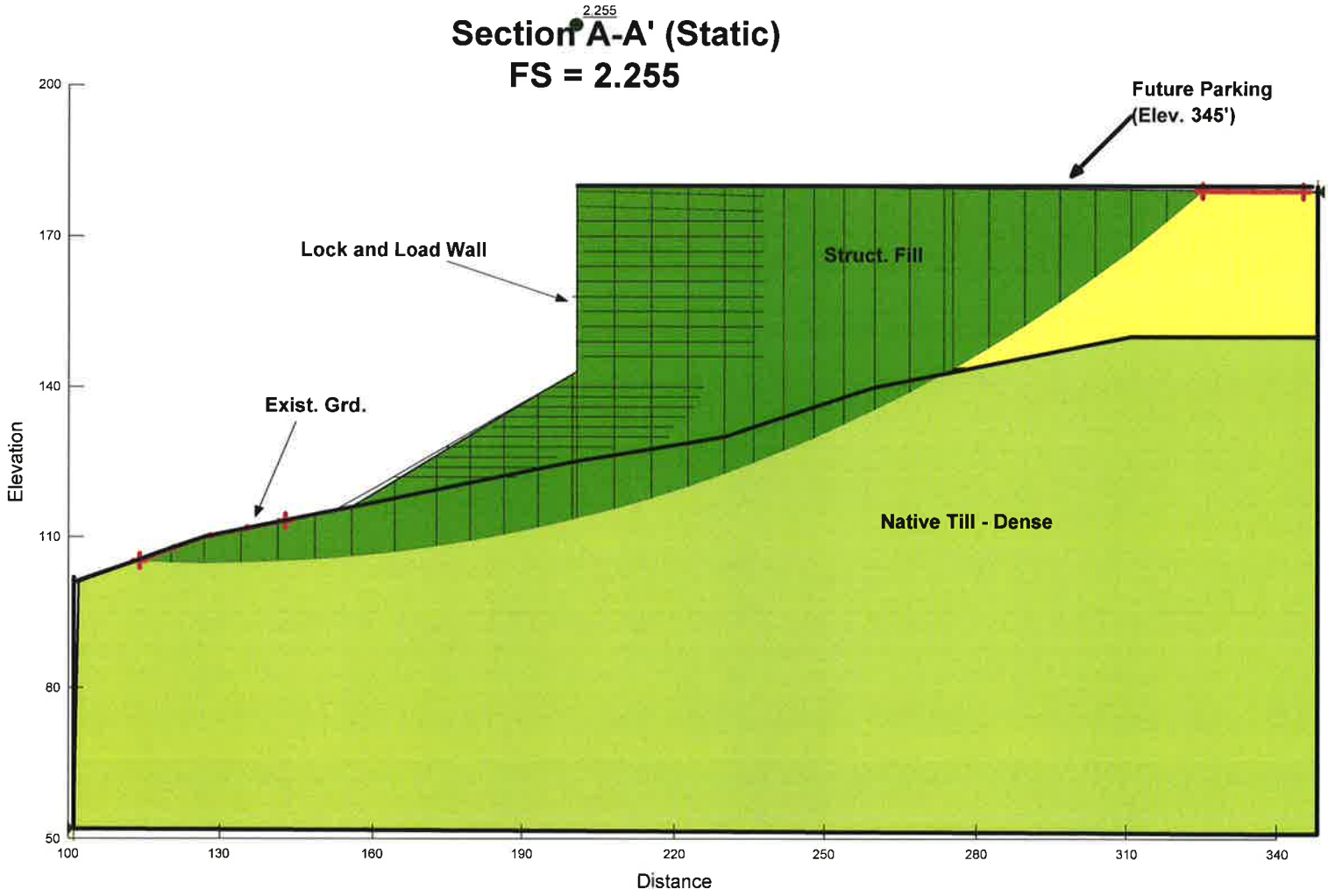
Section A-A' (Static)
FS = 2.255



Soundview A-A' – Static

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File Information

Created By: Ray Coglas
Revision Number: 62
Last Edited By: Ray Coglas
Date: 12/14/2016
Time: 9:44:22 AM
File Name: Soundview A-A' (Static).gsz
Directory: C:\Users\ray.coglas\Documents\SlopeW\
Last Solved Date: 12/14/2016
Last Solved Time: 9:44:47 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

Soundview A-A'

Description: Static At North Site Margin
Kind: SLOPE/W
Method: Morgenstern-Price
Settings
- **Side Function**
  - **Interslice force function option:** Half-Sine
- **PWP Conditions Source:** (none)

Slip Surface
- **Direction of movement:** Right to Left
- **Use Passive Mode:** No
- **Slip Surface Option:** Entry and Exit
- **Critical slip surfaces saved:** 1
- **Optimize Critical Slip Surface Location:** No
- **Tension Crack**
  - **Tension Crack Option:** (none)

FOS Distribution
- **FOS Calculation Option:** Constant

Advanced
- **Number of Slices:** 30
- **Optimization Tolerance:** 0.01
- **Minimum Slip Surface Depth:** 0.1 ft
- **Optimization Maximum Iterations:** 2000

Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

Structural Fill

Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion: 0 psf
Phi: 34 °
Phi-B: 0 °

Native Till

Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion: 250 psf
Phi: 38 °
Phi-B: 0 °

Slope Fill

Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion: 0 psf
Phi: 34 °
Phi-B: 0 °

Slip Surface Entry and Exit

Left Projection: Range
Left-Zone Left Coordinate: (114, 105.32) ft
Left-Zone Right Coordinate: (143, 113.28767) ft
Left-Zone Increment: 4
Right Projection: Range
Right-Zone Left Coordinate: (325.19833, 179.15511) ft
Right-Zone Right Coordinate: (345.19741, 179.01907) ft
Right-Zone Increment: 4
Radius Increments: 4

Slip Surface Limits

Left Coordinate: (101, 52) ft
Right Coordinate: (348, 179) ft

Seismic Loads

Horz Seismic Load: 0

Regions

	Material	Points	Area (ft²)
Region 1	Native Till	6,7,16,15,1,5,4,13,3,2,8,9	19396
Region 2	Structural Fill	10,11,12,2,3,13,14	4966.2
Region 3	Slope Fill	16,15,1,5,4,13,14,10	1120.7795

Points

	X (ft)	Y (ft)
Point 1	200	125
Point 2	348	150
Point 3	310	150
Point 4	260	140
Point 5	230	130
Point 6	102	101
Point 7	127	110
Point 8	348	51
Point 9	101	52
Point 10	201	143
Point 11	201	180
Point 12	348	179
Point 13	279	143.8
Point 14	248	143
Point 15	173	119.45205
Point 16	156	115.9589

Critical Slip Surfaces

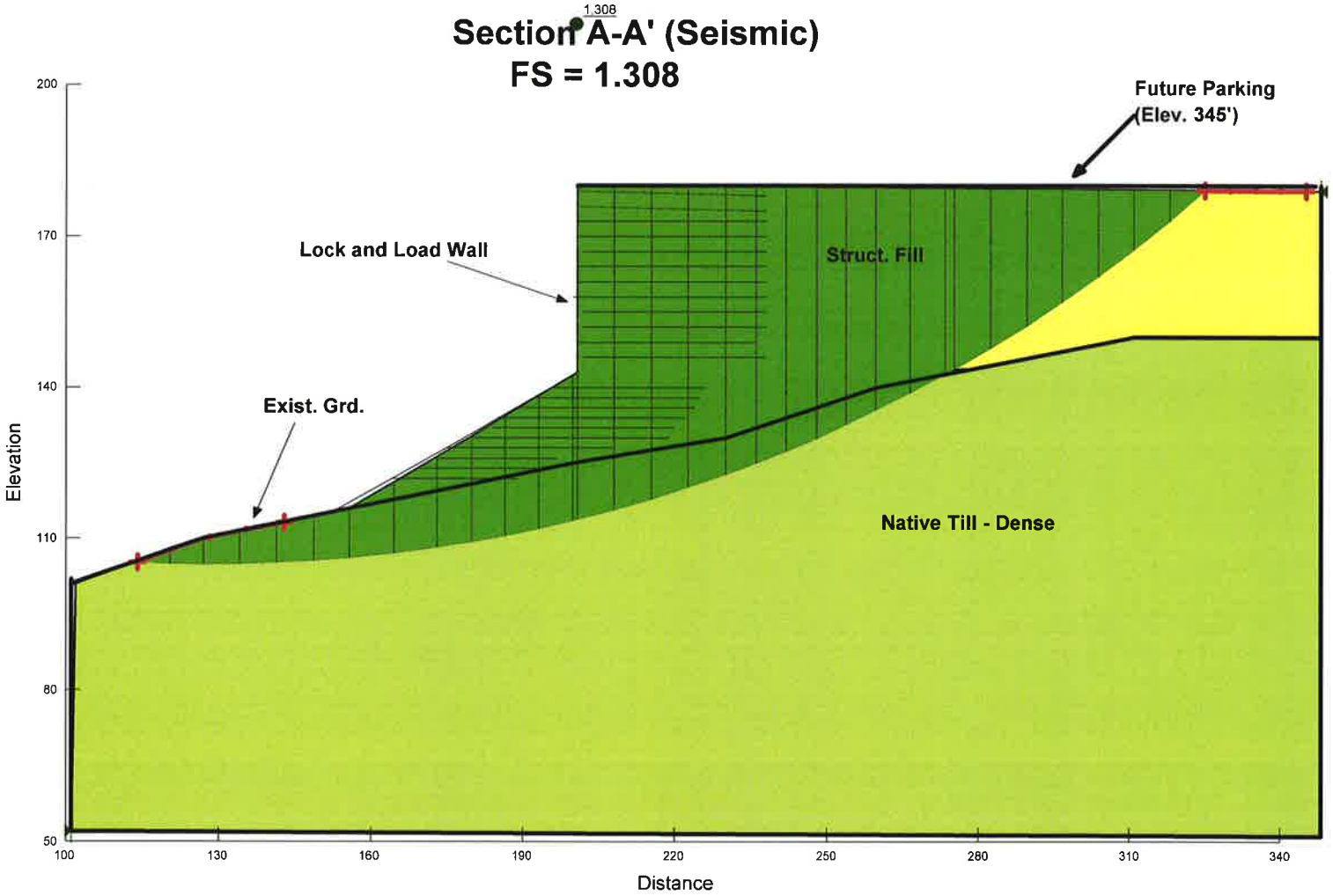
	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	2	2.255	(128.629, 402.448)	297.488	(325.198, 179.155)	(114, 105.32)

Slices of Slip Surface: 2

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	2	117.25	105.1956	0	175.90193	137.42965	250
2	2	123.75	105.01785	0	513.66931	401.32245	250
3	2	130.625	104.98885	0	785.37545	613.60255	250
4	2	137.875	105.1259	0	983.20743	768.16583	250
5	2	145.125	105.43995	0	1155.2817	902.60496	250
6	2	152.375	105.9316	0	1298.3536	1014.385	250
7	2	160.25	106.67625	0	1634.3337	1276.8814	250
8	2	168.75	107.70915	0	2149.4712	1679.3509	250
9	2	176.375	108.8365	0	2564.5356	2003.6348	250
10	2	183.125	110.01425	0	2889.3694	2257.4228	250
11	2	189.875	111.3533	0	3174.3528	2480.0762	250
12	2	196.625	112.85585	0	3419.5958	2671.681	250
13	2	200.5	113.77275	0	3545.7621	2770.2529	250
14	2	204.625	114.8551	0	7778.6584	6077.354	250
15	2	211.875	116.8697	0	7364.3935	5753.6948	250
16	2	219.125	119.0841	0	6929.4127	5413.8505	250

17	2	226.375	121.503	0	6481.019	5063.527	250
18	2	233	123.8882	0	6065.5549	4738.9309	250
19	2	239	126.21085	0	5685.9442	4442.3465	250
20	2	245	128.68475	0	5305.8665	4145.3972	250
21	2	251	131.314	0	4926.4833	3848.9906	250
22	2	257	134.10315	0	4548.3515	3553.5616	250
23	2	263.43215	137.2831	0	4143.8215	3237.5082	250
24	2	270.29645	140.8868	0	3713.081	2900.9768	250
25	2	274.5832	143.2269	0	3505.0235	2364.1682	0
26	2	278.9921	145.7904	0	3234.8401	2181.9272	0
27	2	286.10075	150.0906	0	2798.1529	1887.3779	0
28	2	293.2094	154.66935	0	2349.803	1584.9621	0
29	2	300.31805	159.54245	0	1883.6139	1270.5136	0
30	2	307.4267	164.728	0	1392.4797	939.23944	0
31	2	314.53535	170.247	0	867.42231	585.08374	0
32	2	321.644	176.1239	0	298.24377	201.16796	0

Section A-A' (Seismic)
FS = 1.308



Soundview A-A' - Seismic

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File Information

Created By: Ray Coglas
Revision Number: 65
Last Edited By: Ray Coglas
Date: 12/14/2016
Time: 9:51:04 AM
File Name: Soundview A-A' (Static).gsz
Directory: C:\Users\ray.coglas\Documents\SlopeW\
Last Solved Date: 12/14/2016
Last Solved Time: 9:51:07 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

Soundview A-A' - Seismic

Description: Static At North Site Margin
Kind: SLOPE/W
Method: Morgenstern-Price
Settings
- **Side Function**
  - **Interslice force function option:** Half-Sine
- **PWP Conditions Source:** (none)

Slip Surface
- **Direction of movement:** Right to Left
- **Use Passive Mode:** No
- **Slip Surface Option:** Entry and Exit
- **Critical slip surfaces saved:** 1
- **Optimize Critical Slip Surface Location:** No
- **Tension Crack**
  - **Tension Crack Option:** (none)

FOS Distribution
- **FOS Calculation Option:** Constant

Advanced
- **Number of Slices:** 30
- **Optimization Tolerance:** 0.01
- **Minimum Slip Surface Depth:** 0.1 ft
- **Optimization Maximum Iterations:** 2000

Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

Structural Fill

Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion: 0 psf
Phi: 34 °
Phi-B: 0 °

Native Till

Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion: 250 psf
Phi: 38 °
Phi-B: 0 °

Slope Fill

Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion: 0 psf
Phi: 34 °
Phi-B: 0 °

Slip Surface Entry and Exit

Left Projection: Range
Left-Zone Left Coordinate: (114, 105.32) ft
Left-Zone Right Coordinate: (143, 113.28767) ft
Left-Zone Increment: 4
Right Projection: Range
Right-Zone Left Coordinate: (325.19833, 179.15511) ft
Right-Zone Right Coordinate: (345.19741, 179.01907) ft
Right-Zone Increment: 4
Radius Increments: 4

Slip Surface Limits

Left Coordinate: (101, 52) ft
Right Coordinate: (348, 179) ft

Seismic Loads

Horz Seismic Load: 0.25
Ignore seismic load in strength: No

Regions

	Material	Points	Area (ft²)
Region 1	Native Till	6,7,16,15,1,5,4,13,3,2,8,9	19396
Region 2	Structural Fill	10,11,12,2,3,13,14	4966.2
Region 3	Slope Fill	16,15,1,5,4,13,14,10	1120.7795

Points

	X (ft)	Y (ft)
Point 1	200	125
Point 2	348	150
Point 3	310	150
Point 4	260	140
Point 5	230	130
Point 6	102	101
Point 7	127	110
Point 8	348	51
Point 9	101	52
Point 10	201	143
Point 11	201	180
Point 12	348	179
Point 13	279	143.8
Point 14	248	143
Point 15	173	119.45205
Point 16	156	115.9589

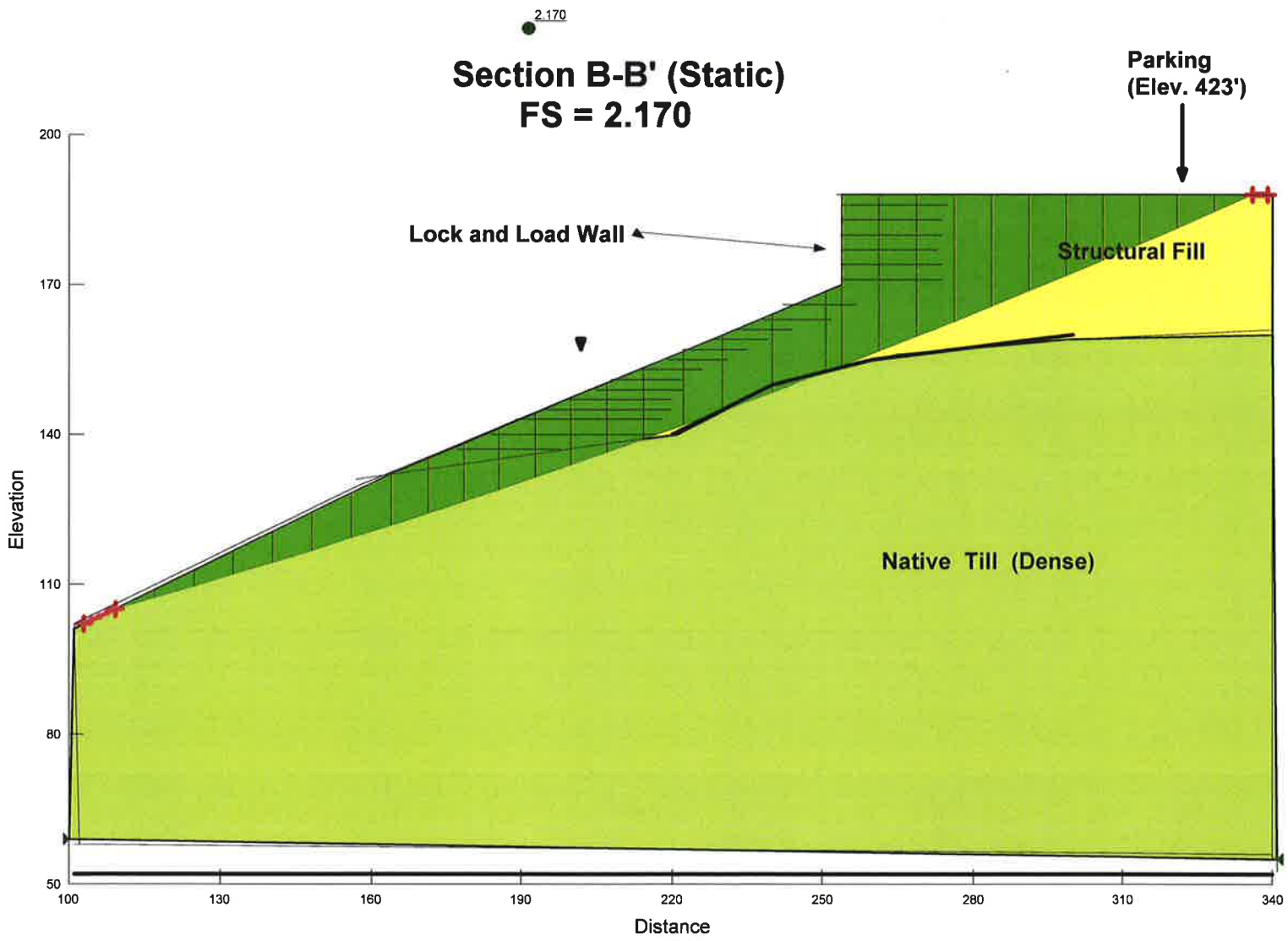
Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	2	1.308	(128.629, 402.448)	297.488	(325.198, 179.155)	(114, 105.32)

Slices of Slip Surface: 2

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	2	117.25	105.1956	0	199.85361	156.14276	250
2	2	123.75	105.01785	0	593.18169	463.44433	250
3	2	130.625	104.98885	0	944.70979	738.08818	250
4	2	137.875	105.1259	0	1240.3107	969.03694	250
5	2	145.125	105.43995	0	1517.7988	1185.8344	250
6	2	152.375	105.9316	0	1762.2203	1376.7974	250
7	2	160.25	106.67625	0	2207.6548	1724.8089	250
8	2	168.75	107.70915	0	2814.0482	2198.5754	250
9	2	176.375	108.8365	0	3252.0967	2540.8164	250
10	2	183.125	110.01425	0	3538.3452	2764.4583	250
11	2	189.875	111.3533	0	3728.7337	2913.2061	250
12	2	196.625	112.85585	0	3830.3511	2992.5983	250
13	2	200.5	113.77275	0	3857.8357	3014.0716	250
14	2	204.625	114.8551	0	7798.3947	6092.7737	250
15	2	211.875	116.8697	0	7090.5494	5539.7444	250
16	2	219.125	119.0841	0	6392.1461	4994.0918	250

17	2	226.375	121.503	0	5727.9181	4475.1401	250
18	2	233	123.8882	0	5163.775	4034.3832	250
19	2	239	126.21085	0	4691.5463	3665.4377	250
20	2	245	128.68475	0	4257.1787	3326.0725	250
21	2	251	131.314	0	3858.6988	3014.7459	250
22	2	257	134.10315	0	3492.3016	2728.4851	250
23	2	263.43215	137.2831	0	3129.1962	2444.796	250
24	2	270.29645	140.8868	0	2769.1186	2163.4726	250
25	2	274.5832	143.2269	0	2527.4548	1704.7898	0
26	2	278.9921	145.7904	0	2346.4759	1582.718	0
27	2	286.10075	150.0906	0	2060.0067	1389.4921	0
28	2	293.2094	154.66935	0	1766.0141	1191.1915	0
29	2	300.31805	159.54245	0	1452.486	979.71421	0
30	2	307.4267	164.728	0	1105.8668	745.91657	0
31	2	314.53535	170.247	0	711.57401	479.96273	0
32	2	321.644	176.1239	0	252.37905	170.23182	0


2.170
Section B-B' (Static)
FS = 2.170
Parking
(Elev. 423')
Lock and Load Wall
Structural Fill
Native Till (Dense)
Elevation
200
170
140
110
80
50
100
130
160
190
220
250
280
310
340
Distance

Soundview Section B-B' - Static

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File Information

Created By: Ray Coglas
Revision Number: 65
Last Edited By: Ray Coglas
Date: 12/14/2016
Time: 11:27:50 AM
File Name: Soundview B-B' (Static).gsz
Directory: C:\Users\ray.coglas\Documents\SlopeW\
Last Solved Date: 12/14/2016
Last Solved Time: 11:27:54 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

Soundview Section B-B' - Static

Description: Section B-B' (Static)
Kind: SLOPE/W
Method: Morgenstern-Price
Settings
- Side Function
  - Interslice force function option: Half-Sine
- PWP Conditions Source: (none)

Slip Surface
- Direction of movement: Right to Left
- Use Passive Mode: No
- Slip Surface Option: Entry and Exit
- Critical slip surfaces saved: 1
- Optimize Critical Slip Surface Location: No
- Tension Crack
  - Tension Crack Option: (none)

FOS Distribution
- FOS Calculation Option: Constant

Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000

Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

Structural Fill

Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion: 0 psf
Phi: 34 °
Phi-B: 0 °

Dense Till

Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion: 250 psf
Phi: 38 °
Phi-B: 0 °

Slip Surface Entry and Exit

Left Projection: Range
Left-Zone Left Coordinate: (103, 101.98413) ft
Left-Zone Right Coordinate: (109.12903, 105) ft
Left-Zone Increment: 4
Right Projection: Range
Right-Zone Left Coordinate: (336, 188) ft
Right-Zone Right Coordinate: (339, 188) ft
Right-Zone Increment: 4
Radius Increments: 4

Slip Surface Limits

Left Coordinate: (100, 59) ft
Right Coordinate: (341, 55) ft

Seismic Loads

Horz Seismic Load: 0

Regions

	Material	Points	Area (ft^2)
Region 1	Structural Fill	1,2,3,4,5,6,7,8,9	3531.5
Region 2	Dense Till	10,1,9,8,7,6,5,11,12	20016.5

Points

	X (ft)	Y (ft)
Point 1	164	132
Point 2	254	170
Point 3	254	188
Point 4	340	188
Point 5	340	160
Point 6	299	159
Point 7	265	156
Point 8	240	150
Point 9	221	140
Point 10	101	101
Point 11	341	55
Point 12	100	59

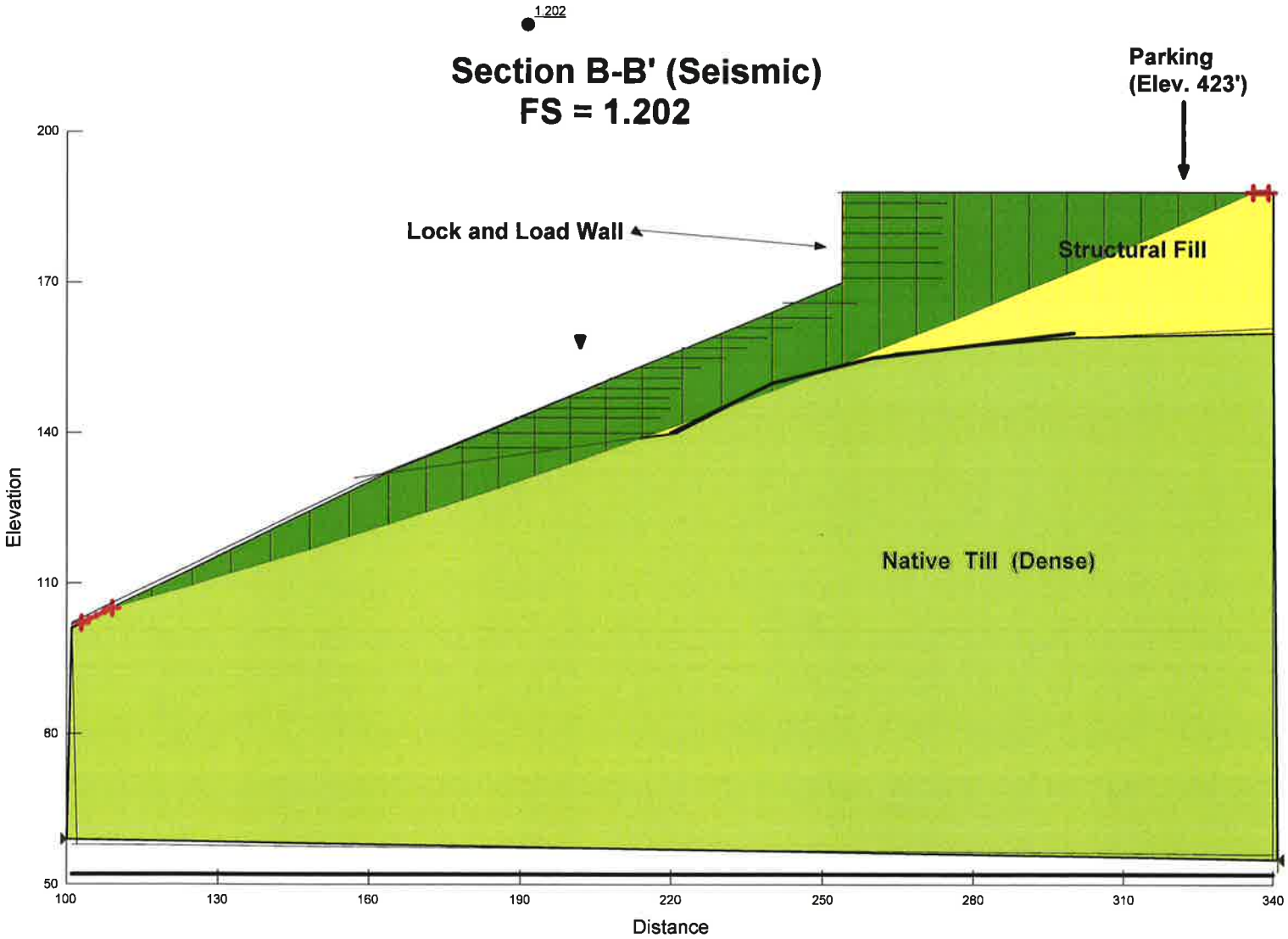
Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	101	2.170	(-370.437, 1767.4)	1730.193	(336, 188)	(109.129, 105)

Slices of Slip Surface: 101

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	101	113.04835	106.14065	0	61.541379	48.081395	250
2	101	120.8871	108.4421	0	242.56097	189.5094	250
3	101	128.72585	110.78385	0	418.84395	327.23676	250
4	101	136.56455	113.16605	0	590.02685	460.97949	250
5	101	144.40325	115.58885	0	755.77589	590.47684	250
6	101	152.24195	118.05245	0	915.7476	715.46044	250
7	101	160.08065	120.5571	0	1069.6499	835.70208	250
8	101	167.60765	123.00015	0	1183.284	924.4828	250
9	101	174.823	125.37855	0	1257.1374	982.18337	250
10	101	182.03835	127.79215	0	1325.5949	1035.6682	250
11	101	189.2537	130.24115	0	1388.6612	1084.941	250
12	101	196.46905	132.7256	0	1446.3948	1130.0475	250
13	101	203.68435	135.24575	0	1498.8146	1171.0023	250
14	101	210.8997	137.8018	0	1545.9407	1207.8212	250
15	101	218.38195	140.4911	0	1611.2027	1086.7699	0
16	101	226.13105	143.3166	0	1652.1335	1114.3781	0
17	101	235.0028	146.6065	0	1667.9352	1303.1338	250
18	101	245.4184	150.537	0	1705.1172	1332.1836	250
19	101	252.4184	153.2111	0	1756.6813	1184.8965	0
20	101	257.72725	155.27375	0	3578.4215	2413.6758	0
21	101	265.1818	158.1983	0	3251.7799	2193.3533	0
22	101	272.63635	161.16275	0	2923.6143	1972.0027	0
23	101	280.0909	164.1674	0	2593.4649	1749.3142	0
24	101	287.54545	167.2124	0	2260.8777	1524.9813	0
25	101	295	170.298	0	1925.278	1298.6164	0
26	101	302.45455	173.42445	0	1586.0979	1069.8365	0
27	101	309.9091	176.59195	0	1242.6509	838.17864	0

28	101	317.36365	179.80075	0	894.50415	603.35067	0
29	101	324.8182	183.05115	0	540.93489	364.86519	0
30	101	332.27275	186.3434	0	181.42429	122.37223	0


1.202
Section B-B' (Seismic)
FS = 1.202
Parking
(Elev. 423')
Lock and Load Wall
Structural Fill
Native Till (Dense)
Elevation
200
170
140
110
80
50
100
130
160
190
220
250
280
310
340
Distance

Soundview Section B-B' - Seismic

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File Information

Created By: Ray Coglas
Revision Number: 64
Last Edited By: Ray Coglas
Date: 12/14/2016
Time: 11:22:18 AM
File Name: Soundview B-B' (Static).gsz
Directory: C:\Users\ray.coglas\Documents\SlopeW\
Last Solved Date: 12/14/2016
Last Solved Time: 11:22:21 AM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

Soundview Section B-B' - Seismic

Description: Section B-B' (Seismic)
Kind: SLOPE/W
Method: Morgenstern-Price
Settings
- **Side Function**
  - **Interslice force function option:** Half-Sine
- **PWP Conditions Source:** (none)

Slip Surface
- **Direction of movement:** Right to Left
- **Use Passive Mode:** No
- **Slip Surface Option:** Entry and Exit
- **Critical slip surfaces saved:** 1
- **Optimize Critical Slip Surface Location:** No
- **Tension Crack**
  - **Tension Crack Option:** (none)

FOS Distribution
- **FOS Calculation Option:** Constant

Advanced
- **Number of Slices:** 30
- **Optimization Tolerance:** 0.01
- **Minimum Slip Surface Depth:** 0.1 ft
- **Optimization Maximum Iterations:** 2000

Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

Structural Fill

Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion: 0 psf
Phi: 34 °
Phi-B: 0 °

Dense Till

Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion: 250 psf
Phi: 38 °
Phi-B: 0 °

Slip Surface Entry and Exit

Left Projection: Range
Left-Zone Left Coordinate: (103, 101.98413) ft
Left-Zone Right Coordinate: (109.12903, 105) ft
Left-Zone Increment: 4
Right Projection: Range
Right-Zone Left Coordinate: (336, 188) ft
Right-Zone Right Coordinate: (339, 188) ft
Right-Zone Increment: 4
Radius Increments: 4

Slip Surface Limits

Left Coordinate: (100, 59) ft
Right Coordinate: (341, 55) ft

Seismic Loads

Horz Seismic Load: 0.25
Ignore seismic load in strength: No

Regions

	Material	Points	Area (ft^2)
Region 1	Structural Fill	1,2,3,4,5,6,7,8,9	3531.5
Region 2	Dense Till	10,1,9,8,7,6,5,11,12	20016.5

Points

	X (ft)	Y (ft)
Point 1	164	132
Point 2	254	170
Point 3	254	188
Point 4	340	188
Point 5	340	160
Point 6	299	159
Point 7	265	156
Point 8	240	150
Point 9	221	140
Point 10	101	101
Point 11	341	55
Point 12	100	59

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	101	1.202	(-370.437, 1767.4)	1730.193	(336, 188)	(109.129, 105)

Slices of Slip Surface: 101

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	101	113.04835	106.14065	0	36.111249	28.2132	250
2	101	120.8871	108.4421	0	206.97803	161.70896	250
3	101	128.72585	110.78385	0	372.97754	291.40199	250
4	101	136.56455	113.16605	0	533.71242	416.98184	250
5	101	144.40325	115.58885	0	688.77742	538.1319	250
6	101	152.24195	118.05245	0	837.77023	654.53784	250
7	101	160.08065	120.5571	0	980.36466	765.94482	250
8	101	167.60765	123.00015	0	1085.0195	847.71014	250
9	101	174.823	125.37855	0	1152.3595	900.32191	250
10	101	182.03835	127.79215	0	1214.0758	948.53994	250
11	101	189.2537	130.24115	0	1270.109	992.31788	250
12	101	196.46905	132.7256	0	1320.5587	1031.7335	250
13	101	203.68435	135.24575	0	1365.3281	1066.7112	250
14	101	210.8997	137.8018	0	1404.7005	1097.4723	250
15	101	218.38195	140.4911	0	1476.9964	996.24668	0
16	101	226.13105	143.3166	0	1510.2867	1018.7013	0
17	101	235.0028	146.6065	0	1501.376	1173.0035	250
18	101	245.4184	150.537	0	1528.1638	1193.9324	250
19	101	252.4184	153.2111	0	1593.0201	1074.5056	0
20	101	257.72725	155.27375	0	3253.315	2194.3887	0
21	101	265.1818	158.1983	0	2954.4622	1992.8099	0
22	101	272.63635	161.16275	0	2655.2386	1790.981	0
23	101	280.0909	164.1674	0	2355.0511	1588.502	0
24	101	287.54545	167.2124	0	2053.1891	1384.8936	0
25	101	295	170.298	0	1748.6992	1179.5125	0
26	101	302.45455	173.42445	0	1441.132	972.05578	0
27	101	309.9091	176.59195	0	1129.5975	761.9231	0

28	101	317.36365	179.80075	0	813.47317	548.69458	0
29	101	324.8182	183.05115	0	492.15542	331.96303	0
30	101	332.27275	186.3434	0	165.10836	111.36699	0