STRUCTURE ESTIMATED QUANTITIES

CAST-IN-PLACE WALL 4W7

I-70 MEDIAN FROM FRA-70-1373R TO FRA-70-1390C

FRA-70/71-12.68/14.86
PID No. 105523

Franklin County, Ohio

Prepared For:

The Ohio Department of Transportation
District 6

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May 31, 2019
REVISED September 6, 2019

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Job CIP WALL 4W7
Sheet No. 1 of 4
Calculated by MOJ Date 8-2-19
Checked by TJW Date 8-5-19

ESTIMATED QUANTITIES

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING

EXT. 11100

LUMP SUM

ITEM 503 - UNCLASSIFIED EXCAVATION

EXT. 21100

SEGMENT 1:	(93' L)	(17' W)	(4.5' D, AVG.)	=	7,115 CF
SEGMENT 2:	(91' L)	(17' W)	(4.8' D, AVG.)	=	7,426 CF
SEGMENT 3:	(87.5' L)	(17' W)	(4.8' D, AVG.)	=	7,140 CF
SEGMENT 4:	(90' L)	(14' W)	(4.8' D, AVG.)	=	6,048 CF
SEGMENT 5:	(55.5' L)	(13' W)	(4.2' D, AVG.)	=	3,030 CF
					30,759 CF

30,759 CF / 27 = 1,140 CY (502, 638)

ITEM 509 - EPOXY COATED REINFORCING STEEL

EXT. 10000

138,307 LBS (60,855 , 77,452)

Client:	ODOT D 6	Job No.:	2012048		
PID No.:	105523	Sheet No:	2	Of	4
Subject:	C.I.P. Wall 4W7 Estimated Quantities	Made By:	MOJ	Date:	8/2/2019
		Chk'd By:	TJW	Date:	8/5/2019

SEGMENT	LOCATION	DIMENSIONS				CONCRETE VOLUME			SEALING AREA	
		HEIGHT (FT)	WIDTH (FT)	LENGTH (FT)		Area (SF)	VOLUME (CF)		PERIMETER (FT)	AREA (SF)
TRANSITION A WB EXTENSION	1 - WB PARAPET	4.75	2.33 avg.	4.85		11.07	53.68		11.46 avg.	55.58
	2 - UPPER WALL	10.85 avg.	2.78 avg.	4.85		30.16	146.29		-	52.62
	3 - EB PARAPET	-	-	-		-	-		-	-
	4 - LOWER WALL	15.57 avg.	2.78 avg.	4.85		43.28	209.93		-	-
	5 - KEY	-	-	-		-	-		-	-
						SUBTOTAL	**409.90**		**SUBTOTAL**	**108.20**
TRANSITION A	1 - WB PARAPET	4.75	1.79 avg.	49.40		8.50	420.02		10.92 avg.	539.45
	2 - UPPER WALL	11.08 avg.	2.25 avg.	49.40		24.93	1,231.54		-	374.45
	3 - EB PARAPET	3.50	2.51 avg.	49.40		8.79	433.98		5.74 avg.	283.56
	4 - LOWER WALL	14.84 avg.	5.08 avg.	49.40		75.39	3,724.13		-	-
	5 - KEY	0.25	2.24 avg.	49.40		0.56	27.66		-	-
						SUBTOTAL	**5,837.34**		**SUBTOTAL**	**1,197.46**
1	1 - WB PARAPET	4.75	1.30 avg.	35.24		6.16	217.09		10.43	367.55
	2 - UPPER WALL	11.27 avg.	1.75	35.24		19.72	695.02		-	273.81
	3 - EB PARAPET	3.50	2.18 avg.	35.24		7.63	268.88		5.41	190.65
	4 - LOWER WALL	14.09 avg.	4.26	35.24		60.02	2,115.22		-	-
	5 - KEY	0.25	1.75	35.24		0.44	15.42		-	-
						SUBTOTAL	**3,311.63**		**SUBTOTAL**	**832.02**
2	1 - WB PARAPET	4.75	1.30 avg.	90.00		6.16	554.42		10.43	938.70
	2 - UPPER WALL	11.10 avg.	1.75	90.00		19.43	1,748.25		-	684.00
	3 - EB PARAPET	3.50	2.18 avg.	90.00		7.63	686.70		5.41	486.90
	4 - LOWER WALL	11.89 avg.	4.26	90.00		50.65	4,558.63		-	-
	5 - KEY	0.25	1.75	90.00		0.44	39.38		-	-
						SUBTOTAL	**7,587.37**		**SUBTOTAL**	**2,109.60**
3	1 - WB PARAPET	4.75	1.30 avg.	90.00		6.16	554.42		10.43	938.70
	2 - UPPER WALL	10.41 avg.	1.75	90.00		18.22	1,639.58		-	621.90
	3 - EB PARAPET	3.50	2.18 avg.	90.00		7.63	686.70		5.41	486.90
	4 - LOWER WALL	8.78 avg.	4.26	90.00		37.40	3,366.25		-	-
	5 - KEY	0.25	1.75	90.00		0.44	39.38		-	-
						SUBTOTAL	**6,286.32**		**SUBTOTAL**	**2,047.50**
4	1 - WB PARAPET	4.75	1.30 avg.	90.00		6.16	554.42		10.43	938.70
	2 - UPPER WALL	9.23 avg.	1.75	90.00		16.15	1,453.73		-	515.70
	3 - EB PARAPET	3.50	2.18 avg.	90.00		7.63	686.70		5.41	486.90
	4 - LOWER WALL	5.41 avg.	4.26	90.00		23.05	2,074.19		-	-
	5 - KEY	0.25	1.75	90.00		0.44	39.38		-	-
						SUBTOTAL	**4,808.41**		**SUBTOTAL**	**1,941.30**
5	1 - WB PARAPET	4.75	1.30 avg.	15.54		6.16	95.73		10.43	162.08
	2 - UPPER WALL	8.44 avg.	1.75	15.54		14.77	229.53		-	76.77
	3 - EB PARAPET	3.50	2.18 avg.	15.54		7.63	118.57		5.41	84.07
	4 - LOWER WALL	2.61 avg.	4.26	15.54		11.12	172.78		-	-
	5 - KEY	0.25	1.75	15.54		0.44	6.80		-	-
						SUBTOTAL	**623.41**		**SUBTOTAL**	**322.92**
TRANSITION B	1 - WB PARAPET	4.75	2.03 avg.	40.00		9.64	385.70		11.17 avg.	446.80
	2 - UPPER WALL	7.98 avg.	2.49 avg.	40.00		19.87	794.81		-	179.20
	3 - EB PARAPET	3.50	2.43 avg.	40.00		8.51	340.20		5.66 avg.	226.40
	4 - LOWER WALL	2.27 avg.	5.25 avg.	40.00		11.92	476.70		-	-
	5 - KEY	0.25	2.49 avg.	40.00		0.62	24.90		-	-
						SUBTOTAL	**2,022.31**		**SUBTOTAL**	**852.40**
						TOTAL	**30,886.68**		**TOTAL**	**9,411.40**

ITEM 511 - CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING
EXT. 46012

Wall segments from above = 30,886.68 CF
Light Pole Pilasters = 142.07 CF
1150 CY (522, 665)

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
EXT. 10100

9411.4 SF/9 = 1046 SY (461, 587)

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Job: CIP WALL 4W7
Sheet No. 3 of 4
Calculated by: MOJ Date: 8-2-19
Checked by: TJW Date: 8-5-19

ITEM 511- CLASS QC 1 CONCRETE WITH QC/QA, FOOTING

EXT. 46512

SEGMENT 1-3:	(3)(90.0') [(15')(2.5') + (0.25')(5.92')]	=	10,525	CF
SEGMENT 4:	(90.0') [(12')(2.5') + (0.25')(4.92')]	=	2,811	CF
SEGMENT 5:	(55.54') [(11')(2.5') + (0.25')(4.42')]	=	1,589	CF
TRANSITIONS:	(½)(2.5' + 1.25')(1.25')(15')	=	35	CF
	(½)(3.5' + 1.75')(1.75')(15')	=	69	CF
	(½)(4' + 2')(2')(12')	=	72	CF
	(½)(4' + 2')(2')(11')	=	66	CF
			15,167	CF

15,167 CF / 27 = **562 CY** (247, 315)

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Job CIP WALL 4W7
Sheet No. 4 of 4
Calculated by MOJ Date 8-2-19
Checked by TJW Date 8-5-19

ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER

EXT. 13600

#1: $[744.32-(727.75+2.5)](4.26') + [(3.5')(4.26') - (1/2)(0.67')(3.5')]$
$+ [755.59-(744.32+3.5)](1.75') + [(1.75')(4.75') - (1/2)(0.91')(4.75')]$ = 93.4 SF

#2: $[742.96-(729.00+2.5)](4.26') + [(3.5')(4.26') - (1/2)(0.67')(3.5')]$
$+ [753.88-(742.96+3.5)](1.75') + [(1.75')(4.75') - (1/2)(0.91')(4.75')]$ = 81.7 SF

#3: $[741.59-(730.75+2.5)](4.26') + [(3.5')(4.26') - (1/2)(0.67')(3.5')]$
$+ [751.49-(741.59+3.5)](1.75') + [(1.75')(4.75') - (1/2)(0.91')(4.75')]$ = 66.6 SF

#4: $[740.23-(732.75+2.5)](4.26') + [(3.5')(4.26') - (1/2)(0.67')(3.5')]$
$+ [748.78-(740.23+3.5)](1.75') + [(1.75')(4.75') - (1/2)(0.91')(4.75')]$ = 49.9 SF

291.6 SF

USE 292 SF (128, 164)

ITEM 516 - 2" PREFORMED EXPANSION JOINT FILLER

EXT. 13900

$[(739.53+3.5)-(734.75+2.5)](6.24') - (1/2)(0.67')(3.5')$
$+ [751.90-(739.53+3.5)](3.23) - (1/2)(0.91')(4.75')$ = 61.4 SF ⇒ USE 61 SF

(27, 34)