NO.	DESCRIPTION	REV. BY	DATE
B	ADDED NOTE	ENR	2-28-2022

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.
2. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. THE EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSUITABLE SUBGRADE. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO 204.05.

   IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.
3. COMPACT THE SUBGRADE ACCORDING TO 204.03.
4. APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE SUBGRADE. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.

   PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO 204.06.
5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.
6. PROOF ROLL THE STABILIZED AREAS ACCORDING TO 204.06 TO VERIFY STABILITY.
7. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204 EXCAVATION OF SUBGRADE.

CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. IN ALL CASES, THE PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES INCLUDING THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS IS IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS.

ITEM 872 - VOID REDUCING ASPHALT MEMBRANE

THIS WORK CONSISTS OF FURNISHING AND INSTALLING VOID REDUCING ASPHALT MEMBRANE (VRAM) MATERIAL DURING CONSTRUCTION OF COLD LONGITUDINAL CONSTRUCTION JOINTS IN ASPHALT CONCRETE SURFACE COURSES IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 872. THE FOLLOWING ESTIMATED QUANTITY IS INCLUDED IN THE GENERAL SUMMARY TO COMPLETE THIS WORK:

ITEM 872 - VOID REDUCING ASPHALT MEMBRANE 35,000 FT.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E (MASH2016)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ANTI-SEGREGATION

PROVIDE ANTI-SEGREGATION EQUIPMENT FOR ALL COURSES OF UNIFORM THICKNESS IN ACCORDANCE WITH CMS 401.12.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446), AS PER PLAN

JOINT CORING IN ACCORDANCE WITH 446.04 IS NOT REQUIRED FOR COLD LONGITUDINAL JOINTS PLACED OVER VOID REDUCING ASPHALT MEMBRANE (VRAM). CONSTRUCT COLD LONGITUDINAL JOINTS OVER VRAM USING THE SAME TECHNIQUES, EQUIPMENT, AND ROLLER PATTERNS USED ON THE REST OF THE MAT. OBTAIN 10 MAT CORES FOR EACH LOT OF MATERIAL IN ACCORDANCE WITH 446.04. PAY FACTORS FOR EACH LOT OF MATERIAL WILL BE DETERMINED ACCORDING TO TABLE 446.04-2.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

CABLE BARRIER ANCHOR ASSEMBLY

ALL CABLE BARRIER ANCHOR ASSEMBLIES SHALL MATCH THE EXITING CABLE BARRIER SYSTEM.

ITEM 606 - CABLE GUARDRAIL

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE HIGH TENSION FOUR CABLE GUARDRAIL SYSTEMS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, CABLE BARRIER WITH CONCRETE LINE POST FOUNDATION, AND ITEM 606 CABLE BARRIER, ANCHOR ASSEMBLY AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL HIGH TENSION CABLE GUARDRAIL SYSTEM NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. THE LENGTH OF THE TENSIONED CABLE NECESSARY TO INSTALL A FUNCTIONAL ANCHOR SYSTEM SHALL BE INCLUDED IN ITEM 606, CABLE BARRIER WITH CONCRETE LINE POST FOUNDATION.

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

SYSTEMS SHALL HAVE A MAXIMUM DEFLECTION OF 8 FEET AND THE MAXIMUM LONGITUDINAL DISTANCE BETWEEN POSTS SHALL BE 15 FEET.

INSTALLATION WILL BE A FOUR CABLE HIGH TENSION SYSTEM INSTALLED IN SOCKETED POSTS FOUNDATION WITH A FOUR FOOT WIDE "NO MOW STRIP".

DELINEATE THE CABLE BARRIER USING TYPE 6 BARRIER REFLECTORS PER ITEM 626 OR USING FLEXIBLE POSTS PER ITEM 620 AS CALLED FOR IN THE PLANS OR DIRECTED BY THE ENGINEER.

ANCHOR TERMINAL STRUTS SHALL BE COVERED COMPLETELY ON BOTH SIDES WITH YELLOW TYPE J, ASTM D 4956 TYPE XI REFLECTIVE SHEETING, PER CMS 730.193.

TRANSITIONS TO W-BEAM GUARDRAIL ARE NOT ALLOWED.

REFER TO MANUFACTURER FOR MAXIMUM OFFSET FROM BREAK POINT.

TORPEDO OR BULLET SPLICES ARE NOT ALLOWED. ALL CABLE SPLICES SHALL BE A SWAGED OR OPEN BODY DESIGN THAT ALLOWS FOR ANNUAL INSPECTION BETWEEN THE WEDGE AND STRANDS OF CABLE.

POSTS ARE SET IN SOCKETED CONCRETE FOUNDATIONS AND SHALL NOT BE PERMANENTLY INSTALLED UNTIL THEIR RESPECTIVE RUNS OF TENSIONED CABLE GUARDRAIL ARE READY FOR FINAL CONNECTION TO THE END TERMINAL ASSEMBLY. THE CONTRACTOR SHALL REPLACE ANY POSTS DAMAGED DURING INSTALLATION AS DETERMINED BY THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.

CEMENT STABILIZED SUBGRADE

THE ROADWAY SUBGRADE SHALL BE CEMENT STABILIZED AS DESIGNATED IN THE TYPICAL SECTIONS. ALL CEMENT STABILIZATION SHALL BE 14 INCHES DEEP AND SHALL BE CONSTRUCTED PER THE REQUIREMENTS STATED IN C&MS SPECIFICATION ITEM 206. FOR ESTIMATING CEMENT, A SPREAD RATE OF FIVE PERCENT PER A SOIL DRY UNIT WEIGHT OF 115 POUNDS PER CUBIC FOOT WAS USED.

THE FOLLOWING ESTIMATED QUANTITIES ARE INCLUDED IN THE GENERAL SUMMARY TO COMPLETE THE WORK NOTED ABOVE:

ITEM 206 - CEMENT	2955 TON
ITEM 206 - CURING COAT	97800 SY
ITEM 206 - TEST ROLLING	50 HOURS
ITEM 206 - MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOIL	1 LUMP

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE:

S.R. 33 AND S.R. 161

THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR ANY AND ALL DAMAGE TO THE CONTRACTORS EQUIPMENT THAT MAY RESULT FROM THE PLANING OPERATION, INCLUDING DAMAGE CAUSED BY CASTINGS AND LOOP DETECTORS. THE DEPTH OF PLANING CLOSE TO THE CASTINGS SHALL BE AS DIRECTED; TO ACHIEVE A SMOOTH RIDING FINISHED PAVEMENT. GREAT CARE SHALL BE TAKEN TO PREVENT THE REMOVAL OF THE EXISTING PAVEMENT CROSS-SLOPE (CROWN) DURING THE PLANING OPERATIONS.

ALL PLANED PAVEMENT SHALL BE PLANED AND RESURFACED AS INDICATED ON THE TYPICAL SECTIONS WITHIN THE SAME WORK PERIOD. FAILURE TO MEET THIS REQUIREMENT WILL SUBJECT THE CONTRACTOR TO A DISINCENTIVE OF $XXXX/DAY FOR EACH DAY THE PLANED SURFACE IS NOT RESURFACED.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

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

U.S. 33 SUPERELEVATION

THE WORK PROPOSED BY THIS PROJECT DOES NOT ALTER THE EXISTING SUPERELEVATION ALONG U.S. 33. FOR THE RESURFACING OF THE SUPERELEVATED SECTIONS, MATCH THE EXISTING CROSS SLOPE.

ITEM 670 - SLOPE EROSION PROTECTION

ITEM 670, SLOPE EROSION PROTECTION SHALL BE PROVIDED ON SLOPES STEEPER THAN 3:1. THE QUANTITY BELOW HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS WORK.

ITEM 670 - SLOPE EROSION PROTECTION 18,500 SY

ITEM 601 - 6" CONCRETE SLOPE PROTECTION, APP

6" CONCRETE SLOPE PROTECTION, SHALL BE CONSTRUCTED IN ACCORDANCE WITH ITEM 601, EXCEPT THE BLOCK GRID PATTERN SHALL BE SPACED AS SHOWN ON SHEET 35

CALCULATED KOD CHECKED MAH

GENERAL NOTES

UNI-33-24.87

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
B	UPDATE NOTES	ENR	2-28-2022

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 AND ASPHALT PAVEMENT. ALL OTHER RIGID REMOVAL (CURBS, WALKS, MEDIANS, ETC.) WILL BE PAID UNDER THE APPROPRIATE ITEM.

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 VERITY 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.

CALCULATED KOD CHECKED MAH

GENERAL NOTES

UNI-33-24.87

SHEET NO.			MOT PHASE	254 PAVEMENT PLANING, ASPHALT CONCRETE, 12.5 MM SY	411 STABILIZED CRUSHED AGGREGATE CY	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG 70-22M (MOT) CY	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL) EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	614 BARRIER REFLECTOR, TYPE 1, 1-WAY EACH	614 OBJECT MARKER, ONE WAY EACH	614 WORK ZONE CENTER LINE, CLASS 1, 642 PAINT MILE	614 WORK ZONE EDGE LINE, CLASS 1, 642 PAINT MILE	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 642 PAINT FT	614 WORK ZONE DOTTED LINE, CLASS 1, 642 PAINT FT	614 WORK ZONE ARROW, CLASS 1, 642 PAINT EACH	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN SY	622 PORTABLE BARRIER, Y CONNECTOR FT	622 PORTABLE BARRIER, UNANCHORED FT	622 PORTABLE BARRIER, ANCHORED FT	614 WORK ZONE EDGE LINE, CLASS 1, 6", 807 PAINT MILE	614 WORK ZONE LANE LINE, CLASS 1, 6", 807 PAINT MILE	614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12", 807 PAINT FT	614 WORK ZONE DOTTED LINE, CLASS 1, 6", 807 PAINT FT
60	-	61	SR161 PRE-PHASE 1					4		19	19		0.21	529		10	1959			890				
63	-	64	SR161 PRE-PHASE 2				113	8		26	26		0.37	82	874	2	2401		250	1080				
65	-	67	U.S. 33 RAMPS PHASE 1 SR161 PHASE 1				163	12		111	111	0.51	1.29	210	1301	4	117		4035	1455				
68	-	71	U.S. 33 RAMPS PHASE 2 SR161 PHASE 2				556	16		110	110	0.013	1.61		981	1	198 5475							
72	-	73	U.S. 33 RAMPS PHASE 3 SR161 PHASE 3										0.03	618	71		282 209							
74	-	75	SR161 PHASE 4				383	3		37	37		0.13	394	484	5			1870					
76	-	80	U.S. 33 PHASE 2	8511	2840	1047	1028	16	375	353	353						4261	2	16920	470	6.23	2.71	4827	1595
81	-	84	U.S. 33 PHASE 3				673	13		82	82						168	2	3120	500	2.22	0.19	4209	420
85	-	88	U.S. 33 PHASE 4				705	6		86	86								4250		3.17	1.15	1010	1897
89	-	90	U.S. 33 PHASE 5				582	5		30	30						692		1510		1.82	0.04	4205	914
MAINTENANCE OF TRAFFIC SUMMARY TOTALS CARRIED TO GENERAL SUMMARY				8511	2841	1047	4203	83	375	854	854	0.53	3.64	1833	3711	22	10288	4	37430	4395	13.44	4.09	14251	4826

NO.	DESCRIPTION	REV. BY	DATE
B	ITEM UPDATES	EMW	2-28-2022

MAINTENANCE OF TRAFFIC SUBSUMMARY

UNI-33-24.87

SHEET NUM.															PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
36	37	38	109	110	111	112	104	108	121	122	129		881	883	01/NHS/PV	02/S\2/PV						
																					ROADWAY	
LS															LS		201	11000	LS		CLEARING AND GRUBBING	36
							18								11	7	202	20010	18	EACH	HEADWALL REMOVED	
							58,036								32,593	25,443	202	23001	58,036	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				131,022									88,373	42,649	203	10000	131,002	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	
	2,955														2,069	886	206	10500	2,955	TON	CEMENT	
	LS														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 1)	
								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
			784		1,112										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	
																					EROSION CONTROL	
									198							198	601	21001	198	SY	CONCRETE SLOPE PROTECTION, AS PER PLAN	37
		20									82				102		601	21050	102	SY	TIED CONCRETE BLOCK MAT, TYPE 1	
										73					73		601	21060	73	SY	TIED CONCRETE BLOCK MAT, TYPE 2	
		10							48						50	8	601	32200	58	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
									243						243		601	32300	243	CY	ROCK CHANNEL PROTECTION, TYPE D WITH FILTER	
3															2	1	659	00100	3	EACH	SOIL ANALYSIS TEST	
24,943															21,950	2,993	659	00300	24,943	CY	TOPSOIL	
						224,712									197,827	26,885	659	10000	224,712	SY	SEEDING AND MULCHING	

NO.	DESCRIPTION	REV. BY	DATE
A	ITEM UPDATES	ENR	2-4-2022
B	QUANTITY UPDATES	ENR	2-28-2022

CALCULATED NJL
CHECKED KOD

GENERAL SUMMARY

UNI-33-24.87

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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	37		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	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	37
	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
								35,000		35,000		872	10000	35,000	FT	VOID REDUCING ASPHALT MEMBRANE (VRAM)	37
																WATER WORK	
						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	SPECIAL	63898000	1	EACH	1-1/2" WATER SERVICE TAP, COMPLETE (COLS. CMS ITEM 805) (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

NO.	DESCRIPTION	REV. BY	DATE
A	QUANTITY REVISIONS	ENR	2-3-2022
B	ADDED ITEM	ENR	2-28-2022

CALCULATED NJL
CHECKED KOD

GENERAL SUMMARY

UNI-33-24.87

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SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE	41	48	666	667	766						01/NHS/PV	02/S>2/PV	04/S>2/BR						
					170								170	509	20001	170	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN (UNI-33-24.50)	766
					22								22	510	10000	22	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT (UNI-33-24.50)	
					7								7	511	33414	7	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE (UNI-33-24.50)	
					12								12	511	44112	12	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING (UNI-33-24.50)	
					9								9	511	46512	9	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING (UNI-33-24.50)	
					34								34	512	10100	34	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) (UNI-33-24.50)	
					7								7	512	33000	7	SY	TYPE 2 WATERPROOFING (UNI-33-24.50)	
					18								18	516	13600	18	SF	1" PREFORMED EXPANSION JOINT FILLER (UNI-33-24.50)	
					21								21	518	21200	21	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC (UNI-33-24.50)	
					27								27	518	40000	27	FT	6" PERFORATED CORRUGATED PLASTIC PIPE (UNI-33-24.50)	
					20								20	518	40011	20	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN (UNI-33-24.50)	766
																		MAINTENANCE OF TRAFFIC	
		8,511									8,511			254	01000	8,511	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 12.5 MM	
		2,841									2,841			411	10000	2,841	CY	STABILIZED CRUSHED AGGREGATE	
		1,047									1,047			442	10001	1,047	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG 70-22M	9
	500										350	150		614	11110	500	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		4,203									2,988	1,215		614	11630	4,203	FT	INCREASED BARRIER DELINEATION	
		83									56	27		614	12380	83	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
	LS										LS	LS		614	12420	LS		DETOUR SIGNING	
	10										6	4		614	12484	10	EACH	WORK ZONE INCREASED PENALTIES SIGN	
	50										30	20		614	12500	50	EACH	REPLACEMENT SIGN	
	100										60	40		614	12600	100	EACH	REPLACEMENT DRUM	
		375									375			614	12801	375	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	46
		854									551	303		614	13310	854	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	
	14										14			614	13312	14	EACH	BARRIER REFLECTOR, TYPE 2, ONE-WAY	
	14	854									565	303		614	13350	868	EACH	OBJECT MARKER, ONE WAY	45
	50,000										50,000			614	18000	50,000	EACH	MAINTAINING TRAFFIC, MISC.: BRIDGE DECK AND PAVEMENT PATCHING	45
	31										18	13		614	18601	31	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	44
		0.53										0.53		614	21100	0.53	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
		3.64										3.64		614	22100	3.64	MILE	WORK ZONE EDGE LINE, CLASS I, 4", 642 PAINT	
		1,833										1,833		614	23200	1,833	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT	
		3,711										3,711		614	24200	3,711	FT	WORK ZONE DOTTED LINE, CLASS I, 642 PAINT	
		22										22		614	30200	22	EACH	WORK ZONE ARROW, CLASS I, 642 PAINT	
		10,288									5,602	4,686		615	20001	10,288	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	44
	100										60	40		615	25001	100	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 1	46
	50										30	20		615	25001	50	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 2	46
	20										12	8		615	25001	20	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 3	46
	20										12	8		615	25001	20	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN, TYPE 4	46
	970										582	388		616	10000	970	MGAL	WATER	
		4									4			622	41050	4	EACH	PORTABLE BARRIER, "Y" CONNECTOR	
		37,430									25,800	11,630		622	41100	37,430	FT	PORTABLE BARRIER, UNANCHORED	
		4,395									970	3,425		622	41110	4,395	FT	PORTABLE BARRIER, ANCHORED	
		13.44									13.44			807	13010	13.44	MILE	WET REFLECTIVE SPRAY THERMOPLASTIC PAVEMENT MARKING, EDGE LINE, 6"	
		4.09									4.09			807	13110	4.09	MILE	WET REFLECTIVE SPRAY THERMOPLASTIC PAVEMENT MARKING, LANE LINE, 6"	
		14,251									14,251			807	13310	14,251	FT	WET REFLECTIVE SPRAY THERMOPLASTIC PAVEMENT MARKING, CHANNELIZING LINE, 12"	
		4,826									4,826			807	13410	4,826	FT	WET REFLECTIVE SPRAY THERMOPLASTIC PAVEMENT MARKING, DOTTED LINE, 6"	
	360										216	144		808	18700	360	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
																		INCIDENTALS	
	LS										LS	LS		614	11000	LS		MAINTAINING TRAFFIC	
30											30			619	16020	30	MNTH	FIELD OFFICE, TYPE C	
LS											LS			623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
LS											LS			624	10000	LS		MOBILIZATION	
LS																			
LS											LS			108	10000	LS		CPM PROGRESS SCHEDULE	
LS																			

NO.	DESCRIPTION	REV. BY	DATE
B	ITEM UPDATES	ENR	2-28-2022

CALCULATED NJL
CHECKED KOD

GENERAL SUMMARY

UNI-33-24.87

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REF NO.	SHEET NO.	STATION TO STATION			202 HEADWALL REMOVED	202 PAVEMENT REMOVED, AS PER PLAN	202 WALK REMOVED	202 CONCRETE MEDIAN REMOVED	202 CONCRETE BARRIER REMOVED	202 CURB REMOVED	202 CURB AND GUTTER REMOVED	202 PIPE REMOVED, 24" AND UNDER	202 GUARDRAIL REMOVED	202 MAILBOX REMOVED	202 MANHOLE REMOVED	202 CATCH BASIN REMOVED	202 FENCE REMOVED	202 MONUMENT ASSEMBLY REMOVED	202 GUARDRAIL REMOVED, BARRIER DESIGN	202 ANCHOR ASSEMBLY REMOVED	202 IMPACT ATTENUATOR REMOVED	202 BRIDGE TERMINAL ASSEMBLY REMOVED	202 REMOVAL MISC.: CONCRETE PAD	202 CABLE BARRIER REMOVED	
					EACH	SY	SF	SY	FT	FT	FT	FT	FT	EACH	EACH	EACH	FT	EACH	FT	EACH	EACH	EACH	SF	FT	
R1	133	2012+00.00, 10.00' LT	TO	2024+50.00, 55.44' RT		2940																			
R2	133	2023+23.81, 9.14' RT	TO	2023+23.52, 103.90' RT	1							95				1									
R3	133	2023+22.42, 13.79' RT	TO	2023+63.77, 10.34' RT				30																	
R4	133	2023+64.07, 10.55' RT	TO	2024+17.95, 10.46' RT						54															
R5	133	2023+63.79, 19.68' RT	TO	2024+20.69, 28.01' RT						58															
R1	134	3012+00.00, 10.00' LT	TO	3024+50.00, 15.50' LT		2421																			
R2	134	3012+47.40, 11.23' LT	TO	3015+87.54, 16.74' LT									276							2					
R3	134	3023+98.30, 90.99' LT	TO	3023+99.93, 30.51' LT	1							61													
R1	135	2024+50.00, 9.00' RT	TO	2037+00.00, 9.00' RT		1170																			
R2	135	2024+50.00, 55.44' RT	TO	2031+48.94, 165.20' RT		2039																			
R3	135	2031+64.10, 64.10' RT	TO	2032+95.40, 207.22' RT		355																			
R4	135	2028+50.13, 11.32' RT	TO	2031+89.06, 9.40' RT									339							1		1			
R5	135	2030+89.92, 46.58' LT	TO	2032+11.73, 29.45' LT									109							1					
R6	135	2030+13.56, 58.39' LT	TO	2030+89.92, 46.58' LT									47								1				
R7	135	2032+20.85, 53.92' LT																1							
R8	135	2029+73.48, 226.35' RT	TO	2030+00.37, 108.00' RT	1							121													
R1	136	3024+50.00, 15.48' LT	TO	3037+00.00, 9.00' LT		1963																			
R2	136	3026+65.00, 62.50' LT	TO	3033+42.23, 232.40' LT		1571																			
R3	136	3033+14.50, 213.00' LT	TO	3034+38.82, 232.65' LT		310																			
R4	136	3035+03.95, 176.40' LT	TO	3037+00.00, 132.77' LT		610																			
R5	136	3034+43.70, 29.72' RT	TO	3035+62.56, 47.10' RT									130									1			
R6	136	3035+62.56, 47.10' RT	TO	3036+38.27, 61.44' RT															77		1				
R7	136	3034+64.72, 9.69' LT	TO	3036+99.86, 10.41' LT									235												
R8	136	3036+04.86, 20.22' LT	TO	3036+32.14, 237.43' LT	1							114													
R9	136	3031+87.75, 40.25' RT	TO	3032+22.73, 41.42' RT																				35	
R1	137	2037+00.00, 108.13' RT	TO	2039+30.00, 64.50' RT		429																			
R2	137	2037+00.00, 8.00' RT	TO	2049+50.00, 9.00' RT		3715																			
R3	137	2042+10.76, 8.84' RT	TO	2042+13.33, 92.92' RT	1							84				1									
R4	137	2049+00.91, 65.31' LT	TO	2049+51.97, 55.22' LT															51		1				
R5	137	2049+51.97, 55.22' LT	TO	2049+52.04, 57.48' LT									10									1			
R6	137	2041+99.41, 38.25' RT	TO	2042+11.85, 57.72' RT								23													
R1	138	3037+00.00, 132.77' LT	TO	3040+69.50, 73.97' LT		1006																			
R2	138	3037+00.00, 8.00' LT	TO	3049+50.00, 21.00' LT		3039																			
R3	138	3036+00.00, 10.50' LT	TO	3038+02.13, 10.84' LT		103																			
R4	138	3042+67.73, 10.48' LT	TO	3043+18.99, 13.33' LT				39																	
R5	138	3042+95.35, 6.06' RT	TO	3043+24.02, 100.43' LT	1							117				1									
R6	138	3042+19.15, 27.99' LT	TO	3042+68.55, 20.50' LT						50															
R7	138	3042+18.32, 10.58' LT	TO	3042+67.91, 10.51' LT						50															
R1	139	2049+78.73, 52.23' LT	TO	2051+71.67, 31.05' LT									178							1					
R2	139	2049+51.93, 57.53' LT	TO	2049+78.73, 52.23' LT															27		1				
R3	139	2050+57.03, 18.11' RT	TO	2051+75.41, 10.28' RT									120												
R4	139	2050+68.93, 74.90' LT	TO	2052+51.60, 55.44' LT									183												
R5	139	2052+51.60, 55.44' LT	TO	2053+27.13, 36.96' LT															77						
R6	139	2060+10.44, 17.15' RT	TO	2061+50.24, 12.89' RT									141												
R7	139	2049+50.00, 15.00' RT	TO	2062+00.00, 11.50' RT		1723																			
R1	140	3049+50.00, 0.00' LT	TO	3061+64.00, 9.00' LT		1703																			
R2	140	3050+57.01, 15.31' LT	TO	3052+28.60, 16.33' LT									107							1	1				
R3	140	3055+43.33, 27.57' LT	TO	2055+63.75, 167.96' LT	1							37													
R4	140	3055+23.41, 31.63' LT	TO	3055+36.58, 63.02' LT	1							34													
R5	140	3055+39.46, 20.29' LT	TO	3055+39.73, 57.23' LT	1							37													
R6	140	3055+49.40, 56.62' LT	TO	3055+49.57, 18.61' LT	1							38													
R7	140	3055+49.82, 63.47' LT	TO	3055+72.93, 35.49' LT	1							36													
R1	141	3071+57.72, 15.85' LT																					16		
R2	141	3071+66.65, 11.83' LT	TO	3073+46.13, 11.95' LT									179							2					
TOTALS CARRIED TO SHEET 104					11	25097		69		212		797	2054			3		1	232	8	5	3	16	35	

NO.	DESCRIPTION	REV. BY	DATE
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CALCULATED NJL
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ROADWAY SUBSUMMARY

UNI-33-24.87

101
923

P:\PR5574\FRA\80748\Design\Roadway\Sheets\807486S001.dgn Sheet 2/28/2022 7:01:24 PM riley

REF NO.	SHEET NO.	STATION TO STATION			202 HEADWALL REMOVED EACH	202 PAVEMENT REMOVED, AS PER PLAN SY	202 WALK REMOVED SF	202 CONCRETE MEDIAN REMOVED SY	202 CONCRETE BARRIER REMOVED FT	202 CURB REMOVED FT	202 CURB AND GUTTER REMOVED FT	202 PIPE REMOVED, 24" AND UNDER FT	202 GUARDRAIL REMOVED FT	202 MAILBOX REMOVED EACH	202 MANHOLE REMOVED EACH	202 CATCH BASIN REMOVED EACH	202 FENCE REMOVED FT	202 MONUMENT ASSEMBLY REMOVED EACH	202 GUARDRAIL REMOVED, BARRIER DESIGN FT	202 ANCHOR ASSEMBLY REMOVED EACH	202 IMPACT ATTENUATOR REMOVED EACH	202 BRIDGE TERMINAL ASSEMBLY REMOVED EACH	202 REMOVAL MISC.: CONCRETE PAD SF	202 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															
R3	145	41+47.67, 33.00' LT	TO	42+00.00, 26.10' LT		64																			
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	42+00.00, 8.00' LT	TO	47+50.00, 28.00' LT		2501																			
R21	146	45+81.21, 228.47' RT	TO	47+50.00, 56.57' RT		100																			
R22	146	42+60.89, 54.39' LT	TO	42+78.17, 47.83' LT								16				1									
R23	146	44+31.06, 121.44' LT	TO	44+32.86, 149.15' LT								27				1									
R24	146	44+10.63, 170.84' LT	TO	44+33.01, 151.14' LT	1							28			1										
R25	146	44+34.67, 150.03' LT	TO	44+65.18, 122.09' LT								52				1									
R26	146	46+97.82, 39.91' LT	TO	46+99.39, 26.94' LT								11				1									
R27	146	42+15.00, 8.50' RT	TO	43+73.00, 85.00' LT		209																			
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				1									
R5	147	50+46.38, 37.30' RT	TO	52+00.00, 35.17' RT								154													
R6	147	47+50.00, 0.00' LT	TO	52+00.00, 0.00' RT		4073																			
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									93												
R5	148	52+00.00, 35.17' RT	TO	57+00.00, 39.28' RT								500													
R6	148	52+00.00, 0.00' LT	TO	57+00.00, 0.00' RT		3491																			
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													
R4	149	57+00.00, 0.00' LT	TO	61+50.00, 0.00' RT		3300																			
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				1									
R3	150	62+72.83, 52.80' LT	TO	63+44.59, 37.69' RT								116													
R4	150	63+44.85, 38.40' RT	TO	64+12.17, 141.95' RT								119				1									
R5	150	63+47.30, 37.97' RT	TO	64+47.51, 46.34' RT								97													
TOTALS CARRIED TO SHEET 104					4	14220	681	1022	163	1929	645	2153	93		1	7									

NO.	DESCRIPTION	REV. BY	DATE
A	ITEM UPDATE	ENR	2-4-2022
B	STATION & QUANTITY UPDATES	ENR	2-28-2022

CALCULATED NJL
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ROADWAY SUBSUMMARY

UNI-33-24.87

REF NO.	SHEET NO.	STATION TO STATION			202 HEADWALL REMOVED EACH	202 PAVEMENT REMOVED, AS PER PLAN SY	202 WALK REMOVED SF	202 CONCRETE MEDIAN REMOVED SY	202 CONCRETE BARRIER REMOVED FT	202 CURB REMOVED FT	202 CURB AND GUTTER REMOVED FT	202 PIPE REMOVED, 24" AND UNDER FT	202 GUARDRAIL REMOVED FT	202 MAILBOX REMOVED EACH	202 MANHOLE REMOVED EACH	202 CATCH BASIN REMOVED EACH	202 FENCE REMOVED FT	202 MONUMENT ASSEMBLY REMOVED EACH	202 GUARDRAIL REMOVED, BARRIER DESIGN FT	202 ANCHOR ASSEMBLY REMOVED EACH	202 IMPACT ATTENUATOR REMOVED EACH	202 BRIDGE TERMINAL ASSEMBLY REMOVED EACH	202 REMOVAL MISC.: CONCRETE PAD SF	202 CABLE BARRIER REMOVED FT	
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																			
R13	150	61+50.00, 36.00' LT	TO	66+00.00, 32.50' RT		3994																			
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	70+00.00, 46.27' RT		351																			
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									
R13	151	66+00.00, 28.00' LT	TO	71+00.00, 6.00' RT		3152																			
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																		
R4	152	71+00.00, 28.00' LT	TO	74+25.00, 28.00' LT		1249																			
R1	159	800+00.00, 9.50' RT	TO	808+39.00, 28.00' RT		1941																			
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													
R3	166	401+12.00, 44.30' LT	TO	405+00.00, 50.00' LT		1088																			
F1	168	21+81.20, 37.75' LT	TO	22+08.25, 38.40' LT													40								
R1	168	20+87.50, 15.50' LT	TO	21+45.00, 0.00' LT		190																			
R1	132	3000+63+00, 8.00' LT	TO	3012+00.00, 8.00' LT		1188																			
R2	132	2008+56.00, 8.00' RT	TO	2012+00.00, 8.00' RT		323																			
R3	141	2062+00.00, 10.00' RT	TO	2064+62.00, 10.00' RT		326																			
R4	141	3061+64.00, 0.00' LT	TO	3073+83.00, 13.00' LT		1727																			
R1	142	3073+83.00, 0.00' LT	TO	3086+02.00, 13.00' LT		1681																			
R1	143	3086+02.00, 0.00' LT	TO	3088+67.50, 0.00' LT		309																			
R1	167	405+00.00, 50.00' LT	TO	408+95.00, 0.00' RT		1030																			
TOTALS CARRIED TO SHEET 104					3	18719	5370			258	2070	1423		1	1	8	40								

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ROADWAY SUBSUMMARY

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NO.	DESCRIPTION	REV. BY	DATE
A	ITEM UPDATE	ENR	2-4-2022
B	STATION & QUANTITY UPDATES	ENR	2-28-2022

			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	25097		69		212		797	2054			3		1	232	8	5	3	16	35	
		102																					
		103		7496																			
		SUBTOTAL	11	32593		69		212		797	2054			3		1	232	8	5	3	16	35	
QUANTITIES FOR PLAN SLPIT 02/S>2/PV																							
		101																					
		102	4	14220	681	1022	163	1929	645	2153	93		1	7									
		103	3	11223	5370			258	2070	1423		1	1	8	40								
		SUBTOTAL	7	25443	6051	1022	163	2187	2715	3576	93	1	2	15	40								
TOTALS CARRIED TO GENERAL SUMMARY			18	58036	6051	1091	163	2399	2715	4373	2147	1	2	18	40	1	232	8	5	3	16	35	

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

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			203	203	659	203	203																
			EXCAVATION	EMBANKMENT	SEEDING AND MULCHING	REDUCTION IN EXCAVATION FOR PAVEMENT REMOVAL (12" AVERAGE PAVEMENT THICKNESS)	EXCAVATION (ADJUSTMENT)																
			CY	CY	SY	CY	CY																
SHEET NO.	ALIGNMENT	FUNDING SPLIT																					
269	U.S. 33 EB	01/NHS/PV	7325	10229	25933	(1717)	5608																
385	U.S. 33 WB	01/NHS/PV	14575	12161	37912	(1900)	12675																
423	S.R. 161 / POST RD.	02/S>2/PV	25383	3144	18520	(56)	25327																
429	REFERENCE LINE CC	02/S>2/PV	910	410	1041	(167)	743																
432	REFERENCE LINE SR	02/S>2/PV	234	14	214	(161)	73																
451	RAMP E-N	01/NHS/PV	12749	2732	14385		12749																
464	RAMP N-EW	01/NHS/PV	10092	2731	11860		10092																
479	RAMP E-S	01/NHS/PV	1527	8494	7148		1527																
505	RAMP W-S	01/NHS/PV	12282	6937	18778		12282																
516	RAMP W-N	01/NHS/PV	2999	2698	3326		2999																
534	RAMP S-EW	01/NHS/PV	15859	2162	10434		15859																
543	HYLAND-CROY RD.	02/S>2/PV	4496	3197	329		4496																
545	POST PRESERVE BLVD.	02/S>2/PV	509	2	281		509																
581	RETENTION BASIN	02/S>2/PV	11500	0	6500		11500																
622	U.S. 33 GRADING DETAILS	01/NHS/PV	1190	261	2103		1190																
623	U.S. 33 GRADING DETAILS	01/NHS/PV	6247	28078	34103		6247																
624	U.S. 33 GRADING DETAILS	01/NHS/PV	4448	20459	31069		4448																
625	U.S. 33 GRADING DETAILS	01/NHS/PV	2697	2793	776		2697																
TOTAL FROM SPLIT		01/NHS/PV	91990	99735	197827	(3617)	88373																
		02/S>2/PV	43032	6767	26885	(383)	42649																
TOTALS CARRIED TO GENERAL SUMMARY				106502	224712		131022																

NO.	DESCRIPTION	REV. BY	DATE
B	QUANTITY UPDATES	ENR	2-28-2022

CALCULATED ENR
CHECKED KOD

EARTHWORK SUBSUMMARY

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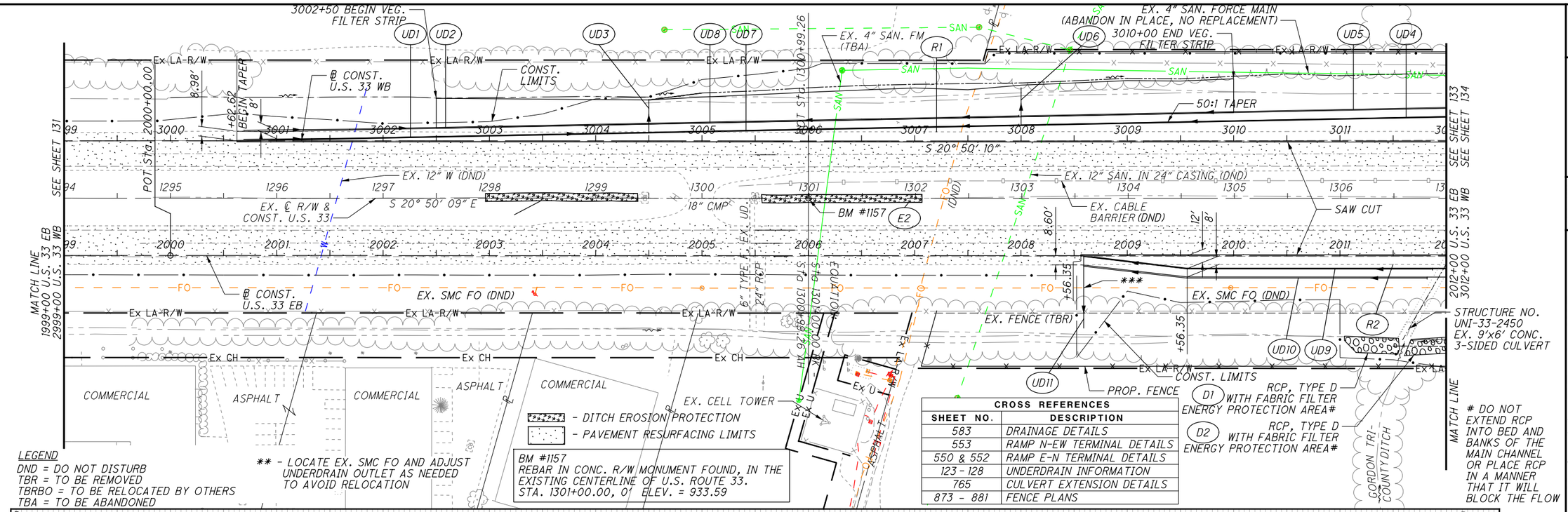
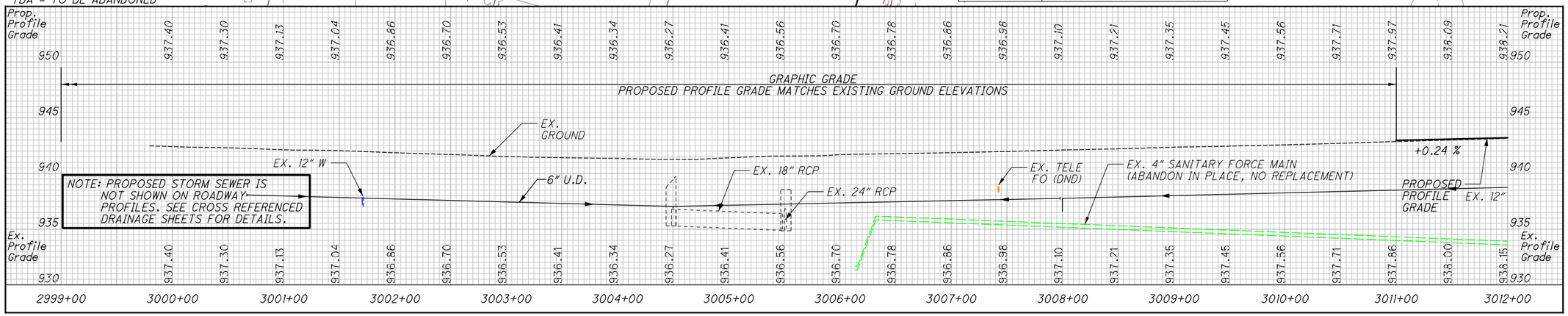
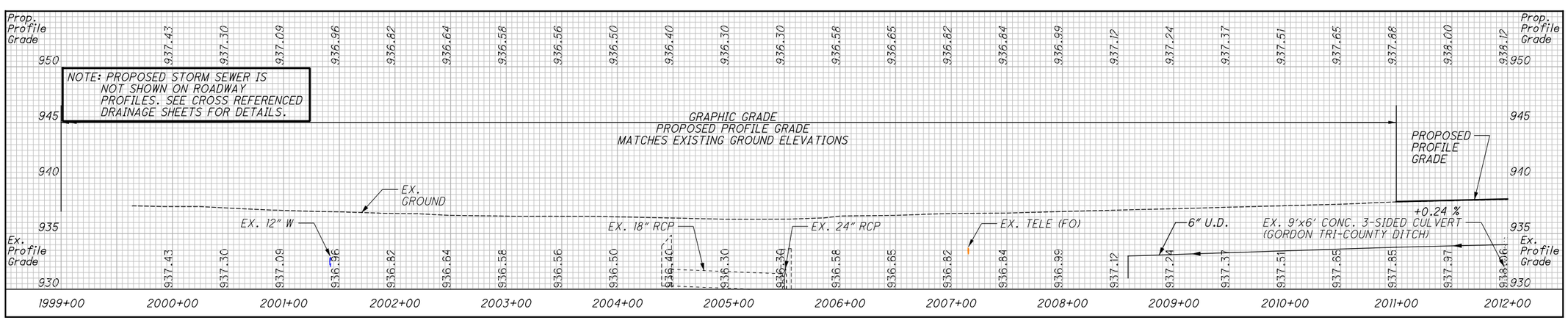
NO.	DESCRIPTION	REV. BY	DATE
B	ADDED BALLOON	ENR	2-28-2022



CROSS REFERENCES	
SHEET NO.	DESCRIPTION
583	DRAINAGE DETAILS
553	RAMP N-EW TERMINAL DETAILS
550 & 552	RAMP E-N TERMINAL DETAILS
123 - 128	UNDERDRAIN INFORMATION
765	CULVERT EXTENSION DETAILS
873 - 881	FENCE PLANS





HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KOD
CHECKED MAH

PLAN AND PROFILE - U.S. 33 EB & WB
STA. 1999+00.00 EB & STA. 2999+00.00 WB
TO STA. 2012+00.00 EB & 3012+00.00 WB

UNI-33-24.87

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GUARDRAIL STATIONING		ITEM
A	STA. 2030+23.05 LT	MGS BARRIER GUARDRAIL
B	STA. 2031+41.42 LT	
C	STA. 2032+03.92 LT	MGS BTA TYPE 1
D	STA. 2032+30.82 LT	
E	STA. 2029+07.20 RT	MGS TYPE B AA
F	STA. 2029+44.70 RT	
G	STA. 2030+57.29 RT	MGS BTA TYPE 1
H	STA. 2030+84.19 RT	
I	STA. 2034+69.85 RT	MGS BTA TYPE 2
J	STA. 2034+71.85 RT	

BM #1159
REBAR IN CONC. R/W MONUMENT FOUND, IN THE EXISTING CENTERLINE OF U.S. ROUTE 33.
STA. 1320+00.08, 0.23' RT ELEV. = 942.99

BM #1160
REBAR IN CONC. R/W MONUMENT FOUND, IN THE EXISTING CENTERLINE OF U.S. ROUTE 33.
STA. 1327+20.15, 0.16' RT ELEV. = 954.38

BM #1069
BOLT ON "W" SIDE OF GUARDRAIL, 142' SOUTHWESTERLY OF THE U.S. 33., 4' SOUTH OF PROPOSED ℄ OF S.R. 161
STA. 52+38.33, 3.90' RT. ELEV. = 938.56

** - LOCATE EX. SMC FO AND ADJUST MGS POST INSTALLATION TO AVOID RELOCATION

LEGEND
DND = DO NOT DISTURB
TBR = TO BE REMOVED
TBRBO = TO BE RELOCATED BY OTHERS
TBA = TO BE ABANDONED
- DITCH EROSION PROTECTION
- PAVEMENT RESURFACING LIMITS
* - SAW CUT

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
584	DRAINAGE DETAILS
555 & 556	RAMP E-S TERMINAL DETAILS
771 & 839	STRUCTURE PLANS
793 & 798	RETAINING WALL PLANS
123 - 128	UNDERDRAIN INFORMATION
585 - 591	WATER WORK PLANS
706 - 715	TRAFFIC SURVEILLANCE PLANS
873 - 881	FENCE PLANS

NO.	DESCRIPTION	REV. BY	DATE
B	REMOVED & ADDED BALLOON	ENR	2-28-2022

CALCULATED KOD CHECKED MAH

HORIZONTAL SCALE IN FEET 0 25 50 100

PLAN AND PROFILE - US 33 EB
STA. 2024+50.00 TO STA. 2037+00.00 EB

UNI-33-24.87

135 / 923

P:\PR41806AA\FRA\80748\ROADWAY\SHEETS\80748GP003

P.I. STA. 2048+73.24
Ls = 200.00'
θ s = 1° 26' 48"
LT = 133.34'
ST = 66.67'
x = 199.99'
y = 1.68'
k = 100.00'
p = 0.42'

P.I. STA. 2055+66.78
Δ = 17° 59' 16" (LT)
Dc = 1° 26' 48"
R = 3,960.62'
T = 626.87'
L = 1243.43'
E = 49.30'
S.E. = MATCH EX.

P.I. STA. 2079+69.83
Δ = 48° 54' 56" (LT)
Dc = 1° 27' 38"
R = 3,922.80'
T = 1,784.23'
L = 3,349.04'
E = 386.71'
S.E. = MATCH EXISTING

P.I. STA. 1350+55.19
Δ = 18° 00' 00" (LT)
Dc = 1° 28' 00"
R = 3,906.62'
T = 618.75'
L = 1,227.30'
E = 48.70'

END FULL DEPTH PAVEMENT LT. / BEGIN APP. SLAB STA. 2050+94.96

BEGIN FULL DEPTH PAVEMENT LT. STA. 2050+19.96

END APP. SLAB STA. 2051+19.90

STA. 2051+27.26 STRUCTURE NUMBER FRA-33-0014 R

BEGIN APP. SLAB STA. 2051+34.50

BEGIN FULL DEPTH PAVEMENT LT. / END APP. SLAB STA. 2051+59.48

END FULL DEPTH PAVEMENT LT. STA. 2052+59.46

PT Sta. 1356+63.74
EQUATION: Sta 1356+63.74 BK = Sta 17+95.55 AH

PC Sta. 17+97.86

BM #1173

MATCH LINE 2062+00.00 US 33 EB SEE SHEET 141

MATCH LINE 2049+50 US 33 EB RAMP W-S STA. 820+82.84 SEE SHEET 137

EITERMAN ROAD

SOUTH FORK INDIAN RUN

DUBLIN CORP. WASHINGTON TWP.

12" CMP (DND) L=934.19

L=934.40

15" RCP

36" RCP

24" CMP

18" CMP

CURB, TYPE 4-C

CURB TYPE 4-C

SAW CUT

℄ CONST. RAMP W-S

℄ CONST. U.S. 33 EB

GUARDRAIL, TYPE MGS

EX. GUARDRAIL, (TBR)

EX. FENCE (TBR)

EX. SMC FO (DND)

EX. CABLE BARRIER (TYP) (DND)

EX. ℄ R/W & CONST. U.S. 33

PROP. FENCE

CONST. LIMITS

50:1 TAPER

15:1 FLARE GUARDRAIL, TYPE MGS

VMS SECTION

EX. CHANGABLE MESSAGE SIGN & SUPPORT (DND)

MANHOLE ADJUSTED TO GRADE

BEGIN TAPER

EX. 16" WATER (DU0190_004)

EX. 24" CMP

EX. CH

TELE

4" HP GAS

Ex R/W

Ex LA R/W

Ex U

SAN

FO

ITEM 601 - 12" OF RCP, TYPE D ENERGY PROTECTION AREA#

DO NOT EXTEND RCP INTO BED AND BANKS OF THE MAIN CHANNEL OR PLACE RCP IN A MANNER THAT IT WILL BLOCK THE FLOW

** - LOCATE EX. SMC FO AND ADJUST MGS POST, STORM SEWER, OR UD INSTALLATION TO AVOID RELOCATION

BM #1076
BRASS PLAQUE IN THE NORTHWEST WINGWALL OF CULVERT (WAS-41-0.75) FOR THE SOUTH FORK OF INDIAN RUN, 148' SOUTHWESTERLY OF THE PROPOSED BASELINE OF CONST. U.S. 33 EB.
STA. 2051+51.71, 148.26' RT. ELEV. = 936.33

BM #1173
REBAR IN CONC. R/W MONUMENT FOUND, IN THE EXISTING CENTERLINE OF U.S. ROUTE 33.
STA. 17+99.45, 0' ELEV. = 936.44

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
123 - 128	UNDERDRAIN INFORMATION
558 & 559	RAMP W-S TERMINAL DETAILS
583	DRAINAGE DETAILS
706 - 715	TRAFFIC SURVEILLANCE PLANS
841 - 872	STRUCTURE PLANS
873 - 881	FENCE PLANS

LEGEND
DND = DO NOT DISTURB
TBR = TO BE REMOVED
TBRBO = TO BE RELOCATED BY OTHERS
TBA = TO BE ABANDONED
- DITCH EROSION PROTECTION
- PAVEMENT RESURFACING LIMITS

GUARDRAIL STATIONING		ITEM
A	STA. 2049+55.44 RT	MGS TYPE E AA
B	STA. 2050+83.49 RT	MGS BTA TYPE 1
C	STA. 2051+10.16 RT	
D	STA. 2051+52.38 RT	MGS BTA TYPE 2
E	STA. 2051+54.37 RT	
F	STA. 2053+99.56 RT	MGS TYPE T AA
G	STA. 2054+12.06 RT	
H	STA. 2060+11.35 RT	MGS TYPE B AA
I	STA. 2060+48.85 RT	
J	STA. 2061+48.85 RT	MGS TYPE T AA
K	STA. 2061+61.35 RT	
L	STA. 2050+89.26 LT	MGS BTA TYPE 1
M	STA. 2051+16.37 RT	

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

GRAPHIC GRADE
+19.96
+59.48
940.01
PROPOSED PROFILE GRADE MATCHES EXISTING GROUND ELEVATIONS
EXISTING GROUND
FRA-033-0014 R SOUTH FORK INDIAN RUN
PROPOSED PROFILE GRADE
EX. 21" SAN. (DND)
EX. 8" CPP (TBR)
EX. 12" CMP (TBR)
50 YEAR HIGH WATER ELEV = 932.93'
EX. 12" CMP (TBR)
6" U.D.
EX. 15" RCP (TBR)
EX. 12" RCP (TBR)
OHWM ELEV = 928.80'
℄ ELEV. = 926.16'

Prop. Profile Grade / Ex. Profile Grade
940.68 940.66 940.63 940.59 940.48 940.37 940.27 940.21 940.16 940.11 940.07 940.03 939.97 939.85 939.80 939.76 939.67 939.59 939.58 939.60 939.50 939.41 939.41 939.48 939.61 939.71 939.85 939.97 940.01 940.03 939.99 940.01
940.68 940.63 940.56 940.46 940.35 940.17 939.97 939.85 939.80 939.76 939.67 939.59 939.58 939.60 939.50 939.41 939.41 939.48 939.61 939.71 939.85 939.97 940.01 940.03 939.99 940.01
950 945 940 935 930
2050+00 2051+00 2052+00 2053+00 2054+00 2055+00 2056+00 2057+00 2058+00 2059+00 2060+00 2061+00 2062+00

NO.	DESCRIPTION	REV. BY	DATE
B	ADDED BALLOON	ENR	2-28-2022

CALCULATED KOD CHECKED MAH

HORIZONTAL SCALE IN FEET 0 25 50 100

PROFILE - US 33 EB
STA. 2049+50.00 EB TO STA. 2062+00.00 EB
PLAN AND PROFILE - US 33 EB STA. 2049+50.00 EB

UNI-33-24.87

139
923

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** - LOCATE EX. SMC FO AND ADJUST MGS POST, STORM SEWER, OR UD INSTALLATION TO AVOID RELOCATION

LEGEND
DND = DO NOT DISTURB
TBR = TO BE REMOVED
TBRBO = TO BE RELOCATED BY OTHERS
TBA = TO BE ABANDONED

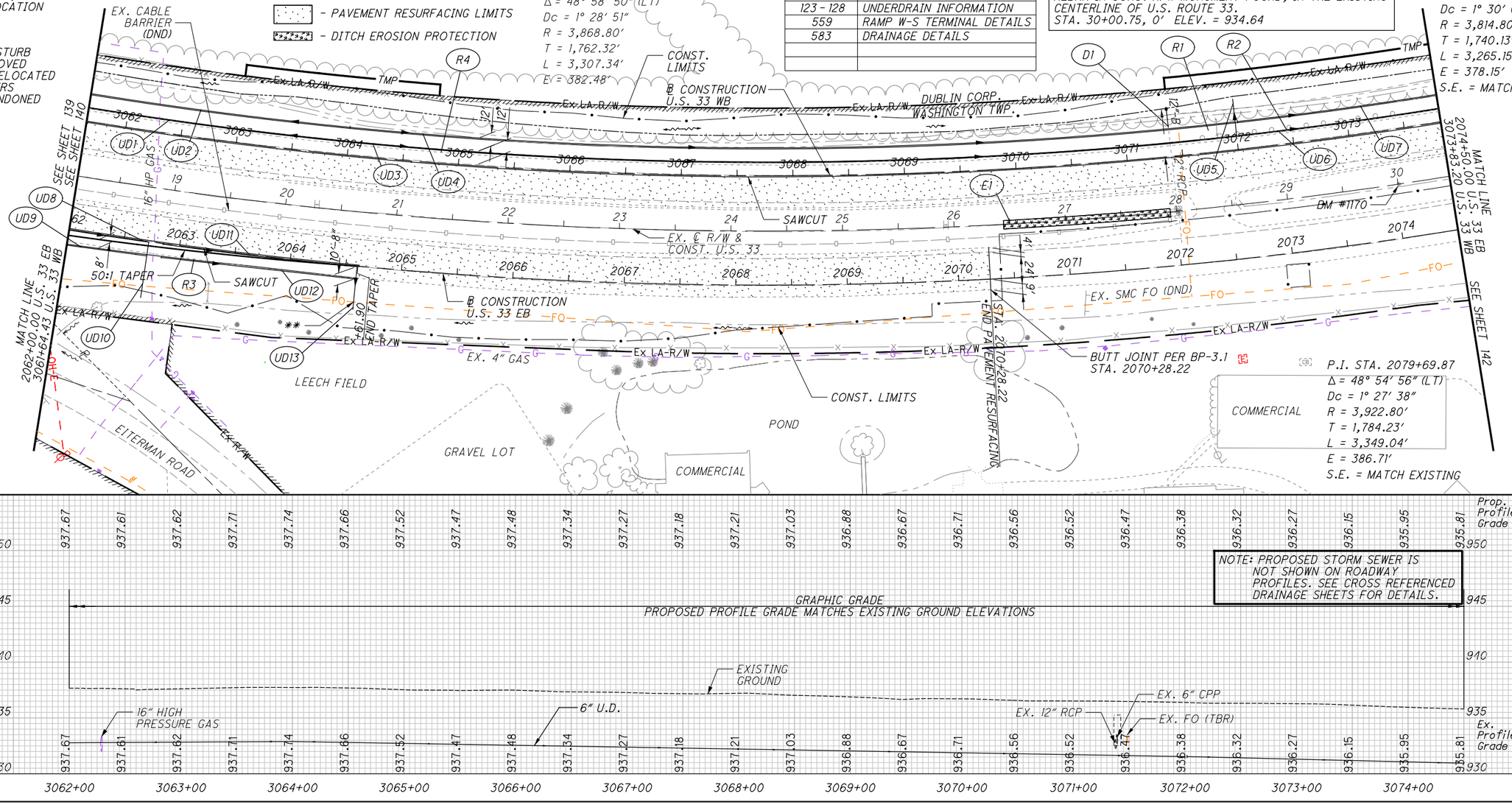
- PAVEMENT RESURFACING LIMITS
- DITCH EROSION PROTECTION

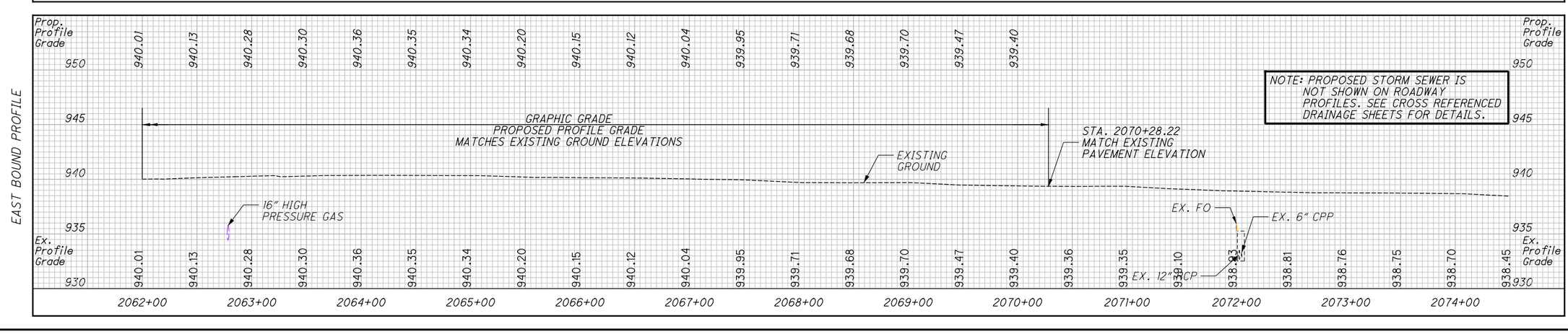
P.I. STA. 35+60.19
Δ = 48° 58' 50" (LT)
Dc = 1° 28' 51"
R = 3,868.80'
T = 1,762.32'
L = 3,307.34'
E = 382.48'

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
123 - 128	UNDERDRAIN INFORMATION
559	RAMP W-S TERMINAL DETAILS
583	DRAINAGE DETAILS

BM #1170
REBAR IN CONC. R/W MONUMENT FOUND, IN THE EXISTING CENTERLINE OF U.S. ROUTE 33.
STA. 30+00.75, 0' ELEV. = 934.64

P.I. STA. 3078+90.59
Δ = 49° 02' 25" (LT)
Dc = 1° 30' 07"
R = 3,814.80'
T = 1,740.13'
L = 3,265.15'
E = 378.15'
S.E. = MATCH EXISTING





NO.	DESCRIPTION	REV. BY	DATE
B	ADDED BALLOON	ENR	2-28-2022

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KOD
CHECKED MAH

PLAN AND PROFILE - U.S. 33 EB & WB
STA. 2062+00.00 EB & 3061+64.43 WB TO
STA. 2074+50.00 EB & 3073+83.20 WB

UNI-33-24.87

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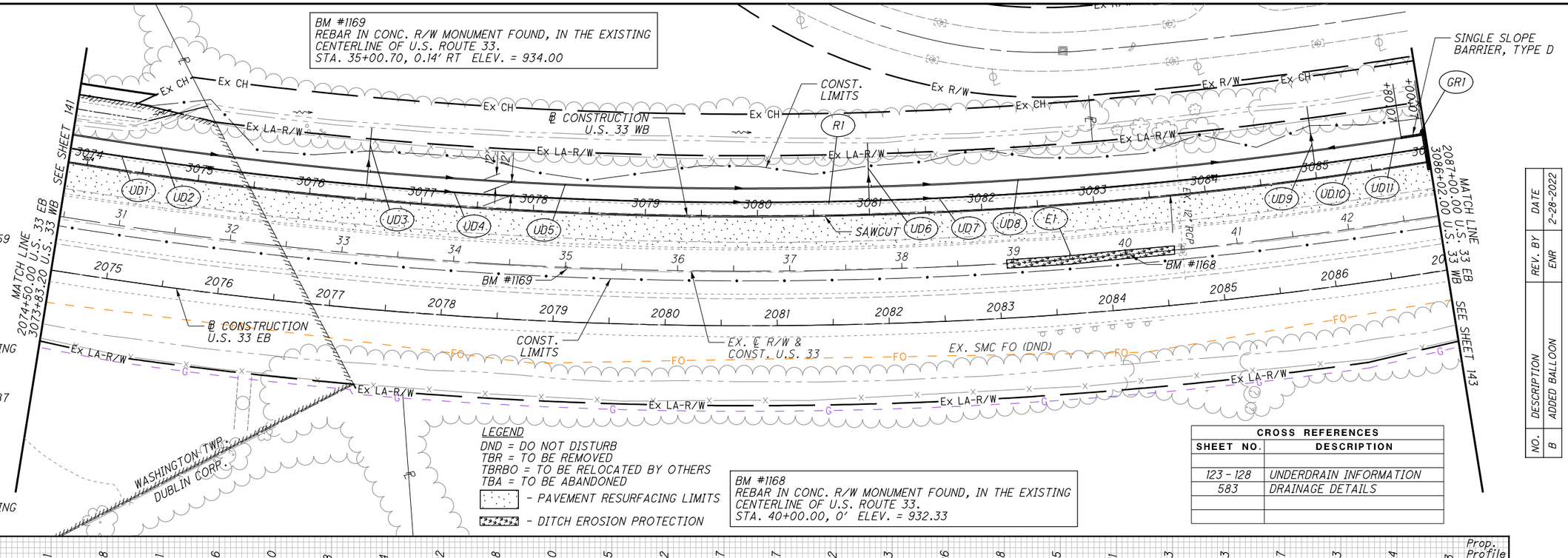
P.I. STA. 35+60.19
Δ = 48° 58′ 50″ (LT)
Dc = 1° 28′ 51″
R = 3,868.80′
T = 1,762.32′
L = 3,307.34′
E = 382.48′

P.I. STA. 3078+90.59
Δ = 49° 02′ 25″ (LT)
Dc = 1° 30′ 07″
R = 3,814.80′
T = 1,740.13′
L = 3,265.15′
E = 378.15′
S.E. = MATCH EXISTING

P.I. STA. 2079+69.87
Δ = 48° 54′ 56″ (LT)
Dc = 1° 27′ 38″
R = 3,922.80′
T = 1,784.23′
L = 3,349.04′
E = 386.71′
S.E. = MATCH EXISTING

BM #1169
REBAR IN CONC. R/W MONUMENT FOUND, IN THE EXISTING CENTERLINE OF U.S. ROUTE 33.
STA. 35+00.70, 0.14′ RT ELEV. = 934.00



LEGEND
DND = DO NOT DISTURB
TBR = TO BE REMOVED
TBRBO = TO BE RELOCATED BY OTHERS
TBA = TO BE ABANDONED
- PAVEMENT RESURFACING LIMITS
- DITCH EROSION PROTECTION

BM #1168
REBAR IN CONC. R/W MONUMENT FOUND, IN THE EXISTING CENTERLINE OF U.S. ROUTE 33.
STA. 40+00.00, 0′ ELEV. = 932.33

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
123 - 128	UNDERDRAIN INFORMATION
583	DRAINAGE DETAILS

NO.	DESCRIPTION	REV. BY	DATE
B	ADDED BALLOON	ENR	2-28-2022

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KOD
CHECKED MAH

PLAN AND PROFILE - U.S. 33 EB & WB
STA. 2074+50.00 EB & 3073+83.20 WB TO
STA. 2087+00.00 EB & 3086+02.00 WB

UNI-33-24.87

142
923

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P.I. STA. 3078+90.59
Δ = 49° 02′ 25″ (LT)
Dc = 1° 30′ 07″
R = 3,814.80′
T = 1,740.13′
L = 3,265.15′
E = 378.15′
S.E. = MATCH EXISTING

P.I. STA. 35+60.19
Δ = 48° 58′ 50″ (LT)
Dc = 1° 28′ 51″
R = 3,868.80′
T = 1,762.32′
L = 3,307.34′
E = 382.48′

P.I. STA. 2079+69.87
Δ = 48° 54′ 56″ (LT)
Dc = 1° 27′ 38″
R = 3,922.80′
T = 1,784.23′
L = 3,349.04′
E = 386.71′
S.E. = MATCH EXISTING

CONCRETE BARRIER END SECTION, TYPE D
GR1
R1
UD1
UD2
E1
A
B
C
D
Ex R/W
Ex CH
Ex LA-R/W
CONSTRUCTION LIMITS
+67.50
-12"S1M
25:1 FLARE
GUARDRAIL, TYPE MGS
SAWCUT
℄ CONSTRUCTION U.S. 33 WB
℄ CONSTRUCTION U.S. 33 EB
EX. ℄ R/W & CONST. U.S. 33
BM 1166
BM 1167
EX. SMC FO (DND)
FO
G
PT Sta. 51+05.20
PT Sta. 2089+72.40
PT Sta. 2095+44.68
PT Sta. 3094+16.62
STA. 3097+20.40
END PAVEMENT RESURFACING
S 89° 18′ 27″ E
S 89° 16′ 59″ E
S 89° 14′ 06″ E
BUTT JOINT PER BP-3.1
STA. 3097+20.40
MATCH LINE
2099+00.00 U.S. 33 EB
3097+81.02 U.S. 33 WB
MATCH LINE
2087+00.00 U.S. 33 EB
3086+02.00 U.S. 33 WB
SEE SHEET 142
SEE SHEET 144

GUARDRAIL STATIONING	ITEM
A STA. 3086+14.07 LT	MGS BTA TYPE 1
B STA. 3086+41.13 LT	
C STA. 3086+82.82 LT	MGS TYPE E AA
D STA. 3087+32.82 LT	

LEGEND
DND = DO NOT DISTURB
TBR = TO BE REMOVED
TBRBO = TO BE RELOCATED BY OTHERS
TBA = TO BE ABANDONED
- PAVEMENT RESURFACING LIMITS
- DITCH EROSION PROTECTION

BM #1166
REBAR IN CONC. R/W MONUMENT FOUND, IN THE EXISTING CENTERLINE OF U.S. ROUTE 33.
STA. 51+05.20, 0′ ELEV. = 929.84

BM #1167
REBAR IN CONC. R/W MONUMENT FOUND, IN THE EXISTING CENTERLINE OF U.S. ROUTE 33.
STA. 45+00.64, 0′ ELEV. = 930.98

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
123 - 128	UNDERDRAIN INFORMATION
583	DRAINAGE DETAILS

NO.	DESCRIPTION	REV. BY	DATE
B	ADDED BALLOON	ENR	2-28-2022

WEST BOUND PROFILE

Prop. Profile Grade: 933.13, 933.29, 933.18, 933.02, 932.88, 932.91, 932.80, 932.75, 932.46, 932.32, 932.16, 932.05, 932.03, 932.07, 932.13, 932.12, 932.06, 931.96, 932.00, 932.13, 932.03
Ex. Profile Grade: 933.13, 933.29, 933.18, 933.02, 932.88, 932.91, 932.80, 932.75, 932.46, 932.32, 932.16, 932.05, 932.03, 932.07, 932.13, 932.12, 932.06, 931.96, 932.00, 932.13, 932.03
925 930 935 940 945 950
3087+00 3088+00 3089+00 3090+00 3091+00 3092+00 3093+00 3094+00 3095+00 3096+00 3097+00 3098+00 3099+00

GRAPHIC GRADE
PROPOSED PROFILE GRADE
MATCHES EXISTING GROUND ELEVATIONS
6" U.D.
EXISTING GROUND
EX. TELE
EX. 12" STM.
STA. 3097+20.40
MATCH EXISTING
PAVEMENT ELEVATION
NOTE: PROPOSED STORM SEWER IS NOT SHOWN ON ROADWAY PROFILES. SEE CROSS REFERENCED DRAINAGE SHEETS FOR DETAILS.

EAST BOUND PROFILE

Prop. Profile Grade: 935.59, 935.42, 935.53, 935.51, 935.39, 935.39
Ex. Profile Grade: 935.59, 935.42, 935.53, 935.51, 935.39, 935.39
930 935 940 945 950
2087+00 2088+00 2089+00

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

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED KOD
CHECKED MAH

PLAN AND PROFILE - U.S. 33 EB & WB
STA. 2087+00.00 WB TO STA. 3086+02.00 WB & STA. 2099+00.00 EB TO STA. 3097+81.02 WB

UNI-33-24.87

143
923

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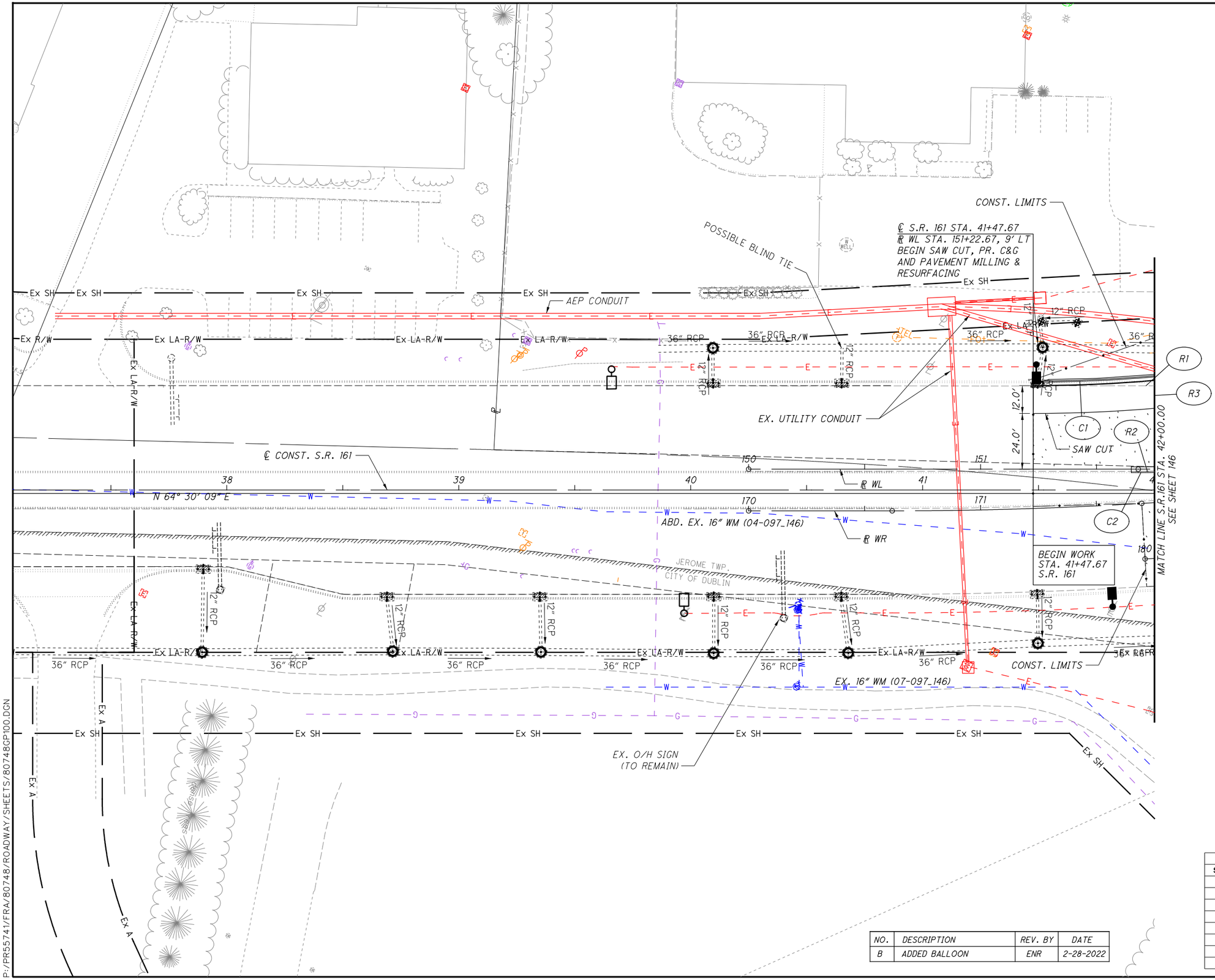

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- PAVEMENT RESURFACING LIMITS

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
123 - 128	UNDERDRAIN INFORMATION
554	RAMP E-S TERMINAL DETAILS
567 - 584	DRAINAGE DETAILS
616 - 617	ROUNDABOUT PVMT. DETAILS

NO.	DESCRIPTION	REV. BY	DATE
B	ADDED BALLOON	ENR	2-28-2022

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MRT
CHECKED MAH

PLAN - S.R. 161
BEGIN TO STA. 42+00.00

UNI-33-24.87

145
923

NO.	DESCRIPTION	REV. BY	DATE
B	ADDED BALLOON	ENR	2-28-2022

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MRT
CHECKED MAH

PLAN - S.R. 161
STA. 42+00.00 TO STA. 47+50.00

UNI-33-24.87

146
923

OLD INDUSTRIAL PARKWAY
CONST. LIMITS
EX. MANUFACTURED WATER QUALITY SYSTEM (TO REMAIN)
REMOVE ABANDONED 12" WATER AS NEEDED
36" C
36" RCP (TBR)
PC STA. 616+72.36
PT STA. 617+35.30
EX. WV (ATG)
12" B
EX. WV (ATG)
EX. 12" WATER (DND)
℄ CONST. RAMP N-EW
℄ CONST. RAMP E-S
℄ CC
℄ NW
℄ WL
℄ WR
℄ WRR
℄ NE
℄ EL
℄ ER
℄ SE
℄ SR
℄ SRR
℄ SL
PI Sta. 44+65.18
℄ CONSTRUCTION S.R. 161
ABD. EX. 12" WM
ABD. EX. 16" WM (04-097_147)
EX. 16" WM (07-097_147)
EX. 12" WM (00-090_002)
SAW CUT
Ex LA-R/W
Ex SH
Ex U
FO
OH-E
PCC Sta. 701+05.85
BEGIN PAVEMENT TAPER ℄ ER STA. 131+46.89, 25.5' RT
END PAVEMENT TAPER ℄ ER STA. 131+96.89, 36.02' RT
EX. MANUFACTURED WATER QUALITY SYSTEM (TO REMAIN)
MATCH LINE S.R. 161 STA. 42+00.00 SEE SHEET 145
MATCH LINE S.R. 161 STA. 47+50.00 SEE SHEET 147
R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11 R12 R13 R14 R15 R16 R17 R18 R19 R20 R21 R22 R23 R24 R25 R26 R27
C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16 C17 C18 C19
CR1 CR2 CR3
W1
N 64° 30' 09" E
N 79° 56' 59" E
S 84° 58' 42" E
S 27° 44' 50" W
UNLESS OTHERWISE LABELED, ALL STORM SEWER IS TO REMIAN
PAVEMENT RESURFACING LIMITS
BRICK PAVERS SEE SHEET 34.

BM #1070
"SW" BOLT OF STRAIN POLE, 40' NORTHEASTERLY OF THE EXISTING CENTERLINE OF INDUSTRIAL PARKWAY, AND 43' NORTHERLY OF THE EXISTING CENTERLINE OF STATE ROUTE 161.
STA. 43+36.54, 42.81' LT. ELEV. = 942.41

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
123 - 128	UNDERDRAIN INFORMATION
554	RAMP E-S TERMINAL DETAILS
557	RAMP W-S TERMINAL DETAIL
567 - 584	DRAINAGE DETAILS
616 - 617	ROUNDABOUT PVMT. DETAILS
873 - 881	FENCE PLANS

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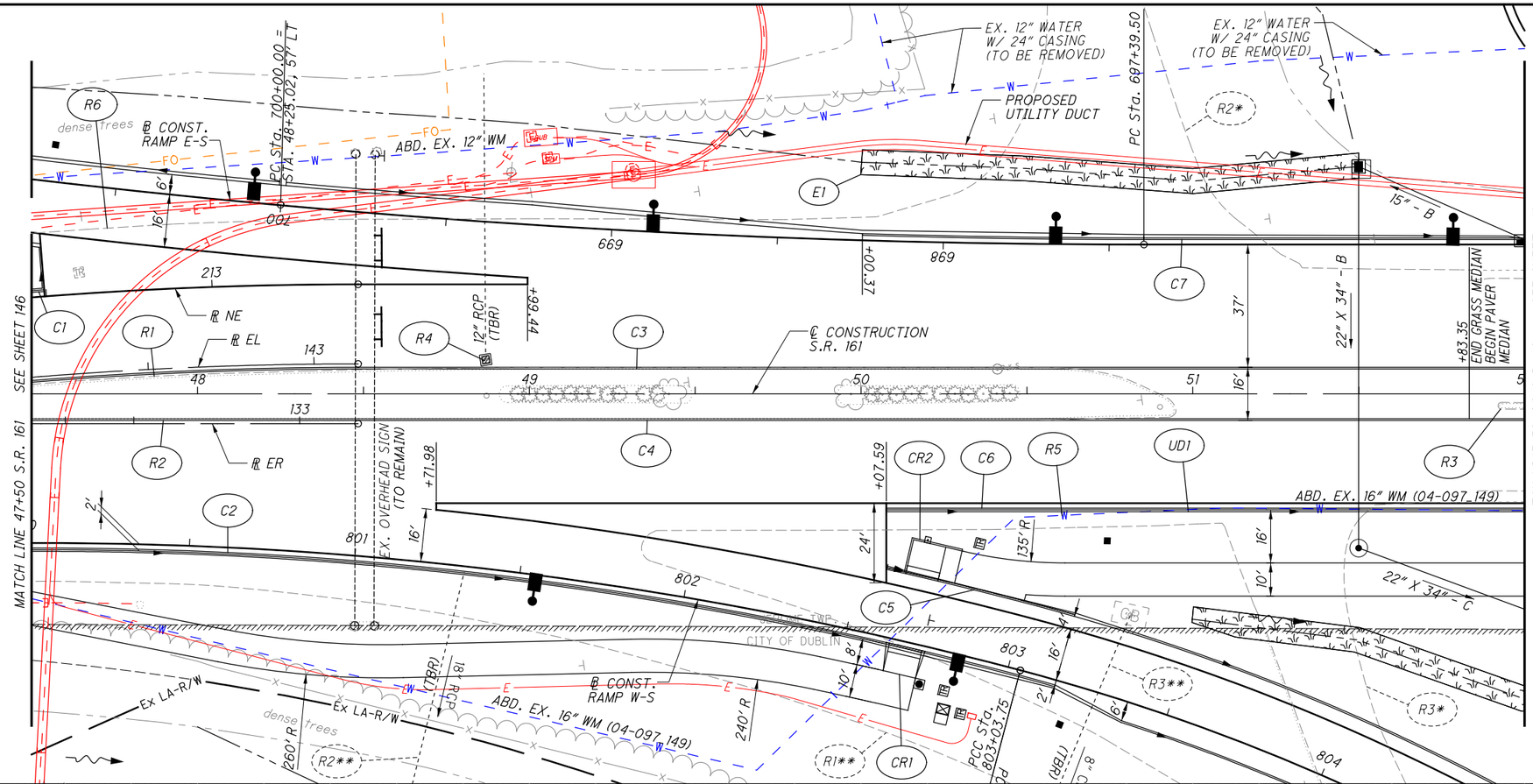
NO.	DESCRIPTION	REV. BY	DATE
B	ADDED BALLOON	ENR	2-28-2022



LEGEND

DND = DO NOT DISTURB
TBR = TO BE REMOVED
TBRBO = TO BE RELOCATED BY OTHERS

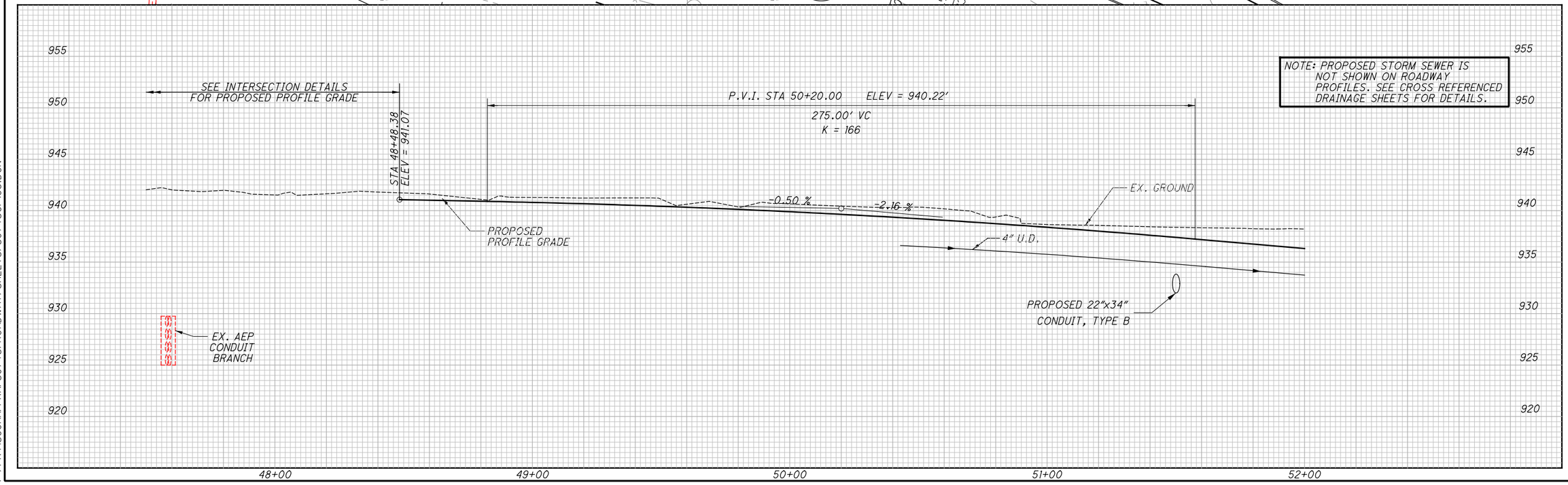
- PAVEMENT RESURFACING LIMITS
- DITCH EROSION PROTECTION

NOTE

* SEE SHEET 135 FOR QUANTITY

** SEE SHEET 159 FOR QUANTITY

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
123 - 128	UNDERDRAIN INFORMATION
568 - 570, 583 - 584	DRAINAGE DETAILS
616 - 621	ROUNDABOUT PVMT. DETAILS
554	RAMP E-S TERMINAL DETAILS
557	RAMP W-S TERMINAL DETAILS
609 - 615	UTILITY DUCT PLANS
791 - 805	RETAINING WALL PLANS



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MRT
CHECKED MAH

PLAN AND PROFILE - S.R. 161
STA. 47+50.00 TO STA. 52+00.00

UNI-33-24.87

147
923

P:/PR41806AA/FRA/80748/ROADWAY/SHEETS/80748GP105.DGN

LEGEND
DND = DO NOT DISTURB
TBR = TO BE REMOVED
TBRBO = TO BE RELOCATED BY OTHERS
- PAVEMENT RESURFACING LIMITS
- DITCH EROSION PROTECTION

CROSS REFERENCES		
SHEET NO.	DESCRIPTION	
568-570, 583-584	DRAINAGE DETAILS	
554	RAMP E-S TERMINAL DETAILS	
560	RAMP W-N TERMINAL DETAILS	
	LANDSCAPE PLANS	
	PAVEMENT DETAILS	
	UTILITY DUCT PLANS	
	STRUCTURE UNI-33-2489 L/R	

BM #1160
REBAR IN CONC. R/W MONUMENT FOUND, IN THE EXISTING CENTERLINE OF U.S. ROUTE 33.
STA. 1327+20.00, 0' ELEV. = 954.38

BM #1069
BOLT ON "W" SIDE OF GUARDRAIL, 142' SOUTHWESTERLY OF THE EXISTING CENTERLINE OF U.S. ROUTE 33, AND 6' SOUTHERLY OF THE EXISTING CENTERLINE OF STATE ROUTE 161
STA. 52+30.59, 3.90' RT. ELEV. = 938.36

EX. 12" WATER W/ 24" CASING (TO BE REMOVED)
BM #1160
PR. WALL
℄ CONST. U.S. 33 WB
STA. 54+62.06 S.R. 161 = STA. 3033+59.68 U.S. 33 WB
EX. 12" WATER W/ 24" CASING (TO BE REMOVED)
** - LOCATE EX. SMC FO AND ADJUST STORM SEWER OR UD INSTALLATION TO AVOID RELOCATION
PROPOSED UTILITY DUCT
EX. ELEC. (TBR)
EX. GUARDRAIL (TBR)
EX. CURB (TBR)
EX. BARRIER (TBR)
℄ CONSTRUCTION S.R. 161
S 81° 01' 22" E
STA. 53+37.54 S.R. 161 = STA. 2032+97.77 U.S. 33 EB
STA. 53+99.80 SR 161 = STA. 1328+27.99 EX. US 33
+82.35 END PAVER MEDIAN BEGIN GRASS MEDIAN
EX. SMC FO (TBR)
ABD. EX. 16" WM (07-097 149)
ABD. EX. 16" WM (04-097 149)
SHARED USE PATH
℄ CONST. US 33 EB
℄ EX. R/W & CONST. U.S. 33
PR. WALL
JEROME TWP.
CITY OF DUBLIN
EX. ELEC. (TBR)
PR. WALL
E1
MATCH LINE 52+00 S.R. 161 SEE SHEET 147
MATCH LINE 57+00 S.R. 161 SEE SHEET 149
UD1 UD2 UD3 UD4 UD5 UD6 UD7 UD8 UD9 UD10 UD11 UD12 UD13 UD14
R1 R2 R3 R4 R5 R6
C1 C2 C3 C4
19"X30"-C
19"X30"-B
30"-C
36"-C
12"-C
15"-C

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

℄ US 33 EB
℄ US 33 WB
MINIMUM VERTICAL SEE UNI-33-2489 L/R PLAN SHEETS FOR VERTICAL CLEARANCE INFORMATION
POINT OF MINIMUM VERTICAL CLEARANCE
EX. GROUND
PROPOSED PROFILE GRADE
4" U.D.
-2.16 %
+1.75 %
P.V.I. STA 53+76.51 ELEV = 932.52'
325.00' VC
K = 83
PROPOSED 19"x30" CONDUIT, TYPE B
EX. ELEC.
EX. FIBER OPTIC

936.33 935.80 935.33 934.93 934.61 934.37 934.20 934.11 934.09 934.15 934.28 934.49 934.77 935.13 935.55 935.99 936.43 936.86 937.30 937.74 938.18
938.22 938.05 938.15 938.02 937.98 938.11 938.26 937.87 938.09 938.19 938.37
960 955 950 945 940 935 930 925
52+00 53+00 54+00 55+00 56+00 57+00

NO.	DESCRIPTION	REV. BY	DATE
B	ADDED BALLOON	ENR	2-28-2022

HORIZONTAL SCALE IN FEET 0 10 20 40
CALCULATED MRT CHECKED MAH

PLAN AND PROFILE - S.R. 161
STA. 52+00.00 TO STA. 57+00.00

UNI-33-24.87

148
923

P:/PR418066A/FRA/80748/ROADWAY/SHEETS/80748GP106.DGN

NO.	DESCRIPTION	REV. BY	DATE
B	ADDED BALLOON	ENR	2-28-2022

MATCH LINE 57+00 S.R. 161 SEE SHEET 148

MATCH LINE 61+50 S.R. 161 SEE SHEET 150

PROPOSED UTILITY DUCT

Ex U

Ex LA-R/W

SHED

PC Sta. 498+69

CONST. LIMITS

SPM

DUB

℄ CONST. RAMP E-N

R4

21:1 TAPER

OH-Comb

UD1

C1

R2

(TBRBO)

℄ CONSTRUCTION S.R. 161

C5

C3

MOVED BY OTHERS

EX. CURB (TBR)

C2

R3

UD2

35:1 TAPER

C4

UD3

R1

ABD. EX. 16" WM (04-097_150)

(TBRBO)

36"-C

10' SHARED PATH

JEROME TWP.

CITY OF DUBLIN

dense brush

Ex CH

E1

200.0' R

8.0

+79.27

+44.92

+50.00

+10.00

+60.00

23'

25'

22'

37'

58

59

60

61

CURVE DATA

P.I. Sta. 64+26.76
Δ = 28° 15′ 32″ (RT)
Dc = 5° 00′ 00″
R = 1,145.92′
T = 288.46′
L = 565.18′
E = 35.75′
C = 559.47′
C.B. = S 66° 53′ 36″ E
S.E. = MATCH EXISTING

LEGEND

DND = DO NOT DISTURB
TBR = TO BE REMOVED
TBRBO = TO BE RELOCATED BY OTHERS

BRICK PAVERS SEE SHEET 34.

- PAVEMENT RESURFACING LIMITS

- DITCH EROSION PROTECTION

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
568 - 573, 583 - 584	DRAINAGE DETAILS
550	RAMP E-N TERMINAL DETAILS
560	RAMP W-N TERMINAL DETAILS
	UNDERDRAIN INFORMATION
	UTILITY DUCT PLANS

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

P.V.I. STA 58+41.51 ELEV = 940.65′

200.00′ VC
K = 68

+1.75 %

-1.20 %

PROPOSED PROFILE GRADE

EX. GROUND

EX. TELE.

4" U.D.

955 950 945 940 935 930 925 920

938.18 938.61 939.05 939.41 939.67 939.85 939.93 939.93 939.82 939.63 939.35 939.05 938.75 938.45 938.15 937.85 937.55 937.25

938.37 939.09 939.21 939.36 939.47 939.40 938.95 938.67 937.70 937.31

57+00 58+00 59+00 60+00 61+00

N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MRT
CHECKED MAH

PLAN AND PROFILE - S.R. 161
STA. 57+00.00 TO STA. 61+50.00

UNI-33-24.87

149
923

P:/PR41806AA/FRA/80748/ROADWAY/SHEETS/80748GP107.DGN

	DESCRIPTION	REV. BY	DATE
B	ADDED BALLOON	ENR	2-28-2022

BM #162
REBAR IN CONC. R/W MONUMENT FOUND, IN THE EXISTING CENTERLINE OF U.S. ROUTE 33.
STA. 1344+36.44, 0' ELEV. = 939.13

BM #1001
BRASS PLAQUE, FRANKLIN COUNTY ENGINEER'S BENCHMARK N32, WEST OF THE EXISTING CENTERLINE OF LIGGETT RD.
STATION 13+61.72, 12.97' WEST, ELEV. = 934.12

RP# 1068
SOUTHEAST BOLT OF LIGHT POLE BASE (#CC-2/C-9), NORTH OF THE EXISTING CENTERLINE OF POST ROAD.
STA. 243+27.68, 38.89' NORTH, ELEV. 937.29

IP'S# 100
IRON PIN SET, EAST OF THE EXISTING CENTERLINE OF LIGGETT ROAD.
STA. 1+78.79, 35.84' EAST, ELEV. = 936.46

LEGEND
DND = DO NOT DISTURB
TBR = TO BE REMOVED
TBRBO = TO BE RELOCATED BY OTHERS
TBA = TO BE ABANDONED

- PAVEMENT RESURFACING LIMITS
- DITCH EROSION PROTECTION

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

CURVE DATA

P.I. Sta. 64+26.76
Δ = 28° 15' 32" (RT)
Dc = 5° 00' 00"
R = 1,145.92'
T = 288.46'
L = 565.18'
E = 35.75'
C = 559.47'
C.B. = S 66° 53' 36" E
S.E. = MATCH EXISTING

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

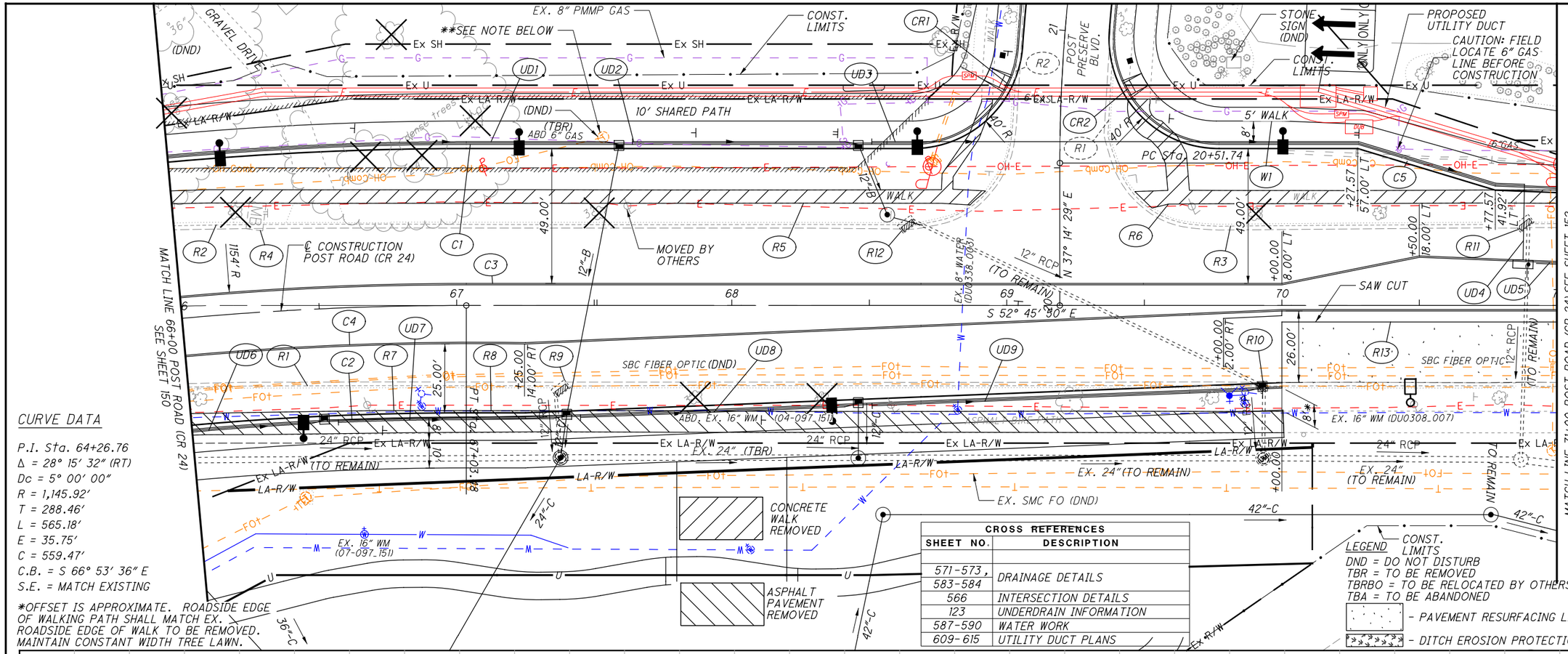
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MRT
CHECKED JED

PLAN AND PROFILE - S.R. 161/ POST RD.
STA. 61+50.00 TO STA. 66+00.00

UNI-33-24.87

150
923

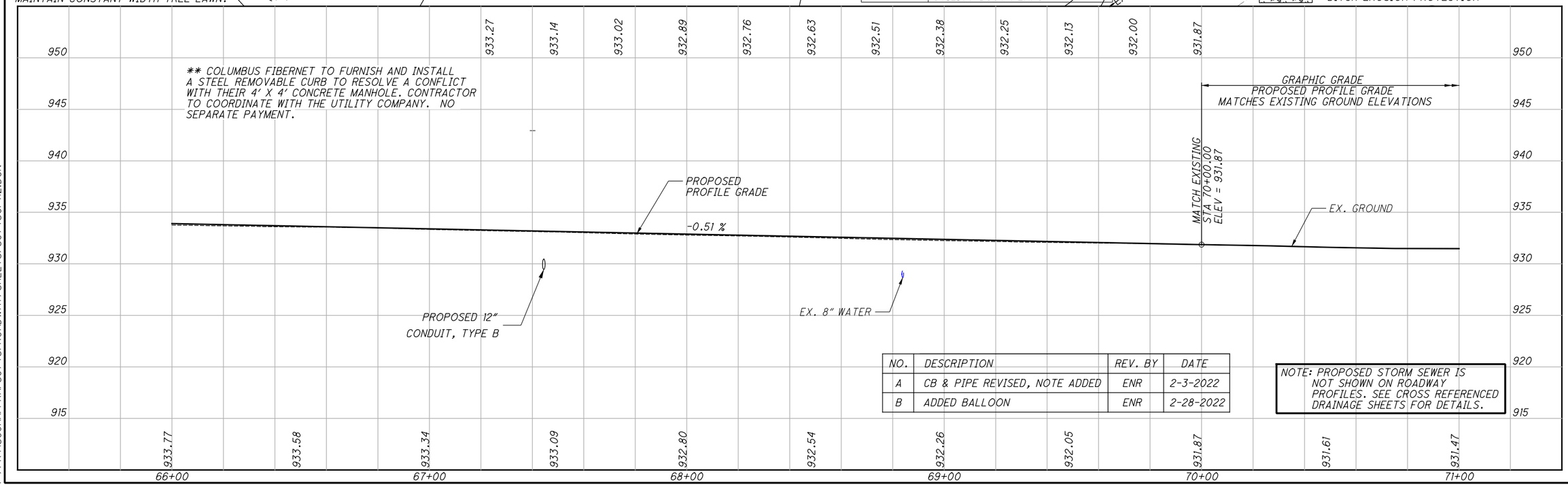


CURVE DATA

P.I. Sta. 64+26.76
Δ = 28° 15′ 32″ (RT)
Dc = 5° 00′ 00″
R = 1,145.92′
T = 288.46′
L = 565.18′
E = 35.75′
C = 559.47′
C.B. = S 66° 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



NO.	DESCRIPTION	REV. BY	DATE
A	CB & PIPE REVISED, NOTE ADDED	ENR	2-3-2022
B	ADDED BALLOON	ENR	2-28-2022

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

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MRT
CHECKED MAH

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

UNI-33-24.87

151
923

P:/PR41806AA/FRA/80748/ROADWAY/SHEETS/80748GP112.DGN

CONCRETE WALK REMOVED

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

BRICK PAVERS SEE SHEET 34.

P.I. STA. 74+03.09
Δ = 48° 00' 10" (RT)
Dc = 8° 48' 53"
R = 650.00'
T = 289.42'
L = 544.57'
E = 61.52'
S.E. = MATCH EXISTING

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
571-574,	DRAINAGE DETAILS
	MEDIAN DETAILS
	UTILITY DUCT PLANS
	INTERSECTION DETAILS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MRT CHECKED MAH

PLAN - POST ROAD (CR 24)/ PERIMETER DRIVE
STA 71+00.00 TO END WORK

UNI-33-24.87

152
923

LEGEND
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
B	ADDED BALLOON	ENR	2-28-2022

UNLESS OTHERWISE LABELED, ALL STORM SEWER IS TO REMIAN

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

GRAPHIC GRADE
PROPOSED PROFILE GRADE
MATCHES EXISTING GROUND ELEVATIONS

PROPOSED PROFILE GRADE
EX. GROUND
MATCH EXISTING STA 74+25.00 ELEV = 931.87
EX. TELE.
EX. CONDUIT & FIBER OPTIC
EX. 16" WATER

950 945 940 935 930 925 920 915

931.47 931.38 931.42 931.75 932.00 932.22 932.59 932.82 933.09 933.33 933.46 933.23

71+00 72+00 73+00 74+00 75+00 76+00

P:/PR41806AA/FRA/80748/ROADWAY/SHEETS/80748GP113.DGN

℄ CONST. S.R. 161

℄ CONST. POST ROAD (CR 24)

℄ CONST. HYLAND-CROY ROAD

EXISTING 12" WATER TIE-IN(DND)

PROP. UTILITY CONDUIT

EX. CURB (TBR)

EX. ELEC. (TBRBO)

ABD 6" GAS (TBR)

ABD 16" GAS (TBR)

GAS (ABND)

16" WTHP GAS ((DND)

8" PMMP GAS ((DND)

SHED

SAVE

CONST. LIMITS

MATCH LINE STA. 405+00.00 SEE SHEET 167

A ℄ CONST. HYLAND-CROY ROAD STA. 400+00.00 = ℄ CONST. POST ROAD (CR24) STA. 64+02.02

CURVE DATA
P.I. STA. 402+52.05
Δ = 19° 05′ 29″ (LT)
DC = 5° 36′ 00″
R = 1,023.14′
T = 172.05′
L = 340.92′
E = 14.37′
S.E. = N.C.

LEGEND
DND = DO NOT DISTURB
TBR = TO BE REMOVED
TBRBO = TO BE RELOCATED BY OTHERS
TBA = TO BE ABANDONED
- PAVEMENT RESURFACING LIMITS
- DITCH EROSION PROTECTION

** - LOCATE EX. SMC FO (OR OTHER EX. UTILITY) AND ADJUST MGS POST, STORM SEWER, UD, DUCT BANK, OR DITCH INSTALLATION TO AVOID RELOCATION

NO.	DESCRIPTION	REV. BY	DATE
B	ADDED BALLOON	ENR	2-28-2022

CALCULATED MRT CHECKED JED

HORIZONTAL SCALE IN FEET 0 10 20 40

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
575-576	DRAINAGE DETAILS
583-584	
616-617	INTERSECTION DETAILS
609-615	UTILITY CONDUIT PLANS
127	UNDERDRAIN INFORMATION
647-650	TRAFFIC SIGNAL PLANS

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

PROPOSED PROFILE GRADE

EX. GROUND

PROPOSED UTILITY CONDUIT

PROPOSED 12" CONDUIT, TYPE B

PROPOSED 18" CONDUIT, TYPE B

P.V.I. STA 401+00.00 ELEV = 934.07′

135.00′ VC
K = 86

-0.92 %

+0.65 %

934.96

934.76 934.55 934.41 934.34 934.34 934.41 934.56 934.72 934.88 935.05 935.21 935.37 935.53 935.70 935.86 936.02 936.18 936.35 936.51 936.67

934.67 936.06 934.66 934.55 934.25 934.42 934.55 935.09 935.47 935.34 935.39

950 945 940 935 930 925 920 915

400+00 401+00 402+00 403+00 404+00 405+00

PLAN AND PROFILE - HYLAND-CROY ROAD
STA. 400+00.00 TO STA. 405+00.00

UNI-33-24.87

166
923

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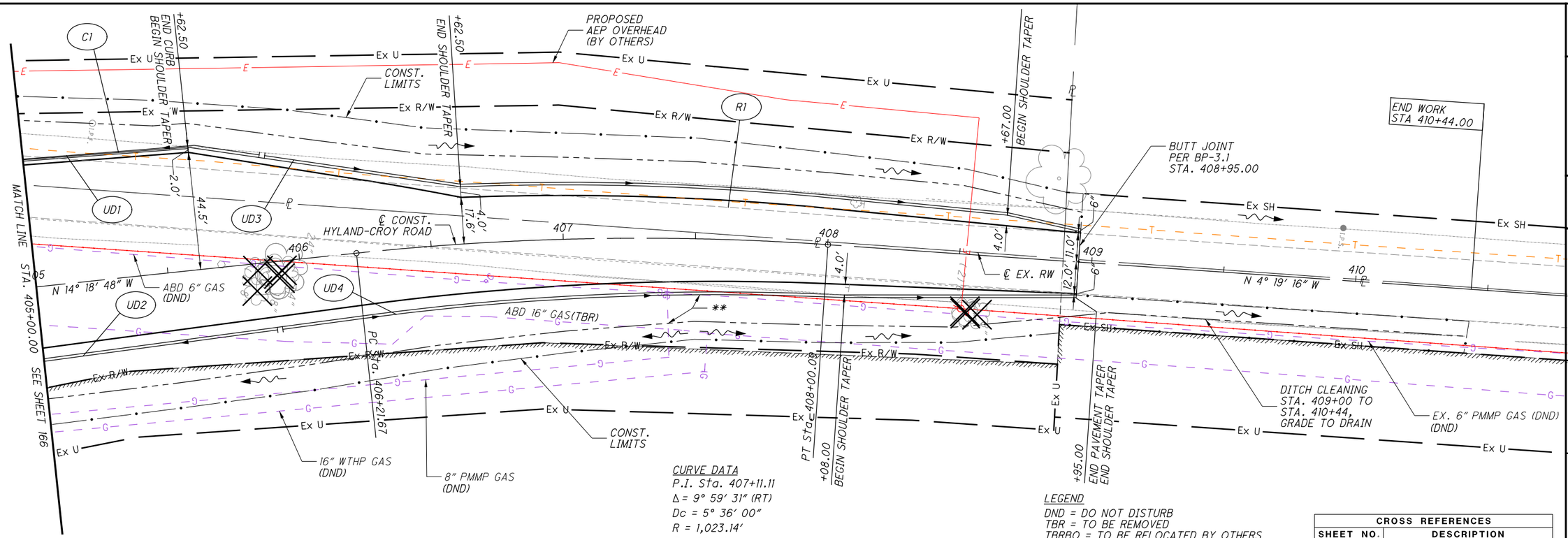


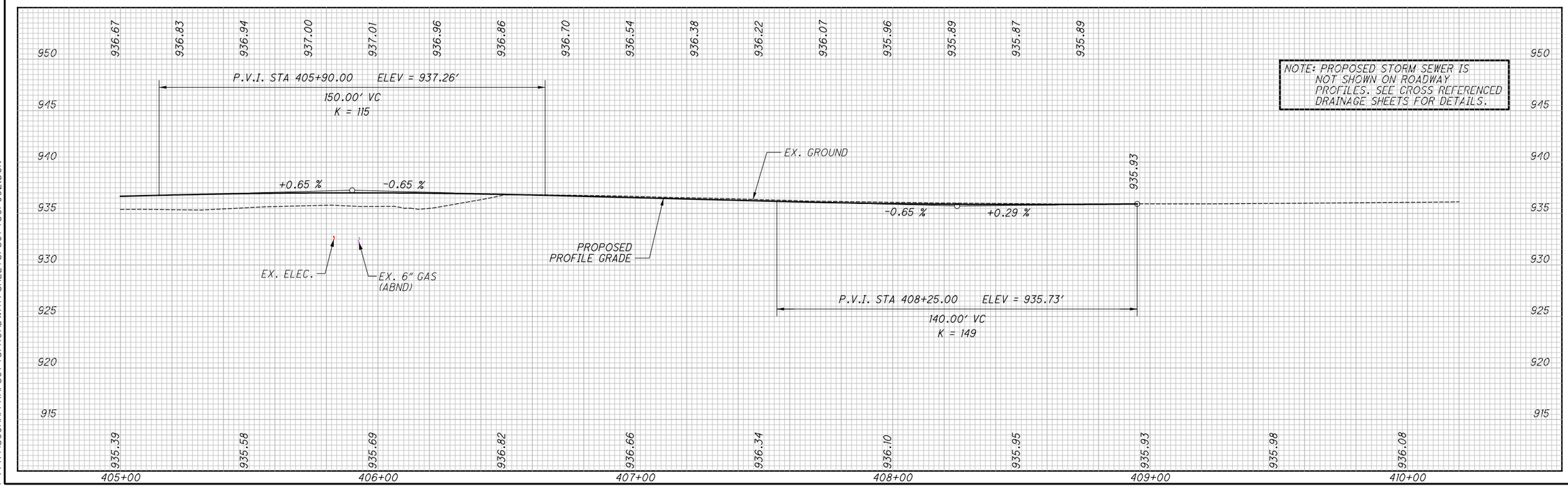
** - LOCATE EX. SMC FO (OR OTHER EX. UTILITY) AND ADJUST MGS POST, STORM SEWER, UD, DUCT BANK, OR DITCH INSTALLATION TO AVOID RELOCATION

CURVE DATA
P.I. Sta. 407+11.11
Δ = 9° 59' 31" (RT)
Dc = 5° 36' 00"
R = 1,023.14'
T = 89.44'
L = 178.43'
E = 3.90'
S.E. = N.C.

NO.	DESCRIPTION	REV. BY	DATE
B	ADDED BALLOON	ENR	2-28-2022

LEGEND
DND = DO NOT DISTURB
TBR = TO BE REMOVED
TBRBO = TO BE RELOCATED BY OTHERS
TBA = TO BE ABANDONED
- PAVEMENT RESURFACING LIMITS
- DITCH EROSION PROTECTION

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
583	DRAINAGE DETAILS
127	UNDERDRAIN INFORMATION



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MRT
CHECKED JED

PLAN AND PROFILE - HYLAND-CROY ROAD
STA. 405+00.00 TO 410+00.00

UNI-33-24.87

167
923

P:/PR41806AA/FRA/80748/ROADWAY/SHEETS/80748GP902.DGN

NO.	DESCRIPTION	REV. BY	DATE
B	ADDED BALLOON	ENR	2-28-2022

A ℄ CONST. POST RESERVE BLVD. STA. 20+00.00 =
℄ CONST. POST ROAD STA. 69+19.27

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
571-573,	DRAINAGE DETAILS
583-584	
609-615	UTILITY PLANS
566	INTERSECTION DETAILS
627	WALKING PATH DETAILS
123-128	UNDERDRAIN INFORMATION

LEGEND
DND = DO NOT DISTURB
TBR = TO BE REMOVED
TBRBO = TO BE RELOCATED BY OTHERS
TBA = TO BE ABANDONED
- PAVEMENT RESURFACING LIMITS
- DITCH EROSION PROTECTION

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MRT
CHECKED MAH

+45.00
END PAVEMENT RESURFACING
END CURB
MATCH EX. WALK

END WORK
STA. 22+17.00

STA. 20+80.53, 28.25' LT
END SHARED USE PATH
BEGIN CONCRETE WALK

CONST. LIMITS

EX. CURB (TBR)

EX. WV (ATG)

EX. 8" W

EX. FH (ATG)

℄ CONST. POST RD.

℄ CONST. POST PRESERVE BLVD.

N 37° 14' 29" E

S 52° 45' 30" E

PC STA 20+15.74

PRC STA. 22+45.62

+45.00
MATCH EX. WALK

STONE SIGN (DND)

PROPOSED UTILITY CONDUIT

CONCRETE WALK REMOVED

ASPHALT PAVEMENT REMOVED

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

P.V.I. STA 21+20.00
ELEV = 932.53'
50.00' VC
K = 15

+3.00 %
-0.39 %
-1.60 %

932.33
931.98
931.58
931.35
931.92
932.37
932.43

EX. LIGHTING CONDUIT
EX. ELEC.
EX. 6" GAS (DND)

P.V.I. STA 20+75.00
ELEV = 931.18'
30.00' VC
K = 7

932.19
932.33
932.57
932.40
932.05
931.75
931.46
931.26
931.42

950 945 940 935 930 925 920 915

20+00 21+00 22+00 23+00 24+00

PLAN AND PROFILE - POST PRESERVE BLVD. STA. 20+00.00 TO END WORK

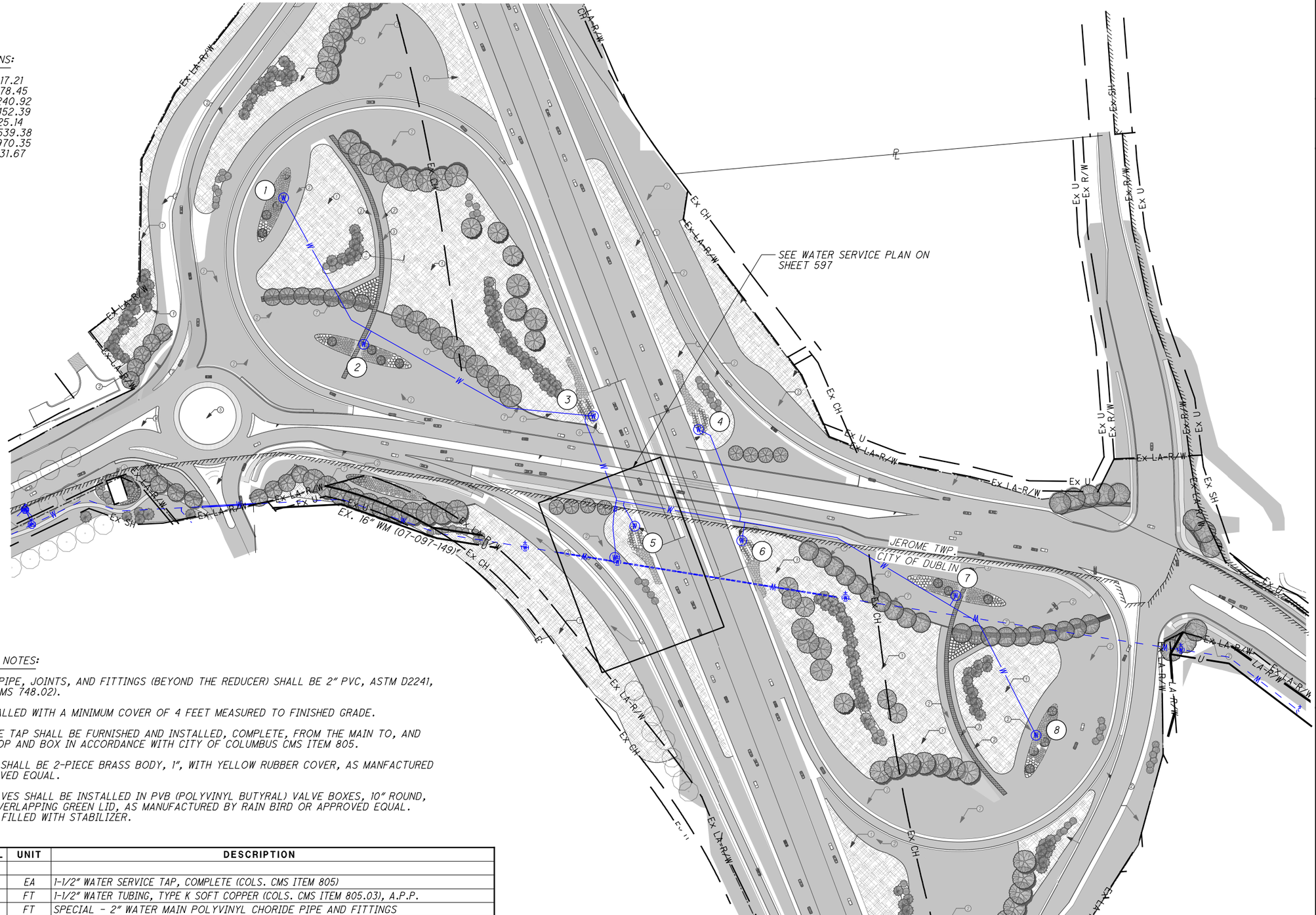
UNI-33-24.87

168
923

P:/PR55741/FRA/80748/ROADWAY/SHEETS/80746GP1001.DGN

QUICK COUPLER LOCATIONS:

1 - N 769764.60, E 1777617.21
2 - N 769470.17, E 1777778.45
3 - N 769325.93, E 1778240.92
4 - N 769298.85, E 1778452.39
5 - N 769101.95, E 1778325.14
6 - N 769075.20, E 1778539.38
7 - N 768964.62, E 1778970.35
8 - N 768683.76, E 1779131.67



IRRIGATION AS PER PLAN NOTES:

ALL IRRIGATION SYSTEM PIPE, JOINTS, AND FITTINGS (BEYOND THE REDUCER) SHALL BE 2" PVC, ASTM D2241, SDR 21, 200 PSI (ODOT CMS 748.02).

ALL PIPE SHALL BE INSTALLED WITH A MINIMUM COVER OF 4 FEET MEASURED TO FINISHED GRADE.

THE 1-1/2" WATER SERVICE TAP SHALL BE FURNISHED AND INSTALLED, COMPLETE, FROM THE MAIN TO, AND INCLUDING, THE CURB STOP AND BOX IN ACCORDANCE WITH CITY OF COLUMBUS CMS ITEM 805.

QUICK COUPLING VALVES SHALL BE 2-PIECE BRASS BODY, 1", WITH YELLOW RUBBER COVER, AS MANFACTURED BY RAIN BIRD, OR APPROVED EQUAL.

ALL QUICK COUPLING VALVES SHALL BE INSTALLED IN PVB (POLYVINYL BUTYRAL) VALVE BOXES, 10" ROUND, WITH BLACK BODY AND OVERLAPPING GREEN LID, AS MANUFACTURED BY RAIN BIRD OR APPROVED EQUAL. BOXES SHALL BE GRAVEL FILLED WITH STABILIZER.

ITEM	EXT.	TOTAL	UNIT	DESCRIPTION
638	98000	1	EA	1-1/2" WATER SERVICE TAP, COMPLETE (COLS. CMS ITEM 805)
638	20774	114	FT	1-1/2" WATER TUBING, TYPE K SOFT COPPER (COLS. CMS ITEM 805.03), A.P.P.
638	20414	2,350	FT	SPECIAL - 2" WATER MAIN POLYVINYL CHORIDE PIPE AND FITTINGS
638	98000	8	EA	SPECIAL-QUICK COUPLER VALVE, 1" BRASS, 2 PIECE, WITH BOX (10" ROUND)
638	98100	1	LUMP	SPECIAL-1 1/2" METER SETTING WITH BACK FLOW PREVENTER IN HEATED ENCLOSURE

NO.	DESCRIPTION	REV. BY	DATE
B	ITEM UPDATES	ENR	2-28-2022

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED ENR
CHECKED JED

IRRIGATION PLAN

UNI-33-24.87

601
923

POWER SUPPLY FOR TRAFFIC SIGNALS

ELECTRICAL POWER SHALL BE OBTAINED FROM AEP. THE AT THE LOCATION INDICATED ON THE PLANS. POWER SUPPLIED SHALL BE 120/240 VOLTS.

NO.	DESCRIPTION	REV. BY	DATE
B	ADDED NOTE	EMW	2-28-2022

ITEM 632 - POWER SERVICE, AS PER PLAN

POWER CABLE SHALL BE PROVIDED AS PER 632.23 BETWEEN THE CONTROL CABINET AND THE TAP-IN LOCATION NOTED IN THE PLAN. WHEN THE POWER CABLE IS IN PLACE AND TWO WEEKS PRIOR TO THE TIME THAT ELECTRICAL POWER WILL BE REQUIRED, THE CONTRACTOR SHALL CONTACT THE AMERICAN ELECTRIC POWER COMPANY CUSTOMER SOLUTION CENTER (1-800-672-2231) WHICH WILL MAKE THE ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR CONNECT POWER CABLE INTO THE POWER COMPANY'S CIRCUITS. A COMMON PHOTO ELECTRIC RELAY AND CONTRACTOR WITH ON/OFF/AUTO SWITCH SHALL CONTROL ALL STREET LIGHTING. THE VOLTAGE SUPPLIED SHALL BE 120/240 VOLTS. 120 VOLTS PER CIRCUIT WITH ONE CIRCUIT FOR TRAFFIC SIGNALS AND ONE CIRCUIT FOR STREET LIGHTING AND ILLUMINATED SIGNS. POWER AND SERVICE CABLE CONDUCTORS SHALL BE COPPER. THE NEUTRAL OF THE POWER CABLE SHALL ONLY BE GROUNDED AT THE MAIN POWER SERVICE DISCONNECT AT THE POWER METER CABINET AND AT THE CONTROLLER CABINET WITH UPS AND GENERATOR CONNECTIONS.

POWER SERVICE SHALL ALSO PROVIDE FOR THE FOLLOWING:
-SERVICE SHALL BE AEP METERED.
-POWER CABLE FROM THE POWER SOURCE SHALL BE ROUTED IN A SEPARATE CONDUIT TO THE DISCONNECT. A TRACER WIRE SHALL BE INSTALLED WITH THE POWER CABLE FROM THE POWER SOURCE TO THE POWER METER CABINET AND CONTINUED INTO THE TRAFFIC SIGNAL CABINET. THIS TRACER WIRE SHALL BE IDENTIFIED AT THE TRANSFORMER, AND BOTH CABINETS.
-THE POWER METER CABINET SHALL INCLUDE A PADLOCK EQUAL TO MASTER NO. 4B KA OR WILSON BOHANNON 66D WITH LOCK BODY OF BRONZE OR BRASS. ALL PADLOCKS SHALL USE THE SAME KEY AND FOUR KEYS SHALL BE GIVEN TO THE CITY.
-PROVIDE FOR ALL COPPER CONDUCTORS.
-ALL STREET LIGHTS INSTALLED ON THE COMBINATION SIGNAL SUPPORTS SHALL BE WIRED TO A 120 VOLT CIRCUIT CONTROLLED AT THE SIGNAL CONTROLLER CABINET AT EACH INTERSERSECTION AND INCLUDE THE FOLLOWING:
-A CIRCUIT BREAKER (20 AMP) AND A 6-POLE LIGHTING CONTACTOR ON THE CABINET SIDE PANEL (ELECTRONICALLY HELD, OPEN STYLE)
-A PHOTOCELL (3-POSITION ON-OFF-AUTO) RATED AS PER CITY SPECIFICATIONS, INSTALLED ON THE SIGNAL SUPPORT CLOSEST TO THE SIGNAL CONTROLLER
-ALL PHOTOCELL WIRING TO THE CONTROLLER
-ALL WIRING TO BE PROTECTED BY TWO DISCONNECTS FOR THE SIGNAL AND LIGHTING. (TWO 30 AMP CITCUIT BREAKERS, ONE FOR LIGHTING AND ONE FOR SIGNAL)

PROVIDE AN ARC FLASH HAZARD WARNING SIGN ON THE OUTSIDE FRONT DOOR OF THE ENCLOSURE IN ACCORDANCE WITHT HE CURRENT NATIONAL ELECTRICAL CODE PARAGRAPH 110.16. PROVIDE AN AVAILABLE FAULT CURREN SIGN ON THE OUTSIDE FRONT DOOR OF THE POWER SERVICE DISCONNECT IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE PARAGRAPH 110.24.

MEASUREMENT AND PAYMENT SHALL BE AS PER ITEM 632.

WORK INSPECTION

THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER WITH 72-HOUR NOTICE OF ANY SIGNAL WORK TO BE PERFORMED AT THE INTERSECTION SITE SO THAT INSPECTION SERVICES CAN BE SUPPLIED.

DOCUMENTATION

TWO (2) SET OF MANUALS AND CONTROLLER CABINET DRAWING WIRING DIAGRAMS SHALL BE SUPPLIED WITH EACH SEPARATE PIECE OF TRAFFIC CONTROL EQUIPMENT SUPPLIED, INCLUDING SYSTEM SOFTWARE OPERATION AND MAINTENANCE MANUALS. A HEAVY CLEAR PLASTIC ENVELOPE ATTACHED TO THE INSIDE OF THE CABINET DOOR SHALL BE PROVIDED FOR STORING WIRING DIAGRAMS (MINIMUM OF 9" X 12" IN SIZE). NO SEPERATE PAYMENT SHALL BE ALLOWED FOR THIS WORK AND THE COST SHALL BE INCLUDED IN THE VARIOUS BID ITEMS.

TWO (2) EACH WIRING DIAGRAMS AND TWO (2) EACH SERVICE/OPERATION MANUALS FOR EACH DIFFERENT PIECE OF EQUIPMENT SHALL BE PROVIDED.

ITEM 632 PEDESTRIAN SIGNAL HEAD (LED), (COUNTDOWN, TYPE D2, AS PER PLAN

PEDESTRIAN SIGNAL HEADS SHALL DISPLAY INTERNATIONAL SYMBOLS IN LIEU OF THE WORDS "WALK" AND "DON'T WALK" AND SHALL BE SUPPLEMENTED BY A PEDESTRIAN CHANGE INTERVAL COUNTDOWN TIMER. THE INTERNATIONAL SYMBOLS AND THE COUNTDOWN DISPLAY SHALL BE HOUSED IN A SINGLE ENCLOSURE. THE DISPLAY SHALL UTILIZE AN LED LIGHT SOURCE THAT COMPLIES WITH APPLICABLE STANDARDS PROMULGATED BY THE ODOT AND THE INSTITUTE OF TRANSPORTATION ENGINEERS.

COUNTDOWN TIMER REQUIREMENTS:
1.THE COUNTDOWN FEATURE SHALL AUTOMATICALLY ADJUST TO THE PROGRAMMED INTERVALS OF THE TRAFFIC CONTROLLER PER THE REQUIREMENTS OF 732.05
2.THE COUNTDOWN TIMER SHALL BE TO THE RIGHT OF THE INTERNATIONAL SYMBOLS.
3.COUNTDOWN NUMBERS SHALL BE CREATED USING TWO ROWS OF L.E.D.'S AND BE 9 INCHES HIGH.
4.USE GE LIGHTING SOLUTIONS TYPE GT1, MODEL NO. PS7-CFF1-26A OR APPROVED EQUAL).

FINAL PLACEMENT OF PEDESTRIAN SIGNAL HEADS SHALL BE APPROVED BY THE ENGINEER.

THE HOUSING SHALL BE FIELD DRILLED TO FIT THE HINGED MOUNTING BRACKET AND REINFORCED WITH PARTS FURNISHED BY THE MANUFACTURER. HEADS SHALL BE MOUNTED ON TWO-HINGED TYPE BRACKETS WHICH ARE BOLTED TO THE POLE. BANDING WILL NOT BE PERMITTED. THE CONTRACTOR SHALL SUPPLY THE MOUNTING BRACKETS AND ALL OTHER NECESSARY HARDWARE.

THE BOTTOM OF THE PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED 8 FEET ABOVE PEDESTRIAN PATHWAY. THE BRACKETS SHALL BE HINGED TO ALLOW THE PEDESTRIAN HEADS TO SWING AWAY FROM EACH OTHER. A CLEAR, SHATTERPROOF, LENS SHALL COVER THE FACE OF THE SIGNAL HEAD AND BE OF SUFFICIENT STRENGTH TO PROTECT THE COMPONENTS FROM ROADSIDE HAZARDS AND VANDALISM.

THE SIGNAL HOUSINGS SHALL BE BLACK POLYCARBONATE.

PAYMENT SHALL BE AS PER ITEM 632.

ITEM 809 - ADVANCE RADAR DETECTION, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A WAVETRONIX SMARTSENSOR ADVANCE DETECTION UNIT (MODEL SS-200E). THE DETECTION UNIT SHALL INCLUDE THE FOLLOWING:

1. POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET.

2. ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET AND SHALL BE COMPATIBLE WITH CALTRANS, NEMA TS1 AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.

3. THE UNIT SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM, AS RECOMMENDED BY THE MANUFACTURER. CABLE(S) SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.

4. SURGE PROTECTION DEVICES, AS RECOMMENDED BY THE MANUFACTURER SHALL BE INCLUDED BOTH AT THE POLE WHERE THE UNIT IS LOCATED TO PROTECT THE UNIT AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.

5. THE MANUFACTURER'S REPRESENTATIVE SHALL BE ON SITE DURING INSTALLATION AND TESTING AND SHALL PROVIDE ONSITE TRAINING ON THE SETUP, OPERATION AND MAINTENANCE OF THE UNIT.

6. A SERIAL TO ETHERNET COMMUNICATIONS MODULE AND ETHERNET CABLE (MINIMUM 7 FEET).

7. THE POWER SUPPLY AND COMMUNICATION MODULES SHALL BE SECURED TO A SINGLE PANEL THAT CAN BE MOUNTED INTERIOR TO THE TRAFFIC CABINET. THE PANEL SHALL INCLUDE MODULAR-PLUG STYLE CONNECTIONS FOR UP TO FOUR (4) SENSOR CABLES. ADDITIONAL SENSORS MAY BE HARD-WIRED TO THE COMMUNICATION MODULES, AS NECESSARY.

8. THE CONTRACTOR SHALL INSTALL THE RADAR DETECTION PRIOR TO MILLING/DISABLING EXISTING LOOPS.

9. THE INSTALLATION SHALL INCLUDE ALL CONTROLLER PROGRAMMING FOR COMPLETE INSTALLATION, WHICH INCLUDES MODIFICATIONS FOR REMOVAL OF EXISTING DETECTION.

PAYMENT FOR ITEM 809 ADVANCE RADAR DETECTION, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING BRACKETS, CABLES, CONDUIT, CONNECTIONS TESTED AND ACCEPTED, AND ANY OTHER NECESSARY HARDWARE TO ESTABLISH A FULLY FUNCTIONAL DETECTION SYSTEM.

ITEM 809 - STOP-LINE RADAR DETECTION, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A WAVETRONIX SMARTSENSOR MATRIX DETECTION UNIT. THE DETECTION UNIT SHALL INCLUDE THE FOLLOWING:

1. POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET.

2. ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET AND SHALL BE COMPATIBLE WITH CALTRANS, NEMA TS1 AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.

3. THE UNIT SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM, AS RECOMMENDED BY THE MANUFACTURER. CABLE(S) SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.

4. SURGE PROTECTION DEVICES, AS RECOMMENDED BY THE MANUFACTURER SHALL BE INCLUDED BOTH AT THE POLE WHERE THE UNIT IS LOCATED TO PROTECT THE UNIT AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.

5. THE MANUFACTURER'S REPRESENTATIVE SHALL BE ON SITE DURING INSTALLATION AND TESTING AND SHALL PROVIDE ONSITE TRAINING ON THE SETUP, OPERATION AND MAINTENANCE OF THE UNIT.

6. A SERIAL TO ETHERNET COMMUNICATIONS MODULE AND ETHERNET CABLE (MINIMUM 7 FEET).

7. THE POWER SUPPLY AND COMMUNICATION MODULES SHALL BE SECURED TO A SINGLE PANEL THAT CAN BE MOUNTED INTERIOR TO THE TRAFFIC CABINET. THE PANEL SHALL INCLUDE MODULAR-PLUG STYLE CONNECTIONS FOR UP TO FOUR (4) SENSOR CABLES. ADDITIONAL SENSORS MAY BE HARD-WIRED TO THE COMMUNICATION MODULES, AS NECESSARY.

8. THE CONTRACTOR SHALL INSTALL THE RADAR DETECTION PRIOR TO MILLING/DISABLING EXISTING LOOPS.

9. THE INSTALLATION SHALL INCLUDE ALL CONTROLLER PROGRAMMING FOR COMPLETE INSTALLATION, WHICH INCLUDES MODIFICATIONS FOR REMOVAL OF EXISTING DETECTION.

PAYMENT FOR ITEM 809 STOP-LINE RADAR DETECTION, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH UNIT, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING BRACKETS, CABLES, CONDUIT AND CONNECTIONS TESTED AND ACCEPTED.

ITEM 625 - GROUND ROD, AS PER PLAN

IN ADDITION TO ITEM 625 AND 725, THIS ITEM SHALL ALSO INCLUDE A CADWELD WIRE CONNECTION AT THE GROUND ROD (AS PER CITY OF DUBLIN SPECIFICATIONS), THE COST OF WHICH SHALL BE INCLUDED IN THE GROUND ROD INSTALLATION.

IT IS THE INTENT OF THIS ITEM THAT THE NO. 4 AWG GROUNDING CONDUCTORS BE INSTALLED IN THE 3/4" CONDUIT BETWEEN THE GROUND ROD AND THE ENCLOSURE GROUND BAR, OR SERVICE NEUTRAL AT MAIN POWER SERVICE DISCONNECT, AS PER CITY OF DUBLIN SPECIFICATIONS.

GROUND ROD TESTING AND ADHERENCE TO RESISTANCE REQUIREMENTS MUST BE SATISFIED AS SPECIFIED IN THE CMS. PAYMENT SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM OF WORK.

PAYMENT SHALL BE PER ITEM 625.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL EQUIPMENT INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORY FOR A PERIOD OF 1 YEAR FOLLOWING COMPLETION OF THE 10 DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATIONS, THE CONTRACTOR SHELL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS FROM THE SAME MANUFACTURER. MATERIAL AND LABOR COST INCURRED IN CORRECTING THE UNSATISFACTORY OPERATIONS SHALL BE BORNE BY THE CONTRACTOR. CUSTOMARY MANUFACTURERS' GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE CITY OF DUBLIN FOLLOWING ACCEPTANCE OF THE EQUIPMENT. THE COST OF GUARANTEEING THE TRAFFIC CONTROL EQUIPMENT SHALL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SIGNAL INSTALLATION.

633 UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 633 AND 733, THE UPS CABINET SHALL INCLUDE A GENERATOR POWER PANEL AND INLET AS DETAILED WITHIN. THE BACKUP UNIT SHALL BE A SYSTEM BASED ON MYERS POWER PRODUCTS MODEL MP2000E OR APPROVED EQUAL. BATTERIES SHALL BE COMPLETE, MOUNTED AND CONTAINED WITHIN THE BATTERY COMPARTMENT OF THE P-UPS CONTROLLER CABINET. THE BATTERY BACKUP SYSTEM EQUIPMENT SHALL BE MOUNTED IN THE MAIN CONTROLLER COMPARTMENT OF THE CABINET.

THE CONTROLLER AND BATTERY BACK-UP CABINET SHALL APPEAR AS ONE CABINET FROM THE OUTSIDE WITH TWO INTERNAL COMPARTMENTS ACCESSED BY SEPARATE DOORS (P58UPS).

THE UPS OUTPUT NOTIFICATIONS FOR ON BATTERY, BATTERY 2 HOUR TIMER, OFF BATTERY AND LOW BATTERY SHALL BE WIRED INTO THE TRAFFIC SIGNAL CABINET BACK PANEL TO PROVIDE SPECIAL STATUS ALARMS FOR EACH OUTPUT INTO THE SIGNAL CONTROLLER.

THE CABINET'S EXTERIOR FINISH SHALL MATCH THE COLOR OF THE MAIN TRAFFIC SIGNAL CONTROLLER CABINET.

ALL CONNECTIONS, WIRING, ATTACHMENT HARDWARE AND MISCELLANEOUS MATERIALS FOR BOTH ATTACHING THE CABINETS AND FOR FULL OPERATION OF THE UPS SYSTEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM. PAYMENT SHALL BE PER ITEM 633 AND SHALL BE MADE AT THE UNIT PRICE BID PER EACH, COMPLETE, IN PLACE, TESTED AND ACCEPTED.

ITEM 632 - SIGNAL SUPPORT FOUNDATION, AS PER PLAN

THE FORMED TOP OF THE ANCHOR BASE POLE FOUNDATION SHALL BE ORIENTED PARALLEL TO THE SIDEWALK OR BACK-OF-CURB OR EDGE-OF-PAVEMENT AS SHOWN ON THE SIGNAL PLANS. A MINIMUM OF TWO CONDUIT ELLS, USED OR UNUSED, SHALL BE INSTALLED IN EACH SIGNAL SUPPORT FOUNDATION.

CONTRACTOR SHALL VACUUM EXCAVATE PROPOSED FOUNDATION LOCATIONS PRIOR TO INSTALLATION.

PAYMENT SHALL BE AS PER ITEM 632.

ITEM 625 - LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), TYPE III, 110 WATT, AS PER PLAN

LUMINAIRES SHALL BE MANUFACTURED BY CREE, WITH THE FOLLOWING PART NUMBER: ARE-EDG-3M-DA-(LED COUNT)-E-UL-BZ-525-40K, AND SHALL BE INSTALLED ON THE SIGNAL SUPPORT AS INDICATED WITHIN. LUMINAIRES SHALL BE COATED DARK BRONZE TO MEET FEDERAL SPECIFICATION NO. 595B AND CONFORM TO COLOR NO. 20040.

ANY ADDITIONAL HARDWARE, INCLUDING MOUNTING ARM, REQUIRED TO ATTACH THE LUMINAIRE TO THE SIGNAL SUPPORT SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM.

PAYMENT SHALL BE PER ITEM 625.

SIGNAL ACTIVATION

PRIOR TO ACTIVATING THE NEW TRAFFIC SIGNAL TO STOP-AND-GO MODE AND/OR REMOVING THE EXISTING TRAFFIC SIGNAL FROM SERVICE, ALL ITEMS IN THE PROPOSED SIGNAL PLAN SHALL BE FULLY COMPLETED, (I.E., VEHICLE DETECTION, PEDESTRIAN SIGNAL HEADS, ETC.). IF THERE ARE CONSTRUCTABILITY ISSUES (I.E., ROADWAY WIDENING, ETC.) THAT PREVENT THE SIGNAL FROM BEING COMPLETED PRIOR TO ACTIVATION, IT SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER. THE DISTRICT TRAFFIC ENGINEER WILL THEN REVIEW, APPROVE OR REJECT PROPOSALS TO ACTIVATE THE TRAFFIC SIGNAL PRIOR TO COMPLETION.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND DISTRICT TRAFFIC ENGINEER AT LEAST 10 WORKING DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION OF THE SIGNAL INSTALLATION. FINAL INSPECTION IS NOT CONSIDERED COMPLETE UNTIL DESIGNATED DISTRICT TRAFFIC PERSONNEL INSPECT THE TRAFFIC SIGNAL AND ISSUE WRITTEN APPROVAL. IF ISSUES ARE FOUND DURING THE FINAL INSPECTION THAT EFFECT THE SAFETY OF THE TRAVELING PUBLIC AND/OR THE EFFICIENCY OF THE INTERSECTION, THE SIGNAL SHALL NOT BE ACTIVATED ON THE PROPOSED DATE. ANY PUNCH LIST ITEMS THAT ARE FOUND SHALL BE CORRECTED AND REINSPECTED BY DISTRICT TRAFFIC PERSONNEL PRIOR TO FINAL ACCEPTANCE. ODOT FORCES SHALL ONLY ASSUME DAY TO DAY MAINTENANCE OF THE TRAFFIC SIGNAL AFTER FINAL WRITTEN ACCEPTANCE HAS BEEN ISSUED.

CALCULATED BPT CHECKED EMW

TRAFFIC SIGNAL NOTES

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