ITEM 511 - CLASS HP CONCRETE, BRIDGE DECK, AS PER PLAN
ITEM 511 - CLASS HP CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN
ITEM 511 - CLASS HP CONCRETE, SUBSTRUCTURE, AS PER PLAN
ITEM 511 - CLASS HP CONCRETE, SUPERSTRUCTURE, AS PER PLAN
ITEM 511 - CLASS HP CONCRETE, TEST SLAB

GENERAL REQUIREMENTS:

THE PROVISIONS OF ITEM 511 SHALL APPLY EXCEPT AS NOTED BELOW.

MIX OPTIONS:

ALL SUPERSTRUCTURE, BRIDGE DECK, PARAPET, MEDIAN BARRIER, AND APPROACH SLAB CONCRETE SHALL BE THIS MIX (HP4, AS PER PLAN). ALL OTHER STRUCTURE CONCRETE SHALL BE THIS MIX OR MIX 2 CONCRETE.

THE FOLLOWING PROPORTIONS WILL BE USED AS A STARTING MIX DESIGN:

CONCRETE TABLE

QUANTITIES PER CUBIC YARD
AGGREGATES (SSD)

HP4, AS PER PLAN (GGBF SLAG + MICROSILICA)								
AGGREGATE TYPE	FINE AGGRE. (LB)	#8 COARSE AGGRE. (LB)	#57 COARSE AGGRE. (LB)	CEMENT CONTENT (LB)	GGBF SLAG (LB)	MICRO-SILICA (LB)	W/CM RATIO ±.01	AIR CONTENT ±2%
GRAVEL	1245	360	1315	400	170	30	0.43	7
LIMESTONE	1245	360	1335	400	170	30	0.43	7
SLAG	1245	315	1155	400	170	30	0.43	7

* ALL COARSE AGGREGATE SHALL HAVE AN ABSORTION OF 1.00% OR GREATER AS DEFINED PER ASTM C127.

THE WEIGHTS SPECIFIED IN THE CONCRETE TABLE WERE CALCULATED FOR MATERIALS OF THE FOLLOWING BULK SPECIFIED GRAVITIES (SSD): NATURAL SAND AND GRAVEL 2.62, LIMESTONE SAND 2.68, LIMESTONE 2.65, SLAG 2.30, FLY ASH 2.65, GGBF SLAG 2.90, MICROSILICA SOLIDS 2.20, AND PORTLAND CEMENT 3.15. FOR AGGREGATES OF SPECIFIED GRAVITIES DIFFERING MORE THAN PLUS OR MINUS 0.02 FROM THESE, THE WEIGHTS IN THE TABLE WILL BE CORRECTED.

PARAPET CONSTRUCTION (FORMED AND POURED):

FORMS SHALL NOT BE REMOVED UNTIL AT LEAST 2 HOURS AFTER THE FINAL SET. DETERMINATION OF THE FINAL SET SHALL BE AS PER ASTM C266 (GILLMORE NEEDLE). TESTING SHALL BE PERFORMED BY THE CONTRACTOR AT NO COST TO THE STATE.

THE MINIMUM CONCRETE SLUMP DURING PLACEMENT OF FORMED CONCRETE PARAPETS SHALL BE 6 INCHES, WITH A MAXIMUM SLUMP OF 8 INCHES.

PARAPET CONSTRUCTION (SLIP FORMED):

SLIP FORMING SHALL NOT BE ALLOWED.

CRACK CONTROL JOINTS:

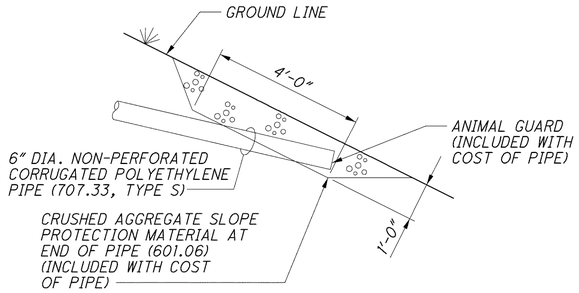
THE CONTRACTOR SHALL CONSTRUCT 1½" DEEP AND ¼" WIDE CRACK CONTROL JOINTS SPACED AT A MINIMUM OF 6 FT AND A MAXIMUM OF 8 FT ON CENTER. THE CRACK CONTROL JOINTS SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE TOP OF THE CONCRETE DECK. THE CONTRACTOR MAY EITHER FORM THE CRACK CONTROL JOINTS IN THE FORM LINERS, OR, WITHIN 24 HOURS OF PLACEMENT, SAW CUT THE CRACK CONTROL JOINTS IN WITH THE USE OF AN EDGE GUIDE, FENCE, OR JIG WHICH IS REQUIRED TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE ENTIRE LENGTH OF EACH CONTROL JOINT SHALL BE SEALED TO A MINIMUM DEPTH OF 1½" WITH POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S.

BASIS OF PAYMENT: PAYMENT FOR THE ABOVE COMPLETED AND ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT BID PRICE FOR:

ITEM	UNITS	DESCRIPTION
511E50001	CUBIC YARD	CLASS HP CONCRETE, BRIDGE DECK, AS PER PLAN
511E50101	CUBIC YARD	CLASS HP CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN
511E50201	CUBIC YARD	CLASS HP CONCRETE, SUBSTRUCTURE, AS PER PLAN
511E51001	CUBIC YARD	CLASS HP CONCRETE, SUPERSTRUCTURE, AS PER PLAN
511E52000	LUMP	CLASS HP CONCRETE, TEST SLAB

ITEM 518 - 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN

ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET OF THE DRAINAGE PIPES. STEEL BOLTS OR RODS FOR THE ANIMAL GUARDS SHALL BE GALVANIZED PER CMS 711.02. SEE STD DWG. DM 1.1 FOR ADDITIONAL DETAILS AND NOTES. THE ANIMAL GUARDS AND CRUSHED AGGREGATE SLOPE PROTECTION ARE INCIDENTAL TO ITEM 518 - 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN.



TERMINATION OF 6" NON-PERFORATED CORRUGATED PLASTIC PIPE (N.P.C.P.P.)

ITEM 526 - REINFORCED CONCRETE APPROACH SLAB (T=17"), AS PER PLAN

THE CONTRACTOR SHALL CONSTRUCT THE APPROACH SLABS PER DETAILS PROVIDED IN THE PLANS (SEE SHEETS 59/67 THRU 62/67) INCLUDING THE HMWM SEALER, 3" P.F.J., 1" P.E.J.F., THE CONSTRUCTION OF THE PARAPET/BARRIER CONCRETE, CONCRETE SEALER, AND ASSOCIATED REINFORCING. PAYMENT SHALL BE INCLUDED WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN.

PRECOMPRESSED FOAM JOINT

DESCRIPTION: THIS WORK WILL CONSIST OF THE INSTALLATION OF A PRE-COMPRESSED FOAM JOINT BETWEEN CONCRETE PARAPETS/BARRIERS AT THE BEGINNING AND END OF APPROACH SLABS. THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS, OR AS DIRECTED BY THE ENGINEER. THE PRE-COMPRESSED FOAM JOINT FILLER SHALL COMPLETELY FILL THE GAP BETWEEN THE PARAPETS/BARRIERS.

THE MATERIAL SHALL BE A PRE-COMPRESSED FOAM JOINT FILLER SUCH AS ONE OF THE FOLLOWING OR AN APPROVED EQUAL:

SEALTITE STANDARD
SCHUL INTERNATIONAL CO.
ONE INDUSTRIAL PARK DRIVE
PELHAM, N.H. 03076
1-800-848-1120

EMSEAL DSM SYSTEM
EMSEAL JOINT SYSTEMS (II)
23 BRIDLE LANE,
SUITE 3
WESTBOROUGH, MA 01581
1-800-526-8365

POLYTITE B
DAYTON SUPERIOR
7777 WASHINGTON VILLAGE DR.,
SUITE 130
DAYTON, OH 45459
1-888-977-9600

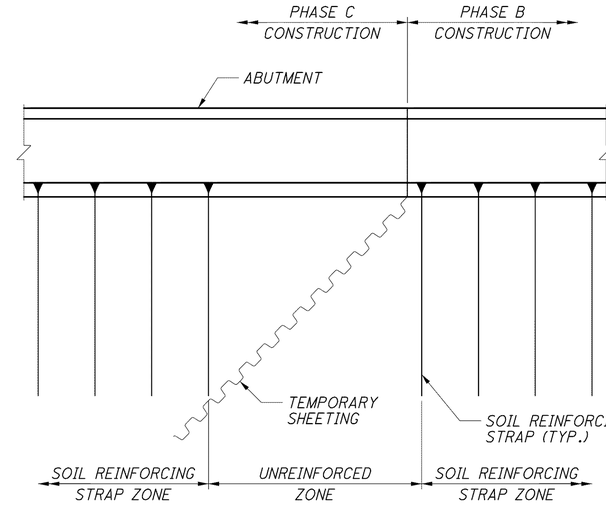
PAYMENT FOR LABOR, MATERIALS AND INSTALLATION OF THIS ITEM SHALL BE INCLUDED WITH EACH 526, REINFORCED CONCRETE APPROACH SLABS, AS PER PLAN.

PROPRIETARY SOIL REINFORCING STRAPS FOR ABUTMENTS

THE PROPRIETARY SOIL REINFORCING STRAP SUPPLIER SHALL DESIGN THE INTERNAL STABILITY OF A MECHANICALLY STABILIZED EARTH (MSE) ABUTMENT IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 840 TO SUPPORT THE LATERAL LOADS APPLIED TO THE BACK FACE OF THE ABUTMENT AND LATERAL LOADS TRANSFERRED FROM THE ABUTMENT DIAPHRAGM THROUGH THE ELASTOMERIC BEARING PADS. THE DESIGN FOR INTERNAL STABILITY SHALL INCLUDE AN UNFACTORED HORIZONTAL STRIP LOAD OF 5.5 K/FT APPLIED PERPENDICULAR TO THE FACE OF THE ABUTMENT AT AN ELEVATION OF 4 FT ABOVE THE TOP OF THE PILE SUPPORTED FOOTING. LOAD INCLUDES ALL APPLICABLE EARTH AND TEMPERATURE LOADS. PROVIDE MULTIPLE ROWS OF STRAPS AS REQUIRED.

MSE WALL SUPPLIER SHALL DESIGN THE ABUTMENT SOIL REINFORCING STRAP SPACING AND LOCATION, AND CONNECTORS TO ACCOMMODATE THE PHASED CONSTRUCTION AND TEMPORARY SHEETING. SEE UNREINFORCED ZONE AT TEMPORARY SHEETING DETAIL BELOW. THE CONTRACTOR IS ALSO ALERTED THAT SIMILAR SPECIAL SOIL REINFORCING STRAP LAYOUT AND DETAILS MAY BE REQUIRED AT THE OUTSIDE EDGES OF ABUTMENTS, DUE TO POSSIBLE INTERFERENCE WITH WINGWALL LOCATIONS.

PAYMENT: ALL COSTS SHALL BE INCIDENTAL TO ITEM 840 - SELECT GRANULAR BACKFILL

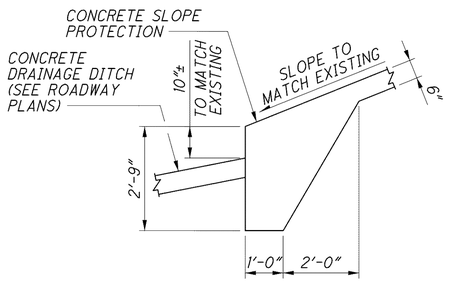


UNREINFORCED ZONE AT TEMPORARY SHEETING DETAIL

RIGHT REAR ABUTMENT AND LEFT FORWARD ABUTMENT SHOWN,
RIGHT FORWARD ABUTMENT AND LEFT REAR ABUTMENT SIMILAR.

ITEM 601 CONCRETE SLOPE PROTECTION, AS PER PLAN

THE LIMITS OF CONCRETE SLOPE PROTECTION SHALL BE AS SHOWN ON SHEET 2/67. REMOVAL OF PORTION OF EXISTING CONCRETE SLOPE PROTECTION SHALL BE INCLUDED WITH THIS ITEM. SEE SHEET 2/67 FOR REMOVAL AND REPLACEMENT LIMITS. THE PROPOSED TOE OF SLOPE SHALL BE AS DETAILED BELOW.



TOE OF SLOPE DETAIL

DESIGN AGENCY
PARSONS BRINCKERHOFF
QUADE & DOUGLAS, INC.
614 W. SUPERIOR AVE., SUITE 400
CLEVELAND, OHIO 44113

DESIGNED	DRAWN	REVIEWED	DATE
BMG	NAL	RJO	6-19-08
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PWP		4300572(L) 4300602(R)	

GENERAL NOTES
BRIDGE NO. LAK-2-0400 L&R
STATE ROUTE 2 OVER VINE STREET

LAK-2-3.32
PID No. 13486

5 / 67

1331
1679