

GENERAL

ROUNDING (G101)

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

UTILITIES (G102A)

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

COMMUNICATION CHARTER COMMUNICATIONS ATTN: DENNIS VOGEL 576 TERNES AVENUE ELYRIA, OH 44035 440.387.5184	COMMUNICATION KINETIC (FORMERLY WINDSTREAM) ATTN: GREGORY KALBRUNNER 245 N. MAIN STREET HUDSON, OH 44236 330.405.1066
ELECTRIC OHIO EDISON ATTN: NATALIE CAMP 6326 LAKE AVENUE ELYRIA, OH 44035 440.326.3319	GAS COLUMBIA GAS OF OHIO ATTN: ADAM WOODIE, P.E. 3101 NORTH RIDGE RD E LORAIN, OH 44055 440.242.5672
WATER RLCWA ATTN: JOE DEMCZYK 42401 S.R. 303, P.O. BOX 567 LAGRANGE, OH 44050 440.355.5121	

THE AFOREMENTIONED UTILITY COMPANIES AND AGENCIES HAVE VARIOUS FACILITIES IN THE AREA THAT WILL REMAIN IN PLACE DURING CONSTRUCTION.

EXTREME CAUTION SHOULD BE EXERCISED IN AREAS WITH UTILITIES. SECTIONS 105.07 AND 107.16 OF THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS REQUIRE, AMONG OTHER THINGS, THAT THE CONTRACTOR COOPERATE WITH ALL UTILITIES LOCATED WITHIN THE LIMITS OF THIS CONSTRUCTION PROJECT AND TAKE RESPONSIBILITY FOR THE PROTECTION OF THE UTILITY PROPERTY AND SERVICES.

CONSTRUCTION NOISE (G104)

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 7:00PM AND 7:00AM. 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 (G105)

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE THE CENTERLINE PLAT SHEET OF THE RIHGT OF WAY PLANS 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: GPS OBSERVATIONS PER THE ODOT VRS NETWORK
MONUMENT TYPE: TYPE B

VERTICAL POSITIONING
ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: GEOID18

HORIZONTAL POSITIONING
REFERENCE FRAME: NAD83 (2011 ADJ, 2010.0)
ELLIPSOID: GRS 80

COORDINATE SYSTEM: O.D.O.T. LORAIN OCCS
LORAIN OCCS PROJECTION PARAMETERS:
PROJECTION: LAMBERT CONFORMAL CONIC
CENTRAL LATITUDE: N 41°24'00"
CENTRAL LONGITUDE: W 277°54'00"
FALSE NORTHING: 100,000 METERS
FALSE EASTING: 50,000 METERS
PROJECTION SCALE FACTOR: 1.000033
PROJECT COORDINATES SHOWN IN U.S. SURVEY FEET

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.

ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS ITEM 623 WILL GOVERN CONSTRUCTION SURVEYING ACTIVITY.

THE FOLLOWING MONUMENT VERIFICATION REPORT(S) WILL BE REQUIRED:
623.04a – PRECONSTRUCTION MONUMENT VERIFICATION AND REPORT - LUMP SUM CARRIED TO GEN SUM
623.04b – POST CONSTRUCTION MONUMENT VERIFICATION AND REPORT - LUMP SUM CARRIED TO GEN SUM

WORK LIMITS (G106)

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.

ROUTINE MAINTENANCE

BETWEEN THE TIME THAT BIDS ARE TAKEN AND THE START OF CONSTRUCTION, THE MAINTAINING AGENCY MAY ENTER UPON THE PROJECT AND PERFORM ROUTINE MAINTENANCE SUCH AS CRACK SEALING, PATCHING, AND BERM AND SHOULDER REPAIR. THE EFFECTS, IF ANY, OF THE PERFORMANCE OF ROUTINE MAINTENANCE SHALL BE CONSIDERED AS INHERENT IN WORK OF THE CHARACTER PROVIDED FOR IN THE PLAN AND THE RESULTING CONDITIONS SHALL NOT BE CONSIDERED AS DIFFERING MATERIALLY FROM THOSE EXISTING AT THE TIME BIDS WERE TAKEN.

WINDOW CONTRACT TABLE

USE THE FOLLOWING TABLE AS REFERRED TO IN THE PROPOSAL:

DESCRIPTION OF CRITICAL WORK	CALENDAR DAYS TO COMPLETE	DISINCENTIVE \$ PER DAY	WORK WINDOW	
			START	END
ROAD CLOSURE ON S.R. 252	60 DAYS	\$10,000	5/3/2027	7/30/2027

ROADWAY

ITEM 201 – CLEARING AND GRUBBING (G108B)

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
3”-12”	9	0	9
>12”-24” (18” FOR QTY)	13	1	14
>24”-30” (30” FOR QTY)	0	1	1
ITEM SPECIAL – TREE REMOVED, 3”-12” DIAMETER	9 EACH		
ITEM 201 – TREE REMOVED, 18” DIAMETER	13 EACH		
ITEM 201 – STUMP REMOVED, 18” DIAMETER	1 EACH		
ITEM 201 – STUMP REMOVED, 30” DIAMETER	1 EACH		

A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201 – CLEARING AND GRUBBING FOR AREAS NOT INCLUDED IN THE ABOVE LIST. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 201 – CLEARING AND GRUBBING.

MONUMENT ASSEMBLIES (G110)

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON THE CENTERLINE PLAT SHEET.

DRAINAGE

ITEM 202 – STRUCTURE REMOVED, AS PER PLAN

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE REMOVED UPON RECEIVING PERMISSION FROM THE ENGINEER, INCLUDING BUT NOT LIMITED TO, EXISTING HEADWALLS AND CONDUIT.

THE COST OF BACKFILL REQUIRED TO FILL THE VOID REMAINING FROM THE EXISTING STRUCTURE SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM.

EXISTING CULVERT VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PROPOSED PLANS PERTAINING TO THE EXISTING CULVERT HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING CULVERT AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, SUCH DETAILS AND DIMENSIONS ARE INDICATIVE OF THE EXISTING CULVERT AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05 AND 105.02. BASE THE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING CULVERT. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES (D104)

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.

ITEM 611 – RESIDENTIAL AND COMMERCIAL DRAINAGE CONNECTIONS

EXISTING ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEW CONDUIT REQUIRED TO REPLACE OR EXTEND THE EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.33, 707.41 NON-PERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35.

PAYMENT FOR ALL LABOR AND MATERIALS WILL BE PERFORMED BY CHANGE ORDER.

ITEM 611 – FARM DRAINS (D107)

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 OUTLET 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 AND ANIMAL GUARDS 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 ANIMAL GUARDS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

PAYMENT FOR ALL LABOR AND MATERIALS WILL BE PERFORMED BY CHANGE ORDER.

REVIEW OF DRAINAGE FACILITIES (D114)

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.

ITEM 605 – AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

STA. 12+75.00 (LEFT AND RIGHT)
STA. 13+25.00 (LEFT AND RIGHT)

PAVEMENT

ITEM 408 - PRIME COAT, AS PER PLAN

THE CONTRACTOR SHALL APPLY ONE COAT OF MC-70 (AS PER SECTION 702) AT A RATE OF 0.40 GAL/SY TO THE COMPLETED AGGREGATE SHOULDER (ITEM 304) AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE A SHIELD TO PREVENT THE SPRAYING OR DRIFTING OF LIQUID BITUMINOUS MATERIAL ONTO THE EDGE OF PAVEMENT OR EDGE LINE. THE CONTRACTOR SHALL APPLY THE PRIME COAT TO THE AGGREGATE SHOULDER WITHIN 7 (SEVEN) CALENDAR DAYS OF THE BERM MATERIAL BEING LAYED ON THE SHOULDER. PRIOR TO APPLYING THE PRIME COAT LAYER, IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO CORRECT ANY DAMAGES TO AGGREGATE SHOULDER THAT HAS OCCURRED DURING THE PERIOD OF TIME BETWEEN THE LAYING OF THE BERM MATERIAL AND THE SPRAYING OF PRIME COAT. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO 107.10 OF THE SPECIFICATIONS.

ITEM 442 – ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (449), AS PER PLAN

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (W8-1-36) SHALL BE ERECTED ON EACH SIDE OF TRANSVERSE JOINTS LEFT OPEN OVER NIGHT, INCLUDING A SPEED ADVISORY SIGN. THESE SIGNS SHALL BE REMOVED IMMEDIATELY AFTER JOINT HAS BEEN CLOSED. PLACEMENT OF SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

CARE SHALL BE TAKEN TO MATCH EXISTING PAVEMENT ELEVATIONS AT EXISTING PAVED BERMS, DRIVES, INTERSECTIONS, ETC.

REQUIREMENTS OF 442 APPLY EXCEPT AS FOLLOWS:

MIX DESIGN: FOR Ndes USE 50 GYRATIONS, FOR Nmax USE 75 GYRATIONS.

CHOOSE OPTIMUM BINDER CONTENT AT DESIGN AIR VOIDS OF 3.5%.

MINIMUM TOTAL PG BINDER CONTENT IS 6.3 PERCENT.

MINIMUM VIRGIN PG BINDER CONTENT IS 5.2 PERCENT.

USE A PG 64-22 BINDER.

WHEN AN AGGREGATE SOURCE IS SPECIALLY DESIGNATED WITH AN SR ON THE AGGREGATE GRAVITY LIST DO NOT USE THE AGGREGATE EXCEPT AS ALLOWED FOR MEDIUM TRAFFIC IN THE GUIDELINES FOR MAINTAINING ADEQUATE PAVEMENT FRICTION IN SURFACE PAVEMENT.

EROSION CONTROL

ITEM 659 – SEEDING AND MULCHING (E101A)

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

659	COMMERCIAL FERTILIZER	0.18	TON
659	LIME	0.26	ACRE
659	WATER	7.01	M GAL
659	REPAIR SEEDING AND MULCHING	63	SQ YD
659	INTERSEEDING	63	SQ YD
659	TOPSOIL	141	CU YD
659	SOIL ANALYSIS TEST	2	EACH
659	SEEDING AND MULCHING	1266	SQ YD

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS. QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY.

FULL-HEIGHT HEADWALLS

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 10TH EDITION OF THE “LRFD BRIDGE DESIGN SPECIFICATIONS” ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2024, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN DATA

THE FOLLOWING DESIGN DATA IS ASSUMED:

INTERNAL ANGLE OF FRICTION, $\Phi_{BF} = 30^\circ$

TOTAL UNIT WEIGHT OF BACKFILL SOIL = 120 PCF

INTERNAL ANGLE OF FRICTION (DRAINED), FOUNDATION SOIL, $\Phi_F = 28^\circ$

UNDRAINED SHEAR STRENGTH (COHESIVE), FOUNDATION SOIL, $S = 1500$ PSF

UNIT WEIGHT OF CONCRETE = 150 PCF

CLASS QC1 CONCRETE (FOOTING, HEADWALL, AND FORESLOPE) = 4.0 KSI COMPRESSIVE STRENGTH

REINFORCING STEEL: A615, A616, OR A617

GRADE 60 MINIMUM YIELD STRENGTH

60 KSI (ALL REINFORCING STEEL SHALL BE EPOXY COATED)

FORESLOPE ANCHOR WALL DOWELS

ANCHOR PER CMS 510 WITH NONSHRINK, NONMETALLIC GROUT CONFORMING TO CMS 705.20 AND TO A DEPTH OF 5". PAYMENT FOR DOWEL HOLES, GROUT AND INSTALLATION SHALL BE INCLUDED WITH ITEM 511.

THREADED INSERTS OR NON-PROTRUDING MECHANICAL CONNECTORS CAPABLE OF DEVELOPING AT LEAST 125 PERCENT OF THE SPECIFIED FIELD STRENGTH OF THE REINFORCEMENT SHOWN ARE AN ACCEPTABLE ALTERNATIVE TO RESIN BONDING. MAINTAIN A MINIMUM COVER OF 3 INCHES AT THE BOTTOM OF THE CULVERT SLAB. MECHANICAL CONNECTORS SHALL HAVE AN “L-SHAPED” BAR INSIDE THE CULVERT WITH A MINIMUM HORIZONTAL LENGTH OF 12 INCHES. THE DEPARTMENT WILL CONSIDER PAYMENT FOR INSERTS OR MECHANICAL CONNECTORS AS INCIDENTAL TO ITEM 611.

POROUS BACKFILL WITH FILTER FABRIC

POROUS BACKFILL WITH FILTER FABRIC 1'-6" THICK SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND TO 12" BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC TYPE A SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6" ABOVE THE TOP ELEVATION OF THE WEEP HOLE.

WEEPHOLES SHALL BE PLACED 6" TO 12" ABOVE THE NORMAL WATER ELEVATION OR GROUND LINE AND SHALL HAVE A MAXIMUM SPACING OF 10'-0". A MINIMUM OF ONE WEEP HOLE SHALL BE PROVIDED PER WINGWALL. PLACE 2 CUBIC FEET OF BAGGED NO. 3 AGGREGATE AT EACH WEEP HOLE TO RETAIN THE POROUS BACKFILL.

BACKFILL LIMITATION

WHEN THE DESIGN HEIGHT IS GREATER THAN 10 FT, THE BACKFILL BEHIND THE WINGWALLS SHALL NOT BE PLACED HIGHER THAN THE ELEVATION OF THE SOIL ABOVE THE TOE. WHEN THE SOIL ABOVE THE TOE IS AT ITS FINISHED ELEVATION, THE REMAINDER OF THE BACKFILL MAY BE PLACED.

PREFORMED EXPANSION JOINT FILLER

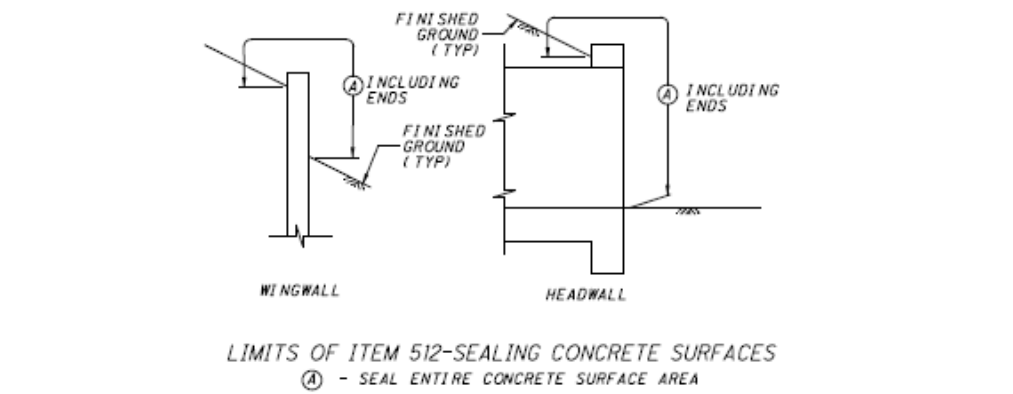
PREFORMED EXPANSION JOINT FILLER (PEJF) CONFORMING TO CMS 705.03, 1 INCH THICK, SHALL BE PLACED ABOVE THE FOOTING BETWEEN THE SIDES OF THE BOX CULVERT AND THE ENDS OF THE WINGWALLS. PAYMENT FOR MATERIALS AND INSTALLATION SHALL BE INCLUDED WITH ITEM 516 – 1" PREFORMED EXPANSION JOINT FILLER.

ITEM 503 – UNCLASSIFIED EXCAVATION (WINGWALL/FOOTING)

EXCAVATION LIMITS FOR THE PROPOSED STRUCTURE SHALL BE AS DEFINED IN 503. EXCAVATION AND BACKFILL OUTSIDE THESE LIMITS NECESSARY TO REMOVE THE EXISTING STRUCTURE OR INSTALL THE PROPOSED STRUCTURE SHALL BE INCLUDED IN ITEM 202 – PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, AND ALL NECESSARY ITEM 511 OR 611 ITEMS.

SEALING OF HEADWALL AND WINGWALLS

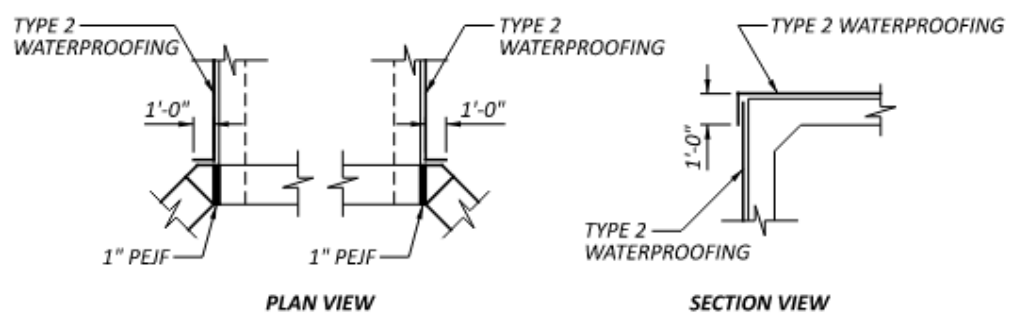
ALL EXPOSED FORESLOPE WALL AND WINGWALL CONCRETE SHALL BE SEALED WITH EPOXY-URETHANE SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DIAGRAMS BELOW. PAYMENT FOR THE EPOXY-URETHANE SEALER SHALL BE PER ITEM 512 – SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).



WATERPROOFING

TYPE 2 WATERPROOFING, PER CMS 512 AND 711.25, SHALL EXTEND VERTICALLY DOWN THE ENTIRE SIDES OF THE PRECAST CULVERT SECTIONS FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT BID PRICE PER SQUARE YARD FOR ITEM 512 – TYPE 2 WATERPROOFING.

TYPE 2 WATERPROOFING, PER CMS 512 AND 711.25, SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES FOR ALL PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT BID PRICE PER SQUARE YARD FOR ITEM 512 – TYPE 2 WATERPROOFING.



WATERPROOFING DETAILS

BASIS OF PAYMENT

ALL LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO CONSTRUCT THE FOOTINGS, CUTOFF WALLS, WINGWALLS, AND HEADWALLS SHALL BE INCLUDED WITH ITEM 511 – CLASS QC1 CONCRETE, RETAINING/WINGWALL INCLUDING FOOTING. PAYMENT FOR REINFORCING STEEL SHALL BE INCLUDED WITH ITEM 509 – EPOXY COATED REINFORCING STEEL.

TRAFFIC CONTROL

LAYOUT OF WORK

PRIOR TO REMOVING OR ERECTING SIGNS OR SIGN SUPPORTS, THE CONTRACTOR SHALL FIELD LAYOUT AND IDENTIFY, BY TYPE OF WORK, SIGNS AND SIGN SUPPORTS TO BE ERECTED OR REMOVED. THIS LAYOUT MAY BE ACCOMPLISHED BY STAKING (USING WHITE STAKES OR WHITE FLAGS) OR BY PLACING CLEARLY DISCERNABLE WHITE PAINTED MARKINGS ON THE EDGE OF PAVEMENT. IN NO CASE SHALL THE CONTRACTOR PLACE ANY PERMANENT PAVEMENT MARKINGS ON ANY EXISTING SIGN OR SIGN SUPPORT.

WORKING DRAWINGS

THE REQUIREMENTS OF C&MS 625.06, 630.03, 632.04, AND 633.04 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS ARE HEREBY MODIFIED TO REQUIRE TWO (2) SETS OF SHOP DRAWINGS, CATALOG CUTS, SPECIFICATIONS, PHOTOMETRIC DATA, BROCHURES, DATA SHEETS AND WIRING DIAGRAMS FOR REVIEW AND APPROVAL, AS REQUIRED BY THE DIRECTOR, OF APPARATUS AND EQUIPMENT TO BE FURNISHED. THESE DOCUMENTS ARE TO BE PROVIDED TO THE DISTRICT THREE CONSTRUCTION ADMINISTRATOR, 906 NORTH CLARK AVE, ASHLAND, OHIO 44805 FOR APPROVAL BEFORE THE ITEMS ARE FURNISHED.

RESTORATION OF DISTURBED AREAS

THE CONTRACTOR SHALL RESTORE ALL SEEDED AND SODDED AREAS, PAVED BERMS, AND OTHER DISTURBED AREAS TO A CONDITION EQUAL TO OR BETTER TO THAT EXISTING BEFORE THIS WORK WAS STARTED. ALL RESTORATION WORK SHALL BE DONE IN ACCORDANCE TO THE PERTINENT SPECIFICATION ITEM AND AS DIRECTED BY THE ENGINEER. PAYMENT FOR ALL RESTORATION WORK, INCLUDING MATERIALS AND LABOR SHALL BE INCLUDED WITH THE UNIT PRICE BID FOR THE VARIOUS 630 AND 631 ITEMS IN THIS PLAN.

ITEM 630 – GROUND MOUNTED SUPPORT, NO. 3 POST, AS PER PLAN

GROUND MOUNTED POST SUPPORTS USED ON THIS PROJECT SHALL BE U-CHANNEL DESIGN AND BE PER CMS 630.06 AND SCD TC-41.20 WITH THE FOLLOWING EXCEPTIONS.

POST SUPPORTS EXPOSED TO TRAFFIC SHALL BE STUBBED AND SPLICED PER THE FOLLOWING PROCEDURE:

- 1) DRIVE 72" LONG STUB TO WITHIN 16" TO 18" OF GROUND SURFACE.
- 2) BOLT UPPER SIGN POST TO STUB USING QUANTITY OF FOUR 5/16" ALUMINUM BOLTS, STAINLESS STEEL LOCK WASHERS, AND STAINLESS STEEL NUTS WITH A MINIMUM OF 4" CENTER TO CENTER SPACING.
- 3) THE UPPER POST SHALL BE SPLICED BEHIND THE STUB POST TO MINIMIZE THE POSSIBILITY OF VEHICLE SNAGGING DURING A COLLISION.
- 4) CARE SHALL BE EXERCISED TO DRIVE AND ERECT POSTS VERTICALLY PLUMB AND ERECT SIGNS SO THEY ARE LEVEL WHEN VIEWED FROM THE ROADWAY.
- 5) PLACE NO MORE THAN TWO POSTS WITHIN 7' VEHICLE PATH UNLESS LOCATED BEHIND GUARDRAIL. SEE SCD-TC 41.20.
- 6) COST OF SPLICE CONNECTION AND OVERLAP OF POSTS SHALL BE INCIDENTAL TO THE COST OF EACH SIGN SUPPORT.
- 7) COST OF REMOVING AND REINSTALLING SIGN POST REFLECTORS SHALL BE INCIDENTAL TO THE COST OF THE SIGN SUPPORT. MISSING REFLECTORS OR NEW REFLECTORS REQUIRED AT NEW INSTALLATIONS SHALL BE PAID BY SEPARATE PAY ITEM.

BASIS OF PAYMENT SHALL BE AT THE UNIT PRICE BID PER FOOT. IN ADDITION TO 630.06, ALL EXISTING GROUND MOUNTED POST SUPPORTS SHALL BE REMOVED AND NEW POSTS INSTALLED. LOCATE GROUND MOUNTED POST SUPPORTS AS FAR FROM THE EDGE OF PAVEMENT (AND ON FAR SIDE OF DITCH) AS POSSIBLE UP TO WITHIN FOUR (4) FEET OF THE APPARENT RIGHT-OF-WAY TO MINIMIZE THE CHANCE OF IMPACT FROM RUN-OFF THE ROAD INCIDENTS.

ALL GROUND MOUNTED POST SUPPORTS SHALL BE U-CHANNEL DESIGN. SQUARE TUBE POST SUPPORTS SHALL BE USED FOR ONE-WAY SUPPORTS (SCD TC-41.50).

ALL GROUND MOUNTED POST SUPPORTS SHALL BE DRIVEN VERTICALLY PLUMB TO A MINIMUM EMBEDMENT DEPTH OF 48 INCHES. IF GROUND CONDITIONS PREVENT DRIVING TO THIS DEPTH, THE SIGN INSTALLATION SHALL BE INSTALLED USING TWO POSTS SIDE BY SIDE TO FORM A DUAL POST INSTALLATION.