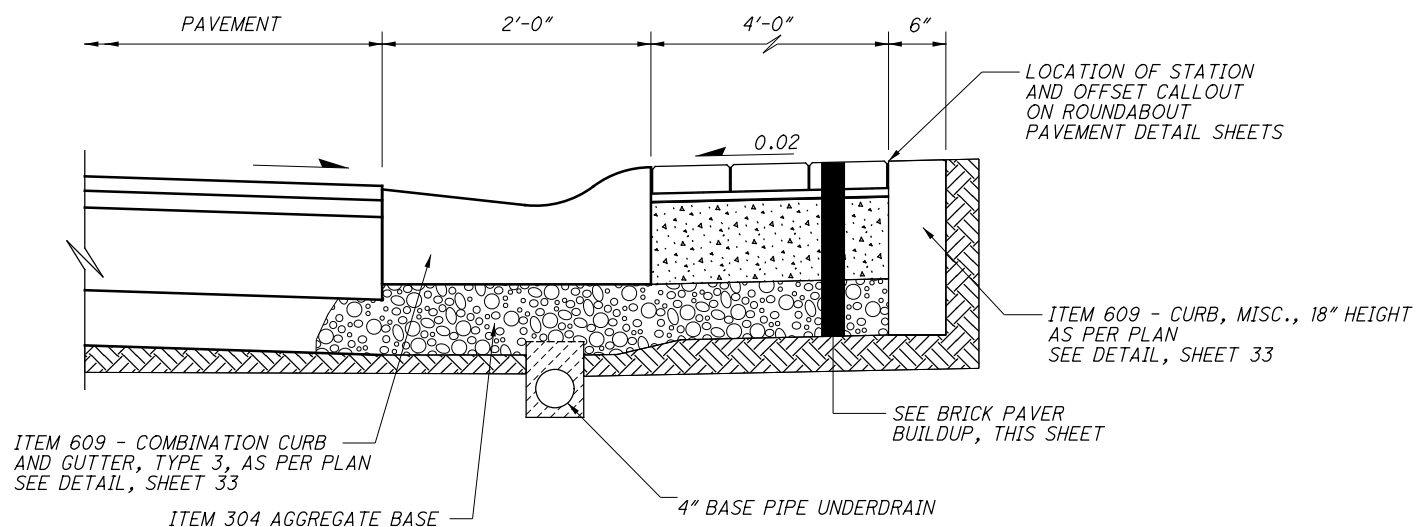
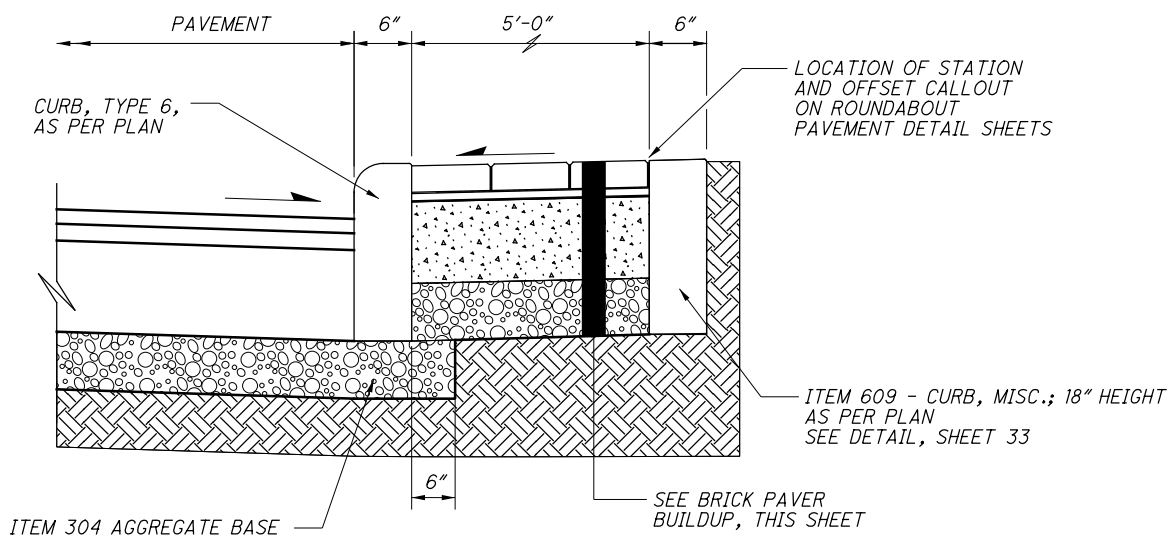


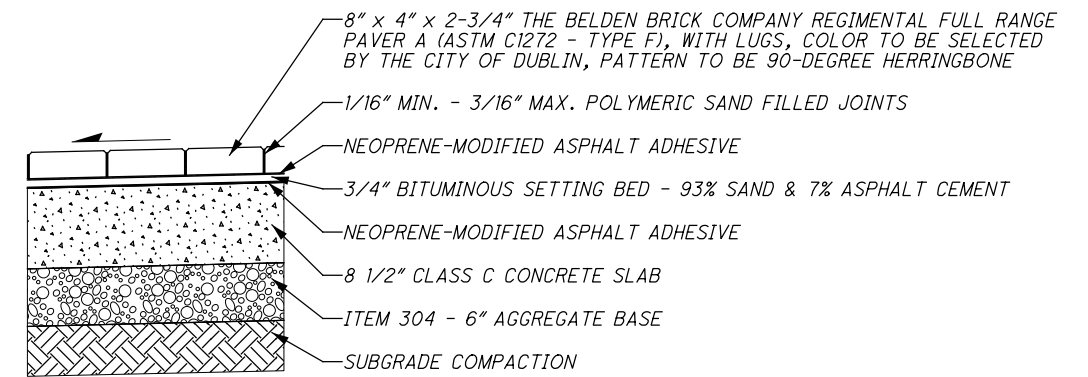
**BANANA ISLAND DETAIL**



**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.

**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 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.

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

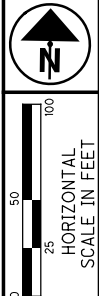
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CALCULATED  
KOD  
CHECKED  
MAH

GENERAL NOTES

UNI - 33 - 24.87

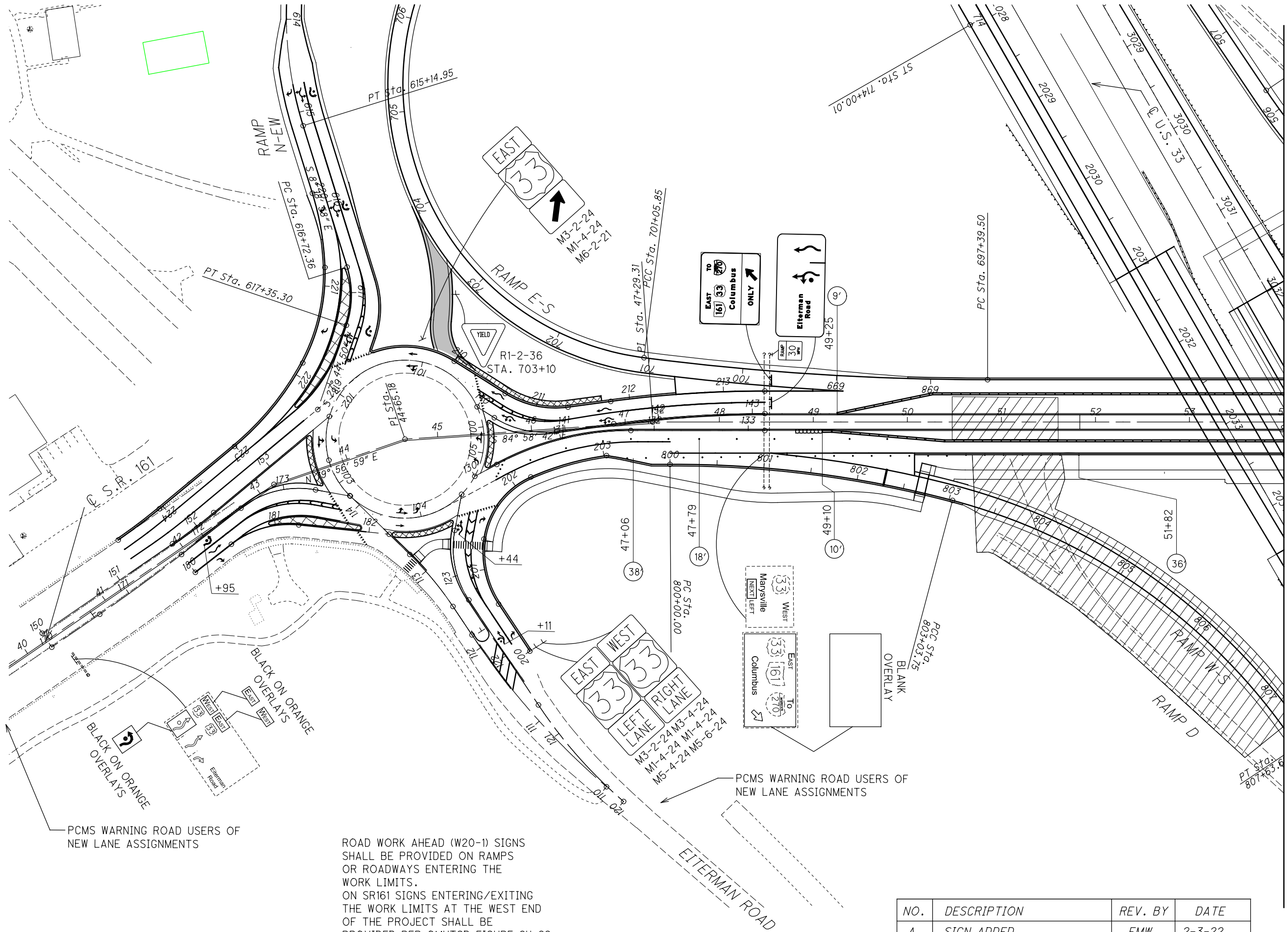
NOTE:  
SEE SHEET 59 FOR LEGEND



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

**UNI -33-24.87**

74  
923



PCMS WARNING ROAD USERS OF NEW LANE ASSIGNMENTS

BLACK ON ORANGE OVERLAYS

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.

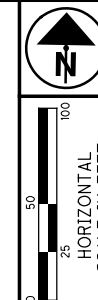
PCMS WARNING ROAD USERS OF NEW LANE ASSIGNMENTS

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

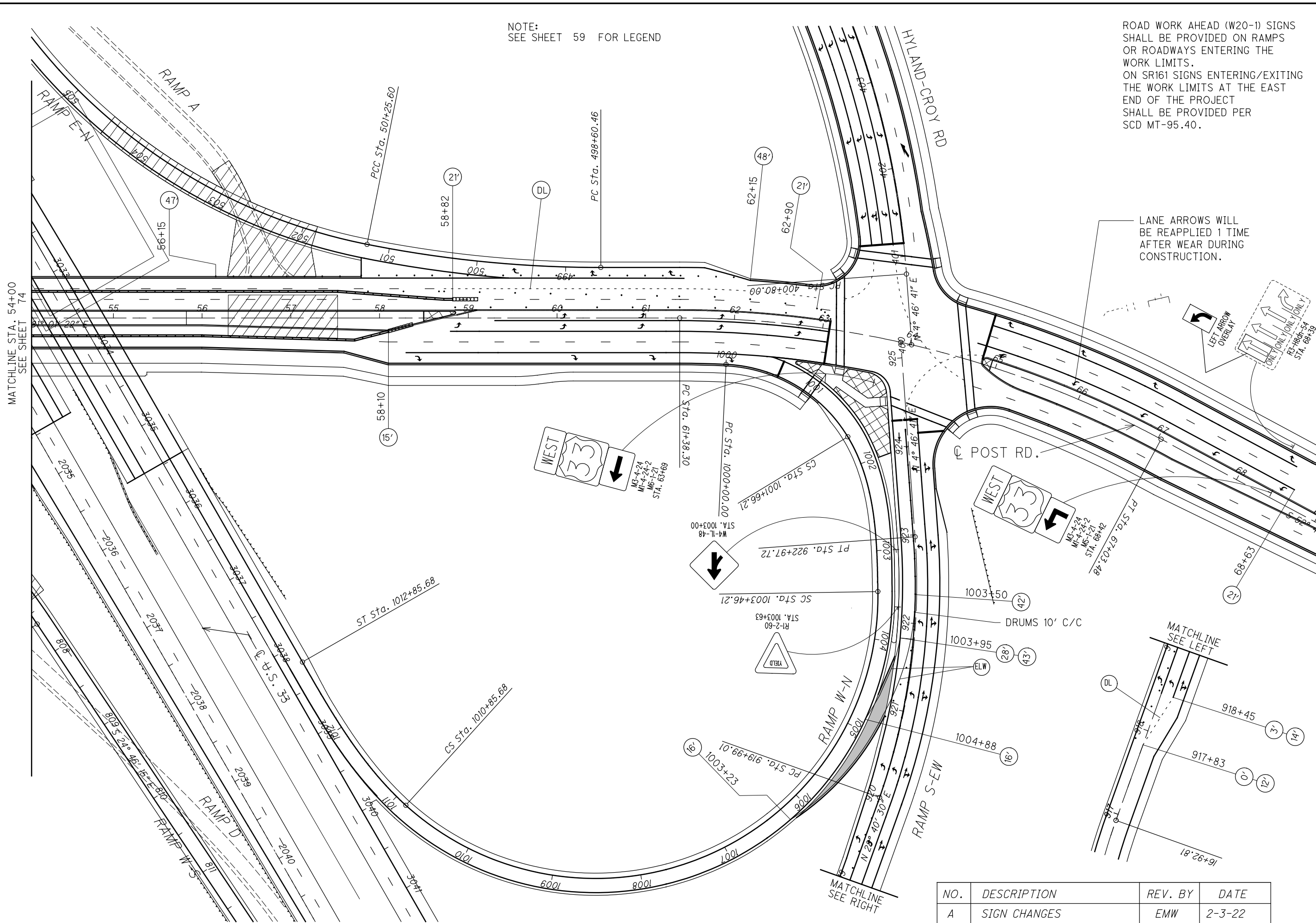
ROAD WORK AHEAD (W20-1) SIGNS SHALL BE PROVIDED ON RAMPS OR ROADWAYS ENTERING THE WORK LIMITS.  
ON SR161 SIGNS ENTERING/EXITING THE WORK LIMITS AT THE EAST END OF THE PROJECT SHALL BE PROVIDED PER SCD MT-95.40.



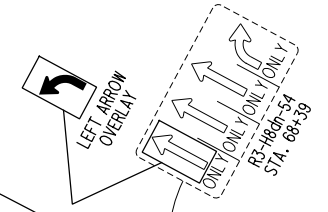
**MAINTENANCE OF TRAFFIC  
S.R. 161 - PHASE 4**

**UNI -33-24.87**

75  
923



LANE ARROWS WILL BE REAPPLIED 1 TIME AFTER WEAR DURING CONSTRUCTION.



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

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		881	883	01/NHS/PV	02/S>2/PV									
LS															LS		201	11000	LS		CLEARING AND GRUBBING	36			
							18								11	7	202	20010	18	EACH	HEADWALL REMOVED				
							14,272								10,849	3,423	202	23001	14,272	SY	PAVEMENT REMOVED, AS PER PLAN	38			
							6,051									6,051	202	30000	6,051	SF	WALK REMOVED				
							1,091								69	1,022	202	30600	1,091	SY	CONCRETE MEDIAN REMOVED				
							163									163	202	30700	163	FT	CONCRETE BARRIER REMOVED				
							2,399								212	2,187	202	32000	2,399	FT	CURB REMOVED				
							2,715									2,715	202	32500	2,715	FT	CURB AND GUTTER REMOVED				
							4,373								797	3,576	202	35100	4,373	FT	PIPE REMOVED, 24" AND UNDER				
							2,147								2,054	93	202	38000	2,147	FT	GUARDRAIL REMOVED				
							232								232		202	38300	232	FT	GUARDRAIL REMOVED, BARRIER DESIGN				
							8								8		202	42206	8	EACH	ANCHOR ASSEMBLY REMOVED				
							3								3		202	47000	3	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED				
							5								5		202	47800	5	EACH	IMPACT ATTENUATOR REMOVED				
							35								35		202	48000	35	FT	CABLE BARRIER REMOVED				
							1									1	202	53100	1	EACH	MAILBOX REMOVED				
							2									2	202	58000	2	EACH	MANHOLE REMOVED				
							18								3	15	202	58100	18	EACH	CATCH BASIN REMOVED				
							1								1		202	60010	1	EACH	MONUMENT ASSEMBLY REMOVED				
							40						11,857		11,338	559	202	75000	11,897	FT	FENCE REMOVED				
							16								16		202	98400	16	SF	REMOVAL MISC.: CONCRETE PAD	40			
		450				135,022									92,440	43,032	203	10000	135,472	CY	EXCAVATION				
		450				106,502									100,185	6,767	203	20000	106,952	CY	EMBANKMENT				
			5,666		1,349										1,349	5,666	204	10000	7,015	SY	SUBGRADE COMPACTION				
															2,069	886	206	10500	2,955	TON	CEMENT				
		2,955													LS	LS	206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS				
		97,800													68,460	29,340	206	11000	97,800	SY	CURING COAT				
				68,137	21,234	8,154									68,755	28,770	206	15020	97,525	SY	CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP				
		50													35	15	206	20000	50	HOUR	TEST ROLLING				
								5,032							4,869	163	606	15050	5,032	FT	GUARDRAIL, TYPE MGS				
								175							175		606	15550	175	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS				
								8							7	1	606	26050	8	EACH	ANCHOR ASSEMBLY, MGS TYPE B				
								8							8		606	26150	8	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH TYPE I)				
								12							11	1	606	26550	12	EACH	ANCHOR ASSEMBLY, MGS TYPE T				
								9							9		606	35002	9	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1				
								4							4		606	35102	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2				
								1							1		SPECIAL	60655150	1	EACH	CABLE BARRIER, ANCHOR ASSEMBLY	40			
								1							1		606	60012	1	EACH	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)				
								98							98		606	98000	98	FT	GUARDRAIL, MISC.: STEEL BACKED TIMBER GUARDRAIL, TYPE A	40			
								2							2		606	98100	2	EACH	GUARDRAIL, MISC.: STEEL BACKED TIMBER GUARDRAIL, TERMINAL SECTION, TYPE SBT FAT-30	40			
													11,143		10,933	210	607	15000	11,143	FT	FENCE, TYPE 47				
							6,455									6,455	608	10000	6,455	SF	4" CONCRETE WALK				
							1,139									1,139	608	52000	1,139	SF	CURB RAMP				
							260								260		608	53020	260	SF	DETECTABLE WARNING				
							20								20		622	10160	20	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D				
								1							1		622	25000	1	EACH	CONCRETE BARRIER END SECTION, TYPE D				
								1							1		622	25050	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D				
														2	2		623	40500	2	EACH	REFERENCE MONUMENT				
															LS		SPECIAL	69091000	LS		AS BUILT CONSTRUCTION PLANS	39			
															1,112	784	SPECIAL	69098300	1,896	SY	HEAVY DUTY BRICK PAVERS INCLUDING CONCRETE BASE	38			
															LS		878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS				
																					<b>EROSION CONTROL</b>				
									198						198		601	21001	198	SY	CONCRETE SLOPE PROTECTION, AS PER PLAN	37			
											82				102		601	21050	102	SY	TIED CONCRETE BLOCK MAT, TYPE 1				
										73					73		601	21060	73	SY	TIED CONCRETE BLOCK MAT, TYPE 2				
															50	8	601	32200	58	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER				
															243		601	32300	243	CY	ROCK CHANNEL PROTECTION, TYPE D WITH FILTER				
															2	1	659	00100	3	EACH	SOIL ANALYSIS TEST				
3															21,950	2,993	659	00300	24,943	CY	TOPSOIL				
24,943															197,827	26,885	659	10000	224,712	SY	SEEDING AND MULCHING				

**GENERAL SUMMARY**

**UNI - 33 - 24.87**

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

224,712

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SHEET NUM.											PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	NJL	CHECKED	KOD
36	37	38	121	122	129	130					01/NHS/PV	02/S>2/PV										
11,236											9,888	1,348	659	14000	11,236	SY	REPAIR SEEDING AND MULCHING					
11,236											9,888	1,348	659	15000	11,236	SY	INTER-SEEDING					
31.35											27.59	3.76	659	20000	31.35	TON	COMMERCIAL FERTILIZER					
46.43											40.86	5.57	659	31000	46.43	ACRE	LIME					
1,244											1,095	149	659	35000	1,244	MGAL	WATER					
506											445	61	659	40000	506	MSF	MOWING					
				10,783							10,112	671	670	00700	10,783	SY	DITCH EROSION PROTECTION					
				127							127		670	00760	127	SY	DITCH EROSION PROTECTION MAT, TYPE F					
											LS		832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN					
											LS		832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS					
											LS		832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE					
											342,145		832	30000	342,145	EACH	EROSION CONTROL					
																	<b>DRAINAGE</b>					
			11.1								9.14	1.96	602	20001	11.1	CY	CONCRETE MASONRY, AS PER PLAN				38	
					4,676							4,676	605	06000	4,676	FT	4" BASE PIPE UNDERDRAINS					
		1000									1000		605	11100	1000	FT	6" SHALLOW PIPE UNDERDRAINS					
					13,133						13,133		605	11110	13,133	FT	6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC					
					211						211		605	13410	211	FT	6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC					
		1000									1000		605	14000	1000	FT	6" BASE PIPE UNDERDRAINS					
					32,244						31,455	789	605	14020	32,244	FT	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC					
					258							258	611	00410	258	FT	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET					
		500									500		611	00900	500	FT	6" CONDUIT, TYPE B					
		700			2,490						3,190		611	01500	3,190	FT	6" CONDUIT, TYPE F					
			603								98	505	611	04400	603	FT	12" CONDUIT, TYPE B					
		500	904								719	685	611	04600	1,404	FT	12" CONDUIT, TYPE C					
			91								91		611	05200	91	FT	12" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21					
			362								307	55	611	05900	362	FT	15" CONDUIT, TYPE B					
			301								50	251	611	06100	301	FT	15" CONDUIT, TYPE C					
			75									75	611	07400	75	FT	18" CONDUIT, TYPE B					
			66									66	611	07600	66	FT	18" CONDUIT, TYPE C					
			128									128	611	09100	128	FT	21" CONDUIT, TYPE C					
			122									122	611	10600	122	FT	24" CONDUIT, TYPE C					
			76								76		611	11700	76	FT	27" CONDUIT, TYPE A					
			100									100	611	13600	100	FT	30" CONDUIT, TYPE C					
			233									233	611	16400	233	FT	36" CONDUIT, TYPE B					
			811								40	771	611	16600	811	FT	36" CONDUIT, TYPE C					
			709									709	611	19600	709	FT	42" CONDUIT, TYPE C					
			81									81	611	52302	81	FT	19" X 30" CONDUIT, TYPE B, 706.04					
			126								96	30	611	52304	126	FT	19" X 30" CONDUIT, TYPE C, 706.04					
			115									115	611	52402	115	FT	22" X 34" CONDUIT, TYPE B, 706.04					
			230									230	611	52404	230	FT	22" X 34" CONDUIT, TYPE C, 706.04					
			102									102	611	52502	102	FT	24" X 38" CONDUIT, TYPE B, 706.04					
			70									70	611	52504	70	FT	24" X 38" CONDUIT, TYPE C, 706.04					
			367								367		611	52700	367	FT	29" X 45" CONDUIT, TYPE A, 706.04					
			166								166		611	52702	166	FT	29" X 45" CONDUIT, TYPE B, 706.04					
			55									55	611	52902	55	FT	34" X 53" CONDUIT, TYPE B, 706.04					
			42									42	611	52904	42	FT	34" X 53" CONDUIT, TYPE C, 706.04					
				16								16	611	98150	16	EACH	CATCH BASIN, NO. 3					
				24							6	18	611	98180	24	EACH	CATCH BASIN, NO. 3A					
				1							1		611	98230	1	EACH	CATCH BASIN, NO. 4					
				6							5	1	611	98410	6	EACH	CATCH BASIN, NO. 8					
				2							1	1	611	98434	2	EACH	CATCH BASIN, NO. 8A					
				3								3	611	98470	3	EACH	CATCH BASIN, NO. 2-2B					
				2								2	611	98570	2	EACH	CATCH BASIN, NO. 2-5					
				2								2	611	98710	2	EACH	INLET, NO. 2-6					
				32								32	611	99574	32	EACH	MANHOLE, NO. 3					
				3							2	1	611	99654	3	EACH	MANHOLE ADJUSTED TO GRADE					
				1							1		611	99661	1	EACH	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN				38	
		10			41						51		611	99710	51	EACH	PRECAST REINFORCED CONCRETE OUTLET					

**GENERAL SUMMARY**

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

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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	
																<b>PAVEMENT</b>		
	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	1,584	692							12,626	6,058	304	20000	18,684	CY	AGGREGATE BASE	
			238								238		305	16010	238	SY	12" CONCRETE BASE, CLASS QC 1P	
	16,436										12,693	3,743	407	20000	16,436	GAL	NON-TRACKING TACK COAT	
	155											155	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										2,258		442	10100	2,258	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), 1.75	
		19,498	7,785								27,283		452	14020	27,283	SY	10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P WITH QC/QA	
				6,216							6,216	609	12001	6,216	FT	COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN	33	
				169							169	609	18001	169	FT	COMBINATION CURB AND GUTTER, TYPE 3, AS PER PLAN	33	
				926							392	534	609	24510	926	FT	CURB, TYPE 4-C	
				209							209	609	26000	209	FT	CURB, TYPE 6		
				5,310							5,310	609	26001	5,310	FT	CURB, TYPE 6, AS PER PLAN	33	
				1,506							1,506	609	71000	1,506	SF	CONCRETE MEDIAN		
				342							342	609	98000	342	FT	CURB, MISC.: 18" HEIGHT	33	
																<b>WATER WORK</b>		
						9					9	202	75610	9	EACH	VALVE BOX REMOVED		
						32					32	613	41201	32	CY	LOW STRENGTH MORTAR BACKFILL, AS PER PLAN	586	
						769					769	638	02401	769	FT	12" WATERMAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS, AS PER PLAN, (COC 801)*	586	
						160					160	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					60	638	06705	60	FT	20" STEEL PIPE ENCASEMENT, OPEN CUT, AS PER PLAN*	586	
						320					320	638	07305	320	FT	20" STEEL PIPE ENCASEMENT, BORED OR JACKED, AS PER PLAN*	586	
						4					4	638	07501	4	EACH	12" GATE VALVE, AS PER PLAN, (COC 802)*	586	
						2					2	638	09801	2	EACH	12" X 12" TAPPING SLEEVE, VALVE AND VALVE BOX, AS PER PLAN, (COC 803)*	586	
						1					1	638	10201	1	EACH	6" FIRE HYDRANT, AS PER PLAN, (COC 809)*	595	
						1					1	638	10600	1	EACH	FIRE HYDRANT AND GATE VALVE REMOVED AND RESET, (COC 809)		
						9					9	638	10800	9	EACH	VALVE BOX ADJUSTED TO GRADE, (COC 807)		
						1					1	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					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					1	638	20844	1	EACH	1-1/2" WATER SERVICE TAP, COMPLETE (COLS. CMS ITEM 805), A.P.P (WSP 6768)	601	
						8					8	SPECIAL	63898000	8	EACH	QUICK COUPLER VALVE, 1" BRASS, 2 PIECE, WITH BOX (10" ROUND) (WSP 6768)	601	
						1					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		

GENERAL SUMMARY

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

SHEET NUM.												PART.						ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED NJL	CHECKED KOD		
602	603	707	717	719	720	721	722	723	724	725	726	01/NHS/PV	02/S>2/PV	03/NHS/BR	06/S>2/OT/AEP	07/S>2/OT/SPEC	08/S>2/OT/DLTK										
<b>LIGHTING</b>																											
				20		36		24		12								625	00450	92	EACH	CONNECTION, FUSED PULL APART (LIGHTING)					
				10		18		12		6								625	00460	46	EACH	CONNECTION, UNFUSED PULL APART					
								12										625	00480	12	EACH	CONNECTION, UNFUSED PERMANENT (LIGHTING)					
				8		18		12		6								625	10491	44	EACH	LIGHT POLE, CONVENTIONAL, AS PER PLAN, 35'				716	
				5		18		12		5								625	14501	40	EACH	LIGHT POLE FOUNDATION, AS PER PLAN				716	
				4,890		10,440		8,580		3,150								625	23000	27,060	FT	NO. 4 AWG 600 VOLT DISTRIBUTION CABLE (LIGHTING)					
								90										625	23100	90	FT	NO. 2 AWG 600 VOLT DISTRIBUTION CABLE					
				1,200		2,700		1,800		900								625	23400	6,600	FT	NO. 10 AWG POLE AND BRACKET CABLE					
				1,630		2,695		2,700		1,135								625	25408	8,160	FT	CONDUIT, 2", 725.051, SCHEDULE 40 PVC					
				70		180		400		95								625	25505	745	FT	CONDUIT, 3", 725.051, AS PER PLAN, SCHEDULE 80 PVC				716	
				2		8		3		1								625	26253	14	EACH	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, TYPE II (LIGHTING)				746	
				1		7		6		4								625	26253	18	EACH	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, TYPE III (LIGHTING)				746	
				5		3		3		1								625	26253	12	EACH	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, TYPE IV (LIGHTING)				746	
										16								625	27503	16	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (LIGHTING)				716	
				1,630		2,695		2,660		845								625	29010	7,830	FT	TRENCH, 30" DEEP					
																		625	30500	18	EACH	PULL BOX, 725.06, SIZE 1.5					
																		625	30510	2	EACH	PULL BOX, 725.06, SIZE 4					
																		625	32000	44	EACH	GROUND ROD (LIGHTING)					
				4														625	33001	4	EACH	STRUCTURE GROUNDING SYSTEM, AS PER PLAN				717	
																		625	34001	1	EACH	POWER SERVICE, AS PER PLAN (LIGHTING)				717	
																		625	34451	1	EACH	CONTROL CENTER CABINET, COMPLETE, AS PER PLAN				717	
																		625	36010	7,815	FT	UNDERGROUND WARNING/MARKING TAPE (LIGHTING)					
				LS														625	37001	LS		SERVICE TO UNDERPASS LIGHTING, AS PER PLAN				717	
				LS														625	38000	LS		HIGH VOLTAGE TEST				717	
																		625	75401	26	EACH	LIGHT POLE REMOVED, AS PER PLAN				716	
																		625	75501	22	EACH	LIGHT POLE FOUNDATION REMOVED, AS PER PLAN				716	
																		625	75507	26	EACH	LUMINAIRE REMOVED, AS PER PLAN				716	
																		625	75801	26	EACH	DISCONNECT CIRCUIT, AS PER PLAN				716	
<b>ELECTRICAL UTILITY DUCT</b>																											
189	76																	625	29700	265	FT	TRENCH, MISC.: UTILITY TRENCH "A", TYPE A TRENCH, AS PER PLAN				606	
	340																	625	29700	340	FT	TRENCH, MISC.: UTILITY TRENCH "B", TYPE A TRENCH, AS PER PLAN				606	
	679																	625	29700	679	FT	TRENCH, MISC.: UTILITY TRENCH "D", TYPE A TRENCH, AS PER PLAN				606	
187	444																	625	29700	631	FT	TRENCH, MISC.: UTILITY TRENCH "E", TYPE A TRENCH, AS PER PLAN				606	
	41																	625	29700	41	FT	TRENCH, MISC.: UTILITY TRENCH "F", TYPE A TRENCH, AS PER PLAN				606	
	214																	625	29700	214	FT	TRENCH, MISC.: UTILITY TRENCH "G", TYPE A TRENCH, AS PER PLAN				606	
	33																	625	29700	33	FT	TRENCH, MISC.: UTILITY TRENCH "H", TYPE A TRENCH, AS PER PLAN				606	
43																		625	29700	43	FT	TRENCH, MISC.: UTILITY TRENCH "L", TYPE A TRENCH, AS PER PLAN				606	
	344																	625	29700	344	FT	TRENCH, MISC.: UTILITY TRENCH "B", TYPE B TRENCH, AS PER PLAN				606	
44	13																	625	29700	57	FT	TRENCH, MISC.: UTILITY TRENCH "C", TYPE B TRENCH, AS PER PLAN				606	
																		625	29700	144	FT	TRENCH, MISC.: UTILITY TRENCH "D", TYPE B TRENCH, AS PER PLAN				606	
144																		625	29700	1,245	FT	TRENCH, MISC.: UTILITY TRENCH "E", TYPE B TRENCH, AS PER PLAN				606	
1,131	114																	625	29700	191	FT	TRENCH, MISC.: UTILITY TRENCH "G", TYPE B TRENCH, AS PER PLAN				606	
191																		625	29700	115	FT	TRENCH, MISC.: UTILITY TRENCH "H", TYPE B TRENCH, AS PER PLAN				606	
88	27																	625	29700	9	FT	TRENCH, MISC.: UTILITY TRENCH "J", TYPE B TRENCH, AS PER PLAN				606	
9																		625	29700	9	FT	TRENCH, MISC.: UTILITY TRENCH "J", TYPE B TRENCH, AS PER PLAN				606	
																		625	29700	20	FT	TRENCH, MISC.: UTILITY TRENCH "K", TYPE B TRENCH, AS PER PLAN				606	
20																		690	98000	7	EACH	SPECIAL -CHANNEL VAULT (INSTALLATION ONLY)				605	
5	2																	690	98000	3	EACH	SPECIAL -FIBERGLASS SWITCH PAD (COORDINATION ONLY)				605	
2	1																	690	98000	4	EACH	SPECIAL -PRECAST CONCRETE ELECTRIC MANHOLE				604	
3	1																	690	98000	7	EACH	SPECIAL -PRECAST DUBLINK CONCRETE MANHOLE				604	
5	2																	690	98000	7	EACH	SPECIAL -PRECAST DUBLINK CONCRETE MANHOLE				604	
<b>TRAFFIC SURVEILLANCE</b>																											
																		625	25408	32	FT	CONDUIT, 2", 725.051					
																		625	25604	45	FT	CONDUIT, 4", 725.051					
																		809	25000	15	FT	CONDUIT, MULTICELL, MISC.: PARAPET ATTACHED				706	
																		809	24500	2,277	FT	CONDUIT, 4", MULTICELL, HDPE WITH 4-1" INNERDUCTS					
																		809	24000	235	FT	CONDUIT, MULTICELL, JACKED OR DRILLED, 4"					
																		625	25802	28	FT	CONDUIT, CONCRETE ENCASED, 4", 725.051					
																		625	29000	2,323	FT	TRENCH					
																		625	30700	1	EACH	PULL BOX, 725.08, 18"					
																		625	30711	10	EACH	PULL BOX, 725.08, 32", AS PER PLAN				706	
																		625	31511	11	EACH	PULL BOX REMOVED, AS PER PLAN				706	

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



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	
		START STATION	END STATION	RT/LT	TO STATION	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
R1	133	2016+57.80, 12.00'	RT	TO	2024+50.00, 55.44'																			
R2	133	2023+23.81, 9.14'	RT	TO	2023+23.52, 103.90'	1	1292					95												
R3	133	2023+22.42, 13.79'	RT	TO	2023+63.77, 10.34'				30															
R4	133	2023+64.07, 10.55'	RT	TO	2024+17.95, 10.46'						54													
R5	133	2023+63.79, 19.68'	RT	TO	2024+20.69, 28.01'						58													
R1	134	3020+74.82, 12.00'	LT	TO	3024+50.00, 32.80'		274																	
R2	134	3012+47.40, 11.23'	LT	TO	3015+87.54, 16.74'								276								2			
R3	134	3023+98.30, 90.99'	LT	TO	3023+99.93, 30.51'	1						61												
R1	135	2024+50.00, 55.44'	RT	TO	2025+50.07, 48.38'		215																	
R2	135	2025+58.29, 72.36'	RT	TO	2031+48.94, 165.20'		1719																	
R3	135	2031+64.10, 64.10'	RT	TO	2032+95.40, 207.22'		256																	
R4	135	2028+50.13, 11.32'	RT	TO	2031+89.06, 9.40'									339							1		1	
R5	135	2030+89.92, 46.58'	LT	TO	2032+11.73, 29.45'									109							1			
R6	135	2030+13.56, 58.39'	LT	TO	2030+89.92, 46.58'									47										
R7	135	2032+20.85, 53.92'	LT	TO													1					1		
R8	135	2029+73.48, 226.35'	RT	TO	2030+00.37, 108.00'	1						121												
R1	136	3024+50.00, 15.48'	LT	TO	3027+89.73, 70.62'		689																	
R2	136	3027+99.34, 96.37'	LT	TO	3033+42.23, 232.40'		1239																	
R3	136	3033+51.50, 208.23'	LT	TO	3034+38.82, 232.65'		209																	
R4	136	3035+03.95, 176.40'	LT	TO	3037+00.00, 132.77'		610																	
R5	136	3034+43.70, 29.72'	RT	TO	3035+62.56, 47.10'									130									1	
R6	136	3035+62.56, 47.10'	RT	TO	3036+38.27, 61.44'															77				1
R7	136	3034+64.72, 9.69'	LT	TO	3036+99.86, 10.41'										235									
R8	136	3036+04.86, 20.22'	LT	TO	3036+32.14, 237.43'	1							114											
R9	136	3031+87.75, 40.25'	RT	TO	3032+22.73, 41.42'																			35
R1	137	2037+00.00, 108.13'	RT	TO	2038+03.90, 99.54'		147																	
R2	137	2038+12.25, 72.91'	RT	TO	2045+77.05, 20.29'		1521																	
R3	137	2042+10.76, 8.84'	RT	TO	2042+13.33, 92.92'	1							84											
R4	137	2049+00.91, 65.31'	LT	TO	2049+51.97, 55.22'															51			1	
R5	137	2049+51.97, 55.22'	LT	TO	2049+52.04, 57.48'									10										1
R6	137	2041+99.41, 38.25'	RT	TO	2042+11.85, 57.72'																			
R1	138	3037+00.00, 132.77'	LT	TO	3040+69.50, 73.97'		899																	
R2	138	3040+77.77, 50.04'	LT	TO	3049+50.00, 21.00'		1606																	
R3	138	3036+00.00, 10.50'	LT	TO	3038+02.13, 10.84'		103																	
R4	138	3042+67.73, 10.48'	LT	TO	3043+18.99, 13.33'				39															
R5	138	3042+95.35, 6.06'	RT	TO	3043+24.02, 100.43'	1																		
R6	138	3042+19.15, 27.99'	LT	TO	3042+68.55, 20.50'										117									
R7	138	3042+18.32, 10.58'	LT	TO	3042+67.91, 10.51'																			
R1	139	2049+78.73, 52.23'	LT	TO	2051+71.67, 31.05'										178									
R2	139	2049+51.93, 57.53'	LT	TO	2049+78.73, 52.23'																			
R3	139	2050+57.03, 18.11'	RT	TO	2051+75.41, 10.28'															27			1	
R4	139	2050+68.93, 74.90'	LT	TO	2052+51.60, 55.44'																			
R5	139	2052+51.60, 55.44'	LT	TO	2053+27.13, 36.96'																			
R6	139	2060+10.44, 17.15'	RT	TO	2061+50.24, 12.89'																			
R1	140	3049+50.00, 12.00'	LT	TO	3050+59.24, 12.00'		70																	
R2	140	3050+57.01, 15.31'	LT	TO	3052+28.60, 16.33'																			
R3	140	3055+43.33, 27.57'	LT	TO	2055+63.75, 167.96'	1																		
R4	140	3055+23.41, 31.63'	LT	TO	3055+36.58, 63.02'	1																		
R5	140	3055+39.46, 20.29'	LT	TO	3055+39.73, 57.23'	1																		
R6	140	3055+49.40, 56.62'	LT	TO	3055+49.57, 18.61'	1																		
R7	140	3055+49.82, 63.47'	LT	TO	3055+72.93, 35.49'	1																		
R1	141	3071+57.72, 15.85'	LT	TO																				
R2	141	3071+66.65, 11.83'	LT	TO	3073+46.13, 11.95'																			
<b>TOTALS CARRIED TO SHEET 104</b>						11	10849		69		212		797	2054		3		1	232	8	5	3	16	35

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

ROADWAY SUBSUMMARY

UNI - 33 - 24.87

CALCULATED  
NJL  
CHECKED  
KOD

P:\PR55741\FRA\80748\Design\Roadway\Sheets\80748GS002.dgn Sheet 2/4/2022 9:17:51AM riley

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
		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			
R1	145	41+47.68, 44.83' LT	TO	42+00.00, 44.95' LT																				
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				500																
R21	146	45+81.21, 228.47' RT	TO	47+50.00, 56.57' RT				482																
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									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																				
R5	147	50+46.38, 37.30' RT	TO	52+00.00, 35.17' RT																				
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																				
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																				
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																				
R3	149	57+00.00, 39.28' RT	TO	61+50.38, 36.55' RT																				
R1	150	61+50.38, 36.55' RT	TO	66+00.00, 36.23' RT																				
R2	150	62+72.57, 53.76' LT	TO	62+81.07, 22.75' LT																				
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																				
R5	150	63+47.30, 37.97' RT	TO	64+47.51, 46.34' RT																				
<b>TOTALS CARRIED TO SHEET 104</b>					4	982	681	1022	163	1929	645	2153	93											

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

CALCULATED	NJL
	CHECKED
KOD	
<b>ROADWAY SUBSUMMARY</b>	
<b>UNI - 33 - 24.87</b>	
102 923	

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
		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		
R6	150	64+28.81, 65.51' LT	TO	64+49.19, 44.46' RT						110													
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													
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								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								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						67													
R3	159	803+17.62, 91.51' RT	TO	803+30.48, 25.06' LT						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						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								
<b>TOTALS CARRIED TO SHEET 104</b>																							
					3	2441	5370			258	2070	1423		1	1	8	40						

CALCULATED NJL CHECKED KOD	ROADWAY SUBSUMMARY	UNI - 33 - 24.87
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NO.	DESCRIPTION	REV. BY	DATE
A	ITEM UPDATE	ENR	2-4-2022



STATION RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG 70-22M	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	302 ASPHALT CONCRETE BASE, PG64-22	407 NON-TRACKING TACK COAT	304 AGGREGATE BASE	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446), 1.75	254 PAVEMENT PLANING, ASPHALT CONCRETE, VARIABLE DEPTH	206 CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP	304 AGGREGATE BASE	302 ASPHALT CONCRETE BASE, PG64-22	204 SUBGRADE COMPACTION	301 ASPHALT CONCRETE BASE, PG64-22	254 PAVEMENT PLANING, ASPHALT CONCRETE, 1.5"	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN	SPECIAL HEAVY DUTY BRICK PAVERS INCLUDING CONCRETE BASE	442 ANTI-SEGREGATION EQUIPMENT	
					FT	FT	SY	SY	CY	CY	CY	GAL	CY	CY	SY	SY	CY	CY	SY	CY	SY	CY	SY	CY	
S.R. 33 WESTBOUND																									
3000+62.62	TO	3031+99.00	11		3136.38			4160.74	173.36	202.26	1211.93	499.29	1177.41			4796.30								375.62	
			32					9386.68	391.11			1689.60		456.30	9386.68										
3031+99.00		3032+49.87	12					390.81	16.28	19.00	110.16	46.90				408.94	67.33							35.28	
3034+69.48		3035+48.00	12					698.70	29.11	33.96	196.96	83.84				731.29	149.19							63.08	
3035+48.00		3050+74.04	11		1526.04			3517.04	146.54	170.97	1006.18	422.04	638.03			3847.65								317.51	
			12																						
			13																						
			33					4439.10	184.96			799.04		215.79	4439.10									400.75	
3043+71.69		3045+77.05			205.36			3517.04																	
3043+71.69		3050+74.04	12		702.35			1250.4316									208.41								
3051+38.70		3088+67.50	15		3728.80			11882.70	495.11	577.63	3369.33	1425.92	2074.50			12658.61								1072.74	
			32					11360.62	473.36			2044.91		552.25	11360.62									1025.61	
3088+67.50		3097+20.40	15					3640.26	151.68			655.25		176.96	3640.26										328.63
S.R. 33 EASTBOUND																									
2008+56.35	TO	2031+09.00	11		2252.65			5427.98	226.17	263.86	1548.19	651.36	1455.73			5885.29								490.03	
			33					6844.99	285.21		1941.81	1232.10		332.74	6844.99									617.95	
2031+09.00		2031+87.96			78.96			702.68	29.28	34.16	198.07	84.32				735.28	121.06							63.44	
2034+07.57		2034+47.00			290.28			702.68	29.28	34.16	196.45	84.32				716.94	118.84							63.44	
2034+47.00		2050+94.96	11		1647.96			4940.95	205.87	240.19	1402.26	592.91	641.37			5277.88								446.06	
			12																						
			13																						
			33					4789.36	199.56			862.08		232.82	4789.36									432.37	
2045+50.67		2045+77.05	11		26.38	12.00	35.17										5.86								
2043+71.69		2045+50.67	12		178.98			236.82	9.87								39.47								
2045+77.05		2049+50.90	13		373.85			1588.37	66.18								264.73								
2049+50.90		2050+94.96	13		144.06			806.08	33.59								134.35								
2051+59.48		2064+61.90	13		1302.42			3524.41	146.85	171.33	1002.88	422.93				4159.96	620.14							318.18	
			33					3585.48	149.39			645.39		174.29	3585.48									323.69	
2050+94.96		2051+59.48	14		64.52			147.42	6.14	7.17	40.95	17.69				147.42	24.57							13.31	
2064+61.90		2070+28.22	16		566.32			2403.78	100.16			432.68		116.85	2403.78									217.01	
S.R. 161																									
47+26.00	TO	62+80.53	17		1554.53			14526.21	605.26	706.14		1743.15				14526.21	2424.85	3631.84						1311.39	
			18																						
			30																						
			31																						
62+80.53		74+25.00	24		1144.47			14132.37	588.85	686.99		1695.88				14244.41	2374.07	3545.35						1275.84	
70+00.00		74+25.00	24		425.00			1308.47	54.52			117.76		1308.47											
58+50.00		58+86.00	18																						
62+44.00		64+05.50	18																						
64+84.00		64+94.50	24																						
71+99.00		72+39.00	24																						
Roundabout																									
		New Pavement	19					1552.93	64.71	75.49		186.35					327.87		1967.19	388.23			414.26	140.20	
		Resurfacing	20					4634.95	193.12												4634.95				
			21																						
			22																						
			23																						
Shared Use Path																									
45+49.64	TO	50+16.39	17		466.75			553.27											553.27	46.11				23.05	
50+28.16		62+91.95	17		1263.79			1494.53											1494.53	124.54				62.27	
			18																						
64+75.43		70+00.00	18		524.57			580.95											580.95	48.41				24.21	
405+20.80		21+46.93	24		905.00			997.01											997.01	83.08				41.54	
21+42.63		69+79.18	24		82.10			73.02											73.02	6.09				3.04	
SUBTOTALS									5055.52	3223.29	12225.17	16435.72	5987.05	2258.00	47758.73	68136.18	6880.73	7177.19	5665.97	696.46	4634.95	154.12	783.28	9332.12	
TOTALS CARRIED TO GENERAL SUMMARY									5056	3224	12226	16436	5988	2258	47759	68137	6881	7178	5666	697	4635	155	784		9333

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

STATION RANGE	TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	206	304	452			204	305	SPECIAL								
							CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP	AGGREGATE BASE	10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1 WITH QC/QA			SUBGRADE COMPACTION	12" CONCRETE BASE, CLASS QC1	HEAVY DUTY BRICK PAVERS INCLUDING CONCRETE BASE								
			FT	FT	SY	SY	SY	CY	SY			SY	SY	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		1180.78													
									196.80													
SR 161 HARDSCAPE																						
51+83.55		55+82.35		398.80			1111.11		1111.11			1111.11		1111.11								
							237.78		237.78			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
A	QUANTITY REVISIONS	ENR	2-3-2022

CALCULATED ARL CHECKED KOD	PAVEMENT SUBSUMMARY	UNI - 33 - 24.87	111 923
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p:\pr41806\Fra\80748\drainage\_sheets\80748DS003.dgn

REF NO.	SHEET NO.	STATION TO STATION	601		602		611		611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611						
			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			FT	FT	FT	FT	FT	FT	FT	FT	FT	FT		FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT						
D144	568	55+00.00		TO	55+50.00								51																								
D145	568	55+50.00			55+50.00																			18													
D25	568	55+50.00			55+50.00																		81														
D38	568	55+50.00			55+50.00																			12													
D27	568	504+00.00			55+50.00																			96													
SP1	35	52+59.35			54+74.93			198																													
D20	569	52+50.00			52+50.00																																
D21	569	53+50.00			53+50.00																																
D22	569	54+00.00			54+00.00																																
D23	569	54+50.00			54+50.00																																
D24	569	55+00.00			55+00.00																																
D33	569	52+80.00			52+80.00																																
D34	569	53+50.00			53+50.00																																
D35	569	54+00.00			54+00.00																																
D36	569	54+50.00			54+50.00																																
D37	569	55+00.00			55+00.00																																
D101	570	51+50.00			51+50.00																																
D19	570	52+00.00			51+50.00									55											115												
D102	570	51+50.00			52+71.90																						130										
D32	570	52+71.90			805+00.00																								166								
D16	570	805+00.00					0.49																														
D39	570	56+50.00			56+50.00																																
D129	571	65+08.36			65+60.00																															54	
D130	571	65+60.00			65+60.00																															6	
D94	571	65+60.00			65+85.00																					102											
D74	571	65+85.00			65+85.00																															10	
D150	571	65+85.00																																			
D111	571	61+50.00			62+33.00																																
D112	571	62+33.00			924+00.00																																
D113	571	924+00.00			64+90.00																																
D113A	571	64+90.00			68+85.00																																
A114	571	65+85.00			66+50.00																																
D114A	571	66+50.00					3			0.69																											
D51	571	1001+00.00			62+33.00																																
D41	571	924+10.00			924+00.00																																
D42	571	924+30.00			924+10.00																																
D43	571	64+77.76			64+90.00																																
D66	571	401+50.00			401+25.00																																
D65	572	401+25.00			401+30.00																																
D76	572	401+30.00			401+03.65																																
D75	572	401+03.65			401+06.19																																
TOTALS CARRIED TO SHEET			121		198	3		1.18	158	277			55	51					233	271			81	126	115	130	102	70			166						

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

CALCULATED  
ALR  
CHECKED  
WDG

DRAINAGE SUBSUMMARY

UNI - 33 - 24.87



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	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			
		TO			SY	CY	CY	CY	FT	FT			FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT				
D95	571	67+51.00		67+40.00						99																										
D85	571	67+40.00		67+37.74																																
D151	571	67+37.74		66+77.30																																
D151A	571	66+77.30					3	0.43																												
D84	571	66+50.00		67+40.00						88																										
D97	571	68+46.00		68+56.53						28																										
D98	571	68+56.53		69+92.97						11																										
D87	571	69+92.97		69+92.28						8																										
D86	571	68+46.00		68+46.01																																
D152	571	68+46.01																																		
D153	571	69+92.28																																		
D154	571																																			
D157	571	70+87.70								4																										
D115A	571	66+41.50		68+55.00																																
D115	571	68+55.00		70+75.00																																
D116	571	70+75.00		74+20.00																																
D116A	571	74+20.00		74+73.30																																
D117	574	74+73.30		75+06.20																																
D118	574	75+06.20		75+30.00																																
D118A	574	75+30.00		76+66.00																																
D119	574	76+66.00					2	0.84																												
D158	574	72+30.00		72+43.72						14																										
D159	574	72+43.72								8																										
D62	575	402+32.85		402+25.00																																
D63	575	402+25.00		402+25.00																																
D73	575	402+25.00		402+25.00																																
D127	575	402+25.00		401+06.19																																
D128	575	401+06.19		60+08.36																																
D79	575	402+29.37		402+25.00																																
D77	575	401+04.17		401+06.19																																
D1	153	512+41.67		512+41.67			2	0.25																												
D1	154	515+50.00		515+50.00				0.25																												
		577	608+00.00	608+00.00			3	1.00																												
		578	708+00.00	708+00.00			3	1.00																												
D1	159	813+44.51		813+43.67																																
D2	159	813+43.67		813+40.78			2	0.25																												
D1	160	817+00.00		816+50.00																																
D2	160	816+50.00		816+50.00			2	0.25																												
D3	160	819+82.06		819+81.86			1																													
		580	1007+00.00	1007+00.00			3	1.00																												
		579	918+50.00	918+50.00			6	2.00																												

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

TOTALS CARRIED TO SHEET 121 27 7.27 260 82 283 50 75 66 128 122 76 709 100 367 55 42

**DRAINAGE SUBSUMMARY**

**UNI - 33 - 24.87**

CALCULATED  
ALR  
CHECKED  
WDG

117  
923



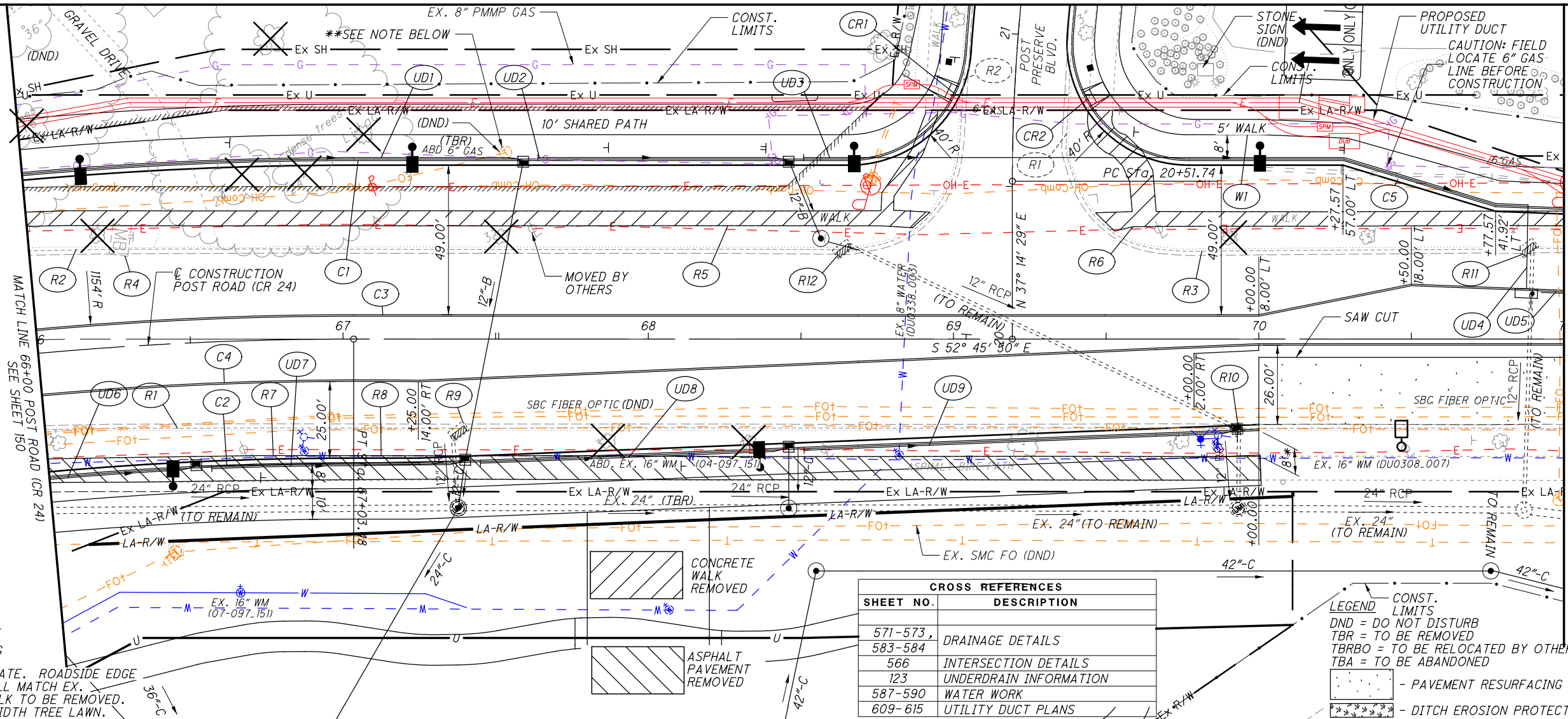




CALCULATED MRT  
CHECKED MAH

**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

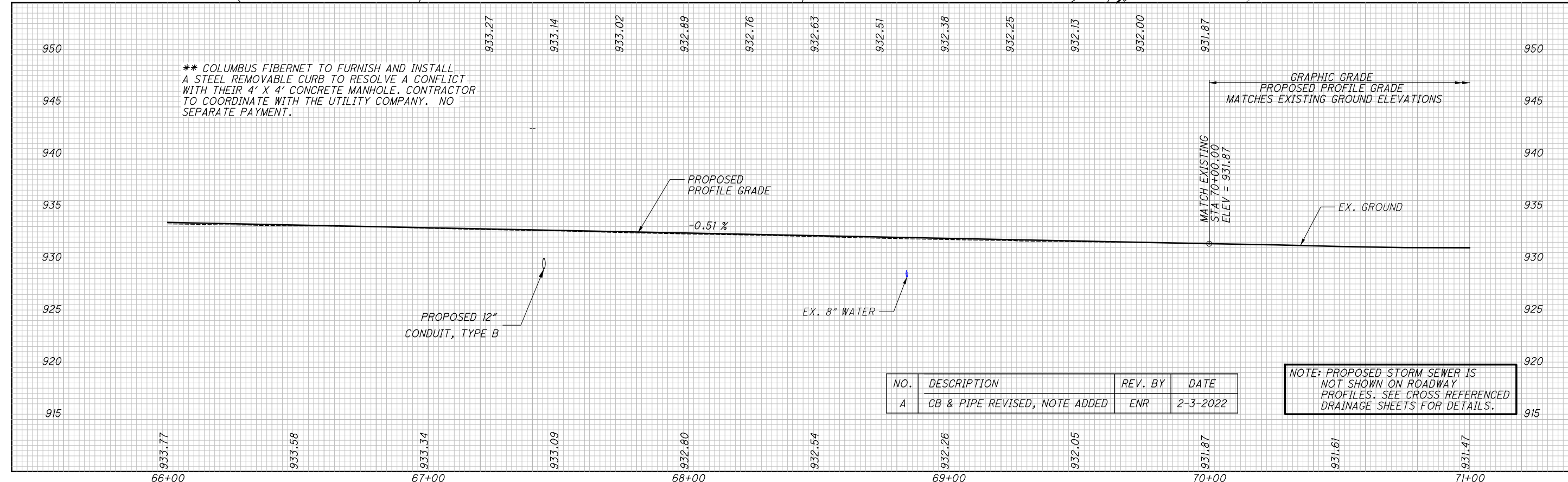
\*OFFSET IS APPROXIMATE. ROADSIDE EDGE OF WALKING PATH SHALL MATCH EX. ROADSIDE EDGE OF WALK TO BE REMOVED. MAINTAIN CONSTANT WIDTH TREE LAWN.

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



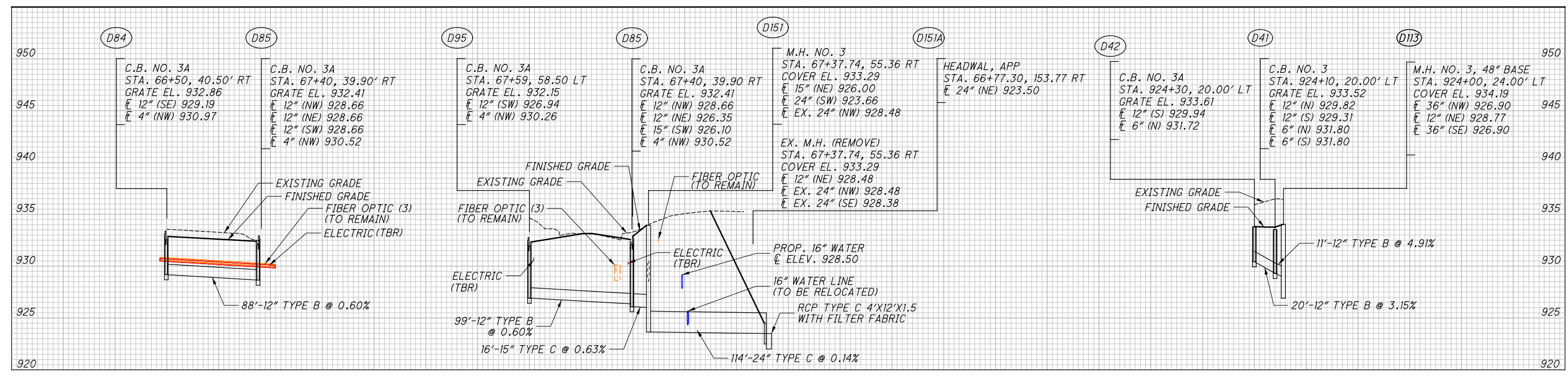
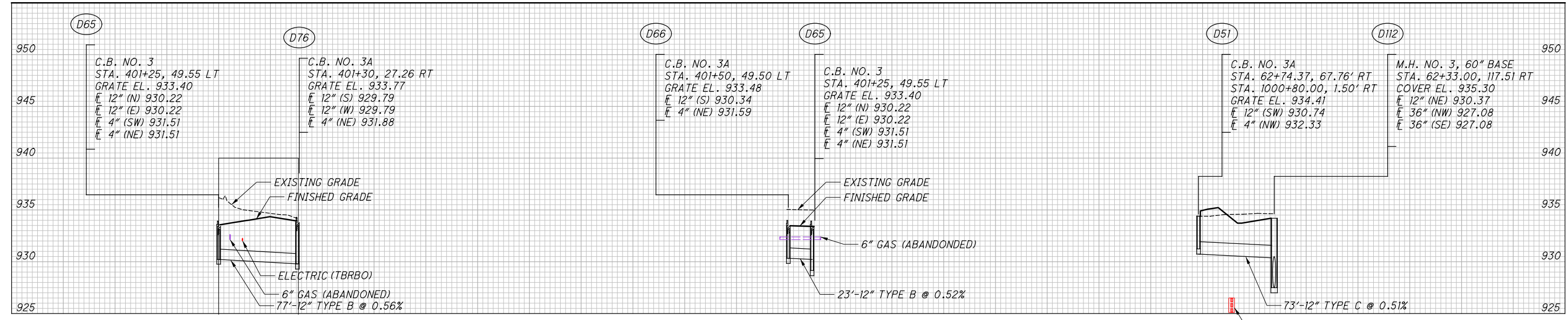
\*\* COLUMBUS FIBERNET TO FURNISH AND INSTALL A STEEL REMOVABLE CURB TO RESOLVE A CONFLICT WITH THEIR 4' X 4' CONCRETE MANHOLE. CONTRACTOR TO COORDINATE WITH THE UTILITY COMPANY. NO SEPARATE PAYMENT.

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



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	TRENCH, MISC.: UTILITY TRENCH "B", TYPE A TRENCH, AS PER PLAN	TRENCH, MISC.: UTILITY TRENCH "B", TYPE B TRENCH, AS PER PLAN	TRENCH, MISC.: UTILITY TRENCH "C", TYPE B TRENCH, AS PER PLAN	TRENCH, MISC.: UTILITY TRENCH "D", TYPE A 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 "F", TYPE A TRENCH, AS PER PLAN	TRENCH, MISC.: UTILITY TRENCH "G", TYPE A TRENCH, AS PER PLAN	TRENCH, MISC.: UTILITY TRENCH "H", TYPE A TRENCH, AS PER PLAN	TRENCH, MISC.: UTILITY TRENCH "H", 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	EACH	EACH	EACH	EACH						
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																				
613	STA. 1051+40		CHN. VAULT, LT																				
613	STA. 1051+64 6' LT		STA. 1051+81																				
613	STA. 1051+81		STA. 1052+45																				
613	STA. 1052+45		STA. 1052+66																				
613	STA. 1052+66		MANHOLE																				
613	STA. 1052+93 2' LT		SWITCH, LT																				
613	STA. 1052+94		STA. 1053+19																				
613	STA. 1053+19		STA. 1053+50																				
613	STA. 1053+50		STA. 1053+65																				
613	STA. 1053+65		STA. 1053+81 RISER																				
613	STA. 1053+65		STA. 1053+96 3' RT																				
613	STA. 1053+96 3' RT		STA. 1054+10 RISER																				
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																				
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>				76	340	344	13	679	444	114	41	214	33	27	1	1	2	2					

ELECTRICAL UTILITY SUBSUMMARY

UNI - 33 - 24.87

CALCULATED  
ARL  
CHECKED  
JED

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

603  
923

**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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CALCULATED  
ARL  
CHECKED  
JED

UTILITY DUCT GENERAL NOTES

UNI - 33 - 24.87

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

605  
923



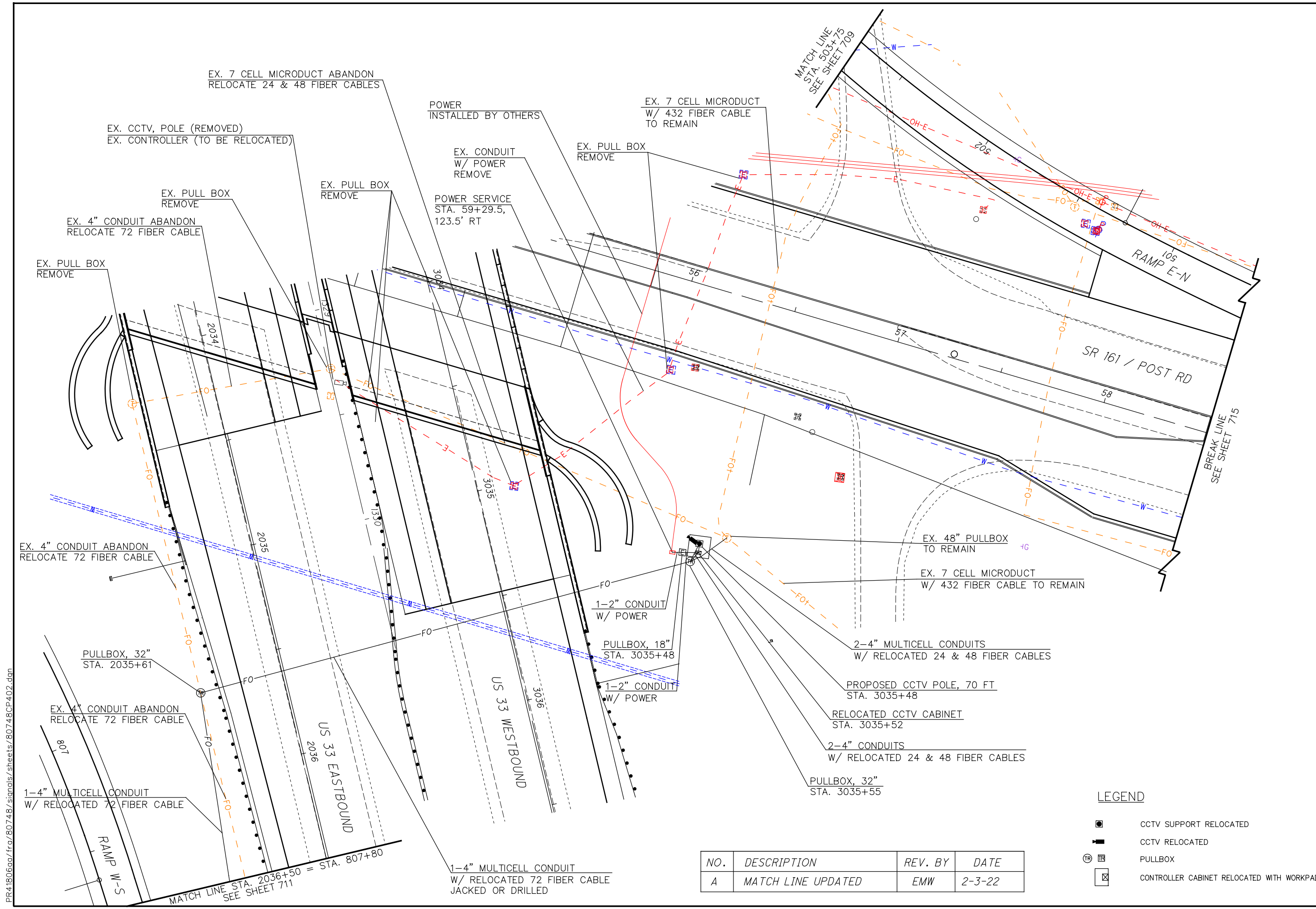


CALCULATED BPT CHECKED EMW

TRAFFIC SURVEILLANCE PLAN  
US33 AT SR161/POST RD

UNI-33-24.87

710  
923



EX. 7 CELL MICRODUCT ABANDON  
RELOCATE 24 & 48 FIBER CABLES

EX. CCTV, POLE (REMOVED)  
EX. CONTROLLER (TO BE RELOCATED)

POWER  
INSTALLED BY OTHERS

EX. 7 CELL MICRODUCT  
W/ 432 FIBER CABLE  
TO REMAIN

EX. CONDUIT  
W/ POWER  
REMOVE

EX. PULL BOX  
REMOVE

POWER SERVICE  
STA. 59+29.5,  
123.5' RT

EX. 4" CONDUIT ABANDON  
RELOCATE 72 FIBER CABLE

EX. PULL BOX  
REMOVE

EX. PULL BOX  
REMOVE

EX. PULL BOX  
REMOVE

EX. 4" CONDUIT ABANDON  
RELOCATE 72 FIBER CABLE

PULLBOX, 32"  
STA. 2035+61

EX. 4" CONDUIT ABANDON  
RELOCATE 72 FIBER CABLE

1-4" MULTICELL CONDUIT  
W/ RELOCATED 72 FIBER CABLE

RAMP W-S

MATCH LINE STA. 2036+50 = STA. 807+80  
SEE SHEET 711

1-4" MULTICELL CONDUIT  
W/ RELOCATED 72 FIBER CABLE  
JACKED OR DRILLED

POWER SERVICE  
STA. 59+29.5,  
123.5' RT

1-2" CONDUIT  
W/ POWER

PULLBOX, 18"  
STA. 3035+48

1-2" CONDUIT  
W/ POWER

EX. 48" PULLBOX  
TO REMAIN

EX. 7 CELL MICRODUCT  
W/ 432 FIBER CABLE TO REMAIN

2-4" MULTICELL CONDUITS  
W/ RELOCATED 24 & 48 FIBER CABLES

PROPOSED CCTV POLE, 70 FT  
STA. 3035+48

RELOCATED CCTV CABINET  
STA. 3035+52

2-4" CONDUITS  
W/ RELOCATED 24 & 48 FIBER CABLES

PULLBOX, 32"  
STA. 3035+55

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

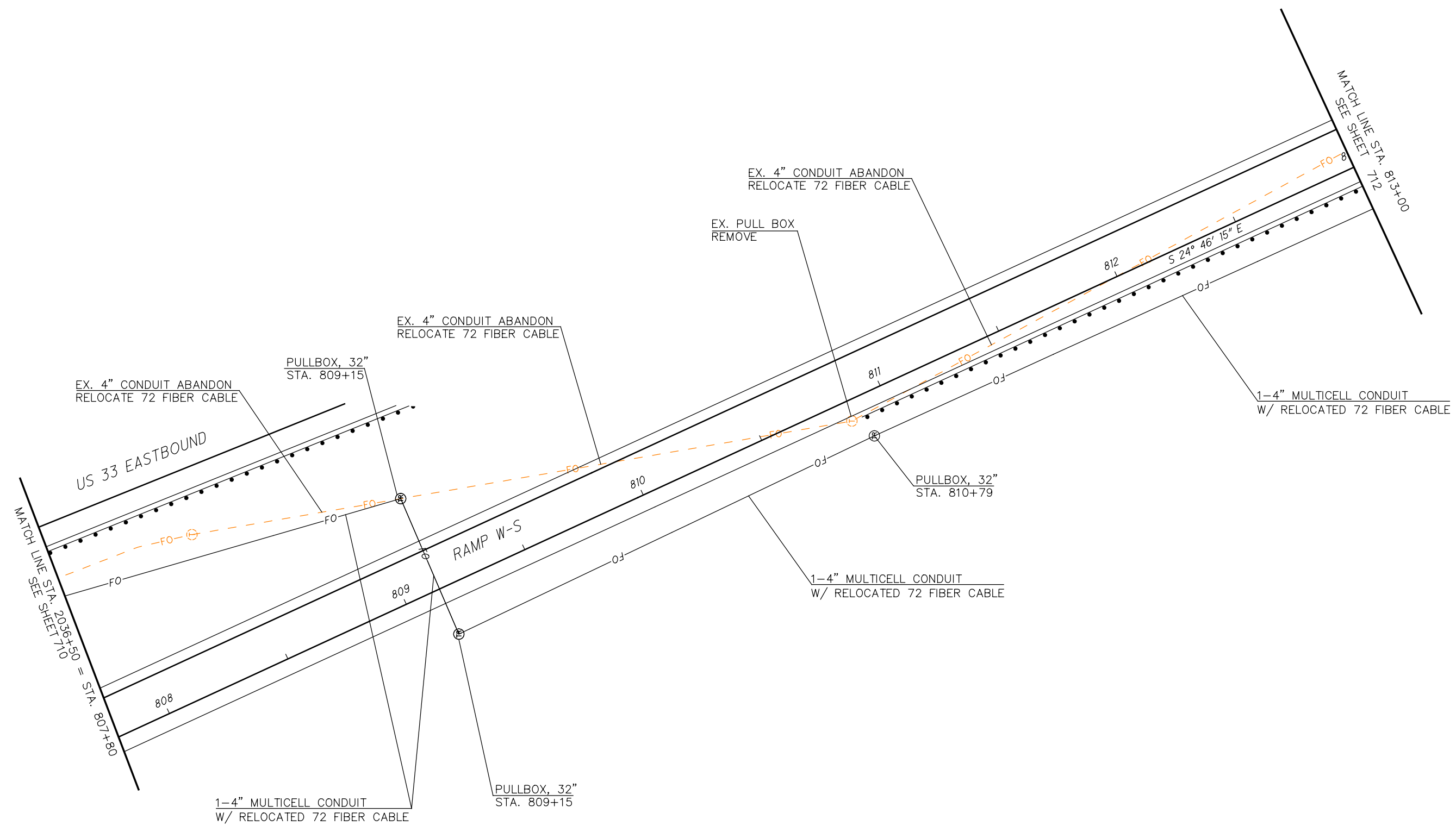
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CALCULATED  
BPT  
CHECKED  
EMW



0 10 20 40  
HORIZONTAL  
SCALE IN FEET

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

**UNI-33-24.87**



**LEGEND**

-  PULLBOX
-  CONTROLLER CABINET WITH WORKPAD

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

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