



LEGEND

- (A) EXISTING ASPHALT PAVEMENT = 13" THICKNESS
- (1) ITEM 203 - EMBANKMENT, AS PER PLAN
- (2) ITEM 203 - GRANULAR MATERIAL, TYPE B, AS PER PLAN
- (3) ITEM 604 - SHEET PILING LEFT IN PLACE, AS PER PLAN, MINIMUM SECTION MODULUS 22.4 IN³/FT
- (4) ITEM 606 - GUARDRAIL, TYPE MGS
- (5) ITEM 659 - SEEDING AND MULCHING, CLASS 3B

NOTES:

1. FOR SHEET PILING WALL LIMITS AND ADDITIONAL DETAILS SEE SHEET P.3.
2. THE EXISTING SLOPE IS A REPRESENTATION OF EXISTING CONDITIONS AND HAS NOT BEEN SURVEYED. EXISTING GROUND CONDITIONS MAY VARY FROM DESIGN TO ACTUAL FIELD CONDITIONS DUE TO SLOPE FAILURE.

TYPICAL SECTION

DESIGN AGENCY



DESIGNER

JDM

REVIEWER

JPH MM-DD-YY

PROJECT ID

118525

SHEET TOTAL

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NOTIFICATION OF CONSTRUCTION INITIATION:

AT LEAST FOURTEEN DAYS PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL ADVISE THE DISTRICT OFFICE OF COMMUNICATIONS VIA EMAIL AT d06.pio@dot.ohio.gov, CENTRAL OFFICE SPECIAL HAUL PERMITS VIA EMAIL AT hauling.permits@dot.ohio.gov. AND THE DISTRICT WORK ZONE TRAFFIC MANAGER VIA EMAIL AT d06.mot@dot.ohio.gov OF ANTICIPATED START DATE OF ANY CONSTRUCTION ACTIVITIES, INCLUDING BUT NOT LIMITED TO THE PLACING OF WORK ZONE SIGNS. THE NOTIFICATION SHALL ALSO INCLUDE THE PROJECT NUMBER, PID, NAME AND PHONE NUMBER OF THE CONTRACTOR, A POINT OF CONTACT AND THE ANTICIPATED IMPACT ON TRAFFIC. THE CONTRACTOR WILL IMMEDIATELY INFORM THE DISTRICT OFFICE OF COMMUNICATIONS AND THE DISTRICT WORK ZONE TRAFFIC MANAGER OF ANY AND ALL DELAYS AND/OR CHANGES REGARDING THE CONSTRUCTION INITIATION DATE.

GENERAL:

THE CONTRACTOR SHALL SUBMIT IN WRITING A SCHEDULE OF OPERATIONS TO THE ENGINEER AND RECEIVE APPROVAL IN WRITING BEFORE WORK IS STARTED ON THIS PROJECT. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

WORK LIMITS:

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CONTRACTORS EQUIPMENT - OPERATION AND STORAGE:

THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAFFIC WHERE PRACTICAL. EQUIPMENT SHALL HAVE AT LEAST ONE AMBER FLASHING LIGHT. WHEN PARKED ALONG THE HIGHWAY, THE EQUIPMENT SHALL BE LOCATED EITHER A MINIMUM OF 30 FEET FROM THE EDGE OF PAVEMENT OR SIX FEET BEHIND GUARDRAIL WITH A MINIMUM OF 125 FEET OF GUARDRAIL PRECEDING THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT AN APPROVED CONTRACTOR'S STORAGE AREA.

REMOVAL ITEMS:

GUARDRAIL, POSTS, AND MISCELLANEOUS HARDWARE DESIGNATED FOR REMOVAL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT BID FOR THE REMOVED ITEM.

UTILITIES:

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDERNEATH OR ADJACENT TO THE WORK AREA.

THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING OUPS AND ENSURING THERE ARE NO CONFLICTING UTILITIES PRIOR TO CONSTRUCTING THE PROPOSED RETAINING WALL AND GUARDRAIL.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E, AS PER PLAN (NCHRP 350 OR MASH 2016):

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEER'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 J, ASTM D4956 TYPE XI REFLECTIVE SHEETING, PER CMS 730.193.

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. PLACEMENT OF THE FOUNDATION TUBES SHOULD BE APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES NOT 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 FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT, AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 203 - EMBANKMENT, AS PER PLAN:

QUANTITIES FOR ITEM 203 EMBANKMENT, AS PER PLAN HAVE BEEN PROVIDED TO BUILD UP FORESLOPES AND ENSURE PROPER GRADING FOR THE PROPOSED MGS GUARDRAIL AND RETAINING WALL. THIS ITEM OF WORK INCLUDES ANY MINOR CLEARING AND GRUBBING NECESSARY TO PLACE THE EMBANKMENT AT THE LOCATIONS SPECIFIED OR DIRECTED.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 203 - EMBANKMENT, AS PER PLAN = 150 CY

ITEM 203 - GRANULAR MATERIAL, TYPE B, AS PER PLAN

THIS ITEM HAS BEEN PROVIDED TO FILL THE CAVITY BEHIND PROPOSED SHEET PILE WALL DUE TO SLOPE FAILURE. THE CONTRACTOR MUST PROVIDE AN EXCAVATOR WITH A PLATE COMPACTOR ABLE TO REACH INTO THE CAVITY TO SAFELY COMPACT THIS MATERIAL NOT TO EXCEED 8 INCH LIFTS. THE INTENT IS TO ACHIEVE A COMPACTED EMBANKMENT THAT WILL NOT SETTLE AND IS FREE TO DRAIN. REQUIREMENTS OF SUPPLEMENT 1015 IS NOT REQUIRED.

AN ESTIMATED QUANTITY OF 35 CY HAS BEEN PROVIDED IN THE GENERAL SUMMARY. THIS QUANTITY IS BASED ON AREA MEASURED FROM THE TYPICAL SECTION ASSUMING A SLOPE FAILURE OF 50 FEET DUE TO UNFORESEEN SLOPE CONDITIONS.

DESIGN DATA

STEEL SHEET PILES - ASTM A572 - YIELD STRENGTH 50 KSI

ITEM 504 - STEEL SHEET PILING LEFT IN PLACE, AS PER PLAN

THE CONTRACTOR SHALL FURNISH AND INSTALL NEW STEEL SHEET PILE SECTIONS IN ACCORDANCE WITH ASTM A572 GRADE 50, 35 FEET LONG, WITH A MINIMUM SECTION MODULUS OF 22.4 IN³/FT. USED SHEET PILING SHALL NOT BE ACCEPTED. SPLICING OF THE SHEET PILE SECTION IS NOT PERMITTED EXCEPT WITHIN THE TOP 10 FEET OR BOTTOM 10 FEET. ANY SPLICING MUST BE WITH A FULL PENETRATION WELD.

SHEET PILE WALL INFORMATION		
STATION	OFFSET FROM S.R. 56 CENTERLINE (FT)*	ELEVATION (FT)
9+51.00	-19.870	699.969
9+61.00	-19.870	700.057
9+71.00	-19.870	700.145
9+81.00	-19.870	700.233
9+91.00	-19.870	700.304
10+01.00	-19.870	700.373
10+11.00	-19.870	700.442
10+21.00	-19.870	700.511
10+31.00	-19.870	700.580
10+31.67	-19.870	700.584

NOTE:

* - OFFSET IS MEASURED FROM THE CENTERLINE OF S.R. 56 TO THE CREEK-FACING SIDE OF THE SHEET PILE WALL.

GRADING AND EROSION CONTROL:

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

ITEM 659 - SEEDING AND MULCHING, CLASS 3B	= 1777 SQ YD
ITEM 659 - COMMERCIAL FERTILIZER	= 0.25 TON
ITEM 659 - LIME	= 0.41 ACRE
ITEM 659 - WATER	= 8 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. QUANTITY FOR CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

BENCHMARKS:

THE TABLE BELOW SUMMARIZES THE SURVEY BENCHMARKS IDENTIFIED DURING PROJECT DEVELOPMENT AND ARE INCLUDED AS A REFERENCE ONLY. THE CONTRACTOR SHALL FIELD-VERIFY ALL SURVEY INFORMATION PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.

BENCHMARK INFORMATION					
NAME	NORTHING (FT)	EASTING (FT)	ELEVATION (FT)	STATION	DESCRIPTION
BM-1	579683.073	1848903.941	696.399	3+94.85	IRON PIN FOUND
BM-2	579278.708	1849287.171	700.929	9+51.75	NAIL IN TELEPHONE POLE

DESIGN AGENCY



DESIGNER

JDM

REVIEWER

JPH MM-DD-YY

PROJECT ID

118525

SHEET TOTAL

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SHEET NUM.						PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	
3	5	6	9	10	12	01/S5K/44	02/S50/44							
								202	38000	25	FT	ROADWAY GUARDRAIL REMOVED	P.9	
			25			25		202	42040	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	P.9	
			1			1								
						150		203	20001	150	CY	EMBANKMENT, AS PER PLAN	P.3	
	35					35		203	35111	35	CY	GRANULAR MATERIAL, TYPE B, AS PER PLAN	P.3	
						2,006.25		606	15050	2,006.25	FT	GUARDRAIL, TYPE MGS	P.9	
						1	1,625	606	26151	1	EACH	ANCHOR ASSEMBLY, MGS TYPE E, AS PER PLAN, (NCHRP 350 OR MASH 2016)	P.9	
								21		21	EACH	BARRIER REFLECTOR, TYPE 2, 1 WAY	P.9	
								1		1	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	P.9	
												EROSION CONTROL		
								1,777	659	00530	1,777	SY	SEEDING AND MULCHING, CLASS 3B	P.3
								0.25	659	20000	0.25	TON	COMMERCIAL FERTILIZER	P.3
								0.41	659	31000	0.41	ACRE	LIME	P.3
								8	659	35000	8	MGAL	WATER	P.3
								2,000	832	30000	2,000	EACH	EROSION CONTROL	
												PAVEMENT		
								1	617	25000	1	MGAL	WATER	
												TRAFFIC CONTROL		
								0.5	642	00300	0.5	MILE	CENTER LINE, TYPE 1	
												MAINTENANCE OF TRAFFIC		
								LS	614	12420	LS		DETOUR SIGNING	
								100	614	13000	100	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
								3	614	18601	3	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	P.5
								32	614	11110	32	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	P.6
												RETAINING WALLS		
								2,824	504	11100	2,824	SF	STEEL SHEET PILING LEFT IN PLACE, MIN. SECTION MODULUS 22.4 CU. IN/FT	
												INCIDENTALS		
								LS	614	11000	LS		MAINTAINING TRAFFIC	
								LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
								LS	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER
JDM

REVIEWER
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118525

SHEET TOTAL
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