ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS, EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

BUTLER RURAL ELECTRIC COOPERATIVE, INC.
3888 STILLWELL BECKETT ROAD
OXFORD, OHIO 45056
PHONE: (513) 867-4400
(RAY BRUNNER)

ROCKIES EXPRESS PIPELINES (REX)
TALLGRASS ENERGY PARTNERS, LP
370 VAN GORDON STREET
LAKEWOOD, COLORADO 80228-1519
PHONE: (303) 763-3417
(GREGG MCALEXANDER)

SOUTHWEST REGIONAL WATER DISTRICT
3640 OLD OXFORD ROAD
HAMILTON, OHIO 45013
PHONE:(513) 863-0828
(TOM PUCKETT)

ALTAFIBER - AERIAL
221 EAST 4TH STREET, BLDG. 121-900
CINCINNATI, OHIO 45201
PHONE: (513) 566-8039
(NANCY MORRIS)

EXISTING PLANS

EXISTING PLANS MAY BE INSPECTED IN THE ODOT DISTRICT 8 OFFICE IN LEBANON.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 7 AM AND 8 PM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE BELOW FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD:	ODOT-VRS
MONUMENT TYPE:	N/A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM:	NAVD 88
GEOID:	18

HORIZONTAL POSITIONING

SURVEYING PARAMETERS (CONTINUED)

REFERENCE FRAME:	NAD83 (2011) (EPOCH 2010.0)
ELLIPSOID:	GRS80
MAP PROJECTION:	LAMBERT CONFORMAL
COORDINATE SYSTEM:	OHIO STATE PLANE: SOUTH ZONE
COMBINED SCALE FACTOR:	1.000090868
ORIGIN OF COORDINATE SYSTEM:	(0,0)

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

CONTROL POINTS

POINT	NORTHING	EASTING	ELEVATION	STATION	OFFSET	DESC.
100	505032.015	1325617.463	671.52	20+42.14	14.206 R	IPINS
101	505302.947	1325331.102	675.03	16+49.17	17.084 L	IPINS
102	505460.259	1325049.021	675.80	13+25.34	17.158 R	IPINS
103	505578.239	1324812.842	680.44	10+63.18	19.523 L	IPINS

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

CLEARING AND GRUBBING SHALL ALSO INCLUDE THE REMOVAL OF THE ITEMS IDENTIFIED IN THE PLANS INCLUDING GATES, GATE POSTS, FENCE POSTS, STEEL BEAMS, POST FOUNDATIONS, SHEETING WALL AND OTHER EROSION PROTECTION MATERIALS WITHIN ODOT'S RIGHT OF WAY.

SOLE SOURCE AQUIFER

THIS PROJECT IS LOCATED WITHIN A SOLE SOURCE AQUIFER. IN ORDER TO MINIMIZE THE POTENTIAL FOR CONTAMINATION, THE CONTRACTOR SHALL UTILIZE PROPER CONTAINMENT AND DIKING IN REFUELING AREAS. FUELS, TOXIC/HAZARDOUS MATERIALS, AND CHEMICALS SHALL NOT BE STORED NEAR DRAINAGE WAYS, DITCHES, OR STREAMS. A SPILL KIT IS TO BE MAINTAINED ON-SITE THROUGHOUT CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL IMMEDIATELY TAKE STEPS TO MITIGATE ANY EVENT, SUCH AS A SPILL OF FUELS, OILS, OR CHEMICALS, THAT COULD THREATEN TO CONTAMINATE THE DRINKING WATER SUPPLY. IF THE SPILL IS A REPORTABLE AMOUNT (PER OHIO EPA'S RELEASE REPORTING REQUIREMENTS), THE CONTRACTOR SHALL CONTACT MORGAN TOWNSHIP FIRE DEPARTMENT 513-738-4513 OR THE OHIO EPA'S SPILLS HOTLINE 1-800-282-9378 FOR CLEAN-UP OF THE SPILL.

NO IMPACTS TO ANY AQUATIC RESOURCE

THE CONTRACTOR SHALL NOT PLACE ANY TEMPORARY OR PERMANENT FILL WITHIN THE JURISDICTIONAL BOUNDARIES OF ANY WATERWAYS, INCLUDING WETLANDS, DURING CONSTRUCTION OF THIS PROJECT, INCLUDING SCAFFOLDING OR BRACING. THE CONTRACTOR SHALL NOT PLACE ANY EQUIPMENT WITHIN THE JURISDICTIONAL BOUNDARY OF ANY WATERWAY. IF DEBRIS ENTERS THE WATERWAY DURING CONSTRUCTION, THE CONTRACTOR SHALL REMOVE THE DEBRIS IMMEDIATELY UTILIZING EQUIPMENT STAGED OUTSIDE THE JURISDICTIONAL BOUNDARY.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

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 REBOUNDABLE RETROREFLECTIVE SHEETING, PER CMS 730.191.

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.

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, 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, NOTIFY THE ENGINEER BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES (CONTINUED)

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, NOTIFY THE ENGINEER 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 IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

ITEM 659 - COMMERCIAL FERTILIZER	0.1 TON
ITEM 659 - LIME	0.15 ACRES
ITEM 659 - WATER	4 M. GAL

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

GENERAL NOTES

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DESIGN AGENCY
Stantec
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Cincinnati, OH 45242
(513) 842-8200

DESIGNER ZTM
REVIEWER TCM 11/22/24
PROJECT ID 116204
SHEET P.3 TOTAL 39

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	5	9	20	22														
																		ROADWAY	
LS														201	11000	LS		CLEARING AND GRUBBING	
			783											202	23000	783	SY	PAVEMENT REMOVED	
			479											202	38000	479	FT	GUARDRAIL REMOVED	
				1										202	20010	1	EACH	HEADWALL REMOVED	
				0.6										202	32800	0.6	SY	CONCRETE SLOPE PROTECTION REMOVED	
				40										202	35100	40	FT	PIPE REMOVED, 24" AND UNDER	
				1										202	58100	1	EACH	CATCH BASIN REMOVED	
			231											203	10000	231	CY	EXCAVATION	
			140											203	20000	140	CY	EMBANKMENT	
			871											204	10000	871	SY	SUBGRADE COMPACTION	
			0.5											204	45000	0.5	HOUR	PROOF ROLLING	
			587.5											606	15150	587.5	FT	GUARDRAIL, TYPE MGS HALF POST SPACING	
			1											606	26150	1	EACH	ANCHOR ASSEMBLY, MGS TYPE E, (MASH 2016)	
			1											606	26550	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
			1											SPECIAL	69050350	1	EACH	MAILBOX REMOVED AND RESET	10
	LS													SPECIAL	69098400	LS		SPECIAL - CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION	4
																		EROSION CONTROL	
			14.1											601	21060	14.1	SY	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	
			60											601	32004	60	CY	ROCK CHANNEL PROTECTION, TYPE A WITH GEOTEXTILE FABRIC	
			714											659	10000	714	SY	SEEDING AND MULCHING	
0.1														659	20000	0.1	TON	COMMERCIAL FERTILIZER	
0.15														659	31000	0.15	ACRE	LIME	
4														659	35000	4	MGAL	WATER	
	5,000													832	30000	5,000	EACH	EROSION CONTROL	
																		DRAINAGE	
			480											605	13300	480	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
				1										611	98150	1	EACH	CATCH BASIN, NO. 3	
				1										611	98230	1	EACH	CATCH BASIN, NO. 4	
				44										611	10400	44	FT	24" CONDUIT, TYPE B	
			20											611	00510	20	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
																		PAVEMENT	
			860											254	01000	860	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.25"	
			194											301	56000	194	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
			146											304	20000	146	CY	AGGREGATE BASE	
			192											407	20000	192	GAL	NON-TRACKING TACK COAT	
			60											441	50000	60	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22, 1.25"	
			84											441	50200	84	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), 1.75"	
			500											609	12000	500	FT	COMBINATION CURB AND GUTTER, TYPE 2	
																		TRAFFIC CONTROL	
			8											621	00100	8	EACH	RPM	
			8											621	54000	8	EACH	RAISED PAVEMENT MARKER REMOVED	
			8											626	00110	8	EACH	BARRIER REFLECTOR, TYPE 2, (BIDIRECTIONAL)	
			0.24											642	00104	0.24	MILE	EDGE LINE, 6", TYPE 1, WHITE	
			0.12											642	00300	0.12	MILE	CENTER LINE, TYPE 1	

GENERAL SUMMARY

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DESIGNER ZTM

REVIEWER TCM 11/22/24

PROJECT ID 116204

SHEET P.7 | TOTAL 39

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	5	9	20	22														
																		RETAINING WALLS (001)	
					LS									202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	22
					LS									503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	22
					LS									503	21330	LS		UNCLASSIFIED EXCAVATION, INCLUDING ROCK AND/OR SHALE	
					12,540									504	11100	12,540	SF	STEEL SHEET PILING LEFT IN PLACE, PZ 40	
					121,830									509	10000	121,830	LB	EPOXY COATED STEEL REINFORCEMENT	
					732									511	46012	732	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING	
					755									511	46512	755	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	
					957									512	10100	957	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
					81									512	33000	81	SY	TYPE 2 WATERPROOFING	
					225									516	13600	225	SF	1" PREFORMED EXPANSION JOINT FILLER	
					658									518	20000	658	SY	PREFABRICATED GEOCOMPOSITE DRAIN	
					66									518	21200	66	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
					444									518	40000	444	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
					210									518	40010	210	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
					313									613	41200	313	CY	LOW STRENGTH MORTAR BACKFILL	
																		MAINTENANCE OF TRAFFIC	
		5												616	10000	5	MGAL	WATER	
		LS												614	12420	LS		DETOUR SIGNING	
																		INCIDENTALS	
		LS												614	11000	LS		MAINTAINING TRAFFIC	
														623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
														624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

BUT-126-2.92

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(513) 842-8200

DESIGNER
ZTM

REVIEWER
TCM 11/22/24

PROJECT ID
116204

SHEET P.8 | TOTAL 39

ROADWAY AND DRAINAGE SUBSUMMARY

SHEET NO.	REF NO.	STATION FROM	STATION TO	SIDE	202 GUARDRAIL REMOVED	601 TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	601 ROCK CHANNEL PROTECTION, TYPE A WITH GEOTEXTILE FABRIC	605 6" UNCLASSIFIED PIPE UNDERDRAINS	606 GUARDRAIL, TYPE MGS HALF POST SPACING	606 ANCHOR ASSEMBLY, MGS TYPE E	606 ANCHOR ASSEMBLY, MGS TYPE T	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	626 BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	690 MAILBOX REMOVED AND RESET
					FT	SY	CY	FT	FT	EA	EA	FT	EACH	EACH
10, 11	R-1	10+43.24	15+22.30	RT	479									
10, 11	GR-1	10+25.00	16+83.66	RT					587.5	1	1		8	
10	M-1	12+50.00												1
10	D-1	11+44.42		RT		6.11								
11	D-2	16+01.13		RT		7.94								
10, 11	D-3	13+80.00	15+00.00				60.00							
10, 11	UD-1	11+25.00	16+25.00	RT				480				20		
TOTALS CARRIED TO GENERAL SUMMARY					479	14.1	60.00	480	587.5	1	1	20	8	1

EARTHWORK AND SEEDING TABLE

STATION FROM	STATION TO	203 EXCAVATION	203 EMBANKMENT	659 SEEDING AND MULCHING
		CY	CY	SY
10+50.00	11+00.00	17	20	67
11+00.00	11+50.00	38	22	64
11+50.00	12+00.00	50	13	56
12+00.00	12+50.00	51	10	56
12+50.00	13+00.00	50	7	56
13+00.00	13+50.00	47	8	56
13+50.00	14+00.00	56	10	56
14+00.00	14+50.00	73	12	56
14+50.00	15+00.00	76	11	56
15+00.00	15+50.00	81	9	56
15+50.00	16+00.00	67	9	56
16+00.00	16+50.00	43	6	42
16+50.00	17+00.00	8	3	37
DEDUCT FOR PAVEMENT PLANING		27		
DEDUCT FOR PAVEMENT REMOVED		391		
TOTALS CARRIED TO GENERAL SUMMARY		231	140	714

PAVEMENT MARKING SUBSUMMARY

SHEET NO.	REF NO.	STATION FROM	STATION TO	SIDE	621 RPM, TWO-WAY YELLOW/YELLOW	621 RAISED PAVEMENT MARKER REMOVED	642 EDGE LINE, 6", TYPE 1	642 CENTER LINE, TYPE 1
					EACH	EACH	MI	MI
32	EL-1	11+00.00	17+00.00	RT			0.12	
32	EL-2	11+00.00	17+00.00	LT			0.12	
32	CL-1	11+00.00	17+00.00	C	8	8		0.12
TOTALS CARRIED TO GENERAL SUMMARY					8	8	0.24	0.12

PAVEMENT CALCULATIONS

SHEET NO.	REF NO.	STATION FROM	STATION TO	LENGTH	WIDTH	AREA / CADD AREA	SIDE	202 PAVEMENT REMOVED	204 SUBGRADE COMPACTION	204 PROOF ROLLING	254 1.25" PAVEMENT PLANING, ASPHALT CONCRETE	301 8" ASPHALT CONCRETE BASE, PG64-22, (449)	304 6" AGGREGATE BASE	407 NON-TRACKING TACK COAT (AREA X 0.055 /9) THREE LAYERS FOR P-1	441 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	441 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)	609 COMBINATION CURB AND GUTTER, TYPE 2
				FT	FT	SF		SY	SY	HR	SY	CY	CY	GAL	CY	CY	FT
10, 11	P-1	11+00.00	17+00.00	600	11	7843	RT	783	871	0.5		194	146	144	30	42	500
10, 11	P-2	11+00.00	17+00.00	600	11 +/-	7737	LT				860			48	30	42	
TOTALS								783	871	0.5	860	194	146	192	60	84	500
TOTALS CARRIED TO GENERAL SUMMARY								783	871	0.5	860	194	146	192	60	84	500

SUBSUMMARIES

DESIGN AGENCY
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(513) 842-8200
DESIGNER ZTM
REVIEWER TCM 11/22/24

PROJECT ID 116204
SHEET P.9 TOTAL 39

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

866 DATED 04-21-17
878 DATED 01-21-22

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 9th EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

DESIGN LOADING INCLUDES:
VEHICULAR LIVE LOAD: HL-93

DESIGN DATA

CONCRETE CLASS QC1:
COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

CONCRETE REINFORCEMENT:

EPOXY COATED STEEL REINFORCEMENT - MINIMUM YIELD STRENGTH 60-KSI (RETAINING WALL & FOOTING)

STEEL SHEET PILING ASTM A572 GRADE 50 - YIELD STRENGTH 50 KSI

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE EXISTING SHEET PILING WALL, SOLDIER PILE WALL WITH LAGGING, AND GABION BASKET WALL ALONG WITH THE DUMPED ROCK BUTTRESS AND ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. REMOVALS SHALL BE RESTRICTED TO ITEMS WITHIN THE EXISTING RIGHT OF WAY LIMITS.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATION. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. THE DEPARTMENT WILL NOT MAKE ADDITIONAL PAYMENT FOR PROVIDING AN ALTERNATE DESIGN.

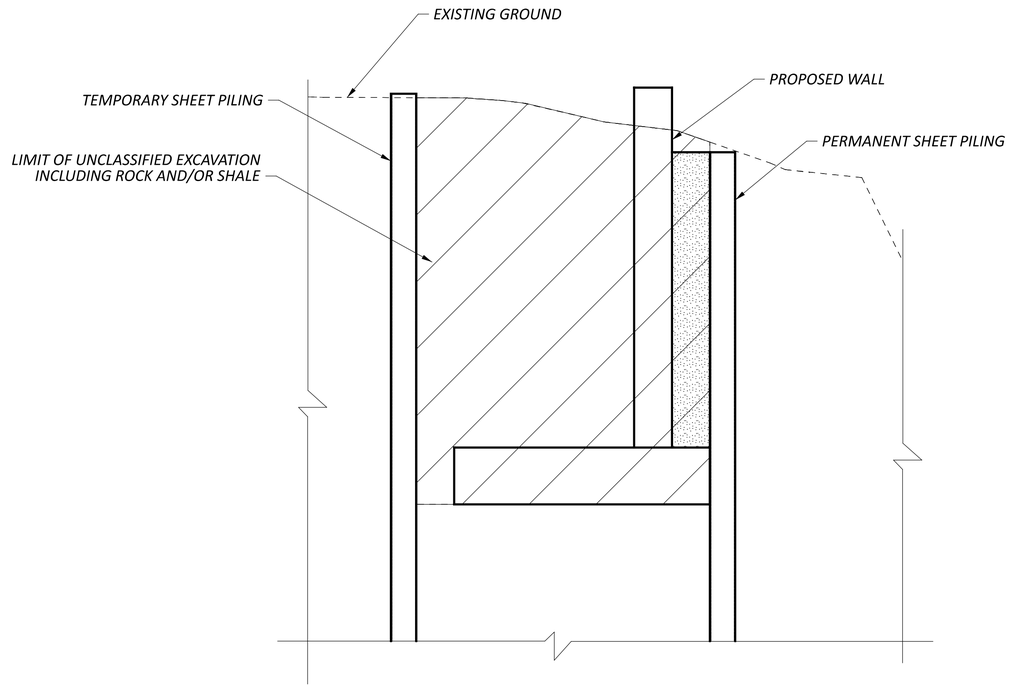
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	WALL	GEN.	SEE SHEET
202	11201	LUMP	LS	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN		LUMP	22
503	11101	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN		LUMP	22
503	21330	LUMP	LS	UNCLASSIFIED EXCAVATION, INCLUDING ROCK AND/OR SHALE		LUMP	
504	11100	12540	SF	STEEL SHEET PILING LEFT IN PLACE		12540	
509	10000	121,830	LB	EPOXY COATED STEEL REINFORCEMENT	121,830		
511	46012	732	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING	732		
511	46512	755	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	755		
512	10100	957	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	957		
512	33000	81	SY	TYPE 2 WATERPROOFING	81		
516	13600	225	SF	1" PREFORMED EXPANSION JOINT FILLER	225		
518	20000	658	SY	PREFABRICATED GEOCOMPOSITE DRAIN	658		
518	21200	66	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	66		
518	40000	444	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	444		
518	40010	210	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	210		
613	41200	313	CY	LOW STRENGTH MORTAR BACKFILL	313		

ITEM 503,UNCLASSIFIED EXCAVATION, INCLUDING ROCK AND/OR SHALE

EXCAVATION AND BACKFILL SHALL BE PER CMS 503 WITH THE FOLLOWING EXCEPTIONS. BACKFILL BETWEEN BACK OF WALL AND TEMPORARY SHEET PILING SHALL BE STRUCTURAL BACKFILL, TYPE 3. BACKFILL BETWEEN PERMANENT SHEET PILING AND FACE OF WALL SHALL BE LOW STRENGTH MORTAR BACKFILL AND/OR CLASS QC1 CONCRETE AS SHOWN IN PLANS. ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THIS WORK SHALL BE INCLUDED FOR PAYMENT WITH ITEM 503, UNCLASSIFIED EXCAVATION, INCLUDING ROCK AND/OR SHALE.

FOUNDATION BEARING RESISTANCE

RETAINING WALL FOOTING, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LOAD PRESSURE OF 3.9 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 5.5 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 7.4 KIPS PER SQUARE FOOT.



TYPICAL LIMIT OF
UNCLASSIFIED EXCAVATION

WALL GENERAL NOTES & ESTIMATED QUANTITIES
WALL 1 STA 11+50.00 TO 16+02.32

DESIGN AGENCY
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10200 Alliance Road, Suite 300
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DESIGNER MRS
REVIEWER BSM 11/22/24
PROJECT ID 116204
SHEET P.22 TOTAL 39

BUT-126-2.92

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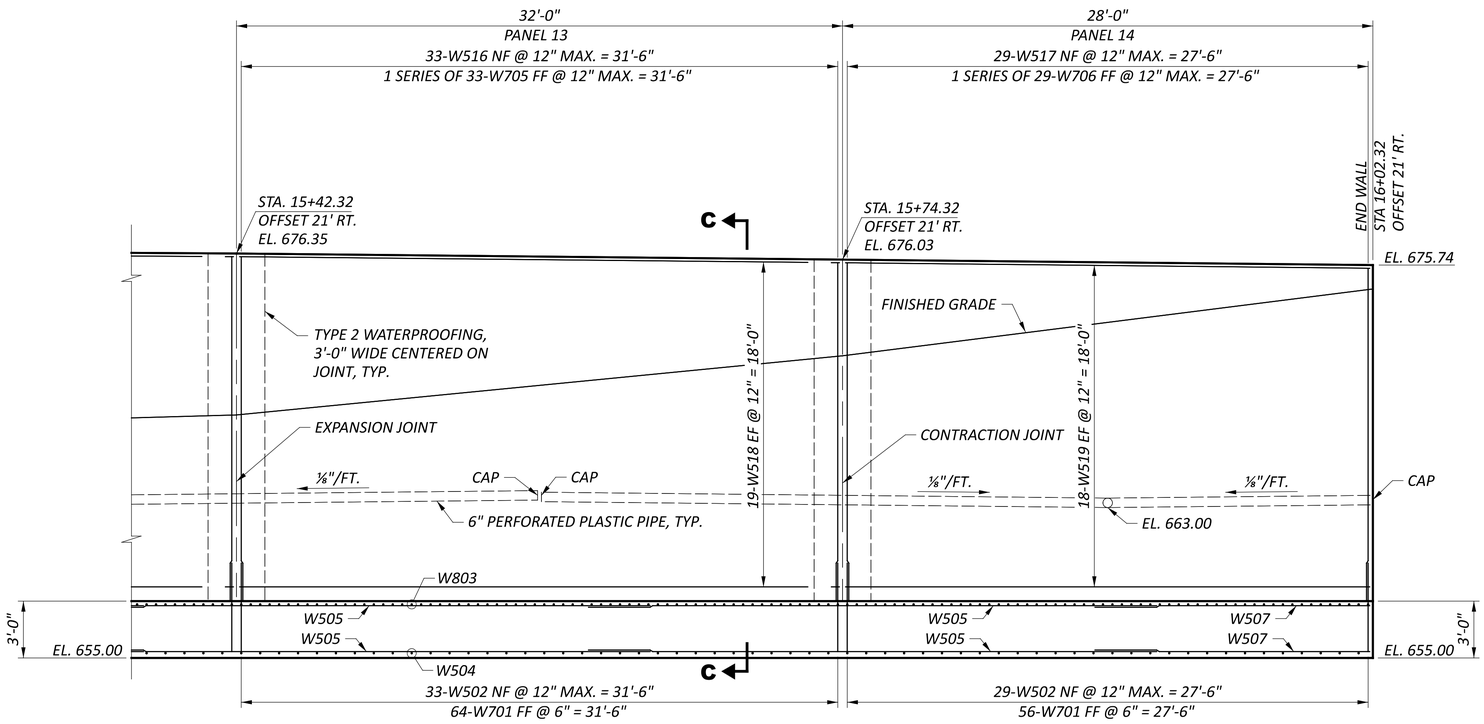
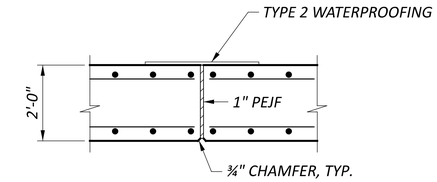
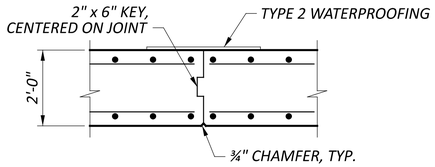


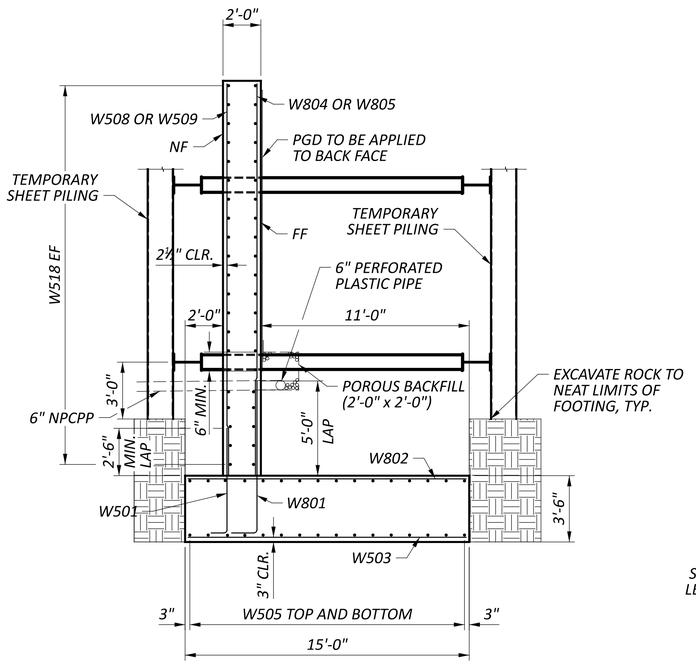
ELEVATION (DEVELOPED)



EXPANSION JOINT

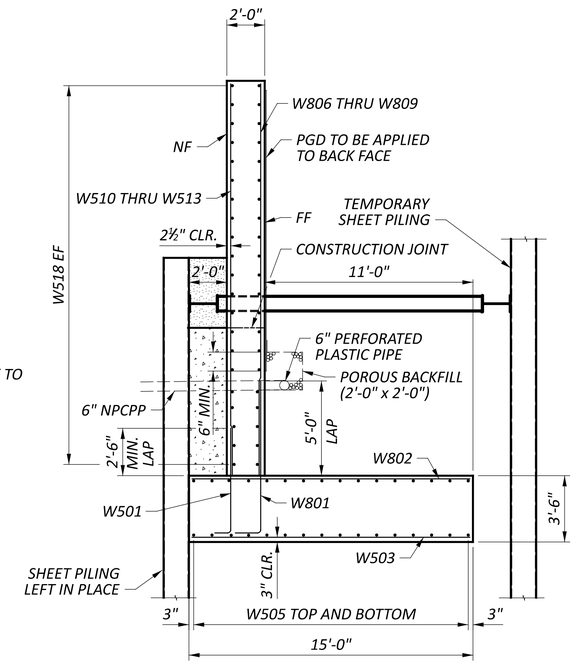


CONTRACTION JOINT



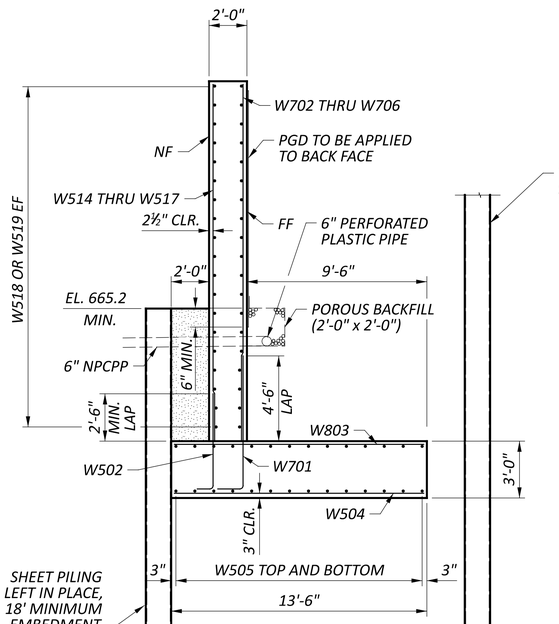
SECTION A-A

STA. 11+50.00 TO 12+21.00±



SECTION B-B

STA. 12+21.00± TO 13+58.00±



SECTION C-C

STA. 13+58.00± TO 16+02.32

LOW STRENGTH MORTAR BACKFILL

CONCRETE, CLASS QC1

NOTES:

1. *ALL DIMENSIONS AND STATIONS ARE ALONG FRONT FACE OF WALL.*
2. *FOR PLAN VIEW OF WALL, SEE SHEET 25 39 .*
3. *FOR TEMPORARY SHORING DETAILS, SEE SHEET 29 39 .*
3. *NPCPP = NON-PERFORATED CORRUGATED PLASTIC PIPE*
4. *SHEET PILING SHALL BE PZ40. ALTERNATIVE SHEETING WITH SECTION PROPERTIES EQUAL TO OR GREATER THAN PZ40 SHEETING MAY BE USED.*
5. *LIMITS SHOWN FOR SECTION B-B ARE APPROXIMATE. SECTION B-B SHALL APPLY WHERE TOP OF ROCK IS BELOW BOTTOM OF FOOTING AND WHERE REQUIRED EMBEDMENT OF 18' CANNOT BE ATTAINED. FOR ADDITIONAL DETAILS, SEE SHEET 30 39 .*
6. *BACKFILL BETWEEN TEMPORARY SHEETING AND BACK OF WALL WITH STRUCTURAL BACKFILL, TYPE 3 PER CMS 703.11.*
7. *WITHIN LIMITS OF SECTION B-B, FILL BETWEEN PERMANENT SHEETING AND FRONT OF WALL WITH CLASS QC1 CONCRETE TO CONSTRUCTION JOINT IN WALL. ABOVE THIS, AND FOR FULL HEIGHT ON REMAINDER OF WALL, FILL GAP BETWEEN FACE OF WALL AND PERMANENT SHEETING WITH LOW STRENGTH MORTAR BACKFILL.*

WALL ELEVATION (3)
WALL 1 STA 11+50.00 TO 16+02.32

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PROJECT ID 116204

SHEET P.28 TOTAL 39

BUT-126-2.92

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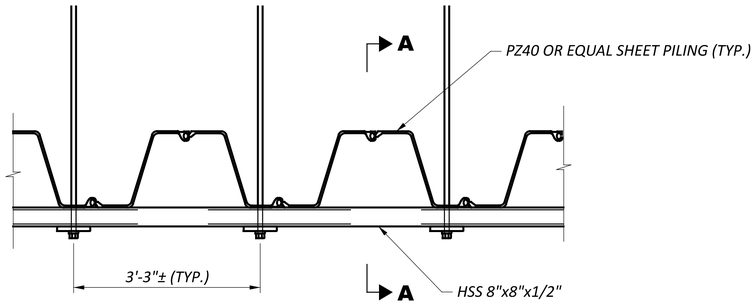
WE003.dgn



PLAN

SOIL PARAMETERS

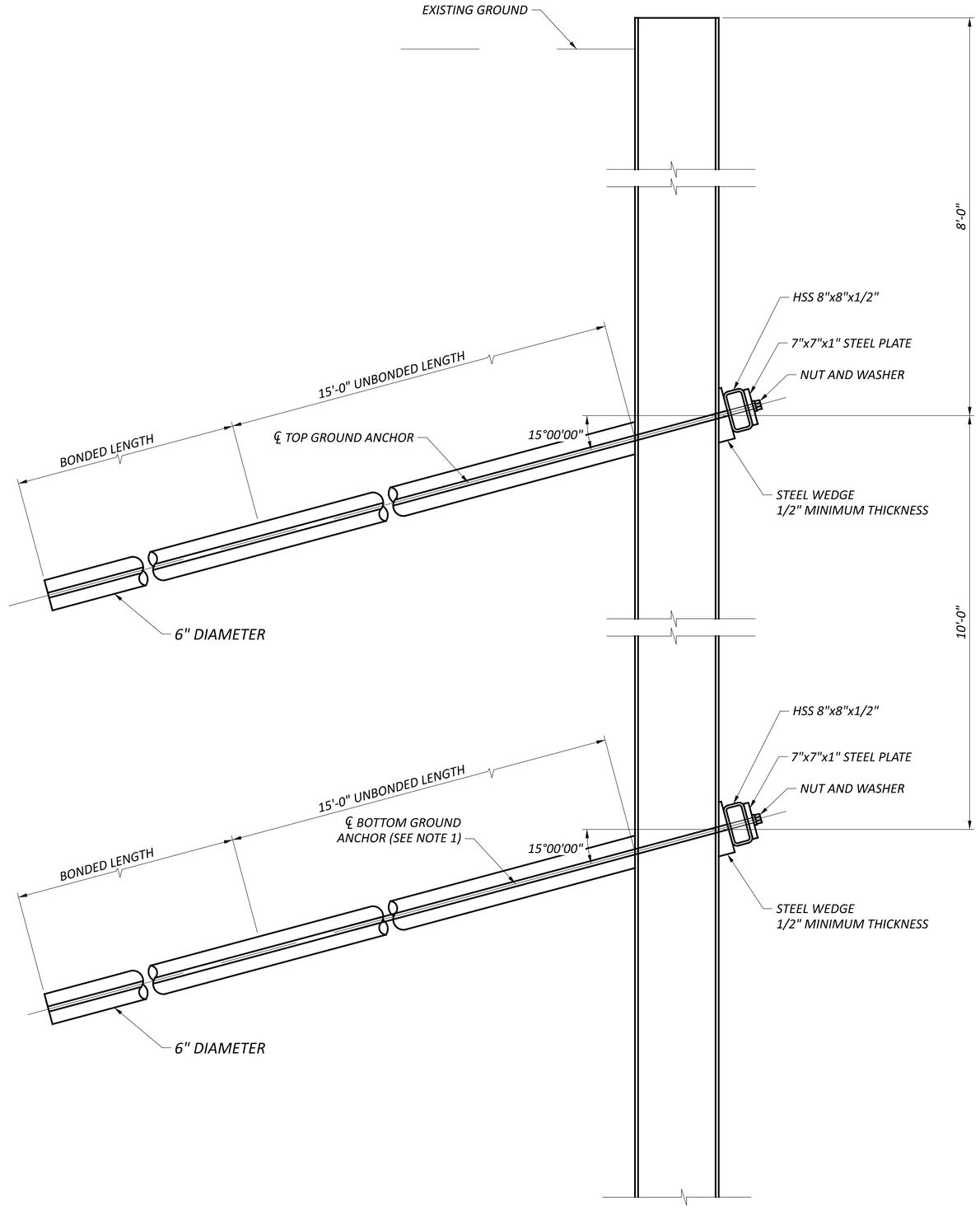
PARAMETER	ASSUMED VALUE
RETAINED SOIL UNIT WEIGHT (PCF)	130
RETAINED SOIL DRAINED FRICTION ANGLE (DEGREES)	30
ACTIVE EARTH PRESSURE COEFFICIENT (Ka)	0.33
ULTIMATE BOND STRENGTH (KSF)	1.05

GROUND ANCHOR DATA

LOCATION	ROW	TEST LOAD	LOCK-OFF LOAD
STA 11+50 - 12+91	TOP	10.6 K	10.6 K
	BOTTOM	33.7 K	33.7 K
STA 12+91 - 16+02.32	TOP	20.5 K	20.5 K
	BOTTOM	---	---

NOTES:

1. *PZ40 OR EQUIVALENT SHEET PILING SHALL BE PROVIDED WITH GROUND ANCHORS AS SHOWN AND MINIMUM EMBEDMENT OF 10 FEET.*
2. *BOTTOM GROUND ANCHOR TO BE INSTALLED ONLY WHERE SUFFICIENT EMBEDMENT IS NOT AVAILABLE DUE TO PRESENCE OF INTERBEDDED SHALE AND LIMESTONE. THIS REGION IS ESTIMATED TO BE FROM STA 11+50 TO STA 12+91. SPACING OF ANCHORS TO BE THE SAME AS FOR TOP GROUND ANCHOR.*
3. *GROUND ANCHORS TO BE DESIGNED AND PROVIDED IN ACCORDANCE WITH SS 866. ANCHORS TO BE INCLUDED FOR PAYMENT WITH ITEM 503, COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN*



SECTION A-A

TEMPORARY SHORING DETAILS WALL 1 STA 11+50.00 TO 16+02.32

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SHEET P.29 TOTAL 39

BUT-126-2.92

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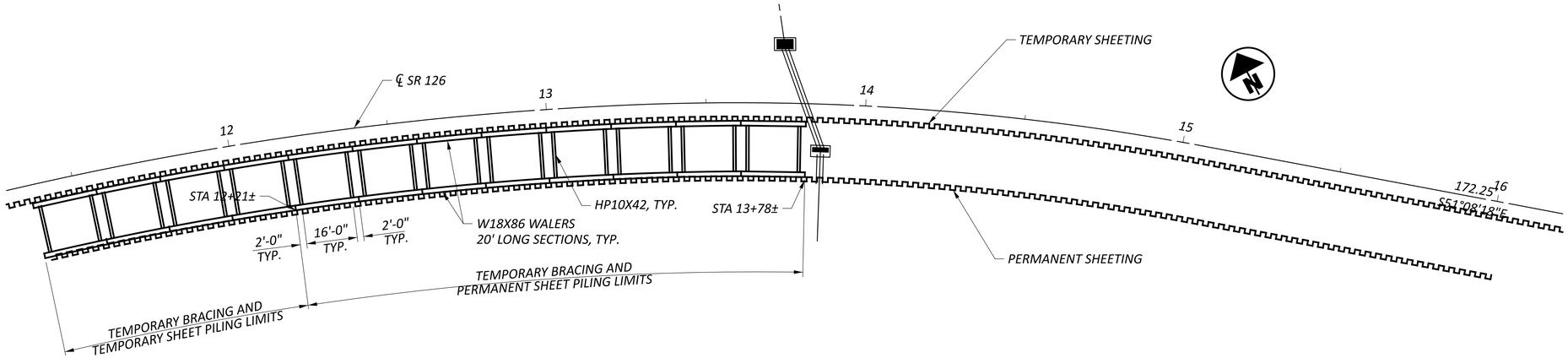
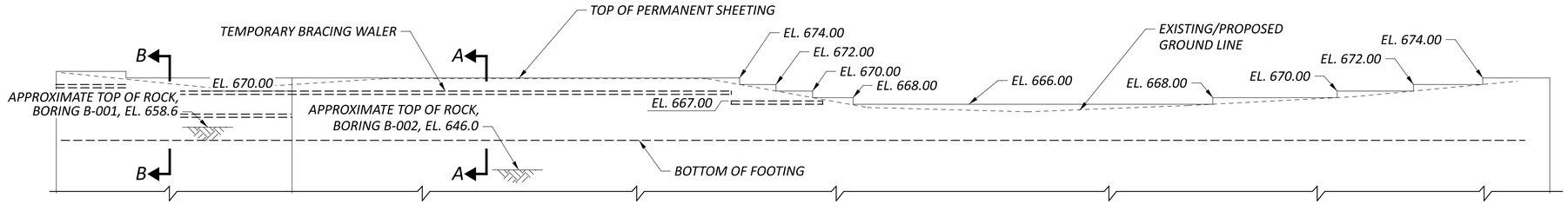
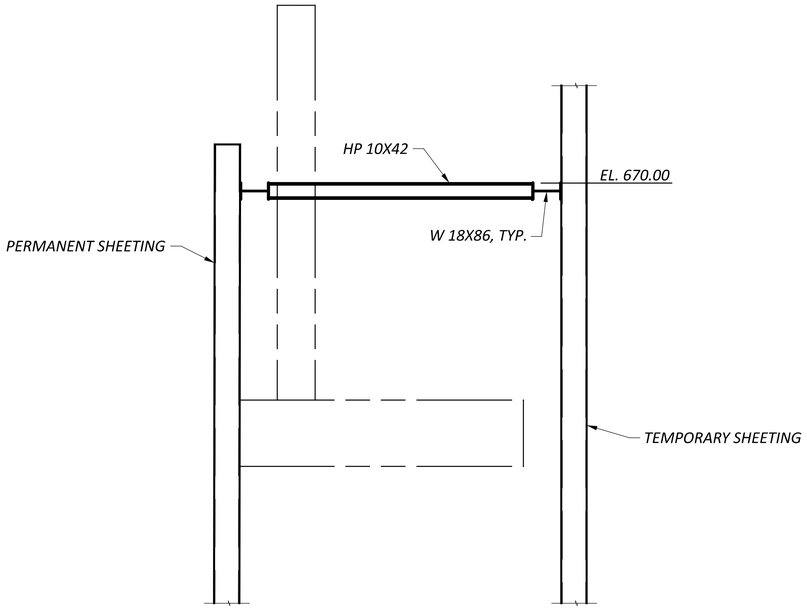


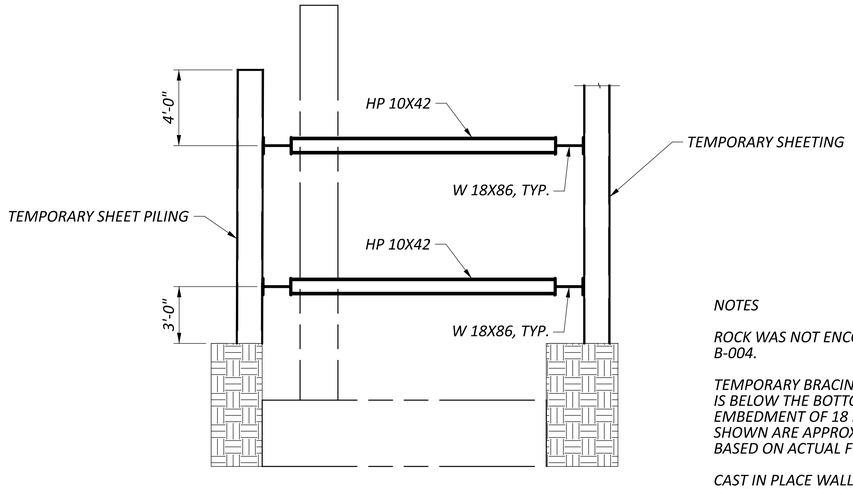
PLAN



ELEVATION



SECTION A-A



SECTION B-B

NOTES

ROCK WAS NOT ENCOUNTERED AT BORINGS B-003 AND B-004.

TEMPORARY BRACING TO BE UTILIZED WHEN BEDROCK IS BELOW THE BOTTOM OF FOOTING AND AN EMBEDMENT OF 18 FEET CANNOT BE ATTAINED. LIMITS SHOWN ARE APPROXIMATE AND SUBJECT TO CHANGE BASED ON ACTUAL FIELD CONDITIONS

CAST IN PLACE WALL TO BE CAST UP TO CONSTRUCTION JOINT, THEN CONCRETE PLACED BETWEEN PERMANENT SHEETING AND FACE OF WALL. TEMPORARY BRACING CAN THEN BE REMOVED AND REMAINDER OF WALL PLACED.

PERMANENT SHEETING DETAILS
WALL 1 STA 11+50.00 TO 16+02.32

DESIGN AGENCY
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10200 Alliance Road, Suite 300
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REVIEWER EMK 11/22/24

PROJECT ID 116204

SHEET P.30 TOTAL 39

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