TEM SPECIAL 519-00100: COMPOSITE FIBER WRAP SYSTEM
A COMPOSITE FIBER WRAP SYSTEM SHALL BE APPLIED TO AREAS F THE PIERS DESIGNATED IN THE PLANS INACCORDANCE WIT PROPOSAL NOTE 519. THE FIBER WRAP SYSTEM SHALL MEET

IBER WRAP APPLIED AT THE CAP LOCATIONS SHALL BE IIDRECTIONAL FABRIC WITH A MINIMUM UNIT STRENGTH OF 1.0 Kinin Each dipection.

FIBER WRAP APPLIED TO THE COLUMN LOCATIONS SHALL BEA FIBER WR
STRESS.
ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN: PRIOR TO THE SURFACE CLEANING SPECIFIIED IN C\&MS 519.04 CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH
PRESSURE WATER BLASTING WITH OR WITHOUTABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.
PATCHING IN ACCORDANCE WITH 519 IS TO BE USED ON RALINGS, BACK FACE OF EXISTING RALIING PARAPETS, AN PIERS AS SHOWN IN THE PLANS. THE ENGINEER MAY ELECT TO CHANGE THE RECOMMENDED PATCHING METHOD BASED ON THE
OBSERVED CONDITIONS AT THE TIME OF WORK. -

AN ADDITIONAL CONTINGENCY QUANTITY OF 15\% HAS BEEN NCLUDED IN THE PATCHING QUANTTIES TO BE USED AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE FOR THE
SQUARE FEET OF PATCHING COMPLETED TO THE SATISFACTIO SQ THE ENGINEER IN ACCORDANCE WITH 519.

## ITEM 625: DISTRIBUTION CABLE, MISC.: REPLACE EXISTING

DE-ENERGIZE AND REMOVE THE EXISTING DISTRIBUTION CABLE JUNCTION BOX LOCATION ON THE BRIDGE TO THE ENDLAST LOCATION ON THE BRIDGE. EXAMINE THE EXISTING WIRING AND MAKE NOTE OF SIZE, VOLTAGE RATING, AND OTHER SALIENT FEATURES FOR RECORD. REPLACED LIGHTING SYSTEMS SHALL YYSTEMS UTLIZING DISTRIBUTION CABLE RATED FOR 5.000 SYSTEMS UTLIIING DISTRIBUTION CABLE RATED FOR 5,000
VOLTS (MAXIMUM OPERATING VOLTAGE UNDER 2005 NEC OF 2,400 VOLTS). THE NEW DISTRIBUTION CABLE SHALL MATCH THE EXISTING DISTRIBUTION CABLE. WHERE CABLE SIZE IS CONNECTORS AS REQUIRED TO PRODUCE A FUNCTIONING SYSTEM.

WHEN COMPLETE, TEST THE LIGHTING SYSTEM IN ACCORDANC WITH C\&MS 625.19 .

PAYMENT FOR THE DISTRIBUTION CABLE REMOVAL, NEW DISTRIBUTION CABLE, CONNECTORS AND SPLICES, AND FINAL SYSTEM TESTING SHALL BE MEASURED ON A PER FOOT BASIS
FOR LENGTH OF CABLE REPLACED IN THE EXISTNG STRUCTURE OR LENGTH OF CABLE REPLACED IN THE EXISTING STRUCTURE ABOR, EQUIPMENT, MATERIALS AND OTHER INCIDENTALS TO COMPLETE THE WORK AND PROVIDE A FUNCTIONING ELECTRICAL DISTRIBUTION SYSTEM.

ITEM 625: REMOVE AND REERECT EXISTING LIGHT POLE, AS PER
THIS WORK CONSISTS OF THE REMOVAL AND REERECTION OF EXISTING LIGHT POLES TO PROVIDE A COMPLETE LIGHTING SYSTEM READY FOR SERVICE

REMOVAL WORK SHALL BE IN ACCORDANCE WITH C\&MS 625.21 AND SHALL CONSIST OF REMOVING THE EXISTING LIGHT POLE AND ELLECTRICAL WIRING FROM THE EXISTING PILASTERS WIT
CARE TO AVID DAMAGING THE LIGHT POLE, LUMINARES, OR OTHER COMPONENTS. UNBOLT BASE PLATES AND RETAIN POLE LOCATIONS ON EACH POLE WITH A REMOVABLE MARKER OR INDICATOR AND RETAIN THE ASSOCIATED HARDWARE WITH EACH POLE. WHERE NUTS OR WASHERS ARE DAMAGED,
CORRODED, OR OTHERWISE UNUSABLE PROVIDE NEW HARDWARE OF THE SAME GRADE TYPE AND FINSH THE HARDWARE OF THE SAME GRADE, TYPE, AND FINISH. THE
PARAPET CONCRETE REMOVAL NECESSARY FOR PARAPET FACING IS PAID FOR UNDER ITEM 517: RALING FACED, AS PER PLAN. IN ADDITION TO THE REMOVAL REQUIRED FOR THE FACING, THE WORK SHALL ALSO INCLUDE HAND CHIPPING AS NECESSARY TO REMOVE THE EXISTING JUNCTION BOXES AN
PROVIDE NEW JUNCTION BOXES. THE ADDITIONAL WORK TO REMOVE THE BOXES AND PROVIDE FOR NEW BOXES BEYOND THE FACING REMOVAL SHALL BE PAID FOR AS INCIDENTAL UNDER ITEM 625. REMOVE EXISTING CONDUIT WITHIN THE LIGHT POLE AND REMOVE THE EXISTNG LOMINAIRES. EXAMINE THE EX
LUMINAIRES AND WIRING AND MAKE NOTE OF MAKE, MODEL, vOLTAGE, AND OTHER SALIENT FEATURES FOR RECORD. TAKE CARE TO AVOID DAMAGING ANY COMPONENTS TO BE REUSED IN
THE NEW CONDITION, INCLUDING ANCHOR BOLTS.
dURING PARAPET FACING WORK, PROVIDE NEW JUNCTION BOXES AS SHOWN ON STANDARD DRAWING HL-20. 14 AND ACCORDANCE WITH C\&MS 625.11. PROVIDE STRUCTUR CONSTRUCTION DRAWING HL-50.21

AFTER COMPLETION OF THE PARAPETAND OVERLAY WORK, PLACE THE LIGHT POLES BACK IN THEIR ORIGINAL LOCATIONS WITH NEW WIRING AND LUMINAIRES TO MATCH THE EXISTING AND STANDARD CONSTRUCTION DRAWINGS HL-60.11 AND HL-
60.12. REPLACED LIGHTING SYSTEMS SHALL MATCH EXISTING AND AT A MINIMUM SHALL BE THREE-WIRE SYSTEMS UTLIZING DISTRIBUTION CABLE RATED FOR 5,000 VOLTS (MAXIMUM OPERATING VOLTAGE UNDER 2005 NEC OF 2,400 V VOLTS). WHERE
POLE WIRING IT UNKNOWN USE NO 10 WWG EXTNDG FRM THE POLE BASE CONNECTOR TO THE LGHTING FIXTURE THE THE POLE BASE CONNECTOR TO THE LIGHTING FIXTURE. THE
CONTRACTOR'S ATTENTION IS DRAWN TO C\&MS 625.08, 625.16, AND 625.18. WHEN COMPLETE, TEST THE LIGHTING SYSTEM IN ACCORDANCE WITH C\&MS 625.19. ADDITIONAL CONCRETE PLACED BEYOND THAT NEEDED FOR THE PARAPET REFACING REPLACEMENTS SHALL BE PAID AS INCIDENTAL TO ITEM 517: RALIING FACED, AS PER PLAN.
PAYMENT FOR THE REPLACEMENT LUMINAIRES; LIGHT POLE REMD WIRLING CONNECTORS ANY ANCHOR BOLT OR HLPDWAR REPLACEMENT REQUIRED; JUNCTION BOX REMOVAL AND REPLACEMENT; LIGHT POLE GROUNDING; ADDITIONAL CONCRETE REMOVAL REQUIRED TO REMOVE AND REPLACE
JUNCTION BOXES AND FINLL SYSTEM TESTM MEASURED ON AN EACH BASIS PER LIGHT POLE AND PAID UNDER ITEM 625: REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN. THIS PAYMENT SHALL BE COMPENSATION FOR ALL LABOR,
EQUIPMENT, MATERIALS AND OTHER INCIDENTALS TO COMPLETE THE WORK AND PROVIDE A FUNCTIONING LIGHT POLE AND

ITEM 625: CONDUIT, MISC.: INSTALL NEW CONDUIT SUPPORT
STRAPS:
FIELD INSPECTIONS DETERMINED THAT MOST OF THE STRAPS HOLDING ELECTRICAL CONDUITS TO THE FACES OF PIERS $4,6,7$ AND 18 HAVE LARGELY BROKEN. THE CONTRACTOR SHALL REMOVE ALL EXISTING STRAPS AND INSTALL NEW STRAPS
ANCHORED INTO THE CONCRETE AT THE MAXIMUM SPACING SHOWN IN THE DETALLS. PRIOR TO INSTALLING THE STRAPS, THE CONTRACTOR SHALL COMPLETE ALL PATCHING AND FIBER WRAPPING IN THE VICINITY OF THE CONDUIT. THE CONTRACTOR MAY NEED TO TEMPORARIY SUPPORT THE CONDUIT OFF THE INSTALLED.
THE CONDUIT STRAPS AND ANCHORS SHALL BE GALVANIZED AND
MEET THE REQUIREMENTS OF 725.04.
PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO REMOVE EXISTING STRAPS, TEMPORARIY SUPPORT THE CONDUIT DURING REPAIRS, AND INSTALL NEW STRAPS AND ANCHORS TO THE SATISFACTION OF
THE ENGINEER. THE DEPARTMENT WILL PAY FOR THE ACCEPTED THE ENGINEER. THE DEPARTMENT WILL PAY FOR THE ACCEPTED
QUANTITY OF CONDUIT SECURED TO THE FACE OF PIER AT THE CONTRACT PRICE FOR ITEM 625: CONDUIT, MISC.: INSTALL NEW CONDUIT SUPPORT STRAPS.

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

AREAS OF THE PIERS WHERE SIGNIFICANT FLOWS OF WATER AND DEICING AGENTS HAVE RESULTED IN THE DETERIORATION OF THE CONCRETE AND SIGNIFICANT RUSTING OF THE REINFORCING STEEL SHALL BE PATCHED IN ACCORDANCE WITH
THE SUPPLEMENTAL SPECIICATON 844. THIS INCLUDES AREAS THE SUPPLEMENTAL SPECIFICATION 844. THIS INCLUDES AREAS
OF THE PIER CAP AND COLUMN 2 THAT ARE LOCATED UNDER THE OPEN JOINT AS WELL AS PIER CAPS AND COLUMNS THAT ARE
LOCATED NEAR SCUPPER OUTLETS HHATHVVE LED TO LOCATED NEAR SCUPPER OUTLETS THAT HAVE LED TO DETERIORATION. THE PATCHING METHOD (844 OR 519) THAT
RECOMMENDED HAS BEEN NOTED ON THE PLANS. THE Engineer elect to change the patching method based on THE OBSERVED CONDITIONS AT THE TIME OF WORK.
an additional contingency quantity of 15\% has been NCLUDED IN THE PATCHING QUANTITIES TO BE USED AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE FOR THE
SQUARE FEET OF PATCHING COMPLETED TO THE SATISACTION SQUARE FEET OF PATCHING COMPLETED T T T
OF THE ENGINERR IN ACCORDANCE WITH 844.

MTEM 848:SUPERPLASTICITEDDENSECONCRETEOVERLAY USING ITEM 848: SURFACE PREPARATION USING HYDRODEMOLTION
PER PLAN:
ITEM 848: SUPERPLASTIIIED DENSE CONCRETE OVERLAY
 ITEM 848: TEST SLAB, AS PER PLAN:
TEM 848: FULLDEPTH REPIR AS PER PLAN:
TTEM 848: EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN
WORK SHALL BE PERFORMED IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 848, "BRIDGE DECK REPAIR AND the Following revisions.
the intent of these items is to repair the existing RIDGE DECKS WTHIN THE PERMITTED CLOSURE PERIODS DEBRIS AND ALL WATER DURING HYDRODEMOLTION SHALL BE CONTAINED IN A SAFE MANNER IN ACCORDANCE WITH SS 848 .
the removal operations shall not begin if sustained RAINS (5 HOURS OR MORE WITH BREAKS BETWEEN SHOWER COMMENCEMENT.

TEM 848 NOTES (CONTNUED)
THE REMOVAL OF THE EXISTING CONCRETE OVERLAY INCLUDES REPAIRED PATCHED CONCRETE.
DURING HYDRODEMOLITION AREAS OF FULL DEPTH REPAIR ARE EXPECTED. ONLY HYDRODEMOLITION REMOVAL EQUIPMENT IS PERMITTED TO DRIVE/OPERATE IN THESE AREAS. ALL EQUIPMENT SHALL BE OPERATED FROM A SAFE DISTANCE ON THE BRIDGE DECK SUPPORTED BY A MINIMUM OF TWO DJACENT BEAMS. A VACUUM TRUCK CAPABLE OF OPERATING CLEANING HYDRODEMOLITION DEBRIS. DRIVING DIRECTLY ON exposed rebar shall not be permitted.
THE CONTRACTOR SHALL PROVIDE A MIX DESIGN AND MAKE ONE OR MORE, ONE CUBIC YARD, TRIAL BATCHES OF OVERLAY PLACED, DEMONSTRATING THE ABLLITY TO MEET 848.26 AND 348.31. DEVELOP BEAM BREAK MATURITY CURVES AND SUBMIT FOR REVIEW BY THE ENGINEER.

REVISE 848.29. THE CONTRACTOR SHALL CONTINUE THE WET CURE FOR THE MAXIMUM HOURS POSSIBLE DURING THE PERMITTED CLOSURE. TRAFFIC SHALL NOT BE PERMITTED ON THE FINISHED OVERLAY SURFACE UNTL A MINNMUM WET CURE AVERAGE MODULUS OF RUPTURE OF 600 PSI

THE CONTRACTOR SHALL PROVIDE ENOUGH MATERIAL FOR TWO BEAM BREAKS EACH AT 12 HOURS, 24 HOURS, 36 HOURS, AND 4 TIME OF THE POUR, THE TME OF THE BEAM BREAK TESTS, AND THE MODULUS OF RUPTURE OF EACH BEAM.
a water fog shall be continuously applied over the SURFACE OF THE FRESHLY PLACED CONCRETE IN SUCHA
MANNER THAT THE ENTIRE SURFACE IS KEPT ATA RELATIVE HUMIDITY OF 90\% OR GREATER. THE AREA TO BE FOGGED SH BE THE ENTIRE AREA OF THE FRESHLY PLACED CONCRETE, WHICH HAS NOT HAD THE FINAL FINISH APPLIED. THE FOG SHALL BE DELIVERED THROUGH A NETWORK OF NOZZLES, WHICH AR SURFACE OF THE CONCRETE. THE NOZZLES USED SHALL ATOMIZE THE WATER SO THAT THERE ARE NO DISCERNIBLE DROPLETS OF WATER. THE FOGGING EQUIPMENT SHALL BE CAPABLE OF APPLYING WATER IN A MIST, NOTA SPRAY, TOO FINE TO DAMAGE THE CONCRETE SURFACE. THE AREA OF COVERAGE
FROM EACH NOZZLE SHALL OVERLAP ADJACENT COVERAGE BY at Least 12 Inches. It shall be demonstrated that the FoGGing system is capable of delivering The fog ing ENVIRONMENT FOR AT LEAST TWICE THE ANTIIPATED
REQUIRED TIME PRIOR TO PLACEMENT OF CONCRETE REQUIRED TIME, PRIOR TO PLACEMENT OF CONCRETE. THE
NTENDED SYSTEM SHALL BE PROPERLY FIILD TESTED. CARE SHALL BE EXERCISED DURING FINISHING TO PREVENT FOGGED WATER FROM BECOMING PART OF THE CONCRETE AND TO PREVENT INCREASING WATER CONTENT IN THE CONCRETE BY
THE WATER USED DURING THE CURING PROESS

FOGGING SHALL CONTINUE UNTLL THE SURFACE IS COVERED WITH WET BURLAP. THE WET BURLAP SHALL NOT BE APPLIED VE THE BURLAP AND AN
LACEMENT LOADS WITHOUT DEFORMATION.
ITEM 848 NOTES CONTINUED ON SHEET 55

## ITEM 848 NOTES (CONTNUED FROM SHEET 54):

REVISIONS TO 848.26: GROOVES SHALL BE SAWED IN THE SONCRETE SURFACE IN THE SAME DIRECTION AS THE EXISTING AFTER TEXTURING THE CONCRETE SURFACE, CLEAN THE SURFACE AND SPRAYA UNIFORM APPLICATION OF CURING MATERIAL 705.07, TYPE 1 OR 1D, AS PER CMS 511.17 METHOD B OF MEMBRANE CURING. THE DECK SURFACE SHALL BE DRY PRIOR TO PLACEMENT OF THE CURNG MATERIAL. IF THE
OF THE GROOVES CANNOT BE DONE WITHIN THE SAME $W$ EEKEND AS THE OVERLAY THE CONTRACTOR MAY ALLOW TRAFFIC ONTO THE OVERLAY AFTER THE CURING COMPOUND HAS BEEN APPLIED, AND COMPLETE THIIS WORK ON A SEPARATE
NIGHT AND REAPPLY THE MEMBRANE CURING COMPOUND.

PRIOR TO CONSTRUCTION OF PROPOSED OVERLAY, HOLD A PREPLACEMENT MEETING. ITEMS TO BE DISCUSSED INCLUDE:

- SEQUENCE OF CONSTRUCTION AND MOT
- STAGING OF EQUIPMENT DURING HYDRODEMOLITION AND - STAGING OF EQUIPMENT DURING HYD
PLACEMENT OF PROPOSED OVERLAY
- ANTICIPATED WEATHER CONDITIONS AND EMERGENCY COVERING MATERIALS IN CASE OF INCLEMENT WEATHER. - PROTECTION OF ADJACENT TRAFFIC PROCEDURES (AS APPLICABLE)
-RATE OF DELI
- RATE OF DELIVERY OF THE CONCRETE TO ENSURE
COMPLETION
- PROCEDURES FOR INSTALLATION OF FORMWORK FOR FULL

DEPTH AREAS
CONSOLIDATION AND FIIISHING OF THE CONCRETE - CONSOLIDATION AND FINSHING OF THE CON

- NUMBER OF FINISHERS AND THEIR DUTIES
- NUMBER OF FINISHERS AND THEIR DUTIES
- TIMING OF FOGGING AND PLACEMENT OF WET CURE
- REMOVAL OF WET CURE
- APPLICATION OF SPRAY CURE
- ANY OTHER APPROPRIATE SUBJECTS

PAYMENT FOR THIS WORK INCLUDES ALL EQUIPMENT, TOOLS, MATERIAL, AND LABOR NECESSARY TO PERFORM THIS WORK, AND WLLL BE MADE AT THE CONTRACT PRICE BID FOR THE ITEMS
OF WIRK ESTABLSHED IN SS 848 .


