SEQUENCE OF OPERATIONS

ALL PHASES

ACCESS TO ALL DRIVES WILL BE MAINTAINED AT ALL TIMES. AS DIRECTED BY THE PROJECT ENGINEER.

PHASE 1 - US 36 - (RIGHT SIDE)

INSTALL ALL TRAFFIC CONTROL DEVICES NEEDED TO MAINTAIN TRAFFIC UTILIZING PORTABLE BARRIER FOR WIDENING AS PER S.C.D. MT-95.45. CONSTRUCT ITEM 615 TEMPORARY PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A ON US 36 - (RIGHT SIDE) STA. 942+39.4 TO STA. 944+50.8. AS INDICATED ON THE PLAN DETAILS.

PHASE 1 - US 36 - (LEFT SIDE)

INSTALL ALL TRAFFIC CONTROL DEVICES NEEDED TO MAINTAIN TRAFFIC UTILIZING PORTABLE BARRIER FOR WIDENING AS PER S.C.D. MT-95.45. CONSTRUCT ITEM 615 TEMPORARY PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A ON US 36 - (LEFT SIDE) STA. 963+77.0 TO STA. 964+14.0. AS INDICATED ON THE PLAN DETAILS.

PHASE 2 - US 36 - (RIGHT SIDE)

INSTALL ALL TRAFFIC CONTROL DEVICES NEEDED TO MAINTAIN TRAFFIC UTILIZING PORTABLE BARRIER AS PER S.C.D. MT-102.10, AS INDICATED ON THE PLAN DETAIL SHEETS.

CONSTRUCT BRIDGE REMOVALS AND RECONSTRUCTION ON US 36 FOR THE PROPOSED RIGHT SIDE, AS PER THE BRIDGE DETAIL SHEETS. TRAFFIC ON I 71 SHALL BE MAINTAINED BY USE OF THE ON BOUND AND OFF BOUND RAMPS AT US 36 FOR CONSTRUCTION ACTIVITIES ON THE BRIDGE ON US 36 DURING STRUCTURE REMOVALS AND BEAM PLACEMENT OPERATIONS.

THIS OPERATION SHALL BE PERFORMED AS PER MT-99.50 AS DIRECTED BY THE PROJECT ENGINEER.

US 36 TRAFFIC SHALL BE STOPPED DURING THESE OPERATIONS SO AS TO ALLOW THE I 71 NORTHBOUND AND SOUTHBOUND TRAFFIC TO BE MAINTAINED USING THE RAMPS. SEE SHEETS 60 - 65 US 36 TRAFFIC SHALL BE STOPPED AS PER STANDARD CONSTRUCTION DRAWING MT-99.60 FOR FIFTEEN MINUTES AND AS DIRECTED BY THE PROJECT ENGINEER.

ALL NECESSARY TEMPORARY TRAFFIC CONTROL DEVISES SHALL BE ADJUSTED AS DETAILED IN THE PLANS TO ALLOW FOR THE RAMPS TO PROVIDE UNOBSTRUCTED TRAVEL TO AND FROM 171 DURING THIS OPERATION.

PHASE 3 - US 36 - (LEFT SIDE)

INSTALL ALL TRAFFIC CONTROL DEVICES NEEDED TO MAINTAIN TRAFFIC UTILIZING PORTABLE BARRIER AS PER S.C.D. MT-102.10, AS INDICATED ON THE PLAN DETAIL SHEETS.

CONSTRUCT BRIDGE REMOVALS AND RECONSTRUCTION ON US 36 FOR THE PROPOSED LEFT SIDE. AS PER THE BRIDGE DETAIL SHEETS. TRAFFIC ON I 71 SHALL BE MAINTAINED BY USE OF THE ON BOUND AND OFF BOUND RAMPS AT US 36 FOR CONSTRUCTION ACTIVITIES ON THE BRIDGE ON US 36 DURING STRUCTURE REMOVALS AND BEAM PLACEMENT OPERATIONS. THIS OPERATION SHALL BE PERFORMED AS PER MT-99.50 AS DIRECTED BY THE PROJECT ENGINEER. US 36 TRAFFIC SHALL BE STOPPED DURING THESE OPERATIONS SO AS TO ALLOW THE I 71 NORTHBOUND AND SOUTHBOUND TRAFFIC TO BE MAINTAINED USING THE RAMPS. SEE SHEETS 60-65.

SEQUENCE OF OPERATIONS (CONT...)

PHASE 3 - US 36 - (LEFT SIDE)

US 36 TRAFFIC SHALL BE STOPPED AS PER STANDARD CONSTRUCTION DRAWING MT-99.60 FOR FIFTEEN MINUTES AND AS DIRECTED BY THE PROJECT ENGINEER. ALL NECESSARY TEMPORARY TRAFFIC CONTROL DEVISES SHALL BE ADJUSTED AS DETAILED IN THE PLANS TO ALLOW FOR THE RAMPS TO PROVIDE UNOBSTRUCTED TRAVEL TO AND FROM I 71 DURING THIS OPERATION.

PHASE 4 - US 36 - (RIGHT SIDE)

INSTALL ALL TRAFFIC CONTROL DEVICES NEEDED TO MAINTAIN TRAFFIC UTILIZING PORTABLE BARRIER FOR WIDENING AS PER S.C.D. MT-95.45. MOVE ALL TRAFFIC BACK TO ITS ORIGINAL TRAFFIC PATTERN ON US 36. REMOVE ITEM 615 TEMPORARY PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A ON US 36 - (RIGHT SIDE) STA. 942+39.4 TO STA. 944+50.8. AS INDICATED ON THE PLAN DETAILS.

PHASE 4 - US 36 - (LEFT SIDE)

INSTALL ALL TRAFFIC CONTROL DEVICES NEEDED TO MAINTAIN TRAFFIC UTILIZING PORTABLE BARRIER FOR WIDENING AS PER S.C.D. MT-95.45. MOVE ALL TRAFFIC BACK TO ITS ORIGINAL TRAFFIC PATTERN ON US 36. REMOVE ITEM 615 TEMPORARY PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A ON US 36 - (LEFT SIDE) STA. 963+77.0 TO STA. 964+14.0, AS INDICATED ON THE PLAN DETAILS.

<u>PHASE 5 - US 36</u>

PERFORM ITEM 254 PAVEMENT PLANING. ASPHALT CONCRETE 1 1/2" MIN. TO 3 1/2" MAX. ON EXISTING US 36, AS INDICATED ON THE TYPICAL SECTIONS AND PLAN DETAIL SHEETS. PLACE ITEM 442 VARIABLE DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5mm TYPE A (449). PLACE FINAL ITEM 442 1 1/2" ASPHALT CONCRETE SURFACE COURSE. 12.5mm. TYPE A (449). AS PER PLAN. UTILIZING FLAGGERS PER MT-97.12 AS NEEDED FOR THESE OPERATIONS.

NOTE:

THE INTERMEDIATE COURSE WILL BE PLACED AFTER THE PLANING OPERATION. SO AS NOT TO OPEN THE LANE TO TRAFFIC UNTIL THE INTERMEDIATE COURSE AND THE TEMPORARY STRIPING HAS BEEN PLACED, AS DIRECTED BY THE PROJECT ENGINEER.

USER:

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SEQUENCE OF OPERATIONS (CONT...)

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THE CONTRACTOR SHALL COMPLETE ALL WORK AS DESCRIBED IN THE SEQUENCE OF OPERATIONS, FOR EACH PHASE OF CONSTRUCTION, BEFORE STARTING WORK ON THE NEXT PHASE OF CONSTRUCTION.

THE CONTRACTOR SHALL NOT BE ALLOWED TO START WORK ON ANY PHASE OF CONSTRUCTION UNTIL APPROVAL HAS BEEN GRANTED BY THE PROJECT ENGINEER.

CONSTRUCTION TASKS INVOLVING MOT FOR I 71 TRAFFIC

AT TIMES THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN TRAFFIC ALONG I 71 FOR CONSTRUCTION ACTIVITIES. FOR WORK REQUIRING LANE CLOSURES (DEMOLITION ACTIVITIES. BEAM PLACEMENT, PAINTING), LANES SHALL BE CLOSED ACCORDING TO SCD MT-95.30 AND SHALL FOLLOW THE LANE VALUE CONTRACT TABLE.

SHOULDER CLOSURES USED FOR PAINTING THE FASCIA BEAMS SHALL BE AS PER SCD MT-95.45 AND MT-101.75. THE FOLLOWING QUANTITIES ARE PROVIDED FOR SHOULDER CLOSURES FOR BEAM PAINTING AND HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 - WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL) 4 EACH ITEM 614 - OBJECT MARKER. ONE WAY 42 EACH ITEM 614 - BARRIER REFLECTOR, TYPE 1 (ONE WAY) 42 EACH ITEM 622 - PORTABLE BARRIER, UNANCHORED 1880 FT

FOR BRIDGE WORK THAT INCLUDES DEMOLITION. CONSTRUCTION AND SETTING OF BEAMS. I 71 MAY BE CLOSED DURING OVERNIGHT HOURS (10PM - 6AM) ONLY ACCORDING TO SCD MT-99.50 DURING PHASES 2 AND 3. THE LONGITUDINAL CHANNELIZERS THAT ARE PROVIDED ON US 36 TO PROHIBIT LEFT TURNING MOVEMENTS DURING NORMAL HOURS SHALL BE REMOVED EACH NIGHT 171 IS CLOSED TO ALLOW THE I 71 TRAFFIC UNOBSTRUCTED THROUGH MOVEMENT THROUGH THE INTERCHANGE. LEOS SHALL BE USED TO MANUALLY CONTROL TRAFFIC SIGNALS DURING THIS TIME TO GIVE PRECEDENCE TO I 71 TRAFFIC. A PCMS SIGN SHALL BE PLACED ALONG US 36 EAST AND WEST OF THE INTERCHANGE PRIOR TO I 71 NIGHT CLOSURES THAT DISPLAY: 1) US 36 NIGHT WORK 2) EXPECT LONG DELAYS.

FOR DETAILS. SEE SHEETS 72 - 77

THE OHIO DEPARTMENT OF TRANSPORTATION HAS CONTRACTED AN INTERSECTION IMPROVEMENT PROJECT. DEL-36-18.95 AT THE INTERSECTION OF U.S.R. 36 / S.R. 37 AND GALENA ROAD (C.R. 34). PID 104502. THE PROJECT IS TO BE CONSTRUCTED CONCURRENTLY WITH THIS PROJECT DEL-36-17.95, PID 113198. THE CONTRACTORS SHALL COOPERATE FULLY WITH EACH OTHER AS OUTLINED IN SECTION 105.08 OF THE CMS MANUAL. ALL MAINTENANCE OF TRAFFIC SHALL BE COORDINATED BETWEEN PROJECTS AND NOT CONFLICT WITH ONE ANOTHER.

IF THE CONTRACTOR SO ELECTS. HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC. PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED. IN WRITING, BY THE DIRECTOR.

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER. TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REP-RESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISS-ING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL SHALL HAVE NO OTHER CONSTRUCTION RELATED DUTIES. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

AN EXTRA ADVANCE WARNING SIGN GROUP CONSISTS OF TWO W20-1 (ROAD WORK AHEAD) SIGNS, TWO W20-5 (RIGHT /LEFT LANE CLOSED AHEAD) SIGNS WITH W16-3A DISTANCE PLATES, AND TWO W3-H7 (WATCH FOR STOPPED TRAFFIC) SIGNS AND **REQUIRED WARNING LIGHTS.**

THE CONTRACTOR SHALL PROVIDE, ERECT, MAINTAIN AND REMOVE EXTRA ADVANCE WARNING SIGN GROUPS AS SHOWN ON TRAFFIC SCD MT-95.50 AT THE FOLLOWING DISTANCES IN ADVANCE OF THE LANE TAPERS WITH THE APPROPRIATE W16-3A DISTANCE PLATES:

LANE TAPER ON I-71 NORTHBOUND, PHASES 2 & 3; PROVIDE SIGN GROUPS AT 2 MILES AND 3 MILES.

LANE TAPER ON I-71 SOUTHBOUND. PHASES 2 & 3: PROVIDE SIGN GROUPS AT 2 MILES AND 3 MILES.

ALTERNATE METHODS:

TRAFFIC CONTROL INSPECTOR

EXTRA ADVANCE WARNING SIGNS (NOTE A)

PAYMENT FOR PROVIDING. ERECTING. MAINTAINING AND REMOVING EXTRA ADVANCE WARNING SIGN GROUPS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614. MAINTAINING TRAFFIC.

COOPERATION BETWEEN CONTRACTORS



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	644	00620	510		CRUSSWALK LINE, 12"
	644	00700	402	FI	I RANSVERSE/DIAGONAL LINE
	644	01300	46		
	644	01510	499		DOTTED LINE, 6"
	646	10010	0.12	MILE	EDGE LINE, 6"
	646	10110	0.12	MILE	LANE LINE, 6"
	646	10200	0.06	MILE	CENTER LINE
	646	10310	640	FT	CHANNELIZING LINE, 12"
	646	20300	8	EACH	LANEARROW
	0.2.1	00100	744		
	831	00100	711	FT FT	REMOVAL OF LONGITUDINAL CHANNELIZING DEVICE
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					STRUCTURE OVER 20 FOO
	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, A
	202	22900	436	SY	APPROACH SLAB REMOVED
	202	23500	2,759	SY	WEARING COURSE REMOVED
	203	25111	24	CV	
	203		24		GRANULAR WATERIAL, TTPE D, AS PER PLAN
	503	21300	LS		UNCLASSIFIED EXCAVATION
	500	10000	472.007		
	509	10000	173,997	LB	
	509	20001	100		CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING C
	509	30020	8,064		NO. 4 DEFORMED GFRP REINFORCEMENT
	510	10000	396	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT
	511	34447	645	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER P
	511	34450	79	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET
	511	46012	19	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL N
	F40	10100	4 4 5 0	0)/	
	512	10100	1,150	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
	512	10300	12		
	512	10600	33		
	513	10240	612,596	LB	STRUCTURAL STEEL MEMBERS, LEVEL 2
	513	20000	14,817	EACH	WELDED STUD SHEAR CONNECTORS
	513	95020	LS		STRUCTURAL STEEL, MISC.: TEMPORARY SLAB SUPPORTS
	514 514	00300 00400	LS LS		FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT FIELD PAINTING STRUCTURAL STEEL, FINISH COAT
	516	10010	160	ст	
	510	12200	10U 247		
	516	13200	10	SF	1" DREFORMED EXPANSION JOINT FILLER
	516	13000	10 04	SF	2" PREFORMED EXPANSION JOINT FILLER
	516	25000	563	SF	NYLON REINFORCED NEOPRENE SHEETING
	010	20000	000		
	SPECIAL	51631250	164	FT	SAWING AND SEALING CONCRETE JOINTS
	516	41600	532	SF	1" ELASTOMERIC BEARING PAD
	516	44101	11	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOA
······	516	44201	44	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOA
			······		
532	517	76300	532	FT	RAILING, MISC.: DECORATIVE RAILING
	519	11100	119	SF	PATCHING CONCRETE STRUCTURE
	SPECIAL	51900100	1,561	SF	COMPOSITE FIBER WRAP SYSTEM
	526	25000	450	SV	REINFORCED CONCRETE APPROACH SLARS (T=15")
	526	90030	160	FT	TYPE C INSTALLATION
	601	20001	342	SY	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN
	625	33000	1	EACH	STRUCTURE GROUNDING SYSTEM
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ONCRETE REINFORCEMENT, AS PER PLAN	127	SL
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AD PLATE (NEOPRENE), AS PER PLAN (2.25")	155	
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PART.			ITEM	GRAND			
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19			SPECIAL	53050030	19		MAINTI RETAINING WALL TEMPORARY
LO				33030030			INE FAINING WALL, TEIMI ONANT
300			614	11110	300	HOUR	LAW ENFORCEMENT OFFICER WITH PATRO
12	*****	~~~~~	614	12380	42	FACH	BARRIER REFLECTOR TYPE 1 (ONE WAY)
153			614	13310	153	EACH	BARRIER REFLECTOR, TYPE 1 (TWO WAY)
42			614	13350	42	EACH	OBJECT MARKER, ONE WAY
153			614	13360	153	FACH	OBJECT MARKER TWO WAY
48			614	18601	48	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, A
0.65			614	20010	0.65	MILE	WORK ZONE LANE LINE, CLASS I, 6"
2.43			614	20560	2.43	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 P
0.44			614	21000	0.44	MILE	WORK ZONE CENTER LINE, CLASS I
1.92			614	21550	1.92	MILE	WORK ZONE CENTER LINE, CLASS III, 642 P
0.84			614	22010	0.84	MILE	WORK ZONE EDGE LINE, CLASS I, 6"
2.23			614 614	22360	2.23		WORK ZONE EDGE LINE, CLASS III, 6", 642 F
8,586			614	23690	8,586	FT	WORK ZONE CHANNELIZING LINE, CLASS I, WORK ZONE CHANNELIZING LINE, CLASS II
3,087			614	24000	3,087	FT	WORK ZONE DOTTED LINE, CLASS I
36			614	25000	36	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE
256 704			614	26000	256 704	FI FT	WORK ZONE STOP LINE, CLASS I WORK ZONE STOP LINE, CLASS III, 642 PAIN
38			614	30000	38	EACH	WORK ZONE ARROW, CLASS I
108			614	30650	108	EACH	WORK ZONE ARROW, CLASS III, 642 PAINT
LS			615	10000	LS		ROADS FOR MAINTAINING TRAFFIC
425			615	20000	425	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CL
1			616	10000	1	MGAL	
540			622 622	41100 41110	<u>540</u>	FT	PORTABLE BARRIER, UNANCHORED PORTABLE BARRIER, ANCHORED
216			831	00100	216	FT	LONGITUDINAL CHANNELIZING DEVICE
	LS		614	11000	LS		MAINTAINING TRAFFIC
	12		619	16010	12	MNTH	FIELD OFFICE, TYPE B
	LS		623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SUR
	LS		624	10000	LS		MOBILIZATION

DESCRIPTION	SEE SHEET NO.	
ENANCE OF TRAFFIC		
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L CAR FOR ASSISTANCE	11	
DE HAZARDS, (UNIDIRECTIONAL)	12	
AS PER PLAN	10	
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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO TH	E FOLLOWING	STANDARD BRIDGE DRAWING(S):
AS-1-15	REVISED	7/17/2015
AS-2-15	REVISED	1/18/2019
GSD-1-1	9 REVISED	1/15/2021
HL-50.21	1 REVISED	7/15/2022
PCB-91	REVISED	7/17/2020
SBR-3-2	0 DATED	7/17/2020
VPF-1-9	0 REVISED	7/20/2018

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S): 800 DATED 1/20/2023 832 DATED 10/19/2018

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 9th EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS. 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

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

DESIGN LOADING

DESIGN LOADING INCLUDES: VEHICULAR LIVE LOAD: HL-93 FUTURE WEARING SURFACE OF 0.0 KIPS/SQ.FT

DESIGN DATA

CONCRETE CLASS QC2: COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE) CONCRETE CLASS QC1: COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE) CONCRETE REINFORCEMENT: EPOXY COATED STEEL REINFORCING MINIMUM YIELD STRENGTH 60 KSI (ALL LOCATIONS BUT RAILING) GFRP REINFORCEMENT (RAILING) STRUCTURAL STEEL - ASTM A709 GRADE 50W:

YIELD STRENGTH = 50 KSI

MONOLITHIC WEARING SURFACE

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

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 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.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05. 105.02 AND 513.04. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

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 RESPON-SIBLE 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 2.3 KIPS.

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

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 INCHES.

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

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

THIS WORK WILL CONSIST OF REMOVAL OF PORTIONS OF THE ABUTMENTS AND THE ENTIRE SUPERSTRUCTURE. REMOVE ABUTMENTS TO ELEVATIONS PROVIDED ON ABUTMENT REMOVAL SHEETS. REMOVE THE CONCRETE DECK AND EXISTING STEEL SUPERSTRUCTURE AS PER THE PHASE CONSTRUCTION DETAILS PROVIDED IN THESE PLANS. ALL LABOR AND MATERIALS TO PERFORM THIS WORK IS INCLUDED IN PAYMENT FOR THIS ITEM.

IN ADDITION. REMOVAL OF THE PROTECTIVE PLASTIC COLUMN CASINGS ON PIER 3 ARE ALSO INCLUDED IN THIS ITEM. EXTRA CARE SHALL BE USED TO REMOVE THE CASING WITHOUT DAMAGE SO THAT THEY CAN RE-USED BY THE DISTRICT. THE CONTRACTOR SHALL DELIVER THE REMOVED CASES TO THE DISTRICT 6 OFFICE.

ITEM 203, GRANULAR MATERIAL, TYPE B, AS PER PLAN

THIS WORK WILL CONSIST OF FILLING IN ANY VOIDED AREAS IN THE EXISTING POROUS BACKFILL AT THE INTERFACE OF THE APPROACH SLABS AND ABUTMENT BACK WALLS. A CONTINGENCY QUANTITY OF 24 CY HAS BEEN PROVIDED TO BE USED AT THE DISCRETION OF THE ENGINEER. ALL LABOR AND MATERIAL TO FACILITATE THIS WORK SHALL BE INCLUDED IN THE UNIT COST OF ITEM 203 - GRANULAR MATERIAL, TYPE B. AS PER PLAN.

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 509 - CONCRETE REINFORCEMENT, REPLACEMENT OF EXISTING CONCRETE REINFORCING, 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 REMOVAL OPERATIONS WITH NEW REINFORCING STEEL OF THE SAME SIZE AND COATING AT NO COST TO THE DEPARTMENT.

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ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN

THE CONTRACTOR SHALL SUPPLY VARIABLE RETARDER ADMIXTURES IN THE DECK CONCRETE TO MAINTAIN FLUIDITY WITHIN THE CONCRETE FOR THE FULL LENGTH OF THE POUR WITHIN EACH PHASE OF CONSTRUCTION TO REDUCE THE CURING OF THE INITIAL PLACE CONCRETE PRIOR TO THE FINAL PLACED CONCRETE.

PAYMENT FOR ALL MATERIAL, EQUIPMENT AND LABOR FOR THE PLACEMENT OF THE CONCRETE DECK BE INCLUDED FOR PAYMENT UNDER THE FOLLOWING ITEMS: ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA. BRIDGE DECK. AS PER PLAN

ITEM 514 FIELD PAINTING STRUCTURAL STEEL

PARTIAL PAINTING OF A709 GRADE 50W STEEL: PAINT THE LAST 5 FT OF EACH BEAM END ADJACENT TO THE ABUTMENTS INCLUDING ALL CROSS FRAMES AND OTHER STEEL WITHIN THESE LIMITS OF THE ABUTMENT. PAINT ALL OF THE SPLICE TO 1 FT EACH SIDE OF THE SPLICE PLATES. PAINT THE ENTIRE LENGTH OF THE FASCIA BEAMS. THE PRIME COAT SHALL CLOSELY APPROACH FEDERAL STANDARD NO. 595B - 20045 OR 20059 (THE COLOR OF WEATHERING STEEL).

PAYMENT FOR ALL MATERIAL. EQUIPMENT AND LABOR FOR THE PAINTING OF THE STEEL WILL BE INCLUDED FOR PAYMENT UNDER THE FOLLOWING ITEMS:

ITEM 514 FIELD PAINTING STRUCTURAL STEEL. INTERMEDIATE COAT ITEM 514 FIELD PAINTING STRUCTURAL STEEL, FINISH COAT

ITEM 513, STRUCTURAL STEEL, MISC.: TEMPORARY SLAB SUPPORTS

THIS WORK SHALL INCLUDE ALL MATERIAL AND LABOR TO CONSTRUCTION, INSTALL, MAINTAIN AND REMOVE THE TEMPORARY SLAB SUPPORTS FOR THE EXISTING CONCRETE DECK EDGE BETWEEN MAINTENANCE OF TRAFFIC PHASES. THE DESIGN SHOWN IN THESE PLANS FOR THE TEMPORARY SUPPORTS IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED. THE CONTRACTOR MAY CONSTRUCT THE SUPPORTS AS SHOWN OR PREPARE AN ALTERNATE DESIGN WHICH WILL NEED TO BE PREPARED IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SLAB SUPPORTS AT THE CONTRACT LUMP SUM PRICE FOR ITEM 513 STRUCTURAL STEEL, MISC.: TEMPORARY SLAB SUPPORTS. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

ITEM 516, SPECIAL - SAWING AND SEALING CONCRETE JOINTS

ALL MATERIALS AND LABOR TO CONSTRUCT THE 8 INCH DEEP X 1 INCH WIDE SAW CUT AND INSTALL HOT APPLIED JOINT SEALER AS PER C&MS 705.04 AT THE INTERFACE OF THE APPROACH SLABS AND THE SUPERSTRUCTURE DIAPHRAGMS. PAYMENT FOR THIS ITEM WILL BE AT THE CONTRACT UNIT PRICE FOR ITEM SPECIAL, SAWING AND SEALING CONCRETE JOINTS.



DESCRIPTION: THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR. MATERIALS AND EQUIPMENT TO FABRICATE, GALVANIZE, CLEAN, APPLY PAINT OVER HOT DIP GALVANIZING (DUPLEX COATING SYSTEM) AND INSTALL THE RAILINGS AS DETAILED IN THESE PLANS AND NOTES. UNLESS OTHERWISE SPECIFIED IN THE PLANS. INSTALL POSTS AND POST SLEEVES PLUMB.

SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH 501.04 AND INCLUDE DETAILS THAT CLEARLY IDENTIFY ALL OF THE REQUIREMENTS LISTED IN HERE. PROVIDE CONNECTIONS CONSISTENT WITH CONCEPTS SHOWN ON THE DRAWING. INDICATE WELDS BY STANDARD AWS SYMBOLS. DISTINGUISHING BETWEEN SHOP AND FIELD WELDS. AND SHOW SIZE. LENGTH AND TYPE OF EACH WELD. IDENTIFY GRINDING FINISH AND PROFILE OF WELDS AS DEFINED HEREIN. INDICATE TYPE. SIZE. FINISH AND LENGTH OF BOLTS. DISTINGUISHING BETWEEN SHOP AND FIELD BOLTS. IDENTIFY HIGH STRENGTH BOLTED SLIP-CRITICAL DIRECT-TENSIONED SHEAR/BEARING CONNECTIONS. CLEARLY INDICATE WHICH SURFACES OR EDGES ARE EXPOSED AND WHAT CLASS OF SURFACE PREPARATION IS BEING USED. INDICATE SPECIAL TOLERANCES AND ERECTION REQUIREMENT AS NOTED ON THE DRAWINGS OR DEFINE HEREIN. SUBMIT MANUFACTURER'S COLOR CHARTS: SUBMIT SAMPLES OF EACH COLOR AND MATERIAL TO BE APPLIED. WITH TEXTURE TO SIMULATE ACTUAL CONDITIONS, ON REPRESENTATIVE SAMPLE, OF ACTUAL SUBSTRATE. PROVIDE BLOCK FILLERS AND PRIMERS. USE REPRESENTATIVE COLORS WHEN

STEPPED SAMPLES. DEFINING EACH SEPARATE COAT. INCLUDING PREPARING SAMPLES FOR REVIEW. RESUBMIT UNTIL REQUIRED SHEEN. COLOR. AND TEXTURE ARE ACHIEVED. PROVIDE A LIST OF MATERIAL AND APPLICATION FOR EACH COAT OD EACH SAMPLE: LABEL EACH SAMPLE AS TO LOCATION AND APPLICATION. SUBMIT SAMPLES ON THE FOLLOWING SUBSTRATES FOR THE FIELD ENGINEERS REVIEW OF COLOR AND TEXTURES ONLY: FERROUS METAL: TWO 8 INCH LONG SAMPLE OF SOLID METAL FOR EACH COLOR AND FINISH.

ITEM 517 RAILING. MISC.: DECORATIVE RAILING

SHOP DRAWINGS DETAILING FENCE FABRICATION

FABRIC SHALL CONSIST OF A 1 INCH DIAMOND MESH USING 0.12 INCH DIA. (11 GAGE) WIRE CONFORMING TO ASTM F668 CLASS 2A OR 2B EXCEPT AS NOTED. THE PVC COATING SHALL BE BLACK IN COLOR CLOSELY APPROACHING FEDERAL STANDARD NO. 595B-17038 UNLESS OTHERWISE SPECIFIED IN THE PLANS. SELVAGES SHALL BE KNUCKLED AT BOTH ENDS. HANDLE ALL PVC COATED FABRIC WITH CARE. IF THE PVC COATING IS DAMAGED. REPLACE THE DAMAGED PORTION OF THE FABRIC AT NO COST TO THE DEPARTMENT. THE INSTALLATION SHOULD BE AS PER 709.

TENSION BARS:

TENSION BARS SHALL BE 3/16" X 1/2" STEEL. THE PROTECTIVE COATING SHALL BE POWDER COATED BLACK TO MATCH FENCE.

TENSION BANDS:

TENSION BANDS SHALL BE 1/8" X 1" STEEL ASSEMBLED WITH 3/8" DIAMETER X 1-1/4" BOLTS. THE PROTECTIVE COATING SHALL BE POWDER COATED BLACK TO MATCH FENCE. ONE TENSION BAND SHALL BE) SUPPLIED FOR EACH FOOT OF FABRIC HEIGHT.



							С	ALCULATED BY:	MAK	DATE:	9/20/2022
					E	STIMATED QUANTITIES		CHECKED BY:	JAH	DATE:	11/21/2022 REV. 4/24/2023
ITEM	EXT.	TOTAL	PAR	TICIPATION SPLITS	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN	SEE SHT.
202	11203	LUMP	LUMP	02/NH3/05 03/NH3/11	LS	PORTIONS OF STRUCTURE REMOVED. OVER 20 FOOT SPAN. AS PER PLAN				LUMP	3
202	22900	436	436		SY	APPROACH SLAB REMOVED				436	
202	23500	2,759	2,759		SY	WEARING COURSE REMOVED			2322	437	
203	35111	24	24		СҮ	GRANULAR MATERIAL, TYPE B, AS PER PLAN	24				3
503	21300	LUMP	LUMP		LS	UNCLASSIFIED EXCAVATION	LUMP	LUMP			
500	10000	172.007	172.007		I P	EDOXY COATED STEEL DEINEODCEMENT	2220		170667		
509	20001	100	100		LB I B	CONCRETE REINFORCEMENT REPLACEMENT OF EXISTING CONCRETE REINFORCEMENT AS PER PLAN	100		170007		3
509	30020	8,064	8,064		FT	NO. 4 DEFORMED GFRP REINFORCEMENT			8064		
510	10000	396	396		EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	396				
511	34447	645	645		CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN			645		3
511	34450	79	79		CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			79		
511	46012	19	19		CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING	19				
512	10100	1,150	1,150		SY	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)	127	493	530		
512	10300	72	72		SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN			72		
512	10600	33	33		FT	CONCRETE REPAIR BY EPOXY INJECTION	9	24			
513	10240	612,596	612,596		LB	STRUCTURAL STEEL MEMBERS, LEVEL 2			612596		
513	20000	14,817	14,817		EACH	WELDED STUD SHEAR CONNECTORS			14817		
513	95020	LUMP	LUMP		LS	STRUCTURAL STEEL, MISC.: TEMPORARY SLAB SUPPORTS			LUMP		3
514	00300	LUMP	LUMP		LS	FIELD PAINTING OF STRUCTURAL STEEL, INTERMEDIATE COAT			LUMP		3
514	00400	LUMP	LUMP		LS	FIELD PAINTING OF STRUCTURAL STEEL, FINISH COAT			LUMP		3
516	10010	160	160		FT	ARMORI ESS PREFORMED JOINT SEAL				160	
516	13200	247	247		SF	¹ / ₂ " PREFORMED EXPANSION JOINT FILLER	247			100	
516	13600	10	10		SF	1" PREFORMED EXPANSION JOINT FILLER				10	
516	13900	94	94		SF	2" PREFORMED EXPANSION JOINT FILLER				94	
516	25000	563	563		SF	NYLON REINFORCED NEOPRENE SHEETING	563				
016 16	31250	164	164		FT	SPECIAL - SAWING AND SEALING CONCRETE JOINTS	164				3
10 516	41000 AA101	532 11	532		SF FACU	I ELASI UMERIC BEARING PAD ELASTOMERIC BEARING WITH INTERNAL LAMINIATES AND LOAD DLATE (NEODDENIE) AS DED DLAN (2.25")	532	11			21
516	44201	44	44		EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE). AS PER PLAN (3.27")	22	22			31
<u> </u>					TYYY						
517	76300	532		532	FT	RAILING, MISC.: DECORATIVE RAILING			532		3
519	11100	119	119		SF	PATCHING CONCRETE STRUCTURE	54	65			
526	25000	450	450		SY	REINFORCED CONCRETE APPROACH SLABS (T=15")			450		
526	90030	160	160		FT	TYPE C INSTALLATION			160		
601	20001	38	38		SY	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN	38				6
625	33000	1	1		EACH	STRUCTURE GROUNDING SYSTEM				1	
SPEC	519E00100	1,561	1,561		SF	COMPOSITE FIBER WRAP SYSTEM		1561			5

RSIZE: 34x22 (in.) DATE: 4/24/2023 TIME: 7:58:37 AM USER: Julia_Hart 198_DEL-036-17.95\400-Engineering\Structures\SFN_2101149\Sheets\1131 MODEL: Sheet PAPERSIZE: 34x22 (V.Prnierts/2) MN 113108 DEL eet PA





261	'_	.2"	

31'-7" (SPAN 2)			81'-7" (SPAN 3)	4 9'-	
	36) ?'-0"		82'-7"	
	W33 X 2	201 (CVN)		W33 X 201 (CVN)	
	18'-0"	18'-0"			<u> </u>
	← € FIELD SPLICE 2	− € PIER 2 BRG	← © FIELD SPLICE 3		– ∉ PIER 3 BRG
00°00'00" (TYP)					
		951			
		© PIER 2 BR STA 950+95.3	G 39		© <i>Q</i> PIER 3 BR STA 951+76.5
	INTEF DIAPH	RMEDIATE HRAGM (TYP)			
17'-0" = 34'-0"	4 SPA @ 1	4'-0"= 56'-0"	2.SPA @ 17'-0" =	: 34'-0" 3 SF	PA @ 14'-0" = 42'-0"