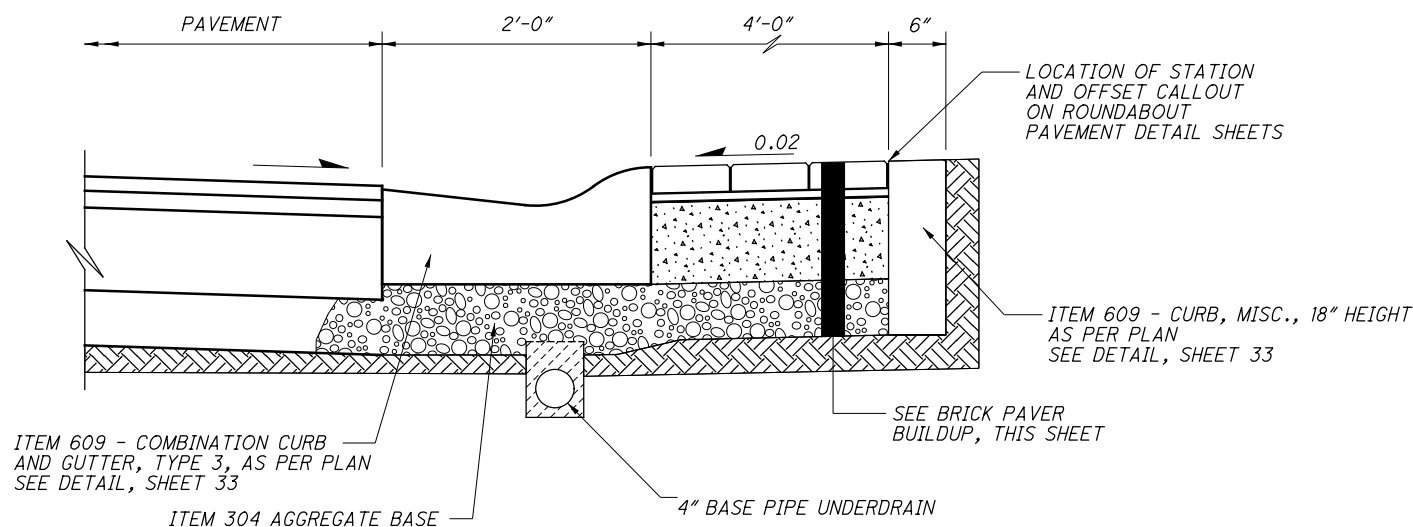
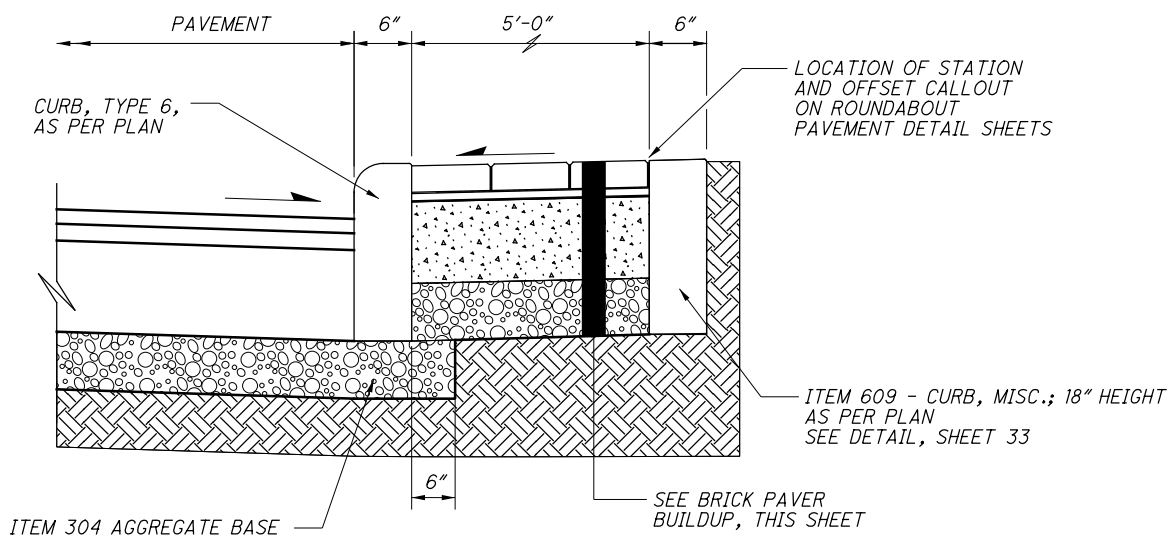


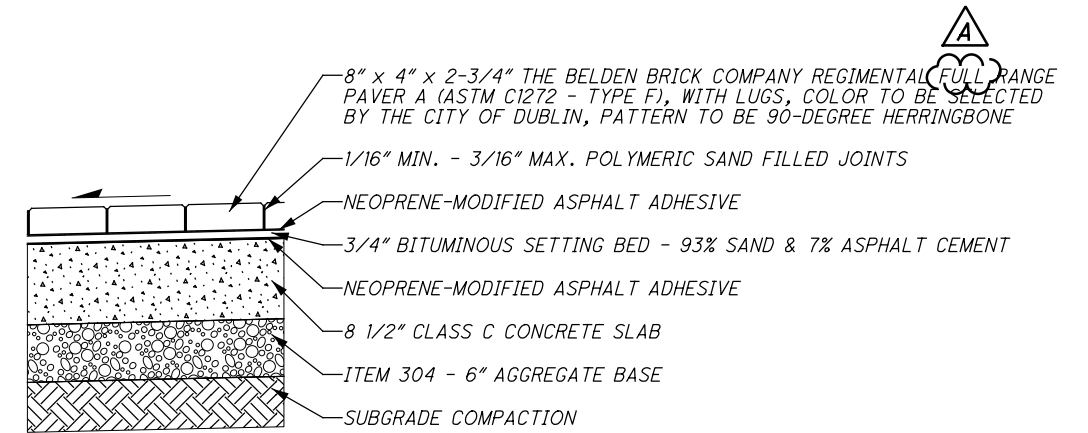
BANANA ISLAND DETAIL



EXTERIOR TRUCK APRON DETAIL



SPLITTER ISLAND DETAIL



BRICK PAVER BUILDUP DETAIL

ITEM SPECIAL -
HEAVY DUTY BRICK PAVERS INCLUDING CONCRETE BASE

MATERIAL NOTES

NEOPRENE - MODIFIED ASPHALT ADHESIVE

1. FURNISH NEOPRENE-MODIFIED ASPHALT ADHESIVE THAT CONTAINS 2 PERCENT NEOPRENE, GRADE WMI, OXIDIZED ASPHALT WITH A 150 DEGREE SOFTENING POINT (77 PENETRATION), AND 10 PERCENT LONG-FIBERED INERT MATERIAL, AS SUPPLIED BY SEIDEL COMPANY, INC., 11 MARKET SQUARE, NEWBURYPORT, MASSACHUSETTS 01950, (617) 649-6740; HASTINGS PAVEMENT COMPANY, INC., 410 LAKEVILLE ROAD, LAKE SUCCESS, NEW YORK 11042, (516) 379-3500; OR APPROVED EQUAL.

BITUMINOUS SETTING BED

1. FURNISH ASPHALT CEMENT CONFORMING TO ASTM 03381, VISCOSITY GRADE AC-10 OR AC-20.
2. FURNISH FINE AGGREGATE OF NATURAL SAND AND/OR STONE SAND, COMPOSED OF HARD, TOUGH, DURABLE, UNCOATED PARTICLES, FREE FROM CLAY, SILT, ORGANIC MATERIAL OR OTHER DELETERIOUS SUBSTANCES. INSURE THE SAND IS UNIFORMLY GRADED WITH ALL MATERIAL PASSING THE NO. 4 SIEVE AND MEETING THE REQUIREMENTS OF ASTM C136.

3. COMBINE THE DRIED FINE AGGREGATE WITH HOT ASPHALT CEMENT AND HEAT MIX TO APPROXIMATELY 300° F AT AN ASPHALT PLANT.

- A. PROVIDE AN APPROXIMATE PROPORTION OF MATERIALS OF 7 PERCENT ASPHALT CEMENT AND 93 PERCENT FINE AGGREGATE.
- B. PROVIDE EACH TON APPORTIONED BY WEIGHT TO 140 POUNDS OF ASPHALT CEMENT AND 1,860 POUNDS OF FINE AGGREGATE.

AGGREGATE BASE AND SUBGRADE COMPACTION SHALL BE PAID FOR UNDER SEPARATE ITEMS.

NO.	DESCRIPTION	REV. BY	DATE
A	UPDATE NOTE	ENR	2-3-2022

PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES

CONNECTIONS OF PROPOSED LONGITUDINAL DRAINAGE TO CORRUGATED METAL STRUCTURES SHALL BE MADE BY MEANS OF A SHOP FABRICATED OR FIELD WELDED STUB ON THE STRUCTURE. THE STUB SHALL MEET THE REQUIREMENTS OF 707 AND HAVE A MINIMUM LENGTH OF 2 FEET AND A MINIMUM WALL THICKNESS OF 0.064 INCHES.

THE LOCATION AND ELEVATION OF THE STUB ARE TO BE CONSIDERED APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO AVOID CUTTING THROUGH JOINTS IN THE STRUCTURE.

THE FIELD WELDED JOINT, IF USED, SHALL BE THOROUGHLY CLEANED AND REGALVANIZED OR OTHERWISE SUITABLY REPAIRED. WELDING SHALL MEET THE REQUIREMENTS OF 513.21.

A MASONRY COLLAR, AS PER STANDARD DRAWING DM-1.1, WILL BE REQUIRED TO CONNECT THE LONGITUDINAL DRAINAGE TO THE STUB, WHEN PIPE OTHER THAN CORRUGATED METAL IS PROVIDED FOR THE LONGITUDINAL DRAINAGE.

PAYMENT FOR CUTTING INTO THE STRUCTURE AND PROVIDING THE CONNECTION DESCRIBED, SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 611 OR 522.

FARM DRAINS

ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE (RIGHT OF WAY) (CONSTRUCTION) LIMITS BY ITEM 611 CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 611 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 611, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

EROSION CONTROL PADS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

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

- 611 6" CONDUIT, TYPE B 500 FT.
- 611 6" CONDUIT, TYPE F 500 FT.
- 611 12" CONDUIT, TYPE C 500 FT.
- 601 ROCK CHANNEL PROTECTION TYPE C WITH FILTER 10 CU. YD.

NO.	DESCRIPTION	REV. BY	DATE
A	UPDATE NOTES	ENR	2-3-2022

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

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

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

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

MANHOLES, CATCH BASINS AND INLETS REMOVED OR ABANDONED

ALL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED WITHIN THE RIGHT OF WAY FOR SALVAGE BY (STATE) (CITY) (VILLAGE) (COUNTY) FORCES.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

EXISTING SUBSURFACE DRAINAGE

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE. UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

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

- 601, TIED CONCRETE BLOCK MAT, TYPE 1 10 SQ. YD.
- 605, BASE PIPE UNDERDRAINS 500 FT.
- 605, SHALLOW PIPE UNDERDRAINS 500 FT
- 611, 6" CONDUIT, TYPE F 100 FT.
- 611, PRECAST REINFORCED CONCRETE OUTLET 5 EACH

ITEM 202 PAVEMENT REMOVED, AS PER PLAN

THIS WORK IS FOR REMOVAL AND DISPOSAL OF CONCRETE PAVEMENT AND CONCRETE BASE ONLY. ALL OTHER RIGID REMOVAL (CURBS, WALKS, MEDIANS, ETC.) WILL BE PAID UNDER THE APPROPRIATE ITEM. THE COST OF ASPHALT PAVEMENT REMOVAL SHALL BE INCLUDED IN ITEM 203 EXCAVATION.

PIPE AND UTILITIES WITHIN SUBGRADE STABILIZATION

ALL PIPES AND UTILITIES THAT MAY INTERFERE WITH THE SUBGRADE STABILIZATION PROCESS (LOCATED 16" OR LESS BELOW THE SUBGRADE) SHALL BE FLAGGED BEFORE THE STABILIZATION PROCESS BEGINS TO ALERT THOSE INVOLVED TO BE CAUTIOUS IT THOSE AREAS.

THE FOLLOWING IS A LIST OF LOCATIONS WHERE INTERFERENCE IS ANTICIPATED. THIS LIST IS NOT INTENDED TO BE ALL INCLUSIVE, IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY EACH CROSSING PRIOR TO STABILIZING.

STORM SEWERS AND CULVERTS AT STATIONS: 51+50, 65+73, 69+31, 72+39, 401+25, 608+00, 708+00, 805+00, 918+50, 3055+43, 3071+39 AT&T FIBER OPTIC STATIONS: 64+00 TO 70+00

PAYMENT FOR THIS ITEM SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 206, CEMENT STABILIZED SUBGRADE.

UNDERDRAINS IN SUBGRADE STABILIZATION

WHEN AN EXISTING UNDERDRAIN IS FOUND TO BE WITHIN THE LIMITS OF THE SUBGRADE STABILIZATION, IT SHALL BE REMOVED AND REPLACED. THE NEW UNDERDRAIN SHALL BE PLACED SO THAT THE CROWN OF THE UNDERDRAIN IS AT THE BOTTOM OF THE SUBGRADE STABILIZATION. THE NEW UNDERDRAIN SHALL BE CONNECT TO THE ADJOINING UNDERDRAINS AS LONG AS THERE IS POSITIVE SLOPE. IF THERE IS NOT POSITIVE SLOPE A NEW UNDERDRAIN OUTLET SHOULD BE ESTABLISHED.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS APPROVED BY THE ENGINEER FOR REMOVING AND REPLACING UNDERDRAINS:

- 601, TIED CONCRETE BLOCK MAT, TYPE 1 10 SQ. YD
- 605, BASE PIPE UNDERDRAINS 500 FT
- 605, SHALLOW PIPE UNDERDRAIN 500 FT
- 611, CONDUIT, TYPE F 100 FT
- 611, PRECAST REINFORCED CONCRETE OUTLET 5 EACH

ITEM 602 CONCRETE MASONRY, AS PER PLAN

THE OUTLETS OF ALL NEW STORM SEWER AND CULVERT PIPE LOCATED WITHIN THE DUBLIN CORPORATION LIMITS, WHERE CALLED OUT IN THE PLANS, SHALL HAVE A PREFABRICATED FLARED END SECTION. FLARED END SECTIONS 24 AND LARGER SHALL BE PRECAST CONCRETE AS MANUFACTURED BY FORTERRA PIPE AND PRECAST, OR APPROVED EQUAL. THIS WORK SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS REQUIRED TO INSTALL THE HEADWALL (FLARED END SECTION), COMPLETE AND ACCEPTED.

EXISTING UNDERDRAINS

EXISTING UNDERDRAINS ALONG U.S. 33 SHALL REMAIN IN USE, EXCEPT WITHIN THE FOLLOWING LIMITS WHERE THEY SHALL BE ABANDONED OR REMOVED:

- U.S. 33 EB STA. 2008+56.35 TO STA. 2043+71.69
- U.S. 33 WB STA. 3000+62.62 TO STA. 3043+71.69

WHERE EXISTING UNDERDRAINS ARE TO REMAIN IN USE ADJACENT TO SAW CUTTING AND FULL- DEPTH PAVEMENT WIDENING, THE CONTRACTOR IS TO ENSURE THAT THE EXISTING AGGREGATE BASE CONTINUES TO DRAIN TO THE EXISTING UNDERDRAIN. NO SUBGRADE STEP SHALL BE CONSTRUCTED, BLOCKING SUBGRADE DRAINAGE. ANY ADDITIONAL COSTS FOR THIS SHALL BE INCIDENTAL TO THE CONSTRUCTION OF ITEM 304, AGGREGATE BASE.

EXTENDED RETENTION BASIN

THIS PLAN UTILIZES EXTENDED RETENTION BASIN(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. RETENTION BASINS MAY BE USED AS SEDIMENT CONTROL DEVICES DURING CONSTRUCTION. FOLLOWING STABILIZATION OF THE TRIBUTARY AREA, FINAL GRADING OF THE RETENTION BASIN MUST MATCH THE PLANS. THE RETENTION BASIN OUTLET STRUCTURE FOR CONSTRUCTION SEDIMENT CONTROL MUST BE REMOVED AND THE OUTLET STRUCTURE MUST BE MADE TO MATCH THE DESIGN SHOWN IN THE PLANS.

ITEM 611 - MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN

THIS ITEM SHALL MEET ALL THE REQUIREMENTS OF ITEM 611, MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN EXCEPT AS MODIFIED BY THIS NOTE. THE INTENT OF THIS ITEM IS TO ADJUST THE CASTING DOWN TO THE PLAN ELEVATION. THE CHANGE IN ELEVATION IS OUTSIDE THAT ALLOWABLE TO ADJUST TO GRADE. THE CONTRACTOR SHALL REMOVE EXISTING RISER SECTIONS OF THE MANHOLE FAR ENOUGH DOWN SO IT CAN ADJUSTED TO THE PLAN ELEVATION. THE NEW PORTION OF THE MANHOLE SHALL COMPLY WITH CITY OF DUBLIN STANDARD DETAIL SA-01.

PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR EACH MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN AND SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPETE THIS ITEM.

ENVIRONMENTAL COMMITMENT NOTES

THE CONTRACTOR WILL INSTALL TEMPORARY SILT FENCING ALONG THE BOUNDARY OF WETLAND 1 BETWEEN STA. 911+00 TO STA. 915+00 TO PREVENT THE EQUIPMENT FROM ENTERING THE AREA AND IMPLEMENT BEST MANAGEMENT PRACTICES (BMP) FOR EROSION AND SEDIMENT CONTROL TO PREVENT STORMWATER RUN-OFF FROM ENTERING THE WETLAND.

ENDANGERED BAT HABITAT REMOVAL

THIS PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT, AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT (ESA). FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS: A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK 3 INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

ITEM SPECIAL - MISC: HEAVY DUTY BRICK PAVERS INCLUDING CONCRETE BASE

HEAVY DUTY BRICK PAVERS INCLUDING CONCRETE BASE, BITUMINOUS SETTING BED, ASPHALT ADHESIVE, BRICK PAVERS, AND POLYMERIC SAND FILL, SHALL BE CONSTRUCTED IN ACCORDANCE TO THE DETAIL ON SHEET 34.

THE SUBGRADE COMPACTION AND 304 AGGREGATE BASE ARE QUANTIFIED AND PAID UNDER SEPARATE ITEMS.

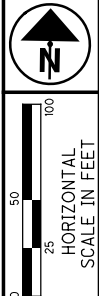
PAYMENT FOR THIS WORK, INCLUDING ALL LABOR, TOOLS, EQUIPMENT AND NECESSARY MATERIALS, SHALL BE MADE AT THE UNIT PRICE BID PER SQ. FT., COMPLETE IN PLACE, AND ACCEPTED.

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GENERAL NOTES

UNI - 33 - 24.87

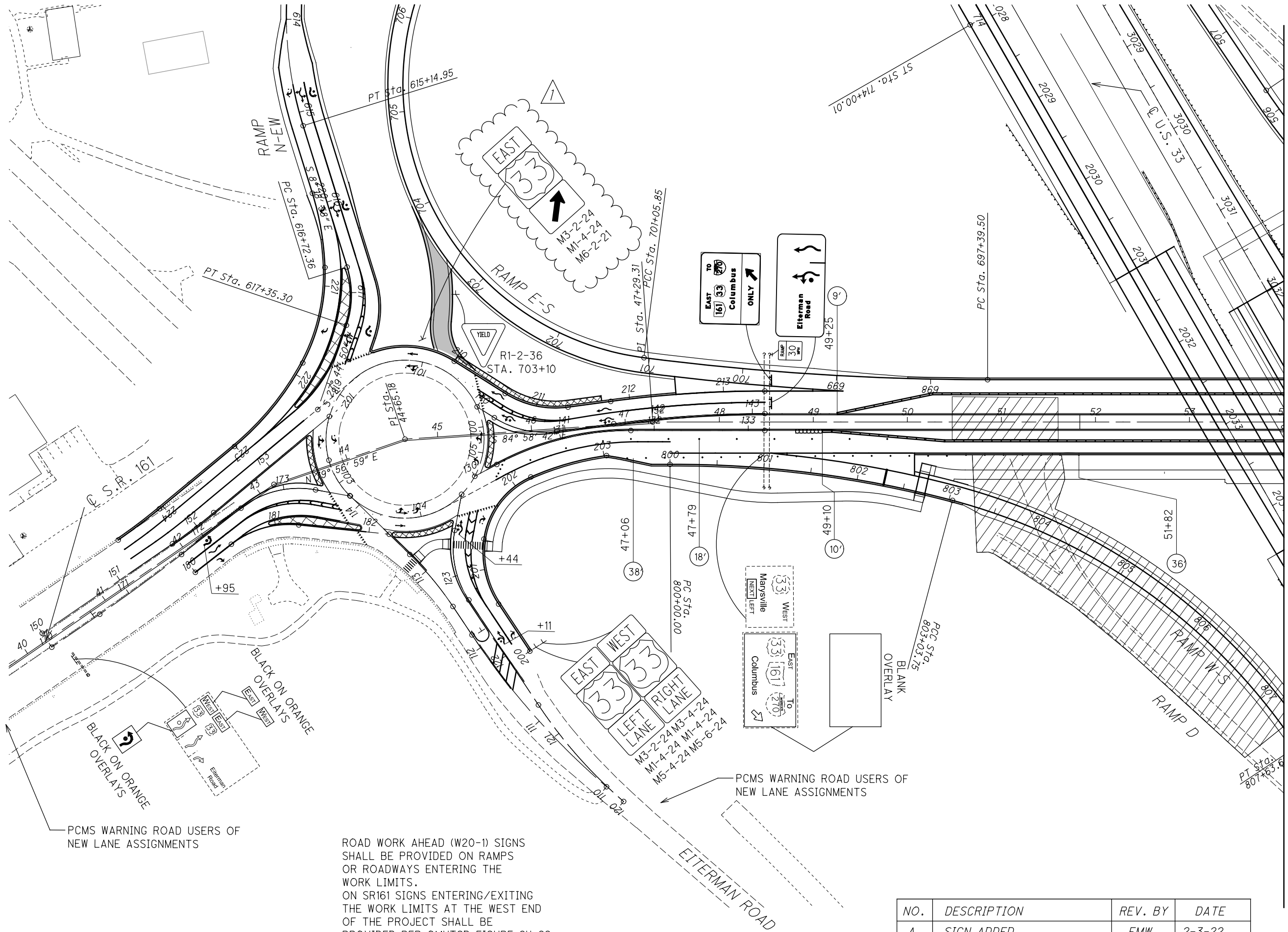
NOTE:
SEE SHEET 59 FOR LEGEND



**MAINTENANCE OF TRAFFIC
S.R. 161 - PHASE 4**

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PCMS WARNING ROAD USERS OF NEW LANE ASSIGNMENTS

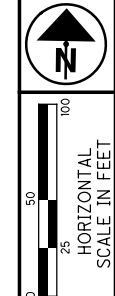
ROAD WORK AHEAD (W20-1) SIGNS SHALL BE PROVIDED ON RAMPS OR ROADWAYS ENTERING THE WORK LIMITS.
ON SR161 SIGNS ENTERING/EXITING THE WORK LIMITS AT THE WEST END OF THE PROJECT SHALL BE PROVIDED PER OMTCD FIGURE 6H-22.

NO.	DESCRIPTION	REV. BY	DATE
A	SIGN ADDED	EMW	2-3-22

MATCHLINE STA. 54+00
SEE SHEET 75

NOTE:
SEE SHEET 59 FOR LEGEND

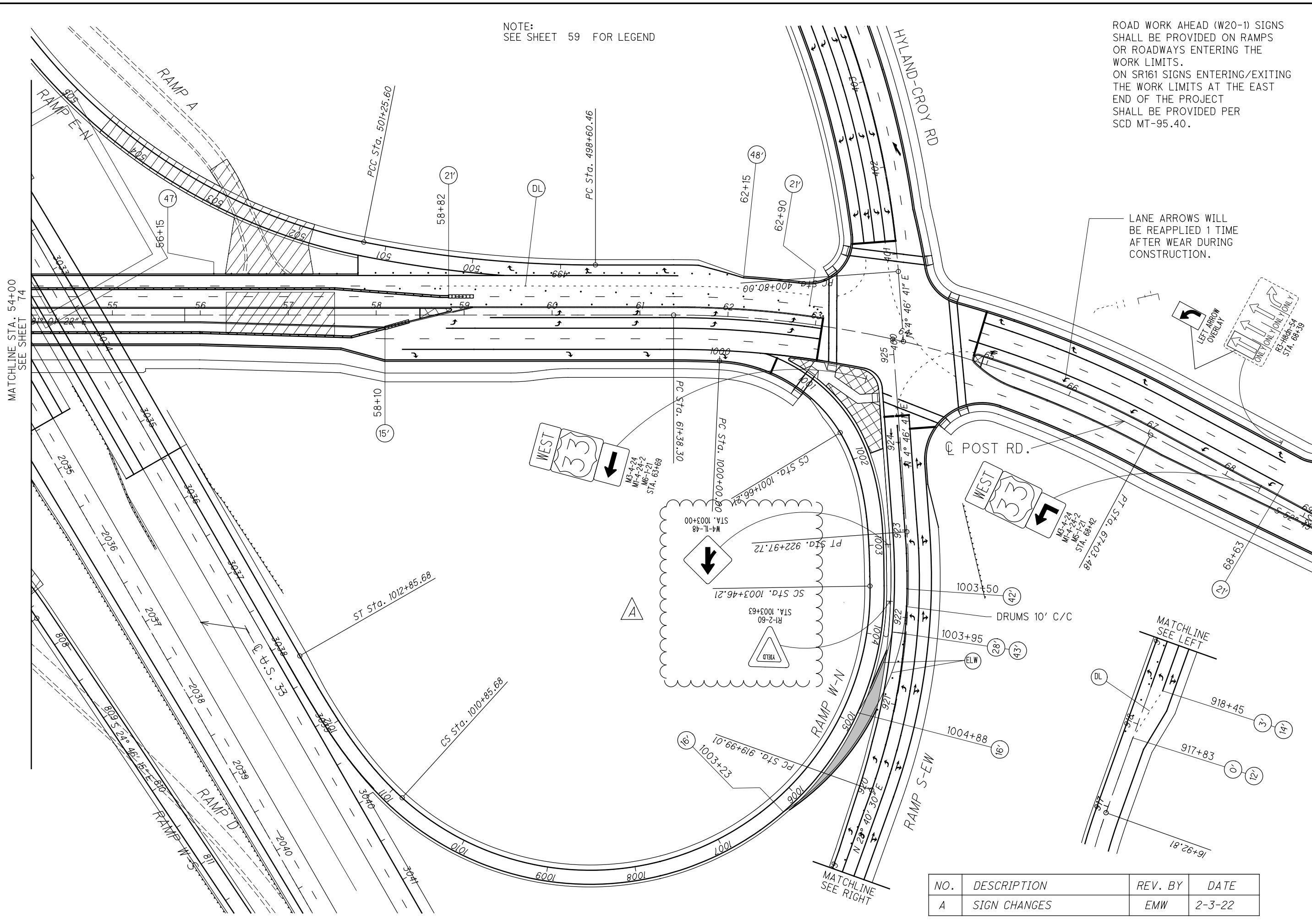
ROAD WORK AHEAD (W20-1) SIGNS SHALL BE PROVIDED ON RAMPS OR ROADWAYS ENTERING THE WORK LIMITS.
ON SR161 SIGNS ENTERING/EXITING THE WORK LIMITS AT THE EAST END OF THE PROJECT SHALL BE PROVIDED PER SCD MT-95.40.



**MAINTENANCE OF TRAFFIC
S.R. 161 - PHASE 4**

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NO.	DESCRIPTION	REV. BY	DATE
A	SIGN CHANGES	EMW	2-3-22

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SHEET NUM.														PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED NJL	CHECKED KOD
36	37	38	109	110	111	112	104	108	121	122	129			01/NHS/PV	02/S>2/PV								
														ROADWAY									
LS														LS		201	11000	LS	CLEARING AND GRUBBING	36			
							18							11	7	202	2000	EACH	HEADWALL REMOVED				
							14,272							10,849	3,423	202	23001	SY	PAVEMENT REMOVED, AS PER PLAN	38			
							6,051								6,051	202	30000	SF	WALK REMOVED				
							1,091							69	1,022	202	30600	SY	CONCRETE MEDIAN REMOVED				
							163								163	202	30700	FT	CONCRETE BARRIER REMOVED				
							2,399							212	2,187	202	32000	FT	CURB REMOVED				
							2,715								2,715	202	32500	FT	CURB AND GUTTER REMOVED				
							4,373							797	3,576	202	35100	FT	PIPE REMOVED, 24" AND UNDER				
							2,147							2,054	93	202	38000	FT	GUARDRAIL REMOVED				
							232							232		202	38300	FT	GUARDRAIL REMOVED, BARRIER DESIGN				
							8							8		202	42206	EACH	ANCHOR ASSEMBLY REMOVED				
							3							3		202	47000	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED				
							5							5		202	47800	EACH	IMPACT ATTENUATOR REMOVED				
							35							35		202	48000	FT	CABLE BARRIER REMOVED				
							1								1	202	53100	EACH	MAILBOX REMOVED				
							2								2	202	58000	EACH	MANHOLE REMOVED				
							18							3	15	202	58100	EACH	CATCH BASIN REMOVED				
							1							1		202	60010	EACH	MONUMENT ASSEMBLY REMOVED				
							40						11,857	11,338	559	202	75000	FT	FENCE REMOVED				
							16							16		202	98400	SF	REMOVAL MISC.: CONCRETE PAD	40			
		450				135,022								92,440	43,032	203	10000	CY	EXCAVATION				
		450				106,502								100,185	6,767	203	20000	CY	EMBANKMENT				
			5,666		1,349									1,349	5,666	204	10000	SY	SUBGRADE COMPACTION				
														2,069	886	206	10500	TON	CEMENT				
		2,955												LS	LS	206	30000	LS	MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS				
		97,800												68,460	29,340	206	11000	SY	CURING COAT				
			68,137	21,234	8,154									68,755	28,770	206	15020	SY	CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP				
		50												35	15	206	20000	HOUR	TEST ROLLING				
								5,032						4,869	163	606	15050	FT	GUARDRAIL, TYPE MGS				
								175						175		606	15550	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS				
								8						7	1	606	26050	EACH	ANCHOR ASSEMBLY, MGS TYPE B				
								8						8		606	26150	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH TYPE I)				
								12						11	1	606	26550	EACH	ANCHOR ASSEMBLY, MGS TYPE T				
								9						9		606	35002	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1				
								4						4		606	35102	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2				
								1						1		SPECIAL	60655150	EACH	CABLE BARRIER, ANCHOR ASSEMBLY	40			
								1						1		606	60012	EACH	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)				
								98						98		606	98000	FT	GUARDRAIL, MISC.: STEEL BACKED TIMBER GUARDRAIL, TYPE A	40			
								2						2		606	98100	EACH	GUARDRAIL, MISC.: STEEL BACKED TIMBER GUARDRAIL, TERMINAL SECTION, TYPE SBT FAT-30	40			
													11,143	10,933	210	607	15000	FT	FENCE, TYPE 47				
							6,455							6,455		608	10000	SF	4" CONCRETE WALK				
							1,139							1,139		608	52000	SF	CURB RAMP				
							260							260		608	53020	SF	DETECTABLE WARNING				
							20							20		622	10160	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D				
								1						1		622	25000	EACH	CONCRETE BARRIER END SECTION, TYPE D				
								1						1		622	25050	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D				
														2		623	40500	EACH	REFERENCE MONUMENT				
														LS		SPECIAL	69091000	LS	AS BUILT CONSTRUCTION PLANS	39			
			784		1,112									1,112	784	SPECIAL	69098300	SY	HEAVY DUTY BRICK PAVERS INCLUDING CONCRETE BASE	38			
														LS		878	25000	LS	INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS				
																			EROSION CONTROL				
									198					198		601	21001	SY	CONCRETE SLOPE PROTECTION, AS PER PLAN	37			
			20								82			102		601	21050	SY	TIED CONCRETE BLOCK MAT, TYPE 1				
										73				73		601	21060	SY	TIED CONCRETE BLOCK MAT, TYPE 2				
			10											50	8	601	32200	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER				
														243		601	32300	CY	ROCK CHANNEL PROTECTION, TYPE D WITH FILTER				
3														2	1	659	00100	EACH	SOIL ANALYSIS TEST				
24,943														21,950	2,993	659	00300	CY	TOPSOIL				
						224,712								197,827	26,885	659	10000	SY	SEEDING AND MULCHING				

GENERAL SUMMARY

UNI - 33 - 24.87

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Main data table with columns: SHEET NUM., PART., ITEM, ITEM EXT, GRAND TOTAL, UNIT, DESCRIPTION, SEE SHEET NO., and a summary column on the right.

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GENERAL SUMMARY

UNI - 33 - 24 . 87

Revision table with columns: NO., DESCRIPTION, REV. BY, DATE. Includes entry 'A QUANTITY REVISIONS ENR 2-3-2022'.

38
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923

SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
48	109	110	111	108	122	585	601			01/NHS/PV	02/S>2/PV						
					1						1	611	99851	1	EACH	WATER QUALITY BASIN, RETENTION, AS PER PLAN	582
PAVEMENT																	
	4,635										4,635	254	01000	4,635	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.5"	
	47,759									46,451	1,308	254	01000	47,759	SY	PAVEMENT PLANING, ASPHALT CONCRETE, VARIABLE DEPTH	
	697										697	301	46000	697	CY	ASPHALT CONCRETE BASE, PG64-22	
	19,404									12,226	7,178	302	46000	19,404	CY	ASPHALT CONCRETE BASE, PG64-22	
	12,869	3,539								12,626	6,058	304	20000	18,684	CY	AGGREGATE BASE	
	16,436									12,693	3,743	305	16010	16,436	SY	12" CONCRETE BASE, CLASS QC IP	
	155										155	407	20000	16,436	GAL	NON-TRACKING TACK COAT	
												441	50101	155	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN	9
	9,333									6,606	2,727	442	00100	9,333	CY	ANTI-SEGREGATION EQUIPMENT	
	5,056									3,550	1,506	442	10001	5,056	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG 70-22M	9
	3,224									1,756	1,468	442	10100	3,224	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	
	2,258											442	10100	2,258	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), 1.75	
		19,498	7,785									452	14020	27,283	SY	10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC IP WITH QC/QA	
												609	12001	6,216	FT	COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN	33
												609	18001	169	FT	COMBINATION CURB AND GUTTER, TYPE 3, AS PER PLAN	33
										392	534	609	24510	926	FT	CURB, TYPE 4-C	
											209	609	26000	209	FT	CURB, TYPE 6	
											5,310	609	26001	5,310	FT	CURB, TYPE 6, AS PER PLAN	33
											1,506	609	71000	1,506	SF	CONCRETE MEDIAN	
											342	609	98000	342	FT	CURB, MISC.: 18" HEIGHT	33
WATER WORK																	
												202	75610	9	EACH	VALVE BOX REMOVED	
												613	41201	32	CY	LOW STRENGTH MORTAR BACKFILL, AS PER PLAN	586
										769	638	638	02401	769	FT	12" WATERMAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS, AS PER PLAN, (COC 801)*	586
										160	638	638	03001	160	FT	16" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS, AS PER PLAN, (COC 801)	593
										60	638	638	06705	60	FT	20" STEEL PIPE ENCASEMENT, OPEN CUT, AS PER PLAN*	586
										320	638	638	07305	320	FT	20" STEEL PIPE ENCASEMENT, BORED OR JACKED, AS PER PLAN*	586
										4	638	638	07501	4	EACH	12" GATE VALVE, AS PER PLAN, (COC 802)*	586
										2	638	638	09801	2	EACH	12" X 12" TAPPING SLEEVE, VALVE AND VALVE BOX, AS PER PLAN, (COC 803)*	586
										1	638	638	10201	1	EACH	6" FIRE HYDRANT, AS PER PLAN, (COC 809)*	595
										1	638	638	10600	1	EACH	FIRE HYDRANT AND GATE VALVE REMOVED AND RESET, (COC 809)	
										9	638	638	10800	9	EACH	VALVE BOX ADJUSTED TO GRADE, (COC 807)	
										1	638	638	11300	1	EACH	1" AIR RELEASE VALVE, (COC 812)	
							2,350			2,350	SPECIAL	63820414	2,350	FT	2" WATER MAIN POLYVINYL CHORIDE PIPE AND FITTINGS (WSP 6768)	601	
										1	SPECIAL	63820752	1	EACH	FIRE HYDRANT REMOVED FOR STORAGE, (COC 809)*	586	
							114			114	638	20774	114	FT	1-1/2" WATER TUBING, TYPE K SOFT COPPER (COLS. CMS ITEM 805.03), A.P.P. (WSP 6768)	601	
										1	638	20844	1	EACH	1-1/2" WATER SERVICE TAP, COMPLETE (COLS. CMS ITEM 805), A.P.P (WSP 6768)	601	
										8	SPECIAL	63898000	8	EACH	QUICK COUPLER VALVE, 1" BRASS, 2 PIECE, WITH BOX (10" ROUND) (WSP 6768)	601	
										1	SPECIAL	63898100	1	LUMP	1 1/2" METER SETTING WITH BACK FLOW PREVENTER IN HEATED ENCLOSURE (WSP 6768)	601	
*INDICATES CITY OF MARYSVILLE SYSTEM ONLY																	

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KOD


GENERAL SUMMARY

UNI-33-24.87

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NO.	DESCRIPTION	REV. BY	DATE
A	QUANTITY REVISIONS	ENR	2-3-2022

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REF NO.	SHEET NO.	STATION TO STATION	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202		
			HEADWALL REMOVED EACH	PAVEMENT REMOVED, AS PER PLAN SY 	WALK REMOVED SF	CONCRETE MEDIAN REMOVED SY	CONCRETE BARRIER REMOVED FT	CURB REMOVED FT	CURB AND GUTTER REMOVED FT	PIPE REMOVED, 24" AND UNDER FT	GUARDRAIL REMOVED FT	MAILBOX REMOVED EACH	MANHOLE REMOVED EACH	CATCH BASIN REMOVED EACH	FENCE REMOVED FT	MONUMENT ASSEMBLY REMOVED EACH	GUARDRAIL REMOVED, BARRIER DESIGN FT	ANCHOR ASSEMBLY REMOVED EACH	IMPACT ATTENUATOR REMOVED EACH	BRIDGE TERMINAL ASSEMBLY REMOVED EACH	REMOVAL MISC.: CONCRETE PAD SF	CABLE BARRIER REMOVED FT		
R1	145	41+47.68, 44.83' LT TO 42+00.00, 44.95' LT											53											
R2	145	41+90.00, 8.00' LT TO 42+00.00, 8.04' LT										10												
R1	146	42+00.00, 44.95' LT TO 47+05.89, 37.86' LT											592											
R2	146	42+00.00, 8.06' LT TO 43+62.29, 30.54' LT										169												
R3	146	42+14.84, 3.56' RT TO 43+62.07, 28.55' RT										165												
R4	146	43+62.38, 27.89' RT TO 43+62.84, 30.01' LT										59												
R5	146	43+62.07, 28.55' RT TO 43+62.29, 30.53' LT										69												
R6	146	43+62.84, 30.01' LT TO 43+66.77, 25.29' RT				33																		
R7	146	44+24.11, 98.56' RT TO 44+40.56, 139.70' RT										44												
R8	146	44+24.64, 98.40' RT TO 45+24.69, 88.79' RT										77												
R9	146	44+32.96, 118.98' RT TO 45+22.30, 109.05' RT				504																		
R10	146	44+24.11, 98.56' RT TO 45+25.23, 89.32' RT										86												
R11	146	44+24.29, 97.10' RT TO 45+24.17, 86.27' RT					43																	
R12	146	45+54.43, 127.45' RT TO 45+71.80, 116.17' RT				177																		
R13	146	45+61.35, 113.02' RT TO 46+08.53, 67.23' RT										74												
R14	146	45+56.62, 108.88' RT TO 46+08.13, 67.26' RT					39																	
R15	146	45+69.72, 26.62' RT TO 45+70.89, 17.07' LT										55												
R16	146	45+64.66, 23.23' RT TO 45+70.72, 16.39' LT				25																		
R17	146	45+69.19, 26.07' RT TO 45+70.72, 16.39' LT										43												
R18	146	45+70.89, 17.07' LT TO 47+50.00, 2.84' LT										184												
R19	146	45+69.72, 26.62' RT TO 47+50.00, 8.15' RT										182												
R20	146	44+62.78, 101.00' LT TO 47+50.00, 45.56' LT																						
R21	146	45+81.21, 228.47' RT TO 47+50.00, 56.57' RT																						
R22	146	42+60.89, 54.39' LT TO 42+78.17, 47.83' LT											16											
R23	146	44+31.06, 121.44' LT TO 44+32.86, 149.15' LT											27											
R24	146	44+10.63, 170.84' LT TO 44+33.01, 151.14' LT	1										28											
R25	146	44+34.67, 150.03' LT TO 44+65.18, 122.09' LT												52										
R26	146	46+97.82, 39.91' LT TO 46+99.39, 26.94' LT												11										
R1	147	47+50.00, 2.84' LT TO 50+94.90, 5.11' RT											349											
R2	147	47+50.00, 8.15' RT TO 50+94.90, 5.11' RT											346											
R3	147	51+92.03, 3.68' RT TO 52+00.00, 2.70' RT											17											
R4	147	48+86.86, 10.26' LT TO 48+86.30, 96.53' LT	1											86										
R5	147	50+46.38, 37.30' RT TO 52+00.00, 35.17' RT												154										
R1	148	52+00.00, 2.70' RT TO 56+05.51, 6.88' LT					424																	
R2	148	56+97.96, 6.59' LT TO 57+00.00, 7.68' LT					1																	
R3	148	52+99.03, 41.76' LT TO 54+61.94, 43.47' LT						163																
R4	148	54+61.80, 41.49' LT TO 55+55.17, 41.62' LT																						
R5	148	52+00.00, 35.17' RT TO 57+00.00, 39.28' RT											500											
R1	149	57+00.00, 7.68' LT TO 60+57.78, 0.00' LT/RT					457																	
R2	149	57+50.75, 52.59' LT TO 57+78.80, 50.57' LT	2											28										
R3	149	57+00.00, 39.28' RT TO 61+50.38, 36.55' RT												450										
R1	150	61+50.38, 36.55' RT TO 66+00.00, 36.23' RT												438										
R2	150	62+72.57, 53.76' LT TO 62+81.07, 22.75' LT												31										
R3	150	62+72.83, 52.80' LT TO 63+44.59, 37.69' RT																						
R4	150	63+44.85, 38.40' RT TO 64+12.17, 141.95' RT												116										
R5	150	63+47.30, 37.97' RT TO 64+47.51, 46.34' RT												119										
														97										
TOTALS CARRIED TO SHEET 104			4	982	681	1022	163	1929	645	2153	93	1	7											


ROADWAY SUBSUMMARY

UNI - 33 - 24.87

NO.	DESCRIPTION	REV. BY	DATE
A	ITEM UPDATE	ENR	2-4-2022

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CALCULATED
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REF NO.	SHEET NO.	STATION TO STATION	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202
			EACH	SY	SF	SY	FT	FT	FT	FT	FT	EACH	EACH	EACH	FT	EACH	FT	EACH	EACH	EACH	SF	FT
			HEADWALL REMOVED	PAVEMENT REMOVED, AS PER PLAN 	WALK REMOVED	CONCRETE MEDIAN REMOVED	CONCRETE BARRIER REMOVED	CURB REMOVED	CURB AND GUTTER REMOVED	PIPE REMOVED, 24" AND UNDER	GUARDRAIL REMOVED	MAILBOX REMOVED	MANHOLE REMOVED	CATCH BASIN REMOVED	FENCE REMOVED	MONUMENT ASSEMBLY REMOVED	GUARDRAIL REMOVED, BARRIER DESIGN	ANCHOR ASSEMBLY REMOVED	IMPACT ATTENUATOR REMOVED	BRIDGE TERMINAL ASSEMBLY REMOVED	REMOVAL MISC.: CONCRETE PAD	CABLE BARRIER REMOVED
R6	150	64+28.81, 65.51' LT TO 64+49.19, 44.46' RT								110				1								
R7	150	64+49.69, 46.53' RT TO 65+82.96, 50.60' RT								126			1									
R8	150	65+85.13, 48.55' RT TO 65+86.07, 23.26' RT								25				1								
R9	150	63+52.58, 53.02' LT TO 66+00.00, 32.32' LT							258													
R10	150	64+03.05, 70.78' RT TO 66+00.00, 23.80' RT							234													
R11	150	63+91.39, 39.94' LT TO 66+00.00, 46.50' LT			1068																	
R12	150	64+01.97, 49.38' RT TO 66+00.00, 42.60' RT		169																		
R1	151	66+00.00, 23.80' RT TO 70+00.00, 27.93' RT							395													
R2	151	66+00.00, 32.32' LT TO 69+02.85, 59.89' LT							323													
R3	151	69+35.33, 61.79' LT TO 71+00.00, 28.30' LT							180													
R4	151	66+29.33, 35.33' LT TO 71+00.00, 28.30' LT										1										
R5	151	66+00.00, 41.81' LT TO 68+94.79, 75.00' LT			1581																	
R6	151	69+44.12, 75.00' LT TO 71+00.00, 41.94' LT			1032																	
R7	151	66+00.00, 34.74' RT TO 71+00.00, 46.27' RT		344																		
R8	151	66+00.00, 36.23' RT TO 68+79.20, 39.53' RT							276													
R9	151	67+37.62, 30.00' RT TO 67+37.61, 53.33' RT							22				1									
R10	151	69+92.97, 29.78' RT TO 67+37.61, 53.33' RT							8				1									
R11	151	70+89.11, 28.62' LT TO 70+89.20, 14.09' LT							14				1									
R12	151	68+64.65, 28.30' LT TO 68+69.39, 29.14' LT							4				1									
R1	152	71+00.00, 28.30' LT TO 74+25.01, 28.18' LT							338													
R2	152	72+41.70, 4.56' LT TO 72+45.72, 11.45' LT							10													
R3	152	71+00.00, 37.12' LT TO 74+25.45, 41.99' LT			1689																	
R1	159	800+22.47, 4.54' RT TO 808+28.13, 7.43' RT		1928																		
R2	159	801+24.04, 68.13' RT TO 801+33.27, 1.63' RT	1						67													
R3	159	803+17.62, 91.51' RT TO 803+30.48, 25.06' LT	1						117				1									
R4	159	803+68.82, 33.39' LT TO 804+43.95, 29.97' RT					99															
R5	159	805+13.06, 126.35' RT TO 805+28.25, 9.73' LT	1						137													
R1	161	1001+20.35, 55.63' LT TO 1004+53.88, 136.8' LT							423													
R1	165	45+20.95, 208.87' RT TO 45+25.23, 89.32' RT						159														
R2	165	45+76.53, 215.64' RT TO 46+94.49, 56.76' RT							273													
R1	166	401+38.62, 103.79' LT TO 402+29.32, 88.01' LT							84				1									
R2	166	400+65.07, 33.90' LT TO 401+34.58, 44.25' LT							69													
F1	168	21+81.20, 37.75' LT TO 22+08.25, 38.40' LT													40							
TOTALS CARRIED TO SHEET 104			3	2441	5370			258	2070	1423	1	1	8	40								

CALCULATED NJL CHECKED KOD

ROADWAY SUBSUMMARY

UNI - 33 - 24.87


NO.	DESCRIPTION	REV. BY	DATE
A	ITEM UPDATE	ENR	2-4-2022

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	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202
	HEADWALL REMOVED	PAVEMENT REMOVED, AS PER PLAN	WALK REMOVED	CONCRETE MEDIAN REMOVED	CONCRETE BARRIER REMOVED	CURB REMOVED	CURB AND GUTTER REMOVED	PIPE REMOVED, 24" AND UNDER	GUARDRAIL REMOVED	MAILBOX REMOVED	MANHOLE REMOVED	CATCH BASIN REMOVED	FENCE REMOVED	MONUMENT ASSEMBLY REMOVED	GUARDRAIL REMOVED, BARRIER DESIGN	ANCHOR ASSEMBLY REMOVED	IMPACT ATTENUATOR REMOVED	BRIDGE TERMINAL ASSEMBLY REMOVED	REMOVAL MISC.: CONCRETE PAD	CABLE BARRIER REMOVED	
	EACH	SY	SF	SY	FT	FT	FT	FT	FT	EACH	EACH	EACH	FT	EACH	FT	EACH	EACH	EACH	SF	FT	
QUANTITIES FOR PLAN SPLIT 01/NHS/PV																					
101	11	10849		69		212		797	2054			3		1	232	8	5	3	16	35	
102																					
103																					
SUBTOTAL	11	10849		69		212		797	2054			3		1	232	8	5	3	16	35	
QUANTITIES FOR PLAN SPLIT 02/S>2/PV																					
101																					
102	4	982	681	1022	163	1929	645	2153	93		1	7									
103	3	2441	5370			258	2070	1423		1	1	8	40								
SUBTOTAL	7	3423	6051	1022	163	2187	2715	3576	93	1	2	15	40								
TOTALS CARRIED TO GENERAL SUMMARY																					
	18	14272	6051	1091	163	2399	2715	4373	2147	1	2	18	40	1	232	8	5	3	16	35	

NO.	DESCRIPTION	REV. BY	DATE
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ROADWAY SUBSUMMARY

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STATION RANGE	TYPICAL SECTION	SIDE	DISTANCE (D) FT	AVERAGE WIDTH (W) FT	SURFACE AREA (A) A=DxW/9 SY	CADD GENERATED AREA SY	206	304	452	204	305	SPECIAL									
							CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP SY	AGGREGATE BASE CY	10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1 WITH QC/QA SY	SUBGRADE COMPACTION SY	12" CONCRETE BASE, CLASS QC1 SY	HEAVY DUTY BRICK PAVERS INCLUDING CONCRETE BASE SY									
RAMP S-EW																					
910+33.36		910+57.61	28	24.25	43.75	117.88			117.88												
					46.08	124.17	124.17	20.69													
910+57.61		911+05.39	28	47.78	42.96	228.04			228.04												
					45.29	240.43	240.43	40.07													
911+05.39		912+40.39	28	135.00	42.11	631.58			631.58												
					44.44	666.58	666.58	111.10													
912+40.39		917+60.15	28	519.76	42.00	2425.55			2425.55												
					44.33	2560.30	2560.30	426.72													
917+60.15		917+75.00	29	14.85	42.00	69.30			69.30												
					44.33	73.15	73.15	12.19													
917+75.00		918+25.00	29	50.00	52.00	288.89			288.89												
					54.33	301.85	301.85	50.31													
918+25.00		919+22.05	29	97.05	52.00	560.73			560.73												
					54.33	585.89	585.89	97.65													
919+22.05		920+52.29	29	130.24	54.00	781.44			781.44												
					56.33	815.21	815.21	135.87													
920+52.29		921+75.95	29	123.66	56.00	769.44			769.44												
					58.33	801.50	801.50	133.58													
921+75.95		922+99.92		123.97	56.00	771.37			771.37												
					58.33	803.51	803.51	133.92													
922+99.92		924+74.63		174.71			1140.29		1140.29												
							1180.78	196.80													
SR 161 HARDSCAPE																					
51+83.55		55+82.35		398.80			1111.11	185.19	1111.11												
							237.78	39.63	237.78	237.78											
SUBTOTALS							8153.36	1583.71	7784.51	1348.89	237.78	1111.11									
TOTALS CARRIED TO GENERAL SUMMARY							8154	1584	7785	1349	238	1112									

NO.	DESCRIPTION	REV. BY	DATE
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CALCULATED ARL	CHECKED KOD	PAVEMENT SUBSUMMARY	UNI - 33 - 24.87

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REF NO.	SHEET NO.	STATION TO STATION				601	601	601	602	611	611												611	611	611	611	611	611	611	611	611	611	611	611	611	611
						CONCRETE SLOPE PROTECTION, AS PER PLAN	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	ROCK CHANNEL PROTECTION, TYPE D WITH FILTER	CONCRETE MASONRY, AS PER PLAN	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	12" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21	15" CONDUIT, TYPE B	15" CONDUIT, TYPE C	18" CONDUIT, TYPE B	18" CONDUIT, TYPE C	21" CONDUIT, TYPE C	24" CONDUIT, TYPE B	24" CONDUIT, TYPE C	27" CONDUIT, TYPE A	30" CONDUIT, TYPE C	36" CONDUIT, TYPE B	36" CONDUIT, TYPE C	42" CONDUIT, TYPE C	19" X 30" CONDUIT, TYPE B, 706.04	19" X 30" CONDUIT, TYPE C, 706.04	22" X 34" CONDUIT, TYPE B, 706.04	22" X 34" CONDUIT, TYPE C, 706.04	24" X 38" CONDUIT, TYPE B, 706.04	24" X 38" CONDUIT, TYPE C, 706.04	29" X 45" CONDUIT, TYPE A, 706.04	29" X 45" CONDUIT, TYPE B, 706.04	34" X 53" CONDUIT, TYPE B, 706.04	34" X 53" CONDUIT, TYPE C, 706.04		
					SY	CY	CY	CY	FT	FT																										
E1	132	2002+96.45		2004+39.62																																
E2	132	2005+56.56		2007+07.01																																
E3	132	3002+50.00		3010+00.00																																
E1	133	2012+57.11		2014+07.27																																
E2	133	2024+09.46		2024+50.00																																
E1	135	2024+50.00		2025+59.35																																
E1	136	3035+23.09		3037+00.00																																
E1	137	2040+45.40		2041+95.38																																
E2	137	2046+93.67		2048+45.42																																
E3	137	2048+58.96		2049+50.00																																
E1	134	3013+00.00		3015+75.00																																
E2	134	505+50.00		515+50.00																																
E1	138	3041+62.06		3042+50.00																																
E1	139	2049+50.00		2050+11.08																																
E2	139	2051+40.56		2052+92.53																																
E3	139	2054+02.96		2055+54.94																																
E4	139	2050+78.71		2050+84.16																																
E5	139	2051+78.40		2051+83.84																																
E6	139	2056+69.30		2058+21.24																																
SA1	139	2050+88.93																																		
SA2	139	2053+34.91																																		
E1	140	3050+43.94		3050+49.53																																
E2	140	3051+45.15		3051+50.70																																
E3	140	3049+46.53		3050+94.51																																
SA1	140	3050+51.96																																		
E1	141	3069+86.18		3071+34.26																																
E1	142	3082+19.62		3083+67.71																																
E1	143	3086+65.78		3088+13.87																																
E1	147	50+00.00		51+50.00																																
E1	148	56+53.98		57+00.00																																
E1	149	57+00.00		58+00.00																																
E1	153	501+28.00		502+00.00																																
E2	153	502+50.00		510+00.00																																
E1	159	803+50.00		805+00.00																																
E2	159	805+00.00		806+50.00																																
E3	159	811+86.68		813+36.67																																
E1	160	815+00.00		816+45.01																																
E2	160	816+54.99		816+95.01																																
E3	160	813+50.00		814+00.00																																
E1	162	1010+00.00		1011+12.90																																
E2	162	1009+04.47		1011+00.00																																
E1	164	914+00.00		914+50.00																																
TOTALS CARRIED TO SHEET																																				

NO.	DESCRIPTION	REV. BY	DATE
A	ITEM UPDATE	ENR	2-4-2022

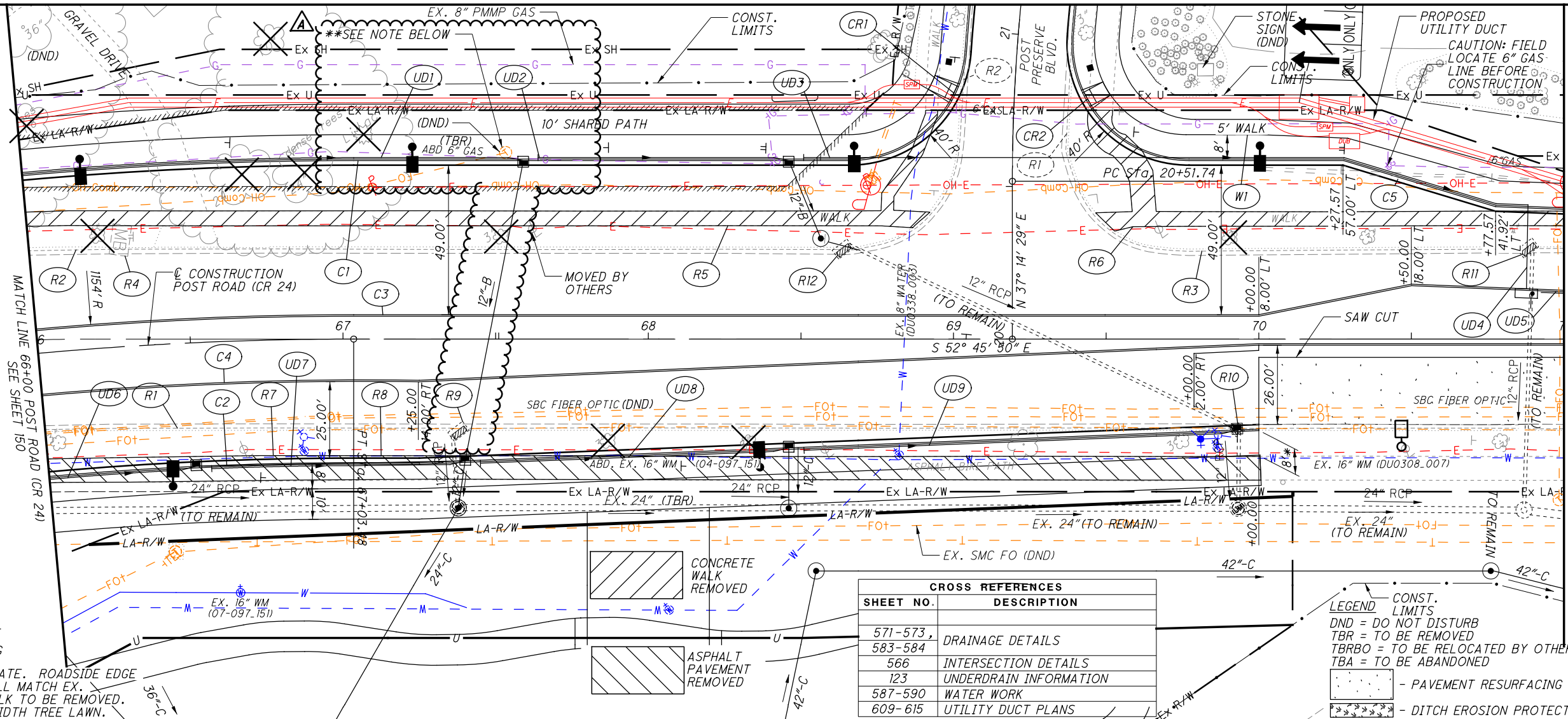
DRAINAGE SUBSUMMARY	CALCULATED
	JMH
UNI - 33 - 24.87	CHECKED
	JEL



CALCULATED MRT
CHECKED MAH

**PLAN AND PROFILE - POST ROAD (CR 24)
STA. 66+00.00 TO STA. 71+00.00**

UNI-33-24.87



CURVE DATA

P.I. Sta. 64+26.76
 $\Delta = 28^\circ 15' 32''$ (RT)
 $D_c = 5^\circ 00' 00''$
 $R = 1,145.92'$
 $T = 288.46'$
 $L = 565.18'$
 $E = 35.75'$
 $C = 559.47'$
 $C.B. = S 66^\circ 53' 36'' E$
 $S.E. =$ MATCH EXISTING

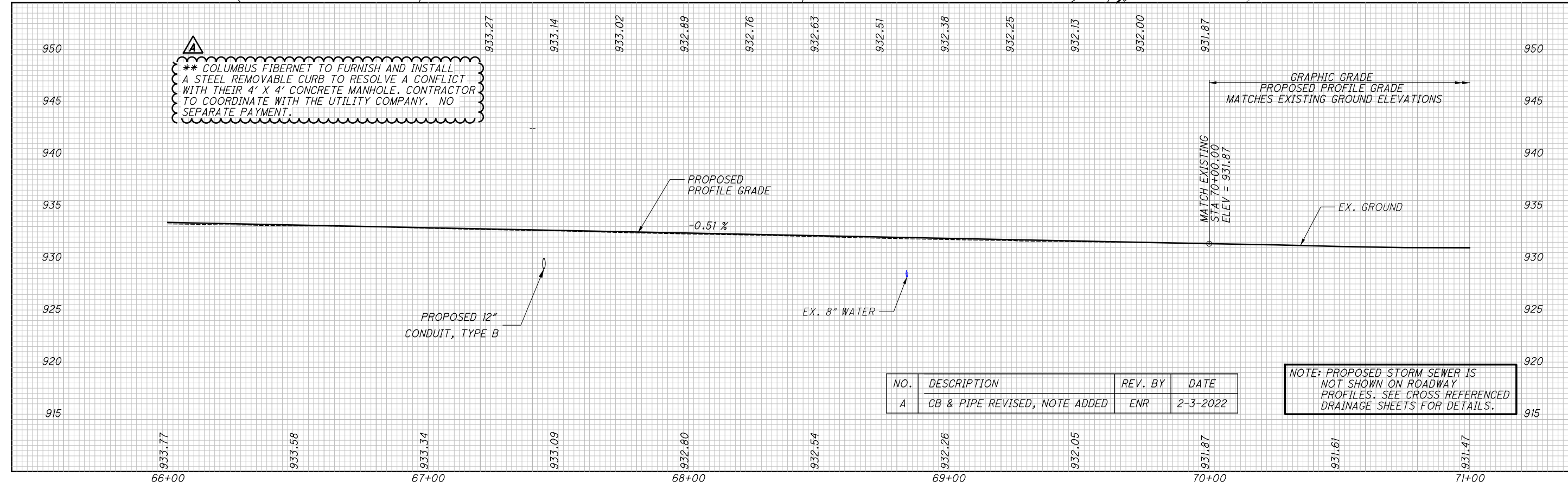
*OFFSET IS APPROXIMATE. ROADSIDE EDGE OF WALKING PATH SHALL MATCH EX. ROADSIDE EDGE OF WALK TO BE REMOVED. MAINTAIN CONSTANT WIDTH TREE LAWN.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
571-573, 583-584	DRAINAGE DETAILS
566	INTERSECTION DETAILS
123	UNDERDRAIN INFORMATION
587-590	WATER WORK
609-615	UTILITY DUCT PLANS

LEGEND

CONST. LIMITS
 DND = DO NOT DISTURB
 TBR = TO BE REMOVED
 TBRBO = TO BE RELOCATED BY OTHERS
 TBA = TO BE ABANDONED

- PAVEMENT RESURFACING LIMITS
 - DITCH EROSION PROTECTION

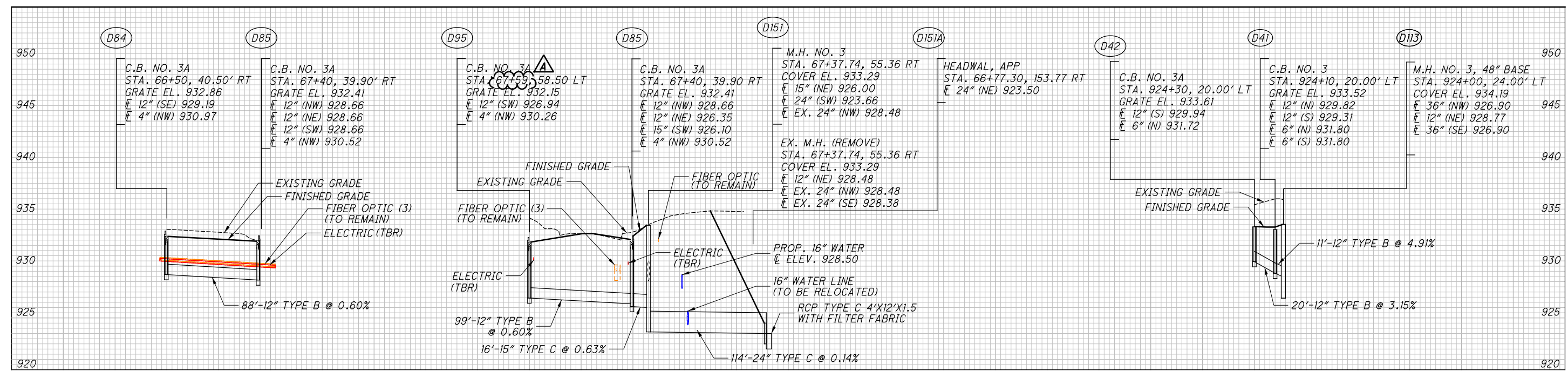
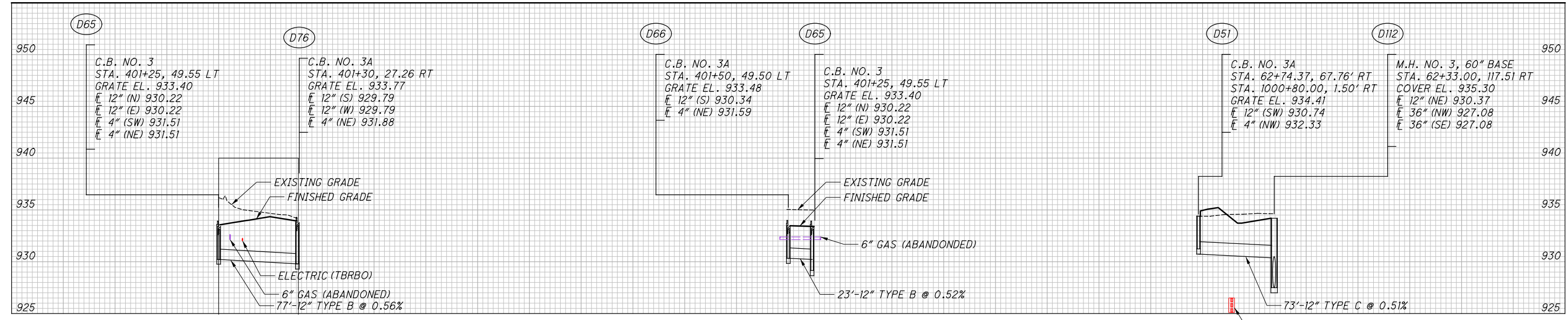


NO.	DESCRIPTION	REV. BY	DATE
A	CB & PIPE REVISED, NOTE ADDED	ENR	2-3-2022

NOTE: PROPOSED STORM SEWER IS NOT SHOWN ON ROADWAY PROFILES. SEE CROSS REFERENCED DRAINAGE SHEETS FOR DETAILS.

STORM SEWER PROFILES

UNI - 33 - 24.87



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
113-120	DRAINAGE QUANTITIES
583-584	DRAINAGE DETAILS

NO.	DESCRIPTION	REV. BY	DATE
A	REVISED STATION	ENR	2-3-2022

P:\PR41806AA\FRA\80748\DRAINAGE_SHEETS\80748DF03.DGN

P:\PR5574\FRA\80748\Design\Utilities\Sheets\80748US002.dgn Default 2/2/2022 9:38:53 AM riley

REF NO.	SHEET NO.	STATION TO STATION		625													SPECIAL			
				TRENCH, MISC.: UTILITY TRENCH "A", TYPE A TRENCH, AS PER PLAN	TRENCH, MISC.: UTILITY TRENCH "C", TYPE B TRENCH, AS PER PLAN	TRENCH, MISC.: UTILITY TRENCH "D", TYPE B TRENCH, AS PER PLAN	TRENCH, MISC.: UTILITY TRENCH "E", TYPE A TRENCH, AS PER PLAN	TRENCH, MISC.: UTILITY TRENCH "E", TYPE B TRENCH, AS PER PLAN	TRENCH, MISC.: UTILITY TRENCH "G", TYPE B TRENCH, AS PER PLAN	TRENCH, MISC.: UTILITY TRENCH "H", TYPE B TRENCH, AS PER PLAN	TRENCH, MISC.: UTILITY TRENCH "J", TYPE B TRENCH, AS PER PLAN	TRENCH, MISC.: UTILITY TRENCH "K", TYPE B TRENCH, AS PER PLAN	TRENCH, MISC.: UTILITY TRENCH "L", TYPE B TRENCH, AS PER PLAN	PRECAST CONCRETE ELECTRIC MANHOLE	FIBERGLASS SWITCH PAD (COORDINATION ONLY)	MISC.: CHANNEL VAULT (INSTALLATION ONLY)	MISC.: PRECAST DUBLINK CONCRETE MANHOLE			
TO	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH					
609	STA. 1031+23, 13' LT		STA. 1031+54, 4' LT						32											
609	STA. 1031+26, 6' LT		STA. 1031+54, 4' LT			28														
609	STA. 1031+54		STA. 1031+67	13																
609	STA. 1031+54, 4' LT		STA. 1031+67							13										
609	STA. 1031+66		STA. 1033+00								133									
610	STA. 1033+00		STA. 1034+29								129									
610	STA. 1034+29		STA. 1034+72	43																
610	STA. 1034+29		STA. 1034+38, 3' LT									9								
610	STA. 1034+38, 3' LT		MANHOLE, LT							12					1					
610	STA. 1034+38, 3' LT		CHN. VAULT, LT			14								1						
610	STA. 1034+53, 12' LT		STA. 1034+64, 4' LT							12										
610	STA. 1034+56, 6' LT		STA. 1034+64, 4' LT																	
610	STA. 1034+64, 4' LT		STA. 1034+72								9									
610	STA. 1034+72		STA. 1037+70							298										
610	STA. 1037+70		MANHOLE	21								1								
610	STA. 1037+70		STA. 1037+82, 6' LT									13								
610	STA. 1037+82, 6' LT		MANHOLE, LT							13					1					
610	STA. 1037+82, 6' LT		CHN. VAULT, LT			13								1						
610	STA. 1037+97, 15' LT		STA. 1038+09, 4' LT							12										
610	STA. 1038+03		STA. 1038+21	18																
610	STA. 1038+01, 9' LT		STA. 1038+09, 4' LT			9														
610	STA. 1038+09, 4' LT		STA. 1038+21								13									
610	STA. 1038+21		STA. 1038+50							29										
611	STA. 1038+50		STA. 1039+25							75										
611	STA. 1039+25		STA. 1039+87				62													
611	STA. 1039+87		STA. 1041+71							184										
611	STA. 1041+71		STA. 1042+12	41																
611	STA. 1041+71		STA. 1041+77, 5' RT									8								
611	STA. 1041+77, 5' RT		MANHOLE, RT			9														
611	STA. 1041+77, 5' RT		CHN. VAULT, RT							10					1					
611	STA. 1041+91, 7' RT		STA. 1042+02, 5' RT			12														
611	STA. 1041+91, 12' RT		STA. 1042+02, 5' RT							12										
611	STA. 1042+02, 5' RT		STA. 1042+12								12									
611	STA. 1042+12		STA. 1044+00								188									
612	STA. 1044+00		STA. 1044+16							16										
612	STA. 1044+16		MANHOLE	27								1								
612	STA. 1044+16		MANHOLE, RT			20				12					1					
612	STA. 1044+16		CHN. VAULT, LT							19				1						
612	STA. 1044+36, 8' RT		STA. 1044+66							35										
612	STA. 1044+37, 5' LT		STA. 700+17																	
612	STA. 1044+40, 7' LT		STA. 1044+49, 7' LT									29								
612	STA. 1044+45, 3' LT		SWITCH, LT			20							1							
612	STA. 1044+49, 7' LT		STA. 1044+66				19													
612	STA. 1044+49, 7' LT		STA. 1044+60, 14' LT																	
612	STA. 1044+52, 3' LT		STA. 1044+60, 14' LT			14														
612	STA. 1044+54		STA. 1044+66	12																
612	STA. 1044+60, 14' LT		STA. 1044+72, 29' LT								20									
612	STA. 1044+66		STA. 1045+45							79										
612	STA. 1045+45		STA. 1046+70					125												
612	STA. 1046+70		MANHOLE	14								1								
612	STA. 1046+70		STA. 1046+78 6' RT																	
612	STA. 1046+78 6' RT		CHN. VAULT, RT			9				11					1					
612	STA. 1046+78 6' RT		MANHOLE, RT								10					1				
612	STA. 1046+86 3' LT		SWITCH, LT			10							1							
612	STA. 1046+92 8' RT		STA. 1047+03 5' RT			11														
612	STA. 1046+92 14' RT		STA. 1047+03 5' RT							12										
TOTALS CARRIED TO GENERAL SUMMARY				189	44	144	187	1131	191	88	9	20	43	3	2	5	5			

NO.	DESCRIPTION	REV. BY	DATE
A	UPDATE ITEM DESCRIPTION	ENR	2-3-2022

CALCULATED: ARL
CHECKED: JED

ELECTRICAL UTILITY SUBSUMMARY

UNI - 33 - 24.87

602
923

REF NO.	SHEET NO.	STATION TO STATION		625	625	625	625	625	625	625	625	625	625	SPECIAL	SPECIAL	SPECIAL	SPECIAL							
				TRENCH, MISC.: UTILITY TRENCH "A", TYPE A TRENCH, AS PER PLAN FT	TRENCH, MISC.: UTILITY TRENCH "B", TYPE A TRENCH, AS PER PLAN FT	TRENCH, MISC.: UTILITY TRENCH "B", TYPE B TRENCH, AS PER PLAN FT	TRENCH, MISC.: UTILITY TRENCH "C", TYPE B TRENCH, AS PER PLAN FT	TRENCH, MISC.: UTILITY TRENCH "D", TYPE A TRENCH, AS PER PLAN FT	TRENCH, MISC.: UTILITY TRENCH "E", TYPE A TRENCH, AS PER PLAN FT	TRENCH, MISC.: UTILITY TRENCH "E", TYPE B TRENCH, AS PER PLAN FT	TRENCH, MISC.: UTILITY TRENCH "F", TYPE A TRENCH, AS PER PLAN FT	TRENCH, MISC.: UTILITY TRENCH "G", TYPE A TRENCH, AS PER PLAN FT	TRENCH, MISC.: UTILITY TRENCH "H", TYPE A TRENCH, AS PER PLAN FT	TRENCH, MISC.: UTILITY TRENCH "H", TYPE B TRENCH, AS PER PLAN FT	PRECAST CONCRETE ELECTRIC MANHOLE EACH	FIBERGLASS SWITCH PAD (COORDINATION ONLY) EACH	MISC.: CHANNEL VAULT (INSTALLATION ONLY) EACH	MISC.: PRECAST DUBLINK CONCRETE MANHOLE EACH						
			TO																					
612		STA. 1046+95		STA. 1047+13	18																			
612		STA. 1047+03 5' RT		STA. 1047+13																				
612		STA. 1047+13		STA. 1047+75							62													
612		STA. 1047+75		STA. 1049+00							125													
613		STA. 1049+00		STA. 1051+40							240													
613		STA. 1051+40		STA. 1051+81									41											
613		STA. 1051+40		CHN. VAULT, LT					20								1							
613		STA. 1051+64 6' LT		STA. 1051+81					20															
613		STA. 1051+81		STA. 1052+45							64													
613		STA. 1052+45		STA. 1052+66								21												
613		STA. 1052+66		MANHOLE	17									1										
613		STA. 1052+93 2' LT		SWITCH, LT											1									
613		STA. 1052+94		STA. 1053+19	25																			
613		STA. 1053+19		STA. 1053+50								31												
613		STA. 1053+50		STA. 1053+65							15													
613		STA. 1053+65		STA. 1053+81 RISER	16																			
613		STA. 1053+65		STA. 1053+96 3' RT										33										
613		STA. 1053+96 3' RT		STA. 1054+10 RISER					18															
614		STA. 700+03		STA. 700+43																				
614		STA. 700+43		STA. 701+90																				
614		STA. 701+90		STA. 703+90																				
614		STA. 703+90		STA. 704+00																				
615		STA. 704+00		STA. 705+83																				
615		STA. 705+83		STA. 706+86 RISER																				
609		STA. 56+29.5 123.5' RT		MANHOLE																				
609		STA. 802+93.0 17.1' LT		STA. 800+08.0 14' RT																				
612		STA. 64+50.0 87.0' RT		MANHOLE																				
614		STA. 61+91.4 76.1' RT		MANHOLE																				
614		STA. 71+16.0 43.9' LT		MANHOLE																				
613		STA. 1052+66		STA. 1052+77 5' RT																				
613		STA. 1052+77 5' RT		CHANNEL VAULT RT																				
613		STA. 1052+77 5' RT		MANHOLE																				
613		STA. 1053+09 8' RT		STA. 1053+16 2' RT																				
613		STA. 1053+02 5' RT		STA. 1053+16 2' RT																				
613		STA. 1053+16 2' RT		STA. 1053+19																				
TOTALS CARRIED TO GENERAL SUMMARY					76	340	344	13	679	444	114	41	214	33	27	1	1	2	2					

NO.	DESCRIPTION	REV. BY	DATE
A	UPDATE ITEM DESCRIPTION	ENR	2-3-2022

ELECTRICAL UTILITY SUBSUMMARY

UNI - 33 - 24.87

CALCULATED ARL CHECKED JED

ITEM SPECIAL - MISC.: FIBERGLASS SWITCH PAD COORDINATION ONLY

THE SWITCH BOXES AND PADS WILL BE FURNISHED AND INSTALLED BY AEP'S CONTRACTOR AT THE LOCATIONS SHOWN ON THE PLANS FOR EACH SWITCH PRIOR TO BACKFILLING OF THE CONDUIT TRENCH.

THE COST FOR COORDINATING INSTALLATION OF THE AEP FURNISHED SWITCH BOX AND PAD WILL BE PAID AT THE UNIT PRICE BID PER EACH INSTALLED, COMPLETE, AND READY FOR INSTALLATION OF THE SWITCH AND CABLE BY AEP.

SPECTRUM/DUBLINK UTILITY CONDUIT

1. MATERIALS

A. CONDUIT - NONMETALLIC CONDUIT SHALL BE SCHEDULE 40 POLYVINYL CHLORIDE (PVC) AS MANUFACTURED BY OSBURN ASSOCIATES, OR APPROVED EQUAL. THEY SHALL BE DESIGNED TO FORM SOUND, STRONG DUCT, FREE FROM DEFECTS. THE INSIDE SURFACE OF THE CONDUIT SHALL BE SMOOTH, ROUND, AND HAVE A NOMINAL INSIDE DIAMETER OF EITHER 4" OR 1.25" AS SPECIFIED.

B. COUPLINGS - THE COUPLINGS SHALL BE OF THE SAME MATERIAL AS THE CONDUIT AND SHALL BE SUFFICIENTLY TIGHT TO PREVENT SILT OR CONCRETE FROM ENTERING THE CONDUIT.

C. SPACERS - CONDUIT SHALL BE SUPPORTED AND SEPARATED BY CONDUIT BRACKETS, AT 5 FOOT MINIMUM INTERVALS, AS MANUFACTURED BY OSBURN ASSOCIATES, PART NOS. 5120, 5121, 5150, OR 5151, OR APPROVED EQUAL.

2. INSTALLATION

A. THE CONDUIT SHALL BE INSTALLED AS SHOWN ON THE PLANS.

B. EXCAVATION FOR THE UNDERGROUND CONDUIT DUCTS SHALL EXTEND TO THE PROFILE OF THE LOWER SIDE OF THE CONDUIT ENCASUREMENT, EXCEPT WHERE SPECIFIED IN THE PLANS OR DIRECTED BY THE ENGINEER. THE DUCTS SHALL HAVE A MINIMUM DEPTH OF COVER OF 30 INCHES TO FINISHED GRADE. THE PROFILE BETWEEN STRUCTURES SHALL BE SET SO THAT THE CONDUITS ARE LEVEL OR SLOPED TO THE NEXT STRUCTURE. WHERE CONDUITS ENTER A STRUCTURE AT A LOWER LEVEL THAN THE APPROACHING PROFILE OF THE CONDUIT, THE CONDUIT SHALL BE SLOPED DOWN TO THE STRUCTURE AT A RATE NOT-TO-EXCEED 5 PERCENT.

C. THE TRENCH SHALL BE EXCAVATED SO THAT ANY CURVE RADIUS WILL BE AS LARGE AS POSSIBLE (5 FOOT RADIUS MINIMUM). THE TRENCH SHALL BE EXCAVATED NO WIDER THAN NECESSARY TO ACCOMMODATE THE CONDUIT AND GRANULAR BACKFILL AS SHOWN ON THE DETAILS. THE BOTTOM OF THE TRENCH SHALL BE UNDISTURBED, TAMPED, AND RELATIVELY SMOOTH EARTH. TRENCHES WHICH HAVE BEEN EXCAVATED TOO DEEP AT ANY POINT ARE TO BE PARTIALLY REFILLED AND TAMPED SOLID. THE SIDES OF THE TRENCH SHALL BE TRIMMED SMOOTH TO PROVIDE FOR A UNIFORM SHEATH OF GRANULAR BACKFILL AROUND THE CONDUITS AS REQUIRED.

D. WHERE A CONDUIT CROSSES A SEWER OR WATERLINE, OR ANY OTHER UNDERGROUND UTILITY, THE CLEARANCE BETWEEN THEM SHALL BE LARGE ENOUGH TO PERMIT MAINTENANCE OF THE SYSTEM WITHOUT DAMAGE TO THE STRUCTURES. THE MINIMUM CLEARANCE SHALL BE DETERMINED BY THE UTILITIES INVOLVED. A SUITABLE SUPPORT, ON EACH SIDE OF THE STRUCTURE, SHALL BE CONSTRUCTED TO AVOID TRANSFERRING ANY DIRECT LOAD ONTO THE STRUCTURE.

E. THE CONDUIT RUNS SHALL BE AS STRAIGHT AS POSSIBLE. FIVE DEGREE ANGLE COUPLINGS OR COMBINATIONS OF 5-DEGREE ANGLE COUPLINGS WITH STRAIGHT SECTIONS OF CONDUIT ARE RECOMMENDED TO NEGOTIATE CURVES. ANY FIELD BENDING OF CONDUIT SHALL BE DONE USING THE MANUFACTURER'S RECOMMENDED EQUIPMENT AND PROCEDURES.

SPECTRUM/DUBLINK UTILITY CONDUIT (CONT.)

F. PRECAST PLASTIC BASE AND CONDUIT BRACKETS SHALL BE PLACED AT 5-FOOT INTERVALS THAT SHALL SEPARATE THE CONDUITS A MINIMUM OF 2 INCHES APART AND PROVIDE A 3-INCH MINIMUM OUTSIDE ENCASUREMENT. BURRS ON THE ENDS OF THE CONDUIT, AS A RESULT OF SAWING, MUST BE REMOVED PRIOR TO COMPLETING A JOINT. JOINTS SHALL FORM A CONTINUOUS SMOOTH INTERIOR SURFACE BETWEEN CONDUIT SECTIONS SO THAT THE CABLE WILL NOT BE DAMAGED WHEN PULLING PAST THE JOINT. SURFACES TO BE JOINED SHALL BE CLEAN AND FREE FROM DIRT, FOREIGN MATERIALS, AND MOISTURE. THE JOINTS SHALL BE SEALED WITH PROPER CEMENT SPECIFIED BY THE CONDUIT MANUFACTURER. THE CONDUITS SHALL BE TIED TOGETHER WITH HEAVY CORD SO AS TO SECURELY HOLD THE CONDUITS IN PLACE. THE OPEN ENDS OF THE CONDUITS SHALL BE CLOSED WITH TIGHT FITTING PLUGS TO PREVENT MUD OR OTHER FOREIGN MATERIAL FROM GETTING INTO THE CONDUIT. AFTER THE CONDUIT IS PLACED, IT MUST BE INSPECTED BY THE FACILITY OWNER BEFORE PLACEMENT OF GRANULAR BACKFILL.

G. THE GRANULAR BACKFILL SHALL BE PLACED AS SOON AS POSSIBLE AFTER THE CONDUITS HAVE BEEN INSTALLED AND INSPECTED. CONDUITS SHALL BE TIED DOWN TO HOLD THEM IN POSITION WHILE THE GRANULAR BACKFILL IS PLACED AND COMPACTED. GRANULAR BACKFILL SHALL BE SIFTED AROUND AND BETWEEN THE CONDUIT AT A RATE THAT ALLOWS FOR COMPLETE FILLING OF VOIDS. THE COST OF GRANULAR BACKFILL SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAL FOOT FOR TRENCH, TYPE A (IN PAVEMENT AREAS) OR TYPE B (IN NON-PAVEMENT AREAS). THE CONTRACTOR MAY SUBSTITUTE CONTROLLED DENSITY FILL PER CITY OF COLUMBUS ITEM 613, TYPE 2 AT NO ADDITIONAL COST.

H. AFTER THE DUCTS ARE INSTALLED, A FLEXIBLE STEEL MANDREL NOT LESS THAN 12 INCHES LONG WITH A CROSS SECTION OF 3 3/4 INCHES (4" DUCT) AND 1 INCH (1 1/4" DUCT), FITTED WITH A PULLING EYE AT EACH END) SHALL BE PULLED THROUGH EACH CONDUIT TO INSURE CLEANLINESS AND CONTINUITY. BY WORKING THE MANDREL BACK AND FORTH, OBSTRUCTIONS SUCH AS CONCRETE MUST BE REMOVED. AFTER THE MANDREL HAS BEEN PULLED THROUGH, A STIFF CIRCULAR WIRE BRUSH AND A SWAB SHALL BE PULLED THROUGH THE CONDUITS TO REMOVE ANY FOREIGN OBJECTS, BITS OF CONCRETE, DIRT, ETC.

I. A 1/4-INCH BRAIDED NYLON PULLING ROPE SHALL BE INSTALLED IN ALL CONDUITS. ENDS OF THE CONDUIT SHALL BE SEALED IN AN APPROVED MANNER TO KEEP ALL MOISTURE AND FOREIGN MATERIALS OUT OF THE CONDUIT.

J. AT "PULL-UP" LOCATIONS, 12 INCHES OF CONDUIT SHALL BE EXPOSED ABOVE FINISHED GRADE AND SEALED WITH A CAP.

K. CONDUIT ONLY SHALL BE INSTALLED BY THE CONTRACTOR TO THE LOCATIONS SHOWN FOR THE POWER SUPPLY AND AMPLIFIER. FOUNDATIONS, PADS, AND EQUIPMENT FOR THE POWER SUPPLY AND AMPLIFIER WILL BE CONSTRUCTED BY DUBLINK/SPECTRUM.

L. THE CONTRACTOR MUST COORDINATE THE TERMINATION OF ALL CONDUITS FOR EQUIPMENT AND RISERS WITH THE AFFECTED FACILITY OWNER. THE COST OF COORDINATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE CONDUIT ITEM.

ITEM SPECIAL - MISC.: CHANNEL VAULTS (INSTALLATION ONLY)

A. THE CONTRACTOR SHALL INSTALL THE CHANNEL VAULTS WHERE SHOWN ON THE PLANS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER AND THE UTILITY OWNER. POLYMER CONCRETE BOXES AND COVER ASSEMBLIES, AS MANUFACTURED BY ARMORCAST, OR EQUAL, WILL BE FURNISHED BY THE UTILITY OWNER (SPECTRUM).

B. THE POLYMER CONCRETE BOXES FURNISHED WILL MEASURE 36" X 48" X 36".

C. THE COST FOR INSTALLATION OF CHANNEL VAULTS, FURNISHED BY THE UTILITY OWNER, WILL BE PAID AT THE UNIT PRICE BID PER EACH INSTALLED, COMPLETE, AND READY FOR INSTALLATION OF CABLE, INCLUDING ALL EXCAVATION, BACKFILL, EMBANKMENT, AND CONNECTION OF DUCT. ALL CABLE WILL BE INSTALLED BY THE UTILITY OWNER.

ITEM 625 - TRENCH MISC.: UTILITY TRENCH "A THROUGH L", TYPE A OR B TRENCH, AS PER PLAN

THE LENGTH OF TRENCH BY TYPE SHALL BE PAID FOR BY THE ACTUAL NUMBER OF FEET MEASURED BETWEEN MANHOLES, PADS, ETC. DEDUCTIONS SHALL BE MADE FOR MANHOLE LENGTHS. THE TRENCH SHALL BE EITHER TYPE A FOR IN PAVEMENT OR TYPE B FOR NON-PAVED AREAS. TYPE A TRENCH SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL TO THE TOP OF SUBGRADE. TYPE B TRENCH CAN BE BACKFILLED WITH SUITABLE COMPACTED NATIVE MATERIAL TO THE FINISHED SURFACE MINUS AN ALLOWANCE FOR TOPSOIL.

ITEM 625 TRENCH MISC.: UTILITY TRENCH "A", TYPE B TRENCH, AS PER PLAN

ITEM 625 TRENCH MISC.: UTILITY TRENCH "B", TYPE A TRENCH, AS PER PLAN

ITEM 625 TRENCH MISC.: UTILITY TRENCH "B", TYPE B TRENCH, AS PER PLAN

ITEM 625 TRENCH MISC.: UTILITY TRENCH "C", TYPE B TRENCH, AS PER PLAN

ITEM 625 TRENCH MISC.: UTILITY TRENCH "D", TYPE A TRENCH, AS PER PLAN

ITEM 625 TRENCH MISC.: UTILITY TRENCH "D", TYPE B TRENCH, AS PER PLAN

ITEM 625 TRENCH MISC.: UTILITY TRENCH "E", TYPE A TRENCH, AS PER PLAN

ITEM 625 TRENCH MISC.: UTILITY TRENCH "E", TYPE B TRENCH, AS PER PLAN

ITEM 625 TRENCH MISC.: UTILITY TRENCH "F", TYPE A TRENCH, AS PER PLAN

ITEM 625 TRENCH MISC.: UTILITY TRENCH "G", TYPE A TRENCH, AS PER PLAN

ITEM 625 TRENCH MISC.: UTILITY TRENCH "G", TYPE B TRENCH, AS PER PLAN

ITEM 625 TRENCH MISC.: UTILITY TRENCH "H", TYPE A TRENCH, AS PER PLAN

ITEM 625 TRENCH MISC.: UTILITY TRENCH "H", TYPE B TRENCH, AS PER PLAN

ITEM 625 TRENCH MISC.: UTILITY TRENCH "J", TYPE B TRENCH, AS PER PLAN

ITEM 625 TRENCH MISC.: UTILITY TRENCH "K", TYPE B TRENCH, AS PER PLAN

ITEM 625 TRENCH MISC.: UTILITY TRENCH "L", TYPE B TRENCH, AS PER PLAN

PAYMENT FOR THE ACCEPTED QUANTITIES OF UTILITY TRENCH "A THROUGH L", TYPE A OR B, SHALL BE MADE AT THE CONTRACT PRICE PER LINEAL FOOT INSTALLED, INCLUDING ALL LABOR, TRENCH EXCAVATION, DUCT, SPACERS AND SUPPORTS, PEA-GRAVEL CONCRETE ENCASUREMENT, BACKFILL, TESTING, AND ALL OTHER APPURTENANT WORK NECESSARY FOR A COMPLETE INSTALLATION ACCEPTED BY THE UTILITY COMPANIES AND READY FOR INSTALLATION OF CABLE.

ITEM SPECIAL - MISC. PRECAST CONCRETE DUBLINK MANHOLE

1. MATERIALS

THE PRECAST CONCRETE DUBLINK MANHOLES SHALL BE FURNISHED BY THE CONTRACTOR AND MEET THE FOLLOWING SPECIFICATIONS:

A. THE MANHOLES SHALL BE AS MANUFACTURED BY OLDCASTLE INFRASTRUCTURE, OR AN APPROVED EQUAL.

B. THE MANHOLES SHALL BE MANUFACTURED IN ACCORDANCE WITH THE DETAILS SHOWN ON SHEET 608.

C. THE MANHOLE FRAMES WITH HEAVY DUTY SOLID LIDS, SIMILAR TO NEENAH FOUNDRY CO., R-1753A, SHALL BE INSTALLED AT EACH TOP OPENING. CASTINGS TO BE FURNISHED BY DUBLINK.

ITEM SPECIAL - MISC. PRECAST CONCRETE DUBLINK MANHOLE (CONT.)

2. INSTALLATION

D. THE CONTRACTOR SHALL PROVIDE ALL EXCAVATION AND BACKFILL NECESSARY FOR MANHOLES AND UNDERGROUND CONDUIT DUCT INSTALLATIONS, INCLUDING ROCK EXCAVATION.

E. EXCAVATION FOR MANHOLES SHALL EXTEND A MINIMUM OF 6 INCHES BELOW THE BOTTOM OF THEIR BASES OR AS NECESSARY FOR PROPER INSTALLATION OF DRAINAGE AND THE COMPLETION OF THE WORK. NO. 8 AGGREGATE OR SIMILAR DRAINAGE MEDIUM SHALL BE PLACED UNDER THE MANHOLES.

F. THE TOP OF THE PRECAST STRUCTURE SHALL BE AT LEAST 30" BELOW EXISTING/PROPOSED GROUND. IF THE BOX IS LOCATED IN A SLOPED AREA THE MINIMUM DEPTH WILL BE MEASURED FROM THE LOWEST GROUND POINT ABOVE THE STRUCTURE.

G. AFTER THE MANHOLES ARE SET AND CONDUITS ARE INSTALLED, BACKFILL SHALL BE BROUGHT TO PROPER LEVEL. ALL BACKFILL AROUND MANHOLES SHALL BE ITEM 613, TYPE 2, LOW STRENGTH MORTAR BACKFILL ONLY. BACKFILL SHALL BE BROUGHT TO THE BOTTOM OF THE PROPOSED PAVING BASE IN PAVED AREAS. RESTORATION OF THE SURFACE SHALL BE AS DETAILED ON THE PLANS AND SHALL BE IN KIND WITH THE SURROUNDING MATERIALS (SOD, GRAVEL, ETC.).

H. WORK SHALL BE PLANNED SO THAT EXCAVATIONS ARE OPEN FOR A MINIMUM OF TIME. NO LOAD OR BACKFILL SHALL BE APPLIED OR OTHER WORK CONDUCTED THAT WOULD DAMAGE THE NEW CONCRETE OR INTERFERE WITH CURING.

I. ALL OPEN TRENCHES SHALL BE BARRICADED AND PROPERLY PROTECTED.

J. AFTER MANHOLES ARE PLACED, THE MANHOLE COVER FRAMES SHALL BE PLACED AND THE TOP ADJUSTED TO GROUND OR PAVING LEVEL. FINAL ADJUSTMENTS WILL BE REQUIRED FOR FINAL RESURFACING. A 6-INCH THICK CONCRETE OR BRICK ADJUSTING RING SHALL BE PROVIDED TO ENSURE CLOSURE BETWEEN THE TOP SLAB OF THE MANHOLE AND THE FRAME.

3. BASIS OF PAYMENT

THE WORK INCLUDED IN THESE ITEMS, INCLUDING SOIL AND ROCK EXCAVATION, EMBANKMENT, CONCRETE MANHOLES, BACKFILL, CASTING INSTALLATION, AND ALL EQUIPMENT AND MATERIALS NECESSARY, SHALL BE PAID FOR AT THE CONTRACT PRICE, COMPLETED IN PLACE.

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UTILITY DUCT GENERAL NOTES

UNI - 33 - 24.87

NO.	DESCRIPTION	REV. BY	DATE
A	NOTE REVISION	ENR	2-3-2022

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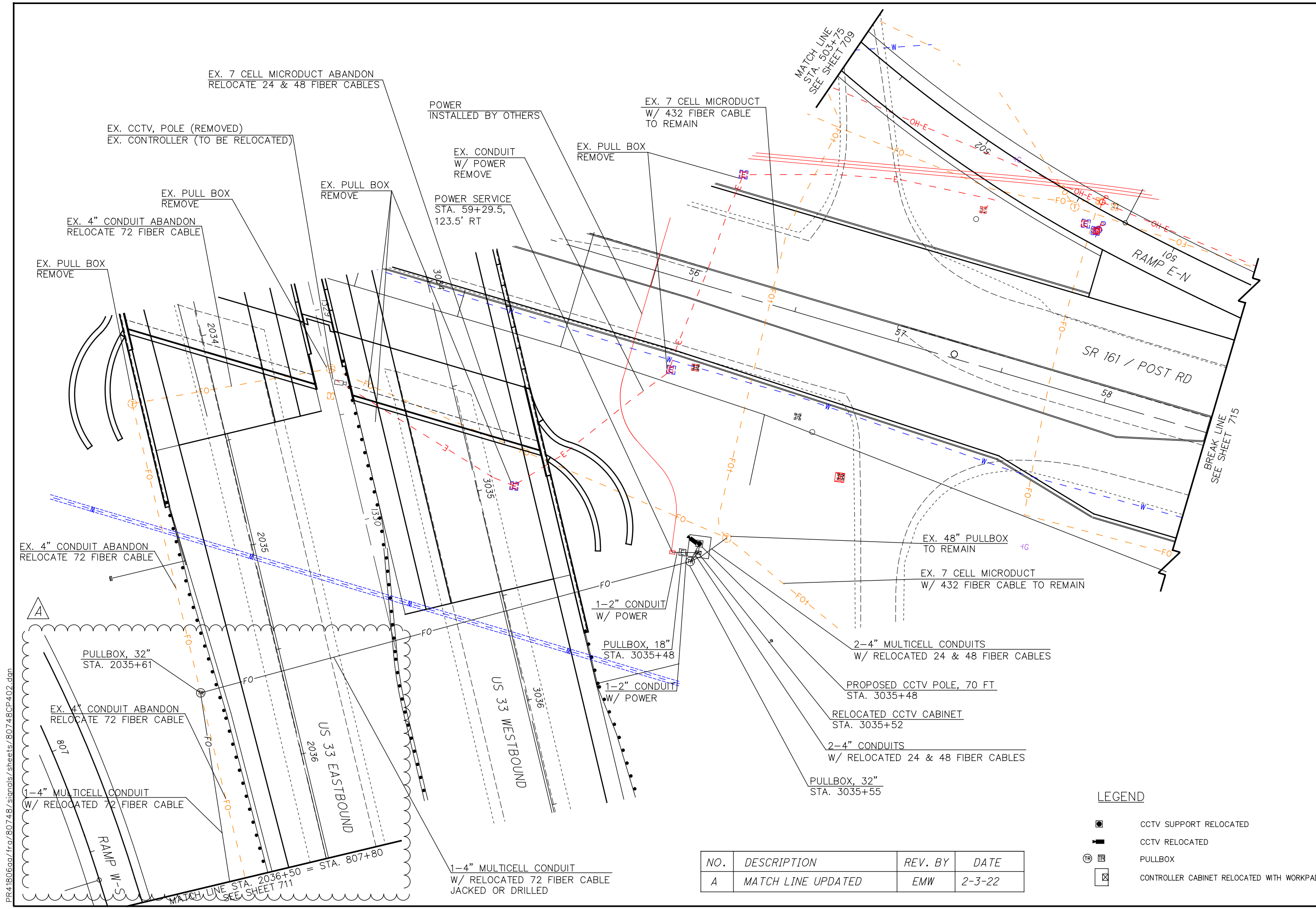


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TRAFFIC SURVEILLANCE PLAN
US33 AT SR161/POST RD

UNI-33-24.87

710
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NO.	DESCRIPTION	REV. BY	DATE
A	MATCH LINE UPDATED	EMW	2-3-22

LEGEND

	CCTV SUPPORT RELOCATED
	CCTV RELOCATED
	PULLBOX
	CONTROLLER CABINET RELOCATED WITH WORKPAD

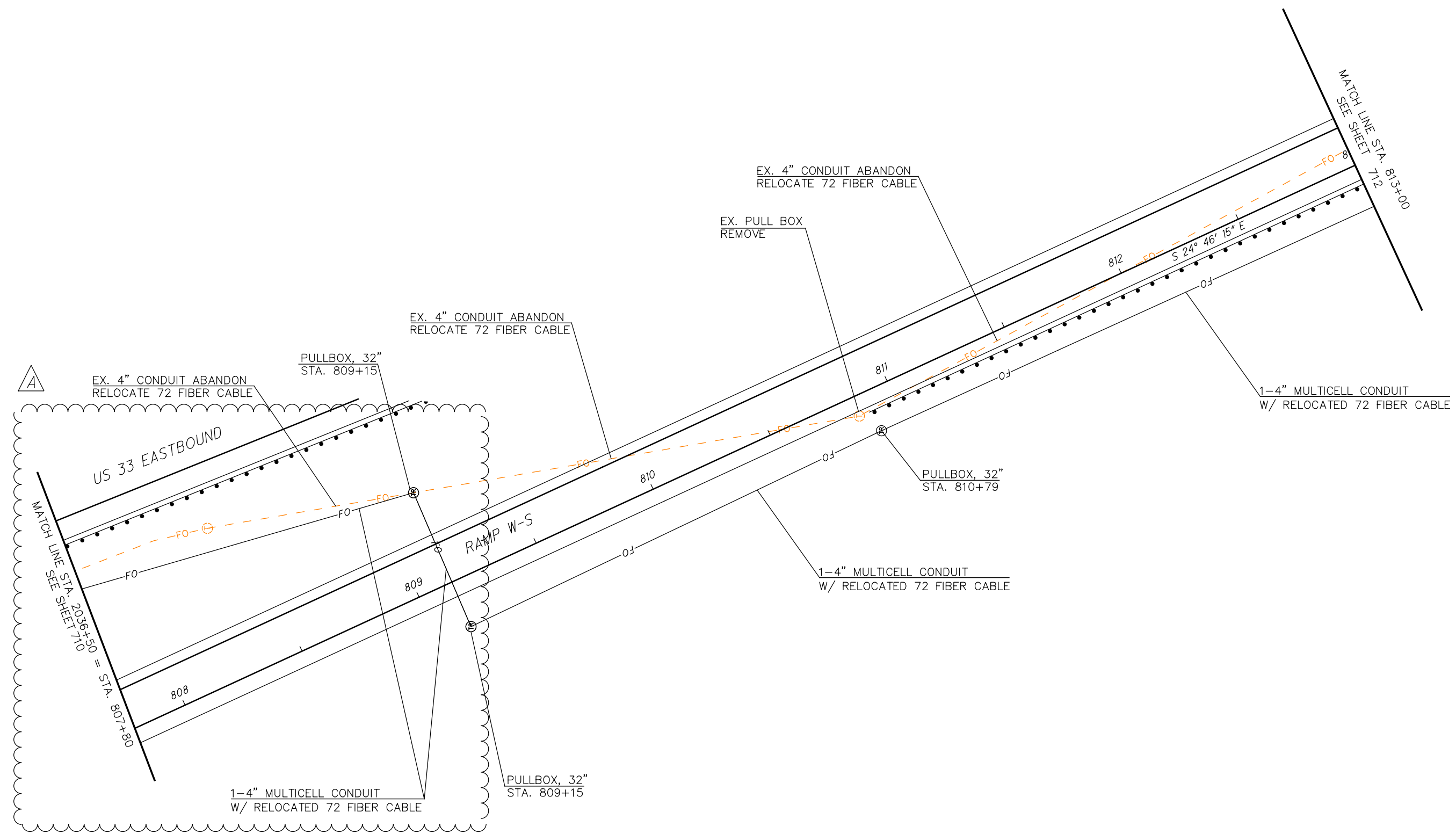
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**TRAFFIC SURVEILLANCE PLAN
US33 EB ON RAMP (RAMP W-S)**

UNI-33-24.87

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LEGEND

-  PULLBOX
-  CONTROLLER CABINET WITH WORKPAD

NO.	DESCRIPTION	REV. BY	DATE
A	MATCH LINE UPDATED	EMW	2-3-22

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