

PROPOSED WORK

IN GENERAL THE PROPOSED WORK CONSISTS OF REMOVING THE EXISTING LATEX WEARING SURFACE OVERLAY WITH HYDRO-DEMOLITION, PATCHING VARIABLE DEPTH WITH MICROSILICA MODIFIED CONCRETE AND PLACING A NEW 2 1/4" MICROSILICA MODIFIED CONCRETE OVERLAY ON THE BRIDGE, INSTALLING A CATHODIC PROTECTION SYSTEM; REMOVING THE EXPANSION JOINT RAISINGS AND INSTALLING NEW RAISINGS WITH A STRIP SEAL; PATCHING THE CURBS AND SUBSTRUCTURE CONCRETE; EPOXY INJECTION OF THE DECK FLOOR; SEALING CONCRETE SURFACES REPLACING THE FENCE FABRIC ON THE NORTH BRIDGE PARAPET, PLANNING AND RESURFACING PORTIONS OF THE APPROACH SLAB.

MAINTENANCE OF TRAFFIC

ONE SIDEWALK MUST BE KEPT OPEN AND ONE LANE OF TRAVEL MUST BE MAINTAINED FOR EACH DIRECTION OF TRAVEL THROUGHOUT THE CONSTRUCTION, NECESSITATING THE WORK BE COMPLETED IN STAGES. THE MAJOR ITEMS OF WORK REQUIRING STAGED CONSTRUCTION ARE DESCRIBED BELOW FOR INFORMATION. SOME OF THE PROJECT ITEMS OF WORK MAY BE PERFORMED AT THE CONTRACTOR'S OWN SCHEDULE WITHIN THE TIME FRAME. HOWEVER, ALL WORK MUST BE COORDINATED WITHIN THE MAINTENANCE OF TRAFFIC PLANS AND SAFETY REQUIREMENTS.

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/OR 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 102.05, 105.02, AND 863.07.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

EXISTING STRUCTURE PLANS:

THE ORIGINAL DESIGN PLANS MAY BE EXAMINED BY PROSPECTIVE BIDDERS AT THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 12 OFFICE, 5500 TRANSPORTATION BLVD., GARFIELD HEIGHTS, OHIO 44125 THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE DRAWINGS.

CONSTRUCTION SEQUENCE

STAGE 1 CONSTRUCTION

1. INSTALL TEMPORARY TRAFFIC CONTROL DEVICES
2. DIVERT TRAFFIC AND INSTALL PHASE ONE TRAFFIC CONTROL DEVICES
3. SAWCUT AND REMOVE WEARING SURFACE OF DECK BY HYDRODEMOLITION
4. PLACE VARIABLE DEPTH MICROSILICA MODIFIED CONCRETE
5. INSTALL CATHODIC PROTECTION SYSTEM
6. INSTALL 2 1/4" MICROSILICA MODIFIED CONCRETE OVERLAY
7. INSTALL STRIP SEAL GLAND AND TEMPORARY ASPHALT RAMP PAVING
8. REMOVE PHASE ONE TRAFFIC CONTROL DEVICES

STAGE 2 CONSTRUCTION

1. DIVERT TRAFFIC ONTO NEW WEARING SURFACE AND INSTALL PHASE TWO TRAFFIC CONTROL DEVICES
2. SAWCUT AND REMOVE WEARING SURFACE OF DECK BY HYDRODEMOLITION
3. PLACE VARIABLE DEPTH MICROSILICA MODIFIED CONCRETE
4. INSTALL CATHODIC PROTECTION SYSTEM
5. INSTALL 2 1/4" MICROSILICA MODIFIED CONCRETE OVERLAY
6. INSTALL STRIP SEAL GLAND AND ASPHALT PAVEMENT BUTT JOINTS
7. REMOVE PHASE TWO TRAFFIC CONTROL DEVICES
8. REPLACE PERMANENT TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS

ITEM SPECIAL - SEALING OF CONCRETE SURFACES WITH TINTED SILANE

THIS ITEM OF WORK SHALL BE USED TO SEAL THE CONCRETE SIDEWALKS OF THE BRIDGE DECK AND APPROACHES AS PER ODOT PROPOSAL NOTE 516. INCLUDED IN THIS WORK IS THE REMOVAL OF THE EXISTING SIDEWALK SEALER. THE SILANE SEALER SHALL CONFORM TO PROPOSAL NOTE 516 AND BE TINTED TO MATCH FEDERAL COLOR STANDARD NO. 36492, GRAY.

PAYMENT SHALL BE MADE AT THE CONTRACT PRICE BID FOR ITEM SPECIAL - SEALING OF CONCRETE SURFACES WITH TINTED SILANE. THIS PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS AND TO THE SATISFACTION OF THE ENGINEER.

ITEM SPECIAL - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

THIS ITEM SHALL CONSIST OF THE NECESSARY LABOR, MATERIALS, AND EQUIPMENT TO PREPARE AND TREAT CONCRETE SURFACES WITH AN APPROVED EPOXY-URETHANE SEALER AS PER ODOT PROPOSAL NOTE 516. THE COLOR OF THE URETHANE TOP COAT SHALL BE FEDERAL COLOR STANDARD NO. 36492, GRAY.

AREAS TO BE SEALED INCLUDE BUT ARE NOT LIMITED TO THE AREAS PATCHED WITH ITEM SPECIAL - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR AND THE SUBSTRUCTURE CONCRETE.

PAYMENT SHALL BE MADE AT THE CONTRACT PRICE BID FOR ITEM SPECIAL - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). THIS PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS AND TO THE SATISFACTION OF THE ENGINEER.

ITEM SPECIAL - URETHANE TOP COAT SEALER

THIS ITEM SHALL CONSIST OF THE NECESSARY LABOR, MATERIALS, AND EQUIPMENT TO PREPARE AND TREAT EPOXY-SEALED CONCRETE SURFACES WITH AN APPROVED URETHANE TOPCOAT IN ACCORDANCE WITH ODOT PROPOSAL NOTE 516 AND THESE SPECIFICATIONS. THE COLOR SHALL BE FEDERAL COLOR STANDARD NO. 36492, GRAY.

THE AREAS TO BE SEALED INCLUDE THE EPOXY COATED SURFACES OF THE DECK EDGES, CURBS, AND PARAPETS.

SURFACES TO WHICH TOPCOATS ARE TO BE APPLIED SHALL BE DRY AND FREE FROM DUST, DIRT, OIL, WAX, CURING COMPOUNDS, EFFLORESCENCE, LAITANCE AND OTHER FOREIGN MATERIALS EXCEPT THE EXISTING EPOXY SEALER.

THE REQUIRED CLEANING METHOD SHALL BE A HIGH PRESSURE WATER BLAST (1000 PSI OR GREATER) FOLLOWED BY A LIGHT SWEEP ABRASIVE BLAST TO REMOVE FOREIGN SUBSTANCES AND TO ROUGHEN THE EXISTING SEALER WITHOUT REMOVING THE EXISTING SEALER. MILDEW SHALL BE TREATED WITH A HYPOCHLORITE SOLUTION TO KILL SPORES. THE ABRASIVE BLAST SHALL BE FOLLOWED BY AN AIR BLAST. BLASTING ABRASIVES CONTAINING MORE THAN 1% FREE SILICA SHALL NOT BE ALLOWED.

THE URETHANE TOPCOAT SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS AND PROPOSAL NOTE 516 WITHIN FORTY-EIGHT (48) HOURS FOLLOWING SURFACE PREPARATION. APPLICATION SHALL BE BRUSH OR ROLLER, AS DIRECTED BY THE ENGINEER, TO THE AREAS SHOWN IN THE PLANS.

THE URETHANE TOPCOAT SHALL BE PRE-QUALIFIED AND APPLIED UNDER THE RELEVANT PROVISIONS OF THE ODOT PROPOSAL NOTE 516-93.

PAYMENT SHALL BE MADE AT THE CONTRACT PRICE BID FOR ITEM SPECIAL - URETHANE TOP COAT SEALER. THIS PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS AND TO THE SATISFACTION OF THE ENGINEER.

ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC: ELASTOMERIC STRIP SEAL

INCLUDED IN THIS ITEM OF WORK IS THE REMOVAL OF THE EXISTING EXPANSION JOINT BAR RAISINGS AND INSTALLATION OF THE RETAINERS, BACKUP BAR AND GLAND OF THE PROPOSED ELASTOMERIC STRIP SEAL.

THE RETAINER SHALL BE A LOW PROFILE RETAINER PRODUCED FROM A SOLID SHAPE EXTRUSION, A HOT ROLLED SOLID SHAPE OR SOLID SHAPE MACHINED FROM A SOLID BAR OR STEEL. STEEL RETAINERS MANUFACTURED BY THE BENDING OF A PLATE OR WELDING OF PIECES TOGETHER ARE NOT ACCEPTABLE. THE INTERNAL DIMENSIONS OF THE STEEL RETAINER SHALL MATCH THE MANUFACTURER'S REQUIREMENTS FOR POSITIVE ANCHORAGE FOR THE GLAND. ANY DEFECTS IN THE STEEL RETAINER THAT COULD CAUSE DAMAGE TO THE GLAND SHALL BE CORRECTED BEFORE THE GLAND IS INSTALLED.

THE INSTALLATION OF THE ELASTOMERIC STRIP SEAL SHALL BE AS SHOWN ON SHEET 6/12 AND ON THE ODOT STANDARD DRAWING EXJ-4-87.

DUE TO THE INABILITY TO ASCERTAIN THE CONDITION OF THE ORIGINAL EXPANSION JOINT ARMOR THE CONTRACTOR SHALL BE PREPARED TO REPAIR OR REPLACE PARTS OF THE ORIGINAL EXPANSION JOINT STEEL IN ORDER TO CORRECTLY INSTALL THE PROPOSED RETAINERS AND BACKUP BAR. THE CONTRACTOR IS DIRECTED TO ADJUST HIS BID ACCORDINGLY.

PAYMENT SHALL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC: ELASTOMERIC STRIP SEAL. THIS PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS AND TO THE SATISFACTION OF THE ENGINEER.

ITEM SPECIAL - PATCHING CONCRETE STRUCTURE, MISC: PATCHING CURBS

THIS ITEM SHALL CONSIST OF SOUNDING THE CONCRETE CURBS, OUTLINING DELAMINATED OR DETERIORATED AREAS, AND PATCHING THE AREAS PER CMS 519.03 AND 519.04 USING CMS 705.21 TYPE 1 MATERIAL, WITH THE FOLLOWING EXCEPTION: IN ADDITION TO THE REQUIREMENTS OF 705.21, THE AGGREGATE SHALL BE CRUSHED LIMESTONE, WASHED AND DRIED.

MEASUREMENT SHALL BE THE LENGTH OF PATCHES IN LINEAL FOOT, TAKEN ALONG THE RADIAL EDGE OF THE CURB.

PAYMENT SHALL BE MADE AT THE CONTRACT PRICE BID FOR ITEM SPECIAL - PATCHING CONCRETE STRUCTURE, MISC: PATCHING CURBS. THIS PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS AND TO THE SATISFACTION OF THE ENGINEER.

ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

THIS ITEM CONSIST OF THE REMOVAL OF ALL LOOSE AND DISINTEGRATED CONCRETE, PREPARATION OF THE SURFACE, AND THE MIXING, PLACING, FINISHING AND CURING OF THE PATCHES AS DIRECTED BY THE ENGINEER AND PER ODOT SUPPLEMENTAL SPECIFICATION 843. THE WORK SHALL BE PERFORMED UPON CONCRETE BRIDGE COMPONENTS IN ACCORDANCE WITH THESE SPECIFICATIONS, AND IN REASONABLY CLOSE CONFORMANCE WITH THE PLANS AND THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. INCLUDED ARE ANY EXCAVATION AND OR SUBSEQUENT EMBANKMENT NECESSARY TO REPAIR APPARENT CONCRETE DETERIORATION AT THE GROUND LEVEL. ALSO INCLUDED IS THE SOUNDING AND MARKING OF REPAIR AREAS BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER.

AREAS TO BE PATCHED INCLUDE THE PIER COLUMNS AND CAPS, ABUTMENTS, WINGWALLS, DECK EDGES, PARAPETS AND SIDEWALKS. (CURBS ARE NOT TO BE INCLUDED IN THIS ITEM OF WORK.) FORMS WILL BE REQUIRED FOR REPAIR OF VERTICAL SURFACES AND SHALL MEET THE APPROVAL OF THE ENGINEER.

INSPECTION AND SOUNDING OF CONCRETE PATCHED: THE CONTRACTOR SHALL LEAVE HIS LADDERS, PLATFORMS OR SCAFFOLDS IN PLACE FOR A SUFFICIENT LENGTH OF TIME AND IN SUCH A MANNER AS TO PERMIT THE ENGINEER TO SOUND OR INSPECT THE CONCRETE.

ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR, CONTINUED

BASIS OF PAYMENT: PAYMENT WILL BE MADE AT THE CONTRACT PRICE BID FOR: ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR. THIS PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS AND TO THE SATISFACTION OF THE ENGINEER.

ITEM 530 - STRUCTURES MISC: REPLACEMENT PULL BOX COVER PLATE

THIS ITEM SHALL CONSIST OF REMOVING THE EXISTING ELECTRICAL PULL BOX COVER AND PORTIONS OF THE SURROUNDING CONCRETE IN THE SIDEWALKS AND INSTALLING A NEW COVER AS DETAILED IN THESE NOTES AND ON SHEET 25/25 OF THESE PLANS.

MATERIALS: THE STEEL SHALL MEET ODOT CMS 513, BE GALVANIZED AS PER 711.02 AND THE SS MACHINE SCREWS MEET CMS 730.10. THE GROUT FOR THE ANCHORS MUST FULLY ENCASE THE ANCHOR AND BE FLUSH OR SLIGHTLY ABOVE THE SURROUNDING CONCRETE. IT SHALL MEET CMS 705.20. MORTAR, IF NEEDED TO FILL OR LEVEL THE CONCRETE DEPRESSION FOR THE PROPER SEATING OF THE STEEL COVER PLATE SHALL BE CMS 705.21, TYPE 1.

PAYMENT SHALL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 530 - STRUCTURES MISC: REPLACEMENT PULL BOX COVER PLATE. THIS PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS AND TO THE SATISFACTION OF THE ENGINEER.

ITEM SPECIAL - LOW PRESSURE EPOXY INJECTING OF DELAMINATED CONCRETE - DECK BOTTOM SURFACE

DESCRIPTION: THIS WORK SHALL CONSIST OF LOW-PRESSURE EPOXY INJECTION OF DELAMINATED CONCRETE OF BRIDGE DECKS IN ACCORDANCE WITH THESE SPECIFICATIONS, IN REASONABLY CLOSE CONFORMANCE WITH THE PLANS AND MANUFACTURER'S RECOMMENDATIONS AS DIRECTED BY THE ENGINEER. ALL REMOVAL OPERATIONS ON THE DECK MUST BE COMPLETE BEFORE THE BOTTOM CAN BE INJECTED.

MATERIALS: THE INJECTION RESIN SHALL BE: THERMAL-CHEM INJECTION RESIN PRODUCT NO. 2, POLY-CARB MARK-10 INJECTION RESIN, DURAL CRETE LV OR SIKADUR 52 INJECTION RESIN.

BONDER SHALL BE: THERMAL-CHEM BONDER PRODUCT NO. 4, POLY-CARB MARK 8 NON-SAG EPOXY BONDER, DURAL CRETE GEL OR SIKADUR HI-MOD GEL (SIKASTIX 31).

ALL MATERIALS SHALL BE STORED AND INCORPORATED IN THE WORK AS RECOMMENDED BY THE MANUFACTURER. A MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT AT JOB SITE UNTIL SUCH TIME AS HE AND THE ENGINEER ARE SATISFIED THAT THE CONTRACTOR IS QUALIFIED IN ALL ASPECTS OF EPOXY PRESSURE GROUTING.

PREPARATION: PORTS SHALL BE INSTALLED IN CLEAN HOLES VACUUM-DRILLED TO PREVENT FINES FROM BEING IMPACTED INTO THE CRACK. THE HOLES SHALL BE 6 INCHES DEEP FOR DECK WEARING SURFACE INJECTION AND 3 INCHES FOR DECK BOTTOM SURFACE INJECTION SO THAT THE EPOXY WILL PENETRATE THE HOLLOW PLANE. THE FIRST PORT SHALL BE LOCATED NEAR THE EDGE OF THE OUTLINED UNSOUND AREA. ADDITIONAL PORTS SHALL BE PLACED AT DISTANCES SLIGHTLY GREATER THAN THE DISTANCE FROM THE FIRST PORT TO THE VOID EDGE. PORT PLACEMENT MUST ENSURE THAT THE GROUT FACE REACHES THE EDGE OF THE VOID BEFORE REACHING THE NEXT PORT. BONDER SHALL BE USED ONLY TO PREVENT EMISSION OF THE INJECTION RESIN BY SEALING THE VISIBLE CRACKS AND INSTALLING THE PORTS AND SHALL NOT BE INDISCRIMINATELY TROWELLED ON THE DECK SURFACES. THE BONDER SHALL CURE 24 HOURS PRIOR TO INJECTION OF EPOXY RESIN.

(CONTINUED ON NEXT SHEET)

BURGESS & NIPLE

DESIGNED DCF MAF	REVIEWED DCF MAF	DATE 3-1-00	STRUCTURE FILE NUMBER 430213
------------------------	------------------------	----------------	---------------------------------

STRUCTURE NOTES, SHEET 1

BRIDGE NO. LAK-20-1434
US ROUTE 20 OVER STATE ROUTE 44

LAK-20-14.34
LAK-44-5.10

2 / 12

11
25