ITEM SPECIAL - STRUCTURE, MISC.: COMPOSITE FIBER WRAP SYSTEM:

COMPOSITE FIBER WRAP SYSTEM SHALL BE PER PROPOSAL NOTE 519.

ITEM SPECIAL - URETHANE TOP COAT SEALER:

THE URETHANE TOP COAT SEALER SHALL BE AS PER ITEM 512. THE COLOR OF THE URETHANE TOP COAT SEALER SHALL BE FEDERAL COLOR NUMBER 595B-27778 (LIGHT NEUTRAL, SEMIGLOSS). THE URETHANE TOP COAT SEALER SHALL BE APPLIED OVER THE FIBER WRAP EPOXY COATING PER PROPOSAL NOTE 519.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM SPECIAL - URETHANE TOP COAT SEALER, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN:

THIS ITEM CONSISTS OF CONSTRUCTING REINFORCED CONCRETE APPROACH SLABS WITH SIDEWALKS AND BRIDGE RAILING IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS, STANDARD DRAWINGS AS-1-15 AND BR-2-15, AND C&MS 526.

METHOD OF MEASUREMENT: ACCEPTED QUANTITIES WILL BE PAID FOR AT THE UNIT PRICE BID PER SQUARE YARD, COMPLETED IN PLACE.

BASIS OF PAYMENT: ALL CONCRETE FOR THE APPROACH SLABS AND INTEGRAL CURBS, EPOXY COATED REINFORCING STEEL AS PER THE STANDARD DRAWING, PREFORMED EXPANSION JOINT FILLER, JOINT SEALER, AND OTHER INCIDENTAL MATERIALS, LABOR, AND EQUIPMENT ARE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR THE MEASURED AREA. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN.

ITEM 607 - VANDAL PROTECTION FENCE, 6 FOOT STRAIGHT, COATED FABRIC, AS PER PLAN:

THIS ITEM SHALL BE AS PER THE DETAILS IN THE PLANS, THE APPLICABLE PORTIONS OF STANDARD DRAWING VPF-1-90, AND THE MANUFACTURER'S RECOMMENDATIONS.

THE ANCHORS SHALL BE CAST IN PLACE WITH A 7 INCH MINIMUM EMBEDMENT LENGTH.

AT LOCATIONS WHERE THE EXISTING FENCE SPANS ACROSS THE EXPANSION JOINT, DO NOT INSTALL LINE RAILS AND EXPANSION JOINT SLEEVES; HOWEVER, THE FABRIC SHALL REMAIN CONTINUOUS ACROSS THE EXPANSION JOINT.

THE COLOR OF THE FENCE FABRIC, RAILS, POSTS, PLATES, TIE WIRES, AND ADDITIONAL VISUAL HARDWARE AND CAULK SHALL BE BLACK.

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

ITEM 607 - FENCE, MISC.: MODIFY EXISTING FENCE:

THIS ITEM CONSISTS OF MODIFYING THE HEIGHT OF THE EXISTING PARAPET-MOUNTED CHAIN LINK FENCE FROM 4'-0"(±) TO 6'-0" MINIMUM IN SPANS 2 AND 3 ON THE RIGHT SIDE OF THE SUPERSTRUCTURE FOR PHASE 1 MAINTENANCE OF TRAFFIC. FURNISH AND INSTALL FENCE MATERIALS MATCHING THE EXISTING FENCE MATERIALS OR OTHERWISE IN CONFORMANCE WITH CMS 607.

PAYMENT SHALL BE AT THE UNIT PRICE BID PER LINEAR FOOT FOR ITEM 607 - FENCE, MISC.: MODIFY EXISTING FENCE, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

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 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".

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

ASBESTOS NOTIFICATION:

A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST SURVEYED THE BRIDGE STRUCTURE SCHEDULED FOR DEMOLTION AND/OR REHABILITATION; THE SURVEY DETERMINED THAT NO 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. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

SUMMARY OF PROPOSED REHABILITATION WORK:

THE FOLLOWING LIST CONTAINS THE MAJOR ITEMS OF WORK INCLUDED IN THESE PLANS FOR THE REHABILITATION OF THIS STRUCTURE:

1. REMOVAL OF EXISTING SUPERSTRUCTURE DECK SLAB, INCLUDING SIDEWALKS, BRIDGE RAILING, FENCING, SLIDING PLATE EXPANSION JOINTS, AND SCUPPERS.
2. REMOVAL OF EXISTING APPROACH SLABS.
3. REMOVAL OF EXISTING ABUTMENT BACKWALLS AND PORTIONS OF EXISTING WINGWALLS, INCLUDING BRIDGE RAILING AND FENCING.
4. REMOVAL AND REPLACEMENT OF EXISTING END CROSSFRAMES AT THE ABUTMENTS.
5. REPLACEMENT OF THE ROCKER BEARINGS AT THE ABUTMENTS AND PIERS 1 AND 3 WITH ELASTOMERIC BEARINGS.
6. CONSTRUCTION OF NEW ABUTMENT BACKWALLS AND ABUTMENT SEATS.
7. CONSTRUCTION OF NEW COMPOSITE SUPERSTRUCTURE DECK SLAB, INCLUDING SIDEWALKS, BRIDGE RAILING, AND VANDAL PROTECTION FENCE.
8. INSTALLATION OF NEW STRIP SEAL EXPANSION JOINTS AT THE ABUTMENTS.
9. CONSTRUCTION OF NEW APPROACH SLABS, INCLUDING SIDEWALKS, BRIDGE RAILING, AND VANDAL PROTECTION FENCE.
10. CONSTRUCTION OF SEISMIC PEDESTALS ON THE BEAM SEATS OF THE ABUTMENTS AND THE CAP OF PIER 2 AND INSTALLATION OF FIBER WRAP ON THE COLUMNS OF PIER 2 AND COLUMN 6 OF PIER 3.
11. PATCHING AND SEALING OF THE EXISTING SUBSTRUCTURE.
12. PAINTING OF THE EXISTING GIRDER ENDS AT THE ABUTMENTS.
13. REPLACEMENT OF END CROSSFRAMES AT THE ABUTMENTS AND INSTALLATION OF CROSSFRAMES OVER PIER 2.

THE FOLLOWING ITEMS OF WORK ARE DETAILED ELSEWHERE IN THE PLANS AND WILL REQUIRE COORDINATION WITH THE STRUCTURAL WORK:

1. REMOVAL AND REPLACEMENT OF UNDERPASS LIGHTING.
2. REMOVAL AND REPLACEMENT OF STRUCTURE MOUNTED LIGHTING.

SUGGESTED CONSTRUCTION PROCEDURE:

PHASE 1 CONSTRUCTION:

1. IMPLEMENT PHASE 1 MAINTENANCE OF TRAFFIC. SHIFT TRAFFIC AND MAINTAIN ONE LANE NORTHBOUND AND ONE LANE SOUTHBOUND ON THE EXISTING NORTHBOUND HALF OF THE BRIDGE DECK.
2. ACQUIRE BOTTOM OF GIRDER ELEVATIONS FOR GIRDER LINES A THROUGH E.
3. SAW CUT THE EXISTING DECK SLAB AND EXISTING APPROACH SLABS AT THE LONGITUDINAL CUT LINE. REMOVE THE EXISTING SOUTHBOUND BRIDGE DECK AND APPROACH SLABS. REMOVAL WILL INCLUDE THE EXISTING JOINT ARMOR AND ALL SCUPPERS AND SUPPORTS.
4. ACQUIRE BOTTOM OF GIRDER ELEVATIONS FOR GIRDER LINES A THROUGH E.
5. REMOVE EXISTING SOUTHBOUND APPROACH SLABS.
6. REMOVE EXISTING ABUTMENT BACKWALLS AND PORTIONS OF EXISTING WINGWALLS ON THE SOUTHBOUND SIDE.
7. CONSTRUCT NEW ABUTMENT SEATS AND NEW ABUTMENT BACKWALLS ON THE SOUTHBOUND SIDE.
8. REPLACE EXISTING BEARINGS AT THE ABUTMENTS AND PIERS.
9. CONSTRUCT NEW SEISMIC PEDESTALS ON ABUTMENTS AND PIER 2.
10. INSTALL NEW POROUS BACKFILL BEHIND ABUTMENTS.
11. REMOVE AND REPLACE EXISTING END CROSSFRAMES, INSTALL SHEAR STUDS, AND INSTALL STEEL RETROFITS AND NEW CROSSFRAMES AT PIER 2.
12. CONSTRUCT THE SOUTHBOUND HALF OF THE NEW BRIDGE DECK.
13. CONSTRUCT THE SOUTHBOUND HALF OF THE NEW APPROACH SLABS.
14. CONSTRUCT NEW SIDEWALKS AND PARAPETS.
15. SEAL SIDEWALKS AND PARAPETS. INSTALL BRIDGE MOUNTED LIGHTING AND VANDAL PROTECTION FENCE.

PHASE 2 CONSTRUCTION:

1. IMPLEMENT PHASE 2 MAINTENANCE OF TRAFFIC. SHIFT TRAFFIC AND MAINTAIN ONE LANE NORTHBOUND AND ONE LANE SOUTHBOUND ON THE NEW SOUTHBOUND HALF OF THE BRIDGE DECK.
2. ACQUIRE BOTTOM OF GIRDER ELEVATIONS FOR GIRDER LINES E THROUGH J.
3. REMOVE THE EXISTING NORTHBOUND BRIDGE DECK AND APPROACH SLABS. REMOVAL WILL INCLUDE THE EXISTING JOINT ARMOR AND ALL SCUPPERS AND SUPPORTS.
4. ACQUIRE BOTTOM OF GIRDER ELEVATIONS FOR GIRDER LINES E THROUGH J.
5. REMOVE EXISTING NORTHBOUND APPROACH SLABS.
6. REMOVE EXISTING ABUTMENT BACKWALLS AND PORTIONS OF EXISTING WINGWALLS ON THE NORTHBOUND SIDE.
7. CONSTRUCT NEW ABUTMENT SEATS AND NEW ABUTMENT BACKWALLS ON THE NORTHBOUND SIDE.
8. REPLACE EXISTING BEARINGS AT THE ABUTMENTS AND PIERS.
9. CONSTRUCT NEW SEISMIC PEDESTALS ON ABUTMENTS AND PIER 2.
10. INSTALL NEW POROUS BACKFILL BEHIND ABUTMENTS.
11. REMOVE AND REPLACE EXISTING END CROSSFRAMES, INSTALL SHEAR STUDS, AND INSTALL STEEL RETROFITS AND NEW CROSSFRAMES AT PIER 2.
12. CONSTRUCT THE NORTHBOUND HALF OF THE NEW BRIDGE DECK.
13. CONSTRUCT THE NORTHBOUND HALF OF THE NEW APPROACH SLABS.
14. CONSTRUCT NEW SIDEWALKS AND PARAPETS.
15. INSTALL EXPANSION JOINT STRIP SEAL GLANDS FULL WIDTH.
16. SEAL SIDEWALKS AND PARAPETS. INSTALL BRIDGE MOUNTED LIGHTING AND VANDAL PROTECTION FENCE.

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DESIGNED PAT | DRAWN DWW | REVIEWED MJL | DATE 10/18/19
CHECKED LNB | REVISED | STRUCTURE FILE NUMBER 1814184

STRUCTURE GENERAL NOTES - 2
BRIDGE NO. CUY-480-0727
GRAYTON ROAD OVER I-480

CUY-480-07.27
PID No. 103991

ESTIMATED QUANTITIES

CALC. BY: JDA DATE: 01/30/20
CHKD. BY: LNB DATE: 02/07/20

ITEM	ITEM EXTENSION	TOTAL	UNIT	DESCRIPTION	REAR ABUTMENT	FORWARD ABUTMENT	PIERS	SUPER-STRUCTURE	GENERAL	REF. SHEET NUMBER
202	11203	LS	--	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					LS	4/47
202	22900	322	SY	APPROACH SLAB REMOVED					322	
503	11100	LS	--	COFFERDAMS AND EXCAVATION BRACING					LS	
503	21100	215	CY	UNCLASSIFIED EXCAVATION	84	99	32			
509	10000	235,432	LB	EPOXY COATED REINFORCING STEEL	7,952	9,334	807	212,999	4,340	
510	10000	572	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	238	270	64			
511	34446	838	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK				838		
511	34450	96	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)				85	11	
511	43210	2	CY	CLASS QC1 CONCRETE, PIER			2			
511	45711	107	CY	CLASS QC1 CONCRETE, ABUTMENT, AS PER PLAN	50	57				4/47
511	51512	170	CY	CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK				150	20	
512	10050	592	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	2	3		555	37	
512	10100	1,792	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	89	105	306	1,154	138	4/47
512	10600	179	FT	CONCRETE REPAIR BY EPOXY INJECTION			179			
512	33000	63	SY	TYPE 2 WATERPROOFING				63		
SPECIAL	51271500	69	SY	URETHANE TOP COAT SEALER			69			5/47
512	74000	307	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES			307			
513	10200	10,000	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF				10,000		
513	20000	10,516	EACH	WELDED STUD SHEAR CONNECTORS				10,516		
514	00050	2,800	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL				2,800		
514	00056	2,800	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT				2,800		4/47
514	00060	3,800	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT				3,800		4/47
514	00066	3,800	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT				3,800		4/47
514	00504	20	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL				20		
514	10000	3	EACH	FINAL INSPECTION REPAIR				3		
516	11210	183	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL				183		
516	13600	11	SF	1" PREFORMED EXPANSION JOINT FILLER					11	
516	44201	18	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (LOAD PLATE 13"x20"x1.50", NEOPRENE 12"x19"x3.95")				18		26/47
516	44201	18	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (LOAD PLATE 15"x20"x1.50", NEOPRENE 14"x19"x3.95")				18		26/47
516	47001	LS	--	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					LS	4/47
518	12200	4	EACH	SCUPPERS, INCLUDING SUPPORTS				4		
518	21200	93	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	43	50				
518	40000	183	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	84	99				
518	40010	80	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	40	40				
SPECIAL	51900100	2,377	SF	COMPOSITE FIBER WRAP SYSTEM (SEE PROPOSAL NOTE)			2,377			5/47
519	11100	453	SF	PATCHING CONCRETE STRUCTURE		3	450			
526	25011	413	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN					413	5/47
SPECIAL	53000400	132	EACH	STRUCTURE, MISC.: GROUT AND SEAL PORTABLE BARRIER ANCHOR HOLES				124	8	8/114
601	20010	15	CY	CRUSHED AGGREGATE SLOPE PROTECTION	7	8				
607	39901	847	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN				749	98	5/47
607	98000	230	FT	FENCE, MISC.: MODIFY EXISTING FENCE				230		5/47

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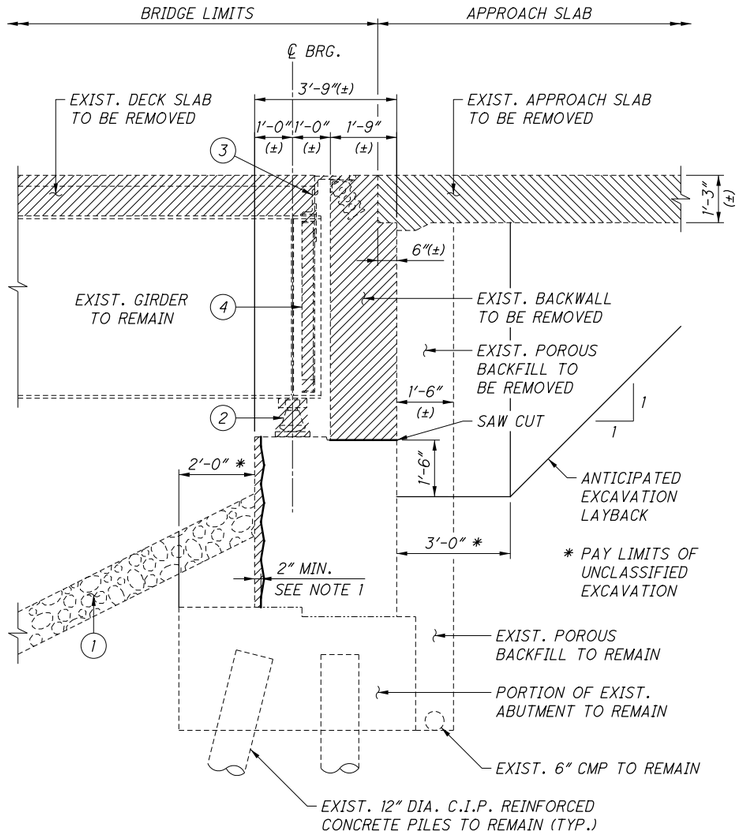
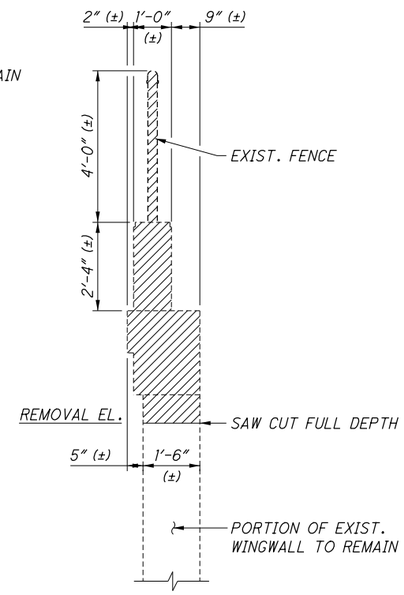
ESTIMATED QUANTITIES
BRIDGE NO. CUY-480-0727
GRAYTON ROAD OVER I-480

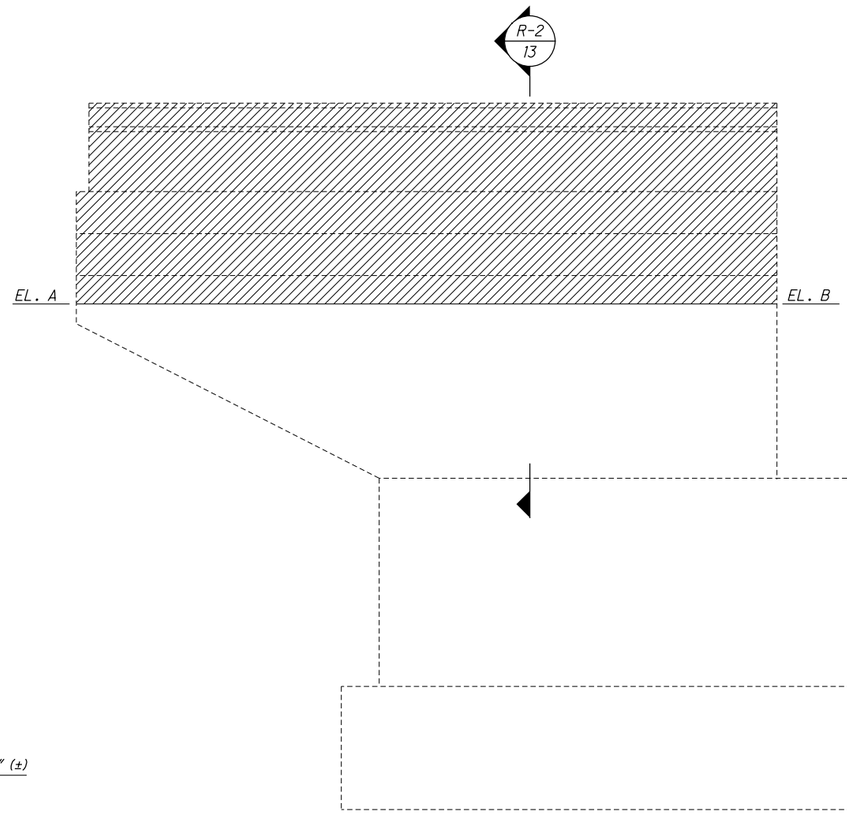
CUY-480-07.27
PID No. 103991



SECTION R-1 11 / R-1 12



SECTION R-2 13



TYPICAL WINGWALL REMOVAL

WINGWALL REMOVAL ELEVATIONS		
REAR ABUTMENT	ELEVATION A	ELEVATION B
LEFT	771.31	771.47
RIGHT	773.05	773.28
FWD. ABUTMENT	ELEVATION A	ELEVATION B
LEFT	769.96	770.41
RIGHT	772.10	772.43

LEGEND

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

ITEM 202 - APPROACH SLAB REMOVED

(1) EXIST. CRUSHED AGGREGATE SLOPE PROTECTION TO REMAIN

(2) EXIST. STEEL BEARING DEVICE TO BE REMOVED

(3) EXIST. EXPANSION JOINT ARMOR TO BE REMOVED

(4) EXIST. END CROSSFRAME TO BE REMOVED

NOTES

1. REMOVAL DEPTH OF 2″ MIN. IS REQUIRED FOR ALL EXISTING CONCRETE ON THE FRONT FACE OF THE ABUTMENT WALL. IN AREAS WHERE DETERIORATED CONCRETE IS FOUND, THE REMOVAL DEPTH SHALL BE INCREASED TO 4″ MIN. AND BE PERFORMED IN ACCORDANCE WITH CMS 519.03 (I.E., REMOVE ALL LOOSE AND DISINTEGRATED CONCRETE TO DEPTH REQUIRED FOR CONCRETE PATCHING).

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ABUTMENT REMOVAL DETAILS

BRIDGE NO. CUY-480-0727
GRAYTON ROAD OVER I-480

CUY-480-07.27
PID No. 103991

13 / 47

80 / 114

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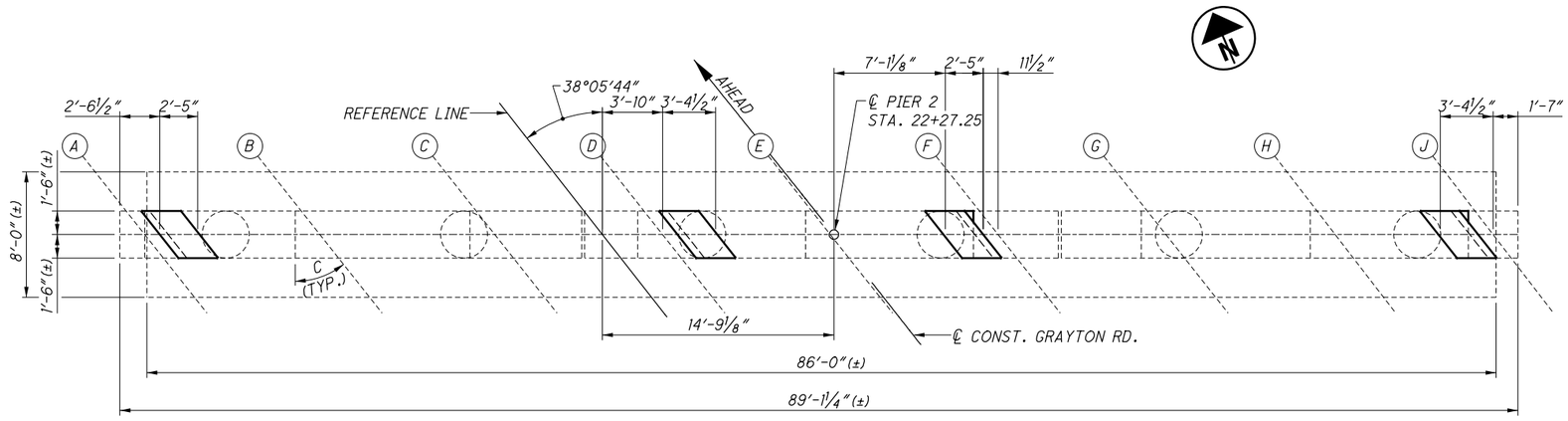
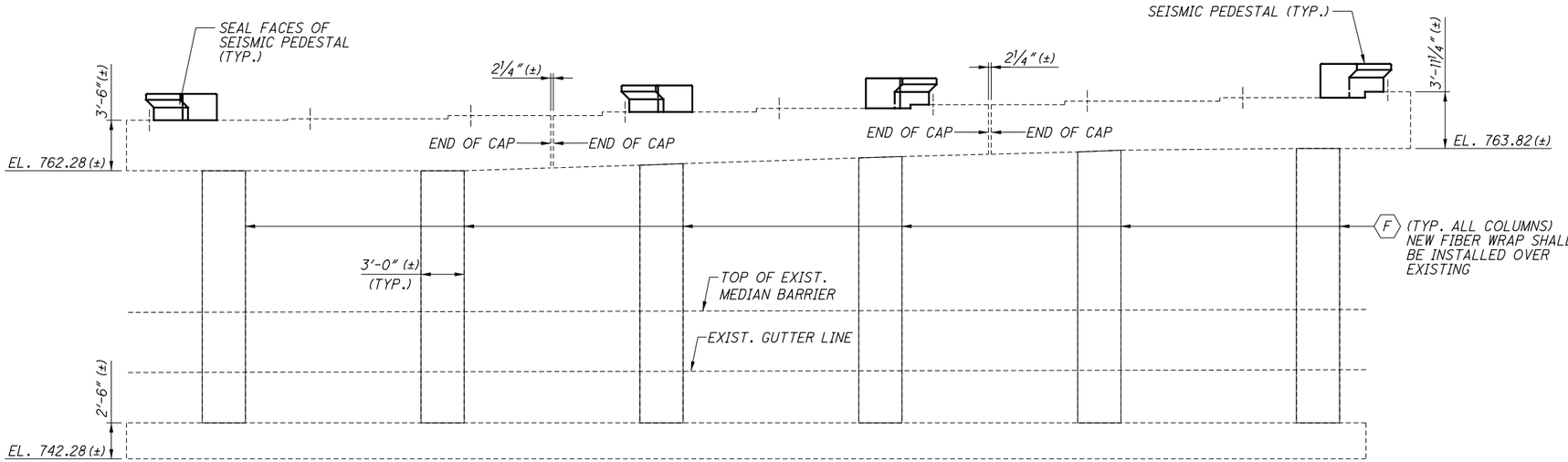
GIRDER LINE	ANGLE C **
A	38°23'09"
D	38°23'09"
F	38°23'09"
J	37°36'04"

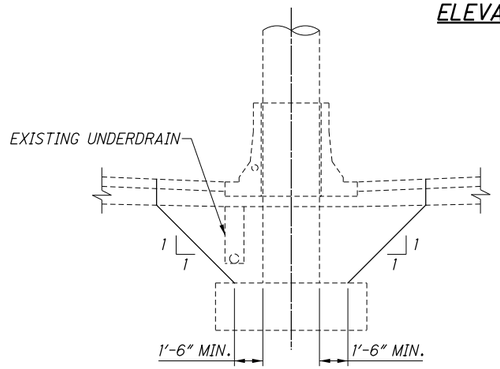
** FIELD VERIFY ANGLE C FOR SEISMIC PEDESTAL CONSTRUCTION



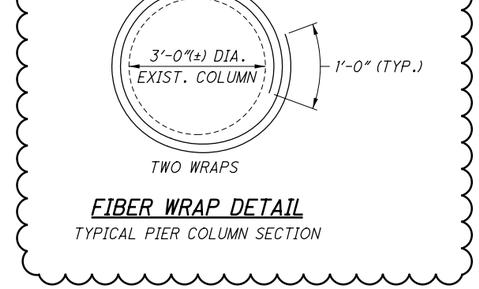
PLAN
(LOOKING AHEAD STATION)



ELEVATION



EXCAVATION LIMITS FOR FIBER WRAPPING



FIBER WRAP DETAIL
TYPICAL PIER COLUMN SECTION

LEGEND

(X) GIRDER LINE DESIGNATION

⟨F⟩ EXISTING PIER COLUMN TO BE FIBER WRAPPED FROM TOP OF FOOTING TO BOTTOM OF PIER CAP

NOTES

1. FOR PIER REPAIR DETAILS, SEE SHEET 15/47.
2. FOR PIER SEISMIC PEDESTAL DETAILS, SEE SHEET 22/47.

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DESIGNED	DRAWN	REVIEWED	DATE
LNB	DWW	MJL	10/18/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EAO		1814184	

PIER 2 PLAN & ELEVATION
BRIDGE NO. CUY-480-0727
GRAYTON ROAD OVER I-480

CUY-480-07.27
PID No. 103991

21/47

88
114

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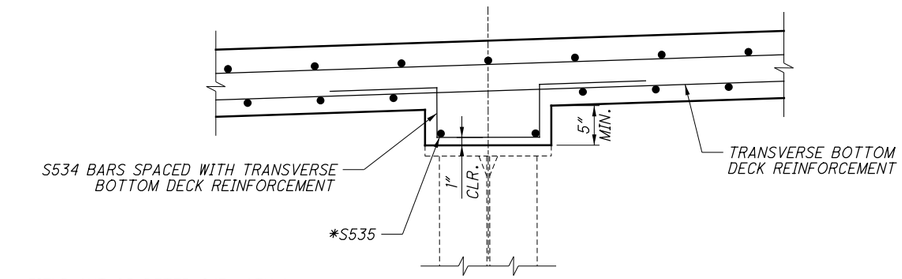


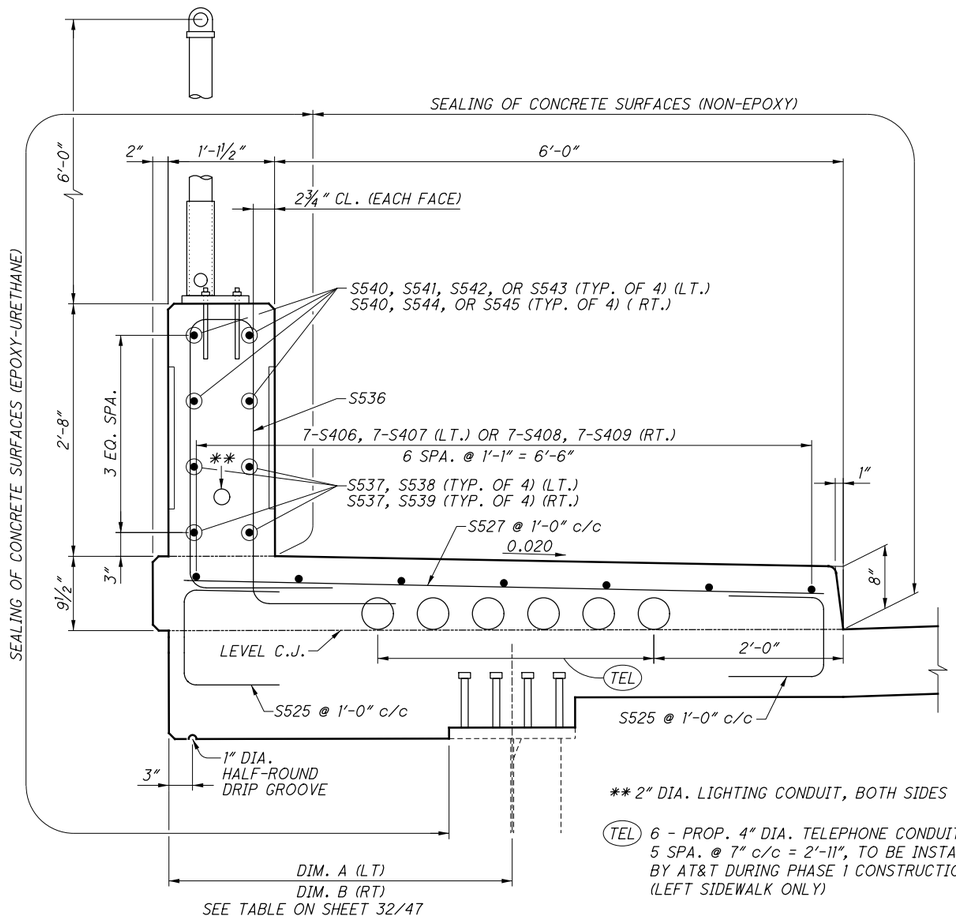
* FIELD CUT OR DETERMINE ACTUAL LENGTH NEEDED BEFORE ORDERING

DEEP HAUNCH DETAIL

FOR USE WITH HAUNCH DEPTH >5"
CONTINGENCY QUANTITY INCLUDED FOR
ITEM 509 - EPOXY COATED REINFORCING STEEL

NOTE

PROVIDE S535 LONGITUDINAL STEEL FOR THE REQUIRED LENGTH OF S534 BARS THEN EXTENDING A DEVELOPMENT LENGTH OF 1'-5" PAST THE LAST S534 BAR ON EACH END. USE 3'-0" LAP LENGTH AS REQUIRED.

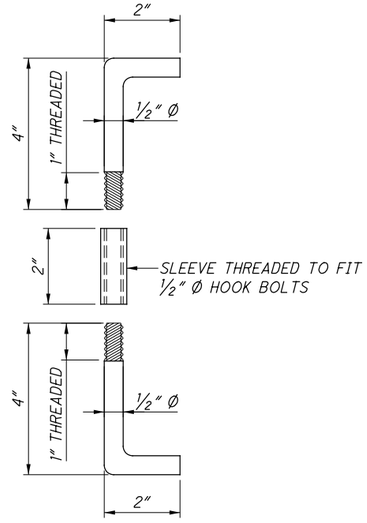


** 2" DIA. LIGHTING CONDUIT, BOTH SIDES

(TEL) 6 - PROP. 4" DIA. TELEPHONE CONDUITS, 5 SPA. @ 7" c/c = 2'-11", TO BE INSTALLED BY AT&T DURING PHASE 1 CONSTRUCTION (LEFT SIDEWALK ONLY)

TYPICAL SIDEWALK AND PARAPET DETAIL

SLAB REINFORCING NOT SHOWN

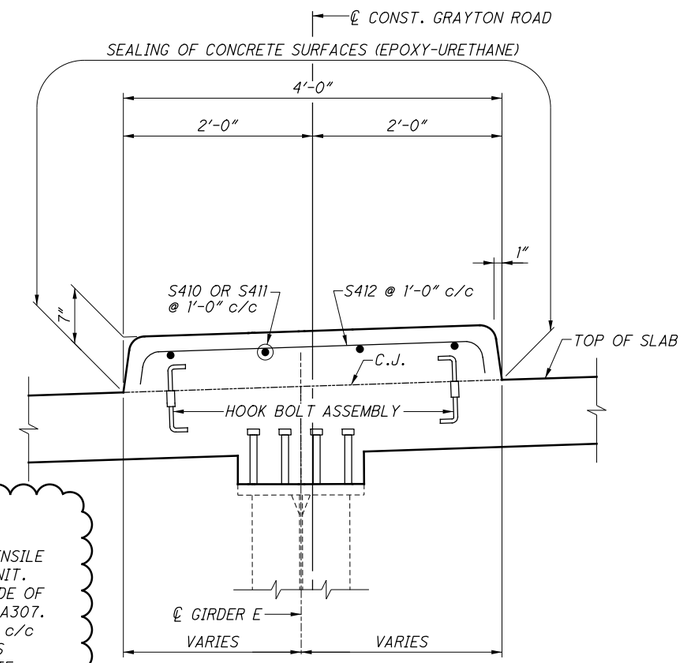


TYPICAL HOOK BOLT ASSEMBLY

SEE NOTE 1

NOTES

1. HOOK BOLT ASSEMBLY REQUIRES A MINIMUM TENSILE STRENGTH OF 4 KIPS WHEN ASSEMBLED AS A UNIT. BOTH HOOK BOLTS AND SLEEVE ARE TO BE MADE OF STEEL AND MEET THE REQUIREMENTS OF ASTM A307. HOOK BOLT ASSEMBLY SPACING SHALL BE 1'-6" c/c MAX. INCLUDE THE HOOK BOLT ASSEMBLIES AS INCIDENTAL TO ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK.



TYPICAL MEDIAN DETAIL

SLAB REINFORCING NOT SHOWN

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DESIGNED	DRAWN	REVIEWED	DATE
LNB	DWW	MJL	10/18/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
EAO		1814184	

SIDEWALK PARAPET & MEDIAN DETAILS
BRIDGE NO. CUY-480-0727
GRAYTON ROAD OVER I-480

CUY-480-07.27
PID No. 103991

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105
114

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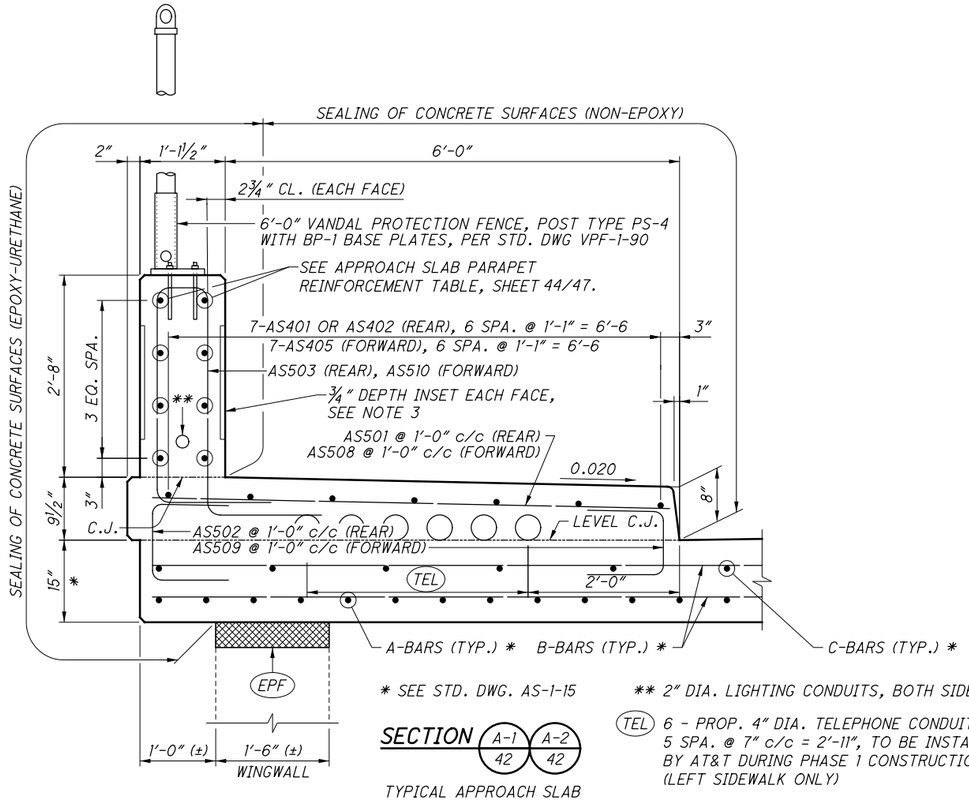


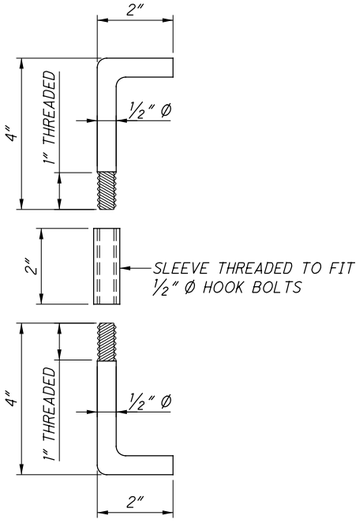
* SEE STD. DWG. AS-1-15

** 2" DIA. LIGHTING CONDUITS, BOTH SIDES

(TEL) 6 - PROP. 4" DIA. TELEPHONE CONDUITS, 5 SPA. @ 7" c/c = 2'-11", TO BE INSTALLED BY AT&T DURING PHASE 1 CONSTRUCTION (LEFT SIDEWALK ONLY)

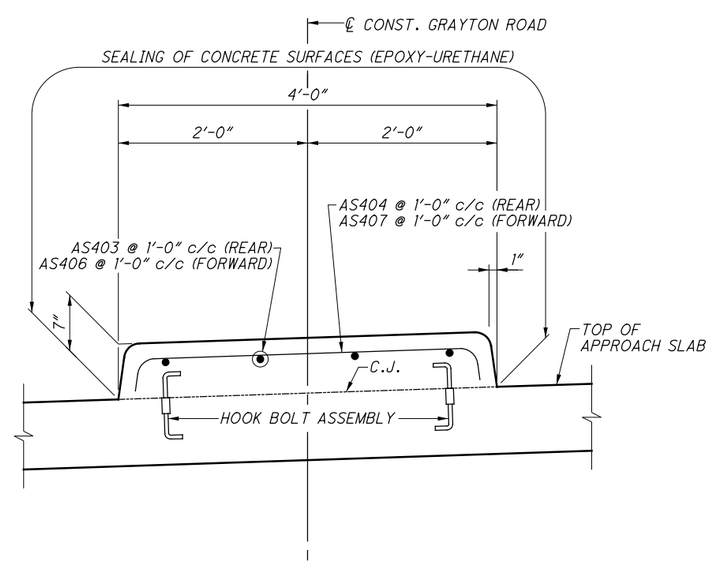
SECTION A-1 42 / A-2 42

TYPICAL APPROACH SLAB SIDEWALK AND PARAPET



TYPICAL HOOK BOLT ASSEMBLY

SEE NOTE 5



TYPICAL MEDIAN DETAIL

APPROACH SLAB REINFORCING NOT SHOWN

LEGEND

(EPF) 4" EXPANDED POLYSTYRENE FILLER, INCLUDED FOR PAYMENT UNDER ITEM 526, REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN

NOTES

1. THIS DRAWING PROVIDES DETAILS TO SUPPLEMENT THE STANDARD DRAWING. FOR APPROACH SLAB REINFORCING STEEL AND DETAILS NOT SHOWN, REFER TO STANDARD DRAWING AS-1-15.
2. THE SIDES OF THE PROPOSED MEDIAN SHALL HAVE THE SAME SHAPE AS CURB, TYPE 2-A, AS PER PLAN. SEE DETAIL ON SHEET 4/114.
3. FOR AESTHETIC DETAILS, SEE SHEET 41/47.
4. FOR REINFORCING STEEL LIST, SEE SHEET 47/47.
5. HOOK BOLT ASSEMBLY REQUIRES A MINIMUM TENSILE STRENGTH OF 4 KIPS WHEN ASSEMBLED AS A UNIT. BOTH HOOK BOLTS AND SLEEVE ARE TO BE MADE OF STEEL AND MEET THE REQUIREMENTS OF ASTM A307. HOOK BOLT ASSEMBLY SPACING SHALL BE 1'-6" c/c MAX. INCLUDE THE HOOK BOLT ASSEMBLIES AS INCIDENTAL TO ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN.

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EAO		1814184	

APPROACH SLAB DETAILS - 2
BRIDGE NO. CUY-480-0727
GRAYTON ROAD OVER I-480

CUY-480-07.27
PID No. 103991

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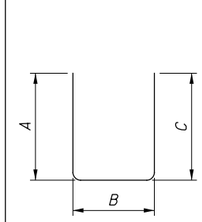
REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	SERIES INC.
SUPERSTRUCTURE										
S401	1573	8'-10"	9282	16	8'-4"					
S402	80	7'-11"	423	STR						
S403	520	30'-0"	10421	STR						
S404	82	5'-5"	297	STR						
S405	533	30'-0"	10681	STR						
S406	14	7'-11"	74	STR						
S407	91	30'-0"	1824	STR						
S408	14	17'-4"	162	STR						
S409	84	30'-0"	1683	STR						
S410	8	19'-5"	104	STR						
S411	48	30'-0"	962	STR						
S412	375	4'-1"	1023	2	0'-4"	3'-7"	0'-4"			
S413	14	1'-8"	16	STR						
S414	29	1'-7"	31	STR						
	1	1'-8"								
S415	SER OF	TO	104	STR						0.3
	62	3'-4"								
	1	1'-7"								
S416	SER OF	TO	122	STR						0.3
	74	3'-4"								
S417	25	1'-8"	28	STR						
	1	1'-11"								
S418	SER OF	TO	47	STR						0.2
	32	2'-6"								
	1	1'-11"								
S419	SER OF	TO	64	STR						0.1
	44	2'-5"								
S420	24	2'-1"	33	STR						
S421	17	2'-3"	26	STR						
S422	30	2'-4"	47	STR						
S423	25	2'-7"	43	STR						
S424	33	2'-8"	59	STR						
	1	1'-8"								
S425	SER OF	TO	54	STR						0.3
	39	2'-6"								
S426	34	2'-6"	57	STR						
	1	1'-11"								
S427	SER OF	TO	41	STR						0.3
	28	2'-6"								
	1	2'-0"								
S428	SER OF	TO	33	STR						0.3
	22	2'-6"								
	1	2'-6"								
S429	SER OF	TO	60	STR						0.1
	34	2'-9"								
S430	18	2'-8"	32	STR						
	1	2'-8"								
S431	SER OF	TO	86	STR						0.1
	45	3'-1"								
	1	2'-9"								
S432	SER OF	TO	74	STR						0.1
	38	3'-1"								
	1	1'-8"								
S433	SER OF	TO	48	STR						0.4
	33	2'-8"								
	1	1'-8"								
S434	SER OF	TO	62	STR						0.4
	41	2'-10"								
	1	2'-10"								
S435	SER OF	TO	66	STR						0.1
	34	3'-0"								
	1	2'-10"								
S436	SER OF	TO	37	STR						0.1
	19	3'-0"								

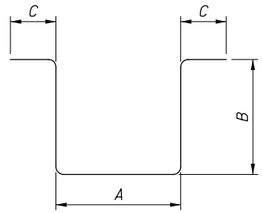
REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	SERIES INC.
	2	1'-5"								
S501	SER OF	TO	162	STR						9.1
	13	10'-6"								
	2	11'-3"								
S502	SER OF	TO	1521	STR						8.9
	32	34'-4"								
S503	1278	36'-3"	48320	STR						
S504	220	36'-5"	8356	STR						
	2	4'-7"								
S505	SER OF	TO	2802	STR						6.0
	65	36'-9"								
S506	16	4'-0"	67	STR						
S507	N O T U S E D									
S508	88	15'-6"	1423	STR						
S509	572	30'-0"	17898	STR						
S510 ◊	781	3'-0"	2044	STR						
S511 ◊	781	3'-9"	3055	STR						
S512	10	4'-0"	42	STR						
	2	4'-8"								
S513	SER OF	TO	1778	STR						9.7
	41	36'-11"								
S514	1374	36'-11"	52905	STR						
S515	78	37'-2"	3024	STR						
	2	10'-10"								
S516	SER OF	TO	2425	STR						6.1
	50	35'-8"								
	2	0'-9"								
S517	SER OF	TO	231	STR						6.1
	20	10'-4"								
S518	N O T U S E D									
S519	88	13'-0"	1193	STR						
S520	572	30'-0"	17898	STR						
S521 ✣	776	2'-6"	2023	STR						
S522 ✣	776	3'-7"	2900	STR						
S523	N O T U S E D									
	1	1'-9"								
S524	SER OF	TO	20	STR						12.8
	5	6'-0"								
S525	1498	3'-3"	5078	2	1'-3"	1'-0"	1'-3"			
	1	1'-2"								
S526	SER OF	TO	9	STR						19.0
	3	4'-4"								
S527	741	6'-9"	5217	STR						
S528	1	8'-2"	9	STR						
S529	1	8'-8"	9	STR						
	1	1'-2"								
S530	SER OF	TO	17	STR						12.5
	5	5'-4"								
	1	2'-2"								
S531	SER OF	TO	12	STR						21.0
	3	5'-8"								
S532	1	7'-4"	8	STR						
S533	1	9'-6"	10	STR						
S534 *	194	4'-2"	843	6	1'-0"	0'-7"	1'-3"			
S535 *	7	30'-0"	219	STR						
S536	898	9'-1"	8508	30	1'-6"	0'-8"	3'-1"	2'-10"		
S537	104	30'-0"	3254	STR						
S538	4	22'-9"	95	STR						
S539	4	13'-2"	55	STR						
S540	560	4'-8"	2726	STR						
S541	4	8'-1"	34	STR						
S542	12	6'-1"	76	STR						
S543	4	6'-3"	26	STR						
S544	4	7'-6"	31	STR						
S545	4	6'-8"	28	STR						
S601	237	34'-9"	12370	STR						
S602	79	13'-10"	1641	STR						

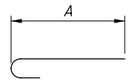
BENDING DIAGRAMS



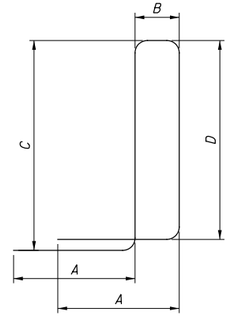
TYPE-2



TYPE-6



TYPE-16



TYPE-30

LEGEND

* CONTINGENCY QUANTITY INCLUDED FOR ADDITIONAL REINFORCEMENT IN DEEP HAUNCHES (T>5"), SEE SHEET 38/47

◊ REINFORCING BAR WITH MECHANICAL CONNECTOR, FEMALE THREADED INSERT REQUIRED FOR PHASE 1 CONSTRUCTION

✣ REINFORCING BAR WITH MECHANICAL CONNECTOR, MALE THREADED END REQUIRED FOR PHASE 2 CONSTRUCTION

REINFORCING STEEL NOTES

1. SERIES BARS - EACH BAR VARIES BY TABULATED AMOUNT.
2. ALL DIMENSIONS ARE OUT TO OUT.
3. TYPE 'STR' INDICATES A STRAIGHT BAR.
4. THE BAR SIZE NUMBER IS INDICATED IN THE 'MARK' COLUMN. THE FIRST ONE OR TWO DIGITS OF EACH MARK INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, A501 IS A #5 BAR SIZE AND P1101 IS A #11 BAR SIZE.
5. ALL REINFORCING STEEL SHALL BE EPOXY COATED.

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DESIGNED LNB | DRAWN DWW | REVIEWED MJL | DATE 10/18/19
CHECKED EAO | REVISED | STRUCTURE FILE NUMBER 8114184

REINFORCING STEEL LIST - 2
BRIDGE NO. CUY-480-0727
GRAYTON ROAD OVER I-480

CUY-480-07.27
PID No. 103991

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