



Re: Final Completion Memorandum – For the Grading, Drainage Improvements, and Erosion Control of Real property located on South Melrose Drive, Vista, CA, Identified as Assessor's Parcel Number 169-180-27 as part of the Kiewit Shea Desalination Project (the "**Project**"), Real Property Improvement Agreement dated May 1<sup>st</sup> 2014 (the "**Agreement**"), by and between the City of Vista ("**City**") and Kiewit Shea Desalination ("**Developer**").

Real Property Improvement Agreement: PC N/A LD#14-001 GP #14-001 DWG N/A  
Assessor's Parcel Number: 169-180-27

Attn: City Engineer  
City of Vista  
200 Civic Center Drive  
Vista, CA 92084-6275


Pursuant to Section 2f. of the Real Property Improvement Agreement, Developer hereby certifies that all Work and all other obligations under the Agreement are fully and completely performed in accordance with the terms of the Agreement, including the provision and execution of this Final Completion Memorandum.

Developer certifies that it achieved all requirements under the Agreement for Final Completion on October 22, 2014.

Attached is all documentation required to be provided by Developer under the Agreement to establish that Developer has achieved all requirements under the Agreement for Final Completion.

**IN WITNESS WHEREOF**, Developer has caused this Final Completion Memorandum to be duly executed and delivered as of the date first written above.

**Anthony Joyce**  
**Project Director**  
**Kiewit Shea Desalination Project**

 Date: 11/14/2014

**City Acceptance of Final Completion Memorandum**

Pursuant to Section 2f. of the Agreement, the City accepts the Final Completion Memorandum. Acceptance of this Final Completion Memorandum shall relieve the Developer of any obligation to maintain the Work in accordance with the requirements of the Agreement, and shall release the Developer or any surety of the Developer from any obligations or liability pursuant to the Agreement.

For and on behalf of

**City Engineer**  
**City of Vista California**

Name:  **GREG MAYER, P.E.**

Date: 11-12-14

October 23, 2014

Kiewit Shea Desalination  
5050 Avenida Encinas, Suite 370  
Carlsbad, CA 92008

Subject: Soils Compaction Report  
Melrose-Vista Lot  
Carlsbad, San Diego County, CA

Gentlemen:

A series of in place density (compaction) tests were taken at the locations listed below beginning on May 12, 2014, and continuing through October 7, 2014. The compaction tests were taken in fill soils.

Field testing was by the direct transmission nuclear method, ASTM D6938. The maximum density - optimum moisture relationship was established in the laboratory by the ASTM D1557 test method.

A summary of the results of all tests performed is attached. The field density tests were taken at locations selected by our representative and do not constitute certification of compaction of the subject improvements. We have performed the tests, as previously described, in accordance to generally accepted soil testing practices. No other warranty, express or implied, is made.

We trust that this letter will serve your needs at this time. If you have any questions or require further assistance, please do not hesitate to contact us.

Respectfully,

RMA Group

MAXIMUM DENSITY - OPTIMUM MOISTURE RELATIONSHIPS

Soil Type	Test Method <sup>1</sup>	Description	Optimum Moisture (%)	Maximum Density (pcf)
1	M	Brown Sandy Clay	14.6	116.4
3	M	Olive Green Silty-Sandy Clay	21.0	102.9
4	M	Brown Sandy Clay	12.3	121.0
5	M	Brown Sandy Clay	14.1	118.5
6	M	Light Brown Sand w/ Clay	14.5	115.5
7	M	Dark Brown Sand w/ Clay	16.0	111.7
8	M	Light Brown Clay & Gray-Light Brown Sand	12.2	121.2
9	M	Dark Brown Sand w/ Clay	15.6	113.6
10	M	Light Brown Sand w/ Brown-Orange Hard Clay	15.6	111.3
11	M	Hard Dark Silt Stone w/ Light Brown Sand	14.1	115.0
12	M	Brown Silty Clay	12.5	122.7
13	M	Light Brown Sand, Gray Sand, Yellow Sand	12.9	120.3

<sup>1</sup>Test Method

M - ASTM D1557 (Maximum Density Optimum Moisture Content Relationship)

IN-PLACE DENSITIES

Test No.	Date	Item <sup>2</sup> Tested	Location	Test <sup>3</sup> Method	Test Elev. (ft)	Moisture (%)	Dry Density (pcf)	Relative Compaction (%)	Soil Type
1	5/12/14	F	South Slope, 13' from Toe	N	337.0	15.0	110.8	95	1
2	5/12/14	F	South Slope, 14' from Toe	N	336.0	13.0	96.1	82**	1
3	5/12/14	F	South Slope, 22' from Toe	N	338.0	16.0	98.0	95	3
4	5/13/14	F	Retest of #2	N	336.0	12.8	104.5	90	1
5	5/13/14	F	South Slope, 22' from Toe	N	336.0	20.2	93.2	91	3
6	5/13/14	F	South Slope, 14' from Toe	N	338.0	21.9	93.7	91	3
7	5/13/14	F	South Slope, 16' from Toe	N	341.0	20.4	93.5	91	3
8	5/13/14	F	South Slope, 24' from Toe	N	340.0	14.7	108.4	93	1
9	5/14/14	F	South Slope, 18' from Toe	N	342.0	18.5	98.9	96	3
10	5/15/14	F	South Slope, 45' from Toe	N	342.5	15.7	105.9	91	1
11	5/15/14	F	South Slope, 38' from Toe	N	342.5	20.0	93.2	91	3
12	5/15/14	F	South Slope, 24' from Toe	N	344.5	12.4	104.1	89**	1
13	5/15/14	F	Retest of #12	N	344.5	15.4	105.0	90	1
14	5/15/14	F	Southeast Slope Keyway, 6' from Toe	N	339.5	25.0	100.9	98	3
15	5/15/14	F	Southeast Slope Keyway, 8' from Toe	N	339.0	12.5	92.9	90	3
16	5/16/14	F	Southeast Slope Keyway, 10' from Toe	N	341.0	22.7	94.9	92	3
17	5/16/14	F	South Slope, 24' from Toe	N	346.0	14.4	111.2	96	6
18	5/16/14	F	Southeast Slope Keyway, 8' from Toe	N	344.0	21.6	99.1	96	3
19	5/16/14	F	South Slope, 23' from Toe	N	346.0	16.6	106.2	92	6
20	5/16/14	F	South Slope, 42' from Toe	N	346.0	13.5	106.6	92	6
21	5/19/14	F	South Slope, 42' from Toe	N	347.5	14.6	99.3	86**	6
22	5/19/14	F	South Slope, 31' from Toe	N	347.5	20.1	103.1	89**	6
23	5/19/14	F	Retest of #21	N	347.5	18.7	105.3	91	6
24	5/19/14	F	Retest of #22	N	347.5	16.0	106.6	92	6
25	5/19/14	F	South Slope, 29' from Toe	N	347.5	14.4	108.1	91	5
26	5/19/14	F	South Slope, 20' from Toe	N	347.5	19.5	101.3	88**	6
27	5/19/14	F	Retest of #26	N	347.5	20.1	104.5	90	6
28	5/20/14	F	South Slope, 61' from Toe	N	350.0	13.5	110.3	91	4
29	5/20/14	F	Southeast Slope Outside of Keyway, 39' from Toe	N	349.5	20.3	97.3	95	3
30	5/20/14	F	South Slope, 41' from Toe	N	349.5	16.0	100.9	98	3
31	5/20/14	F	South Slope, 40' from Toe	N	349.5	22.7	101.4	99	3
32	5/20/14	F	South Slope, 38' from Toe	N	349.0	19.3	102.4	90	9
33	5/20/14	F	South Slope, 70' from Toe	N	351.5	19.9	104.0	92	9
34	5/20/14	F	South Slope, 53' from Toe	N	350.0	19.5	101.9	90	9
35	5/20/14	F	South Slope, 81' from Toe	N	350.0	14.1	106.5	90	5
36	5/21/14	F	Southeast Slope Bottom of Keyway, 13' from Toe	N	345.5	18.5	92.5	90	3

IN-PLACE DENSITIES

Test No.	Date	Item <sup>2</sup> Tested	Location	Test <sup>3</sup> Method	Test Elev. (ft)	Moisture (%)	Dry Density (pcf)	Relative Compaction (%)	Soil Type
37	5/21/14	F	South Slope, 81' from Toe	N	353.5	12.2	109.5	90	4
38	5/21/14	F	South Slope, 77' from Toe	N	353.5	15.8	105.2	91	6
39	5/21/14	F	South Slope, 106' from Toe	N	352.0	13.2	107.8	91	5
40	5/21/14	F	South Slope, 75' from Toe	N	352.0	17.7	100.1	90	7
41	5/22/14	F	Southeast Slope Bottom of Keyway, 10' from Toe	N	347.5	18.8	94.0	91	3
42	5/23/14	F	South Slope, 111' from Toe	N	356.0	18.2	103.4	90	6
43	5/23/14	F	South Slope, 81' from Toe	N	356.0	15.1	106.5	92	6
44	5/23/14	F	South Slope, 89' from Toe	N	355.5	15.2	150.0	91	6
45	5/23/14	F	South Slope, 66' from Toe	N	355.0	14.4	105.2	91	6
46	5/27/14	F	South Slope, 129' from Toe	N	358.0	17.3	104.3	90	6
47	5/27/14	F	South Slope, 72' from Toe	N	357.5	14.8	104.2	90	6
48	5/27/14	F	South Slope, 81' from Toe	N	357.0	16.7	104.2	90	6
49	5/27/14	F	South Slope, 49' from Toe	N	357.0	15.3	108.7	90	4
50	5/29/14	F	South Slope, 62' from Toe	N	360.0	18.3	105.1	91	6
51	5/29/14	F	South Slope, 119' from Toe	N	360.0	11.6	110.3	91	4
52	5/29/14	F	South Slope, 81' from Toe	N	359.0	12.3	108.7	90	4
53	5/29/14	F	Southeast Slope Outside of Keyway, 55' from Toe	N	359.0	20.8	92.0	89**	3
54	5/29/14	F	Retest of #53	N	359.0	20.0	97.4	95	3
55	5/29/14	F	East Slope Keyway, 17' from Toe	N	351.5	23.9	92.2	90	3
56	5/30/14	F	South Slope, 89' from Toe	N	362.0	17.1	106.2	90	5
57	5/30/14	F	South Slope, 114' from Toe	N	362.0	18.6	103.6	87**	5
58	5/30/14	F	Retest of #57	N	361.5	16.2	108.3	91	5
59	5/30/14	F	Southeast Slope Outside of Keyway, 49' from Toe	N	361.5	18.8	100.3	90	7
60	5/30/14	F	Southeast Slope Outside of Keyway, 67' from Toe	N	361.5	14.4	106.4	90	5
61	6/2/14	F	Northeast Slope Keyway, 9' from Toe	N	352.0	19.3	89.6	87**	3
62	6/2/14	F	Retest of #61	N	352.0	18.9	92.2	90	3
63	6/3/14	F	Northeast Slope Bottom of Keyway, 11' from Toe	N	354.0	18.3	93.6	91	3
64	6/3/14	F	Northeast Slope Bottom of Keyway, 9' from Toe	N	354.0	25.3	98.6	96	3
65	6/3/14	F	Northeast Slope Bottom of Keyway, 6' from Toe	N	345.5	23.3	94.0	91	3
66	6/4/14	F	Northeast Slope Keyway, 6' from Toe	N	356.0	23.4	90.1	88**	3
67	6/4/14	F	Southwest Slope, 61' from Toe	N	360.0	12.0	115.3	95	8
68	6/4/14	F	Southwest Slope, 83' from Toe	N	360.0	13.0	109.0	90	8
69	6/4/14	F	Retest of #66	N	356.0	22.8	92.2	90	3

IN-PLACE DENSITIES

Test No.	Date	Item <sup>2</sup> Tested	Location	Test <sup>3</sup> Method	Test Elev. (ft)	Moisture (%)	Dry Density (pcf)	Relative Compaction (%)	Soil Type
70	6/4/14	F	South Slope North End, 113' from Toe	N	360.0	14.0	104.7	91	6
71	6/4/14	F	South Slope, 48' from Toe	N	360.0	16.8	103.7	90	6
72	6/5/14	F	West Side, 32' from Toe	N	360.0	13.9	108.2	91	5
73	6/5/14	F	West Side, 59' from Toe	N	360.0	14.6	105.1	91	6
74	6/5/14	F	West Side, 44' from Toe	N	360.0	11.0	107.5	91	5
75	6/5/14	F	West Side, 72' from Toe	N	360.0	15.3	106.6	92	6
76	6/6/14	F	Northeast Slope Keyway, 9' from Toe	N	357.5	25.4	92.1	90	3
77	6/6/14	F	Northeast Slope Keyway, 11' from Toe	N	357.5	18.5	88.8	86**	3
78	6/9/14	F	Southwest Slope, 64' from Toe	N	362.0	13.3	111.2	92	8
79	6/9/14	F	Northwest Side of Fill 136' from Toe	N	362.0	14.5	108.9	90	8
80	6/9/14	F	Retest of #77	N	357.5	21.5	92.9	90	3
81	6/10/14	F	Southeast Slope, 79' From Toe	N	361.5	13.2	110.6	91	8
82	6/10/14	F	Southeast Slope, 132' From Toe	N	361.0	12.2	111.2	92	8
83	6/11/14	F	Northeast Slope Outside of Keyway, 8' from Toe	N	357.0	16.3	92.7	90	3
84	6/11/14	F	Southeast Slope Outside of Keyway, 28' from Toe	N	357.0	17.9	96.1	93	3
85	6/12/14	F	Northeast Slope Bottom of Keyway, 7' from Toe	N	353.0	19.3	92.8	90	3
86	6/12/14	F	Northeast Slope Keyway, 9' from Toe	N	355.0	15.9	94.4	92	3
87	6/12/14	F	Southwest Slope, 74' from Toe	N	363.0	9.6	109.5	90	8
88	6/12/14	F	Southwest Slope, 122' from Toe	N	363.0	13.7	108.7	90	8
89	6/13/14	F	Southeast Slope, 89' From Toe	N	361.0	14.2	109.4	90	8
90	6/13/14	F	Southeast Slope, 41' From Toe	N	359.0	18.7	104.4	90	6
91	6/16/14	F	Southwest Slope, 74' from Toe	N	362.0	26.5	93.7	91	3
92	6/17/14	F	Southwest Slope, 29' from West Toe	N	364.0	14.9	107.2	90	5
93	6/17/14	F	Southwest Slope, 68' from West Toe	N	364.0	15.9	107.2	90	5
94	6/18/14	F	Southeast Slope, 182' From Toe	N	363.0	16.0	103.4	90	6
95	6/18/14	F	Southeast Slope, 117' From Toe	N	363.0	18.5	103.8	90	6
96	6/18/14	F	Southeast Slope, 51' From East Toe	N	362.0	11.4	106.7	90	5

IN-PLACE DENSITIES

Test No.	Date	Item <sup>2</sup> Tested	Location	Test <sup>3</sup> Method	Test Elev. (ft)	Moisture (%)	Dry Density (pcf)	Relative Compaction (%)	Soil Type
97	6/18/14	F	Southeast Slope, 69' From East Toe	N	362.0	14.0	106.9	90	5
98	6/18/14	F	Northeast Slope Keyway, 14' from Toe	N	360.0	24.3	101.3	91	7
99	6/19/14	F	Northeast Slope Keyway, 13' from Toe	N	361.0	14.3	92.9	90	3
100	6/19/14	F	Northeast Slope Keyway, 9' from Toe	N	361.0	17.6	92.5	90	3
101	6/19/14	F	Northeast Slope Keyway, 26' from Toe	N	360.0	14.5	103.5	90	6
102	6/19/14	F	Northeast Slope Keyway, 17' from Toe	N	361.0	15.3	92.1	90	3
103	6/19/14	F	Northeast Slope Keyway, 18' from Toe	N	361.0	17.5	92.2	90	3
104	6/24/14	F	North Side, 149' from South Toe	N	365.0	12.8	108.6	94	11
105	6/24/14	F	South Slope, 58' from Toe	N	365.0	14.5	102.7	89**	11
106	6/24/14	F	Retest of #105	N	365.0	12.8	108.6	94	11
107	6/25/14	F	Southeast Slope, 86' from East Toe	N	364.0	14.6	110.5	96	11
108	6/25/14	F	Northeast Slope Keyway, 28' from Toe	N	364.0	15.2	104.6	91	11
109	6/26/14	F	West Side, 119' from South Toe	N	368.0	17.6	104.1	91	11
110	6/26/14	F	Northwest Side, 167' from South Toe	N	368.0	16.2	106.6	93	11
111	6/26/14	F	South Side, 96' from Toe	N	367.0	13.3	109.8	95	11
112	6/26/14	F	North Side, 181' from South Toe	N	367.0	18.2	106.2	92	11
113	6/27/14	F	East Slope, 26' From Toe	N	366.0	12.6	106.9	93	11
114	6/27/14	F	Southeast Slope, 53' From Toe	N	366.0	16.7	105.1	91	11
115	6/30/14	F	Northwest Side, 132' from South Toe	N	370.0	17.0	105.2	91	11
116	6/30/14	F	North Side, 139' from South Toe	N	370.0	16.1	104.5	91	11
117	6/30/14	F	Southwest Side, 48' from Toe	N	369.0	15.7	109.2	95	11
118	6/30/14	F	South Slope, 39' from Toe	N	369.0	16.9	106.5	93	11
119	6/30/14	F	East Slope, 28' from Toe	N	360.0	15.8	102.0	89**	11
120	6/30/14	F	Retest of #119	N	368.0	17.7	103.5	90	11
121	6/30/14	F	Southeast Slope, 36' from Toe	N	368.0	17.2	103.8	90	11
122	7/2/14	F	Northwest Side, 197' from South Toe	N	371.4	20.5	103.6	90	11

IN-PLACE DENSITIES

Test No.	Date	Item <sup>2</sup> Tested	Location	Test <sup>3</sup> Method	Test Elev. (ft)	Moisture (%)	Dry Density (pcf)	Relative Compaction (%)	Soil Type
123	7/2/14	F	Southwest Side, 119' from South Toe	N	371.4	16.5	107.9	94	11
124	7/2/14	F	North Side, 146' from South Toe	N	370.4	18.1	106.0	92	11
125	7/2/14	F	South Side, 98' from Toe	N	370.4	17.7	100.3	87**	11
126	7/2/14	F	Retest of #125	N	369.4	15.9	103.6	90	11
127	7/2/14	F	East Slope, 28' from Toe	N	369.4	13.0	103.3	90	11
128	7/2/14	F	Southeast Slope, 36' from Toe	N	369.4	16.1	107.8	94	11
129	7/10/14	F	Northwest Side, 175' from South Toe	N	373.0	15.2	109.0	95	11
130	7/10/14	F	Southwest Side, 127' from South Toe	N	373.0	15.0	106.8	93	11
131	7/14/14	F	Southeast Slope, 57' from East Toe	N	371.0	16.3	103.9	90	11
132	7/14/14	F	Southeast Slope, 63' from East Toe	N	371.0	18.5	97.3	85**	11
133	7/14/14	F	Retest of #132	N	371.0	15.7	106.6	93	11
134	7/15/14	F	Northeast Slope Bottom of Keyway, 14' from Toe	N	368.0	23.2	99.1	96	3
135	7/15/14	F	Northeast Slope Bottom of Keyway, 9' from Toe	N	368.0	20.7	99.3	97	3
136	7/18/14	F	Southwest Side, 82' from South Toe	N	374.4	12.9	109.5	95	11
137	7/18/14	F	Northwest Side, 163' from South Toe	N	374.4	12.6	108.7	95	11
138	7/18/14	F	Southeast Slope, 62' from East Toe	N	372.4	13.3	109.2	95	11
139	7/18/14	F	North Side, 171' from South Toe	N	373.4	15.6	111.6	94	5
140	7/18/14	F	East Slope, 48' from Toe	N	372.4	16.7	108.5	94	11
141	7/18/14	F	South Side, 57' from Toe	N	373.4	14.4	102.9	90	11
142	7/22/14	F	West Side, 105' from South Toe	N	375.0	12.7	114.8	95	4
143	7/22/14	F	Southwest Side, 64' from South Toe	N	375.0	16.7	107.1	89**	4
144	7/22/14	F	Retest of #143	N	375.0	16.1	109.4	90	4
145	7/22/14	F	South Side, 61' from Toe	N	374.0	13.8	115.2	95	4
146	7/22/14	F	Northwest Side, 182' from South Toe	N	375.0	16.6	110.8	92	4
147	7/23/14	F	Southeast Side, 63' from Toe	N	373.0	16.3	109.3	90	4
148	7/23/14	F	Center of Fill, 154' from South Toe	N	374.0	14.0	109.7	91	4



IN-PLACE DENSITIES

Test No.	Date	Item <sup>2</sup> Tested	Location	Test <sup>3</sup> Method	Test Elev. (ft)	Moisture (%)	Dry Density (pcf)	Relative Compaction (%)	Soil Type
149	7/23/14	F	North Side, 232' from South Toe	N	374.0	13.3	103.4	85**	4
150	7/23/14	F	Retest of #149	N	374.0	13.6	111.3	92	4
151	7/25/14	F	Southeast Side, 57' from East Toe	N	373.0	10.9	108.7	90	4
152	7/25/14	F	Northeast Side, 51' from East Toe	N	373.0	12.6	112.1	93	4
153	7/29/14	F	Northeast Side Outside of Keyway, 18' from Toe	N	370.0	15.4	93.1	90	3
154	7/29/14	F	Northeast Side Outside of Keyway, 15' from Toe	N	371.0	15.4	93.3	91	3
155	7/29/14	F	West Side, 127' from South Toe	N	376.8	15.6	109.6	91	4
156	7/29/14	F	Northwest Side, 214' from South Toe	N	376.8	14.8	112.6	93	4
157	7/30/14	F	South Side, 77' from Toe	N	375.8	16.7	113.2	94	4
158	7/30/14	F	North Side, 196' from South Toe	N	375.8	12.8	109.8	91	4
159	7/30/14	F	Southeast Side, 71' from Toe	N	374.8	11.4	117.1	97	4
160	7/30/14	F	Northeast Side, 82' from Toe	N	374.8	13.5	113.9	94	4
161	8/5/14	F	Southwest Side, 104' from South Toe	N	378.0	11.2	114.9	95	4
162	8/5/14	F	Northwest Side, 234' from South Toe	N	378.0	12.7	111.9	92	4
163	8/5/14	F	Northeast Side Bottom of Keyway, 15' from Toe	N	374.0	23.2	94.3	92	3
164	8/5/14	F	Northeast Side Outside of Keyway, 19' from Toe	N	374.0	11.6	111.6	92	4
165	8/6/14	F	South Side, 85' from Toe	N	377.0	14.4	115.2	95	4
166	8/6/14	F	North Side, 191' from South Toe	N	377.0	13.7	110.2	91	4
167	8/6/14	F	Southeast Side, 62' from Toe	N	376.0	10.7	112.9	93	4
168	8/6/14	F	Northeast Side, 51' from Toe	N	375.0	11.7	114.2	94	4
169	8/6/14	F	North Slope Bottom of Keyway, 18' from Toe	N	376.0	17.0	94.5	92	3
170	8/8/14	F	North Slope Bottom of Keyway, 14' from Toe	N	380.0	21.3	99.0	96	3
171	8/8/14	F	North Slope Outside of Keyway, 19' from Toe	N	376.0	16.3	96.6	94	3
172	8/12/14	F	Northwest Side, 246' from South Toe	N	382.0	13.1	114.8	95	4
173	8/12/14	F	West Side, 177' from South Toe	N	382.0	13.9	110.3	91	4

IN-PLACE DENSITIES

Test No.	Date	Item <sup>2</sup> Tested	Location	Test <sup>3</sup> Method	Test Elev. (ft)	Moisture (%)	Dry Density (pcf)	Relative Compaction (%)	Soil Type
174	8/12/14	F	West Side, 90' from South Toe	N	382.0	14.8	109.6	91	4
175	8/12/14	F	North Side, 269' from Southeast Toe	N	381.0	14.8	109.2	90	4
176	8/12/14	F	Center of fill, 158' from Southeast Toe	N	381.0	11.9	114.4	95	4
177	8/12/14	F	South Side, 70' from Toe	N	381.0	13.1	113.7	94	4
178	8/12/14	F	North Slope Keyway, 17' from Toe	N	372.0	21.9	97.9	95	3
179	8/15/14	F	Southeast Side, 91' from Toe	N	380.0	10.4	111.2	92	4
180	8/15/14	F	Northeast Side, 56' from Toe	N	380.0	14.7	113.6	94	4
181	8/22/14	F	Southwest Side	N	382.0	19.3	95.3	93	3
182	8/22/14	F	West Side	N	382.5	20.2	96.4	94	3
183	8/22/14	F	Northwest Side	N	382.5	19.9	94.3	92	3
184	8/22/14	F	Northwest Side	N	382.5	21.4	98.1	95	3
185	8/22/14	F	Southeast Side	N	382.5	13.1	102.7	92	10
186	8/22/14	F	Southeast Side	N	382.5	13.1	102.5	92	10
187	9/3/14	F	East Side, 37' from Toe	N	389.0	14.9	103.3	93	10
188	9/3/14	F	Northeast Side, 25' from Toe	N	390.0	15.8	105.4	92	11
189	9/3/14	F	Southeast Side, 40' from Toe	N	389.5	13.8	100.1	90	10
190	9/8/14	F	Southwest Side, 28' from Toe	N	388.5	15.0	103.3	93	10
191	9/8/14	F	Northwest Side, 12' from Toe	N	388.5	14.2	111.0	100	10
192	9/10/14	F	North Slope Keyway, 11' from Toe	N	390.5	17.3	99.3	97	3
193	9/10/14	F	North Slope Keyway, 13' from Toe	N	391.0	14.9	99.8	90	10
194	9/12/14	F	Northwest Side	N	389.0	16.4	102.9	84**	12
195	9/12/14	F	Center of Fill	N	389.0	11.5	112.1	91	12
196	9/12/14	F	Southwest Side	N	387.0	19.5	98.4	80**	12
197	9/12/14	F	Retest of #194	N	389.0	14.6	115.6	94	12
198	9/15/14	F	Retest of #196	N	387.0	16.1	110.7	90	12
199	9/18/14	F	North Slope Keyway	N	386.0	12.9	116.2	95	12
200	9/18/14	F	North Slope Keyway	N	386.0	13.7	115.3	94	12
201	9/18/14	F	Northeast Side, 42' from Toe	N	386.0	16.4	110.6	90	12
202	9/18/14	F	Southeast Side, 69' from Toe	N	385.0	11.7	114.8	94	12
203	9/25/14	F	East Side, 60' from Toe	N	393.6	12.1	103.9	88**	5
204	9/25/14	F	Retest of #203	N	393.6	9.7	106.1	90	5
205	9/25/14	F	Northeast Corner, 56' from West Toe	N	392.0	11.5	113.3	92	12
206	9/25/14	F	Southeast Corner, 67' from Toe	N	390.0	10.9	120.3	98	12
207	9/25/14	F	Southwest Corner, 91' from Toe	N	390.6	11.1	116.9	95	12
208	9/25/14	F	Southeast Corner, 67' from Toe	N	393.6	12.1	106.7	90	5

IN-PLACE DENSITIES

Test No.	Date	Item <sup>2</sup> Tested	Location	Test <sup>3</sup> Method	Test Elev. (ft)	Moisture (%)	Dry Density (pcf)	Relative Compaction (%)	Soil Type
209	9/26/14	F	Center-West Side, 235' North of FH and 46' East	N	392.6	12.1	115.4	94	12
210	9/26/14	F	Center-East Side, 270' North of FH and 72' East	N	391.6	12.7	114.1	93	12
211	9/26/14	F	Northwest Side, 321' North of FH and 39' East	N	394.0	12.6	115.0	96	13
212	9/26/14	F	North Side, 375' North of FH and 27' East	N	394.0	11.6	110.6	92	13
213	9/30/14	F	Southwest Side, 165' North of FH and 46' East	N	393.5	10.9	117.7	96	12
214	9/30/14	F	Southeast Side, 180' North of FH and 91' East	N	393.0	10.9	116.7	95	12
215	9/30/14	F	Northeast Side, 352' North of FH and 108' East	N	395.0	11.3	112.4	92	12
216	9/30/14	F	North Side, 28' from Toe	N	394.0	12.5	113.4	92	12
217	10/1/14	F	North Side, 38' from Toe	N	397.0	14.3	110.8	90	12
218	10/1/14	F	North Side, 310' North of FH and 121' East	N	395.0	6.9	113.3	92**	12
219	10/1/14	F	Retest of #218	N	395.0	12.6	120.6	98	12
220	10/1/14	F	North Side, 181' North of FH 111' East	N	394.5	12.1	110.8	90	12
221	10/1/14	F	North Side, 168' North of FH 39' East	N	393.0	14.7	109.8	90	12
222	10/6/14	F	North Side, 360' North of FH 29' East	N	395.0	13.4	115.9	94	12
223	10/6/14	F	North Side, 309' North of FH 34' East	N	395.0	10.5	110.9	90	12
224	10/6/14	F	North Side, 242' North of FH 39" East	N	394.5	14.2	113.1	92	12
225	10/7/14	F	North Side, 359' North of FH 78' East	N	395.5	12.2	113.4	92	12
226	10/7/14	F	North Side, 291' North of FH 110' East	N	395.0	12.1	113.0	92	12
227	10/7/14	F	North Side, 243' North of FH 96' East	N	395.0	14.9	110.7	90	12
228	10/7/14	F	North Side, 373 North of FH 27' East	N	395.5	14.7	110.8	90	12

\*\* Areas represented by these tests received additional compacted effort and were retested.

<sup>2</sup>Item Tested:

F – Fill 90%

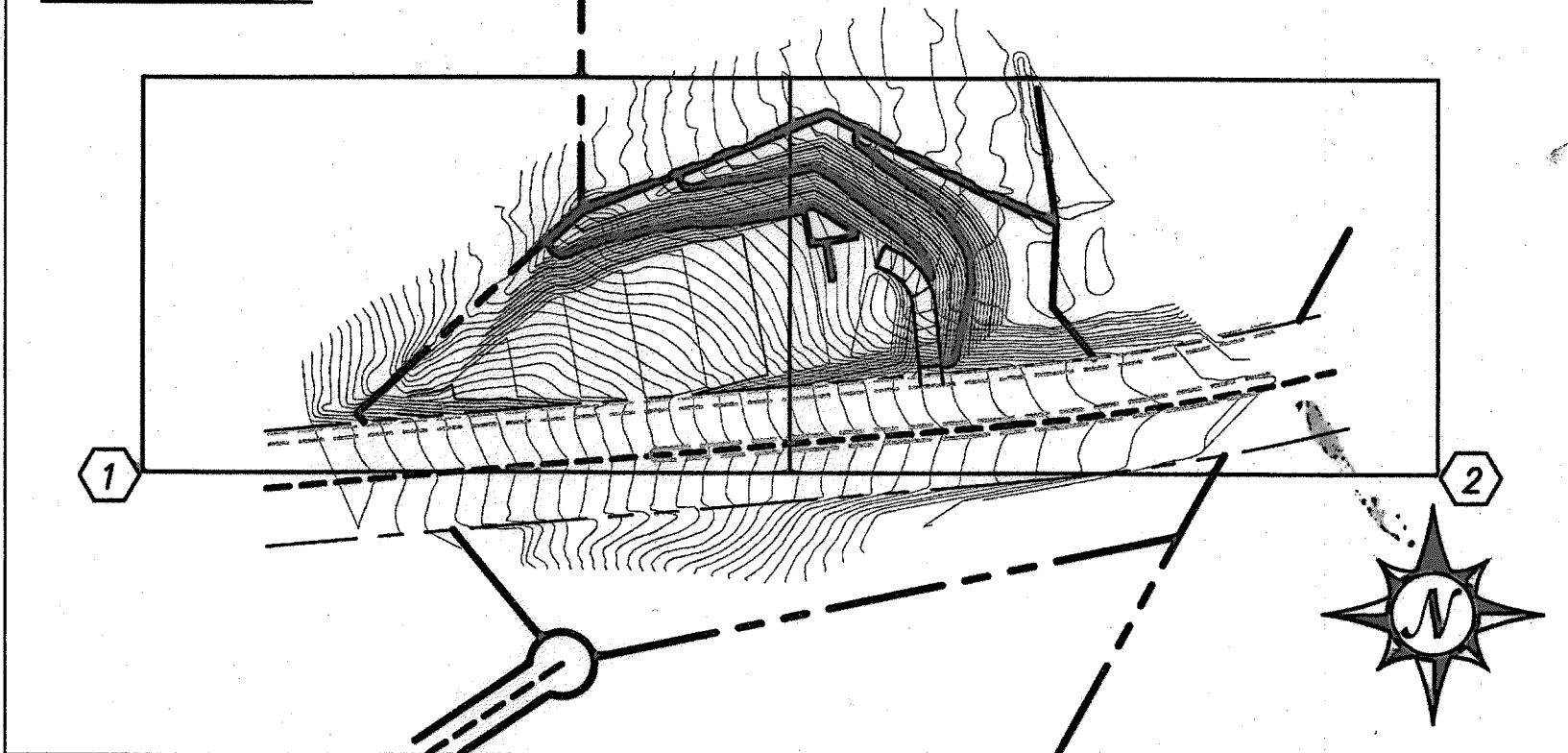
<sup>3</sup>Test Method:

N - ASTM D6938 (Density of Soil In-Place by Direct Transmission Nuclear Method)

**GENERAL NOTES**

- ALL GRADING IS TO BE DONE IN ACCORDANCE WITH THE CITY OF VISTA DEVELOPMENT CODE, CHAPTER 17, SECTION 17.56 AND THE SOILS REPORT PREPARED BY RMA GROUP (SOILS ENGINEER), KNOWN AS JOB NUMBER 12-685 0/03.
- ALL APPLICABLE PERMITS WILL BE REQUIRED PRIOR TO ANY WORK IN THE CITY OF VISTA.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL SUBSTRUCTURES, WHETHER SHOWN HEREON OR NOT, AND PROTECT THEM FROM DAMAGE. THE EXPENSE OF REPAIR OR REPLACEMENT OF SAID STRUCTURES SHALL BE BORNE BY THE CONTRACTOR.
- BEFORE EXCAVATING, THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES BY CONTACTING THE FOLLOWING:  
 UNDERGROUND SERVICE ALERT (800) 422-4133  
 UNDERGROUND SERVICE ALERT (SDG&E) (800) 227-2600  
 SAN DIEGO GAS & ELECTRIC (EMERGENCY) (800) 227-2600  
 PACIFIC BELL TELEPHONE CO. (EMERGENCY) 611-7343  
 VISTA IRRIGATION DISTRICT (ENG. DEPT) (760) 597-3116  
 VISTA IRRIGATION DISTRICT (EMERGENCY) (760) 597-3131  
 COX CABLE (EMERGENCY) (760) 599-6063  
 ADELPHIA COMMUNICATIONS (EMERGENCY) (760) 436-7741  
 CITY OF VISTA (MAIN NUMBER) (760) 726-1340  
 CITY OF VISTA (ENG. DEPT. DIRECT LINE) (760) 639-6111  
 AFTER HOURS EMERGENCY DISPATCH FOR SEWER SPILLS OR STORM DRAIN CONTAMINATION - CALL RANCHO FIRE DISPATCH (EMERGENCY) (658)756-3006
- ALL CUT AND FILL SLOPES SHALL BE NO STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL UNLESS OTHERWISE SPECIFIED BY AN APPROVED SOILS ENGINEERING REPORT AND THE CITY ENGINEER.
- THE FACE OF CUT AND/OR FILL SLOPES SHALL BE PREPARED AND MAINTAINED TO PROTECT AGAINST EROSION PER CITY OF VISTA DEVELOPMENT CODE, CHAPTER 17, SECTION 17.56.
- ALL MAJOR SLOPES SHALL BE ROUNDED INTO EXISTING TERRAIN TO PRODUCE A CONTOURED TRANSITION FROM CUT OR FILL TO NATURAL GROUND ABUTTING CUT OR FILL SURFACES.
- A FINAL SOILS REPORT, WITH ORIGINAL SIGNATURE/SEAL OF SOILS ENGINEER, SHALL BE SUBMITTED IN DUPLICATE PRIOR TO ROUGH GRADING APPROVAL, AND MUST PROVIDE THE FOLLOWING INFORMATION:  
 A. SOILS BEARING VALUE  
 B. EXPANSIVE CHARACTERISTICS  
 C. FOUNDATION RECOMMENDATION  
 D. DISPOSITION OF LARGE ROCKS ENCRORCHING ONTO THE FOUNDATION  
 E. COMPACTION REPORT ON GRADED LOTS  
 F. ELEVATION OF WATER TABLE IF ENCOUNTERED  
 G. A PLAT SHOWING THE LOCATIONS OF TEST BORINGS AND/OR EXCAVATIONS
- THE PERMITTEE SHALL GIVE NOTICE TO THE CITY OF VISTA ENGINEERING INSPECTION DEPARTMENT FOR A PRE-CONSTRUCTION CONFERENCE AT LEAST 48 HOURS PRIOR TO COMMENCING THE WORK. ANY WORK DONE WITHOUT PROPER INSPECTION WILL BE SUBJECT TO REJECTION. PHONE (760) 639-6113 FOR INSPECTIONS.
- "AS BUILT" DRAWINGS MUST BE SUBMITTED BY THE ENGINEER OF WORK AND APPROVED BY THE CITY ENGINEER PRIOR TO FINAL ACCEPTANCE OF WORK.

**KEY MAP**



**KEY MAP LEGEND**

SCALE: 1" = 100'/200'

DESCRIPTION	SYMBOL
SHEET NUMBER	①

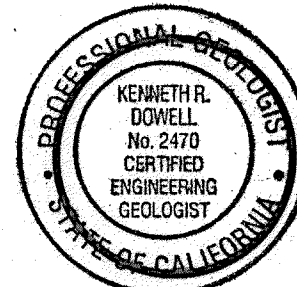
**SHEET INDEX**

SHEET 1	COVER SHEET
SHEET 2	GENERAL NOTE SHEET
SHEET 3	GENERAL NOTE SHEET
SHEET 4	GRADING SHEET
SHEET 5	GRADING SHEET
SHEET 6	EROSION CONTROL SHEET

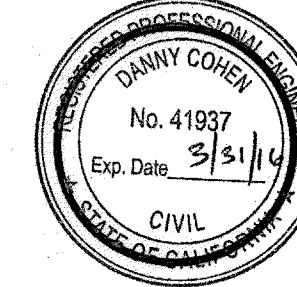
**GEOTECHNICAL DECLARATION**

THESE PLANS HAVE BEEN REVIEWED BY THE UNDERSIGNED AND THE GEOTECHNICAL ASPECTS OF THE PLANS HAVE BEEN FOUND TO BE IN CONFORMANCE WITH THE INTENTIONS OF THE FINDINGS AND RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT PREPARED BY RMA GROUP, JOB NUMBER 12-685 0/03, AND ALL SUPPLEMENTS THERETO.

DATE: 4/29/14  
 BY: [Signature] C.E.G. 2470  
 RMA GROUP INC  
 15130 SANTA MARGARITA CT  
 ADDRESS: RANCHO CARMONA CA 91730 PHONE NO. 909-981-1750



DATE: 4/29/14  
 BY: [Signature] R.C.E. 41137  
 RMA Group  
 6976 Conroy Ct.  
 San Diego, CA 92111 PHONE NO. 858-609-7130



**SOILS ENGINEER'S CERTIFICATION**

WE HEREBY CERTIFY THAT WE HAVE PROVIDED PROFESSIONAL TESTING AND APPROVAL CONCERNING THE PREPARATION OF GROUND TO RECEIVE FILLS, TESTING FOR REQUIRED COMPACTION, STABILITY OF ALL FINISH SLOPES, DESIGN OF BUTTRESS FILLS WHERE REQUIRED, THE ADEQUACY OF THE NATURAL GROUND FOR RECEIVING FILL, THE STABILITY OF CUT SLOPES WITH RESPECT TO GEOLOGICAL MATTERS AND THE NEED FOR SUBDRAINS AND OTHER GROUNDWATER DRAINAGE DEVICES, AND THAT THESE GRADING PLANS ACCURATELY REFLECT ALL CONDITIONS AND CONSTRUCTION RECOMMENDATIONS PREPARED FOR THIS PROJECT.

SOILS ENGINEER OF RECORD: \_\_\_\_\_ NAME \_\_\_\_\_

ENGINEERING GEOLOGIST OF RECORD: \_\_\_\_\_ NAME \_\_\_\_\_

**TOPOGRAPHY SOURCE**

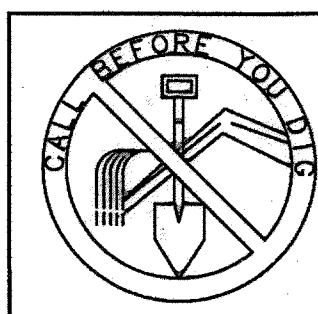
PROVIDED BY THE CITY OF VISTA

**HYDROLOGY REPORT**

A HYDROLOGY REPORT HAS NOT BEEN PREPARED FOR THIS PROJECT (WAIVED BY CITY)

**REFERENCE DRAWINGS**

CONCRETE DRIVEWAY SDRSQ-G-14B



**UNDERGROUND SERVICE ALERT**

SECTION 4216 & 4217 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER CALL UNDERGROUND SERVICE ALERT TOLL FREE @ 1-800-422-4133 TWO (2) WORKING DAYS BEFORE YOU DIG. WEB ADDRESS: WWW.DIGALERT.ORG

**DECLARATION OF RESPONSIBLE CHARGE**

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE CALIFORNIA BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT CITY OF VISTA STANDARDS. I AGREE THAT THE WORK PERFORMED BY ME GENERALLY ACCEPTED STANDARDS AND PRACTICES OF MY TRADE OR PROFESSION. I FURTHER AGREE THAT THE WORK PERFORMED HEREIN IS IN ACCORDANCE WITH THE RULES AND REGULATIONS REQUIRED BY THE CITY OF VISTA. I AGREE THAT PLAN CHECK OR REVIEW OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF VISTA, IN ITS CAPACITY AS A PUBLIC ENTITY FOR THE PLANS PREPARED BY ME, IS CONFINED TO A REVIEW ONLY AND IS NOT A DETERMINATION BY THE CITY OF VISTA OF THE TECHNICAL SUFFICIENCY OR ADEQUACY OF THE PLANS OR DESIGN AND THEREFORE DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR THE PLANS OR DESIGN OF IMPROVEMENTS BASED THEREON.

I AGREE TO INDEMNIFY AND HOLD HARMLESS THE CITY OF VISTA, ITS OFFICERS, AGENTS, AND EMPLOYEES FROM PROPERTY DAMAGE OR BODILY INJURY ARISING SOLELY FROM NEGLIGENT ACTS, ERRORS, OR OMISSIONS OF THE ENGINEER, ITS AGENTS, OR ITS EMPLOYEES, ACTING WITHIN THE COURSE AND SCOPE OF SUCH AGENCY AND EMPLOYMENT, AND ARISING OUT OF THE WORK PERFORMED BY ME.

**OWNER/APPLICANT**

CITY OF VISTA  
 200 CIVIC CENTER DRIVE  
 VISTA, CA 92084-6240  
 (760) 726-1340

**PROPERTY ADDRESS**

MELROSE DR., SOUTH OF SUNSET DR.  
 VISTA, CA 92084

**APN**

APN: 169-180-27

**DISTURBED ACREAGE**

(NO. OF ACRES)

**ESTIMATED GRADING QUANTITIES**

DESCRIPTION	QUANTITY	10% SHRINKAGE, 1 SUBSIDENCE APPLIED TO FILL QUANTITY
CUT	973	
FILL	78509	
IMPORT	77536	
EXPORT	N/A	

NOTE: QUANTITIES INCLUDE ANY EARTHWORK FOR REMEDIAL PURPOSES, QUANTITIES ARE FOR PERMIT PURPOSES ONLY. CONTRACTOR SHALL CONFIRM ALL QUANTITIES. A HAUL ROUTE PERMIT IS REQUIRED FOR ANY EXPORT/IMPORT OF SOILS AND MAY BE OBTAINED AT THE DEVELOPMENT SERVICES COUNTER.

**WORK TO BE DONE**

THE IMPROVEMENT WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING DOCUMENTS, CURRENT AT THE TIME OF CONSTRUCTION, AS DIRECTED BY THE CITY ENGINEER:

- VISTA DEVELOPMENT CODE,
- CITY OF VISTA STANDARD DRAWINGS,
- THIS SET OF PLANS,
- THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK) AND THE SAN DIEGO SPECIAL PROVISIONS,
- THE SAN DIEGO AREA REGIONAL STANDARD DRAWINGS, AND AS MAY BE MODIFIED BY THE CITY OF VISTA STANDARDS,
- THE VID STANDARDS AND SPECIFICATIONS FOR WATER

**LEGEND**

COV - CITY OF VISTA STD. DRAWING  
 VD - VISTA IRRIGATION DISTRICT STD. DRAWING  
 SDRSD - SAN DIEGO REGIONAL STD. DRAWING

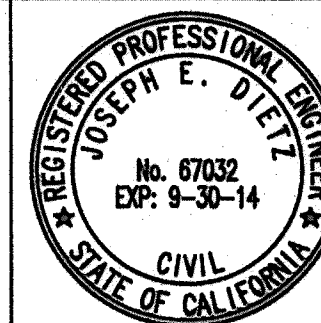
DESCRIPTION	STANDARD	SYMBOL	QUANTITY
PROPERTY LINE		---	
LOT LINE		---	
EXISTING WATERLINE		W	
EXISTING SEWER MAIN		S	
EXISTING GAS LINE		G	
EXISTING STORM DRAIN		SD	
FINISHED GROUND CONTOUR		XXX	
EXISTING GROUND CONTOUR		~ 440	
PROPOSED CUT/FILL SLOPE		▽ 2:1	
GRADED PAD LIMIT		[ ]	
FUTURE BUILDING LIMIT		[ ]	
RETAINING WALL (BY SEPARATE PERMIT)		[ ]	
FUTURE SPOT ELEVATIONS		400.50TC 400.00P	
ITEM IDENTIFICATION (WORK TO BE DONE)		ITEM NO. ①	
DEEPEENED FOOTING/RAISED STEM WALL (FOR REFERENCE ONLY) PER ARCHITECTURAL PLANS		STRUCTURE NO. WHERE APPLICABLE	
6" CURB		---	
6" CURB & GUTTER		---	
FINISH PAVEMENT ELEV.		P	
TOP OF CURB ELEV.		TC	
FLOW LINE		FL	
DIRECTION OF DRAINAGE		---	
EXISTING SPOT ELEV.		98.0	
DETAIL IDENTIFICATION		DETAIL NO. ② SHEET NO. ③	
FIRE SERVICE LATERAL		FS	
WATER LATERAL		W	
SEWER LATERAL WITH CLEAN OUT & UTILITY BOX		S	
GRAVEL BAGS		○○○○	
NO. OF PARKING SPACES		③	
EXIST. UTILITY TO BE REMOVED		///W///	

STORMWATER  
 INSPECTION PRIORITY HIGH WVID NO. #937C365889  
 "AS BUILT"  
 RCE \_\_\_\_\_ EXP. \_\_\_\_\_ DATE \_\_\_\_\_  
 REVIEWED BY: \_\_\_\_\_ DATE \_\_\_\_\_  
 INSPECTOR \_\_\_\_\_ DATE \_\_\_\_\_

**CITY of VISTA**

GRADING PLANS FOR:  
**VACANT CITY PARCEL**  
**APN: 169-180-27**  
**1350 S. MELROSE DRIVE, VISTA, CA**

APPROVED	#55075	06/30/2014	5/2/14	SHEET 1 OF 6
CITY ENGINEER	P.E.	EXP.	DATE	
BENCHMARK: CITY GS				GP14-001



**ENGINEER OF WORK**

TETRA TECH  
 17885 VON KARMAN AVE., SUITE 500  
 IRVINE, CA 92614-6213  
 PHONE (949) 809-5000 FAX (949) 809-5010

[Signature]  
 ENGINEER OF WORK DATE 03/13/2014

NO.	DESCRIPTION	CITY	DATE	VID	DATE
	APPROVED CHANGES				

**ENGINEER'S NOTE:** THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES & USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

1. DEVELOPMENT OF THIS PROJECT SHALL COMPLY WITH ALL REQUIREMENTS OF STATE WATER RESOURCES CONTROL BOARD (SWRCB) ORDER NO. 99-08-DWQ (N.P.D.E.S. GENERAL PERMIT NO. CAS000002), WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF STORM WATER RUNOFF ASSOCIATED WITH CONSTRUCTION ACTIVITY.
2. IN ACCORDANCE WITH SAID PERMIT, A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND A MONITORING PROGRAM PLAN SHALL BE DEVELOPED AND IMPLEMENTED CONCURRENT WITH THE COMMENCEMENT OF GRADING ACTIVITIES AND A COMPLETE AND ACCURATE NOTICE-OF-INTENT (NOI) WILL BE FILED WITH THE SWRCB. A COPY OF THE ACKNOWLEDGMENT FROM THE SWRCB THAT A NOI HAS BEEN RECEIVED FOR THIS PROJECT SHALL BE FILED WITH THE CITY OF VISTA WHEN RECEIVED; FURTHER, A COPY OF THE COMPLETED NOI FROM THE SWRCB SHOWING THE PERMIT NUMBER FOR THIS PROJECT SHALL BE FILED WITH THE CITY OF VISTA WHEN RECEIVED; (WDID No. 9 37C365889).
3. IN ADDITION, THE UNDERSIGNED AND SUBSEQUENT OWNER(S) OF ANY PORTION OF THE PROPERTY COVERED BY THIS GRADING PERMIT NO. GP-\_\_\_\_\_ AND BY SWRCB ORDER NO. 99-08-DWQ, AND ANY SUBSEQUENT AMENDMENTS THERETO, SHALL COMPLY WITH SPECIAL PROVISIONS AS SET FORTH IN SECTION C.7 OF SWRCB ORDER NO. 99-08-DWQ.

OWNER OF LAND \_\_\_\_\_

SIGNATURE OF LAND OWNER, CORPORATE OFFICER, GENERAL PARTNER, OR PROPRIETOR \_\_\_\_\_ DATE \_\_\_\_\_

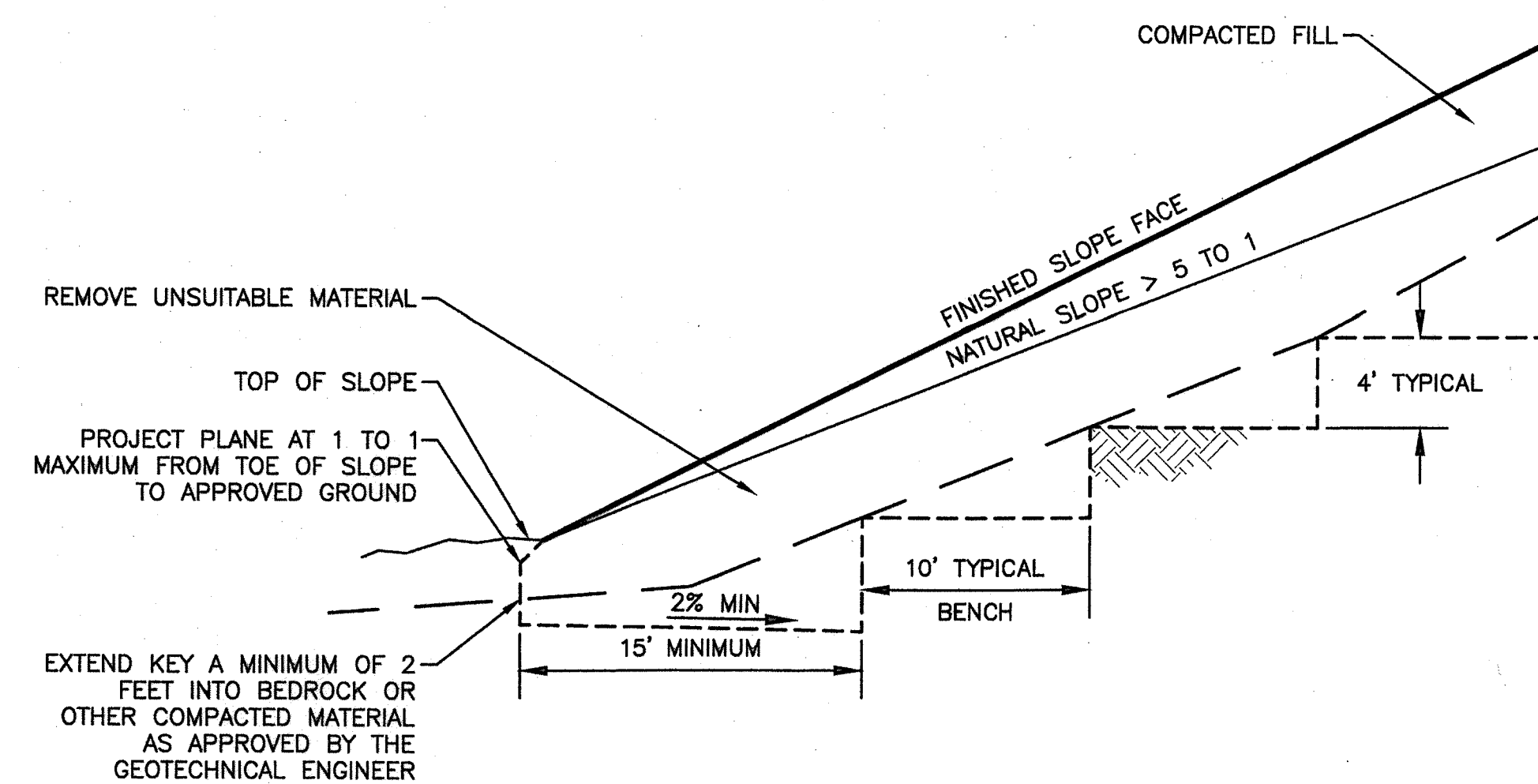
PRINTED NAME OF ABOVE PERSON \_\_\_\_\_

TITLE \_\_\_\_\_

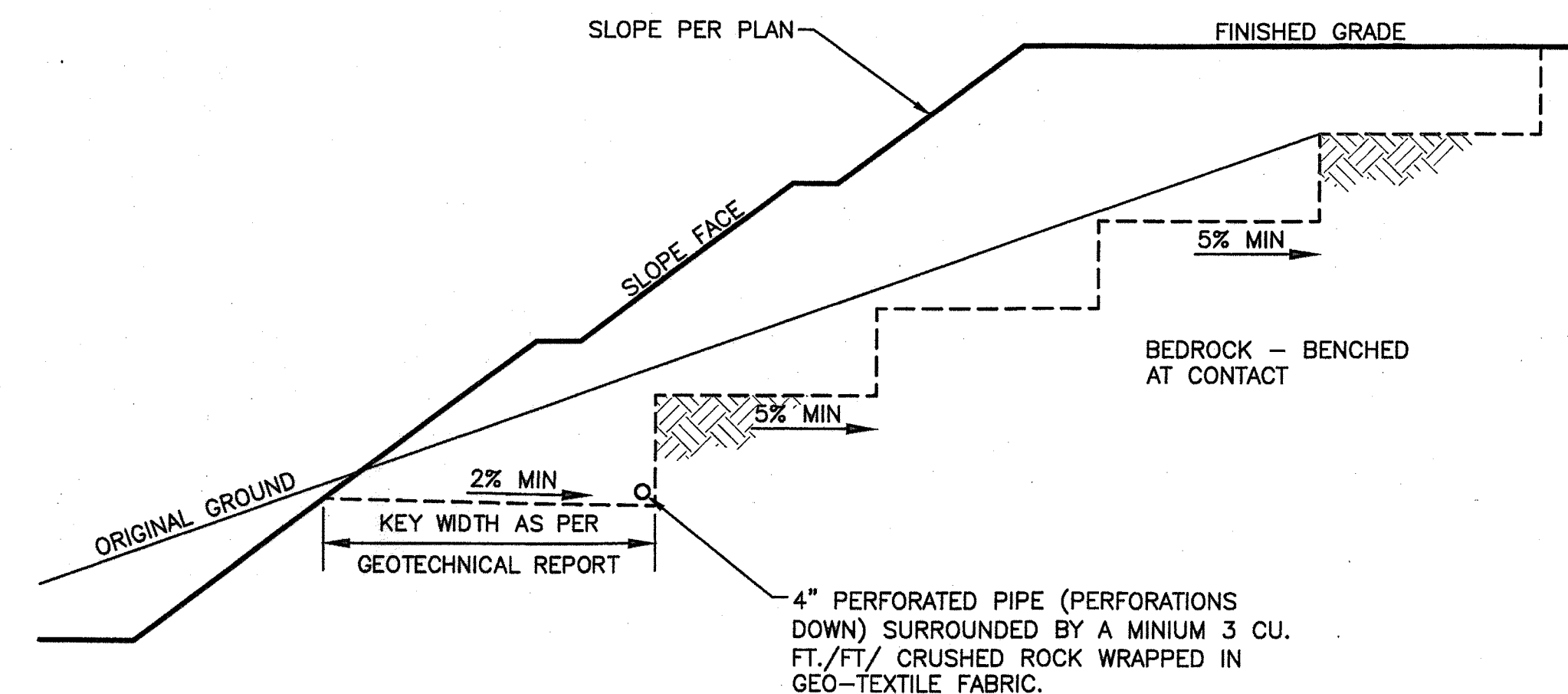
(THE ABOVE NOTE IS ONLY APPLICABLE TO SITES DISTURBING MORE THAN ONE ACRE.)

**GRADING NOTES**

1. ALL VEGETATION, TRASH AND DEBRIS SHALL BE CLEARED FROM THE AREA TO BE GRADED AND REMOVED FROM THE SITE. PRIOR TO PLACEMENT OF COMPACTED FILLS, ALL TOPSOILS, NON-ENGINEERED FILLS AND LOOSE, POUROUS, OR COMPRESSIBLE SOILS WILL NEED TO BE REMOVED DOWN TO COMPETENT GROUND.
2. PRIOR TO PLACEMENT OF FILL, ALL REMOVAL BOTTOMS IN OVEREXCAVATION AREAS AND CUT SURFACES EXPOSING COMPETENT NATIVE SOILS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 12 INCHES, MOISTURE CONDITIONED AND COMPACTED TO AT LEAST 90 PERCENT OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D1557.
3. THE REQUIREMENTS OF THE GEOTECHNICAL REPORT SHALL BE INCORPORATED INTO THE GRADING ACTIVITIES INCLUDING APPENDIX C AND APPENDIX J



**FILL OVER NATURAL SLOPE**



**SPECIFICATIONS FOR CRUSHED ROCK**

PUBLIC WORKS CONSTRUCTION SECTION 200-1.2

SIEVE SIZE	% PASSING
1"	100
3/4"	90-100
1/2"	30-60
3/8"	0-20
#4	0-5

**SPECIFICATIONS FOR PIPE**

SCHEDULE 40 PVC OR CARBON VULCANIZED 2" PVC-SDR 335 OR EQUIVALENT

FILTER FABRIC - MIRAFI 140N, SUPAC 5NP OR APPROVED EQUIVALENT.

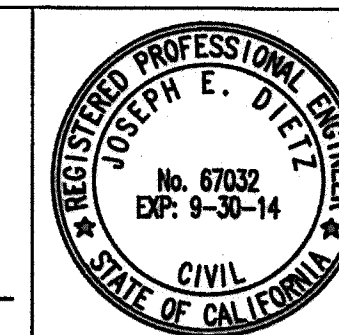
**BACKDRAINAGE DETAIL FOR FILL OVER CUT SLOPES**

NO.	DESCRIPTION	QTY	DATE	WD	DATE
APPROVED CHANGES					

**ENGINEER OF WORK**

TETRA TECH  
17885 VON KARMAN AVE., SUITE 500  
IRVINE, CA 92614-6213  
PHONE (949) 809-5000 FAX (949) 809-5010

\_\_\_\_\_  
ENGINEER OF WORK



**CITY of VISTA**

GRADING PLANS FOR:  
**VACANT CITY PARCEL**  
**APN: 169-180-27**  
**1350 S. MELROSE DRIVE, VISTA, CA**

APPROVED: \_\_\_\_\_  
CITY ENGINEER P.E. #55075 06/30/2014 5/2/14 DATE SHEET 2 OF 6

BENCHMARK: QTY QS

GP14-001

**EROSION CONTROL NOTES**

STORM WATER AND EROSION CONTROL NOTES

- TOTAL AREA OF LAND DISTURBANCE = 2.98 ACRES
- THIS PROJECT IS SUBJECT TO ALL APPLICABLE GENERAL AND PROJECT SPECIFIC PROHIBITIONS AND REQUIREMENTS IN CHAPTERS 13.18 AND 17.56 OF THE VISTA MUNICIPAL CODE, AND THE CITY STORMWATER STANDARDS MANUAL.
- BMPs AT MANNED FACILITIES MUST BE INSPECTED BY THE EROSION CONTROL CONTRACTOR BEFORE AND FOLLOWING PREDICTED RAIN EVENTS. BMPs AT UNMANNED FACILITIES MUST BE INSPECTED BY THE DISCHARGER REGULARLY DURING THE RAINY SEASON AND PERIODICALLY BETWEEN EACH RAINY SEASON. THESE BMPs MUST BE MAINTAINED SO THAT THEY CONTINUE TO FUNCTION AS DESIGNED. BMPs WHICH FAIL MUST BE REPAIRED AS SOON AS IT IS SAFE TO DO SO. IF THE FAILURE OF A BMP INDICATES THAT THE BMPs IN USE ARE INAPPROPRIATE OR INADEQUATE TO THE CIRCUMSTANCES, THE BMPs MUST BE MODIFIED OR UPGRADED TO PREVENT ANY FURTHER FAILURE IN THE SAME OR SIMILAR CIRCUMSTANCES.
- IN THE EVENT OF FAILURE OR REFUSAL TO PROPERLY MAINTAIN SAID DEVICES, THE CITY ENGINEER MAY CAUSE EMERGENCY MAINTENANCE WORK TO BE DONE TO PROTECT ADJACENT PRIVATE AND PUBLIC PROPERTY, THE COST OF WHICH (INCLUDING AN INITIAL MOBILIZATION AMOUNT) SHALL BE CHARGED TO THE OWNER.
- SEDIMENTATION BASINS MAY NOT BE REMOVED OR MADE INOPERATIVE WITHOUT PRIOR APPROVAL OF THE CITY ENGINEER.
- TEMPORARY EROSION CONTROL DEVICES SHOWN ON THE EROSION CONTROL PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED AS THE WORK PROGRESSES AS RECOMMENDED BY THE ENGINEER OF WORK AND AS APPROVED BY THE CITY ENGINEER.
- ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE STREET AREAS UPON STARTING OPERATIONS, AND PERIODICALLY THEREAFTER, AS DIRECTED BY THE INSPECTOR.
- A 12-INCH HIGH BY 4-FOOT WIDE BERM SHALL BE MAINTAINED ALONG THE TOP OF SLOPE OF THOSE FILLS ON WHICH GRADING IS NOT IN PROGRESS. CONCENTRATED WATER SHALL NOT BE CARRIED WITHIN 10 FEET FROM THE TOP OF SLOPES.
- STAND-BY CREWS SHALL BE ALERTED BY THE CONTRACTOR, PERMITTEE, OR OWNER FOR EMERGENCY WORK DURING RAINSTORMS.
- ALL UTILITY TRENCHES SHALL BE BACKFILLED WITHIN 24 HOURS AND MUST BE BACKFILLED BEFORE THE END OF THE WORK DAY IF A 40% CHANCE OF RAIN IS PREDICTED.
- ALL BUILDING PADS SHALL BE SLOPED TOWARDS THE DRIVEWAY AND VELOCITY CHECK DAMS PROVIDED AT THE BASE OF ALL DRIVEWAYS DRAINING INTO THE STREET. VELOCITY CHECK DAMS SHALL BE PROVIDED ACROSS THE OUTLETS OF ALL LOTS DRAINING ONTO THE STREET.
- PROVIDE VELOCITY CHECK DAMS IN ALL STREET AREAS, PAVED OR UNPAVED, AT THE INTERVALS INDICATED BELOW. VELOCITY CHECK DAMS MAY BE CONSTRUCTED OF GRAVEL BAGS, TIMBER, OR OTHER EROSION RESISTANT MATERIALS APPROVED BY THE CITY ENGINEER, AND SHALL EXTEND COMPLETELY ACROSS THE STREET OR CHANNEL AT RIGHT ANGLES TO THE CENTERLINE. EARTHEN DIKES MAY NOT BE USED AS VELOCITY CHECK DAMS.
 

STREET GRADE	CHECK DAM INTERVAL
LESS THAN 2%	AS REQUIRED
2% TO 4%	100 FEET
4% TO 10%	50 FEET
OVER 10%	25 FEET
- PROVIDE VELOCITY CHECK DAMS IN ALL UNPAVED GRADED CHANNELS AT THE INTERVALS INDICATED BELOW UNLESS CHANNELS ARE LINED WITH TEMPORARY MATERIALS SUCH AS PLASTIC SHEETING.
 

CHANNEL GRADE	CHECK DAM INTERVAL
LESS THAN 3%	100 FEET
3% TO 6%	50 FEET
OVER 6%	25 FEET
- A GRAVEL BAG SILT BASIN, OR SILT TRAP, SHALL BE PROVIDED AT EVERY STORM DRAIN INLET TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM.
- A GUARD SHALL BE POSTED ON SITE WHENEVER THE DEPTH OF WATER IN ANY DEVICE EXCEEDS TWO FEET.
- ALL REMOVABLE PROTECTION DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE 5-DAY RAIN FORECAST PROBABILITY EXCEEDS 40%. AFTER EACH RAINSTORM EXCEEDING 1/4 INCH IN A 12 HOUR PERIOD, SILT AND DEBRIS SHALL BE REMOVED FROM CHECK DAMS AND DESILTING BASINS, AND BASINS SHALL BE PUMPED DRY.
- EFFECTIVE PLANTING SHALL BE INSTALLED, FULLY GERMINATED, AND SHALL EFFECTIVELY COVER THE REQUIRED SLOPES PRIOR TO FINAL APPROVAL. THE PLANTING MIX SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO INSTALLATION. SPRINKLER SYSTEMS ARE REQUIRED ON ALL SLOPES OVER FIVE FEET IN HEIGHT. TEMPORARY SPRINKLER SYSTEMS WILL BE REQUIRED ON ALL SLOPES UNTIL PLANTING IS ESTABLISHED, AND MAY NOT BE REMOVED WITHOUT PRIOR APPROVAL OF THE CITY ENGINEER.
- GRAVEL BAGS AND NECESSARY MATERIALS SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR ANY DAMAGED EROSION CONTROL MEASURES, WHEN RAIN IS IMMINENT. A STAND-BY CREW SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON.
- ANY PROPOSED ALTERNATE EROSION CONTROL MEASURES ARE TO BE RECOMMENDED BY THE ENGINEER OF WORK, FOR APPROVAL BY THE CITY ENGINEER, PRIOR TO INSTALLATION.
- FROM OCTOBER 1ST THROUGH APRIL 30TH OF EACH YEAR, COV MUNICIPAL CODE, CHAPTER 17.56, REQUIRES THAT ALL DENUDED SLOPE FACES BE PROTECTED FROM EROSION, AND THAT ALL SEDIMENT BE KEPT ON SITE. THE USE OF INDUSTRY STANDARD SLOPE PROTECTION AND SEDIMENT CONTROL METHODS ARE REQUIRED TO BE IN PLACE AND MAINTAINED 24 HOURS A DAY/7 DAYS A WEEK.
- MATERIALS AND WASTE WITH THE POTENTIAL TO POLLUTE URBAN RUN-OFF SHALL BE USED IN ACCORDANCE WITH LABEL DIRECTIONS AND SHALL BE STORED IN A MANNER THAT EITHER PREVENTS CONTACT WITH RAINFALL OR CONTAINS CONTAMINATED RUN-OFF FOR TREATMENT AND DISPOSAL.

**EROSION CONTROL NOTES (cont'd.)**

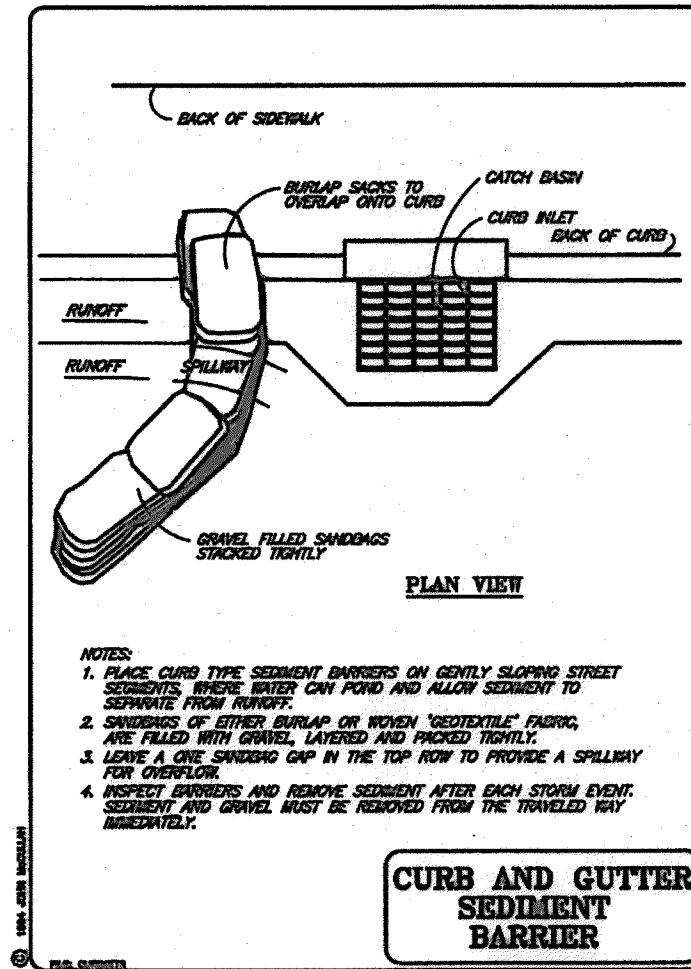
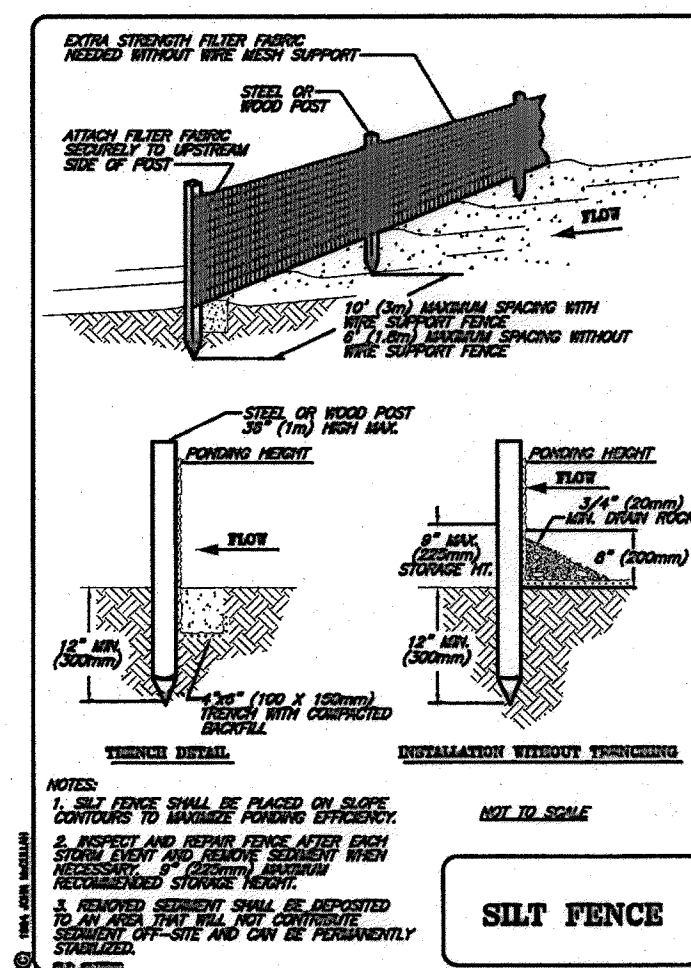
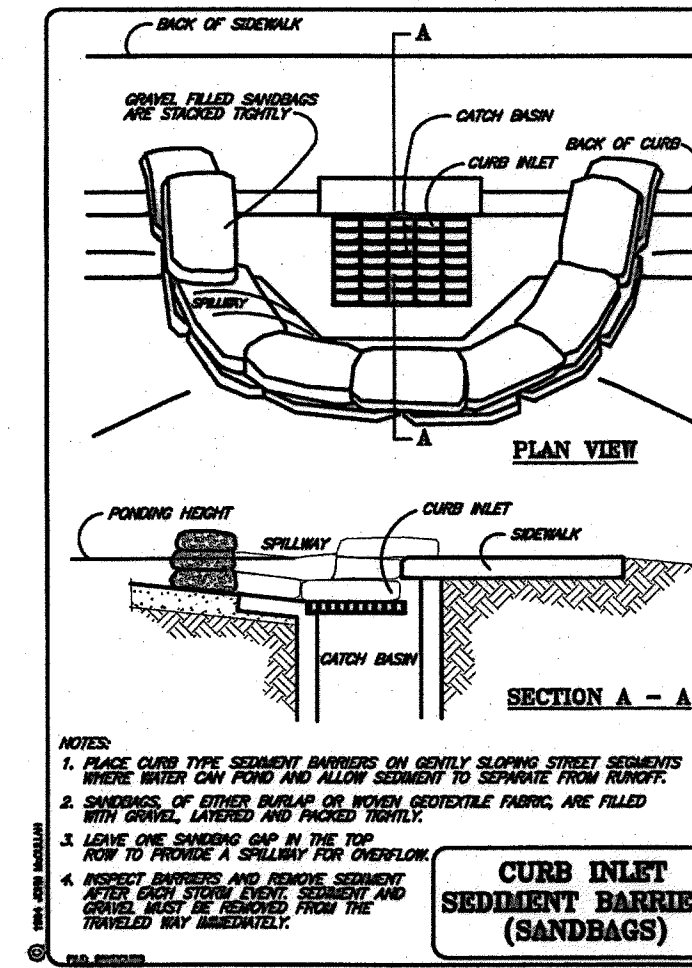
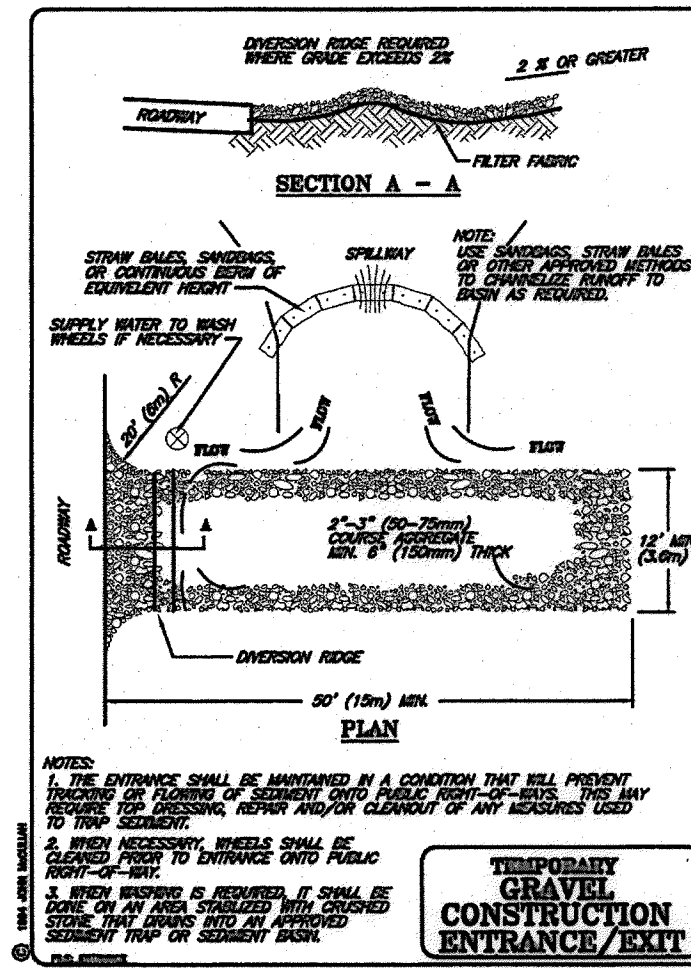
23. THE OWNER DESIGNATED 24-HOUR TELEPHONE NUMBER AND THE NAME(S) OF THE PERSON(S) RESPONSIBLE FOR EMERGENCY WORK APPEARS BELOW AND SHALL AT ALL TIMES BE POSTED IN A CONSPICUOUS PLACE ONSITE TO FACILITATE PUBLIC REPORTING OF PROBLEMS. (A TELEPHONE ANSWERING MACHINE OR ANSWERING SERVICE IS UNACCEPTABLE.)

DAVID SINDELAR  
NAME

909-322-8752  
24 HOUR PHONE NUMBER

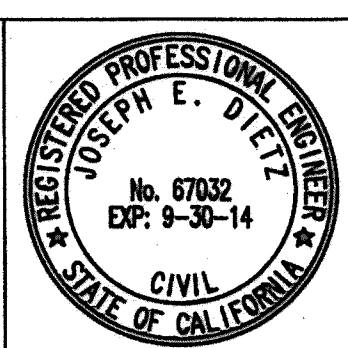
CONTRACTOR SHALL IMPLEMENT AND MAINTAIN ONSITE AT ALL TIMES A STORMWATER MANAGEMENT PLAN (SWMP) OR STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN CITY APPROVED FORMAT WHICH IS HEREBY INCORPORATED WITH THESE PLANS BY REFERENCE. SAID PLAN SHALL BE KEPT CURRENT AND REFLECTIVE OF CURRENT SITE CONDITIONS.

**EROSION CONTROL DETAILS**



NO.	DESCRIPTION	CITY	DATE	VID	DATE
APPROVED CHANGES					

**ENGINEER OF WORK**  
TETRA TECH  
17885 VON KARMAN AVE., SUITE 500  
IRVINE, CA 92614-6213  
PHONE (949) 809-5000 FAX (949) 809-5010  
DATE: 03/13/2014



**CITY of VISTA**

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APN: 169-180-27  
1350 S. MELROSE DRIVE, VISTA, CA

APPROVED: [Signature]  
CITY ENGINEER P.E. #55075  
DATE: 06/30/2014  
EXP: 5/2/14

BENCHMARK: CITY GS

SHEET 3 OF 6  
GP14-001

LEVEL OF COMPLETENESS 90%

- NOTES:**
1. CONTRACTOR SHALL FIELD VERIFY TIE-IN ELEVATIONS.
  2. CONTRACTOR SHALL PROTECT ALL EXISTING ITEMS IN PLACE UNLESS OTHERWISE NOTED.

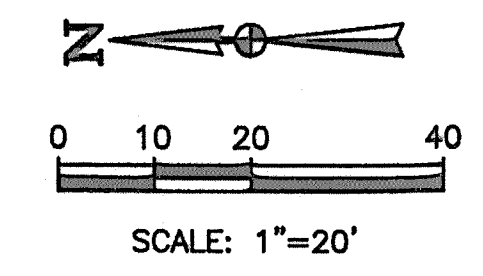
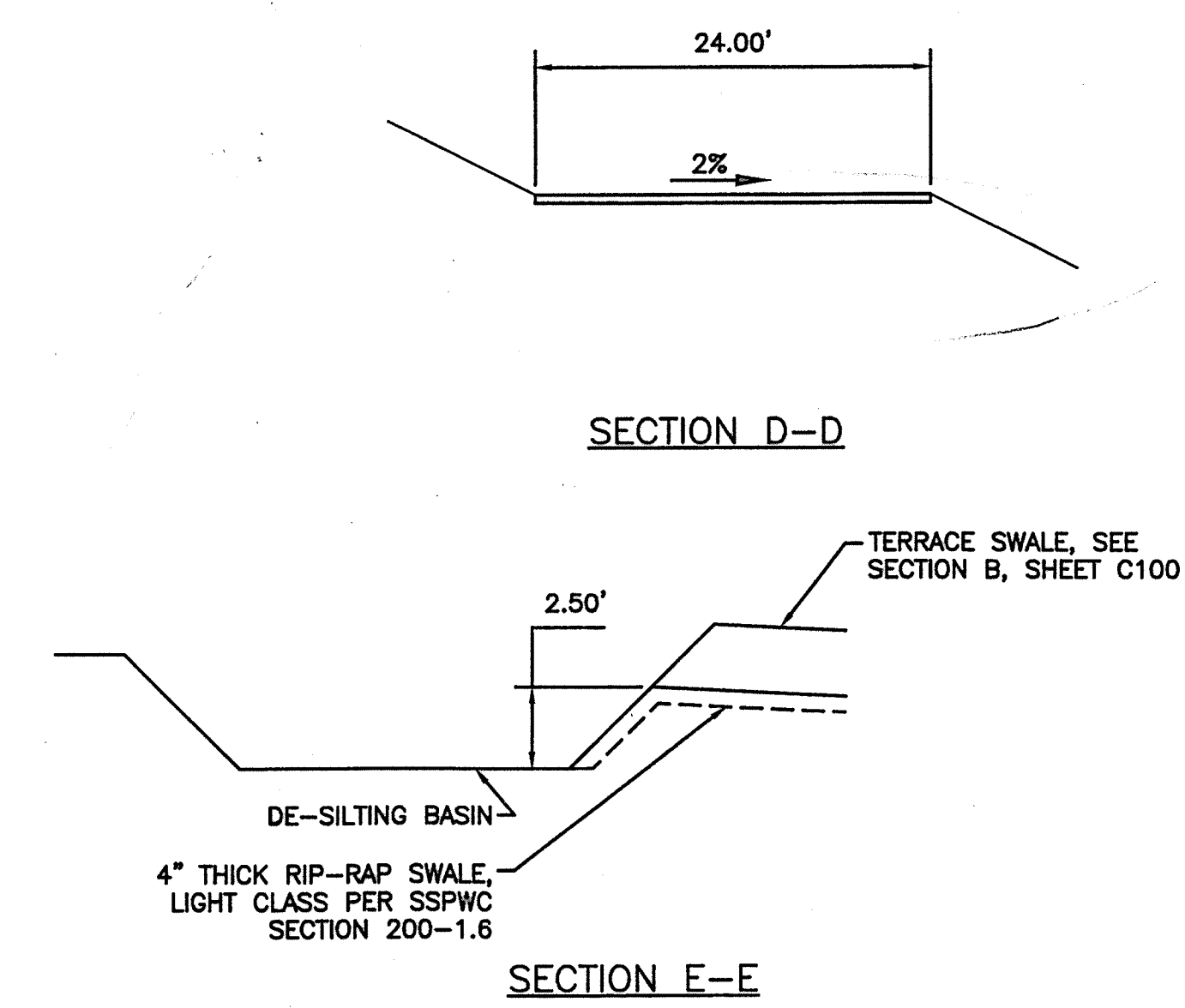
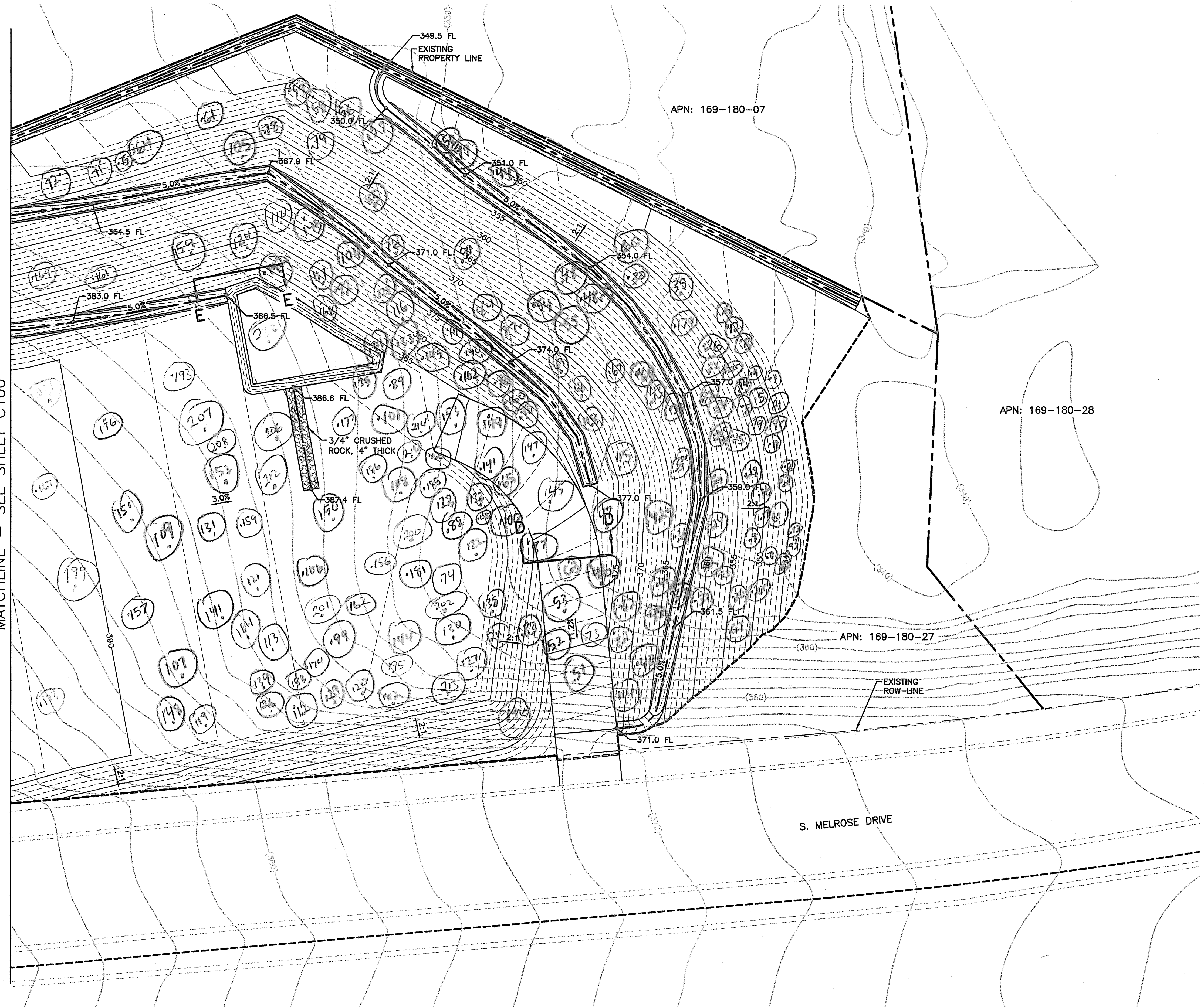
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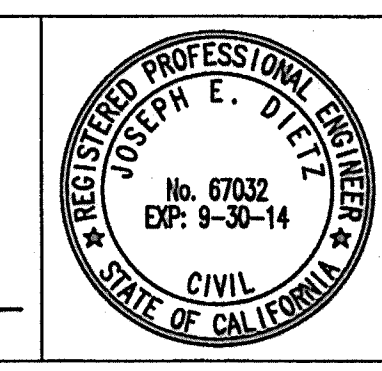
S. MELROSE DRIVE

MATCHLINE - SEE SHEET C100



NO.	DESCRIPTION	CITY	DATE	VID	DATE
APPROVED CHANGES					

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APPROVED	#55075	06/30/2014	5/2/14	SHEET 5 OF 6
<i>[Signature]</i>	P.E.	EXP.	DATE	

BENCHMARK: CITY GS

GP14-001

P.C.: NA LD# 14-001 DWG#: NA

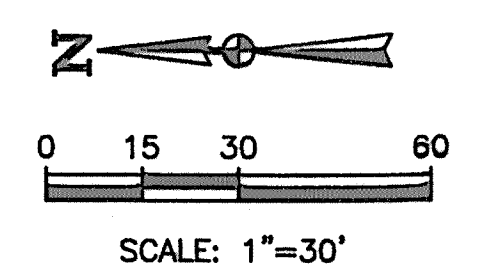
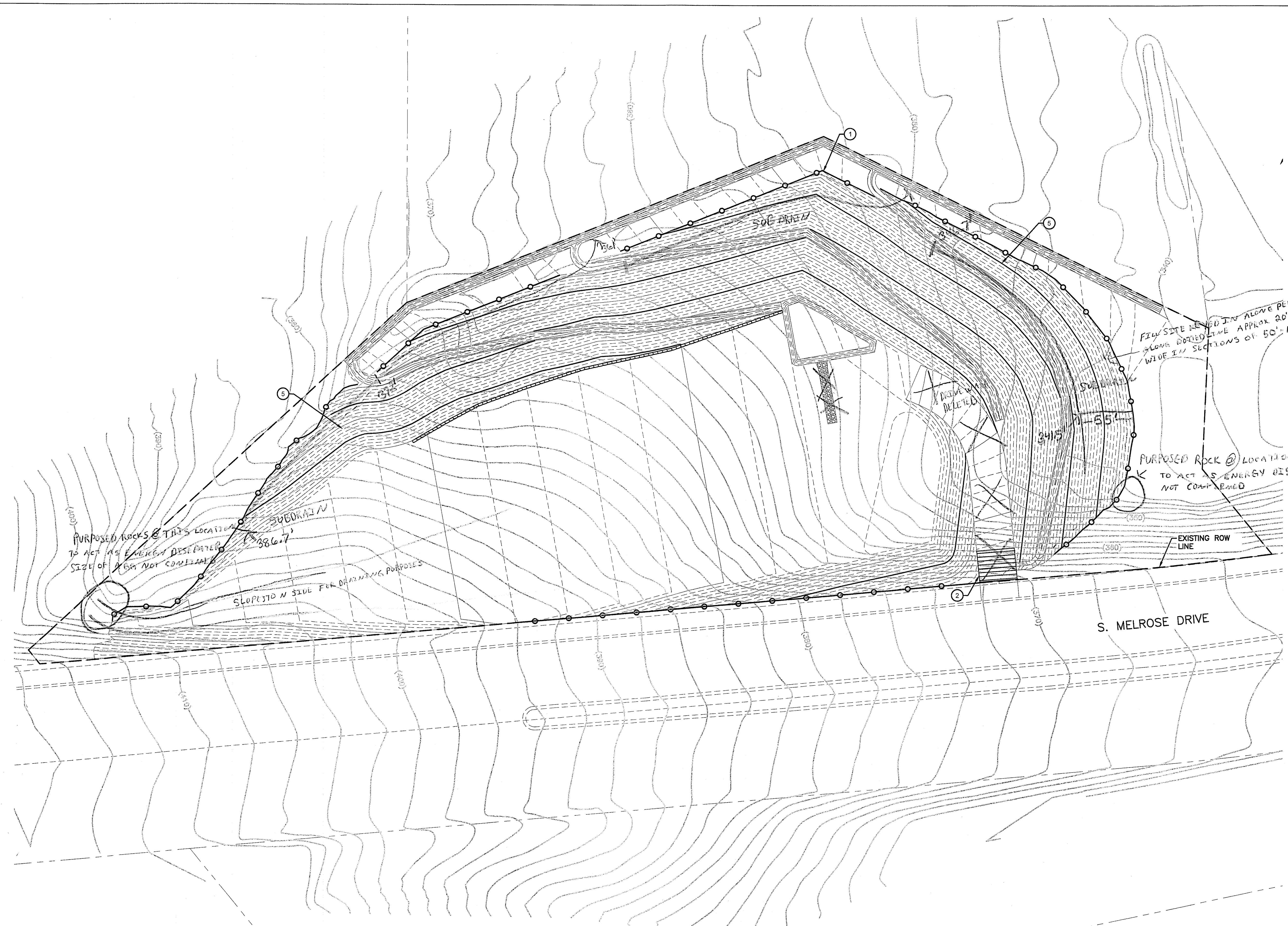
LEVEL OF COMPLETENESS 90%

**CONSTRUCTION NOTES**

- ① SILT FENCE, PER DETAIL, SHEET G003
- ② STABILIZED CONSTRUCTION ENTRANCE, PER CASQA TC-1
- ③ NOT USED
- ④ SANDBAG BARRIER, PER CASQA SE-8
- ⑤ FIBER ROLLS, PER CASQA SE-5

**LEGEND**

- SILT FENCE
- PROJECT LIMITS
- SANDBAGS
- FIBER ROLLS

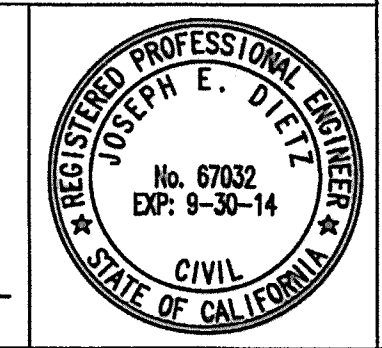


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APPROVED: *Joseph E. Ditzel*  
 CITY ENGINEER P.E.  
 BENCHMARK: CITY GAS

DATE: 03/13/2014



**CITY of VISTA**

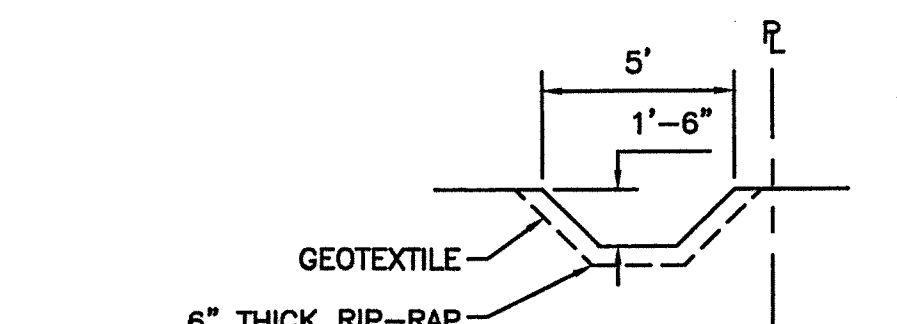
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BENCHMARK: CITY GAS				GP14-001

LEVEL OF COMPLETENESS 90%

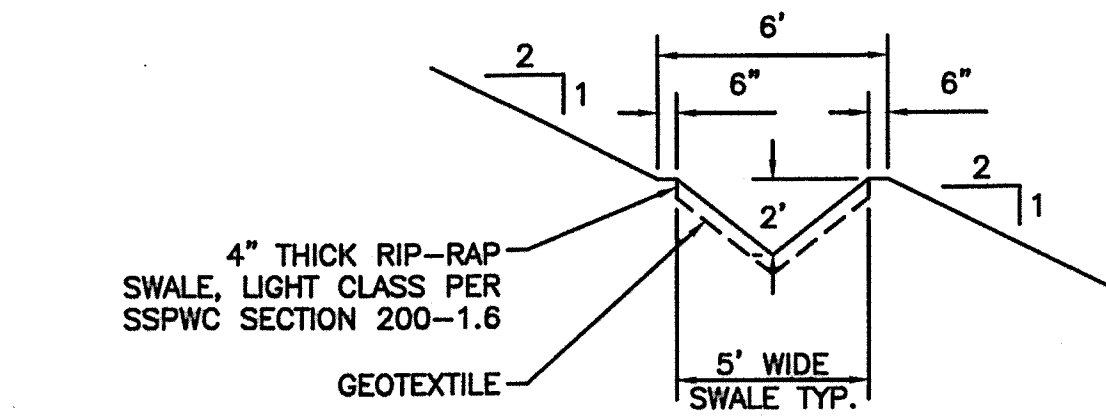


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6" THICK RIP-RAP SWALE, LIGHT CLASS PER SSPWC SECTION 200-1.6

SECTION A-A

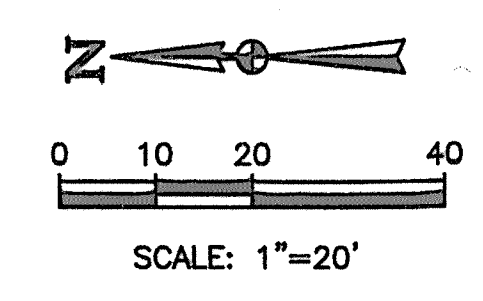


4" THICK RIP-RAP SWALE, LIGHT CLASS PER SSPWC SECTION 200-1.6

SECTION B-B

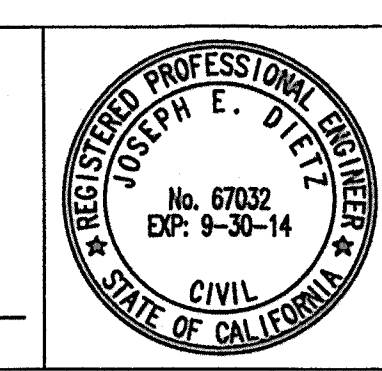


MATCHLINE - SEE SHEET C101



NO.	DESCRIPTION	CITY	DATE	VD	DATE

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GP14-001

P.C.: NA LD# 14-001 DWG#: NA

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