

BR-1-89

ITEM SPECIAL - ACRYLIC LATEX MODIFIED MORTAR OVERLAY

I. DESCRIPTION. THIS WORK SHALL CONSIST OF APPLYING A THIN LAYER OF ACRYLIC LATEX MODIFIED CONCRETE MORTAR ON A PREPARED BRIDGE DECK SURFACE IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE PLANS.

II. MATERIALS. THE MATERIALS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

PORTLAND CEMENT, TYPE II	701.05
WATER	499.02
ANTIFOAM:	IN ACCORDANCE WITH LATEX MANUFACTURER'S SPECIFICATION

AGGREGATE: AGGREGATE SHALL BE BLAST FURNACE SLAG OR HAYDITE THAT MEETS COMPOSITIONAL LIMITS SHOWN BELOW.

SIEVE NO.	% PASSING
4	95-100
8	70-95
16	45-55
30	20-30
50	5-20
100	0-11

LATEX EMULSION: MARK-200 MODIFIED ACRYLIC (OR APPROVED EQUAL)
THE LATEX EMULSION SHALL BE PROTECTED FROM FREEZING AND PROLONGED EXPOSURE TO TEMPERATURES IN EXCESS OF 85 DEGREES F. ALL EMULSIONS REMAINING IN STORAGE FACILITIES LONGER THAN SEVEN DAYS SHALL BE RECIRCULATED ONCE A WEEK. MARK-200 MODIFIED ACRYLIC EMULSION IS MANUFACTURED BY POLY-CARB; 33095 BAINBRIDGE RD; P.O. BOX 39278; SOLON, OHIO 44139; TELEPHONE 1-216-248-1228.

CURING MATERIALS	705.07
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III. PROPORTIONING. THE FOLLOWING WEIGHTS ARE FOR A ONE (1) BAG MIX:

MATERIAL	WEIGHT (LBS.)
CEMENT	94
WATER (TOTAL)	42 (INCLUDES WATER IN LATEX)
AGGREGATE (SATURATED SURFACE DRY)	244
LATEX EMULSION	38
ANTIFOAM	AS RECOMMENDED BY THE LATEX MANUFACTURER BUT NOT TO EXCEED 2.0 LBS.

THE DESIRED WATER-CEMENT-RATIO IS 0.45, BUT A RANGE OF 0.43 TO 0.48 IS ACCEPTABLE PROVIDING THAT A CONSISTENCY SATISFACTORY FOR BROOMING IS OBTAINED.

IV. MIXING. MIXING SHALL BE DONE AT THE JOB SITE.

- A. MIXER. THE MIXER SHALL BE A MORTAR MIXER OR OTHER MIXING DEVICE APPROVED BY THE ENGINEER.
- B. PROCEDURE.
 1. PROPER AMOUNTS OF AGGREGATE AND CEMENT SHALL BE ADDED TO THE MIXER AND MIXED INTO A UNIFORM BLEND.
 2. THE LATEX SHALL BE BLENDED WITH THE PROPER AMOUNT OF ANTIFOAM PRIOR TO DELIVERY TO THE JOB SITE.
 3. THE LATEX ADMIXTURE SHALL BE ADDED.
 4. WATER SHALL BE ADDED.
 5. THE COMPLETE BATCH SHALL THEN BE MIXED FOR A MINIMUM OF THREE MINUTES.

V. APPLICATION

- A. RESTRICTIONS. LATEX MODIFIED MORTAR SHALL NOT BE APPLIED WHEN THE AIR TEMP. IS NOT BETWEEN 65 DEGREES F. AND 80 DEGREES F., WHEN RAIN IS FORECAST WITHIN 12 HOURS, OR WHEN THE DECK IS NOT DRY.
- B. PROCEDURE.
 1. THE DECK SHALL BE PREMARKED TO CONTROL MIXED MATERIAL USE AND TO PROVIDE A UNIFORM COVERAGE OF 250 SQUARE YARDS OF DECK PER CUBIC YARD OF MORTAR.
 2. THE PROPERLY MIXED MORTAR SHALL BE PROMPTLY DELIVERED AND DEPOSITED ON THE PLACEMENT SITE WHERE IT WILL BE VIGOROUSLY SCRUBBED INTO THE DECK SURFACE WITH STIFF BROOMS IN A MANNER APPROVED BY THE ENGINEER.
 3. ALL SURFACES SHALL BE COVERED WITH A COATING OF THE MORTAR WHICH INCLUDES BOTH CEMENT PASTE AND AGGREGATE.
 4. FINAL BROOMING TRANSVERSE TO THE BRIDGE SHALL BE MADE IF REQUIRED TO OBTAIN THE FINAL HIGH FRICTION SURFACE.
- C. CURING. IMMEDIATELY AFTER THE MORTAR HAS BEEN PLACED, MEMBRANE CURING, ACCORDING TO 511.14 METHOD B, SHALL BE APPLIED. THE OVERLAY SHALL CURE AT LEAST 6 CONSECUTIVE HOURS IN AN AIR TEMPERATURE ABOVE 65 DEGREES F. THE TEMPERATURE OF THE OVERLAY SHALL BE MAINTAINED ABOVE 60 DEGREES F UNTIL THE CURING PERIOD IS PAST.

VI. METHOD OF MEASUREMENT. THE YARDAGE UNDER THIS ITEM WILL BE THE NUMBER OF SQUARE YARDS OF ACRYLIC LATEX MODIFIED MORTAR OVERLAY COMPLETED AND ACCEPTED IN PLACE.

VII. BASIS OF PAYMENT. THE ACCEPTED QUANTITIES OF ACRYLIC LATEX MODIFIED MORTAR OVERLAY WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING AND PLACING ALL MATERIALS, TEXTURIZING THE HIGH FRICTION SURFACE, CURING THE LMC MORTAR AND ALL OTHER MATERIAL, LABOR AND EQUIPMENT NECESSARY TO COMPLETE THIS WORK ACCORDING TO SPECIFICATIONS.

PAYMENT WILL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	SQUARE YARD	ACRYLIC LATEX MODIFIED MORTAR OVERLAY

ITEM SPECIAL - URETHANE TOP COAT SEALER

THIS ITEM SHALL CONSIST OF THE APPLICATION OF A URETHANE TOP COAT SEALER OVER CONCRETE AREAS COATED WITH EPOXY. THESE AREAS BEING AS NOTED IN THE ITEM SPECIAL - SEALING OF CONCRETE SURFACE (EPOXY). THE COLOR SHALL BE FEDERAL COLOR STANDARD NO. 595A-16187.

THE URETHANE COATING SHALL BE APPLIED BETWEEN 1 AND 10 DAYS AFTER THE APPLICATION OF THE EPOXY. THE EPOXY SHALL BE CLEAN AND DRY BEFORE THE URETHANE IS APPLIED. APPLICATION SHALL BE ACCORDING TO MANUFACTURER'S RECOMMENDATION.

THE URETHANE TOP COAT SHALL BE ONE OF THE FOLLOWING PRODUCTS:

- 1) AMERON'S AMERCOAT 450 H.S.
- 2) POLY - CARB'S MARK 73
- 3) TNEMEC'S SERIES 70 ENDURA SHIELD

THE COST OF ALL LABOR, EQUIPMENT AND MATERIAL NECESSARY TO ACCOMPLISH THIS ITEM OF WORK SHALL BE PAID FOR UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	SQ. YD.	URETHANE TOPCOAT SEALER

ITEM 630- SIGN AND SIGN SUPPORT ASSEMBLY, BRIDGE MOUNTED, 41.40, MODIFIED, AS PER PLAN, STAINLESS STEEL (C-1, C-2 SYSTEMS)

THIS ITEM OF WORK SHALL CONSIST OF INSTALLING THE NEW MODIFIED SIGN SUPPORT ASSEMBLY AND THE CHEVRON SIGNS. THE STANDARD DRAWING TC-41.40 DESIGN SIGN SUPPORT ASSEMBLY, BRIDGE MOUNTED, TYPE I SHALL BE MODIFIED AS PER THE DETAIL 8 OF 13.

PAYMENT FOR THIS ITEM SHALL INCLUDE ALL NECESSARY LABOR, MATERIAL, MISCELLANEOUS HARDWARE, AND EQUIPMENT REQUIRED TO INSTALL THE NEW SIGN SUPPORT ASSEMBLY AND CHEVRON SIGN. PAYMENT SHALL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
630	EACH	SIGN AND SIGN SUPPORT ASSEMBLY, BRIDGE MOUNTED, 41.40, TYPE I, MODIFIED, AS PER PLAN, STAINLESS STEEL (C-1, C-2 SYSTEMS).

ITEM 630 - REMOVAL OF BRIDGE MOUNTED CHEVRON SIGN

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL OF THE CHEVRON WARNING SIGNS AND THEIR SUPPORTS. THE DISPOSAL OF THE EXISTING SIGN AND SUPPORT ASSEMBLIES IS THE RESPONSIBILITY OF THE CONTRACTOR.

THE CONTRACTOR SHALL COORDINATE THIS REMOVAL ITEM WITH THE INSTALLATION OF THE NEW BRIDGE MOUNTED SIGN SUPPORT ASSEMBLIES AND INSTALLATION OF THE SIGNS. A ONE FOR ONE REPLACEMENT SHALL BE NECESSARY TO INSURE THE CHEVRON WARNING SYSTEM IS IN PLACE AT THE END OF THE WORK DAY. THE CONTRACTOR SHALL NOT LEAVE THE JOBSITE UNLESS THE CHEVRON WARNING SIGNS ARE BEING DISPLAYED BY EITHER THE NEW OR EXISTING SIGN SUPPORT ASSEMBLIES. PAYMENT FOR THIS ITEM SHALL INCLUDE ALL NECESSARY LABOR, MATERIAL, AND EQUIPMENT REQUIRED TO PERFORM THE WORK NOTED HEREIN. PAYMENT SHALL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
630	EACH	REMOVAL OF BRIDGE MOUNTED CHEVRON SIGN

GENERAL NOTES
LAK-2/44/535-(1354 ES)/(0385)
(0561 L&R)(0620SW)/(0039)

LAKE COUNTY				OHIO			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
B.G.W.	B&W	B&W	EJA	DWL	1-7-89		