



Project: BRO-763-1.51
 Bridge: BRO-763-0151

Date: 7/16/21
 By: RG
 Checked: CCJ
 Date: 9/30/21

QUANTITY COMPUTATIONS

DESCRIPTION: STRUCTURE REMOVED

ITEM NO. 202E11000
 QUANTITY 1
 UNIT LUMP

Pipe Removal

Width (ft)	Length (ft)	#	Area (SF)
15.00	35	1	525.0

Total= 525.0 SF

assume \$15.00 SF Total= \$7,875.00

Heedwall Removal

Width (ft)	Length (ft)	Top EL	Bot EL	Height	#	Volume
3	12			12	2	32.00 CY

Length (ft)	Height (ft)	Width (ft)	#	Volume
			4	0.00 CY
Abutments Total =				32.00 CY
assume	\$175	CY	Cost=	\$5,600.00

Pier Concrete Removal	Width (ft)	Length (ft)	Height	#	Volume
	0	3	3.5	12	0.00 CY
assume	\$250	CY	Cost=	\$0.00	

Total Cost = \$13,475.00

Say = \$15,000



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QUANTITY COMPUTATIONS

DESCRIPTION: COFFERDAMS AND EXCAVATION BRACING

ITEM NO. 503E11100
QUANTITY 1
UNIT LUMP

Say = \$10,000



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QUANTITY COMPUTATIONS

DESCRIPTION: UNCLASSIFIED EXCAVATION

ITEM NO. 503E21300
QUANTITY 322
UNIT LUMP

	Area (SF)	Top EL.	Bot EL.	Height (Ft)	#	Vol (CY)
Rear Footing	482			8	1	150.0
forward Footing	535			9	1	172.4

Total= 322.3 CY

Grand Total= 322 CY



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QUANTITY COMPUTATIONS

DESCRIPTION: ROCK EXCAVATION

ITEM NO. 503E22200
QUANTITY 263
UNIT LUMP

	Area (SF)	Top EL.	Bot EL.	Height (Ft)	#	Vol (CY)
Rear Footing	482			7	1	117.8
forward Footing	535			7	1	144.6

Total= 262.5 CY

Grand Total= 263 CY



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QUANTITY COMPUTATIONS

DESCRIPTION: EPOXY COATED REINFORCING STEEL

ITEM NO. 509E10000
QUANTITY 11853
UNIT LB

EPOXY COATED REINFORCING STEEL

	Total (LB)	
FOOTINGS	5893	
Wingwall	5200	
Headwalls	760	
Total=	11853	LB



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QUANTITY COMPUTATIONS

DESCRIPTION: CLASS QC1 CONCRETE, WINGWALL ABOVE FOOTING

ITEM NO. 511E46010
 QUANTITY 37
 UNIT CY

WINGWALL CONCRETE

Inlet

	Top EL.	Bot EL.	Ht (ft.)	Width (ft)	Len (ft)	#	Total (CY)
Wingwall 1	696.25	683	13.25	1.25	3.83	1	2.35
Wingwall 1	694.625	683	11.625	1.25	15.833	1	8.52
Wingwall 3	696.75	683	13.75	1.25	11.4167	1	7.27
Wingwall 3	695.925	683	12.925	1.25	10	1	5.98
Inlet Total=							24.12

Outlet

	Top EL.	Bot EL.	Ht (ft.)	Width (ft)	Len (ft)	#	Total (CY) (SY)
Wingwall 2	695.5	683	12.5	1.25	3.833	1	2.22
Wingwall 2	694.75	683	11.75	1.25	6.25	1	3.40
Wingwall 4	695.5	683	12.5	1.25	10.833	1	6.27
Outlet Total=							11.89

Grand Total= 36.01
say= 37.00



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QUANTITY COMPUTATIONS

DESCRIPTION: CLASS QC1 CONCRETE, FOOTING

ITEM NO. 511E46510
QUANTITY 81
UNIT CY

HEADWALL FOOTING

	Area (SF)	Ht (Ft)			
Rear Footing	337	3	1	37.44	CY
Forward Footing	385	3	1	42.78	CY

Total= 80.22 CY
Grand Total= 80.22
say= 81.00 CY



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QUANTITY COMPUTATIONS

DESCRIPTION: CLASS QC1 CONCRETE, HEADWALL	ITEM NO. 511E46610
	QUANTITY 3
	UNIT CY

WINGWALL CONCRETE

Inlet

	Top EL.	Bot EL.	Ht (ft.)	Width (ft)	Len (ft)	#	Total (CY)	Total (SY)
Headwall			2.25	1.25	17.32	1	1.80	
Inlet Total=							1.80	

Outlet

	Top EL.	Bot EL.	Ht (ft.)	Width (ft)	Len (ft)	#	Total (CY)
Headwall			1.5	1.25	17.32	1	1.20
Outlet Total=							1.20

Grand Total= 3.0
say= 3.00



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QUANTITY COMPUTATIONS

DESCRIPTION: SEALING OF CONCRETE SURFACES (EPOXY URETHANE)	ITEM NO.	512E10100
	QUANTITY	114
	UNIT	SY

**Sealing
Inlet**

	Behind HW (ft)	Top (ft)		Front (ft)	Total Ht (ft)	Len (ft)	#	Total (SY)
Headwall	0	1.25		2.25	3.5	17.32	1	6.74
Inside culvert					4.0	35	1	15.56
								22.29

	Behind WW (ft)	Top (ft)	Top EL.	Bot EL.	Front (ft)	Total Ht (ft)	Len (ft)	#	Total (SY)
Wingwall 1	0.5	1.25	696.25	686	10.25	12.0	3.83	1	5.11
Wingwall 1	0.5	1.25	694.625	689.25	5.38	7.1	17.083	1	13.52
Wingwall 3	0.5	1.25	696.75	686	10.75	12.5	8.79	1	12.21
Wingwall 3	0.5	1.25	696.75	687.15	9.60	11.4	3.87	1	4.88
Wingwall 3	0.5	1.25	695.925	691.45	4.47	6.2	11.25	1	7.78
									43.50
									Inlet Total= 65.79

Outlet

	Behind HW (ft)	Top (ft)		Front (ft)	Total Ht (ft)	Len (ft)	#	Total (SY)
Headwall	0	1.25		1.5	2.8	17.32	1	5.29
Inside Box					4.0	35	1	15.56
								20.85

	Behind HW (ft)	Top (ft)	Top EL.	Bot EL.	Front (ft)	Total Ht (ft)	Len (ft)	#	Total (SY)
Wingwall 2	0.5	1.25	695.5	685.5	10.00	11.8	3.833	1	5.00
Wingwall 2	0.5	1.25	694.75	685.5	9.25	11.0	6.25	1	7.64
Wingwall 4	0.5	1.25	695.5	685.5	10.00	11.8	10.833	1	14.14
									26.79

Outlet Total= 47.63
 Grand Total= 113.43
say= 114.00



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QUANTITY COMPUTATIONS

DESCRIPTION: TYPE 2 WATERPROOFING

ITEM NO. 512E33000

QUANTITY 90

UNIT SY

Waterproofing

	Total Ht (ft)	Len (ft)	#	Total (SY)
Culvert Sides	11.25	35.8	2	89.50

Total= 89.50

say= 90.00



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QUANTITY COMPUTATIONS

DESCRIPTION: TYPE 3 WATERPROOFING

ITEM NO. 512E33010

QUANTITY 63

UNIT SY

Waterproofing

	Total Ht (ft)	Len (ft)	#	Total (SY)
Culvert Top	15.00	32.91	1	54.85
Behind Headwall-inlet	2.25	17.34	1	4.34
Behind Headwall-outlet	1.50	17.34	1	2.89

Total= 62.08

say= 63.00



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QUANTITY COMPUTATIONS

DESCRIPTION: 1" PREFORMED EXPANSION JOINT FILLER	ITEM NO.	516E13600
	QUANTITY	64
	UNIT	SF

1" PEJF at wingwall culvert interfaces

	Top EL.	Bottom El.	Length (ft)	Height (ft)	Width (ft)	#	Total (SF)
Inlet	696.25	683		13.25	1.25	2	33.1
Outlet	695.5	683		12.5	1.25	2	31.25
						Total=	64.4
						say=	65

SF



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QUANTITY COMPUTATIONS

DESCRIPTION: POROUS BACKFILL WITH FILTER FABRIC

ITEM NO. 518E21200
 QUANTITY 31
 UNIT CY

Backfill extends from 12" below embankment to 12" below weepholes

	Top EL.	Bot EL.	Area (SF)	Width (ft)	#	Vol (CY)	
Wingwall 1			145	2	1	10.7	
Wingwall 2			85	2	1	6.3	
Wingwall 3			104	2	1	7.7	
Wingwall 4			88	2	1	6.5	
					Total=	31.3	CY
					Say =	31	CY



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QUANTITY COMPUTATIONS

DESCRIPTION: CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE
THREE SIDED FLAT TOPPED CULVERT (15'-0" SPAN x 10'-0" RISE)

ITEM NO. 611E70000
QUANTITY 38

UNIT FT

Length= 38 FT