

MSE Wall G Quantities

ESTIMATED QUANTITIES					CALC BY:	CBY	6/3/2023
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
203	20000	608	CY	EMBANKMENT			
203	35110	1,384	CY	GRANULAR MATERIAL, TYPE B			
SPECIAL	20365000	4	EACH	SPECIAL - SETTLEMENT PLATFORM			
503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN			
512	10101	296	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN			
516	13600	225	SF	1" PREFORMED EXPANSION JOINT FILLER			
601	21000	33	SY	CONCRETE SLOPE PROTECTION			
SPECIAL	69098400	LUMP		SPECIAL - TEMPORARY SURCHARGE			
840	20001	3,398	SF	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN			
840	21000	1,043	CY	WALL EXCAVATION			
840	22000	696	SY	FOUNDATION PREPARATION			
840	23000	2,412	CY	SELECT GRANULAR BACKFILL			
840	23050	35	CY	NATURAL SOIL			
840	25010	575	FT	6" DRAINAGE PIPE, PERFORATED			
840	25020	11	FT	6" DRAINAGE PIPE, NON-PERFORATED			
840	26000	278	FT	CONCRETE COPING			
840	26050	2,841	SF	AESTHETIC SURFACE TREATMENT			
840	27000	1	DAY	ON-SITE ASSISTANCE			
867	00100	LUMP		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL G1)			
867	00100	LUMP		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL G2)			

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
203	20000	608	CY	EMBANKMENT			
	FA	19.75	ft	soil reinforcement length			
		1.50	ft	MSE wall to footing toe			
		7.00	ft	abutment footing width			
		8.50	ft	limit width			
		528.75	ft	bottom of footing elev			
		521.00	ft	estimated top of ex. ground			
		1.00	ft	distance from bottom of footing to top of limits			
		8.75	ft	height			
		220.49	ft	abutment length			
		16398.91	cf	total WALL G			
		608.00	cy	total WALL G			

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
203	35110	1384	CY	GRANULAR MATERIAL, TYPE B			
		528.75	ft	bottom of footing elev			
		2.00	ft	bottom of footing to bottom of limits			
		540.07	ft	elevation on top of approach slab (ave)			
		17.00	in	approach slab depth			
		7.90	ft	fill height			
		17.75	ft	soil reinforcement length			
		2.00	ft	length from end of soil reinforcement to limits			
		19.75	ft	fill width			
		2.25	ft	footing heel width			
		3.00	ft	abutment height			
		6.90	ft	height over heel			
		2.25	ft	footing heel width			
		2.31	ft	depth of approach slab at RF of abutment			
triangular		0.90	ft	depth of approach slab at RF of abutment- approach slab depth			
approach slab		1.79	ft	2:1 slope for width			
subtract		176.95	cf				
		220.49	ft	abutment length			
		37646.02	cf	total			
right wingwa		2.77	ft	height - approach slab height			
triangular		10.65	ft	length			
subtract		20.00	ft	width			
		295.24	cf	total			
		37350.78	cf	total WALL G			
		1384.00	cy	total WALL G			

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512	10101	296	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN			
	coping	278.00	ft	total length (from coping calc)			
		10.00	in	coping top			
		24.00	in	coping side			
		3.50	in	coping bottom max with 1" relief			
		3.13	ft	coping perimeter			
		868.75	sf	total coping			
	panel	1792.84	sf	area from profile			
		2662	sf	WALL G subtotal			
		296	sy	WALL G subtotal			
516	13600	225	SF	1" PREFORMED EXPANSION JOINT FILLER			
		0.5	ft	height			
		224.60	ft	length			
		2.00	ea	sides of slope protection			
		225	sf	subtotal			

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
601	21000	33	SY	CONCRETE SLOPE PROTECTION			
		1.33	ft	width			
		209.63	ft	length (measured in plan view)			
		280	sf	subtotal			
		31	sy	subtotal			
		1.33	ft	width minus 1" PEJF in front of wingwalls			
		14.98	ft	length (measured in plan view)			
		20	sf	subtotal			
		2	sy	subtotal			
		33	sy	TOTAL			

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
840	20001	3398	SF	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN			
	Section 1	9.83	ft	length			
		8.08	ft	min height			
		12.60	ft	max height			
		101.68	sf	subtotal			
	Section 2	15.17	ft	length			
		12.60	ft	height			
		192	sf	subtotal			
	Section 3	236.31	ft	length			
		12.60	ft	height			
		2978	sf	subtotal			
	Section 4	13.72	ft	length			
		5.74	ft	min height			
		12.60	ft	max height			
		125.80	sf	subtotal			
		3398.00	sf	WALL G subtotal			
840	21000	1043	CY	WALL EXCAVATION			
	FA	275.03	ft	length			
		22.75	ft	width			
		521.00	ft	estimated elevtion of existing ground			
		516.50	ft	top of leveling pad elevation - 6 inch pad - 1 ft			
		4.50	ft	assumed average height			
		28156.32	cf	total			
		1043.00	cy	total			
840	22000	696	SY	FOUNDATION PREPARATION			
	FA	275.03	ft	length			
		22.75	ft	depth			
		6256.96	sf	subtotal			
		696	sy	TOTAL WALL G			

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
840	23000	2412	CY	SELECT GRANULAR BACKFILL			
	under	17.75	ft	soil reinforcement length			
	footing	2.00	ft	length from end of soil reinforcement to limits			
		19.75	ft	limit length			
		528.75	ft	bottom of footing elevation			
		517.50	ft	bottom of leveling pad elevation			
		11.25	ft	height under footing			
		222.19	sf	total under footing			
		2.00	ft	height behind footing			
		3.50	ft	width behind footing			
		7.00	sf	area behind footing			
		16.25	ft	length around anchored footing strap			
		1.00	ft	height around anchored footing strap			
		16.25	sf	area around anchored footing strap			
		10.00	in	leveling pad heel width			
		6.00	in	leveling pad height			
		0.42	sf	subtract for leveling pad heel			
		246.00	sf	cross sectional area			
		226.25	ft	length of footing			
		55657.50	cf	total			

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
840	23000	2412	CY	SELECT GRANULAR BACKFILL (CONT.)			
	left side	19.75	ft	limit width			
		9.83	ft	length			
		7.08	ft	min height minus 12" natural soil			
		11.60	ft	max height minus 12" natural soil			
		1813.91	cf	total			
		17.52	ft	length			
		11.60	ft	height minus 12" natural soil			
		19.75	ft	width			
		4013.83	cf	total			
		5827.74	cf	left side total			
	right side	19.75	ft	limit width			
		13.72	ft	length			
		4.74	ft	min height minus 12" natural soil			
		11.60	ft	max height minus 12" natural soil			
		2213.62	cf	total			
		6.22	ft	length			
		11.60	ft	height minus 12" natural soil			
		19.75	ft	width			
		1425.00	cf	total			
		3638.63	cf	right side total			
		65123.86	cf	total WALL G			
		2412.00	cy	total WALL G			

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
840	23050	35	CY	NATURAL SOIL			
	left	1.00	ft	1' min			
		12.58	ft	length from select granular backfill			
		18.03	ft	length from select granular backfill			
		19.75	ft	width of soil reinforcement + 2 ft			
		604.64	cf				
	right	1.00	ft	1' min			
		16.72	ft	length from select granular backfill			
		19.75	ft	width of soil reinforcement + 2 ft			
		330.20	cf				
		935	cf				
		35	CY	TOTAL			

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
840	25010	575	FT	6" DRAINAGE PIPE, PERFORATED			
		25.00	ft	front pipe behind MSE wall above leveling pad left side			
		250.03	ft	front pipe behind MSE wall above leveling pad			
		20.75	ft	back pipe behind MSE wall left side			
		245.50	ft	front pipe behind MSE wall middle to right			
		16.75	ft	left pipe connection (length of soil reinforcement minus 1 foot)			
		16.75	ft	right pipe connection (length of soil reinforcement minus 1 foot)			
		575	ft	total			
840	25020	11	FT	6" DRAINAGE PIPE, NON-PERFORATED			
		11	ft	length to outlet into existing catch in front of wall			
840	26000	278	FT	CONCRETE COPING			
		9.83	ft	left side angled length			
		4.62	ft	left side angled height			
		10.86	ft	left side angled total			
		15.17	ft	left side length to kink			
		236.31	ft	middle length			
		13.72	ft	right side height			
		6.96	ft	right side length			
		15.38	ft	total right side length			
		278.00	ft	total length			
840	26050	2841	SF	AESTHETIC SURFACE TREATMENT			
		2841	sf	measured in microstation (top of leveling pad to bottom of coping)			