

**ITEM 614. MAINTAINING TRAFFIC**

THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES ON THE PROJECT IN ACCORDANCE WITH THE OHIO MANUAL OF TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, C&S ITEM 614 - MAINTAINING TRAFFIC, AND AS DESCRIBED BELOW.

1. ALL SIGNS, SIGN SUPPORTS, DRUMS, PORTABLE BARRIER AND INCIDENTALS FOR TRAFFIC CONTROL SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN CONFORMANCE WITH THE MOST RECENT REVISION, CURRENT EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCD). ALL SIGNS USED FOR THE MAINTENANCE OF TRAFFIC SHALL BE NEW OR LIKE NEW CONDITION. DEVICES USED TO MAINTAIN TRAFFIC SHALL BE REMOVED IMMEDIATELY AFTER THE TERMINATION OF SAID WORK. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM BID ITEM FOR ITEM 614 - MAINTAINING TRAFFIC.

2. THE SHADOW VEHICLE SHALL BE EQUIPPED WITH A TRUCK-MOUNTED OR TRAILER ATTENUATOR (TMA) IN ACCORDANCE WITH CMS 614.03.

3. TOTAL CLOSURES OF FREEWAYS SHALL ONLY OCCUR FROM 12AM-5AM WEEKDAYS AND FROM 3AM-7AM SATURDAY AND FROM 3AM-8AM SUNDAY AND SHALL BE PER MT-99.60.

AN OPTION TO DOING 10 MINUTE CLOSURES PER MT 99.60, IS TO TOTALLY CLOSE I-90 UNDER W 44 ST. TOTAL CLOSURE WILL BE ALLOWED 8 TIMES EACH DIRECTION FROM 12AM TO 5AM WEEKDAYS, MONDAY THRU THURSDAY AND WEEKENDS FROM 3AM SATURDAY TO 7AM SATURDAY AND 3AM SUNDAY TO 8AM SUNDAY.

DURING THE TOTAL CLOSURE OF I-90 ALL TRAFFIC WILL BE DETOURED TO THE NORTH AND SOUTH MARGINAL ROADS AND ALLOWED TO REENTER I-90. 3 LEO'S WILL BE PROVIDED BY THE CONTRACTOR TO DIRECT TRAFFIC, 1 AT W. 41 ST AND N. MARGINAL RD., 1 AT W. 41 ST AND S. MARGINAL RD., AND 1 AT W. 44 ST AND N. MARGINAL RD. A LEO WILL BE AT EACH CLOSURE POINT ON I-90. 3 OR 4 LANES WILL HAVE TO BE CLOSED ON 90 TO FUNNEL THE TRAFFIC TO THE RAMPS SIMILAR TO SCD MT-99.50. A MESSAGE BOARD WILL BE USED TO WARN MOTORISTS THAT ALL TRAFFIC MUST EXIT. THE MESSAGE SHOULD READ "ALL TRAFFIC MUST EXIT/ PREPARE TO STOP". ROAD CLOSED AHEAD SIGNS SHALL BE DUAL MOUNTED 1000' TO 1500' IN ADVANCE OF THE ROAD CLOSURE ON I-90.

LEO'S WILL BE AT THE EXPENSE OF THE CONTRACTOR AS WILL ANY ADDITIONAL SIGNAGE FOR THE TOTAL CLOSURE. THE PCMS CALLED OUT IN THE PLANS CAN BE USED FOR THE TOTAL CLOSURES.

4. MOVING OPERATIONS SHALL ONLY OCCUR DURING LANE CLOSURE TIMES UNLESS PERMISSION IS GRANTED BY THE DISTRICT WORK ZONE TRAFFIC MANAGER.

WITH THE EXCEPTION OF SEPARATE PAY ITEMS, PAYMENTS FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR THE APPLICABLE MAINTAINING TRAFFIC ITEMS.

**LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS**

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS FOURTH OF JULY  
 NEW YEARS LABOR DAY  
 MEMORIAL DAY THANKSGIVING  
 (OTHER HOLIDAY OR EVENT)

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00AM FRIDAY
THURSDAY (THANKSGIVING ONLY)	6:00AM WEDNESDAY THROUGH 6:00AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

**LANE VALUE CONTRACT**

THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES AS DESIGNATED IN THE LANE VALUE CONTRACT TABLE FOR EACH UNIT OF TIME THE DESCRIBED CRITICAL LANE/RAMP IS RESTRICTED FROM FULL USE BY THE TRAVELING PUBLIC WITHIN THE RESTRICTED TIME PERIOD. THE LANE VALUE CONTRACT TABLE IS LOCATED IN THE PLAN GENERAL NOTES. THE DISINCENTIVES WILL BE ASSESSED FOR ALL RESTRICTIONS OF THE CRITICAL WORK.

CRITICAL WORK IS SHOWN IN THE LANE VALUE CONTRACT TABLE.

CRITICAL WORK IS DEFINED AS HAVING THE DESIGNATED SECTIONS OPEN TO UNRESTRICTED TRAFFIC AS SHOWN IN THE TABLE, OR THE ENTIRE PROJECT IF NOT OTHERWISE LISTED.

UNRESTRICTED TRAFFIC IS DEFINED AS ALL TRAFFIC LANES BEING AVAILABLE FOR USE WITH SPECIFIED STRIPING AND SAFETY FEATURES IN PLACE.

**LANE VALUE CONTRACT TABLE**

Description of Critical Lane/Ramp to be Maintained	Direction	Lanes	Restricted Time Period	Time Unit	Disincentive (per time unit per lane)
IR-90					
Hilliard Entrance Ramp to W 44 St Exit Ramp	East	4	As Per the Permitted Lane Closure Schedule	Each Minute	\$240
W 44 St Entrance Ramp to Hilliard Exit Ramp	West	4	As Per the Permitted Lane Closure Schedule	Each Minute	\$240
W 44 St Exit Ramp to 490/90 Split	East	4	As Per the Permitted Lane Closure Schedule	Each Minute	\$240
490/90 Merge to W 44 St Entrance Ramp	West	4	As Per the Permitted Lane Closure Schedule	Each Minute	\$240

**LANE CLOSURE/REDUCTION REQUIRED**

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

**NOTICE OF CLOSURE SIGN**

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. [AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.]

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

NOTICE OF CLOSURE SIGN TIME TABLE		
ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP & ROAD CLOSURES	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE

THE SIGN DISPLAY WILL BE PROVIDED BY THE ENGINEER. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

**DROP-OFFS IN WORK ZONES**

ALL DROP-OFFS DURING CONSTRUCTION SHALL BE ADEQUATELY MAINTAINED AND PROTECTED AS PER STANDARD CONSTRUCTION DRAWING MT-101.90.

**SCHEDULE OF THROUGH LANES TO BE MAINTAINED**

ALL LANE CLOSURES MAY ONLY BE IMPLEMENTED AT THE TIMES PERMITTED BY THE "DISTRICT 12 PERMITTED LANE CLOSURE TIMES" LIST, WHICH IS LOCATED ON THE ODOT WEBSITE:

<http://www.dot.state.oh.us/districts/D12/HighwayManagement/Pages/PermittedLaneClosures.aspx>

THE LATEST REVISION, AT 14 DAYS PRIOR TO THE BID DATE, SHALL BE IN EFFECT FOR THIS PROJECT.

NO LANE OR SHOULDER CLOSURES SHALL BE IN PLACE WHEN NO WORK IS BEING PREFORMED, UNLESS DIRECTED BY THE ENGINEER. SHOULDER CLOSURES SHALL ONLY BE ALLOWED AT THE TIMES SPECIFIED FOR LANE CLOSURES.

ANY ROADWAY NOT LISTED SHALL NOT HAVE ANY LANE CLOSURES ON WEEKDAYS FROM 6:30AM TO 9:00AM AND 3:00PM TO 6:00PM. CONTACT DENNIS O'NEIL, DISTRICT 12 WORK ZONE TRAFFIC MANAGER, AT (216) 584-2204 IF THERE ARE ANY QUESTIONS.

ALL NOTES ON THE PERMITTED LANE CLOSURE TIMES SHALL BE PART OF THE PROJECT.

**CONSTRUCTION START DATE**

THE CONSTRUCTION OF THIS PROJECT SHALL NOT START UNTIL 4/15/2021.

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 DRB

MAINTENANCE OF TRAFFIC NOTES

CUY-90-13.45

**STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS**

REFER TO THE FOLLOWING STANDARD DRAWINGS:

A-1-69	REVISED	07-19-02
AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
BR-2-15	REVISED	07-17-15
EXJ-4-87	REVISED	01-19-18
GSD-1-19	REVISED	01-18-19
HL-20.14	REVISED	01-18-19
HL-30.31	REVISED	01-17-14
VPF-1-90	REVISED	07-20-18

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

SS 800-2019	DATED	07-17-20
SS 844	DATED	04-20-18

**DESIGN SPECIFICATIONS**

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017, 8TH EDITION AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

**LRFD LOAD MODIFIERS**

OPERATIONAL IMPORTANCE: A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

**DESIGN LOADING**

DESIGN LOADING: HL93  
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ. FT.

**DESIGN STRESSES**

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

STRUCTURAL STEEL - ASTM A709 GRADE 50 - YIELD STRENGTH 50 KSI

**DECK PROTECTION METHOD**

EPOXY COATED REINFORCING STEEL  
2 1/2" CONCRETE COVER

**MONOLITHIC WEARING SURFACE**

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

**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 CMS 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 THAT HAVE BEEN VERIFIED IN THE FIELD.

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

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 USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. 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 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 C&MS 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. 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 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.

**DECK PLACEMENT DESIGN ASSUMPTIONS**

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.37 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

**ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT**

THE FINISH COAT COLOR OF THE EXTERIOR OF THE TWO FASCIA GIRDERS SHALL BE FEDERAL COLOR NUMBER 595B-15056 (CITY BLUE) PER THE DETAIL BELOW. THE FINISH COAT COLOR OF THE INSIDE OF THE TWO FASCIA GIRDERS, THE INTERIOR GIRDERS, AND THE CROSSFRAMES SHALL BE FEDERAL COLOR NUMBER 595B-15450 (BLUE). THE BEARING STEEL LOAD PLATES SHALL BE PAINTED IN ACCORDANCE WITH ITEM 514 WITH FINISH COAT TO MATCH THE INTERIOR GIRDERS.



**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.

**SUBSTRUCTURE CONCRETE REMOVAL**

REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. 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 INCH 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 REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

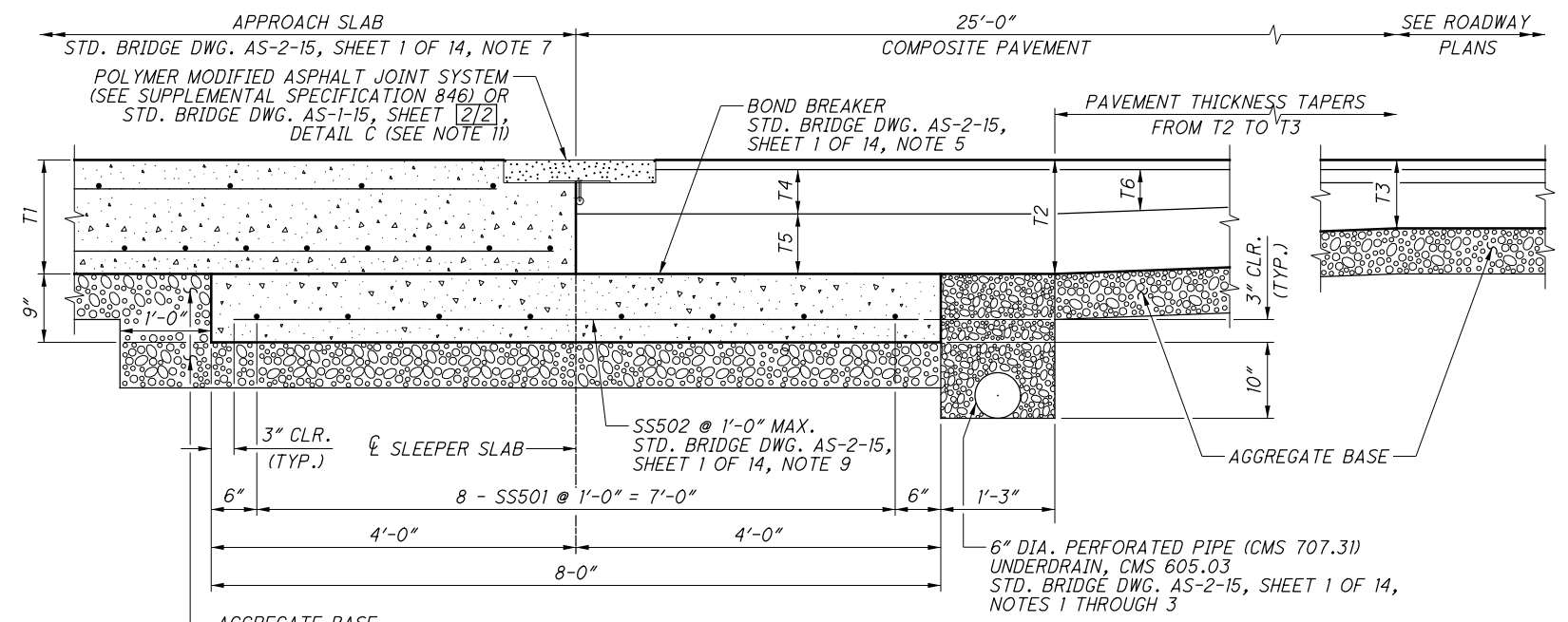
**ITEM 512, SEALING OF CONCRETE SURFACES**

SEAL THE CONCRETE SURFACES AS DETAILED ON THE PLAN SHEETS. THE COLOR OF THE NON-EPOXY SHALL BE CLEAR. THE FINISH COLOR OF THE EPOXY-URETHANE SHALL BE FEDERAL COLOR NUMBER 595B-37722 (ODOT BUFF), EXCEPT THE AREA THAT IS FORMLINED SHALL HAVE THE FINISH COLOR MATCHING FEDERAL COLOR NUMBER 595B-26521 (TAN, SEMIGLOSS).

**ITEM 526, REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN**

THE APPROACH SLAB SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ODOT CMS ITEM 526 AND AS DETAILED IN THE PLANS. PAYMENT FOR THIS ITEM WILL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND ANY INCIDENTALS REQUIRED TO PERFORM THIS WORK. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER SQUARE YARD FOR ITEM 526, REINFORCED CONCRETE APPROACH SLABS.

FOR THE PAVEMENT THICKNESS TAPER, VARY THE THICKNESS OF THE ITEM 441 LAYER (ASPHALT CONCRETE INTERMEDIATE COURSE) AND KEEP A CONSTANT 9" THICKNESS OF THE ITEM 305 LAYER (CONCRETE BASE) AS SHOWN IN THE DETAIL BELOW. SEE STD. BRIDGE DWG. AS-2-15, FOR ADDITIONAL NOTES AND DETAILS.



**SECTION A-A**

SEE STD. BRIDGE DWG. AS-2-15, FOR ADDITIONAL NOTES AND DETAILS.

- T1 : THICKNESS OF PROPOSED REINFORCED CONCRETE APPROACH SLAB (SEE BRIDGE PLANS AND STD. BRIDGE DWG. AS-2-15, SHEET 1 OF 14, NOTE 4)
- T2 : THICKNESS OF THE 25-FOOT COMPOSITE PAVEMENT (SEE ROADWAY PLANS AND STD. BRIDGE DWG. AS-2-15, SHEET 1 OF 14, NOTE 4)
- T3 : THICKNESS OF PROPOSED/EXISTING PAVEMENT (SEE ROADWAY PLANS)
- T4 : 6.75" ITEM 441 (SEE ROADWAY PLANS)
- T5 : 9" ITEM 305 (SEE ROADWAY PLANS)
- T6 : VAR. DEPTH - ITEM 441 (SEE ROADWAY PLANS)

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**DESIGN AGENCY**  
**ms consultants, inc.**  
 4608 St. Clair Avenue  
 Cleveland, Ohio 44103-1206  
**DATE** 7/17/2019  
**REVIEWED** JDH  
**DRAWN** JSP  
**CHECKED** SUR  
**DESIGNED** LAW  
**FILE NUMBER** 1807811  
**GENERAL NOTES (1 OF 2)**  
 BRIDGE NO. CUY-090-1345  
 WEST 44TH STREET OVER I-90  
**CUY-090-13.45**  
 PID No. 105792  
 2 / 30  
 107  
 135

**ITEM SPECIAL - FORM LINER:**

THIS ITEM SHALL INCLUDE THE FURNISHING OF ALL MATERIALS AND THE NECESSARY LABOR TO PROVIDE A REUSABLE ARCHITECTURAL TREATMENT ON THE INSIDE FACE OF BRIDGE AND APPROACH SLAB PARAPET RAILINGS.

ALL WORK SHALL CONFORM TO THE APPLICABLE PROVISIONS OF ITEM 511 EXCEPT AS MODIFIED AND ADDED HEREIN.

ARCHITECTURAL TREATMENT OF CONCRETE PARAPETS SHALL BE AS FOLLOWS:

GENERAL: THE WORK SHALL INCLUDE:

- CONSTRUCTION OF TEXTURED CONCRETE SURFACES USING FORM LINERS DESIGNED TO DUPLICATE CLOSELY THE APPEARANCE OF NATURAL STONE.
- DESIGN AND PATTERN OF THE CONCRETE SURFACES SHALL FOLLOW THE MANUFACTURER'S STANDARD DRAWING SELECTED.
- PATTERN SHALL BE: CUSTOM ROCK #1203, NEW ENGLAND DRYSTACK; GREENSTREAK #330, ASHLAR STONE; ARCHITECTURAL POLYMERS #911, LARGE STONE DRYSTACK; OR APPROVED EQUAL.
- SHOP DRAWINGS: PLAN, ELEVATION, AND DETAILS TO SHOW OVERALL PATTERN, JOINT LOCATIONS, FORM TIE LOCATIONS, AND END, EDGE AND OTHER SPECIAL CONSIDERATIONS.
- SAMPLES: FORM TIES, SAMPLE AND DESCRIPTION, SHOWING METHOD OF SEPARATION WHEN FORMS ARE REMOVED.
- MANUFACTURER OF FORM LINERS MUST HAVE A MINIMUM FIVE YEARS EXPERIENCE MAKING CUSTOM FORM LINERS AND COLOR STAINS TO CREATE FORMED CONCRETE SURFACES TO MATCH NATURAL STONE SHAPES AND SURFACE TEXTURES.
- PRE-INSTALLATION MEETING: SCHEDULE CONFERENCE WITH MANUFACTURER'S REPRESENTATIVE TO ASSURE UNDERSTANDING OF FORM LINER USE, REQUIREMENTS FOR CONSTRUCTION OF MOCK-UP, AND TO COORDINATE THE WORK.

**PRODUCTS:**

- FORM LINERS AS MANUFACTURED BY:

CUSTOM ROCK FORMLINER 2020 WEST 7TH STREET ST. PAUL, MN 55116 (615) 699-1345 WWW.CUSTOMROCK.COM	ARCHITECTURAL POLYMERS 1220 LITTLE GAP ROAD PALMERTON, PA 18071 (610) 824-3322 WWW.APFORMLINER.COM
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GREENSTREAK  
3400 TREE COURT INDUSTRIAL BLVD.  
ST. LOUIS, MO 63122-6614  
(636) 225-9400  
WWW.GREENSTREAK.COM

- RELEASE AGENT: COMPATIBLE WITH FORM LINER. CONSULT MANUFACTURER.
- FORM TIES: DESIGNED TO SEPARATE AT LEAST 1 INCH BACK FROM FINISHED SURFACE, LEAVING ONLY A NEAT HOLE THAT CAN BE PLUGGED WITH PATCHING MATERIAL.

**EXECUTION:**

- FORMED CONCRETE CONSTRUCTION: INSTALLER SHALL HAVE A MINIMUM FIVE YEARS OF EXPERIENCE WITH VERTICALLY FORMED ARCHITECTURAL CONCRETE. INSTALLER SHALL BE TRAINED IN MANUFACTURER'S SPECIAL TECHNIQUES IN ORDER TO ACHIEVE REALISTIC SURFACES.
- FORM LINER PREPARATION: CLEAN AND MAKE FREE OF BUILDUP PRIOR TO EACH POUR. INSPECT FOR BLEMISHES OR TEARS. REPAIR IF NEEDED FOLLOWING MANUFACTURER'S RECOMMENDATIONS.
- FORM LINER ATTACHMENT: PLACE ADJACENT LINERS WITH LESS THAN 1/4 INCH SEPARATION BETWEEN LINERS. ATTACH LINERS TO FORM SECURELY, FOLLOWING MANUFACTURER'S RECOMMENDATIONS.
- FORM RELEASE AGENT: APPLY FOLLOWING MANUFACTURER'S RECOMMENDATIONS.
- FORM STRIPPING AND RELATED CONSTRUCTION SHALL AVOID CREATING DEFECTS IN THE FINISHED SURFACES.
- WHERE FORM LINERS ABUT, CAREFULLY BLEND TO MATCH THE BALANCE OF THE STONE PATTERN, AVOIDING VISIBLE SEAMS OR FORM MARKS.
- PLACE FORM TIES AT THE THINNEST POINTS OF LINER (HIGHER POINTS OF FINISHED WALL). NEATLY PATCH THE HOLE REMAINING AFTER DISENGAGING THE PROTRUDING PORTION OF THE TIE SO THAT IT WILL NOT BE VISIBLE AFTER SEALING THE CONCRETE SURFACE.
- WHERE AN EXPANSION JOINT MUST OCCUR AT A POINT OTHER THAN AT MORTAR OR RUSTICATION JOINTS, SUCH AS AT THE FACE OF CONCRETE TEXTURE WHICH IS TO HAVE THE APPEARANCE OF STONE, CONSULT MANUFACTURER FOR PROPER TREATMENT OF EXPANSION MATERIAL.

BASIS OF PAYMENT: PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE AT THE CONTRACT UNIT PRICE BID FOR ITEM SPECIAL - FORM LINER. THIS PRICE SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM AS SPECIFIED.

**ITEM 690 - DOMINION ENERGY ROLLER GUIDE/SUPPORT**

UNDER THIS ITEM, THE CONTRACTOR WILL PROVIDE AND INSTALL PIPE ROLLER GUIDE/SUPPORT WHERE SHOWN ON THE PLANS TO SUPPORT THE PROPOSED DOMINION ENERGY (DE) 6" DIAMETER GAS LINE. ROLLERS/SUPPORTS WILL BE SIZED TO CARRY THE PROPOSED GAS LINE. FOR PIPE SUPPORTS, ROLLERS SHALL BE DOUBLE ROLLERS USING NON-CONDUCTIVE MATERIAL. THESE ROLLERS WILL BE FULLY FIELD-ADJUSTABLE AND BE PROVIDED WITH ALL REQUIRED HARDWARE AND FASTENERS FOR A COMPLETE OPERABLE SYSTEM. DOMINION ENERGY WILL SUPPLY AND INSTALL THE GAS MAIN. BEFORE ORDERING THE CONTRACTOR SHALL GET APPROVAL FROM DOMINION ENERGY. THE CONTRACTOR SHALL COORDINATE WITH DOMINION ENERGY TO SCHEDULE THE WORK. NO ADDITIONAL PAYMENT WILL BE MADE FOR ANY SCHEDULE DELAYS WHEN COORDINATING THIS WORK WITH DOMINION ENERGY.

PAYMENT WILL BE MADE AT THE PRICE PER EACH PER ITEM 690 - DOMINION ENERGY ROLLER GUIDE/SUPPORT.

**ITEM 607 - VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN**

THE ANCHORS SHALL BE CAST IN PLACE. ALL FENCE FABRIC SHALL BE BLACK VINYL COATED AND ALL RAILS, POSTS, PLATES AND ADDITIONAL VISUAL HARDWARE SHALL BE PAINTED WITH BLACK EPOXY-URETHANE SHOP APPLIED. ALL TIE WIRES AND CAULK SHALL BE BLACK.

PAYMENT SHALL BE AT THE UNIT PRICE BID PER LINEAR FOOT FOR ITEM 607 - VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

**ABBREVIATIONS**

- ABUT. - ABUTMENT
- APPR. - APPROACH
- APPROX. - APPROXIMATE
- BOT. - BOTTOM
- BRG. - BEARING
- C/C - CENTER TO CENTER
- CEI - CLEVELAND ELECTRIC ILLUM.
- C.J. - CONSTRUCTION JOINT
- COL. - COLUMN
- CONST. - CONSTRUCTION
- C.P.P. - CORRUGATED PLASTIC PIPE
- CPP - CLEVELAND PUBLIC POWER
- CWD - CLEVELAND WATER DEPARTMENT
- DIA. - DIAMETER
- E.F. - EACH FACE
- EL. - ELEV.
- EQ. SPA. - EQUAL SPACE
- E.W. - EACH WAY
- EX. - EXIST.
- EXP. - EXPANSION
- F.A. - FORWARD ABUTMENT
- F.F. - FAR FACE
- FTG. - FOOTING
- FWD. - FORWARD
- H.M.W.M. - HIGH MOLECULAR WEIGHT METHACRYLATE
- MAX. - MAXIMUM
- M.O.T. - MAINTENANCE OF TRAFFIC
- MIN. - MINIMUM
- N.F. - NEAR FACE
- P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
- R.A. - REAR ABUTMENT
- RT. - RIGHT
- S.B. - SOUTHBOUND
- SER. - SERIES
- SPA. - SPACING
- STA. - STATION
- T & B - TOP AND BOTTOM
- T.H. - TEST HOLE
- TYP. - TYPICAL
- T/T - TOE TO TOE
- VAR. - VARIES
- V.C. - VERTICAL CURVE
- VERT. - VERTICAL
- U.N.O. - UNLESS NOTED OTHERWISE

**CEI FIRST ENERGY COORDINATION**

THE CONTRACTOR SHALL COORDINATE DE-ENERGIZING OF THE EXISTING CEI ELECTRIC CABLE(S) WHICH ARE SUPPORTED BY THE EXISTING BRIDGE GIRDERS AND WHICH EXTEND UNDERGROUND UNDER SOUTH MARGINAL AND NORTH MARGINAL ROADS. CEI WILL INSTALL TWO (2) NEW 5" DIA. DUCTS IN THE BRIDGE SIDEWALK AND APPROACH ROADWAYS, AND WILL ALSO INSTALL NEW CABLE(S) IN THE NEW CONDUITS. THE CONTRACTOR SHALL COORDINATE WITH CEI TO PROVIDE ACCESS AND TO SCHEDULE THEIR WORK.

THE EXISTING CEI CONDUITS WILL BE REMOVED BEFORE THE CPP DUCT BANK IS RELOCATED.

THE WORK FOR THIS ITEM SHALL BE INCIDENTAL TO THE PROJECT AND NO SEPARATE PAYMENT SHALL BE MADE.

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

THE CONCRETE PATCHING DEPTH SHALL BE 7". THE REINFORCING STEEL WITHIN THE PATCH IS INCLUDED WITH ITEM 509 EPOXY COATED REINFORCING STEEL FOR PAYMENT.

**ASBESTOS NOTIFICATION**

A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST SURVEYED THE BRIDGE STRUCTURE SCHEDULED FOR DEMOLITION AND/OR REHABILITATION; THE SURVEY DETERMINED THAT 6415 SQUARE FEET OF ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE.

ODOT SHALL PROVIDE A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO ONE OF THE ADDRESSES BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

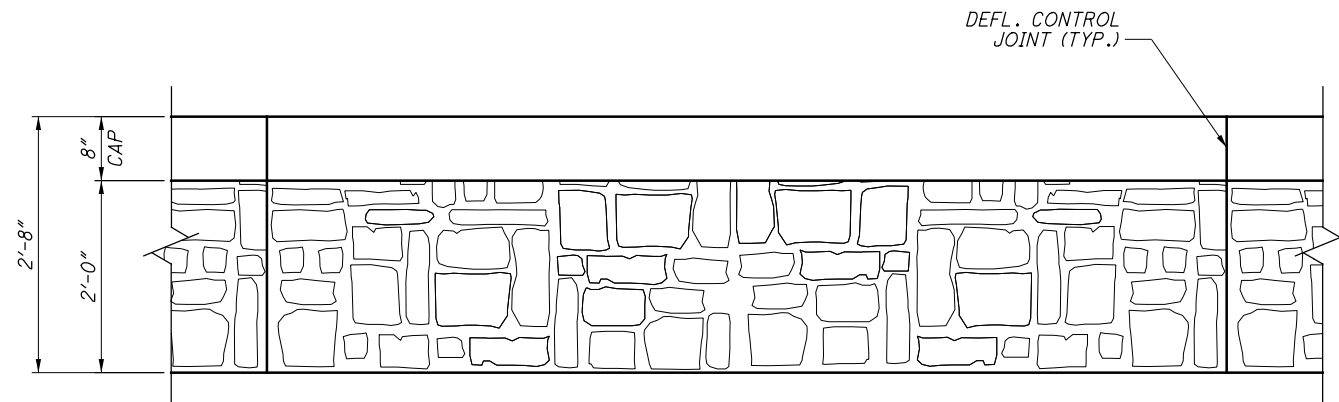
ASBESTOS PROGRAM  
OHIO EPA, DAPC  
P.O. BOX 1049  
COLUMBUS, OH 43216-1049

OR

ASBESTOS PROGRAM  
OHIO EPA, DAPC  
50 W. TOWN ST., SUITE 700  
COLUMBUS, OH 43215

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION. THE FORM SHALL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. COPIES OF THE OEPA FORM AND BRIDGE INSPECTION REPORT ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 12 OFFICE, 5500 TRANSPORTATION BOULEVARD, GARFIELD HEIGHTS, OHIO 44125.

BASIS FOR PAYMENT: THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM, AND REMOVAL, HANDLING AND DISPOSAL OF ASBESTOS CONTAINING MATERIALS. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.



**TYPICAL FORM LINER ELEVATION**  
(AS VIEWED FROM SIDEWALK)

\\msconsultants.com\files\Production\02\60\_08342\105792\_BRIDGE\_REDECK\_DESIGN\Structures\CUY090\_1345C\_Sheets\090\_1345C\_SNO02.dgn Sheet 4/14/2020 8:57:47 AM jhren

DESIGN AGENCY: **ms consultants, inc.**  
4608 St. Clair Avenue  
Cleveland, Ohio 44103-1206

DATE: 7/17/2019  
REVIEWED: JDH  
DRAWN: JSP  
DESIGNED: LAW  
CHECKED: SUR

STRUCTURE FILE NUMBER: 1807811

GENERAL NOTES (2 OF 2)  
BRIDGE NO. CUY-090-1345  
WEST 44TH STREET OVER I-90

PID No. 105792

3 / 30

108  
135

BY: TVB 6/24/2019  
 CHECKED: LAW 9/20/2019

ESTIMATED QUANTITIES

ITEM	ITEM EXT.	PARTICIPATION			TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPERSTRUCTURE	GENERAL	SHEET REF.
		01/BRO/BR	02/BRO/BR	03/BRO/BR								
202	11203	LS			LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					LS	2
202	22900	240			240	APPROACH SLAB REMOVED					240	
202	23500	240			240	WEARING COURSE REMOVED			240			
503	11100	LS			LS	COFFERDAMS AND EXCAVATION BRACING					LS	
509	10000	106,810			106,810	EPOXY COATED REINFORCING STEEL	10,317	1,309	91,824		3,360	
510	10000	362			362	EACH DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	268	94				
511	34446	269			269	CY CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			269			
511	34450	45			45	CY CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			45			
511	42510	12			12	CY CLASS QC1 CONCRETE, PIER CAP		12				
511	45710	55			55	CY CLASS QC1 CONCRETE, ABUTMENT	55					
511	51512	133			133	CY CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK			107		26	
512	10050	462			462	SY SEALING OF CONCRETE SURFACES (NON-EPOXY)			462			
512	10100	1,082			1,082	SY SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	492	120	470			
512	10600	33			33	FT CONCRETE REPAIR BY EPOXY INJECTION	33					
512	33000	11			11	SY TYPE 2 WATERPROOFING	11					
513	10280	265,003			265,003	LB STRUCTURAL STEEL MEMBERS, LEVEL 4			265,003			
513	20000	3,168			3,168	EACH WELDED STUD SHEAR CONNECTORS			3,168			
514	00060	14,468			14,468	SF FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			14,468			
514	00066	14,468			14,468	SF FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			14,468			
516	11210	101			101	FT STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			101			
516	13600	86			86	SF 1" PREFORMED EXPANSION JOINT FILLER	86					
516	44100	12			12	EACH ELASTOMERIC BEARING (10" X 16" X 2.0488") WITH INTERNAL LAMINATES (NEOPRENE) AND LOAD PLATE (11" X 19" X 1.5" MIN.)	12					
516	44200	6			6	EACH ELASTOMERIC BEARING (18" X 20" X 3.1235") WITH INTERNAL LAMINATES (NEOPRENE) AND LOAD PLATE (19" X 30.5" X 1.5" MIN.)		6				
518	21200	45			45	CY POROUS BACKFILL WITH GEOTEXTILE FABRIC	45					
519	11101	537			537	SF PATCHING CONCRETE STRUCTURE, AS PER PLAN	153	384				2
526	30011	318			318	SY REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN					318	2
526	90010	96			96	FT TYPE A INSTALLATION					96	
SPECIAL	530E13000	733			733	SF FORMLINER			733			3
601	20010	37			37	CY CRUSHED AGGREGATE SLOPE PROTECTION					37	3
607	39901	367			367	FT VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN			367			3
SPECIAL	690E98000			11	11	EACH DOMINION ENERGY ROLLER GUIDE/SUPPORT			11			3
844	10001	743			743	SF CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN	743					3

DESIGN AGENCY: **ms consultants, inc.**  
 4608 St. Clair Avenue  
 Cleveland, Ohio 44103-1206

DESIGNED: TVB  
 CHECKED: SUR

DRAWN: KRM  
 REVISED: SSR

REVIEWED: JDH  
 DATE: 7/17/2019  
 STRUCTURE FILE NUMBER: 1807811

ESTIMATED QUANTITIES  
 BRIDGE NO. CUY-090-1345  
 WEST 44TH STREET OVER I-90

CUY-090-13.45  
 PID No. 105792

4/30  
 109  
 135