



CALCULATIONS

Project: 2018-0405
PID No. 96959
SCI-73-1195
SFN: 7302674

Submittal: Final
Date: Nov 4, 2019
By: CAB
Checked: CLP

Bridge Quantity Calculations

ITEM 202E11003 STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (LS)

LUMP SUM

TOTAL LUMP

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.

ITEM 202E23500 WEARING COURSE REMOVED (SY)

99.24 X 32.00 = 3175.68 SQ. FT. /9= 352.85 SQ. YD.

TOTAL 353 SQ. YD.

ITEM 503E11101 COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN (LS)

LUMP SUM

TOTAL LUMP

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 507E00100 STEEL PILES HP10X42, FURNISHED (FT)

RA 16 X 30 = 480 L.F.
FA 16 X 25 = 400 L.F.
880

TOTAL 880 FT

ITEM 507E00150 STEEL PILES HP10X42, DRIVEN (FT)

RA 16 X 25 = 400 L.F.
FA 16 X 20 = 320 L.F.
720

TOTAL 720 FT

ITEM 509E10000 EPOXY COATED REINFORCING STEEL (LB)

ABUT 12549
SUP 26631
39180 POUND

TOTAL 39180 POUND



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ITEM 511E21522 CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE (CY)

0.71	X	32.00	X	81.84	=	1854.95	CU. FT.
0.20	X	16.33	X	81.84	=	266.49	CU. FT.
0.79	X	2.42	X	81.84	=	156.58	CU. FT.
5.42	X	5.42	X	36.95	=	1084.80	CU. FT.
5.45	X	5.42	X	36.95	=	1090.80	CU. FT.
5.42	X	3.00	X	3.85	=	62.60	CU. FT.
5.45	X	3.00	X	3.85	=	62.95	CU. FT.
1.00	X	0.42	X	36.95	=	15.40	CU. FT.
0.11	X	88.00	X	16.33	=	150.89	CU. FT.
-0.50	X	1.25	X	36.95	=	-23.09	CU. FT.
-0.50	X	1.25	X	36.95	=	-23.09	CU. FT.
-2.00	X	3.00	X	5.42	=	-32.52	CU. FT.
-2.00	X	3.00	X	5.42	=	-32.52	CU. FT.
						<u>4634.23</u>	
							/27= 171.64
						<u>TOTAL</u>	<u>172 CU.YD.</u>

ITEM 511E33500 SEMI-INTEGRAL DIAPHRAGM GUIDE (EACH)

RA	1.00	=	1.00	EACH
FA	1.00	=	<u>1.00</u>	EACH
			2.00	
			<u>TOTAL</u>	<u>2 EACH</u>



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

RA	1.38	X	36.95	+	5.60	X	12.92	=	123.34	SQ. FT.
	3.69	X	26.33	+	2.50	X	20.70	=	148.91	SQ. FT.
	3.00	X	7.53	+	3.50	X	9.28	=	55.07	SQ. FT.
	3.00	X	5.28	+	4.64	X	36.95	=	187.29	
	-4.00	X	6.43					=	-25.72	
									488.89	/9= 54.32 SQ.YD.
FA	3.43	X	36.95	+	5.53	X	15.68	=	213.42	SQ. FT.
	3.50	X	12.77	+	3.00	X	5.12	=	60.06	SQ. FT.
	2.50	X	15.65	+	4.05	X	15.17	=	100.55	SQ. FT.
	3.00	X	7.70	+	7.34	X	8.56	=	85.93	SQ. FT.
									459.96	/9= 51.11 SQ.YD.
Sup	0.46	+	3.33	+	0.46	+	1.30	+	0.24	
	+ 1.38	+	0.35	+	2.67	+	1.50	=	11.68	
	2	X	87.12	X	11.68	=	2035.52	SQ.FT.	/9=	226.17 SQ.YD.
										<hr/> 331.60 SQ. YD.
									TOTAL	332 SQ.YD.

ITEM 512E33000 TYPE 2 WATERPROOFING (SY)

RA	76.33	X	3.00	+	59.47	X	8.37	=	726.75	SQ. FT.
	-8.50	X	1.87	+	17.46	X	8.47	=	131.99	SQ. FT.
				+	17.45	X	2.66	=	46.42	SQ. FT.
									905.16	/9= 100.57 SQ.YD.
FA	74.41	X	3.00	+	13.14	X	62.39	=	1043.03	SQ. FT.
	-11.66	X	4.45	+	12.63	X	12.53	=	106.43	SQ. FT.
	-14.15	X	0.50	X	3.96			=	-28.02	SQ. FT.
									1121.44	/9= 124.60 SQ.YD.
										<hr/> 225.18 SQ. YD.
									TOTAL	225 SQ.YD.



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ITEM 515E15080 DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE WF42-49 (EACH)

1 X 4 = 4 EACH

TOTAL 4 EACH

ITEM 515E20000 INTERMEDIATE DIAPHRAGMS (EACH)

3 X 3 = 9 EACH

TOTAL 9 EACH

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

RA	5.60	X	3.46	+	5.43	X	3.46	=		
	2.00	X	6.25	+	2.00	X	6.25	=	38.16	SQ. FT.
	3.00	X	5.42					=	25.00	
FA	5.45	X	3.46	+	5.62	X	3.46	=	16.25	
	2.00	X	6.25	+	2.00	X	6.25	=	38.30	SQ. FT.
	3.00	X	5.42					=	25.00	
									<u>16.25</u>	
									158.97	

TOTAL 159 SQ. FT.

ITEM 516E14020 SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL (FT)

RA	43.75	+	6.63	+	6.41	=		
FA	43.79	+	6.50	+	6.63	=	56.79	FT.
							<u>56.92</u>	FT.
							113.70	

TOTAL 114.00 FT.



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ITEM 516E44101 ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (EACH)

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

TOTAL 8 EACH

ITEM 517E70000 RAILING (TWIN STEEL TUBE) (FT)

90.63	+	4.9167	=	95.55	
90.89	+	4.9167	=	<u>95.80</u>	FT
				191.35	FT
					FT

TOTAL 191.35 FT

ITEM 518E21200 POROUS BACKFILL WITH GEOTEXTILE FABRIC (CY)

RA	1.8	X	3.00	X	48.09	=	252.47	
RA	2.0	X	7.36	X	48.09	=	707.88	CU. FT.
RA	2.0	X	8.27	X	9.12	=	150.75	CU. FT.
RA	-0.3	X	3.00	X	9.12	=	-6.84	CU. FT.
RA	1.0	X	3.00	X	20.23	=	60.69	CU. FT.
RA	3.0	X	4.44	X	19.56	=	<u>260.54</u>	CU. FT.
							1425.50	CU. FT.
FA	1.8	X	3.00	X	59.97	=	314.84	CU. FT. /27 52.80 CU. YD.
FA	2.0	X	9.36	X	48.06	=	899.68	CU. FT.
FA	1.0	X	3.00	X	14.26	=	42.78	CU. FT.
FA	2.0	X	9.83	X	14.26	=	280.21	CU. FT.
FA	2.0	X	6.14	X	11.91	=	<u>146.25</u>	CU. FT.
							1683.77	CU. FT.
								CU. FT. /27 62.36 CU. YD.
								<u>115.16 CU. YD.</u>

TOTAL 115 CU. YD.



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ITEM 518E22300 SPECIAL - STEEL DRIP STRIP (FT)

[(2 X 87.42)+(28 X 1.5)]=
216.85 FT.

TOTAL 217 FT

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

RA 77.35 FT.
FA 75.44 FT.
152.79 FT.

TOTAL 153 FT

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

RA 33.33 FT. FT.
FA 36.00 FT. FT.
69.33 FT. FT.

TOTAL 69 FT

ITEM 526E25000 REINFORCED CONCRETE APPROACH SLABS (T=15") (SY)

2 X 32.00 X 25.00 = 1600.00
SQ. FT. /9= 177.78 SQ. YD.

TOTAL 178 SQ.YD.

ITEM 526E90010 TYPE A INSTALLATION (FT)

2.00 X 36.95 = 73.90
FT.

TOTAL 74 FT.