| SHEET NUMBER | | | | | | | | | | PART. | | ITEM GRAND | | | SEE | | |
|--------------|----------|-------|----------|----------|------------------|---|---------------|-------|---|----------|------------------|------------|----------------|------------------|--------------|--|--------------|
| | | 5 | | 10 | 11 | | 12 | 13 | | 14 | 01/NHS | ITEM | EXT | TOTAL | UNIT | DESCRIPTION | SHEET NO. |
| 4 | | 3 | | 10 | 11 | | 12 | 15 | | 14 | 01/1003 | | | TOTAL | | ROADWAY | 110. |
| | | | | | | | | 1,651 | | | 1,651 | 202 | 38000 | 1,651 | FT | GUARDRAIL REMOVED | |
| | | | | | | | | 8 | | | 8 | 202 | 42010 | 8 | EACH | ANCHOR ASSEMBLY REMOVED, TYPE E | |
| | | | | | | | | 2 | | | 2 | 202 | 42040 | 2 | | ANCHOR ASSEMBLY REMOVED, TYPE T | |
| | | | | | | | | 4 | | | 4 | 202 | 47000 | 4 | | BRIDGE TERMINAL ASSEMBLY REMOVED | |
| | | | | | | | | 20 | | | 20 | 209 | 15000 | 20 | STA | RESHAPING UNDER GUARDRAIL | |
| | | | | | | | | | | 1 | | | 1-1 | | | | |
| | | | | | | | | 1,550 | | | 1,550 | 606 | 15100 | 1,550 | FT | GUARDRAIL, TYPE MGS WITH LONG POSTS | |
| | | | | | | | | 8 | | | 8 | 606 | 26150 | 8 | | ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016), (SOFT STOP) | |
| | | | | | | | | 2 | | | 2 | 606 606 | 26550 35002 | 2 | EACH EACH | ANCHOR ASSEMBLY, MGS TYPE T MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 | |
| | | | | | | | | 4 | | | 4 | 000 | 33002 | 4 | ЕАСП | IVIGS BRIDGE TERIVITIVAL ASSETVIBLE, TEPE I | |
| | | | | | | | | | | | | | | | | EROSION CONTROL | |
| | | | | | | | | | | | 1,000 | 832 | 30000 | 1,000 | EACH | EROSION CONTROL | |
| | | | | | | | | | | | 1,000 | | 33333 | 1,000 | 27 (011 | | |
| | | | | | | | | | | | | | | | | DRAINAGE | |
| 8 | | | | | | | | | | | 8 | 611 | 99654 | 8 | EACH | MANHOLE ADJUSTED TO GRADE | |
| | | | | | | | | | | 1 | | | | | | | |
| | | | | | | | | | | | | | | | | PAVEMENT | |
| 430 | | | | | | | | | | | 430 | 253 | 02000 | 430 | CY | PAVEMENT REPAIR | |
| | | | | | 17,858 | | | | | | 17,858 | 407 | 20000 | 17,858 | GAL | NON-TRACKING TACK COAT | |
| | | | | | 4,134 | | | | | | 4,134 | 424 | 14000 | 4,134 | CY | FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B, (448) | |
| | | | | | 6 | | | | | | 6 | 617 | 10100 | 6 | | COMPACTED AGGREGATE | |
| | | | | | 111 | | | | | | 111 | 617 | 20000 | 111 | SY | SHOULDER PREPARATION | |
| | | | | | 0.1 | | | | | | 0.1 | 617 | 25000 | 0.1 | MGAL | WATER | |
| | | | | | 16.50 | | | | | | 16.50 | 610 | 40600 | 46.50 | N 411 5 | BUILDING CHOURDED (ACRUALT CONCRETE) | |
| | | | | | 16.58 | | | | | 1 | 16.58 | 618 | 40600 | 16.58 | | RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE) | |
| | | | | | 198,422 1,995 | | | | | | 198,422 4,000 | 897 897 | 01010 02000 | 198,422 4,000 | SY SY | PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A, 0.75" PATCHING PLANED SURFACE | |
| | | | | | 1,995 | | | | | | 4,000 | 657 | 02000 | 4,000 | 31 | PATCHING PLANED SURFACE | |
| | | | | | | | | | | 1 | | | | | | TRAFFIC CONTROL | |
| 865 | | | | | | | | | | | 865 | 621 | 00100 | 865 | EACH | RPM | |
| 709 | | | | | | | | | | | 709 | 621 | 54000 | 709 | EACH | RAISED PAVEMENT MARKER REMOVED | |
| | | | | | | | | 25 | | | 25 | 626 | 00110 | 25 | | BARRIER REFLECTOR, TYPE 2, (BIDIRECTIONAL) | |
| | | | | | | | 12 | | | | 12 | 644 | 01360 | 12 | EACH | WRONG WAY ARROW | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | 133 | | | | 133 | 644 | 00500 | 133 | FT | STOP LINE | |
| | | | | | | | 1,407 | | | | 1,407 | 644 | 00720 | 1,407 | FT | CHEVRON MARKING | |
| | | | | | | | 39 | | | | 39 | 644 | 01300 | 39 | EACH | LANE ARROW | |
| | | | | | | | 353 | | | _ | 353 | 645 | 00418 | 353 | FT | CHANNELIZING LINE, 12", TYPE A4 | |
| | | | | | | | 241 | | | | 241 | 645 | 01522 | 241 | FT | DOTTED LINE, 6", TYPE A4 | |
| | | | | | | | 40 | | | _ | 1 | C.1.C | 40500 | 10 | | | |
| | | | | | | | 43 | | | | 43 | 646 | 10620 | 43 | FT | CHEVRON MARKING | |
| | | | | | | | 701 | | | 1 | 701 | 646 | 50100 | 701 | FT | REMOVAL OF PAVEMENT MARKING | |
| | | - | 1 | | | _ | 17.62 7.87 | | - | 1 | 17.62 7.87 | 807 807 | 10010 10110 | 17.62 7.87 | MILE MILE | WET REFLECTIVE TRAFFIC PAINT, EDGE LINE, 6" | |
| | | 1 | 1 | | | | 9,012 | | | 1 | 9,012 | 807 807 | 10110 | 9,012 | FT | WET REFLECTIVE TRAFFIC PAINT, LANE LINE, 6" WET REFLECTIVE TRAFFIC PAINT, CHANNELIZING LINE, 12" | |
| | | | | | | | 7,892 | | | | 7,892 | 807 | 10310 | 7,892 | FT | WET REFLECTIVE TRAFFIC PAINT, CHANNELIZING LINE, 12 WET REFLECTIVE TRAFFIC PAINT, DOTTED LINE, 6" | |
| | | | | | | | 7,032 | | | | 7,032 | 007 | 10410 | 7,032 | ' ' | WET REFERENCE TRAITIETAINT, BOTTED LINE, O | |
| | | | | | | | 26 | | | | 26 | 850 | 10010 | 26 | MILE | GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT) | |
| | | | | | | | 16,904 | | | | 16,904 | 850 | 10130 | 16,904 | FT | GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT) | |
| | | | 1 | | | 1 | , | | | 1 | , | | | , | | , | |
| | | | | | | | | | | 1 | | | | | | MAINTENANCE OF TRAFFIC | |
| | | 500 | | | | | | | | | 500 | 614 | 11110 | 500 | HOUR | LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE | |
| | | | | 1 | | | | | | | 1 | 614 | 12380 | 1 | EACH | WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL) | |
| | | | | 5 | | | | | | | 5 | 614 | 13310 | 5 | EACH | BARRIER REFLECTOR, TYPE 1 (ONE-WAY) | |
| | | | | 5 | | | | | | | 5 | 614 | 13351 | 5 | | OBJECT MARKER, ONE WAY, AS PER PLAN | 7 |
| | | | | 2 | | | | | | | 2 | 614 | 18600 | 2 | SNMT | PORTABLE CHANGEABLE MESSAGE SIGN | |
| | <u> </u> | |) | _ | | | | | 1 | 1 | | | | | | | |
| | | 7.87 | 1 | | | | | | | 1 | 7.87 | 614 | 20560 | 7.87 | MILE | WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT | |
| | | 17.62 | | | | | | | | 1 | 17.62 | 614 | 22360 | 17.62 | MILE | WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT | |
| | 1 | 8,133 | 1 | | | | | | | 1 | 8,133 | 614 | 24612 | 8,133 | FT | WORK ZONE DOTTED LINE, CLASS III, 6", 642 PAINT | |
| | | 9,365 | <u> </u> | <u> </u> | | | | | 1 | _ | 9,365 | 614 | 23690 | 9,365 | FT | WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT | |
| | | 133 | | | | | | | | 1 | 133 | 614 | 26610 | 133 | FT | WORK ZONE STOP LINE, CLASS III, 642 PAINT | |
| | | - | - | 200 | | 1 | | | | 1 | 200 | COO | 41100 | 200 | | DODTADLE DADDIED LINIANCHODED | |
| | | | | 200 | | | | | - | 1 | 200 | 622 | 41100 | 200 | FT | PORTABLE BARRIER, UNANCHORED | |
| | | 1 | 1 | 1 | | + | | | 1 | + | + | | - | | | STRUCTURE OVER 20 FOOT SPAN (HAM-126-17.53) | |
| | | 1 | 1 | | | _ | | | 1 | 1 | 1 | | | 1 | | SEE SHEET 14 | |
| | | | | | | | | | | 1 | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| <u>-</u> | | - | - | - | - | | - | - | - | - | - | <u> </u> | - | | - | | |

DESIGN AGENCY



JDO 08-07-2025

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

REVISED 7/17/2020 PCB-91

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

SS847 DATED 7/19/2024

DESIGN DATA

CONCRETE CLASS QC5: COMPRESSIVE STRENGTH 4.5 KSI (DECK PATCHING)

EXISTING STRUCTURE PLANS

CONSTRUCTION PLANS FOR THE EXISTING BRIDGES ARE AVAILABLE FOR REFERENCE BY CONTACTING THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 8 OFFICE.

IT IS THE RESPONSIBLITY OF THE CONTRACTOR TO BECOME FAMILIAR WITH ALL PERTINENT EXISTING DRAWINGS AND DETAILS RELEVANT TO THIS PROJECT.

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 INDICTIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTION 102.05, 105.02. 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 THAT HAVE BEEN VERIFIED IN THE FIELD.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS WORK CONSISTS OF THE PARTIAL REMOVAL OF CONCRETE PARAPETS TO ACCOMODATE PROPOSED WORK.

THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. TO ENSURE THE PROTECTION OF PUBLIC WELFARE, OR LIFE, HEALTH OR PROPERTY THE CONTRACTOR SHALL SUBMIT ENGINEERED DRAWINGS TO THE ENGINEER FOR APPROVAL PER 501.05B.

MAXIMUM REMOVAL LIMITS: SOUND THE CONCRETE TO DETERMINE THE LIMITS OF THE CONCRETE TO BE REMOVED AND COMPARE THESE LIMITS TO THE AREAS SHOWN IN THE PLANS. IF NEW AREAS ARE DISCOVERED OR IF THE DIMENSIONS OF THE PLAN AREAS INCREASE BY MORE THAN 25% IN ANY DIRECTION, DOCUMENT THE AREAS AND NOTIFY THE ENGINEER FOR EVALUATION TWO WEEKS PRIOR TO REMOVAL.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS, THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (CONTINUED)

THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN UP ANY AND ALL DEBRIS DURING REMOVAL OPERATIONS. THE COST TO CLEAR AND CLEAN UP ALL DEBRIS DURING REMOVAL SHALL INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

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.

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF REINFORCING STEEL, AS PER PLAN

REPLACEMENT OF ALL EXISITING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

REPLACE ALL EXISING REINFORCING STEEL 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 EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

ADDITIONAL QUANTITIES HAVE BEEN PROVIDED FOR DOWEL HOLES, IF NEEDED, TO EMBED THE REPLACEMENT REINFORCING INTO THE EXISTING STRUCTURE. PAYMENT FOR DOWEL HOLES SHALL BE MADE AT THE BID UNIT PRICE FOR ITEM 510 DOWEL HOLES, AS PER PLAN.

DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN

FOR INSTALLATION OF REPLACEMENT OF EXISTING REINFORCING BARS DEEMED UNUSABLE, INSTALL DOWEL BARS ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR BLACK REBAR PUBLISHED IN THE ICC-ES. USE AN ANCHOR ADHESIVE EVALUATED ACCORDING TO ICCES REPORT AC308, "ACCEPTANCE CRITERIA FOR POST-INSTALLED ADHESIVE ANCHORS IN CONCRETE ELEMENTS", FOR CRACKED AND UNCRACKED CONCRETE APPLICATIONS. PUBLISHED ICCES REPORTS FOR ACCEPTABLE PRODUCTS ARE AVAILABLE AT:

HTTPS://ICC-ES.ORG/EVALUATION-REPORT-PROGRAM/REPORTS-DIRECTORY/

THE HOLES FOR THE DOWEL BARS SHALL BE DRILLED WITH A HAMMER DRILL AND CARBIDE BIT. PRIOR TO THE INSTALLATION OF THE ANCHORS, THE HOLES SHALL BE CLEANED AND DRIED IN A MANNER CONSISTENT WITH THE MANUFACTURER'S REQUIREMENTS FOR DRY CONCRETE.

SELECT FROM ONE OF THE FOLLOWING APPROVED PRODUCTS:

DEWALT/POWERS FASTENERS PURE 110 + EPOXY ADHESIVE ANCHOR SYSTEM

(ICCES REPORT ESR-3298)

ADHESIVES TECHNOLOGY CORPORATION (ATC) ULTRABOND HS-1CC ADHESIVE ANCHOR SYSTEM

(ICCES REPORT ESR-4094)

SIMPSON STRONG-TIE SET-3G EPOXY ADHESIVE ANCHORS (ICCES REPORT ESR-4057)

HILTI HIT-HY 200 ADHESIVE ANCHOR SYSTEM (ICCES REPORT ESR-3187)

INSTALL ADHESIVE ANCHORS ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS PUBLISHED IN SECTION 4.3 OF THE ICCES REPORTS LISTED ABOVE. THE MINIMUM EMBEDMENT DEPTH FOR ANCHORS SHALL BE 12".

PRIOR TO DRILLING HOLES, LOCATE 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 TO EITHER SIDE OF THE EXISTING BAR. THE DEPARTMENT WILL PAY FOR DOWEL HOLES AND GROUTING WITH ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN ITEM 847 - MICRO SILICA MODIFIED CONCRETE OVERLAY ITEM 847 - EXISTING CONCRETE OVERALY REMOVED (T=2")

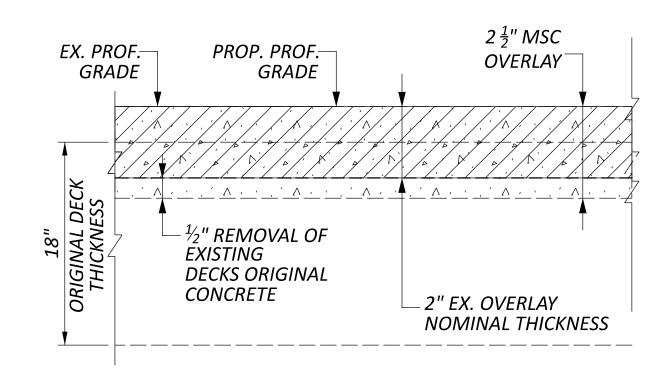
PATCHING LOCATIONS AND AREAS SHOWN IN THE PLANS ARE APPROXIMATE. PATCHING AREAS CARRIED TO THE ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% TO ACCOUNT FOR ADDITIONAL AREAS REQUIRING PATCHING THAT MAY HAVE DEVELOPED SINCE THE MOST RECENT INSPECTION. THE CONTRACTOR SHALL SOUND THE SURROUNDING PERIMETER OF THE AREA TO BE PATCHED AND PATCH NEW AREAS APPROVED BY THE ENGINEER THAT HAVE NOT BEEN DETAILED IN THE PLANS.

MEASUREMENT AND PAYMENT:

THE PLAN QUANTITIES INCLUDE AN INCREASE OF THE FIELD MEASURED QUANTITIES. THE ACCEPTED QUANTITIES FOR THE COMPLETED WORK AS DESCRIBED WILL BE MEASURED AND PAID BY ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

BRIDGE DECK REPAIR WITH MICROSILICA MODIFIED CONCRETE USING SCARIFICATION AN CHIPPING ($2\frac{1}{2}$ " THICK)

STRUCTURE No.: HAM-126-1753



LEGEND

- MICROSILICA MODIFIED CONCRETE OVERLAY

- EXISTING CONCRETE OVERLAY REMOVED (T=2")

| ESTIMATED QUANTITIES - STRUCTURE No.: HAM-126-1753 (SFN: 3105067) (01/NHS FUNDING SPLIT) | | | | | | | | | |
|--|------------------|-------|------|---|-------|--------------|------|-------|--|
| ITEM | EXTENSION | TOTAL | UNIT | DESCRIPTION | ABUT. | PIERS SUPER. | GEN. | SHEET | |
| 202 | 11203 | LUMP | LS | PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN | | | LUMP | 14 | |
| 509 | 20000 | 20 | LB | CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT | | 20 | | | |
| 509 | 25000 | 113 | LB | UNCOATED STEEL REINFORCMENT | | 113 | | | |
| 510 | 10001 | 2 | EACH | DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN | | 2 | | 14 | |
| 511 | 34410 | 3 | CY | CLASS QC2 CONCRETE, SUPERSTRUCTURE | | 3 | | | |
| 512 | 10100 | 17 | SY | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | | 17 | | | |
| | | | | | | | | | |
| 847 | 10000 | 89 | SY | MICRO SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN (T=2.5) (ACCELERATED CLOSURE) | | 89 | | | |
| 847 | 20000 | 3 | CY | WHICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS); MATERIAL ONLY | | 3 | | | |
| 847 | 30000 | LUMP | LS | TEST SLAB | | | LUMP | | |
| 847 | 30200 | 1 | CY | FULL DEPTH REPAIR | | 1 | | | |
| 847 | 30400 | 89 | SY | EXISTING CONCRETE OVERLAY REMOVED, 2.5 INCH NOMINAL THICKNESS | | 89 | | | |
| 847 | 50000 | 54 | SY | HAND CHIPPING | | 54 | | | |
| | | | | | | | | | |

| | ESTIMATED QUANTITIES - STRUCTURE No.: HAM-126-1906 (SFN: 3105121) (01/NHS FUNDING SPLIT) | | | | | | | | |
|------|--|------------------|-------|------|--|-------------|--------|------|-------|
| ITEN | | EXTENSION | TOTAL | UNIT | DESCRIPTION | ABUT. PIERS | SUPER. | GEN. | SHEET |
| | 519 | 12300 | 1 | 2 SY | PATCHING CONCRETE BRIDGE DECK - TYPE B | | 12 | | |
| | | | | | | | | | |

ESIGN AGENCY

SUMMARY

SUB

AND

S

NOTE

ENERAL

5

CTURE



ESIGNER GTF REVIEWER CAH 08-07-202! ROJECT ID 120995

14 17

ITEM 847- MICRO SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN (T=2.5") (ACCELERATED CLOSURE)

THIS ITEM SHALL CONFORM TO SUPPLEMENTAL SPECIFICATION 847 WITH THE **FOLLOWING CONDITIONS AND REVISIONS:**

MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.5 IN. MIN. TO 2.25 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.5 AND 2.25 INCHES IN LENGTH. FIBERS WITH AN ASPECT RATIO GREATER THAN 60 MAY REQUIRES A BLOWER TO INHIBIT BALLING AND MATTING OF FIBERS (ACI 544.3R-08). STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURE'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. MACRO-SYNTHETIC FIBERS IS TO BE USED AS AN ADMIXTURE TO CONTROL CRACKING AND IS NOT TO BE USED TO SUPPLEMENT OR REPLACE REINFORCING STEEL IN THE DESIGN. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CONCRETE SUPPLIERS CHOICE OF ONE OF THESE ADMIXTURES DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS.

REVISIONS TO 847.14: AT THE OPTION OF THE ENGINEER, THE CONTRACTOR SHALL MAKE ONE OR MORE, ONE CUBIC YARD, TRIAL BATCHES OF OVERLAY MATERIAL AT LEAST 30 DAYS BEFORE THE OVERLAY IS TO BE PLACED. DEMONSTRATE THE ABILITY TO MEET 847.22 AND 847.27. DEVELOP BEAM BREAK MATURITY CURVES.

REVISIONS TO 847.20: AT LEAST THIRTY DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL A SCHEDULE OF OVERLAY WORK ITEMS TO BE COMPLETED. THE SCHEDULE SHALL INCLUDE A BREAKDOWN OF ALL MAJOR WORK ACTIVITIES ON AN HOURLY BASIS. OVERLAY WORK SHALL NOT BEGIN UNTIL THE SCHEDULE IS APPROVED BY THE ENGINEER.

CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN THE WHEEL LINE.

REVISIONS TO 847.19: FULL DEPTH REPAIR WILL NOT BE REQUIRED IF LESS THAN ONE HALF OF THE DECK ORIGINAL CONCRETE THICKNESS IS SOUND.

REVISIONS TO 847.22: LONGITUDINAL GROOVES SHALL BE SAWED IN THE CONCRETE SURFACE OF THE TRAVELLED LANES PER 511.20, AFTER THE WET CURE IS COMPLETE. AFTER THE TEXTURING THE CONCRETE SURFACE, CLEAN THE SURFACE AND SPRAY AN UNIFORM APPLICATION OF CURING MATERIAL 705.07, TYPE 1 OR 1D, AS PER CMS 511.17 METHOD B OF MEMBRANE CURING. THE DECK SURFACE MUST BE DRY PRIOR TO PLACEMENT OF THE CURING MATERIAL. IF THE SAWING OF THE LONGITUDINAL GROOVES CANNOT BE DONE WITHIN THE SAME SHORT-TERM CLOSURE PERIOD AS THE OVERLAY, THE CONTRACTOR MAY ALLOW TRAFFIC ONTO THE OVERLAY, AND SHALL HAVE 24 HOURS FROM REMOVAL OF THE WET CURE TO SAW THE LONGITUDINAL GROOVES AND REAPPLY THE MEMBRANE-CURING COMPOUND.

ITEM 847- MICRO SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN (T=2.5") (ACCELERATED CLOSURE) (CONTINUED)

4) REVISE 847.23, 847.24 AND 847.25. THE CONTRACTOR SHALL CONTINUE THE WET CURE FOR THE MAXIMUM NUMBER OF HOURS POSSIBLE DURING THE PERMITTED LANE CLOSURE. THE CLOCK STARTS FOR THE WET CURE WHEN THE OVERLAY PLACEMENT IS COMPLETE.

TABLE 847.23 SCHEDULE OF DEDUCTIONS FOR WET CURE PERIOD LESS THAN 24 **HOURS**

HOURS OF WET CURE AMOUNT OF DEDUCTION FOR EACH HOUR LESS THAN 24 HOURS OF WET CURE PER BID PRICE OF SQUARE YARD OF CONCRETE OVERLAY, AS PER PLAN

(BY PERCENTAGE)

| 24-22 | |
|-------|-------------|
| 21 | 2 % |
| 20 | 4% |
| 19 | <i>6%</i> |
| 18 | 10% |
| 17 | 14% |
| 16 | 18% |
| 15 | 22 % |
| 14 | 26% |
| 13 | <i>30%</i> |
| 12 | <i>34%</i> |
| | |

IF THE CONTRACTOR FAILS TO OPEN LANES TO TRAFFIC AT THE TIMES REQUIRED IN THE MAINTENANCE OF TRAFFIC NOTES, THE CONTRACTOR WILL BE ASSESED THE HIGHER OF THE TWO DISINCENTIVES FOR THE WET CURE PERIOD AND FOR THE MAINTENANCE OF TRAFFIC REQUIREMENT.

TRAFFIC WILL NOT BE PERMITED ON THE FINISHED OVERLAY SURFACE UNTIL AFTER COMPLETION OF THE WET CURE, WHICH IS A MINIMUM OF 12 HOURS, AND AFTER TWO TEST BEAMS HAVE ATTAINED AN AVERAGE MODULUS OF RUPTURE OF 600 PSI.

FOR EACH POUR, THE CONTRACTOR SHALL PROVIDE ENOUGH MATERIAL FOR TWO BEAM BREAKS EACH AT 12 HOURS, 24 HOURS, 36 HOURS, AND 48 HOURS. THE DEPARTMENT WILL PERFORM THE BEAM BREAK TESTS AND DOCUMENT THE TIME OF THE POUR, THE TIME OF THE BEAM BREAK TESTS AND THE MODULUS OF RUPTURE OF EACH BEAM UNTIL THE MODULUS OF RUPTURE OF TWO TESTS IS NOT LESS THAN 650 PSI.

REVISIONS TO 847.26: THE REMOVAL OPERATIONS SHALL NOT BEGIN IF SUSTAINED RAINS (5

HOURS OR MORE WITH BREAKS BETWEEN SHOWERS LESS THAN 1 1/2 HOURS) ARE PREDICTED WITHIN 48 HOURS OF COMMENCEMENT.

THE OVERLAY SURFACE EVAPORATION RATE REQUIREMENTS ARE IN EFFECT FROM 9:30 AM TO 11:00 PM. THEY ARE NOT IN EFFECT FROM 11:00 PM TO 9:30 AM.

PAYMENT FOR ALL LABOR. MATERIAL. AND EQUIPMENT NECESSARY TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN ITEM 847- CONCRETE OVERLAY, AS PER PLAN, ON A SQUARE YARD BASIS.

ESIGN AGENCY

2

0

ER

Z

9

S

 \bigcup

RU



ESIGNER GTF

REVIEWER CAH 08-07-2025 ROJECT ID

120995

14A 17