

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

FRA-71-0.00 (PIC)

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

PROJECT DESCRIPTION

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

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

LIMITED ACCESS

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

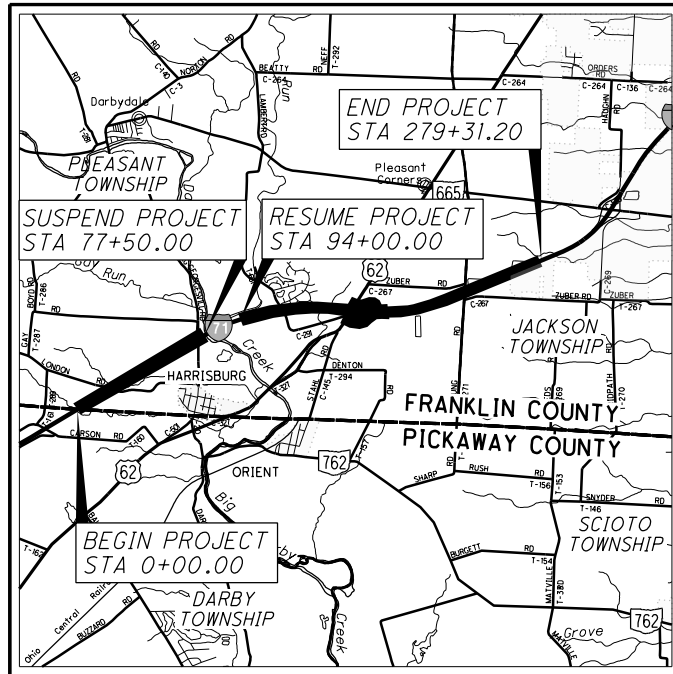
2019 SPECIFICATIONS

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

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

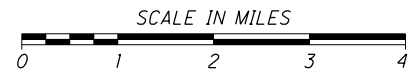
APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION



LOCATION MAP

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



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

DESIGN DESIGNATION AND DESIGN EXCEPTIONS

SEE SHEET 2

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ENGINEERS SEAL:

STRUCTURES



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

ENGINEERS SEAL:

ROADWAY



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

ENGINEERS SEAL:

MOT AND LIGHTING



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

STANDARD CONSTRUCTION DRAWINGS

STANDARD CONSTRUCTION DRAWINGS												SUPPLEMENTAL SPECIFICATIONS			
BP-1.1	7/28/00	DM-1.1	7/21/17	MGS-5.2	7/15/16	HL-10.11	4/17/20	MT-95.30	7/19/19	MT-100.00	1/15/16	TC-41.50	10/18/13	800	4/17/20
BP-2.1	7/17/15	DM-1.2	1/18/13	MGS-5.3	7/15/16	HL-10.12	4/17/20	MT-95.40	1/17/20	MT-101.60	1/17/20	TC-42.10	10/18/13	807	4/17/20
BP-2.2	7/18/08	DM-4.1	7/20/18	MGS-6.1	1/19/18	HL-10.13	4/17/20	MT-95.45	1/17/20	MT-101.70	1/17/20	TC-42.20	10/18/13	808	4/17/20
BP-2.3	7/18/14	DM-4.2	7/20/12	MGS-6.2	7/19/19	HL-10.31	4/17/20	MT-95.70	1/17/20	MT-101.75	1/17/20	TC-51.11	1/15/16	813	10/19/18
BP-3.1	1/17/20	DM-4.3	1/15/16			HL-20.11	4/17/20	MT-95.71	1/17/20	MT-101.80	1/17/20	TC-52.10	10/18/13	821	4/20/12
BP-5.1	1/18/19	DM-4.4	1/15/16	RM-1.1	7/18/14	HL-20.21	4/17/20	MT-95.72	1/17/20	MT-101.90	7/21/17	TC-52.20	7/20/18	832	10/19/18
BP-6.1	7/19/13			RM-4.3	7/18/14	HL-30.11	4/17/20	MT-95.82	7/19/13	MT-102.10	1/17/20	TC-61.10	1/17/20	833	7/19/19
BP-9.1	1/18/19	F-2.1	7/20/18	RM-4.5	7/21/17	HL-30.21	4/17/20	MT-95.81	1/17/20	MT-102.20	4/19/19	TC-64.10	1/17/20	836	1/19/18
		F-3.1	7/19/13	RM-4.6	7/19/13	HL-30.22	4/17/20	MT-98.11	1/17/20	MT-102.30	10/16/15	TC-65.10	1/17/20	837	7/19/19
CB-2.1	7/20/18	F-3.3	7/19/13			HL-30.31	4/17/20	MT-98.20	4/19/19	MT-103.10	1/19/18	TC-65.11	7/21/17	846	4/17/15
CB-2.2	7/20/18	F-3.4	7/19/13	AS-1-15	7/17/15	HL-30.32	4/17/20	MT-98.21	1/17/20	MT-104.10	10/16/15	TC-71.10	1/19/18	848	1/20/17
CB-2.3	1/15/16			AS-2-15	1/18/19	HL-40.26	4/17/20	MT-98.22	1/17/20	MT-105.10	1/17/20	TC-72.20	7/20/18	848	1/18/20
CB-3.2	1/15/16	MGS-1.1	1/19/18	GSD-1-19	1/18/19	HL-50.21	4/17/20	MT-98.28	1/17/20			TC-73.20	1/17/20	899	1/17/20
CB-3.3	1/15/16	MGS-2.1	1/19/18	PCB-91	1/18/13	HL-60.11	4/17/20	MT-98.29	1/17/20	TC-12.30	1/19/18			905	4/17/20
CB-3.4	1/15/16	MGS-3.1	1/19/18	SBR-1-13	7/20/18	HL-60.12	4/17/20	MT-98.30	7/19/19	TC-21.20	7/20/18			908	10/20/17
I-2.2	7/19/19	MGS-3.2	1/18/13	SICD-1-96	7/18/14	HL-60.21	7/20/18	MT-99.20	4/19/19			SPECIAL PROVISIONS		913	4/21/17
		MGS-4.2	7/19/13	SICD-2-14	7/18/14	HL-60.31	1/17/20	MT-99.30	1/17/20	TC-41.20	10/18/13			921	4/28/12
MH-1.2	1/15/16	MGS-4.3	1/18/13	VPF-1-90	7/20/18			MT-99.60	7/15/16	TC-41.30	10/18/13			938	1/19/18

UNDERGROUND UTILITIES



PLAN PREPARED BY:

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

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, AS PER PLAN.

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, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ESTIMATED QUANTITIES

FOR THE ASPHALT OPTION, A WEDGE COURSE SHALL BE INSTALLED AT THE CONCLUSION OF PHASE 1 AND PHASE 2 TO PROVIDE A SMOOTH TRANSITION APPROACHING AND DEPARTING THE APPROACH SLABS/BRIDGE DECKS. THIS TRANSITION SHALL BE AT A MINIMUM OF 120:1. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
144 CU. YD.

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 962 M. GAL.

ITEM 614, REPLACEMENT SIGN

FLATSHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD, CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

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

ITEM 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 PROVIDED IN THE GENERAL SUMMARY.

WORK ZONE SPEED ZONES (WZSZS)

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

WZSZ REVISION NUMBER	COUNTY-ROUTE-SECTION	DIRECTION
WZ-35645	FRA-71-0.00	NORTHBOUND
WZ-35645	FRA-71-0.00	SOUTHBOUND

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

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

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

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

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

WZSZS USING TEMPORARY FLATSHEET SPEED LIMIT SIGNS SHALL BE IN ACCORDANCE WITH THIS NOTE AND SCD MT-104.10. ADDITIONALLY PAYMENT MAY BE REMOVED, OR A DISINCENTIVE APPLIED, FOR WZSZS USING TEMPORARY FLATSHEET SPEED LIMIT SIGNS THE SAME AS DESCRIBED IN THE MOST RECENT PUBLICATION OF SS 808 IN REGARDS TO WZSZS USING DSL SIGN ASSEMBLIES (SEE SS 808.06 PARAGRAPHS 4 THROUGH 7, INCLUDING TABLE 1). ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN OMTUCD PART 6.

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

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

ORIGINAL POSTED SPEED LIMIT
SLM 0.00 TO SLM 4.2570 MPH
SLM 4.25 TO SLM 5.2965 MPH

ORIGINAL POSTED SPEED LIMIT	W/ POSITIVE PROT.		W/OUT POSITIVE PROT.	
	WORKERS PRESENT	WORKERS NOT PRESENT	WORKERS PRESENT	WORKERS NOT PRESENT
70	60	65	55	65
65	55	60	50	60
60	55	60	50	60
55	50	55	45	55

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

ITEM 614, WORK ZONE SPEED LIMIT SIGN ASSUMING 4 SIGNS (WINTERIZATION) 4 EACH

ITEM 614, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY 160 SIGN MNTH ASSUMING 2 DSL SIGN ASSEMBLIES FOR 2 MONTHS (PRE-PHASE 1, PARTS A & B) ASSUMING 7 DSL SIGN ASSEMBLIES FOR 4 MONTHS (PHASE 1) ASSUMING 8 DSL SIGN ASSEMBLIES FOR 4 MONTHS (PHASE 2) ASSUMING 12 DSL SIGN ASSEMBLIES FOR 8 MONTHS (PHASE 3)

WORK ZONE INCREASED PENALTIES SIGN (R11-H5A)

R11-H5A-48 SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SIGNS SHALL BE MOUNTED AT THE APPROPRIATE OFFSETS AND ELEVATIONS AS PRESCRIBED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE MAINTAINED ON SUPPORTS MEETING CURRENT SAFETY CRITERIA.

THE SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR

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

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

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

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

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

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

ITEM 614, WORK ZONE INCREASED PENALTIES SIGN 40 EACH

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

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

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

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

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

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

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

CALCULATED
BER
CHECKED
SMM

MAINTENANCE OF TRAFFIC GENERAL NOTES

FRA-71-0.00

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SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	614		614			615	615	615	615	615	615	615	616	646	808
		MAINTAINING TRAFFIC, AS PER PLAN	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	DETOUR SIGNING	WORK ZONE SPEED LIMIT SIGN	WORK ZONE INCREASED PENALTIES SIGN	REPLACEMENT SIGN	REPLACEMENT DRUM	WORK ZONE CROSSOVER LIGHTING SYSTEM	MAINTAINING TRAFFIC - MISC.: BRIDGE DECK AND PAVEMENT PATCHING	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN		WORK ZONE EDGE LINE, CLASS 1, 6", 807				ROADS FOR MAINTAINING TRAFFIC, AS PER PLAN	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 1	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 2	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 3	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 4	WATER	SPECIAL - AIR SPEED ZONE MARKING
		PLAN	HOURLY		EACH	EACH	EACH	EACH	EACH	EACH	EACH	SNMT				SY	SY	SY	SY	SY	SY	SY	MGAL	EACH	SNMT
16		LUMP																							
19					12	40	10	100															962		160
20												22													
21			1500																						
22				LUMP									\$180,000		LUMP										
23																			300	6844	2000	500		18	
46	PRE-PHASE 1																357	699							
47	PRE-PHASE 1																4745	2871							
48	PRE-PHASE 1																169	2035							
49	PRE-PHASE 1																	2055							
50	PRE-PHASE 1																	2009							
51	PRE-PHASE 1																	958							
52	PRE-PHASE 1																								
53	PRE-PHASE 1																								
54	PRE-PHASE 1																								
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65	PRE-PHASE 1																								
66	PRE-PHASE 1																								
112	PRE-PHASE 1																								
113	PRE-PHASE 1																								
114	PRE-PHASE 1																								
SUB-TOTALS																									
TOTALS CARRIED TO SHEET 392		LUMP	1,500	LUMP	12	40	10	100	3	\$180,000	22		29235 FT		LUMP	14,471	37,907	300	6,844	2,000	500	962	18	160	

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SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	614	614	614	614	615	615	622	622	622							
		WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	WORK ZONE CROSSOVER LIGHTING SYSTEM	WORK ZONE RAISED PAVEMENT MARKER	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	OBJECT MARKER, ONE-WAY	OBJECT MARKER, TWO-WAY	WORK ZONE LANE LINE, CLASS I, 6", 807	WORK ZONE EDGE LINE, CLASS I, 6", 807	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807	WORK ZONE DOTTED LINE, CLASS I, 12", 642 PAINT	WORK ZONE GORE MARKING, CLASS II, 642 PAINT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	PORTABLE BARRIER, UNANCHORED	PORTABLE BARRIER, ANCHORED	GLARE SCREEN						
		EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	SY	SY	FT	FT	FT							
115	PRE-PHASE 1					81					460	530														
116	PRE-PHASE 1					171					1650	1125														
117	PRE-PHASE 1	1				191	60	8	28		63	4768	573		212		940				360					
118	PRE-PHASE 1					81	54	16	34		600	4000	200				900				800					
119	PRE-PHASE 1					200	15		5			3524	800				220				220					
120	PRE-PHASE 1					9						28	62													
121	PRE-PHASE 1					24						462														
122	PRE-PHASE 1					70						1600														
123	PRE-PHASE 1	1				20	14	4	19			1600					740									
124	PRE-PHASE 1					80	6	6	8			1289					100									
125	PHASE 1-3		4							14							700									
128	PHASE 1					87						532	566													
130	PHASE 1	1				98	45		15		200	1658	629		133		740									
132	PHASE 1					64	48	7	23		410	1600	390		553		800									
133	PHASE 1					120	48	7	23			1600	800		553		800									
134	PHASE 1					41	48		16		560	1600	240		553		800									
135	PHASE 1					7	48		16		800	1600			553		800									
136	PHASE 1					7	48		16		800	1600			553		800									
137	PHASE 1					7	48		16		800	1600			553		800									
138	PHASE 1					7	48		16		800	1600			553		800									
139	PHASE 1					7	48		16		800	1600			553		800									
140	PHASE 1					78	48		16		300	1600	500		500		800									
142	PHASE 1				1	78	3		1		310	1600	490		46		50									
144	PHASE 1	1			3	47	9	5	15		510	1600	290				110									
146	PHASE 1					106	48		16		100	1600	700		238		800									
148	PHASE 1					7	48		16		800	1600			553		800									
150	PHASE 1					7	48		16		800	1600			553		800									
151	PHASE 1					7	48		16		800	1600			553		800									
152	PHASE 1					7	54	2	20		800	1600			553		800									
153	PHASE 1					7	48		16		800	1600			553		800									
154	PHASE 1					7	48		16		800	1600			553		800									
156	PHASE 1					7	48		16		800	1600			553		800									
158	PHASE 1				2	5	57	10	29		800	1600			241		570	230								
160	PHASE 1				2	5		3	20		800	1647		420	282		550	250								
162	PHASE 1					7	48		16		800	1600			553		800									
164	PHASE 1					7	48		16		800	1600		368	553		800									
166	PHASE 1					7	48		16		800	1600		672	976	290	800									
168	PHASE 1					7	48		16		800	1600			2086		800									
169	PHASE 1					7	48		16		800	1600			661		800									
170	PHASE 1					7	48		16		800	1600			553		800									
171	PHASE 1					7	48		16		800	1600			553		800									
172	PHASE 1					7	48		16		800	1600			553		800									
173	PHASE 1					7	48		16		800	1600			553		800									
174	PHASE 1					7	48		16		800	1600			553		800									
175	PHASE 1					7	48		16		800	1600			553		800									
176	PHASE 1					7	48		16		800	1600			553		800									
177	PHASE 1					7	48		16		800	1600			553		800									
178	PHASE 1					78	36		12		300	1600	500		548		600									
180	PHASE 1					105						776	688		814											
204	PHASE 1			1																						
205	PHASE 1			1																						
SUB-TOTALS											24,953 FT	78,394 FT														
TOTALS CARRIED TO SHEET 392		4	4	2	8	2,014	1,759	68	684	14	4.73 MILE	14.85 MILE	9,083	1,460	212	20,350	290	30,220	480	1,380						

CALCULATED BER	CHECKED SMM	MAINTENANCE OF TRAFFIC SUBSUMMARY (CONCRETE OPTION)
<div style="border: 1px solid black; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;"> 29 </div>		1312

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SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	614	614	614	622	622											
		WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	DETOUR SIGNING	WORK ZONE RAISED PAVEMENT MARKER	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	OBJECT MARKER, ONE-WAY	WORK ZONE LANE LINE, CLASS 1, 6", 807	WORK ZONE EDGE LINE, CLASS 1, 6", 807	WORK ZONE CHANNELIZING LINE, CLASS 1, 12", 807	WORK ZONE DOTTED LINE, CLASS 1, 12", 642 PAINT	WORK ZONE STOP LINE, CLASS 1, 642 PAINT	PORTABLE BARRIER, UNANCHORED	PORTABLE BARRIER, ANCHORED										
		EACH	EACH		EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	FT											
206	PHASE 2					66				274	437															
208	PHASE 2					120				1600	800															
210	PHASE 2					120	30		10	1600	800			500												
212	PHASE 2	1			9	96	96		32	134	1658	692		1610												
214	PHASE 2				7		96		32	800	1600			1600												
215	PHASE 2				7		96		32	800	1600			1600												
216	PHASE 2				7		96		32	800	1600			1600												
217	PHASE 2				7		96		32	800	1600			1600												
218	PHASE 2				7		96		32	800	1600			1600												
219	PHASE 2				7		96		32	800	1600			1600												
220	PHASE 2				7		96		32	800	1600			1600												
221	PHASE 2				7		96		32	800	1600			1600												
222	PHASE 2				93		84		44	300	1600	500		1400												
224	PHASE 2				78		50	5	23	310	1600	490		800												
226	PHASE 2				16		54		22	790	1600	10		800												
228	PHASE 2	1			120		90		30		1600	800		1500												
230	PHASE 2				32		96		32	620	1600	180		1600												
232	PHASE 2				7		96		32	800	1600			1600												
233	PHASE 2				7		96		32	800	1600			1600												
234	PHASE 2				7		96		32	800	1600			1600												
235	PHASE 2				7		96		32	800	1600			1600												
236	PHASE 2				7		96		32	800	1600			1600												
237	PHASE 2				7		96		32	800	1600			1600												
238	PHASE 2				7		63	6	43	800	1600			1370	230											
240	PHASE 2				7		111	3	40	800	1600			1350	250											
242	PHASE 2				7		111		32	800	1600			1600												
243	PHASE 2	1			7		93		31	800	2880			1530												
245	PHASE 2				7		96		32	800	2050		350	1600												
247	PHASE 2				7		96		32	800	1600		430	1600												
249	PHASE 2				7		96		32	800	1600			1600												
250	PHASE 2				7		96		32	800	1600			1600												
251	PHASE 2				7		96		32	800	1600			1600												
252	PHASE 2				7		96		32	800	1600			1600												
253	PHASE 2				7		96		32	800	1600			1600												
254	PHASE 2				7		96		32	800	1600			1600												
255	PHASE 2				7		96		32	800	1600			1600												
256	PHASE 2				7		96		32	800	1600			1600												
257	PHASE 2				7		96		32	800	1600			1600												
258	PHASE 2				36	42	84		28	310	1600	490		1400												
260	PHASE 2	1				75					408	504														
262	PHASE 2		1				39		13		1414			610												
263	PHASE 2						6		2		1564			460												
264	PHASE 2			LUMP																						
266	PHASE 2A										1396			25												
267	PHASE 2A						24				1654															
268	PHASE 2A										151															
270	PHASE 2A	1									1331		151	269												
272	PHASE 2A										200															
273	PHASE 2A						45		15					750												
274	PHASE 2A						48		16		350			800												
275	PHASE 2A						27		9		430			430												
276	PHASE 2A			LUMP																						
277	PHASE 2A			LUMP																						
SUB-TOTALS										25,664 FT	71,760 FT															
TOTALS CARRIED TO SHEET 392		5	1	LUMP	587	519	3,551	14	1,222	5.06 MILE	13.57 MILE	5,703	1,200	25	58,510	480										

CALCULATED	BER	CHECKED	SMM
MAINTENANCE OF TRAFFIC SUBSUMMARY (CONCRETE OPTION)			
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SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	614	614	614	614	615	615	622	622						
		WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	DETOUR SIGNING	WORK ZONE RAISED PAVEMENT MARKER	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	OBJECT MARKER, ONE-WAY	WORK ZONE LANE LINE, CLASS I, 6", 807	WORK ZONE EDGE LINE, CLASS I, 6", 807	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807	WORK ZONE DOTTED LINE, CLASS I, 12", 642 PAINT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	WORK ZONE GORE MARKING, CLASS II, 642 PAINT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	PORTABLE BARRIER, UNANCHORED	GLARE SCREEN					
		EACH		EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	SY	SY	FT	FT						
319	PRE-PHASE 3														30	65								
320	PRE-PHASE 3					33	11								1105	197	550							
321	PRE-PHASE 3	1				15	5								408	114	250							
322	PRE-PHASE 3		LUMP																					
332	PHASE 3				219																			
333	PHASE 3	1		32	170	78	4	4	353	1696	1448							630	630					
334	PHASE 3			28		96	7	7	1500	3200	1305		142					800	800					
335	PHASE 3			14		96	6	6	1600	3200								800	800					
336	PHASE 3			14		102	8	10	1600	3200								800	800					
337	PHASE 3			14		96	6	6	1600	3200								800	800					
338	PHASE 3			14		96			1600	3200								800	800					
339	PHASE 3			14		96			1600	3200								800	800					
340	PHASE 3			14		96			1600	3200								800	800					
341	PHASE 3			14		96			1600	3200								800	800					
342	PHASE 3			14		96	9	16	1600	3200								800	800					
343	PHASE 3			14		96	3	26	1600	3200								800	800					
344	PHASE 3			14		96	6	26	1600	3200								800	800					
345	PHASE 3			14		96			1600	3200								800	800					
346	PHASE 3			14		96			1600	3200								800	800					
347	PHASE 3			14		96	12	12	1600	3200								800	800					
348	PHASE 3			14		96	4	4	1600	3200								800	800					
349	PHASE 3			14		102	8	10	1600	3200								800	800					
350	PHASE 3			14		96			1600	3200								800	800					
351	PHASE 3			14		96	12	12	1600	3200								800	800					
352	PHASE 3			14		96	16	16	1600	3200								800	800					
353	PHASE 3			14		111	16	21	1600	3200		100						800	800					
354	PHASE 3			14		126	11	21	1600	3295		535						800	800					
355	PHASE 3			14		96			1600	3200								800	800					
356	PHASE 3			14		153		19	1600	3800		250						1750	800					
357	PHASE 3	1		14	18	144		16	1600	4800		790		44				1600	800					
358	PHASE 3	1		14	33	123		9	1600	3798		508		112				1220	800					
359	PHASE 3			14		96			1600	3200		305						800	800					
360	PHASE 3			14		96			1600	3200								800	800					
361	PHASE 3			14		96			1600	3200								800	800					
362	PHASE 3			14		96			1600	3200								800	800					
363	PHASE 3			14		96			1600	3200								800	800					
364	PHASE 3			14		96			1600	3200								800	800					
365	PHASE 3			14		96			1600	3200								800	800					
366	PHASE 3			14		96			1600	3200								800	800					
367	PHASE 3			14		96			1600	3200								800	800					
368	PHASE 3			52	64	96			891	3200	709							800	800					
369	PHASE 3				240	12				2768	1600							160	160					
370	PHASE 3				60						384													
374	PHASE 3					12		4		1208			14					160						
375	PHASE 3					54		18		1800								900						
376	PHASE 3		LUMP																					
SUB-TOTALS									55,544 FT	125,565 FT														
TOTALS CARRIED TO SHEET 392		4	LUMP	574	804	3,753	128	279	10.52 MILE	23.74 MILE	5,546	2,488	142	14	156	1,543	376	32,820	28,790					

CALCULATED BY: []
 CHECKED BY: []
 SMM: []
MAINTENANCE OF TRAFFIC SUBSUMMARY (CONCRETE OPTION)
FRA-71-0.00
 32
 1312

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SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	622										
		WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	OBJECT MARKER, ONE-WAY	WORK ZONE EDGE LINE, CLASS I, 6", 807	WORK ZONE DOTTED LINE, CLASS I, 12", 642 PAINT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	WORK ZONE GORE MARKING, CLASS II, 642 PAINT	PORTABLE BARRIER, UNANCHORED										
		EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT										
377	PHASE 3A				36	12	1160	16			580										
378	PHASE 3A	1			39	13	1800				620										
379	PHASE 3A				12	4	1200				156										
380	PHASE 3A				48	16	1600				800										
381	PHASE 3A	1	58	39	18	6	1847	115	155		254										
382	PHASE 3A			15			305	305													
SUB-TOTALS							7,912 FT														
TOTALS CARRIED TO SHEET 392		2	58	54	153	51	1.50 MILE	420	16	155	2,410										

MAINTENANCE OF TRAFFIC SUBSUMMARY (CONCRETE OPTION)	CALCULATED BER
	CHECKED SMM

SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	614	614	614	615	615	615	615	615	615	615	616	644	808
		MAINTAINING TRAFFIC, AS PER PLAN	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	DETOUR SIGNING	WORK ZONE SPEED LIMIT SIGN	WORK ZONE INCREASED PENALTIES SIGN	REPLACEMENT SIGN	REPLACEMENT DRUM	WORK ZONE CROSSOVER LIGHTING SYSTEM	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	MAINTAINING TRAFFIC, MISC.: BRIDGE DECK AND PAVEMENT PATCHING	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	WORK ZONE EDGE LINE, CLASS 1, 6", 807	ROADS FOR MAINTAINING TRAFFIC, AS PER PLAN	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 1	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 2	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 3	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 4	WATER	SPECIAL - AIR SPEED ZONE MARKING	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY
		PLAN	HOURLY	EACH	EACH	EACH	EACH	EACH	CY	EACH	SNMT	EA		SY	SY	SY	SY	SY	SY	MGAL	EACH	SNMT	
16		LUMP																					
19				12	40	10	100														962		160
20																							
21			1500																				
22				LUMP						\$180,000				LUMP									
23																300	6844	2000	500		18		
67	PRE-PHASE 1														165	560							
68	PRE-PHASE 1														4348	3302							
69	PRE-PHASE 1														342	2035							
70	PRE-PHASE 1														465	2055							
71	PRE-PHASE 1														449	2009							
72	PRE-PHASE 1														314	958							
73	PRE-PHASE 1														146								
74	PRE-PHASE 1														28								
75	PRE-PHASE 1														302								
76	PRE-PHASE 1														441	1846							
77	PRE-PHASE 1														334	2111							
78	PRE-PHASE 1														307	1845							
79	PRE-PHASE 1														168	1483							
80	PRE-PHASE 1														414	1842							
81	PRE-PHASE 1														538	2210							
82	PRE-PHASE 1														6264	4639							
83	PRE-PHASE 1														3199	4394							
84	PRE-PHASE 1														540	2031							
85	PRE-PHASE 1														473	2103							
86	PRE-PHASE 1														192	1465							
112	PRE-PHASE 1										1												
113	PRE-PHASE 1										1												
114	PRE-PHASE 1										1												
TOTALS CARRIED TO SHEET 392		LUMP	1,500	LUMP	12	40	10	100	3	144	\$180,000	22		LUMP	19,429	36,888	300	6,844	2,000	500	962	18	160

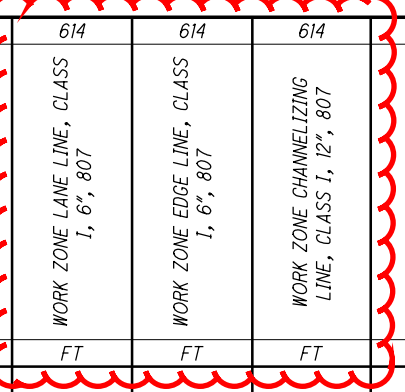
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SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	614	614	614	614	615	615	622	622	622								
		WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	WORK ZONE CROSSOVER LIGHTING SYSTEM	WORK ZONE RAISED PAVEMENT MARKER	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	OBJECT MARKER, ONE-WAY	OBJECT MARKER, TWO-WAY	WORK ZONE LANE LINE, CLASS I, 6", 807	WORK ZONE EDGE LINE, CLASS I, 6", 807	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807	WORK ZONE DOTTED LINE, CLASS I, 12", 642 PAINT	WORK ZONE GORE MARKING, CLASS II, 642 PAINT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	PORTABLE BARRIER, UNANCHORED	PORTABLE BARRIER, ANCHORED	GLARE SCREEN							
		EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	SY	SY	FT	FT	FT								
115	PRE-PHASE 1					81																					
116	PRE-PHASE 1					171																					
117	PRE-PHASE 1	1				191	60	8	28																		
118	PRE-PHASE 1					81	54	16	34																		
119	PRE-PHASE 1					200	15		5																		
120	PRE-PHASE 1					9																					
121	PRE-PHASE 1					24																					
122	PRE-PHASE 1					70																					
123	PRE-PHASE 1	1				20	14	4	19																		
124	PRE-PHASE 1					80	6	6	8																		
125	PHASE 1-3		4																								
127	PHASE 1					15																					
129	PHASE 1					120																					
131	PHASE 1	1				85	45	15	30																		
132	PHASE 1					64	48	7	23																		
133	PHASE 1					120	48	7	23																		
134	PHASE 1					41	54	9	27																		
135	PHASE 1					7	48	7	23																		
136	PHASE 1					7	48		16																		
137	PHASE 1					7	48		16																		
138	PHASE 1					7	48		16																		
139	PHASE 1					7	48		16																		
141	PHASE 1					86	48		16																		
143	PHASE 1				1	99	9		3																		
145	PHASE 1					41	18	6	12																		
147	PHASE 1	1				120	48		16																		
149	PHASE 1					32	48		16																		
150	PHASE 1					7	48	13	29																		
151	PHASE 1					7	48	4	20																		
152	PHASE 1					7	54	2	20																		
153	PHASE 1					7	48		16																		
155	PHASE 1					7	48	10	26																		
157	PHASE 1					7	48	16	32																		
159	PHASE 1				2	5	57	12	31																		
161	PHASE 1				2	5	60	4	24																		
163	PHASE 1					7	48		16																		
165	PHASE 1					7	48		16																		
167	PHASE 1					7	48		16																		
168	PHASE 1					7	48		16																		
169	PHASE 1					7	48		16																		
170	PHASE 1					7	48		16																		
171	PHASE 1					7	48	4	20																		
172	PHASE 1					7	48	6	22																		
173	PHASE 1					7	48		16																		
174	PHASE 1					7	48		16																		
175	PHASE 1					7	48		16																		
176	PHASE 1					7	48		16																		
177	PHASE 1					7	48		16																		
179	PHASE 1					78	36		12																		
181	PHASE 1					138																					
204	PHASE 1			1																							
205	PHASE 1			1																							
SUB-TOTALS																											
TOTALS CARRIED TO SHEET 392		4	4	2	5	2,144	1,840	156	775	14	4.66 MILE	15.06 MILE	10,006	1,460	212	4,130	286	30,060	480	1,380							

CALCULATED	BER	CHECKED	SMM
MAINTENANCE OF TRAFFIC SUBSUMMARY (ASPHALT OPTION)			
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35			
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SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	614	614	614	622	622								
		WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	DETOUR SIGNING	WORK ZONE RAISED PAVEMENT MARKER	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	OBJECT MARKER, ONE-WAY	WORK ZONE LANE LINE, CLASS 1, 6", 807	WORK ZONE EDGE LINE, CLASS 1, 6", 807	WORK ZONE CHANNELIZING LINE, CLASS 1, 12", 807	WORK ZONE DOTTED LINE, CLASS 1, 12", 642 PAINT	WORK ZONE STOP LINE, CLASS 1, 642 PAINT	PORTABLE BARRIER, UNANCHORED	PORTABLE BARRIER, ANCHORED							
		EACH	EACH		EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	FT								
207	PHASE 2																						
209	PHASE 2																						
211	PHASE 2																						
213	PHASE 2	1																					
214	PHASE 2																						
215	PHASE 2																						
216	PHASE 2																						
217	PHASE 2																						
218	PHASE 2																						
219	PHASE 2																						
220	PHASE 2																						
221	PHASE 2																						
223	PHASE 2																						
225	PHASE 2																						
227	PHASE 2																						
229	PHASE 2	2																					
231	PHASE 2																						
232	PHASE 2																						
233	PHASE 2																						
234	PHASE 2																						
235	PHASE 2																						
236	PHASE 2																						
237	PHASE 2																						
239	PHASE 2																						
241	PHASE 2																						
242	PHASE 2	1																					
244	PHASE 2	1																					
246	PHASE 2																						
248	PHASE 2																						
249	PHASE 2																						
250	PHASE 2																						
251	PHASE 2																						
252	PHASE 2																						
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257	PHASE 2																						
259	PHASE 2																						
261	PHASE 2																						
262	PHASE 2																						
263	PHASE 2																						
264	PHASE 2																						
266	PHASE 2A																						
267	PHASE 2A																						
269	PHASE 2A																						
271	PHASE 2A	1																					
272	PHASE 2A																						
273	PHASE 2A																						
274	PHASE 2A																						
275	PHASE 2A																						
276	PHASE 2A																						
277	PHASE 2A																						
SUB-TOTALS																							
TOTALS CARRIED TO SHEET 392		6	1	LUMP	18	829	2,134	14	713	5.13 MILE	13.48 MILE	4,009	1,200	25	32,710	480							



CALCULATED	BER	CHECKED	SMM
MAINTENANCE OF TRAFFIC SUBSUMMARY (ASPHALT OPTION)			
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SHEET NO.	PHASE	614	614	614	614	614	614	614	614	614	614	614	614	614	615	615	622	622						
		WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	DETOUR SIGNING	WORK ZONE RAISED PAVEMENT MARKER	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	OBJECT MARKER, ONE-WAY	WORK ZONE LANE LINE, CLASS I, 6", 807	WORK ZONE EDGE LINE, CLASS I, 6", 807	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807	WORK ZONE DOTTED LINE, CLASS I, 12", 642 PAINT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	WORK ZONE GORE MARKING, CLASS II, 642 PAINT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	PORTABLE BARRIER, UNANCHORED	GLARE SCREEN					
		EACH		EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SY	SY	FT	FT						
319	PRE-PHASE 3														30	65								
320	PRE-PHASE 3					33		11							1105	197	550							
321	PRE-PHASE 3	1				15		5							408	114	250							
322	PRE-PHASE 3		LUMP																					
332	PHASE 3				219																			
333	PHASE 3	1			202	78	4	4	353	1696	1448						630	630						
334	PHASE 3				28	96	7	7	1500	3200	1305		142				800	800						
335	PHASE 3				14	96	6	6	1600	3200							800	800						
336	PHASE 3				14	102	8	10	1600	3200							800	800						
337	PHASE 3				14	96	6	6	1600	3200							800	800						
338	PHASE 3				14	96			1600	3200							800	800						
339	PHASE 3				14	96			1600	3200							800	800						
340	PHASE 3				14	96			1600	3200							800	800						
341	PHASE 3				14	96			1600	3200							800	800						
342	PHASE 3				14	96	9	16	1600	3200							800	800						
343	PHASE 3			2	12	96	3	26	1600	3200							800	800						
344	PHASE 3			4	8	96	6	26	1600	3200							800	800						
345	PHASE 3				14	96			1600	3200							800	800						
346	PHASE 3				14	96			1600	3200							800	800						
347	PHASE 3				14	96	12	12	1600	3200							800	800						
348	PHASE 3				14	96	4	4	1600	3200							800	800						
349	PHASE 3				14	102	8	10	1600	3200							800	800						
350	PHASE 3				14	96			1600	3200							800	800						
351	PHASE 3				14	96	12	12	1600	3200							800	800						
352	PHASE 3				14	96	16	16	1600	3200							800	800						
353	PHASE 3			4	10	111	16	21	1600	3200			100				800	800						
354	PHASE 3			4	10	126	11	21	1600	3295			535				800	800						
355	PHASE 3				14	96			1600	3200							800	800						
356	PHASE 3				14	153		19	1600	3800			250				1750	800						
357	PHASE 3	1			32	144		16	1600	4800			790	44			1600	800						
358	PHASE 3	1			47	123		9	1600	3798			508	112			1220	800						
359	PHASE 3				14	96			1600	3200			305				800	800						
360	PHASE 3				14	96			1600	3200							800	800						
361	PHASE 3				14	96			1600	3200							800	800						
362	PHASE 3				14	96			1600	3200							800	800						
363	PHASE 3				14	96			1600	3200							800	800						
364	PHASE 3				14	96			1600	3200							800	800						
365	PHASE 3				14	96			1600	3200							800	800						
366	PHASE 3				14	96			1600	3200							800	800						
367	PHASE 3				14	96			1600	3200							800	800						
368	PHASE 3				116	96			891	3200	709						800	800						
369	PHASE 3				240	12				2768	1600						160	160						
370	PHASE 3				60						384													
374	PHASE 3					12		4		1208			14				160							
375	PHASE 3					54		18		1800							900							
376	PHASE 3		LUMP																					
SUB-TOTALS									55,544 FT	125,565 FT														
TOTALS CARRIED TO SHEET 392		4	LUMP	14	1,362	3,753	128	279	10.52 MILE	23.78 MILE	5,546	2,488	142	14	156	1,543	376	32,820	28,790					

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MAINTENANCE OF TRAFFIC SUBSUMMARY (ASPHALT OPTION)
 38
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SHEET NO.	PHASE	614	614	614	614	614	614	614	614	622											
		WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	OBJECT MARKER, ONE-WAY	WORK ZONE EDGE LINE, CLASS I, 6", 807	WORK ZONE DOTTED LINE, CLASS I, 12", 642 PAINT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	WORK ZONE GORE MARKING, CLASS II, 642 PAINT	PORTABLE BARRIER, UNANCHORED											
		EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT											
377	PHASE 3A			36	12	1160		16		580											
378	PHASE 3A	1		39	13	1800				620											
379	PHASE 3A			12	4	1200				156											
380	PHASE 3A			48	16	1600				800											
381	PHASE 3A	1	54	18	6	1847	115		155	254											
382	PHASE 3A		15			305	305														
SUB-TOTALS						7,912 FT															
TOTALS CARRIED TO SHEET 392		2	69	153	51	1.50 MILE	420	16	155	2,410											

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SHEET NUM.						PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
12	13	400	401	402	928	01/IMS/PV	02/NHS/PV	03/IMS/BR	04/IMS/BR						
		50								611	08200	50	FT	18" CONDUIT, TYPE F, 707.05, TYPE C OR 707.21	
			205							611	08900	205	FT	21" CONDUIT, TYPE B	
			64							611	08900	64	FT	21" CONDUIT, TYPE B, 706.02	
			34							611	09100	34	FT	21" CONDUIT, TYPE C, 706.02	
			90							611	10200	90	FT	24" CONDUIT, TYPE A, 706.02, 707.01 ALUMINIZED, 707.21, 707.33 WITH WELDED BELL	
			100							611	10200	100	FT	24" CONDUIT, TYPE A 706.02 OR 30" CONDUIT, TYPE A, 707.01, 707.02, 707.04, 707.05, 707.07 OR 707.21	
			184							611	10400	184	FT	24" CONDUIT, TYPE B	
			119							611	10400	119	FT	24" CONDUIT, TYPE B, 706.02	
			8							611	10600	8	FT	24" CONDUIT, TYPE C, 706.02	
			999							611	10600	999	FT	24" CONDUIT, TYPE C	
50										611	10600	50	FT	24" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	
250										611	10601	250	FT	24" CONDUIT, TYPE C, AS PER PLAN	12
					26					611	13200	26	FT	30" CONDUIT, TYPE A, 706.02	
			113							611	13400	113	FT	30" CONDUIT, TYPE B	
			501							611	13600	501	FT	30" CONDUIT, TYPE C	
			34							611	13600	34	FT	30" CONDUIT, TYPE C, 706.02	
			40							611	14200	40	FT	30" CONDUIT, TYPE F, 707.05	
			245							611	16400	245	FT	36" CONDUIT, TYPE B, 706.02	
250										611	16601	250	FT	36" CONDUIT, TYPE C, AS PER PLAN	12
					32					611	20700	32	FT	48" CONDUIT, TYPE A, 706.02	
					24					611	20700	24	FT	48" CONDUIT, TYPE A, 707.07	
					24					611	26000	24	FT	72" CONDUIT, TYPE A, 707.07	
					232					611	52500	232	FT	24" X 38" CONDUIT, TYPE A, 706.04	
					227					611	52700	227	FT	29" X 45" CONDUIT, TYPE A, 706.04	
					304					611	95001	304	FT	10' X 5' CONDUIT, TYPE A, 706.05, AS PER PLAN	937
			192							611	96600	192	FT	CONDUIT, BORED OR JACKED, 18", TYPE B	12
			7				6			611	98180	7	EACH	CATCH BASIN, NO. 3A	
			7							611	98300	7	EACH	CATCH BASIN, NO. 5	
			11							611	98341	11	EACH	CATCH BASIN, NO. 5A	
			3							611	98370	3	EACH	CATCH BASIN, NO. 6	
			48				29			611	98410	48	EACH	CATCH BASIN, NO. 8	
			7		1		1			611	98434	8	EACH	CATCH BASIN, NO. 8A	
			4							611	98470	4	EACH	CATCH BASIN, NO. 2-2B	
			11							611	99110	11	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1	
				6						611	99574	6	EACH	MANHOLE, NO. 3	
	2			92						611	99710	94	EACH	PRECAST REINFORCED CONCRETE OUTLET	
					1					611	99900	1	EACH	DRAINAGE STRUCTURE, MISC.:DETAIL AND CONSTRUCTION BLIND TAP	929
														DRAINAGE ALTERNATE 1A	
					260					833	10000	260	FT	CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, ROUND CONDUIT 72" DIAMETER	930
														DRAINAGE ALTERNATE 1B	
					260					837	10000	260	FT	LINER PIPE 66" ID 707.18, .19, .20, .24, .35, 748.06 (66" OD), SS938, 707.75	930
					260					837	21000	260	FT	BACKFILL FOR LINER PIPE	930
														DRAINAGE ALTERNATE 2A	
					663					899	10000	663	FT	CURED-IN-PLACE PIPE LINER, 48" DIAMETER	931
														DRAINAGE ALTERNATE 2B	
					663					837	10000	663	FT	LINER PIPE 42" ID 707.18, .19, .20, .35, .42, .43, 748.06 (42" OD), SS938, 707.75	931
					663					837	21000	663	FT	BACKFILL FOR LINER PIPE	931

GENERAL SUMMARY

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SHEET NUM.				PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
402	1032	1035	1275	01/IMS/PV	02/NHS/PV	03/IMS/BR	04/IMS/BR						
											TRAFFIC CONTROL		
	237							620	00500	237	EACH	DELINEATOR, POST GROUND MOUNTED, TYPE C	
	1,134							621	00100	1,134	EACH	RPM	
		3						625	32000	3	EACH	GROUND ROD	
24								626	00102	24	EACH	BARRIER REFLECTOR, TYPE 1 (1-WAY)	
48								626	00102	48	EACH	BARRIER REFLECTOR, TYPE 1 (2-WAY)	
154								626	00110	154	EACH	BARRIER REFLECTOR, TYPE 2 (1-WAY)	
		352						630	02100	352	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
		362.4						630	03100	362.4	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
		266.9						630	04100	266.9	FT	GROUND MOUNTED SUPPORT, NO. 4 POST	
		29.6						630	06400	29.6	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, S4X7.7	
		40.4						630	07600	40.4	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12	
		22						630	08600	22	EACH	SIGN POST REFLECTOR	
		4						630	09000	4	EACH	BREAKAWAY STRUCTURAL BEAM CONNECTION	
		3						630	20600	3	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 6	
		535.4						630	80100	535.4	SF	SIGN, FLAT SHEET	
		404						630	80224	404	SF	SIGN, OVERHEAD EXTRUSHEET	
		2						630	81020	2	EACH	CONCRETE MEDIAN BARRIER SIGN BRACKET	
		4						630	84500	4	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	
		3						630	84510	3	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	
		65						630	84900	65	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
		3						630	85400	3	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL	
		66						630	86002	66	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
		7						630	86102	7	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL	
											TRAFFIC CONTROL OPTIONS		
	25.59							642	00104	25.59	MILE	EDGE LINE, 6", TYPE 1	
	21.75							642	00204	21.75	MILE	LANE LINE, 6", TYPE 1	
	4,051							642	00404	4,051	FT	CHANNELIZING LINE, 12", TYPE 1	
	4,048							644	01110	4,048	FT	DOTTED LINE, 6"	
	20,607							644	30000	20,607	FT	REMOVAL OF PAVEMENT MARKING	
	2							SPECIAL	64440000	2	EACH	AIR SPEED ZONE MARKING	
												1036	
	61							646	10400	61	FT	STOP LINE	
	128							646	10600	128	FT	TRANSVERSE/DIAGONAL LINE	
	4							646	20320	4	EACH	WRONG WAY ARROW	
	666							646	20504	666	FT	DOTTED LINE, 6"	
											CONCRETE OPTION		
	20,607							644	30000	20,607	FT	REMOVAL OF PAVEMENT MARKING	
	25.59							642	00104	25.59	MILE	EDGE LINE, 6", TYPE 1	
	21.75							642	00204	21.75	MILE	LANE LINE, 6", TYPE 1	
	4,051							642	00404	4,051	FT	CHANNELIZING LINE, 12", TYPE 1	
	61							646	10400	61	FT	STOP LINE	
	128							646	10600	128	FT	TRANSVERSE/DIAGONAL LINE	
	4							646	20320	4	EACH	WRONG WAY ARROW	
	4,714							646	20504	4,714	FT	DOTTED LINE, 6"	
	2							SPECIAL	64620710	2	EACH	AIR SPEED ZONE MARKING	
												1036	
											NOISE BARRIERS		
		30,204						SPECIAL	60610210	30,204	SF	NOISE BARRIER (REFLECTIVE)	
		2,100						SPECIAL	60610210	2,100	SF	NOISE BARRIER (REFLECTIVE) SAFE AND SOUND	
												1300	
												1300	

GENERAL SUMMARY

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SHEET NUM.										PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
28	34	35	36	37	38	39				01/IMS/PV	02/NHS/PV	03/IMS/BR	04/IMS/BR						
	10									5	5			614	12500	10	EACH	REPLACEMENT SIGN	
	100									50	50			614	12600	100	EACH	REPLACEMENT DRUM	
	3	2								1	4			614	12756	5	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM	
		5	18	105	14					137	5			614	12800	142	EACH	WORK ZONE RAISED PAVEMENT MARKER	
		2,144	829	608	1,362	69				4,558	454			614	12801	5,012	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	21
	144									144				614	13000	144	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
		1,840	2,134	51	3,753	153				5,328	2,603			614	13310	7,931	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	
		156	14		128					255	43			614	13312	298	EACH	BARRIER REFLECTOR, TYPE 2, ONE-WAY	
		775	713		279	51				1,708	110			614	13350	1,818	EACH	OBJECT MARKER, ONE WAY	
		14		17						31				614	13360	31	EACH	OBJECT MARKER, TWO WAY	
	180,000									180,000				614	18000	180,000	EACH	MAINTAINING TRAFFIC, MISC.: BRIDGE DECK AND PAVEMENT PATCHING	22
	22									11	11			614	18601	22	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	20
		4.66	5.13		10.52					16.6	3.51			614	20056	20.31	MILE	WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	
	5.79	5.06	13.48		23.78	1.5				51.18	8.13			614	22056	59.61	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT	
		10,006	4,009		5,446					17,722	1,849			614	2340	19,561	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 6", 807 PAINT	
		1,460	1,200		2,488	420				1,599	969			614	24208	5,568	FT	WORK ZONE DOTTED LINE, CLASS I, 12", 642 PAINT	
					142					95	47			614	25210	142	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS II, 642 PAINT	
			25		14	16				45	10			614	26200	55	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
		212			156	155				419	104			614	28200	523	FT	WORK ZONE GORE MARKING, CLASS II, 642 PAINT	
	LS									LS	LS			615	10001	LS		ROADS FOR MAINTAINING TRAFFIC, AS PER PLAN	22
	19,429	4,130			1,543					24,588	514			615	20000	25,102	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
	36,888	286			376					37,425	125			615	20001	37,550	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	22
	300									300				615	25001	300	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 1	23
	6,844									6,844				615	25001	6,844	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 2	23
	2,000									2,000				615	25001	2,000	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 3	23
	500									500				615	25001	500	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 4	23
	962									481	481			616	10000	962	MGAL	WATER	
		30,060	32,710		32,820	2,410				86,257	11,743			622	41100	98,000	FT	PORTABLE BARRIER, UNANCHORED	
		480	480							960				622	41110	960	FT	PORTABLE BARRIER, ANCHORED	
		1,380			28,790					20,573	9,597			622	80000	30,170	FT	GLARE SCREEN	
					11.65					11.65				644	00104	11.65	MILE	EDGE LINE, 6"	
					11.11					11.11				644	00204	11.11	MILE	LANE LINE, 6"	
					1,622					1,622				644	00404	1,622	FT	CHANNELIZING LINE, 12"	
					1,653					1,653				644	01520	1,653	FT	DOTTED LINE, 12"	
					1.69					1.69				646	10010	1.69	MILE	EDGE LINE, 6"	
					0.3					0.3				646	10110	0.3	MILE	LANE LINE, 6"	
					25					25				646	10400	25	FT	STOP LINE	
					226					226				646	20510	226	FT	DOTTED LINE, 12"	
	18									18				SPECIAL	64620710	18	EACH	AIR SPEED ZONE MARKING	23
	160									80	80			808	18700	160	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
																		INCIDENTALS	
	LS	LS								LS	LS			108	10000	LS		CPM PROGRESS SCHEDULE	
										LS				614	11001	LS		MAINTAINING TRAFFIC, AS PER PLAN	16
										24				619	16021	24	MNTH	FIELD OFFICE, TYPE C, AS PER PLAN	13
										LS				623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
										LS				624	10000	LS		MOBILIZATION	

CALCULATED DCB CHECKED DLW
GENERAL SUMMARY
FRA - 71 - 0:00
 393
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SHEET NO.	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611
	21" CONDUIT, TYPE B	21" CONDUIT, TYPE B, 706.02	21" CONDUIT, TYPE C, 706.02	CONDUIT, BORED OR JACKED, 18", TYPE C	24" CONDUIT, TYPE A 706.02, 707.01 ALUMINIZED, 707.21, 707.33 WITH WELDED BELL	24" CONDUIT, TYPE A 706.02 OR 30" CONDUIT, TYPE A, 707.01, 707.02, 707.04, 707.05, 707.07 OR 707.21	24" CONDUIT, TYPE B	24" CONDUIT, TYPE B, 706.02	24" CONDUIT, TYPE C	24" CONDUIT, TYPE C, 706.02	30" CONDUIT, TYPE B	30" CONDUIT, TYPE C	30" CONDUIT, TYPE C, 706.02	30" CONDUIT, TYPE F, 707.05	36" CONDUIT, TYPE B, 706.02	36" CONDUIT, TYPE C	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 5	CATCH BASIN, NO. 5A	CATCH BASIN, NO. 6	CATCH BASIN, NO. 8	CATCH BASIN, NO. 8A	CATCH BASIN, NO. 2-2B	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1	
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
626																										
629																										
632																										
635																										
638																										
641	III																									
644																										
647																										
653																									7	
659																									3	
665					90																2					
670						100																			1	
945																										
946																										
947																										
948																										
949																										
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962																										
963																										
964																										
TOTALS FROM THIS SHEET	III	0	0	0	90	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	1	0	11	
TOTALS FROM SHEET 397	94	64	34	192	0	0	184	119	999	8	113	501	34	40	245	0	0	7	7	11	1	43	6	4	0	
TOTALS CARRIED TO GENERAL SUMMARY	205	64	34	192	90	100	184	119	999	8	113	501	34	40	245	0	0	7	7	11	3	48	7	4	11	

ROADWAY SUBSUMMARY	CALCULATED
	DCB CHECKED SJS
FRA - 71 - 0:00	401 1312

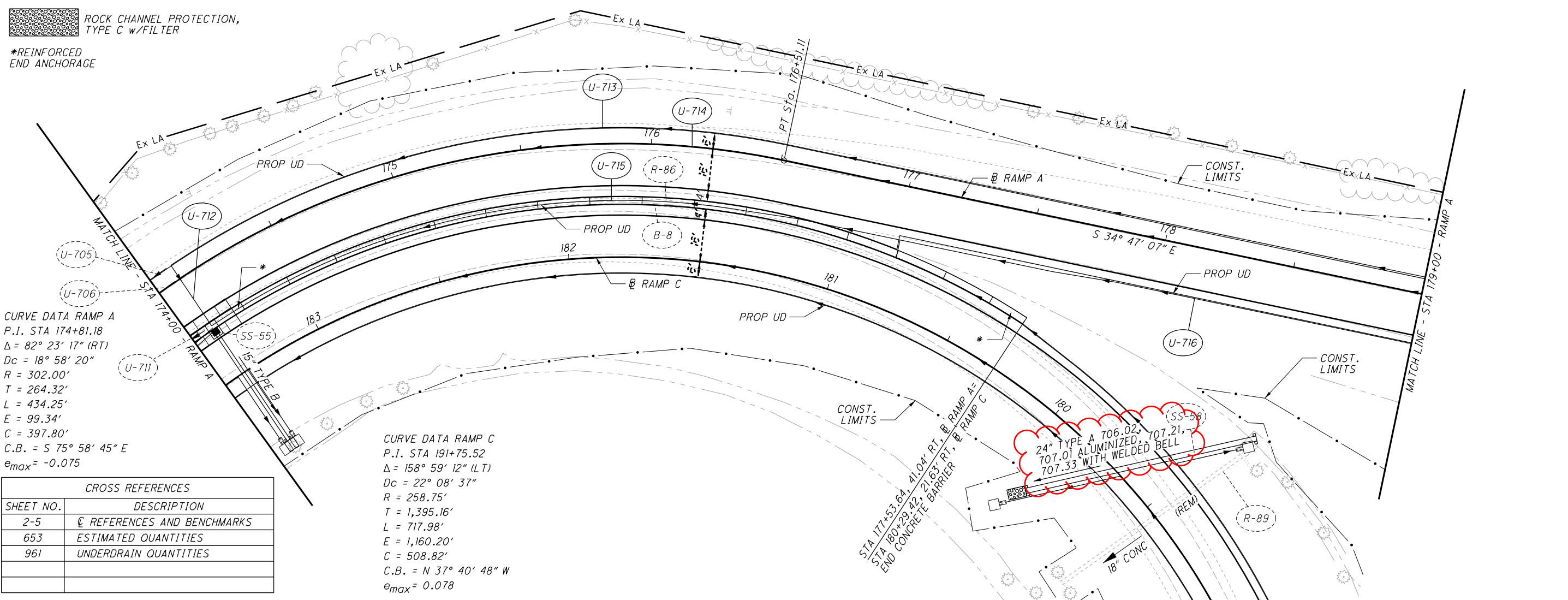


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**PLAN AND PROFILE - RAMP A
STA 174+00 TO STA 179+00**

FRA-71-0.00

650
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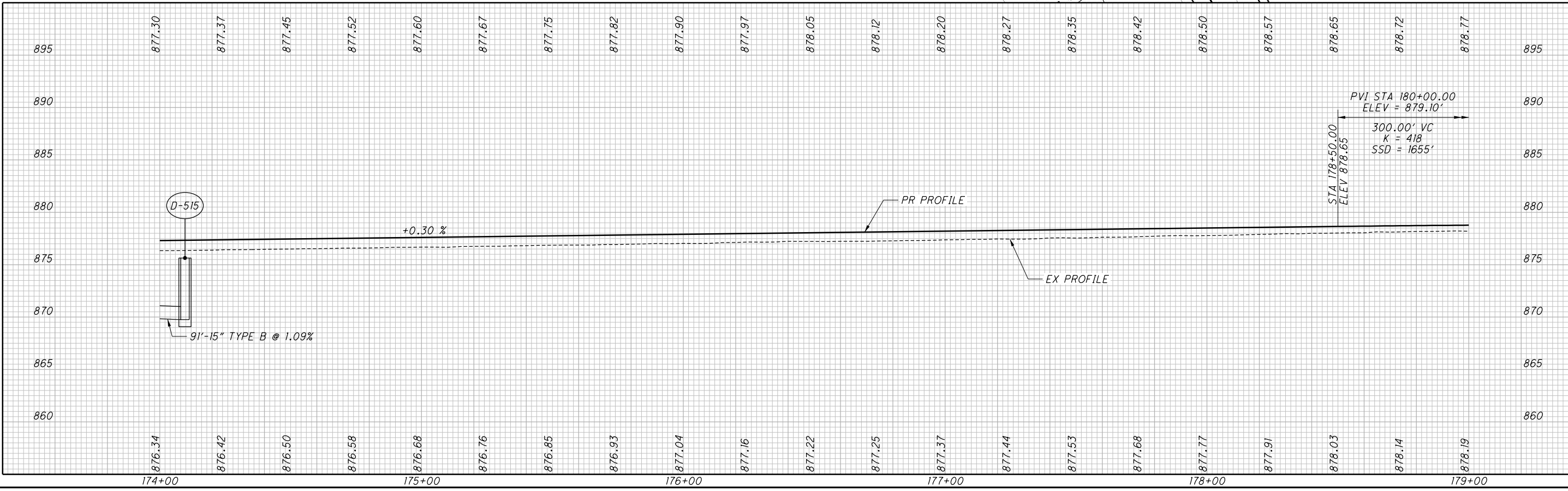
ROCK CHANNEL PROTECTION, TYPE C w/FILTER

*REINFORCED END ANCHORAGE

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

CURVE DATA RAMP C
 P.I. STA 191+75.52
 $\Delta = 158^\circ 59' 12''$ (LT)
 $D_c = 22^\circ 08' 37''$
 $R = 258.75'$
 $T = 1,395.16'$
 $L = 717.98'$
 $E = 1,160.20'$
 $C = 508.82'$
 C.B. = N $37^\circ 40' 48''$ W
 $e_{max} = 0.078$

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



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ROCK CHANNEL PROTECTION,
TYPE C w/FILTER

*1 24" CONDUIT, TYPE A 706.02, 707.01 ALUMINIZED,
707.21, 707.33 WITH WELDED BELL

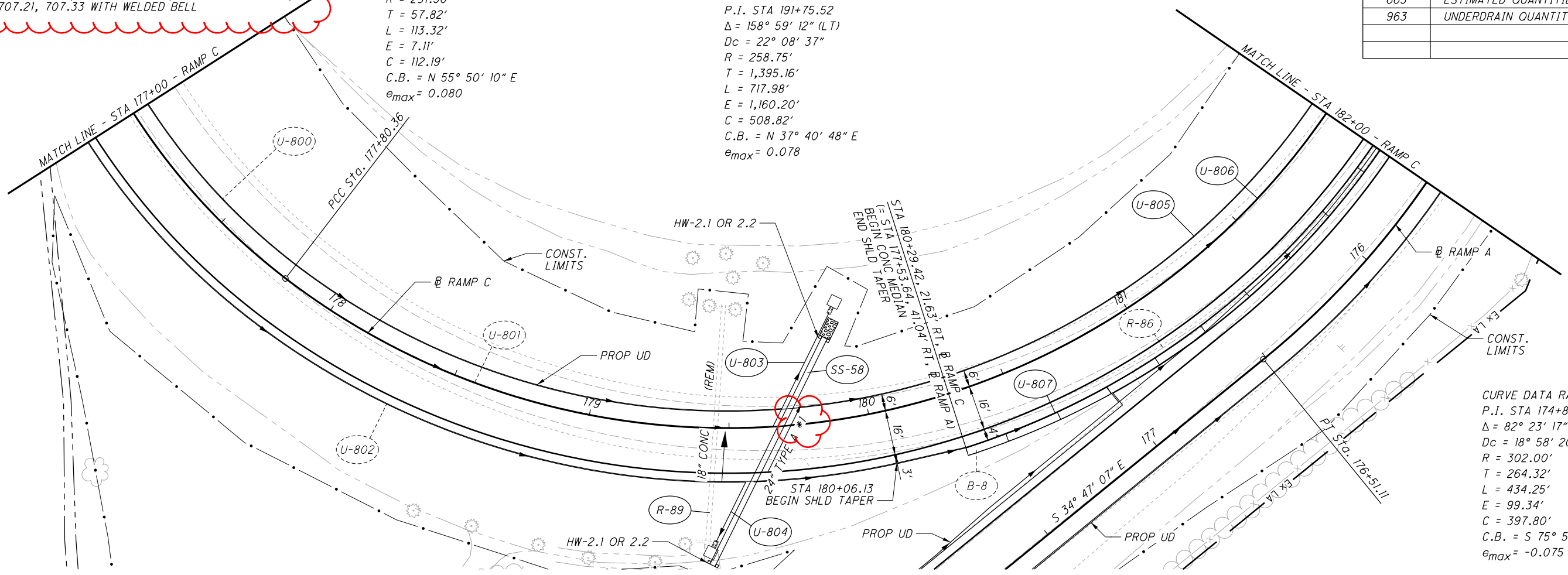
CURVE DATA RAMP C
P.I. STA 177+24.87
 $\Delta = 28^\circ 02' 45''$ (LT)
 $D_c = 24^\circ 45' 00''$
 $R = 231.50'$
 $T = 57.82'$
 $L = 113.32'$
 $E = 7.11'$
 $C = 112.19'$
C.B. = N $55^\circ 50' 10''$ E
 $e_{max} = 0.080$

CURVE DATA RAMP C
P.I. STA 191+75.52
 $\Delta = 158^\circ 59' 12''$ (LT)
 $D_c = 22^\circ 08' 37''$
 $R = 258.75'$
 $T = 1,395.16'$
 $L = 717.98'$
 $E = 1,160.20'$
 $C = 508.82'$
C.B. = N $37^\circ 40' 48''$ E
 $e_{max} = 0.078$

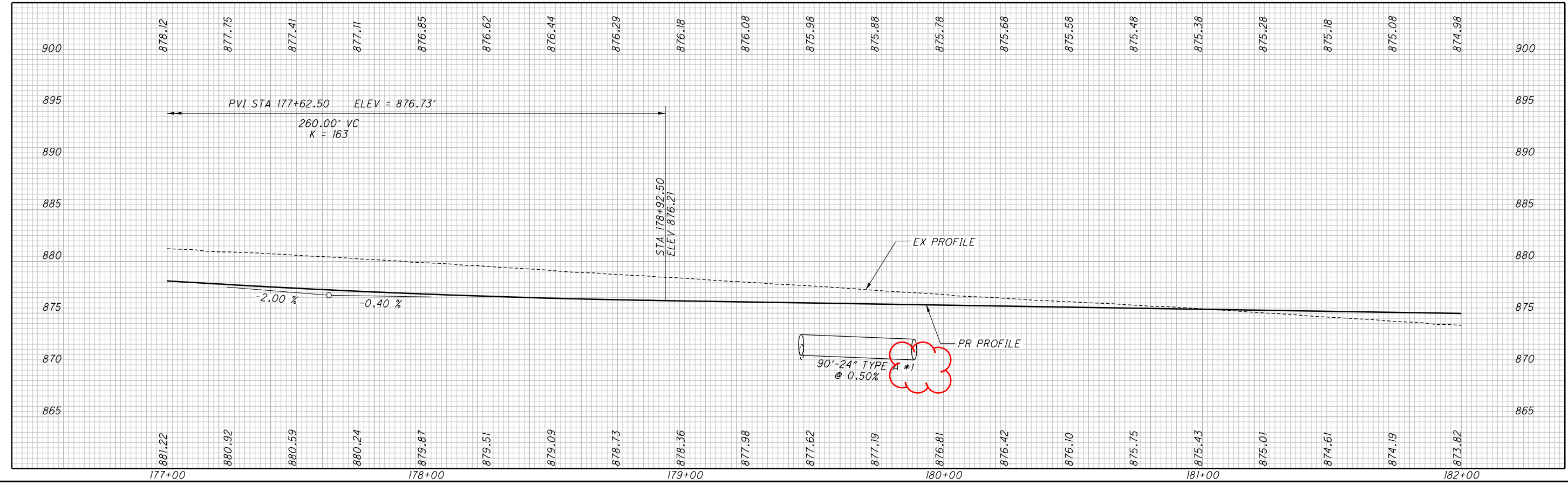
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-5	☐ REFERENCES AND BENCHMARKS
665	ESTIMATED QUANTITIES
963	UNDERDRAIN QUANTITIES

CALCULATED
ANN
CHECKED
SJS

0 20 40
HORIZONTAL
SCALE IN FEET



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



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

FRA-71-0.00

661
1312

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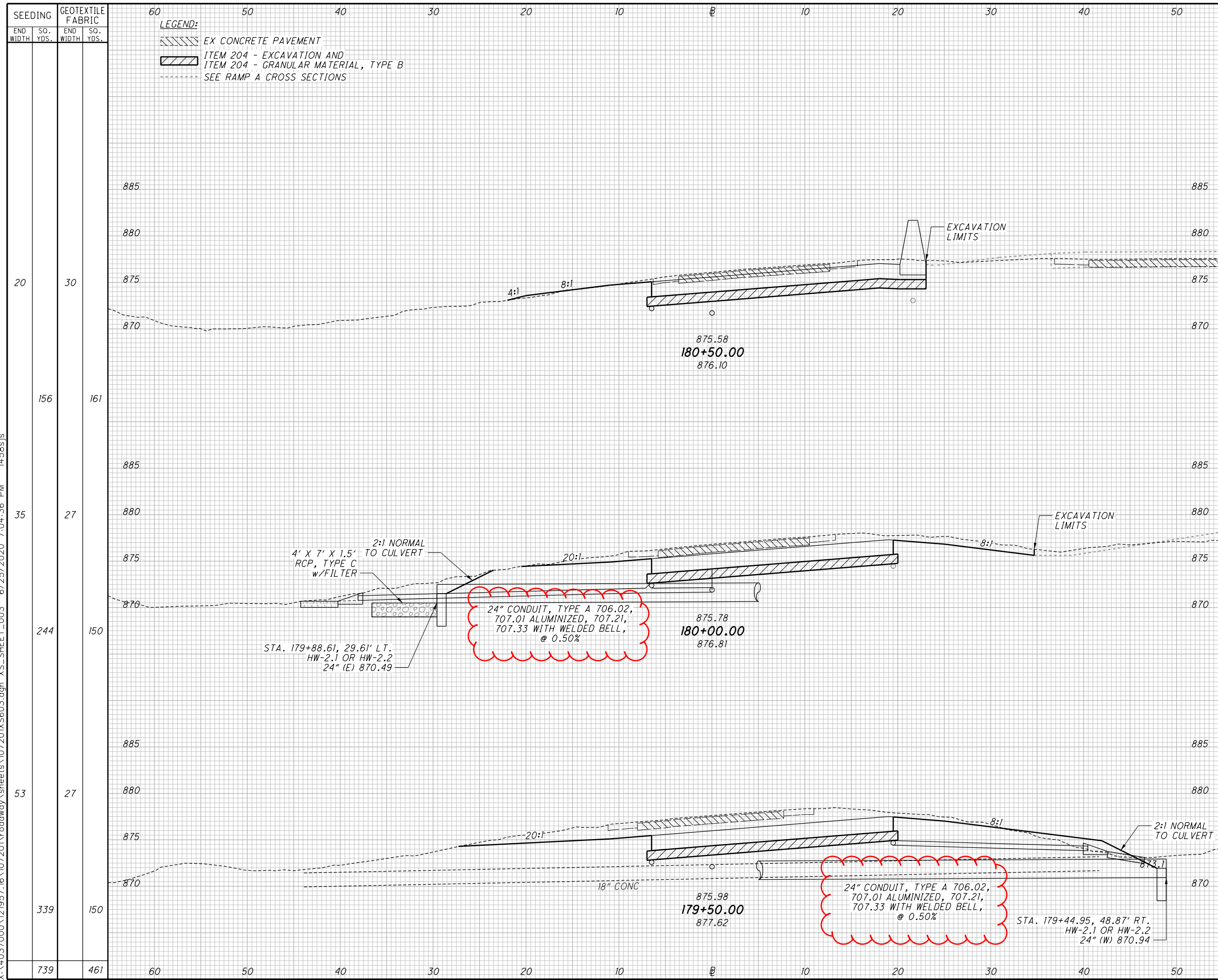
REF. NO.	SHEET NO.	STATION		SIDE	202	202	202	202	601	602	611							
		FROM	TO		HEADWALL REMOVED EACH	GUTTER REMOVED SY	PIPE REMOVED, 24" AND UNDER FT	CATCH BASIN REMOVED EACH	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	CONCRETE MASONRY CY	24" CONDUIT, TYPE A, 706.02, 707.01 ALUMINIZED, 707.21, 707.33 WITH WELDED BELL FT							
R-89	661	179+43	179+48	LT/RT	2	39	86											
R-90	662	183+46		LT/RT			57	2										
SS-58	661	179+49	179+89	LT/RT					1.56	0.92	90							
TOTALS CARRIED TO SHEETS 399-402					2	39	143	2	1.56	0.92	90							

24" CONDUIT, TYPE A,
706.02, 707.01 ALUMINIZED,
707.21, 707.33 WITH WELDED
BELL

<p>ESTIMATED QUANTITIES</p>	<p>FRA - 71 - 0:00</p>	<p>665 1312</p>
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CALCULATED
DCB
CHECKED
SJS

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END WIDTH	SO. YDS.	END WIDTH	SO. YDS.	ITEM 203		ITEM 204		CALCULATED DCB	CHECKED SJS
				CUT	FILL	CUT	FILL		
20	30	30	30	45	1	30	30		
156	161	161	161		104	1	53	53	
35	27	27	27	67	0	27	27		
244	150	150	150		144	8	50	50	
53	27	27	27	88	9	27	27		
339	150	150	150		182	26	50	50	
739	461	461	461		430	35	153	153	

CROSS SECTIONS - RAMP C
 STA 179+50 TO STA 180+50

FRA - 71 - 0:00

885
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REF. NO.	SHEET NO.	STATION		SIDE	601	601	602	602	611	611	611	611	611	611	611	611	611	670	833	836	836	836	837	899	
		FROM	TO		ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CONCRETE MASONRY	MASONRY, MISC.:PATCHING EXISTING CONCRETE CONDUIT W/ PORTLAND CEMENT MORTAR	30" CONDUIT, TYPE A, 706.02	48" CONDUIT, TYPE A, 706.02	48" CONDUIT, TYPE A, 707.07	72" CONDUIT, TYPE A, 707.07	24" X 38" CONDUIT, TYPE A, 706.04	29" X 45" CONDUIT, TYPE A, 706.04	10' X 5' CONDUIT, TYPE A, 706.05, AS PER PLAN	CATCH BASIN, NO. 8A	DRAINAGE STRUCTURE, MISC.:DETAIL AND CONSTRUCTION BLIND TAP	DITCH EROSION PROTECTION MAT, TYPE A	CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, ROUND CONDUIT 72" DIAMETER (ALTERNATE 1A)	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 3	BACKFILL FOR LINER PIPE (ALTERNATE 1B AND 2B)
					CY	CY	CY	FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	SY	FT	SY	SY	SY	FT	FT
929		12+33	13+61	LT&RT		2.9	1.0								227							155.8			
930		27+48	28+28	LT&RT			34.6					24						25.8	260	48.3				260	260
931		54+16	57+67	LT&RT			18.2				24							71.2				663		663	663
933		147+96	147+94	LT&RT	14.8		18.2	202		32															
934		166+51	166+51	LT&RT		2.8	1.1	260	26																
935		189+43	189+43	LT&RT		3.3	0.9							232			1								
937		224+40	226+45	LT&RT		27.0										304						47.6			
TOTALS CARRIED TO GENERAL SUMMARY					14.8	36	74	462	26	32	24	24	232	227	304	1	1	97	260	48.3	203.4	663	260	923	663

CULVERT SUBSUMMARY

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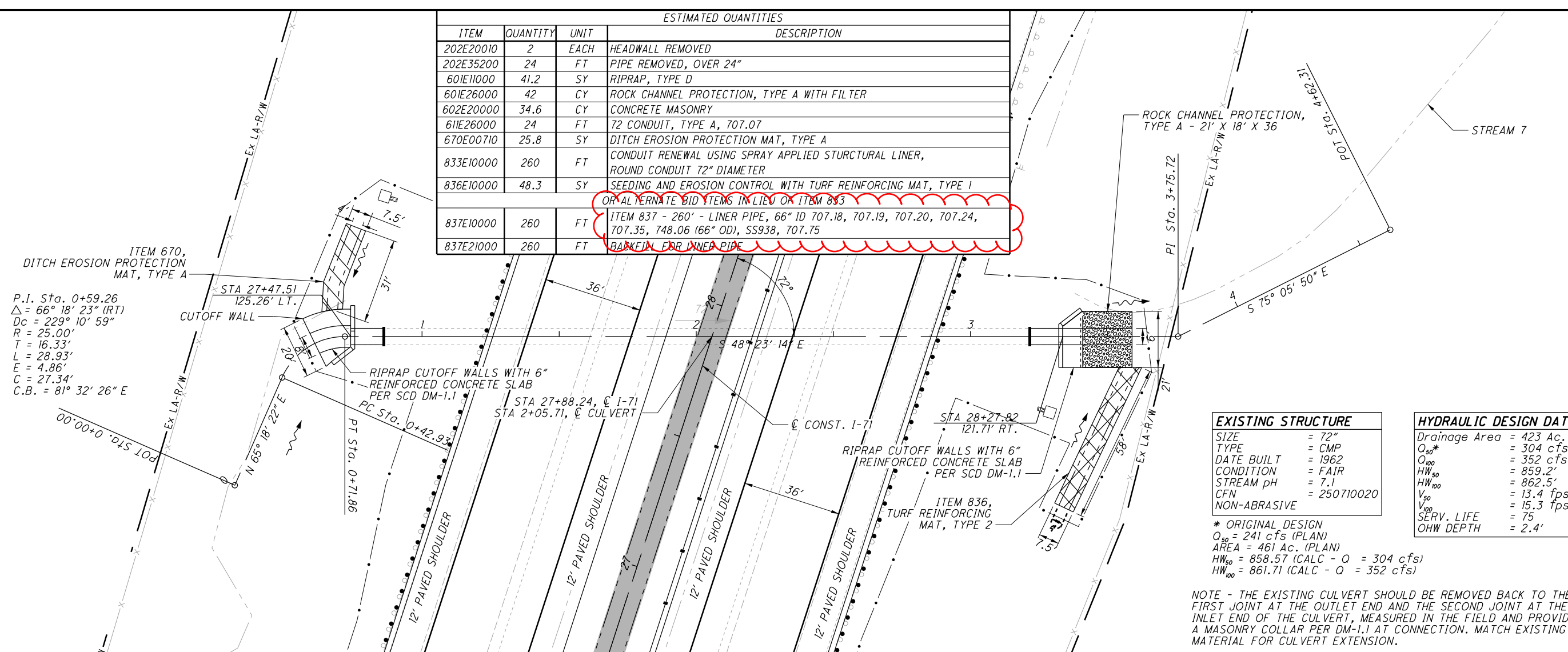
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ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
202E20010	2	EACH	HEADWALL REMOVED
202E35200	24	FT	PIPE REMOVED, OVER 24"
601E11000	41.2	SY	RIPRAP, TYPE D
601E26000	42	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER
602E20000	34.6	CY	CONCRETE MASONRY
611E26000	24	FT	72 CONDUIT, TYPE A, 707.07
670E00710	25.8	SY	DITCH EROSION PROTECTION MAT, TYPE A
833E10000	260	FT	CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, ROUND CONDUIT 72" DIAMETER
836E10000	48.3	SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1
OR ALTERNATE BID ITEMS IN LIEU OF ITEM 833			
837E10000	260	FT	ITEM 837 - 260' - LINER PIPE, 66" ID 707.18, 707.19, 707.20, 707.24, 707.35, 748.06 (66" OD), SS938, 707.75
837E21000	260	FT	BACKFILL FOR LINER PIPE

ITEM 670, DITCH EROSION PROTECTION MAT, TYPE A

P.I. Sta. 0+59.26
 $\Delta = 66^\circ 18' 23''$ (RT)
 $D_c = 229' 10' 59''$
 $R = 25.00'$
 $T = 16.33'$
 $L = 28.93'$
 $E = 4.86'$
 $C = 27.34'$
 $C.B. = 81^\circ 32' 26''$ E

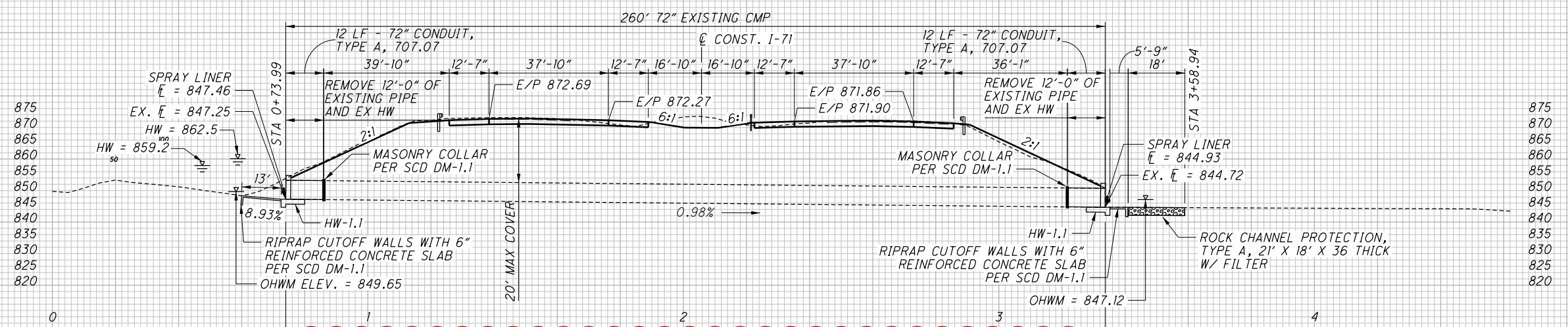


EXISTING STRUCTURE	
SIZE	= 72"
TYPE	= CMP
DATE BUILT	= 1962
CONDITION	= FAIR
STREAM pH	= 7.1
CFN	= 250710020
NON-ABRASIVE	

HYDRAULIC DESIGN DATA	
Drainage Area	= 423 Ac.
Q_{50}^*	= 304 cfs
Q_{100}	= 352 cfs
HW_{50}	= 859.2'
HW_{100}	= 862.5'
V_{50}	= 13.4 fps
V_{100}	= 15.3 fps
SERV. LIFE	= 75
OHW DEPTH	= 2.4'

* ORIGINAL DESIGN
 $Q_{50} = 241$ cfs (PLAN)
 AREA = 461 Ac. (PLAN)
 $HW_{50} = 858.57$ (CALC - $Q = 304$ cfs)
 $HW_{100} = 861.71$ (CALC - $Q = 352$ cfs)

NOTE - THE EXISTING CULVERT SHOULD BE REMOVED BACK TO THE FIRST JOINT AT THE OUTLET END AND THE SECOND JOINT AT THE INLET END OF THE CULVERT, MEASURED IN THE FIELD AND PROVIDE A MASONRY COLLAR PER DM-1.1 AT CONNECTION. MATCH EXISTING MATERIAL FOR CULVERT EXTENSION.



ITEM 833 - 260' - CONDUIT RENEWAL USING SPRAY APPLIED STRUCTURAL LINER, 72" DIAMETER, OR
 ITEM 837 - 260' - LINER PIPE, 66" ID 707.18, 707.19, 707.20, 707.24, 707.35, 748.06(66" OD), SS938, 707.75
 AND ITEM 837 - 260' - BACKFILL FOR LINER PIPE



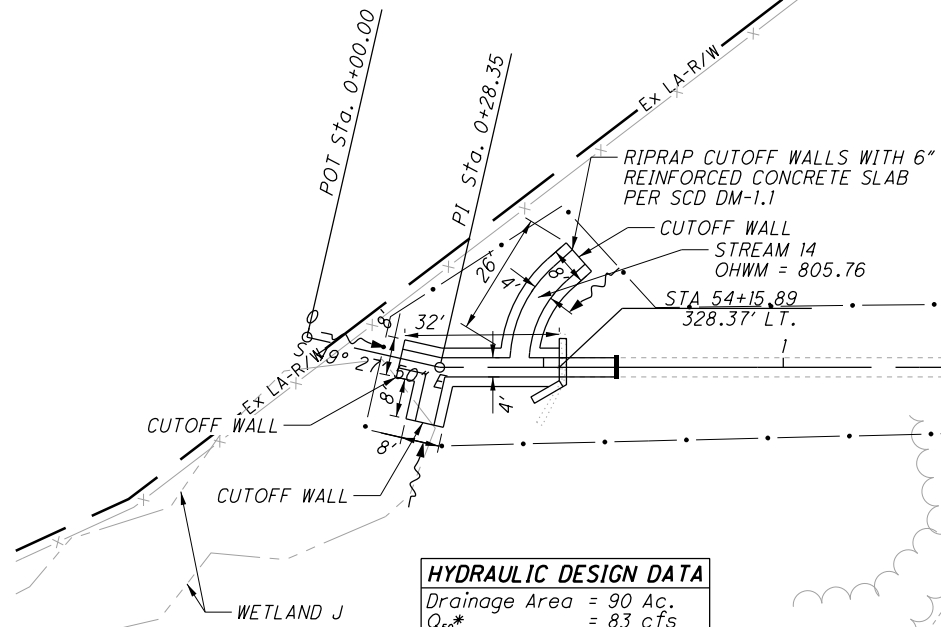
CULVERT DETAIL
 STA. 27+88.24

FRA - 71 - 0.00

930
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NOTE - THE EXISTING CULVERT SHOULD BE REMOVED BACK TO THE FIRST JOINT AT THE OUTLET END AND THE SECOND JOINT AT THE INLET END OF THE CULVERT, MEASURED IN THE FIELD AND PROVIDE A MASONRY COLLAR PER DM-1.1 AT CONNECTION. MATCH EXISTING MATERIAL FOR CULVERT EXTENSION.

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
202E20010	2	EACH	HEADWALL REMOVED
202E35200	24	FT	PIPE REMOVED, OVER 24"
601E11000	65.9	SY	RIPRAP, TYPE D
601E32000	23	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER
602E20000	18.2	CY	CONCRETE MASONRY
611E20700	24	FT	48" CONDUIT, TYPE A, 707.07
610E00710	71.2	SY	DITCH EROSION PROTECTION MAX, TYPE A
899E10000	663	FT	CURED IN PLACE PIPE LINER, 48" DIAMETER OR 42" ID 707.18, 707.19, 707.20, 707.35, 707.42, 707.43, 748.06(42" OD), SS938, 707.75
837E10000	663	FT	ITEM 837 - 663' LINER PIPE, 42" ID 707.18, 707.19, 707.20, 707.35, 707.42, 707.43, 748.06(42" OD), SS938, 707.75
837E21000	663	FT	BACKFILL FOR LINER PIPE



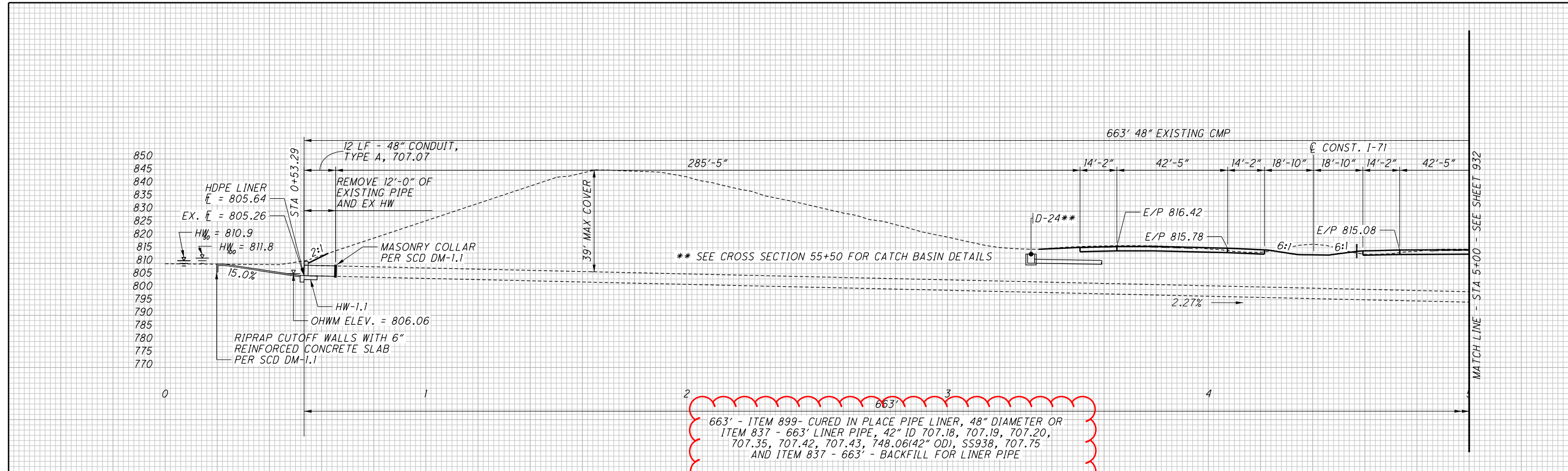
HYDRAULIC DESIGN DATA

Drainage Area = 90 Ac.
 Q_{50}^* = 83 cfs
 Q_{100} = 95 cfs
 HW_{50} = 810.9'
 HW_{100} = 811.8'
 V_{50} = 16.7 fps
 V_{100} = 17.7 fps
 SERV. LIFE = 75
 OHW DEPTH = 0.8'

* ORIGINAL DESIGN
 Q_{50} = 100 cfs (PLAN)
 AREA = 83 Ac. (PLAN)
 HW_{50} = 809.6 (CALC - 83 cfs)
 HW_{100} = 810.3 (CALC - 95 cfs)

EXISTING STRUCTURE
 SIZE = 48"
 TYPE = CMP
 DATE BUILT = 1962
 CONDITION = POOR
 STREAM pH = 7.6
 CFN = 250710035
 NON-ABRASIVE

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663' - ITEM 899 - CURED IN PLACE PIPE LINER, 48" DIAMETER OR
 ITEM 837 - 663' LINER PIPE, 42" ID 707.18, 707.19, 707.20,
 707.35, 707.42, 707.43, 748.06(42" OD), SS938, 707.75
 AND ITEM 837 - 663' - BACKFILL FOR LINER PIPE

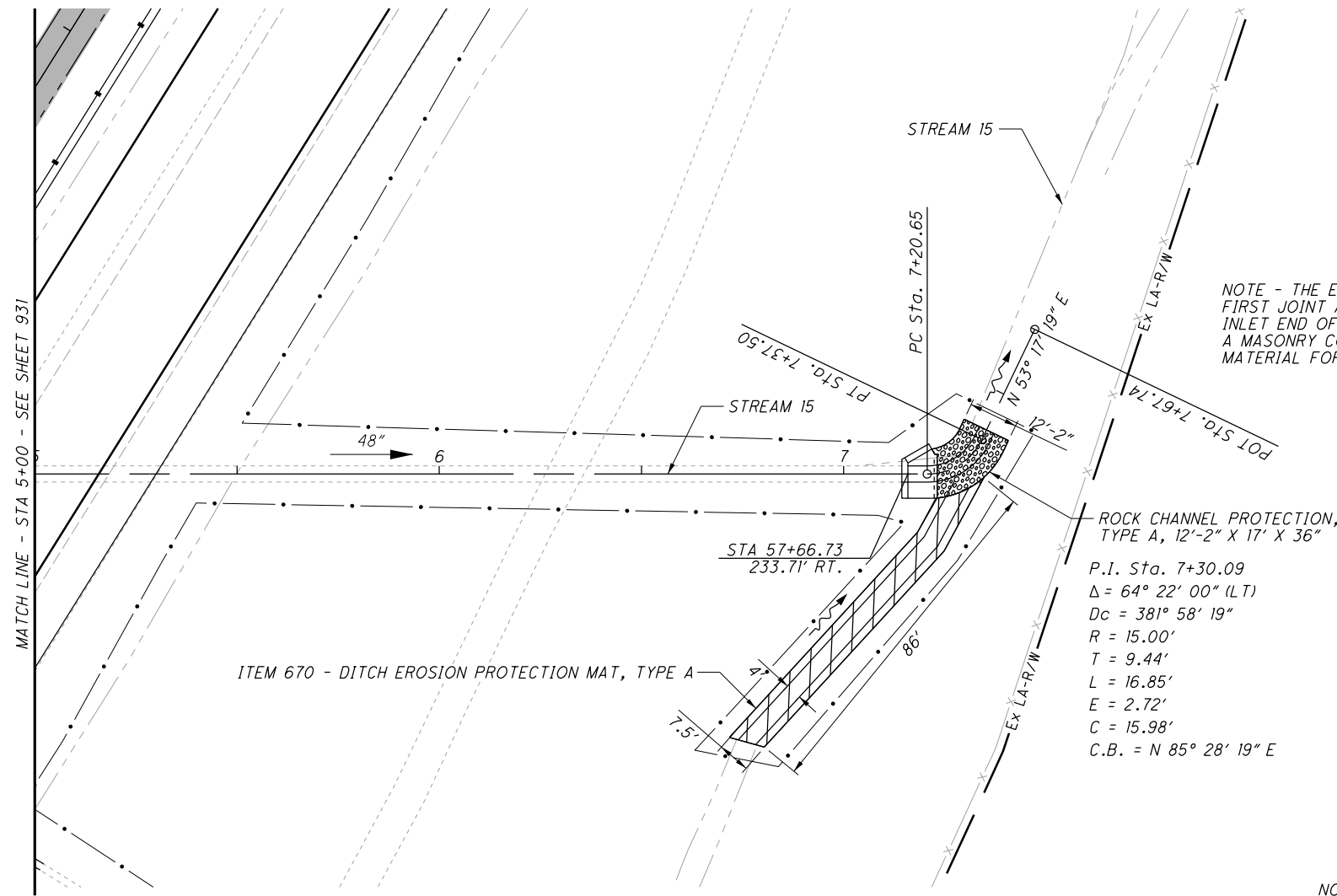


CULVERT DETAIL
STA. 56+20.85

FRA -71-0.00

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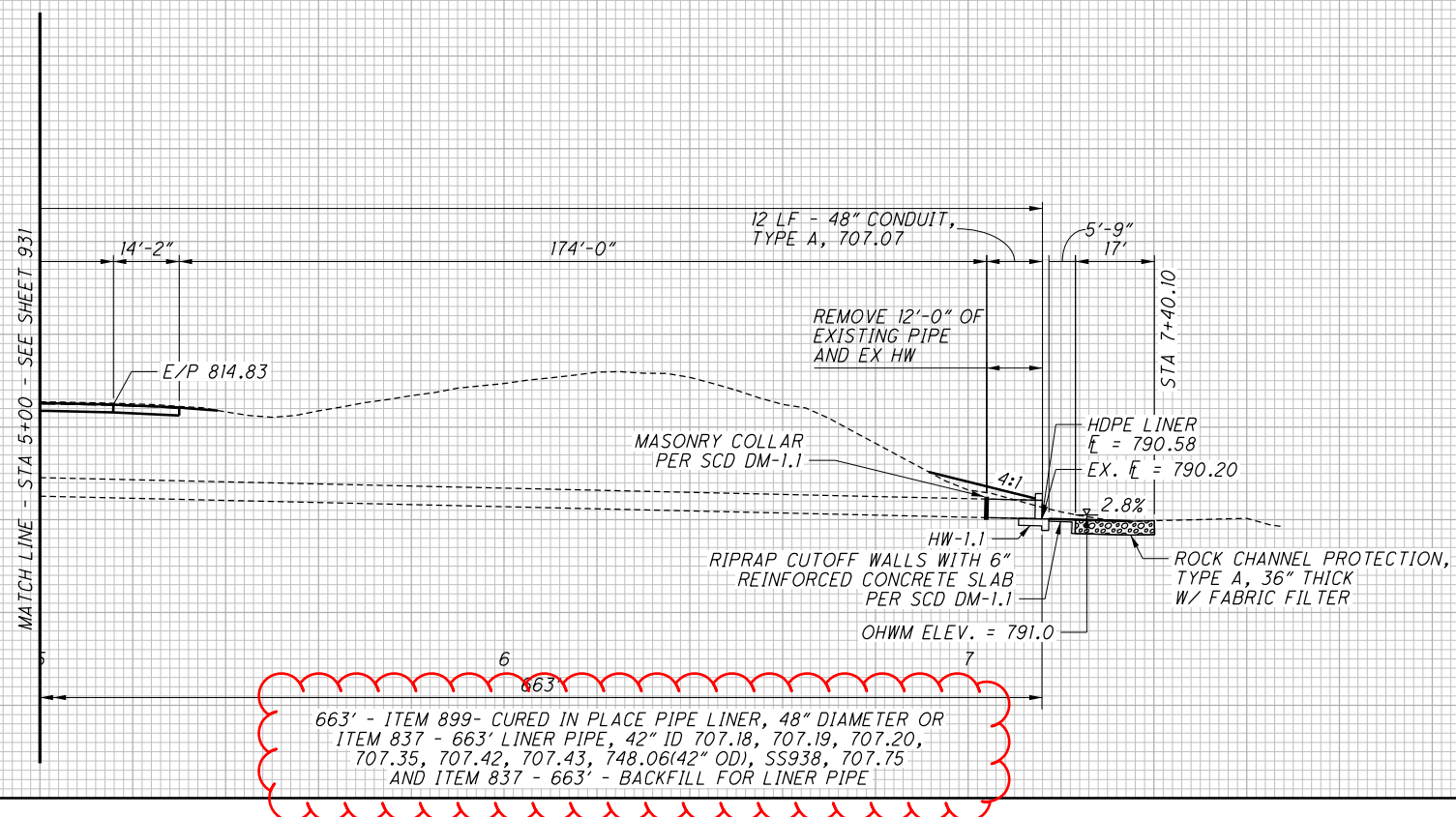


NOTE - THE EXISTING CULVERT SHOULD BE REMOVED BACK TO THE FIRST JOINT AT THE OUTLET END AND THE SECOND JOINT AT THE INLET END OF THE CULVERT, MEASURED IN THE FIELD AND PROVIDE A MASONRY COLLAR PER DM-1.1 AT CONNECTION. MATCH EXISTING MATERIAL FOR CULVERT EXTENSION.

NOTE: FOR QUANTITIES, SEE PREVIOUS SHEET.



CULVERT DETAIL
STA. 56+20.85



FRA -71-0.00

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SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	LENGTH	621	621	621	642	642	642	642	644	644	644				646	646	646	646	
			DELINATOR, POST GROUND MOUNTED, TYPE C	RPM (WHITE/RED)			RPM (YELLOW/RED)	EDGE LINE, 6", TYPE 1 (WHITE)	EDGE LINE, 6", TYPE 1 (YELLOW)	LANE LINE, 6", TYPE 1	CHANNELIZING LINE, 12", TYPE 1	DOTTED LINE, 6" (WHITE)	REMOVAL OF PAVEMENT MARKING	SPECIAL - AIR SPEED ZONE MARKING	STOP LINE	TRANSVERSE/DIAGONAL LINES	DOTTED LINE, 6" (WHITE)	WRONG WAY ARROW	FROM	TO	EACH	EACH	EACH	EA
1036	EW-1	I-71	826+26.00	840+28.99	LT																			
1036	EW-2	I-71	813+77.00	840+28.99	RT																			
1036	EY-1	I-71	826+26.00	840+28.99	LT																			
1036	EY-2	I-71	813+77.00	840+28.99	RT																			
1036	LL-1	I-71	826+26.00	840+28.99	LT																			
1036	LL-2	I-71	813+77.00	840+28.99	RT																			
1036 - 1037	DL-1	I-71	0+00.00	1+50.00	RT																			
1036 - 1051	EW-1	I-71	0+00.00	74+50.00	LT																			
1036 - 1051	EW-2	I-71	0+00.00	74+50.00	RT																			
1036 - 1092	EY-1	I-71	0+00.00	290+01.00	LT																			
1036 - 1092	EY-2	I-71	0+00.00	289+72.00	RT																			
1036 - 1051	LL-1	I-71	0+00.00	74+50.00	LT																			
1036 - 1051	LL-2	I-71	0+00.00	74+50.00	RT																			
1037 - 1092	LL-3	I-71	1+50.00	289+72.00	RT																			
1036 - 1038	DL-2	I-71	0+00.00	10+50.00	LT																			
1038 - 1092	LL-4	I-71	10+50.00	290+01.00	LT																			
1055 - 1093	EW-3	I-71 - RAMP C	94+00.00	176+27.38	LT/BL																			
1055 - 1096	EW-4	I-71 - RAMP D	94+00.00	168+88.47	RT																			
1055 - 1092	LL-5	I-71	94+00.00	290+01.00	LT																			
1055 - 1092	LL-6	I-71	94+00.00	289+72.00	RT																			
1067 - 1070	DL-3	I-71	155+77.84	168+28.00	LT																			
1069	DL-4	I-71	161+00.00	165+79.00	RT																			
1069 - 1070	CH-1	I-71	165+79.00	168+89.00	RT																			
1069 - 1070	CH-2	RAMP D	165+79.00	168+88.47	RT																			
1070 - 1072	CH-3	RAMP C	168+28.00	176+27.38	LT																			
1070 - 1072	CH-4	I-71	168+28.00	176+34.00	LT																			
1070 - 1072	EW-5	I-71	168+89.00	178+48.94	RT																			
1072 - 1073	EW-6	I-71	176+34.00	184+59.19	LT																			
1072 - 1092	EW-7	RAMP B - I-71	178+27.46	289+72.00	RT																			
1073 - 1095	EW-8	RAMP A - I-71	184+68.33	290+01.00	BL/LT																			
1072 - 1073	CH-5	I-71	178+48.94	183+50.00	RT																			
1072 - 1073	CH-6	RAMP B - I-71	178+27.46	183+50.00	LT																			
1073 - 1074	CH-7	RAMP A	184+68.33	188+64.84	RT																			
1073 - 1074	CH-8	I-71	184+59.19	188+64.84	LT																			
1073 - 1075	DL-5	I-71	183+50.00	196+00.00	RT																			
1074 - 1075	DL-6	I-71	188+64.84	194+00.00	LT																			
		NB STRUCTURES (DEDUCT FOR EPOXY MARKINGS)	163+21.68	165+46.61	RT																			
		SB STRUCTURES (DEDUCT FOR EPOXY MARKINGS)	157+33.84	159+47.84	LT																			
			163+73.45	166+00.09	LT																			
1036 - 1052	ASZ-1		0+00.00	79+20.00	RT																			
1078 - 1092	ASZ-2		210+30.00	289+50.00	RT																			
		MARKINGS REMOVED NB	813+77.00	840+28.99	RT																			
		MARKINGS REMOVED NB	279+31.20	289+72.00	RT																			
		MARKINGS REMOVED SB	826+26.00	840+28.99	LT																			
		MARKINGS REMOVED SB	279+31.20	290+01.00	LT																			
1036 - 1092			0+00	279+31.20	LT/RT																			
TOTALS CARRIED TO SHEET 1032								142	1039	11.02	11.76	21.75	4051	4048	20,607	2						666		

CALCULATED EGD CHECKED DLW
SUBSUMMARY - TRAFFIC CONTROL
FRA - 71 - 0.00
 1031
 1312

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SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	LENGTH	620	621	621	642	642	642	642	644	644	SPECIAL	646	646	646	646		
			DELINATOR, POST GROUND MOUNTED, TYPE C	RPM (WHITE/RED)			RPM (YELLOW/RED)	EDGE LINE, 6", TYPE 1 (WHITE)	EDGE LINE, 6", TYPE 1 (YELLOW)	LANE LINE, 6", TYPE 1	CHANNELIZING LINE, 12", TYPE 1	DOTTED LINE, 6" (WHITE)	REMOVAL OF PAVEMENT MARKING	AIR SPEED ZONE MARKING	STOP LINE	TRANSVERSE/DIAGONAL LINE	DOTTED LINE, 6" (WHITE)	WRONG WAY ARROW				
			FROM	TO			EACH	EACH	EACH	MILE	MILE	MILE	FT	FT	FT	EACH	FT	FT	FT	EACH		
1073	- 1093	EW-8	RAMP A	164+74.62	184+68.33	LT/BL	2068.95	23														
1073	- 1093	EY-6	RAMP A	164+75.00	184+68.33	RT	1995.39			26		0.38										
	1093	TR-1	RAMP A	164+75.00	165+99.60	RT																
	1093	SL-1	RAMP A	164+75.00		RT/LT	36.00										36	64				
	1093	WW-1	RAMP A	165+05.00		RT														1		
	1093	WW-2	RAMP A	167+50.00		RT														1		
1072	- 1096	EW-7	RAMP B	159+63.32	178+27.46	BL	1906.53	20			0.36											
1072	- 1096	EY-5	RAMP B	160+01.81	178+27.46	RT	1825.65			24		0.35										
1072	1093	EW-3	RAMP C	176+27.38	193+36.00	BL	1730.75	25			0.33											
1072	1095	EY-4	RAMP C	176+27.38	192+75.00	RT	1684.47			22		0.32										
	1096	SL-2	RAMP D	186+25.00		LT	25.00										25					
1070	1096	EW-4	RAMP D	168+88.47	186+45.22	BL	1826.65	27			0.35											
1070	1096	EY-3	RAMP D	168+88.47	186+25.00	LT	1790.81			23		0.34								1		
	1096	WW-4	RAMP D	183+60.00		LT														1		
	1096	TR-2	RAMP D	185+77.80	186+25.00	LT												64				
	1096	WW-3	RAMP D	185+95.00		LT														1		
TOTALS FROM THIS SHEET							95		95	1.43	1.38							61	128		4	
TOTALS FROM SHEET 1031							142	1039		11.02	11.76	21.75	4051	4048	20,607	2				666		
TOTALS CARRIED TO GENERAL SUMMARY							237	1,134		25.59	21.75	4051	4048	20,607	2			61	128	666	4	

SUBSUMMARY - TRAFFIC CONTROL
 FRA - 71 - 0:00
 1032
 1312

CALCULATED
 EGD
 CHECKED
 DLW

AIR SPEED ZONE MARKING

AIR SPEED ZONE MARKINGS SHALL BE WHITE AND 24 INCHES WIDE MEASURED IN THE DIRECTION OF TRAVEL AND 4 FEET IN LENGTH. ON TWO-LANE ROADWAYS WITH PAVED SHOULDERS LESS THAN 4 FEET IN WIDTH, THE AIR SPEED ZONE MARKINGS SHALL BE PLACED WITH 2 FEET ON EACH SIDE OF THE CENTER LINE OR EDGE LINE MARKINGS. WHEN PAVED SHOULDERS OF SUFFICIENT WIDTH ARE AVAILABLE, THE AIR SPEED ZONE MARKINGS SHALL BE PLACED ON THE SHOULDERS.

PLACE THE MARKINGS AT 0.25 MILE INTERVALS OVER A 1.5 MILE LENGTH OF ROADWAY.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE THE MARKINGS LAID OUT BY A REGISTERED SURVEYOR. A RECORD IS TO BE KEPT AND ONE ORIGINAL SIGNED AND SEALED DOCUMENT IS TO BE SENT TO THE DISTRICT TRAFFIC ENGINEER AND ONE COPY IS TO BE SENT TO THE DISTRICT CONSTRUCTION ENGINEER.

MATERIALS, EQUIPMENT AND APPLICATION SHALL BE ACCORDING TO THE TYPE OF PAVEMENT MARKING MATERIAL USED.

PAYMENT SHALL BE ACCORDING TO THE PAVEMENT MARKING MATERIAL USED AND SHALL INCLUDE THE SURVEYING WORK. THE FOURTEEN MARKINGS PLACED IN EACH 1.5 MILE OF ROADWAY SHALL EQUAL ONE ZONE. ONE ZONE SHALL BE MEASURED AS 1 EACH FOR AIR SPEED ZONE MARKING.

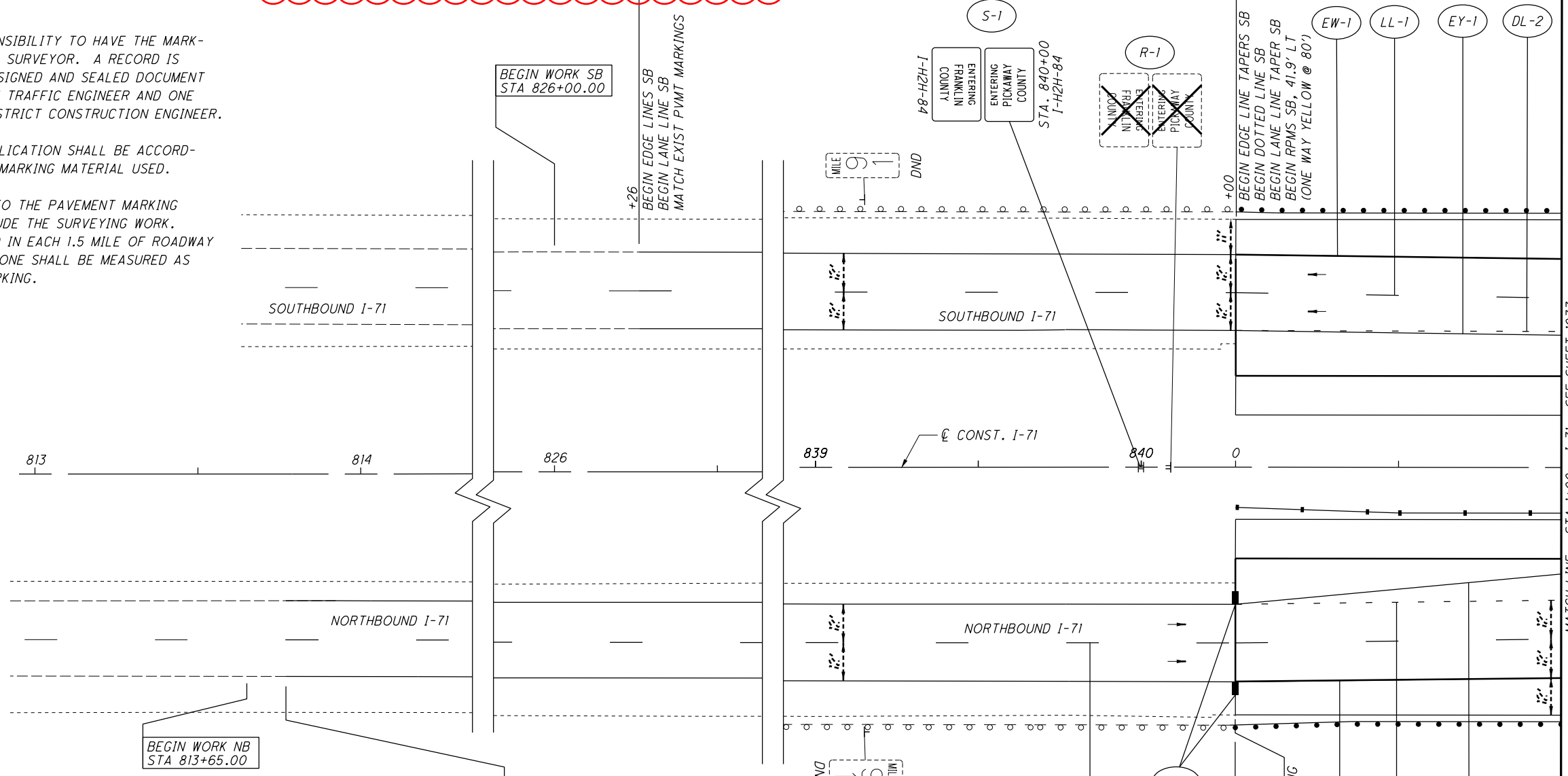
NOTES

1.A. LONG PAVEMENT MARKINGS AS DEFINED BY CMS 641.08 SHALL BE TRAFFIC PAINT, ITEM 642.

1.B. AUXILIARY PAVEMENT MARKINGS AS DEFINED BY CMS 641.08 SHALL BE THERMOPLASTIC, ITEM 644, EXCEPT EPOXY PAVEMENT MARKINGS, ITEM 646, SHALL BE USED ON CONCRETE SURFACES SUCH AS THE CONCRETE OPTION, APPROACH SLABS, BRIDGE SURFACES AND THE PROPOSED RAMPS.

2. INSTALL RAISED PAVEMENT MARKERS (RPM'S) PER SCD'S TC-65.10 AND TC-65.11.

3. MATCH EXISTING PAVEMENT MARKINGS AT STATION 813+26 SB AND STATION 813+77 NB.



LEGEND				
(EW-1)	EDGE LINE, 6" (WHITE)	(SL-1)	STOP LINE	EXISTING SIGN
(EY-1)	EDGE LINE, 6" (YELLOW)	(TR-1)	TRANSVERSE/DIAGONAL LINE	EXISTING SIGN TO BE REMOVED
(LL-1)	LANE LINE, 6"	(ASZ-1)	AIR SPEED ZONE MARKING	PROPOSED SIGN
(CH-1)	CHANNELIZING LINE, 12"	(WW-1)	WRONG WAY ARROW	DND - DO NOT DISTURB
(DL-1)	DOTTED LINE, 6" (WHITE)			
	PROPOSED	EXISTING		
	+	+	ONE POST SIGN, GROUND MOUNTED	
	≡	≡	TWO POST SIGN, GROUND MOUNTED	
	≡≡	≡≡	THREE POST SIGN, GROUND MOUNTED	
	H	H	SINGLE POST SIGN, BACK TO BACK, GROUND MOUNTED	

NOTE
PAVEMENT MARKINGS SHALL BEGIN AT STATION 813+77 NB AND STATION 826+26 SB. THE PROPOSED MARKINGS SHALL MATCH THE EXISTING MARKINGS AT THE STATIONS NOTED. THE EXISTING PAVEMENT MARKINGS SHALL BE REMOVED FROM STATION 813+77 TO STATION 0+00 NB AND STATION 826+26 TO 0+00 SB.

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REF NO.	SHEET NO.	STATION TO STATION		605	SPECIAL																						
				AGGREGATE DRAINS, AS PER PLAN	NOISE BARRIER (REFLECTIVE)	NOISE BARRIER (REFLECTIVE) SAFE AND SOUND																					
				FT	SF	SF																					
WALL-1	4	10+16.00	TO	14+08.00		5292																					
WALL-1	4-5	14+08.00	TO	18+88.00		6456																					
WALL-1	5-6	18+88.00	TO	21+52.00		3540																					
WALL-1	6-7	21+52.00	TO	25+12.00		4860																					
WALL-1	7	25+12.00	TO	29+44.00		5844																					
WALL-2	21	50+00.00	TO	50+88.00	88	1176																					
WALL-2	21	50+88.00	TO	51+60.00	72	996																					
WALL-2	21	51+60.00	TO	52+32.00	72	1020																					
WALL-2	21	52+32.00	TO	53+04.00	72	1020																					
WALL-2	21	53+04.00	TO	53+76.00	72		1044																				
WALL-2	21	53+76.00	TO	54+64.00	88		1056																				
TOTALS CARRIED TO GENERAL SUMMARY					464	30204	2100																				

NOISE BARRIER SUBSUMMARY	CALCULATED ANN CHECKED LYH
FRA -71-0.00	2 / 27
1275	1312

PANEL NOTES:
THE ALIGNMENT OF THE HORIZONTAL JOINTS WHEN THE TOP OF WALL ELEVATIONS ARE STEPPING UP OR DOWN FROM BAY TO BAY IS NOT REQUIRED. HOWEVER, WHEN THE TOP OF WALL ELEVATIONS ARE THE SAME FROM BAY TO BAY, THE ALIGNMENT OF THE HORIZONTAL JOINTS IS REQUIRED.

PROVIDE 3/4" BACKER ROD (NOT 1/2") SPECIFIED BY ASTM D5249 TYPE 1 OR 3.

NOISE BARRIER POSTS WITH KRYTON KRYSTOL INTERNAL MEMBRANE (KIM)

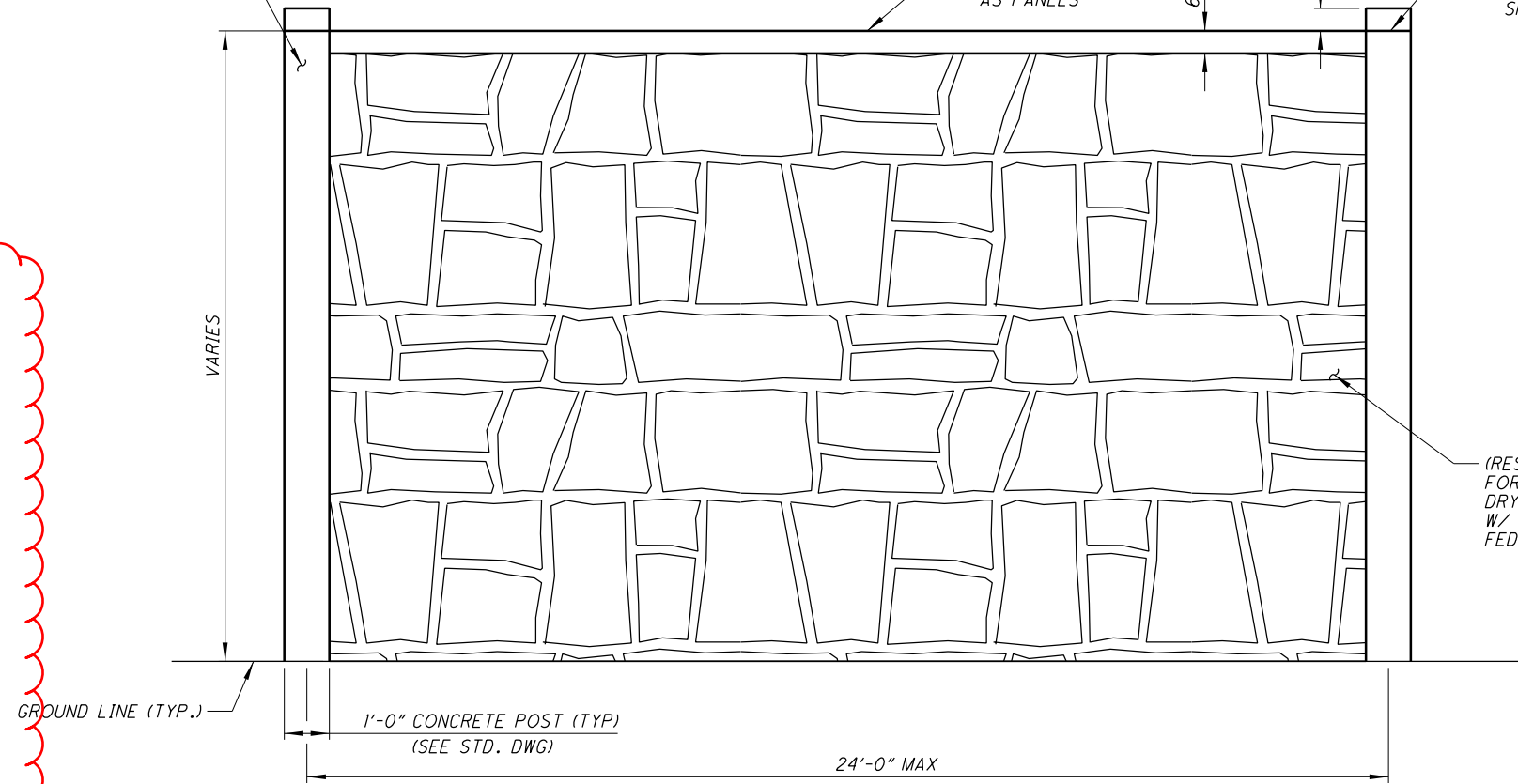
POSTS FROM BAY 1 TO BAY 41 OF WALL 1 SHALL BE CONSTRUCTED USING CONCRETE WITH A WATERPROOFING ADMIXTURE, KRYTON KRYSTOL INTERNAL MEMBRANE (KIM), AS FURNISHED BY KRYTON, 761 BETA DRIVE (UNIT W), CLEVELAND, OH, TELEPHONE NO. 216-475-8112. MODIFICATIONS OF THE MIX DESIGN, DOSAGE OF ADMIXTURE, APPLICATION INSTRUCTIONS AND CURE METHOD SHALL BE AS RECOMMENDED BY KRYTON.

SEAL POSTS 42-82 OF WALL 1 AND ALL POSTS OF WALL 2 WITH NON-EPOXY SEALER PER ITEM 512 (NO COLOR) FOR POSTS 1-41 OF WALL 1, SEE KRYTON KRYSTOL NOTE

INTEGRAL CAP, SAME COLOR AS PANELS

RUSTICATION GROOVE SHALL MEET THE TOP ELEVATION OF THE HIGHEST ADJACENT PANEL. THE GROOVE ON THE POSTS SHALL BE 3/4"

(RESIDENTIAL SIDE) FORMLINER PATTERN 1: DRYSTACK FORMLINER W/ 2" MAX RELIEF, FEDERAL COLOR NO. 36373, GRAY



ITEM 606 SPECIAL NOISE BARRIER (REFLECTIVE), SAFE AND SOUND

PANELS IN BAYS 15 - 23 OF WALL #2 SHALL BE MANUFACTURED AND DELIVERED TO THE PROJECT SITE BY SPS. THE CONTRACTOR IS DIRECTED TO CONTACT JOE GALLO OF SPS AT 216-905-5941 TO COORDINATE PROJECT SCHEDULES INCLUDING, BUT NOT LIMITED TO, MANUFACTURE AND DELIVERY OF NOISE BARRIER PANELS. SPS SHALL PROVIDE THE NOISE BARRIER PANEL AT THE SAME COST AS THE ITEM 606 NOISE BARRIER (REFLECTIVE). THE PROVIDED NOISE BARRIER PANELS SHALL MATCH DETAILS IN NBS-1-09. THE PANELS SHALL MATCH COLOR AND STYLE OF THE CONCRETE PANELS IN THE REMAINDER OF THE WALL SECTION.

INSTALLATION OF THESE PANELS WILL BE PERFORMED BY THE PRIME CONTRACTOR.

PAYMENT FOR THIS SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE FOOT ITEM 606 SPECIAL NOISE BARRIER (REFLECTIVE), SAFE AND SOUND UNLESS OTHERWISE NOTED, AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

AESTHETIC NOTES:

- SEE STANDARDS DRAWING NBS-1-09 FOR ADDITIONAL DETAILS.
- FOR THE COLOR AND TEXTURE ON ROADWAY SIDE OF THE WALLS USE ARCHITECTURAL POLYMER FORM LINER OR ENGINEER-APPROVED EQUAL-ASHLAR TEXTURE, 905 SMALL AGED ASHLAR. USE DRYSTACK PATTERN TEXTURE ON RESIDENTIAL SIDE.
- RESIDENTIAL SIDE:
WALL 1 & 2- FED. COLOR NO. 36373
- ROADWAY SIDE:
WALL 1 & 2- FED. COLOR NO. 34227
- AESTHETIC TREATMENTS SHALL BE CONSIDERED INCIDENTAL AND INCLUDED WITH ITEM 606 - SPECIAL, NOISE BARRIER QUANTITIES.
- USE THE ARCHITECTURAL POLYMERS DRYSTACK STONE PATTERN 9050 OR ENGINEERED APPROVED EQUAL.

NOISE WALL ELEVATION
(RESIDENTIAL SIDE)

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