

ITEM 614 - MAINTAINING TRAFFIC

CONSTRUCTION OPERATIONS SHALL NOT BEGIN UNTIL ALL TRAFFIC CONTROL IS IN PLACE AND APPROVED BY ODOT PERSONNEL. THE PROJECT ENGINEER SHALL APPROVE ALL TEMPORARY TRAFFIC CONTROL DEVICES FOR CONDITION AND LOCATION BEFORE THE CONTRACTOR WILL BE ALLOWED TO BEGIN WORK. IF THE CONTRACTOR DOES NOT COMPLY WITH THE STANDARDS, HIS PERMIT SHALL BE REVOKED AND ALL WORK SHALL BE TERMINATED.

ALL SIGNS, BARRACADES, SIGN SUPPORTS, DRUMS, FLAGGERS, WORK ZONE TRAFFIC SIGNALS AND INCIDENTALS FOR TRAFFIC CONTROL SHALL BE FURNISHED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR IN CONFORMANCE WITH THE MOST RECENT REVISIONS, CURRENT EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCD). ALL SIGNS USED FOR THE MAINTENANCE OF TRAFFIC SHALL BE NEW OR LIKE NEW CONDITION SUBJECT TO THE APPROVAL OF THE ENGINEER. DEVICES USED TO MAINTAIN TRAFFIC SHALL BE REMOVED IMMEDIATELY AFTER THE TERMINATION OF SAID WORK. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC.

FOR WORK WHICH IS CONFINED TO THE SHOULDER, TRAFFIC CONTROL SHALL CONFORM TO FIGURES TA-1, TA-3, TA-4, AND TA-6 OF THE OMUTCD AND SCD MT-95.45. IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS AND PROVISIONS OF THE OMUTCD AND FAILURE RESULTS IN A CONDITION AT THE WORK SITE WHICH IS UNSAFE FOR TRAFFIC, THE ENGINEER HAS THE AUTHORITY TO SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 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 SEPERATELY ITEMIZED IN THE PLAN.

NOTIFICATION OF CONSTRUCTION INITIATION

AT LEAST FOURTEEN DAYS PRIOR TO STARTING INITIAL CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL ADVISE THE DISTRICT OFFICE OF COMMUNICATIONS VIA EMAIL AT D06.PIO@DOT.OHIO.GOV, THE DISTRICT WORK ZONE TRAFFIC MANAGER VIA EMAIL AT D06.MOT@DOT.OHIO.GOV AND THE CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION VIA EMAIL AT HAULING.PERMITS@DOT.OHIO.GOV OF THE ANTICIPATED START DATE OF ANY CONSTRUCTION ACTIVITIES INCLUDING BUT NOT LIMITED TO THE PLACING OF WORK ZONE SIGNS. THE NOTIFICATION SHALL ALSO INCLUDE THE PROJECT NUMBER, PID, NAME AND PHONE NUMBER OF THE CONTRACTOR, A POINT OF CONTACT AND THE ANTICIPATED IMPACT ON TRAFFIC. THE CONTRACTOR WILL IMMEDIATELY INFORM THE DISTRICT OFFICE OF COMMUNICATIONS AND THE DISTRICT WORK ZONE TRAFFIC MANAGER OF ANY AND ALL DELAYS AND/OR CHANGES REGARDING THE CONSTRUCTION INITIATION DATE.

LANE CLOSURE/REDUCTION REQUIRED

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

PRE-MAINTENANCE OF TRAFFIC MEETING

A PRE-MAINTENANCE OF TRAFFIC MEETING SHALL BE HELD (MINIMUM OF 10 WORK DAYS) PRIOR TO WORK BEGINNING OR ANY CHANGE OF PHASING. THIS MEETING SHALL INCLUDE THE DISTRICT WORK ZONE TRAFFIC MANAGER (d06.mot@dot.ohio.gov) AS WELL AS THE CONTRACTOR AND ANY OF HIS SUB-CONTRACTORS INVOLVED WITH TEMPORARY TRAFFIC CONTROL. FOR COLUMBUS SECTIONS OF ROADWAY, ALSO INCLUDE THE TEMPORARY TRAFFIC CONTROL COORDINATOR (614-645-6269 OR 614-645-5845) FROM THE CITY OF COLUMBUS TRANSPORTATION DIVISION.

WEEKLY MAINTENANCE OF TRAFFIC MEETING

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

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

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

NOTICE OF CLOSURE SIGN

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

NOTIFICATION OF CLOSURE SIGN TIME TABLE		
ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP AND ROAD CLOSURES	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS AND < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
	<= 12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

DUST CONTROL

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

ITEM 616 - WATER 1007 M. GAL.

ITEM 614 MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND THE SAME NUMBER OF LANES AS WERE AVAILABLE AT THE START OF THE PROJECT SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

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)	6:00AM 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).

NOTIFICATION OF TRAFFIC RESTRICTIONS

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 SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). 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	NOTIFICATION DUE TO PERMITS AND PIO
RAMP AND ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS AND < 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 UNFORSEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

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. DRUMS SHALL ALSO BE DOUBLE BALLASTED.

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

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 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 50 EACH HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614 - REPLACEMENT DRUM

DRUMS 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 DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 300 EACH HAS BEEN CARRIED TO THE GENERAL SUMMARY.

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.

MAINTENANCE OF TRAFFIC FOR MARKING PAVEMENT REPAIRS

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

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

ITEM 411 - STABILIZED CRUSHED AGGREGATE, AS PER PLAN
ITEM 411 SHALL BE INSTALLED AT A DEPTH OF 6 INCHES AND 2 FEET IN WIDTH WHEREVER TRAFFIC WILL BE WITHIN 2 FEET OF THE EDGE OF AN EXISTING SHOULDER DURING CONSTRUCTION.
ALL COSTS ASSOCIATED WITH PREPARING THE SUBGRADE FOR INSTALLATION AND WITH THE INSTALLATION OF THE ITEM 411 SHALL BE INCIDENTAL TO ITEM 411 - STABILIZED CRUSHED AGGREGATE, AS PER PLAN.

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ITEM	EXTENSION	TOTAL FROM SHEET					TOTAL	UNIT	DESCRIPTION	SEE SHEET
		55	56	57	58	59				
202	35100			68			68	FT	PIPE REMOVED, 24" AND UNDER	
411	10001						477	CY	STABILIZED CRUSHED AGGREGATE, AS PER PLAN	46
611	04400			68			68	FT	12" CONDUIT, TYPE B	
614	11000						LS		MAINTAINING TRAFFIC	46
614	11110						1000	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	50
614	11630						41560	FT	INCREASED BARRIER DELINEATION	47
614	12380						33	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	51
614	12420						LS		DETOUR SIGNING	
614	12484						42	EACH	WORK ZONE INCREASED PENALTIES SIGN	50
614	12500						50	EACH	REPLACEMENT SIGN	46
614	12600						300	EACH	REPLACEMENT DRUM	46
614	12801						2487	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	47
614	13310						2425	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	47
614	13312						497	EACH	BARRIER REFLECTOR, TYPE 2, ONE-WAY	47
614	13350						1329	EACH	OBJECT MARKER, ONE WAY	47
614	18601						2	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	49
614	20056	0.43	1.93	2.82	4.77	4.77	14.72	MILE	WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	
614	21050	0.81					0.81	MILE	WORK ZONE CENTER LINE, CLASS I, 807 PAINT, DOUBLE SOLID	
614	22056	1.81	3.88	2.10	3.82	3.76	15.37	MILE	WORK ZONE, EDGE LINE, CLASS I, 6", 807 PAINT, WHITE	
614	22056	1.08	3.98	1.88	3.96	3.19	14.09	MILE	WORK ZONE, EDGE LINE, CLASS I, 6", 807 PAINT, YELLOW	
614	23110	4898	16160	8727	9886	6846	46517	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	
614	24102	907			2290	12110	15307	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT	
614	25200	397	294	399	126		1216	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	
614	98000				0.05	3.10	3.15	MILE	WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, CLASS I, 5" 642 PAINT	48
614	98000	0.94			0.09		1.03	MILE	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, CLASS I, 5", 642 PAINT, WHITE	48
614	98000	0.02					0.02	MILE	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, CLASS I, 5", 740.06, TYPE I, YELLOW	48
614	98100				394		394	FT	WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, CLASS I, 10" PAINT	48
614	98100	69					69	FT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 5", 740.06, TYPE I	48
614	98100	1659	1703	977	1308		5647	FT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, CLASS I, 12" 807 PAINT	47
614	98100	12					12	FT	WORK ZONE PAVEMENT MARKING, MISC.: STOP LINE, 20", 642 PAINT	48
615	10000						LS		ROADS FOR MAINTAINING TRAFFIC	
615	25000	1707	565	1926	91		4289	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
616	10000						1001	MGAL	WATER	
622	41050						2	EACH	PORTABLE BARRIER, "Y" CONNECTOR	
622	41100	4050	8900	8640	14490	5480	41560	FT	PORTABLE BARRIER, UNANCHORED	
808	18700						120	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	49
TOTALS CARRIED TO GENERAL SUMMARY, SHEET 210										

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MAINTENANCE OF TRAFFIC SUBSUMMARY

FRA-70-22.61

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REF NO.	SHEET NO.	LOCATION	STATION TO STATION		614		614		614		614		614		614		614		614		614		615		622	
			TO	TO	614	614	614	614	614	614	614	614	614	614	614	614	614	614	614	614	614	614	614	615	615	622
						WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	WORK ZONE CENTER LINE, CLASS I, 807 PAINT, DOUBLE SOLID	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	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, CLASS I, 12" 807 PAINT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, CLASS I, 5" 642 PAINT	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, CLASS I, 5", 642 PAINT, WHITE	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, CLASS I, 5", 740.06, TYPE I, YELLOW	WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, CLASS I, 10" PAINT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 5", 740.06, TYPE I	WORK ZONE PAVEMENT MARKING, MISC.: STOP LINE, 20", 642 PAINT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	PORTABLE BARRIER, UNANCHORED					
						MILE	MILE	MILE	MILE	FT	FT	FT	FT	MILE	MILE	MILE	FT	FT	FT	SY	FT					
PHASE 1																										
ELW-1	68	TO	81	RAMP	2055+25.00	TO	1083+09.00																			
PB-1	70	TO	70	RAMP	100+31.00	TO	103+31.00																			
ELW-2	70	TO	72	RAMP	1016+93.00	TO	104+31.00																			
PB-1	70	TO	70	IR-70	531+49.00	TO	534+89.00																			
CH-1	72	TO	73	IR-270	1028+17.00	TO	1039+89.00																			
ELY-1	73	TO	75	IR-270	1031+17.00	TO	1069+97.00																			
ELW-3	73	TO	73	IR-270	1031+17.00	TO	1035+92.00																			
CH-2	73	TO	74	IR-270	1035+92.00	TO	1046+00.00																			
CV-1	73	TO	73	IR-270	1035+92.00	TO	1043+09.00																			
CH-3	73	TO	73	IR-270	1035+94.00	TO	1043+09.00																			
ELY-2	73	TO	81	RAMP	1035+94.00	TO	2039+08.00																			
PB-3	73	TO	81	RAMP	2035+10.00	TO	1059+29.00																			
LL-1	73	TO	75	IR-270	1039+89.00	TO	1062+75.00	0.43																		
DL-1	74	TO	75	IR-270	1046+00.00	TO	1062+75.00																			
CH-4	75	TO	76	IR-270	1062+75.00	TO	1073+98.00																			
CH-5	75	TO	76	IR-270	1062+75.00	TO	1073+98.00																			
DL6-1	76	TO	77	IR-270	1077+05.00	TO	1086+12.00																			
TP-1	80	TO	81	RAMP A1	2027+27.55	TO	2037+22.93																			
ELW-4	82	TO	83	SCARBOROUGH BLVD	30+29.07	TO	36+00.00																			
CL-1	82	TO	87	SCARBOROUGH BLVD	30+29.07	TO	55+67.00																			
ELW-5	82	TO	87	SCARBOROUGH BLVD	30+29.07	TO	55+67.00																			
TP-2	82	TO	83	SCARBOROUGH BLVD	30+29.07	TO	36+00.00																			
DL6-1	87	TO	87	SCARBOROUGH BLVD	55+67.00	TO	56+33.00																			
ELY-3	87	TO	87	SCARBOROUGH BLVD	56+33.00	TO	57+16.00																			
TP-3	87	TO	87	SCARBOROUGH BLVD	56+33.00	TO	57+16.00																			
PHASE 1A																										
ELW-6	90	TO	91	SCARBOROUGH BLVD	29+68.00	TO	37+00.00																			
CL-2	90	TO	93	SCARBOROUGH BLVD	29+68.00	TO																				
ELW-7	91	TO	93	SCARBOROUGH BLVD	39+36.00	TO	47+70.00																			
SL-1	93	TO	93	SCARBOROUGH BLVD	46+44.00	TO	46+44.00																			
ELW-8	93	TO	93	SCARBOROUGH BLVD	55+59.00	TO	56+66.00																			
TOTALS CARRIED TO SUMMARY SHEET						54		0.43	0.81	1.81	1.08	4898	907	1659	397		0.94	0.02		69	12	1707	4050			

MAINTENANCE OF TRAFFIC PHASE 1 SUBSUMMARY

FRA -70-22.61

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REF NO.	SHEET NO.			LOCATION	STATION TO STATION	614 6" 807 PAINT	614 1, 807 PAINT, DOUBLE SOLID	614 6", 807 PAINT, WHITE	614 6", 807 PAINT, YELLOW	614 WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	614 WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT	614 WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, CLASS I, 12" 807 PAINT	614 WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	614 WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, CLASS I, 5" 642 PAINT	614 WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, CLASS I, 5", 5",740.06, TYPE I, YELLOW	614 WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, CLASS I, 10" PAINT	614 WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 5", 740.06, TYPE I	614 WORK ZONE PAVEMENT MARKING, MISC.: STOP LINE, 20", 642 PAINT	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	622 PORTABLE BARRIER, UNANCHORED	
	TO		TO			MILE	MILE	MILE	MILE	FT	FT	FT	FT	MILE	MILE	MILE	FT	FT	FT	SY	FT
PHASE 2																					
ELY-1	101	TO	103	IR-70	527+32.00 TO 551+66.00				0.47	3033											
CH-1	101	TO	103	IR-70	524+32.00 TO 554+66.00		0.39														
ELW-1	101	TO	102	IR-70	527+32.00 TO 547+66.00																
PB-1	101	TO	101	IR-70	531+10.00 TO 536+00.00																490
PB-2	101	TO	102	IR-70	533+17.00 TO 539+06.00																590
ELY-2	101	TO	102	IR-70	528+03.00 TO 541+31.00			0.26													
CH-2	101	TO	102	IR-70	525+43.00 TO 544+30.00					1926											
CH-3	101	TO	102	IR-70	527+43.00 TO 544+30.00					1678											
ELW-2	101	TO	102	IR-70	528+03.00 TO 541+31.00		0.26														
PB-3	101	TO	102	IR-70	531+94.00 TO 537+00.00																520
CH-4	102	TO	103	IR-70	547+66.00 TO 551+66.00					400											
ELY-3	108	TO	111	IR-270	968+55.00 TO 999+57.00			0.59													
LL-1	108	TO	111	IR-270	968+55.00 TO 999+57.00	0.59															
LL-2	108	TO	111	IR-270	968+55.00 TO 999+57.00	0.59															
ELW-3	108	TO	111	IR-270	968+55.00 TO 999+57.00		0.59														
PB-4	109	TO	110	IR-270	977+71.00 TO 983+25.00																560
TP-1	109	TO	111	IT-270	979+91.20 TO 998+15.55														565		
PB-5	110	TO	110	IR-270	983+15.00 TO 989+75.00																660
PB-6	110	TO	111	IR-270	990+95.00 TO 997+57.00																670
CH-5	112	TO	114	IR-270	1016+71.00 TO 1031+91.00					1513											
ELY-4	112	TO	114	IR-270	1015+84.00 TO 1037+56.00			0.42													
ELW-4	113	TO	114	IR-270	1024+35.00 TO 1037+56.00		0.5														
CH-6	113	TO	114	IR-270	1021+27.00 TO 1041+51.00					1992											
ELY-5	113	TO	114	IR-270	1024+35.00 TO 1072+98.00			0.92													480
PB-7	113	TO	114	IR-270	1028+94.00 TO 1033+72.00																650
PB-8	113	TO	114	IR-270	1029+67.00 TO 1036+16.00																
ELW-5	113	TO	115	IR-270	1020+57.00 TO 1051+76.00		0.59														
ELY-6	113	TO	115	IR-270	1020+57.00 TO 1051+76.00			0.59													
ELY-7	113	TO	114	IR-270	1023+57.00 TO 1036+28.00			0.25													
CH-7	113	TO	114	IR-270	1020+58.00 TO 1039+28.00					1877											
ELW-6	113	TO	114	IR-270	1023+57.00 TO 1036+28.00		0.25														
PB-9	113	TO	114	IR-270	1026+44.00 TO 1031+10.00																460
PB-10	113	TO	114	IR-270	1025+57.00 TO 1031+14.00																550
ELW-7	113	TO	114	IR-270	1026+35.00 TO 1033+72.00		0.21														
PB-11	114	TO	114	IR-270	1031+52.00 TO 1042+37.00																1070
LL-3	114	TO	117	IR-270	1041+51.00 TO 1072+98.00	0.6															
LL-4	114	TO	114	IR-270	1031+91.00 TO 1039+54.00	0.15															
CH-8	114	TO	115	IR-270	1039+54.00 TO 1054+79.00					1520											
ELW-8	114	TO	119	RAMP A2	1083+06.00 TO 2031+78.00		1.09		0.48												
ELY-8	114	TO	119	RAMP A2	1050+90.00 TO 2031+78.00																
PB-12	114	TO	119	RAMP A2	1048+03.00 TO 2031+78.00																2200
CH-9	115	TO	116	IR-270	1050+90.00 TO 1065+00.00					1397											
CV-1	115	TO	116	IR-270	1050+90.00 TO 1059+58.00								294								
CH-10	115	TO	116	IR-270	1050+90.00 TO 1059+58.00					824											
DL-1	116	TO	117	IR-270	1065+00.00 TO 1072+98.00						797										
DL6-1	117	TO	118	IR-270	1077+06.00 TO 1086+12.00						906										
TOTALS CARRIED TO SUMMARY SHEET						54	1.93	3.88	3.98	16160		1703	294							565	8900

CALCULATED BY T
 BPT
 CHECKED BY EMW
MAINTENANCE OF TRAFFIC PHASE 2 SUBSUMMARY
FRA-70-22.61
 56
 1199

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Table with columns: REF NO., SHEET NO., LOCATION, STATION TO STATION, and various material/quantity columns (202, 611, 614, etc.). Rows include items like ELW-1, CH-1, CV-1, etc., with stationing and descriptions.

TOTALS CARRIED TO SUMMARY SHEET

54

68

68

2.82

2.10

1.88

8727

977

399

1926

8640

Summary table with columns: CALCULATED, BPT, CHECKED, EMW, and a large vertical title: MAINTENANCE OF TRAFFIC PHASE 3 SUBSUMMARY. Includes project ID: FRA-70-22.61 and sheet number: 57/1199.

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REF NO.	SHEET NO.			LOCATION	STATION TO STATION		614	614	614	614	614	614	614	614	614	614	614	615	622						
							WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	WORK ZONE CENTER LINE, CLASS I, 807 PAINT, DOUBLE SOLID	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	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, CLASS I, 12" 807 PAINT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, CLASS I, 5" 642 PAINT	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, CLASS I, 5", 740.06, TYPE I, YELLOW	WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, CLASS I, 10" PAINT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 5", 740.06, TYPE I	WORK ZONE PAVEMENT MARKING, MISC.: STOP LINE, 20", 642 PAINT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	PORTABLE BARRIER, UNANCHORED				
PHASE 4							MILE	MILE	MILE	MILE	FT	FT	FT	FT	MILE	MILE	MILE	FT	FT	FT	SY	FT			
ELY-1	159	TO	171	IR-70	494+20.00	TO	644+05.00				2.87														
CH-1	159	TO	160	IR-70	491+24.00	TO	505+97.00						1381												
CH-2	159	TO	160	IR-70	497+20.00	TO	501+99.00					480													
CH-3	159	TO	160	IR-70	497+20.00	TO	499+89.00					269													
CV-1	159	TO	160	IR-70	497+20.00	TO	500+99.00							126											
LL-1	160	TO	170	IR-70	505+97.00	TO	638+15.00	2.53																	
ELW-1	160	TO	163	IR-70	501+99.00	TO	539+37.00			0.71															
PB-1	160	TO	161	IR-70	501+90.00	TO	522+29.00																		
PB-2	160	TO	160	IR-70	501+90.00	TO	505+58.00																2040		
TP-1	160	TO	162	IR-70	501+00.00	TO	523+37.10											91					390		
PB-3	162	TO	162	IR-70	531+59.00	TO	534+88.00																320		
ELY-2	162	TO	174	RAMP	1016+93.00	TO	532+00.00			0.18															
PB-4	162	TO	162	RAMP	527+93.00	TO	531+02.00																320		
LL-2	162	TO	176	RAMP A2	3011+50.00	TO	3033+20.00	0.4																	
CH-4	163	TO	164	IR-70	539+37.00	TO	549+36.00						1000												
CH-5	163	TO	164	RAMP	539+37.00	TO	549+36.00						1001												
ELW-2	163	TO	164	RAMP	539+37.00	TO	557+52.00			0.19															
LL-3	163	TO	176	RAMP C1	3011+50.00	TO	6033+97.00	0.15																	
DL6-1	163	TO	164	RAMP C1	6033+97.00	TO	6039+98.00					815													
ELW-3	163	TO	180	RAMP C1	6033+97.00	TO	8+31.00			0.93															
LL-4	164	TO	170	IR-70	549+36.00	TO	638+15.00	1.69																	
CH-6	164	TO	165	IR-70	557+52.00	TO	569+34.00						1182												
CH-7	164	TO	165	RAMP A2	557+52.00	TO	569+34.00						1182												
DL6-2	164	TO	165	RAMP A2	557+52.00	TO	564+77.00					815													
ELW-4	164	TO	180	RAMP A2	3041+72.00	TO	8599+00.00			0.83															
ELY-3	164	TO	180	RAMP C2	3048+17.00	TO	8+58.00			0.66															
DL-1	165	TO	166	IR-70	569+34.00	TO	582+92.00							1308											
PB-5	165	TO	180	IR-70	570+92.00	TO	8598+19.00																2410		
PB-6	165	TO	180	RAMP C1	6059+55.00	TO	11+96.00																3360		
CH-8	166	TO	167	RAMP G1	582+92.00	TO	590+51.00						760												
CH-9	166	TO	167	RAMP G1	582+92.00	TO	590+51.00						760												
ELW-5	167	TO	167	IR-70	590+51.00	TO	597+89.00			0.14															
ELY-4	167	TO	180	RAMP G1	590+51.00	TO	8599+65.00																		
CH-10	167	TO	167	IR-70	597+89.00	TO	600+14.00			0.13			225												
CH-11	167	TO	167	RAMP G2	597+89.00	TO	600+14.00						226												
DL6-3	167	TO	168	IR-70	600+14.00	TO	506+74.00					660													
ELY-5	167	TO	180	RAMP G2	1107+76.00	TO	1113+84.00			0.12															
ELW-6	167	TO	180	RAMP G2	1107+76.00	TO	648+05.00			1.02															
PB-7	167	TO	180	RAMP G2	1106+16.00	TO	612+84.00																2070		
PB-8	168	TO	169	IR-70	612+74.00	TO	619+34.00																660		
PB-9	169	TO	171	IR-70	620+74.00	TO	641+05.00																2060		
CH-12	170	TO	171	IR-70	638+15.00	TO	648+05.00						710												
CH-13	170	TO	171	IR-70	638+15.00	TO	648+05.00						710												
PB-11	174	TO	174	IR-270 SB	1013+74.00	TO	1017+56.00																390		
PB-10	179	TO	180	BRICE RD	10+04.00	TO	14+63.00																470		
ELW-7	179	TO	180	BRICE RD	9+28.00	TO	13+85.00									0.09									
LL-5	179	TO	180	BRICE RD	13+13.00	TO	10+53.00							0.05											
CH-14	180	TO	180	BRICE RD	6+96.00	TO	9+28.00																232		
CH-15	180	TO	180	BRICE RD	6+96.00	TO	8+58.00																162		
TOTALS CARRIED TO SUMMARY SHEET							54	4.77		3.82	3.96	9886	2290	1308	126	0.05	0.09			394				91	14490

CALCULATED	BPT
	CHECKED
EMW	
MAINTENANCE OF TRAFFIC PHASE 4 SUBSUMMARY	
FRA-70-22.61	
58	
1199	

- EDGE LINE, WHITE*
- EDGE LINE, YELLOW*
- LANE LINE*
- CHANNELIZING LINE**
- DOTTED LINE, 12"
- DOTTED LINE, 6"
- CHEVRON LINE
- CENTERLINE, DOUBLE SOLID
- STOP LINE
- LANE ARROW
- PORTABLE BARRIER, 32"
- DRUMS (SPACING 80' TANGENTS & 40' TAPERS UNLESS STATED)
SCARBOROUGH (SPACING 40' TANGENTS & 20' TAPERS UNLESS STATED)
- IMPACT ATTENUATOR (UNIDIRECTIONAL UNLESS STATED)
- PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B

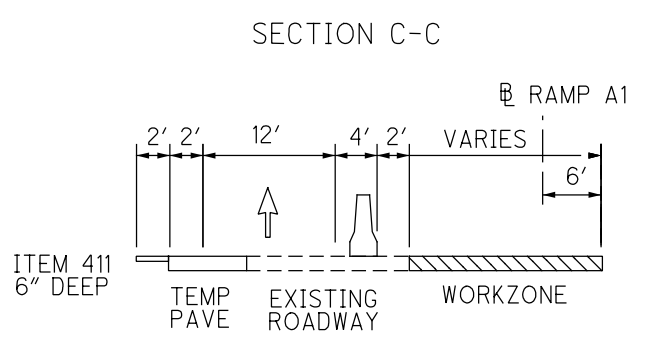
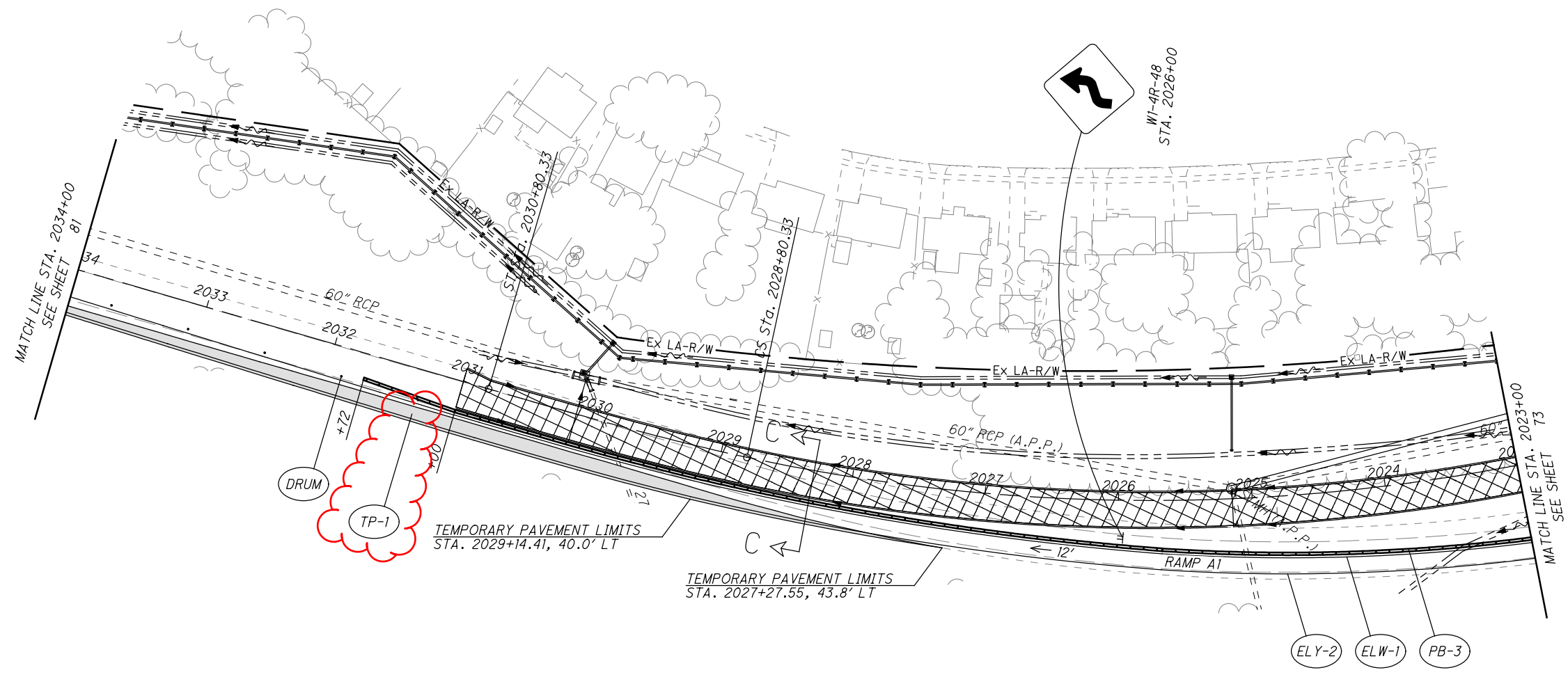


ITEM 644 - THERMOPLASTIC ON ALL ASPHALT SURFACE
 ITEM 646 - EPOXY ON ALL CONCRETE SURFACE

* 5" MARKINGS SHALL BE USED ON LOCAL ROADS
 ** 10" MARKING SHALL BE USED ON LOCAL ROADS

- TRAFFIC FLOW ARROW
- PROPOSED SIGN
- EXISTING SIGN REMOVED
- EXISTING SIGN, TO REMAIN
- EXISTING SINGLE POST SIGN SUPPORT
- PROPOSED SINGLE POST SIGN SUPPORT
- EXISTING TWO POST SIGN SUPPORT
- PROPOSED TWO POST SIGN SUPPORT
- EXISTING TRUSS SIGN SUPPORT
- EXISTING CANTILEVER SIGN SUPPORT
- FLASHING ARROW BOARD
- TYPE 3 BARRICADE
- WORK AREA
- TEMPORARY PAVEMENT

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ELY-2
ELW-1
PB-3

MI-4R-48
STA. 2026+00

MATCH LINE STA. 2034+00
SEE SHEET 81

MATCH LINE STA. 2023+00
SEE SHEET 73

CALCULATED
BPT
CHECKED
EMW

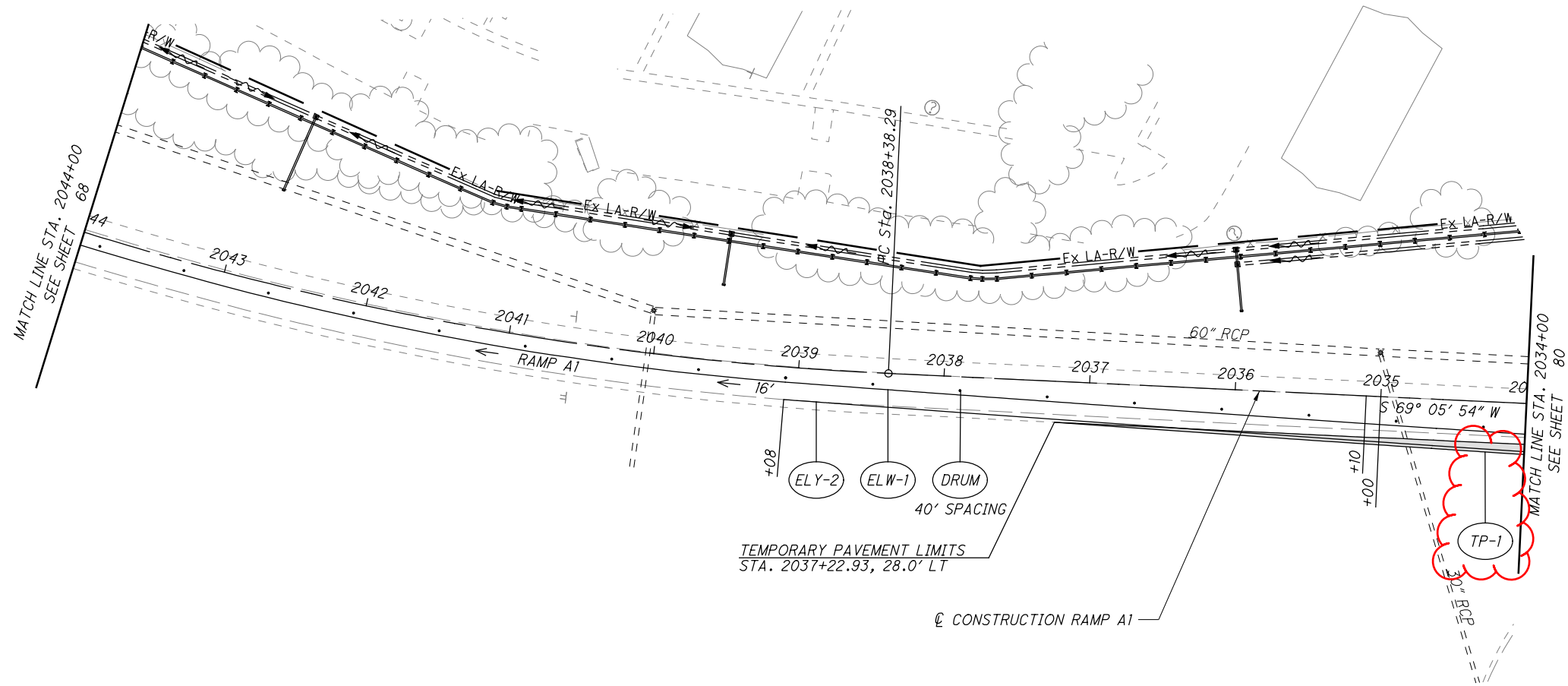
0 50 100
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
STA. 2023+00 TO STA. 2034+00

FRA-70-22.61

NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66 .

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NOTES:
 1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66 .

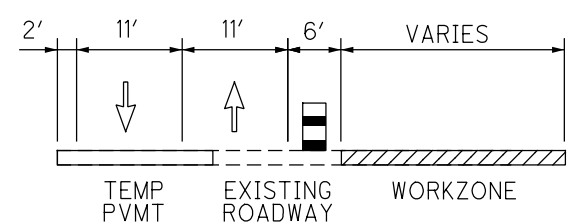
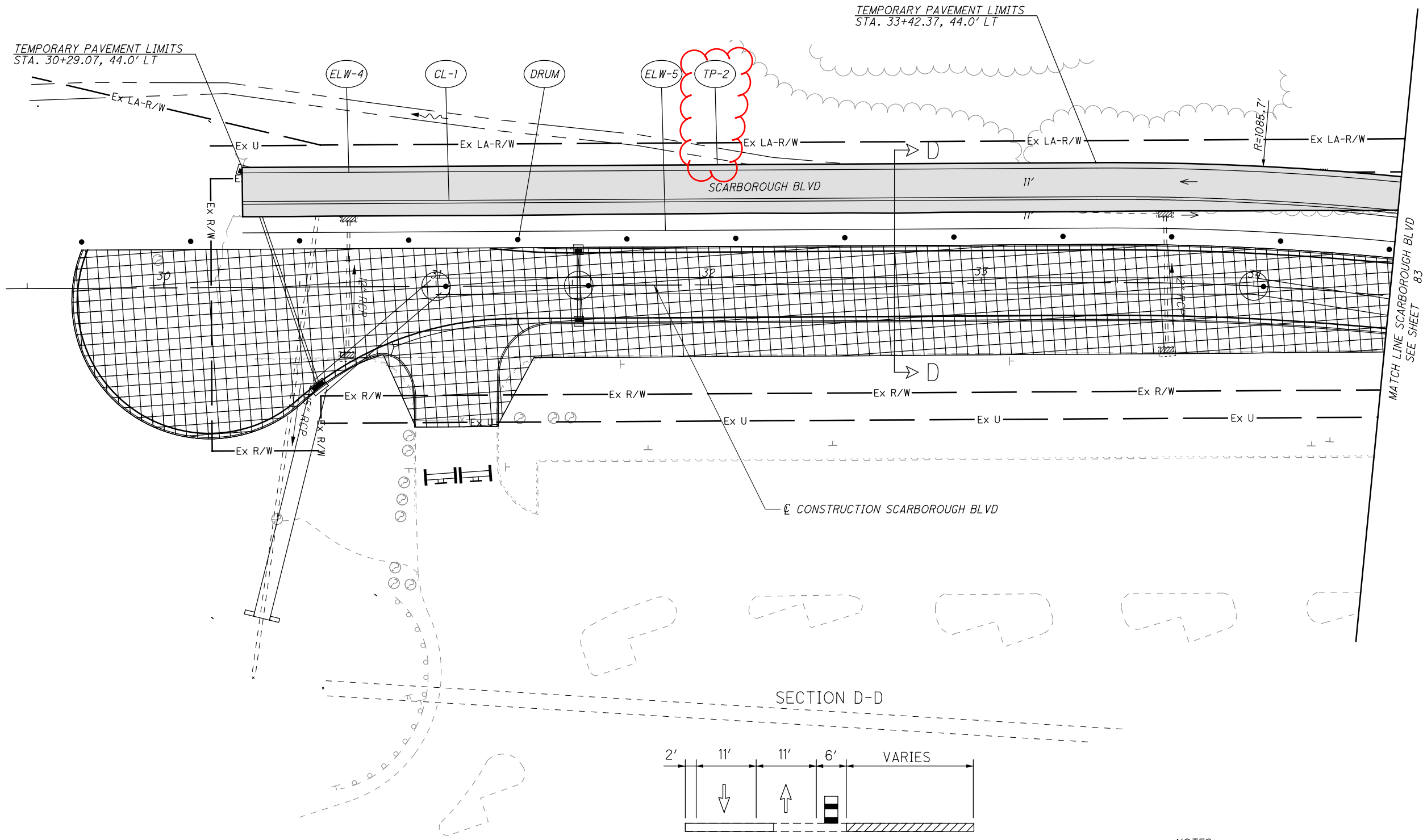


CALCULATED	
BPT	
CHECKED	EMW

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
STA. 2034+00 TO END WORK

FRA-70-22.61

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NOTES:
 1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66.

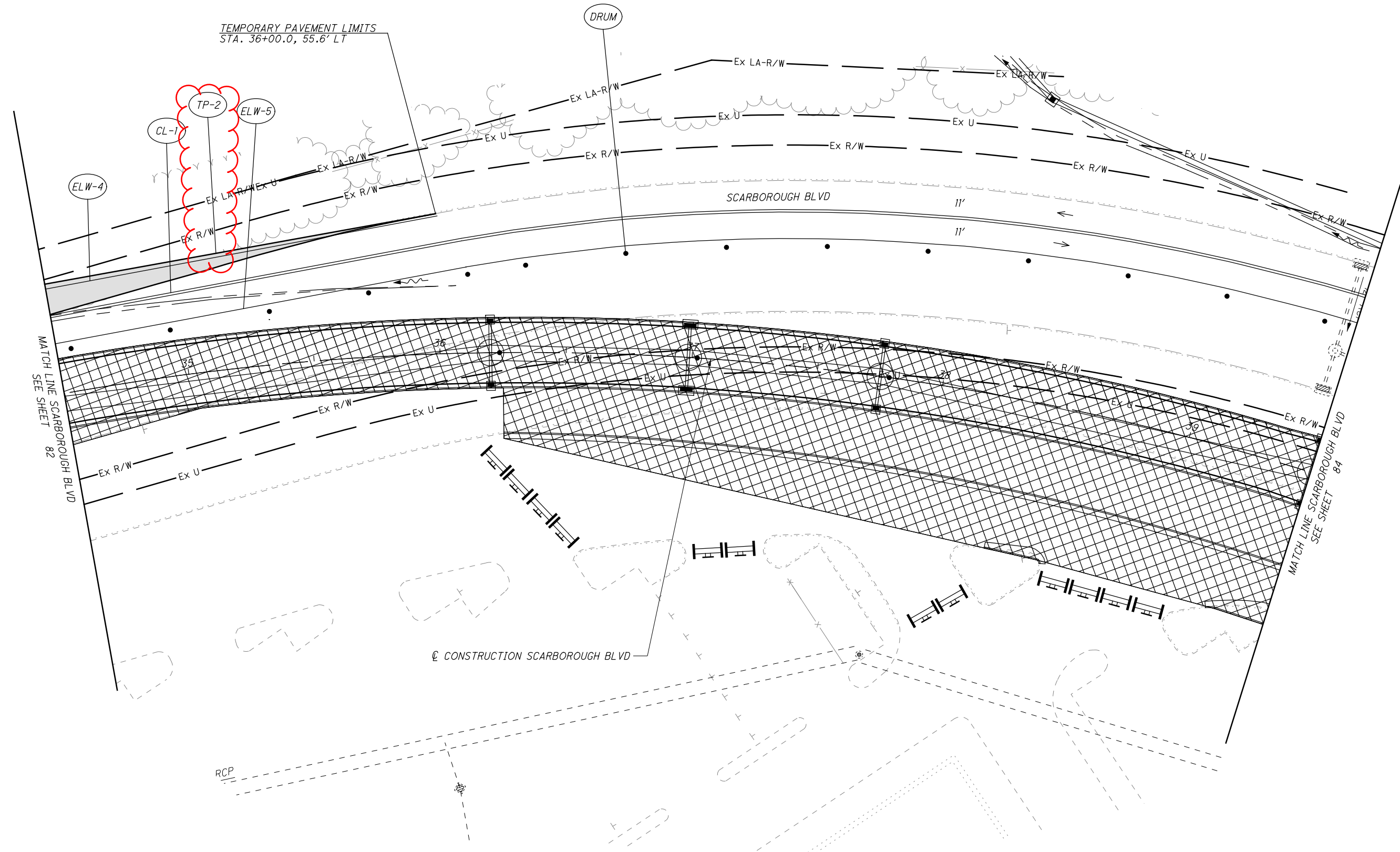
CALCULATED
 BPT
 CHECKED
 EMW

0 20 40
 HORIZONTAL
 SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN - PHASE 1
 BEGIN WORK TO STA. 34+50**

FRA-70-22.61

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CALCULATED
BPT
CHECKED
EMW

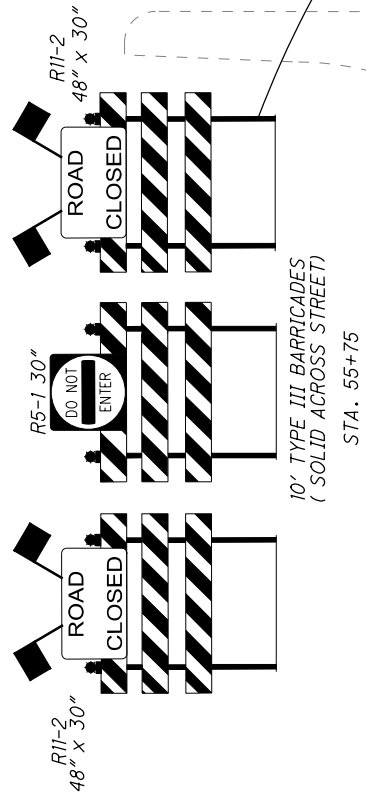
0 20 40
10
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 1
STA. 34+50 TO STA. 39+50

FRA-70-22.61

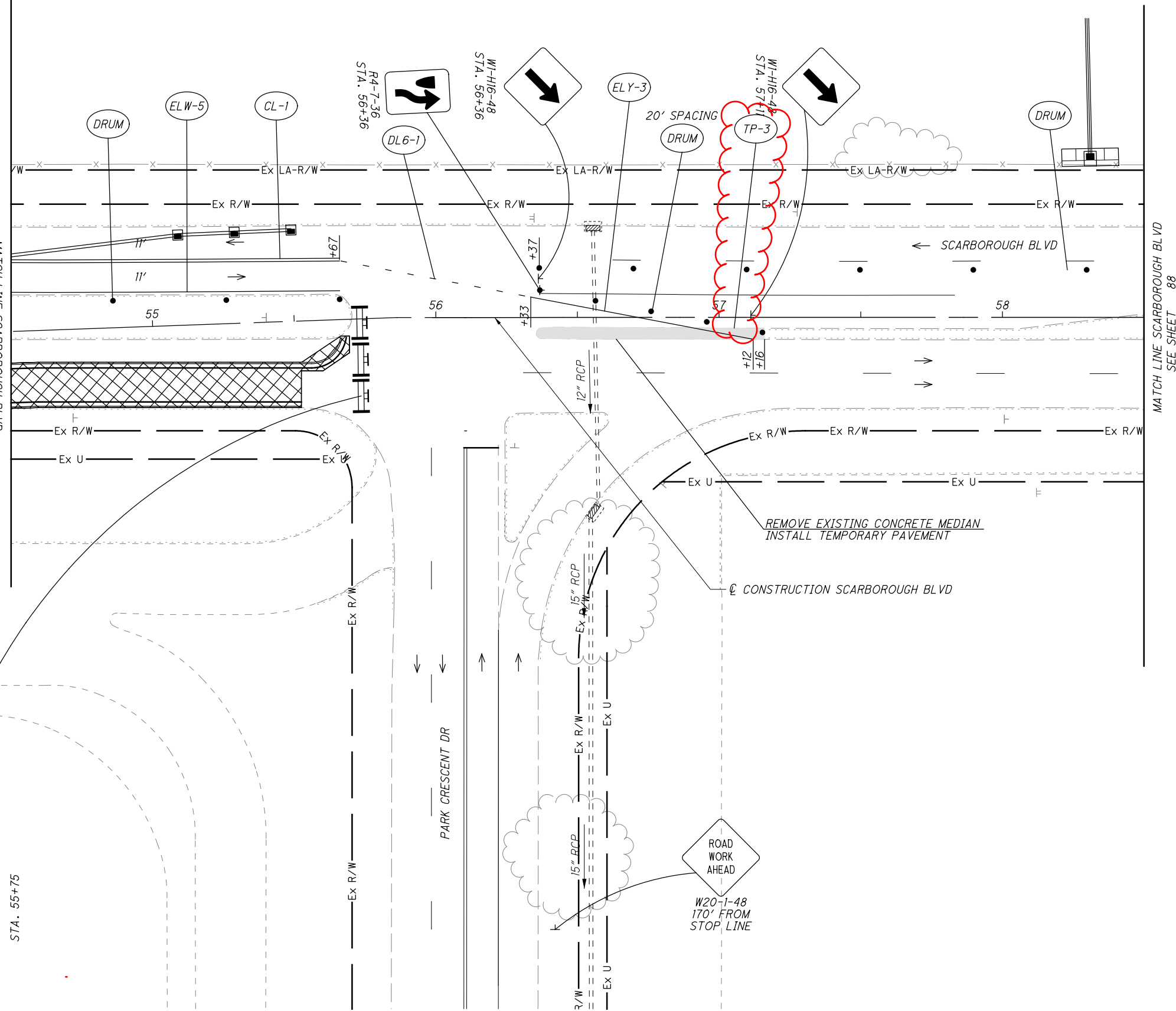
NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66.

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10' TYPE III BARRICADES
(SOLID ACROSS STREET)
STA. 55+75

MATCH LINE SCARBOROUGH BLVD
SEE SHEET 86



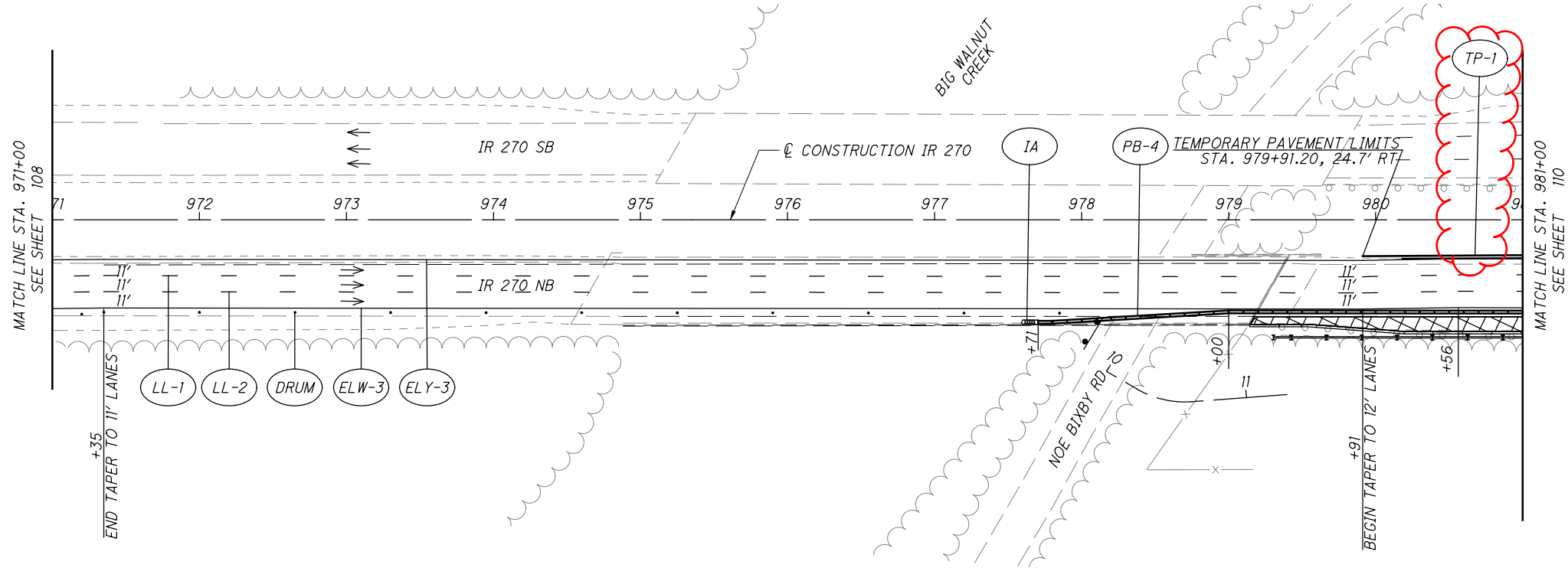
MATCH LINE SCARBOROUGH BLVD
SEE SHEET 88

NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66.

CALCULATED
BPT
CHECKED
EMW

MAINTENANCE OF TRAFFIC PLAN - PHASE 1 STA. 54+50 TO STA. 58+50

FRA-70-22.61



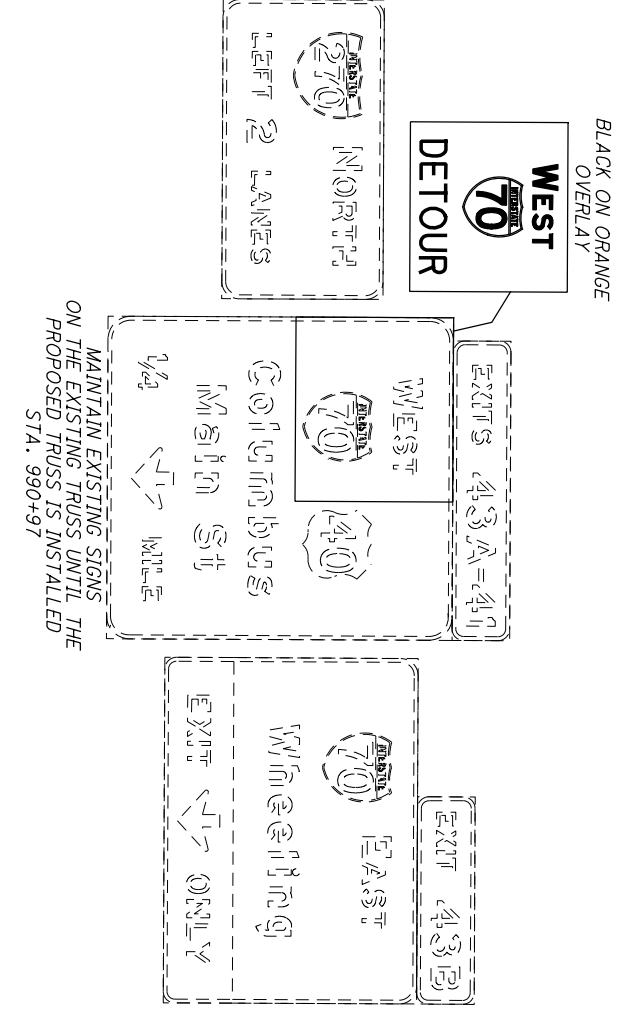
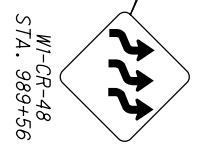
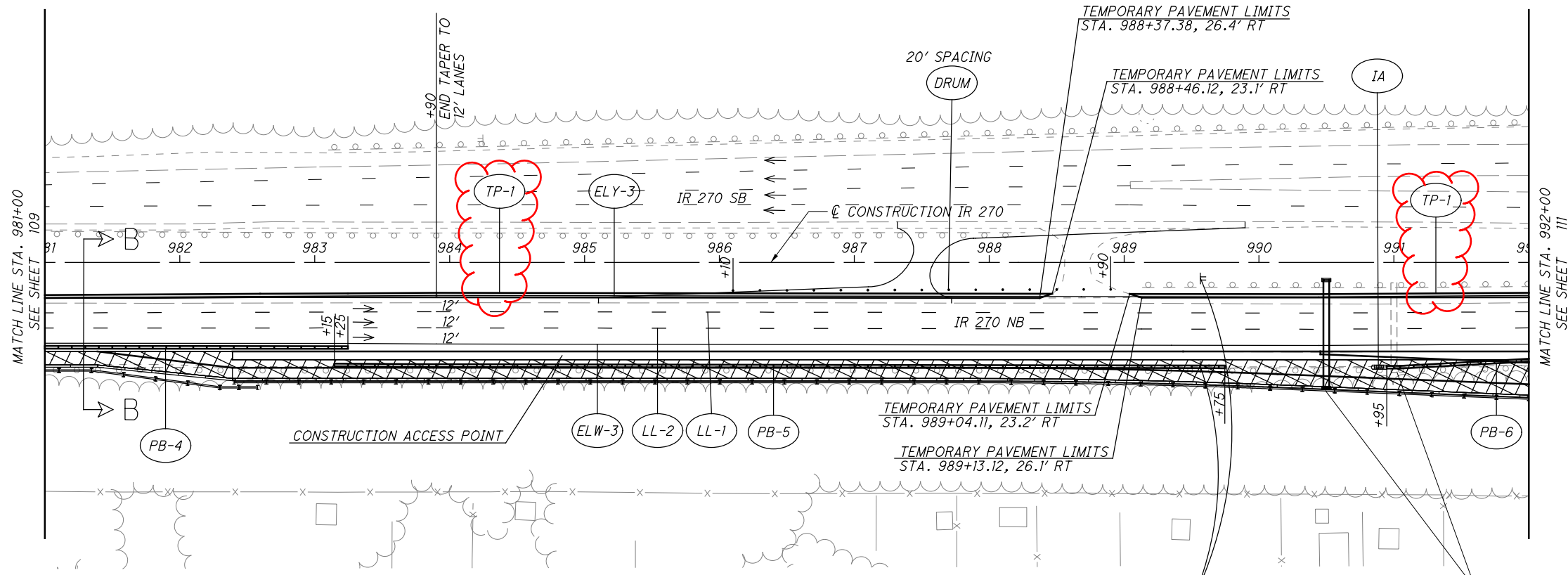
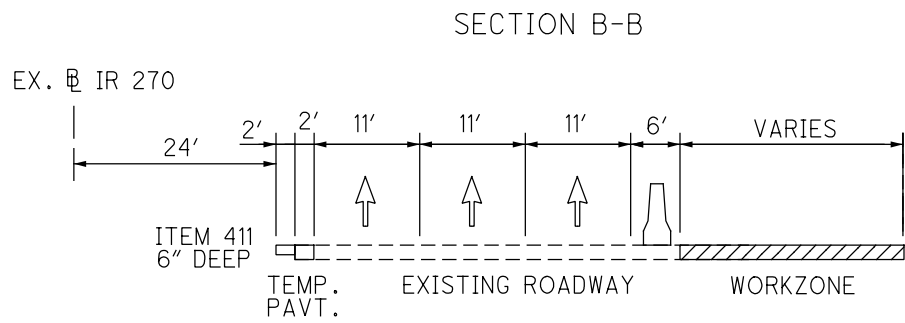
NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66 .

CALCULATED	BPT
CHECKED	EMW

0 50 100
HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
STA. 971+00 TO STA. 981+00

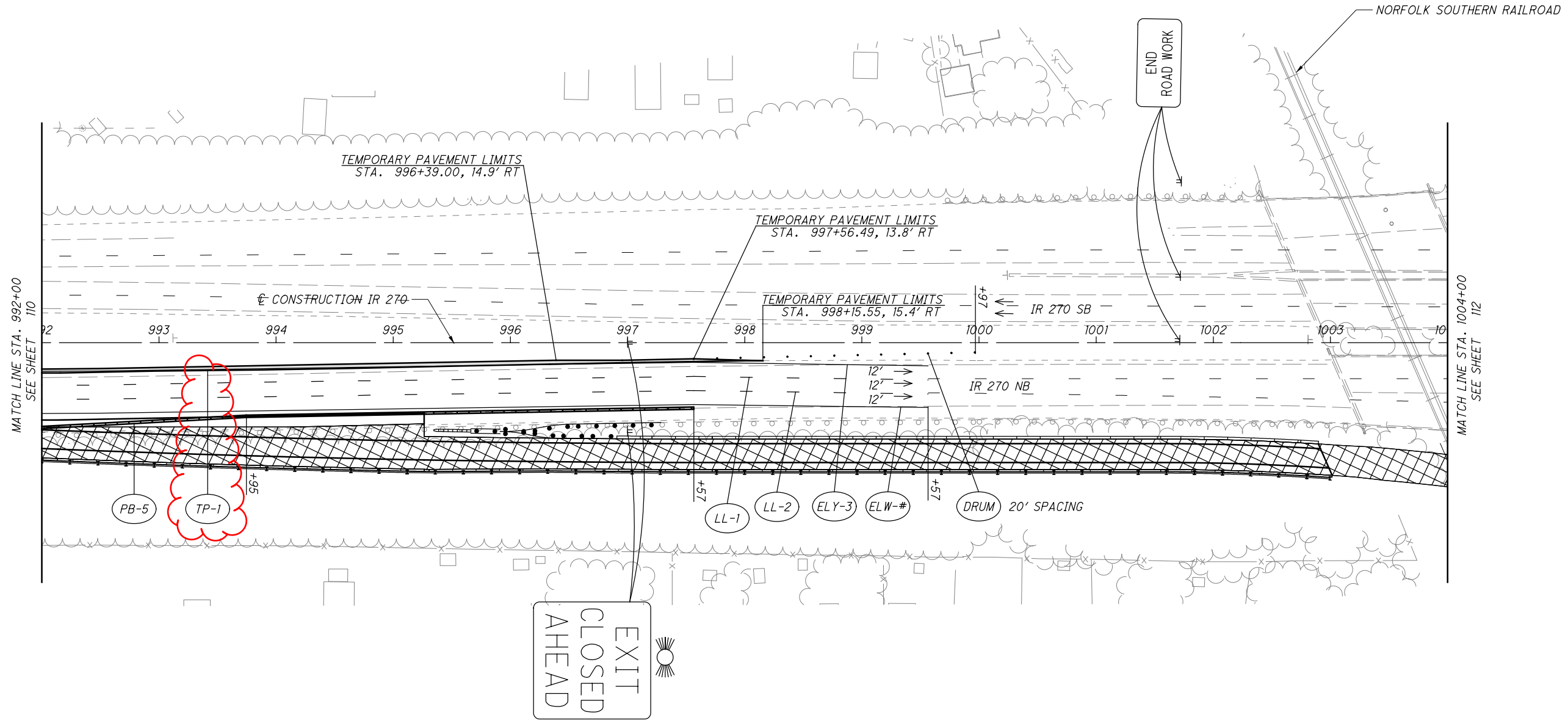
FRA-70-22.61



NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66 .



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CALCULATED BPT CHECKED EMW

0 50 100
HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 2
STA. 992+00 TO STA. 1004+00

FRA-70-22.61

NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66 .



0 50 100
HORIZONTAL
SCALE IN FEET

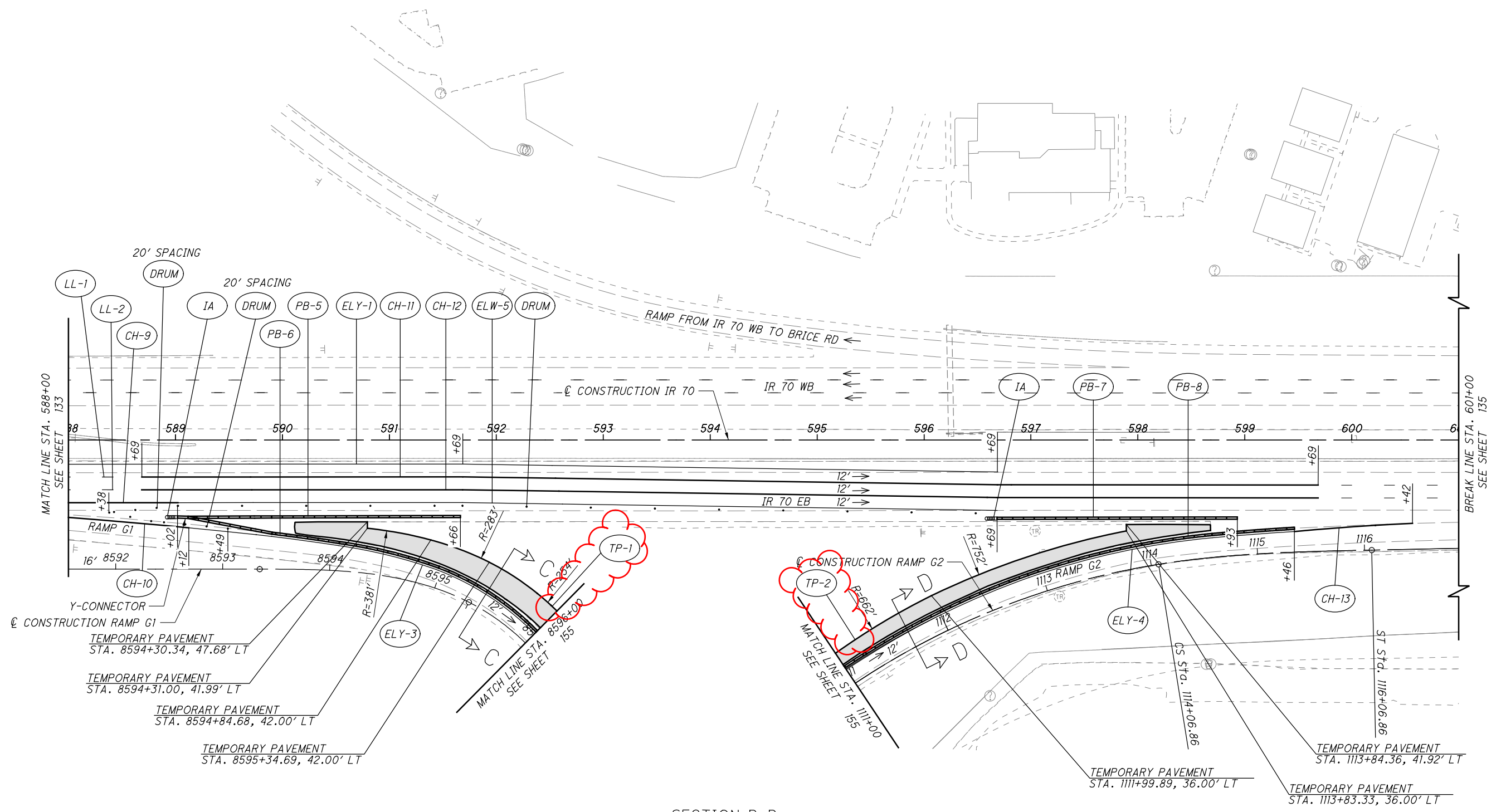
CALCULATED
BPT
CHECKED
EMW

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
STA. 588+00 TO STA. 601+00

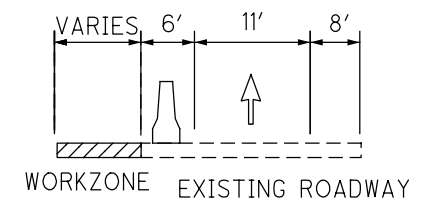
FRA-70-22.61

134
1199

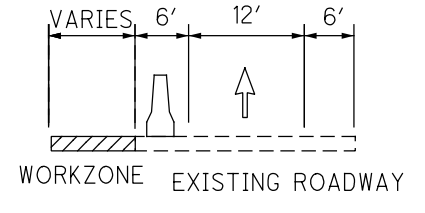
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SECTION C-C

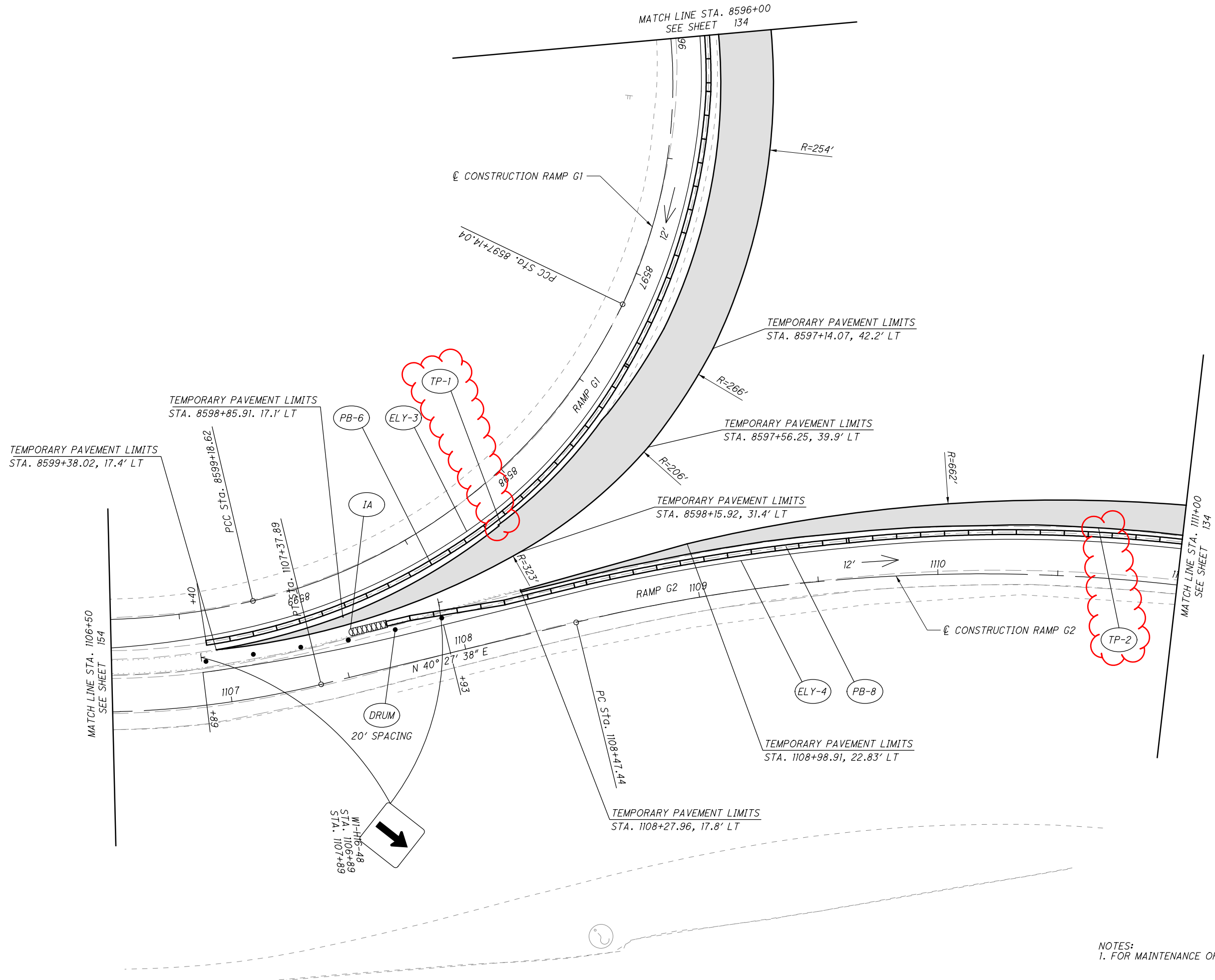


SECTION D-D



NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66.

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NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66 .

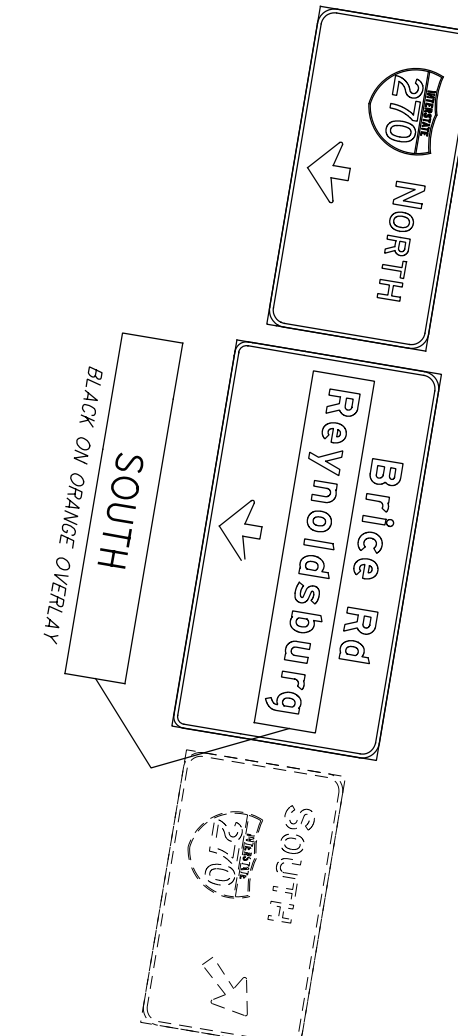
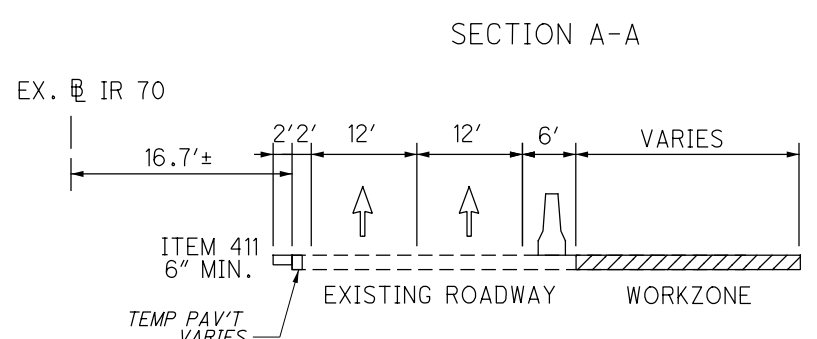
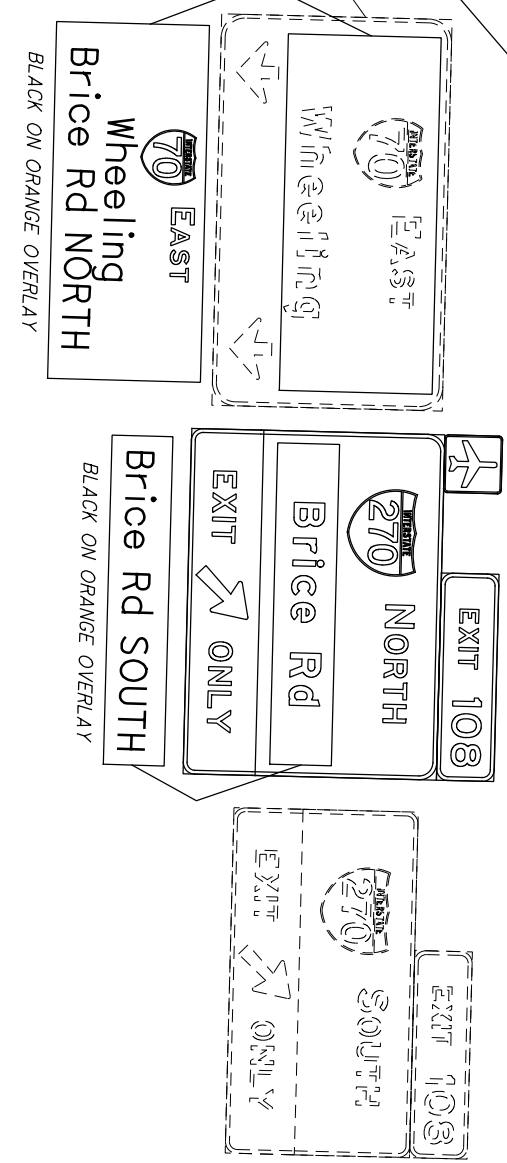
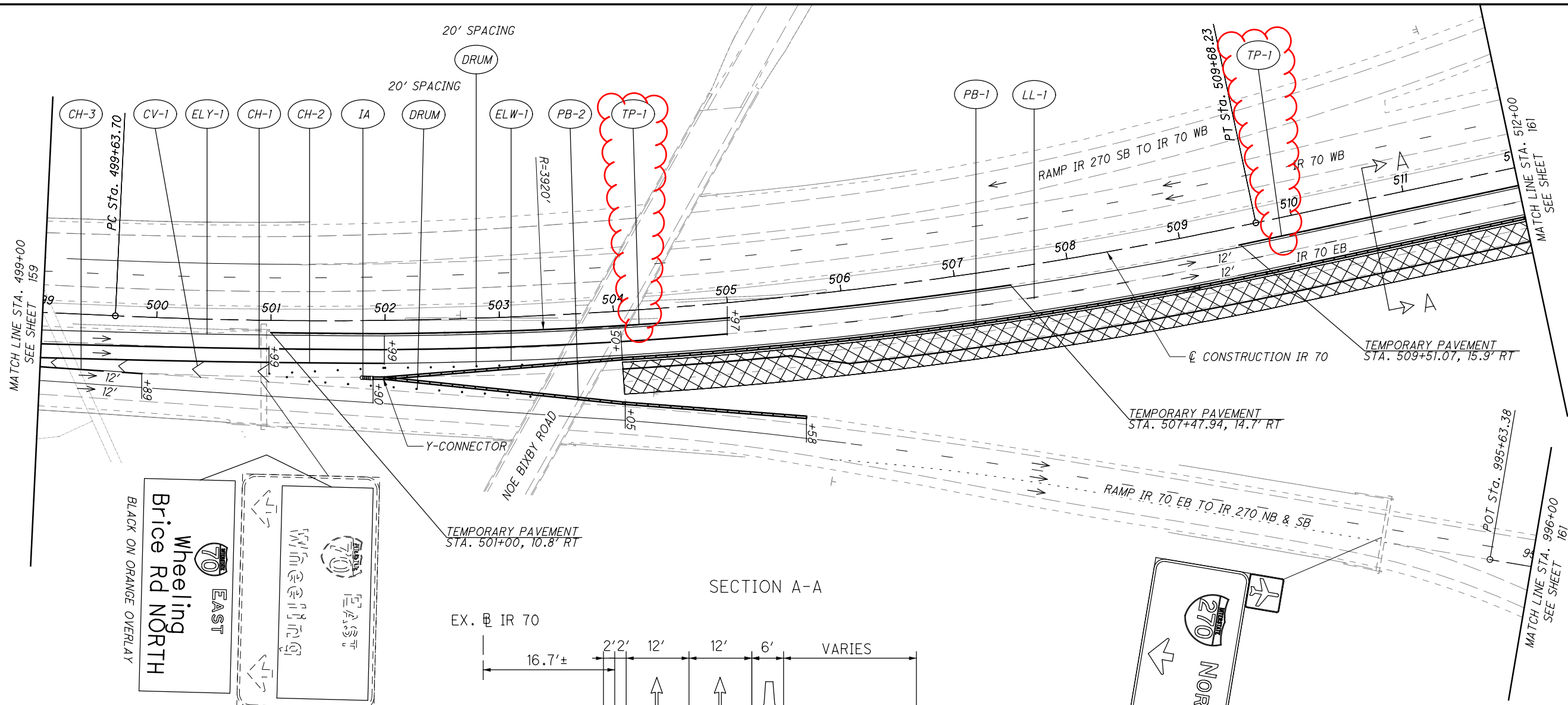
CALCULATED
BPT
CHECKED
EMW

0 20 40
10
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 3
STA. 1106+50 TO STA. 1111+00

FRA-70-22.61

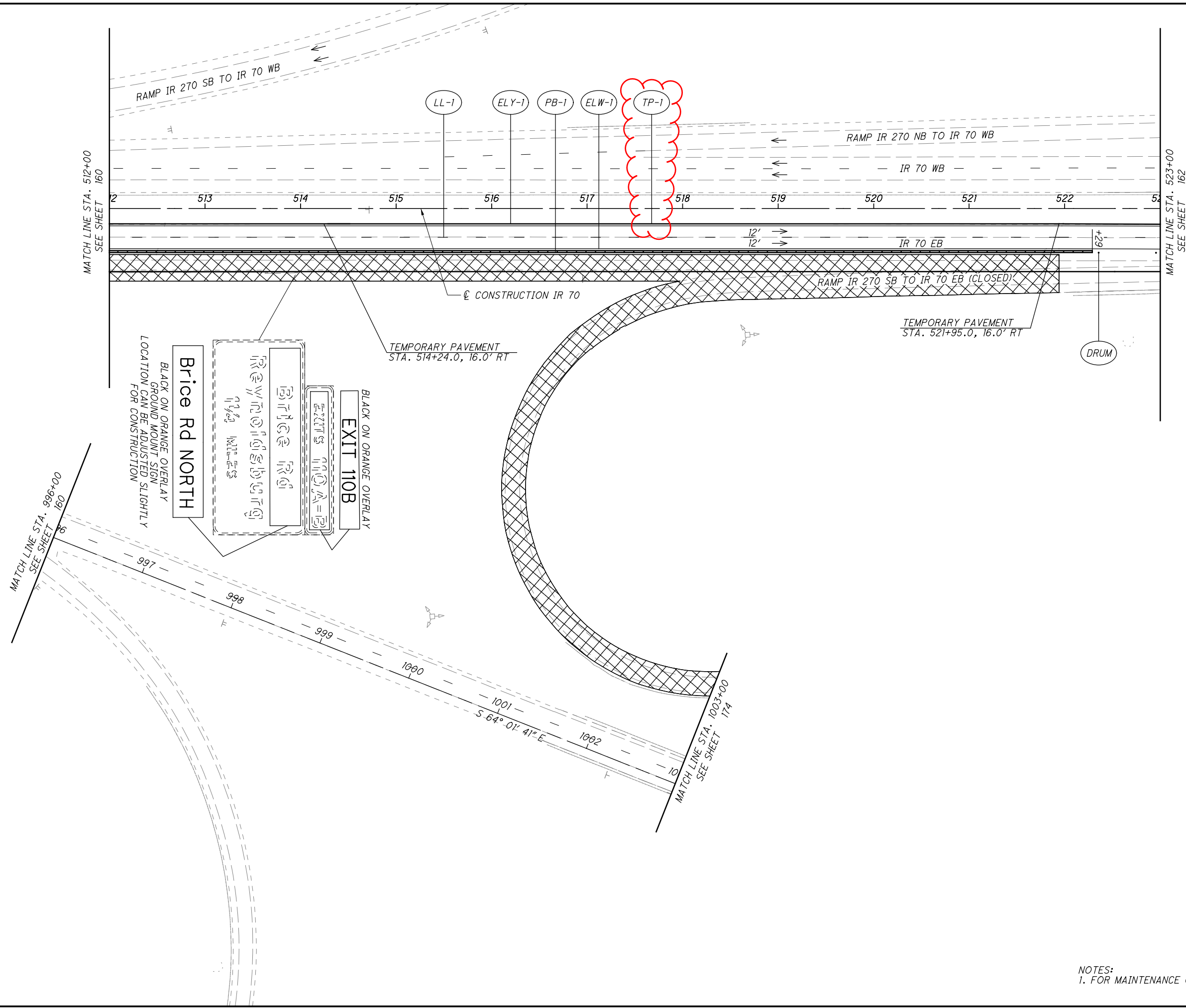
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NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66 .

	CALCULATED BPT	MAINTENANCE OF TRAFFIC PLAN - PHASE 4 STA. 499+00 TO STA. 512+00	FRA-70-22.61
	CHECKED EMW		
160 1199			

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NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66 .

CALCULATED	BPT
CHECKED	EMW

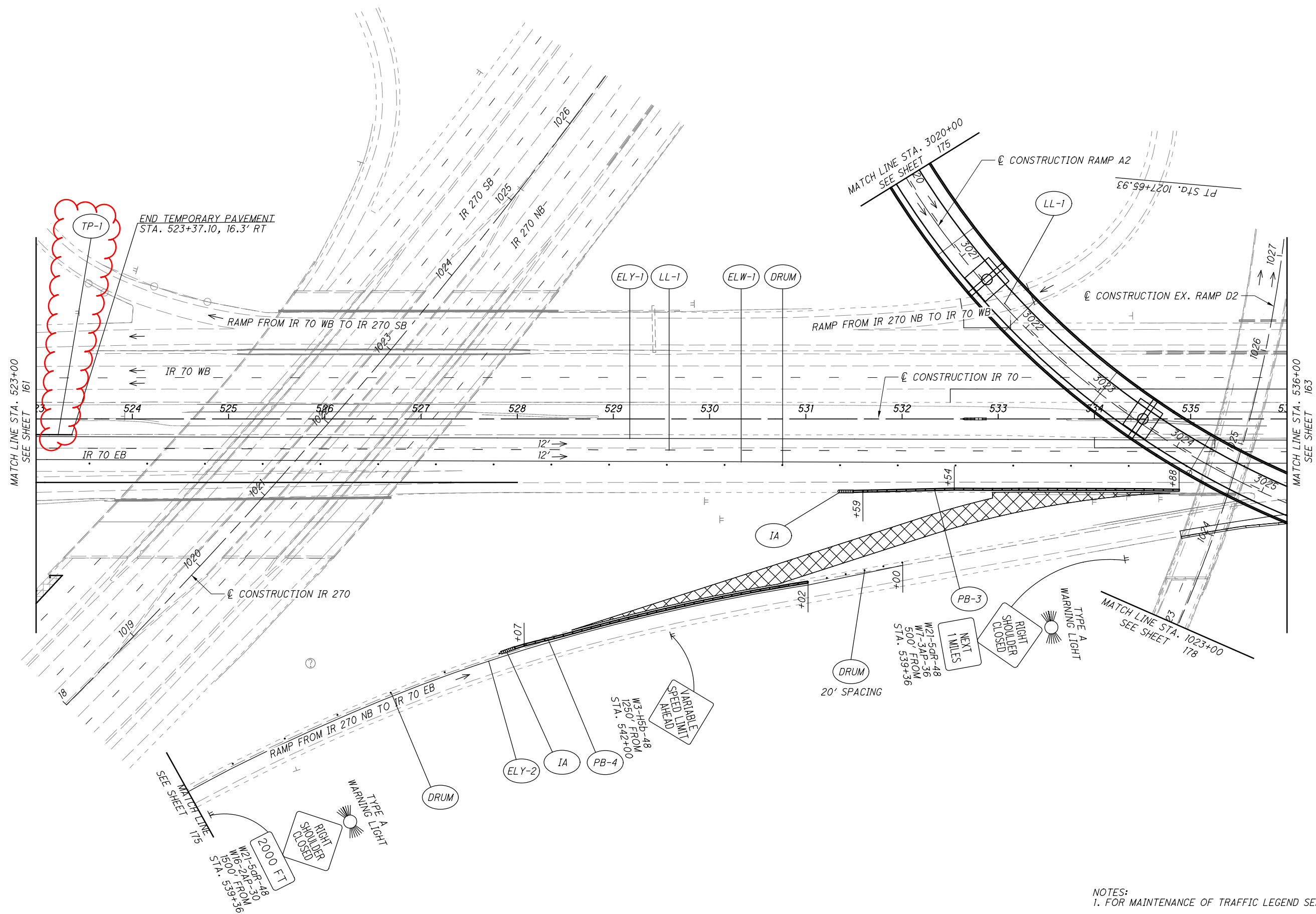
0 50 100
25
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
STA. 512+00 TO STA. 523+00

FRA-70-22.61

161
1199

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NOTES:
1. FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 66 .

CALCULATED
BPT
CHECKED
EMW

0 50 100
HORIZONTAL
SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN - PHASE 4
STA. 523+00 TO STA. 536+00

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SHEET NUM.											PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	
											01/IMS/PV	02/IMS/BR							
54	42	213	214	215	234	778	785	804	832										
PAVEMENT																			
					19,571								19,571	254	01000	19,571	SY	PAVEMENT PLANING, ASPHALT CONCRETE, VARIABLE DEPTH	
					19,597								19,597	255	20001	19,597	FT	FULL DEPTH PAVEMENT SAWING, AS PER PLAN	
					19,394								19,394	301	46000	19,394	CY	ASPHALT CONCRETE BASE, PG64-22	
					10,204								10,204	302	46000	10,204	CY	ASPHALT CONCRETE BASE, PG64-22.	
					24,614								24,614	304	20000	24,614	CY	AGGREGATE BASE	
					7,225								7,225	305	12010	7,225	SY	8" CONCRETE BASE, CLASS QC 1P	
					24,072								24,072	407	20000	24,072	GAL	NON-TRACKING TACK COAT	
477					45								477	411	10001	477	CY	STABILIZED CRUSHED AGGREGATE, AS PER PLAN	
					60								45	441	50400	45	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS)	
					5,715								60	441	50600	60	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), (DRIVEWAYS)	
					2,127								5,715	442	00100	5,715	CY	ANTI-SEGREGATION EQUIPMENT	
					5,625								2,127	442	10001	2,127	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG76-22M	
					2,173								5,625	442	10100	5,625	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	
					407								2,173	442	10301	2,173	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN	
					407								407	442	20000	407	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448)	
					407								407	442	20200	407	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)	
					99								99	452	12010	99	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
					10,247								10,247	452	13010	10,247	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
	3.25												3.25	618	40600	3.25	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
					74								74	875	10000	74	LB	LONGITUDINAL JOINT ADHESIVE	
WATER WORK																			
							86						86	SPECIAL	63820040	86	FT	6" WATER MAIN DIP CLASS 52 MECHANICAL JOINTS AND FITTINGS (COL. 801)	
							17						17	SPECIAL	63820080	17	FT	8" WATER MAIN DIP CLASS 52 MECHANICAL JOINTS AND FITTINGS (COL. 801)	
							2,712						2,712	SPECIAL	63820168	2,712	FT	12" WATER MAIN DIP CLASS 52 MECHANICAL JOINTS AND FITTINGS (COL. 801)	
							398						398	SPECIAL	63820464	398	FT	24" STEEL PIPE ENCASEMENT, BORED OR JACKED (COL. 806)	
							10						10	638	98000	10	EACH	WATER WORK, MISC.:6" WATCH VALVE WITH VALVE BOX (COL. 802)	
							2						2	SPECIAL	63820554	2	EACH	8" GATE VALVE WITH VALVE BOX (COL. 802)	
							6						6	SPECIAL	63820586	6	EACH	12" GATE VALVE WITH VALVE BOX (COL. 802)	
							10						10	SPECIAL	63820750	10	EACH	6" FIRE HYDRANT (COL. 809)	
							1						1	SPECIAL	63821400	1	EACH	FIRE HYDRANT ADJUSTED TO GRADE (COL. 810)	
SANITARY SEWER																			
							498						498	611	03100	498	FT	10" CONDUIT, TYPE B	
							2						2	611	99574	2	EACH	MANHOLE, NO. 3 (SANITARY)	
							2						2	611	99654	2	EACH	MANHOLE ADJUSTED TO GRADE (SANITARY)	
							406						406	SPECIAL	63820464	406	FT	24" STEEL PIPE ENCASEMENT, BORED OR JACKED (COL. 806)	
LIGHTING																			
FOR LIGHTING ESTIMATED QUANTITIES, SEE SHEET 940																			
TRAFFIC CONTROL																			
		55	15										70	626	00102	70	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	
		55	238	15									237	71	626	00102	308	EACH	BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL
		9											9	626	00110	9	EACH	BARRIER REFLECTOR, TYPE 2, ONE-WAY	
		29	101	16									146	626	00110	146	EACH	BARRIER REFLECTOR, TYPE 2, BI-DIRECTIONAL	
				1									1	626	00118	1	EACH	BARRIER REFLECTOR, TYPE 6, BI-DIRECTIONAL	
FOR SIGNING ESTIMATED QUANTITIES, SEE SHEET 850A																			
FOR PAVEMENT MARKING ESTIMATED QUANTITIES, SEE SHEET 850A																			
TRAFFIC SIGNALS																			
FOR TRAFFIC SIGNAL & ITS ESTIMATED QUANTITIES, SEE SHEET 927																			
RETAINING WALLS																			
FOR RETAINING WALL I ESTIMATED QUANTITIES, SEE SHEET 755																			
FOR RETAINING WALL J ESTIMATED QUANTITIES, SEE SHEET 764																			
FOR RETAINING WALL K ESTIMATED QUANTITIES, SEE SHEET 769 & 775																			
FOR RETAINING WALL B ESTIMATED QUANTITIES, SEE SHEET 1139																			
FOR RETAINING WALL G-H ESTIMATED QUANTITIES, SEE SHEET 1140																			
NOISE BARRIERS																			
								79,340	21,400	100,740			SPECIAL	60610210	100,740	SF	NOISE BARRIER (REFLECTIVE)		

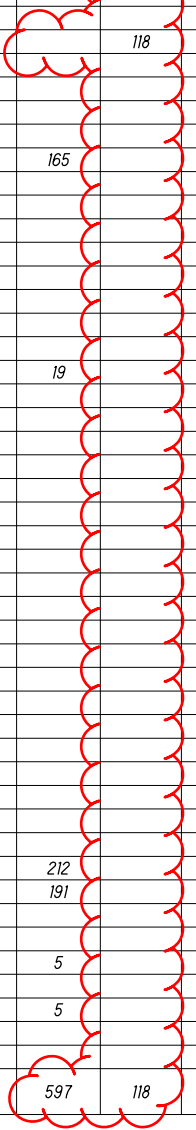
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 CHECKED CO
GENERAL SUMMARY
FRA - 70 - 22.61
 210
 1199

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SHEET NUM.											PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.		
											54	215	01/TMS/PV						
STRUCTURE OVER 20 FOOT SPAN																			
FOR BRIDGE NO. FRA-70-2374 ESTIMATED QUANTITIES, SEE SHEET 988																			
FOR BRIDGE NO. FRA-270-4262 ESTIMATED QUANTITIES, SEE SHEET 1003																			
FOR BRIDGE NO. FRA-270-4318C ESTIMATED QUANTITIES, SEE SHEET 1109																			
MAINTENANCE OF TRAFFIC																			
											1,000		1,000	614	1110	1,000	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
											41,560		41,560	614	11630	41,560	FT	INCREASED BARRIER DELINEATION	
											33	1	34	614	12380	34	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
											LS		LS	614	12420	LS		DETOUR SIGNING	
											42		42	614	12484	42	EACH	WORK ZONE INCREASED PENALTIES SIGN	
											50		50	614	12500	50	EACH	REPLACEMENT SIGN	
											300		300	614	12600	300	EACH	REPLACEMENT DRUM	
											2,487		2,487	614	12801	2,487	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	47
											2,425		2,425	614	13310	2,425	EACH	BARRIER REFLECTOR, TYPE 1, ONE WAY	
											497		497	614	13312	497	EACH	BARRIER REFLECTOR, TYPE 2, ONE WAY	
											1,329		1,329	614	13350	1,329	EACH	OBJECT MARKER, ONE WAY	
											2		2	614	18601	2	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	49
											14.72		14.72	614	20056	14.72	MILE	WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	
											0.81		0.81	614	21050	0.81	MILE	WORK ZONE CENTER LINE, CLASS I, 807 PAINT	
											29.46		29.46	614	22056	29.46	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT	
											46,517		46,517	614	23110	46,517	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	
											15,307		15,307	614	24102	15,307	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 807 PAINT	
											1,216		1,216	614	25200	1,216	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	
											1.03		1.03	614	98000	1.03	MILE	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, CLASS I, 5", 642 PAINT	48
											0.02		0.02	614	98000	0.02	MILE	WORK ZONE PAVEMENT MARKING, MISC.: EDGE LINE, CLASS I, 5", 740.06, TYPE 1	48
											3.15		3.15	614	98000	3.15	MILE	WORK ZONE PAVEMENT MARKING, MISC.: LANE LINE, CLASS I, 5", 642 PAINT	48
											69		69	614	98100	69	FT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, 5", 740.06, TYPE 1	48
											5,647		5,647	614	98100	5,647	FT	WORK ZONE PAVEMENT MARKING, MISC.: DOTTED LINE, CLASS I, 12", 807 PAINT	48
											394		394	614	98100	394	FT	WORK ZONE PAVEMENT MARKING, MISC.: CHANNELIZING LINE, CLASS I, 10", 642 PAINT	48
											12		12	614	98100	12	FT	WORK ZONE PAVEMENT MARKING, MISC.: STOP LINE, 20", 642 PAINT	48
											LS		LS	615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
											4,289		4,289	615	25000	4,289	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
											1,007		1,007	616	10000	1,007	MGAL	WATER	
											2		2	622	41050	2	EACH	PORTABLE BARRIER, "Y" CONNECTOR	
											41,560		41,560	622	41100	41,560	FT	PORTABLE BARRIER, UNANCHORED	
												165	165	622	90000	165	FT	BARRIER, MISC.: PORTABLE BARRIER, UNANCHORED	43
											120		120	808	18700	120	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
INCIDENTALS																			
											LS		LS	103	05000	LS		PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND	
											LS		LS	108	10000	LS		CPM PROGRESS SCHEDULE	
											LS		LS	614	11000	LS		MAINTAINING TRAFFIC	
													36	619	16020	36	MNTH	FIELD OFFICE, TYPE C	
													LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
													LS	624	10000	LS		MOBILIZATION	

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CALCULATED	TJS	CHECKED	CO	
GENERAL SUMMARY				
FRA-70-22.61				
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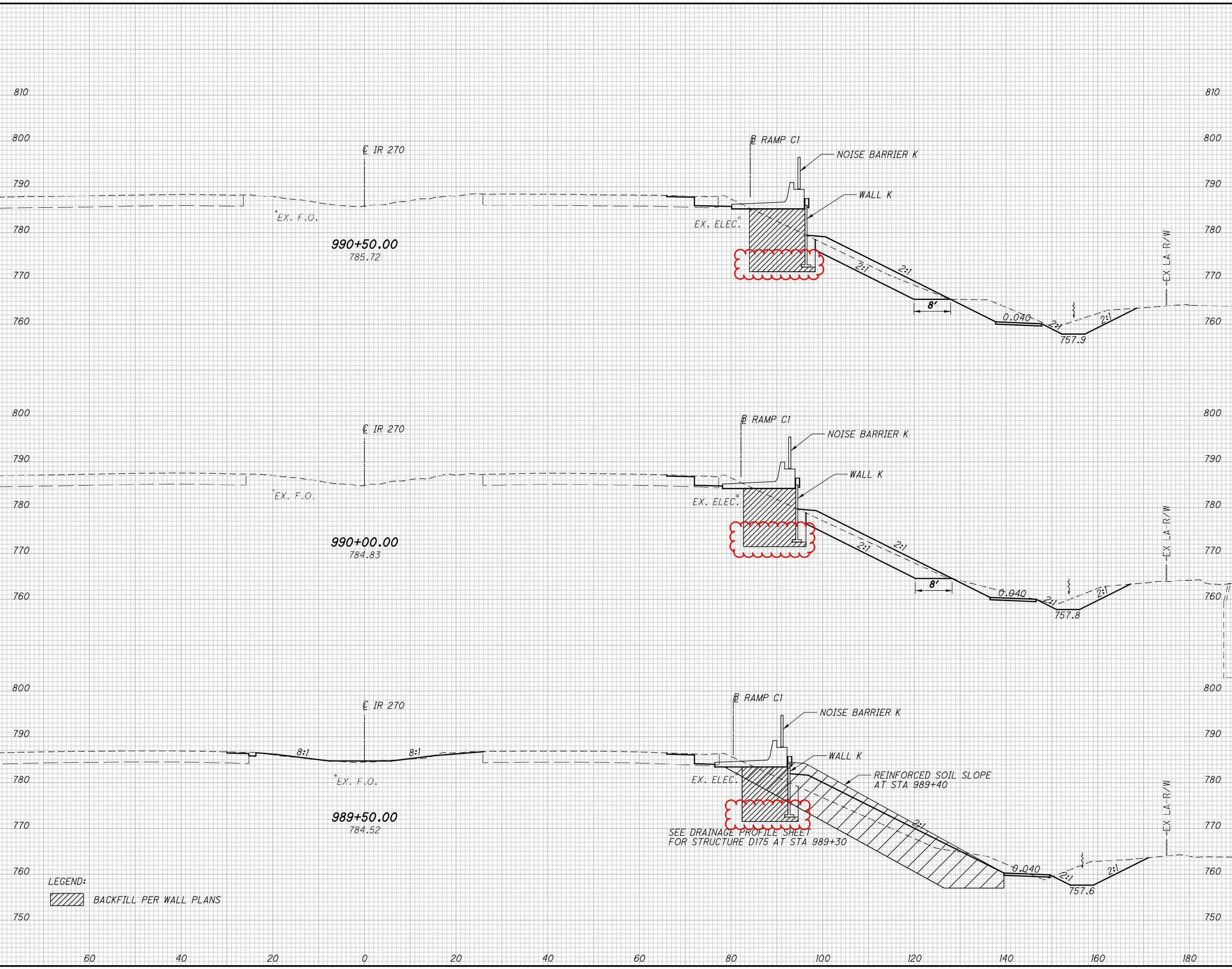
SHEET NO.	REFERENCE NO.	STATION TO STATION		SIDE	602	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611		
		FROM	TO		CONCRETE MASONRY	15" CONDUIT, TYPE B	15" CONDUIT, TYPE F, 707.05 TYPE C, 707.21	18" CONDUIT, TYPE B	CONDUIT, BORED OR JACKED, 18", TYPE B	18" CONDUIT, TYPE C	18" CONDUIT, TYPE F, 707.05 TYPE C, 707.21	21" CONDUIT, TYPE B	24" CONDUIT, TYPE B	24" CONDUIT, TYPE F, 707.05 TYPE C, 707.21	27" CONDUIT, TYPE B	36" CONDUIT, TYPE B	36" CONDUIT, TYPE C	48" CONDUIT, TYPE C	54" CONDUIT, TYPE C	72" CONDUIT, TYPE B, 706.02 W/ PREMIUM JOINTS, 706.11	84" CONDUIT, TYPE B	34"x53" CONDUIT, TYPE C, 706.04	CATCH BASIN, NO. 8	CATCH BASIN, NO. 8A	CATCH BASIN, NO. 5A	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	MANHOLE, NO. 3	MANHOLE, NO. 4
					CY	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	EA	EA	EA	EA	EA	EA	EA	EA	EA
		IR-70																											
705	D501	534+56.89	534+06.44	RT	0.66																								
705	D502	535+60.20	534+56.89	RT																	55						1		
705	D154	535+94.86	535+60.20	RT																	105	1					1		
705	D503	536+82.61	535+60.20	RT																									
705	D507	536+82.61	536+83.52	RT																							1		
705	D950	537+60.00	537+59.97	RT																							13		
705	D155	537+59.97	535+94.86	RT																							165		
705	D504	538+37.11	536+82.61	RT																									
705	D505	539+97.03	538+37.11	RT																									
705	D506	542+96.94	539+97.03	RT																									
705	D105	544+15.98	544+15.98	RT	0.02																								
707	D104	545+96.38	542+96.94	RT	0.01	5																							
707	D103	548+77.89	545+96.38	RT																									
709	D85	561+96.03	561+96.03	RT																									
709	D84	562+15.02	561+96.03	RT																							19		
709	D113	564+10.80	562+10.80	RT																									
709	D83	565+50.00	565+50.00	RT																							196 139		
		IR-270																											
716	D203	977+88.96	978+54.42	RT																									
716	D700	978+32.73	978+54.42	RT	0.43	41																							
716	D202	978+54.42	979+38.83	RT																									
716	D183	979+79.06	980+02.00	RT		23																							
716	D184	980+02.00	980+50.00	RT																							48		
716	D181	980+50.00	980+50.02	RT																									
716	D182	980+50.02	980+50.02	RT	0.43																								
716	D180	981+28.45	980+50.00	RT		78																							
716	D178	982+14.23	981+28.45	RT		87																							
717	D176	988+00.00	980+00.00	RT																							57		
717	D177	988+00.00	980+00.00	RT	0.25																								
717	D175A	989+30.86	989+30.86	RT																							60		
717	D175C	989+30.86	989+30.86	RT	0.31																								
721	D156	1047+93.66	1050+09.50	LT																							212		
721	D149	1050+09.50	1052+03.72	LT																							191		
721	D153	1047+02.21	1051+92.08	LT																									
721	D150	1052+03.72	1052+06.52	LT	0.03																						5		
721	D151	1052+06.52	1051+92.08	LT																							58		
722	D152	1057+00.00	1057+00.00	LT	0.06																						5		
TOTALS CARRIED TO GENERAL SUMMARY					2.2	569	57	597	118	13	60	48	89	50	58	958	462	5	501	162	10	160	6	1	2	4	5	13	1



FRA - 70 - 22.61	DRAINAGE SUBSUMMARY	CALCULATED REM CHECKED KAG
237 1199		

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SEEDING	END AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
71		169		102		
395		295		197		
550		149		111		
127		97		99		
689		189		103		
1634	60	712	40	495		



END AREA	VOLUME		CALCULATED	CHECKED
	CUT	FILL		
169	102			
295	197			
149	111			
97	99			
189	103			
712	495			

CROSS SECTIONS IR-270
STA. 989+50.00 TO STA. 990+50.00
FRA-70-22.61

369
1199

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SEEDING	END AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
65	143	81	259	151	370	1199
67	137	83	270	164		
68	154	94	299	182		
367			828	497		
1128						

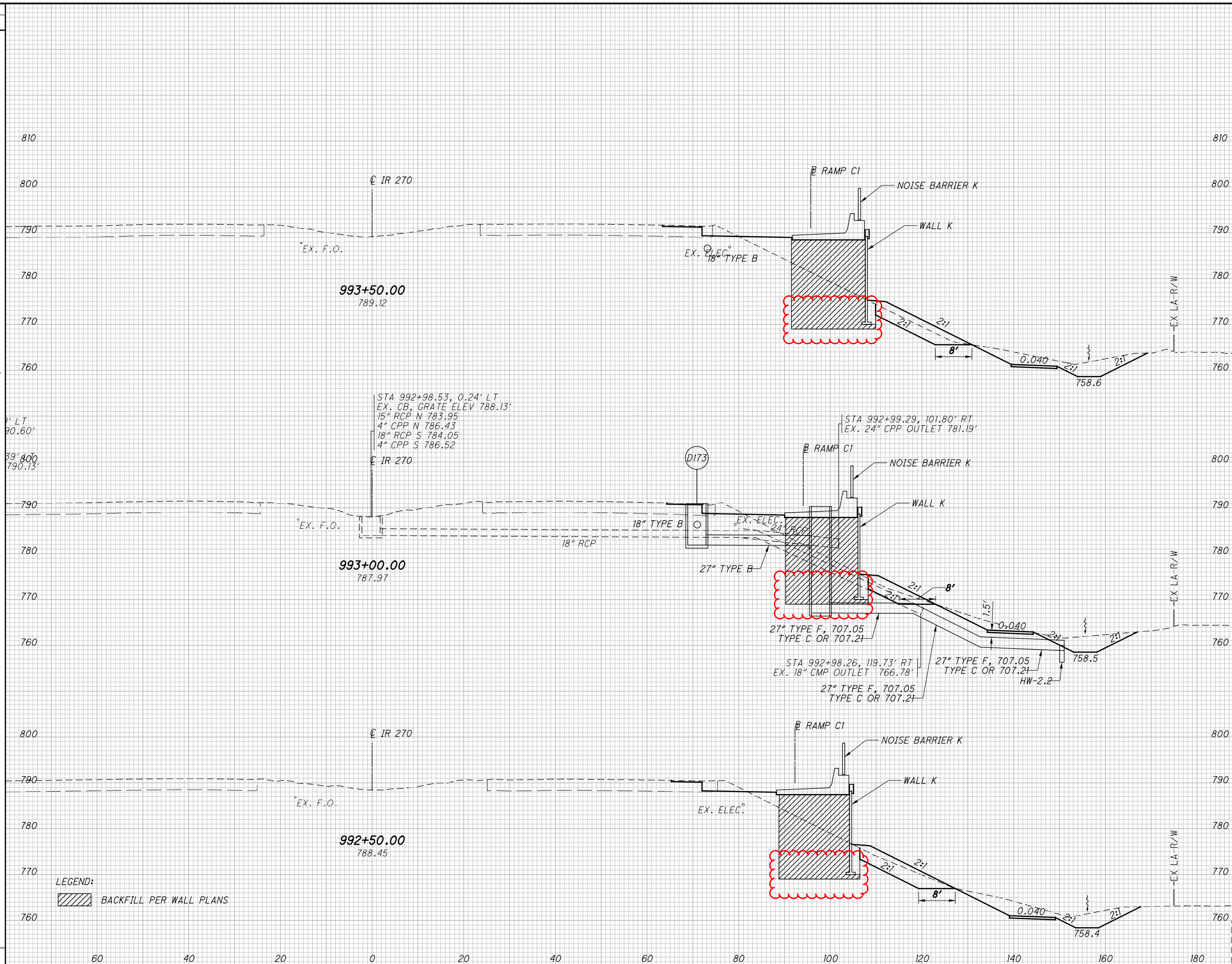


CROSS SECTIONS IR-270
STA. 991+00.00 TO STA. 992+00.00

FRA-70-22.61

370
1199

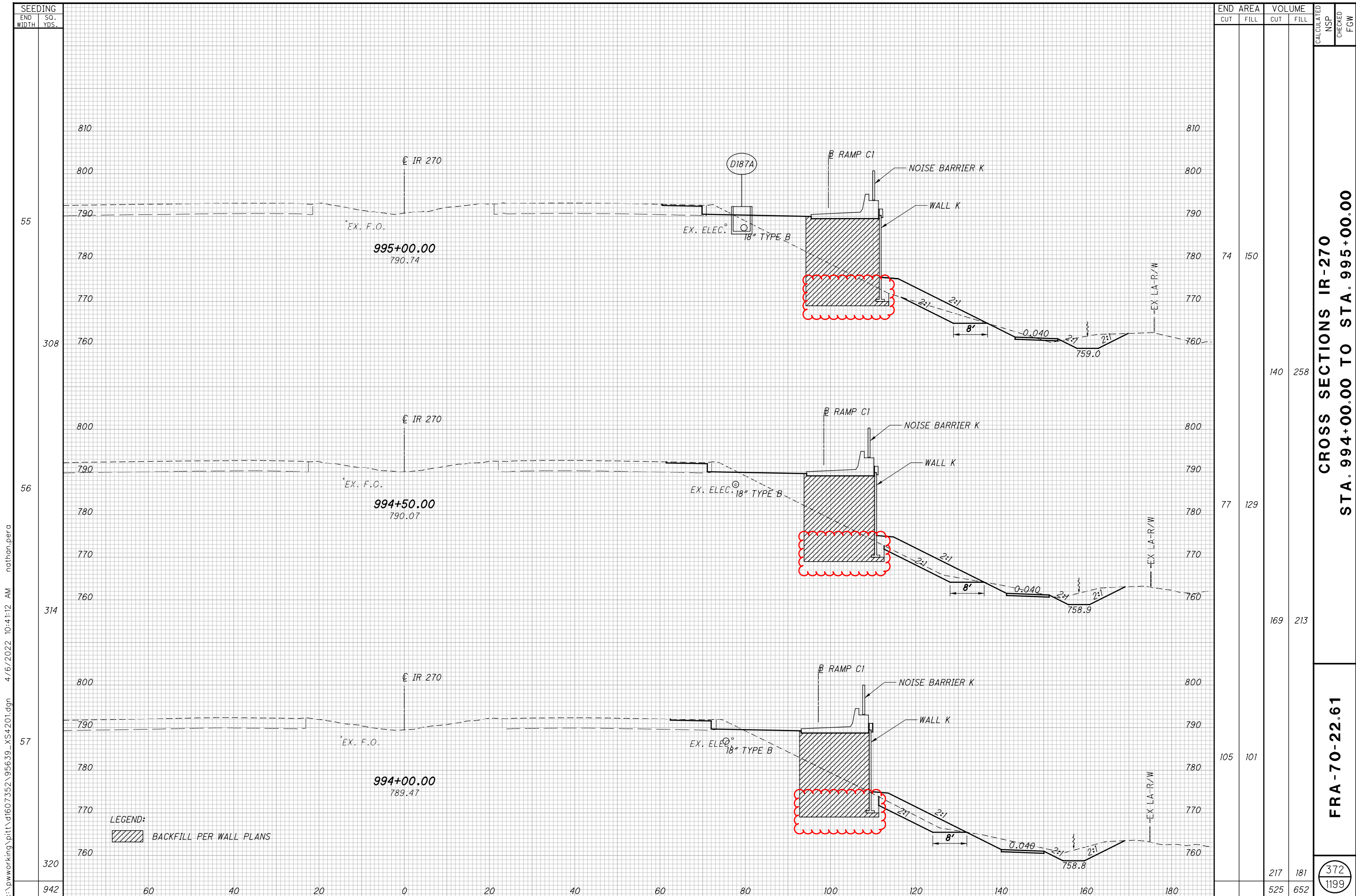
SEEDING
END WIDTH SO. YDS.
347
997



END AREA		VOLUME	
CUT	FILL	CUT	FILL
129	94	216	143
104	60	224	129
138	79	260	148
		700	420

CROSS SECTIONS IR-270
 STA. 992+50.00 TO STA. 993+50.00
 FRA-70-22.61
 371
 1199

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LEGEND:
 BACKFILL PER WALL PLANS

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SEEDING	END AREA		VOLUME		CALCULATED	NSP	CHECKED	FGW
	CUT	FILL	CUT	FILL				
55		74		150				
308			140	258				
56		77		129				
314			169	213				
57		105		101				
320			217	181				
942			525	652				

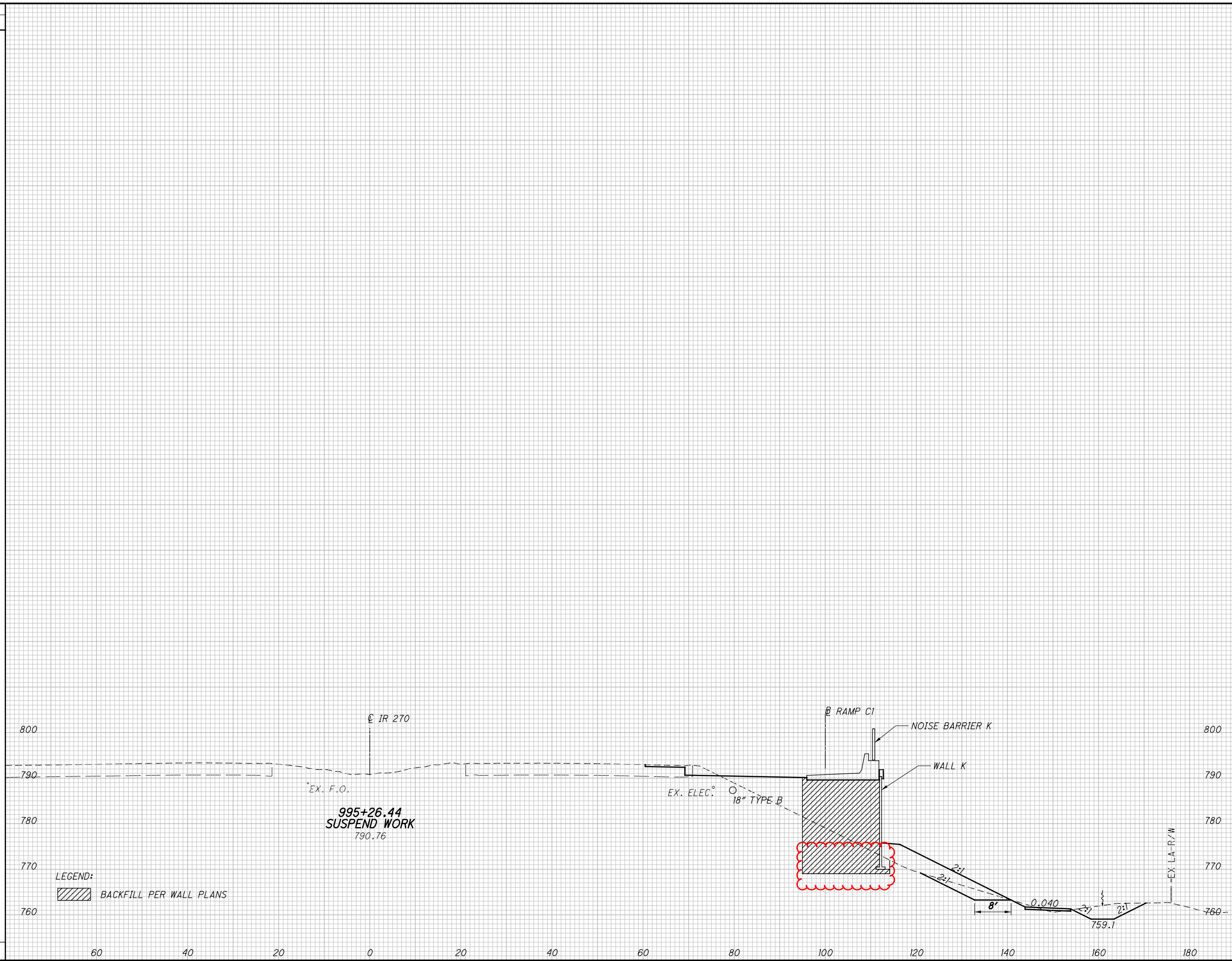
CROSS SECTIONS IR-270
 STA. 994+00.00 TO STA. 995+00.00

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372
 1199

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SEEDING	
END WIDTH	SO. YDS.
162	
162	



LEGEND:
 BACKFILL PER WALL PLANS

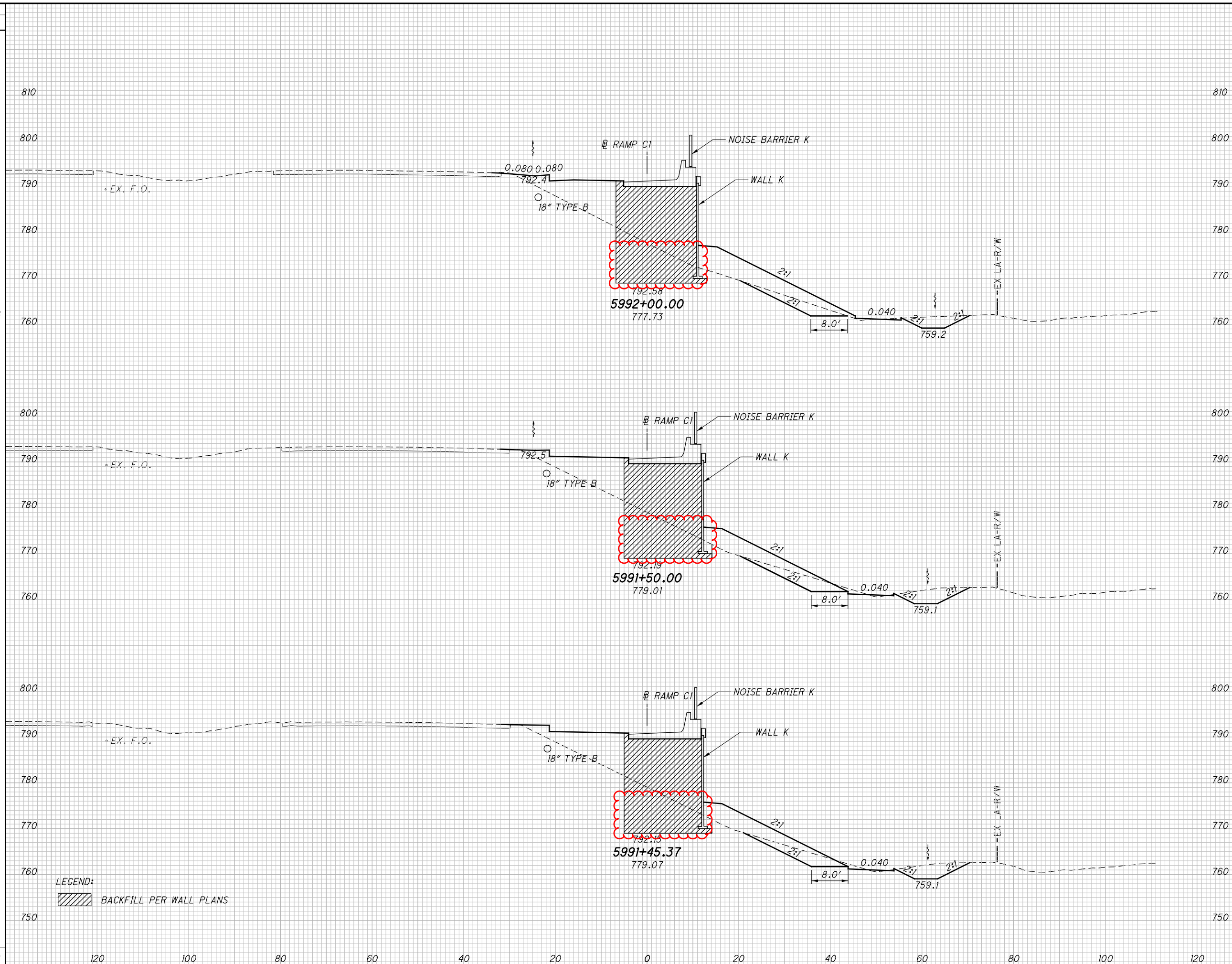
END AREA		VOLUME		CALCULATED NSP	CHECKED FGW
CUT	FILL	CUT	FILL		
74	171	70	157		
70	157	70	157		

CROSS SECTIONS IR-270
STA. 995+50.00 TO STA. 995+26.44

FRA-70-22.61

373
1199

SEEDING
 END SO.
 WIDTH YDS.
 420
 120
 100
 80
 60
 40
 20
 0
 20
 40
 60
 80
 100
 120

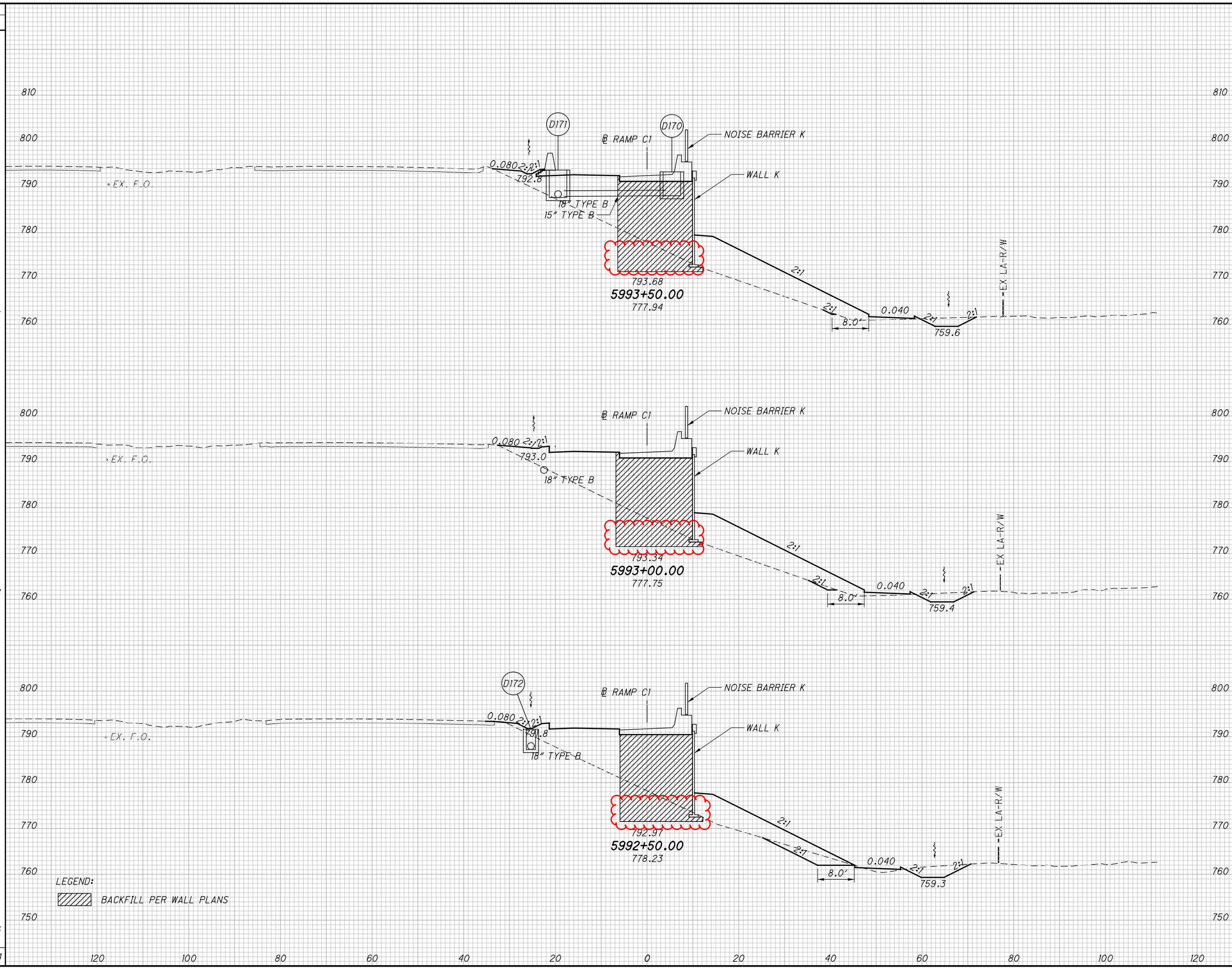


END AREA	VOLUME		CALCULATED NSP	CHECKED FGW
	CUT	FILL		
57	262			
75	206	122	433	
71	205	13	35	
	135	468		

CROSS SECTIONS RAMP C1
 STA. 5991+45.37 TO STA. 5992+00.00
 FRA-70-22.61
 492
 1199

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SEEDING
END WIDTH SO. YDS.
72
395
70
403
75
406
1204



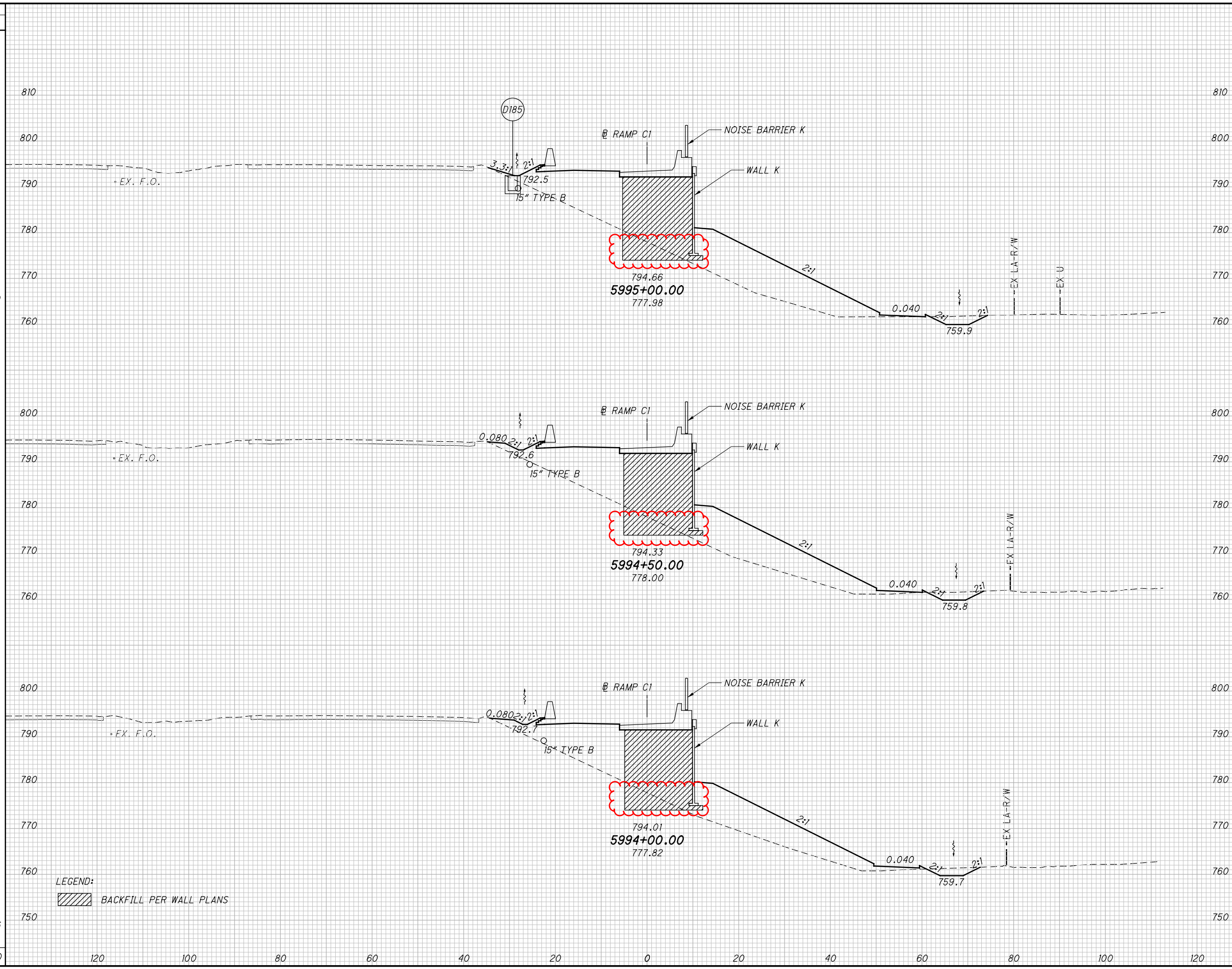
END AREA	VOLUME	CALCULATED	CHECKED	NSP	FGW
17	357				
33	633				
19	326				
61	545				
47	262				
96	485				
190	1663				

CROSS SECTIONS RAMP C1
STA. 5992+50.00 TO STA. 5993+50.00
FRA-70-22.61

493
1199

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SEEDING
 END SO.
 WIDTH YDS.
 76
 420
 75
 414
 74
 406
 1240

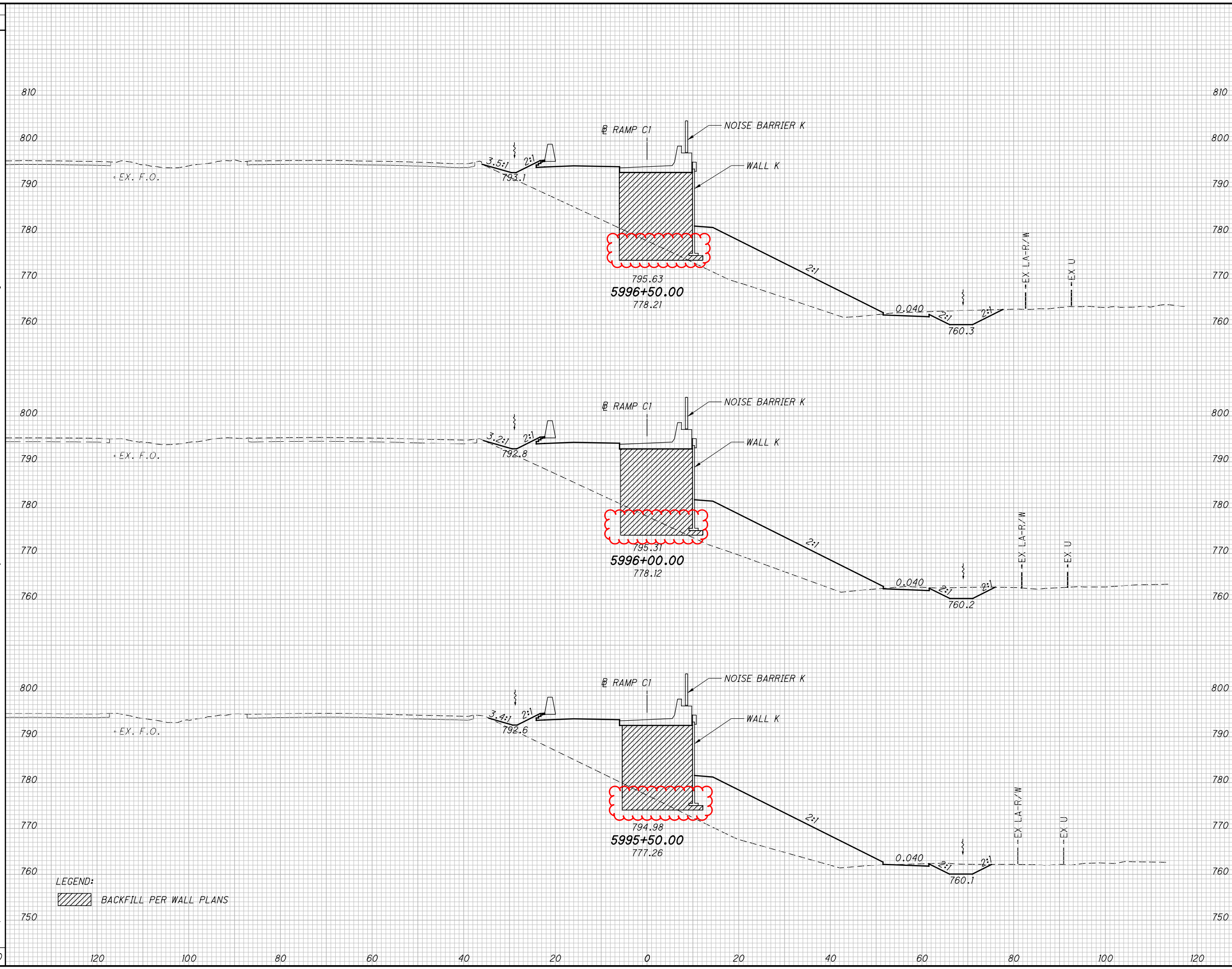


END AREA	VOLUME	CALCULATED	
		CUT	FILL
16	467		
29	830		
15	429		
27	769		
14	401		
29	702	494	
85	2301	1199	

CROSS SECTIONS RAMP C1
STA. 5994+00.00 TO STA. 5995+00.00
FRA-70-22.61

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SEEDING
 END SO.
 WIDTH YDS.
 81
 442
 80
 433
 77
 425
 1300



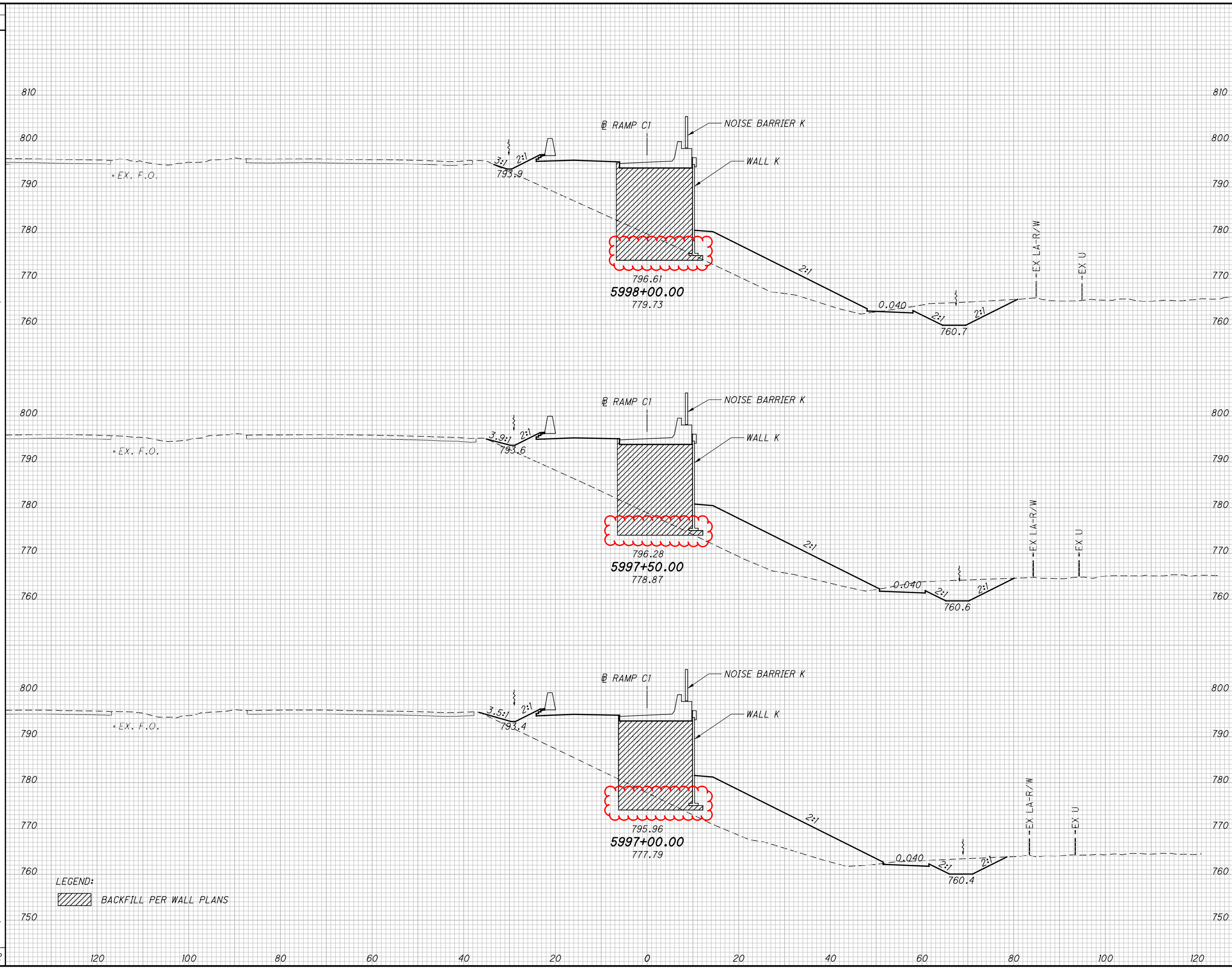
LEGEND:
 BACKFILL PER WALL PLANS

END	AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
81	41	478				
80	29	484	65	891		
77	23	529	48	938		
	36	922	149	2751	495	1199

CROSS SECTIONS RAMP C1
STA. 5995+50.00 TO STA. 5996+50.00
FRA-70-22.61

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SEEDING
 END WIDTH SO. YDS.
 82
 458
 461
 82
 453
 1372



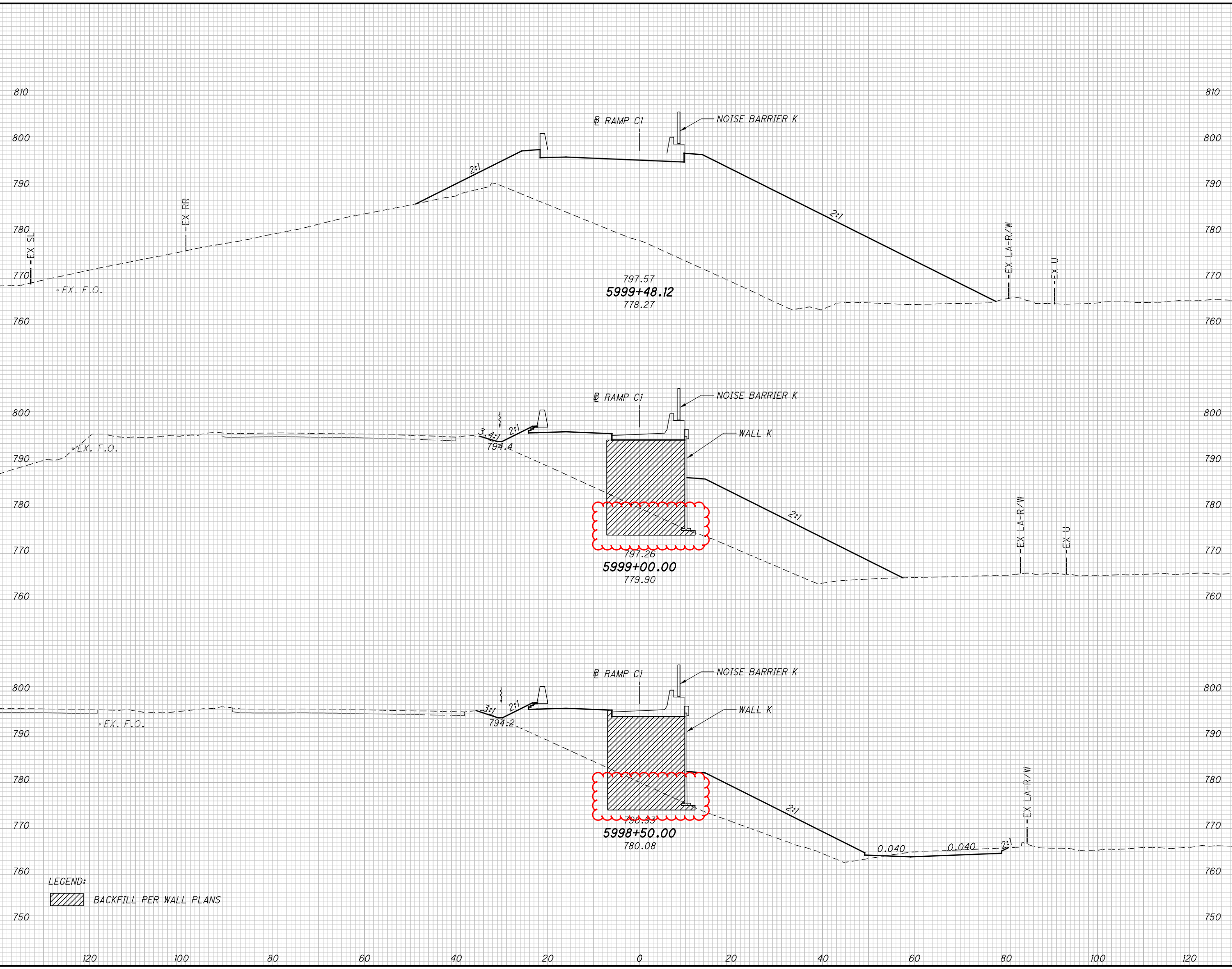
END AREA	VOLUME	CALCULATED	
		CUT	FILL
78	360		
75	413		
47	503		
81	908	81	908
142	716	336	2472

CROSS SECTIONS RAMP C1
 STA. 5997+00.00 TO STA. 5998+00.00
 FRA-70-22.61
 496
 1199

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SEEDING	
END WIDTH	SO. YDS.
109	537
92	431
63	403
1371	

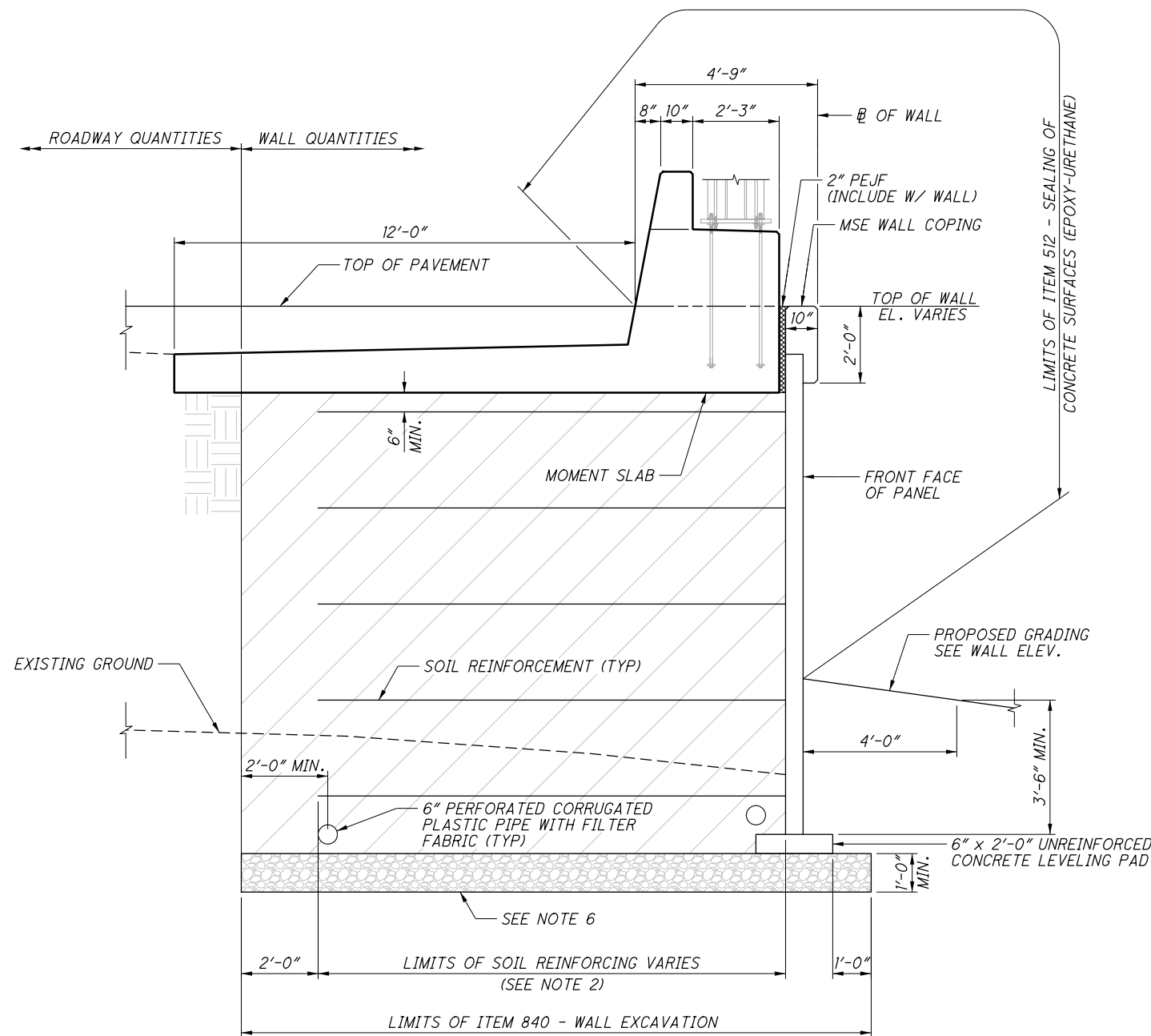


END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	1708	0	2146
0	700	24	1040
26	423	96	725
		120	3911

CROSS SECTIONS RAMP C1
STA. 5998+50.00 TO STA. 5999+48.12

FRA-70-22.61

497
1199

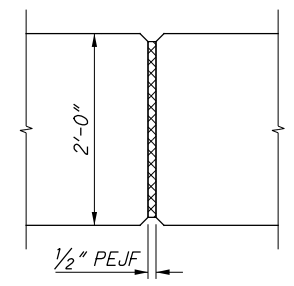


TYPICAL SECTION
 MSE PORTION OF THE WALL

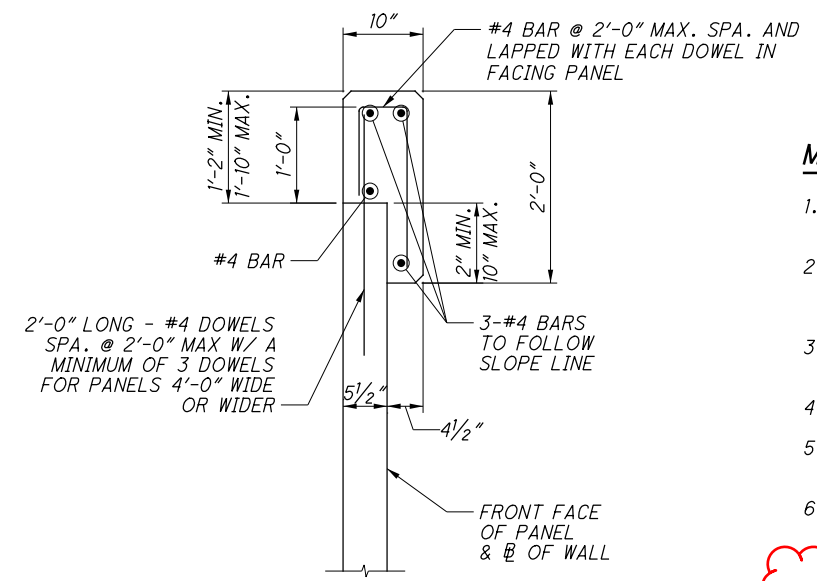
LEGEND:

- ITEM 203, EMBANKMENT
- SELECT GRANULAR BACKFILL PER SUPPLEMENTAL SPECIFICATION 840
- ITEM 203, GRANULAR MATERIAL TYPE C

* - GFRP BARS PER SBR-1-13 STD. DWG. TO BE USED AT PARAPET JOINTS 1/2" DIA. GLASS FIBER REINFORCED POLYMER (GFRP) STIFFENING REINFORCEMENT.



COPING EXPANSION JOINT



MSE WALL COPING

MSE WALL NOTES:

1. FLOW LINE OF 6" φ PERFORATED PLASTIC PIPE WILL VARY TO PROVIDE POSITIVE DRAINAGE AT OUTLET. MINIMUM SLOPE OF PIPE SHALL BE 1/8" PER FOOT.
2. SOIL REINFORCEMENT LENGTH TO BE DETERMINED BY WALL SUPPLIER ON THE APPROVED WALL SYSTEM, BUT SHALL NOT BE LESS THAN 0.7H WHERE H IS THE DESIGN HEIGHT OF THE WALL OR 8'-0", WHICHEVER IS GREATER.
3. THE MAXIMUM DESIGN HEIGHT OF THE TURNBACK PORTION OF MSE WALLS IS AS SHOWN IN THE PLANS, FINAL HEIGHT TO BE DETERMINED BY WALL SUPPLIER.
4. THE THICKNESS OF MSE WALL PANELS IS ASSUMED AT 5 1/2".
5. COPING EXPANSION JOINTS SHALL BE SPACED NO MORE THAN 20 FEET APART AND ALIGNED WITH JOINTS BETWEEN FALLING PANELS.
6. COMPACT EXPOSED BEARING SURFACE WITH VIBRATORY EQUIPMENT TO THE REQUIREMENTS OF CMS 204 AND SS 840.

WALL K					REF. SHEET
ITEM	EXT.	TOTAL	UNIT	DESCRIPTION	
503	11100	LS	LS	COFFERDAMS AND EXCAVATION BRACING	
509	10000	288,455	LB	EPOXY COATED REINFORCING STEEL	
511	53010	2,341	CY	CLASS QC1 CONCRETE, MISC.: MOMENT SLAB AND PARAPET	8/9
512	10100	4,403	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
516	13200	112	SF	1/2" PREFORMED EXPANSION JOINT FILLER	
516	13600	674	SF	1" PREFORMED EXPANSION JOINT FILLER	
516	13900	4,126	SF	2" PREFORMED EXPANSION JOINT FILLER	
840	20000	25,861	SF	MECHANICALLY STABILIZED EARTH WALL	
840	21000	5,643	CY	WALL EXCAVATION	
840	22000	2,701	SY	FOUNDATION PREPARATION	
840	23000	14,559	CY	SELECT GRANULAR BACKFILL	
840	25010	2,704	FT	6" DRAINAGE PIPE, PERFORATED	
840	26000	1,352	FT	CONCRETE COPING	
840	27000	5	DAY	ON-SITE ASSISTANCE	
840	28000	LS	LS	SGB INSPECTION AND COMPACTION TESTING	

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CALCULATED BY: THS DATE: 8/13/20
 CHECKED BY: KRH DATE: 8/13/20

SFN: 2511300

PARTICIPATION			ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIER	SUPER.	GEN.	REF.
01/IMS/PV	02/IMS/BR	03/IMS/BR										
	LUMP		503	1100	LUMP		COFFERDAMS AND EXCAVATION BRACING				LUMP	
	LUMP		503	21300	LUMP		UNCLASSIFIED EXCAVATION				LUMP	
	LUMP		505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
	1600		507	00200	1600	FT	STEEL PILES HP12X53, FURNISHED	1600				
	1440		507	00250	1440	FT	STEEL PILES HP12X53, DRIVEN	1440				
	1200		507	00300	1200	FT	STEEL PILES HP14X73, FURNISHED		1200			
	940		507	00350	940	FT	STEEL PILES HP14X73, DRIVEN		940			
	1681231		509	10001	1681231	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	27056	649610	1004565		20-23, 81, 89 AND 107 / 113
	2383		511	34447	2383	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN			2383		9 / 113
	500		511	34450	500	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			500		
	120		511	41012	120	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		120			
	180		511	44112	180	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	180				
	2686		511	45602	2686	CY	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA		2686			
	114		511	46512	114	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	114				
	5791		512	10100	5791	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	292	1947	3552		
	34		512	33000	34	SY	TYPE 2 WATERPROOFING	34				
	5496000		513	10301	5496000	LB	STRUCTURAL STEEL MEMBERS, LEVEL 5, AS PER PLAN			5496000		53 / 113
	17880		513	20000	17880	EACH	WELDED STUD SHEAR CONNECTORS			17880		
	3136		514	00060	3136	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			3136		9 / 113
	3136		514	00066	3136	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			3136		9 / 113
	97		516	10010	97	FT	ARMORLESS PREFORMED JOINT SEAL				97	
	100		SPECIAL	51612400	100	FT	SPECIAL - MODULAR EXPANSION JOINT			100		10 AND 93 / 113
	17		516	13600	17	SF	1" PREFORMED EXPANSION JOINT FILLER				17	
	2		518	12301	2	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN			2		90 / 113
	95		518	21200	95	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	95				
	100		518	40000	100	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	100				
	2		523	20000	2	EACH	DYNAMIC LOAD TESTING	1	1			
	517		524	94935	517	FT	DRILLED SHAFTS, 66" DIAMETER, INTO BEDROCK, AS PER PLAN		517			9 / 113
	691		524	94946	691	FT	DRILLED SHAFTS, 72" DIAMETER, ABOVE BEDROCK		691			
	122		524	94947	122	FT	DRILLED SHAFTS, 72" DIAMETER, ABOVE BEDROCK, AS PER PLAN		122			9 / 113
	326		526	30011	326	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN				326	103 AND 104 / 113
	97		526	90030	97	FT	TYPE C INSTALLATION				97	
	45		869	00101	45	EACH	HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS, AS PER PLAN			45		74 / 113
	19		894	10000	19	EACH	THERMAL INTEGRITY PROFILING (TIP) TEST		19			9 / 113

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DESIGN AGENCY: HRS ENGINEERING, INC.
 2800 CORPORATE EXCHANGE DR.,
 SUITE 100
 COLUMBUS, OHIO 43231
 614-833-5770

DATE: 8/13/20
 FILE NUMBER: 2511300

REVIEWED: BTA
 STRUCTURE FILE NUMBER: 2511300

DRAWN: THS
 CHECKED: KRH

DESIGNED: THS
 CHECKED: KRH

ESTIMATED QUANTITY TABLE
 BRIDGE NO. FRA-270-4262
 RAMP A2 OVER IR 270, IR 70 AND RAMP D2

FRA-70-22.61
 PID No. 95639

11 / 113

1003
 1199

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

Table with 3 columns: Drawing ID, Status, Date. Includes AS-1-15, AS-2-15, GSD-1-19, ICD-1-82, SBR-1-13 and their revised versions.

AND THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

Table with 3 columns: Drawing ID, Status, Date. Includes SS800, SS846 and their revised versions.

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017, 8TH EDITION AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING:

HL-93
FUTURE WEARING SURFACE (FWS) OF 60 PSF

DESIGN DATA:

CONCRETE CLASS QC2- COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
STRUCTURAL STEEL - ASTM A709 GRADE 50W YIELD STRENGTH 50 KSI

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2 1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE:

MONOLOTHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

ITEM 203 EMBANKMENT, AS PER PLAN:

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT BETWEEN STATIONS 5998+48.12 TO 6002+30.49.

CONSTRUCTION CLEARANCE:

MAINTAIN A CONSTRUCTION CLEARANCE OF 10 FEET HORIZONTALLY FROM THE CENTER OF TRACKS AND 22 FEET VERTICALLY FROM A POINT LEVEL WITH THE TOP OF THE HIGHER RAIL, AND 6 FEET FROM THE CENTER OF TRACKS, AT ALL TIMES.

NS COORDINATION 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).

ALL UTILITY INSTALLATIONS OR RELOCATIONS ON NORFOLK SOUTHERN RIGHT-OF-WAY THAT ARE REQUIRED IN CONJUNCTION WITH THIS PROJECT CAN BE INSTALLED OR RELOCATED AS PART OF THE PROJECT PROVIDED THE CONSTRUCTION IS PERFORMED BY THE PROJECT CONTRACTOR OR PROJECT CONTRACTOR'S SUB-CONTRACTOR. HOWEVER, THE UTILITY MUST SUBMIT AN APPLICATION FOR THE INSTALLATION OR RELOCATION TO AECOM FOR APPROPRIATE HANDLING FOR LICENSE AGREEMENT AND APPLICABLE FEES. FOR UTILITY APPLICATIONS GO TO: WWW.NSCORP.COM > REAL ESTATE > NS SERVICES > WIRE, PIPELINE, AND FIBER OPTICS PROJECTS.
NOTE: LICENSE AGREEMENT MUST BE EXECUTED PRIOR TO UTILITY BEING INSTALLED OR RELOCATED.

"ONE CALL" SERVICES DO NOT LOCATE BURIED RAILROAD SIGNAL AND COMMUNICATIONS LINES. THE CONTRACTOR SHALL CONTACT THE RAILROAD'S REPRESENTATIVE TWO (2) DAYS IN ADVANCE OF THOSE PLACES WHERE EXCAVATION, PILE DRIVING, OR HEAVY LOADS MAY DAMAGE RAILROAD UNDERGROUND LINES ON RAILROAD PROPERTY. UPON REQUEST FROM THE CONTRACTOR OR AGENCY, RAILROAD SIGNAL FORCES WILL LOCATE AND PAINT MARK OR FLAG RAILROAD UNDERGROUND SIGNAL, COMMUNICATION, AND POWER LINES IN THE AREA TO BE DISTURBED FOR THE CONTRACTOR. THE CONTRACTOR SHALL AVOID EXCAVATION OR OTHER DISTURBANCE OF THESE LINES WHICH ARE CRITICAL TO THE SAFETY OF THE RAILROAD AND THE PUBLIC. IF DISTURBANCE OR EXCAVATION IS REQUIRED NEAR A BURIED RAILROAD SIGNAL, COMMUNICATION, OR POWER LINE, THE LINE SHALL BE POTHOLED MANUALLY WITH CAREFUL HAND EXCAVATION BY THE CONTRACTOR AND PROTECTED BY THE CONTRACTOR DURING THE COURSE OF THE DISTURBANCE UNDER THE SUPERVISION AND DIRECTION OF A RAILROAD SIGNAL REPRESENTATIVE.

FOR PROJECTS EXCEEDING 30 DAYS OF CONSTRUCTION, 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.

NORFOLK SOUTHERN WILL BE PROVIDED AS-BUILT DRAWINGS OF THE BRIDGE SHOWING THE ACTUAL CLEARANCES AS CONSTRUCTED. DEPTH, SIZE, AND LOCATION OF ALL FOUNDATION COMPONENTS SHALL BE SHOWN ON THE DRAWINGS.

THE ELEVATIONS OF THE EXISTING TOP-OF-RAIL SHALL BE VERIFIED TO MATCH THE APPROVED FINAL PLANS BEFORE BEGINNING CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE NORFOLK SOUTHERN PUBLIC PROJECTS ENGINEER.

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 2.4 KIPS.

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

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

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

PILE DRIVING CONSTRAINTS:

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FT BEHIND EACH ABUTMENT. DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED AND A 90 CALENDAR DAY WAITING PERIOD HAS ELAPSED. THE ENGINEER MAY ADJUST THE LENGTH OF THE WAITING PERIOD BASED ON SETTLEMENT PLATFORM READINGS. AFTER THE SPECIFIED WAITING PERIOD HAS ELAPSED, DRIVE ABUTMENT PILES TO THE UBV.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE IS 147 KIPS PER PILE FOR THE ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 245 KIPS PER PILE FOR THE PIER PILES.

ABUTMENT PILES:

12 INCH DIAMETER PILES 50 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEM

PIER PILES:

16 INCH DIAMETER PILES 65 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEM

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 44,000 FOOT-POUNDS. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 35,000 POUNDS PER SQUARE INCH.

COLOR AND SURFACE TREATMENT:

ABUTMENTS, PARAPETS AND DECK OVERHANGS: SEAL SURFACES AS NOTED IN THE BRIDGE PLANS, WITH EPOXY-URETHANE, USING FEDERAL STANDARD COLOR NUMBER 17778 (LIGHT NEUTRAL).

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN:

SHEET PILING FOR TEMPORARY SHORING AT THE REAR ABUTMENT SHALL MEET THE FOLLOWING REQUIREMENTS:

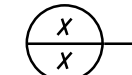
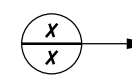
- 1. ASTM A572 GR 50 STEEL WITH A MINIMUM SECTION MODULUS OF 7.5 IN³ /FT.
2. THE TOP ELEVATION SHALL BE 798.0 AND MINIMUM BOTTOM ELEVATION SHALL BE 775.0
3. SEE 'SITE PLAN', [1/32] FOR LOCATION OF SHORING.
4. EXISTING ELECTRICAL SHALL BE RELOCATED OUT OF THE PATH OF THE SHEET PILING PRIOR TO DRIVING.
5. PRIOR TO EXCAVATION, SHEET PILING SHALL BE DRIVEN PARALLEL TO IR 270. SHEET PILING SHALL BE REMOVED ENTIRELY AFTER ADEQUATE BACKFILL HAS BEEN PLACED DURING CONSTRUCTION.
6. PAYMENT WILL BE MADE AT THE CONTRACT LUMP SUM PRICE FOR ITEM 503, COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

ABBREVIATIONS:

THE FOLLOWING STANDARD ABBREVIATIONS ARE USED THROUGHOUT THE PLANS:

- ABUT. - ABUTMENT
APPR. - APPROACH
Ø - BASELINE
BM - BENCHMARK
B OR BOT. - BOTTOM
BRG. - BEARING
C.B. - CATCH BASIN
C/C - CENTER TO CENTER
C.I.P. - CAST-IN-PLACE
C.J. - CONSTRUCTION JOINT
CL - CENTERLINE
CLR. - CLEARANCE
CONST. - CONSTRUCTION
C.P.P. - CORRUGATED POLYETHYLENE PIPE
CVN - CHARPY V-NOTCH
DIA. - DIAMETER
DL - DEAD LOAD
DWG. - DRAWING
EA. - EACH
E.F. - EACH FACE
EL. OR ELEV. - ELEVATION
EMB. - EMBEDMENT
EQ. - EQUAL
EST. - ESTIMATED
EX. OR EXIST. - EXISTING
EXP. - EXPANSION
F.A. - FORWARD ABUTMENT
F.F. - FAR FACE
F/F - FACE TO FACE
FIN. GRD. - FINISHED GRADE
FIX. - FIXED
FTG. - FOOTING
F.S. - FIELD SPLICE
FWD. - FORWARD
GIR. - GIRDER
GIR'S. - GIRDERS
HORIZ. - HORIZONTAL
INCRM. - INCREMENT
LT. - LEFT
MAX. - MAXIMUM
M.C. - MECHANICAL CONNECTOR
MIN. - MINIMUM
NDC - NORMAL DESIGN CRITERIA
N.F. - NEAR FACE
NO. - NUMBER
N.P.C.P.P. - NON-PERFORATED CORRUGATED POLYETHYLENE PIPE
O.C.J. - OPTIONAL CONSTRUCTION JOINT
PI - PIER 1
P.C.P.P. - PERFORATED CORRUGATED POLYETHYLENE PIPE
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
PL. - PLATE
PR. OR PROP. - PROPOSED
R.A. - REAR ABUTMENT
REF. - REFERENCE
RELOC. - RELOCATED
REQ. OR REQ'D. - REQUIRED
RNDG. - ROUNDING
RT. - RIGHT
SER'S. - SERIES
SHLD. - SHOULDER
SPA. - SPACE(D) OR SPACING
STA. - STATION
STD. DWG. OR SCD - STANDARD CONSTRUCTION DRAWING
STM. - STORM SEWER
T - TOP
T.O.S. - TOP OF SLOPE
TYP. - TYPICAL
UBV - ULTIMATE BEARING VALUE
U.N.O. - UNLESS NOTED OTHERWISE
VAR. - VARIES
VC - VERTICAL CURVE
VERT. - VERTICAL
W/ - WITH
W.P. - WORK POINT

THE SYMBOLS BELOW DESIGNATE THE NAMES AND LOCATIONS OF THE SECTION DETAILS THROUGHOUT THE STRUCTURE PLANS. THE TOP LETTER DESIGNATES THE SECTION NAME. THE BOTTOM NUMBER(S) SHOW WHICH STRUCTURE SHEET IS BEING CROSS REFERENCED.



SECTION

Vertical sidebar containing: DESIGN AGENCY (AECOM), DATE (10/20), REVISIONS (JTH, 2511304), DRAWN (ERM, REVIS), DESIGNED (ERM, CHECKED, JDM), GENERAL NOTES, FRA-70-22.61, PID No. 95639, 3/32, and drawing numbers 1108 and 1199.

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c:\pwworking\pitt\1635143\070_4318C_6BSQ01.dgn 4/7/2022 6:54:10 PM evan.mutch

PARTICIPATION			ITEM ODOT	EXT.	TOTAL	UNIT	DESCRIPTION	QUANTITIES		CALC BY:	ERM	7/28/2020			
01/IMS/PV	02/IMS/BR	03/IMS/BR						FRA-270-4318C				CHECK BY:		GAD	7/29/2020
								ABUTMENTS		PIERS	SUPER.	GENERAL	REF. SHEET		
		REAR	FWD.												
	LS		503	11101	LS	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN					LS	3/32		
	555		503	21100	555	CY	UNCLASSIFIED EXCAVATION	206	215	134					
	LS		505	11100	LS	LS	PILE DRIVING EQUIPMENT MOBILIZATION					LS			
	720		507	00500	720	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	360	360						
	800		507	00550	800	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	400	400						
	1,200		507	00700	1,200	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN			1200					
	1,300		507	00750	1,300	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED			1300					
	76		507	92200	76	FT	PREBORED HOLES	17	59						
	93,083		509	10000	93,083	LB	EPOXY COATED REINFORCING STEEL	4038	4181	24392	60472				
	187		511	34446	187	CY	CLASS QC2 CONCRETE WITH QC/OA, BRIDGE DECK				187				
	56		511	34450	56	CY	CLASS QC2 CONCRETE WITH QC/OA, BRIDGE DECK (PARAPET)				56				
	120		511	41012	120	CY	CLASS QC1 CONCRETE WITH QC/OA, PIER ABOVE FOOTINGS			120					
	80		511	43512	80	CY	CLASS QC1 CONCRETE WITH QC/OA, ABUTMENT INCLUDING FOOTING	39	41						
	43		511	46512	43	CY	CLASS QC1 CONCRETE WITH QC/OA, FOOTING			43					
	757		512	10100	757	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	37	39	297	384				
	129,212		513	10240	129,212	LB	STRUCTURAL STEEL MEMBERS, LEVEL 2				129212				
	1,664		513	20000	1,664	EACH	WELDED STUD SHEAR CONNECTORS				1664				
	1,118		514	00060	1,118	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT				1118				
	1,118		514	00066	1,118	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT				1118				
	1		514	10000	1	EACH	FINAL INSPECTION REPAIR				1				
	74		516	13200	74	SF	1/2" PREFORMED EXPANSION JOINT FILLER	36	38						
	121		516	13600	121	SF	1" PREFORMED EXPANSION JOINT FILLER	60	61						
	6		516	13900	6	SF	2" PREFORMED EXPANSION JOINT FILLER	3	3						
	90		516	14014	90	FT	INTEGRAL ABUTMENT EXPANSION JOINT SEAL	44	46						
	8		516	44201	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (11" x 11" x 2.0" WITH 12" x 12" x 1.5" PLATE)	4	4				14/32		
	8		516	44200	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (15" x 15" x 2.5" WITH 16" x 16" x 1.5" PLATE)			8					
	63		518	21200	63	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	31	32						
	115		518	40000	115	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	56	59						
	12		518	40010	12	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	6	6						
	2		523	20000	2	EACH	DYNAMIC LOAD TESTING	1		1					
	196		526	30001	196	SY	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN				196	26/32	27/32		
	61		526	90010	61	FT	TYPE A INSTALLATION				61				
	537		601	20000	537	SY	CRUSHED AGGREGATE SLOPE PROTECTION	253	284						
	26		846	00110	26	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM				26				

DESIGN AGENCY: AECOM
 AGRON CLEVELAND COLUMBUS
 271 WEST NATIONWIDE BOULEVARD
 OHIO 43126-2586
 (614) 464-4600

DATE: 10/20
 REVIEWED: JTH
 STRUCTURE FILE NUMBER: 2511304

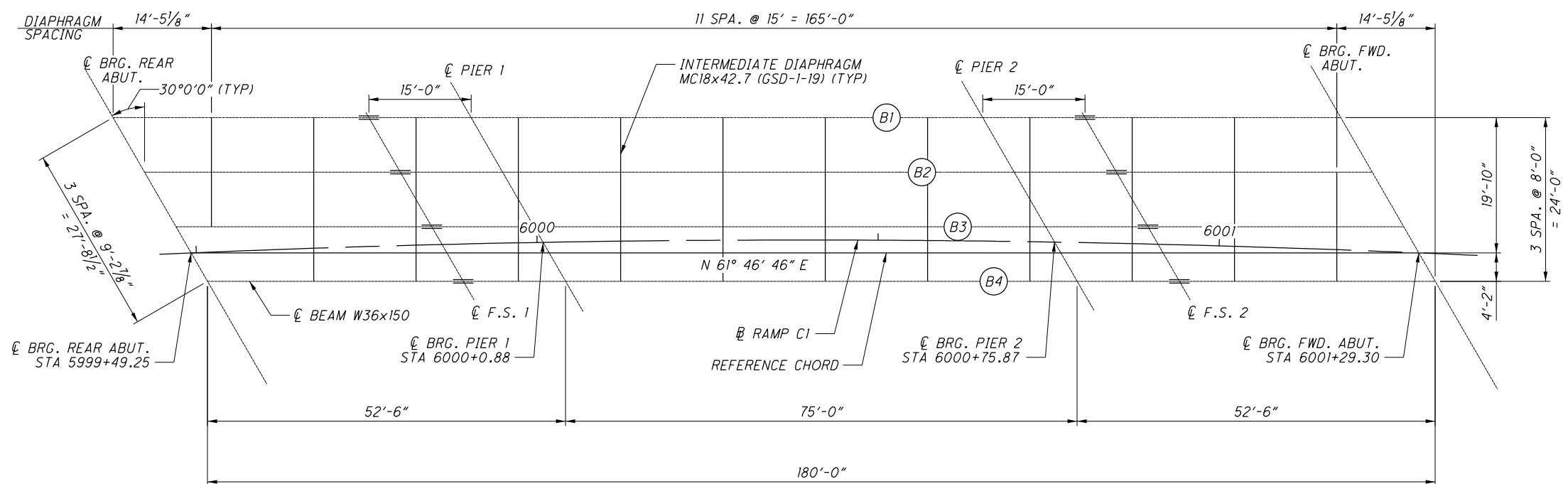
DESIGNED: ERM
 CHECKED: GAD

DRAWN: ERM
 REVISION: REVISED

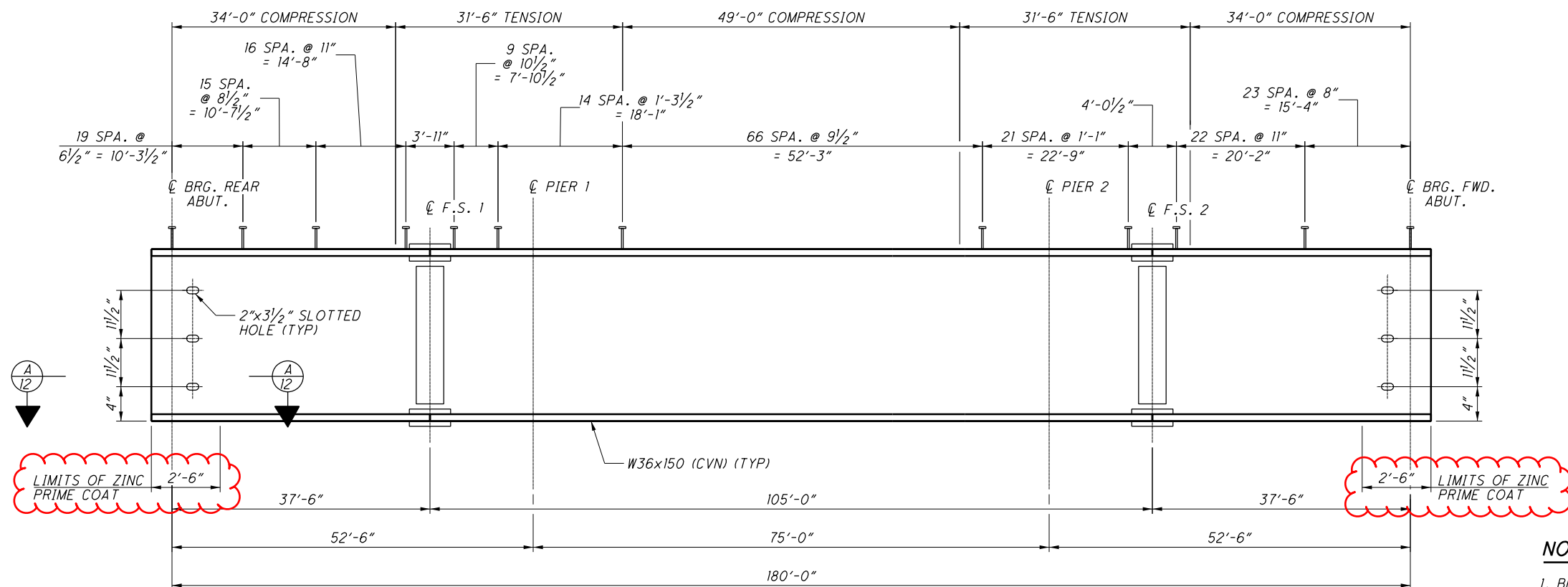
ESTIMATED QUANTITIES
 BRIDGE NO.: FRA-270-4318C
 RAMP C1 OVER NORFOLK SOUTHERN RR

FRA-70-22.61
 PID No. 95639

4/32
 1109
 1199



FRAMING PLAN



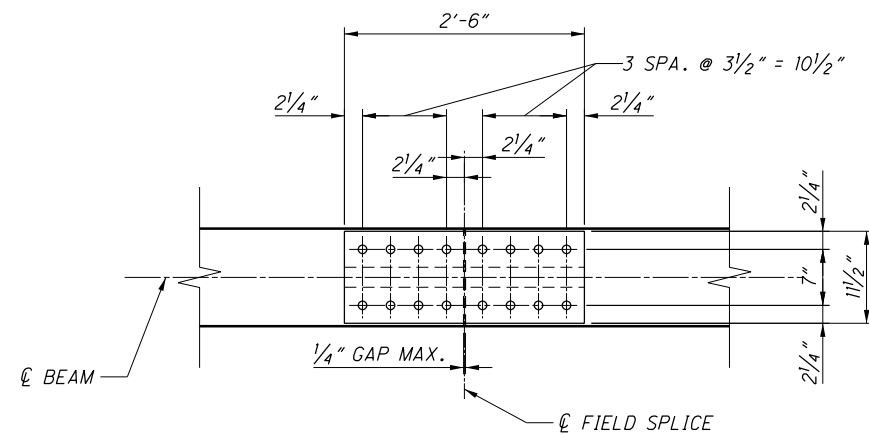
BEAM ELEVATION

NOTES:

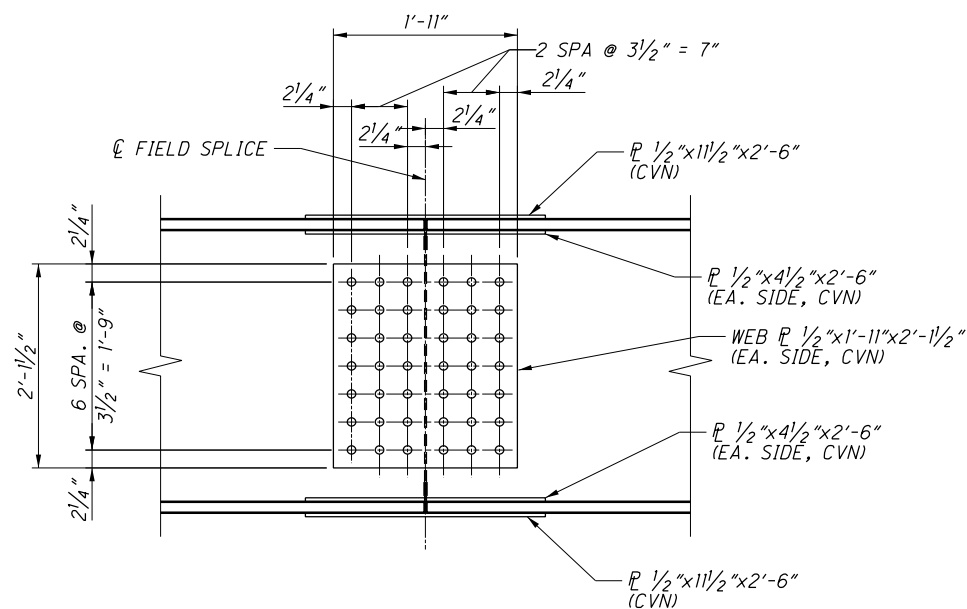
1. BEAM MEASUREMENTS, TO BE TAKEN ALONG REFERENCE CHORD
2. FOR ADDITIONAL DETAILS, SEE SHEET 12/32.

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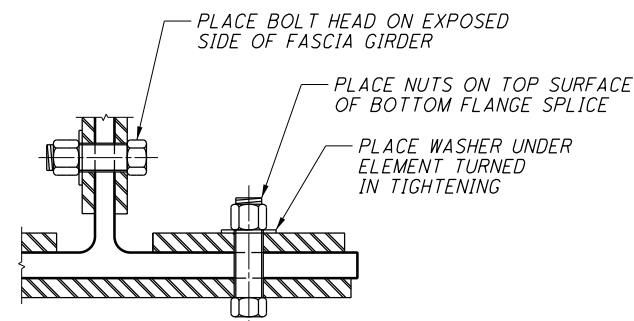
DESIGNED	TLN	CHECKED	ERM
DRAWN	ERM	REVISID	ERM
REVIEWED	JTH	STRUCTURE FILE NUMBER	2511304
DATE	10/20		



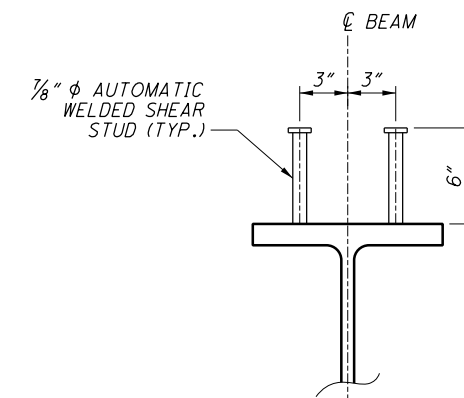
FLANGE SPLICE
FIELD SPLICE 1 AND FIELD SPLICE 2



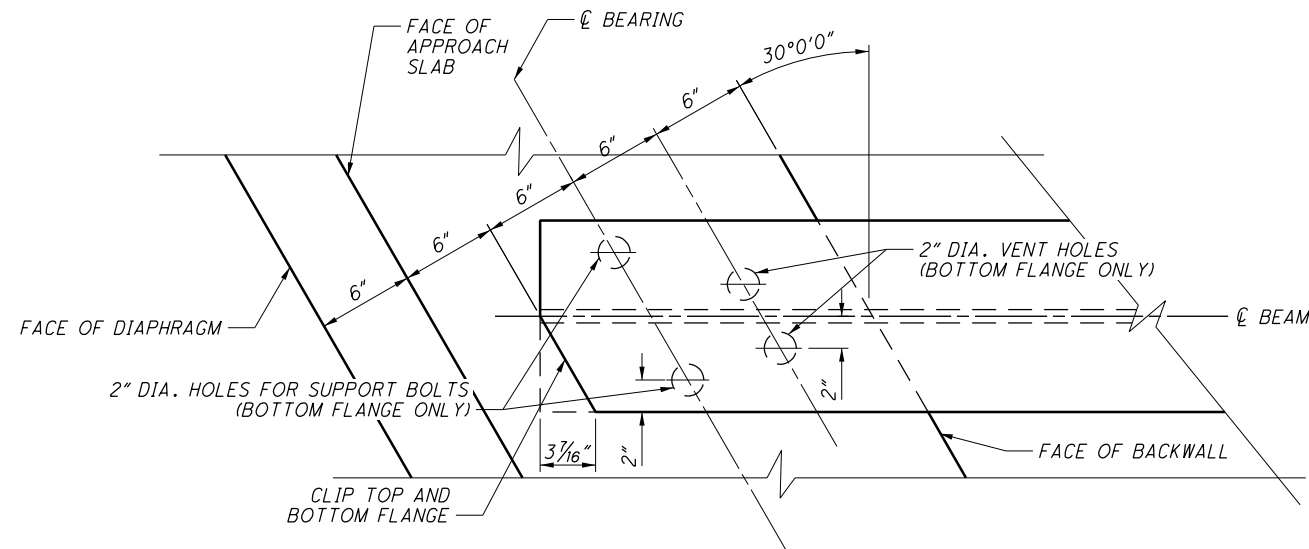
WEB SPLICE
FIELD SPLICE 1 AND FIELD SPLICE 2



BOLT ORIENTATION DETAIL



STUD SHEAR CONNECTOR DETAIL



SECTION 11 (TYPICAL AT EACH ABUT)

NOTES:

- ALL BOLTS IN FIELD SPLICES SHALL BE 1" DIAMETER HIGH STRENGTH BOLTS PER ASTM A325 TYPE 1. ALL BOLT HOLES SHALL BE 1/16" DIAMETER.
- FIELD SPLICE BOLTS FOR BEAM 1 SHALL BE GALVANIZED.
- ALL SPLICE PLATES SHALL BE ASTM A709 GRADE 50W.
- ALL SPLICE PLATES, EXCLUDING FILL PLATES, SHALL BE DESIGNATED (CVN). THE MATERIAL SHALL MEET THE SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN CMS 711.01.
- THE OPENING BETWEEN GIRDER ENDS AFTER ASSEMBLY SHALL NOT EXCEED 1/4".
- FOR LOCATIONS OF FIELD SPLICES, SEE FRAMING PLAN SHEET 11/32.
- WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" OR 5/16" FOR GREATER THAN 3/4" THICK.

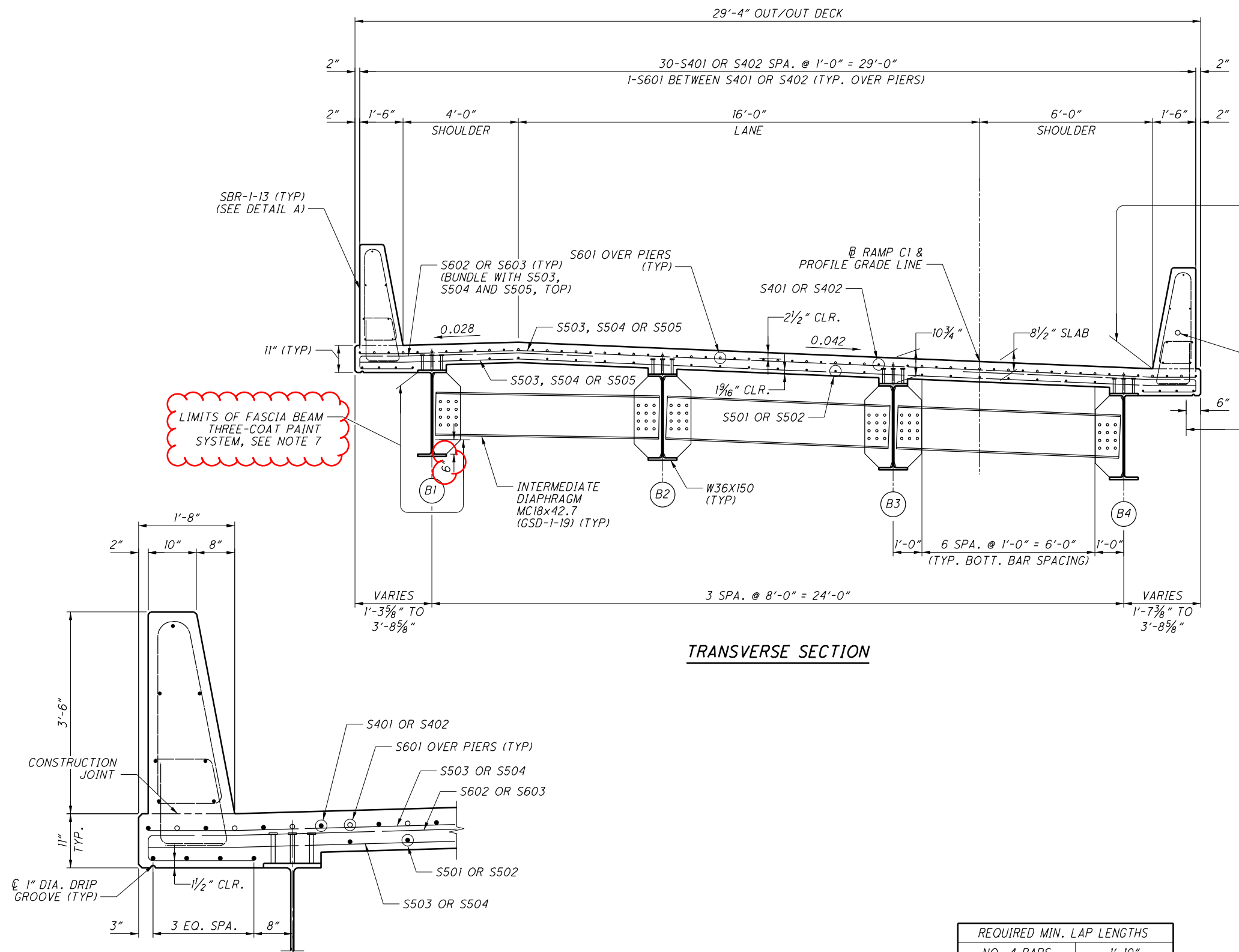
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DESIGNED	TLN	CHECKED	ERM
DRAWN	ERM	REVISED	
REVIEWED	JTH	STRUCTURE FILE NUMBER	2511304
DATE	10/20		

BEAM DETAILS
BRIDGE NO. FRA-270-4318C
RAMP C1 OVER NORFOLK SOUTHERN RR

FRA-70-22.61
PID No. 95639

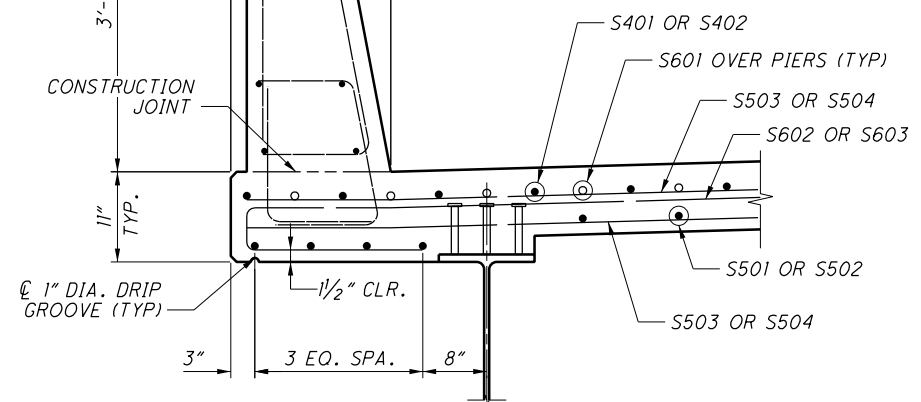
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LIMITS OF FASCIA BEAM
THREE-COAT PAINT
SYSTEM, SEE NOTE 7

LIMITS OF SEALING
CONCRETE SURFACES
(EPOXY-URETHANE)
(TYP)

TRANSVERSE SECTION



DETAIL A

REQUIRED MIN. LAP LENGTHS	
NO. 4 BARS	1'-10"
NO. 5 BARS	2'-3"
NO. 6 BARS	3'-4"

NOTES:

1. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM/GIRDER HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 2 1/8 INCHES AND A HAUNCH WIDTH EQUAL TO THE TOP FLANGE WIDTH. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE.

THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM/GIRDER, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.23.
2. FOR GENERAL NOTES, SEE SHEET [3/32].
3. FOR ADDITIONAL INTERMEDIATE DIAPHRAGM INFORMATION, SEE STANDARD DRAWING GSD-1-19.
4. FOR END DIAPHRAGM DETAILS, SEE SHEETS [15/32] AND [16/32].
5. FOR PARAPET REINFORCING DETAILS, SEE SHEET [22/32].
6. FOR REINFORCING STEEL LISTS, SEE SHEET [31/32].

7. FASCIA PAINT FOR BEAM 1 ONLY, SEE BDM FIGURE 308-1 FOR ADDITIONAL PAINT LIMITS AT SPLICE LOCATIONS.