

Project: 2021-4003
 PID No. 110560
 HIG-00072-05.816

Submittal: Final
Date: Aug. 16, 2022
By: CLP
Checked: CAB

Bridge Quantity Calculations

ITEM 202E11002 STRUCTURE REMOVED, OVER 20 FOOT SPAN (LS)

LUMP SUM

	TOTAL		LUMP
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ITEM 202E22900 APPROACH SLAB REMOVED (SY)

2 X 15.00 X 20.00 = 600.00 SQ. FT. /9= 66.67 SQ. YD.

	TOTAL		67 SQ. YD.
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ITEM 202E23500 WEARING COURSE REMOVED (SY)

79.56 X 32.00 = 2545.92 SQ. FT. /9= 282.88 SQ. YD.
 2.00 X 15.00 X 20.00 = 600.00 SQ. FT. /9= 66.67 SQ. YD.

	TOTAL		350 SQ. YD.
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ITEM 503E11100 COFFERDAMS AND EXCAVATION BRACING (LS)

LUMP SUM

	TOTAL		LUMP
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ITEM 503E21301 UNCLASSIFIED EXCAVATION, AS PER PLAN (LS)

LUMP SUM

	TOTAL		LUMP
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ITEM 505E11100 PILE DRIVING EQUIPMENT MOBILIZATION (LS)

LUMP SUM

TOTAL LUMP

ITEM 507E00600 14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN (FT)

RA	7	X	60	=	420	FEET
FA	7	X	50	=	<u>350</u>	FEET
					770	FEET

TOTAL 770 FT

ITEM 507E00650 14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED (FT)

RA	7	X	65	=	455	FEET
FA	7	X	55	=	<u>385</u>	FEET
					840	FEET

TOTAL 840 FT

ITEM 509E10000 EPOXY COATED REINFORCING STEEL (LB)

ABUT	8147	LB
SUP	<u>19914</u>	LB
	28061	LB

TOTAL 28061 LB

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ITEM	511E33418 CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE (CY)									
	(ABUTMENT DIAPHRAGM)									
4.88 X	4.33	X	36.23	=	765.55	CU. FT.				
0.50 X	-1.08	X	33.13	=	-17.94	CU. FT.				
4.88 X	4.33	X	36.23	=	765.55	CU. FT.				
0.50 X	-1.08	X	33.13	=	-17.94	CU. FT.				
					<u>1495.23</u>		/27 =		55.38	CU.YD.
							<u>TOTAL</u>		<u>55</u>	<u>CU.YD.</u>

ITEM	511E34446 CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (CY)									
1 X	0.71	X	32.00	X	65.51	=	1484.82	CU. FT.		
2 X	0.96	X	0.96	X	65.51	=	120.32	CU. FT.		
4 X	0.20	X	4.08	X	65.51	=	213.14	CU. FT.		
2 X	0.50	X	0.38	X	33.13	=	<u>12.42</u>	CU. FT.		
							1830.71	/27 =	67.80	CU.YD.
							<u>TOTAL</u>		<u>68</u>	<u>CU.YD.</u>

ITEM	511E43510 CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING (CY)									
5.09 X	4.33	X	52.00	=	1147.42	CU. FT.				
3.49 X	2.50	X	6.00	=	52.35	CU. FT.				
4.82 X	2.50	X	1.75	=	21.09	CU. FT.				
3.40 X	2.50	X	6.00	=	51.00	CU. FT.				
4.85 X	2.50	X	1.67	=	<u>20.25</u>	CU. FT.				
					1292.11					
5.11 X	4.33	X	52.00	=	1151.13	CU. FT.				
3.50 X	2.50	X	6.00	=	52.50	CU. FT.				
4.84 X	2.50	X	1.92	=	23.19	CU. FT.				
3.38 X	2.50	X	6.00	=	50.70	CU. FT.				
4.81 X	2.50	X	1.51	=	<u>18.10</u>	CU. FT.				
					1295.62		/27=	95.84	CU.YD.	
							<u>TOTAL</u>		<u>96</u>	<u>CU.YD.</u>



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ITEM 512E10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) (SY)

RA	3.99	X	6.00	+	5.32	X	2.08	=	35.02	SF	
	3.00	X	8.81	+	3.00	X	8.84	=	52.95	SF	
	3.98	X	6.00	+	5.43	X	1.33	=	31.12	SF	
	4.76	X	36.23					=	172.40	SF	
									291.49	/9=	32.39 SQ.YD.
FA	4.08	X	6.00	+	5.42	X	2.25	=	36.67	SF	
	3.00	X	8.99	+	3.00	X	8.65	=	52.92	SF	
	3.88	X	6.00	+	5.31	X	1.17	=	29.48	SF	
	4.75	X	36.23					=	172.15	SF	
									291.23	/9=	32.36 SQ.YD.
Superstructure	1.67			+	0.96		+ 0.38		+ 1.48		
	+ 0.3536			+	0.875		+ 0.24		+ 1.30		
	+ 0.46			+	3.33		+ 0.4583		= 11.50	SF	
2	X	65.51	X	11.50	=	1506.49	SF	/9=	167.39	SQ.YD.	
											232.13 SQ. YD.
							TOTAL				232 SQ.YD.

ITEM 512E33000 TYPE 2 WATERPROOFING (SY)

RA	40.00	X	8.86	=	354.53	SQ. FT.	/9=	39.39 SQ. YD.
RA	6.00	X	7.47	=	44.82	SQ. FT.	/9=	4.98 SQ. YD.
RA	6.00	X	7.46	=	44.76	SQ. FT.	/9=	4.97 SQ. YD.
FA	40.00	X	8.88	=	355.07	SQ. FT.	/9=	39.45 SQ. YD.
FA	6.00	X	7.58	=	45.48	SQ. FT.	/9=	5.05 SQ. YD.
FA	6.00	X	7.38	=	44.28	SQ. FT.	/9=	4.92 SQ. YD.
								98.77 SQ. YD.
					TOTAL			99 SQ.YD.

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ITEM 515E15070 DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS,
 LEVEL 3, TYPE WF36-49 (EACH)
 (71'-4" BEAM LENGTH)

$$1 \times 4 = 4 \text{ EACH}$$

TOTAL 4 EACH

ITEM 515E20000 INTERMEDIATE DIAPHRAGMS (EACH)

$$1 \times 3 = 3 \text{ EACH}$$

TOTAL 3 EACH

ITEM 516E13200 1/2" PREFORMED EXPANSION JOINT FILLER (SF)

RA 1.00 X 36.58 = 36.58 SQ. FT.

FA 1.00 X 36.58 = 36.58 SQ. FT.

73.17

TOTAL 73 SQ. FT.

ITEM 516E13600 1" PREFORMED EXPANSION JOINT FILLER (SF)

RA 1.00 X 36.58 = 36.58 SQ. FT.

FA 1.00 X 36.58 = 36.58 SQ. FT.

73.17

TOTAL 73 SQ. FT.

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ITEM 516E13900 2" PREFORMED EXPANSION JOINT FILLER (SF)

RA	4.82	X	2.59	+	4.85	X	2.59	=	25.05	SQ. FT.
FA	4.84	X	2.59	+	4.81	X	2.59	=	<u>24.99</u>	SQ. FT.
									50.04	

TOTAL 50 SQ. FT.

ITEM 516E14014 INTEGRAL ABUTMENT EXPANSION JOINT SEAL (FT)

RA	5.32	+	39.58	+	5.35	=	50.25	FT.
FA	5.34	+	39.58	+	5.31	=	<u>50.23</u>	FT.
							100.48	

TOTAL 100.00 FT.

ITEM 516E44101 ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE
 (NEOPRENE), AS PER PLAN (EACH)
 (0'-10" x 2'-0" x 1 3/4")

RA	1	X	4	=	4	EACH
FA	1	X	4	=	<u>4</u>	EACH
					8	EACH

TOTAL 8 EACH

ITEM 517E70100 RAILING (THREE STEEL TUBE BRIDGE RAILING) (FT)

80.60	-	1.9375	=	78.66	FT
80.61	-	1.9375	=	<u>78.67</u>	FT
				157.34	

TOTAL 157.34 FT



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ITEM 518E21200 POROUS BACKFILL WITH GEOTEXTILE FABRIC (CY)

RA	2.0	X	8.86	X	40.00	=	709.07	CU. FT.		
	2.0	X	6.97	X	6.00	=	83.64	CU. FT.		
	2.0	X	6.96	X	6.00	=	<u>83.52</u>	CU. FT.		
							876.23	CU. FT.	/27	32.45 CU. YD.
FA	2.0	X	8.88	X	40.00	=	710.14	CU. FT.		
	2.0	X	7.08	X	6.00	=	84.96	CU. FT.		
	2.0	X	6.88	X	6.00	=	<u>82.56</u>	CU. FT.		
							877.66	CU. FT.	/27	<u>32.51</u> CU. YD.
										64.96 CU. YD.
							<u>TOTAL</u>			<u>65 CU. YD.</u>

ITEM 518E22300 SPECIAL - STEEL DRIP STRIP (FT)

$[(2 \text{ X } 65.51) + (18 \text{ X } 2)] = 167.02 \text{ FT.}$

TOTAL 167 FT

ITEM 518E40000 6" PERFORATED CORRUGATED PLASTIC PIPE (FT)

RA	52.00	FT.
FA	<u>52.00</u>	FT.
	104.00	FT.

TOTAL 104 FT

ITEM 518E40010 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS (FT)

RA	10.00	FT.
FA	<u>14.00</u>	FT.
	24.00	FT.

TOTAL 24 FT



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ITEM 523E20001 DYNAMIC LOAD TESTING, AS PER PLAN (EACH)

RA	1	
FA	1	
	<u>2</u>	EACH

TOTAL	2	EACH
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ITEM 523E20501 RESTRIKE, AS PER PLAN (EACH)

RA	1	
FA	1	
	<u>2</u>	EACH

TOTAL	2	EACH
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ITEM 526E15010 REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=13") (SY)

2 X 32.00 X 20.00 = 1280.00 SQ. FT. /9= 142.22 SQ. YD.

TOTAL	142 SQ.YD.
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ITEM 526E90010 TYPE A INSTALLATION (FT)

2 X 33.1288 = 66.26 FT

TOTAL	66.26 FT
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