

ITEM 844 - HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE, (DECK AND SIDEWALKS) AS PER PLAN

ITEM 844 - HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE, (PARAPET) AS PER PLAN

ITEM 844 - HIGH PERFORMANCE CONCRETE, SUBSTRUCTURE

THE PROVISIONS OF 844 SHALL APPLY EXCEPT AS NOTED BELOW.

SLIPFORMING:

THE CONTRACTOR IS ALLOWED THE OPTION OF SLIPFORMING BRIDGE PARAPETS OVER NON TRAVELED WAYS. A MINIMUM OF 3 DAYS AFTER PLACING THE TEST SECTION THE CONTRACTOR SHALL CORE THE TEST SECTION (A MINIMUM OF 3 CORES) AT LOCATIONS AS DIRECTED BY THE ENGINEER. APPROVAL TO SLIPFORM SHALL NOT BE GRANTED UNTIL AFTER THE CORING AND AFTER A SUCCESSFUL SLIPFORMING RESULT IS OBTAINED. IN ADDITION TO THE REQUIREMENTS OF THE LAST PARAGRAPH OF 844.031 THE ENGINEER WILL INSPECT THE SLIPFORMED SURFACE FOR HORIZONTAL CRACKING 6 MONTHS AFTER COMPLETION OF THE SLIPFORMING OPERATION. ANY ADDITIONAL CRACKS FOUND SHALL BE REPAIRED AS PER THE SPECIFICATIONS AT NO ADDITIONAL COST TO THE STATE. IN ADDITION, ALL ANCHOR BOLTS FOR FENCE POSTS SHALL BE CAST IN PLACE.

SLIPFORMING SHALL NOT BE PERFORMED DIRECTLY OVER AREAS WHERE THERE IS OR WILL BE VEHICULAR (INCLUDING RAILROAD), OR PEDESTRIAN TRAFFIC. AT THESE LOCATIONS, THE PARAPETS SHALL BE FORMED AND THE FOLLOWING REQUIREMENTS FOLLOWED.

THE MINIMUM CONCRETE SLUMP DURING PLACEMENT OF ALL CONCRETE PARAPETS SHALL BE 6 IN. (152.4 mm). THE MAXIMUM SLUMP ALLOWED DURING PLACEMENT IS 8 IN. (203.2 mm).

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.

ANCHOR BOLTS FOR FENCE POSTS SHALL BE CAST IN PLACE.

THE CONTRACTOR SHALL CONSTRUCT 1/2 IN. (38 mm) DEEP AND 1/4 IN. (6 mm) WIDE CONTROL JOINTS SPACED AT A MINIMUM OF 6 FT. (1830 mm) AND A MAXIMUM OF 8 FT. (2440 mm) ON CENTER. THE CONTROL JOINTS SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AT THE TOP OF SIDEWALK IN FRONT AND ENDING AT THE ELEVATION OF THE TOP OF THE CONCRETE DECK IN BACK. THE CONTRACTOR MAY EITHER FORM THE CONTROL JOINTS IN WITH FORM LINERS, OR, WITHIN 24 HOURS OF PLACEMENT, SAW CUT THE 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 1/2 IN. (38mm) WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT-S-00227E.

MIX OPTIONS:

ALL SUPERSTRUCTURE CONCRETE SHALL BE THIS MIX (MIX 4, 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.

BRIDGE LOCATION  
LAK-20-18.07 NORTH SIDE AND SOUTH SIDE

ABESTOS CONTAINING MATERIALS  
1/2 INCH PIPE AND 5-INCH PIPE  
(RESPECTFULLY) TOTAL LENGTH 166FT

THE REMOVAL AND DISPOSAL OF ANY ABESTOS CONTAINING MATERIAL DISTURBED DURING THE REPLACEMENT OF THE BRIDGE MUST COMPLY WITH THE OHIO ADMINISTRATIVE CODE, THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS, AND THE NATIONAL EMISSION STANDARD FOR HAZARDOUS AIR POLLUTANTS (NESHAP) STANDARDS FOR ABESTOS.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM WITH SECTIONS XVII AND XVI COMPLETED IS INCLUDED WITH THE BID PACKAGE. A COPY OF THIS FORM SIGNED BY THE BRIDGE OWNER WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR WILL COMPLETE SECTIONS VIII, XIII OF THE SIGNED FORM AND SUBMIT THE COMPLETED FORM TO THE LOCAL AIR AUTHORITY AT LEAST TEN (10) DAYS PRIOR TO DEMOLITION OF THE BRIDGE. THE CONTRACTOR WILL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER, THE LOCAL AIR AUTHORITY.

ATTN. NANCY MELI  
LAKE COUNTY HEALTH DISTRICT  
AIR POLLUTION CONTROL  
33 MILL STREET  
PAINESVILLE, OHIO 44060

A COPY OF THE OHIO DEPARTMENT OF HEALTH NOTIFICATION FORM IS ALSO INCLUDED WITH THE BID PACKAGE. A COPY OF THIS FORM MUST BE COMPLETED AND SUBMITTED TO THE OHIO DEPARTMENT OF HEALTH AT LEAST TEN (10) DAYS PRIOR TO THE DEMOLITION OF THE BRIDGE. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER, THE ADDRESS IS:

OHIO DEPARTMENT OF HEALTH  
ABESTOS PROGRAM  
246 NORTH HIGH STREET  
P.O. BOX 118  
COLUMBUS, OHIO 4326-0118

THE CONTRACTOR SHALL PROVIDE AN INDIVIDUAL TRAINED IN THE PROVISIONS OF NESHAP THAT WILL BE ON-SITE DURING REMOVAL OF THE ABESTOS CONTAINING MATERIALS. IN ADDITION TO THE ABESTOS CONTAINING MATERIAL IDENTIFIED IN THE ABESTOS SURVEY REPORT, ANY ADDITIONAL NON-VISIBLE ABESTOS ENCOUNTERED WITHIN THE PROJECT WORK LIMITS SHALL ALSO BE MONITORED BY THIS INDIVIDUAL.

THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE, SUBMIT, AND COMPLY WITH THE OEPA NOTIFICATION FORM AND TO REMOVE, TRANSPORT, AND DISPOSE OF THE MATERIALS CONTAINING ASBESTOS FROM WITHIN THE PROJECT WORK LIMITS. PAYMENT OF THIS WORK SHALL BE INCLUDED IN THE BID LUMP SUM PRICE ITEM SPECIAL - ASBESTOS ABATEMENT

ITEM

CONCRETE TABLE  
QUANTITIES PER CUBIC YARD  
AGGREGATES (SSD)

MIX 4, AS PER PLAN  
(GGBF SLAG + MICROSILICA)

AGGREGATE TYPE	FINE AGGRE. (LB)	#8 COARSE AGGRE. (LB)	#57 COARSE AGGRE. (LB)	TOTAL CONTENT (LB)	CEMENT (LB)	GGBF SLAG (LB)	MICRO-SILICA (LB)	WATER TO CEMENT RATIO MAX.	AIR CONTENT +/-2%
GRAVEL	1245	360	1315	2920	400	170	30	0.42	7
LIMESTONE	1245	360	1335	2940	400	170	30	0.42	7
SLAG	1245	315	1155	2715	400	170	30	0.42	7

\*ALL COARSE AGGREGATE SHALL HAVE AN ABSORPTION OF 1.00% OR GREATER AS PER ASTM C127

THE WEIGHTS SPECIFIED IN THE CONCRETE TABLE WERE CALCULATED FOR MATERIALS OF THE FOLLOWING BULK SPECIFIC 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 SPECIFIC GRAVITIES DIFFERING MORE THAN PLUS OR MINUS 0.02 FROM THESE, THE WEIGHTS IN THE TABLE WILL BE CORRECTED.

BASIS OF PAYMENT:

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

ITEM	UNITS	DESCRIPTION
844E48001	CUBIC YARD	HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (DECK), AS PER PLAN
844E48021	CUBIC YARD	HIGH PERFORMANCE CONCRETE, SUPERSTRUCTURE (PARAPET AND SIDEWALKS), AS PER PLAN
844E48040	CUBIC YARD	HIGH PERFORMANCE CONCRETE, SUBSTRUCTURE
844E49000	LUMP SUM	HIGH PERFORMANCE CONCRETE TRIAL MIX
844E49010	LUMP SUM	HIGH PERFORMANCE CONCRETE TESTING

ABBREVIATIONS:

ABUT. - ABUTMENT  
A.S. - APPROACH SLAB  
BRGS. - BEARINGS  
BTM. - BOTTOM  
C/C - CENTER TO CENTER  
C.J. - CONSTRUCTION JOINT  
CLR. - CLEARANCE  
DIA. - DIAMETER  
E.F. - EACH FACE  
ELEV. - ELEVATION  
F.A. - FORWARD ABUTMENT  
FWD. - FORWARD  
INV. - INVERT  
MAX. - MAXIMUM  
MIN. - MINIMUM  
O/O - OUT TO OUT  
R.A. - REAR ABUTMENT  
R.F. - RIGHT FORWARD  
(S) - SERIES  
SPA. - SPACES  
STA. - STATION  
TYP. - TYPICAL  
WW - WINGWALL