

EXTENSION OF EXISTING CONCRETE STRUCTURES

PRIOR TO DRILLING DOWEL HOLES FOR PROPOSED EXTENSION OF THE EXISTING ABUTMENTS AND PIERS (SHEET 11/29, 14/29, AND 16/29) THE CONTRACTOR SHALL ASCERTAIN THE LOCATION OF EXISTING REINFORCING STEEL BY MEANS SUITABLE TO THE ENGINEER, SUCH AS MAGNETIC DEVICES, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF DAMAGE TO EXISTING REINFORCING STEEL THAT IS TO BE INCORPORATED INTO THE NEW WORK THAT IS CAUSED BY HIS OPERATIONS.

ITEM 511 - CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN

A. PLACEMENT LIMITATIONS

CONCRETE SHALL NOT BE PLACED IF THE AMBIENT AIR TEMPERATURE OR PREDICTED AIR TEMPERATURE DURING THE DURATION OF THE POUR IS 80° F OR GREATER.

PLACEMENT OF CONCRETE SHALL BE COMPLETED UNDER FAVORABLE ATMOSPHERIC CONDITIONS. FAVORABLE ATMOSPHERIC CONDITIONS EXIST WHEN THE SURFACE EVAPORATION RATE AS AFFECTED BY THE AMBIENT AIR TEMPERATURE, CONCRETE TEMPERATURE, RELATIVE HUMIDITY, AND WIND VELOCITY IS 0.1 POUNDS PER SQUARE FOOT PER HOUR OR LESS. FIGURE (1) SHALL BE USED TO DETERMINE GRAPHICALLY THE SURFACE EVAPORATION RATE. FIGURE (1) MAY BE FOUND ON PAGE 11 OF SUPPLEMENTAL SPECIFICATION 845. FAVORABLE ATMOSPHERIC CONDITIONS MAY REQUIRE PLACEMENT DURING LATE EVENINGS (6:00 P.M. TO OFFICIAL SUNSET), NIGHT (OFFICIAL SUNSET TO OFFICIAL SUNRISE), OR EARLY MORNING (SUNRISE TO 8:00 A.M.). PLACEMENT DURING THESE TIMES WILL BE CONSIDERED TO MEET THE REQUIREMENTS FOR FAVORABLE ATMOSPHERIC CONDITIONS PROVIDED THAT THE TEMPERATURE LIMITATION ABOVE IS MET.

IF PLACEMENT OF THE CONCRETE IS TO BE MADE AT NIGHT, THE CONTRACTOR SHALL SUBMIT A PLAN WHICH PROVIDES ADEQUATE LIGHTING FOR THE WORK AREA AT LEAST FIFTEEN (15) CALENDAR DAYS IN ADVANCE AND SHALL RECEIVE WRITTEN APPROVAL FROM THE ENGINEER BEFORE PLACING THE CONCRETE.

B. CURING

THE BRIDGE DECK SHALL BE WATER CURED PER CMS 511.14 METHOD (A) USING CONTINUOUS SPRINKLING AND NO PLASTIC SHEETING.

AN EVAPORATION RETARDANT AND FINISHING AID MAY BE USED AT THE CONTRACTOR'S OPTION PRIOR TO THE TILING OPERATION. ANY PRODUCT USED FOR SUCH PURPOSE SHALL BE SPECIFICALLY MARKETED FOR SAID USE (PLAIN WATER IS NOT ACCEPTABLE). THE APPLICATION RATE SHALL NOT EXCEED THE HOURLY SURFACE EVAPORATION RATE AS DETERMINED BY FIGURE 1 IN SS 845 ON PAGE 11.

IMMEDIATELY AFTER THE TEXTURING OPERATION, THE CONTRACTOR SHALL SPRAY AN EVAPORATION RETARDANT OVER THE TEXTURED AREA. THE APPLICATION RATE SHALL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS. THE WET BURLAP CURE SHALL FOLLOW THIS OPERATION AS CLOSELY AS POSSIBLE.

SIDEWALKS, CURBS, AND PARAPETS MAY BE MEMBRANE CURED PER SS 836 UNLESS OTHERWISE NOTED.

C. POUR SEQUENCE

IN ORDER TO PREVENT WATER FROM ENTERING THE FRESH CONCRETE, ALL POURS SHALL BE MADE "UPGRADE" WHENEVER POSSIBLE. ALL OTHER PROVISIONS OF 511 SHALL REMAIN IN EFFECT.

D. PROPORTIONING

THE PROPORTIONS OF COARSE AND FINE AGGREGATES SHALL BE MODIFIED TO PROVIDE THE MAXIMUM AMOUNT OF COARSE AGGREGATE POSSIBLE AND STILL PROVIDE A WORKABLE AND FINISHABLE MIX. THE USE OF FLAT, ANGULARLY BROKEN AGGREGATE SHALL BE AVOIDED.

ITEM 516 - STRUCTURAL EXPANSION JOINTS INCLUDING ELASTOMERIC STRIP SEALS

THIS ITEM SHALL CONSIST OF FURNISHING, FABRICATING, INSTALLING, CLEANING AND PAINTING STRUCTURAL STEEL EXPANSION JOINTS WITH ELASTOMERIC STRIP SEALS PER DRAWING EXJ-4-87.

DURING INSTALLATION OF THE ARMOR FOR THE SUPERSTRUCTURE SIDE OF THE EXPANSION JOINT SEAL, THE SEATING OF GIRDERS ON BEARINGS SHALL BE CAREFULLY OBSERVED TO ASSURE THAT POSITIVE BEARING IS MAINTAINED. PROPER VERTICAL FIT OF THE ARMOR ON THE BEAMS SHALL BE ACHIEVED BY POSITIONING OF BEVEL FILL PLATES RATHER THAN BY CLAMPING FORCE.

THE JOINT OPENING VARIES WITH THE AMBIENT TEMPERATURE AT THE TIME OF CONSTRUCTION AND SHALL BE SET AS FOLLOWS:

TEMPERATURE	JOINT OPENING
30° F	2 3/8"
40° F	2 5/16"
50° F	2 3/16"
60° F	2 1/16"
70° F	2"
80° F	1 7/8"
90° F	1 3/4"

A 4" JOINT SEAL SHALL BE FURNISHED BY ONE OF THE MANUFACTURES LISTED IN EXJ-4-87, OR AN APPROVED ALTERNATE, FOR USE IN THE EXPANSION JOINT.

ITEM SPECIAL - SEALING OF CONCRETE SURFACES, EPOXY

AN EPOXY SEALER SHALL BE APPLIED TO THE SURFACES SHOWN ON SHEETS 11/29, 12/29, 15/29, 16/29 AND 17/29.

SEE PROPOSAL NOTE FOR SEALER MATERIAL, SURFACE PREPARATION REQUIREMENTS, AND APPLICATION RATES AND PROCEDURES.

ITEM 513 - STRUCTURAL STEEL, AISC CATEGORY III, AS PER PLAN

SURFACE PREPARATION AND SHOP PRIME PAINTING SHALL BE IN ACCORDANCE WITH AND BE PAID FOR AS SPECIFIED IN THE PROPOSAL NOTE "PAINTING OF NEW STEEL, SYSTEM IZEU."

ITEM SPECIAL - SUPERPLASTICIZED CONCRETE, SUPERSTRUCTURE

THE HIGH MOLECULAR WEIGHT METHACRYLATE (HMWM) SPECIFIED IN THE PROPOSAL NOTE SHALL BE APPLIED TO CONCRETE SURFACES WITHIN 1'-0" OF THE JOINTS DESIGNATED IN THE PROPOSAL NOTE.

PROPOSED WORK:

THE WORK PROPOSED FOR THIS STRUCTURE SHALL BE ACCOMPLISHED IN THREE CONSTRUCTION PHASES AND IS COMPRISED OF, BUT NOT LIMITED TO THE FOLLOWING:

SEQUENCE I

1. COMPLETE ALL ITEMS OF WORK WHICH DO NOT REQUIRE PERMANENT LANE CLOSURES ON SR306. SEE SEQUENCE ONE ON SHEET 7.

SEQUENCE 2 - PHASE I

2. ERECT TEMPORARY BARRIERS AND MAINTAIN TRAFFIC ON THE LEFT SIDE OF THE EXISTING STRUCTURE.
3. INSTALL ALL NECESSARY SHEETING AND REMOVE THE RIGHT HALF OF THE EXISTING STRUCTURE TO THE LIMITS SHOWN ON SHEETS 7/29 AND 9/29.
4. CONSTRUCT THE RIGHT HALF OF THE PROPOSED STRUCTURE TO THE LIMITS SHOWN, WITH THE EXCEPTION OF THE ELASTOMERIC STRIP SEALS.

SEQUENCE 3


PHASE II

5. MOVE TEMPORARY BARRIERS TO RIGHT SIDE OF STRUCTURE AND MAINTAIN TRAFFIC ON THE RIGHT SIDE OF THE PROPOSED STRUCTURE.
6. PERFORM REMAINDER OF STRUCTURE REMOVAL AS PER PLAN.
7. CONSTRUCT THE LEFT HALF OF THE PROPOSED STRUCTURE TO THE LIMITS SHOWN, WITH THE EXCEPTION OF THE ELASTOMERIC STRIP SEALS.

SEQUENCE 3

PHASE III

8. INSTALL CROSS-FRAMES IN CENTER BAY.
9. PLACE REMAINDER OF CONCRETE DECK. (CLOSURE POUR)
10. INSTALL ELASTOMERIC STRIP SEALS.
11. REMOVE BARRIERS AND OPEN STRUCTURE TO FULL WIDTH TRAFFIC.

 CT Consultants, Inc. Engineers • Architects • Planners <small>Willoughby • Mentor • Columbus • North Canton • Youngstown</small>							4/29
GENERAL NOTES BRIDGE NO. LAK-306-0691 OVER STATE ROUTE 2 LAKE COUNTY							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
jea	jea	jea	J.P.R.	BJA	8/31/90		