

STRUCTURE NOTES

GENERAL DESIGN DATA

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC5 - COMPRESSIVE STRENGTH 4.5 KSI (PATCHING)
REINFORCING STEEL - ASTM A615, OR A996, MINIMUM YIELD STRENGTH 60 KSI

PLACEMENT OF ADJACENT CONCRETE POURS

DO NOT PLACE ADJACENT CONCRETE POURS SIMULTANEOUSLY. ALLOW SUFFICIENT TIME FOR THE FIRST POUR TO CURE TO THE POINT FORMS CAN BE STRIPPED WITHOUT DETRIMENT TO THE POUR BEFORE PLACING THE SECOND POUR. ALL CONSTRUCTION JOINTS NOT SPECIFICALLY LABELED IN THE PLANS AS OPTIONAL ARE TO BE PERFORMED AS DETAILED ABOVE. SHOULD THE CONTRACTOR FAIL TO PERFORM THE CONSTRUCTION JOINT AS DESCRIBED, THE ENGINEER WILL DIRECT THE CONTRACTOR TO REMOVE THE INADEQUATELY PLACED CONCRETE AND REPLACE IT AS DESCRIBED ABOVE AT NO COST TO THE DEPARTMENT. PAYMENT WILL NOT BE MADE FOR INADEQUATELY PLACED CONCRETE NOT REPLACED.

ALL LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS NEEDED TO PERFORM THE DESCRIBED WORK IS TO BE CONSIDERED INCIDENTAL TO THE RESPECTIVE CONCRETE ITEM AND WILL BE PAID FOR UNDER THAT CONTRACT BID PRICE.

ITEM 202. PORTIONS OF STRUCTURE REMOVED. AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. PRIOR TO CONCRETE PLACEMENT. ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER CUBIC YARD OF ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

ITEM 202 - REMOVAL MISC.: JOINT SEAL

THIS ITEM SHALL BE USED TO REMOVE ANY JOINT SEAL AND THE EXISTING ELASTOMERIC COMPRESSION SEAL GLAND LOCATED BETWEEN THE APPROACH SLAB AND THE DECK OR BACKWALL.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER FOOT FOR THE ABOVE ITEM, WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING

THE CONTRACTOR SHALL PREPARE AND PROVIDE PLANS TO SUPPORT THE SIDES OF EXCAVATIONS IN ACCORDANCE WITH C&M 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING.

ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE (BRIDGE DECK REPAIR), AS PER PLAN

THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLAN TO REPAIR DAMAGED CORNERS OF THE CONCRETE DECK.

THE CONCRETE SHALL BE CLASS QC2 WITH THE COARSE AGGREGATE BEING LIMESTONE.

WHEN MARKING THE EXTENTS OF THESE REPAIRS, CARE SHOULD BE TAKEN TO STAY 6 INCHES AWAY FROM THE EXISTING GUARDRAIL POST HARDWARE.

ALL EXISTING SURFACES TO WHICH THE CONCRETE IS TO BOND SHALL BE CLEANED BY ABRASIVE BLASTING WHERE POSSIBLE. THESE SURFACES SHALL BE MADE FREE OF SPALLS, LAITANCE, PAINT, RUST AND OTHER CONTAMINANTS DETRIMENTAL TO ACHIEVING AN ADEQUATE BOND.

AFTER THE REMOVAL OF EXISTING CONCRETE AT THESE LOCATIONS, DOWELS SHALL BE PLACED INTO THE ADJACENT CONCRETE SURFACES WITH A MINIMUM OF 6 INCHES OF COVER ON ALL VERTICAL SURFACES. THIS WORK SHALL BE CONSIDERED INCIDENTAL AND PAYMENT SHALL BE INCLUDED WITH THIS ITEM.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR THE ABOVE WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 511 - CLASS QC1 CONCRETE, PIER, AS PER PLAN

THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLAN.

THE CONCRETE SHALL BE CLASS QC1 WITH THE COARSE AGGREGATE BEING #8 LIMESTONE.

THE USE OF A PENCIL VIBRATOR IS REQUIRED FOR EACH PROPOSED ENCASEMENT.

THE COST OF THE PROPOSED 24" POLYETHYLENE, 707.33 OR PVC PIPE, 707.42, SHALL BE INCLUDED IN THIS ITEM.

THE 24" PIPE SHALL BE REMOVED PRIOR TO RE-WATERING IN ORDER TO INSPECT AND REPAIR THE PIER ENCASEMENTS IF EXCESSIVE VOIDS ARE PRESENT.

ALL EXISTING SURFACES TO WHICH THE CONCRETE IS TO BOND SHALL BE CLEANED BY ABRASIVE BLASTING. THESE SURFACES SHALL BE MADE FREE OF SPALLS, LAITANCE, PAINT, RUST AND OTHER CONTAMINANTS DETRIMENTAL TO ACHIEVING AN ADEQUATE BOND.

ALL EXCAVATION REQUIRED TO PERFORM THE ABOVE WORK, INCLUDING THE REMOVAL OF EXISTING PIER ENCASEMENTS SHALL BE INCLUDED IN THIS ITEM.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR THE ABOVE WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 511 - CLASS QC1 CONCRETE, ABUTMENT, AS PER PLAN

THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLAN TO FILL EXISTING VOIDS UNDERNEATH ABUTMENT FOOTINGS.

THE CONCRETE SHALL BE CLASS QC1 WITH THE COARSE AGGREGATE BEING LIMESTONE.

ALL EXISTING SURFACES TO WHICH THE CONCRETE IS TO BOND SHALL BE CLEANED BY ABRASIVE BLASTING WHERE POSSIBLE. THESE SURFACES SHALL BE MADE FREE OF SPALLS, LAITANCE, PAINT, RUST AND OTHER CONTAMINANTS DETRIMENTAL TO ACHIEVING AN ADEQUATE BOND.

ALL EXCAVATION REQUIRED TO PERFORM THE ABOVE WORK SHALL BE INCLUDED IN THIS ITEM.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR THE ABOVE WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 514 - FIELD PAINTING, MISC.: FIELD PAINTING OF STEEL PILES

WORK UNDER THIS ITEM INCLUDES THE SURFACE PREPARATION AND PAINTING OF THE EXISTING STEEL PILES DESIGNATED FOR PAINTING IN THE PLANS

THE SURFACE PREPARATION FOR THE EXPOSED SURFACES OF THE EXISTING STEEL PILES INCLUDES CLEANING BY ABRASIVE BLASTING PER SSPC-SP 10. THESE SURFACES SHALL BE MADE FREE OF SPALLS, LAITANCE, PAINT, RUST AND OTHER CONTAMINANTS DETRIMENTAL TO ACHIEVING AN ADEQUATE BOND.

THE PAINT SHALL BE AN ALUMINUM-FILLED EPOXY MASTIC PRIMER, SUCH AS "CARBOMASTIC 15", AS MANUFACTURED BY CARBOLINE COMPANY; "EPOXY MASTIC ALUMINUM II", AS MANUFACTURED BY THE SHERWIN-WILLIAMS COMPANY; OR AN APPROVED EQUIVALENT. THE ESTIMATED BUILD-UP OF THE EPOXY MASTIC IS TO BE 8-10 MILS.

THE AREAS TO BE PAINTED ARE DEFINED IN THE PLANS AND ARE GENERALLY DESCRIBED AS THE EXPOSED STEEL PILE SURFACES THAT WILL NOT BE ENCASED WITH CONCRETE.

THIS ITEM SHALL BE PERFORMED AFTER THE ENCASEMENT WORK IS COMPLETED.

ADDITIONAL COSTS ASSOCIATED WITH APPLICATION VARIATIONS, SUCH AS BUT NOT LIMITED TO HEATED ENCLOSURES OR SUPPLEMENTAL ADDITIVES DUE TO TEMPERATURE RESTRICTIONS REQUIRED PER THE MANUFACTURES SPECIFICATIONS SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM.

FOR WORK AT HUR-99-3.68, THE CMS 514.06 DATE RESTRICTION REQUIREMENTS SHALL BE WAIVED TO ALLOW APPLICATION AFTER OCTOBER 31.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE FOOT WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

MINOR EXCAVATION MAY BE REQUIRED TO ACCESS REPAIR AREAS AT ABUTMENTS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THIS PAY ITEM.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE FOOT WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

CALCULATED
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STRUCTURE NOTES

D03-BH-FY 2020-(B)

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