

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING:

EXJ-4-87 REVISED 1-20-23
TST-1-99 REVISED 1-15-21

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

844 DATED 4-20-2018

DESIGN DATA

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

CONCRETE REINFORCEMENT:
EPOXY COATED STEEL REINFORCEMENT - MINIMUM YIELD STRENGTH 60-KSI (ABUTMENTS)

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN AND ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. 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 DEPARTMENT WILL NOT PERMIT THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS. DO NOT BEGIN WORK UNTIL THE ENGINEER ACCEPTS THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING CONCRETE REINFORCEMENT 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 CONCRETE REINFORCEMENT THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

CUT LINE JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING CONCRETE REINFORCEMENT, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. 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 STEEL REINFORCEMENT 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.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. THE DEPARTMENT WILL NOT PERMIT HYDRAULIC HOE-RAM TYPE HAMMERS. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18-IN LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH CONCRETE REINFORCEMENT THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN AND ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

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 C&MS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

ITEM 509 - CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT, AS PER PLAN

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCEMENT BY THE NUMBER OF POUNDS ACCEPTED IN PLACE. REPLACE ALL EXISTING STEEL REINFORCEMENT BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW CONCRETE REINFORCEMENT OF THE SAME SIZE, COATING, AND MATERIAL AT NO COST TO THE DEPARTMENT.

ITEM 519 - PATCHING CONCRETE BRIDGE DECK, TYPE B

THIS ITEM OF WORK SHALL BE IN ACCORDANCE WITH PROPOSAL NOTE 512 - ITEM SPECIAL PATCHING CONCRETE BRIDGE DECKS, WITH THE FOLLOWING REVISIONS: REMOVE AND PATCH ONLY UNSOUND PROBLEM AREAS MARKED OUT BY THE ENGINEER, INCLUDING EXISTING BRIDGE JOINTS, BACKWALLS AND APPROACH SLABS; THE ENTIRE CONCRETE SURFACE IS NOT TO BE SOUNDED TO REPAIR ALL POTENTIAL UNSOUND AREAS.

THIS ITEM APPLIES ON THE FOLLOWING STRUCTURES:

LOG-117-0364

ITEM 530 - STRUCTURES, MISC.: ABUTMENT REFACING WITH GALVANIC ANODE PROTECTION

IN AREAS DESIGNATED IN THE PLANS, PERFORM ALL WORK AS DESCRIBED IN SS844 WITH REVISIONS AS DESCRIBED IN THIS NOTE AND WITH EXCEPTION THAT THE ENTIRE ABUTMENT FACE SHALL BE EXTENDED 9 INCHES AND AS DETAILED IN THE PLANS. THE FOLLOWING NOTE ARE REVISIONS TO SS844 BY SECTION.

844.01 DESCRIPTION

INSTALL CONCRETE PATCHES USING GALVANIC ANODES PER SUPPLEMENTAL SPECIFICATION 844.

844.02 MATERIALS

CONCRETE USED SHALL BE QC SCC.

844.03 CLEANING AND REPAIR OF REINFORCING STEEL

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.

844.04 GALVANIC ANODE INSTALLATION

INSTALL ANODE UNITS AND REPAIR MATERIAL IMMEDIATELY FOLLOWING PREPARATION AND CLEANING OF STEEL REINFORCEMENT. REPAIR MATERIAL SHALL BE PLACED NO LATER THAN ONE (1) WEEK AFTER CONCRETE REMOVAL UNLESS APPROVED BY THE ENGINEER. GALVANIC ANODES SHALL BE INSTALLED IN THE LOCATIONS AND SPACING AS SPECIFIED IN THE PLANS. IN NO CASE, SHALL THE SPACING EXCEED 18 INCHES. THE CONTRACTOR SHALL PERFORM HIS WORK AS TO NOT DAMAGE THE EMBEDDED ANODES OR CREATE ANY AIR VOIDS AROUND THE EMBEDDED ANODES WHILE SETTING FORMWORK OR PLACING CONCRETE.

844.06 QUALITY CONTROL

THE PROPOSED FORM SYSTEM MUST BE SUBMITTED, AND ACCEPTED BY THE PROJECT ENGINEER PRIOR TO THE INSTALLATION OF ANY FORMWORK. THE FORM SYSTEM SHALL PROVIDE ENOUGH HEAD PRESSURE TO ENSURE THE PATCH IS FULLY CONSOLIDATED AND NULL OF VOIDS. THE FORM SYSTEM SHALL INCORPORATE VENTS ALONG THE TOP OF THE PATCH TO ALLOW ENTRAPPED AIR TO ESCAPE DURING CONCRETE PLACEMENT. THE FORM SYSTEM SHALL INCORPORATE A GATE/VALVE SYSTEM CAPABLE OF CONTAINING THE SELF CONSOLIDATING CONCRETE ONCE CONCRETE PLACEMENT IS COMPLETE.

844.08 BASIS OF PAYMENT

PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS, INCLUDING REMOVAL OF UNSOUND CONCRETE AND DETAILED DRAINS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 530 STRUCTURES, MISC.: ABUTMENT REFACING WITH GALVANIC ANODE PROTECTION, AS PER PLAN. DOWEL HOLES AND REINFORCING STEEL SHALL BE PAID FOR SEPARATELY.

ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN

844.01 DESCRIPTION

INSTALL CONCRETE PATCHES USING GALVANIC ANODES PER SUPPLEMENTAL SPECIFICATION 844 EXCEPT AS NOTED BELOW. ALL CONCRETE PATCHES SHALL BE PLACED TO THE EXISTING SURFACE UNLESS OTHERWISE DETAILED IN THE PLANS.

844.02 MATERIALS

CONCRETE USED SHALL BE QC SCC PER C&MS 499, 511. ALL OTHER REQUIREMENTS LISTED IN SS844.02 APPLY.

844.04 GALVANIC ANODE INSTALLATION

INSTALL ANODE UNITS AND REPAIR MATERIAL IMMEDIATELY FOLLOWING PREPARATION AND CLEANING OF STEEL REINFORCEMENT. REMOVE COATINGS ONLY AS NECESSARY TO ENSURE THE ANODE IS TIED DIRECTLY TO UNCOATED REINFORCING STEEL. REPAIR MATERIAL SHALL BE PLACED NO LATER THAN ONE (1) WEEK AFTER CONCRETE REMOVAL UNLESS APPROVED BY THE ENGINEER. GALVANIC ANODES SHALL BE INSTALLED IN THE LOCATIONS AND SPACING AS SPECIFIED IN THE PLANS. IN NO CASE, SHALL THE SPACING EXCEED 18 INCHES. THE CONTRACTOR SHALL PERFORM HIS WORK AS TO NOT DAMAGE THE EMBEDDED ANODES OR CREATE ANY AIR VOIDS AROUND THE EMBEDDED ANODES WHILE SETTING FORMWORK OR PLACING CONCRETE.

844.06 QUALITY CONTROL

THE PROPOSED FORM SYSTEM MUST BE SUBMITTED, AND ACCEPTED BY THE PROJECT ENGINEER PRIOR TO THE INSTALLATION OF ANY FORMWORK. THE FORM SYSTEM SHALL NOT BE SUPPORTED THROUGH THE PATCH. THE FORM SYSTEM SHALL PROVIDE ENOUGH HEAD PRESSURE TO ENSURE THE PATCH IS FULLY CONSOLIDATED AND NULL OF VOIDS. THE FORM SYSTEM SHALL INCORPORATE VENTS ALONG THE TOP OF THE PATCH TO ALLOW ENTRAPPED AIR TO ESCAPE DURING CONCRETE PLACEMENT. THE FORM SYSTEM SHALL INCORPORATE A GATE/VALVE SYSTEM CAPABLE OF CONTAINING THE SELF CONSOLIDATING CONCRETE ONCE CONCRETE PLACEMENT IS COMPLETE.

844.08 BASIS OF PAYMENT

PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 844 CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN. PAYMENT WILL INCLUDE REMOVAL OF THE UNSOUND CONCRETE, FORMWORK, AND PLACEMENT OF THE QC SCC CONCRETE MIX.

ITEM 530 - STRUCTURES: PIER COLUMN SHIELDS

INSTALL PIER COLUMN SHIELDS AROUND EACH PIER COLUMN INDICATED IN THE PLANS. THE DIAMETER OF THE EXISTING PIER COLUMN IS 3'-0". PIER COLUMN SHIELDS ARE TO BE MODULAR HDPE PIER COLUMN SHIELD PANELS FROM POLY SALT ARMOR, LLC., <https://polysaltarmor.com>, OR APPROVED EQUAL. APPLICATIONS FOR APPROVED EQUAL SHALL BE REQUESTED IN WRITING TWO WEEKS BEFORE SUBMISSION OF PROJECT BIDS.

THE PANELS ARE TO BE TINTED SO THAT THE FINAL COLOR IS FEDERAL COLOR STANDARD NO. 17778 - LIGHT NEUTRAL AND ARE TO BE UNTEXTURED. PANELS ARE TO BE CONNECTED TOGETHER USING STAINLESS STEEL HARDWARE THROUGH NESTED FEATURES INTEGRAL TO EACH PANEL. CONNECTION HARDWARE SHALL BE TIGHTENED SUFFICIENTLY BUT SUCH THAT IT CAN BE EASILY REMOVED FOR MAINTENANCE OR INSPECTION ACTIVITIES. EACH PANEL SECTION SHALL INTERLOCK WITH THE SECTION BELOW IT SUCH THAT IT CAN BE EASILY REMOVED FOR MAINTENANCE OR INSPECTION ACTIVITIES.

PANELS THAT REST ON TOP OF BARRIER WALL AGAINST PIER COLUMNS SHALL HAVE ANY GROOVE OR NESTING FEATURE REMOVED SO THAT THE PANEL RESTS FLUSH ON TOP OF THE BARRIER WALL WITHOUT GAPS. IF PANEL TRIMMING IS NECESSARY TO INSTALL BETWEEN BARRIER AND PIER CAP, TRIMMING SHALL BE LIMITED TO THE BOTTOM OF THE BOTTOM SECTION. THE AMOUNT OF TRIMMING SHALL ONLY BE WHAT IS NECESSARY TO INSTALL THE SECTIONS.

PANELS THAT REST DIRECTLY ON THE GROUND SHALL BE PLACED ON NO LESS THAN THREE CINDER BLOCKS TO ALLOW AN AIR GAP BETWEEN THE BOTTOM SECTION AND THE GROUND. LOCALIZED GRADING USING HAND TOOLS ONLY MAY BE NECESSARY TO GET THE PANELS TO SIT EVENLY ON ALL CINDER BLOCKS.

BRIDGE IDENTIFICATION SIGNAGE SHALL BE REMOVED FROM COLUMNS AND RELOCATED TO THE TOP OF THE STEEL TERMINAL ASSEMBLY CONNECTING INTO THE BARRIER WALL IN FRONT OF THE PIER.

PAYMENT FOR THE ABOVE MATERIAL AND LABOR WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 530, STRUCTURES: PIER COLUMN SHIELDS.

ITEM 517 - RAILING, MISC.: ANCHOR BOLTS AND SPACER PLATE PER TST-1-99

REPLACE BOLTS AND EMBEDDED PLATE WITH NEW BOLTS AND PLATE PER ODOT SCD TST-1-99. THE EXISTING POST AND BASEPLATE CAN REMAIN IN PLACE.

PAYMENT FOR THE ABOVE MATERIAL AND LABOR WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 517, RAILING, MISC.: ANCHOR BOLTS AND SPACER PLATE PER TST-1-99.

SFN	VARIES
DESIGN AGENCY	CARPENTER MARTY
DESIGNER	CHECKER
SMH	BWR
REVIEWER	
STK	3-6-23
PROJECT ID	110156
SUBSET	TOTAL
1	1
SHEET	TOTAL
P.9	50