

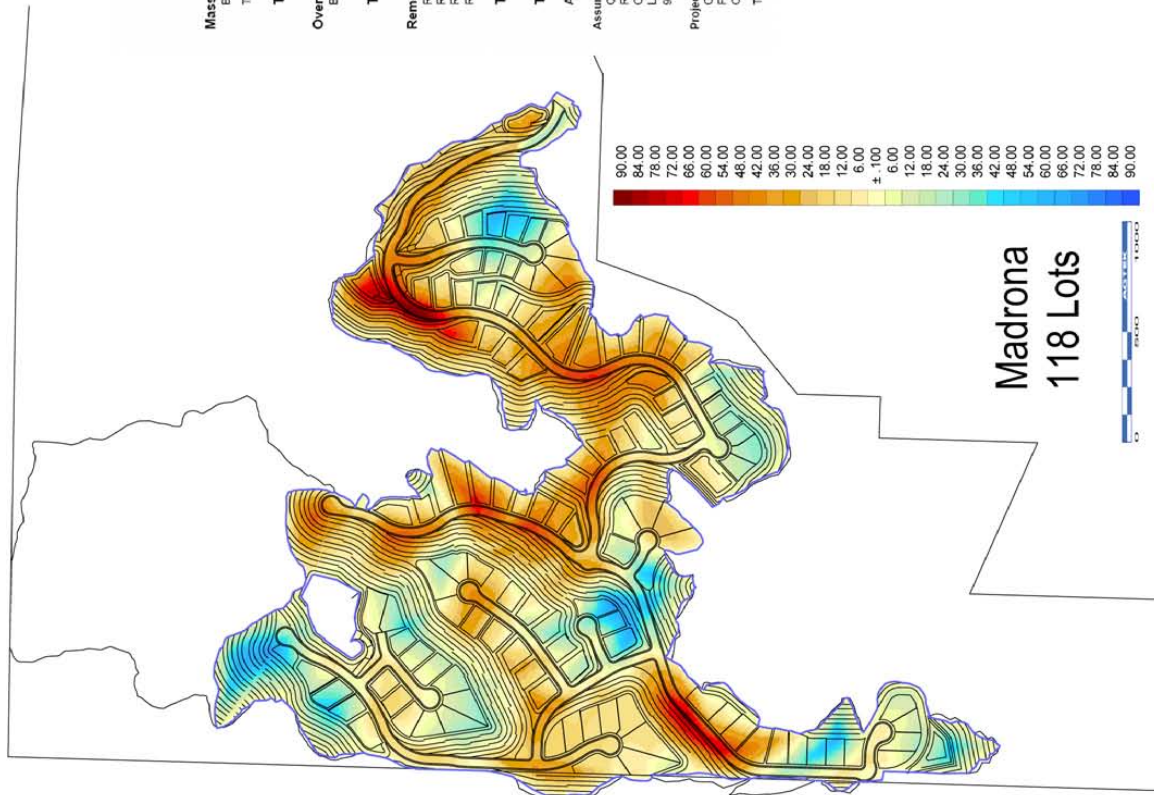
**Madrona  
Grading Quantities**

	Cut CY	<Shrink> Bulk %	<Shrink> Bulk CY	Adjusted CY	Fill CY Required	<Import> Export CY	% of Adjusted CY
<b>Mass Excavation</b>							
Berms	2,381,000	1.0%	23,800	2,404,800			
Total Excavation/Fill Required - Phase 1	2,381,000	1.0%	23,800	2,404,800	2,430,200	(25,400)	
<b>Total Mass Excavation</b>	<b>2,381,000</b>	<b>1.0%</b>	<b>23,800</b>	<b>2,404,800</b>	<b>2,430,200</b>	<b>(25,400)</b>	<b>1.1%</b>
<b>Removals</b>							
Removals	2,539,900	1.0%	25,400	2,565,300	2,539,900	25,400	
<b>Total Removals</b>	<b>2,539,900</b>	<b>1.0%</b>	<b>25,400</b>	<b>2,565,300</b>	<b>2,539,900</b>	<b>25,400</b>	<b>1.0%</b>
<b>Total Earthmoving</b>	<b>4,920,900</b>	<b>1.0%</b>	<b>49,200</b>	<b>4,970,100</b>	<b>4,970,100</b>	<b>0</b>	<b>0.0%</b>
Approximate Height (in Feet) to Adjust Site to Balance						0.0	

**Assumptions**  
 Quantities Based on Tract Map prepared by Fred Cornwell on 02.12.12  
 Remedial Recommendations per Ginter and Associates Report 12.16.11  
 Over-Ex Cut and Transition Pads 5 Feet  
 Landfill Removals, Bitness, and Fill Keys per Ginter Geologic Maps, Contours, and AutoCAD 05.08.12  
 93% Compaction of Fills > 40 Feet = 1,174,300 CY

	AC	SF
Project Area	68.31	2,975,400
Cut Area	62.09	2,704,500
Fill Area	0.58	25,200
On Grade Area	130.97	5,705,100
Total Area		

**Figure D-6.1 - Grading Analysis of Madrona 162 Lot Plan**  
 2013 Update of Final EIR 02-01  
 October 2013



**Madrona  
Grading Quantities**

	Cut CY	<Shrink> Bulk %	<Shrink> Bulk CY	Adjusted CY	Fill CY Required	<Import> Export CY	% of Adjusted CY
<b>Mass Excavation</b>							
Bedrock	2,372,300	1.0%	23,700	2,396,000			
Total Excavation/Fill Required - Phase 1	2,372,300	1.0%	23,700	2,396,000	1,055,840	1,337,160	
<b>Total Mass Excavation</b>	<b>2,372,300</b>	<b>1.0%</b>	<b>23,700</b>	<b>2,396,000</b>	<b>1,055,840</b>	<b>1,337,160</b>	<b>55.8%</b>
<b>Overexcavation</b>							
Bedrock	209,000	1.0%	2,100	211,100	209,000	2,100	
<b>Total Overexcavation</b>	<b>209,000</b>	<b>1.0%</b>	<b>2,100</b>	<b>211,100</b>	<b>209,000</b>	<b>2,100</b>	<b>1.0%</b>
<b>Removals</b>							
Removals - Buttress	721,800	1.0%	7,200	729,000	721,800	7,200	
Removals - Landslide	1,357,800	(8.0%)	(108,600)	1,249,200	1,357,800	(108,600)	
Removals - Fill Key	85,200	1.0%	900	86,100	85,200	900	
Removals - Alluvium/Colluvium	12,700	(8.0%)	(1,000)	11,700	12,700	(1,000)	
<b>Total Removals</b>	<b>2,177,500</b>	<b>(4.7%)</b>	<b>(101,500)</b>	<b>2,076,000</b>	<b>2,177,500</b>	<b>(101,500)</b>	<b>4.9%</b>
<b>Total Earthmoving</b>	<b>4,758,800</b>	<b>(1.6%)</b>	<b>(76,700)</b>	<b>4,683,100</b>	<b>3,445,340</b>	<b>1,237,760</b>	<b>28.4%</b>

Approximate Height (in Feet) to Adjust Site to Balance

Assumptions  
 Quantities Based on 44 LOT REDUCTION AREA Tract Map prepared by Fred Conwell on 07/29/13  
 93% Compaction of Fills > 40 Feet  
 Over Excavation/Fill Required - Phase 1  
 Over Excavation/Fill Required - Phase 2  
 Landslide Removals, Buttress, and Fill Keys per Glina Geologic Maps, Contours, and AutoCAD 05/08/12  
 93% Compaction of Fills > 40 Feet = 1,174,300 CY

Project Area	AC	SF
Cut Area	84.05	2,790,200
Fill Area	36.86	1,695,800
On Grade Area	0.47	20,400
<b>Total Area</b>	<b>121.38</b>	<b>4,516,400</b>

**Figure D-6.2 - Grading Analysis of 118 Lot Alternative**  
 2013 Update of Final EIR 02-01  
 October 2013