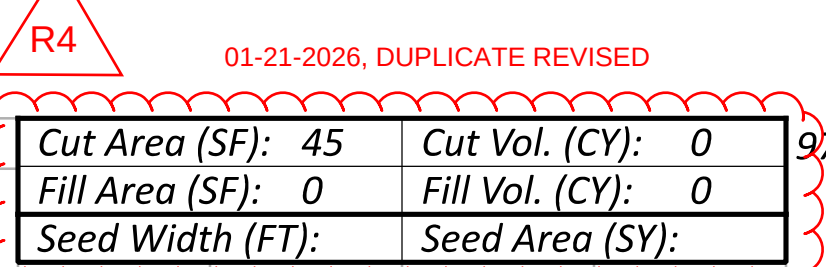
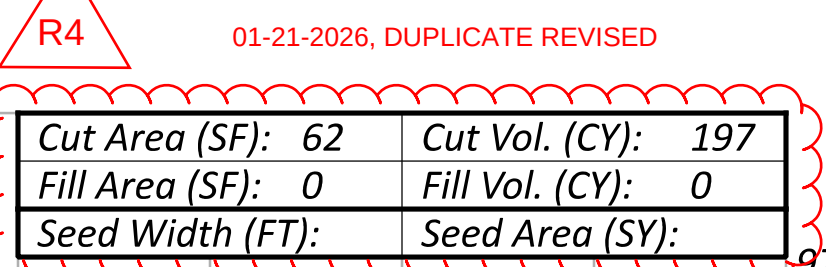
SHEET

P.160

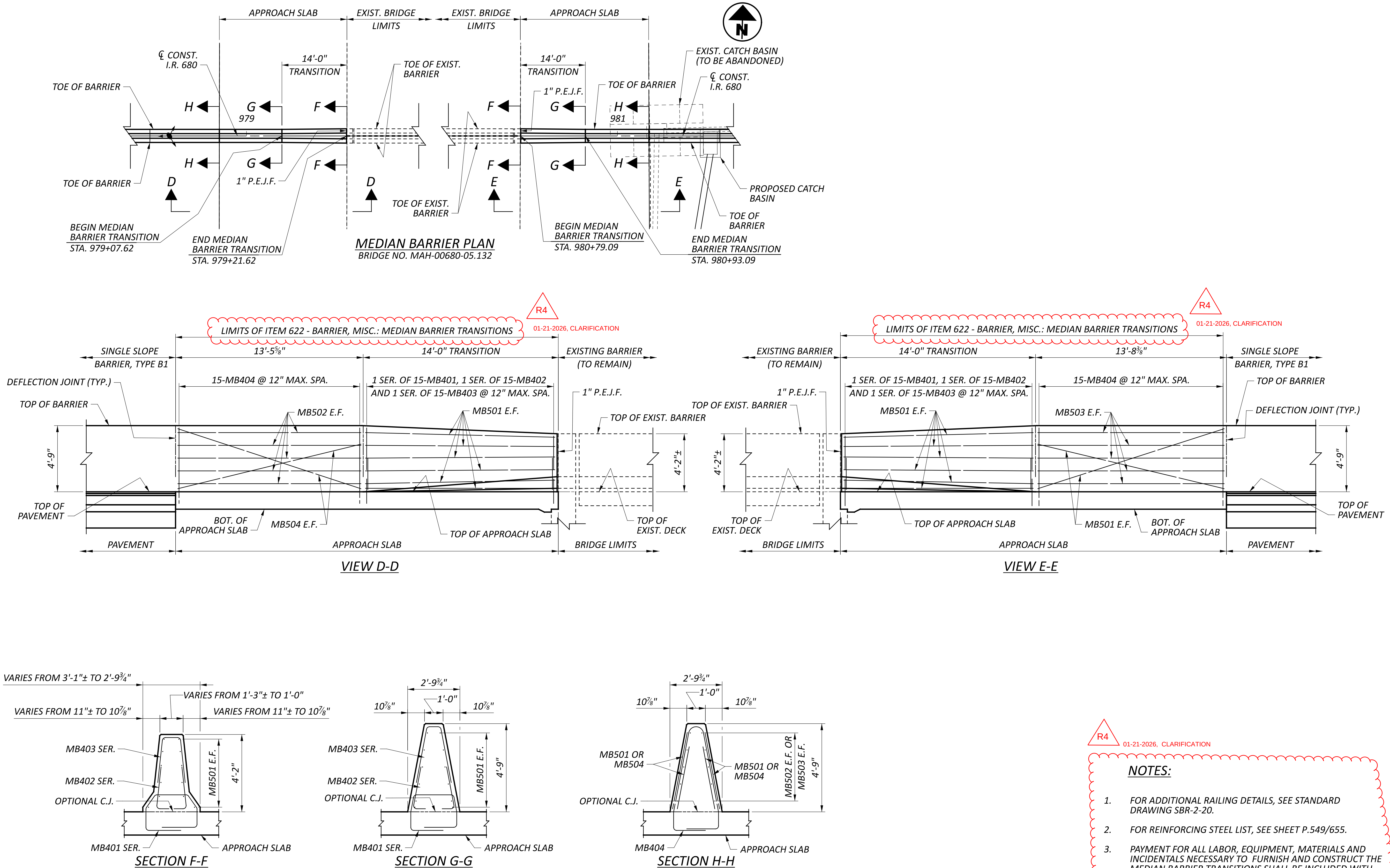
TOTAL

655

REF NO.	SHEET NO.	STATION TO STATION					602	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	61
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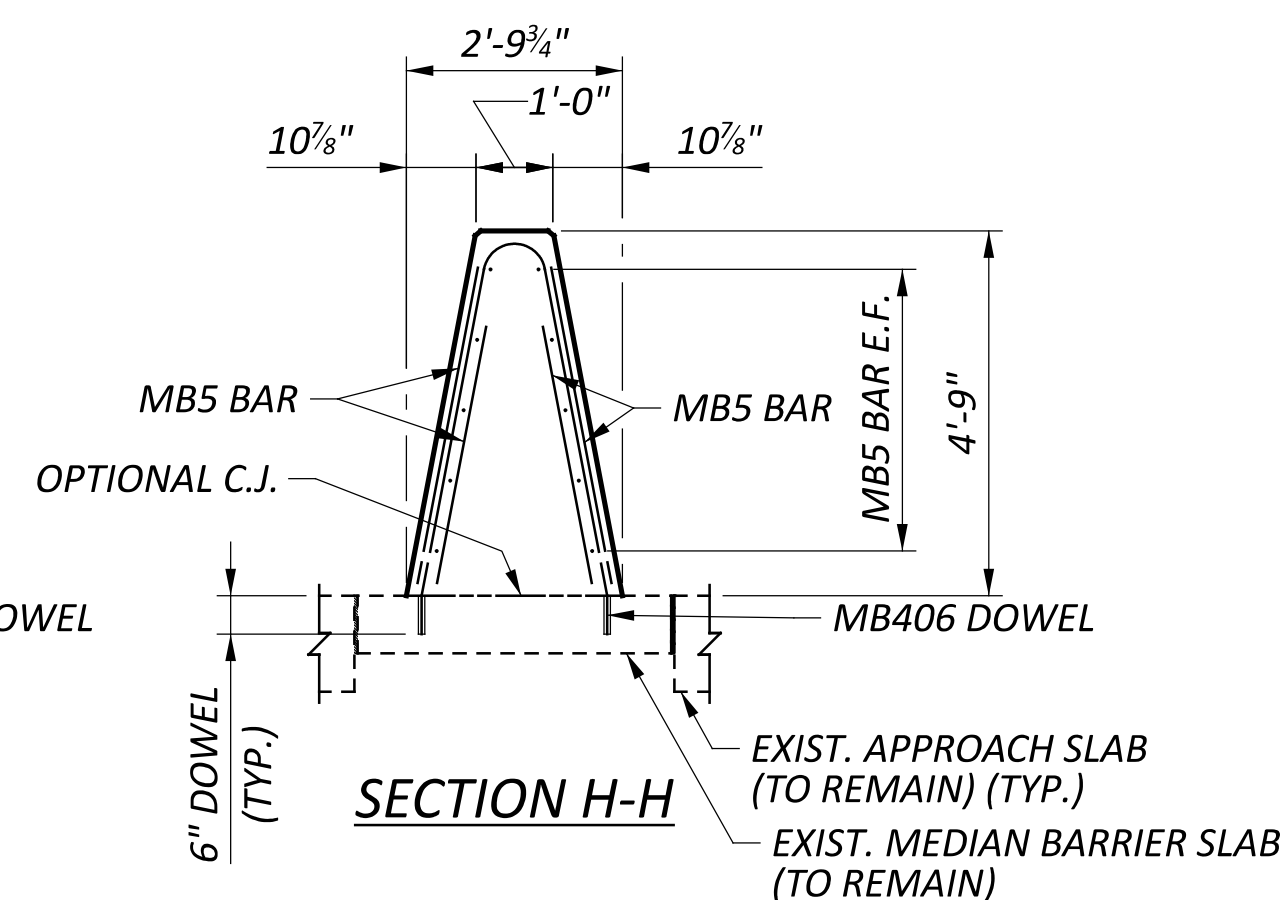
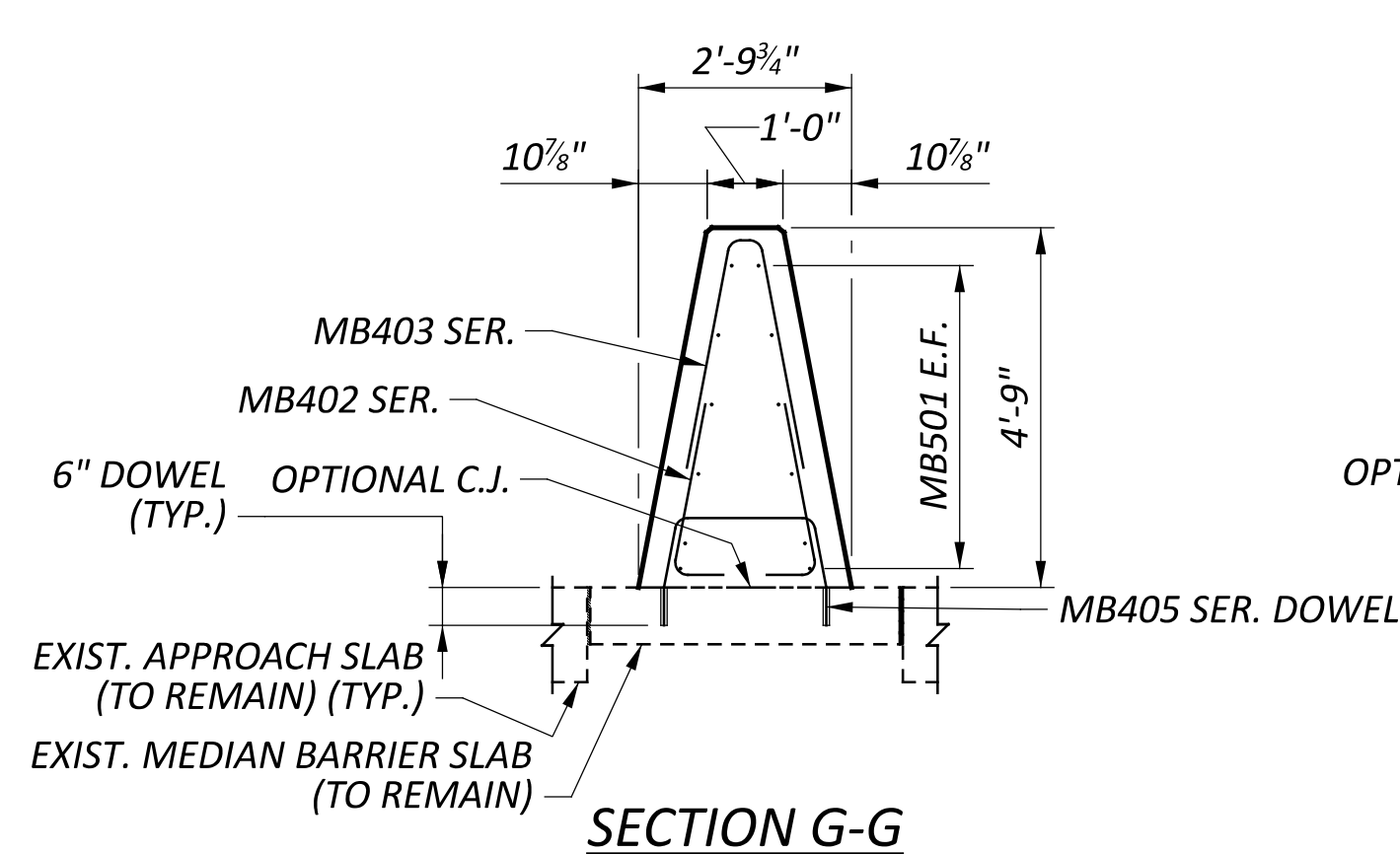
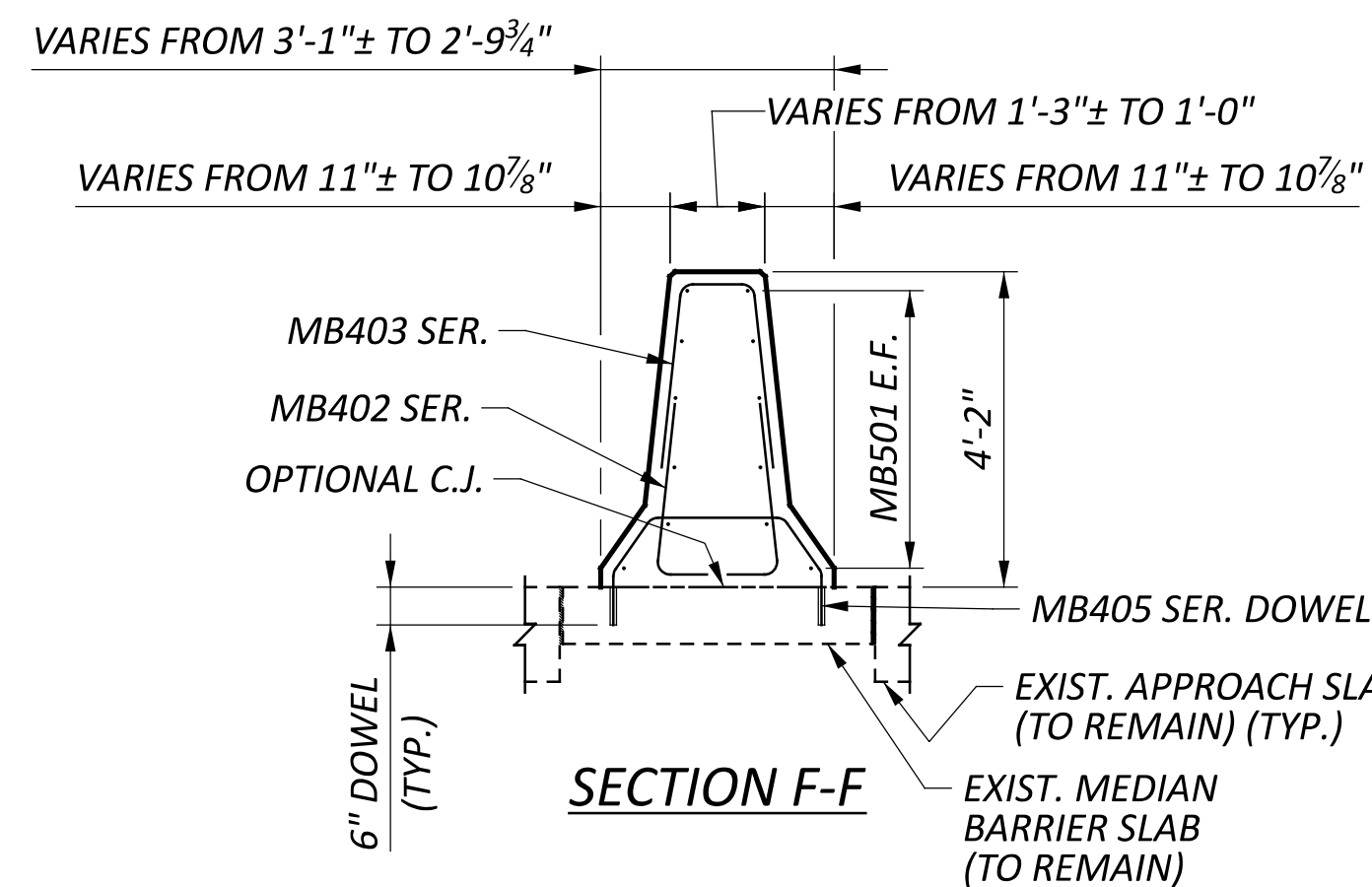
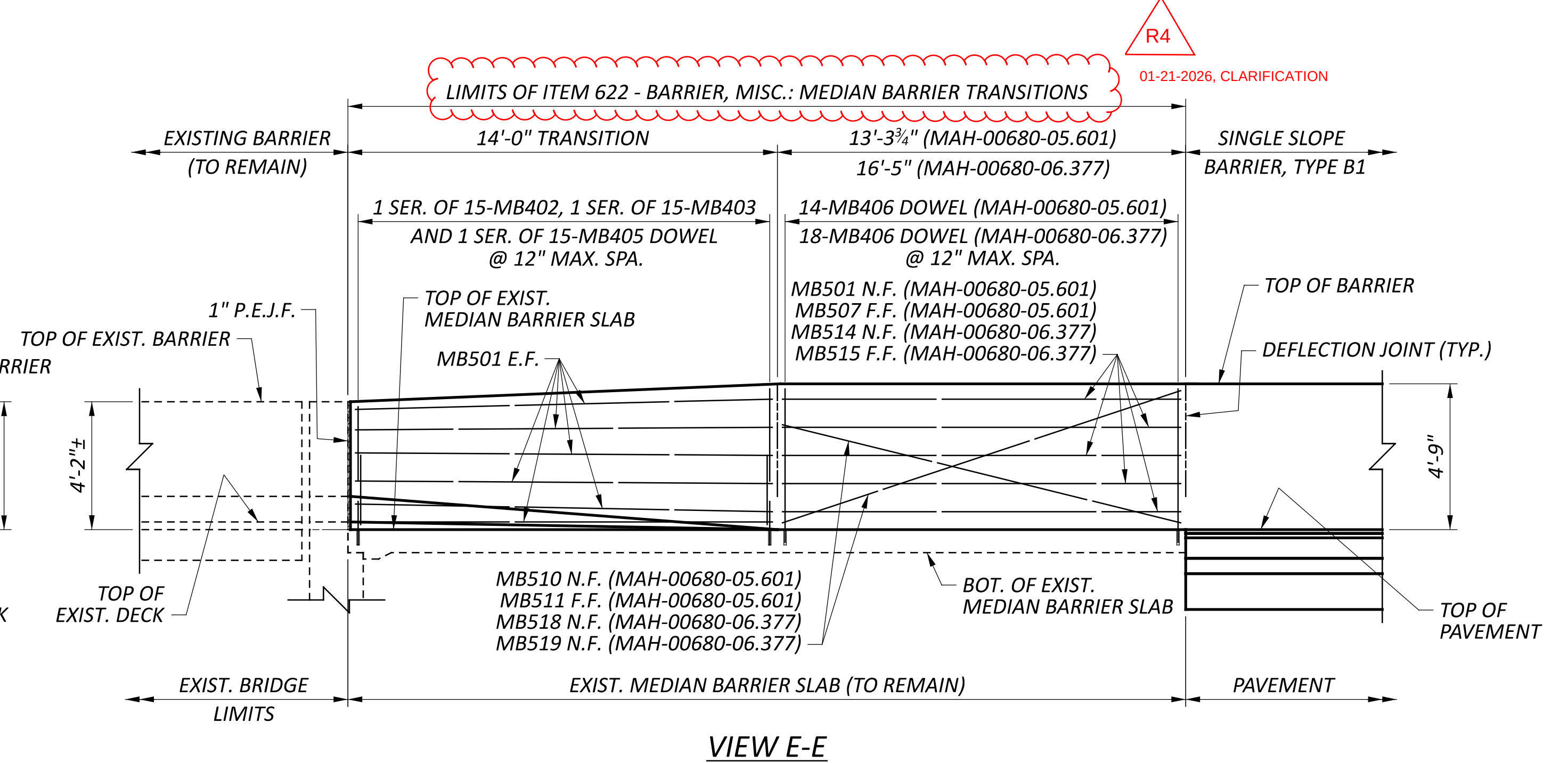
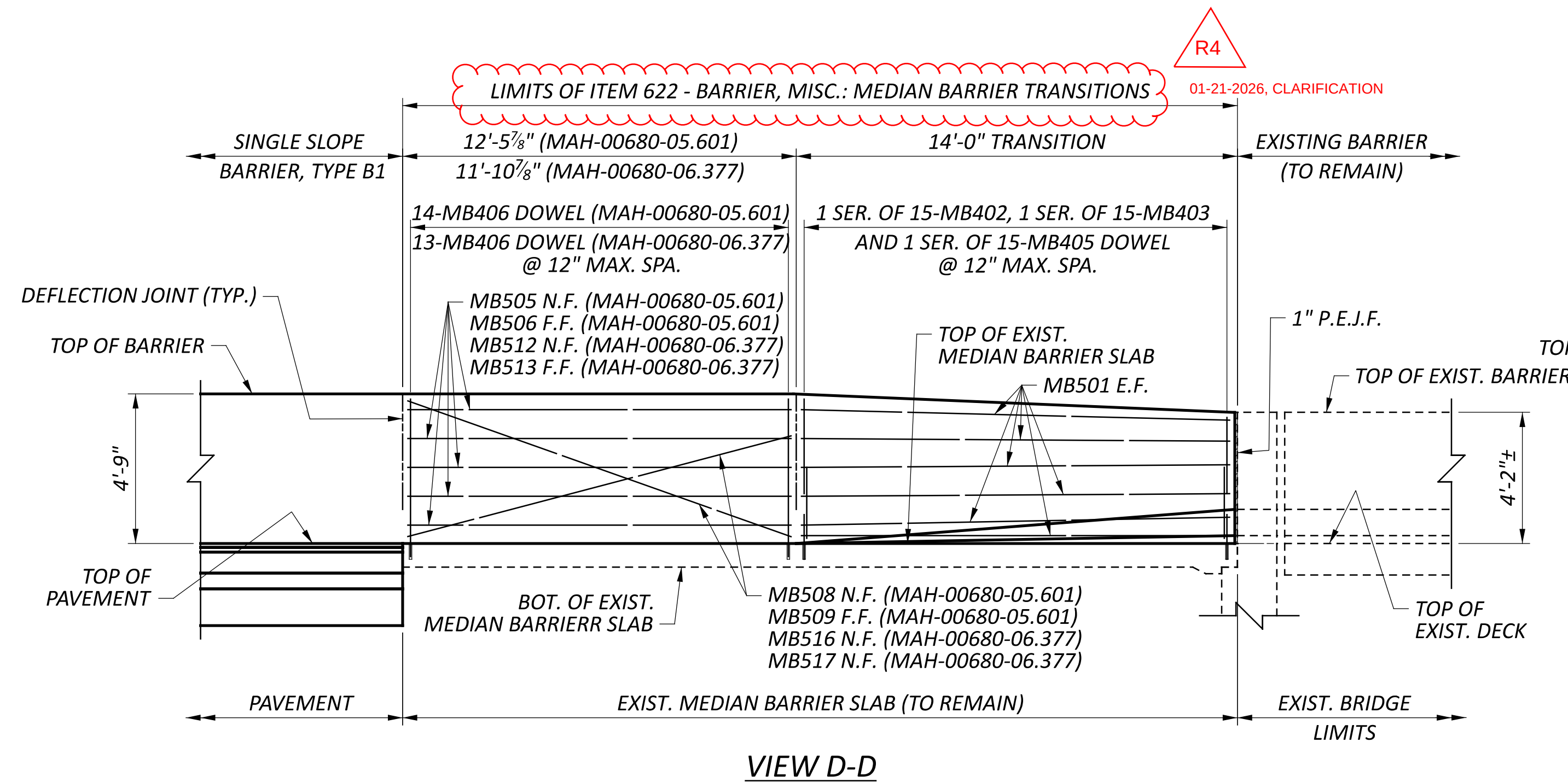
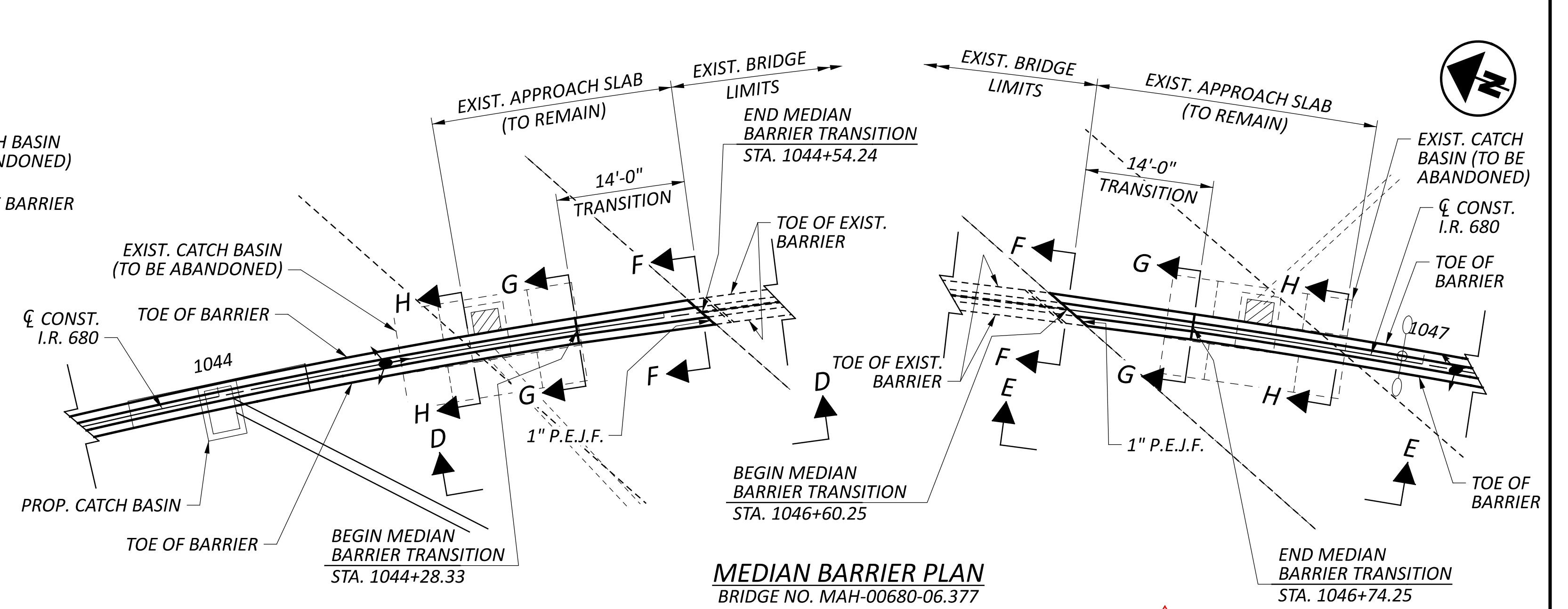
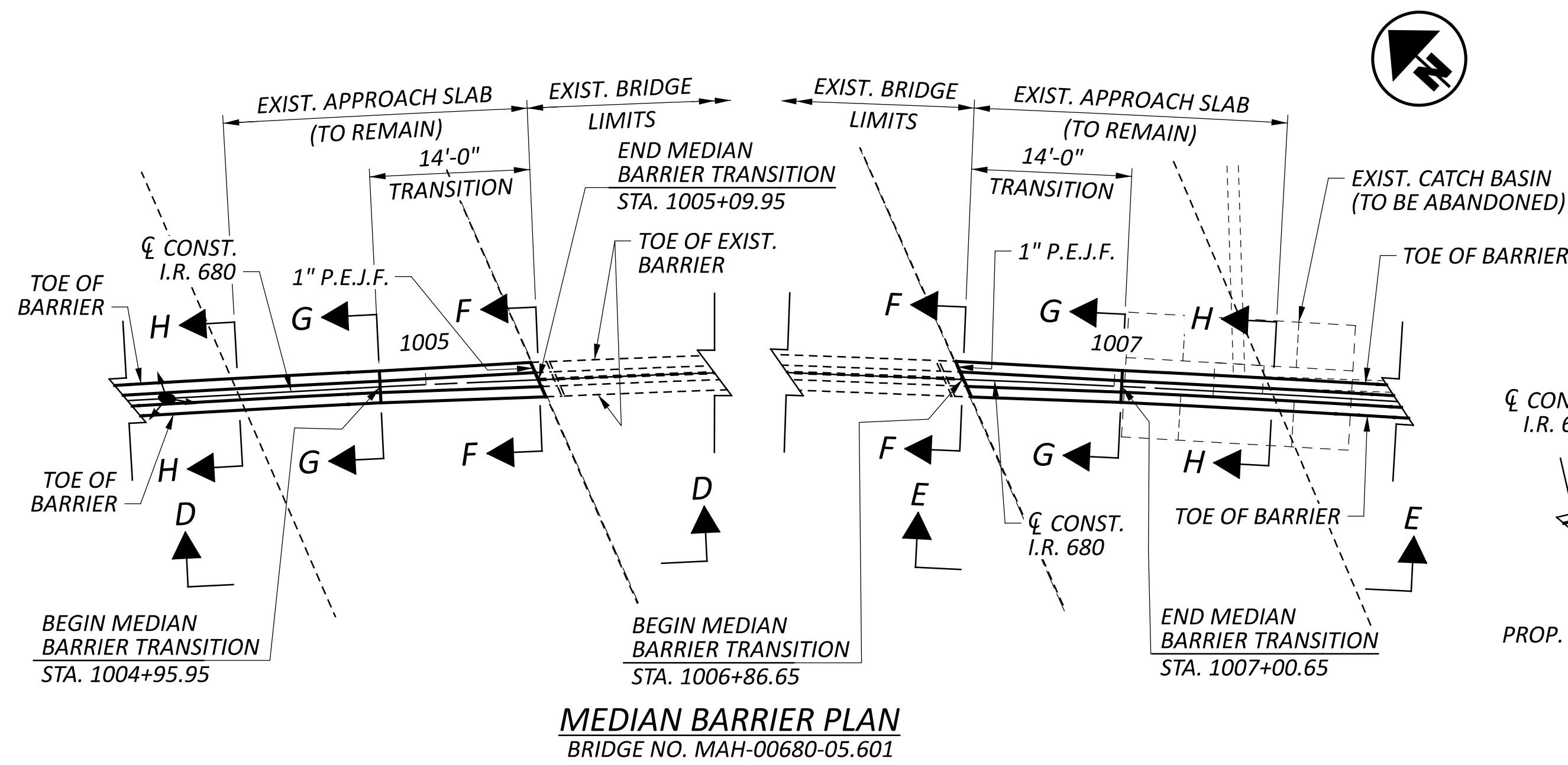


Sheet Totals			121474	
Seeding	Cut	Fill	SHEET	TOTAL
	574	62	P.291	655



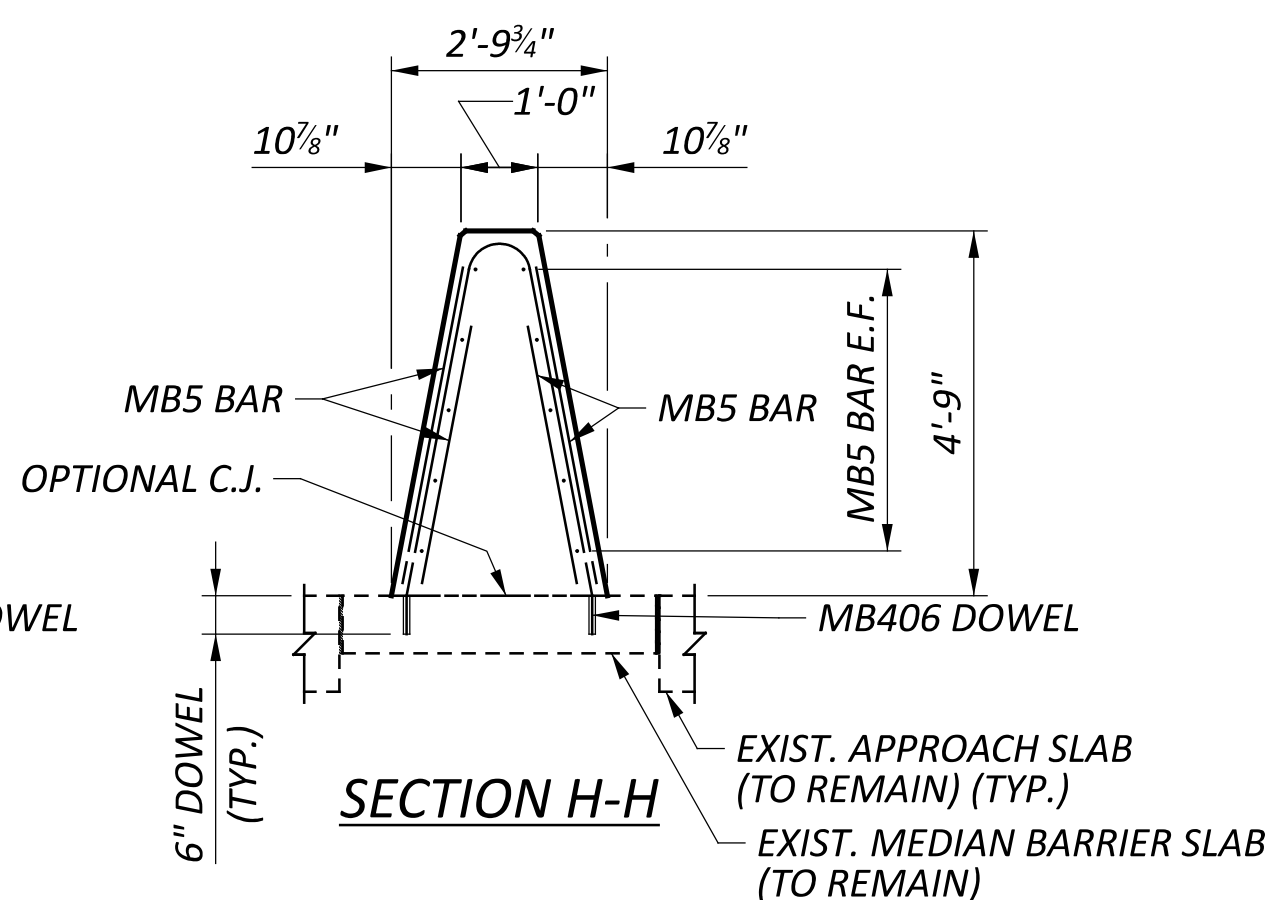
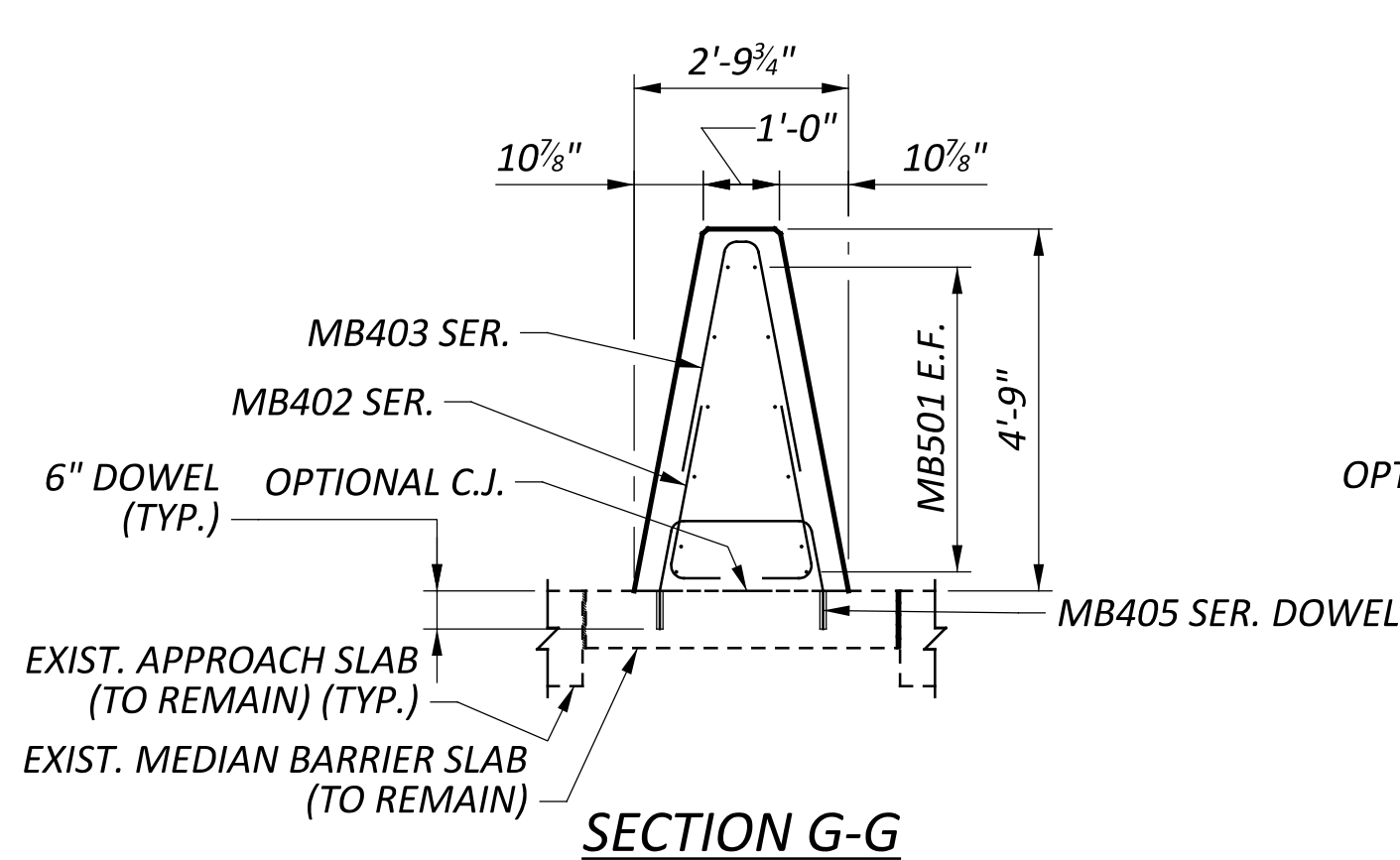
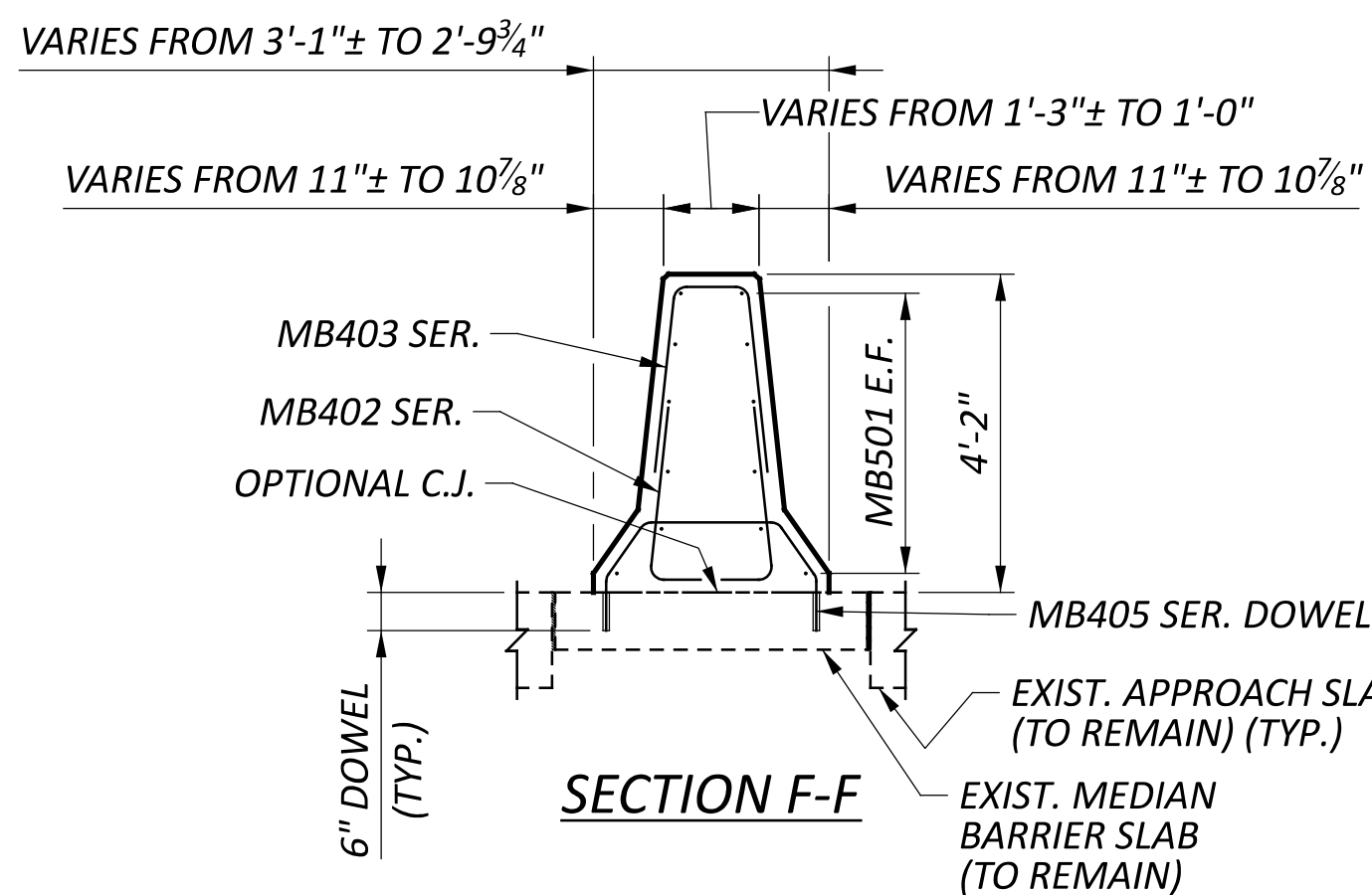
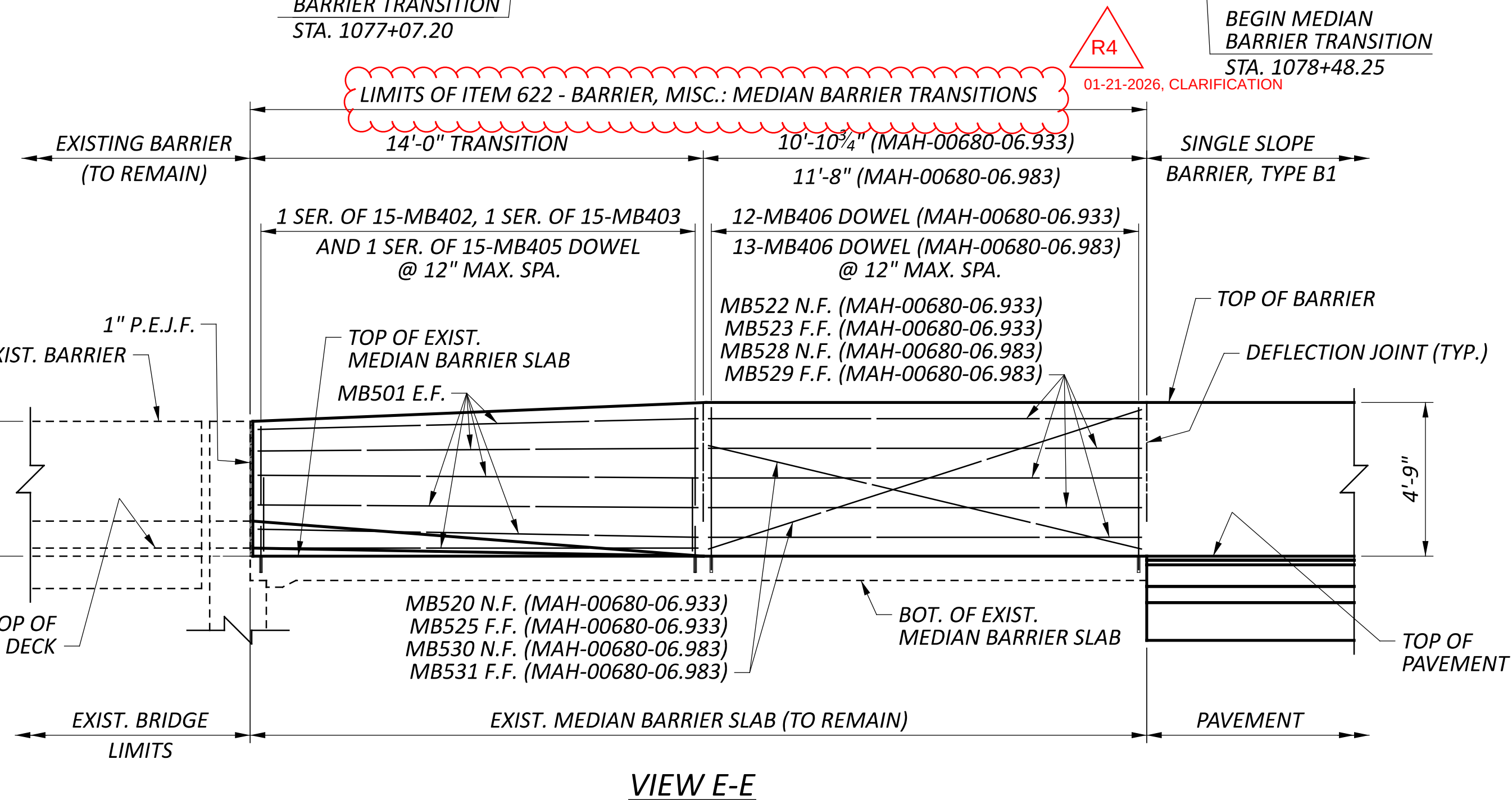
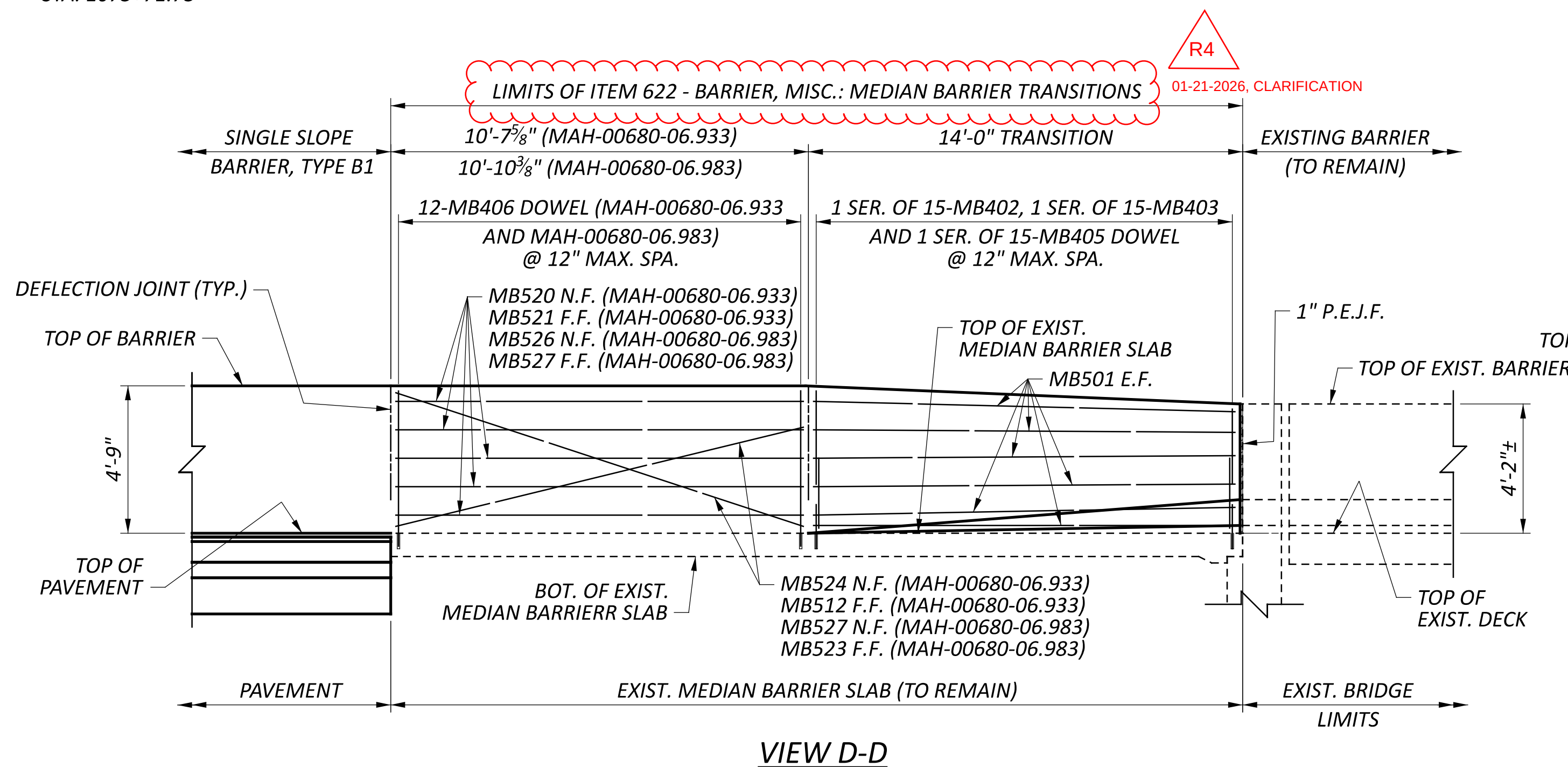
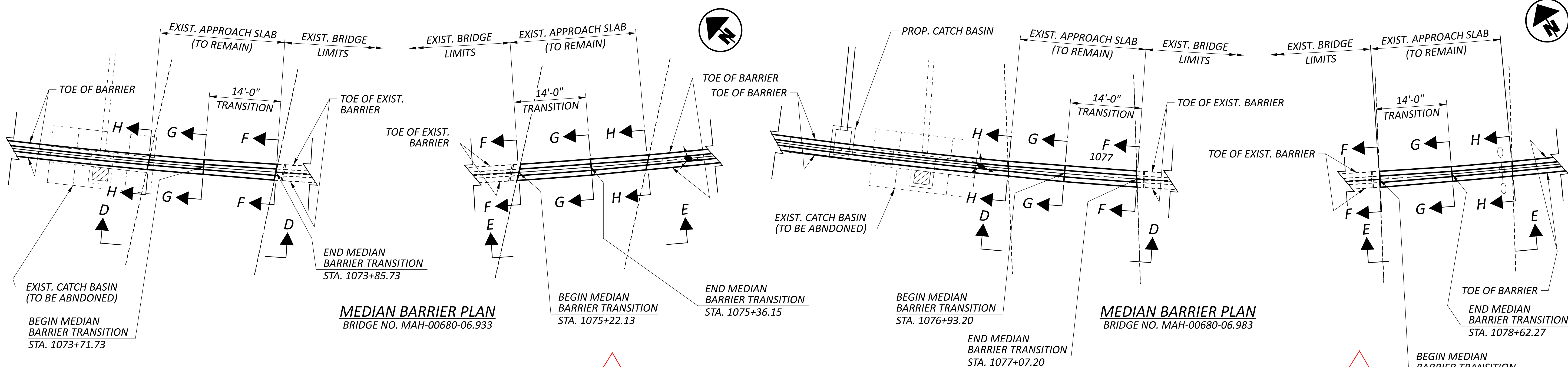
NOTES:

- FOR ADDITIONAL RAILING DETAILS, SEE STANDARD DRAWING SBR-2-20.
- FOR REINFORCING STEEL LIST, SEE SHEET P.549/655.
- PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO FURNISH AND CONSTRUCT THE MEDIAN BARRIER TRANSITIONS SHALL BE INCLUDED WITH ITEM 622 - BARRIER, MISC.: MEDIAN BARRIER TRANSITIONS. REINFORCING STEEL, 1" P.E.J.F., CONCRETE, AND DOWELS SHALL BE INCIDENTAL TO THIS ITEM. A QUANTITY OF 55 FT HAS BEEN CARRIED TO THE GENERAL SUMMARY.



NOTES:

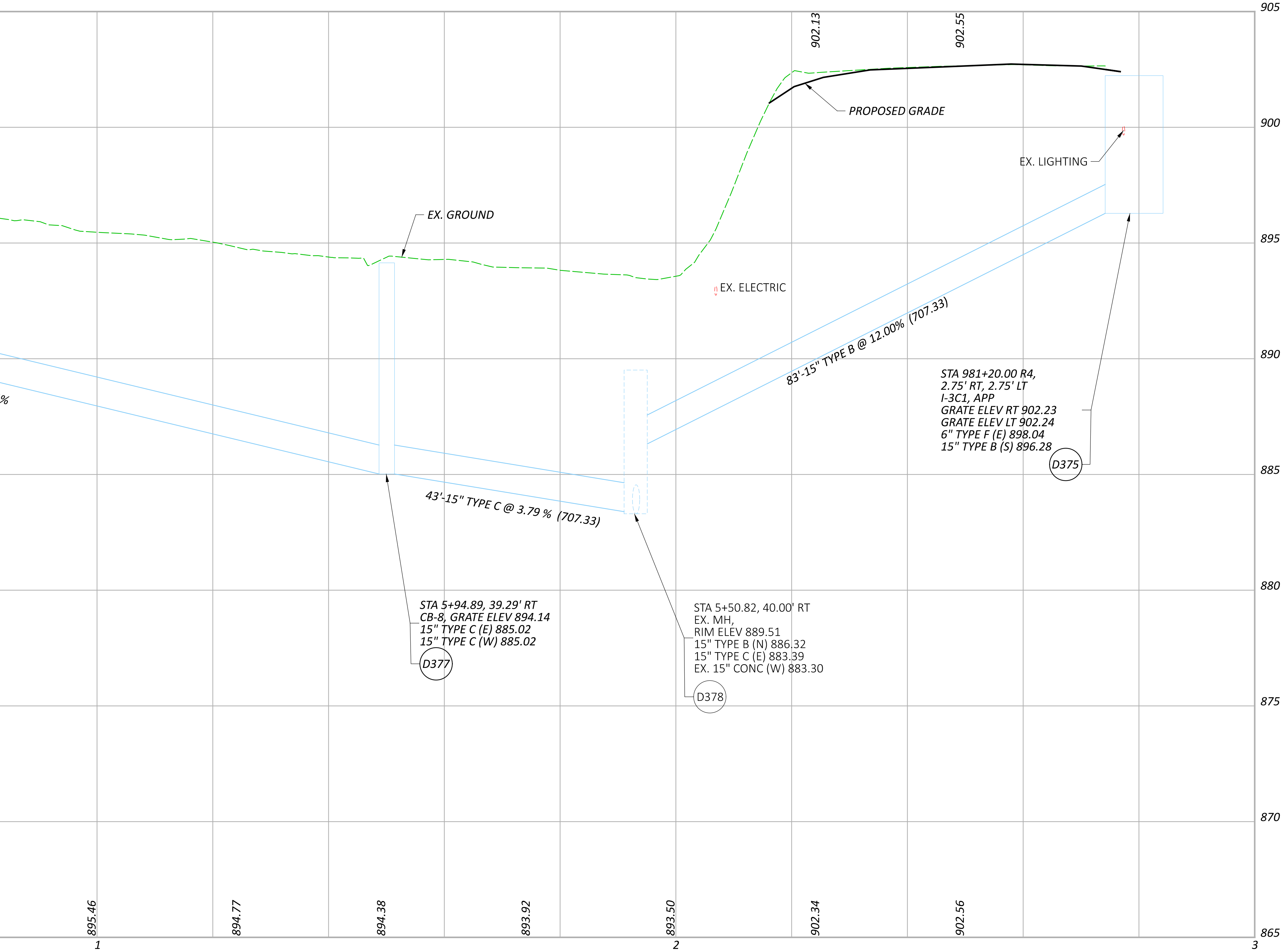
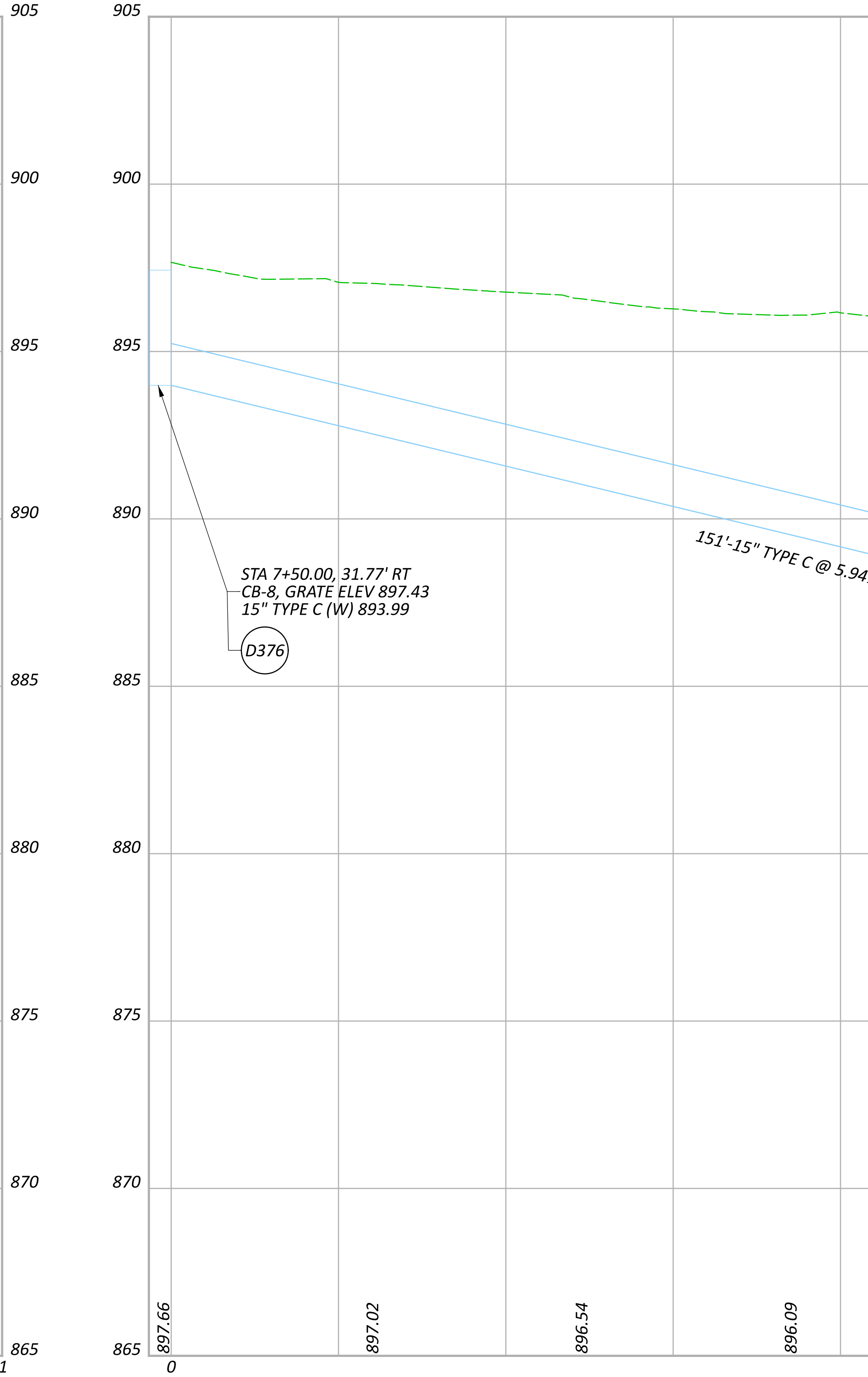
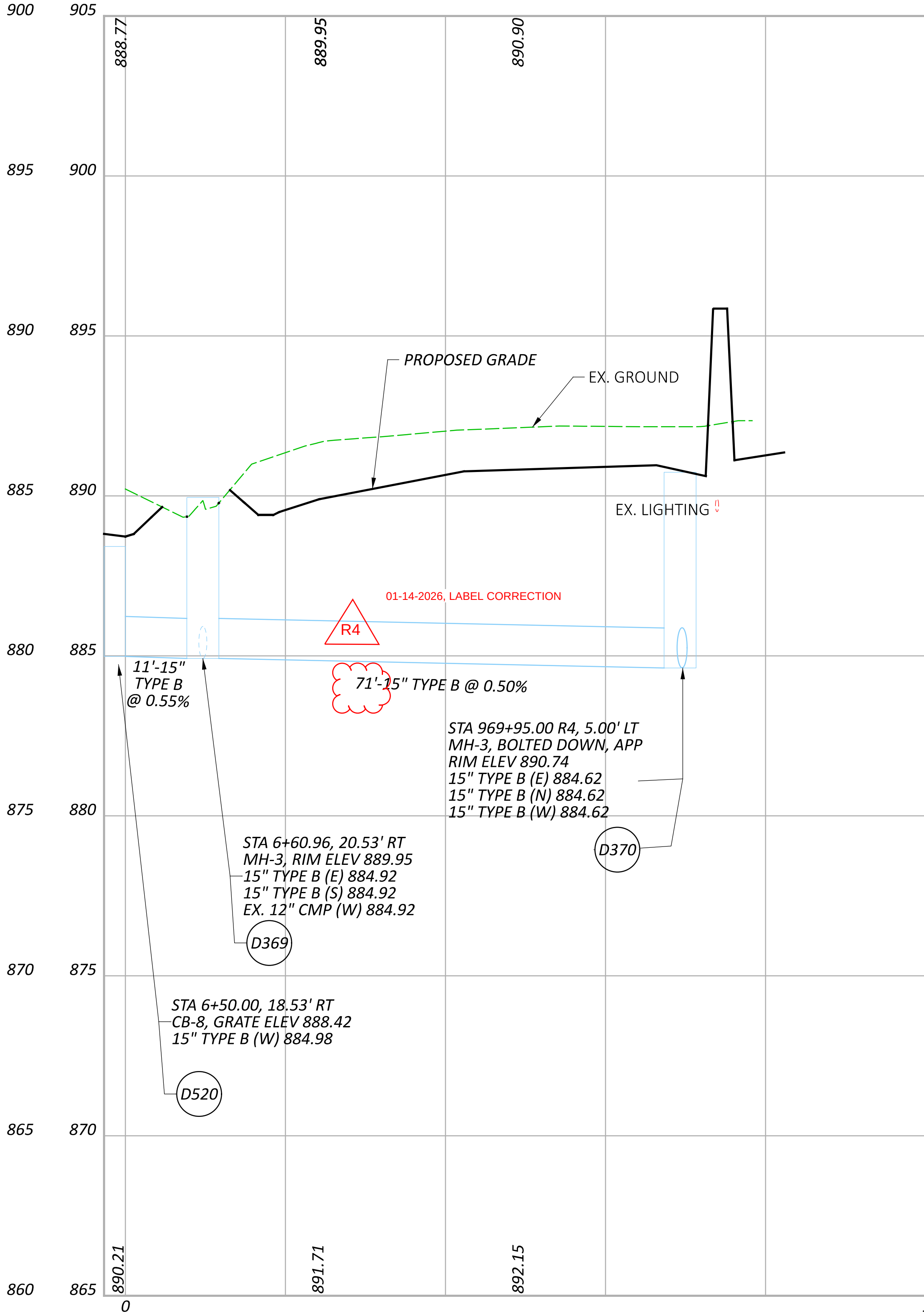
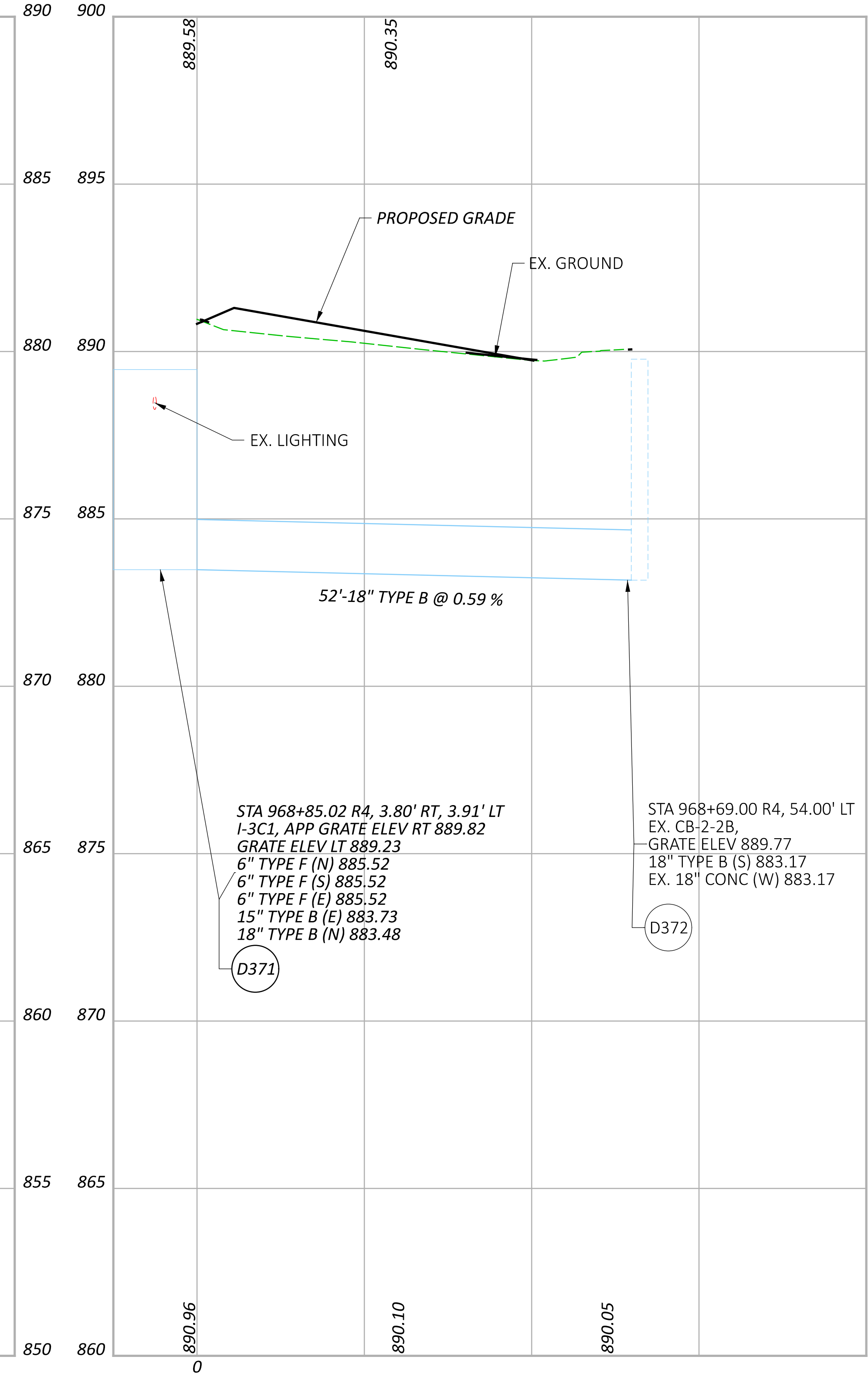
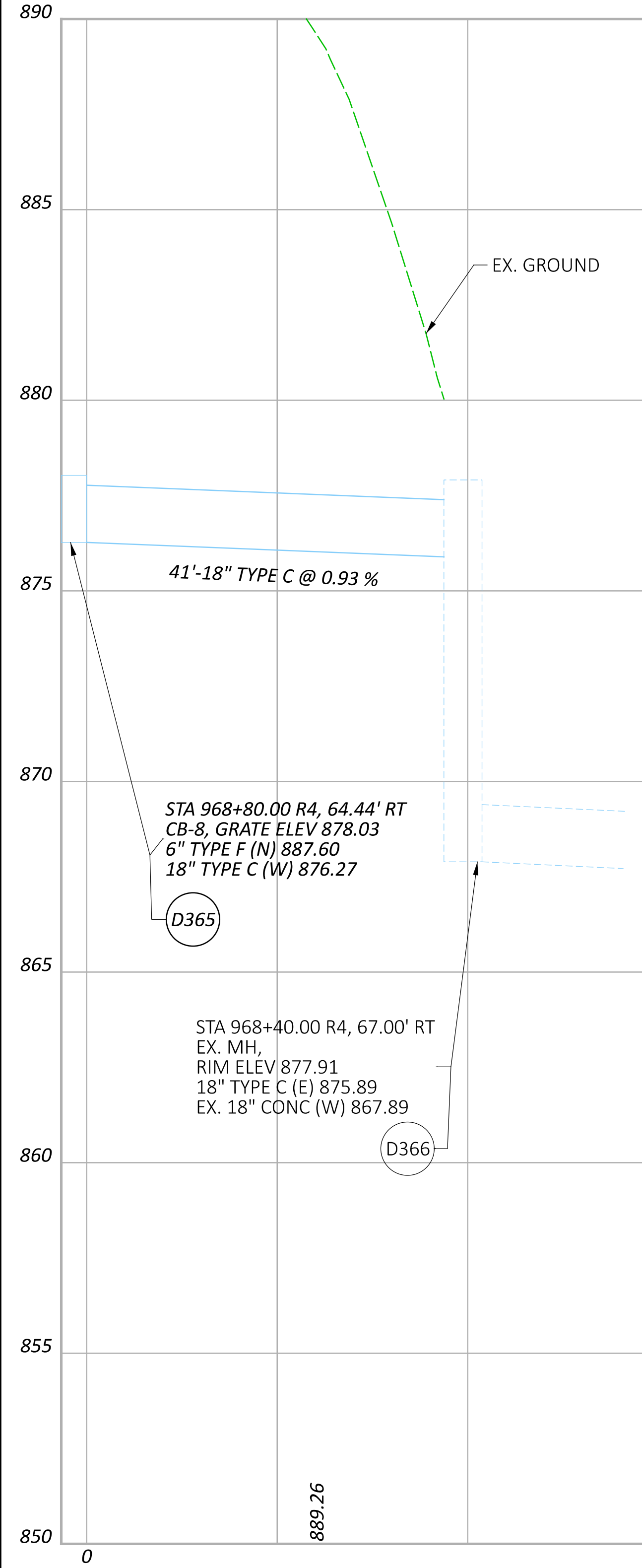
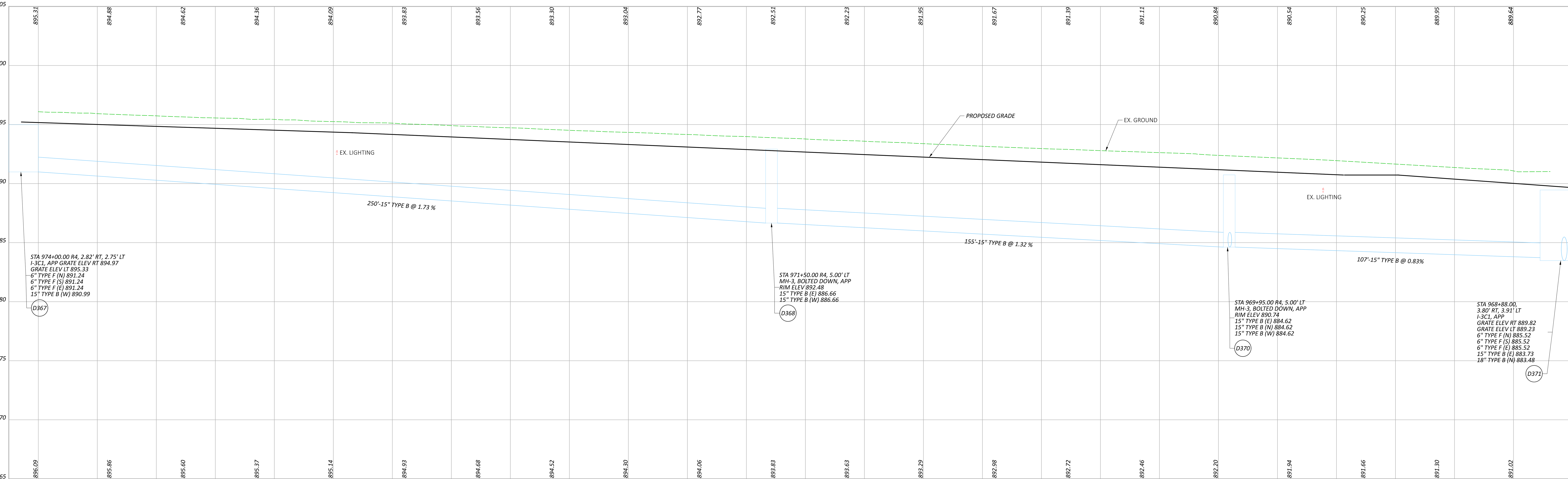
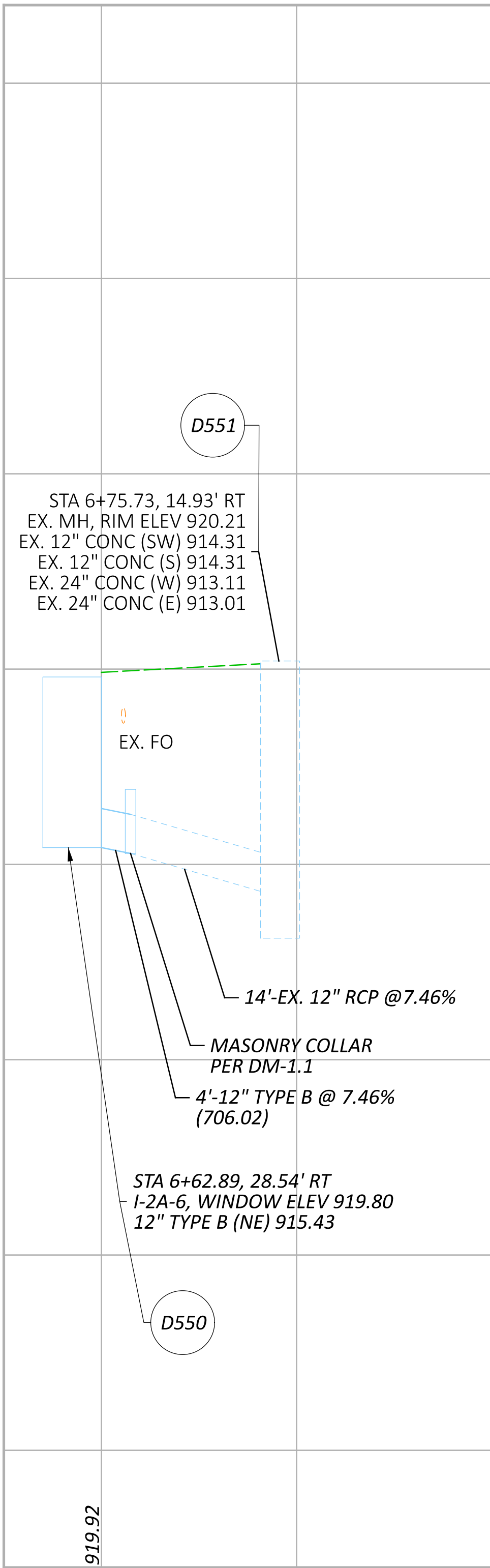
1. *FOR ADDITIONAL RAILING DETAILS, SEE STANDARD DRAWING SBR-2-20.*
2. *FOR REINFORCING STEEL LIST, SEE SHEET P.549/655.*
3. *PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO FURNISH AND CONSTRUCT THE MEDIAN BARRIER TRANSITIONS SHALL BE INCLUDED WITH ITEM 622 - BARRIER, MISC.: MEDIAN BARRIER TRANSITIONS. REINFORCING STEEL, 1" P.E.J.F., CONCRETE, AND DOWELS SHALL BE INCIDENTAL TO THIS ITEM. A QUANTITY OF 110 FT HAS BEEN CARRIED TO THE GENERAL SUMMARY.*

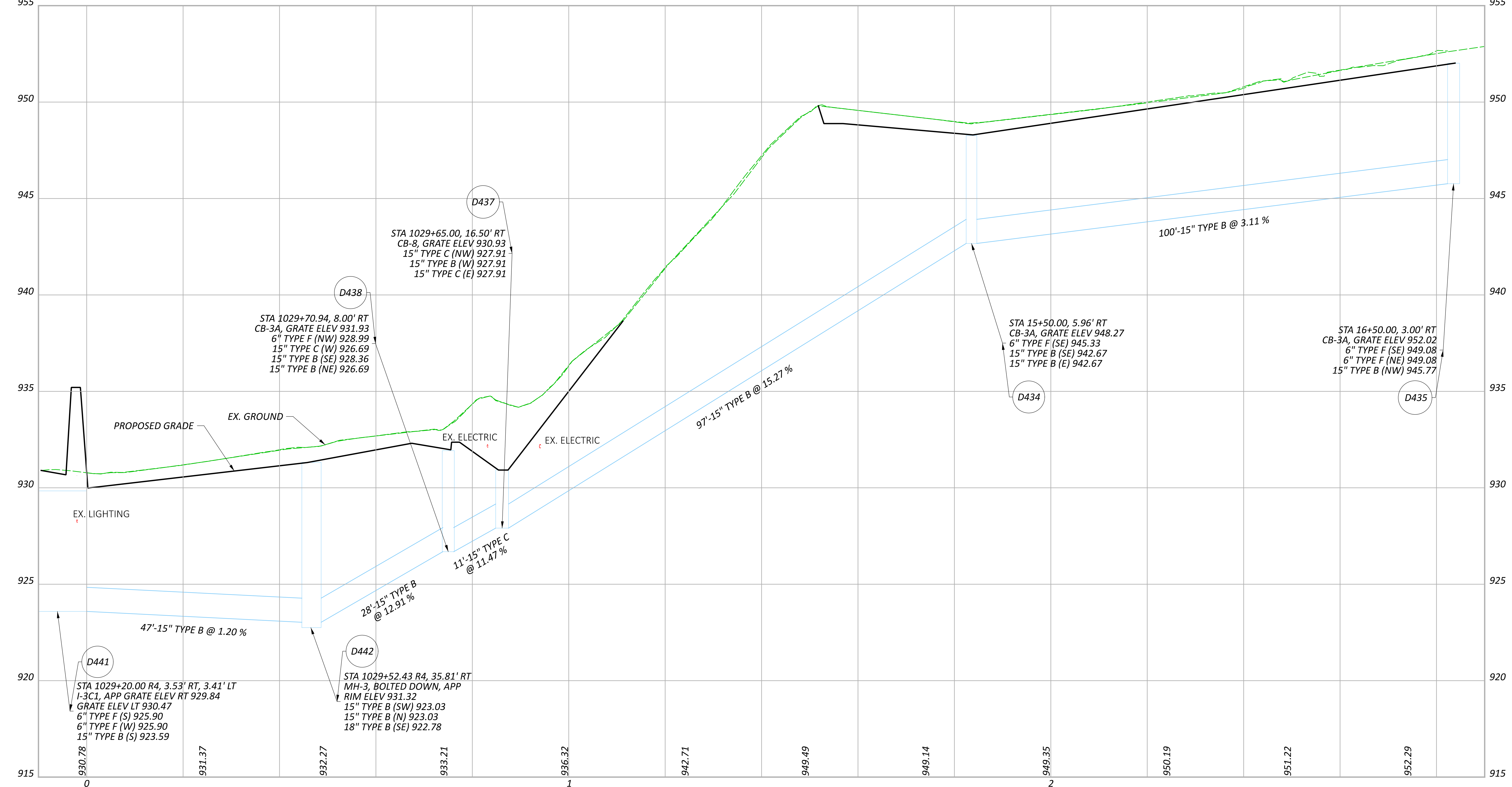
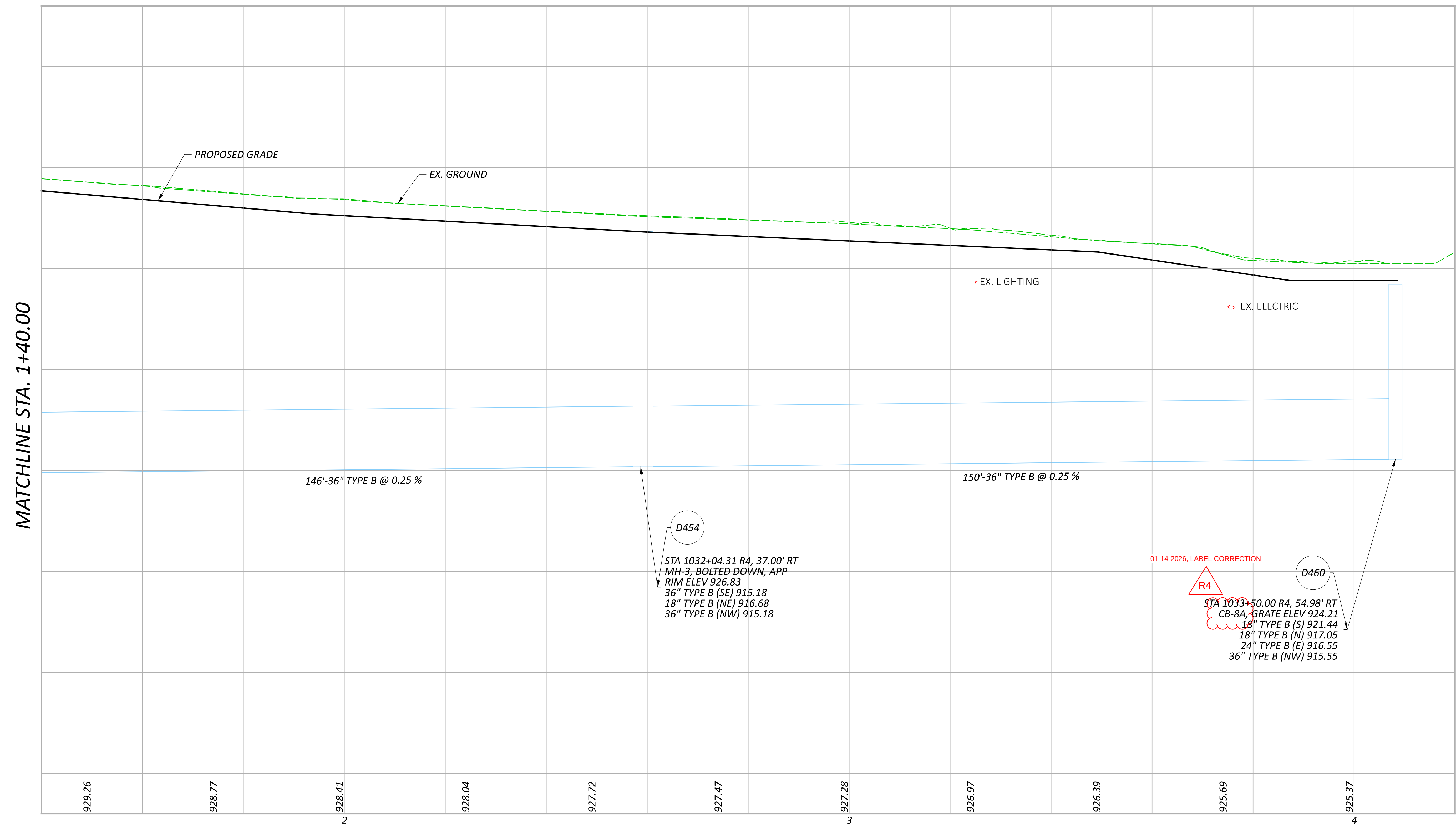
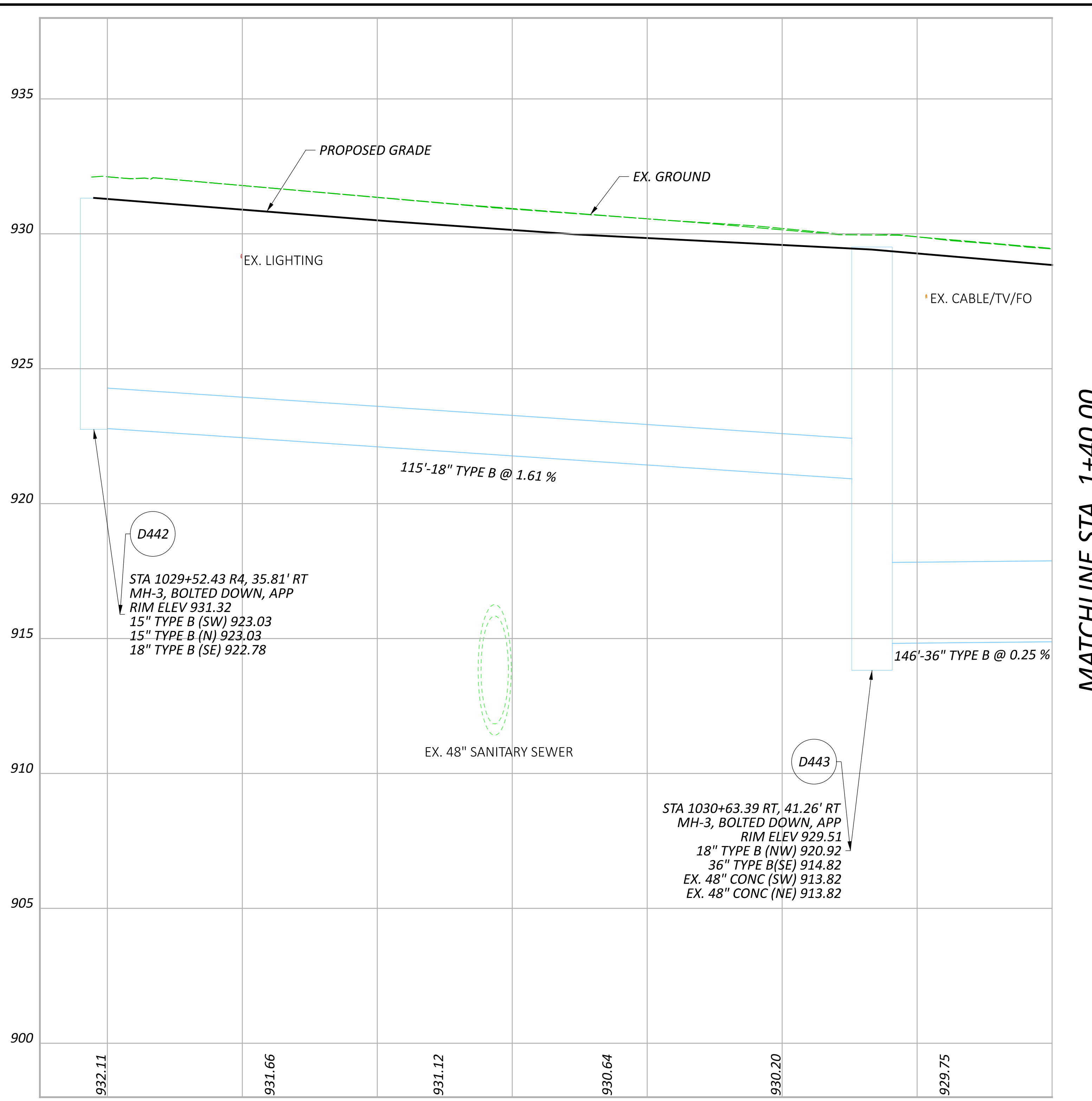
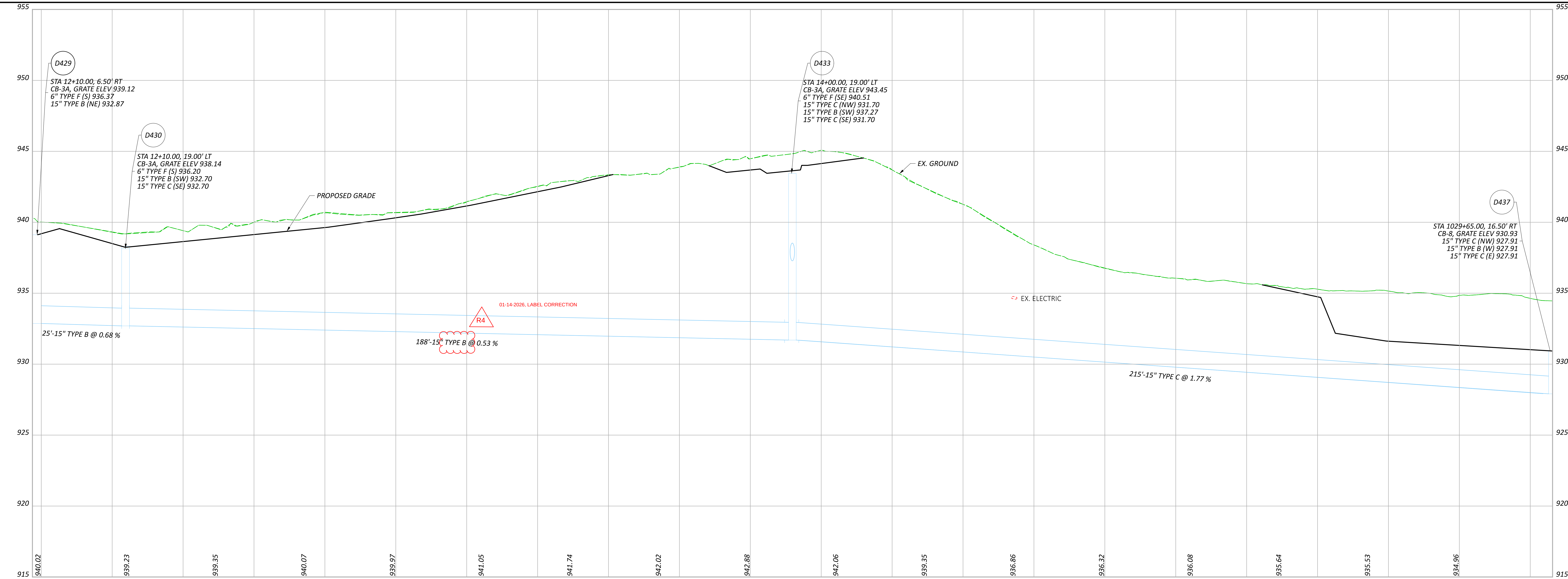


R4
 01-21-2026, CLARIFICATION

NOTES:

- FOR ADDITIONAL RAILING DETAILS, SEE STANDARD DRAWING SBR-2-20.
- FOR REINFORCING STEEL LIST, SEE SHEET P.549/655.
- PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO FURNISH AND CONSTRUCT THE MEDIAN BARRIER TRANSITIONS SHALL BE INCLUDED WITH ITEM 622 - BARRIER, MISC.: MEDIAN BARRIER TRANSITIONS. REINFORCING STEEL, 1" P.E.J.F., CONCRETE, AND DOWELS SHALL BE INCIDENTAL TO THIS ITEM. A QUANTITY OF 100 FT HAS BEEN CARRIED TO THE GENERAL SUMMARY.





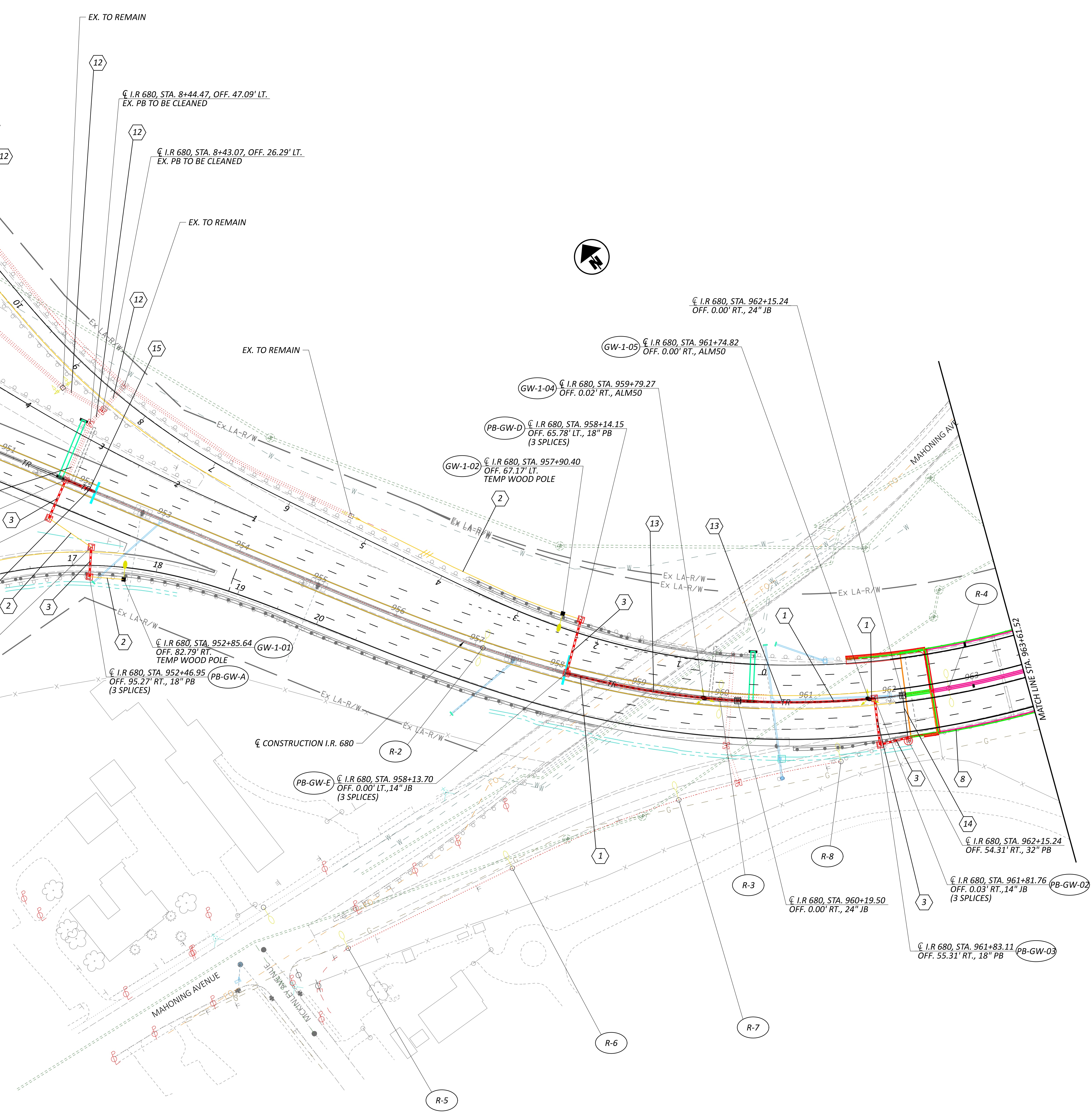
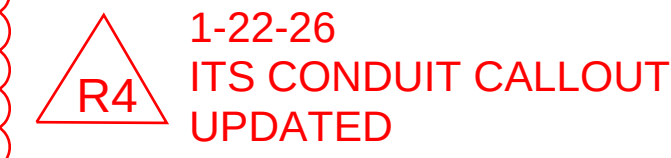
MATCHLINE STA. 1+40.00

STORM SEWER PROFILES
 I.R. 680, RAMP K

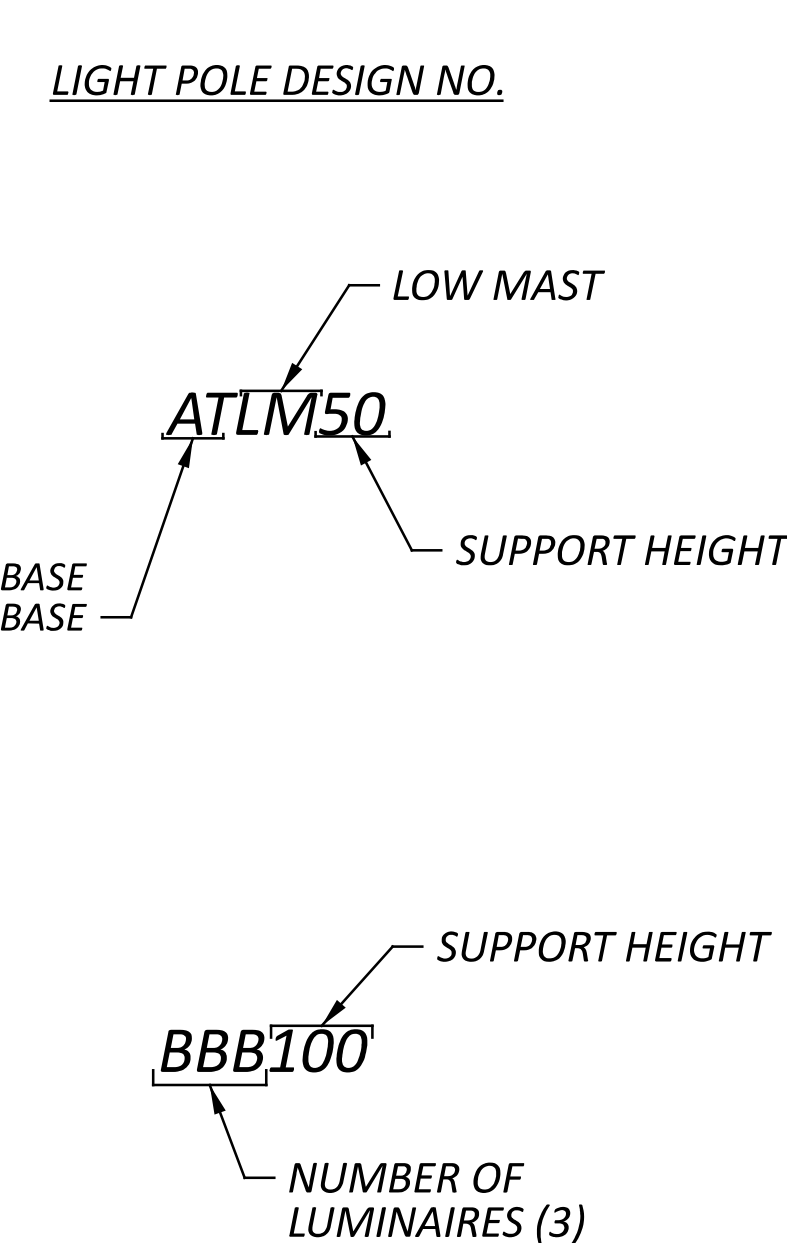
REF NO.	SHEET NO.	STATION TO STATION			625	625	625	625	625	SPECIAL
					PULL BOX REMOVED	LIGHT TOWER REMOVED	LIGHT POLE REMOVED	LIGHT POLE FOUNDATION REMOVED	LIGHT TOWER FOUNDATION REMOVED	REPLACEMENT OF EXISTING LIGHTING UNIT
					EACH	EACH	EACH	EACH	EACH	EACH
	475-481	935+11.52	TO	1129+50.00	15					10
	475	935+11.52	TO	963+61.52		0	7	7	0	
	476	963+61.52	TO	992+11.52		3	12	12	3	
	477	992+11.52	TO	1020+61.52			14	14		
	478	1020+61.52	TO	1049+11.52		1	21	21	1	
	479	1049+11.52	TO	1077+61.52			10	10		
	480	1077+61.52	TO	1106+11.52		4	9	9	4	
	481	1106+11.52	TO	1126+50.00			9	9		
TOTALS CARRIED TO GENERAL SUMMARY					15	8	82	82	8	10

 1-22-26
ITS GENERAL SUMMARY
ADDED FOR CLARITY

Item No	Extension	Description	Quantity	Unit
625	29000	TRENCH	685	FT
809	00530	ITS JUNCTION BOX, 17x24x6	33	EA
809	01900	ITS PULL BOX WITH STANDARD LID ASSEMBLY, 32" WIDE, TYPE 1	11	EA
809	24510	CONDUIT, 2", MULTICELL, WITH 4-10/8MM INNERDUCTS	1370	FT







<u>CONDUIT CODES</u>	
1	2" CONDUIT, 725.051 IN BARRIER WITH THREE NO. 4 AWG 2400 VOLT DISTRIBUTION CABLES
2	1 1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT DISTRIBUTION CABLES
3	3" CONDUIT, 725.04 WITH THREE NO. 4 AWG 2400 VOLT DISTRIBUTION CABLES
4	EX. CONDUIT IN PARAPET TO REMAIN EX. CABLES TO BE REMOVED AND CONDUIT CLEANED INSTALL THREE NO. 4 AWG 2400 VOLT DISTRIBUTION CABLES
5	3" CONDUIT, 725.04 IN BARRIER WITH THREE NO. 4 AWG 2400 VOLT DISTRIBUTION CABLES
6	2 - 1 1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES
7	STUB & CAP CONDUIT ELL
8	3" CONDUIT, 725.04 IN PARAPET WITH THREE NO. 4 AWG 2400 VOLT DISTRIBUTION CABLES
9	3" CONDUIT, JACKED OR DRILLED, 725.04 WITH THREE NO. 4 AWG 2400 VOLT DISTRIBUTION CABLES
10	EX. CONDUIT TO REMAIN EX. CABLES TO BE REMOVED AND CONDUIT CLEANED INSTALL THREE NO. 4 AWG 2400 VOLT DISTRIBUTION CABLES
11	3" CONDUIT, 725.04 WITH 2, THREE NO. 4 AWG 2400 VOLT DISTRIBUTION CABLES
12	EX. CONDUIT TO REMAIN
15	2" CONDUIT, 725.051 IN BARRIER - EMPTY



ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATION. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN. THE DEPARTMENT WILL NOT MAKE ADDITIONAL PAYMENT FOR PROVIDING AN ALTERNATE DESIGN.

THE EXCAVATION BRACING SHALL MEET THE FOLLOWING REQUIREMENTS:

		R.A.	F.A.
BEGIN	STATION	962+33.0	968+47.7
	OFFSET	0.0' LT.	0.0' LT.
	TOP ELEVATION	885.5	891.5
	BOT. ELEVATION	853.0	860.0
END	STATION	962+48.6	968+63.0
	OFFSET	0.0' LT.	0.0' LT.
	TOP ELEVATION	885.5	891.5
	BOT. ELEVATION	853.0	860.0
DESIGN EXCAVATION DEPTH (FT.)		10.6	10.4
MINIMUM SECTION MODULUS (cu. in./ft.)		23.1	22.1

MATERIAL FOR EXCAVATION BRACING SHALL BE ASTM A572, GRADE 50 STEEL, MINIMUM YIELD 50 KSI.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN

AFTER THE DECK SLAB IS REMOVED, THE CONTRACTOR AND ENGINEER SHALL INSPECT THE WEBS AT THE ENDS OF THE GIRDERS AT THE ABUTMENTS. ANY DETERIORATION ENCOUNTERED SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER. THE TYPICAL GIRDER REPAIR DETAIL SHOWN ON SHEET 32/64 IS TO BE USED AS A GUIDE FOR REPAIR.

PRIOR TO FIELD WELDING OF THE NEW STRUCTURAL STEEL AND WEB PLATES, THE CONTRACTOR SHALL REMOVE ALL LOOSE AND DISINTEGRATED DEBRIS. BLAST CLEAN AREAS TO BE WELDED TO NEAR WHITE METAL CONDITION. ALL FAYING SURFACES OF THE REPAIR AREAS SHALL BE PAINTED PER CMS ITEM 514.

ALL REQUIREMENTS OF C&MS 513 APPLY TO SHOP FABRICATED MEMBERS. PERFORM WORK FOR FIELD FABRICATED MEMBERS ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING FIELD FABRICATION TO BE PREQUALIFIED AS SPECIFIED IN S1078. SUBMIT A WRITTEN LETTER OF MATERIAL ACCEPTANCE IN ACCORDANCE WITH C&MS 501.06, TO THE ENGINEER. PROVIDE THE ENGINEER "AS-BUILT" DRAWINGS ACCORDING TO C&MS 513.06, EXCEPT C&MS 501.04 DOES NOT APPLY. UPON RECEIPT OF THE ENGINEER'S ACCEPTANCE, SUPPLY A COPY OF THE DRAWINGS, ACCORDING TO S1002 TO THE OFFICE OF MATERIAL MANAGEMENT FOR RECORD PURPOSES.

A CONTINGENCY QUANTITY OF 600 POUNDS IS INCLUDED IN THE ESTIMATED QUANTITIES FOR THE WEB REPAIRS AS DESCRIBED ABOVE.

THIS ITEM SHALL ALSO INCLUDE THE REMOVAL AND REPLACEMENT OF CROSSFRAMES ABOVE PIER 3 AS SHOWN ON SHEET 35/64 AND THE REMOVAL OF THE END CROSSFRAMES, BOLTS AND CONNECTION PLATES AND THE REPLACEMENT WITH NEW END CROSSFRAMES, INCLUDING STIFFENER AND CONNECTION PLATES.

THE EXISTING END CROSSFRAMES SHALL BE REMOVED FLUSH WITH THE EXISTING GIRDERS. BLAST CLEAN AREAS OF REMOVAL. REPAIR ANY AREA DAMAGED BY THE REMOVAL PROCESS.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN (CONTINUED)

ALL EQUIPMENT, LABOR, MATERIALS AND INCIDENTALS REQUIRED TO PERFORM THE WORK DESCRIBED ABOVE SHALL BE INCLUDED FOR PAYMENT WITH ITEM 513, STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN.

R4

01-21-2026, QUANTITY CORRECTION

ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, AS PER PLAN

THE CONTRACTOR SHALL VISUALLY INSPECT THE PIERS, ABUTMENTS, AND WINGWALLS TO DETERMINE THE LOCATION AND EXTENT OF THE CRACKED CONCRETE TO BE REPAIRED BY EPOXY INJECTION. ALL CRACK REPAIR LENGTHS SHALL BE APPROVED BY THE ENGINEER. A CONTINGENCY QUANTITY OF 50 FT IS INCLUDED IN THE ESTIMATED QUANTITIES.

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

THE CONTRACTOR SHALL VISUALLY INSPECT THE SUBSTRUCTURES TO DETERMINE THE LOCATION AND EXTENT OF SPALLED AND DELAMINATED CONCRETE TO BE REPAIRED BY PATCHING. ALL LOCATIONS AND AREAS SHALL BE APPROVED BY THE ENGINEER.

PRIOR TO THE SURFACE CLEANING SPECIFIED IN C&MS 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE 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.

A CONTINGENCY QUANTITY OF 100 SF IS INCLUDED IN THE ESTIMATED QUANTITIES.

R4

01-21-2026, QUANTITY CORRECTION

DECK PLACEMENT DESIGN ASSUMPTIONS

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.38 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103 INCHES.

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 INCHES.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65 INCHES.

ABBREVIATIONS

ABUT. - ABUTMENT	MIN. - MINIMUM
APPR. - APPROACH	N.F. - NEAR FACE
APPROX. - APPROXIMATE	O/O - OUT TO OUT
BOT. - BOTTOM	P.E.J.F. - PREFORMED
BRG. - BEARING	EXPANSION
C/C - CENTER TO CENTER	JOINT FILLER
C.J. - CONSTRUCTION JOINT	R.A. - REAR ABUTMENT
COL. - COLUMN	RCP - ROCK CHANNEL PROTECTION
CONC. - CONCRETE	REINF. - REINFORCING
CONST. - CONSTRUCTION	RT. - RIGHT
DIA. - DIAMETER	SCD - STANDARD CONSTRUCTION
EL. - ELEV. - ELEVATION	DRAWING
E.W. - EACH WAY	SER. - SERIES
EX. - EXIST. - EXISTING	SPA. - SPACING
EXP. - EXPANSION	STA. - STATION
EQ. SPA. - EQUAL SPACE	T & B - TOP AND BOTTOM
E.F. - EACH FACE	TYP. - TYPICAL
F.A. - FORWARD ABUTMENT	T/T - TOE TO TOE
F.F. - FAR FACE	U.N.O. - UNLESS NOTED
F/F - FACE TO FACE	OTHERWISE
FTG. - FOOTING	VAR. - VARIES
FWD. - FORWARD	V.C. - VERTICAL CURVE
MAX. - MAXIMUM	VERT. - VERTICAL
M.O.T. - MAINTENANCE OF	W.P. - WORKPOINT
TRAFFIC	

ASBESTOS NOTIFICATION

A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST INSPECTED THE BRIDGE STRUCTURE SCHEDULED FOR DEMOLITION AND/OR REHABILITATION;

THE INSPECTION DETERMINED THAT 40 SQUARE FEET OF EXPANSION JOINT MATERIAL AT THE REAR ABUTMENT LEFT WINGWALL CONTAINS ASBESTOS. THE ASBESTOS CONTAINING MATERIAL SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. THE CONTRACTOR SHALL ENSURE THAT THE ABATEMENT, TRANSPORT, AND DISPOSAL OF ASBESTOS CONTAINING MATERIAL IS CONDUCTED IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. THE CONTRACTOR SHALL ENSURE THAT ALL DOCUMENTATION RELATED TO THE ABATEMENT, TRANSPORT, AND DISPOSAL OF ASBESTOS CONTAINING MATERIALS IS SUBMITTED TO THE PROJECT ENGINEER FOR RECORD KEEPING WITHIN 2 WEEKS OF COMPLETION.

THE DEPARTMENT HAS PROVIDED A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM (PARTIALLY COMPLETED) AND THE ASBESTOS INSPECTION REPORT IN THE SPECIAL PROVISIONS FOR THIS PROJECT. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO THE OEPA AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION. ONLINE SUBMISSION IS AVAILABLE AT HTTP://WWW.EPA.OHIO.GOV/ASBESTOS AND IS ENCOURAGED OR, THE CONTRACTOR SHALL SUBMIT IT TO ONE OF THE ADDRESSES BELOW:

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 FORM SHALL INCLUDE:

- THE CONTRACTORS NAME AND ADDRESS
- THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE STRUCTURE DEMOLITION AND/OR RENOVATION
- DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHODS BE USED
- ALL NECESSARY FEES

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED NOTIFICATION OF DEMOLITION AND RENOVATION FORM TO THE PROJECT ENGINEER AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

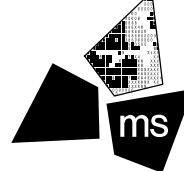
THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIALS NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

THE CONTRACTOR SHALL FURNISH ALL THE LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PROPERLY ABATE, TRANSPORT, AND DISPOSE OF ASBESTOS CONTAINING MATERIALS IN A LANDFILL LICENSED BY THE LOCAL HEALTH DEPARTMENT AND PERMITTED BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY - DIVISION OF AIR POLLUTION CONTROL TO ACCEPT ASBESTOS CONTAINING MATERIAL. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM SPECIAL - STRUCTURES, REMOVAL OF ASBESTOS CONTAINING MATERIAL.

SFN

5006872

DESIGN AGENCY



ms consultants, inc.

DESIGNER

CHECKER

JSE

SJR

REVIEWER

WER 05/30/25

PROJECT ID

121474

SUBSET

TOTAL

5

64

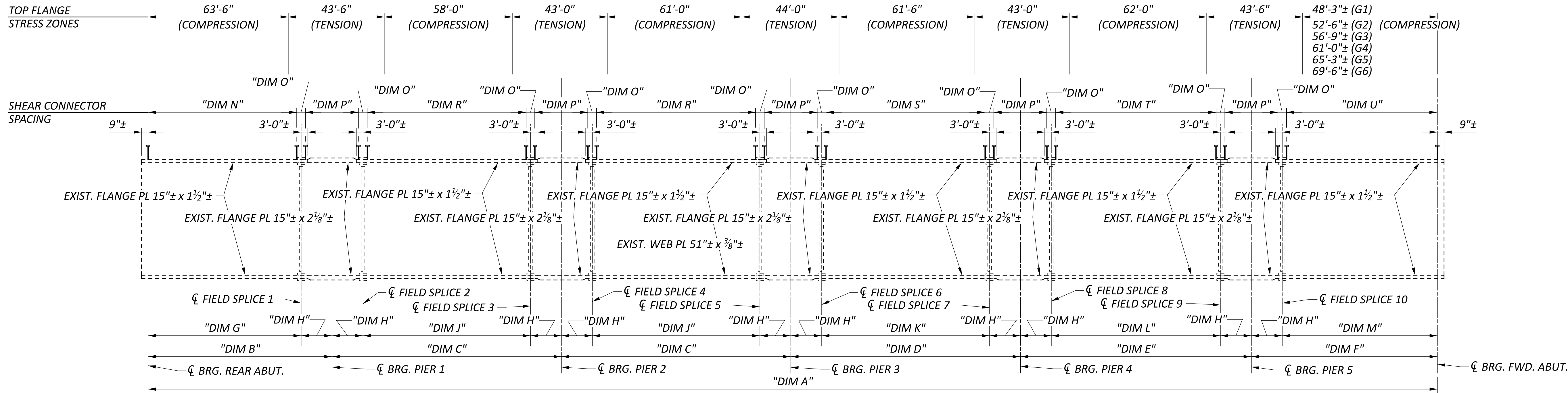
SHEET

TOTAL

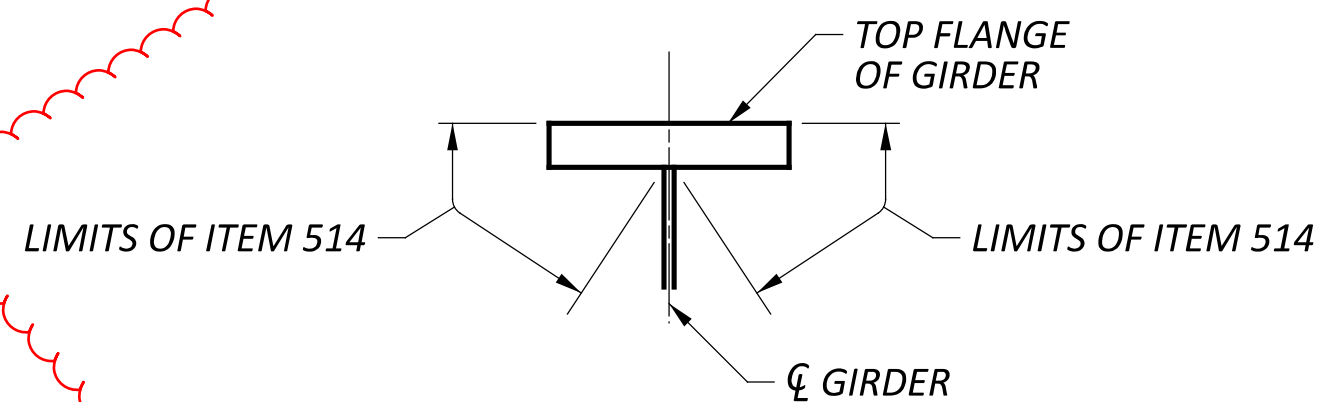
P.490

655

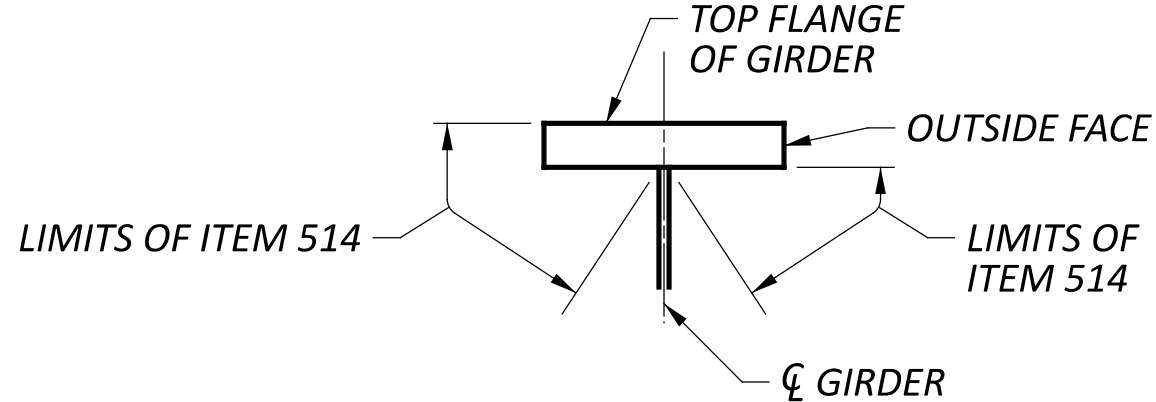
ESTIMATED QUANTITIES (02/IMS)									
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPERSTRUCTURE	GENERAL	SHEET REF.
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					4/64
202	22900	423	SY	APPROACH SLAB REMOVED				423	
503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN					5/64
503	21301	LS		UNCLASSIFIED EXCAVATION, AS PER PLAN					4/64
				01-21-2026, QUANTITY CORRECTION					
509	10000	624,562	LB	EPOXY COATED STEEL REINFORCEMENT	30,979		582,734	10,849	
509	26000	6,664	LB	GALVANIZED STEEL REINFORCEMENT	6,664				
509	30020	37,159	FT	NO. 4 DEFORMED GFRP REINFORCEMENT			37,159		
510	10001	651	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	651				4/64
511	34447	1,747	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN			1,747		49/64
511	34450	509	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			509		
511	45712	268	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT	268				
511	53012	34	CY	CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET WITH QC/QA	34				61/64
512	10001	194	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN, (PERMANENT GRAFFITI PROTECTION)		194			4/64
512	10100	6,240	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	526	2,534	3,180		
512	10601	100	FT	CONCRETE REPAIR BY EPOXY INJECTION, AS PER PLAN				100	5/64
512	74000	194	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES		194			
				01-21-2026, QUANTITY CORRECTION					
513	10201	13,450	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN			13,450		5/64
513	20000	18,195	EACH	WELDED STUD SHEAR CONNECTORS			18,195		
				01-21-2026, QUANTITY CORRECTION					
514	00050	14,280	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			14,280		
514	00056	14,280	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			14,280		
514	00060	15,667	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			15,667		
514	00066	15,667	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			15,667		
514	00504	120	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			120		
514	10000	48	EACH	FINAL INSPECTION REPAIR			48		
516	11210	199	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			199		
516	13600	377	SF	1" PREFORMED EXPANSION JOINT FILLER			377		
516	13900	48	SF	2" PREFORMED EXPANSION JOINT FILLER	48				
516	44100	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (17" X 20" X 2.668")		12			
516	44200	48	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (17.5" X 20" X 3.273")		48			
516	44300	24	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (14" X 15" X 4.565")	24				
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					5/64
518	21200	103	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	103				
519	11101	100	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	100				5/64
526	30010	676	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")				676	
526	90020	113	SY	TYPE B INSTALLATION				113	
SPECIAL	53000600	40	SF	STRUCTURES, REMOVAL OF ASBESTOS CONTAINING MATERIAL	40				5/64



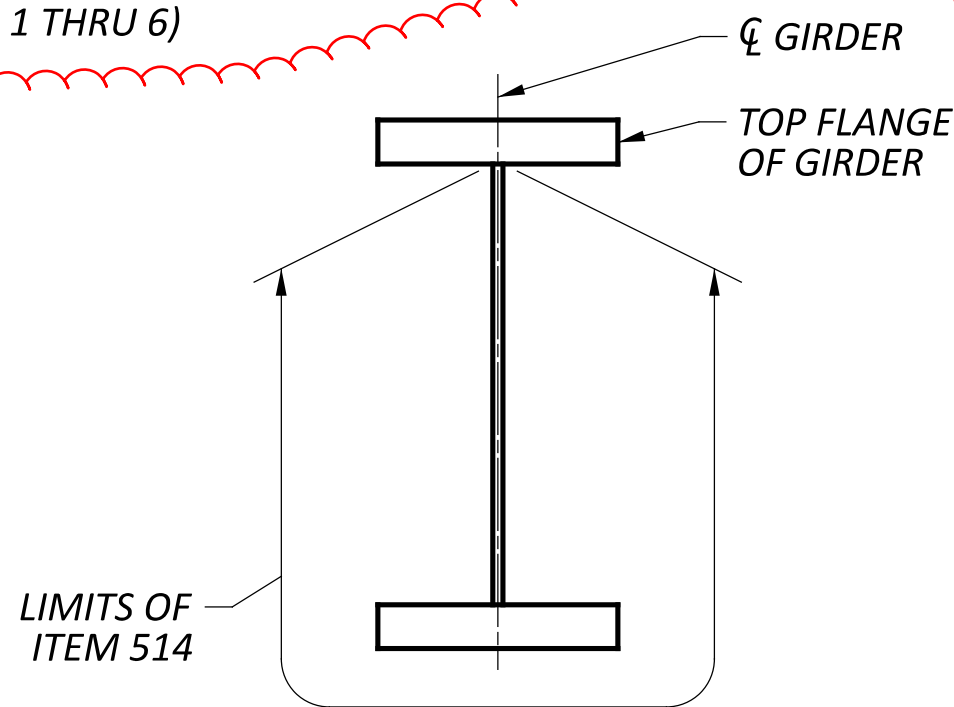
GIRDER ELEVATION
(LEFT BRIDGE - GIRDERS 1 THRU 6)



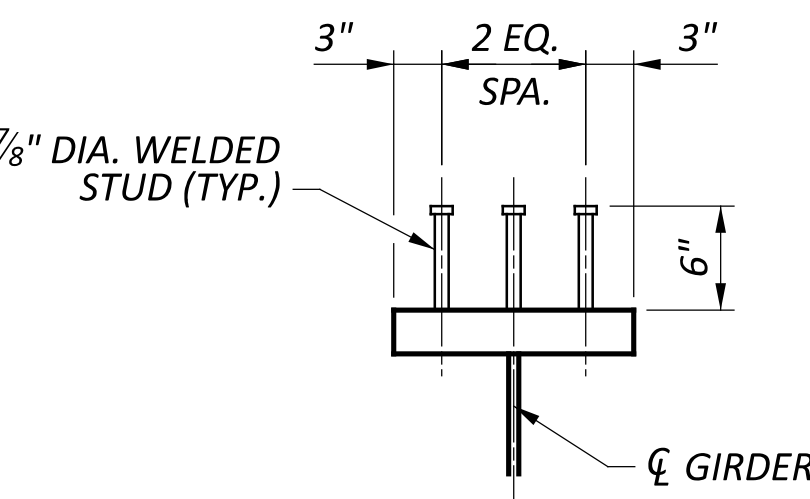
LIMITS OF ITEM 514
(FULL LENGTH OF INTERIOR GIRDERS)



LIMITS OF ITEM 514
(FULL LENGTH OF EXTERIOR GIRDERS)



LIMITS OF ITEM 514
(10' LENGTH OF ALL GIRDER ENDS)



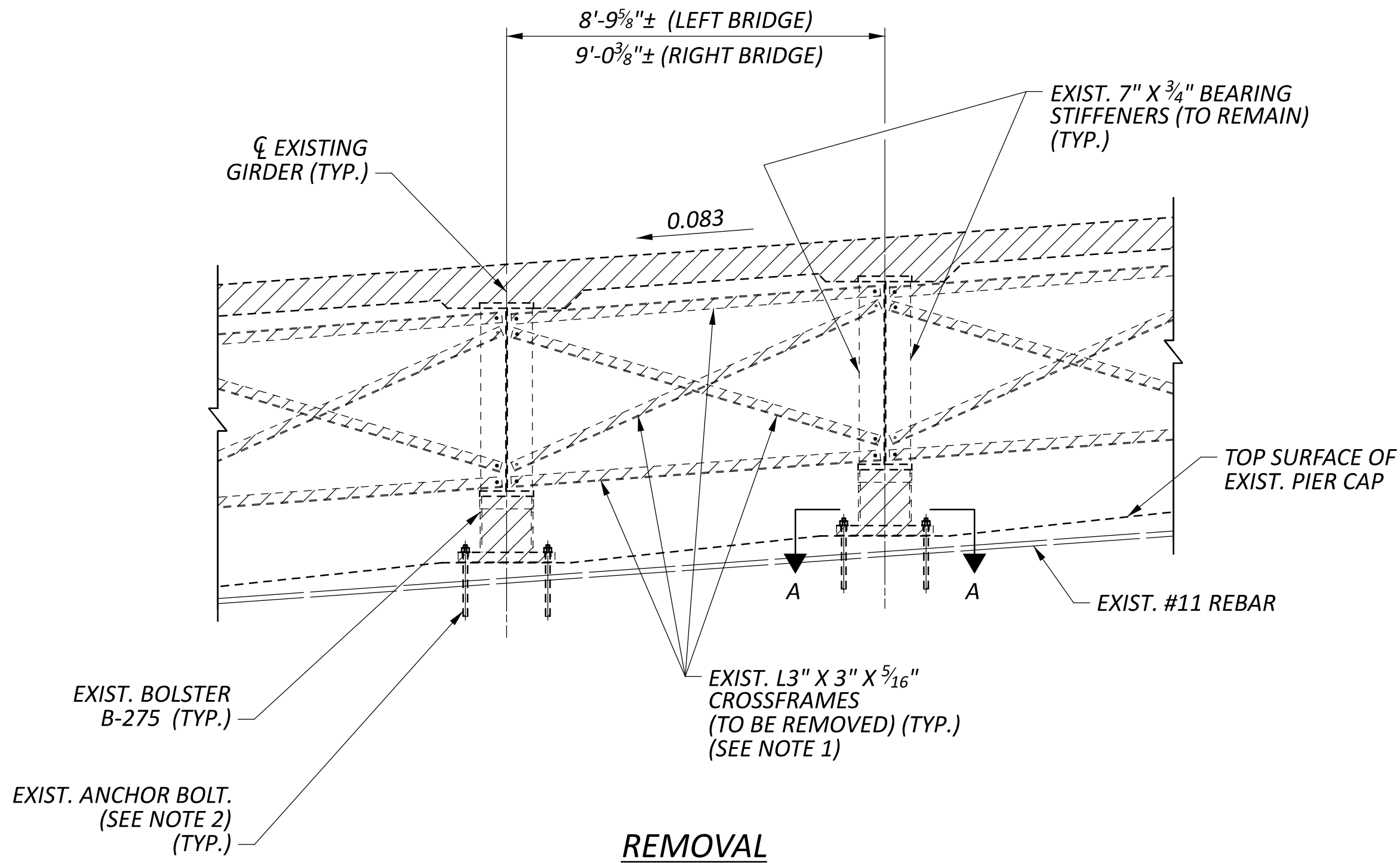
WELDED SHEAR STUD CONNECTION DETAIL
NOTE: SHEAR STUDS SHALL BE LOCATED NO CLOSER THAN 3" FROM EDGE OF GIRDER SPLICE PLATE.

GIRDER DIMENSIONS (LEFT BRIDGE)												
GIRDER	"DIM A"	"DIM B"	"DIM C"	"DIM D"	"DIM E"	"DIM F"	"DIM G"	"DIM H"	"DIM J"	"DIM K"	"DIM L"	"DIM M"
1	571'-2 ⁷ / ₈ "±	81'-2 ¹ / ₈ "±	101'-2 ¹ / ₂ "±	101'-6 ¹ / ₂ "±	102'-9 ³ / ₄ "±	83'-4"±	67'-2 ¹ / ₈ "±	14'-0"±	73'-2 ¹ / ₂ "±	73'-6 ¹ / ₂ "±	74'-9 ¹ / ₄ "±	69'-4"±
2	575'-6"±	81'-10 ³ / ₄ "±	102'-1 ¹ / ₄ "±	102'-4 ¹ / ₂ "±	103'-4 ¹ / ₂ "±	83'-7 ³ / ₄ "±	67'-10 ³ / ₄ "±	14'-0"±	74'-1 ¹ / ₄ "±	74'-4 ¹ / ₂ "±	75'-4 ¹ / ₂ "±	69'-7 ³ / ₄ "±
3	579'-9 ¹ / ₈ "±	82'-7 ³ / ₈ "±	103'-0"±	103'-2 ¹ / ₂ "±	103'-11 ³ / ₄ "±	83'-11 ¹ / ₂ "±	68'-7 ³ / ₈ "±	14'-0"±	75'-0"±	75'-2 ¹ / ₂ "±	75'-11 ³ / ₄ "±	69'-11 ¹ / ₂ "±
4	584'-0 ³ / ₁₆ "±	83'-3 ³ / ₁₆ "±	103'-10 ³ / ₄ "±	104'-0 ¹ / ₂ "±	104'-7"±	84'-3 ¹ / ₄ "±	69'-3 ³ / ₁₆ "±	14'-0"±	75'-10 ³ / ₄ "±	76'-0 ¹ / ₂ "±	76'-7"±	70'-3 ¹ / ₄ "±
5	588'-3 ¹ / ₁₆ "±	84'-0 ⁹ / ₁₆ "±	104'-9 ¹ / ₂ "±	104'-10 ¹ / ₂ "±	105'-2 ⁵ / ₁₆ "±	84'-7 ¹ / ₁₆ "±	70'-0 ⁹ / ₁₆ "±	14'-0"±	76'-9 ¹ / ₂ "±	76'-10 ¹ / ₂ "±	77'-2 ³ / ₁₆ "±	70'-7 ¹ / ₁₆ "±
6	592'-5 ¹⁵ / ₁₆ "±	84'-9 ¹ / ₈ "±	105'-8 ¹ / ₄ "±	105'-8 ⁹ / ₁₆ "±	105'-9 ⁹ / ₁₆ "±	84'-10 ³ / ₁₆ "±	70'-9 ¹ / ₈ "±	14'-0"±	77'-8 ¹ / ₄ "±	77'-8 ⁹ / ₁₆ "±	77'-9 ⁹ / ₁₆ "±	70'-10 ¹³ / ₁₆ "±

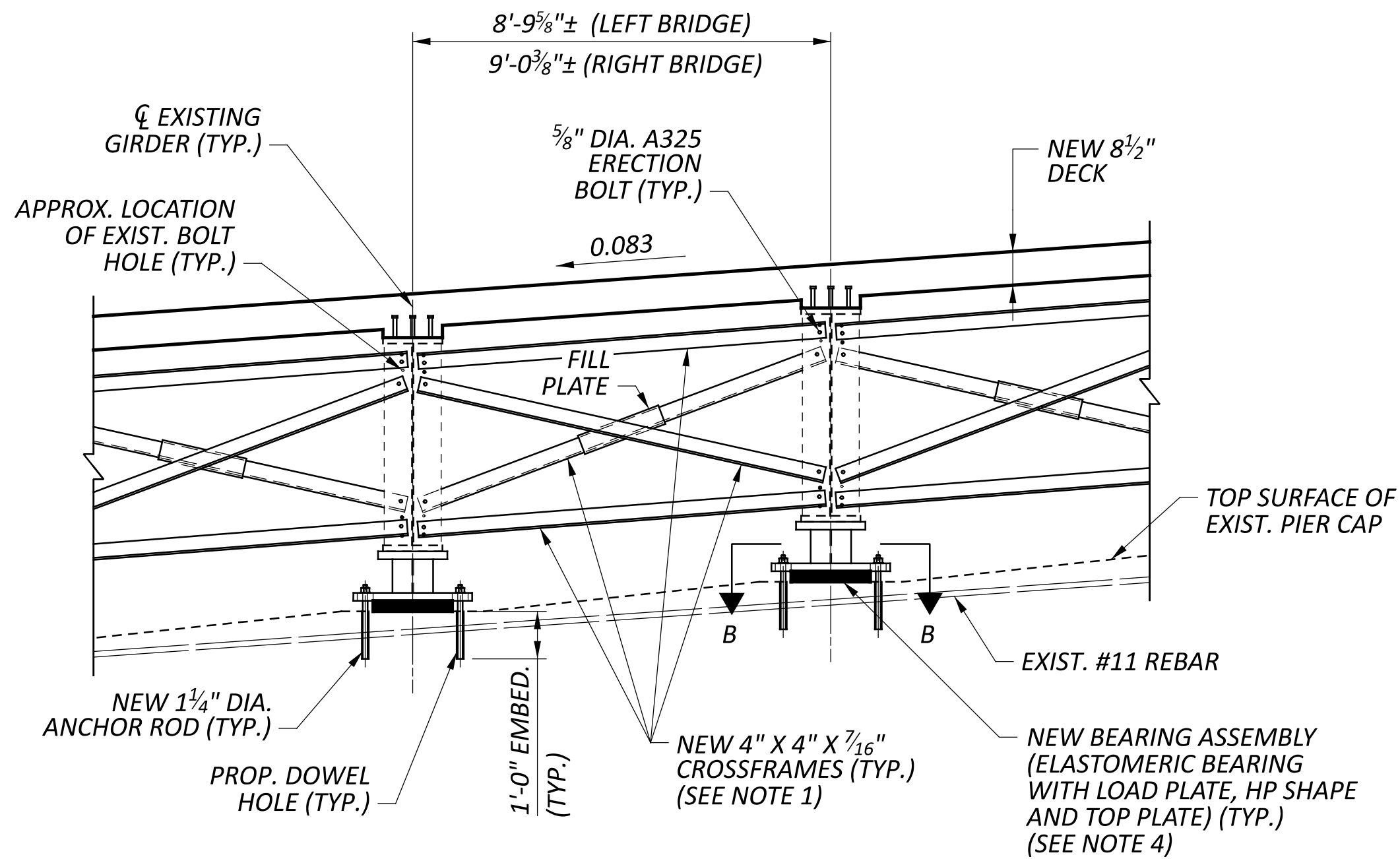
SHEAR CONNECTOR SPACING (LEFT BRIDGE)							
GIRDER	"DIM N"	"DIM O"	"DIM P"	"DIM R"	"DIM S"	"DIM T"	"DIM U"
1	66 SPA. @ 12" MAX. = 65'-2 ¹ / ₈ "±	4'-0"	24 SPA. @ 12" = 24'-0"	70 SPA. @ 12" MAX. = 69'-2 ¹ / ₂ "±	70 SPA. @ 12" MAX. = 69'-6 ¹ / ₂ "±	71 SPA. @ 12" MAX. = 70'-9 ¹ / ₄ "±	68 SPA. @ 12" = 67'-4"
2	66 SPA. @ 12" MAX. = 65'-10 ³ / ₄ "±	4'-0"	24 SPA. @ 12" = 24'-0"	71 SPA. @ 12" MAX. = 70'-1 ¹ / ₄ "±	71 SPA. @ 12" MAX. = 70'-4 ¹ / ₂ "±	72 SPA. @ 12" MAX. = 71'-4 ¹ / ₂ "±	68 SPA. @ 12" = 67'-7 ³ / ₄ "±
3	67 SPA. @ 12" MAX. = 66'-7 ³ / ₈ "±	4'-0"	24 SPA. @ 12" = 24'-0"	71 SPA. @ 12" MAX. = 71'-0"	72 SPA. @ 12" MAX. = 71'-2 ¹ / ₂ "±	72 SPA. @ 12" MAX. = 71'-11 ³ / ₄ "±	68 SPA. @ 12" = 67'-11 ¹ / ₂ "±
4	68 SPA. @ 12" MAX. = 67'-3 ¹⁵ / ₁₆ "±	4'-0"	24 SPA. @ 12" = 24'-0"	72 SPA. @ 12" MAX. = 71'-10 ³ / ₄ "±	73 SPA. @ 12" MAX. = 72'-0 ¹ / ₂ "±	73 SPA. @ 12" MAX. = 72'-7"	69 SPA. @ 12" = 68'-3 ¹ / ₄ "±
5	69 SPA. @ 12" MAX. = 68'-0 ⁹ / ₁₆ "±	4'-0"	24 SPA. @ 12" = 24'-0"	73 SPA. @ 12" MAX. = 72'-9 ¹ / ₂ "±	73 SPA. @ 12" MAX. = 72'-10 ¹ / ₂ "±	74 SPA. @ 12" MAX. = 73'-2 ³ / ₁₆ "±	69 SPA. @ 12" = 68'-7 ¹ / ₁₆ "±
6	69 SPA. @ 12" MAX. = 68'-9 ¹ / ₈ "±	4'-0"	24 SPA. @ 12" = 24'-0"	74 SPA. @ 12" MAX. = 73'-8 ¹ / ₄ "±	74 SPA. @ 12" MAX. = 73'-8 ⁹ / ₁₆ "±	74 SPA. @ 12" MAX. = 73'-9 ⁹ / ₁₆ "±	69 SPA. @ 12" = 68'-10 ¹³ / ₁₆ "±

NOTES:

- FOR NOTES AND TYPICAL GIRDER REPAIR DETAILS, SEE SHEET 32/64.
- THE CONTRACTOR SHALL PERFORM SURFACE PREPARATION AND FIELD PAINT (PER ITEM 514) THE EXPOSED SIDES AND BOTTOM OF THE TOP FLANGES OF ALL GIRDERS AND A 10-FOOT LENGTH OF THE EXISTING GIRDER ENDS AFTER END CROSS FRAMES ARE REPLACED AND WEB REPAIRS ARE PERFORMED. THE CONTRACTOR SHALL NOT OVERSPRAY ONTO THE CONCRETE DECK OR CONCRETE SUBSTRUCTURE COMPONENTS (BACK WALLS, ABUTMENTS AND PIERS). PAINTING SHALL BE CONFINED TO THE STRUCTURAL STEEL COMPONENTS. THE COLOR OF THE FINISH COAT SHALL BE FCN 15526 (BLUE) TO MATCH EXISTING PAINT COLOR.

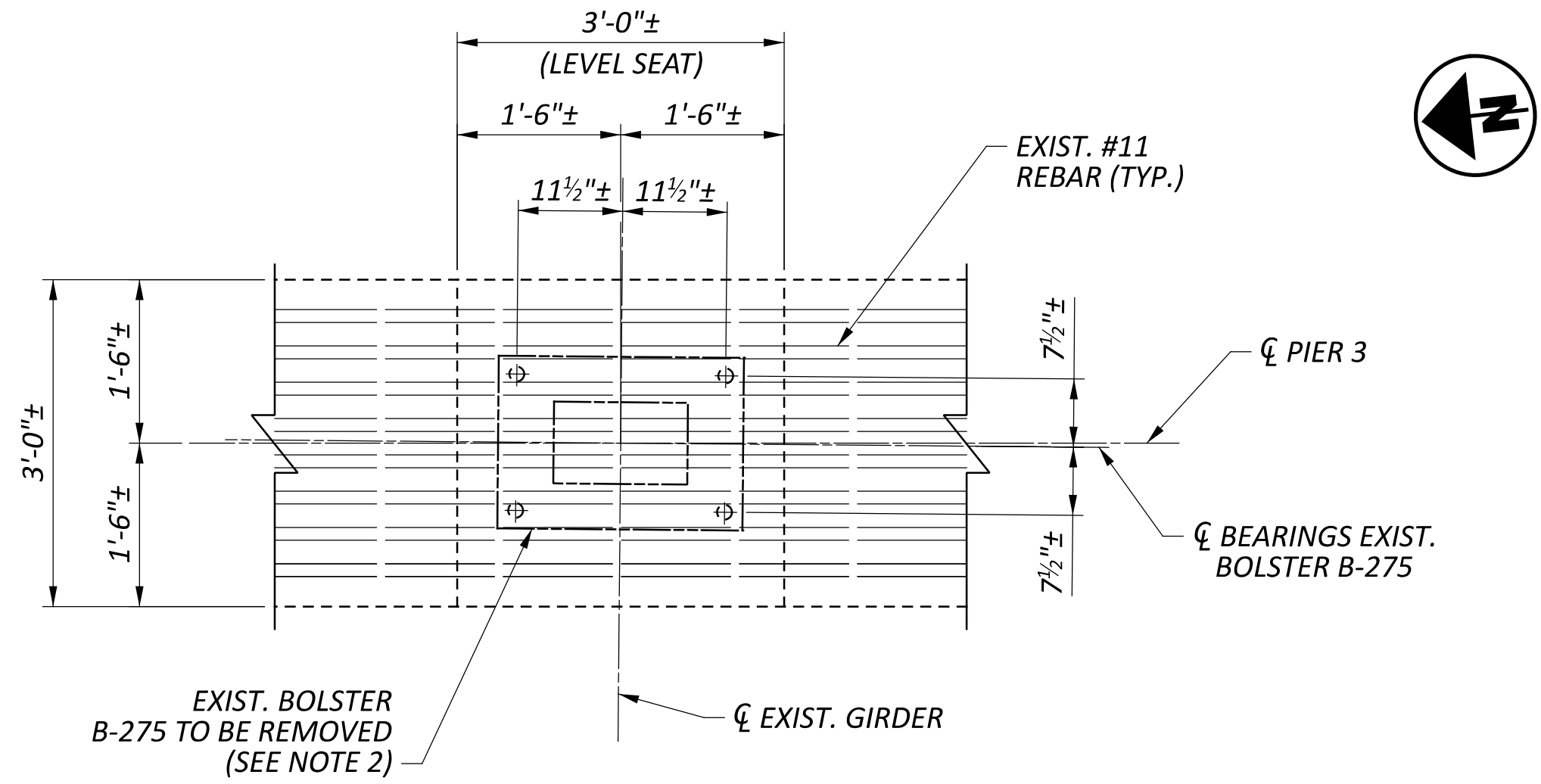


REMOVAL

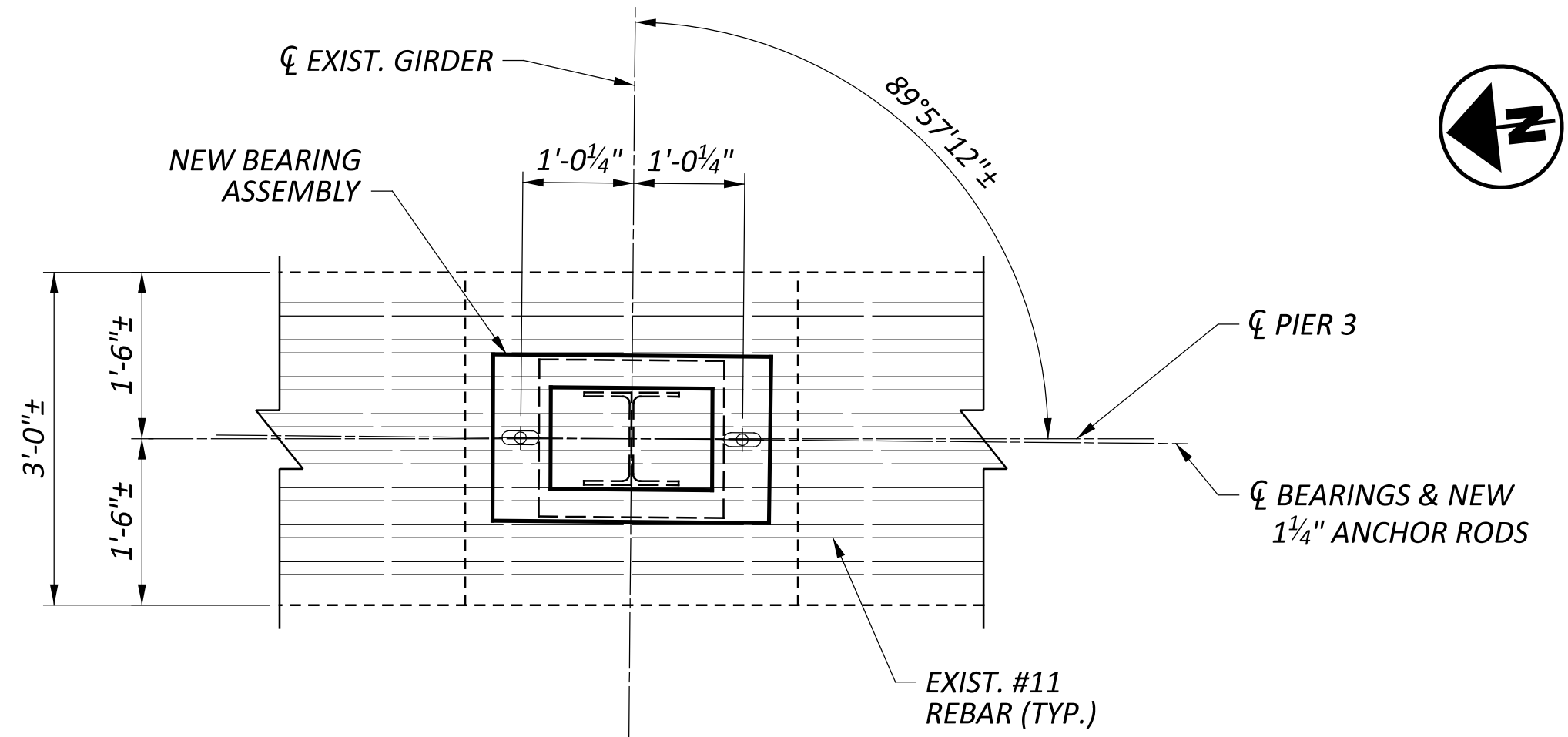


PROPOSED

PARTIAL PIER 3 ELEVATION
(LEFT OR RIGHT BRIDGE)
(LOOKING UPSTATION)

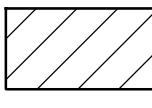


SECTION A-A



SECTION B-B

LEGEND:

 - ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

- CONTRACTOR SHALL REMOVE THE EXISTING 3" X 3" X 5/16" CROSSFRAMES, INCLUDING ERECTION BOLTS. THE EXISTING 7" X 3/4" BEARING STIFFENERS SHALL REMAIN AND BE RE-USED TO ATTACH THE NEW 4" X 4" X 7/16" CROSSFRAMES. INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS WITH ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN.
- REMOVE EXISTING BOLSTERS INCLUDING NUTS AND WASHERS. CONTRACTOR SHALL CUT AND REMOVE PORTION OF EXISTING ANCHOR BOLTS FLUSH WITH TOP SURFACE OF EXISTING PIER CAP.
- REFER TO GSD-1-19 FOR ADDITIONAL CROSS FRAME DETAILS.
- FOR PIER 3 BEARING DETAILS, SEE SHEET 38/64.
- THE CONTRACTOR SHALL FIELD PAINT THE NEW CROSS FRAMES AT PIER 3 AND PORTIONS OF PAINT COATING SYSTEM (WELD LOCATIONS, ETC.) THAT ARE DAMAGED DUE TO REMOVAL AND REPLACEMENT OF CROSS FRAMES AT PIER 3, PER ITEM 514. THE CONTRACTOR SHALL NOT OVERSPRAY ONTO THE CONCRETE DECK OR CONCRETE SUBSTRUCTURE COMPONENTS (BACK WALLS, ABUTMENTS AND PIERS). PAINTING SHALL BE CONFINED TO THE STRUCTURAL STEEL COMPONENTS. THE COLOR OF THE FINISH COAT SHALL BE FCN 15526 (BLUE) TO MATCH EXISTING PAINT COLOR.

PIER 3 CROSSFRAME REMOVAL AND REPLACEMENT
BRIDGE NO. MAH-00680-04.886
OVER PRICE ROAD & MILL CREEK

SFN	
5006872	
DESIGN AGENCY	
	
DESIGNER	CHECKER
JSE	TVB
REVIEWER	
WER 05/30/25	
PROJECT ID	
121474	
SUBSET	TOTAL
35	64
SHEET	TOTAL
P.520	655

MARK	MATERIAL TYPE	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
						A	B	C	D	E	R	INC.
SUPERSTRUCTURE BARS (EPOXY COATED STEEL REINFORCEMENT)												
S401	ECSR	2,870	30'-0"	57,515	STR							
S402	ECSR	1 SER. OF 64	9'-1" TO 33'-7"	907	STR							0'-4 5⁄8"
S403	ECSR	1 SER. OF 64	5'-9" TO 30'-2"	765	STR							0'-4 5⁄8"
S404	ECSR	5,076	8'-10"	29,952	16	8'-4"						
S405	ECSR	2,542	4'-8"	7,924	2	1'-0"	9"	3'-1"				
S406	NOT USED											
S407	ECSR	3	9'-1"	18	STR							
S408	ECSR	3	33'-7"	67	STR							
S409	ECSR	3	5'-9"	12	STR							
S410	ECSR	3	30'-2"	60	STR							
S501	ECSR	5,162	30'-0"	161,519	STR							
S502	ECSR	2 SER. OF 64	10'-9" TO 23'-0"	0 2,267 0	STR							0'-2 3⁄8"
S503	ECSR	2 SER. OF 64	9'-4" TO 21'-6"	2,078	STR							0'-2 3⁄8"
S504	ECSR	2,538	30'-7"	80,958	16	30'-0"						
S505	ECSR	2,538	23'-4"	61,766	16	22'-9"						
S506	ECSR	252	29'-8"	7,797	STR							
S507	ECSR	1,008	31'-8"	33,293	STR							
S508	ECSR	2,538	22'-9"	60,222	STR							
S509	NOT USED											
S601	ECSR	1,310	7'-6"	14,757	37	11"	10"	1'-5"	1'-0"	7"		
S602	ECSR	2,142	13'-6"	43,433	35	1'-0"	1'-0"	8"	4'-7"		2"	
S603	NOT USED											
S604	NOT USED											

MARK	MATERIAL TYPE	NUMBER	LENGTH	TOTAL LENGTH	TYPE	DIMENSIONS						
						A	B	C	D	E	R	INC.
BRIDGE RAILING BARS (GLASS FIBER REINFORCED POLYMER REINFORCEMENT - GFRP)												
R401	GFRP	800	30'-0"	24,000	STR							
R402	GFRP	10	21'-5"	214	STR							
R403	GFRP	10	11'-10"	118	STR							
R404	GFRP	456	10'-0"	4,560	STR							
R405	GFRP	8	10'-11"	87	STR							
R406	GFRP	8	14'-9"	118	STR							
R407	GFRP	10	27'-9"	278	STR							
R408	GFRP	10	28'-9"	288	STR							
R409	GFRP	460	10'-6"	4,830	STR							
R410	GFRP	4	15'-6"	62	STR							
R411	GFRP	8	13'-11"	111	STR							

MARK	MATERIAL TYPE	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
						A	B	C	D	E	R	INC.
BRIDGE RAILING BARS (EPOXY COATED STEEL REINFORCEMENT - ECSR)												
R601	ECSR	1,310	7'-0"	13,773	23	6"	3'-3"	3'-3"				
			TOTAL = 13,773									

MARK	MATERIAL TYPE	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
						A	B	C	D	E	R	INC.
MEDIAN BARRIER TRANSITION BARS (EPOXY COATED STEEL REINFORCEMENT - ECSR)												
		2	8'-7"			1'-9"			2"			
MB401	ECSR	SER. OF 15	TO 9'-2"	178	15	TO 1'-11"	1'-2"	8"	TO 6"	1'-8"		0'-0 ½"
MB402	ECSR	150	2'-9"	276	11	2"	2'-3"	7"				
MB403	ECSR	10	5'-5"	593	20	2'-5"	5"	7"	5"	2'-5"		0'-0 7⁄8"
		SER. OF 15	TO 6'-5"			TO 3'-0"	TO 8"	TO 4"	TO 8"	TO 3'-0"		
MB404	ECSR	30	14'-10"	297	34	1'-0"	2'-5"	1'-0"	4'-7"		4"	
MB405	ECSR	8	5'-3"	434	15	0"	1'-2"	8"	2"	1'-8"		0'-0 ¼"
		SER. OF 15	TO 5'-7"						TO 6"			
MB406	ECSR	108	11'-5"	824	34	1'-0"	0"	0"	4'-7"		4"	
MB501	ECSR	129	13'-8"	1,839	STR							
MB502	ECSR	10	13'-2"	137	STR							
MB503	ECSR	10	13'-4"	139	STR							
MB504	ECSR	4	13'-6"	56	STR							
MB505	ECSR	5	11'-8"	61	STR							
MB506	ECSR	5	12'-8"	66	STR							
MB507	ECSR	5	12'-4"	64	STR							
MB508	ECSR	2	13'-0"	27	STR							
MB509	ECSR	2	12'-0"	25	STR							
MB510	ECSR	2	14'-0"	29	STR							
MB511	ECSR	2	12'-8"	26	STR							
MB512	ECSR	7	10'-5"	76	STR							
MB513	ECSR	5	12'-9"	66	STR							
MB514	ECSR	5	18'-4"	96	STR							
MB515	ECSR	5	13'-10"	72	STR							
MB516	ECSR	2	10'-9"	22	STR							
MB517	ECSR	2	13'-1"	27	STR							
MB518	ECSR	2	18'-8"	39	STR							
MB519	ECSR	2	14'-2"	30	STR							
MB520	ECSR	7	10'-6"	77	STR							
MB521	ECSR	5	10'-1"	53	STR							
MB522	ECSR	5	10'-2"	53	STR							
MB523	ECSR	7	11'-0"	80	STR							
MB524	ECSR	2	10'-10"	23	STR							
MB525	ECSR	2	11'-4"	24	STR							
MB526	ECSR	5	10'-4"	54	STR							
MB527	ECSR	7	10'-8"	78	STR							
MB528	ECSR	5	11'-3"	59	STR							
MB529	ECSR	5	11'-5"	60	STR							
MB530	ECSR	2	11'-7"	24	STR							
MB531	ECSR	2	11'-9"	25	STR							

R4 01-21-2026, CLARIFICATION

R4 01-21-2026, CLARIFICATION

LEGEND:

▼ THE WEIGHT OF REINFORCING STEEL FOR MEDIAN BARRIER TRANSITIONS IS SHOWN FOR INFORMATION ONLY AND SHALL BE INCLUDED FOR PAYMENT WITH ITEM 622 - BARRIER, MISC.: MEDIAN BARRIER TRANSITIONS. SEE SHEETS P.372, P.374, AND P.376 FOR LOCATIONS OF THIS REINFORCEMENT.

NOTES:

1. FOR BAR TYPES, SEE SHEET 62/64.
2. FOR NOTES, SEE SHEET 64/64.

SFN	5006872
DESIGN AGENCY	
	
DESIGNER JSE	CHECKER SJR
REVIEWER WER 05/30/25	
PROJECT ID 121474	
SUBSET 63	TOTAL 64
SHEET P.549	TOTAL 655