RESTRICTIONS FOR COMPACTION OF UNDERCUT, SUBGRADE AND AGGREGATE BASE ALONG CORNELL RD.

#### ITEM 204 - SUBGRADE COMPACTION, AS PER PLAN

UTILIZE A COMPACTOR WITH A MAXIMUM EFFECTIVE WEIGHT OF 4 TONS AND IN STATIC COMPACTION MANNER. DO NOT INCLUDE VIBRATORY COMPACTION MEANS AT THE SUBGRADE LEVEL. ALL OTHER REQUIREMENTS OF ITEM 204 APPLY.

#### ITEM 304 - AGGREGATE BASE, AS PER PLAN

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SUPPLY AGGREGATE BASE CONSISTING OF CRUSHED CARBONATE STONE MEETING THE REQUIREMENTS OF ITEM 304. PLACE AND COMPACT THE AGGREGATE BASE IN ACCORDANCE WITH ITEM 304. UTILIZE A COMPACTOR WITH A MAXIMUM EFFECTIVE WEIGHT OF 4 TONS AND IN STATIC COMPACTION MANNER. DO NOT INCLUDE VIBRATORY COMPACTION MEANS AT THE ON THE AGGREGATE BASE. ALL OTHER REQUIREMENTS OF ITEM 304 APPLY. PERFORM THE A TEST SECTION ACCORDING TO SUPPLEMENT 1015 TO DETERMINE THE MAXIMUM DRY DENSITY OF THE AGGREGATE BASE FOR THE SITE CONDITIONS.

#### ITEM 204 - GRANULAR MATERIAL TYPE C. AS PER PLAN

SUPPLY GRANULAR MATERIAL, TYPE C CONSISTING OF CRUSHED CARBONATE STONE MEETING THE REQUIREMENTS OF ITEM 204. PLACE AND COMPACT THE TYPE C MATERIAL IN ACCORDANCE WITH ITEM 204. UTILIZE A COMPACTOR WITH A MAXIMUM EFFECTIVE WEIGHT OF 4 TONS AND IN STATIC COMPACTION MANNER. DO NOT INCLUDE VIBRATORY COMPACTION MEANS AT THE ON THE AGGREGATE BASE. ALL OTHER REQUIREMENTS OF ITEM 204 APPLY.

#### ITEM 638 - WATER WORK

PERFORM WATER WORK IN ACCORDANCE WITH CMS 638 AND THE CITY OF CINCINNATI SUPPLEMENT TO THE ODOT 2019 CMS.

https://www.cincinnati-oh.gov/dote/permitslicenses/dote-resource-center/odotspecifications-and-certification/2019-city -supplement-to-odot/

REFER TO WATER WORK PLANS FOR ADDITIONAL NOTES AND MATERIAL SPECIFICATIONS.

EXCAVATION, PIPE TRENCH RESTORATION, PAVEMENT/SIDEWALK REMOVAL AND RESTORATION SHALL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE WATER WORK ITEMS.

### ITEM 878 - MATERIAL TESTING

UNBOUND MATERIALS SHALL ADHERE TO THE REQUIREMENT OF SS 878. PAYMENT FOR MATERIAL TESTING SHALL BE INCLUDED UNDER THE FOLLOWING PAY ITEM:

ITEM 878 - INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIAL.

#### ASBESTOS ABATEMENT

AN ASBESTOS SURVEY FOR SFN 3113353 SCHEDULED FOR RENOVATION WORK WAS CONDUCTED BY A LICENSED ASBESTOS HAZARD EVALUATION SPECIALIST. THE ASBESTOS SURVEY IDENTIFIED THE PRESENCE OF PRESUMED ASBESTOS CONTAINING MATERIALS (i.e. 4' TO 5' OF TELECOM CONDUIT RUNNING THROUGH EACH ABUTMENT BACK WALL). CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER TO HAVE THE OWNER REMOVE THE ASBESTOS.

AN ASBESTOS SURVEY FOR SFN 3113418 SCHEDULED FOR RENOVATION WORK WAS CONDUCTED BY A LICENSED ASBESTOS HAZARD EVALUATION SPECIALIST. THE ASBESTOS SURVEY DID NOT IDENTIFY THE PRESENCE OF ANY ASBESTOS CONTAINING MATERIALS.

#### ELECTRONIC SUBMISSION:

THE CONTRACTOR SHALL SUBMIT ELECTRONICALLY TO OEPA A COMPLETED NOTIFICATION OF DEMOLITION & RENOVATION FORM (NDRF) AND APPLICABLE FEES ALONG WITH THE ASBESTOS SURVEY REPORT. THE COMPLETED NDRF MUST BE SUBMITTED TO OEPA AT LEAST 10 DAYS PRIOR TO ANY DEMOLITION AND RENOVATION ACTIVITY. THE CONTRACTOR IS RESPONSIBLE FOR RETAINING AN ELECTRONIC COPY OF THE NDRF (IN PDF FORM) FOR SUBMISSION TO THE DISTRICT ENVIRONMETNAL STAFF AND A ONE HARD COPY TO THE PROJECT ENGINEER.

(GO TO THE OEPA EBUSINESS CENTER AND SUBMIT THE DNRF AND PAYMENT ALONG WITH THE ASBESTOS SURVEY REPORT)

#### HARD COPY SUBMISSION:

THE CONTRACTOR MAY ELECT TO SUBMIT A HARD COPY OF THE COMPLETED NDRF AND PAYMENT ALONG WITH THE ASBESTOS SURVEY REPORT TO THE FOLLOWING:

ASBESTOS PROGRAM ASBESTOS PROGRAM OHIO EPA, DAPC OR OHIO EPA, DAPC P.O. BOX 1049 50 W. TOWN ST., SUITE 700 COLUMBUS, OHIO 43216-1049 COLUMBUS, OHIO 43215

IF THE CONTRACTOR ELECTS TO SUBMIT A HARD COPY TO OEPA THEY ARE RESPONSIBLE FOR RETAINING A HARD COPY OF THE NDRF FOR SUBMISSION TO THE DISTRICT ENVIRONMETNAL STAFF AND A ONE HARD COPY TO THE PROJECT ENGINEER.

#### BASIS OF PAYMENT

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

690E98400 ITEM SPECIAL - MISC.: WORK INVOLVING ASBESTOS CONTAINING MATERIALS - LUMP SUM

#### INTERIM COMPLETION DATES

CONTRACTOR MAY BEGIN CONSTRUCTION AS EARLY AS JUNE 7, 2021 BUT WILL NOT BE HELD TO THAT DATE.

SIGNALIZED LANE CLOSURE ON THE CORNELL RD. STRUCTURE WILL BEGIN ON JUNE 1, 2022 TO ALLOW THE CONTRACTOR TIME TO ORDER MATERIALS, FINAL COMPLETION DATE AT CORNELL RD. HAS BEEN SET FOR SEPTEMBER 30, 2022 TO FINISH UP NON-TRAFFIC IMPACTING WORK.

AN INTERIM COMPLETION DATE OF NOVEMBER 30, 2021 HAS BEEN SET TO HAVE THE WELLER RD. STRUCTURE OPEN TO TRAFFIC. A SECOND INTERIM COMPLETION DATE OF JULY 30, 2022 HAS BEEN SET FOR ALL WORK TO BE COMPLETE ON THE WELLER RD. STRUCTURE.

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THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS SHALL BE AS DIRECTED BY THE PROJECT ENGINEER. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME. THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. AND TO REVISE SIGN MESSAGES. IF NECESSARY.

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 2 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE, THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.) THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER

BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE, ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS, FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 8 SIGN MONTHS ASSUMING 2 PCMS SIGN(S) FOR 4 MONTH(S)

# TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

#### ITEM 614, WORK ZONE MARKINGS AND SIGNS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF C&MS 614.04 AND 614.11.

- 614 WORK ZONE CENTER LINE, CLASS I, 642 PAINT
- 614 WORK ZONE EDGE LINE, CLASS I, 642 PAINT = 0.85 MI.
- 614 WORK ZONE DOTTED LINE, CLASS I, 642 PAINT = 100 FT
- 614 WORK ZONE STOP LINE, CLASS I, 642 PAINT = 36 FT
- 614 WORK ZONE CENTER LINE, CLASS III, 642 PAINT = 0.38 MI.
- 614 WORK ZONE EDGE LINE, CLASS III, 642 PAINT
- 614 WORK ZONE DOTTED LINE, CLASS III, 642 PAINT = 100 FT
- 614 WORK ZONE STOP LINE, CLASS III, 642 PAINT

614 - WORK ZONE IMACT ATTENUATOR = 6 EACH 1614-DETOUR SIGNING - LUMASUM SUM

- 615 PAVEMENT FOR MAINTAINING TRAFFIC, TYPE B (SEE SHEET 12)
- 615 ROADS FOR MAINTAINING TRAFFIC = LUMP SUM

622 - PARTABLE BARRIER, UNANCHORED = 2,400 FT 162k-RABITABLE BARRINER LANCHORED - 1000

1,200 FT OF UNANCHORED PCB AND (2) WORK ZONE IMPACT ATTENUATORS ARE PROVIDED FOR USE ALONG THE I-275 MEDIAN TO PROTECT THE CONTRACTOR DURING CONSTRUCTION.

THE CONTRACTOR SHALL PLACE ALL WORK ZONE PAVEMENT MARKINGS OR PERMANENT MARKINGS UPON COMPLETION OF THE BRIDGE SEALING PRIOR TO OPENING THE ROADWAY TO TRAFFIC.

				5	SHEET NU	М.				PART.	ITEM	ITEM	GRAND	UNIT	SE   DESCRIPTION   SHE.
6	7	9 10	11	12	28	30	36	37	WW2	01/IMS/BR		EXT	TOTAL		NC NC
									12	12	638	98600	12	FT	WATER WORK, MISC.:FURNISHING AND LAYING 6" DUCTILE IRON PIPE AND FITTINGS   WW
									22	22	638	98600	22		WATER WORK, MISC.:FURNISHING AND LAYING 8" DUCTILE IRON PIPE AND FITTINGS
															TRAFFIC CONTROL
							21	24		45	621	00100	45		RPM
							21	24		<u>45</u> 36	621 626	54000 00102	45 36	EACH FACH	RAISED PAVEMENT MARKER REMOVED BARRIER REFLECTOR, TYPE 1, (BIDIRECTIONAL)
										40	626	00110	40	EACH	BARRIER REFLECTOR, TYPE 2, (BIDIRECTIONAL)
							30 13			30 13	630 630	03100 08600	30 13		GROUND MOUNTED SUPPORT, NO. 3 POST SIGN POST REFLECTOR
							3			3	630	80100	3	SF	SIGN, FLAT SHEET
							2			2 4	630	80510	2		SIGN, STREET NAME REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL
							3			3	630 630	84900 86002	3		REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL  REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL
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		0.5					0.36	0.2		0.5	642 644	00100	0.56		CENTER LINE, TYPE 1  EDGE LINE, 4"
							0.15	0.1		0.25	644	00300	0.25	MILE	CENTER LINE
							18 18			18 18	644 644	30000 30000	18 18		STOP LINE REMOVAL OF PAVEMENT MARKING
							0.51	0.3		0.81	644	30030	0.81	MILE	REMOVAL OF PAVEMENT MARKING
					1		0.17	0.19		0.36	646 646	10000	0.36 0.19		EDGE LINE, 4"  CENTER LINE
							0.26	0.29		0.55	646	50300	0.55		REMOVAL OF PAVEMENT MARKING
															NOISE BARRIERS
	LUMP									LUMP	SPECIAL	60610900	LS		NOISE BARRIER: REMOVAL, STORAGE AND RE-USE
															STRUCTURE REPAIR (HAM-275-31.88) 4
															STRUCTURE REPAIR (HAM-275-32.70) 6
															MAINTENANCE OF TRAFFIC
		500				~~		~		7508			508	YOUR	TAN ENFORCEMENT OF GICER WITH PATRIOL CARFOR ASSISTANCE
		<del>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</del>	6 1 NMP x			- · ·				6 × 1/MP	614	12384	6		WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)  DETOUR SIGNING \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
		35	29/1							35	614	13000	35	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
			I							40	614 614	13310 13312	40 48		BARRIER REFLECTOR, TYPE 1, (BIDIRECTIONAL)   1   BARRIER REFLECTOR, TYPE 2, (BIDIRECTIONAL)   1
		40								1 70	014		70		
		40 48 8								8	614	13360	8		OBJECT MARKER, TWO WAY
		48	8								614 614	13360 18600	8 8		OBJECT MARKER, TWO WAY  PORTABLE CHANGEABLE MESSAGE SIGN
		48	0.38							8				SNMT MILE	PORTABLE CHANGEABLE MESSAGE SIGN  WORK ZONE CENTER LINE, CLASS I, 642 PAINT
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#### STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

#### REFER TO THE FOLLOWING STANDARD DRAWINGS:

AS-1-15	7/17/15	SBR-1-20	7/17/20
AS-2-15	1/18/19	SICD-2-14	7/18/14
PCB-91	7/17/20	VPF-1-90	7/20/18
SICD-1-96	7/18/14	GSD-1-19	1/18/19
A-1-20	7/17/20	NBS-1-09	1/19/18
BR-2-15	7/17/15	TVPF-1-18	7/20/18
EXJ-4-87	1/19/18		

#### REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

# DESIGN SPECIFICATIONS AND LOAD RATING

THIS STRUCTURE CONFORMS TO THE "LRFD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 8th ED., INCLUDING ALL INTERIM SPECIFICATIONS AND THE 2019 ODOT BRIDGE DESIGN MANUAL.

THIS STRUCTURE WAS LOAD RATED PER THE "LRFR BRIDGE RATING SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, LATEST ED., INCLUDING ALL INTERIM SPECIFICATIONS. LOAD RATING FOR THE REHABILITATED HAM-275-3270 STRUCTURE RESULTED IN AN HL-93 INVENTORY RATING OF 0.921 (LESS THAN 1.00 REQUIRED). A DESIGN EXCEPTION FOR STRUCTURAL CAPACITY IS ON FILE.

#### DESIGN LOADING

HL-93, CASE (II) LOADING FUTURE WEARING SURFACE (FWS) = 0 PSF (NON-INTERSTATE) SIDEWALK LOADING = 0.075 KSF

#### DESIGN DATA

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 2.5" CONCRETE COVER HMWM CONCRETE SEALER

# MONOLITHIC WEARING SURFACE

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

#### NON-USE OF ASBESTOS-CONTAINING MATERIALS

THE CONTRACTOR SHALL AT NO TIME INCORPORATE ANY MATERIALS WHICH ARE COMPOSED OF OR CONTAIN ANY AMOUNTS OF ASBESTOS. THE SUBSTITUTION OF MATERIALS WHICH CONTAIN ANY AMOUNTS OF ASBESTOS WILL IN NO CIRCUMSTANCES BE ACCEPTABLE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF CERTIFICATION ASSERTING THAT NO ASBESTOS CONTAINING MATERIALS WERE USED IN ANY PORTION OF THE CONSTRUCTION.

#### ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN DESCRIPTION

THIS WORK CONSISTS OF PARTIALOR COMPLETE REMOVAL OF CONCRETE DECKS, BULB ANGLE DRAINAGE SYSTEMS, AND/OR SUBSTRUCTURES, THE REMOVAL OF PARAPETS, DECK JOINTS AND/OR OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, GIRDERS, CROSS FRAMES, ETC.). THIS WORK ALSO INCLUDES REMOVALS FOR GIRDER REPAIRS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

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 WHICH FALLS FROM THE STRUCTURE DURING ALL REMOVAL OPERATIONS. THE COST TO CLEAR AND CLEAN UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

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.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE PERFORMING REPAIR.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED

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

CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS (PRESTRESSED BOX BEAM, I-BEAM, STEEL BEAM STEEL GIRDER, ETC.), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO 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. DUE TO THE POSSIBLE PRESENCE OF ATTACHMENTS (E.G., FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE ENGINEER.

#### 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. MINIMUM WATER PRESSURE SHALL BE 1,500 PSI.

#### HMWM CONCRETE SEALER

THE CONTRACTOR SHALL SEAL ALL CONSTRUCTION JOINTS IN THE DECK SLAB OVERLAY, ABUTMENT BACK WALL AND NEW APPROACH SLABS WITH A HIGH MOLECULAR WEIGHT METHACRYLATE SEALER PER CMS 511.22, SEALING SHALL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE CONCRETE OVERLAY AND APPROACH SLAB ITEMS.

#### ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00. MECHANICAL CONNECTORS SHALL BE CONSIDERED INCIDENTAL TO THIS PAY ITEM.

ITEM 509 - REINFORCING STEEL, MISC .: GALVANIZED REBAR PROVIDE GALVANIZED REBAR DOWELS AS NOTED IN THE PLANS FOR THE PARNPET REPLACEMENTATIVAL VIOLET SASS

EXISTING PLANS MAY BE INSPECTED IN THE ODOT DISTRICT 8 OFFICE IN LEBANON, OHIO.

# ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE

THIS ITEM INCLUDES SEALING THE CONCRETE SUPERSTRUCTURE AND SUBSTRUCTURE SURFACES OF SPECIFIED BRIDGES AS SHOWN ON THE PLANS. THE COLOR OF THE URETHANE COATING SHALL BE FEDERAL COLOR STANDARD NO. 17778 (LIGHT NEUTRAL).

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, MATERIAL AND LABOR NECESSARY TO PERFORM THIS TASK. PAYMENT SHALL BE MADE AT THE BID PRICE PER SQUARE YARD.

# 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, 2007.

# ITEM 509 REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN

REPLACE ALL EXISTING 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 EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE RE-MOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

IN ADDITION TO REPLACEMENT REBAR, PROVIDE REBAR WHERE REQUIRED FOR MISCELANEOUS RECONSTRUCTION EFFORTS.

A QUANTITY OF 200 POUNDS OF REBAR HAS BEEN CARRIED TO THE STRUCTURE QUANTITIES.

#### 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 WHICH HAVE BEEN VERIFIED IN THE FIELD.

# EXISTING STRUCTURE VERIFICATION

MECHANICAL CONNECTORS SHALL BE CAPABLE OF DEVELOPING 125 PERCENT OF THE YIELD STRENGTH OF THE CONNECTED BARS. FOR CONNECTORS WITH THREADED BAR ENDS, IN ORDER TO OFFSET THE EFFECT OF AREA REDUCTION ON THE STRENGTH OF THE BAR AND STILL MEET THE REQUIREMENTS OF ASTM A615, USE THE NEXT LARGER DIAMETER BAR OR A HIGHER GRADE OF STEEL BAR FOR THE REINFORCING RECEIVING THE THREADS.

#### ITEM 514 - SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL.

PRIME COAT:

THE ENDS OF GIRDERS G1 THROUGH G4 SHAL TO BE ENCASED WITHIN THE ABUTMENT DIAPHRAGMS ARE TO BE BLASTED PER 514.13 AND PAINTED WITH ORGANIC ZINC PRIME COAT PRIOR TO ENCASEMENT.

THE PRIME COAT SHALL BE 708.02B. ALL SURFACE PREPARATION OF THE EXISTING STRUCTURAL STEEL FOR FIELD PAINTING WILL BE PAID FOR UNDER ITEM 514 - SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL. ALL PRIME COAT APPLICATION ON THE EXISTING STRUCTURAL STEEL WILL BE PAID FOR UNDER ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT.

# VANDAL PROTECTION FENCING

INSTALL FENCING FOR EACH CONSTRUCTION PHASE PRIOR TO OPENING THAT PHASE TO VEHICULAR AND/OR PEDESTRIAN TRAFFIC.

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- 2. SEAL WEARING SURFACE WITH HIGH MOLECULAR WEIGHT METHACRYLATE (HMWM).
- 3. MODIFY OR REPLACE THE EXPANSION JOINTS AS NEEDED TO ACCOMMODATE THE NEW BARRIERS.
- 4. PATCH PIER COLUMNS WITH 519 PATCHING.

- REPAIR THE DETERIORATED FASCIA GIRDER WITH A PERFORATION IN THE WEB. REPAIR DAMAGED PAINT INCLUDING DETERIORATED END AT THIS LOCATION.
- 6. CONNECT NEW SIDEWALK INTO EXISTING SIDEWALKS
  AT EACH END OF THE BRIDGE. PROVIDE PROPER
  GUARDRAIL END TERMINALS. COORDINATE FOR
  UTILITIES CROSSING UNDER THE SIDEWALK. TAPER
  SIDEWALK THICKNESS FROM 8" AT THE BRIDGE TO
  MATCH EXISTING HEIGHT OF THE APPROACH SIDEWALK.
  PROVIDE 2% MAX LONGITUDINAL SLOPE FOR SIDEWALK
  TAPER. REGRADE SLOPES BEHIND THE SIDEWALK TAPER
  AS NECESSARY. SIDEWALKS SHALL BE ADA COMPLIANT
  FOR WIDTH AND GRADE.
- 7. SEAL THE SUPERSTRUCTURE, PIERS AND ANY REPAIRED PORTIONS OF THE ABUTMENTS WITH EPOXY URETHANE (FEDERAL COLOR 17778) TO THE LIMITS SHOWN IN THE PLANS.
- 8. REPLACE APPROACH GUARDRAILS, END TERMINAL ASSEMBLIES, AND BRIDGE TERMINAL ASSEMBLIES TO MEET NEW MGS REQUIREMENTS.
- 9. MILL AND FILL THE SURFACE COURSE OF THE APPROACH
  ROADWAY THAT IS DISTURBED BY MOT/CONSTRUCTION.
  PAVEMENT SHALL BE 1.25" OF ITEM 441 ASPHALT CONCRETE
  SURFACE COURSE, TYPE 1, (448). REPLACE RPM'S
  DISTURBED BY CONSTRUCTION.
- 10. REPLACE PAVEMENT STRIPING ON THE BRIDGE AND ON THE PORTION OF ASPHALT APPROACH PAVEMENT TO BE MILL/FILLED. MATCH EXISTING STRIPING. USE 646 EPOXY ON CONCRETE SURFACES AND 644 THERMOPLASTIC ON ASPHALT.
- 11. REMOVE AND RE-ERECT ANY GROUND MOUNTED SIGNS
  THAT ARE IMPACTED BY CONSTRUCTION ON NEW #3
  POSTS. INSTALL BARRIER/GUARDRAIL REFLECTORS.
- 12. REMOVE BRUSH FROM UNDER AND WITHIN 10 FEET OF THE BRIDGE.

#### BRIDGE CLEANING

CLEANING OF BRIDGE DECK AND SCUPPERS SHALL BE
CONSIDERED INCIDENTAL TO THE DECK SEALING AND/OR
REPLACEMENT WORK. CLEANING THE ABUTMENT SEATS
SHALL BE CONSIDERED INCIDENTAL TO THE ABUTMENT
CONVERSION TO SEMI-INTEGRAL. THE CONTRACTOR SHAL
COLLECT AND PROPERLY DISPOSE OF DEBRIS AND
1,500 PSI WASH WATER. CONTRACTOR SHALL PROVIDE
ALL BMP'S AS REQUIRED TO MEET ENVIRONMENTAL
RESTRICTIONS AND COMMITMENTS AS WELL AS REQUIREMENTS
OF THE ODOT CMS, ETC.

### PROPOSED WORK HAM-275-3270 (WELLER RD.)

- 1. REPLACE THE DECK. THE NEW DECK COMPOSITE SHALL
  BE CONFIGURED TO ACCOMMODATE A 1'-0" WIDE BR-2-15
  RAILING AND 7'-6" SIDE SIDEWALK ON THE NORTH SIDE,
  A 1'-6" GUTTER, TWO 11 FOOT LANES, A 3'-0" SHOULDER
  AND A NEW BARRIER ON THE RIGHT SIDE PER SBR-1-13.
  INSTALL NEW VANDAL PROTECTION FENCE (VPF) PER
  DISTRICT VPF POLICY. REMOVE REFLECTIVE BRIDGE
  MOUNTED DELINEATOR POSTS.
- 2. LOWER SUPERSTUCTURE STEEL TO ACCOMMODATE THICKER
  DECK SLAB AND ADDED DECK HAUNCHES. SUPERSTRUCTURE
  SHALL BE LOWERED UNIFORMLY TO PREVENT
  OVERSTRESSING THE GIRDERS AND CROSSFRAMES.
- 3. MINIMIZE DISTURBANCE TO THE NEARBY NOISE WALL.
- . RELACE SCUPPERS ON THE BRIDGE.
- 5. REPLACE THE EXISTING SHIM STACK AND BEARINGS WITH ELASTOMERIC BEARINGS AT THE ABUTMENTS.

  ACCOMMODATE HEIGHT BETWEEN GIRDER AND BEAM SEAT USE OF AN HP PEDESTAL. ONLY ONE SHIM PLATE ALLOWED PER NEW BEARING.
- 6. REMOVE THE END CROSS FRAMES AND EXPANSION JOINTS. CONVERT ABUTMENTS TO SEMI-INTEGRAL.
- 7. REMOVE EXISTING APPROACH SLABS WITH 9"± ASPHALT OVERLAY. CONSTRUCT NEW APPROACH SLABS WITH
- SIDEWALK. FIEFERENCE STN. DWG. AS 1-15 ANN AS 2-15.

  8. RECONSTRUCT TOPS OF PIER COLUMNS AND REPLACE
  EXISTING BEARINGS WITH ELASTOMERIC BEARINGS.
  PERFORM 519 PATCHING OF PIER COLUMNS.

  8. PANNTALL OF THE STRUCTURAL STEEL ABUTMENT

BEARINGS, AND PIER BEARINGS WITH OZEU.

- 10. SEAL THE SUPERSTRUCTURE AND PIERS WITH BRIDGE WITH EPOXY URETHANE (FEDERAL COLOR 17778) TO THE LIMITS SHOWN IN THE PLANS.
- 11. REMOVE EXISTING MEDIAN GUARDRAIL LOCATED ON EACH SIDE OF THE CENTER PIER. PROTECT CENTER PIER WITH CONCRETE BARRIER AND APPROPRIATE GUARDRAIL END TERMINALS PER STD. DWG. MGS-3.1 AND RM-4.4. EXISTING CABLE BARRIER SHALL REMAIN IN PLACE.
- 12. REPLACE APPROACH GUARDRAILS, END TERMINAL
  ASSEMBLIES, AND BRIDGE TERMINAL ASSEMBLIES TO MEET
  NEW MGS REQUIREMENTS. USE LONG POST REPLACEMENT
  GUARDRAIL TO MINIMIZE SLOPE REGRADING.
- 13. COORDINATE WITH UTILITIES CROSSING UNDER THE SIDEWALK. CONSTRUCT NEW APPROACH SIDEWALK. TAPER SIDEWALK THICKNESS FROM 8" AT THE BRIDGE TO MATCH EXISTING HEIGHT OF THE APPROACH SIDEWALK. PROVIDE 2% MAX LONGITUDINAL SLOPE FOR SIDEWALK TAPER. REGRADE SLOPES BEHIND THE SIDEWALK TAPER AS NECESSARY. SIDEWALKS SHALL BE ADA COMPLIANT FOR WIDTH AND GRADE. TRANSITION SIDEWALK HEIGHT FROM 8" TO 6" ONCE OFF OF THE APPROACH SLABS. CARRY 6" TALL SIDEWALKS AND TYPE 6 CONCRETE CURB ALONG NORTH AND SOUTH APPROACH PAVEMENTS. TRANSITION SIDEWALK HEIGHT AND WIDTH TO MATCH EXISTING WHERE SIDEWALK SHIFTS AWAY FROM ROAD. TIE-IN WITH EXISTING BRICK PAVER/ASPHALT SIDEWALK BEHIND TREE LAWN.
- 14. RELOCATE FIRE HYDRANT AT SOUTH END OF BRIDGE.
- 15. PERFORM 25 FEET OF FULL DEPTH PAVEMENT REPLACEMENT BEYOND NEW APPROACH SLABS.
- 16. BEYOND FULL DEPTH PAVEMENT, MILL AND FILL THE SURFACE COURSE OF THE APPROACH ROADWAY THAT IS DISTURBED BY MOT/CONSTRUCTION. PAVEMENT SHALL BE 1.25" OF ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448). REPLACE RPM'S DISTURBED BY CONSTRUCTION.
- 17. PROVIDE NEW PAVEMENT STRIPING ON THE BRIDGE AND ON THE PORTION OF ASPHALT APPROACH PAVEMENT TO BE REPLACED AND MILL/FILLED. MATCH EXISTING STRIPING. USE 646 EPOXY ON CONCRETE SURFACES AND 644 THERMOPLASTIC ON ASPHALT.
- 18. RE-ERECT ANY GROUND MOUNTED SIGNS THAT ARE IMPACTED BY CONSTRUCTION ON NEW #3 POSTS. INSTALL BARRIER/GUARDRAIL REFLECTORS.
- 19. REMOVE BRUSH FROM UNDER AND WITHIN 10 FEET OF THE BRIDGE.

CLASS QC3 CONCRETE, MISC.: SUPERSTRUCTURE CONCRETE WITH QC/QA, AS PER PLAN (FOR PARAPETS, DECK SLAB, SIDEWALK AND ABUTMENT DIAPHRAGMS)

THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE SUPERSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE 499.03, CLASS OC 3 MEETING A
DESIGN STRENGTH OF 4,500 PSI, WITH MACRO-SYNTHETIC
FIBERS WITH MODIFICATION PER 511.02
FIBERS FOR CONCRETE ASTM C 1116, TYPE III

CORROSION INHIBITOR 515.15

THE CLASS QC3 CONCRETE FOR THE SUPERSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA:
WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.0 IN. MIN. TO 2.5 IN. MAX.)

MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

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 1.0 AND 2.5 INCHES IN LENGTH. 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. 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

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED. THE TRANSIT MIXER CHARGE SHALL BE LIMITED TO 3/4 OF ITS RATED CAPACITY OR 6 CUBIC YARDS, WHICHEVER IS SMALLER. THE FIRST THREE TRANSIT MIXER LOADS ARE REQUIRED TO BE AT THE MINIMUM YARDAGE LISTED ABOVE TO SHOW PROOF OF THE SUCCESSFUL BATCHING OPERATION. AFTER CONSISTENCY IN THE DELIVERED MATERIAL HAS BEEN ESTABLISHED, THE CONCRETE SUPPLIER MAY INCREASE THE BATCH DELIVERED QUANTITIES AS LONG AS THE QUALITY REMAINS ACCEPTABLE TO THE ENGINEER. THE ENGINEER CAN REDUCE THE BATCH LOAD SIZE AT ANY TIME AS NEEDED TO CORRECT/IMPROVE CONCRETE QUALITY.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

APPROACH SLABS, DIAPHRAGMS, AND BRIDGE RAILING CONCRETE (WHEN APPLICABLE) ARE TO USE THE SAME MIX DESIGN AS THE BRIDGE DECK. THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED. USE SELF-COMPACTING CONCRETE ON DECORATIVE RAILING SIMILAR TO TEXAS RAILING AND MACRO-SYNTHETIC CONCRETE PER THIS SPECIFICATION ON TRADITIONAL CONCRETE RAILING WHEN APPLICABLE.

THE CONTRACTOR SHALL PROVIDE TRADITIONAL BRIDGE DECK FORMS CONFORMING TO CMS 508. PERMANENT STAY-IN-PLACE (SIP) FORMS ARE NOT ALLOWED. THE PLACING OF THE DECK AND THE APPROACH SLABS IN THE SAME CONCRETE POUR IS NOT PERMITTED.

# ITEM 518 - SCUPPERS

THE NEW SCUPPERS AND DOWNSPOUTS SHALL EITHER BE MADE OF CAST IRON OR SHALL HAVE A GALVANIZED FINISH IN ORDER TO PROLONG THE SCUPPER'S SERVICE LIFE.

# PARAPET REMOVAL

ONCE THE PARAPET IS REMOVED, THE CONTRCACTOR SHALL VERIFY THE THAT THE CONCRETE DECK BELOW THE PARAPET IS STILL SOUND. IF NOT, THE CONTRACTOR SHALL INFORM THE PROJECT ENGINEER IMMEDIATELY WHO WILL DETERMINE IF THERE IS A NEED FOR ADDITIONAL DECK EDGE REPAIR.

DATE DESIGN AGENCY

M/DD/YY

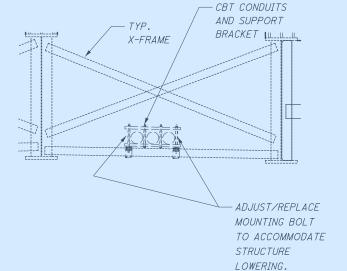
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3113418

DISTRICT 8 BRIDGE OFFICE



IF THERE IS NOT SUFFICIENT SLACK IN THE CONDUITS, REPLACE THE EXISTING TELEPHONE CONDUIT SUPPORT BRACKET MOUNTING BOLTS WITH LONGER BOLTS THAT WILL ACCOMMODATE THE LOWERING OF THE SUPERSTRUCTURE BUT LEAVE THE CONDUITS AT THEIR CURRENT HEIGHT. THE CONTRACTOR SHALL ERECT TEMPORARY SUPPORTS BETWEEN THE CROSSFRAMES AS NECESSARY TO SUPPORT THE CONDUITS WHILE THE PERMENANT SUPPORTS ARE REHABILITATED.



ALL MATERIALS, LABOR, EQUIPMENT AND ANY MISCELANEOUS APPURTENANCES (I.E. CONDUIT REPLACEMENT, SURVEY, ETC.) REQUIRED TO COMPLETE THE UTILITY SUPPORT REHABILITATION SHALL BE INCLUDED UNDER ITEM 530 - STRUCTURE, MISC.: UTILITY SUPPORT REHABILITATION (LUMP).

#### 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 2.5 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 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN

INSTALL ADHESIVE ANCHORS ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS PUBLISHED IN THE ICC-ES REPORTS LISTED BELOW.

WWW.ICC-ES.ORG/EVALUATION\_REPORTS/

THE HOLES FOR THE ADHESIVE ANCHORS 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:

HILTI HIT-HY 200 ADHESIVE ANCHORS ICC-ES REPORT ESR-3187)

DEWALT PURE110+ EPOXY ADHESIVE ANCHOR SYSTEM (ICC-ES REPORT ESR-3298)

SIMPSON STRONG-TIE SET-3G EPOXY ADHESIVE ANCHORS ICC-ES REPORT ESR-4057)

ATC ULTRABOND HS-ICC ADHESIVE ANCHOR SYSTEM (ICC-ES REPORT ESR-4094)

# RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING AND VANDAL PROTECTION FENCE), AS PER PLAN

12' TALL CURVED VANDAL PROTECTION FENCE WITH MODIFIED BASE PLATES ARE INCLUDED WITH THE BR-2 CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING FOR PAYMENT. ITEM 513 - STRUCTURAL STEEL MISC., REPAIR OF DAMAGED MAIN MEMBER, COMPLETE PENETRATION WELDING: AFTER DAMAGED AREAS HAVE BEEN INSPECTED ACCORDING TO ITEM 849 DAMAGE ASSESSMENT. PREPARE THE DAMAGED MATERIAL FOR WELDING, PROVIDE RUNOFF TABS FOR ALL COMPLETE PENETRATION WELDS. PERFORMING COMPLETE PENETRATION WELDS ACCORDING TO C&MS 513 USING APPROVED ELECTRODES, PROCEDURES AND WELDERS, REMOVE RUNOFF TABS AND GRIND THE COMPLETED EDGES SMOOTH, GRIND THE COMPLETED WELDS SMOOTH AND FLUSH WITH THE ADJACENT SURFACES TO PROVIDE A SURFACE FINISH ACCORDING TO ANSI B46.1 OF 250 MIL. DO NOT OVER GRIND AS TO REDUCE THE MATERIAL THICKNESS OR WIDTH OF THE NEW OR EXISTING MATERIALS. PREPARE ALL REENTRANT CORNERS WITH A ONE INCH RADIUS. REMOVE WELDING, START AND STOP DISCONTINUITIES. RADIOGRAPHIC TEST THE FINISHED WELDS ACCORDING TO C&MS 513.25A AND SUBMIT COPIES OF THE REPORTS TO THE ENGINEER. THE ENGINEER MAY OBTAIN TECHNICAL ASSISTANCE FROM THE OFFICE OF MATERIALS MANAGEMENT. THE DEPARTMENT WILL INCLUDE ALL MATERIALS: TOOLS; LABOR; EQUIPMENT; AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH ITEM 513 -STRUCTURAL STEEL MISC., REPAIR OF DAMAGED MAIN MEMBERS, COMPLETE PENETRATION WELDING. FOOT.

ITEM 513 - STRUCTURAL STEEL MISC., REPAIR OF DAMAGED MAIN OR SECONDARY MEMBERS, FILLET WELDING: AFTER DAMAGED AREAS HAVE BEEN INSPECTED ACCORDING TO ITEM 849 DAMAGE ASSESSMENT. PREPARE THE DAMAGED MATERIAL FOR WELDING, PERFORMING % INCH FILLET WELDS ACCORDING TO ITEM 513 USING APPROVED ELECTRODES, PROCEDURES AND WELDERS. WELD EACH SECONDARY MEMBER ACCORDING TO PLAN DETAILS. MAGNETIC PARTICLE INSPECT ALL FILLET WELDS ACCORDING TO C&MS 513.25B. THE ENGINEER MAY OBTAIN TECHNICAL ASSISTANCE FROM THE OFFICE OF MATERIALS MANAGEMENT. THE DEPARTMENT WILL INCLUDE ALL MATERIALS; TOOLS; LABOR; EQUIPMENT; AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL MISC., REPAIR OF DAMAGED MAIN OR SECONDARY MEMBERS: FILLET WELDING. FOOT.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN: ALL REQUIREMENTS OF 513 APPLY TO SHOP FABRICATED MEMBERS. PERFORM WORK FOR FIELD FABRICATED MEMBERS ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING FIELD FABRICATION TO BE PRE-QUALIFIED AS SPECIFIED IN SUPPLEMENT 1078. SUBMIT A WRITTEN LETTER OF MATERIAL ACCEPTANCE, 501.06, TO THE ENGINEER. PROVIDE SHOP DRAWINGS ACCORDING TO 513.06 OR SUPPLY THE ENGINEER WITH "AS BUILT" DRAWINGS MEETING 513.06 AFTER COMPLETION OF FIELD FABRICATION. THE ENGINEER WILL REVIEW THE SUBMITTED DRAWINGS FOR CONCURRENCE WITH THE FINAL AS-BUILT CONDITION. THE ENGINEER MAY CONTACT THE OFFICE OF STRUCTURAL ENGINEERING FOR TECHNICAL ASSISTANCE. IF THE ENGINEER IS SATISFIED WITH THE "AS-BUILT" DRAWINGS AND THE DELIVERED MATERIALS. SUPPLY A COPY OF THE DRAWINGS, STAMPED, SEALED AND DATED, ACCORDING S1002, TO THE STRUCTURAL, WELDING AND METALS SECTION OF THE OFFICE OF MATERIAL MANAGEMENT FOR RECORD PURPOSES. THE MEMBERS INCLUDED IN THIS ITEM ARE PROVIDED IN TABLE 2 AND 3. THE DEPARTMENT WILL INCLUDE ALL MATERIALS, TOOLS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN: POUND.

#### ITEM 516 JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

THIS WORK FOR THIS ITEM CONSISTS OF RAISING OR REPOSITIONING EXISTING STRUCTURES TO DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

THIS WORK SHALL ALSO INCLUDE TEMPORARY STRUCTURAL SUPPORT OF THE HAM-275-31.88 SUPERSTRUCTURE AT THE FORWARD ABUTMENT TO ACCOMMODATE GIRDER REPAIRS. THE TEMPORARY SUPPORT SHALL NOT ANCHOR TO THE FRONT FACE OF THE EXISTING ABUITMENT FOR STRUCTURAL SUPPORT OR LATERAL STABILITY.

THIS WORK SHALL ALSO INCLUDE TEMPORARY STRUCTURAL SUPPORT OF THE HAM-275-32.70 SUPERSTRUCTURE USING JACKING TOWERS WHILE THE SUBSTRUCTURES ARE RECONSTRUCTED, THE SUPERSTRUCTURE IS LOWERED AND BEARINGS REPLACED. THE HAM-275-32.70 SUPERSTRUCTURE SHALL BE LOWERED UNIFORMLY SO THAT THE STRUCTURE IS NOT OVERSTRESSED. JACKING TOWERS SHALL REST ON THE PIER FOOTINGS OR HAVE INDEPENDENT FOUNDATIONS. THE TOWERS SHALL NOT ANCHOR TO THE EXISTING PIER COLUMNS FOR STRUCTURAL SUPPORT OR LATERAL STABILITY.

SHOULDER CLOSURES ALONG IR-275 SHALL BE ERECTED TO ACCOMMODATE JACKING TOWER WORK.

SUBMIT CONSTRUCTION, SHORING AND JACKING PLANS IN ACCORDANCE WITH CMS 501.05.

IF DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

# EXISTING STRUCTURE INFORMATION

EXISTING STRUCTURE INFORMATION INCLUDING
DIMENSIONS AND ELEVATIONS SHALL BE CONSIDERED
APPROXIMATE. IT SHALL BE THE CONTRACTOR'S
RESPONSIBILITY TO VERIFY ALL STRUCTURE INFORMATION
AND ELEVATIONS PRIOR TO START OF AND DURING
CONSTRUCTION. ANY SURVEY COSTS ASSOCIATED WITH
THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE
RESPECTIVE TASKS.

ALERT THE PROJECT ENGINEER IMMEDIATELY REGARDING ANY CONSTRUCTION ISSUES.

HAM-IR 273-31.88/32.70 PID No.100808

NOTES --275-3188, L RD. & W

STRUCTURE: N SIDGE NO. HAM-2 UNDER CORNELL

OR-

TRANSP BRIDGE

IO C DIST

4/4

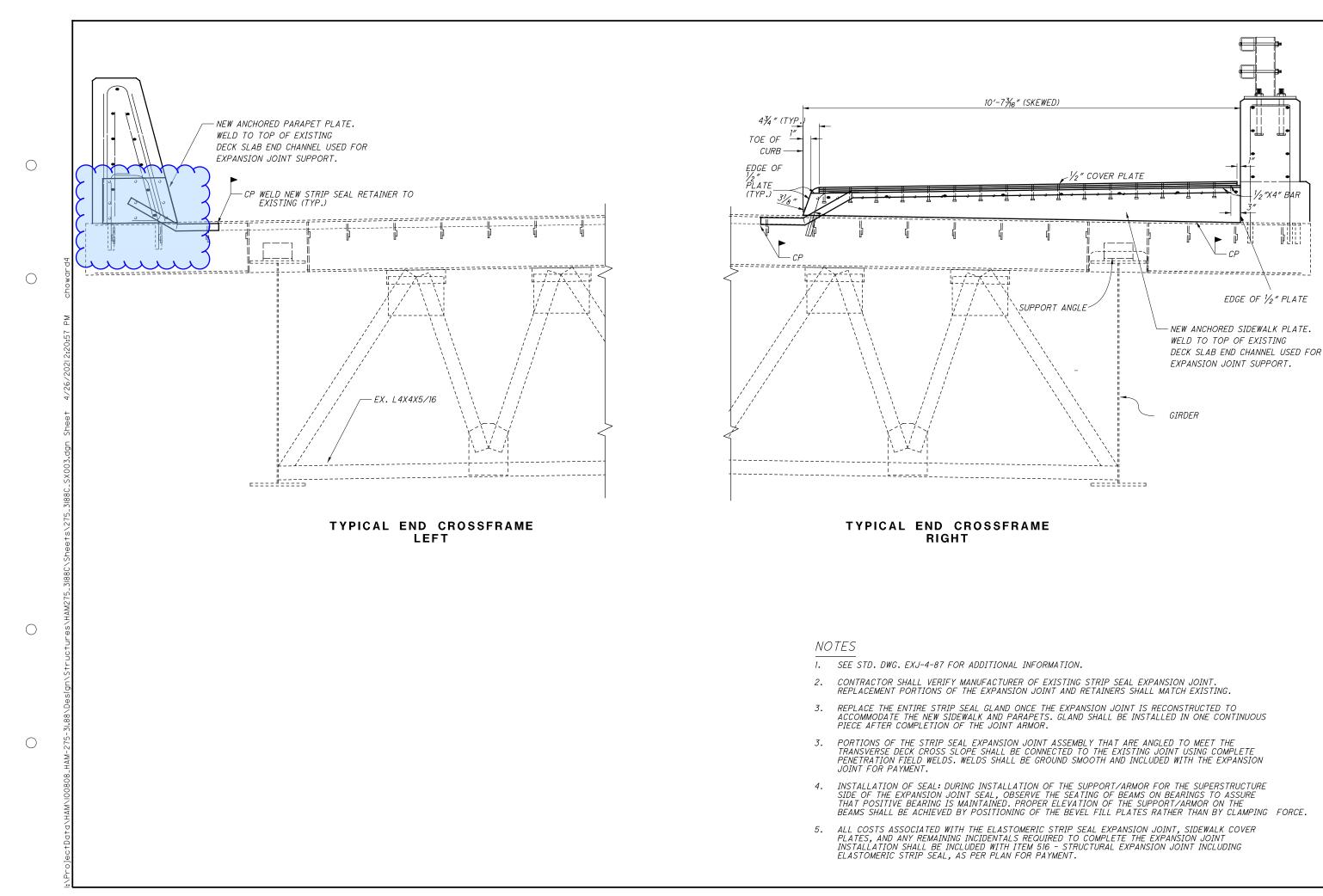
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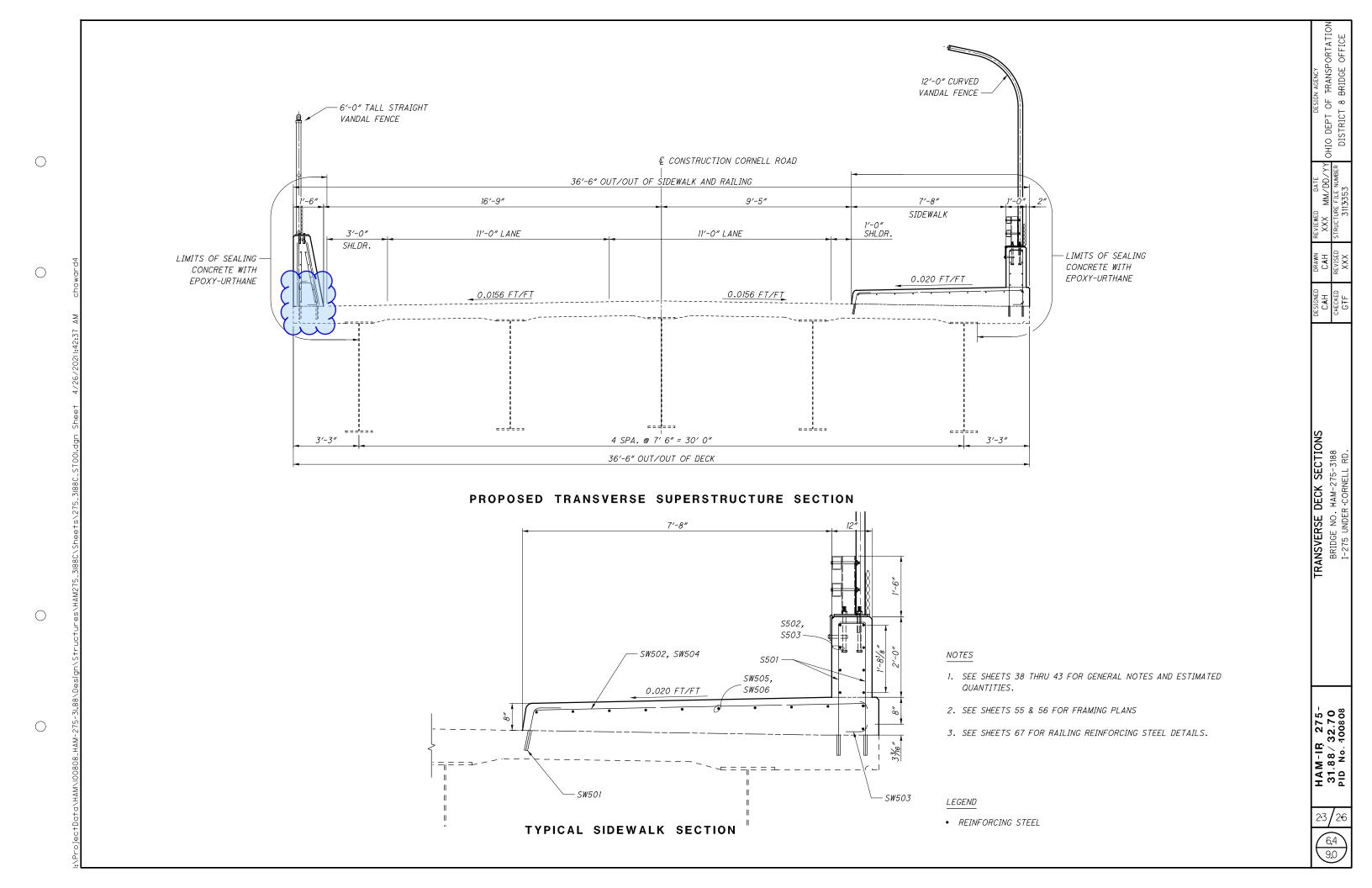
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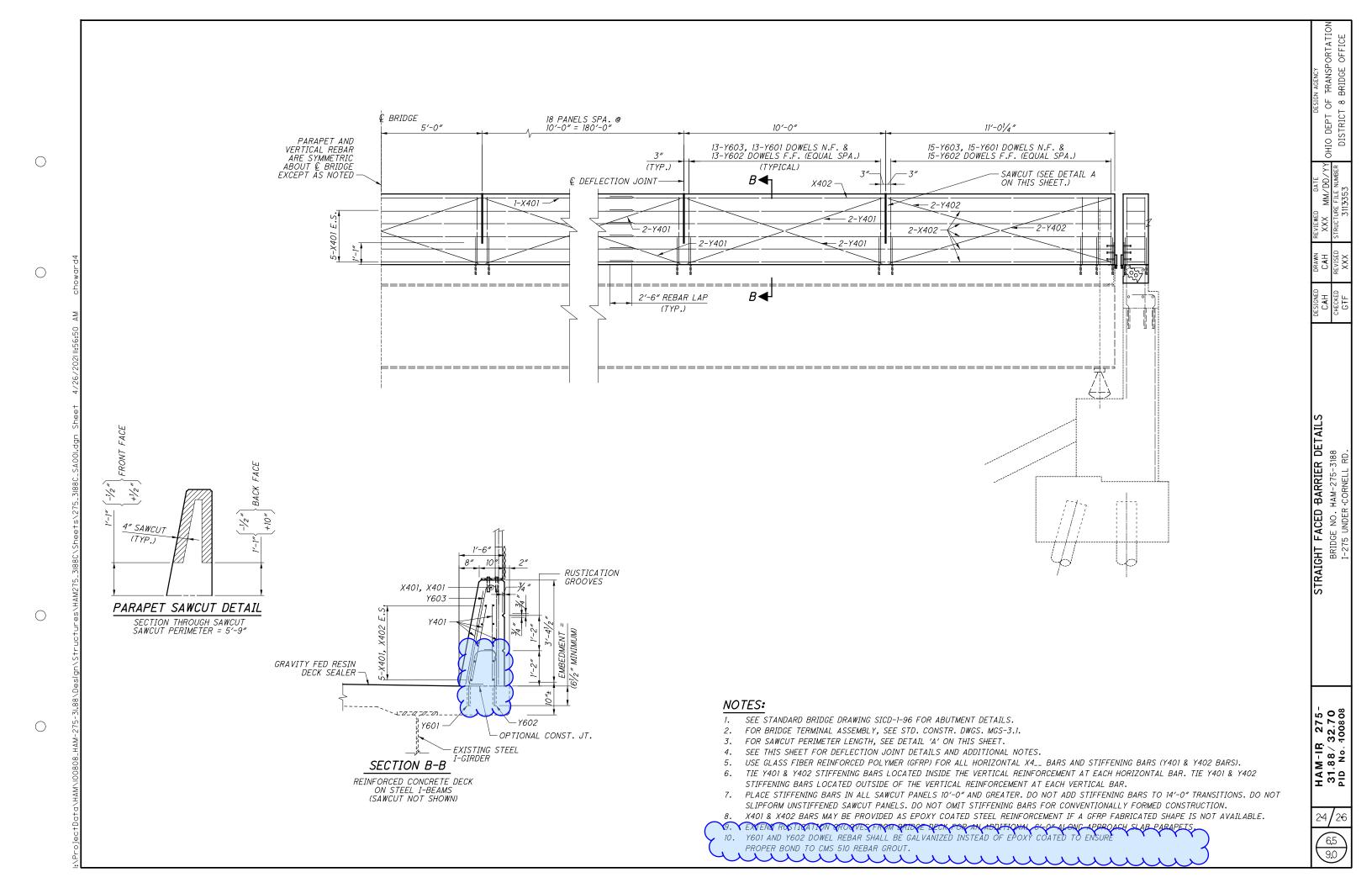


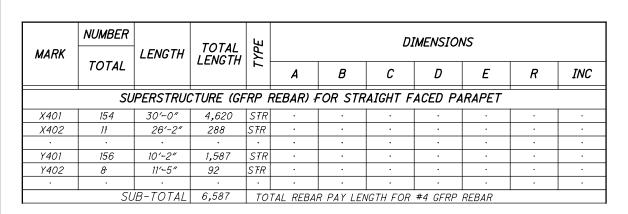
31.88 21.88 26

DEPT OF STRICT 8

OHIO E DIST







		NUMBER			TOTAL				Di	MENSIO	NS		_
MARK	REAR	FWD.	TOTAL	LENGTH	TOTAL LENGTH	TYPE						1	
	ABUT	ABUT	TOTAL				Α	В	С	D	Ε	R	MC
			ABU	MENT (GF	RP REBAI	R) RE	INFORC.	ING STE	EL LIST				
AX401	12	12	24	9′-10″	236	STR				•			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
AX402	6	6	12	6′-4″	75	BNT	•			٠			4
AX403	6	6	12	5'+1"	61	STR		•		•			
AX404		1:1	1:1	10'-1"	111	STR	•	•		•			
AX405		4	4	10'-5"	42	STR	•	•		•			
AX406	1-1	•	1:1	<i>5′</i> −11″	66	STR	•	•	•	•	•	•	•
AX407	1	1	2	4' <b>-</b> 9"	10	STR	•	•	•	•	•	•	•
•		•	•	•	•	•	•	•	•	•	•		
•		•	•	•	•		•	•	•	•	•		
			Si	UB-TOTAL	601	TO	TAL REBA	R PAY LEI	NGTH FOR	#4 GFRP	REBAR		

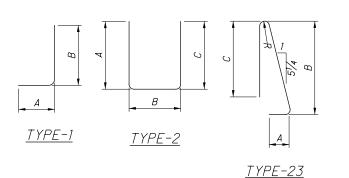
# NOTES:

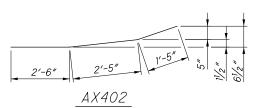
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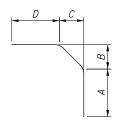
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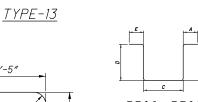
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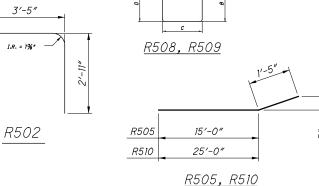
- 1. ALL DIMENSIONS ARE OUT TO OUT OF BAR
- 2. DIMENSIONS ON HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE STANDARD HOOKS ARE TO BE USED. REFERENCE CMS 509.
- 3. ALL REINFORCING STEEL CLEARANCES ARE 2" UNLESS OTHERWISE NOTED.
- 4. ALL REBAR SHALL BE STANDARD EPOXY COATED UNLESS NOTED OTHERWISE.
- 5. GALVANIZED REBAR DOWELS SHALL BE USED TO OBTAIN PROPER BOND WHEN USING CMS 510 GROUT WITH SHALLOW EMBEDMENT DECK DOWELS.











	EPOX	Y REBAR :	SUB-TOTA	L 17,420									-	
			SUB-TOTA											
	<del>, , , ,</del>	<del>, , ,</del>	<b>x</b>	<b>X</b> X	X	\ \ \	<u>, , , , , , , , , , , , , , , , , , , </u>	<u>, , , , , , , , , , , , , , , , , , , </u>	<u>, , , , , , , , , , , , , , , , , , , </u>	<u>, , , , , , , , , , , , , , , , , , , </u>			<u> </u>	
		NUMBER				Ę			D1	MENSIO	VS			
MARK	REAR	FWD.	TOTAL	LENGTH	WEIGHT	TYPE								
	ABUT	ABUT	70772				Α	В	С	D	Ε	R	INC	
	•		A	BUTMENT	EPOXY R	EINF	ORCING	STEEL	LIST					
	2 SER.	2 SER.	4 SER.	3′-6″			•			•			•	
AY601	OF	OF	OF	TO	259	STR				•			0'+1"	
•	1-1	1:1	1-1	4′-4″		•				•			•	
AY602	8	8	16	4'-4"	104	STR				•	•	•	•	
AY603	7	13	20	7′-4″	<i>153</i>	23	0'-11"	3'-3"	3'-0"		•	0'-3"		
AY604	5	12	17	3′-6″	8.9	13	1'-0"	1'-7"	0'-3"	1'-0"	•	0'-3"	•	
AY605	5	12	17	2'-11"	7-4	1	0′-6″	2'-7"		•		•	•	
	•				•	•	•			•		•	•	
AY606	2	2	4	4'-4"	26	13	1′-10″	1′7″	0'-3"	1'-0"	•		•	
AY607	2	2	4	3′-9″	2:3	1	0′-6″	3′-5″		•	•		•	
	•			•	•	•	•			•	•		•	
R501	2	2	4	4′-2″	17	1	0'-10"	3′-6″		•	•		•	
R5·02	2	2	4	6'-1"	26	BNT				•			•	
R5:03	2	2	4	4'-7"	19	STR	•			•			•	
R504	2	2	4	6′-2″	26	STR				•			•	
R5:05	6		12	16′+5″	205	B∙T	•			•	•		•	
	•	•	•	•			•			•		•	•	
R506	30	<i>4:</i> 5	75	3′→3″	254	2	0′-8″	1′−2″	1′-8″	•	•	•	•	
R507	5	5	10	4′-5″	46	STR				•			•	
R5:08	12	1-1	2:3	9′-10″	236	BNT	0'-4"	4'+1"	0'-8"	5′→3″			•	
R5:09	13	29	42	9′-10″	431	BNT	0'-4"	2'-7"	0'-8"	3′-9″			•	
R510	•	6	12	26′-5″	331	B∙T	•			•	•		•	
	•					•							•	
R511	1	1	2	4'+1"	9	2	0′-8″	1′−2″	2′-6″		•	•	•	
R512	1	1	2	10′-8″	22		0'+4"	2′→7″	0'+8"	4′→7″		•		
A501	10	10	20	2′-4″	49	2	1′→7″	0'-11"	0'-0.34"	•			•	
A5:02	2	2	4	3'-4"	14	1	1′-0″	2'-6"		•			•	
A5:03	2	2	4	10'-0"	42	STR	•			•			•	
A5·04	2	2	4	3'+1"	13	1	1'-0"	2'-3"	•	•	•		٠	

3,223 1 0'-8" 3'-3"

13 0'-6"

1 0'-6"

23 0′−11″

1 0'-8"

2 0'-8"

STR

STR

STR

STR

STR

STR

SUPERSTRUCTURE REINFORCING STEEL LIST (EPOXY U.N.O.)

1'-5"

1′-9″

3′→3″

0'-11"

0′-9″

LENGTH | WEIGHT

3,505

218

2084

1680

4,Ю7

622

24

805

3,642

4,819

300

30'-0"

26'-2"

2'-7"

7′→4″

1'-5"

11'-4"

1'-10"

8′-4″

30'-0"

26'-2"

**DIMENSIONS** 

D

0'-9"

Ε

R

INC

90 °

REINFORCING STEEL I BRIDGE NO. HAM-275-3188 I-275 UNDER CORNELL RD.

> 31. PD

26

C

0'-3"

0′-8″

**NUMBER** 

TOTAL

824

112

8

537

537

537

421

421

419

154

MARK

S5:01

S5<del>0</del>2

S5<del>0</del>3

Y601

Y602 Y603

SW501

SW502 SW503

SW504

SW505

SW506

GAL VAINZED REBAR =>

GAL VAINZED REBAR =>

GAL VAINZED REBAR =>

GAL VAINZED REBAR =>

		NUMBER			Ē	DIMENSIONS									
MARK	REAR	FWD.	TOT./	LENGTH	WEIGHT	.XPE	SIMENOIONG								
	ABUT	FWD. ABUT	TOTAL				A	В	С	D	Ε	R	INC		
			APPROAC	H SLAB S	IDEWALK I	ΕΡΟλ	Y REIN	ORCING	STEEL	LIST					
AS501	20	20	40	3'-4"	139	1	1'-0"	2'-6"							
AS502	20	20	40	10'-0"	417	STR									
AS503	20	20	40	3'-1"	129	1	1'-0"	2'-3"							
AS504	8	8	16	19'+8"	328	SŦR		•			•	•	•		
			SU	B-TOTAL	1,013										

SUB-TOTAL 2,468

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STRUCTURE ESTIMATED QUANTITIES
BRIDGE NO.: HAM-275-3270
WELLER RD. OVER IR-275

REVIEWED DATE DESIGN AGENCY

XXX MM/DD/YY

STRUCTURE FILE NUMBER

3113418

DISTRICT 8 BRIDGE OFFICE

2 / 2:3
6.9
9.0

				ESTIMATED QUANTITIES - STRUCTURE No.: HAM-275-3270			(100% 01/IMS/	/BR FUNDING
ITEM	EXTENSION	TOTAL		DESCRIPTION	ABUTMENT	PIERS	SUPERSTRUCTURE	GENERAL
202	11203	LS	LUMP	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	LUMP		LUMP	
202	22900	200	SY	APPROACH SLAB REMOVED				200
503	11100	LS	LUMP	COFFERDAMS AND EXCAVATION BRACING	LUMP			
503	21300	LS	LUMP	UNCLASSIFIED EXCAVATION	LUMP	LUMP		
509	10001	174268	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	15,242	7262	151,764	
509	20001	200	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				200
509	30020	6991	FT	No. 4 GFRP DEFORMED BARS			6,991	
510	10001	297	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	297			
511	33500	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	2			
511	53014	1041	CY	CLASS QC3 CONCRETE, MISC.: SUPERSTRUCTURE CONCRETE WITH QC/QA, AS PER PLAN	2		1,041	
511	53014	57	CY	CLASS QC3 CONCRETE, MISC.: SUBSTRUCTURE CONCRETE WITH QC/QA, AS PER PLAN	41	16	1,011	
512	10100	2114	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	260	361	1328	165
512	33000	6	SY	TYPE 2 WATERPROOFING	6	301	1020	100
512	74000	542	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	181	361		
513	10200	7552		STRUCTURAL STEEL MEMBERS, LEVEL UF	101	301	7,552	
513	20000	1704		WELDED STUD SHEAR CONNECTORS			1,704	
514	00050	36265	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			36,265	
514	00056	36265 36265	SF	PAINTING EXISTING STRUCTURAL STEEL, PRIME COAT			36,265	
514	00050	36265	SF	PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			36,265	
514	00066	36265	SF	PAINTING STRUCTURAL STEEL, FINISH COAT			36,265	
514	00504			GRINDING OF FINS, TEARS AND SLIVERS ON EXISTING STRUCTURAL STEEL			29	
514	10000	23 31		FINAL INSPECTION REPAIR			31	
014	10000	- 31	LACIT	TINAL INSTITUTION NET AIN			31	
516	10000	106	FT	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL			106	
516	10010	106	FT	ARMORLESS PREFORMED JOINT SEAL				106
516	13600	17	SF	1" PREFORMED EXPANSION JOINT FILLER			17	
516	13900	124	SF	2" PREFORMED EXPANSION JOINT FILLER			124	
516	14020	146	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	146		12.1	
516	44400	8		ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 21.5" DIAM. X 6.23" w/ 22.5" DIAM. X1.50" LOAD PLATE	770		8	
516	44400	12		ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 23.5" DIAM. X 6.51" w/ 24.5" DIAM. X1.50" LOAD PLATE			12	
516	47001	LS	LUMP	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP	
517	75122	430	FT	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING AND VANDAL PROTECTION FENCE)			430	
518	12301	12		SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN			12	
518	21200	120	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	120		12	
518	40000	202	l	6" PERFORATED CORRUGATED PLASTIC PIPE	202			
518	40010	120	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	120			
<del> </del>	40010	120		WON TENI CHATED CONTROLLED TEASTIC TITE, INCEDIMO SI ECIAES	120			
519	11100	70	SF	PATCHING CONCRETE STRUCTURE		70		)
1526		x 23X0		REINFORCED GONGRETE APPROACH SIMBS WITH OC/OA (T=170). AS PER BLANCES TO STAND TO ST		10		230
526	90030	106		TYPE C INSTALLATION			$\sim$	106
PECIAL				STRUCTURES, MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION	LUMD	$\sim$	NIMP	100
SPECIAL		LS		STRUCTURES, MISC.: UTILITY SUPPORT REHABILITATION	LUMP		LUMP	
				JANDAL PROXECTION FENCE; 6'STBATGAT, SOAXED FABRICS	X		LUMP 130	
		400		THE	$\sim\sim$	$\sim$		

