Appendix B:
Biological Resources

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B.1 - Arborist Report

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HORTICULTURAL
Associates

Consultants in Horticulture and Arboriculture

TREE PRESERVATION AND MITIGATION REPORT

Mill Creek Community
Windsor, CA

Prepared For:

First Carbon Solutions
1350 Treat Boulevard, Suite 380
Walnut Creek, CA 94597

Prepared by:

John C. Meserve
Consulting Arborist and Horticulturist
ISA Certified Arborist, WE #0478A
ISA Tree Risk Assessment Qualified

February 28, 2018

HORTICULTURAL Associates

Consultants in Horticulture and Arboriculture
P.O Box 1261, Glen Ellen, CA 95442

February 28, 2018

Janna Waligorski
First Carbon Solutions
1350 Treat Blvd., Suite 380
Walnut Creek, CA 94597

Re: Completed *Tree Preservation and Mitigation Report*, Mill Creek Community in Windsor,

Janna,

Attached you will find our completed *Tree Preservation and Mitigation Report* for the above noted site in Santa Rosa. A total of 155 trees were evaluated on the property and this includes all protected trees as defined in the Windsor Tree Ordinance. Many other trees are present which are not protected species and these have not been included in this study. Project edge trees along the creek that are protected have also been included, but most creek trees have not been included because they are well inside the limits of the creek setback.

Each tree is identified with a numbered aluminum tag placed on the trunk at approximately eye level. Overhanging off-site trees were included in the Inventory, but were not tagged. Some trees on the project site located in dense berry brambles or poison oak were also not physically tagged due to difficult access.

Each tree in this report was evaluated and documented for species, size, health, and structural condition. The *Tree Inventory Chart* also includes information about expected impacts of the proposed development plan and recommendations for action based on the plan reviewed. The *Tree Location Plan* shows the location and numbering sequence of all evaluated trees. A *Tree Fencing Detail* is included, as well as *Tree Protection Guidelines* and *Pruning Standards.*

The plans that were provided for our use did not include the surveyed locations of all protected trees present and where this occurred we estimated tree location.

This report is intended to be a basic inventory of trees present at this site, which includes a general review of tree health and structural condition. No in-depth evaluation has occurred, and assessment has included only external visual examination without probing, drilling, coring, root collar examination, root excavation, or dissecting any tree

part. Failures, deficiencies, and problems may occur in these trees in the future, and this inventory in no way guarantees or provides a warranty for their condition.

EXISTING SITE CONDITION SUMMARY

The project site consists of an empty field with some urban detritus and fill soil located in various locations. Past history of the site is unknown.

EXISTING TREE SUMMARY

Protected tree species found on the site include Coast Live Oak, Valley Oak, Coast Redwood, Oregon Ash, and California Buckeye.

Several larger trees that are not protected were included because of their size and potential usefulness at the site, and these included Monterey Pine, Pittosporum, and native Willow.

CONSTRUCTION IMPACT SUMMARY

Of the 155 trees in this inventory the following development impacts can be expected:

(87) Preservation appears to be possible

(64) Removal required due to expected development impacts

(4) Removal recommended due to existing poor condition

Please feel free to contact me if you have questions regarding this report, or if further discussion would be helpful.

Regards,

John C. Meserve
Consulting Arborist and Horticulturist
ISA Certified Arborist, WE #0478A



TREE INVENTORY CHART

TREE INVENTORY
Mill Creek Community
Windsor, CA

February 28, 2018

Tree #	Species	Common Name	Trunk (dbh inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1-4	Expected Impact	Recommendations
1	*Quercus lobata*	Valley Oak	8	22	12	3	3	3	1, 6, 7, 8, 9
2	*Quercus lobata*	Valley Oak	±8+10	28	14	3	3	3	1, 6, 7, 8, 9
3	*Quercus lobata*	Valley Oak	21.5	45	32	3	2	3	1, 6, 7, 8, 9
4	*Pittosporum* sp.	Pittosporum	Multi-trunk	30	18	3	3	3	1, 6, 7, 8, 9
5	*Quercus agrifolia*	Coast Live Oak	7.5	18	12	4	3	3	2
6	*Quercus lobata*	Valley Oak	11.5	32	16	4	3	3	2
7	*Quercus agrifolia*	Coast Live Oak	12	26	14	4	3	3	2
8	*Quercus lobata*	Valley Oak	9.5	35	16	4	3	3	2
9	*Quercus lobata*	Valley Oak	8.5	35	16	4	3	3	2
10	*Quercus lobata*	Valley Oak	9	40	18	4	3	3	2
11	*Quercus lobata*	Valley Oak	±12	40	18	3	3	3	2
12	*Sequoia sempervirens*	Coast Redwood	±10	30	12	4	3	3	2
13	*Quercus lobata*	Valley Oak	7.5	20	12	3	3	3	2
14	*Quercus lobata*	Valley Oak	8+16+8+6	40	24	3	2	3	1, 6, 7, 8, 9
15	*Quercus lobata*	Valley Oak	10+8+8.5+5.5	40	28	3	3	3	1, 6, 7, 8, 9
16	*Quercus lobata*	Valley Oak	±9+3	40	16	3	3	3	1, 6, 7, 8, 9

HORTICULTURAL ASSOCIATES
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TREE INVENTORY
Mill Creek Community
Windsor, CA

February 28, 2018

Tree #	Species	Common Name	Trunk (dbh inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1-4	Expected Impact	Recommendations
17	*Quercus lobata*	Valley Oak	6	20	10	3	3	3	1, 6, 7, 8, 9
18	*Quercus lobata*	Valley Oak	8	30	18	3	3	3	1, 6, 7, 8, 9
19	*Quercus lobata*	Valley Oak	6	20	12	3	3	3	1, 6, 7, 8, 9
20	*Quercus lobata*	Valley Oak	7	32	14	3	3	3	1, 6, 7, 8, 9
21	*Quercus lobata*	Valley Oak	6.5+5	22	14	3	3	3	1, 6, 7, 8, 9
22	*Quercus lobata*	Valley Oak	±7+5	30	12	3	3	3	1, 6, 7, 8, 9
23	*Quercus lobata*	Valley Oak	7.5	22	10	3	3	3	2
24	*Quercus lobata*	Valley Oak	6.5	30	14	3	3	3	2
25	*Quercus lobata*	Valley Oak	6.5+5	20	9	3	3	3	2
26	*Quercus lobata*	Valley Oak	8+4.5	25	12	4	3	3	2
27	*Salix* sp.	Willow	±6	23	16	4	3	3	1, 6, 7, 8, 9
28	*Salix* sp.	Willow	±20+16	40	28	4	3	3	1, 6, 7, 8, 9
29	*Salix* sp.	Willow	±8	18	30	4	2	3	1, 6, 7, 8, 9
30	*Quercus lobata*	Valley Oak	±18+20+21	48	32	4	2	3	1, 6, 7, 8, 9
31	*Salix* sp.	Willow	±18	35	32	4	3	3	1, 6, 7, 8, 9
32	*Quercus lobata*	Valley Oak	23.5	52	28	4	3	3	1, 6, 7, 8, 9

TREE INVENTORY
Mill Creek Community
Windsor, CA

Tree #	Species	Common Name	Trunk (dbh inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1-4	Expected Impact	Recommendations
33	*Quercus lobata*	Valley Oak	±20	45	24	4	3	3	1, 6, 7, 8, 9
34	*Quercus lobata*	Valley Oak	20.5	42	22	4	3	3	1, 6, 7, 8, 9
35	*Quercus lobata*	Valley Oak	14.5	40	22	4	3	3	1, 6, 7, 8, 9
36	*Quercus lobata*	Valley Oak	±24	48	33	3	2	3	1, 6, 7, 8, 9
37	*Quercus lobata*	Valley Oak	8+8	30	16	4	3	3	1, 6, 7, 8, 9
38	*Quercus lobata*	Valley Oak	9+16.5	45	24	4	3	3	1, 6, 7, 8, 9
39	*Quercus lobata*	Valley Oak	±34	50	26	4	2	3	1, 6, 7, 8, 9
40	*Fraxinus latifolia*	Oregon Ash	23.5	45	20	4	2	3	1, 6, 7, 8, 9
41	*Quercus lobata*	Valley Oak	32	38	26	4	2	3	1, 6, 7, 8, 9
42	*Quercus lobata*	Valley Oak	23	50	30	4	3	3	1, 6, 7, 8, 9
43	*Salix* sp.	Willow	7.5	20	10	2	1	3	1, 6, 7, 8, 9
44	*Quercus lobata*	Valley Oak	±18	45	26	4	2	3	1, 6, 7, 8, 9
45	*Quercus lobata*	Valley Oak	26.5	45	32	4	3	3	1, 6, 7, 8, 9
46	*Quercus lobata*	Valley Oak	±22	40	24	4	3	3	2
47	*Fraxinus latifolia*	Oregon Ash	7+4.5	20	16	3	3	3	2
48	*Quercus lobata*	Valley Oak	9	32	14	4	3	3	2

TREE INVENTORY
Mill Creek Community
Windsor, CA

Tree #	Species	Common Name	Trunk (dbh inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1-4	Expected Impact	Recommendations
49	*Quercus lobata*	Valley Oak	9	32	20	4	3	3	2
50	*Quercus lobata*	Valley Oak	6	12	10	3	2	3	2
51	*Quercus lobata*	Valley Oak	8	22	18	3	3	3	2
52	*Quercus lobata*	Valley Oak	6.5	36	14	4	3	3	1, 6, 7, 8, 9
53	*Quercus lobata*	Valley Oak	10.5+14+5.5	42	24	4	3	3	1, 6, 7, 8, 9
54	*Fraxinus latifolia*	Oregon Ash	9.5	25	25	3	3	3	1, 6, 7, 8, 9
55	*Quercus lobata*	Valley Oak	17	45	24	4	3	3	1, 6, 7, 8, 9
56	*Quercus lobata*	Valley Oak	9.5	30	26	4	3	3	1, 6, 7, 8, 9
57	*Quercus lobata*	Valley Oak	7	26	14	4	3	3	1, 6, 7, 8, 9
58	*Quercus lobata*	Valley Oak	9	35	18	4	3	3	1, 6, 7, 8, 9
59	*Quercus lobata*	Valley Oak	9+3.5	22	14	3	3	3	2
60	*Quercus lobata*	Valley Oak	10	35	16	3	3	3	2
61	*Quercus lobata*	Valley Oak	6	20	9	3	3	3	2
62	*Quercus lobata*	Valley Oak	21+16.5	38	30	4	3	3	2
63	*Quercus lobata*	Valley Oak	12	40	18	3	3	3	2
64	*Quercus lobata*	Valley Oak	6.5	35	12	4	3	3	2

TREE INVENTORY
Mill Creek Community
Windsor, CA

Tree #	Species	Common Name	Trunk (dbh inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1-4	Expected Impact	Recommendations
65	*Quercus lobata*	Valley Oak	6	20	9	4	3	3	2
66	*Quercus lobata*	Valley Oak	22.5	52	32	4	3	3	2
67	*Quercus lobata*	Valley Oak	7.5+5.5+6+3	20	18	4	3	3	2
68	*Quercus lobata*	Valley Oak	13	35	20	4	3	3	2
69	*Quercus lobata*	Valley Oak	10.5	22	18	3	3	3	1, 6, 7, 8, 9
70	*Quercus lobata*	Valley Oak	13+11	35	22	3	3	3	1, 6, 7, 8, 9
71	*Quercus lobata*	Valley Oak	7	32	14	3	3	3	1, 6, 7, 8, 9
72	*Quercus lobata*	Valley Oak	6	14	14	3	3	3	1, 6, 7, 8, 9
73	*Quercus lobata*	Valley Oak	7+5.5	18	14	3	3	3	1, 6, 7, 8, 9
74	*Quercus lobata*	Valley Oak	12.5	38	18	3	3	3	1, 6, 7, 8, 9
75	*Quercus lobata*	Valley Oak	12.5	25	18	3	3	3	1, 6, 7, 8, 9
76	*Quercus lobata*	Valley Oak	10	36	14	3	3	3	1, 6, 7, 8, 9
77	*Quercus lobata*	Valley Oak	25	48	24	4	3	3	2
78	*Quercus lobata*	Valley Oak	7.5	18	11	3	3	3	1, 6, 7, 8, 9
79	*Quercus lobata*	Valley Oak	4.5+6	25	12	4	3	3	2
80	*Quercus lobata*	Valley Oak	6	22	12	4	3	3	2

TREE INVENTORY
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Tree #	Species	Common Name	Trunk (dbh inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1-4	Expected Impact	Recommendations
81	*Quercus agrifolia*	Coast Live Oak	8.5	22	12	4	3	3	2
82	*Quercus lobata*	Valley Oak	7	29	14	4	3	3	2
83	*Quercus lobata*	Valley Oak	10+5.5	30	16	3	3	3	2
84	*Quercus lobata*	Valley Oak	10	30	16	4	3	3	2
85	*Quercus lobata*	Valley Oak	6.5	20	12	4	3	3	2
86	*Quercus lobata*	Valley Oak	6	22	9	4	3	3	2
87	*Quercus lobata*	Valley Oak	21	32	25	4	3	3	2
88	*Quercus lobata*	Valley Oak	11.5	35	18	4	3	3	1, 6, 7, 8, 9
89	*Quercus lobata*	Valley Oak	10.5+9	36	16	3	3	3	1, 6, 7, 8, 9
90	*Quercus lobata*	Valley Oak	7	25	12	3	3	3	1, 6, 7, 8, 9
91	*Quercus lobata*	Valley Oak	13	30	18	3	3	3	1, 6, 7, 8, 9
92	*Quercus lobata*	Valley Oak	10.5	24	16	3	2	3	1, 6, 7, 8, 9
93	*Quercus lobata*	Valley Oak	6.5	18	9	3	3	3	1, 6, 7, 8, 9
94	*Quercus lobata*	Valley Oak	7.5	20	12	4	3	3	1, 6, 7, 8, 9
95	*Quercus lobata*	Valley Oak	8.5+8.5+5.5+4.5+6	30	20	3	3	3	1, 6, 7, 8, 9
96	*Quercus lobata*	Valley Oak	6.5	25	12	3	3	3	1, 6, 7, 8, 9

TREE INVENTORY
Mill Creek Community
Windsor, CA

Tree #	Species	Common Name	Trunk (dbh inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1-4	Expected Impact	Recommendations
97	*Quercus lobata*	Valley Oak	4+5.5+6+7	25	14	3	3	3	1, 6, 7, 8, 9
98	*Quercus lobata*	Valley Oak	6.5+5	20	10	3	3	3	1, 6, 7, 8, 9
99	*Quercus lobata*	Valley Oak	±6	16	6	3	3	3	1, 6, 7, 8, 9
100	*Quercus lobata*	Valley Oak	8	32	14	4	3	3	2
101	*Quercus lobata*	Valley Oak	±9=10	38	16	3	3	3	2
102	*Quercus lobata*	Valley Oak	6+9	32	16	3	3	3	2
103	*Quercus lobata*	Valley Oak	6	25	10	3	3	3	2
104	*Quercus lobata*	Valley Oak	11	38	16	4	3	3	2
105	*Quercus lobata*	Valley Oak	6	30	12	4	3	3	2
106	*Quercus lobata*	Valley Oak	±10	38	14	4	3	3	2
107	*Quercus lobata*	Valley Oak	11	32	16	4	3	3	2
108	*Quercus lobata*	Valley Oak	±12+10	34	16	3	3	3	2
109	*Quercus lobata*	Valley Oak	±7	18	12	4	3	3	2
110	*Quercus lobata*	Valley Oak	±7.5+8	35	14	3	3	3	2
111	*Quercus agrifolia*	Coast Live Oak	±12	20	18	4	3	3	2
112	*Quercus lobata*	Valley Oak	±6	35	10	4	3	3	2

TREE INVENTORY
Mill Creek Community
Windsor, CA

February 28, 2018

Tree #	Species	Common Name	Trunk (dbh inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1-4	Expected Impact	Recommendations
113	*Quercus lobata*	Valley Oak	±7	30	10	4	3	3	2
114	*Quercus lobata*	Valley Oak	16	50	28	3	3	3	1, 6, 7, 8, 9
115	*Quercus lobata*	Valley Oak	11	35	20	3	3	3	1, 6, 7, 8, 9
116	*Quercus lobata*	Valley Oak	9	25	16	3	3	3	1, 6, 7, 8, 9
117	*Quercus agrifolia*	Coast Live Oak	9.5	20	14	4	3	3	1, 6, 7, 8, 9
118	*Quercus lobata*	Valley Oak	9	35	18	3	3	3	1, 6, 7, 8, 9
119	*Quercus lobata*	Valley Oak	30.5	45	28	2	2	3	1, 6, 7, 8, 9
120	*Aesculus californica*	California Buckeye	7	20	18	4	3	3	2
121	*Aesculus californica*	California Buckeye	7	20	16	4	3	3	2
122	*Quercus lobata*	Valley Oak	16	38	24	3	3	3	1, 6, 7, 8, 9
123	*Fraxinus latifolia*	Oregon Ash	10.5+5.5	30	16	2	2	3	1, 6, 7, 8, 9
124	*Salix* sp.	Willow	±28	30	40	3	2	3	1, 6, 7, 8, 9
125	*Quercus lobata*	Valley Oak	16	30	24	4	3	3	1, 6, 7, 8, 9
126	*Quercus lobata*	Valley Oak	15.5	32	16	3	3	3	1, 6, 7, 8, 9
127	*Quercus lobata*	Valley Oak	11+13.5	35	16	3	3	3	2
128	*Quercus lobata*	Valley Oak	11+13.5	30	16	3	3	3	2

TREE INVENTORY
Mill Creek Community
Windsor, CA

Tree #	Species	Common Name	Trunk (dbh inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1-4	Expected Impact	Recommendations
129	*Quercus lobata*	Valley Oak	13	30	18	3	3	3	2
130	*Quercus lobata*	Valley Oak	20.5	30	22	3	3	3	1, 6, 7, 8, 9
131	*Quercus lobata*	Valley Oak	10.5+5.5	40	16	2	3	3	1, 6, 7, 8, 9
132	*Quercus lobata*	Valley Oak	19.5	45	18	3	3	3	1, 6, 7, 8, 9
133	*Quercus lobata*	Valley Oak	13	22	24	3	3	3	1, 6, 7, 8, 9
134	*Quercus lobata*	Valley Oak	16	40	20	3	3	3	1, 6, 7, 8, 9
135	*Quercus lobata*	Valley Oak	15.5	40	18	3	3	3	1, 6, 7, 8, 9
136	*Quercus lobata*	Valley Oak	10.5	23	14	3	3	3	1, 6, 7, 8, 9
137	*Quercus lobata*	Valley Oak	10	30	16	3	4	3	1, 6, 7, 8, 9
138	*Quercus lobata*	Valley Oak	±6.5	18	8	4	3	3	2
139	*Pinus radiata*	Monterey Pine	±36	75	24	4	3	3	1, 6, 7, 8, 9
140	*Sequoia sempervirens*	Coast Redwood	±22	80	18	4	3	3	1, 6, 7, 8, 9
141	*Quercus lobata*	Valley Oak	±20	55	30	4	3	3	1, 6, 7, 8, 9
142	*Pinus radiata*	Monterey Pine	±34	80	30	4	3	3	1, 6, 7, 8, 9
143	*Pinus radiata*	Monterey Pine	±28	60	26	4	3	3	1, 6, 7, 8, 9
144	*Ulmus parvifolia*	Chinese Elm	±12	30	20	4	3	3	1, 6, 7, 8, 9

TREE INVENTORY
Mill Creek Community
Windsor, CA

Tree #	Species	Common Name	Trunk (dbh inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1-4	Expected Impact	Recommendations
145	*Quercus lobata*	Valley Oak	7	18	14	4	3	3	1, 6, 7, 8, 9
146	*Quercus lobata*	Valley Oak	±12.5	40	28	4	3	3	1, 6, 7, 8, 9
147	*Fraxinus latifolia*	Oregon Ash	26+28	60	28	2	1	3	3
148	*Fraxinus latifolia*	Oregon Ash	±18+18+20	30	28	2	1	3	3
149	*Quercus lobata*	Valley Oak	14+6+16+13	45	32	3	2	3	2
150	*Fraxinus latifolia*	Oregon Ash	7.5	20	20	2	2	3	2
151	*Fraxinus latifolia*	Oregon Ash	12	30	20	2	2	3	3
152	*Salix* sp.	Willow	13	20	24	2	2	3	2
153	*Fraxinus latifolia*	Oregon Ash	±18	20	28	2	1	3	3
154	*Fraxinus latifolia*	Oregon Ash	6	14	16	2	3	3	2
155	*Salix* sp.	Willow	7+6	35	16	3	3	3	2

KEY TO TREE INVENTORY CHART

KEY TO TREE INVENTORY CHART

Mill Creek Community
Windsor, California

Tree Number

Each tree has been identified in the field with an aluminum tag and reference number. Tags are attached to the trunk at approximately eye level and the *Tree Location Plan* illustrates the location of each numbered tree.

Species

Each tree has been identified by genus, species and common name. Many species have more than one common name.

Trunk

Each trunk has been measured to the nearest one half inch to document its diameter at 4 feet above adjacent grade. Trunk diameter is a good indicator of age, and is commonly used to determine mitigation replacement requirements.

Height

Height is estimated in feet, using visual assessment.

Radius

Radius is estimated in feet, using visual assessment. Since many canopies are asymmetrical, it is not uncommon for a radius estimate to be an average of the canopy size.

Health

The following descriptions are used to rate the health of a tree. Trees with a rating of 4 or 5 are very good candidates for preservation and will tolerate more construction impacts than trees in poorer condition. Trees with a rating of 3 may or may not be good candidates for preservation, depending on the species and expected construction impacts. Trees with a rating of 1 or 2 are generally poor candidates for preservation.

(5) Excellent - health and vigor are exceptional, no pest, disease, or distress symptoms.

(4) Good - health and vigor are average, no significant or specific distress symptoms, no significant pest or disease.

(3) Fair - health and vigor are somewhat compromised, distress is visible, pest or disease may be present and affecting health, problems are generally correctable.

(2) Marginal - health and vigor are significantly compromised, distress is highly visible and present to the degree that survivability is in question.

(1) Poor - decline has progressed beyond the point of being able to return to a healthy condition again. Long-term survival is not expected. This designation includes dead trees.

Structure

The following descriptions are used to rate the structural integrity of a tree. Trees with a rating of 3 or 4 are generally stable, sound trees which do not require significant pruning, although cleaning, thinning, or raising the canopy might be desirable. Trees with a rating of 2 are generally poor candidates for preservation unless they are preserved well away from improvements or active use areas. Significant time and effort would be required to reconstruct the canopy and improve structural integrity. Trees with a rating of 1 are hazardous and should be removed.

(4) Good structure - minor structural problems may be present which do not require corrective action.

(3) Moderate structure - normal, typical structural issues which can be corrected with pruning.

(2) Marginal structure - serious structural problems are present which may or may not be correctable with pruning, cabling, bracing, etc.

(1) Poor structure - hazardous structural condition which cannot be effectively corrected with pruning or other measures, may require removal depending on location and the presence of targets.

Development Impacts

Considering the proximity of construction activities, type of activities, tree species, and tree condition - the following ratings are used to estimate the amount of impact on tree health and stability. Most trees will tolerate a (1) rating, many trees could tolerate a (2) rating with careful consideration and mitigation, but trees with a (3) rating are poor candidates for preservation due to their very close proximity to construction or because they are located within the footprint of construction and cannot be preserved.

(3) A significant impact on long term tree integrity can be expected as a result of proposed development.

(2) A moderate impact on long term tree integrity can be expected as a result of proposed development.

(1) A very minor or no impact on long term tree integrity can be expected as a result of proposed development.

(0) No impact is expected

Recommendations

Recommendations are provided for removal or preservation. For those being preserved, protection measures and mitigation procedures to offset impacts and improve tree health are provided.

(1) Preservation appears to be possible.

(2) Removal is required due to significant development impacts.

(3) Removal is recommended due to poor health or hazardous structure.

(4) Removal is required due to significant development impacts and poor existing condition.

(5) Removal is recommended due to poor species characteristics.

(6) Install temporary protective fencing at the edge of the dripline, or edge of approved construction, prior to beginning grading or construction. Maintain fencing in place for duration of all construction activity in the area.

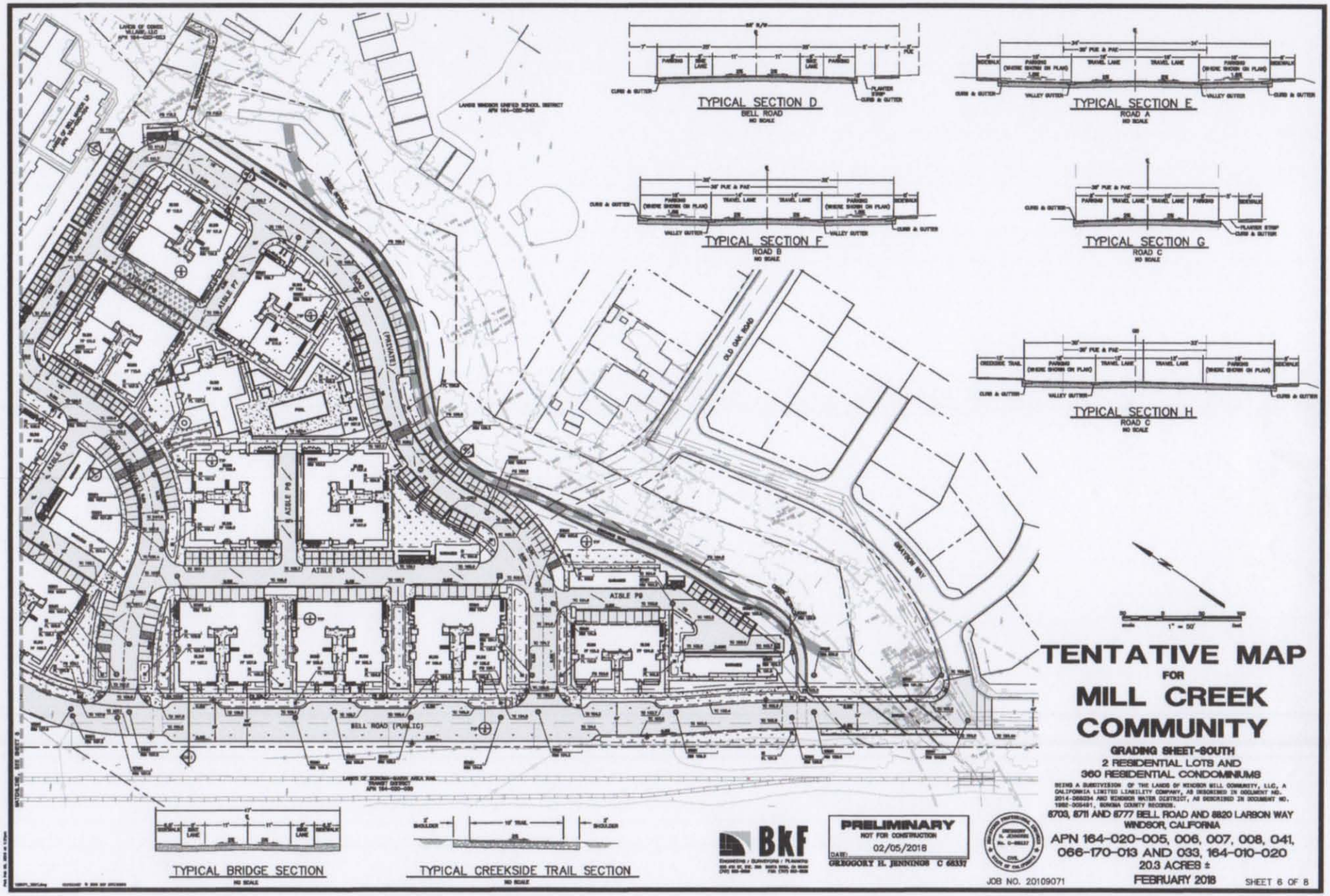
(7) Maintain existing grade within the fenced portion of the dripline. Route drainage swales and all underground work outside the dripline.

(8) Place a 4" layer of chipped bark mulch over the soil surface within the fenced dripline prior to installing temporary fencing. Maintain this layer of mulch throughout construction.

(9) Prune to clean, raise, or provide necessary clearance. Prune to reduce branches that are over-loaded, over-extended, largely horizontal, arching, or have foliage concentrated near the branch ends, per International Society of Arboriculture Pruning Standards.

Pruning to occur by, or under the supervision of, an Arborist certified by the International Society of Arboriculture. Pruning Standards are attached to this report.

TREE LOCATION PLANS
South Section
Tentative Map
Site Plans with Tree Locations



TENTATIVE MAP
FOR
MILL CREEK COMMUNITY

GRADING SHEET-SOUTH
2 RESIDENTIAL LOTS AND
360 RESIDENTIAL CONDOMINIUMS

BEING A SUBDIVISION OF THE LANDS OF WINDSOR MILL COMMUNITY, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY, AS DESCRIBED IN DOCUMENT NO. 2014-066234 AND WINDSOR WATER DISTRICT, AS DESCRIBED IN DOCUMENT NO. 1982-005481, SONOMA COUNTY RECORDS.

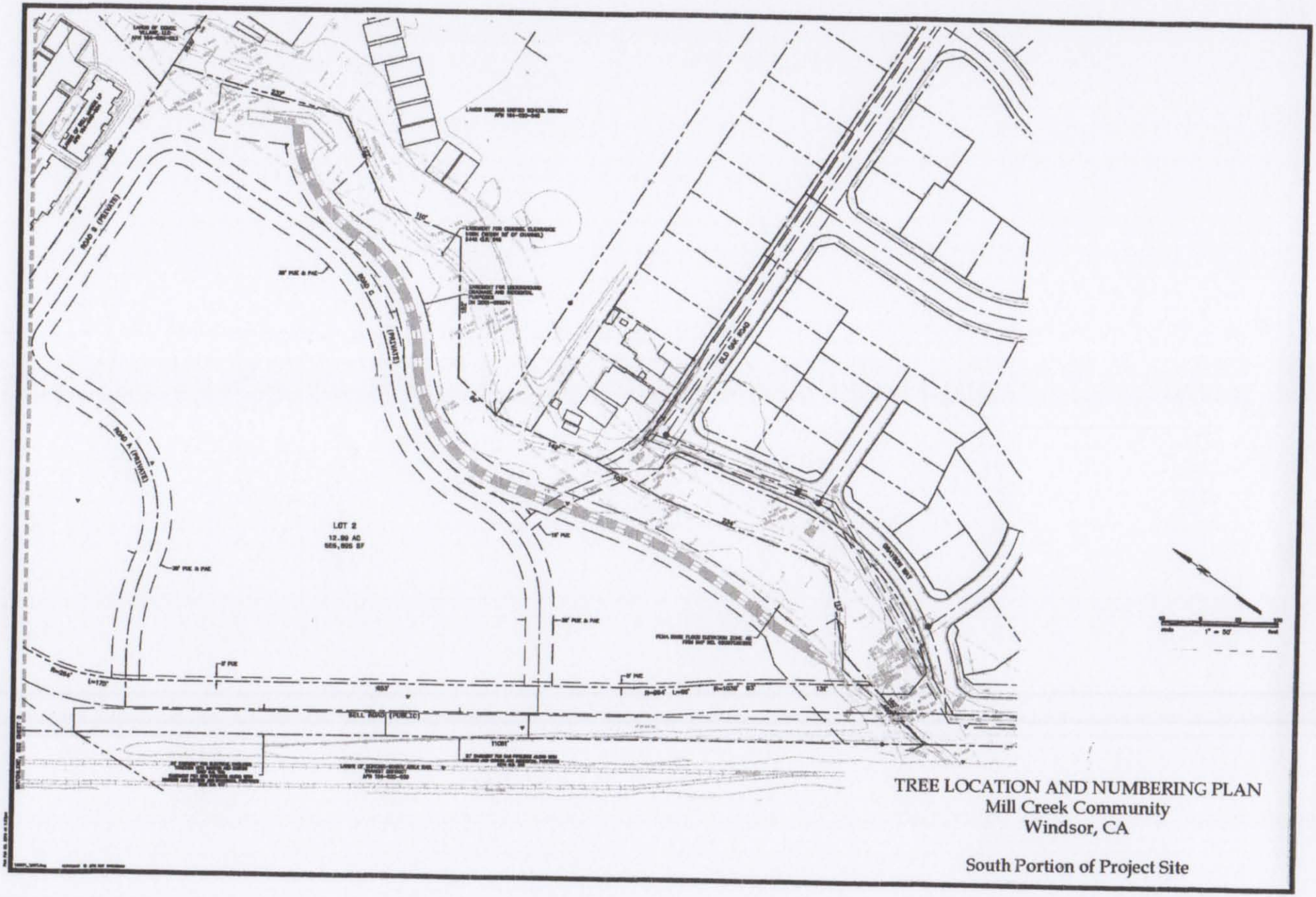
6703, 6711 AND 6777 BELL ROAD AND 8820 LARSON WAY
WINDSOR, CALIFORNIA

APN 164-020-005, 006, 007, 008, 041,
066-170-013 AND 033, 164-010-020
20.3 ACRES ±

BkF
Engineers / Surveyors / Planners

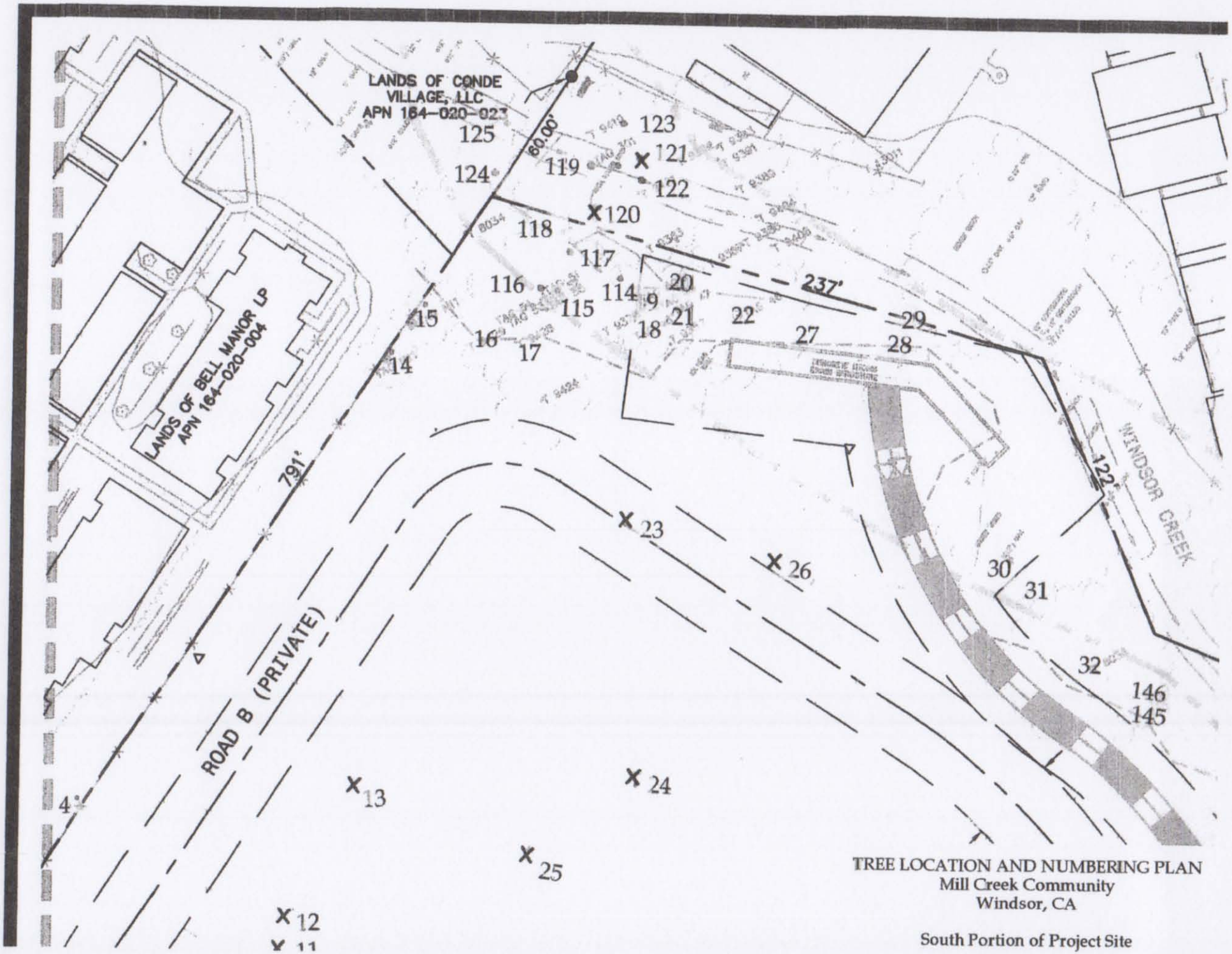
PRELIMINARY
NOT FOR CONSTRUCTION
DATE: 02/05/2018
GREGORY H. JENNINGS C 68337

JOB NO. 20109071
FEBRUARY 2018
SHEET 6 OF 8



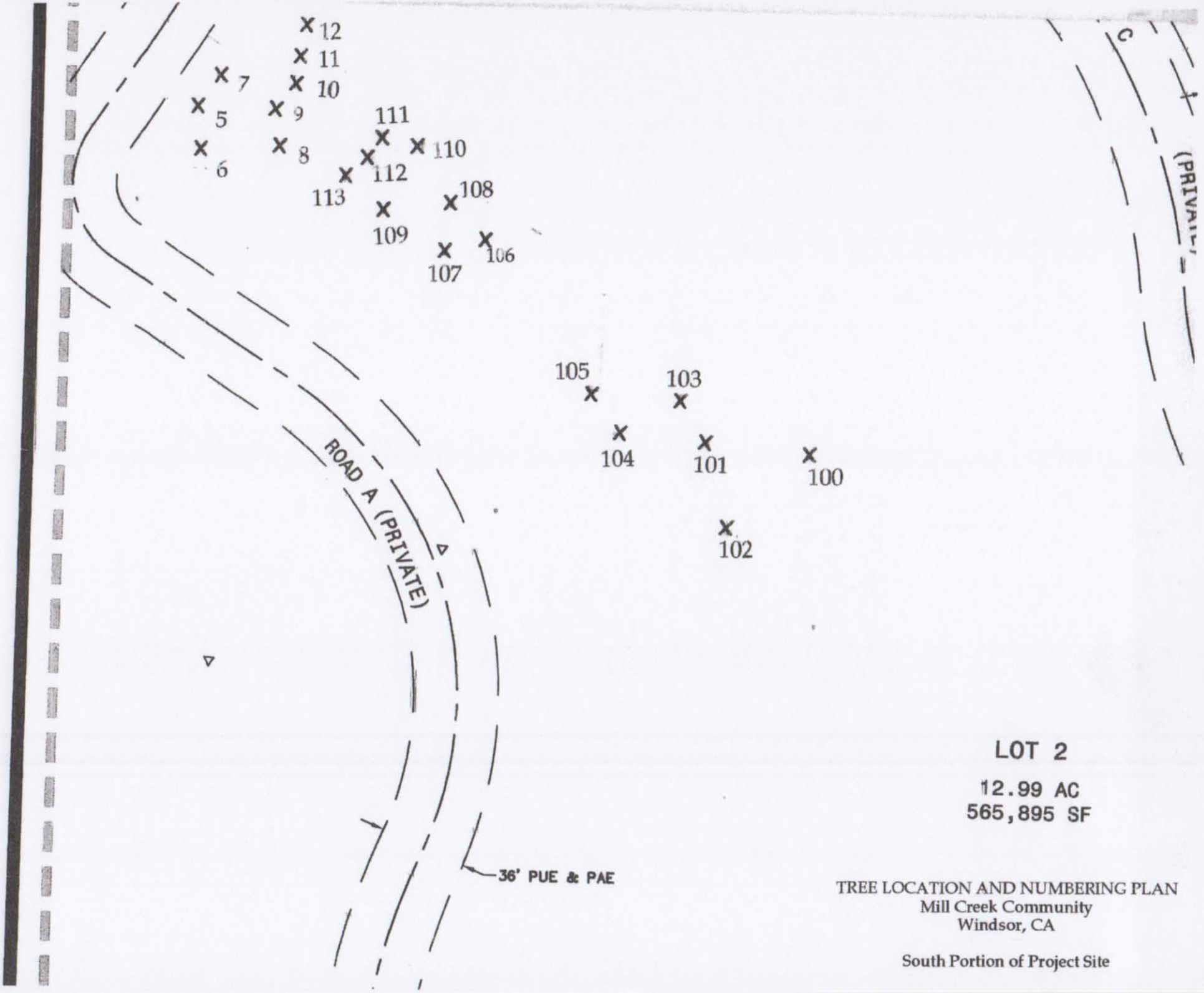
TREE LOCATION AND NUMBERING PLAN
Mill Creek Community
Windsor, CA

South Portion of Project Site



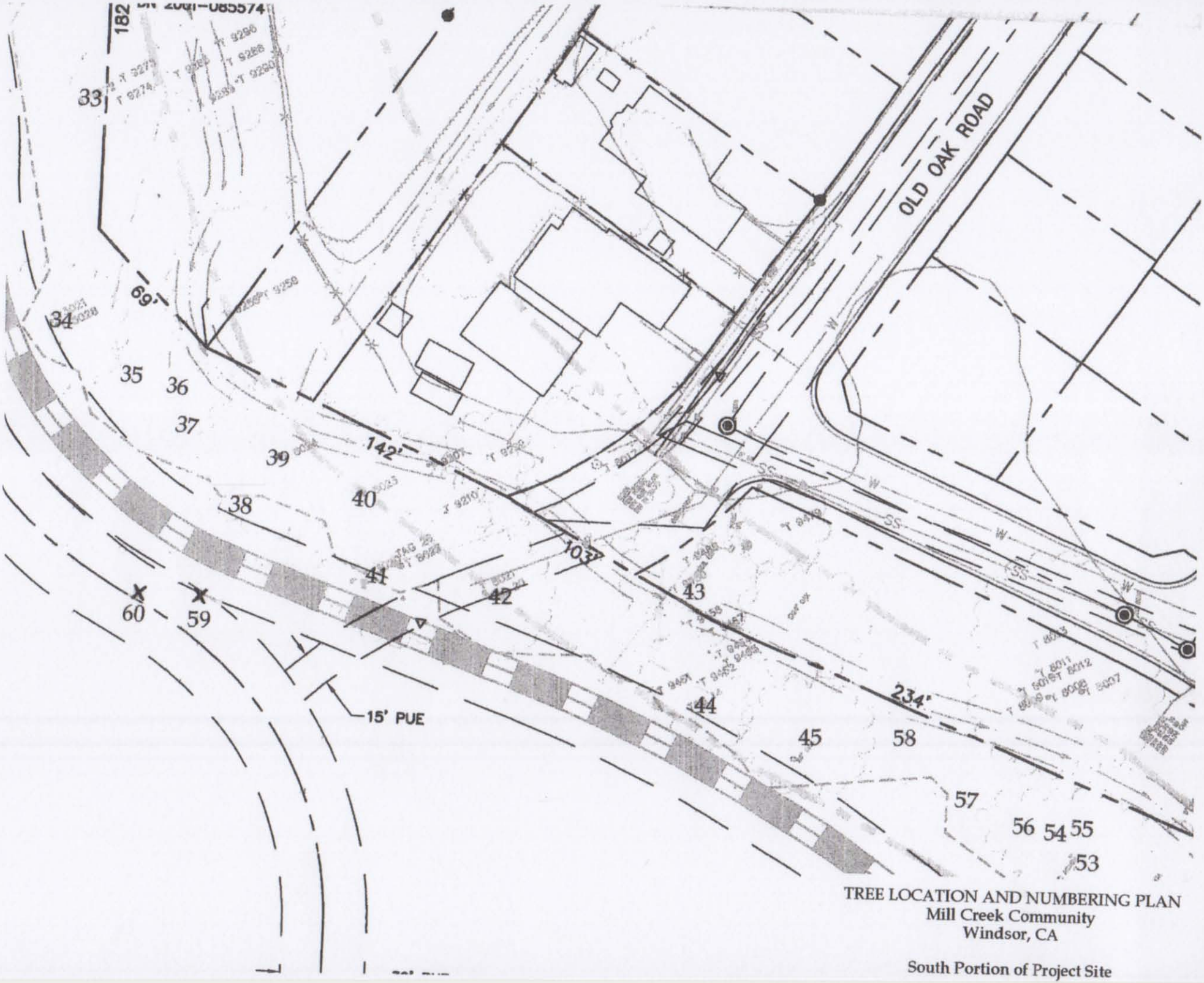
TREE LOCATION AND NUMBERING PLAN
Mill Creek Community
Windsor, CA

South Portion of Project Site



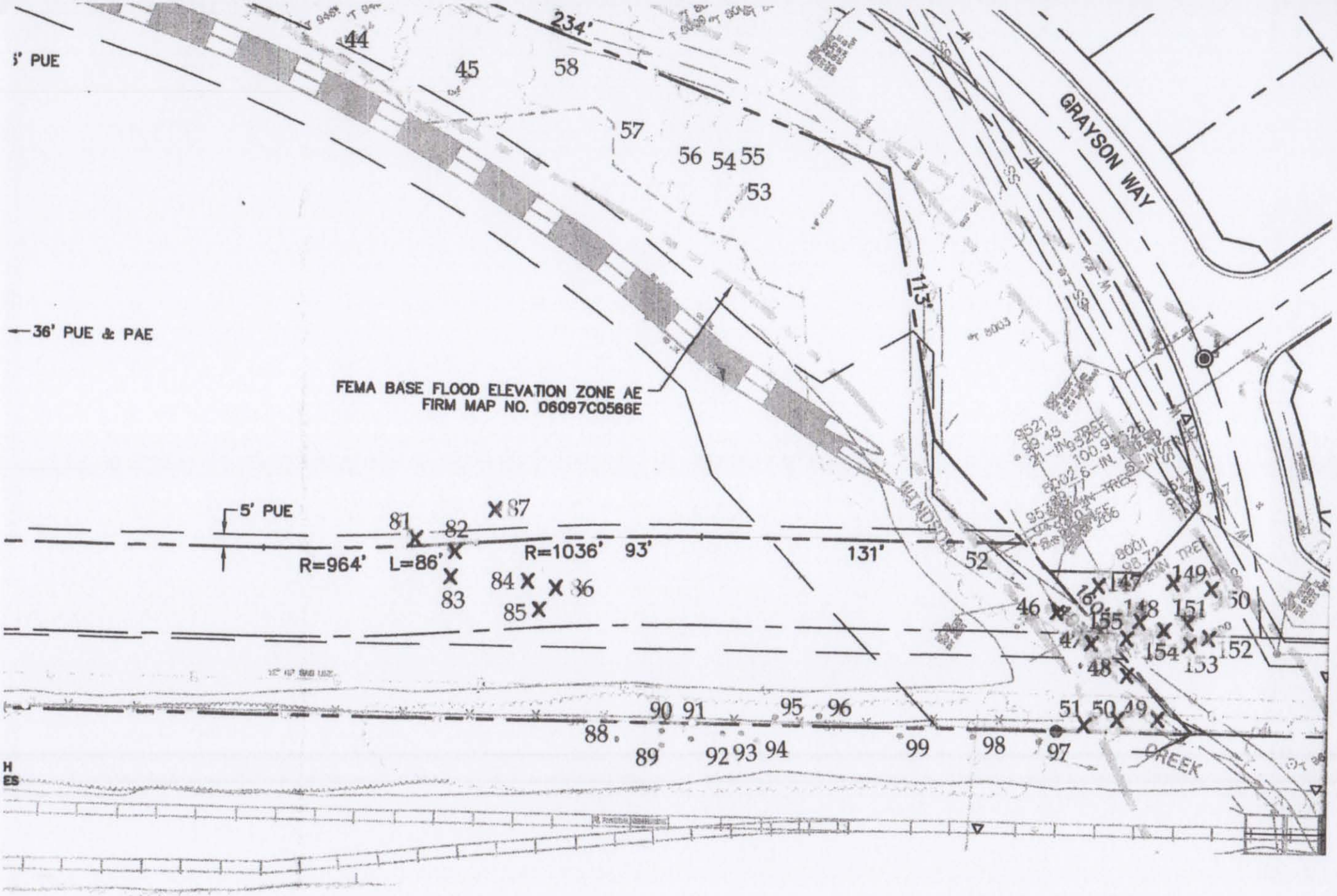
TREE LOCATION AND NUMBERING PLAN
Mill Creek Community
Windsor, CA

South Portion of Project Site



TREE LOCATION AND NUMBERING PLAN
Mill Creek Community
Windsor, CA

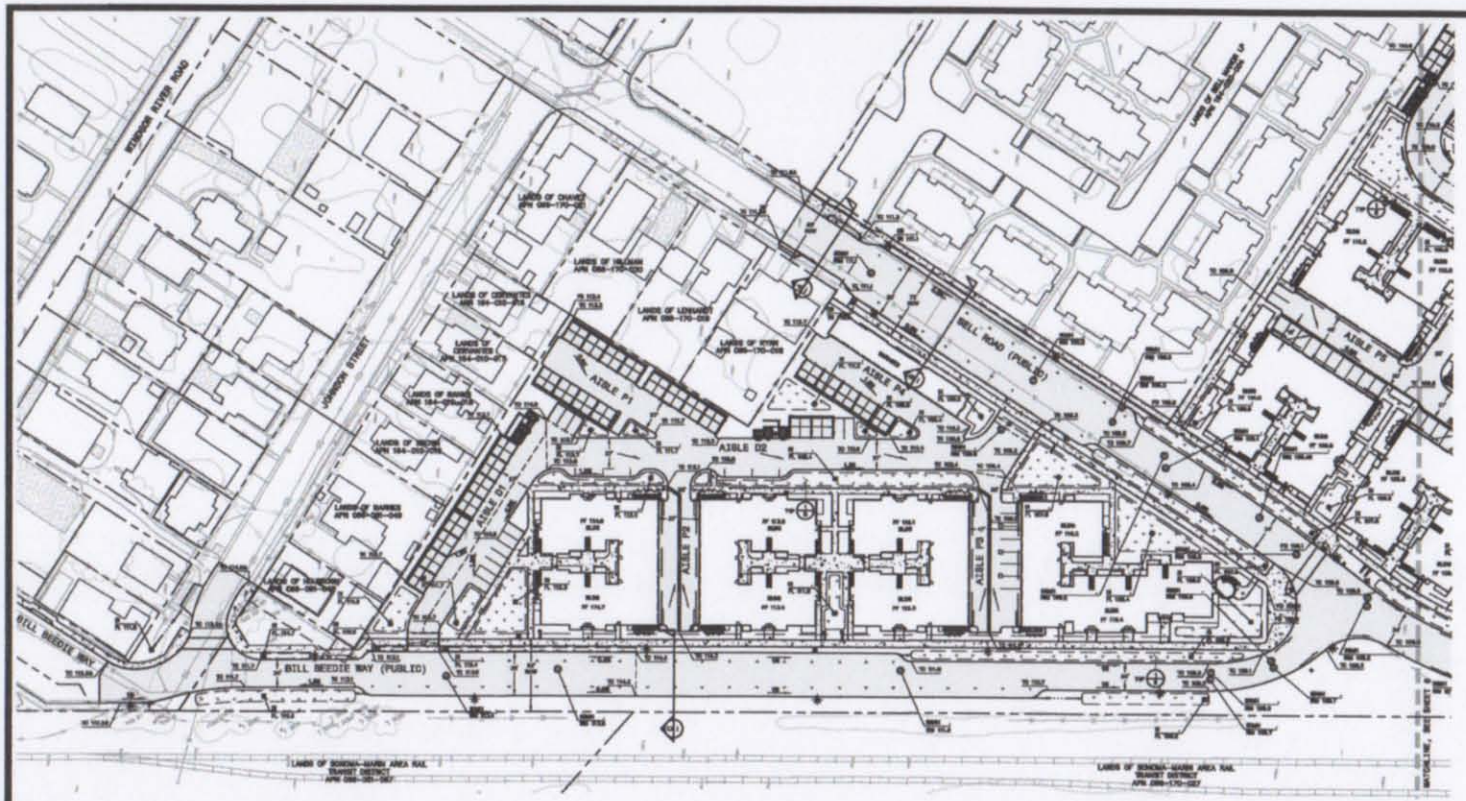
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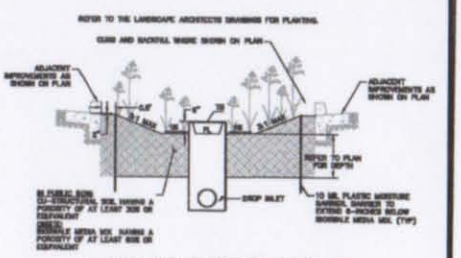


TREE LOCATION AND NUMBERING PLAN
Mill Creek Community
Windsor, CA

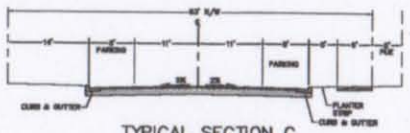
South Portion of Project Site

TREE LOCATION PLANS
North Section
Tentative Map
Site Plans with Tree Locations

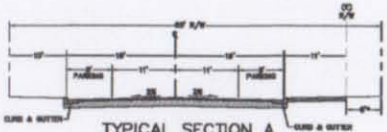




VOLUME CAPTURE FACILITY
NO SCALE

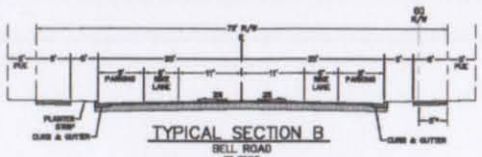


TYPICAL SECTION C
BELL BEEDIE WAY
NO SCALE



TYPICAL SECTION A
BELL ROAD
NO SCALE

*ADDITIONAL RIGHT OF WAY AND PUE TO BE ACQUIRED FROM BELL MANOR, LLC BY TOWN OF WINDSOR

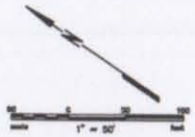


TYPICAL SECTION B
BELL ROAD
NO SCALE

*ADDITIONAL RIGHT OF WAY AND PUE TO BE ACQUIRED FROM BELL MANOR, LLC BY TOWN OF WINDSOR



2 POROUS ASPHALT
NO SCALE



TENTATIVE MAP
FOR
MILL CREEK COMMUNITY

GRADING SHEET-NORTH

2 RESIDENTIAL LOTS AND
360 RESIDENTIAL CONDOMINIUMS

BEING A SUBDIVISION OF THE LANDS OF WINDSOR MILL COMMUNITY, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY, AS DESCRIBED IN DOCUMENT NO. 2014-068094 AND WINDSOR WATER DISTRICT, AS DESCRIBED IN DOCUMENT NO. 1982-309491, SONOMA COUNTY RECORDS.

8703, 8711 AND 8777 BELL ROAD AND 8820 LARSON WAY
WINDSOR, CALIFORNIA

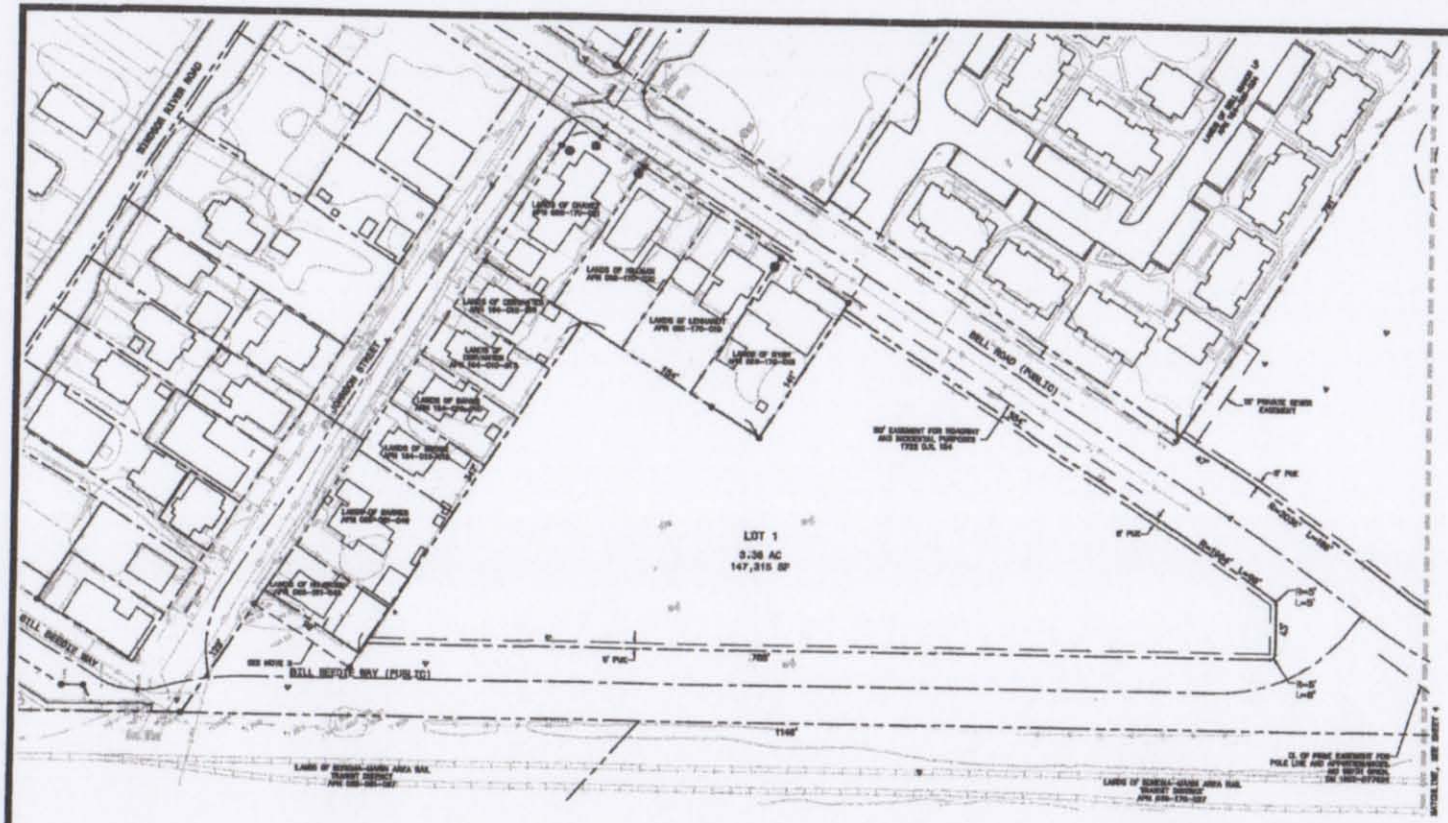
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066-170-013 AND 033, 164-010-020
20.3 ACRES ±

FEBRUARY 2018

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ENGINEERS / SURVEYORS / PLANNERS

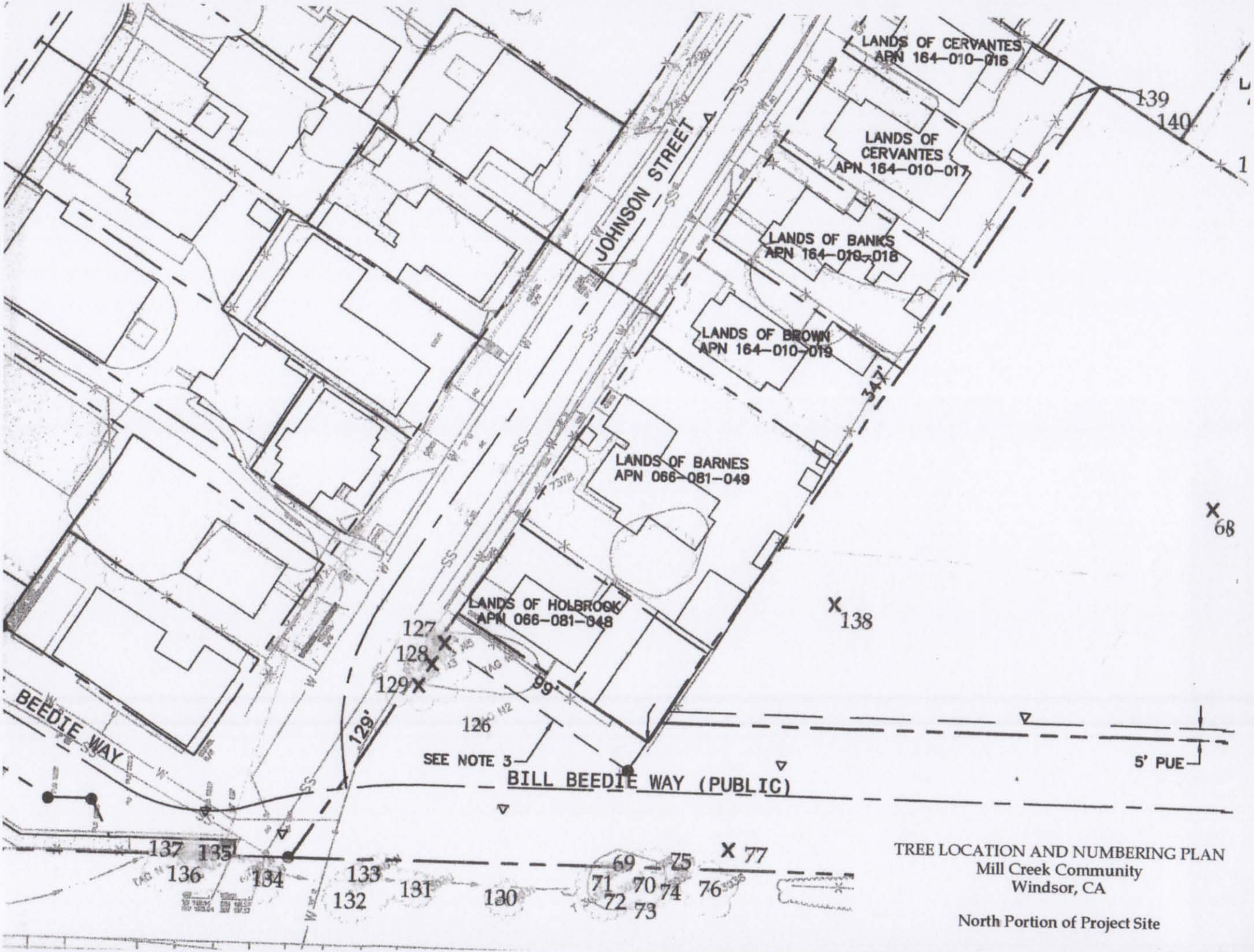
PRELIMINARY
NOT FOR CONSTRUCTION
DATE: 02/05/2018
GREGORY H. JENNINGS C 68337

JOB NO. 20109071



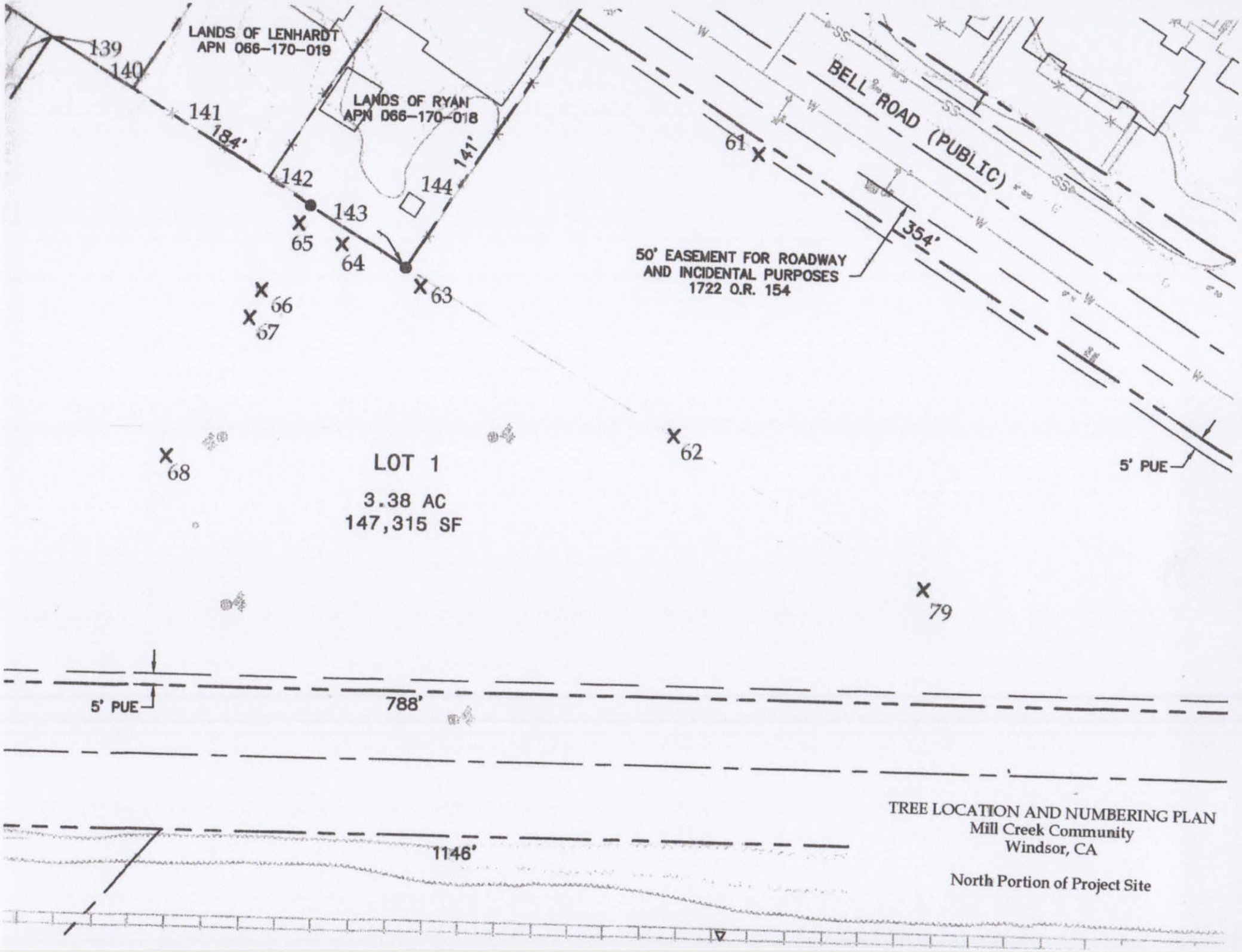
TREE LOCATION AND NUMBERING PLAN
Mill Creek Community
Windsor, CA

North Portion of Project Site



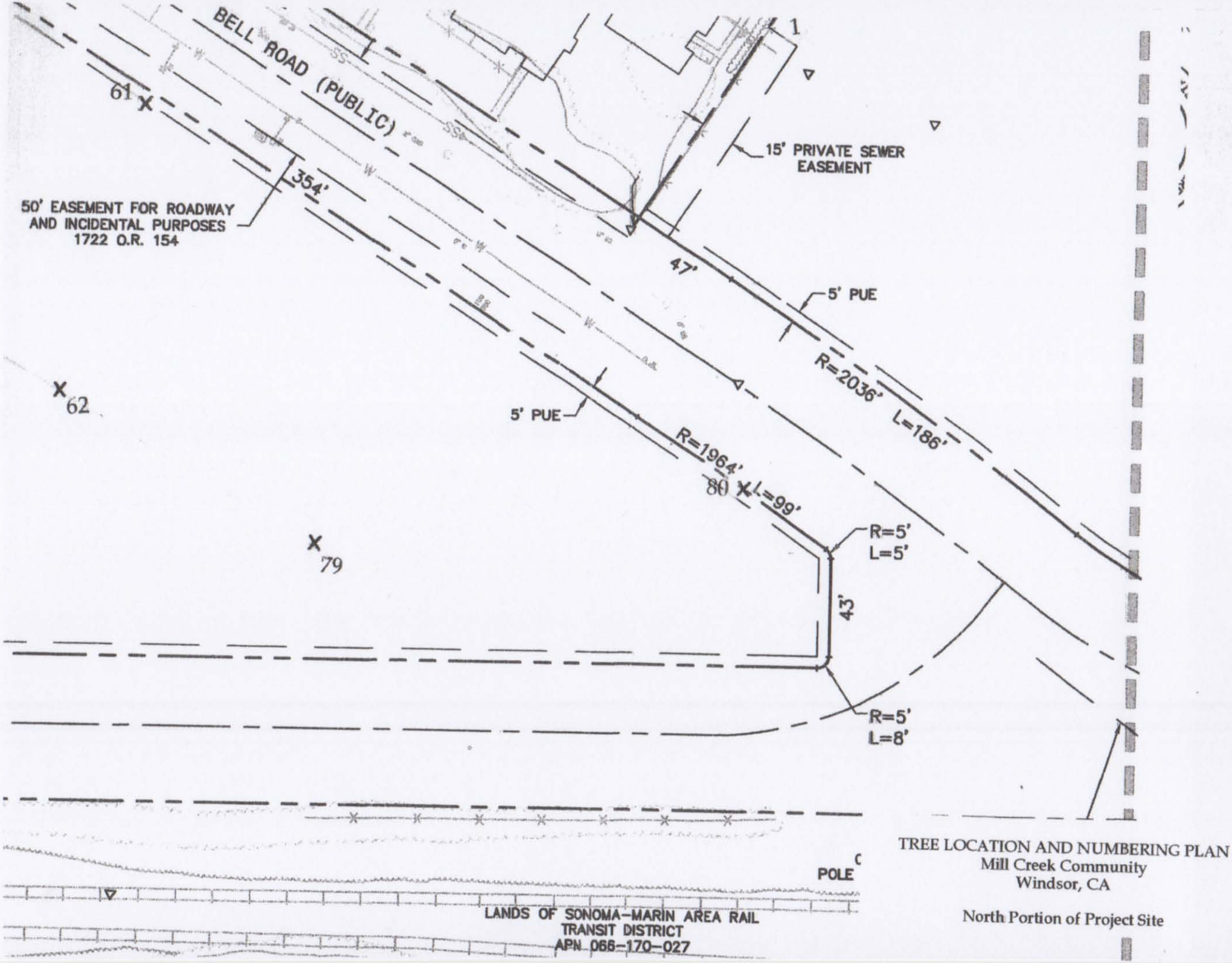
TREE LOCATION AND NUMBERING PLAN
Mill Creek Community
Windsor, CA

North Portion of Project Site



TREE LOCATION AND NUMBERING PLAN
Mill Creek Community
Windsor, CA

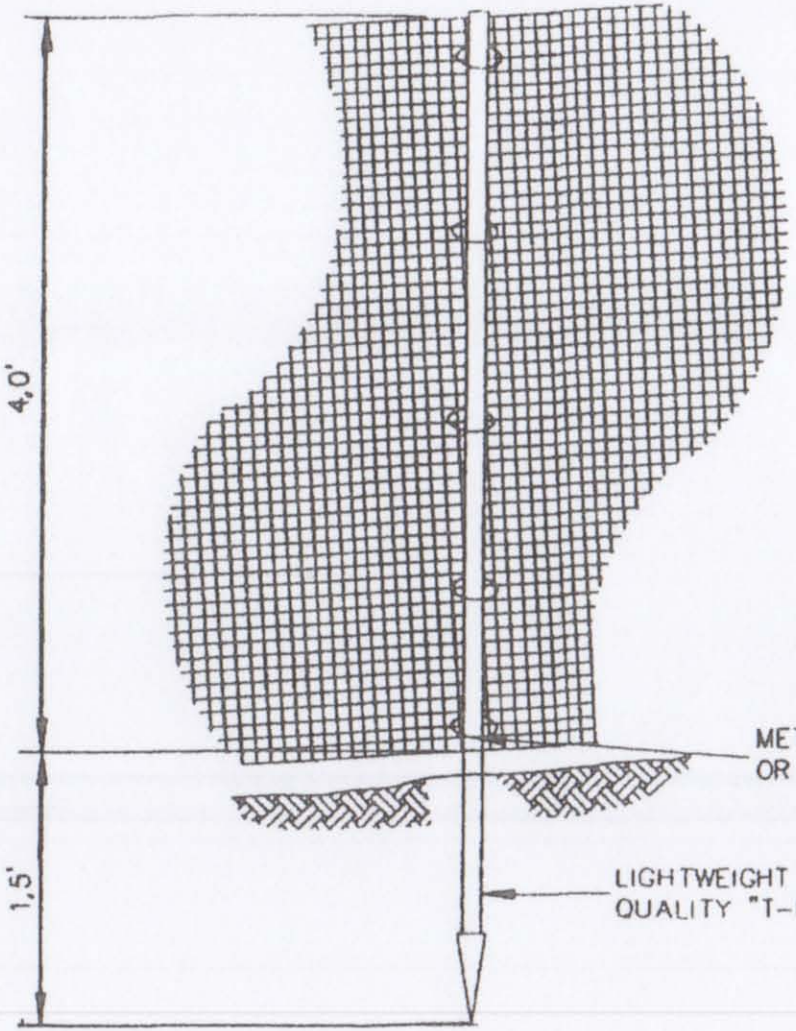
North Portion of Project Site



TREE LOCATION AND NUMBERING PLAN
Mill Creek Community
Windsor, CA

North Portion of Project Site

TREE FENCING DETAIL



NOTE:
TENSOR LIGHTWEIGHT SAFTY GRID, ORANGE
COLOR, BX226516, CUT OR FOLD AT POSTS
AS NEEDED TO CONFORM TO SLOPING TERRAIN.

TREE PROTECTION FENCING DETAIL

TREE PRUNING STANDARDS

WESTERN CHAPTER

ISA

PRUNING STANDARDS

Purpose:

Trees and other woody plants respond in specific and predictable ways to pruning and other maintenance practices. Careful study of these responses has led to pruning practices which best preserve and enhance the beauty, structural integrity, and functional value of trees.

In an effort to promote practices which encourage the preservation of tree structure and health, the W.C. ISA Certification Committee has established the following Standards of Pruning for Certified Arborists. The Standards are presented as working guidelines, recognizing that trees are individually unique in form and structure, and that their pruning needs may not always fit strict rules. The Certified Arborist must take responsibility for special pruning practices that vary greatly from these Standards.

I. Pruning Techniques

A. A thinning cut removes a branch at its point of attachment or shortens it to a lateral large enough to assume the terminal role. Thinning opens up a tree, reduces weight on heavy limbs, can reduce a tree's height, distributes ensuing invigoration throughout a tree and helps retain the tree's natural shape. Thinning cuts are therefore preferred in tree pruning.

When shortening a branch or leader, the lateral to which it is cut should be at least one-half the diameter of the cut being made. Removal of a branch or leader back to a sufficiently large lateral is often called "drop crotching."

B. A heading cut removes a branch to a stub, a bud or a lateral branch not large enough to assume the terminal role. Heading cuts should seldom be used because vigorous, weakly attached upright sprouts are forced just below such cuts, and the tree's natural form is altered. In some situations, branch stubs die or produce only weak sprouts.

C. When removing a live branch, pruning cuts should be made in branch tissue just outside the branch bark ridge and collar, which are trunk tissue. *(Figure 1)* If no collar is visible, the angle of the cut should approximate the angle formed by the branch bark ridge and the trunk. *(Figure 2)*

D. When removing a dead branch, the final cut should be made outside the collar of live callus tissue. If the collar has grown out along the branch stub, only the dead stub should be removed, the live collar should remain intact, and uninjured. *(Figure 3)*

E. When reducing the length of a branch or the height of a leader, the final cut should be made just beyond (without violating) the branch bark ridge of the branch being cut to. The cut should approximately bisect the angle formed by the branch bark ridge and an imaginary line perpendicular to the trunk or branch cut. *(Figure 4)*

F. A goal of structural pruning is to maintain the size of lateral branches to less than three-fourths the diameter of the parent branch or trunk. If the branch is codominant or close to the size of the parent branch, thin the branch's foliage by 15% to 25%, particularly near the terminal. Thin the parent branch less, if at all. This will allow the parent branch to grow at a faster rate, will reduce the weight of the lateral branch, slow its total growth, and develop a stronger branch attachment. If this does not appear appropriate, the branch should be completely removed or shortened to a large lateral. *(Figure 5)*

G. On large-growing trees, except whorl-branching conifers, branches that are more than one-third the diameter of the trunk should be spaced along the trunk at least 18 inches apart, on center. If this is not possible because of the present size of the tree, such branches should have their foliage thinned 15% to 25%, particularly near their terminals. *(Figure 6)*

H. Pruning cuts should be clean and smooth with the bark at the edge of the cut firmly attached to the wood.

I. Large or heavy branches that cannot be thrown clear, should be lowered on ropes to prevent injury to the tree or other property.

J. Wound dressings and tree paints have not been shown to be effective in preventing or reducing decay. They are therefore not recommended for routine use when pruning.

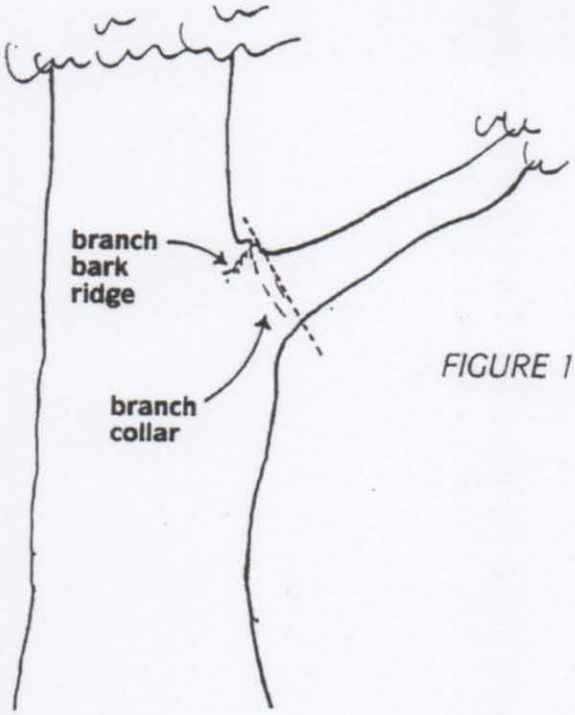


FIGURE 1. *When removing a branch, the final cut should be just outside the branch bark ridge and collar.*



FIGURE 2. *In removing a limb without a branch collar, the angle of the final cut to the branch bark ridge should approximate the angle the branch bark ridge forms with the limb. Angle AB should equal Angle BC.*

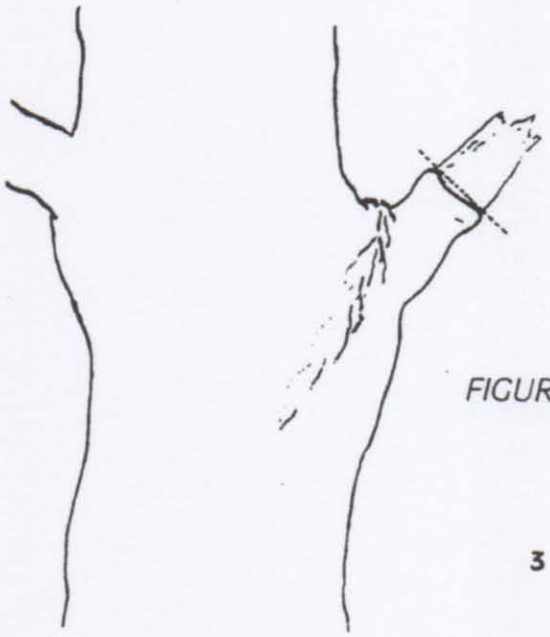


FIGURE 3. *When removing a dead branch, cut outside the callus tissue that has begun to form around the branch.*

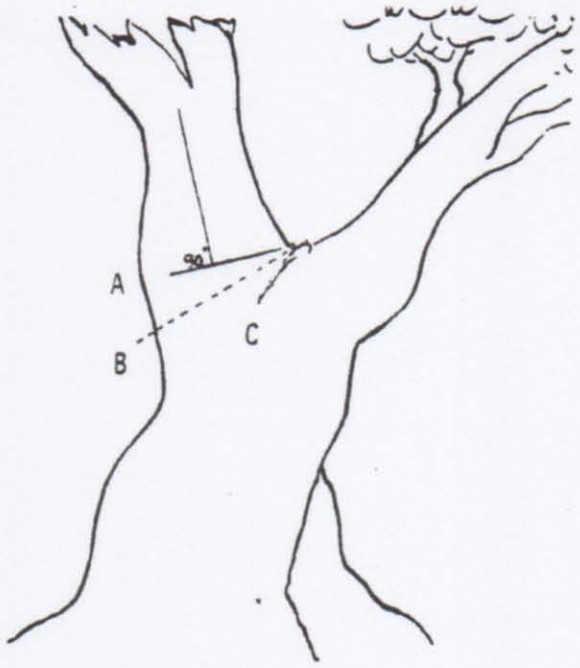


FIGURE 4. *In removing the end of a limb to a large lateral branch, the final cut is made along a line that bisects the angle between the branch bark ridge and a line perpendicular to the limb being removed. Angle AB is equal to Angle BC.*



FIGURE 5. *A tree with limbs tending to be equal-sized, or codominant. Limbs marked B are greater than ¾ the size of the parent limb A. Thin the foliage of branch B more than branch A to slow its growth and develop a stronger branch attachment.*

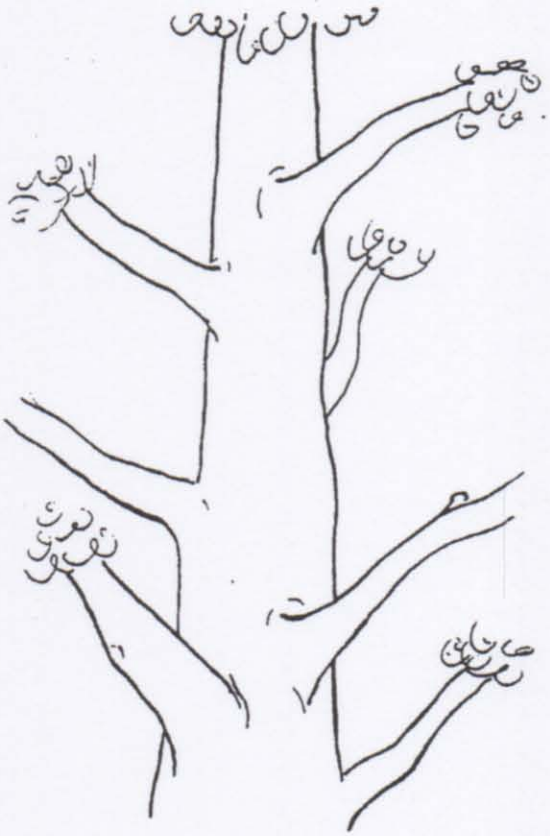


FIGURE 6. *Major branches should be well spaced both along and around the stem.*

II. Types of Pruning — Mature Trees

A. CROWN CLEANING

Crown cleaning or cleaning out is the removal of dead, dying, diseased, crowded, weakly attached, and low-vigor branches and watersprouts from a tree crown.

B. CROWN THINNING

Crown thinning includes crown cleaning and the selective removal of branches to increase light penetration and air movement into the crown. Increased light and air stimulates and maintains interior foliage, which in turn improves branch taper and strength. Thinning reduces the wind-sail effect of the crown and the weight of heavy limbs. Thinning the crown can emphasize the structural beauty of trunk and branches as well as improve the growth of plants beneath the tree by increasing light penetration. When thinning the crown of mature trees, seldom should more than one-third of the live foliage be removed.

At least one-half of the foliage should be on branches that arise in the lower two-thirds of the trees. Likewise, when thinning laterals from a limb, an effort should be made to retain inner lateral branches and leave the same distribution of foliage along the branch. Trees and branches so pruned will have stress more evenly distributed throughout the tree or along a branch.

An effect known as "lion's-tailing" results from pruning out the inside lateral branches. Lion's-tailing, by removing all the inner foliage, displaces the weight to the ends of the branches and may result in sunburned branches, water-sprouts, weakened branch structure and limb breakage.

C. CROWN REDUCTION

Crown reduction is used to reduce the height and/or spread of a tree. Thinning cuts are most effective in maintaining the structural integrity and natural form of a tree and in delaying the time when it will need to be pruned again. The lateral to which a branch or trunk is cut should be at least one-half the diameter of the cut being made.

D. CROWN RESTORATION

Crown restoration can improve the structure and appearance of trees that have been topped or severely pruned using heading cuts. One to three sprouts on main branch stubs should be selected to reform a more natural appearing crown. Selected vigorous sprouts may need to be thinned to a lateral, or even headed, to control length growth in order to ensure adequate attachment for the size of the sprout. Restoration may require several prunings over a number of years.

II. Types of Pruning — Mature Trees *(continued)*

E. CROWN RAISING

Crown raising removes the lower branches of a tree in order to provide clearance for buildings, vehicles, pedestrians, and vistas. It is important that a tree have at least one-half of its foliage on branches that originate in the lower two-thirds of its crown to ensure a well-formed, tapered structure and to uniformly distribute stress within a tree.

When pruning for view, it is preferable to develop "windows" through the foliage of the tree, rather than to severely raise or reduce the crown.

III. Size of Pruning Cuts

Each of the Pruning Techniques (Section I) and Types of Pruning (Section II) can be done to different levels of detail or refinement. The removal of many small branches rather than a few large branches will require more time, but will produce a less-pruned appearance, will force fewer watersprouts and will help to maintain the vitality and structure of the tree. Designating the maximum size (base diameter) that any occasional undesirable branch may be left within the tree crown, such as ½", 1" or 2" branch diameter, will establish the degree of pruning desired.

IV. Climbing Techniques

A. Climbing and pruning practices should not injure the tree except for the pruning cuts.

B. Climbing spurs or gaffs should not be used when pruning a tree, unless the branches are more than throw-line distance apart. In such cases, the spurs should be removed once the climber is tied in.

C. Spurs may be used to reach an injured climber and when removing a tree.

D. Rope injury to thin barked trees from loading out heavy limbs should be avoided by installing a block in the tree to carry the load. This technique may also be used to reduce injury to a crotch from the climber's line.

TREE PROTECTION GUIDELINES

GENERAL TREE PROTECTION GUIDELINES FOR CONSTRUCTION AROUND PRESERVED TREES

Mill Creek Community
Windsor, CA

INTRODUCTION

Great care must be exercised when development is proposed in the vicinity of established trees of any type. The trees present at construction sites require specialized protection techniques during all construction activities to minimize negative impact on their long term health and vigor. The area immediately beneath and around canopy driplines is especially critical, and the requirements and procedures that follow are established to protect short and long term tree integrity. The purpose of this protection guideline is therefore to define the procedures that must be followed during any and all phases of development in the immediate vicinity of designated and protected trees.

Established, mature trees respond in a number of different ways to the disruption of their natural conditions. Change of grade within the root system area or near the root collar, damage to the bark of the trunk, soil compaction above the root system, root system reduction or damage, or alteration of summer soil moisture levels may individually or collectively cause physiological stress leading to tree decline and death. The individual impacts of these activities may cause trees to immediately exhibit symptoms and begin to decline, but more commonly the decline process takes many years, with symptoms appearing slowly and over a period of time. Trees may not begin to show obvious signs of decline from the negative impacts of construction until many years after construction is completed. It is not appropriate to wait for symptoms to appear, as this may be too late to correct the conditions at fault and to halt decline.

It is therefore critical to the long-term health of all protected trees that a defined protection program be established before beginning any construction activity where protected trees are found. Once incorporated at the design level, it is mandatory that developers, contractors, and construction personnel understand the critical importance of these guidelines, and the potential penalties that will be levied if they are not fully incorporated at every stage of development.

The following guidelines are meant to be utilized by project managers and those supervising any construction in the vicinity of protected trees including grading contractors, underground contractors, all equipment operators, construction personnel, and landscape contractors. These protection guidelines are presented in a brief outline form to be applied to each individual activity that occurs during

Horticultural Associates
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Glen Ellen, CA 95442
707-935-3911

development activities. It is left to project managers to implement these protection measures. Questions which arise, or interpretation of guidelines as they apply to specific site activities, must be referred to the designated project arborist as they occur.

TREE PROTECTION ZONE

1. The canopy dripline is illustrated on the Improvement Plans and represents the area around each tree, or group of trees, which must be protected at all times with tree protection fencing. No encroachment into the dripline is allowed at any time without approval from the project arborist, and unauthorized entry may be subject to civil action and penalties.

2. The dripline will be designated by the project arborist at a location determined to be adequate to ensure long term tree viability and health.

TREE PROTECTION FENCING

1. Prior to initiating any construction activity on a construction project, including demolition or grading, temporary protective fencing shall be installed at each site tree. Fencing shall be located at the dripline designated by the project arborist or illustrated on the Improvement Plans.

2. Fencing shall be minimum 4' height at all locations, and shall form a continuous barrier without entry points around all individual trees, or groups of trees. Barrier type fencing such as *Tensar* plastic fencing is recommended, but any fencing system that adequately prevents entry will be considered for approval by the project arborist. The use of post and cable fencing is not acceptable.

3. Fencing shall be installed in a professional manner with steel fence posts (standard quality farm 'T' posts work well) placed no more than 8 feet on center. Fencing shall be attached to each post at 5 locations with plastic electrical ties, metal tie wire, or flip tie. See fencing detail.

4. Fencing shall serve as a barrier to prevent encroachment of any type by construction activities, equipment, materials storage, or personnel.

5. All encroachment into the fenced dripline must be approved in writing and supervised by the project arborist. Approved dripline encroachment may require additional mitigation or protection measures that will be determined by the project arborist at the time of the request.

6. Contractors and subcontractors shall direct all equipment and personnel to remain outside the fenced area at all times until project is complete, and shall instruct personnel and sub-contractors as to the purpose and importance of fencing and preservation.

7. Fencing shall be upright and functional at all times from start to completion of project. Fencing shall remain in place and not be moved or removed until all construction activities at the site are completed.

TREE PRUNING AND TREATMENTS

1. All recommendations for pruning or other treatments must be completed prior to acceptance of the project. It is strongly recommended that pruning be completed prior to the start of grading to facilitate optimum logistics and access.
2.
3. All pruning shall be conducted in conformance with International Society of Arboriculture pruning standards, and all pruning must occur by, or under the direct supervision of, an arborist certified by the International Society of Arboriculture.

GRADING AND TRENCHING

1. Any construction activity that necessitates soil excavation in the vicinity of preserved trees shall be avoided where possible, or be appropriately mitigated under the guidance of the project arborist. All contractors must be aware at all times that specific protection measures are defined, and non conformance may generate stop-work orders.

2. The designated dripline is defined around all site trees to be preserved. Fences protect the designated areas. No grading or trenching is to occur within this defined area unless so designated by the Improvement Plan, and where designated shall occur under the direct supervision of the project arborist.

3. Trenching should be routed around the dripline whenever possible. Where trenching has been designated within the dripline, utilization of underground technology to bore, tunnel or excavate with high-pressure air or water will be specified. Hand digging will be generally discouraged unless site conditions restrict the use of alternate technology.

4. All roots greater than one inch in diameter shall be cleanly hand-cut as they are encountered in any trench or in any grading activity. The tearing of roots

by equipment of any type shall not be allowed. Mitigation treatment of pruned roots shall be specified by the project arborist as determined by the degree of root pruning, location of root pruning, and potential exposure to desiccation. No pruning paints or sealants shall be used on cut roots.

5. Where significant roots are encountered mitigation measures such as supplemental irrigation and/or organic mulches may be specified by the project arborist to offset the reduction of root system capacity.

6. Retaining walls are effective at holding grade changes outside the area of the dripline and are recommended where necessary. Retaining walls shall be constructed in post and beam or drilled pier construction styles where they are necessary near or within a dripline.

7. Placement of fill soils is generally discouraged within the dripline, but in some approved locations may be approved to cover up to 30% of this area. The species and condition of the tree shall be considered, as well as site and soil conditions, and depth of fill. Retaining walls should be utilized to minimize the area of fill within the dripline. Type of fill soil and placement methods shall be specified by the project arborist.

8. Grade changes outside the dripline, or those necessary in conjunction with retaining walls, shall be designed so that drainage water of any type or source is not diverted toward or around the root crown in any manner. Grade shall drain away from root crown at a minimum of 2%. If grading toward the root collar is unavoidable, appropriate surface and/or subsurface drain facilities shall be installed so that water is effectively diverted away from root collar area.

9. Approved fill soils within the dripline may also be mitigated using aerated gravel layers and/or perforated aeration tubing systems, as specified by the project arborist.

10. Tree roots will be expected to grow into areas of soil fill, and quality of imported soil shall be considered. Ideally, fill soil should be site soil that closely matches that present within the root zone area. When import soil is utilized it must be the same or slightly coarser texture than existing site soil, should have a pH range comparable to site soils, and generally should have acceptable chemical properties for appropriate plant growth. A soil analysis is recommended prior to importation to evaluate import soil for these criteria.

11. Grade reduction within the designated dripline shall be generally discouraged, and where approved, shall be conducted only after careful consideration and coordination with the project arborist.

12. Foundations of all types within the dripline shall be constructed using design techniques that eliminate the need for trenching into natural grade. These techniques might include drilled piers, grade beams, bridges, or cantilevered structures. Building footprints should generally be outside the dripline whenever possible.

DRAINAGE

The location and density of native trees on many sites may be directly associated with the presence of naturally occurring water, especially ephemeral waterways. Project design, especially drainage components, should take into consideration that these trees may begin a slow decline if this naturally present association with water is eliminated.

TREE DAMAGE

Any form of tree damage which occurs during the demolition, grading, or construction process shall be evaluated by the project arborist. Specific mitigation measures will be developed to compensate for or correct the damage. Fines and penalties may also be levied.

Measures may include, but are not limited to, the following:

- pruning to remove damaged limbs or wood
- bark scoring to remove damaged bark and promote callous formation
- alleviation of compaction by lightly scarifying the soil surface
- installation of a specific mulching material
- supplemental irrigation during the growing season for up to 5 years
- treatment with specific amendments intended to promote health, vigor, or root growth
- vertical mulching or soil fracturing to promote root growth

- periodic post-construction monitoring at the developer's expense

- tree replacement, or payment of the established appraised value, if the damage is so severe that long term survival is not expected

FERTILIZATION

1. Native trees generally do not require supplemental fertilization unless exhibiting a deficiency symptom. Following completion of construction any tree that exhibits symptoms of a specific nutrient deficiency shall be fertilized to compensate for the deficiency. Soil or tissue analysis may be required to identify the deficiency.

2. Distressed trees, or trees damaged by construction in any way, may be detrimentally affected by supplemental fertilization. The decision to fertilize, and with what fertilizers, shall be made by the project arborist based on conditions and appearance observed at the completion of the project.

PEST CONTROL

A close visual examination for tree pests shall be conducted by the pruning contractor as he completes recommended pruning procedures. If a serious infestation is present, that was not apparent from ground observation, then pest control measures may be considered. However, the simple presence of tree pests does not warrant the use of chemical pesticides. Only a serious infestation, capable of causing tree decline, would warrant pesticide use. The use of organic sprays or pesticidal soaps is the preferred method for treating any serious pest infestation.

WEED CONTROL

No specific measures are recommended for weed control, and the presence of weeds should not be considered problematic in relation to continued tree health. However, use of contact weed killers and pre-emergent weed killers are generally not recommended due to their potential for root system damage if improperly applied.

DISEASE CONTROL

No specific measures are recommended for disease control unless noted in the Tree Protection and Preservation Plan. All disease control measures should be based on observation of actual conditions in the tree canopy.

MULCHING

Trees will generally benefit from the application of a 4 inch layer of chipped bark mulch over the soil surface within the greater root zone area. Ideal mulch material is a chipped bark containing a wide range of particle sizes. Bark mulches composed of shredded redwood, bark screened for uniformity of size, or chipped lumber will not function as beneficially. Rock and gravel mulches are generally discouraged due to their minimal benefit.

PLANTING UNDER EXISTING TREES

1. The installation of lawn beneath established native trees is strongly discouraged because it has the potential to initiate serious disease. If planting is required for aesthetic or functional purposes, the use of drought tolerant, woody species is most appropriate. Species should be selected for their ability to survive with minimal or no water through the summer months after the initial establishment period. Only drip irrigation should be utilized within the canopy dripline to minimize summer water in the root zone.

2. Many non-native trees will tolerate summer irrigation well and suitable landscape planting and irrigation may actually be beneficial.

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B.2 - Biological Assessment and Peer Review Technical Memorandum

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FIRSTCARBON SOLUTIONS™

Peer Review

Memo

Date: March 8, 2018

To: Kimberly Jordan, Associate Planner
Town of Windsor

From: Robert Carroll, Associate Biologist

Subject: Windsor Mill Community Project—Biological Resource Assessment and Wetland Delineation Peer Reviews

Introduction

FirstCarbon Solutions (FCS) completed a peer review of the Biological Assessment BA, which included a delineation of wetlands, from November 2014 prepared by Dr. Laurence P. Stromberg for the proposed Windsor Mill Community Project. The purpose of the peer review was first to determine if potential on-site biological resources were appropriately identified and if proposed mitigation measures appropriately reduce potential impacts for California Environmental Quality Act (CEQA) purposes, and second to determine if potential wetlands and waters subject to federal and state Jurisdiction under Section 404 and 401 of the Clean Water Act were appropriately identified for incorporation into Windsor Mill Community Project ISMND. Below is a summary of the BA with FCS's determinations regarding adequacy.

Site Location and Description

The BA and WD describe the project site that consists of approximately 20.2-acres in the Town of Windsor, Sonoma County, California. The site is an irregular, roughly triangular-shaped area south of Windsor River Road between the Northwest Pacific Railroad tracks that borders the southwest project boundary and Windsor Creek that runs along the northeast boundary of the site.

Methodology

Prior to conducting a field survey for the purpose of the peer review, FCS biologists reviewed the project site plans, aerial photos, topographic maps, and project description, in addition to the information provided in both the BA and WD. A literature and database review was conducted, which included the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CNDDB) (CDFW 2018); the California Native Plant Society's (CNPS's) Inventory of Rare and Endangered Plants (CNPS 2018); the Healdsburg USGS 7.5-minute quadrangle map (1980); the National Wetland Inventory (NWI; USFWS 2018); and other technical databases and resource agency reports, in order to assess the current distribution of special-status species and habitats in the vicinity of the proposed project site (e.g., streams, riparian habitat, ponds).

On February 9, 2018, FCS biologists Brian Mayerle and Robert Carroll visited the project site to verify whether the BA completed by Dr. Stromberg was comprehensive in its methods, accuracy, and completeness. Additionally, the purpose of this reconnaissance-level field survey was to obtain an overview of the existing habitat conditions within the project site and the site's potential to support special-status wildlife and plant species, wetlands, critical habitat, wildlife movement, and other potentially jurisdictional features to provide a basis for peer review of the BA and WD.

Results

Habitat and Biological Community Descriptions

FCS biologist Robert Carroll reviewed the general habitat descriptions provided in the BA and vegetation described in the WD and compared them with habitat conditions and species observed in the field on February 9, 2018. FCS has determined that the BA accurately describes the habitat conditions and vegetation that occur on the site.

Upland Annual Grassland Habitat

The majority of the upland annual grassland habitat is a ruderal habitat, as the site shows evidence of past disturbance from its prior use as a lumber and milling facility. Species included but were not limited to slender oats (*Avena barbata*), Bermuda grass (*Cynodon dactylon*), ryegrass (*Festuca perennis*), soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), Harding grass (*Phalaris aquatica*), chicory (*Cichorium intybus*), rose clover (*Trifolium hirtum*), subterranean clover (*Trifolium subterraneum*), bird's-foot trefoil (*Lotus corniculatus*), and rough cat's-ear (*Hypochaeris radicata*).

Trees are present within the upland grassland habitat. Trees included but were not limited to valley oak (*Quercus lobata*) and coast live oak (*Quercus agrifolia*), Italian cypress (*Cupressus sempervirens*), Monterey pine (*Pinus radiata*), red gum eucalyptus (*Eucalyptus camaludulensis* and *E. compacta*), locust (*Robinia* sp.) and acacia (*Acacia baileyana*).

Wetlands

The WD identified five small seasonal wetlands with a total area of 3,074 square feet or 0.07-acre on the project site. Seasonal wetlands ranged from 165 square feet to 1,061 square feet. All five wetlands have been disturbed because of past conditions, and they provide low habitat value for wildlife and are ecologically isolated, thereby reducing their function and value. The project site is located on the Santa Rosa Plain Conservation Strategy (SRPCS), and wetlands would likely to be considered jurisdictional and subject to Section 404 of the Clean Water Act.

FCS concurs with the assessment that the majority of the soils found on-site belong to the Huichica loam series. These loam soils are generally characterized by a water constraining soil horizon in the form of a cemented clay hardpan that has the ability to pool water at the surface. A majority of the soil found on the project site has been disturbed through fill, disking, and leveling efforts.

Waters of the United States

Windsor Creek roughly parallels the eastern site boundary. Windsor Creek is a tributary to Mark West Creek, which is a tributary of the Russian River, a traditional navigable water. In addition, Windsor Creek depicts an ordinary high water, making it a "water of the United States." The creek carries flow from the northeast end of the site to an undercrossing at the Northwestern Pacific Railroad tracks. The elevation from top of bank to channel bottom along Windsor Creek ranges from about 9 feet at the northern end of the site (109 feet at top of bank, 100 feet at the channel bottom) to 8 feet at the southern end of the creek (100 feet at top of bank, 92 feet at channel bottom).

Windsor Creek and its associated riparian woodland bordering the site to the east are likely considered jurisdictional pursuant to both Sections 404 and 401 of the Clean Water Act and Section 1602 of the California Fish and Game Code. Windsor Creek supports well-developed riparian vegetation with trees and shrubs species that include valley oak, Oregon ash (*Fraxinus oregona*), yellow willow (*Salix lutea*), red willow (*Salix laevigata*), black willow (*Salix goodingii*), sandbar willow (*Salix exigua*), black walnut (*Juglans nigra*), golden wattle (*Acacia decurrens*), California buckeye (*Aesculus californica*), and ornamental plum (*Prunus* sp.). The majority of the riparian understory contains Himalayan blackberry, poison hemlock (*Conium maculatum*), poison oak (*Toxicodendron diversilobum*), and coyote brush (*Baccharis pilularis consanquinea*).

Special-status Species

Special-status Plant Species

Monk & Associates conducted special-status species surveys on the project site between March and June in 2003 and 2004. The results for these surveys were negative. Six additional surveys were conducted by Dr. Stromberg in 2013 and 2014. These surveys targeted special-status species listed in the in the draft Santa Rosa Plain Vernal Pool Ecosystem Preservation Plan prepared for the Santa Rosa Plain Vernal Pool Task Force (CH2M Hill 1996), listed by the state and federal governments, and identified in California Natural Diversity Data Base records. Special-status species included Sonoma sunshine (*Blennosperma bakeri*), Sebastopol meadowfoam (*Limnanthes vinculans*), and Burke's goldfields (*Lasthenia burkei).* The results of the 2013–2014 surveys were also negative. Although the habitat within the project site can be considered suitable for the listed plant species, including Burke's goldfields, none of the listed species were found.

FCS concurs with the conclusion that development of the project site will likely not adversely affect listed plants. Specifically, it is unlikely to have an adverse effect on the seed bank of any listed plant species as well as individuals or populations of listed plants. The project will not eliminate hydrologic connections between other wetlands known to support listed plant species or isolate remaining populations from one another. The small loss of marginal suitable, but unoccupied habitat resulting from the project would not jeopardize the continued conservation efforts any of the listed species on the Santa Rosa Plain. However, because of the loss of marginal habitat, FCS recommends that an additional rare plant surveys be conducted during the blooming period prior to the commencement of construction.

Special-status Wildlife Species

Dr. Stromberg's BA identified California tiger salamander (CTS) (*Ambystoma tigrinum californiense)* as the only special-status wildlife species with the potential to occur on the project site. According to the Santa Rosa Conservation Strategy Map, a portion of the site is designated to be "developed with no potential impacts on CTS" while the other portion of the site is designated as "CTS unlikely to be present on the remainder of the site." Additionally, the project site is located outside the designated Critical Habitat for CTS. The wetlands on the site are less than 0.4 foot deep and are extremely unlikely to contain standing water for periods sufficient to allow CTS larvae to metamorphose and develop and mature. Lastly, the project site is approximately 5.17 miles from the nearest breeding site and has been surrounded by urban development that has created substantial barriers to CTS movement.

FCS concurs with Dr. Stromberg's conclusion that no mitigation would be required for CTS. No breeding habitat occurs on or near the site and no adult CTS have been observed within 1.3 miles. As noted above, the project site is approximately 5.17 miles from the nearest breeding site, and, according to section 5.3.3.3 of the Santa Rosa Plain Conservation Strategy:

> Impact to CTS is not likely on some lands beyond 1.3 miles from breeding sites, or on lands within 1.3 miles from breeding sites that are surrounded by significant barriers or are otherwise unsuitable CTS habitat. Neither surveys nor mitigation would be required for projects on these properties. No CTS mitigation or surveys will be required for projects outside of the potential CTS range.

The BA does not address potential impacts to special-status bird species that are protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code. The project site will remove trees that have the potential to provide suitable nesting habitat for birds protected under the MBTA. FCS shall recommend mitigation measures to reduce potential impacts to special-status bird species protected under the MBTA to a less than significant level under CEQA.

Conclusion

FCS's peer-review of the Biological Assessment for the Windsor Mill Community Project prepared by Dr. Laurence Stromberg determined that the BA and WD is well written and appropriately addresses the majority of relevant biological and aquatic resources that occur, or have potential to occur, within the project site. In summary, FCS agrees with the recommended mitigation measures provided in the BA, but will recommend more thorough mitigation measures as they relate to special-status plant and wildlife species for the ISMND's mitigation measures for impacts to biological resources.

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BIOLOGICAL ASSESSMENT
WINDSOR MILL COMMUNITY PROJECT
TOWN OF WINDSOR, SONOMA COUNTY, CALIFORNIA

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November xx, 2014

Windsor Mill Community,

Town of Windsor, Sonoma County, California

1.0. INTRODUCTION

1.1. Project Location

This Biological Assessment addresses the impacts resulting from the development of the Windsor Mill Community project on approximately 20.2-acre site located in the Town of Windsor. The site is an irregular, roughly triangularly shaped area south of Windsor River Road between the Northwest Pacific Railroad tracks, which borders the southwest project boundary and Windsor Creek, which runs along the northeast side of the site (Figures 1 and 2) (all figures at the end of the assessment). The site comprises several parcels or parts thereof including: A. P. Nos. 164-020-005, 164-020-006, 164-020-008-000, 164-020-041, 066-170-033, 164-010-020, and 066-170-013.

1.2. Description of the Project Site

1.2.1. Topography and Drainage

The property is relatively flat, with about 11 feet of relief across the site, the elevations ranging from 112 ft to 113 ft in the extreme northwest corner of the site to about 101 ft in the extreme southern corner. Small ditches have been excavated on the site ,but these ditches do not carry water to off-site ditches or to Windsor Creek. No natural drainages are present on the site other than Windsor Creek.

Windsor Creek roughly parallels the eastern site boundary. Windsor Creek is a tributary to Mark West Creek, which in turn is a tributary of the Russian River. The creek carries flow from the northeast end of the site to an undercrossing at the Northwestern Pacific Railroad tracks. The range in elevation from top of bank to channel bottom along Windsor Creek ranges from about nine feet at the northern end of the site (109 ft at top of bank, 100 ft at the channel bottom) to eight feet at the southern end of the creek (100 ft at top of bank, 92 ft at channel bottom).

1.2.2. Soils

The soils on the site are mapped by the Natural Resource Conservation Service (previously the U.S. Soil Conservation Service (USDA Forest Service and Soil Conservation Service and the University of California Agricultural Experiment Station 1972) as belonging to the Huichica loam series, 0-2 percent slopes. Generally, Huichica loam soils are characterized by a water-restricting horizon in the form of a moderately well-cemented hardpan with the capacity to perch water at the surface. In the native, undrained state, the ponded phase of the Huichica loam series in depressional sites is a hydric soil. Much of the site is characterized by fill or has been leveled and the soils are almost universally disturbed, the exception being in the northeast corner of the site.

1.3. PAST AND CURRENT LAND USE

The Windsor Mill site comprises several parcels, all of which have been subject to past disturbance. Most of the parcels were developed and in industrial or commercial use. Bell Road is stubbed out at a point along the northern property. In the northwest part of the site, a feed supply and a Cash and Carry businesses operated in the past and virtually the entirety of the two sites was disturbed. Buildings, driveways, parking areas, storage facilities, sheds, etc. covered most of the sites and ditches some ditches were excavated to carry runoff from the hardscape. The original Windsor Mill operated south of these properties for many years with access from Bell Road and included the property between the Northwest Pacific Railroad tracks and Windsor Creek. Between the extension of Bell Road, which though abandoned remains paved, and the tracks, the site was paved and entirely hardscaped except for a narrow strip along the tracks. A few small structures for were present between Bell Road and the creek but that area remained essentially undeveloped.

Currently, all of the structures and much of the hardscape has been removed. The section of Bell Road through the site, which has been abandoned (and will be realigned with the proposed Windsor Mill community project), remains physically intact along with other areas of asphalt, graveled surface, and harscape remain adjacent to it and scattered through the site. Imported soil has been stockpiled in several locations. The site is not currently grazed and does not appear to have been grazed since the commercial operations on the site were terminated.

1.4. BIOLOGICAL CONDITIONS

1.4.1. Upland Annual Grassland Habitat

Most of the upland annual grassland habitat at the site is a ruderal habitat, a product of vegetation restablishment following prior use as a lumber and milling facility. Common species include slender oats (Avena barbata), Bermuda grass (Cynodon dactylon), ryegrass (*Festuca perennis),* soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), cut-leaf geranium (*Geranium dissectum*), purple vetch *(Vicia benghalensis),* common vetch (*Vicia sativa*), Harding grass (*Phalaris aquatica*), chicory (*Cichorium intybus*), wild radish (*Raphanus sativus*), rose clover (*Trifolium hirtum*), subterranean clover (*Trifolium subterraneum*), bird's-foot trefoil (*Lotus corniculatus*), and rough cat's-ear (*Hypochaeris radicata*). Uncommon species include sun cups (*Camissonia ovata*), parentucellia (*Parentucellia viscosum*), and smooth owl's clover (*Triphysaria versicolor* ssp. *faucibarbata*). Sweet fennel (*Foeniculum vulgare*), is scattered as is coyote brush *(Baccharis pilularis* ssp. *consanguinea*).

Trees are scattered throughout the upland grassland habitat. Tree species include valley oak (*Quercus lobata*) and coast live oak (*Quercus agrifolia*), curly leaf willow (*Salix matsudana*?), Italian cypress (*Cupressus sempervirens*), Monterey pine (*Pinus radiata*), red gum eucalyptus (*Eucalyptus camaludulensis* and *E. compacta*), locust (*Robinia* sp.) and acacia (Acacia baileyana), cultivated edible peach, plum (*Prunus* spp.), and apple (*Malus* sp.), Fremont cottonwood *(Populus fremontii*), coast redwood (*Sequoia sempervirens*), Chinese elm (*Ulmus chinensis*), California fan palm (*Washingtonia robusta*), and hopseed bush (*Dodonaea* sp.).

1.4.2. Seasonal wetland

Five small seasonal wetlands with a total area of 3,074 af (0.07 ac) are present on the site (Figures 3 - 7). Three of the five are of artificial origin and are in areas that were hardscape at one time but all five have been subject to disturbance of some sort.

The five small wetlands differ compositionally. The 680-square-foot seasonal wetland at the south end of the site was dominated by pygmy waterwort (*Crassula aquatica*) and rabbitsfoot grass (*Polypogon monspeliensis*), the latter extremely stunted Other species included spikerush (*Eleocharis macrostachya*), dominant at the southern end of the wetland, ryegrass (*Festuca perennis*), sheep sorrel (*Rumex acetosella*), and a pair of upland species [hawwkbit (*Leontodon taraxacoides*) and rough cat's ear (*Hypocheris radicata*)] both commonly found in shallow seasonal wetland habitats in dry years and/or at the end of the growing season.

Three small wetlands also occur along the paved-gravel road through the center of the site. The largest of these wetlands (1,061 sf) was doiminated by brown-head rush (*Juncus phaeocephalus*), six-weeks fescue, and sweet vernal grass (*Anthoxanthum aristatum*) but Douglas meadowfoam (*Limnanthes douglasii*) was scattered throughout it. Spiny-fruited buttercup (*Ranunculus muricatus*), curly dock, California oatgrass (*Danthonia californica californica*), spikerush (*Eleocharis macrostachya*), iris-leaf rush *(Juncus xiphioides)*, and meadow barley (*Hordeum brachyantherum*) were also present.

The second of these wetlands (682 sf) was dominated by annual hairgrass (*Deschampsia danthonioides*) and hawkbit, the latter's abundance reflective of the relatively dry years. Subdominant species included Mediterranean barley (*Hordeum marinum gussoneanum*), coyote thistle (*Eryngium aristulatum*), California buttercup (*Ranunculus californicus*), and spiny-fruited buttercup.

The smallest of these wetlands, 165 sf was dominated by ryegrass and Mediterranean barley but tall flatsedge (*Cyperus eragrostis*) and six-weeks fescue (*Festuca bromoides*) are also common. Popcorn flower (*Plagiobothrys stipitatus*) and speedwell (*Veronica peregrina*), were also present but did not produce one percent cover in 2013 and 2014.

1.4.3. Windsor Creek

1.4.3.1. Channel conditions. Windsor Creek was assessed in a California Department of Fish and Wildlife Stream Inventory Report in 1996 that was revised 10 years later. The assessment ran from the confluence of Windsor Creek with Mark West Creek to the crossing of Arata Lane northeast of the Windsor Mill community site (California Department of Fish and Game 2006). The report distinguished two channel types using the methods developed by Rosgen for classifying natural rivers (1994): B4 upstream from the confluence with Mark West (a length of 20,172 feet, and F3 for the upper

> 1,500 feet, which is above the Windsor Mill Community site. B4 channel types are moderately entrenched, moderate gradient (two to four percent), riffle-dominated channels, with infrequently spaced pools, a very stable plan and profile, stable banks, and a predominantly gravel substrate. On the Windsor Mill Community site, the conditions at the proposed pedestrian and vehicular bridge crossings.....

1.4.3.2. Wetland and riparian habitat. Windsor Creek forms the eastern boundary of the project site. The creek supports well-developed riparian vegetation. Tree and large shrub species present include valley oak *(Quercus lobata),* Oregon ash *(Fraxinus oregona),* yellow willow *(Salix lutea),* red willow *(Salix laevigata),* black willow (*Salix goodingii*), sandbar willow, black walnut *(Juglans nigra),* golden wattle *(Acacia decurrens),* California buckeye *(Aesculus californica),* and ornamental plum *(Prunus* sp.). The riparian understory is dominated by Himalayan blackberry, poison hemlock *(Conium maculatum),* poison oak *(Toxicodendron diversilobum),* coyote brush *(Baccharis pilularis consanquinea),* wild cucumber *(Marah fabaceus)* and California rose *(Rosa californica).* The creek channel is mostly open water habitat covered with floating duckweed *(Lemna minor),* while some portions of the channel support knotweed *(Polygonum* sp.), watercress *(Rorippa nasturtium-aquaticum),* and common water-plantain *(Alisma plantago-aquatica).*

The Windsor Creek crossing corridors support well-developed riparian vegetation. Jurisdictional habitat at the two crossings, the areas below ordinary high water since no wetland habitat abuts the channel, is shown in Figures 8 and 9. Tree and large shrub species include valley oak *(Quercus lobata),* Oregon ash *(Fraxinus oregona),* yellow willow *(Salix lutea),* red willow *(Salix laevigata),* sandbar willow, black walnut *(Juglans nigra),* California bay (*Umbellularia californica*), golden wattle *(Acacia decurrens),* California buckeye *(Aesculus californica),* and ornamental plum *(Prunus* sp.). The riparian understory is dominated by Himalayan blackberry (*Rubus discolor*), poison hemlock *(Conium maculatum),* poison oak *(Toxicodendron diversilobum),* coyote brush *(Baccharis pilularis),* wild cucumber *(Marah fabaceus)* and California rose *(Rosa californica).* The creek channel is mostly open water habitat covered with floating duckweed *(Lemna minor),* while some portions of the channel support knotweed *(Polygonum* sp.), watercress *(Rorippa nasturtium-aquaticum),* and water-plantain *(Alisma plantago-aquatica).*

At the vehicular bridge crossing, the dominant tree species are yellow willow, golden wattle, and valley oak with California bay saplings, French broom (*Genista monspessulana*), Himalaya berry, posion oak, and coyote brush (*Baccharis pilularis* var. *consanguinea*) on the upper and lower banks and periwinkle (*Vinca minor*) forming the ground layer. The width of the channel at ordinary high water ranges from 12 to 14 feet. The bottom is unvegetated and characterized by sediment-covered gravel and small cobble. No seasonal or perennial wetland habitat abuts the channel in either crossing corridor. The soils (sample site 14 at the southern vehicular crossing) are 10yr3/2 sandy gravelly loam with 10yr5/1 redox concentrations but no vegetation is present other than overstory and understory plants that overhang and are rooted well above the channel bottom.

At the pedestrian bridge crossing the dominant tree species are valley oak and yellow willow. Oregon ash and yellow willow form a small tree understory layer on the west side of the channel and the ground cover is limited to tall flatsedge and posion oak. The vegetation on the upper terrace and the slope between the lower and upper terraces is dominated by poison oak, periwinkle, Himalaya berry, with fennel and California wild rose beneath the outer limits of the riparian canopy. California buckeye are rooted on the slope between the channel and the lower terrace on the east side of the channel and above that, the vegetation is a Himalaya berry thicket with intermixed poison oak. The width of the channel at ordinary high water in the pedestrian crossing ranges from 26 to 29 feet. The bottom is vegetated with water smartweed (*Polygonum hydropiperoides*), tall flatsedge, an unidentified mint, and small sycamore (*Plantanus racemosa*) saplings. No wetlands occur adjacent to the channel.

The area below ordinary high water at the pedestrian crossing is approximately 225 sf. The area bellow ordinary high water at the vehicular bridge crossing is approximately 625 sf. The total area of Windsor Creek and adjacent wetlands within the two crossings is approximately 850 sf or 0.020 acre.

1.5. LISTED AND SPECIAL-STATUS PLANT SPECIES

1.5.1. Burke's Goldfields

information about habitat for sake of consistency with fish and CTS

Monk & Associates conducted special-status plant species surveys on the Windsor Mill site between March and June in 2003 and 2004. The surveys were conducted according to the survey guidelines established by the California Department of Fish and Wildlife. The results were negative.

Additional surveys were conducted by Stromberg in 2013 and 2014. The dates of the field visits were March 14, March 29, April 17, and May 15, 2013, and April 16, April and May 20, 2014.

Target special-status species included those listed in the draft Santa Rosa Plain Vernal Pool Ecosystem Preservation Plan prepared for the Santa Rosa Plain Vernal Pool Task Force (CH2M Hill 1996), listed by the sate and federal governments, and identified in California Natural Diversity Data Base records. Target species were limited to those species whose ranges include the immediately surrounding region and which were considered to have the potential to occur on the site given their habitat requirements and the types of habitat present.

Each wetland was surveyed completely each year. Non-wetland habitat other than landscaped areas in the immediate vicinity of the residence were considered to provide suitable habitat for the upland target species were surveyed using a series of parallel transects. The survey was conducted within the "windows" during which all target species either were in flower or would be readily identifiable to species. The survey methods used were consistent with the guidelines established by the California Department of Fish and

Wildlife (2000) for assessing the effects of proposed developments on rare and endangered plants and plant communities.

Distributional information for the three species listed as endangered by the federal government -- Sonoma sunshine (*Blennosperma bakeri*), Sebastopol meadowfoam (*Limnanthes vinculans*), and Burke's goldfields (*Lasthenia burkei)* -- was obtained from Appendix B to the Vernal Pool Ecosystem Preservation Plan (CH2M Hill 1996). Information on distributional and habitat requirements of the upland species was obtained from flora (Mason 1975, Munz and Keck 1968, Best et al. 1996, Baldwin et al. 2012), other reports and surveys conducted for special-status species on the Santa Rosa Plain and properties in the vicinity, and the California Native Plant Society's list of rare and endangered plant species in the state (Skinner and Pavlik 1994).

i)Nearby reference sites were checked prior to and during the completion of the survey. The sites included Carinalli-Todd Road Mitigation Bank, Gobbi Mitigation Site, Slippery Rock Conservation Bank, Hazel Mitigation Bank, Alton Lane Preserve, Porter Mitigation Site, Gobbi Mitigation Site, Slippery Rock Conservation Bank, Alton North Conservation Bank, Woodbridge Preserve, and Wright Preservation Bank (constructed wetlands in the southwest corner).

The results of the 2013-2014 survey were also negative. Although the habitat can be considered suitable for the listed plant species, including Burke's goldfields, none of the listed species were observed,

1.6. CALIFORNIA TIGER SALAMANDER

information about habitat for sake of consistency with fish and CTS

1**California tiger salamander** (*Ambystoma tigrinum californiense*)

„h Vernal pools, seasonal wetlands, occasionally reservoirs or other man-made ponds for reproduction

„h Burrows made by burrowing mammals; adult and post-metamorph juvenile tiger salamanders live underground most of the year

„h Absence or scarcity of predatory fishes or bullfrogs in breeding areas

„h Foods: larvae predatory, consuming aquatic invertebrates and smaller amphibian larvae; adults eat invertebrates, small amphibians, reptiles, or mammals

Figures 10 - 12 shows the location of the Windsor Mill Community project site with respect to the potential range of the California tiger salamander (*Ambystoma californiense*), the potential impact designations on figures in the Santa Rosa Plain Conservation Strategy (revised Figure 3 of the Strategy) and the Programmatic Biological Opinion (PBO) (Enclosure 1), the boundaries of the Critical Habitat

designated by the U. S. Fish and Wildlife Service, and the nearest known adult CTS and CTS breeding pond locations.

In the PBO development of a small part of the site (within the limits of the original Windsor Mill facility) is considered to have no effect and development of the remainder is considered to have the potential to affect listed plant species but is unlikely to adversely affect CTS. On the Conservation Strategy map, part of the site is considered to be developed with no potential for impacts on CTS (or plants) and CTS is considered unlikely to be present on the remainder of the site. Figure 12 provides part of the explanation for these designations. In addition to being outside designated Critical Habitat, the southernmost end of the site is more than 23,000 feet north of the nearest known adult CTS and CTS breeding pond locations, which are located in the Alton Mitigation Site and the Alton North Conservation Bank sites.

The wetlands on the site are less than 0.4 ft deep and are extremely unlikely to contain standing water for periods sufficient to allow CTS larval to metamorphose and develop and mature. Monk & Associates submitted a California tiger salamander site assessment report to the U. S. Fish and Wildlife Service in 2004. In its assessment, Monk & Associates provided a professional opinion that no suitable breeding habitat or upland (underground) refuge habitat is present on the Windsor Mill Community site and requested a "no-effect" letter. The Service responded.....
The Windsor Mill Community project is approximately 5.17 miles from the nearest breeding site and has been surrounded by urban development that has posed substantial barriers to CTS movement and development of the site has been considered to not require mitigation for CTS.

1.7. FISH

Several species of fish listed by the state and/or federal government occur in the rivers and creeks in the region. These species include the Coastal Ecologically Significant Unit (ESU) of Chinook salmon, California (*Oncorhynchus tshawytscha*), listed as endangered by the state and as threatened by the federal government, the Central California Coastal ESU of the Coho salmon, central Calif. coastal ESU (*Oncorhynchus kisutch)*, listed by the federal government as a threatended species, and the Central California Coastal ESU of the steelhead trout (*Oncorhynchus mykiss)*, listed by the federal government as a threatened species.

Of these species, only steelhead trout

Ideal steelhead trout habitat includes cool, high-quality perennial streams, or intermittent streams with shaded pools and near-surface flow during the dry season. Clean, well-aerated gravel beds for spawning, typically in steep, rocky reaches of upper tributaries. Juvenile steelhead insects, crustaceans, and other stream invertebrates before smolting; adults feed mainly at sea.

Coho salmon habitat requirements are similar and include deep pools or glides with submerged rootwads or other cover for juvenile rearing. Food requirements are similar to those of steelhead trout.

1.8. PROPOSED ACTION (PROJECT)

The Windsor Mill Community site is located within the one-half-mile radius Station Planning Area. The Station Area Plan/Downtown Specific Plan was a policy adopted by Town Council and intended to create higher density housing options within one-half mile of the light rail station. The Windsor Mill community project has been proposed and designed in response to this policy.

1.8.1. Public Streets

Two public streets will be dedicated within the project limits. Bell Road will be extended through the site with a new alignment, running directly south toward the western project boundary and then running parallel to the west boundary and the railroad tracks to a crossing of Windsor Creek in the extreme southern corner of the site and reconnection with an existing portion of Bell Road. Bill Beedie Way will be created along the railroad right-of-way, providing public trail amenities as well as pedestrian and vehicular connectivity to the Windsor Train Station to the north.

1.8.2. Bridges

As conditions of approval for the project the Town of Windsor has required the construction of two new bridges across Windsor Creek. A pedestrian bridge will connect the site to the neighboring Windsor Creek Elementary School and a vehicular bridge connecting the segments of Bell Road at the north and south ends of the project site. The pedestrian bridge has been identified as an important element in the Town's Safe Routes to Schools initiative and will form part of a creek-side trail system that will be an amenity for both the proposed project and the Town of Windsor. The pedestrian bridge has been located to best align with the boundary of the school property. The vehicular bridge will provide north-south vehicular, pedestrian, and bicycle connections between the Town Green and the southern parts of Windsor and function as a crossing for in-ground utilities.

Details about characteristics and construction methods

1.8.3. Residential Areas

1.8.3.1. North Residential Area. The north residential development area represents approximately five acres and will consist of 111 one- to three-bedroom apartments in two- to four-story buildings. The north residential area will include required surface parking and community amenities such as a swimming pool and playgrounds. Additionally a small area of "tuck-under" parking will be located on the ground floors of many of the apartment buildings. The proposed density of approximately 22 units per acre meets the targets described in the Station Area Plan.

1.8.3.2. South Residential Area. The south residential area is proposed for approximately 15 acres and will consist of 249 three-story attached townhomes, each with two or three bedrooms. The proposed density of approximately 16 units per acre meets the targets described in the Station Area Plan. Each dwelling unit will have a private two-car garage. The multiplex buildings will be arranged on the site to generally separate vehicular from pedestrian and bicycle traffic. Paved vehicular circulation surfaces will be minimized to allow more site area for a system of interconnected landscaped pedestrian paths (passes), onto which each unit will front. Together with public sidewalks these paseos provide a continuous pedestrian circulation system connecting each unit to the greater community including the Train Station and downtown Town Green.

1.8.4. Creekside Trail

Consistent with a Town of Windsor condition of approval, the project will include a creek-side trail connecting the pedestrian bridge in the northeast corner of the site with the bridge crossing to Bell Road in the extreme southern corner. The creek-side trail will be a public amenity. The residential units located along the creek-side trail will be oriented such that the front doors of the units will face the trail with the intent that those residents will be more likely to increase security through observation.

1.8.4. Utilities

Unused storm drain outfalls in the vicinity of the proposed vehicular bridge crossing will be removed with this development. During removal and construction, temporary linear sediment barriers (e.g. fiber rolls, silt fence, etc.) and dewatering will be utilized as required in accordance with the State Water Resources Control Board (SWRCB) Construction General Permit (CGP) in order to avoid erosion and sediment movement into the creek and downstream. Ultimately, a new public storm drain system collecting storm water from the development and proposed public streets will connect directly to the existing twin 72-inch bypass conduits that parallel the creek.

A public sewer main is planned to be installed in the new Bell Road which will take effluent south. The sewer main will cross beneath Windsor Creek near the proposed vehicular bridge and will likely be installed using jack and bore methods with a casing in accordance with Town of Windsor construction standards.

???? fill

No excavation is proposed in the seasonal wetland habitat.

1.7.2. Discharge of Fill

Clean fill of on-site origin will be discharged into the 1,842 sf of seasonal wetland habitat. The total fill volume will be approximately 41 cy.

1.8. PROJECT SCHEDULE

The proposed remediation is planned for the summer and fall of 2015. The work should take approximately nine months.

1.9. STORM-WATER POLLUTION PREVENTION

A Storm Water Pollution Prevention Plan (SWPPP) will be developed to prevent project construction impacts on habitat and waters beyond the limits of the project site. Erosion control will be accomplished using conventional techniques suitable for local conditions (soil type, slope, etc.). Applicable protection measures, such as wattle barriers (without nylon or plastic netting) and/or silt fencing and regular on-site monitoring, will be used to protect against inadvertent impacts to areas outside the project impact area during construction.

1.10. AVOIDANCE, PROTECTION, AND MINIMIZATION MEASURES

1.10.1. Avoidance

1.10.1.1. Seasonal wetlands (Suitable Burke's goldfields habitat). The applicant does not propose to avoid any of the seasonal wetlands on the project site. Avoidance would not be ecologically sound. Urban development in the areas surrounding the project site has eliminated many seasonal wetlands and endangered plant species colonies. As it progresses, urban development of the few remaining nearby and adjacent properties, which is beyond the control of the applicant but has been proposed in the past, any avoided wetlands would remain ecologically isolated in a landscape characterized by incompatible land uses.

Wetlands left as islands within urbanizing areas lose their functional values, making their avoidance both ecologically and economically impractical. Avoided wetlands must be buffered with considerable areas of surrounding upland habitat, possess effective ecological connections with other wetlands and types of habitat, and have the hydrologic setting necessary to maintain the existing water balance. The combined upland and wetland habitat must be large enough to be internally resistant to the demographic and genetic events that cause local extinctions (eliminate species populations) and, via eliminations, reduce community diversity and the associated functions. The latter requirement is particularly important for endangered species that occupy few wetlands or small parts of individual wetlands.

The minimum size of an avoided area or preserve is, however, an important unanswered ecological question for most habitat types, including seasonal wetlands for which in many areas with drier rainfall regimes than the Santa Rosa Plain has stimulated consideration of the need to protect surrounding contributing watersheds. Ecologists argue theoretically that smaller populations are more vulnerable to intrinsic (inbreeding, genetic drift, random fluctuations in population size) and extrinsic (drought, flood, changes in

the nature and intensity of management, and other natural or human-induced environmental variations) causes of extinction than are larger populations.

Habitat fragmentation, one expression of which is a pattern of small, scattered preserves, is believed to isolate species populations and lead to their decline, particularly where the surrounding landscape is extremely different. When compared with natural ecosystems, residentially and commercially developed lands are extremely different types of surrounding land use (Janzen 1986, Shaffer 1981, Diamond and May 1976, Sullivan and Shafer 1975, Wilcox and Murphy 1985).

No work reported in the scientific literature prescribes the minimum acceptable size of a seasonal wetland preserve on the Santa Rosa Plain. The Vernal Pool Task Force recognized that preservation of small wetland areas in urbanized settings leads to losses of function, that surrounding upland habitat is required to buffer a wetland preserve, and that large preserves are superior to small preserves. No effort was made to quantify preserve and buffer size, minimum viable population size, or satisfactory connectivity, but the vernal pool ecosystem preservation plan[1] and the Interagency Review Team support the preservation of larger areas as places where mitigation for impacts on seasonal wetland habitat and endangered plant species should occur. Conservation banks and preserves removed from the direct and immediate influence of urban land uses offer a preferable alternative to patchwork arrays of small ("postage stamp" is a commonly used description) preserves (CH2M Hill 1996) stranded as islands within developed or urbanized landscapes. In such islands, the functions and values associated with wetlands, including habitat for endangered plant species, cannot be expected to persist.

Because of their locations – they are not clustered together – effective avoidance and preservation would be impracticable and the avoided areas would be small, even with surrounding buffers. Grazing would not be practical in the avoided areas given the difficulty of access and a tendency for residential landowners to complain about the odors associated with cattle grazing. Lacking grazing, the wetlands would gradually no longer function in the manner necessary to retain their currently compromised functions. Although discing can temporarily improve conditions by eliminating thatch and opening sites for plant establishment, it would destroy vegetation annually, cause partial burial of seed, and gradually result in wetland filling. Discing cannot be considered the ecological equivalent of grazing.

Limited quantitative research correlates reductions in native plant species abundance with isolation and declines in period of inundation [consistent with qualitative field observations of increases in non-native species on other sites on the Santa Rosa Plain (Stromberg personal observations)]. Isolation and altered hydrologic function have more significant effects on smaller plant populations (Bauder 1987, Zedler 1986). For these and the above reasons, preservation of the wetlands would be ecologically improbable. Even partial avoidance, i.e., avoidance of the farmed wetland pastures in whole or in part, would yield little in

1

terms of long-term preservation of wetland functions, regardless of the manner in which the latter are defined.

Avoidance and minimization of impacts of occupied seasonal wetland habitat (that has not been observed in several past and recent surveys to actually support Burke's goldfields) through avoidance would be of little long-term ecological value.

1.10.1.2. California tiger salamander. Many of the reasons stated for the ecological impracticality of avoiding seasonal wetland habitat apply to the avoidance of upland CTS habitat. No breeding habitat occurs on or near the site and no adult CTS have been observed within 1.3 miles. No avoidance of upland CTS habitat on the site is proposed by the applicant.

1.10.2. Protection Measures

The applicant does not propose to install fence to passively relocate (temporarily exclude) CTS from the project site prior to construction. The following protective measures would be implemented during construction if required by the Service Needed????):

1. A trained monitor will be available to be on-site when work is in progress at the project site and mitigation site to supervise the on-site compliance of these protection measures.

2. A training session will be given to all construction workers before work is started on the project. After initial training, all new personnel will be given the training as well. The training session will provide pictures of the CTS, information on their biology, measures required to protect these species, relevant federal and state regulations, penalties for harming or harassing the CTS, and what to do if CTS are found.

3. If a CTS is observed on the project site by a worker, the worker will immediately inform the monitor and the monitor contact the Service-approved biologist. The monitor will halt work within 100 feet of the animal until the CTS is captured and removed from the work area. The Service-approved biologist will be the only person allowed to handle CTS. CTS found in the work area will be relocated to pre-approved areas no more than one hour after capture.

4. The monitor and the biologist have the authority to halt work activities at any time to prevent harming special-status species or when any of these protective measures have been violated. Work will only commence when authorized by the biologist.

5. Before the start of work each morning, the monitor will check for wildlife under any vehicles and equipment.

6. Before the start of work each morning, the monitor will check all excavated steep-walled holes or trenches greater than one foot deep for any wildlife. Wildlife will be removed and the biologist will be notified if CTS are found.

7. A record of all CTS observed and the outcome of that observation will be kept by the monitor and submitted to the Service.

8. All foods and food-related trash items, such as lunch bags, plastic sandwich bags, fast food containers, foods of any type, candy wrappers, chip packages, drink bottles, and cans, etc., will be enclosed in sealed trash containers and removed completely from the site once every three days. Food items could attract predators into the work area.\

9. No pets will be allowed on the project site during construction.

10. A speed limit of 15 mph will be observed on-site.

11. All equipment will be maintained to prevent no leaks of automotive fluids, such as gasoline, oils, or solvents.

12. Hazardous materials such as fuels, oils, solvents, etc., will be stored in sealable containers in a designated location that is at least 200 feet from aquatic habitats. All fueling and maintenance of vehicles and other equipment and staging areas will occur at least 200 feet from any aquatic habitat.

13. All grading and will be completed between April 15 and October 15.

1.10.3. Minimization Measures

Consistent with the requirements for erosion and sediment control of the State Water Resources Control Board Construction General Permit (CGP), Windsor Mill Community LLC will file a Notice of Intent and prepare a Storm Water Pollution Prevention Plan (SWPPP) prior to construction. Techniques incorporated into the SWPPP and used to prevent sediment from entering watercourses during construction may include the following:

1. Temporary linear sediment barriers (e.g. fiber rolls, silt fence, etc.) installed perpendicular to sheet flow routes in order to filter and clean storm water.

2. Stabilized construction entrances/exits consisting of crushed rock and/or steel rumble racks to clean tires and prevent tracking of sediment onto public rights-of-way.

3. Inlet protection devices (e.g. filter fabric, gravel bags, etc.) to filter and clean storm water before it enters the public storm drain system.

4. Covers for stockpiles and disturbed ground areas to prevent erosion due to rainfall and/or wind.

5. Ground water dewatering (if needed) handled in conformance with a dewatering permit issued by the Regional Water Quality Control Board (RWQCB).

6. Other temporary Best Management Practices (BMPs) as needed to comply with CGP requirements.

The applicant will also carry out a dust control program during all active on-site grading operations. The program is intended to minimize the amount of dust leaving construction areas that could be deposited on nearby residents or sensitive habitat. It will consist of continuous use of water trucks during active grading operations. Equipment will be allocated based on weather, wind, and soil conditions encountered during construction operations.

2.0. ASSESSMENT OF IMPACTS ON LISTED SPECIES

2.1. Direct and Indirect Impacts

2.1.1. Special-status plant species. The project will eliminate a very small area of seasonal wetland habitat that would be suitable for the plant species listed as endangered on the Santa Rosa Plain. Protocol surveys conducted in four years have produced no observations of listed species. Development of the project will not take listed plants, is unlikely to have an impact on the seed bank of a listed species, and the loss of the small area of habitat would not affect any of the listed species were once present. The project will not eliminate hydrologic connections between other wetlands known to support listed plant species or isolate remaining populations from one another. The small loss of suitable but unoccupied habitat resulting from the project would not jeopardize the continued any of the listed species on the Santa Rosa Plain. The project would have no direct or indirect impact on any listed plant species.

The total area of seasonal wetland habitat that would be affected by the Windsor Mill community project is only 0.07 acre. The loss of habitat over the Santa Rosa Plain as a whole has been important but native seasonal wetland habitat supports only a small fraction of the total number of Burke's goldfields plants now present on the Plain. Several million plants have been established in stable habitat on the Woodbridge Preserve and at Slippery Rock Conservation Bank and, although the period of establishment is only three years, an increasing, apparently stable population has been established at Alton North Conservation Bank. Observations in 2014 on the Jacobson property, which abuts the Woodbridge Preserve, indicate that Burke's goldfields has expanded into habitat on the Jacobson property in which the species has not been observed for more than a decade. The plants have become established on the margins of a large vernal pool that is hydrologically connected to one of the vernal pools constructed in the southwest quarter of the Woodbridge Preserve.

2.1.2. California tiger salamander. Section 5.3.3.3 of the Conservation Strategy states that:

> "Impact to CTS is not likely on some lands beyond 1.3 miles from breeding sites, or on lands within 1.3 miles from breeding sites that are surrounded by significant barriers or are otherwise unsuitable CTS habitat (see Figure 3). Neither surveys nor mitigation would be required for projects on these properties. No CTS mitigation or surveys will be required for projects outside of the potential CTS range."

Because of the distance of the site from the nearest adult CTS observation or known CTS breeding pond, the lengthy period of urban and rural residential development of the land between the site and the nearest known CTS observations, and the array of surrounding and nearby physical barriers to CTS movement, the project is not considered to have and potential direct or indirect impacts on the California tiger salamander.

2.2. Cumulative Impacts

Cumulative effects include those of future state, tribal, local, or private actions that are reasonably certain to occur in the action area. Future federal actions that are unrelated to the proposed action are not considered in this analysis, because they require separate consultation pursuant to section 7 of the Endangered Species Act (Act) or Section 10a of the Act.

The threats to Burke's goldfields and the other endangered plant species that occur in Santa Rosa Plain vernal pools and swales, such as unauthorized fill of wetlands, urbanization, increases in non-native species, continued irrigation of pastures with recycled wastewater discharge, and lack of management necessary to reduce thatch are likely to continue with concomitant adverse effects on these species. The results are likely to include additional habitat loss and degradation, increasingly isolated populations (exacerbating the disruption of gene flow patterns), and further reductions in the reproduction, numbers, and distribution of these species, which will decrease their ability to respond to stochastic events.

Cumulative impacts on CTS could increase in the future if the current application of the U. S. Army Corps of Engineers' ("Corps") regulatory authority under the Clean Water Act changes. On January 9, 2001, the United States Supreme Court issued an opinion regarding the Solid Waste Agency of Northern Cook County, Petitioner v. United States Army Corps of Engineers, et al. (SWANCC) that addressed the Corps' regulatory authority over isolated wetlands. The Corps' San Francisco District generally has regulated wetlands on the Santa Rosa Plain that are hydrologically connected to the Laguna de Santa Rosa, a tributary of the Russian River. Reduced application of the Corps' regulatory authority, and subsequent lack of Section 7 consultation with the Service on such isolated wetlands, could result in increased impacts to federally listed species in the Santa Rosa Plain from future state, tribal, local, or private actions.

Cumulative effects on the CTS would include continuing and future conversion of suitable breeding, foraging, sheltering, and dispersal habitat resulting from urban development. Additional urbanization can result in road widening and increased traffic on roads that bisect breeding and upland habitats, thereby increasing road-kill while reducing in size and further fragmenting of the remaining habitats.

3.0 . PROPOSED MITIGATION FOR LISTED SPECIES

The Service and CDFW have yet to finalize definitions of "occupied" and "suitable" habitat for the three endangered plant species on the Santa Rosa Plain and to establish guidance for determining the role of potential hydrologic connections between wetlands that actually contain plants and others on a site that do not but occur in the vicinity. The four small seasonal wetlands on the Bay Village Homes site are hydrologically isolated from one another but all but the 30-square-foot wetland appear to be physical and potentially hydrologically connected with seasonal wetlands the off-site portions of which have been observed previously to support Burke's goldfields. All but the 30-square-foot wetland are, therefore, considered to be occupied Burke's goldfields habitat.

Burke's goldfields credits are currently difficult to acquire; arrangements are underway between the applicant and a banker to acquire the necessary credits from a Service-approved mitigation or conservation bank on the Santa Rosa Plain.

Although the Conservation Strategy mitigation requirements were established before the species was listed by the State of California, it states that impact on CTS are "not likely on some lands beyond 1.3 miles from breeding sites, or on lands within 1.3 miles from breeding sites that are surrounded by significant barriers or are otherwise unsuitable CTS habitat (see Figure 3). Neither surveys *nor mitigation* would be required for projects on these properties."

If CDFW and/or the Service require otherwise, the applicant will mitigate impacts on 0.78 acres of potential CTS habitat with the purchase of the required mitigation credits from a bank approved by the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife. The Conservation Strategy indicates that impacts on CTS are not likely on some lands beyond 1.3 miles from breeding sites, or on lands within 1.3 miles from breeding sites that are surrounded by significant barriers or are otherwise unsuitable CTS habitat (see Figure 3). Because of the distance from the nearest known CTS breeding ponds and the barriers to movement between the breeding ponds and the subject site, no mitigation may be required. Alternatively, mitigation could be required at a ratio of 0.2:1. In that even, the applicant will acquire 0.156 credits (rounded to accommodate the bank's minimal unit sale).

5.0. REFERENCES

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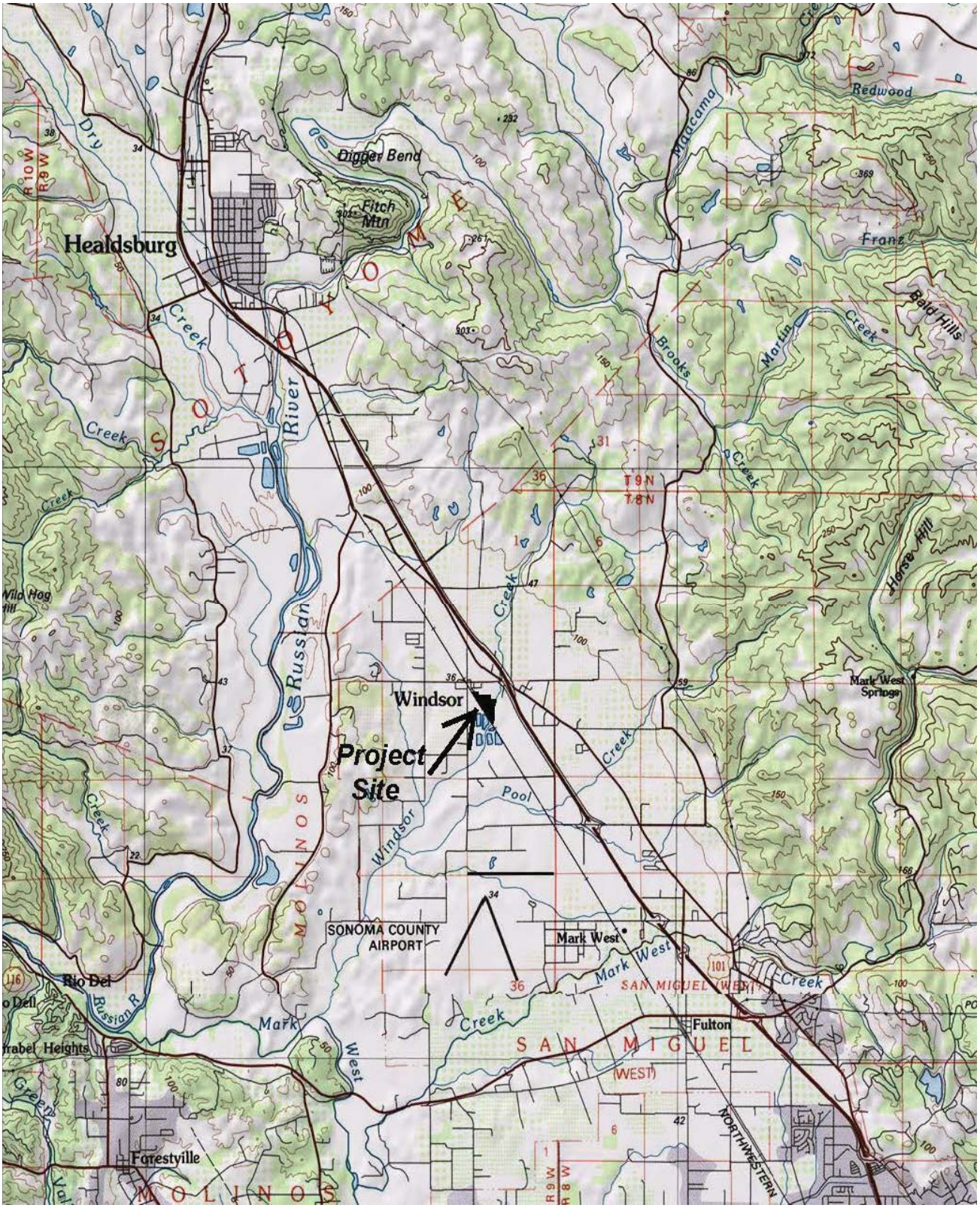
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6.0. PERSONAL COMMUNICATIONS

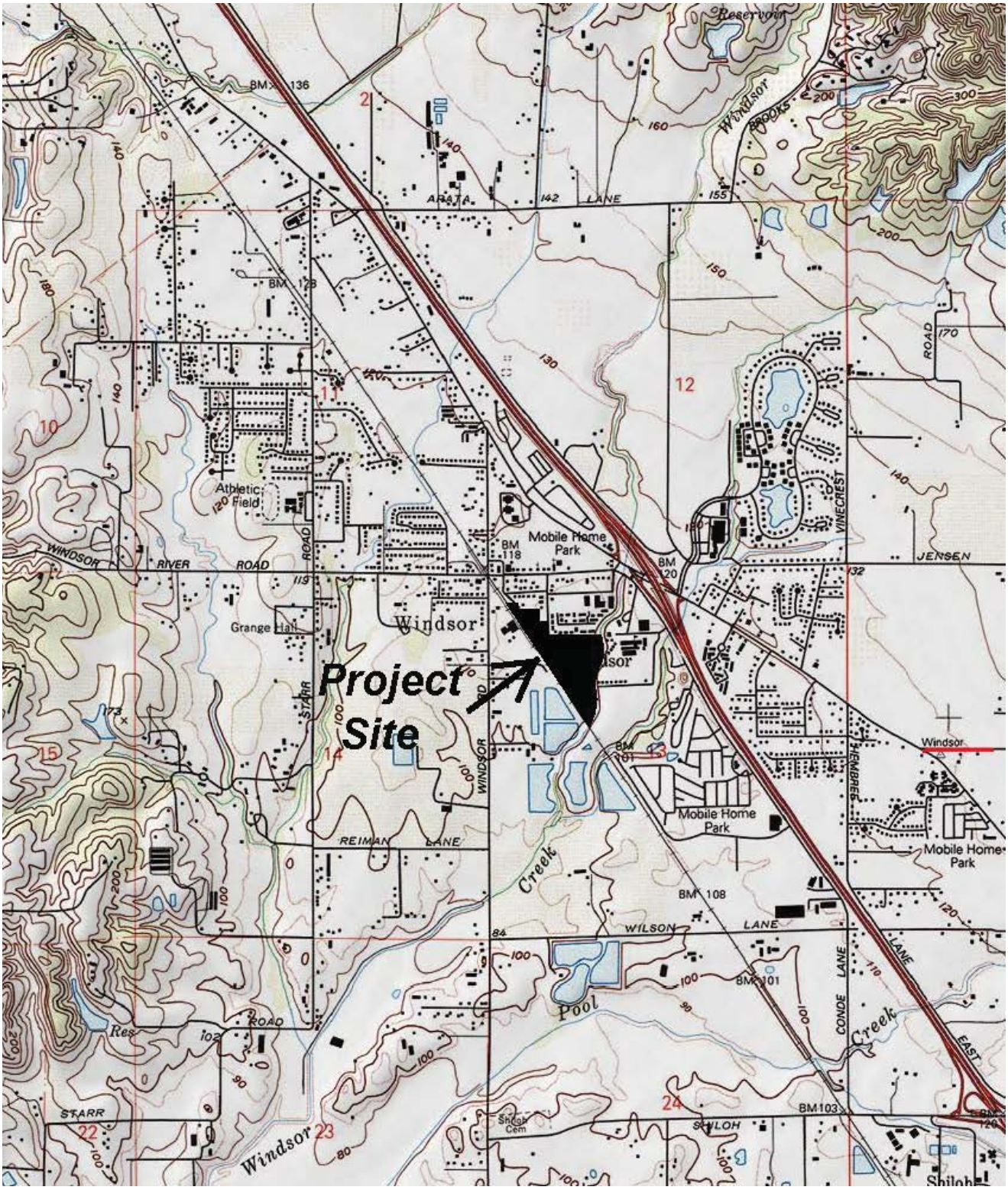
Mr. Dan Wilson, National Marine Fisheries Service, Santa Rosa, California.

Mr . Bryan Matsumoto, Project Manager, Regulatory Branch, San Francisco District, U. S. Army Corps of Engineers, San Francisco, California.

FIGURES



Applicant: Mr. Robert Bisno Windsor Mill Communities, LLC 9255 Sunset Blvd., Suite 920 Los Angeles, CA 90069 Site: Windsor Mill Communities Site Windsor, California	Nominal Scale: 1:110,000	Figure 1. Regional Location Map



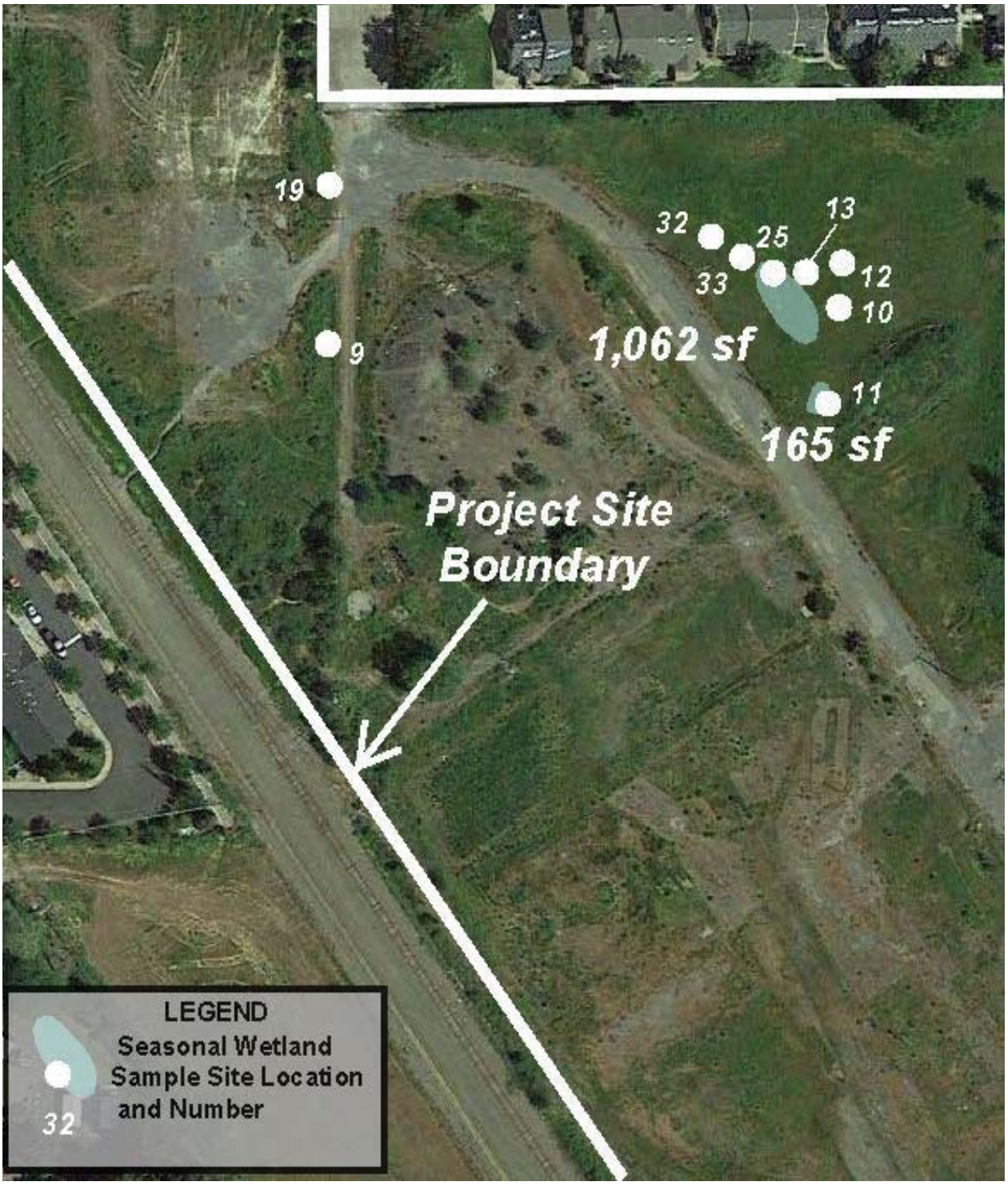
Applicant: Mr. Robert Bisno Windsor Mill Communities, LLC 9255 Sunset Blvd., Suite 920 Los Angeles, CA 90069 Site: Windsor Mill Communities Site Windsor, California	N Nominal Scale: 1:24,000	Figure 2. Project Site Location



Applicant: Mr. Robert Bisno Windsor Mill Community, LLC. 9255 Sunset Blvd., Suite 920 Los Angeles, CA 90069Site: Site: Windsor Mill Communities Site Windsor, California	N No Scale:	Figure 3. Index to Figures Showing the Pre-jurisdictional Determination of the Windsor Mill Communities Site



Applicant: Mr. Robert Bisno Windsor Mill Communities, LLC 9255 Sunset Blvd., Suite 920 Los Angeles, CA 90069 Site: Windsor Mill Communities Site Windsor, California	Nominal Scale: 1:1,200	Figure 4. Pre-jurisdictional Determination Northwest Corner of the Windsor Mill Communities Site



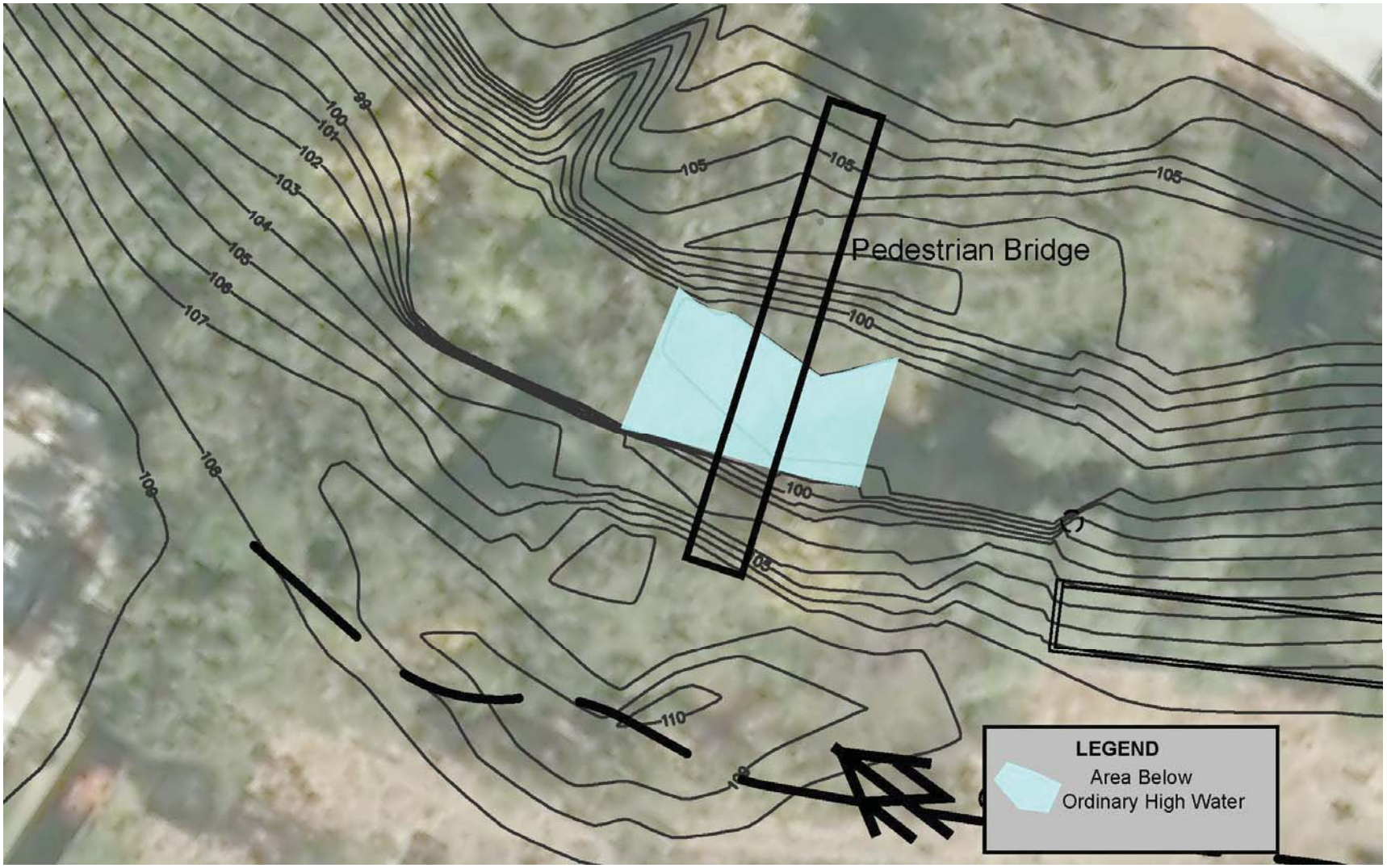
Applicant: Mr. Robert Bisno Windsor Mill Communities, LLC 9255 Sunset Blvd., Suite 920 Los Angeles, CA 90069 Site: Windsor Mill Communities Site Windsor, California	**N** Nominal Scale: 1:1,200	Figure 5. Pre-jurisdictional Determination West-Central Section of the Windsor Mill Communities Site



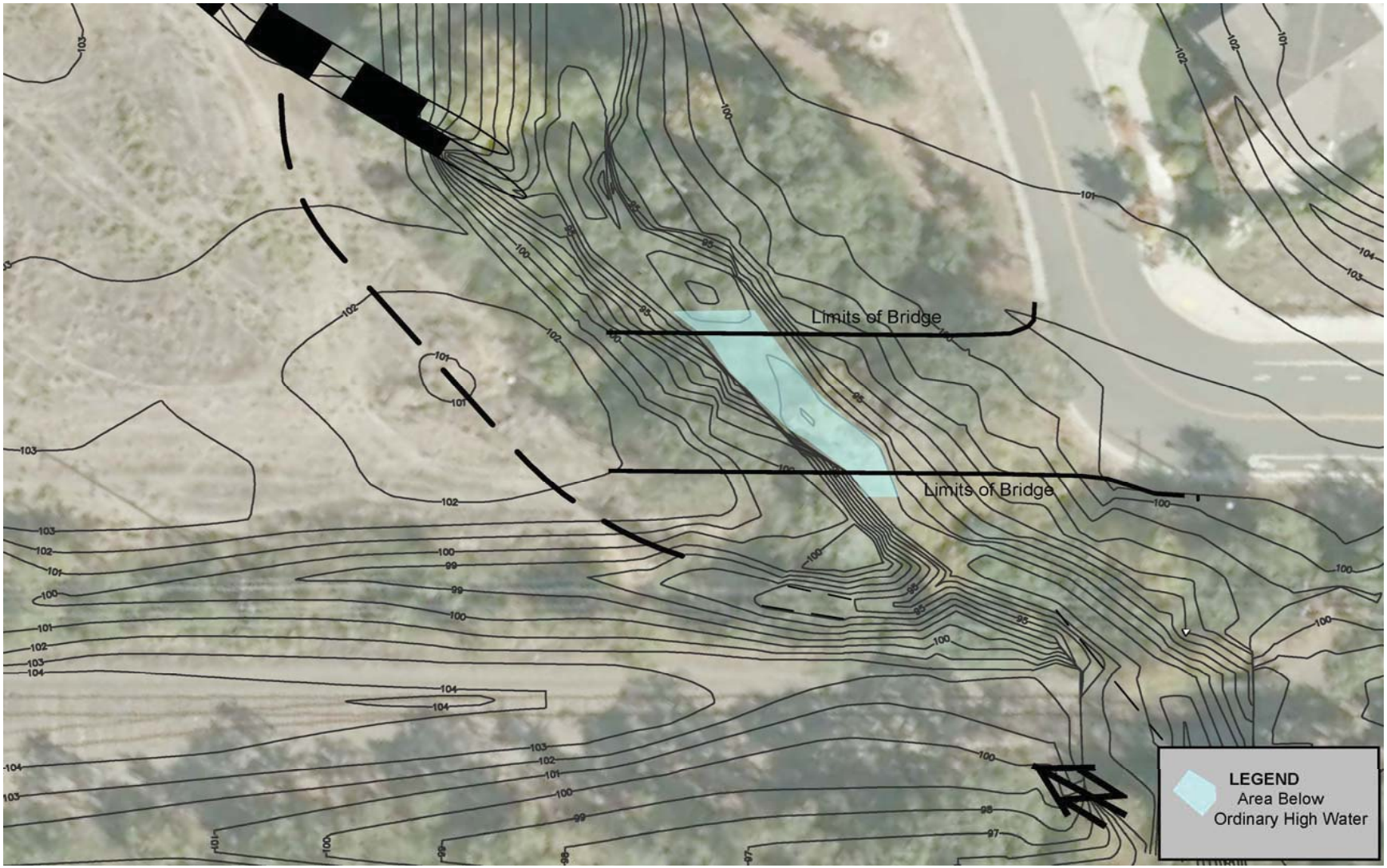
Applicant: Mr. Robert Bisno Windsor Mill Communities, LLC 9255 Sunset Blvd., Suite 920 Los Angeles, CA 90069 Site: Windsor Mill Communities Site Windsor, California	**N** Nominal Scale: 1:1,200	Figure 6. Pre-jurisdictional Determination East-Central Section of the Windsor Mill Communities Site



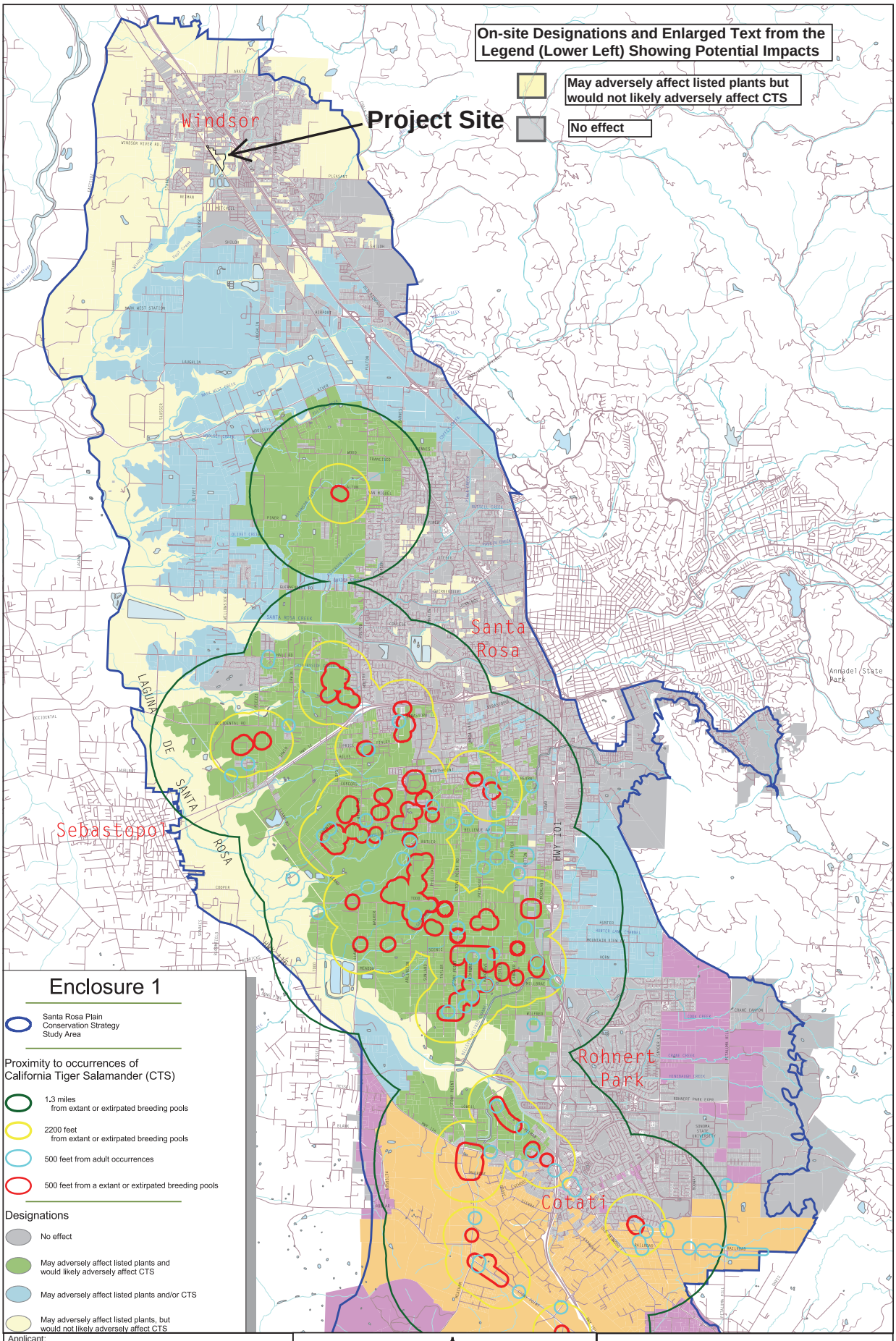
Applicant: Mr. Robert Bisno Windsor Mill Community, LLC. 9255 Sunset Blvd., Suite 920 Los Angeles, CA 90069 Site: Windsor Mill Communities Site Windsor, California	**N** Nominal Scale: 1:1,200	Figure 7. Pre-jurisdictional Determination Southeast Corner of the Windsor Mill Communities Site



Applicant: Mr. Robert Bisno Windsor Mill Communities, LLC 9255 Sunset Blvd., Suite 920 Los Angeles, CA 90069 Site: Windsor Mill Communities Site Windsor, California	Nominal Scale: 1:480	Figure 8. Pre-jurisdictional Determination at the Pedestrian Bridge Crossing



Applicant: Mr. Robert Bisno Windsor Mill Communities, LLC 9255 Sunset Blvd., Suite 920 Los Angeles, CA 90069 Site: Windsor Mill Communities Site Windsor, California	Nominal Scale: 1:480	Figure 9. Pre-jurisdictional Determination at the Vehicular Bridge Crossing

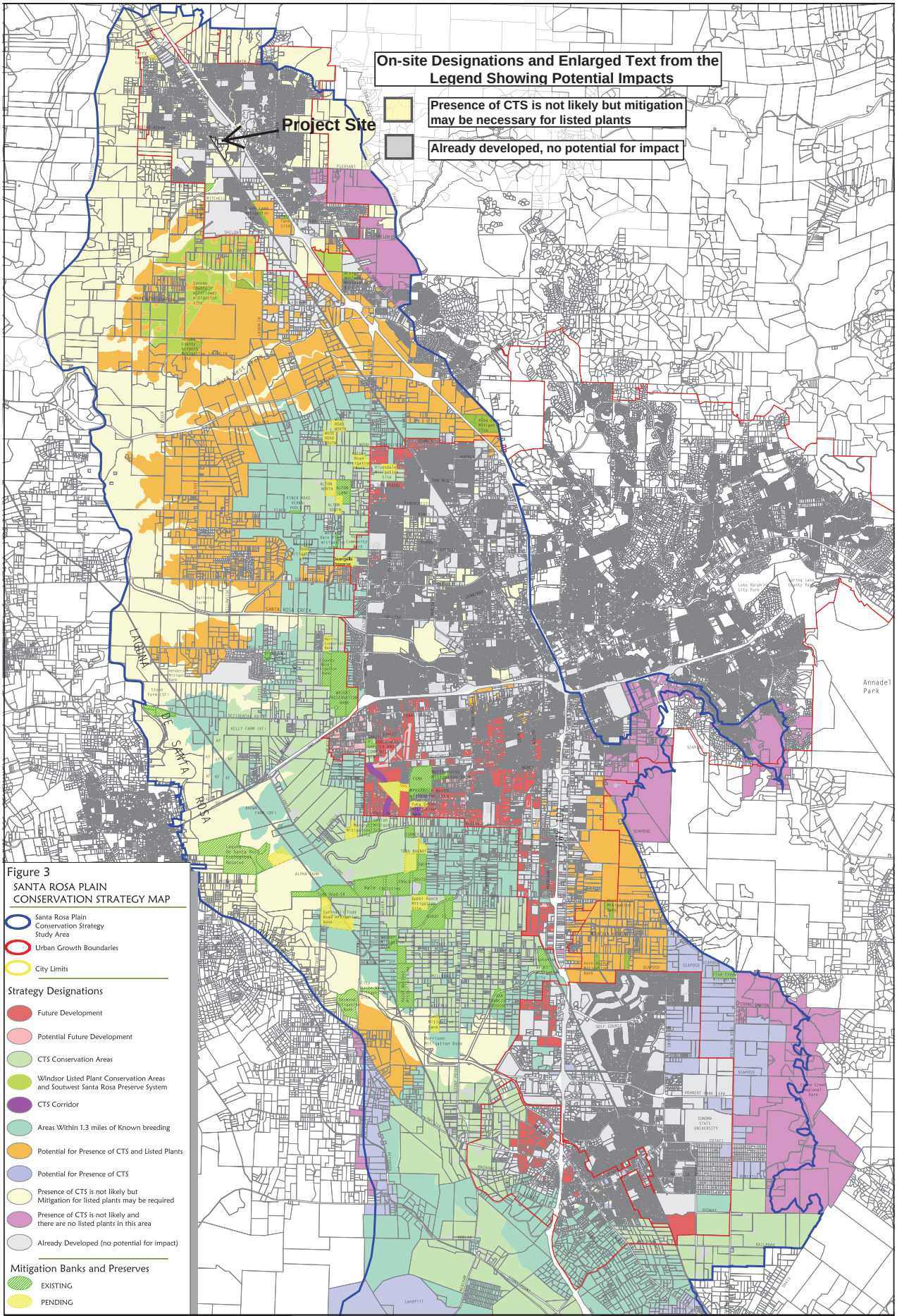


Applicant:
Mr. Robert Bisno
Windsor Mill Community, LLC
9255 Sunset Blvd., Suite 290

Site:
Windsor Mill Communities Site
Windsor, California

Nominal Scale: 1:78,000

Figure 10.
Location of the Windsor Mill Community Site with Respect to Enclosure 1 (Programmatic Biological Opinion) Designations of Potential Impacts.



Applicant:
Mr. Robert Bisno
Windsor Mill Communities, LLC
9255 Sunset Blvd., Suite 290
Site:
Windsor Mill Communities Site
Windsor, California

Nominal Scale: 1:78,000

Figure 11.
Location of the Windsor Mill Communities Site with Respect to Figure 3 (Revised) of the Santa Rosa Plain Conservation Strategy



Applicant:
Mr. Robert Bisno
Windsor Mill Communities, LLC
9255 Sunset Blvd., Suite 290

Site:
Windsor Mill Communities Site
Windsor, California

Nominal Scale:
1:85,000

Figure 12.
Location of the Windsor Mill Communities Site with Respect to California Tiger Salamander Critical Habitat and the Nearest Known Adult CTS and Breeding Pond Locations



LEGEND

ASPHALT CONCRETE

CONCRETE

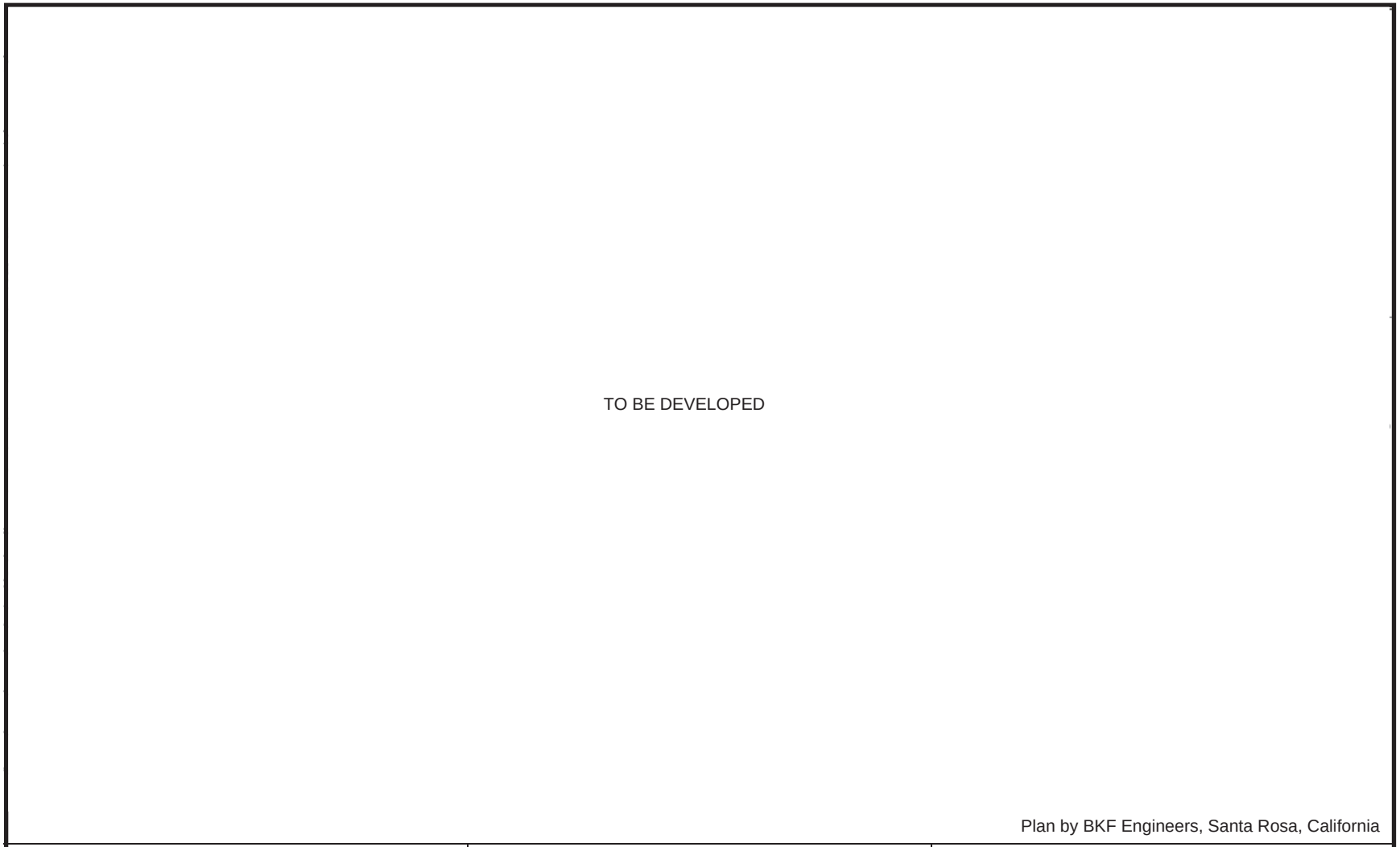
STORMWATER TREATMENT AREA

Plan by BKF Engineers, Santa Rosa, California

Applicant:
Mr. Robert Bisno
Windsor Mill Community, LLC
9255 Sunset Blvd., Suite 290
Site:
Windsor Mill Communities Site
Windsor, California

Nominal Scale: 1:3,000

Figure 13
Proposed Windsor Mill Community Project

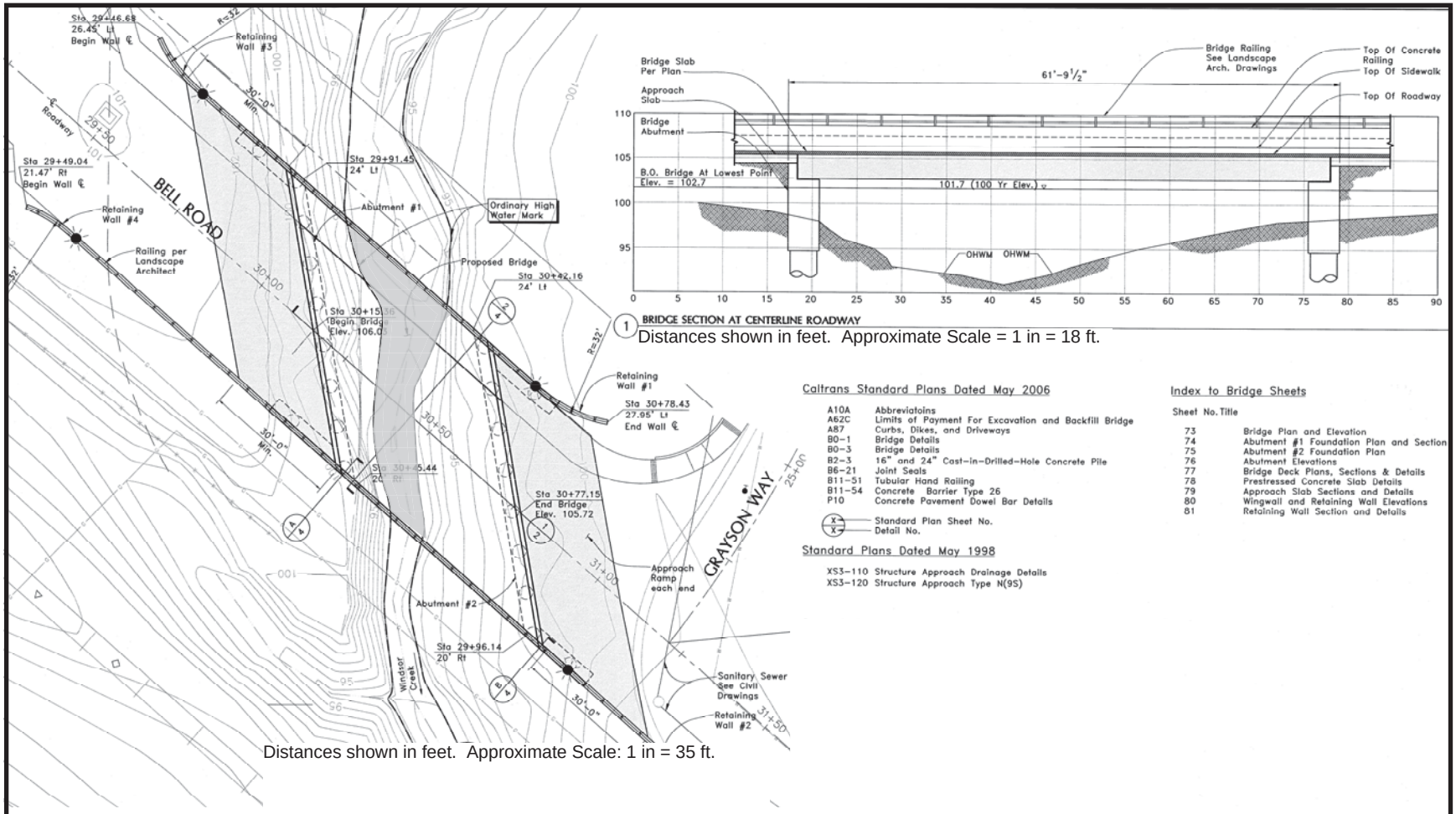


Plan by BKF Engineers, Santa Rosa, California

Applicant:
Mr. Robert Bisno
Windsor Mill Community, LLC
9255 Sunset Blvd., Suite 290
Site:
Windsor Mill Communities Site
Windsor, California

Scale varies

Figure 14.
Proposed Pedestrian Bridge



Distances shown in feet. Approximate Scale = 1 in = 18 ft.

Distances shown in feet. Approximate Scale: 1 in = 35 ft.

Caltrans Standard Plans Dated May 2006

A10A	Abbreviatoins
A62C	Limits of Payment For Excavation and Backfill Bridge
A87	Curbs, Dikes, and Driveways
B0-1	Bridge Details
B0-3	Bridge Details
B2-3	16" and 24" Cast-in-Drilled-Hole Concrete Pile
B6-21	Joint Seals
B11-51	Tubular Hand Railing
B11-54	Concrete Barrier Type 26
P10	Concrete Pavement Dowel Bar Details

X = Standard Plan Sheet No.
X = Detail No.

Standard Plans Dated May 1998

XS3-110	Structure Approach Drainage Details
XS3-120	Structure Approach Type N(9S)

Index to Bridge Sheets

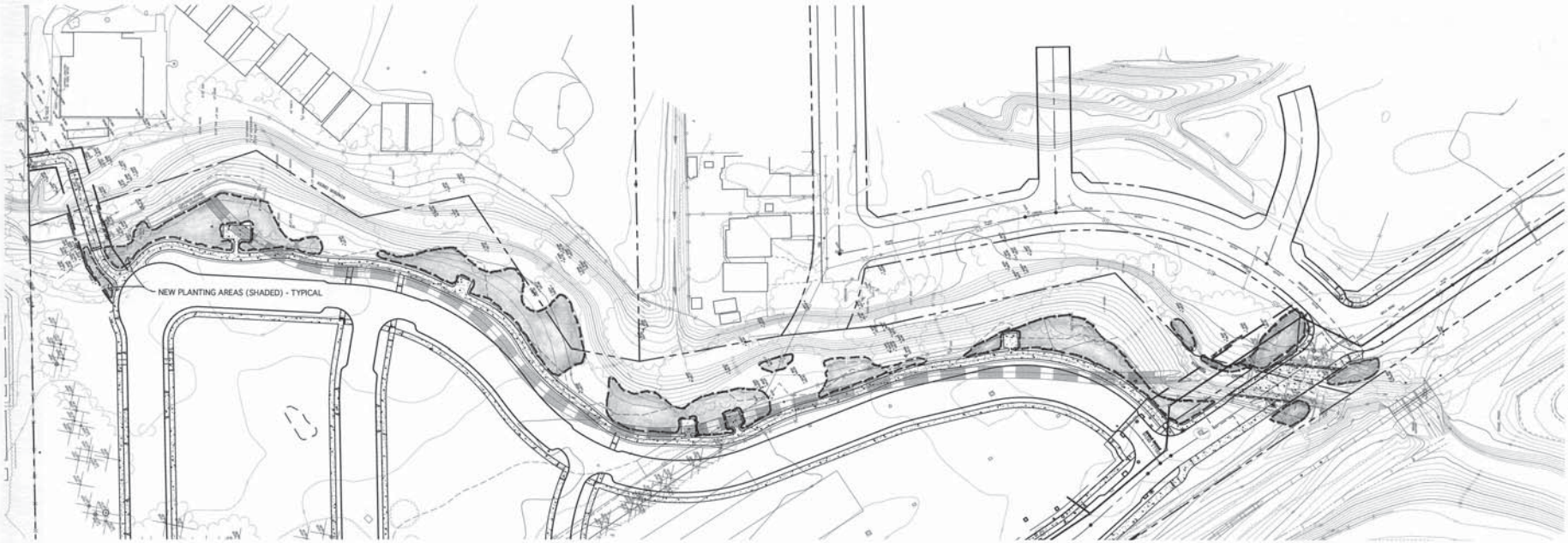
Sheet No.	Title
73	Bridge Plan and Elevation
74	Abutment #1 Foundation Plan and Section
75	Abutment #2 Foundation Plan
76	Abutment Elevations
77	Bridge Deck Plans, Sections & Details
78	Prestressed Concrete Slab Details
79	Approach Slab Sections and Details
80	Wingwall and Retaining Wall Elevations
81	Retaining Wall Section and Details

Plan by BKF Engineers, Santa Rosa, California

Applicant:
Mr. Robert Bisno
Windsor Mill Community, LLC
9255 Sunset Blvd., Suite 290
Site:
Windsor Mill Communities Site
Windsor, California

Scale varies

Figure 15
Proposed Vehicular Bridge



WINDSOR MILL
CREEK REVEGETATION & ENHANCEMENT PLAN

OVERVIEW OF NEW PLANTING AREAS

Scale: 1 in = 50 ft.

Approved By: Hope Kingma, Project Biologist
Monk & Associates

Plans Prepared By:
Dave Haselwood, Landscape Architect
Denise Kelly, Horticulturist
Becky Duckles, Project Arborist
707.829.0555

REV.	DATE	DESCRIPTION	BY	CHK'D	APV'D

DESIGNED: | DRAWN: | CHECKED:

TOWN OF WINDSOR
PUBLIC WORKS DEPARTMENT

APPROVED:

RICHARD W. BURTT — DATE
PUBLIC WORKS DIRECTOR/TOWN ENGINEER
R.C.E. NO. 32862 EXP. 6/30/08
R.T.E. NO. 1538 EXP. 9/30/06

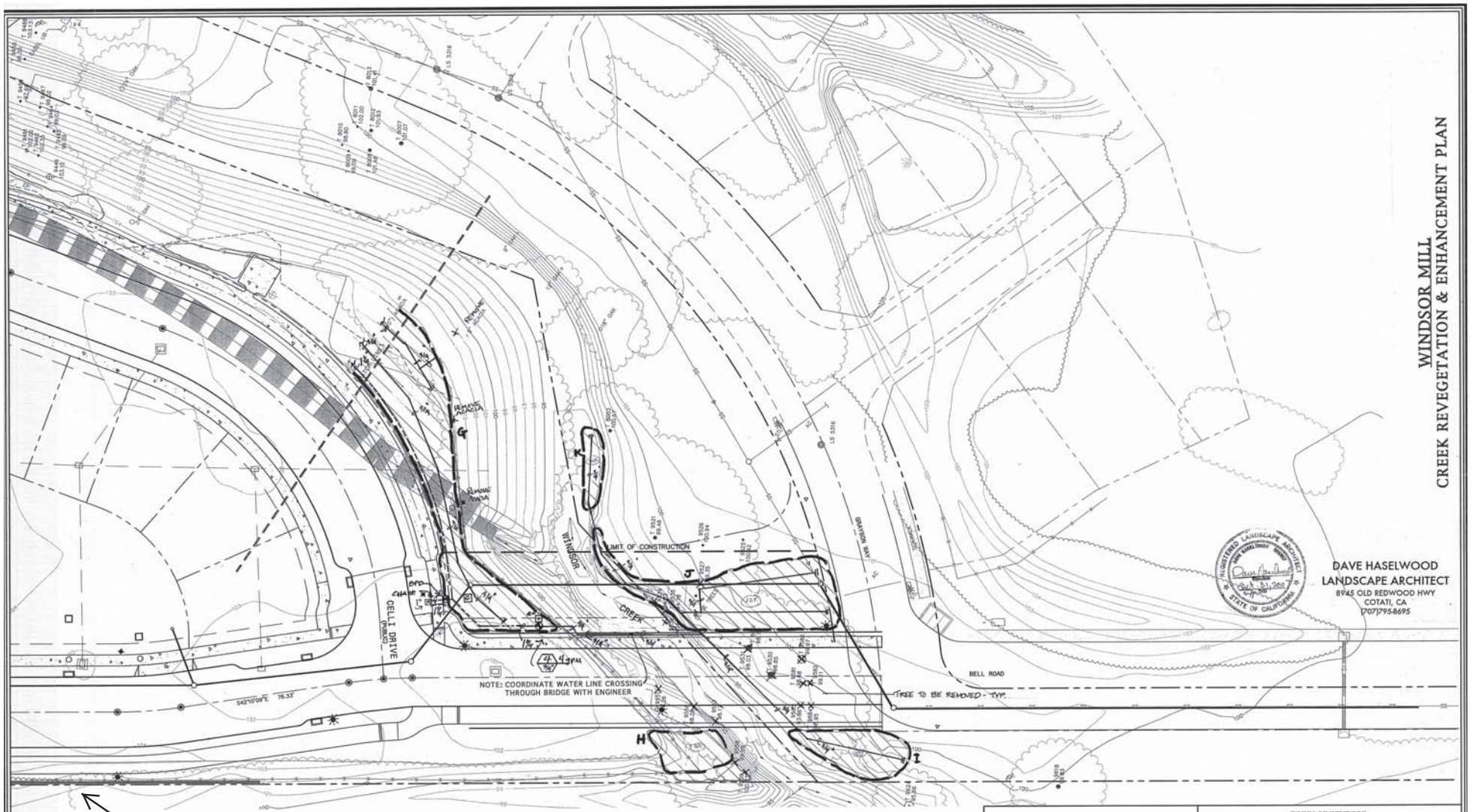
RECOMMENDED:

WILHELM DAIDA — DATE
ASSISTANT TOWN ENGINEER
R.C.E. NO. 29875 EXP. 3/31/07

SCALE: AS SHOWN | SHEET 1 of 6
DATE: 2-22-07 | PROJ. NO.

Applicant:
Mr. Robert Bisno
Windsor Mill Communities, LLC
9255 Sunset Blvd., Suite 290
Site:
Windsor Mill Communities Site
Windsor, California

Figure 16.
Windsor Creek Revegetation and Enhancement Plan
Sheet 1 of 6



Applicant:
Mr. Robert Bisno
Windsor Mill Communities, LLC
9255 Sunset Blvd., Suite 290
Site:
Windsor Mill Communities Site
Windsor, California

Figure 17.
Windsor Creek
Revegetation and Enhancement Plan
Sheet 2 of 6

APPROVED: WINDSOR FIRE PROTECTION DISTRICT
BY: _____ _____
MATT GUSTAFSON, FIRE MARSHALL DATE

APPROVED: RINCON VALLEY FIRE PROTECTION DISTRICT
BY: _____ _____
DOUGLAS WILLIAMS, FIRE CHIEF DATE

Approved By: Hope Kingma, Project Biologist
Monk & Associates

Plans Prepared By:
Dave Haselwood, Landscape Architect
Denise Kelly, Horticulturist
Becky Duckles, Project Arborist
707.829.0555

DESIGNED: | DRAWN: | CHECKED:

REV.	DATE	DESCRIPTION	BY	CHK'D	APV'D

TOWN OF WINDSOR
PUBLIC WORKS DEPARTMENT

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RICHARD W. BURTT DATE
PUBLIC WORKS DIRECTOR/TOWN ENGINEER
R.C.E. NO. 32862 EXP. 6/30/08
R.T.E. NO. 1538 EXP. 9/30/06

RECOMMENDED:

WILHELM DAIDA DATE
ASSISTANT TOWN ENGINEER
R.C.E. NO. 29875 EXP. 3/31/07

SCALE: AS SHOWN | SHEET 2 of 6
DATE: 2-22-07 | PROJ. NO.

Applicant:
Mr. Robert Bisno
Windsor Mill Communities, LLC
9255 Sunset Blvd., Suite 290
Site:
Windsor Mill Communities Site
Windsor, California

Figure 18.
Windsor Creek
Revegetation and Enhancement Plan
Sheet 3 of 6





WINDSOR MILL
CREEK REVEGETATION & ENHANCEMENT PLAN

DAVE HASELWOOD
LANDSCAPE ARCHITECT
8945 OLD REDWOOD HWY
COTATI, CA.
(707)795-8695

APPROVED: WINDSOR FIRE PROTECTION DISTRICT

BY: _____ _____
MATT GUSTAFSON, FIRE MARSHALL DATE

APPROVED: RINCON VALLEY FIRE PROTECTION DISTRICT

BY: _____ _____
DOUGLAS WILLIAMS, FIRE CHIEF DATE

Approved By: Hope Kingma, Project Biologist
Monk & Associates

Plans Prepared By:
Dave Haselwood, Landscape Architect
Denise Kelly, Horticulturist
Becky Duckles, Project Arborist
707.829.0555

DESIGNED:	DRAWN:	CHECKED:

REV.	DATE	DESCRIPTION	BY	CHK'D	APV'D

TOWN OF WINDSOR
PUBLIC WORKS DEPARTMENT

APPROVED: _____

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R.T.E. NO. 1538 EXP. 9/30/06

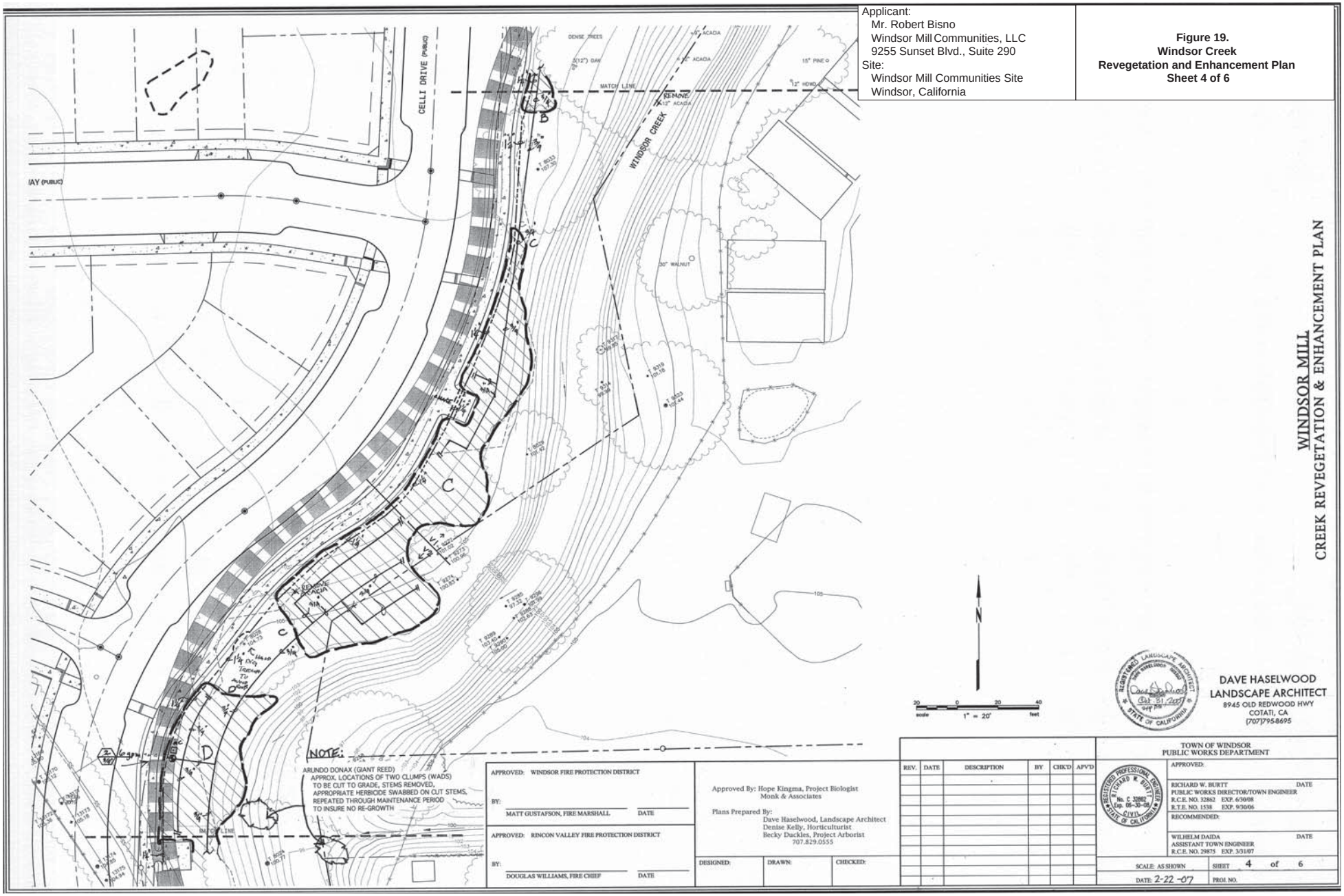
RECOMMENDED: _____

WILHELM DAIDA DATE
ASSISTANT TOWN ENGINEER
R.C.E. NO. 29875 EXP. 3/31/07

SCALE: AS SHOWN SHEET 3 of 6
DATE: 2-22-07 PROJ. NO.

Applicant:
Mr. Robert Bisno
Windsor Mill Communities, LLC
9255 Sunset Blvd., Suite 290
Site:
Windsor Mill Communities Site
Windsor, California

Figure 19.
Windsor Creek
Revegetation and Enhancement Plan
Sheet 4 of 6



WINDSOR MILL
CREEK REVEGETATION & ENHANCEMENT PLAN

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LANDSCAPE ARCHITECT
8945 OLD REDWOOD HWY
COTATI, CA
(707)795-8695

APPROVED: WINDSOR FIRE PROTECTION DISTRICT
BY: _____ DATE _____
MATT GUSTAFSON, FIRE MARSHALL

APPROVED: RINCON VALLEY FIRE PROTECTION DISTRICT
BY: _____ DATE _____
DOUGLAS WILLIAMS, FIRE CHIEF

Approved By: Hope Kingma, Project Biologist
Monk & Associates

Plans Prepared By:
Dave Haselwood, Landscape Architect
Denise Kelly, Horticulturist
Becky Duckles, Project Arborist
707.829.0555

DESIGNED: | DRAWN: | CHECKED:

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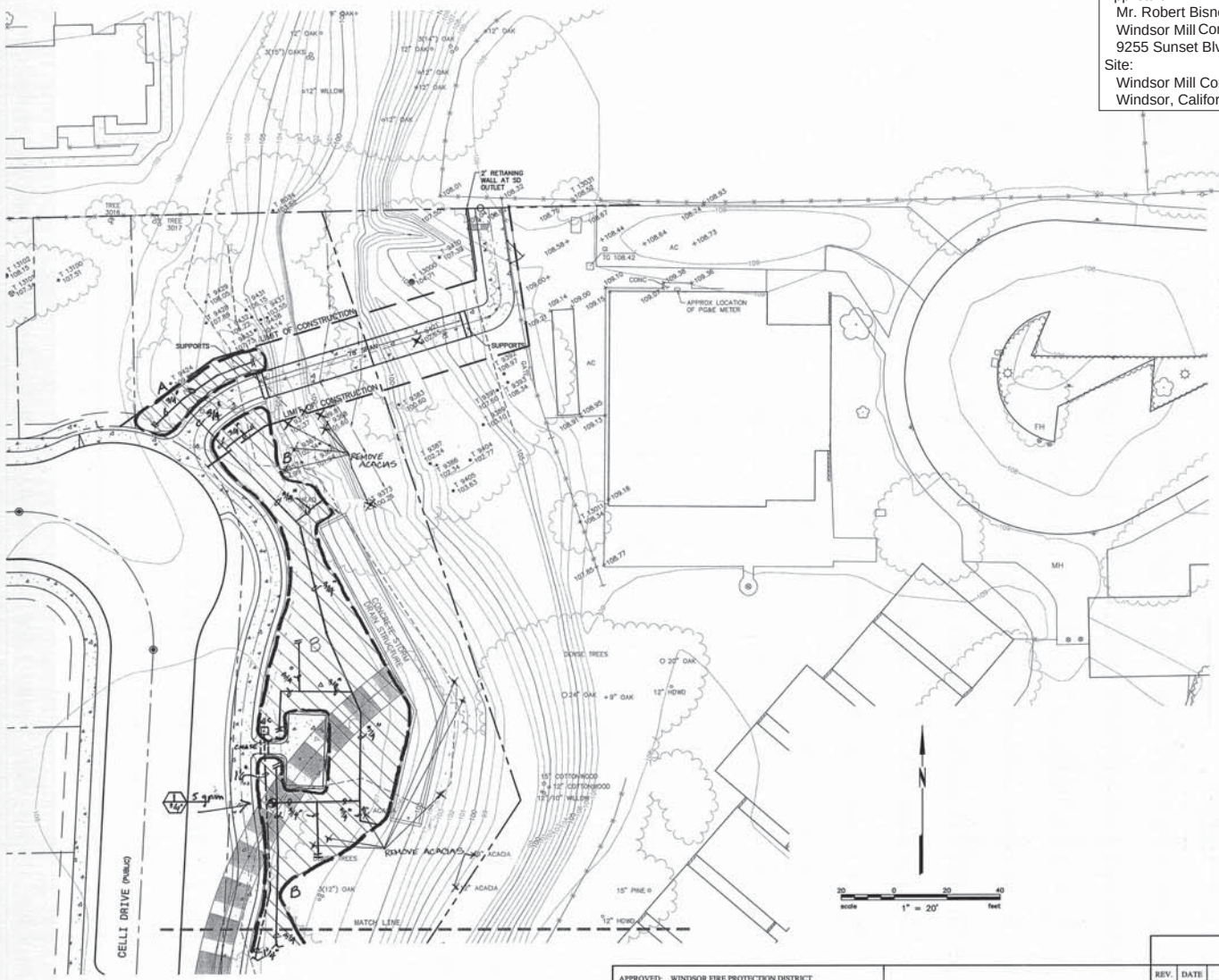
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R.C.E. NO. 29875 EXP. 3/31/07

SCALE: AS SHOWN | SHEET 4 of 6
DATE: 2-22-07 | PROJ. NO.

Applicant:
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9255 Sunset Blvd., Suite 290
Site:
Windsor Mill Communities Site
Windsor, California

Figure 20.
Windsor Creek
Revegetation and Enhancement Plan
Sheet 5 of 6



HYDROSEEDED AREAS

General:
Areas to receive hydroseed treatment include all graded and/or disturbed areas that are not planted. All areas to receive seeding shall be free of vegetation and debris, raked smooth and free of clods. All slopes shall be uniformly compacted. No soil amendments or fertilizers are required or allowed in native grass hydroseed areas.

Preparation:
1. All slurry preparation to be done at the job site. Water, mulch, compost, and binder shall be added to the tank simultaneously so that the finished load is a homogeneous mix of the specified ingredients.
2. Seed shall be added last and shall be discharged within 2 hours.
3. Once fully loaded, the complete slurry shall be agitated for 3-5 minutes to allow for uniform mixing.

Application:
1. All hydroseed applications are to be applied in a sweeping motion to provide a uniform application and form a mat at the specified rates. The Three-Step Straw Treatment consists of applying a uniform hydroseed slurry, followed by applying a straw mulch and then tacking the straw in place.
2. Contractor is to apply the three steps in such a way as to complete the three steps in an orderly manner and stay off partially and completely treated areas.
3. Straw shall be treated with mulch and tackifier before it can blow off the site, and in no case shall be left untreated for more than 24 hours.
4. Seeding is to be timed to allow 2-4 inches of plant growth prior to expected fall rains.
5. Installing contractor is responsible for washing or otherwise cleaning excess material off of all areas not intended to receive treatment.

Three-step Straw Application

Lbs. per acre	Material	
Step 1		
600 lbs.	cellulose wood fiber	
40 lbs. total	seed mix (PLS/Pure Live Seed) 33.33% each:	
	California bromegrass	*Bromus carinatus*
	meadow barley	*Hordeum brachyantherum*
	blue wildrye	*Elymus glaucus*
Step 2		
4,000 lbs.	straw (rice or native grass straw)	
Step 3:		
500 lbs.	cellulose wood fiber	
100 lbs.	organic binder	

WINDSOR MILL
CREEK REVEGETATION & ENHANCEMENT PLAN

DAVE HASELWOOD
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8945 OLD REDWOOD HWY
COTATI, CA
(707)795-8695

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MATT GUSTAFSON, FIRE MARSHALL DATE

APPROVED: RINCON VALLEY FIRE PROTECTION DISTRICT
BY: _____ _____
DOUGLAS WILLIAMS, FIRE CHIEF DATE

Approved By: Hope Kingma, Project Biologist
Monk & Associates

Plans Prepared By:
Dave Haselwood, Landscape Architect
Denise Kelly, Horticulturist
Becky Duckles, Project Arborist
707.829.0555

DESIGNED: DRAWN: CHECKED:

REV.	DATE	DESCRIPTION	BY	CHK'D	APV'D

TOWN OF WINDSOR
PUBLIC WORKS DEPARTMENT

APPROVED:

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PUBLIC WORKS DIRECTOR/TOWN ENGINEER
R.C.E. NO. 32862 EXP. 6/30/08
R.T.E. NO. 1538 EXP. 9/30/06

RECOMMENDED:

WILHELM DAIDA DATE
ASSISTANT TOWN ENGINEER
R.C.E. NO. 29875 EXP. 3/31/07

SCALE: AS SHOWN SHEET 5 of 6
DATE: 2-22-07 PROJ. NO.

CREEK REVEGETATION & ENHANCEMENT PLANT LIST

Botanical Name	Common Name	Container Size	Approx Spacing	Area A	Area B	Area C	Area D	Area E	Area F	Area G	Area H	Area I	Area J	Area K	TOTAL
TREES															
Aesculus californica	California Buckeye	tree pot	12' o.c.		3	3	3	5		3					17
Fraxinus latifolia	Oregon Ash	tree pot	12' o.c.		2		2			5					9
Juglans californica	Calif. Black Walnut	tree pot	12' o.c.		3	2	3	1							9
Populus fremontii	Fremont Cottonwood	tree pot	12' o.c.		2		2	2		3		2		1	12
Quercus agrifolia	Coast Live Oak	tree pot/5-gal.	20' o.c.		5		2			2					9
Quercus lobata	Valley Oak	tree pot/5-gal.	20' o.c.	6	10	15	7		9	6	5	7	5		70
Quercus lobata	Valley Oak	15-gallon	20' o.c.	0	6	3	7			3		2	2		23
Salix laevigata	Red Willow	tree pot	10' o.c.	6									5	2	13
Salix lasiolepis	Arroyo Willow	tree pot	6' o.c.	6									15	7	28
SHRUBS & PERENNIALS															
Baccharis pilularis	Coyote Brush	1-gallon	6' o.c.		15	20	30		25	25	10				125
Juncus patens	Blue Rush	1-gallon	4' o.c.		20	15	15		7	12					69
Rosa californica	Wild Rose	1-gallon	6' o.c.		12	10	20			10		9	23		84
Sambucus mexicana	Blue Elderberry	1-gallon	8' o.c.		3	5	3			5					16
Symphoricarpos albus	Snowberry	1-gallon	4' o.c.		5					10					15
TOTAL				**18**	**86**	**73**	**94**	**8**	**41**	**84**	**15**	**20**	**50**	**10**	**499**

No arroyo willow will be planted. Twenty-eight additional trees of the other species will be planted.

IRRIGATION LEGEND

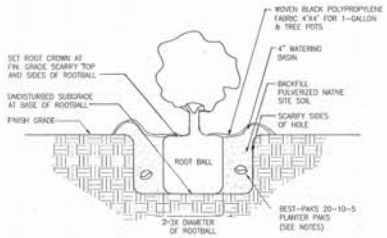
- 1" Water Meter (per Town of Windsor standards) by others
- 1" Wilkins Reduced Pressure Backflow Prevention Device
- Irri-trol MC-4 Plus Controller (Pedestal mount P-2B)
- Irri-Smart Rain Sensor
- Rainbird PEB-100-PRS-D Pressure Regulating Electric Valve with ¾" Amiad Filter and Pressure Regulator
- Rainbird 33DRC Quick Coupling Valve (on triple swing assem
- Class 200 PVC Lateral Line (6" of cover)
- Sch. 40 PVC Mainline (12" of cover)
- Rigid Chase (12" of cover)
- 5 Controller Station / GPM / ¾ Valve Size

Applicant:
Mr. Robert Bisno
Windsor Mill Community, LLC
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Site:
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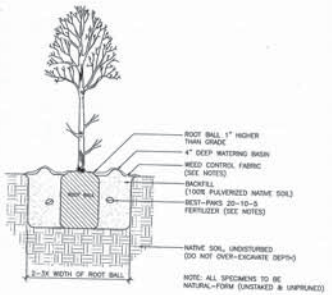
Figure 21.
Windsor Creek
Revegetation and
Enhancement Plan
Sheet 6 of 6

PLANTING NOTES:

1. The creek revegetation/enhancement areas will be planted with native riparian woody and herbaceous species to augment the existing tree canopy and shrub understory cover adjacent to Windsor Creek.
2. To the extent practicable, Acacias (*Acacia decurrens, A. melanoxylon*) within the project area will be removed as part of this work. Trees on the creek banks will be felled at ground level and all debris removed off-site, but the root system will be left intact and in place. The creek bank and all native vegetation must remain protected and undisturbed during the removal process. Native riparian vegetation will be planted where invasive exotics have been removed. Sprouts growing from stumps shall be cut as part on ongoing maintenance. The resulting wounds shall be painted with Rodeo™(or similar herbicide labeled for this use and specified by a licensed pest control advisor, and applied by a licensed pest control operator). Acacias on flat ground within the planting areas shall be felled, the stumps grubbed out, and all pieces removed from the site.
3. A mandatory walk-through with project arborist/ecologist is required to delineate the work areas and methods of invasive exotics removal prior to start of work.
4. Trees and shrubs shall be of the same species and mixture as are found along this section of Windsor Creek: Valley Oak (*Quercus lobata*), Coast Live Oak (*Quercus agrifolia*), Fremont Cottonwood (*Populus fremontii ssp. fremontii*), California Buckeye (*Aesculus californica*), and Willows (*Salix laevigata & S. lasiolepis*), etc. Understory shrubs are also typical of local riparian species: Wild Rose (*Rosa californica*), Coyote Brush (*Baccharis pilularis*), Snowberry (*Symphoricarpos albus*) and Blue Elderberry (*Sambucus mexicana*), etc. All plants must be natural-form, un-pruned, un-staked specimens.
5. Plant containers will be tree pots, 5-gallons and 15-gallons for trees; shrubs will be 1-gallon size.
6. The optimal planting window is between the months of November and February, or when soil has been moistened by winter rains to the depth of 10" or more. Planting may occur outside of this window, however the irrigation system must be fully operational upon completion of planting regardless of the timing of installation. All plants must be watered in within 1 hour of planting.
7. Woven black polypropylene weed control fabric ('Lumite', 'Earthscape' or approved equal) will be installed around each tree and shrub (except Blue Rush) to assist in controlling unwanted vegetation. Weed control fabric for trees will be a minimum of 5'x5' square, fabric size for shrubs will be 4'x4' square. 'X'-shaped cuts will be made at the center of each piece of fabric to allow space for the plant and water basin. Fabric to be secured at outside edges of the square and water basin with 6" metal jute staples: 10 staples per 5' square and 8 staples per 4' square.
8. All planting areas shall be cleared of weedy plants, dead or alive, prior to planting. Weedy plants include Himalayan berry (*Rubus discolor*) and periwinkle (*Vinca major*); roots must be grubbed out as well as top portions of plants. Weedy plants shall be disposed of off-site immediately after clearing and grubbing.
9. Revegetation/enhancement planting zones will be limited to the boundaries that are depicted on the plans. Individual plant locations are not shown. Planting locations will be laid out in the field by the project arborist/ecologist using a color-coded flagging system. Each planting location will be designated with a colored irrigation flag depicting the corresponding species. Flags shall remain in place after installation.
10. All oaks within the enhancement areas shall be enclosed by 6' high metal field fencing (4" openings) that is secured to metal t-posts. The fencing circle for each tree shall be a minimum of 4 feet in diameter. An overlap of fencing at one end of a section will allow access for weeding and maintenance. Fencing shall remain in place for the duration of the maintenance period, and removed after final project acceptance.
11. All roses within the mitigation and enhancement areas shall be enclosed by 4' high poultry netting (1" openings) secured with 2 stakes. The wire protection circle for each rose shall be a minimum of 36" in diameter. Stakes shall be 4' tall, ½" rebar driven 1' into the ground; fold netting to inside over the top of the plants to discourage browsing. Fencing shall remain in place for the duration of the maintenance
12. Installation for all plants shall be per the detail shown on the planting plan. 'Best-pak' brand fertilizer (or approved equal) shall be included for each plant. Rate: 1 pack per 1-gallon plant, 2 packs for tree pots, 3 packs for 5-gallons, 6 packs for 15-gallons. Fertilizer packs shall be evenly distributed throughout the pulverized backfill (no added amendments, native soil only). A 4-inch tall water basin shall be constructed around each plant to retain water. The basin shall be 1.5 times wider than the rootball width. All plants shall be watered immediately after planting.
13. Plants in all planting zones will be irrigated with a drip system. The exact location of the drip tubing and bubblers will be dependent on final field locations of the plants; layout shown on the irrigation plan is schematic. The irrigation system shall be removed upon completion of the monitoring and maintenance period per direction from the Town of Windsor.
14. Irrigation shall be provided from April through November, or when the ground is soaked to a depth of 10" by winter rains. Plants will require frequent irrigation for the first few seasons of growth (approximately every 6-10 days, depending on weather conditions for the first two years). Frequency will gradually be diminished (approximately every 7-14 days, depending on weather conditions), for the following 3 years and beyond until plants become established. Frequency shall be adjusted as needed.
15. Water shall be delivered directly onto the rootball within the planting basin. 1-gallon size plants will require approximately 1-2 gallons per irrigation event, tree pots and larger plants will require approximately 3-5 gallons per irrigation event. The number of emitters/bubblers per plant is shown on the irrigation plan. Planting basins shall be thoroughly soaked or flooded with water at each irrigation interval.
16. Planting locations shall have the weeds removed from within the watering basin and weed mat three times per year for five years following installation. Weeds shall be removed in February, April, and December of each year.
17. Weed mats and protective fencing shall remain in place for five years following plant installation. Weed mat fabric around growing plant stems shall be reduced to allow for lateral growth as part of ongoing maintenance.
18. Monitoring shall include a survival count each year during the five-year maintenance period. The minimum survival rate per species is 80% orf the original quantity per year. The first count shall be at the end of the first growing season, October/November. The final count shall occur at the end of the maintenance period in November. Replacement planting shall occur each fall (October-December), except as directed by the project arborist/ecologist.
19. Five (one per year) brief monitoring reports will be due by the end of March following a maintenance year. Reports will be submitted to the Town of Windsor and shall include plant survival counts by species, representative photos of each planting phase, and recommendations. Photos shall be taken from the same vantage point each year, so that plant growth can be documented in a photographic timeline.



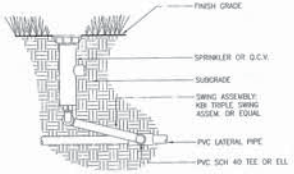
SHRUB PLANTING DETAIL
SCALE: NTS



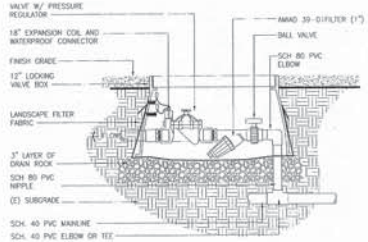
TREE PLANTING DETAIL (15 GALLON TREES)
SCALE: NTS

IRRIGATION NOTES

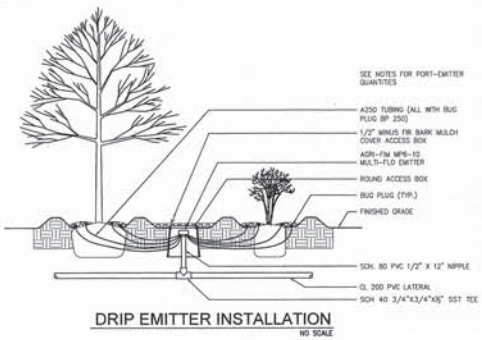
1. Emitters shall be Agrifim Maxi-Flo Drip MFB bubblers installed as shown on the detail. Install per the following schedule: (there are 6 ports per emitter)
   15-gallon tree - 6 ports
   5-gallon tree/tree pot - 3 ports
   1-gallon shrub - 2 ports
2. Install each multi-port emitter in an access box. Cover with ground arbor mulch or ½" minus fir bark.
3. Each run of lateral pipe (¾") shall have a threaded end cap for flushing purposes. The end cap shall be visible at finish grade.
4. Set the pressure regulator on each valve at 25-30 psi. Install the ¾" Amiad filter adjacent to the valve and in the same large valve box.
5. The controller shall be pedestal mounted. Electrical service shall be furnished by others. Mount the rain sensor on a pole in the immediate vicinity of the controller.
6. Control wire shall be U.F. #14 direct burial with 12" of cover. Splices shall be made only in valve boxes using waterproof connectors.
7. Run the lateral pipe on the underside of the Bell Rood bridge with stable connectors. Coordinate placement and attachment with Engineer and Town.



TRIPLE SWING ASSEMBLY
SCALE: NTS



REMOTE CONTROL VALVE FOR DRIP APPLICATIONS
SCALE: NTS
NOTE: SET PRESSURE REG. AT 25 PSI



DRIP EMITTER INSTALLATION
NO SCALE

TOWN OF WINDSOR
PUBLIC WORKS DEPARTMENT

APPROVED:

RICHARD W. BURTT — DATE
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SCALE: AS SHOWN — SHEET 6 of 6
DATE: 2-22-07 — PROJ. NO.

Approved By: Hope Kingma, Project Biologist
Monk & Associates

Plans Prepared By:
Dave Haselwood, Landscape Architect
Denise Kelly, Horticulturist
Becky Duckles, Project Arborist
707.829.0555

B.3 - CNDDB, CNPS, and USFWS Database Search Results

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Healdsburg (3812257))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Amorpha californica var. napensis Napa false indigo	PDFAB08012	None	None	G4T2	S2	1B.2
Antrozous pallidus pallid bat	AMACC10010	None	None	G5	S3	SSC
Ardea herodias great blue heron	ABNGA04010	None	None	G5	S4	
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Blennosperma bakeri Sonoma sunshine	PDAST1A010	Endangered	Endangered	G1	S1	1B.1
Brodiaea leptandra narrow-anthered brodiaea	PMLIL0C022	None	None	G3?	S3?	1B.2
Centromadia parryi ssp. parryi pappose tarplant	PDAST4R0P2	None	None	G3T2	S2	1B.2
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
Downingia pusilla dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Hemizonia congesta ssp. congesta congested-headed hayfield tarplant	PDAST4R065	None	None	G5T1T2	S1S2	1B.2
Hysterocarpus traski pomo Russian River tule perch	AFCQK02011	None	None	G5T4	S4	SSC
Lasthenia burkei Burke's goldfields	PDAST5L010	Endangered	Endangered	G1	S1	1B.1
Lavinia symmetricus navarroensis Navarro roach	AFCJB19023	None	None	G4T1T2	S2S3	SSC
Limnanthes vinculans Sebastopol meadowfoam	PDLIM02090	Endangered	Endangered	G1	S1	1B.1
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Microseris paludosa marsh microseris	PDAST6E0D0	None	None	G2	S2	1B.2
Navarretia leucocephala ssp. bakeri Baker's navarretia	PDPLM0C0E1	None	None	G4T2	S2	1B.1
Navarretia leucocephala ssp. plieantha many-flowered navarretia	PDPLM0C0E5	Endangered	Endangered	G4T1	S1	1B.2

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Northern Hardpan Vernal Pool	CTT44110CA	None	None	G3	S3.1	
Northern Hardpan Vernal Pool						
Oncorhynchus kisutch pop. 4	AFCHA02034	Endangered	Endangered	G4	S2?	
coho salmon - central California coast ESU						
Oncorhynchus mykiss irideus pop. 8	AFCHA0209G	Threatened	None	G5T2T3Q	S2S3	
steelhead - central California coast DPS						
Pandion haliaetus	ABNKC01010	None	None	G5	S4	WL
osprey						
Taricha rivularis	AAAAF02020	None	None	G4	S2	SSC
red-bellied newt						

Record Count: 25

CNPS California Native Plant Society

Plant List

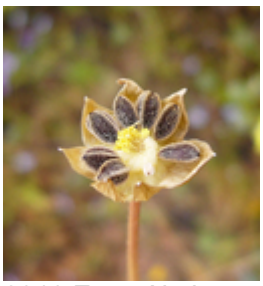
Inventory of Rare and Endangered Plants

5 matches found. *Click on scientific name for details*

Search Criteria

California Rare Plant Rank is one of [1A, 1B, 2A, 2B], FESA is one of [Endangered, Threatened, Candidate], CESA is one of [Endangered, Threatened, Rare], Found in Sonoma County, Found in Quad 3812257

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Remove Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank	Photo
Blennosperma bakeri	Sonoma sunshine	Asteraceae	annual herb	Mar-May	1B.1	S1	G1	 2010 Zoya Akulova
Cordylanthus tenuis ssp. capillaris	Pennell's bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Sep	1B.2	S1	G4G5T1	 2009 Aaron Arthur
Lasthenia burkei	Burke's goldfields	Asteraceae	annual herb	Apr-Jun	1B.1	S1	G1	 2002 John Game
Limnanthes vinculans	Sebastopol meadowfoam	Limnanthaceae	annual herb	Apr-May	1B.1	S1	G1	



Jo-Ann Ordano 2005
California Academy of Sciences

Navarretia leucocephala ssp. plieantha	many-flowered navarretia	Polemoniaceae	annual herb	May-Jun	1B.2	S1	G4T1	no photo available

Suggested Citation

California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 15 February 2018].

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IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Sonoma County, California



Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

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Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
Northern Spotted Owl Strix occidentalis caurina There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/1123	Threatened

Reptiles

NAME	STATUS
Green Sea Turtle Chelonia mydas No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6199	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2076	Endangered

Crustaceans

NAME	STATUS
California Freshwater Shrimp Syncaris pacifica No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7903	Endangered

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Flowering Plants

NAME	STATUS
Burke's Goldfields Lasthenia burkei No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4338	Endangered
Many-flowered Navarretia Navarretia leucocephala ssp. plieantha No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2491	Endangered
Sebastopol Meadowfoam Limnanthes vinculans No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/404	Endangered
Sonoma Sunshine Blennosperma bakeri No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1260	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see maps of where birders and the general public have sighted birds in and around your project area, visit E-bird tools such as the E-bird data mapping tool (search for the name of a bird on your list to see specific locations where that bird has been reported to occur within your project area over a certain timeframe) and the E-bird Explore Data Tool (perform a query to see a list of all birds sighted in your county or region and within a certain timeframe). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT

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	THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Ashy Storm-petrel Oceanodroma homochroa This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/7237	Breeds May 1 to Jan 15
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Black Oystercatcher Haematopus bachmani This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9591	Breeds Apr 15 to Oct 31
Black Rail Laterallus jamaicensis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/7717	Breeds Mar 1 to Sep 15
Black Swift Cypseloides niger This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10
Black Turnstone Arenaria melanocephala This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Burrowing Owl Athene cunicularia This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9737	Breeds Mar 15 to Aug 31
California Thrasher Toxostoma redivivum This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Clark's Grebe Aechmophorus clarkii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lawrence's Goldfinch Carduelis lawrencei This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Lewis's Woodpecker Melanerpes lewis This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Long-billed Curlew Numenius americanus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5511	Breeds elsewhere
Marbled Godwit Limosa fedoa This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere

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Nuttall's Woodpecker Picoides nuttallii This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse Baeolophus inornatus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Rufous Hummingbird selasphorus rufus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds elsewhere
Short-billed Dowitcher Limnodromus griseus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Tricolored Blackbird Agelaius tricolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Whimbrel Numenius phaeopus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9483	Breeds elsewhere
Willet Tringa semipalmata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wrentit Chamaea fasciata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds.

Probability of Presence (▪)

Each green bar represents the bird's relative probability of presence in your project's counties during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the counties of your project area. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

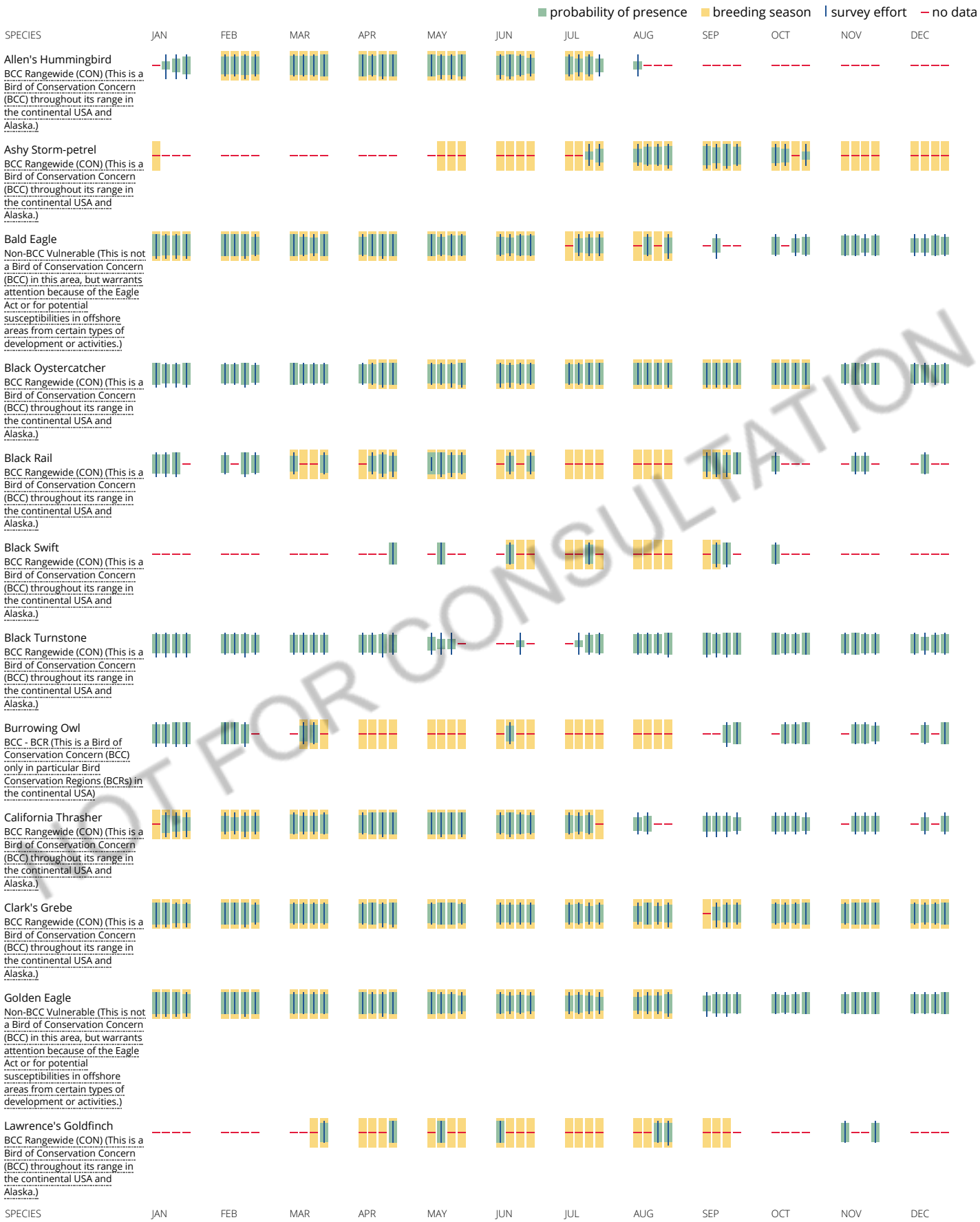
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

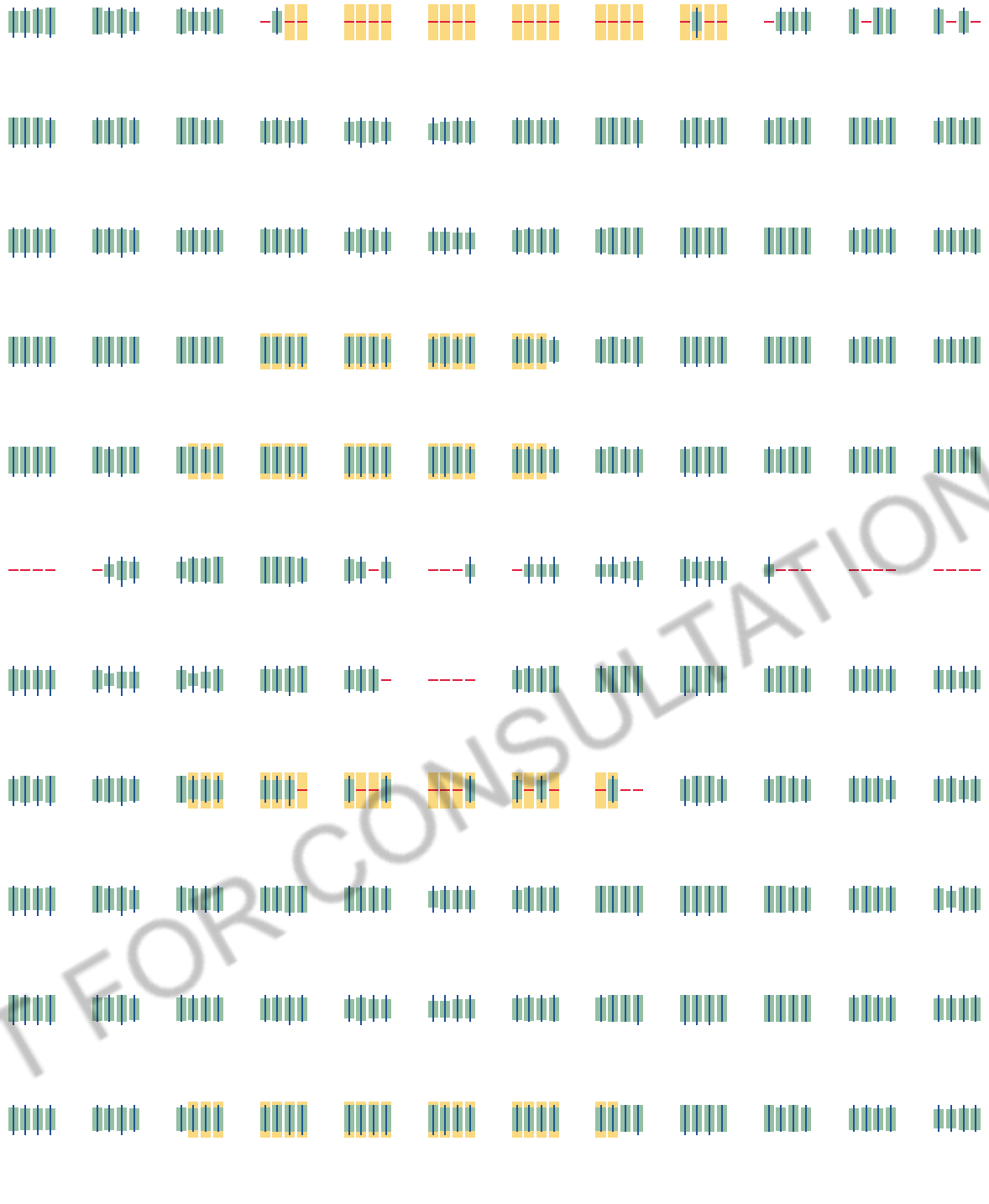
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Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information.



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Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the counties which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird entry on your migratory bird species list indicates a breeding season, it is probable that the bird breeds in your project's counties at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the BGEPA should such impacts occur.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

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Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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