

REFERENCES:

REFERENCE IS MADE TO THE FOLLOWING OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS: 843 PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR DATED 04-18-03

MATERIAL:

CONCRETE CLASS S - UNIT STRESS 1500 psi
REINFORCING STEEL - ASTM A615, A616, A617, GRADE 60, UNIT STRESS 24 KSI
QUICK SETTING CONCRETE MORTAR, TYPE 1 OR 2, 705.21.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.5 AND 105.2. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

MAINTENANCE OF TRAFFIC:

TRAFFIC SHALL BE MAINTAINED. REFER TO ROADWAY PLAN FOR MAINTENANCE OF TRAFFIC ON THE BRIDGE DURING CONSTRUCTION.

REMOVALS:

THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNT CHISEL TYPE TOOLS. FOR REMOVALS OVER BRIDGE MEMBERS (STEEL BEAMS) THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OF THE BRIDGE DECK SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING STEEL MEMBERS.

THE CONTRACTOR SHALL MILL THE ENTIRE SURFACE OF THE BRIDGE DECK TO REMOVE THE EXISTING 1-1/2 INCH ASPHALT OVERLAY TO THE ORIGINAL DECK SURFACE.

NO PART OF THE STRUCTURE SHALL BE SUBJECTED TO UNIT STRESSES THAT EXCEED 136.5% OF ALLOWABLE UNIT STRESSES AS DEFINED IN THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DUE TO EITHER DEMOLITION OR CONSTRUCTION METHODS, OR TO THE USE OR MOVEMENT OR DEMOLITION OR CONSTRUCTION EQUIPMENT ON OR ACROSS THE STRUCTURE. SUBMIT STRUCTURAL ANALYSIS COMPUTATIONS, BY AN OHIO REGISTERED PROFESSIONAL ENGINEER, SHOWING THE ALLOWABLE STRESSES AND THE MAXIMUM STRESSES PRODUCED BY THE REMOVAL METHODS OR EQUIPMENT TO THE DIRECTOR AT LEAST 20 DAYS BEFORE CONSTRUCTION BEGINS.

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL IN PLACE. TYPE B PATCHING SHALL BE USED TO REPAIR THE BRIDGE DECK, AS PER PROPOSAL NOTE 512.

PROPOSED WORK ON DECK SLAB:

THIS WORK CONSISTS OF REPAIRING OF CONCRETE DECKS INCLUDING PARAPETS AND DECK JOINTS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REPAIR TO PROTECT THE EXISTING STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED.

PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC UNDER THE STRUCTURE TO THE DIRECTOR AT LEAST 30 DAYS BEFORE CONSTRUCTION BEGINS. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION.

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN:

DESCRIPTION: THIS WORK CONSISTS OF FACING BRUSH CURB STYLE PARAPETS, USING CAST IN PLACE CONCRETE, AS SHOWN ON SHEET 42.

REMOVAL: CAREFULLY REMOVE THE EXISTING CONCRETE BRUSH CURB TO THE LIMITS SHOWN. REMOVE ALL LOOSE OR UNSOUND CONCRETE. REMOVE SOUND CONCRETE, AS NECESSARY, TO OBTAIN A MINIMUM 4 INCH THICKNESS OF NEW CONCRETE.

DOWEL HOLES AND REINFORCING STEEL: DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING EPOXY GROUT, 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. THE DEPARTMENT WILL PAY FOR ALL REINFORCING STEEL, DOWEL HOLES AND GROUTING UNDER ITEM 519.

SURFACE PREPARATION: THOROUGHLY CLEAN THE PARAPET SURFACE IN CONTACT WITH THE REFACING WITH DETERGENT TO REMOVE SURFACE CONTAMINANTS. AFTER DETERGENT CLEANING AND WITHIN 24 HOURS OF PLACING CONCRETE, BLAST CLEAN AND AIR BROOM OR POWER SWEEP ALL SURFACES IN CONTACT WITH THE REFACING TO REMOVE ALL SPALLS, LAITANCE, AND OTHER CONTAMINANTS DETRIMENTAL TO THE ACHIEVEMENT OF AN ADEQUATE BOND. ACCEPTABLE BLAST CLEANING METHODS ARE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN WATER, ABRASIVE BLASTING WITH CONTAINMENT OR VACUUM ABRASIVE BLASTING. USE HAND TOOLS AS NECESSARY TO REMOVE SCALE FROM ANY EXPOSED REINFORCING STEEL.

CONTROL JOINTS: SAWCUT 1/4 INCH DEEP CONTROL JOINTS ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE. PLACE THE JOINT SAW CUTS AT THE SAME LOCATION AS THE EXISTING DEFLECTION JOINTS. USE AN EDGE GUIDE, FENCE OR JIG TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 1/4 INCH. SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF ONE INCH WITH POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S. LEAVE THE BOTTOM ONE-HALF INCH OF BOTH THE INSIDE AND OUTSIDE FACES OF THE PARAPET UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THIS ITEM IN SQUARE FEET BY THE ACTUAL PLAN AREA OF THE CURB BETWEEN THE ENDS OF THE EXISTING CONCRETE PARAPET.

BASIS OF PAYMENT: PAYMENT FOR THIS ITEM INCLUDES ALL COSTS OF REMOVAL, DOWEL HOLES, REINFORCING STEEL, CONCRETE, SHRINKAGE CONTROL JOINTS, EPOXY INJECTION AND INSPECTION PLATFORMS. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT BID PRICE FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

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