

UTILITIES

THERE ARE NO KNOWN UNDERGROUND, OR OVERHEAD UTILITIES, WITHIN THE PROJECT CONSTRUCTION LIMITS.

EXISTING PLANS

EXISTING PLANS SHALL BE MADE AVAILABLE THROUGH THE OFFICE OF CONTRACT SALES & ESTIMATING'S WEBSITE UNDER "OTHER INFORMATION"

PERSONAL PROTECTION EQUIPMENT (PPE)

THE CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS OF SECTIONS XXIV AND XXXIV OF THE OHIO DEPARTMENT OF TRANSPORTATION SAFETY & HEALTH STANDARD OPERATING PROCEDURE 220-006(SP) EFFECTIVE: NOVEMBER 1, 2018 (EXCEPT AS AMENDED BELOW) AND ALL SUBSEQUENT UPDATES POSTED AT THE FOLLOWING WEBSITE:

HTTP://WWW.DOT.STATE.OH.US/POLICY/POLICIESANDSOPS/POLICIES/220-006(SP).PDF

AMENDMENTS TO THE REQUIREMENTS OF THIS DOCUMENT ARE:

XXIV. HEAD PROTECTION (HARD HATS)
ALL PERSONS WITHIN THE RIGHT-OF-WAY OF ANY HIGHWAY OR ANY OTHER TYPE OF ROADWAY OR CONSTRUCTION SITE WHO ARE EXPOSED TO EITHER TRAFFIC (VEHICLES USING THE HIGHWAY FOR PURPOSES OF TRAVEL) OR CONSTRUCTION EQUIPMENT WITHIN THE WORK AREA, REGARDLESS OF JOB TYPE, SHALL WEAR APPROPRIATE HEAD PROTECTION. ALL HARD HATS MUST MEET OR EXCEED ANSI Z89.1-2009 TYPE 1, CLASS E-G REQUIREMENTS.

XXXIV. SAFETY APPAREL AND VEST (HIGH VISIBILITY)
ALL PERSONS WITHIN THE RIGHT-OF-WAY OF ANY HIGHWAY OR ANY OTHER TYPE OF ROADWAY OR CONSTRUCTION SITE WHO ARE EXPOSED TO EITHER TRAFFIC (VEHICLES USING THE HIGHWAY FOR PURPOSES OF TRAVEL) OR CONSTRUCTION EQUIPMENT WITHIN THE WORK AREA, REGARDLESS OF JOB TYPE, SHALL WEAR A HIGH-VISIBILITY SAFETY VEST THAT MEETS THE PERFORMANCE CLASS II OR CLASS III REQUIREMENTS OF THE ANSI/ISEA 107-2015 PUBLICATION ENTITLED "AMERICAN NATIONAL STANDARD FOR HIGH-VISIBILITY SAFETY APPAREL AND ACCESSORIES."

WORKERS MAY WEAR AN ANSI CLASS II OR ANSI CLASS III APPROVED RAIN SUIT, JACKET OR OTHER APPAREL WITHOUT A SAFETY VEST OVER IT.

SITE RESTORATION

IN ADDITION TO ALL APPLICABLE PARTS OF THE C&MS, THE FOLLOWING SHALL APPLY:

CARE SHALL BE TAKEN TO LIMIT DAMAGE TO EXISTING GROUND COVER. ALL DISTURBED SEEDED SURFACES SHALL BE RESTORED BY SEEDING AND MULCHING ACCORDING TO THE C&MS, IF NOT OTHERWISE ACCOUNTED FOR IN THE PLANS.

ANY EXISTING FACILITIES SUCH AS FENCING, CONCRETE RIPRAP CUTOFF WALLS, ETC. DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED ACCORDING TO THE C&MS.

RESTORATION OF DISTURBED FACILITIES AND SURFACES IMPACTED BY THE CONTRACTOR'S OPERATIONS AS DESCRIBED ABOVE SHALL BE CONSIDERED INCIDENTAL TO ALL CONTRACT ITEMS.

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.

WORK LIMITS

THE CONTRACTOR SHALL MAINTAIN WORK LIMITS WITHIN THE EXISTING RIGHT-OF-WAY, UNLESS OTHERWISE PROVIDED FOR BY THE C&MS.

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.

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 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 CONDUIT ITEMS.

ORDINARY HIGH WATER MARK

FOR LOCATIONS NOT IDENTIFIED AS AQUATIC RESOURCES IN THE WATERWAY PERMIT CONDITIONS, DATED 2/23/21, USE THE FOLLOWING INFORMATION FOR THE ORDINARY HIGH WATER MARK IN REGARDS TO ITEM 503:

ALL-30-20.84 (SITE 1): OHWM WAS DETERMINED TO BE 18" ABOVE THE CULVERT BOTTOM

HAN-30-0.52 (SITE 2): OHWM WAS DETERMINED TO BE 12" ABOVE THE CULVERT BOTTOM

SEE THE WATERWAY PERMIT CONDITIONS, DATED TBD, FOR THE ORDINARY HIGH WATER MARK FOR ALL OTHER APPLICABLE PROJECT LOCATIONS.

ITEM 611, CONDUIT, MISC.: 15" PIPE CONNECTION TO LINER PIPE

IN ADDITION TO ALL APPLICABLE PARTS OF THE C&MS FOR A CONDUIT RUN, THIS ITEM SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS NECESSARY TO IDENTIFY AND REINSTATE THE EXISTING 15" PIPE LATERAL TO THE PROPOSED LINER PIPE AT SITE 1 (ALL-30-20.84)

PROVIDE A MAIN-TO-LATERAL CONNECTION, AS REQUIRED. PROVIDE WRITTEN CONFIRMATION FROM THE MANUFACTURER OF THE SELECTED LINER PIPE MATERIAL THAT THE METHOD TO REINSTATE THE LATERAL AND THE TYPE OF CONNECTION IS COMPATIBLE WITH THE SELECTED LINER PIPE MATERIAL AND INSTALLATION, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. INCLUDE THIS WRITTEN CONFIRMATION AS PART OF THE INSTALLATION PLAN.

AS PER EXISTING PLANS, THE FLOW LINE ELEVATION OF THE EXISTING 15" PIPE LATERAL IS APPROXIMATELY 36" ABOVE THE FLOW LINE OF THE EXISTING 96" CMP TO BE LINED AND THE CONDUIT SLOPE IS 20.27%. THE CONTRACTOR SHALL MAINTAIN SIMILAR LINE AND GRADE TO THE EXISTING PLANS OR A SIMILAR LINE AND GRADE AS DETERMINED BY THE FIRST PARAGRAPH OF "CROSSING AND CONNECTIONS TO EXISTING PIPES AND UTILITIES" NOTE ON SHEET 2.

FIELD DATA COLLECTED THROUGH MARCH 19TH, 2021 INDICATE THE FLOW LINE OF THE EXISTING 15" CMP IS APPROXIMATELY 116 FT FROM THE INLET END AND 69" ABOVE THE PIPE INVERT.

ITEM 837 - LINER PIPE, AS PER PLAN

IN ADDITION TO 837.03.B, THIS ITEM SHALL INCLUDE THE REMOVAL OF THE FAILED PORTION OF THE REAR (WEST) 78" CORRUGATED METAL PIPE AT SITE 7, WYA-30-2.75 NEAR THE FIRST JOINT FROM THE UPSTREAM SIDE (SOUTH) AT APPROXIMATELY 20 FT FROM THE INLET.

THE CONTRACTOR SHALL REMOVE THE EXISTING FAILED CORRUGATED METAL PIPE AND ASSOCIATED MATERIAL TO THE EXTENT NECESSARY TO INSTALL THE LINER PIPE. THE METHOD OF REMOVAL, INCLUDING ANY ADDITIONAL PROCEDURES FOR GROUTING, FILLING VOIDS, AND RESTORING THE SITE, SHALL BE INCLUDED IN THE INSTALLATION PLAN. FOR A METHOD OF REMOVAL REQUIRING EXCAVATION, PERFORM THE WORK AND BACKFILL THE CAVITY CREATED IN ACCORDANCE WITH C&MS 202. IF REQUIRED, PROVIDE EXCAVATION BRACING IN ACCORDANCE WITH C&MS 503.

SEE THE MAINTENANCE OF TRAFFIC NOTES FOR ADDITIONAL DETAILS ON THE LIMITS OF EXCAVATION.

FOR BACKFILLED AREAS, PROVIDE A FINAL GRADE THAT PRESENTS A NEAT, WELL-DRAINED APPEARANCE THAT CONFORMS TO THE SITE TOPOGRAPHY.

THE COST FOR ALL MATERIAL, EQUIPMENT, LABOR AND INCIDENTALS NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THIS ITEM, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

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ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF 2 LANES OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ALONG US 30 BY USE OF THE EXISTING PAVEMENT, EXCEPT FOR PERIODS OF SHORT-TERM STATIONARY WORK THAT OCCUPY LOCATIONS WITHIN A SINGLE DAYLIGHT PERIOD WHEN TRAFFIC MAY BE MAINTAINED AS DETAILED IN THE PLANS.

EXCEPT AS DESCRIBED BELOW FOR THE WYA-30-2.75, SITE 7 LOCATION, THE CONTRACTOR SHALL LIMIT DROP-OFFS IN THE WORK ZONES TO PROVIDE THE METHOD OF DROP-OFF PROTECTION TO BE "NONE" OR "DRUMS" AS PER SCD MT-101.90, "DROP-OFFS IN WORK ZONES", UNLESS OTHERWISE APPROVED BY THE ENGINEER.

LENGTH AND DURATION OF LANE RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

MAINTAIN TRAFFIC AT ALL TIMES, EXCEPT A SINGLE LANE CLOSURE OF US 30 PER DIRECTION SHALL BE PERMITTED FOR MINIMUM PERIODS OF TIME BY THE USE OF SCD MT-95.30, "CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS"

IN ADDITION, THE CONTRACTOR MAY PERFORM WORK THAT MAINTAINS TRAFFIC WITH THE USE OF SECTION 6G.06 & FIG. 6H-1 (TA-1), "WORK BEYOND THE SHOULDER" OF THE OMTCD. AND SCD MT-95.45, "CLOSING SHOULDER OF A MULTI-LANE DIVIDED HIGHWAY"

EQUIPMENT CANNOT BE STORED UNPROTECTED IN THE MEDIAN OR SHOULDER AREA AS PER 614.035. IT MUST BE MOVED TO A PROTECTED AREA, WHENEVER NOT IN USE.

WYA-30-2.75, SITE 7 LOCATION (US 30 EASTBOUND)

IN ADDITION, AT THE WYA-30-2.75 SITE ALONG THE OUTSIDE SHOULDER OF US 30 EASTBOUND, THE CONTRACTOR MAY PERFORM WORK THAT MAINTAINS TRAFFIC WITH THE USE OF SCD MT-95.45, "CLOSING SHOULDER OF A MULTI-LANE DIVIDED HIGHWAY" WITH PORTABLE BARRIER, IF EXCAVATING IS REQUIRED TO REMOVE THE FAILED SECTION OF THE EXISTING REAR (WEST) 78" CMP. ENGINEERED DRAWINGS SHALL BE REQUIRED FOR ANY EXCAVATION WITHIN THE LIMITS SHOWN ON THE "EXCAVATION LIMITS" DETAIL ON THIS SHEET.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT THIS LOCATION AS DIRECTED BY THE ENGINEER FOR PORTABLE BARRIER:

ITEM 614, WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL) 1 EACH

ITEM 622, PORTABLE BARRIER, UNANCHORED 360 FT

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

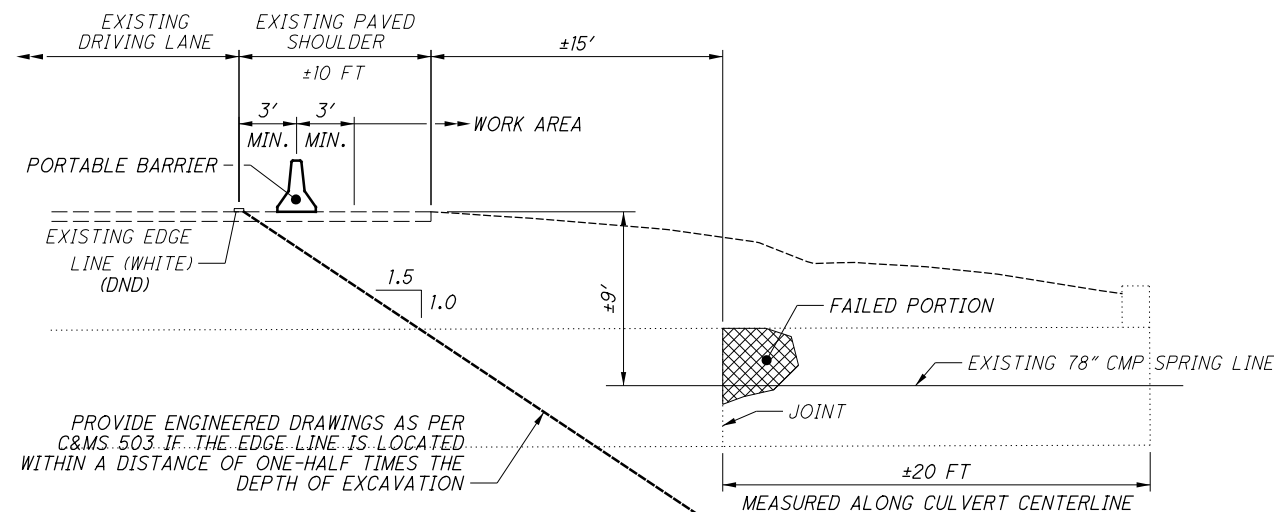
NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION OF TRAFFIC RESTRICTIONS TIME TABLE		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMP & ROAD CLOSURES	>= 2 WKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HRS & < 2 WKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<= 12 HRS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.



WYA-30-2.75, SITE 7 LOCATION (US 30 EASTBOUND)
EXCAVATION LIMITS
SECTION PERPENDICULAR TO US 30

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1 (ONE-WAY) 8 EACH

ITEM 614, OBJECT MARKER, ONE-WAY 7 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

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MAINTENANCE OF TRAFFIC GENERAL NOTES

D01-CR-FY2021

CULVERT LINER PIPE DRAINAGE QUANTITIES

LOCATION NO.	LOCATION NAME	REF NO.	503	601	611		837	837	837	837	837		837	837	837	837	837	
			COFFERDAMS AND EXCAVATION BRACING	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER, 30" THICK	CONDUIT, MISC.; 15" PIPE CONNECTION TO LINER PIPE (SEE NOTE ON SHEET 2)		LINER PIPE 84" 707.11, 707.12, 748.06	LINER PIPE 42" 748.06, SS938 OR 42" OD 707.34	LINER PIPE 60" 748.06, SS938	LINER PIPE 54" 748.06, SS938 OR 54" OD 707.34	LINER PIPE 66" 707.11, 707.12, 707.24, 748.06, SS938	LINER PIPE, AS PER PLAN 66" 707.11, 707.12, 707.24, 748.06, SS938 (SEE NOTE OF SHEET 2)		BACKFILL FOR LINER PIPE, 42" DIAMETER	BACKFILL FOR LINER PIPE, 54" DIAMETER	BACKFILL FOR LINER PIPE, 60" DIAMETER	BACKFILL FOR LINER PIPE, 66" DIAMETER	BACKFILL FOR LINER PIPE, 84" DIAMETER
			LS	CY	LS		FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	
1	ALL-30-20.84	D-1	LS	20	LS		240										240	
2	HAN-30-0.52	D-2	LS	7				228					228					
3	HAN-30-1.60	D-3	LS	13					233						233			
5	HAN-30-2.68	D-5	LS	11						282				282				
6	WYA-30-2.31	D-6	LS	32							492					492		
7	WYA-30-2.75	D-7	LS	28							222	222				444		
8	WYA-30-3.26	D-8	LS	25					424					424				
9	WYA-30-6.19	D-9	LS	28							562				562			
TOTALS CARRIED TO GENERAL SUMMARY			LS	164	LS		240	228	657	282	1276	222		228	282	657	1498	240

THE CONTRACTOR SHALL REMOVE ALL DEBRIS AND OBSTRUCTIONS FROM THE EXISTING CONDUIT BEFORE INSERTING THE LINER PIPE AS PER SS837.03.B.

AS PER C&MS 102.05, IN ADDITION TO A PROJECT SITE VISIT, EXISTING DOCUMENTS INCLUDING EXISTING PLANS AND PHOTOGRAPHS FROM ROUTINE PIPE & BRIDGE INSPECTIONS SHALL BE MADE AVAILABLE THROUGH THE OFFICE OF CONTRACT SALES & ESTIMATING'S WEBSITE UNDER "OTHER INFORMATION" FOR THE CONTRACTOR'S REVIEW.

CULVERT DATA TABLE FOR PROPOSED LINER PIPE LOCATIONS

PROJECT LOCATIONS	CFN	EXISTING				EX. INLET FLOWLINE ELEV.	EX. OUTLET FLOWLINE ELEV.	DESIGNED GRADE	MAX. INVERT RISE FROM EX. FLOWLINE TO LINER PIPE	MIN. COVER MAX. COVER	DRAINAGE AREA	Q50 Q100	HW50 HW100	V50 V100	ABRASION LEVEL	STREAM pH	DESIGN SERVICE LIFE
		SIZE	TYPE	LENGTH	BUILD DATE												
1 ALL-30-20.84 STA 1099+60	CFN 1977882	96 IN	CMP	240 FT	1997	879.50	879.00	0.21%	0.50 FT	17 FT 18 FT	56 AC.	71 CFS 82 CFS	884.3 884.5	2.7 FPS 3.0 FPS	2	7.8	75 Yr.
2 HAN-30-0.52 STA 27+82	CFN 1840860	48 IN	CMP	228 FT	1997	894.50	893.00	0.66%	0.30 FT	7 FT 8 FT	35 AC.	62 CFS 70 CFS	899.8 900.6	7.9 FPS 8.7 FPS	2	7.9	75 Yr.
3 HAN-30-1.60 STA 85+00	CFN 1839730	66 IN	CMP	233 FT	1997	902.00	901.00	0.43%	0.30 FT	9 FT 10 FT	230 AC.	157 CFS 186 CFS	909.1 910.5	10.5 FPS 10.4 FPS	2	7.9	75 Yr.
5 HAN-30-2.68 STA 141+90	CFN 1839727	60 IN	CMP	282 FT	1997	910.00	908.00	0.71%	0.30 FT	7 FT 8 FT	160 AC.	121 CFS 144 CFS	916.2 916.5	11.7 FPS 12.2 FPS	2	7.9	75 Yr.
6 WYA-30-2.31 C-13, STA 3+714.56	CFN 1854565 CFN 1976715	78 IN	CMP	246 FT	2004	871.59	871.18	0.17%	0.30 FT	16 FT 17 FT	1970 AC.	579 CFS 674 CFS	881.8 883.7	12.4 FPS 14.2 FPS	2	8.4	75 Yr.
7 WYA-30-2.75 C-15, STA 4+440.55	CFN 1854567 CFN 1854566	78 IN	CMP	222 FT	2004	871.64	871.32	0.14%	0.30 FT	7 FT 8 FT	1773 AC.	566 CFS 661 CFS	879.8 880.3	9.7 FPS 10.1 FPS	2	8.4	75 Yr.
8 WYA-30-3.26 C-16, STA 5+253.55	CFN 1854568 CFN 1854569	72 IN	CMP	212 FT	2004	864.48	864.11	0.17%	0.30 FT	8 FT 9 FT	1670 AC.	567 CFS 712 CFS	876.9 877.8	14.9 FPS 15.7 FPS	2	8.4	75 Yr.
9 WYA-30-6.19 C-22, STA 9+972.09	CFN 1854572 CFN 1854552	78 IN	CMP	281 FT	2004	836.61	835.96	0.23%	0.40 FT	24 FT 25 FT	1754 AC.	480 CFS 558 CFS	845.1 846.6	11.0 FPS 12.5 FPS	2	8.4	75 Yr.

NOTES FOR THE DATA TABLE ABOVE:

- EXISTING CULVERT AND STRUCTURE INFORMATION IS BASED ON RECORD DATA. THE CULVERT IDENTIFICATION NUMBERS (2004 PLANS ONLY) AND THE STATIONINGS PROVIDED UNDER "PROJECT LOCATIONS" ARE FROM RECORD PLANS. ALL ELEVATIONS ARE IN THE DATUM OF THEIR ORIGINAL PLANS.
- THE DESIGNED GRADE OF THE LINER PIPE SHALL BE EQUAL TO OR GREATER THAN THE VALUE IN THE TABLE, UNLESS OTHERWISE APPROVED BY THE ENGINEER. THE DESIGN INTENT IS TO MINIMIZE THE INCREASE TO EXISTING INVERT ELEVATIONS. THE MAXIMUM INVERT RISE SHOWN IN THE TABLE FROM THE EXISTING FLOWLINE TO THE INVERTS OF THE LINER PIPE SHALL NOT BE EXCEEDED, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

3) FOR ADDITIONAL INFORMATION REGARDING THE ORDINARY HIGH WATER MARK FOR USE WITH ITEM 503, SEE THE NOTE ON SHEET 2.

4) WYA-30-2.75 (SITE 7) AND WYA-30-3.26 (SITE 8) CULVERT DATA BASED ON FIELD SURVEY MEASUREMENTS THRU 4/14/2021.

5) PROVIDE A RECESSED INLET AS SITES HAN-30-2.09 (SITE 4), HAN-30-2.68 (SITE 5), WYA-30-2.31 (SITE 6), WYA-30-2.75 (SITE 7) AND WYA-30-3.26 (SITE 8). SEE DETAILS ON SHEET 7.

SUMMARY OF CULVERT ROCK CHANNEL PROTECTION

PROJECT LOCATIONS	LENGTH (FT)	WIDTH (FT)	DEPTH (IN)	OUTLET	
				LOCATION	TYPE
1 ALL-30-20.84	18	12	30	NORTH	B
2 HAN-30-0.52	13	6	30	NORTH	B
3 HAN-30-1.60	17	8	30	NORTH	B
5 HAN-30-2.68	15	8	30	NORTH	B
6 WYA-30-2.31	20	17	30	NORTH	B
7 WYA-30-2.75	18	17	30	NORTH	B
8 WYA-30-3.26	18	15	30	NORTH	B
9 WYA-30-6.19	18	17	30	NORTH	B

NOTES FOR THE DATA TABLE ABOVE:

1) ROCK CHANNEL PROTECTION (RCP) SHALL BE INSTALLED AT THE OUTLET SIDE ONLY.

2) IF CONCRETE RIPRAP CUTOFF WALLS EXISTS, DO NOT DISTURB THEM. INSTALL RCP STARTING AT THE END OF THE EXISTING CONCRETE RIPRAP CUTOFF WALLS.

CULVERT DATA TABLE FOR PROPOSED CURED-IN-PLACE PIPE LINER LOCATIONS

PROJECT LOCATIONS	CFN	EXISTING				MIN. COVER MAX. COVER
		SIZE	TYPE	LENGTH	BUILD DATE	
11 WYA-30-21.14 REF. NO. D8, STA. 33+880	CFN 1981739	15 IN	CMP	77 FT	2001	6 FT 7 FT
12 WYA-30-21.54 REF. NO. D7, STA. 34+520	CFN 1864139	15 IN	CMP	122 FT	2001	10 FT 11 FT
13 WYA-30-22.07 REF. NO. D1, STA. 35+380	CFN1864153	15 IN	CMP	103 FT	2001	6 FT 7 FT

REFERENCE NUMBER AND STATIONING FROM RECORD PLANS. THE 15" CONDUITS RUNS IDENTIFIED FOR REHABILITATION ARE UNDERNEATH THE EASTBOUND TRAVEL LANES. LENGTHS SHOWN ARE CATCH BASIN TO CATCH BASIN/PIPE OUTLET.

CURED-IN-PLACE AND FIELD PAVING DRAINAGE QUANTITIES

LOCATION NO.	LOCATION NAME	REF NO.	SPECIAL	503	611	899
			PIPE CLEANOUT OVER 48"	COFFERDAMS AND EXCAVATION BRACING	FIELD PAVING OF EXISTING PIPE, 84" CMP	CURED-IN-PLACE PIPE LINER, 15" DIAMETER
			FT		FT	FT
10	WYA-30-11.75	D-10	181	LS	181	
11	WYA-30-21.14	D-11				77
12	WYA-30-21.54	D-12				122
13	WYA-30-22.07	D-13				103
TOTALS CARRIED TO GENERAL SUMMARY			181	LS	181	302

FOR ADDITIONAL INFORMATION REGARDING THE ORDINARY HIGH WATER MARK FOR USE WITH ITEM 503, SEE THE NOTE ON SHEET 2.

HAN-30-0209, SFN 3201009 (SITE 4)

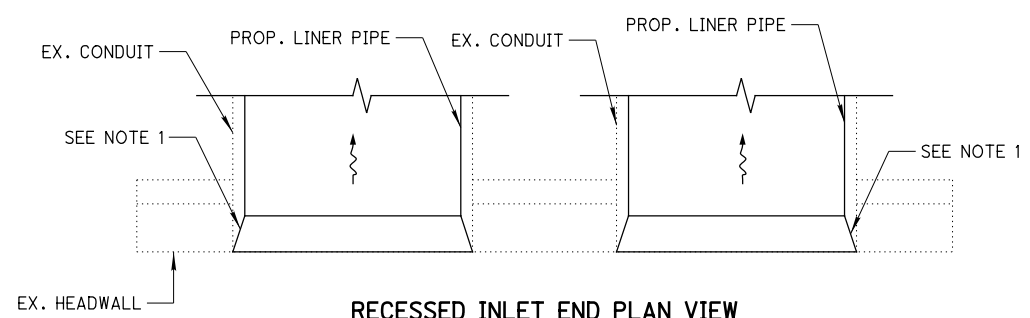
ESTIMATED QUANTITIES CARRIED TO GENERAL SUMMARY (02/NFP/BR)

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING
601	32100	11	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER, 15' LONG BY 8' WIDE BY 30" THICK AT OUTLET (NORTH)
837	10000	386	FT	LINER PIPE, 72" 707.11, 707.12, 748.06, SS938
837	21000	386	FT	BACKFILL FOR LINER PIPE, 72" DIAMETER

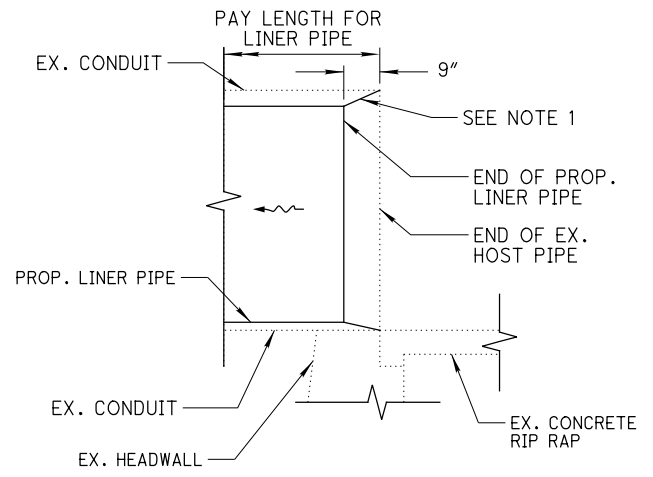
STRUCTURE DATA TABLE FOR PROPOSED LINER PIPE LOCATIONS

PROJECT LOCATION	SFN	EXISTING				EX. INLET FLOWLINE ELEV.	EX. OUTLET FLOWLINE ELEV.	DESIGNED GRADE	MAX. INVERT RISE FROM EX. FLOWLINE TO LINER PIPE	MIN. COVER MAX. COVER	DRAINAGE AREA	Q50 Q100	HW50 HW100	V50 V100	ABRASION LEVEL	STREAM pH	DESIGN SERVICE LIFE
		SIZE	TYPE	LENGTH	BUILD DATE												
4 HAN-30-2.09 STA 109+00	SFN 3201009	84 IN	CMP	386 FT	1997	902.00	900.50	0.39%	0.40 FT	9 FT 10 FT	486 AC.	259 CFS 320 CFS	911.0 913.5	10.1 FPS 12.1 FPS	2	7.9	75 Yr.

THE STATIONING PROVIDED UNDER "PROJECT LOCATION" IS FROM RECORD PLANS. SEE NOTES ON SHEET 6 FOR DETAILS REGARDING THE LINER PIPE AND ROCK CHANNEL PROTECTION.



RECESSED INLET END PLAN VIEW
(TWIN PIPES SHOWN, SINGLE PIPE LOCATION SIMILAR)

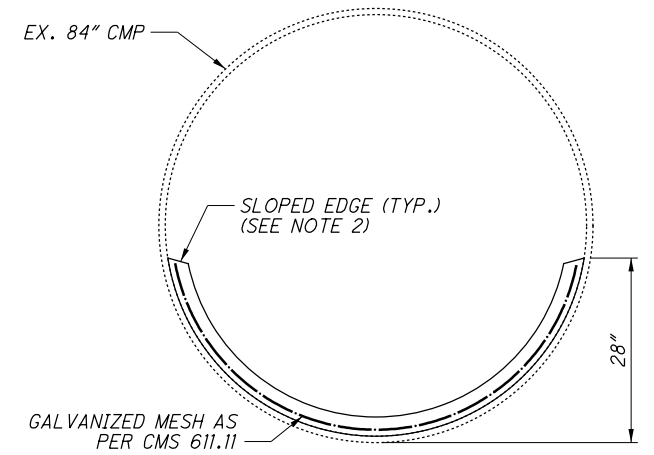


RECESSED INLET END SECTION

APPLIES TO HAN-30-2.09 (SITE 4), HAN-30-2.68 (SITE 5), WYA-30-2.31 (SITE 6), WYA-30-2.75 (SITE 7) AND WYA-30-3.26 (SITE 8)

NOTE:

1. THE LINER PIPE(S) SHALL BE PLACED 9" SHORTER THAN THE EXISTING PIPE(S) ON THE INLET END(S). BACKFILL FOR THE LINER PIPE SHALL BE SLOPED TO TRANSITION FROM THE INLET END OF THE LINER PIPE TO THE INLET END OF THE EXISTING HOST PIPE.



FIELD PAVING OF THE EXISTING CONDUIT AT WYA-30-11.75 (SITE 10)

1) INVERT PAVING SHALL BE 3 INCHES THICK MEASURED FROM THE TOP OF CORRUGATIONS AS PER CMS 611.11.

2) CARE SHALL BE TAKEN TO ANGLE THE TOP OF CONCRETE TO ASSURE THAT NO WATER OR DEBRIS WILL COLLECT AT THIS LOCATION.

3) INPUT VALUES USED TO DETERMINE NEED FOR ADDITIONAL REINFORCING:

- SOIL HEIGHT ABOVE CROWN = 3 FT
- CORRUGATION SIZE = 3 IN. x 1 IN.
- MIN. GAUGE = 16
- MAX. METAL LOSS = 75%
- AVERAGE WEIGHT OF SOIL = 130 LB/CF

4) BUILD DATE IS 1962, EXTENDED IN 1991 AS CULVERT NO. 19-C AT STA. 763+35, US 23 SOUTHBOUND WITH A 15° BEND IN THE INLET EXTENSION.

ITEM SPECIAL - PIPE CLEANOUT, OVER 48"

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

ESTIMATED QUANTITIES ARE SHOWN ON THE TABLE ON THIS SHEET AND ARE INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK.

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