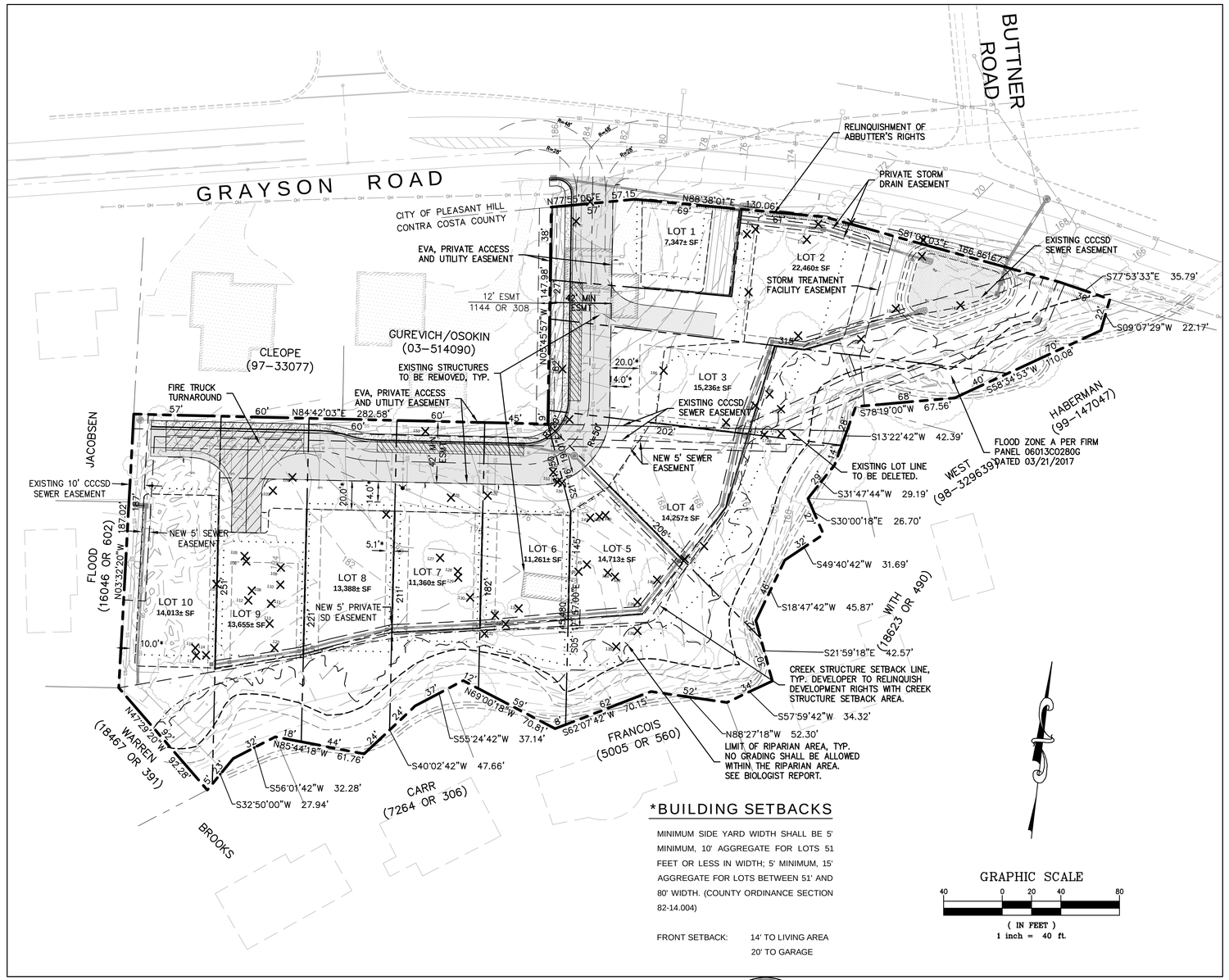
VESTING TENTATIVE MAP
SUBDIVISION SD20-9531
1024 & 1026 GRAYSON ROAD

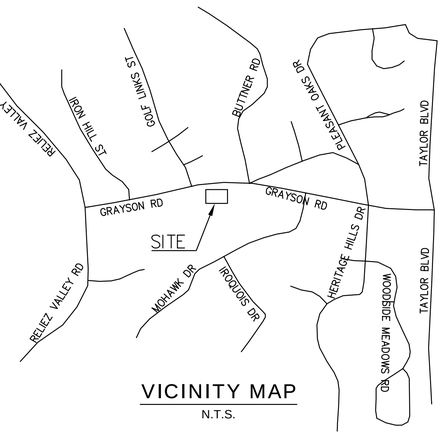
CITY OF PLEASANT HILL, CONTRA COSTA COUNTY, CALIFORNIA

TOTAL UNITS: 10 RESIDENTIAL

LEGEND:

BLDG	BUILDING
CONC	CONCRETE
(E)/EX	EXISTING
ESMT	EASEMENT
FNC	FENCE
INV.	INVERT
P.U.E	PRIVATE UTILITY EASEMENT
REBAR.	REBAR
( )	RECORD DATA
R/W	RIGHT OF WAY
SSCO	SANITARY SEWER CLEANOUT
SSMH	SANITARY SEWER MANHOLE
SDDI	STORM DRAIN DRAIN INLET
(T)	TOTAL
WM	WATER METER
WV	WATER VALVE
Ⓢ	SANITARY SEWER MANHOLE
WV	WATER VALVE
○	FOUND MONUMENT AS NOTED
◉	STANDARD STREET MONUMENT
— — — —	EASEMENT LINE
———	ADJACENT PROPERTY LINE
▬ ▬ ▬	BOUNDARY LINE
- - - - -	TIE LINE
—— – ——	CENTERLINE
—— W ——	EXISTING WATER LINE
—— EX SD ——	EXISTING STORM DRAIN PIPE
—— OE ——	EXISTING ELECTRIC CABLE
—— (E)SS ——	EXISTING SANITARY SEWER LINE
	EXISTING EDGE OF PAVEMENT
	EXISTING BUILDING
	EXISTING BRICK PATH
	EXISTING CONCRETE
	EXISTING AC PAVEMENT
	EXISTING TREE





VICINITY MAP

N.T.S.

PROJECT SUMMARY

PROPERTY ADDRESS:	1024 & 1026 GRAYSON ROAD PLEASANT HILL, CA 94523
PROPERTY OWNER:	ANDY BYDE CALIBR VENTURES 925-683-5493
SUBDIVIDER:	ANDY BYDE CALIBR VENTURES 925-683-5493
CIVIL ENGINEER:	DEBOLT CIVIL ENGINEERING 811 SAN RAMON VALLEY BLVD DANVILLE, CA 94526 (925) 837-3780
SURVEYOR:	DEBOLT CIVIL ENGINEERING 811 SAN RAMON VALLEY BLVD DANVILLE, CA 94526 (925) 837-3780
ASSESSOR'S PARCEL NO:	166-030-001 & 002
TOTAL AREA:	3.05± AC GROSS (2.76± AC NET)
EXISTING ZONING:	R-15
PROPOSED ZONING:	PLANNED DEVELOPMENT
EXISTING LAND USE:	SINGLE-FAMILY RESIDENTIAL
PROPOSED LAND USE:	SINGLE-FAMILY RESIDENTIAL
UTILITIES:	
WATER SUPPLY:	CONTRA COSTA WATER DISTRICT
FIRE PROTECTION:	CONTRA COSTA COUNTY FPD
SEWAGE DISPOSAL:	CENTRAL CONTRA COSTA SANITARY DISTRICT
STORM DRAIN:	CITY OF PLEASANT HILL
GAS & ELECTRIC:	PACIFIC GAS & ELECTRIC
TELEPHONE:	AT&T
CABLE TELEVISION:	COMCAST

SHEET INDEX

EXISTING UTILITY NOTE:

THE UTILITY LINES SHOWN ON THIS DRAWING ARE DERIVED FROM SURFACE OBSERVATION AND ARE APPROXIMATE ONLY. ACTUAL LOCATION AND SIZE, TOGETHER WITH PRESENCE OF ANY ADDITIONAL UTILITY LINES NOT SHOWN ON THIS DRAWING SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ANY EXCAVATION.

FLOOD ZONE

ZONE A: SPECIAL FLOOD AREA WITHOUT BASE FLOOD. ELEVATION (BFE)

ZONE X: AREAS OF 0.2% CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% CHANCE FLOOD. FLOOD INSURANCE RATE MAP PANEL NUMBER 06013C0280G, DATED 03/21/2017.

*BUILDING SETBACKS

MINIMUM SIDE YARD WIDTH SHALL BE 5' MINIMUM, 10' AGGREGATE FOR LOTS 51 FEET OR LESS IN WIDTH; 5' MINIMUM, 15' AGGREGATE FOR LOTS BETWEEN 51' AND 80' WIDTH. (COUNTY ORDINANCE SECTION 82-14.004)

FRONT SETBACK: 14' TO LIVING AREA
20' TO GARAGE

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.

ENGINEER'S STATEMENT

CIVIL ENGINEERING WORK ON THIS TENTATIVE PARCEL MAP HAS BEEN PREPARED BY ME OR UNDER MY DIRECTION IN ACCORDANCE WITH STANDARD CIVIL ENGINEERING PRACTICE.

01/28/22

EASTON C. MCALLISTER, PE — DATE
P.E. #61148 EXP 12/31/20

ALL PLANS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS SIGNED AND STAMPED BY THE ENGINEER AND REVIEWING AGENCY

VESTING TENTATIVE MAP

1024 & 1026 GRAYSON ROAD
SUBDIVISION SD20-9531
VICINITY OF PLEASANT HILL CONTRA COSTA COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — EASTON C. MCALLISTER — No. 61148 — EXP. 12/31/22 — CIVIL — STATE OF CALIFORNIA

EASTON C McALLISTER - PE 61148 / PLS 9583
RENEWAL DATE: 12/31/22 (PE) 03/31/23 (PLS)

#	REVISIONS	DATE

DEBOLT CIVIL ENGINEERING
45+ YEARS
811 SAN RAMON VALLEY BLVD #201
DANVILLE, CALIFORNIA 94526
(925) 837-3780 | DEBOLTCIVIL.COM

Date: 01/28/22
Scale: 1" = 40'
By: EM/mm
Job No.: 19300

ALL PLANS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS SIGNED AND STAMPED BY THE ENGINEER AND REVIEWING AGENCY.

PRELIMINARY GRADING, DRAINAGE AND UTILITY PLAN

1024 & 1026 GRAYSON ROAD
SUBDIVISION SD20-9531

VICINITY OF PLEASANT HILL — CONTRA COSTA COUNTY — CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — EASTON C. McALLISTER — No. 61148 — EXP. 12/31/22 — CIVIL — STATE OF CALIFORNIA

EASTON C McALLISTER - PE 61148 / PLS 9583
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Date: 01/28/22
Scale: 1" = 20'
By: EM/mm
Job No.: 19300

VTM-2

Project Name: Grayson Road
Project Type: Treatment Only
APN:
Drainage Area: 137,690
Mean Annual Precipitation: 20.0

Self-Treating DMAs

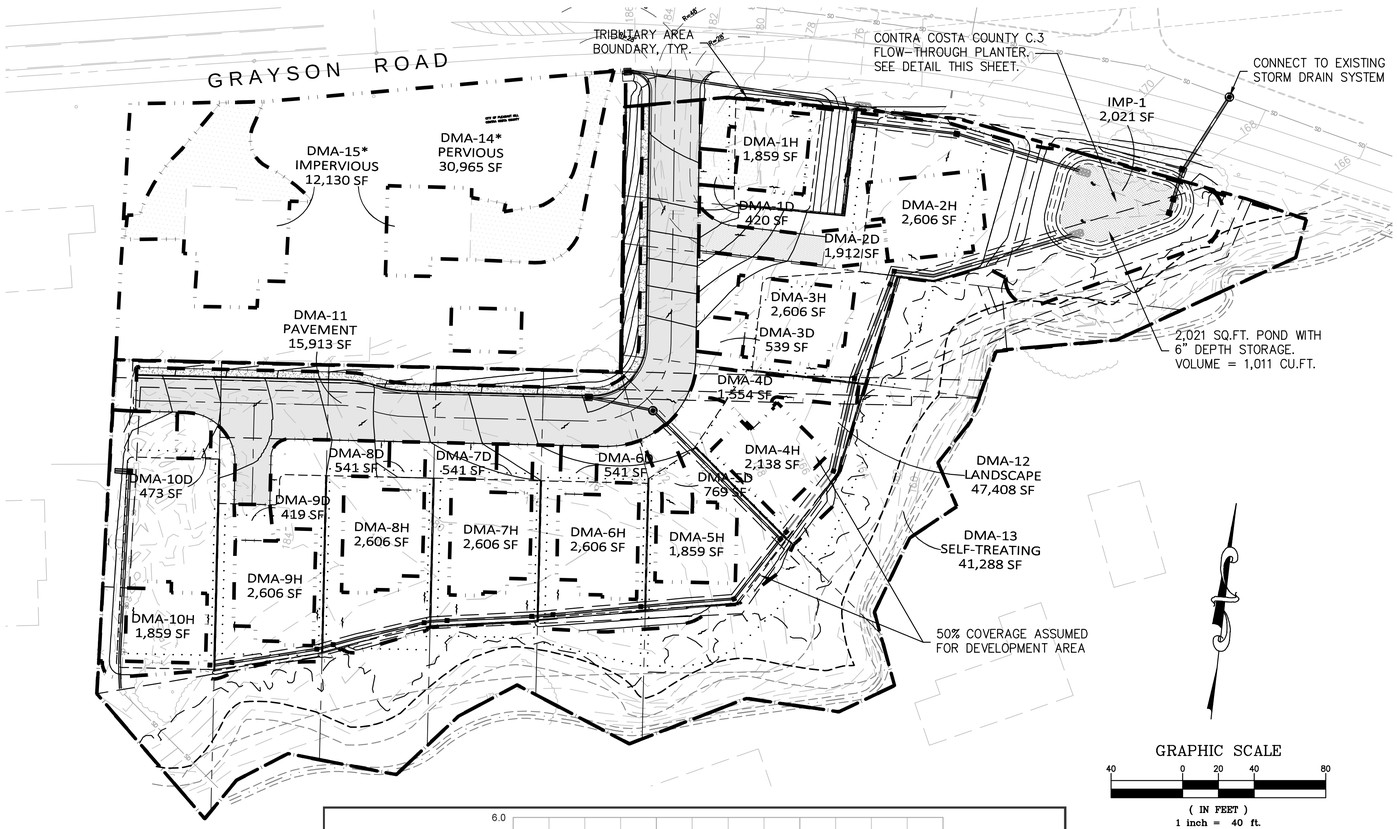
DMA Name	Area (sq ft)
DMA-13	41,288.0

IV. Areas Draining to IMPs

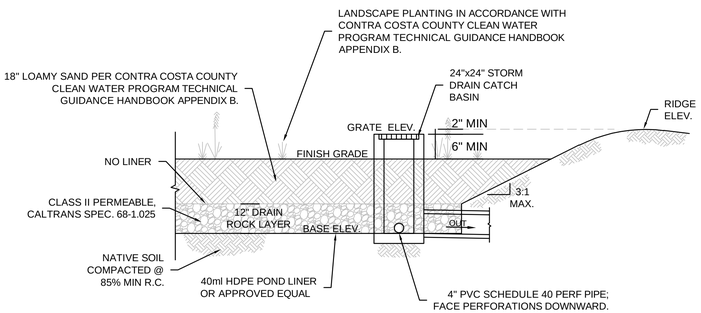
IMP Name: IMP1
IMP Type: Flow-Through Planter
Soil Group: IMP1

DMA Name	Area (sq ft)	Post Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing			
					IMP Sizing Factor	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
DMA-1D	420	Pervious Concrete	0.10	42				
DMA-1H	1,859	Conventional Roof	1.00	1,859				
DMA-2D	1,912	Pervious Concrete	0.10	191				
DMA-2H	2,606	Conventional Roof	1.00	2,606				
DMA-3D	539	Pervious Concrete	0.10	54				
DMA-3H	2,606	Conventional Roof	1.00	2,606				
DMA-4D	1,554	Pervious Concrete	0.10	155				
DMA-4H	2,138	Conventional Roof	1.00	2,138				
DMA-5D	769	Pervious Concrete	0.10	77				
DMA-5H	1,859	Conventional Roof	1.00	1,859				
DMA-6D	541	Pervious Concrete	0.10	54				
DMA-6H	2,606	Conventional Roof	1.00	2,606				
DMA-7D	541	Pervious Concrete	0.10	54				
DMA-7H	2,606	Conventional Roof	1.00	2,606				
DMA-8D	541	Pervious Concrete	0.10	54				
DMA-8H	2,606	Conventional Roof	1.00	2,606				
DMA-9D	419	Pervious Concrete	0.10	42				
DMA-9H	2,606	Conventional Roof	1.00	2,606				
DMA-10D	473	Pervious Concrete	0.10	47				
DMA-10H	1,859	Conventional Roof	1.00	1,859				
DMA-11	15,913	Concrete or Asphalt	1.00	15,913				
DMA-12	47,408	Landscape	0.10	4,741				
			Total	44,776				
				Area	0.040	1.000	1,791	2,021

Report generated on 1/25/2022 12:00:00 AM by the Contra Costa Clean Water Program IMP Sizing Tool software (version 1.3.1.0).

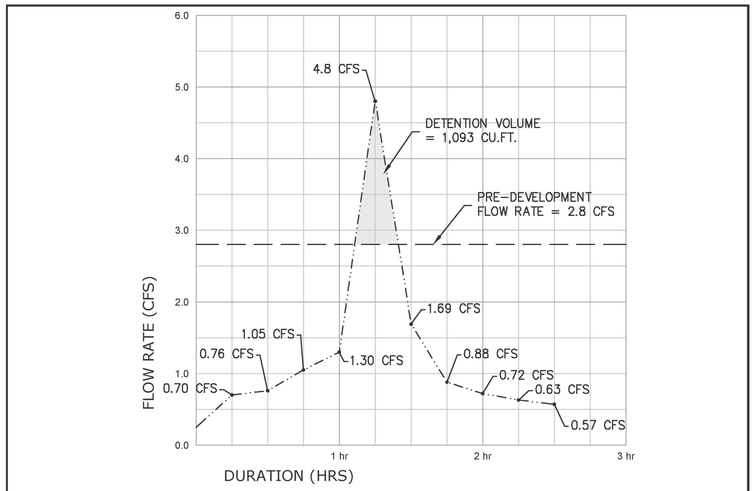


C.3 TREATMENT SIZING CALCULATIONS



NOTE:
REFER TO CONTRA COSTA COUNTY CLEAN WATER PROGRAM TECHNICAL GUIDANCE HANDBOOK CHAPTER 4 FOR ADDITIONAL INFORMATION ON FLOW-THROUGH PLANTERS.

1 / - C.3 FLOW-THROUGH PLANTER
N.T.S.



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GRAYSON ROAD (SD 20-9531)
HYDROLOGY STUDY
DETENTION SIZING HYDROGRAPH

Job No.: 19300 Date: 08/10/20 Sheet: 1 of 1

DETENTION SIZING CALCULATIONS

HYDROLOGY AND STORM WATER CONTROL PLAN

1024 & 1026 GRAYSON ROAD
SUBDIVISION SD20-9531

VICINITY OF PLEASANT HILL CONTRA COSTA COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER EASTON C. McALLISTER No. 61148 EXP. 12/31/22 CIVIL STATE OF CALIFORNIA

EASTON C McALLISTER - PE 61148 / PLS 9583
RENEWAL DATE: 12/31/22 (PE) 03/31/23 (PLS)

#	REVISIONS	DATE

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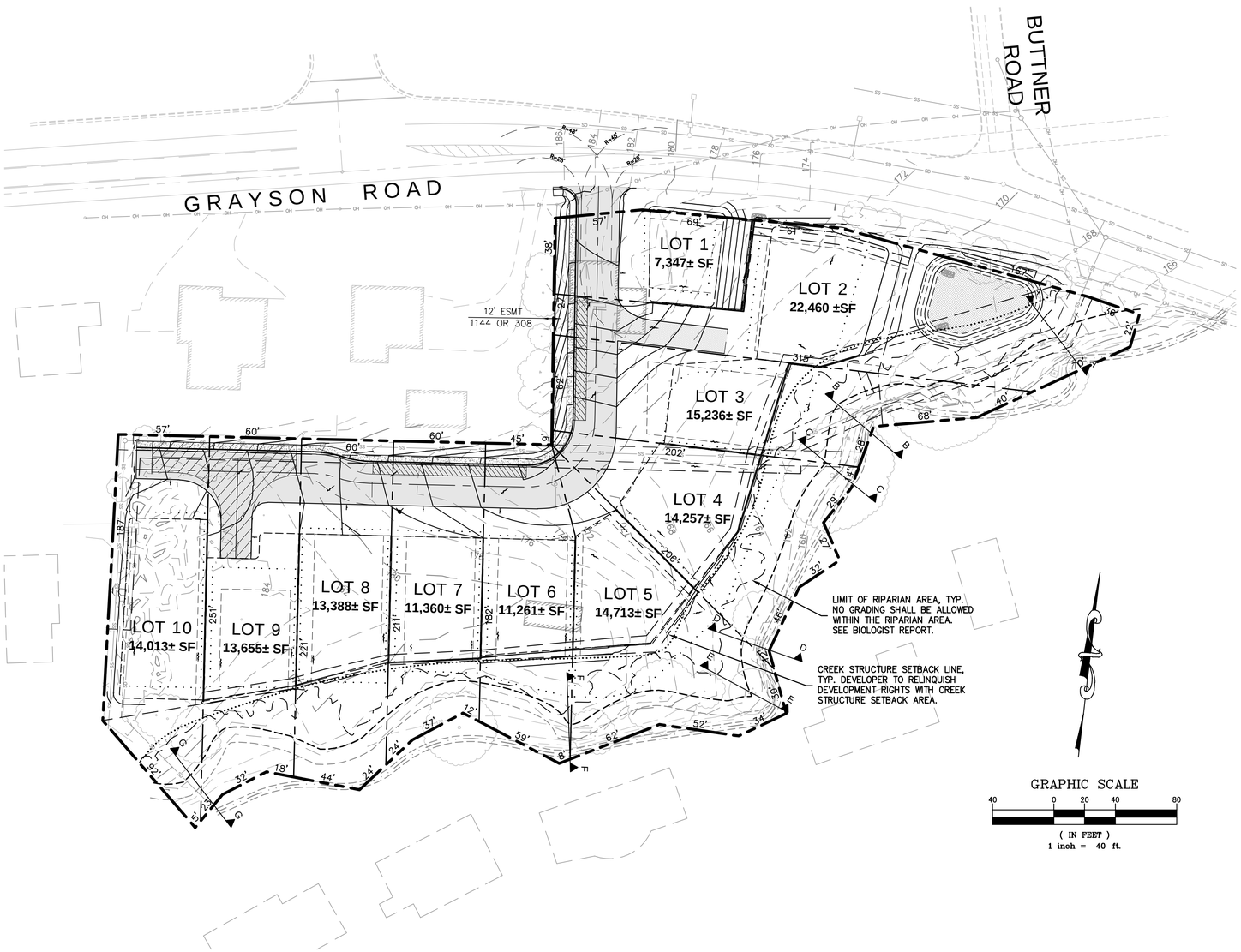
Date: 01/28/22
Scale: 1" = 40'
By: EM/mm
Job No.: 19300

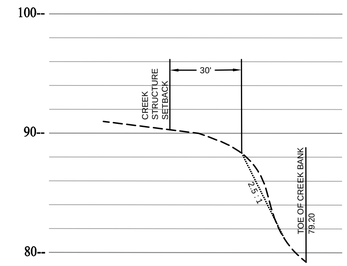
VTM-3



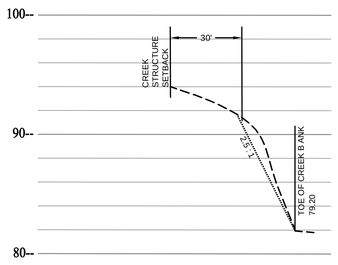
GRAPHIC SCALE

40 0 20 40 80

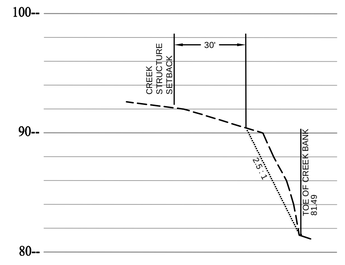
(IN FEET)
1 inch = 40 ft.



SECTION A-A



SECTION B-B



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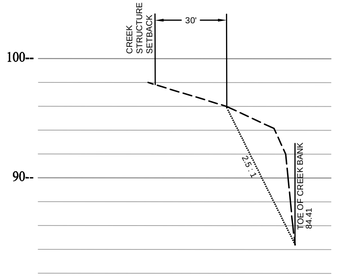
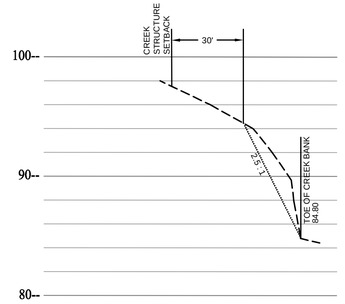
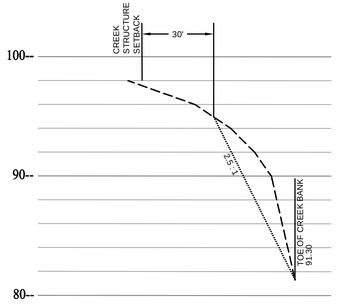


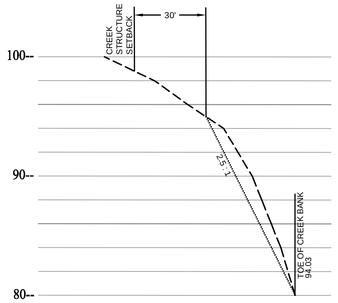
SECTION D-D



SECTION E-E



SECTION F-F



SECTION G-G

CREEK STRUCTURE SETBACK EXHIBIT

1024 & 1026 GRAYSON ROAD
SUBDIVISION SD20-9531

VICINITY OF PLEASANT HILL CONTRA COSTA COUNTY

REGISTERED PROFESSIONAL ENGINEER
EASTON C. McALLISTER
No. 61148
EXP. 12/31/22
CIVIL
STATE OF CALIFORNIA
CALIFORNIA

EASTON C McALLISTER - PE 61148 / PLS 9583
RENEWAL DATE: 12/31/22 (PE) 03/31/23 (PLS)

#	REVISIONS	DATE

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45+ YEARS
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(925) 837-3780 | DEBOLTCIVIL.COM

Date: 01/28/22
Scale: 1" = 40'
By: EM/mm
Job No.: 19300

#	Species	DBH	Health	Structure	Dripline N	E	S	W	Age	DE	CI	Comments	Action
101	Coast live oak											This tree no longer exists. Old report stated it as a 9" tree. No evidence of a stump was found.	N/A
102	Valley oak	16	G-F	G	20	25	20	20	Y	X	M	Epicormic sprouts along scaffold branches. Within west p/l set back, some grading will likely occur within dripline.	Save Set protection fencing at dripline (d/l), and have arborist on site for any d/l encroachment.
103	Fruiting pear	10, 5, 5, 4, 4	P	P	10	0	10	10	OM	X	H	Declining tree. In proposed driveway	Remove
104	Valley oak	18, 19, 20, 12	G	G	30	30	30	30	M	X	H	Co-dominant stems at 3'. In proposed driveway.	Remove
105	Coast live oak	11, 7, 6	F-P	F	15	15	10	0	M	X	H	Co-dominant stems. Understory tree. Within building footprint.	Remove
106	Valley oak	11, 12	G	F	25NW-W				M	X	H	Co-dominant stems. Within building footprint.	Remove
107	Valley oak	4, 3, 12, 11, 5, 7, 5	G	F	25	0	18	25	M	X	H	Basal shoot from old stump. In proposed driveway. Within building footprint.	Remove
107 B	Coast live oak	11, 5, 8	F	P	15	0	0	25	M	X	H	Growing out from base of #107. Co-dominant trunks. Within building footprint.	Remove
108	Coast live oak	17	F	F	25NW-W				M	X	H	Curved trunk. Within building footprint.	Remove
109	Valley oak	12, 11, 7, 6	F	F	30N				M	X	H	One sided tree to the N/W. Dieback & epicormic sprouting. Within building footprint.	Remove
110	Valley oak	20, 11, 11, 16	G	F	25	25	0	25	M	X	H	Co-dominant trunks. Within building footprint.	Remove

#	Species	DBH	Health	Structure	Dripline N	E	S	W	Age	DE	CI	Comments	Action
111	Coast live oak	19	F-P	F	20	25	20	20	M	X	H	Bark inclusion on all 3 attachments. Sparse with stunted growth. Within building footprint.	Remove
112	Coast live oak	11	F	P	0	6	10	10	Y	X	H	Top broken at 12' with sprouting. Within building footprint.	Remove
113	Valley oak	7	F	P	6S				Y	X	H	Sparse canopy, 2 trunks removed. Within building footprint.	Remove
114	Valley oak	7, 4	F	F	6	6	6	6	Y	X	H	Crowded. Within building footprint.	Remove
115	Coast live oak	13	G	G	12	0	8	10	Y	X	H	3" from base of #116; crowded. Within building footprint.	Remove
116	Valley oak	7, 6	F	F	18N				Y	X	H	Very crowded. Co-dominant trunks; sweeping lean to N. Within building footprint.	Remove
117	Coast live oak	17	F-P	F-P	15NE				M		L	Sparse understory tree. Outside of grading limits.	Save
118	Valley oak	14, 18	F	F	15	15	20	20	M		L	Co-dominant stem bends to N. Outside of grading limits.	Save
119	Coast live oak	17	Dead										Remove.
120	Coast live oak	17	F-P	F	10	10	10	10	M		L	Ivy covering trunk. In decline; sycamore borer damage. Treat for Borer. Outside of grading limits in creek setback.	Save
121	Valley oak	13	F	F	20S				Y		L	Ivy covering trunk. Outside of grading limits in creek setback.	Save
122	Valley oak	22	P	P	25N				M		L	Ivy covering trunk. Declining canopy; sweeping lean to N. Outside of grading limits in creek setback.	Save
122 A	Coast live oak	30	F	F	50N				M		L	In creek structure setback. Significant lean to N. Ivy covering trunk. Outside of grading limits in creek setback.	Save
123	Valley oak	14, 7, 7, 10, 10	F	F	0	25	0	15	M	X	H	Sparse canopy. Co-dominant stems at 6'. Within grading limits	Remove
124	Valley oak	16	F	G	15	20	15	8	M	X	H	Tag embedded in trunk. Epicormic sprouts. Within grading limits	Remove

#	Species	DBH	Health	Structure	Dripline N	E	S	W	Age	DE	CI	Comments	Action
124 B	Coast live oak	7	F	P	6	10	4	0	Y	X	H	90° correcting bend in trunk. Within grading limits	Remove
125	Chinese pistache	27	G	G	25	25	25	25	OM	X	H	Dieback; slightly drought stressed. Within grading limits	Remove
126	Chinese pistache	17, 17, 10, 8	F	G	25	25	25	6	OM	X	H	Within grading limits	Remove
127	Coast live oak	17	G	G	15	0	0	20	M	X	H	Within grading limits	Remove
128	Valley oak	19	G	F	20	25	0	20	M	X	H	Within grading limits	Remove
129	Valley oak	14	G	F	0	20	20	20	Y	X	H	Within grading limits	Remove
130	Coast live oak	16	F	G	15	15	10	0	Y	X	H	Sparse lower canopy. Within grading limits	Remove
131	Calif. Buckeye	11, 8	F	F	15	20	25	20	M	X	H	Dead lower/interior canopy. Within grading limits	Remove
131 B	Valley oak	18	F	F	35N				M	X	H	Not surveyed. 35" lean to N. Ivy and poison oak covering trunk. Within grading limits	Remove
132	Coast live oak	11	F	F	40N				Y	X	H	10" lean to N. Tag engulfed by trunk. Within grading limits	Remove
133	Coast live oak	14	G	F	40N-20NW				Y	X	H	10" lean to N. Within grading limits	Remove
134	Monterey pine	50	P	F	50	50	50	50	OM	X	M	Over mature tree, in declining years. Sparse canopy. Recommend removal. Less than 5 years of anticipated lifespan.	Remove
135	Coast redwood	18, 18, 10	F	G	20	20	20	20	M	X	H	Drought stressed, needs irrigation. Within grading limits.	Remove
135 A	Calif. Buckeye	6, 8, 11, 7, 7, 9, 11, 8	G	G	20	20	20	20	M		L	Within creek structure set back. ~3 trunk clusters treated as one.	Save
136	Silver dollar eucalyptus (*Eucalyptus cinerea*)	13, 16	F	F	25	15	10	0	M	X	H	Failed trunk. Within grading limits.	Remove

#	Species	DBH	Health	Structure	Dripline N	E	S	W	Age	DE	CI	Comments	Action
137	Coast live oak	40	G-F	P	35	35	35	35	M	X	M-H	Ivy covering trunk. Co-dominant stems at 4' with included bark. Grading just north of trunk proposed. Pull grade limits at least 15' from trunk in order to save tree.	Save If grading can be adjusted.
138	Valley oak	18	F	F	15	15	5	0	M	X	M-H	Ivy covering trunk. Grading just north of trunk. Recommend pulling grade limits at least 10' from trunk.	Save If grading can be adjusted
138 B	Buckeye	17, 12, 13, 14, 15, 13, 12, 10, 10, 13	F-P/P	F	20	20	20	20	M		L	In creek structure setback. Top dieback.	Save
139	Mimosa		Dead									Within grading limits.	Remove
140	Coast live oak	17	G	G	18	18	18	18	M	X	H	Within grading limits.	Remove
141	Coast live oak	9	G	G	10	10	10	10	Y	X	H	Tag embedded in trunk but readable. Within grading limits.	Remove
142	Coast live oak	19, 20	G	F	30	30	10	10	M	X	H	Co-dominant trunks. Within grading limits.	Remove
142 B	Coast live oak	20	G	F	30	0	0	20	M	X	H	In creek structure setback. Within grading limits.	Remove
142 C	Coast live oak	14	G	G	20	15	0	0	Y	X	H	Not surveyed.	
143	Valley oak	15	G-F	G	12	12	12	12	Y	X	H	Ivy on trunk. Within grading limits.	Remove
144	Valley oak	11	G	F	15SE				Y	X	H	Ivy on trunk. Understory tree. Within grading limits.	Remove
145	Coast live oak	22	G-F	G	25	20	18	20	M	X	H	Ivy on trunk. Within grading limits.	Remove
146	Coast live oak	18, 15	G	F	25	0	20	25	M	X	H	Co-dominant trunks. Within grading limits.	Remove
147	Fruiting plum		Dead							X	H	Within grading limits.	Remove
148	Persimmon	6, 7	G	P	6	15SE		5	M	X	H	Leaders poorly attached, breaking apart. Within grading limits.	Remove
149	Black Walnut	7, 6	G	F	8	15	15	0	Y	X	H	Within grading limits.	Remove

#	Species	DBH	Health	Structure	Dripline N	E	S	W	Age	DE	CI	Comments	Action
149 B	Valley oak	7	G	F	25NE				Y	X	H	Not surveyed. Within grading limits.	Remove
150	Coast live oak	19	G	F	0	25	20	20	M	X	H	One stem topped by PG&E, Poor location. Within grading limits.	Remove
151	Coast live oak	15	F-P	P	25N-NE		0	20	Y	X	H	Topped by PG&E. Sparse canopy and deadwood. Within proposed driveway	Remove
152	Coast live oak	15	G	F	10	15	0	0	Y	X	H	Sided by PG&E. Within proposed driveway.	Remove
153	Valley oak	20, 15	G	F	10	25	30	30	M	X	H	Somewhat lions tailed, branches elongated to S. Within grading and sewer easement.	Remove
154	Valley oak	13	G	G-F	10	0	20	20	Y	X	M-H	1' from existing gravel driveway. Trunk buried. At edge grading limits. Arborist on site for grading.	Save Arborist to pull fill back from base of tree.
155	Coast live oak	11	G	F	8	12	15	0	Y	X	H	Topped by PG&E. Within proposed driveway.	Remove
156	Coast live oak	9	G	F	6	8	6	0				Growing up under PG&E wires. Within proposed driveway.	Remove
157	Coast live oak	10	G	F	10	0	10	18	Y	X	L	Off-site. Trunk buried. 1.5' from existing gravel driveway. Grading at edge of dripline.	Save Arborist to pull fill back from base of tree.
158	Chinese pistache	12	F	F	15	12	0	10	M	X	H	Partially topped. Within grading for road.	Remove
159	Coast live oak	8	G	F-P	12NW				Y	X	L	Off-site. Trunk buried. Sided by PG&E. Grading at edge of dripline.	Save
160	Valley oak	7	G	F	8	8	0	0	Y	X	L	Off-site. Co-dominant stems at 7'. Topped by PG&E. Trunk buried. Grading at edge of dripline.	Save
160 B	Coast live oak	7	G	F	15N-NE				Y	X	L	Off-site; not surveyed. Lean to NE. 6" NW of #160. . Grading at edge of dripline.	Save
161	Iron bark euc.	11, 7										Previously removed. Suspect by PG&E (under wires)	N/A
162	Coast live oak	15, 11	G	P	15	15	15	15	M	X	L	Topped by PG&E, co-dominant stems. Grading for road at edge of dripline.	Save

#	Species	DBH	Health	Structure	Dripline N	E	S	W	Age	DE	CI	Comments	Action
163	Coast live oak	11	G	G	6	6	6	6	Y	X	L	Reduced by PG&E. Grading at edge of dripline	Save
164	Incense cedar	15	F	F	7	7	7	7	M	X	H	Sweeping S shaped trunk. Within proposed road.	Remove
165	Incense cedar											Removed.	N/A
166	Coast live oak	19, 20	G-F	F	30	30	30	0	M	X	H	Co-dominant stems. Moderate sycamore borer. Within grading limits.	Remove
166 B	Siberian elm	7, 11	F-P	P	18	0	0	18	M	X	H	Not surveyed. Co-dominant stems at 2'. Within grading limits.	Remove
166 C	Siberian elm	9, 8, 7	P	P	20	0	0	20	M	X	H	Not surveyed. Basal sprouts; decay. Within grading limits.	Remove
167	Black walnut	9, 4, 4	F	F	20	0	0	20	M	X	H	Within grading limits.	Remove
168	Black walnut	8	P	P	20NW				Y	X	H	Understory tree; no growth in past 14 years. Within grading limits.	Remove
169	Coast live oak	20	G	F	35	20	20	20	M	X	H	Within grading limits.	Remove
169 B	Coast live oak	9	G	F	30NW				Y	X	H	Not surveyed. Understory tree. 40° phototropic lean to NW. Within grading limits.	Remove
170	Coast live oak	14	G	G	8	8	8	8	Y	X	H	Trunk buried. Within grading limits.	Remove
171	Coast live oak	14	F-P	F	35N-NW				Y	X	H	Ivy around base, upper branches are damaged by a fungal canker at 15'. On creek bank well. Within grading limits.	Remove
171 B	Coast live oak	14	G	G	35NW				Y	X	H	In creek structure setback. 40° lean to NW. Within grading limits.	Remove
172	Monterey pine	48	F-P	F-P	30	30	30	30	OM	X	H	5° lean to N/W. Grading up to base of tree. Only 3-5 years of anticipated lifespan left.	Remove
173	Calif. Buckeye	14, 14, 8, 8, 8, 7, 7, 5	G	F	35	20	0	20	M	X	M-H	Low branching (trunks laying on ground). Grading limits well within N/W dripline. Pull grade limits back so 15' from trunk.	Save Assuming grade limits can be adjusted.
173 B	Calif. Buckeye	11, 12	G	F	10	10	10	10	M		L	In creek structure setback. Ivy covering tree.	Save

ARBORIST REPORT
TREE INVENTORY

1024 & 1026 GRAYSON ROAD
SUBDIVISION SD20-9531

VICINITY OF PLEASANT HILL CONTRA COSTA COUNTY CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER EASTON C. McALLISTER No. 61148 EXP. 12/31/22 CIVIL STATE OF CALIFORNIA

EASTON C McALLISTER - PE 61148 / PLS 9583
RENEWAL DATE: 12/31/22 (PE) 03/31/23 (PLS)

#	REVISIONS	DATE

DEBOLT CIVIL ENGINEERING
45+ YEARS
811 SAN RAMON VALLEY BLVD #201
DANVILLE, CALIFORNIA 94526
(925) 837-3780 | DEBOLTCIVIL.COM

Date: 01/28/22
Scale: N.T.S.
By: EM/mm
Job No.: 19300

VTM-5

#	Species	DBH	Health	Structure	Dripline N E S W	Age	DE	CI	Comments	Action
173 C	Coast live oak	8	F	P	25N	Y	X	L-M	Understory tree with heavy lean (trunk horizontal before correcting) to NW. Young tree with some dripline grading encroachment.	Save
174	Black walnut	23	F-P	F	20 20 20 25	M	X	H	Low branching, old mistletoe in canopy; dieback. Within grade limits.	Remove
175	Siberian elm	17, 17, 15	P	P	20 20 20 20	M	X	H	Tree in decline, poorly structured. Within grade limits.	Remove
176	Coast redwood	30	F/F-P	G	15 15 15 15	M	X	H	Drought-stressed. Within grade limits.	Remove
177	Coast redwood	26	F/F-P	G	15 15 15 15	M	X	H	Drought-stressed. Within grade limits.	Remove
177 B	Valley oak	11	G	G	8 8 8 8	Y	X	H	Not surveyed. Chain on trunk. Within grade limits.	Remove
178	Valley oak	14, 6	G	F	15 15 20 20	Y	X	H	Lean to SW. Within grade limits.	Remove
178 B	Valley oak	8	G	F	12 12 0 0	Y			Not surveyed. Within grade limits.	Remove
179	Calif. Buckeye	8, 7, 6	G	G	12 12 12 12	M	X	H	Within grade limits	Remove
180	Mulberry	18	P	P	0 10 10 0	OM	X	H	Previously topped. Within grade limits.	Remove
181	Valley oak	11	F	F	15NE-NW	Y		L	Grading just outside dripline.	Save
182	Valley oak	11	F	F	15S	Y	X	L-M	Grading at edge of dripline.	Save
183	Valley oak	13	F	F	20 N E 15 0 0	Y	X	L-M	Grading at edge of dripline.	Save
184	Black walnut	8, 8, 7	P	P	8 8 8 8	M	X	H	Declining health. Within grade limits.	Remove
185	Valley oak	11	F	F	18 N E 10 0 0	Y	X	L-M	S shaped trunk. Grading at edge of dripline.	Save

#	Species	DBH	Health	Structure	Dripline N E S W	Age	DE	CI	Comments	Action
186	Calif. Buckeye	7, 7, 6, 6, 5, 5, 5	G	G	18 18 18 18	M	X	M	Tangled with mulberry, and walnut. Grading withn dripline.	Save Arborist on site during grading.
187	Mulberry	18	P	P	15 15 15 15	M	X	H	Drought stressed, tangled with buckeye. Within grading limits.	Remove
188	Black walnut	9	F	F	20S	Y	X	H	Competing with buckeye, recommend removal. Within grade limits.	Remove
188 B	Coast live oak	11	F	G	12 12 12 12	Y	X	H	Not surveyed. Within storm treatment area.	Remove
188 C	Coast live oak	11	G	G	6 0 10 15	Y	X	H	Not surveyed. Within storm treatment area.	Remove
189	Calif. Buckeye	9, 9, 8, 7, 7, 5, 5, 5, 3, 3, 3	G	G	15 20 25 20	M	X	L-M	Grading limits at edge of dripline.	Save
190	Mulberry	16	Dead							Remove.
191	Coast live oak	14	G	G	10 10 10 10	Y		L	Grade limits just outside dripline.	Save
191 B	Coast live oak	11, 9	F	F	18NE-NW	M		L	Not surveyed. Lean over road.	Save
192	Mulberry	19	P	P	8 8 8 8	OM	X	H	Drought stressed. In decline. Within grade limits.	Remove
192 A	Coast live oak	17	G	F	18 N E 10 10 18 N W	M		L	In creek structure setback. Reduced by PG&E. By street, lifting asphalt curb.	Save
192 B	Willow	20, 20	P	P	15 0 0 0	OM		L	Outside northeast property corner along Grayson. Topped by PG&E; sparse canopy. Recommend removal	Remove
192 C	Willow	24	F	P	0 0 25 30 S W	OM		L	Outside northeast property corner along Grayson. Uprooted to S. Fallen tree.	Remove
193	Siberian elm	12, 12, 10, 5, 5, 4	P	P	8 8 8 8	M	X	H	Dying tree. Within grading limits	Remove

#	Species	DBH	Health	Structure	Dripline N E S W	Age	DE	CI	Comments	Action
194	Siberian elm	12, 9, 4	P	P	0 15 15 15	M	X	H	Dying tree. Within grade limits.	Remove
194 B	Coast live oak	9	G	F	15N	Y	X	H	Not surveyed. Up against elm.	Remove
195	Siberian elm	13, 4	P	P	20N	M	X	H	Declining health. Within grade limits.	Remove
196	Coast live oak	19	G	F	20 N W 0 20 20	M		L	Sweeping trunk	Save
197	Bush eucalyptus	10, 8, 8	Dead			M		L	Dead/failed. Fire hazard.	Remove
198	Bush eucalyptus	15, 15	P	P	10N	M		L	Dying, fire hazard.	Remove
199	Blue gum euc.	50	F	F-P	25 20 20 20	M		L	10" branch failure to N in 2006; minor sprouting from failure. Prune for safety if targets within 50ft.	Save
200	Bush eucalyptus	18, 5, 6	F	P	15S	M		L	Declining health. Recent failures. Prune for safety.	Save
201	Monterey pine	24	F	P	20 20 20 20	OM		L	Over mature tree, badly included co-dominant stems. Anticipate short life span, recommend removal.	Remove
202	Monterey pine	22	P	P	0 20 20 0	OM		L	Over mature tree, declining health. Recommend removal.	Remove
203	Monterey pine								Removed.	N/A
204	Monterey pine	18	F	P	25E	M		L	Poorly tapered trunk; lean to E. Recommend removal.	Remove
205	Monterey pine								Removed.	N/A
206	Calif. Buckeye	15, 15, 10, 10	G	G	25 25 25 25	M		L	Healthy tree.	Save

ARBORIST REPORT
TREE INVENTORY

1024 & 1026 GRAYSON ROAD
SUBDIVISION SD20-9531
VICINITY OF PLEASANT HILL CONTRA COSTA COUNTY

REGISTERED PROFESSIONAL ENGINEER EASTON C. McALLISTER No. 61148 EXP. 12/31/22 CIVIL STATE OF CALIFORNIA
CALIFORNIA

EASTON C McALLISTER - PE 61148 / PLS 9583
RENEWAL DATE: 12/31/22 (PE) 03/31/23 (PLS)

#	REVISIONS	DATE

DEBOLT CIVIL ENGINEERING
45+ YEARS
811 SAN RAMON VALLEY BLVD #201
DANVILLE, CALIFORNIA 94526
(925) 837-3780 | DEBOLTCIVIL.COM

Date: 01/28/22
Scale: N.T.S.
By: EM/mm
Job No.: 19300

VTM-6

ALL PLANS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS SIGNED AND STAMPED BY THE ENGINEER AND REVIEWING AGENCY.

CONCEPTUAL BUILDING LAYOUT

1024 & 1026 GRAYSON ROAD
SUBDIVISION SD20-9531

VICINITY OF PLEASANT HILL CONTRA COSTA COUNTY

REGISTERED PROFESSIONAL ENGINEER
EASTON C. McALLISTER
No. 61148
EXP. 12/31/20
CIVIL
STATE OF CALIFORNIA
CALIFORNIA

EASTON C McALLISTER - R.C.E. 61148
RENEWAL DATE: 12/31/22

#	REVISIONS	DATE

DEBOLT CIVIL ENGINEERING
45+ YEARS
811 SAN RAMON VALLEY BLVD #201
DANVILLE, CALIFORNIA 94526
(925) 837-3780 | DEBOLTCIVIL.COM

Date: 03/25/22
Scale: 1" = 20'
By: EM
Job No.: 19300

VTM-7

Plan 2 | Modern Farmhouse (R)

Plan 2 | Modern Prairie

Plan 1 | Modern Farmhouse

Plan 3 | Modern Prairie (R)

Conceptual Streetscene

1024 & 1026 GRAYSON ROAD

PLEASANT HILL, CA

CALIBR VENTURES

A1
NTS

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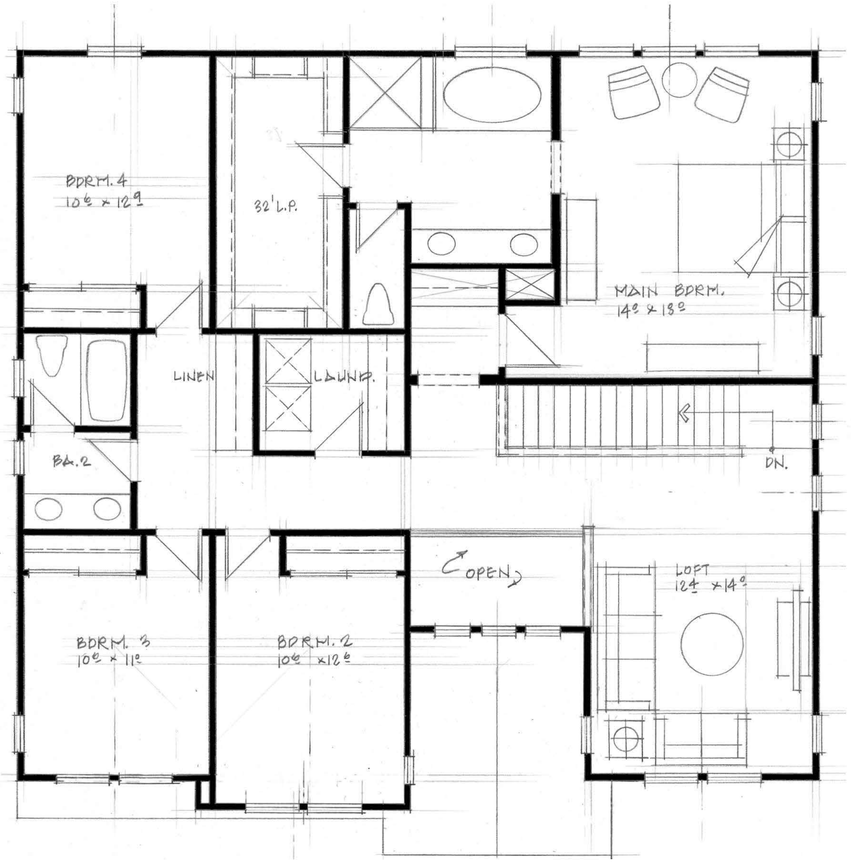
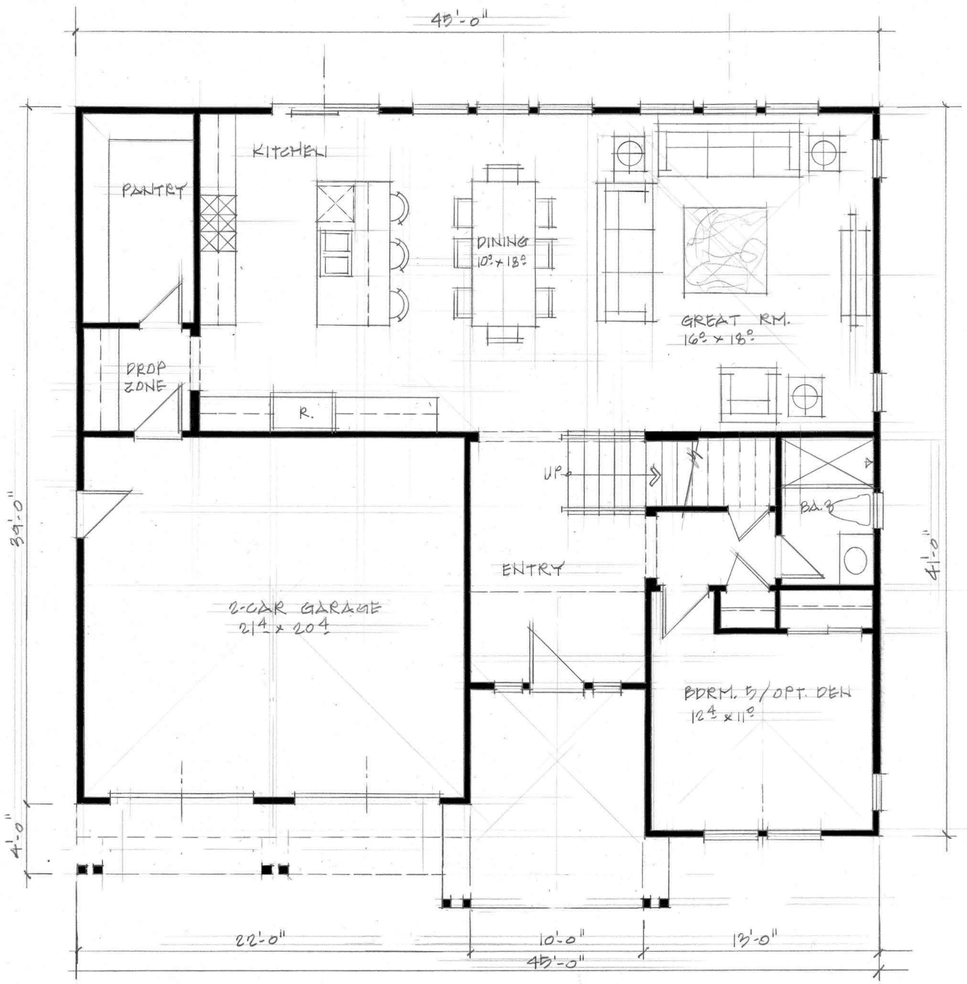
ORANGE COUNTY . LOS ANGELES . BAY AREA



Second Floor 1,667 SF



First Floor 1,262 SF

PLAN 1

2,929 SF
5 Bdrm | 3 Bath | Loft | Opt. Den
2-Car Garage

CALIBR VENTURES

1024 & 1026 Grayson Road

PLEASANT HILL, CA

A1.01

0 2 4 8

 | 2021351 | 11-24-21

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Modern Prairie Elevation

Modern Farmhouse Elevation

PLAN 1
Front Elevations

CALIBR VENTURES

1024 & 1026 Grayson Road

PLEASANT HILL, CA

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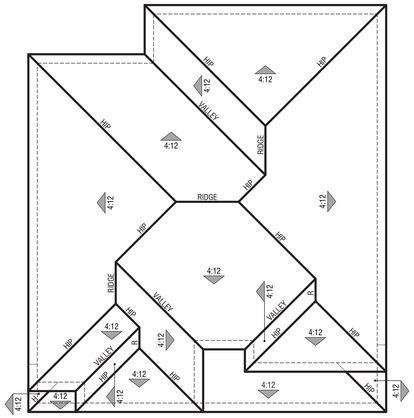
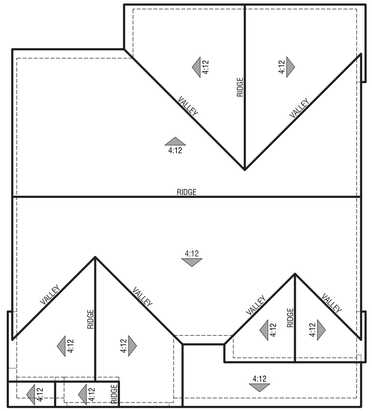
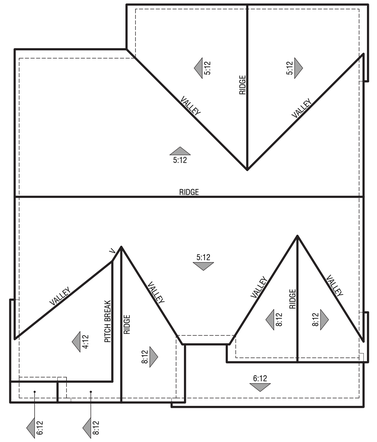


Elevation C
Modern Prairie



Elevation B
Spanish Colonial



Elevation A
Modern Farmhouse

PLAN 2
Roof Plan

CALIBR VENTURES

1024-1026 Grayson Rd

PLEASANT HILL, CA

A9

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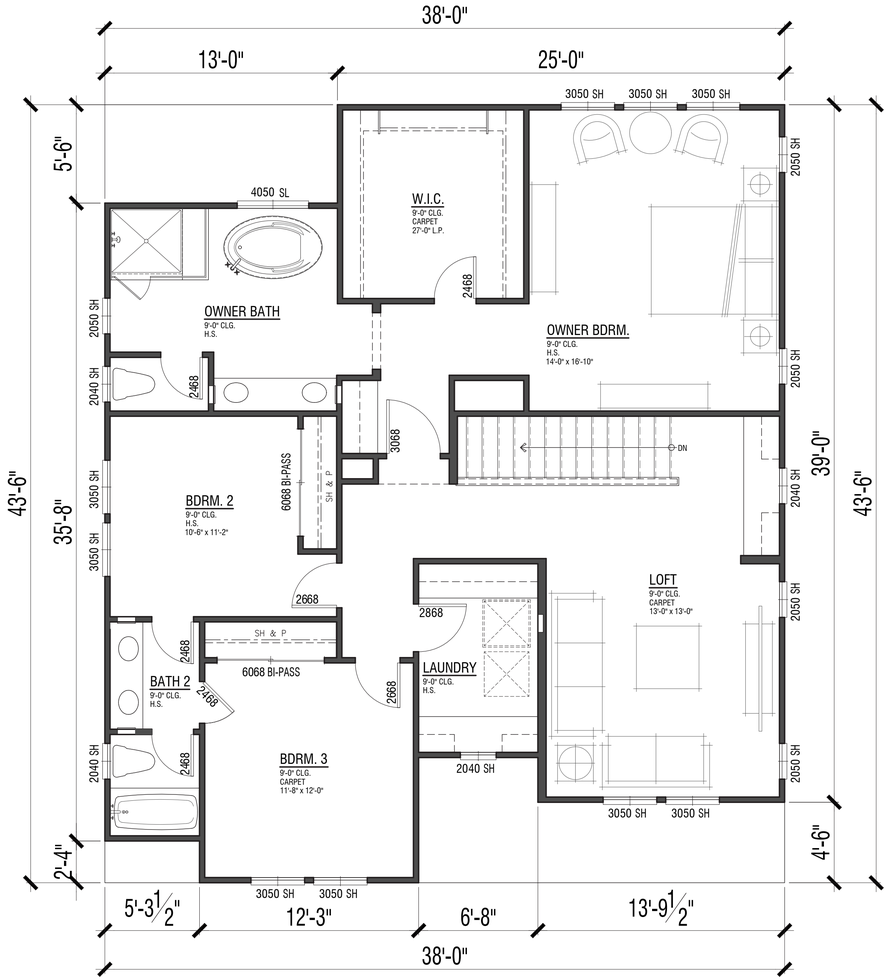
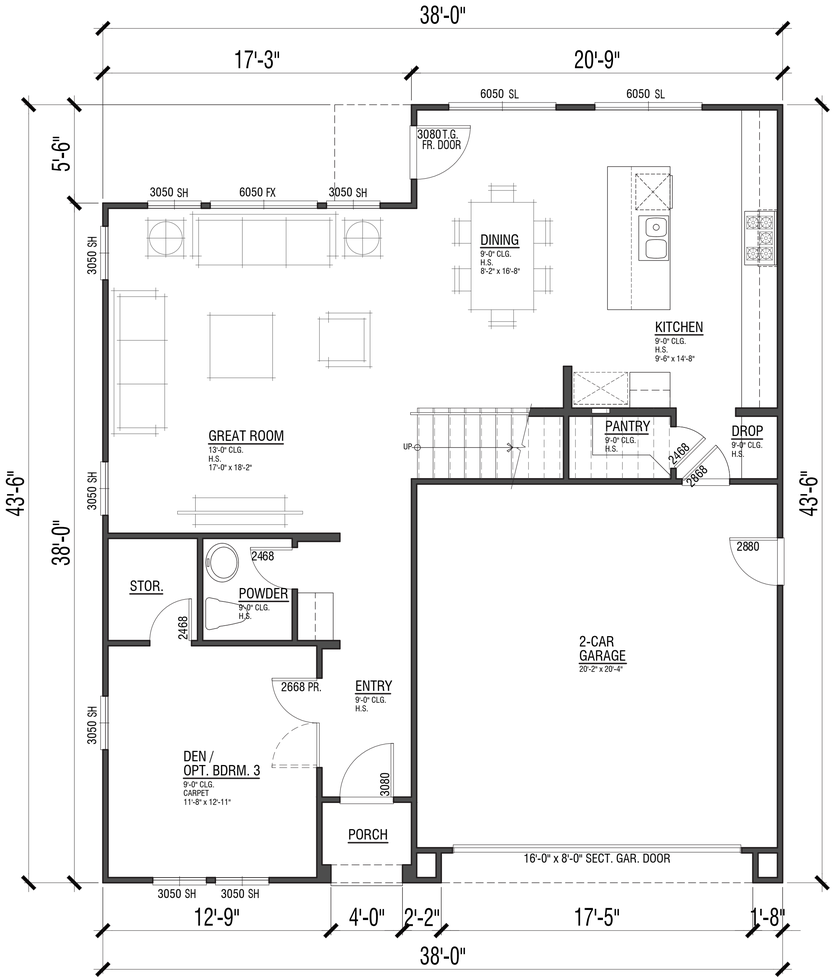


Second Floor 1,420 SF



First Floor 1,078 SF

PLAN 2

2,498 SF

3 Bdrm | 3 Bath | Loft | Den

2-Car Garage

CALIBR VENTURES

1024-1026 Grayson Rd

PLEASANT HILL, CA

A8

0 2 4 8

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ORANGE COUNTY . LOS ANGELES . BAY AREA

Elevation A
Modern Farmhouse
Color Scheme 1

Elevation C
Modern Prairie
Color Scheme 6

Elevation B
Spanish Colonial
Color Scheme 3

PLAN 2
Front Elevations

CALIBR VENTURES

1024-1026 Grayson Rd

PLEASANT HILL, CA

A10

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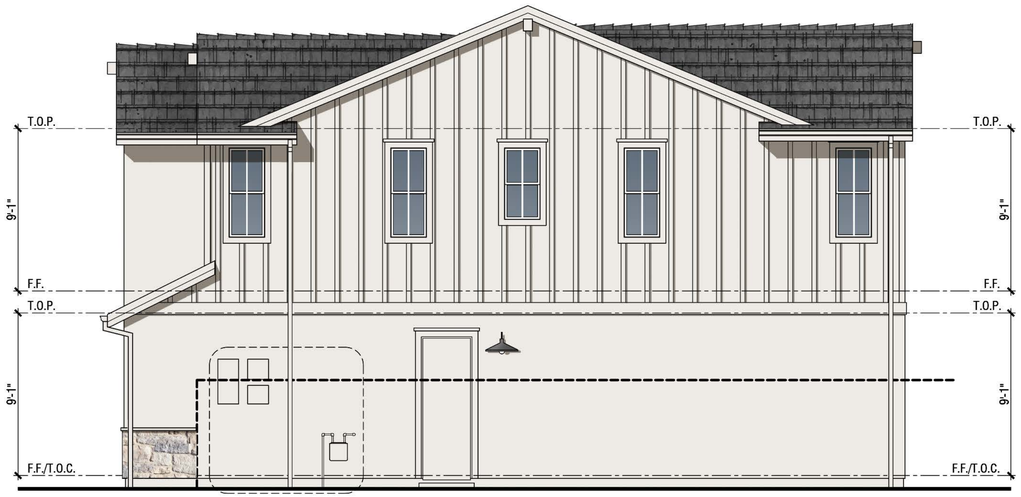

Right Elevation

Rear Elevation

Left Elevation

Front Elevation

EXTERIOR MATERIALS:

Elevation A - Color Scheme 1

1. CONCRETE SLATE TILE ROOFING
2. INSULATED VINYL WINDOWS
3. FIBERGLASS FRONT DOOR
4. STUCCO
5. STUCCO OVER FOAM TRIM
6. FIBER CEMENT BOARD AND BATTEN SIDING
7. FIBER CEMENT TRIM
8. MANUFACTURED STONE VENEER
9. MANUFACTURED STONE CAP
10. FASCIA
11. SECTIONAL ROLL-UP GARAGE DOOR
12. LIGHT FIXTURE

PLAN 2

Elevation A - Modern Farmhouse

CALIBR VENTURES

1024-1026 Grayson Rd

PLEASANT HILL, CA

A11

0 2 4 8

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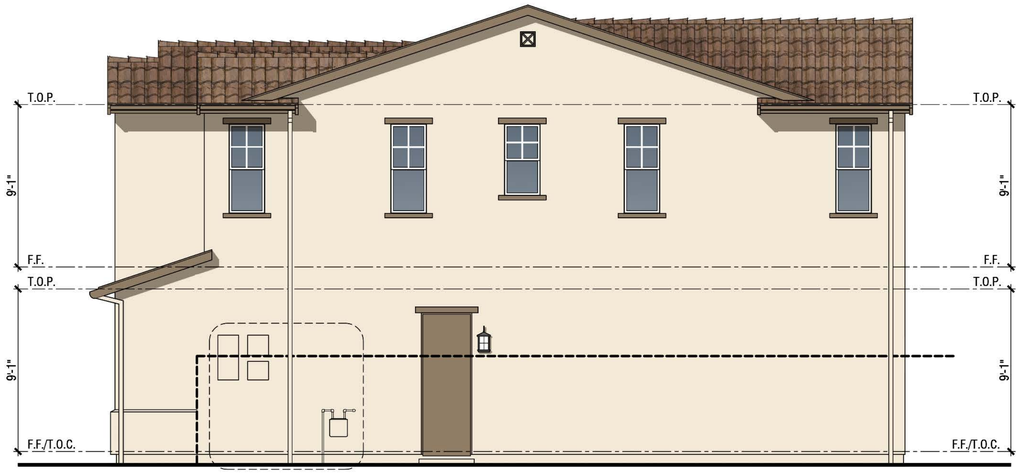

Right Elevation

Rear Elevation

Left Elevation

Front Elevation

EXTERIOR MATERIALS:

Elevation B - Color Scheme 3

1. CONCRETE 'S' TILE ROOFING
2. INSULATED VINYL WINDOWS
3. FIBERGLASS FRONT DOOR
4. STUCCO
5. STUCCO OVER FOAM TRIM
6. DECORATIVE CERAMIC TILE
7. FASCIA
8. SECTIONAL ROLL-UP GARAGE DOOR
9. DECORATIVE METAL
10. LIGHT FIXTURE

PLAN 2

Elevation B - Spanish Colonial

CALIBR VENTURES

1024-1026 Grayson Rd

PLEASANT HILL, CA

A12

0 2 4 8

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WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

Right Elevation

Rear Elevation

Left Elevation

Front Elevation

EXTERIOR MATERIALS:

Elevation C - Color Scheme 6

1. CONCRETE SHAKE TILE ROOFING
2. INSULATED VINYL WINDOWS
3. FIBERGLASS FRONT DOOR
4. STUCCO
5. STUCCO OVER FOAM TRIM
6. MANUFACTURED BRICK VENEER & CAP
7. FASCIA
8. SECTIONAL ROLL-UP GARAGE DOOR
9. LIGHT FIXTURE

PLAN 2

Elevation C - Modern Prairie

CALIBR VENTURES

1024-1026 Grayson Rd

PLEASANT HILL, CA

A13

0 2 4 8

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Modern Prairie Elevation

Modern Farmhouse Elevation

PLAN 3
Front Elevations

CALIBR VENTURES

1024 & 1026 Grayson Road

PLEASANT HILL, CA

A3.03

0 2 4 8

 | 2021351 | 11-24-21

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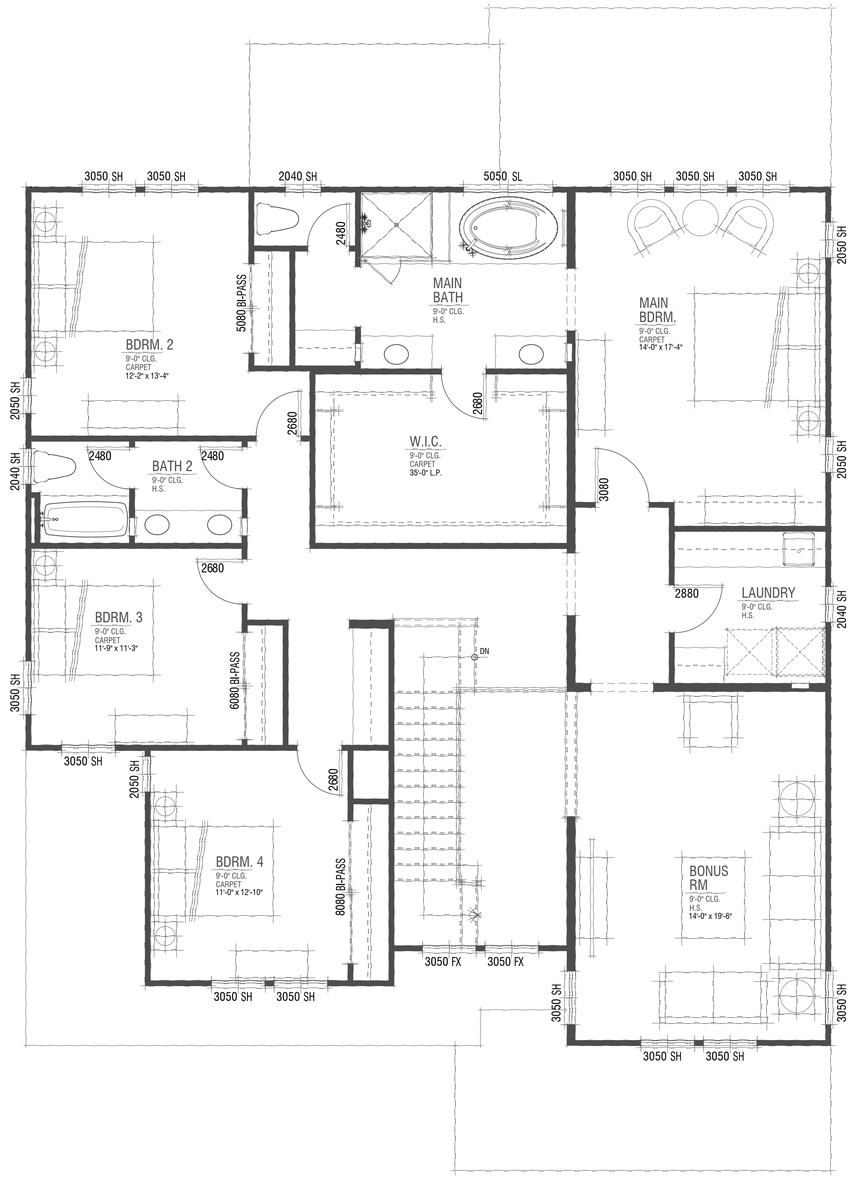


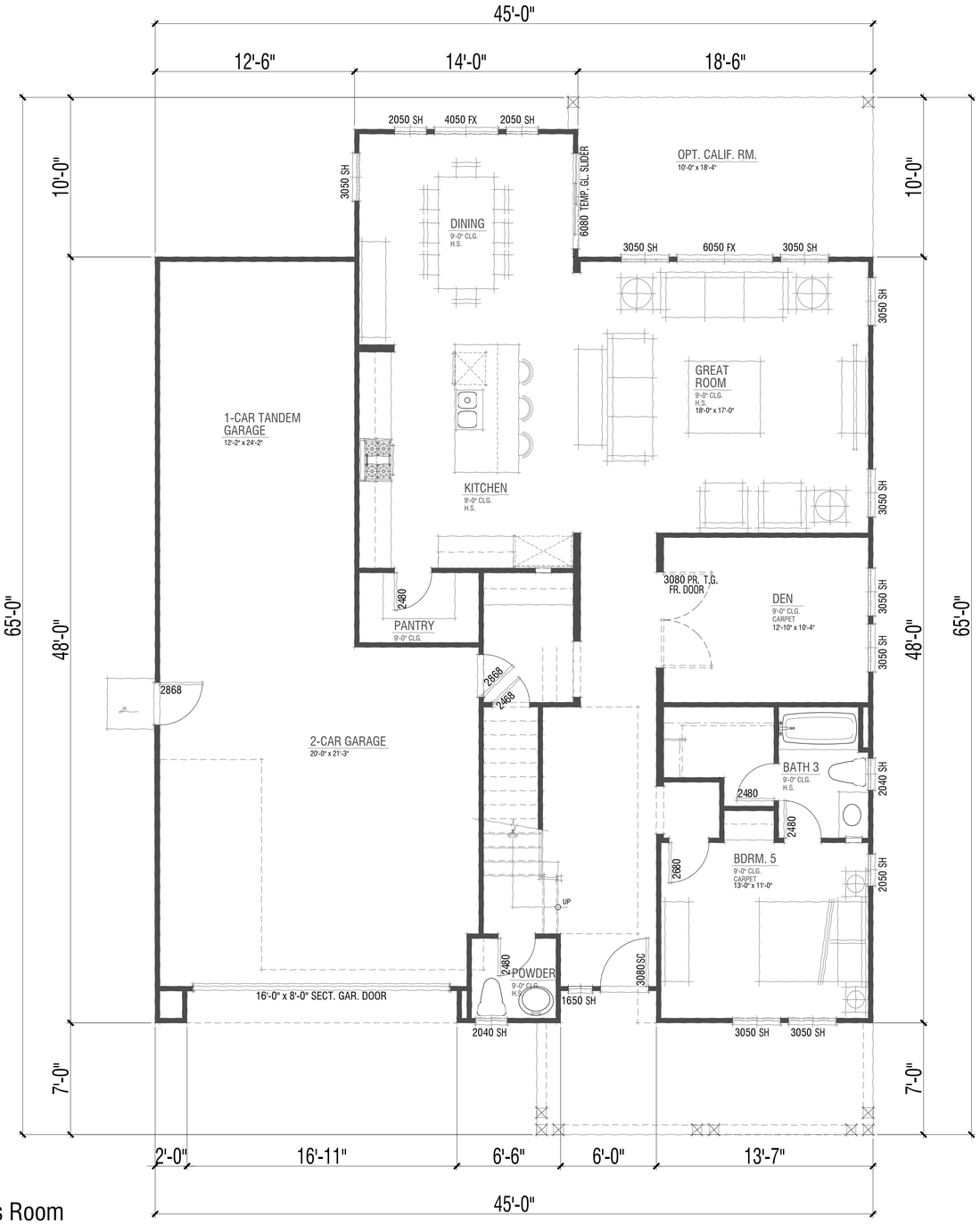
Second Floor 1,678 SF

PLAN 3

3,277 SF

5 Bdrm | 3.5 Bath | Den | Bonus Room

3-Car Tandem Garage



First Floor 1,481 SF

CALIBR VENTURES

1024 & 1026 Grayson Road

PLEASANT HILL, CA

A3.01

0 2 4 8

 | 2021351 | 11-24-21

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

May 6, 2020 (revised 10/17/22)

Andy Byde
Calibr Ventures
bydeandy@gmail.com

RE: Revised Arborist Report for the Development of 1024-1026 Grayson Road

Project Summary
This report updates the 2006 arborist report with current tree assessment and measurements, and anticipated tree impact. Trees proposed for removal are estimated based on proposed grading and building footprints. Actual impacts may vary once homes are designed. A supplemental arborist report may be necessary at that time.

This 10/17/22 revision adds 13 trees (#301-313) along the creek that were omitted in prior reports. The scope of work did not include review of updated plans and health/structure reassessment of other trees, though the locations of a few trees were adjusted.

Site Summary
A total of 130 trees > 6" in diameter were inventoried. It is my opinion that 97 trees will need to be removed to accommodate the proposed project. The remaining trees can be retained given that the protection measures within this report are followed.

Assumptions & Limitations
This report is based on my site visit on 5/4/20 & 10/11/22, and existing conditions & demolition plan by Debolt Civil Engineering dated 3/9/22 (plot date 10/13/22). It was assumed that the trees and the proposed improvements were accurately surveyed. Several trees were not surveyed or appear to be located incorrectly, so I roughly located them on the tree protection plan based on their proximity to adjacent surveyed trees. Since it was difficult to tell which trees were accurately located, the approximate locations will likely need to be resurveyed if precision is needed.

The health and structure of the trees were assessed visually from ground level. No drilling, root excavation, or aerial inspections were performed. Internal or non-detectable defects may exist and could lead to part or whole tree failures. Due to the dynamic nature of trees and their environment, it is not possible for arborists to guarantee that trees will not fail in the future.

Tree Inventory & Assessment Table
#s: Each tree was given a square metal tag with numbers ranging from 102-206 & circular tags from #301-313. (Note: as of 2022, tags are likely engulfed by trunk growth.) Trees with letters attached (a, b, or c) were new young trees that have grown up to protected size since the 2006 inventory. Their locations are shown on the attached the tree inventory plan.
DBH (Diameter at Breast Height): Trunk diameters in inches were measured at 4.5' above average grade with a diameter tape. Height of measurement may deviate slightly from the standard on atypical trunks.

Health & Structural Condition Rating
Dead: Dead or declining past chance of recovery.
Poor (P): Stunted or declining canopy, poor foliar color, possible disease or insect issues. Severe structural defects that may or may not be correctable. Usually not a reliable specimen for preservation.
Fair (F)*:* Fair to moderate vigor. Minor structural defects that can be corrected. More susceptible to construction impacts than a tree in good condition.
Good (G): Good vigor and color, with no obvious problems or defects. Generally more resilient to impacts.
Very Good (VG): Exceptional specimen with excellent vigor and structure. Unusually nice.

Dripline: Canopy radius was visually estimated in each cardinal direction.

Age
Young (Y): Within the first 20% of expected life span. High resiliency to encroachment.
Mature (M): Between 20% - 80% of expected life span. Moderate resiliency to encroachment.
Overmature (OM): In >80% of expected life span. Low resiliency to encroachment.

DE: Dripline Encroachment (X indicates encroachment)
CI: Anticipated Construction Impact (L = Low, M = Moderate, H = High)

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
101	Coast live oak											This tree no longer exists. Old report stated it as a 9" tree. No evidence of a stump was found.	N/A
102	Valley oak	16	G-F	G	20	25	20	20	Y	X	M	Epicormic sprouts along scaffold branches. Within west p/l set back, some grading will likely occur within dripline.	Save Set protection fencing at dripline (d/l), and have arborist on site for any d/l encroachment.
103	Fruiting pear	10, 5, 5, 4, 4	P	P	10	0	10	10	OM	X	H	Declining tree. In proposed driveway	Remove
104	Valley oak	18, 19, 20, 12	G	G	30	30	30	30	M	X	H	Co-dominant stems at 3'. In proposed driveway.	Remove
105	Coast live oak	11, 7, 6	F-P	F	15	15	10	0	M	X	H	Co-dominant stems. Understory tree. Within building footprint.	Remove
106	Valley oak	11, 12	G	F	25NW-W				M	X	H	Co-dominant stems. Within building footprint.	Remove
107	Valley oak	4, 3, 12, 11, 5, 7, 5	G	F	25	0	18	25	M	X	H	Basal shoot from old stump. In proposed driveway. Within building footprint.	Remove
107 B	Coast live oak	11, 5, 8	F	P	15	0	0	25	M	X	H	Growing out from base of #107. Co-dominant trunks. Within building footprint.	Remove
108	Coast live oak	17	F	F	25NW-W				M	X	H	Curved trunk. Within building footprint.	Remove
109	Valley oak	12, 11, 7, 6	F	F	30N				M	X	H	One sided tree to the N/W. Dieback & epicormic sprouting. Within building footprint.	Remove
110	Valley oak	20, 11, 11, 16	G	F	25	25	0	25	M	X	H	Co-dominant trunks. Within building footprint.	Remove
111	Coast live oak	19	F-P	F	20	25	20	20	M	X	H	Bark inclusion on all 3 attachments. Sparse with stunted growth. Within building footprint.	Remove
112	Coast live oak	11	F	P	0	6	10	10	Y	X	H	Top broken at 12' with sprouting. Within building footprint.	Remove
113	Valley oak	7	F	P	6S				Y	X	H	Sparse canopy, 2 trunks removed. Within building footprint.	Remove
114	Valley oak	7, 4	F	F	6	6	6	6	Y	X	H	Crowded. Within building footprint.	Remove
115	Coast live oak	13	G	G	12	0	8	10	Y	X	H	3" from base of #116; crowded. Within building footprint.	Remove

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
116	Valley oak	7, 6	F	F	18N				Y	X	H	Very crowded. Co-dominant trunks; sweeping lean to N. Within building footprint.	Remove
117	Coast live oak	17	F-P	F-P	15NE				M		L	Sparse understory tree. Outside of grading limits.	Save
118	Valley oak	14, 18	F	F	15	15	20	20	M		L	Co-dominant stem bends to N. Outside of grading limits.	Save
119	Coast live oak	17	Dead										Remove.
120	Coast live oak	17	F-P	F	10	10	10	10	M		L	Ivy covering trunk. In decline; sycamore borer damage. Treat for Borer. Outside of grading limits in creek setback.	Save
121	Valley oak	13	F	F	20S				Y		L	Ivy covering trunk. Outside of grading limits in creek setback.	Save
122	Valley oak	22	P	P	25N				M		L	Ivy covering trunk. Declining canopy; sweeping lean to N. Outside of grading limits in creek setback.	Save
122 A	Coast live oak	30	F	F	50N				M		L	In creek structure setback. Significant lean to N. Ivy covering trunk. Outside of grading limits in creek setback.	Save
123	Valley oak	14, 7, 7, 10, 10	F	F	0	25	0	15	M	X	H	Sparse canopy. Co-dominant stems at 6'. Within grading limits	Remove
124	Valley oak	16	F	G	15	20	15	8	M	X	H	Tag embedded in trunk. Epicormic sprouts. Within grading limits	Remove
124 B	Coast live oak	7	F	P	6	10	4	0	Y	X	H	90° correcting bend in trunk. Within grading limits	Remove
125	Chinese pistache	27	G	G	25	25	25	25	OM	X	H	Dieback; slightly drought stressed. Within grading limits	Remove
126	Chinese pistache	17, 17, 10, 8	F	G	25	25	25	6	OM	X	H	Within grading limits	Remove
127	Coast live oak	17	G	G	15	0	0	20	M	X	H	Within grading limits	Remove
128	Valley oak	19	G	F	20	25	0	20	M	X	H	Within grading limits	Remove
129	Valley oak	14	G	F	0	20	20	20	Y	X	H	Within grading limits	Remove
130	Coast live oak	16	F	G	15	15	10	0	Y	X	H	Sparse lower canopy. Within grading limits	Remove
131	Calif. Buckeye	11, 8	F	F	15	20	25	20	M	X	H	Dead lower/interior canopy. Within grading limits	Remove
131 B	Valley oak	18	F	F	35N				M	X	H	Not surveyed. 35° lean to N. Ivy and poison oak covering trunk. Within grading limits	Remove
132	Coast live oak	11	F	F	40N				Y	X	H	10° lean to N. Tag engulfed by trunk. Within grading limits	Remove

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
133	Coast live oak	14	G	F	40N-20NW				Y	X	H	10° lean to N. Within grading limits	Remove
134	Monterey pine	50	P	F	50	50	50	50	OM	X	M	Over mature tree, in declining years. Sparse canopy.	Removed
135	Coast redwood	18, 18, 10	F	G	20	20	20	20	M	X	H	Drought stressed, needs irrigation. Within grading limits.	Remove
135 A	Calif. Buckeye	6, 8, 11, 7, 7, 9, 11, 8	G	G	20	20	20	20	M		L	Within creek structure set back. ~3 trunk clusters treated as one.	Save
136	Silver dollar eucalyptus (*Eucalyptus cinerea*)	13, 16	F	F	25	15	10	0	M	X	H	Failed trunk. Within grading limits.	Remove
137	Coast live oak	40	G-F	P	35	35	35	35	M	X	M-H	Ivy covering trunk. Co-dominant stems at 4' with included bark. Grading just north of trunk proposed. Pull grade limits at least 15' from trunk in order to save tree.	Save If grading can be adjusted.
138	Valley oak	18	F	F	15	15	5	0	M	X	M-H	Ivy covering trunk. Grading just north of trunk. Recommend pulling grade limits at least 10' from trunk.	Save If grading can be adjusted
138 B	Buckeye	17, 12, 13, 14, 15, 13, 12, 10, 10, 13	F-P/P	F	20	20	20	20	M		L	In creek structure setback. Top dieback.	Save
139	Mimosa		Dead									Within grading limits.	Remove
140	Coast live oak	17	G	G	18	18	18	18	M	X	H	Within grading limits.	Remove
141	Coast live oak	9	G	G	10	10	10	10	Y	X	H	Tag embedded in trunk but readable. Within grading limits.	Remove
142	Coast live oak	19, 20	G	F	30	30	10	10	M	X	H	Co-dominant trunks. Within grading limits.	Remove
142 B	Coast live oak	20	G	F	30	0	0	20	M	X	H	In creek structure setback. Within grading limits.	Remove
142 C	Coast live oak	14	G	G	20	15	0	0	Y	X	H	Not surveyed.	
143	Valley oak	15	G-F	G	12	12	12	12	Y	X	H	Ivy on trunk. Within grading limits.	Remove
144	Valley oak	11	G	F	15SE				Y	X	H	Ivy on trunk. Understory tree. Within grading limits.	Remove
145	Coast live oak	22	G-F	G	25	20	18	20	M	X	H	Ivy on trunk. Within grading limits.	Remove
146	Coast live oak	18, 15	G	F	25	0	20	25	M	X	H	Co-dominant trunks. Within grading limits.	Remove
147	Fruiting plum		Dead							X	H	Within grading limits.	Remove

#	Species	DBH	Health	Structure	Dripline N	E	S	W	Age	DE	CI	Comments	Action
148	Persimmon	6, 7	G	P	6	15SE		5	M	X	H	Leaders poorly attached, breaking apart. Within grading limits.	Remove
149	Black Walnut	7, 6	G	F	8	15	15	0	Y	X	H	Within grading limits.	Remove
149 B	Valley oak	7	G	F	25NE				Y	X	H	Not surveyed. Within grading limits.	Remove
150	Coast live oak	19	G	F	0	25	20	20	M	X	H	One stem topped by PG&E, Poor location. Within grading limits.	Remove
151	Coast live oak	15	F-P	P	25N-NE		0	20	Y	X	H	Topped by PG&E. Sparse canopy and deadwood. Within proposed driveway	Remove
152	Coast live oak	15	G	F	10	15	0	0	Y	X	H	Sided by PG&E. Within proposed driveway.	Remove
153	Valley oak	20, 15	G	F	10	25	30	30	M	X	H	Somewhat lions tailed, branches elongated to S. Within grading and sewer easement.	Remove
154	Valley oak	13	G	G-F	10	0	20	20	Y	X	M-H	1' from existing gravel driveway. Trunk buried. At edge grading limits. Arborist on site for grading.	Save Arborist to pull fill back from base of tree.
155	Coast live oak	11	G	F	8	12	15	0	Y	X	H	Topped by PG&E. Within proposed driveway.	Remove
156	Coast live oak	9	G	F	6	8	6	0				Growing up under PG&E wires. Within proposed driveway.	Remove
157	Coast live oak	10	G	F	10	0	10	18	Y	X	L	Off-site. Trunk buried. 1.5' from existing gravel driveway. Grading at edge of dripline.	Save Arborist to pull fill back from base of tree.
158	Chinese pistache	12	F	F	15	12	0	10	M	X	H	Partially topped. Within grading for road.	Remove
159	Coast live oak	8	G	F-P	12NW				Y	X	L	Off-site. Trunk buried. Sided by PG&E. Grading at edge of dripline.	Save
160	Valley oak	7	G	F	8	8	0	0	Y	X	L	Off-site. Co-dominant stems at 7'. Topped by PG&E. Trunk buried. Grading at edge of dripline.	Save
160 B	Coast live oak	7	G	F	15N-NE				Y	X	L	Off-site; not surveyed. Lean to NE. 6" NW of #160. . Grading at edge of dripline.	Save
161	Iron bark euc.	11, 7										Previously removed. Suspect by PG&E (under wires)	N/A
162	Coast live oak	15, 11	G	P	15	15	15	15	M	X	L	Topped by PG&E, co-dominant stems. Grading for road at edge of dripline.	Save
163	Coast live oak	11	G	G	6	6	6	6	Y	X	L	Reduced by PG&E. Grading at edge of dripline	Save
164	Incense cedar	15	F	F	7	7	7	7	M	X	H	Sweeping S shaped trunk. Within proposed road.	Remove
165	Incense cedar											Removed.	N/A
166	Coast live oak	19, 20	G-F	F	30	30	30	0	M	X	H	Co-dominant stems. Moderate sycamore borer. Within grading limits.	Remove

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
166 B	Siberian elm	7, 11	F-P	P	18	0	0	18	M	X	H	Not surveyed. Co-dominant stems at 2'. Within grading limits.	Remove
166 C	Siberian elm	9, 8, 7	P	P	20	0	0	20	M	X	H	Not surveyed. Basal sprouts; decay. Within grading limits.	Remove
167	Black walnut	9, 4, 4	F	F	20	0	0	20	M	X	H	Within grading limits.	Remove
168	Black walnut	8	P	P	20NW				Y	X	H	Understory tree; no growth in past 14 years. Within grading limits.	Remove
169	Coast live oak	20	G	F	35	20	20	20	M	X	H	Within grading limits.	Remove
169 B	Coast live oak	9	G	F	30NW				Y	X	H	Not surveyed. Understory tree. 40° phototropic lean to NW. Within grading limits.	Remove
170	Coast live oak	14	G	G	8	8	8	8	Y	X	H	Trunk buried. Within grading limits.	Remove
171	Coast live oak	14	F-P	F	35N-NW				Y	X	H	Ivy around base, upper branches are damaged by a fungal canker at 15'. On creek bank well. Within grading limits.	Remove
171 B	Coast live oak	14	G	G	35NW				Y	X	H	In creek structure setback. 40° lean to NW. Within grading limits.	Remove
172	Monterey pine	48	F-P	F-P	30	30	30	30	OM	X	H	5° lean to N/W. Grading up to base of tree. Only 3-5 years of anticipated lifespan left.	Remove
173	Calif. Buckeye	14, 14, 8, 8, 8, 7, 7, 5	G	F	35	20	0	20	M	X	M-H	Low branching (trunks laying on ground). Grading limits well within N/W dripline. Pull grade limits back so 15’ from trunk.	Save Assuming grade limits can be adjusted.
173 B	Calif. Buckeye	11, 12	G	F	10	10	10	10	M		L	In creek structure setback. Ivy covering tree.	Save
173 C	Coast live oak	8	F	P	25N				Y	X	L-M	Understory tree with heavy lean (trunk horizontal before correcting) to NW. Young tree with some dripline grading encroachment.	Save
174	Black walnut	23	F-P	F	20	20	20	25	M	X	H	Low branching, old mistletoe in canopy; dieback. Within grade limits.	Remove
175	Siberian elm	17, 17, 15	P	P	20	20	20	20	M	X	H	Tree in decline, poorly structured. Within grade limits.	Remove
176	Coast redwood	30	F/F-P	G	15	15	15	15	M	X	H	Drought-stressed. Within grade limits.	Remove
177	Coast redwood	26	F/F-P	G	15	15	15	15	M	X	H	Drought-stressed. Within grade limits.	Remove
177 B	Valley oak	11	G	G	8	8	8	8	Y	X	H	Not surveyed. Chain on trunk. Within grade limits.	Remove
178	Valley oak	14, 6	G	F	15	15	20	20	Y	X	H	Lean to SW. Within grade limits.	Remove
178 B	Valley oak	8	G	F	12	12	0	0	Y			Not surveyed. Within grade limits.	Remove
179	Calif. Buckeye	8, 7, 6	G	G	12	12	12	12	M	X	H	Within grade limits	Remove

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
180	Mulberry	18	P	P	0	10	10	0	OM	X	H	Previously topped. Within grade limits.	Remove
181	Valley oak	11	F	F	15NE-NW				Y		L	Grading just outside dripline.	Save
182	Valley oak	11	F	F	15S				Y	X	L-M	Grading at edge of dripline.	Save
183	Valley oak	13	F	F	20 NE	15	0	0	Y	X	L-M	Grading at edge of dripline.	Save
184	Black walnut	8, 8, 7	P	P	8	8	8	8	M	X	H	Declining health. Within grade limits.	Remove
185	Valley oak	11	F	F	18 NE	10	0	0	Y	X	L-M	S shaped trunk. Grading at edge of dripline.	Save
186	Calif. Buckeye	7, 7, 6, 6, 5, 5, 5	G	G	18	18	18	18	M	X	M	Tangled with mulberry, and walnut. Grading withn dripline.	Save Arborist on site during grading.
187	Mulberry	18	P	P	15	15	15	15	M	X	H	Drought stressed, tangled with buckeye. Within grading limits.	Remove
188	Black walnut	9	F	F	20S				Y	X	H	Competing with buckeye, recommend removal. Within grade limits.	Remove
188 B	Coast live oak	11	F	G	12	12	12	12	Y	X	H	Not surveyed. Within storm treatment area.	Remove
188 C	Coast live oak	11	G	G	6	0	10	15	Y	X	H	Not surveyed. Within storm treatment area.	Remove
189	Calif. Buckeye	9, 9, 8, 7, 7, 5, 5, 5, 3, 3, 3	G	G	15	20	25	20	M	X	L-M	Grading limits at edge of dripline.	Save
190	Mulberry	16	Dead										Remove.
191	Coast live oak	14	G	G	10	10	10	10	Y		L	Grade limits just outside dripline.	Save
191 B	Coast live oak	11, 9	F	F	18NE-NW				M		L	Not surveyed. Lean over road.	Save
192	Mulberry	19	P	P	8	8	8	8	OM	X	H	Drought stressed. In decline. Within grade limits.	Remove
192 A	Coast live oak	17	G	F	18 NE	10	10	18 NW	M		L	In creek structure setback. Reduced by PG&E. By street, lifting asphalt curb.	Save
192 B	Willow	20, 20	P	P	15	0	0	0	OM		L	Outside northeast property corner along Grayson. Topped by PG&E; sparse canopy. Recommend removal	Remove
192 C	Willow	24	F	P	0	0	25	30 SW	OM		L	Outside northeast property corner along Grayson. Uprooted to S. Fallen tree.	Remove
193	Siberian elm	12, 12, 10, 5, 5, 4	P	P	8	8	8	8	M	X	H	Dying tree. Within grading limits	Remove

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
194	Siberian elm	12, 9, 4	P	P	0	15	15	15	M	X	H	Dying tree. Within grade limits.	Remove
194 B	Coast live oak	9	G	F	15N				Y	X	H	Not surveyed. Up against elm.	Remove
195	Siberian elm	13, 4	P	P	20N				M	X	H	Declining health. Within grade limits.	Remove
196	Coast live oak	19	G	F	20 NW	0	20	20	M		L	Sweeping trunk	Save
197	Bush eucalyptus	10, 8, 8	Dead						M		L	Dead/failed. Fire hazard.	Remove
198	Bush eucalyptus	15, 15	P	P	10N				M		L	Dying, fire hazard.	Remove
199	Blue gum euc.	50	F	F-P	25	20	20	20	M		L	10" branch failure to N in 2006; minor sprouting from failure. Prune for safety if targets within 50ft.	Save
200	Bush eucalyptus	18, 5, 6	F	P	15S				M		L	Declining health. Recent failures. Prune for safety.	Save
201	Monterey pine	24	F	P	20	20	20	20	OM		L	Over mature tree, badly included co-dominant stems. Anticipate short life span, recommend removal.	Remove
202	Monterey pine	22	P	P	0	20	20	0	OM		L	Over mature tree, declining health. Recommend removal.	Remove
203	Monterey pine											Removed.	N/A
204	Monterey pine	18	F	P	25E				M		L	Poorly tapered trunk; lean to E. Recommend removal.	Remove
205	Monterey pine											Removed.	N/A
206	Calif. Buckeye	15, 15, 10, 10	G	G	25	25	25	25	M		L	Healthy tree.	Save
301	Calif. Buckeye	10, 10	G	G-F	8	12	10	12	M	X	H	Co-dominant trunks. In proposed grading.	Remove.
302	Coast live oak	9	F/F-P	F-P	25N- 20NE				Y	X	H	Dominated by poison oak and ivy. In proposed grading.	Remove.
303	Valley oak	19	G-F	F	25N				M	X	H	Corrected phototropic lean (about 20' above grade). Slightly sparse canopy. Ivy & poison oak dominating lower trunk. In proposed grading.	Remove.
304	Coast live oak	20	G	F	15	6	10	25	M	X	H	Ivy climbing trunk. Canopy in upper half. In proposed grading.	Remove.
305	Valley oak	19.5	F-P/P	F-P	25N				M	X	H	Dead secondary stem at base, branches dead to very top. Remaining canopy sparse & stunted with deadwood. In proposed grading.	Remove.
306	Valley oak	12	P	P	30N				M-OM	X	H	Lower branches dead. Remaining canopy very sparse and stunted, concentrated at top of tree about 15' N of trunk. In proposed grading.	Remove.
307	Coast live oak	24	G	G-F	20	20	15	15	M	X	H	Ivy climbing trunk. Trunk has slight kink to E at 6' but has reoriented vertically. Canopy in upper half of tree. In proposed grading.	Remove.

#	Species	DBH	Health	Structure	Dripline N E S W	Age	DE	CI	Comments	Action
308	Coast live oak	13, 16, 7	G-F	F/F-P	30N	M	X	H	Multiple co-dominant trunks. Phototropic lean to N, all canopy in upper 1/4. Ivy climbing trunk. In proposed grading.	Remove.
309	Coast live oak	11	G-F	F-P	25N	Y-M	X	H	Phototropic lean to N, all canopy in upper 1/6. In proposed grading. In proposed grading.	Remove.
310	Coast live oak	10	F	P	0 0 8 12	Y-M	X	H	1/3 canopy dead, remaining branch extends to W. Ivy climbing trunk. In proposed grading.	Remove.
311	Coast live oak	21	F	F	30N	M	X	H	Phototropic lean to N, all canopy in upper 1/3, slightly corrected lean In proposed grading.	Remove.
312	Coast live oak	28	G-F	F/F-P	30N	M	X	H	Phototropic lean to N, all canopy in upper 1/4. Ivy climbing trunk. In proposed grading.	Remove.
313	Valley oak	9	F-P	F	30NW	Y	X	H	Phototropic lean to NW, ivy. In proposed grading.	Remove.

Tree Encroachment Summary

A total of 130 trees were inventoried. At least four additional trees (#101, 134, 203 & 205) that were shown on the survey were removed since the original site visit.

- Trees that will need to be removed: #'s 103-116, 119, 123-135, 136, 139-153, 155-156, 158, 164, 166-172, 174-180, 184, 187-188c, 190, 192, 192b-195, 197, 198, 201-201, 301-313 (97 trees)
- Trees to be saved that will be subjected to dripline encroachment, and will need arborist supervision during grading within driplines: #'s 102, 137, 138, 154, 157, 159, 160, 160b, 162, 163, 173, 173c, 182, 183, 185, 186, 189 (17 trees)
- Additional trees to be saved that will not have dripline encroachment: #'s 117, 118, 120, 121, 122, 122a, 135a, 173a, 181, 191, 191b, 192a, 196, 199, 200, 266 (16 trees)

Tree Protection Recommendations (to be printed on site plans)

Pre- Grading Phase

- Remove trees #103-116, 119, 123-135, 136, 139-153, 155-156, 158, 164, 166-172, 174-180, 184, 187-188c, 190, 192, 192b-195, 197, 198, 201-201, 301-313 (97 trees)
- Mulch from tree removals may be spread out under the driplines of trees that will be retained, keeping at least 12" away from the trunks.
- Prior to construction or grading, contractor shall install protection fencing to construct a temporary Tree Protection Zone (TPZ) around each tree or grove of trees to be saved. TPZ fencing shall encompass the driplines and be approved by the project arborist.
- TPZ fencing shall remain in an upright sturdy manner from the start of grading until the completion of construction. Fencing shall not be adjusted or removed without consulting the project arborist.

Grading and Construction Phase

- The project arborist shall be on-site during excavation/grading within driplines, especially trees: #'s 102, 137, 138, 154, 157, 159, 160, 160b, 162, 163, 173, 173c, 182, 183, 185, 186, 189.
- Should roots ≥ 2" be encountered, arborist shall cleanly prune roots with a handsaw or sawzall, and immediately re-cover. Irrigate as necessary.
- If needed, canopy pruning shall be performed by personnel certified by the International Society of Arboriculture (ISA). All pruning shall adhere to ISA and American National Standards Institute (ANSI) Standards and Best Management Practices. Project arborist to set guidelines prior to pruning.
- Should Tree Protection Zone (TPZ) encroachment be necessary, the contractor shall contact the project arborist for consultation and recommendations.
- Contractor shall keep TPZs free of all construction-related materials, debris, fill soil, equipment, etc. The only acceptable material is mulch spread out beneath the trees.
- Should any damage to the trees occur, the contractor shall promptly notify the project arborist to appropriately mitigate the damage.

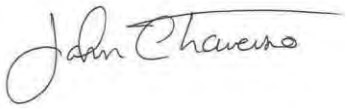
Landscaping Phase (if applicable)

- The Tree Protection Zone (TPZ) fencing shall remain in place with the same restrictions until landscape contractor notifies and meets with the project arborist.
- Avoid all fill work, grade changes, and trenching within driplines unless it is performed by hand, and approved by the project arborist.
- Pipes shall be threaded under or through large roots without damaging them.
- Contractor shall avoid trenching and grade changes within driplines.
- All planting and irrigation shall be kept a minimum of 10' away from native oaks. All irrigation within the driplines shall be targeted at specific plants, such as drip emitters or bubblers. No overhead irrigation shall occur within the driplines of native oaks.
- All planting within oak driplines shall be compatible with oaks, consisting of plant material that requires little to no water after two years' establishment. A list of oak-compatible plants can be found in a publication from the California Oak Foundation, available at: http://californiaoaks.org/wp-content/uploads/2016/04/CompatiblePlantsUnderAroundOaks.pdf

Thank you for the opportunity to provide this report, and please do not hesitate to contact me if there are any questions or concerns.

Please see attached tree inventory plan.

Sincerely,



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(10/17/22 Revision by

Jennifer Tso
Board Certified Master Arborist #WE-10270B
ISA Tree Risk Assessor Qualified)

HATCH LEGEND

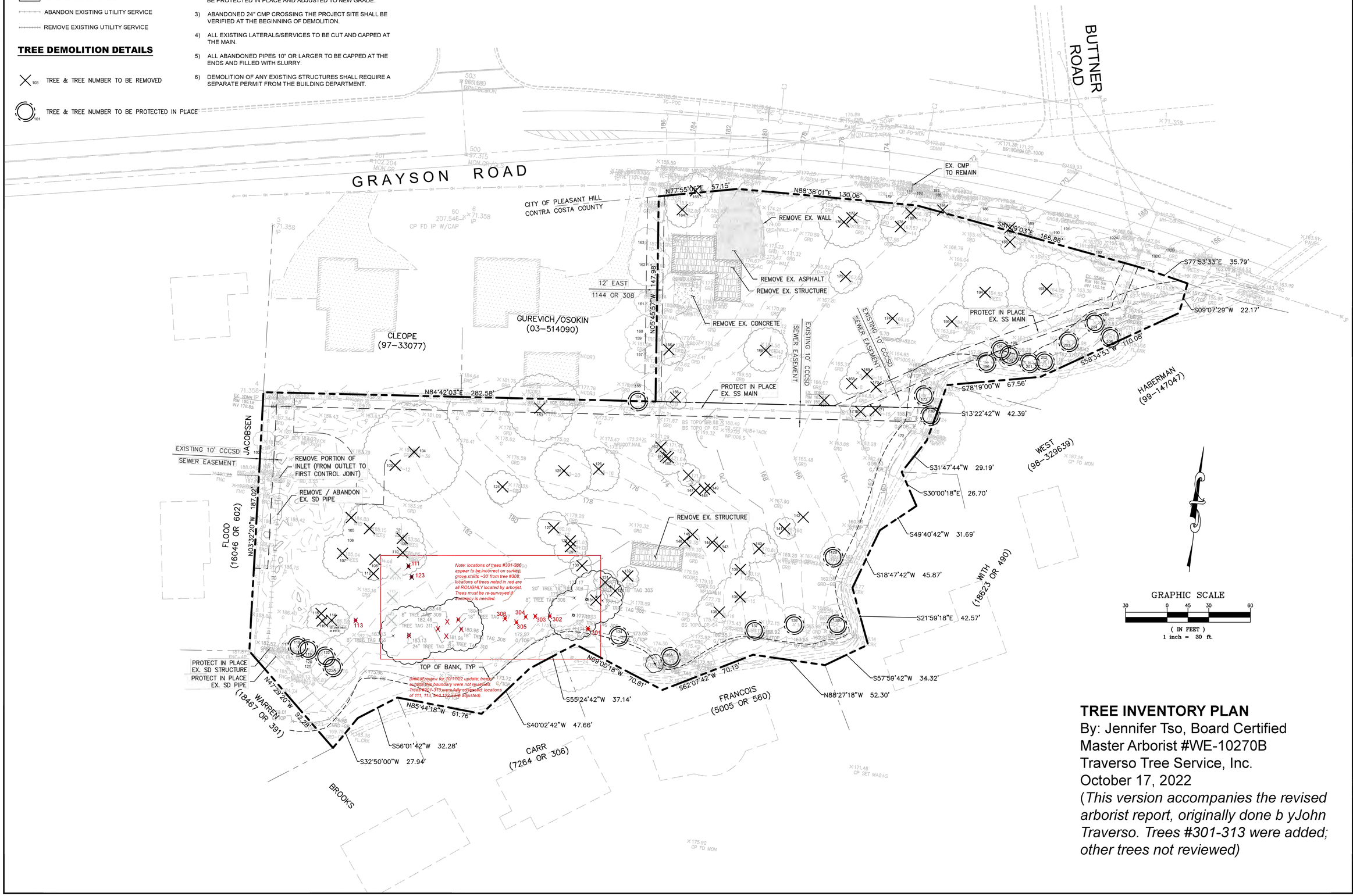
- REMOVE BUILDING
- REMOVE ASPHALT PAVEMENT
- REMOVE PCC CONCRETE
- ABANDON EXISTING UTILITY SERVICE
- REMOVE EXISTING UTILITY SERVICE

TREE DEMOLITION DETAILS

- 103 — TREE & TREE NUMBER TO BE REMOVED
- 101 — TREE & TREE NUMBER TO BE PROTECTED IN PLACE

CONTRACTOR NOTES

1) CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL THE PROPOSED WORK IN CONFORMANCE WITH OTHER RECENT AND ACTIVE PROJECTS IN THE AREA.
2) ALL EXISTING UTILITIES NOT DESIGNATED FOR REMOVAL SHALL BE PROTECTED IN PLACE AND ADJUSTED TO NEW GRADE.
3) ABANDONED 24" CMP CROSSING THE PROJECT SITE SHALL BE VERIFIED AT THE BEGINNING OF DEMOLITION.
4) ALL EXISTING LATERALS/SERVICES TO BE CUT AND CAPPED AT THE MAIN.
5) ALL ABANDONED PIPES 10" OR LARGER TO BE CAPPED AT THE ENDS AND FILLED WITH SLURRY.
6) DEMOLITION OF ANY EXISTING STRUCTURES SHALL REQUIRE A SEPARATE PERMIT FROM THE BUILDING DEPARTMENT.



TREE INVENTORY PLAN

By: Jennifer Tso, Board Certified Master Arborist #WE-10270B
Traverso Tree Service, Inc.
October 17, 2022
(*This version accompanies the revised arborist report, originally done b yJohn Traverso. Trees #301-313 were added; other trees not reviewed)*

TALUS
ENGINEERING | PLANNING | DEVELOPMENT

IMPROVEMENT PLANS FOR 1024 GRAYSON ROAD (SUBD SD20-9531)
EXISTING CONDITIONS AND DEMOLITION PLAN

CONTRA COSTA COUNTY CALIFORNIA
PLEASANT HILL (UNINC.)

Revisions

No.	

Stamp: REGISTERED PROFESSIONAL ENGINEER — PORTER C. McCARTER — No. 61148 — EXP. 12/31/22 — CIVIL — STATE OF CALIFORNIA

Date	03/09/22
Scale	1" = 30'
Job No.	19300

Drawing Number:
C.03
3 OF **14**

DRAWING NAME: P:\p19300\MP_PLANS\C03 19300 EXIST.dwg
PLOT DATE: 10-13-22 PLOTTED BY: karin

Appendix B:
Biological Resources Supporting Information

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BIOLOGICAL RESOURCES ANALYSIS REPORT

FOR THE

GRAYSON ROAD PROPERTY

CONTRA COSTA COUNTY, CALIFORNIA

Prepared for:

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Prepared by:

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February 2022

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LIST OF ATTACHMENTS

SUMMARY

On April 6, 2021, Olberding Environmental, Inc. conducted a field reconnaissance survey of the Grayson Road Property (Property) for the purpose of identifying sensitive plant and wildlife species and sensitive habitats potentially occurring on the Property. The Property surveyed is comprised of approximately 3.05 acres located in unincorporated Contra Costa County, California (Attachment 1, Figures 1-2).

Results of the initial reconnaissance survey indicate that the Property contains waters that might be considered jurisdictional by the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), and/or the California Department of Fish and Wildlife (CDFW). The southern boundary of the Property is bordered by Grayson Creek, a perennial creek that flows northeast from its origin in Briones Regional Park. The creek flows through a riparian woodland corridor located on the southern portion of the Property. Water was present in the entire length of Grayson Creek bordering the Property during the April 2021 survey. The Project as proposed does not include any improvements within Grayson Creek, and the residential development will be set back from the creek in accordance with the Contra Costa County Creek Setback Ordinance (Title 9, Chapter 914).

A query of the California Natural Diversity Database (CNDDB) showed that four special-status plant species have a potential to occur on the Property. Congdon's tarplant (*Centromadia parryi ssp. congdonii*), Diablo helianthella (*Helianthella castanea*), Mount Diablo fairy-lantern (*Calochortus pulchellus*), and bent-flowered fiddleneck (*Amsinckia lunaris*) were identified as having a potential to occur on the Property based on the presence of suitable habitat for these species and CNDDB occurrences located within the vicinity of the Property. The April 2021 survey of the Property performed during the blooming period for three of these species (Diablo helianthella, Mount Diablo fairy lantern, bent-flowered fiddleneck) did not find any of these species present on the Property and they are presumed absent from the Property. Although the April 2021 survey was performed outside of the identified blooming period for Congdon's tarplant (June-November), remnant plants would have been observed if they were present. For these reasons Congdon's tarplant is presumed absent from the Property.

A total of five bird species were identified to have a moderate to high potential to occur on the Property in a nesting or foraging capacity. The red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), and Cooper's hawk (*Accipiter cooperii*) all have a high potential to occur in a nesting and foraging capacity. The sharp-shinned hawk (*Accipiter striatus*) and American kestrel (*Falco sparverius*) have a moderate potential to occur in a nesting and foraging capacity. Three of the birds listed above (red-tailed hawk, red-shouldered hawk, Cooper's hawk) were present, and observed foraging on the Property. Additionally, a Cooper's hawk was observed

on the Property exhibiting nesting behaviors. Mitigation measures, including preconstruction surveys for nesting passerine birds and raptors prior to performing any construction-related activities such as tree and vegetation removal or grading during the avian nesting season (February through August), will reduce the potential impacts to sensitive bird species to less-than-significant.

CNDDB listed 5 occurrences of California red-legged frog (*Rana draytonii*) (CRLF) in the 5-mile radius of the Property. Water was present in Grayson creek during the April 2021 survey which offers suitable habitat for foraging and aquatic dispersal within the creek channel. Various vegetative debris located throughout the riparian corridor habitat provide suitable upland refuge. USFWS designated CRLF critical habitat is located approximately 1.3 miles west of the Property. For these reasons, CRLF has a moderate potential to occur on the Property within the creek channel and riparian habitat in a foraging and dispersal capacity, and the proposed project may have a potentially significant impact on CRLF. However, with the proposed mitigation measures, the project will reduce any potential impacts to less-than-significant.

CNDDB listed four occurrences of California tiger salamander (*Ambystoma californiense*) (CTS) within five miles of the Property. However, all of these occurrences are historical and the species is considered to be extirpated within this area. The Property lacks vernal pools or ponds required for breeding, and is not within dispersal distance of any known or potential breeding habitat. For these reasons, CTS is presumed absent from the Property and the proposed project will not result in any potentially significant impacts to the species.

CNDDB listed 13 occurrences of Alameda whipsnake (*Masticophis lateralis euryxanthus*) within the 5-mile radius of the Property. Due to the sensitivity of these species, the exact locations of these occurrences are unknown. The Property does not support shrub or rocky outcrop habitat that the whipsnake prefers; thus, making it unlikely that the whipsnake would breed or permanently reside within the Property boundaries. Suitable whipsnake habitat is, however, located within USFWS designated critical habitat for Alameda Whipsnake approximately 0.9 west in Briones Regional Park and the surrounding open space. Although the Property is surrounded by residential development, this would not preclude whipsnake from dispersing through the Property, as areas of open space are also present within the vicinity of the Property. Therefore, Alameda whipsnake could disperse through the Property as it moves to more suitable habitat. For these reasons, there is potential for Alameda whipsnake to occur on the Property, albeit low, in a dispersal capacity only. The mitigation measures presented in section 8.0 will reduce any potential impacts to this species to less-than-significant.

CNDDB listed 5 occurrences of western pond turtle (*Actinemys marmorata*) within the 5-mile radius of the Property. Water was present in Grayson Creek during the April 2021 survey. Therefore, western pond turtle could use the creek channel for foraging and aquatic dispersal and

the riparian corridor for terrestrial dispersal. For these reasons, western pond turtle has a moderate potential to occur in the creek channel and riparian habitat in a dispersal capacity only, and the proposed project may have a potentially significant impact on western pond turtle. However, with the proposed mitigation measures, the project will reduce any potential impacts to less-than-significant.

No sign of bat use was observed on the Property during the April 2021 survey; however, based on habitat suitability, it was determined that bats have a moderate potential to utilize the developed, mixed woodland, and riparian woodland habitats located within the site in a roosting and foraging capacity. These bat species include: Western red bat (*Lasiurus blossevillii*), hoary bat (*Lasiurus cinereus)* and Yuma myotis (*Myotis yumanensis*). Mitigation measures, including a preconstruction survey for bats in areas with suitable habitat prior to performing any construction-related activities or timing construction to minimize impacts to bats, will reduce the potential impacts to bat species to less-than-significant.

1.0 INTRODUCTION

Olberding Environmental, Inc. prepared this biological resources analysis of the proposed Grayson Road project, located in unincorporated Contra Costa County, California (Figure 1). The purpose of this analysis is to provide a description of existing biological resources on the Property and to identify potentially significant impacts that could occur to sensitive biological resources from the proposed residential development of the Property.

Biological resources include common plant and animal species, and special-status plants and animals as designated by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), National Marine Fisheries Service (NMFS), and the California Native Plant Society (CNPS). Biological resources also include "waters of the United States" and "waters of the State", as regulated by the U.S. Army Corps of Engineers (Corps) and California State Water Resource Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCB). This analysis included a review of pertinent literature on relevant background information and habitat characteristics of the site. Our review included researching existing information in the California Natural Diversity Database (CNDDB) maintained by the CDFW and the CNPS *Inventory of Rare and Endangered Vascular Plants of California*. Also included was a review of information related to species of plants and animals that could potentially utilize the described habitats identified on and immediately surrounding the Property. To assist in the assessment, a field reconnaissance investigation of the Property was conducted on April 6, 2021.

This report documents the methods, results, and conclusions for the reconnaissance-level survey associated with the biological resources analysis for the Property, and identifies "potentially

significant" and "significant impacts" as defined by the California Environmental Quality Act (CEQA) that could occur to biological resources. Mitigation measures have been developed for all identified significant or potentially significant impacts, and upon implementation would reduce the effects of such impacts to levels regarded as "less than significant" pursuant to CEQA.

2.0 LOCATION

The Property is located approximately 3.4 miles north of CA-24 and approximately 2.0 miles west of I-680, on Grayson Road just outside the city limits of Pleasant Hill in unincorporated Contra Costa County, California. Attachment 1, Figure 1 depicts the regional location of the Property in Contra Costa County, and Attachment 1, Figure 2 illustrates the vicinity of the Property in relationship to the City of Pleasant Hill. Attachment 1, Figure 3 identifies the location of the Property on the USGS 7.5 Quadrangle Map for Walnut Creek. An aerial photograph of the Property has been included as Attachment 1, Figure 4.

3.0 PROPERTY DESCRIPTION AND SETTING

The Property encompasses approximately 3.05 acres in an irregular shape and supports four habitat types; mixed woodland, perennial creek, riparian woodland and developed (Attachment 1, Figure 10). Characteristic vegetation of these habitats includes wild oat (*Avena fatua*), Italian rye grass (*Festuca perennis*), ripgut brome (*Bromus diandrus*), coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), buckeye (*Aesculus californica*) and California bay laurel (*Umbellularia californica*) trees.

The Property has two existing residential structures on site which are surrounded by ornamental and fruit trees including but not limited to black walnut (*Juglans nigra*) and Siberian elm *(Ulmus pumila)*. Coast live oak trees are also present around the residential homes. The two-story residence is located in the northern portion of the site, while a one-story house is located in the center of the Property.

Grayson Creek, a perennial creek flows along the southern boundary of the Property from west to east through a riparian corridor.

The topography of the Property consists of relatively flat landscape that slightly slopes from west to east. Elevations of the Property range between 160 feet above sea level near the northeastern boundary and 188 feet above sea level along western boundary.

The Property is immediately surrounded by residential development to the north, south, east, and west. Grayson Road exists along the northern boundary of the Property. Briones Regional Park

lies approximately 0.9 miles south and west of the Property. Oakmont Memorial Park exists approximately 0.4 miles west of the Property. Dinosaur Hill Park exists approximately 1 mile south of the Property. Grayson Woods Golf Course lies just northwest of the Property on the north side of Grayson Road.

4.0 PROPOSED PROJECT

The proposed project is a 10-unit housing development on the approximately 3.05 acre Property as shown on Attachment 2. The project includes a new access road across the site that would provide access to all lots. A stormwater detention basin will be constructed in the northeast portion of the project site. Treated stormwater will be discharged from the basin into a Contra Costa County maintained stormwater drainage system that currently exists under Grayson Road. Infrastructure utilities (water, sewer, cable, electrical, etc.) will also be installed for the residential units. Construction of the proposed project would remove 84 trees. The proposed project plans do not anticipate placing any development or infrastructure in Grayson Creek or the associated riparian corridor. A riparian setback between the projects grading limits and Grayson Creek will be set and adhered to as shown on Attachment 2.

5.0 REGULATORY SETTING

This section provides a discussion of laws and regulations that regulate native wildlife, fish, plants and aquatic resources.

5.1 Federal Regulatory Setting

5.1.1 Plants and Wildlife

The federal Endangered Species Act (ESA) of 1973 (16 USC 1531 et seq., as amended) regulates native plant and animal species, and the listed as Threatened or Endangered under the ESA and designated “critical habitat” for listed species. Listed species are taxa for which proposed and final rules have been published in the Federal Register (U.S. Fish and Wildlife Service [USFWS] 2020). Federal Proposed species (USFWS, 2019) are species for which a proposed listing as Threatened or Endangered under ESA has been published in the Federal Register. Federal Candidate species are defined as “those taxa for which we have on file sufficient information on biological vulnerability and threats to support issuance of a proposed rule to list, but issuance of the proposed rule is precluded by other higher priority listing actions” (USFWS, 2019). Federal Candidate species are not afforded formal protection, although USFWS encourages other federal agencies to give consideration to Candidate species in environmental planning.

The pertinent sections of the ESA are:

Section 4 (16 USCA §1533): Species listing, Critical Habitat Designation, and Recovery Planning: outlines the procedure for listing endangered plants and wildlife.

Section 7 (§1536): Federal Consultation Requirement: imposes limits on the actions of federal agencies that might impact listed species.

Section 9 (§1538): Prohibition on Take: prohibits the "taking" of a listed species by anyone, including private individuals, and State and local agencies.

Section 10: Exceptions to the Take Prohibition: non-federal agencies can obtain an incidental take permit in connection with the approval of a habitat conservation plan (HCP).

The NMFS has jurisdiction over listed marine mammals and anadromous fish, and the USFWS implements the ESA for listed terrestrial species and no anadromous fish species. Below, Sections 9, 7, and 10 of ESA are discussed.

Section 9 of ESA as amended, prohibits the “take” of any fish or wildlife species listed under the ESA as endangered. Under federal regulation, “take” of fish or wildlife species listed by the USFWS prior to 2020, or through a special “Section 4(d)” finding for species listed since 2020 or by NMFS as threatened is also prohibited unless otherwise authorized. “Take,” as defined by the ESA, means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” “Harm” is further defined to include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 CFR 17.3). A December 2001 decision by the 9th Circuit Court of Appeal in *Arizona Cattle Growers’ Association* ruled that the USFWS must show that a threatened or endangered species is present on a site and that it would be taken by the project activities.

If “take” of a listed species may occur during the course of an otherwise lawful activity, the USFWS and NMFS may authorize take through a Section 7 consultation as discussed further below (for federal actions or private actions that are permitted or funded by a federal agency such as the Corps), or through Section 10 of ESA which requires preparation of a HCP (for state and local agencies, or individuals, and projects without a federal “nexus”; for example, projects that do not need a Corps permit).

Section 7(a)(2) of the ESA requires that each federal agency consult with the USFWS or NMFS to ensure that any action authorized, funded or carried out by such agency is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat for listed species. The Section 7 consultation process is triggered by a

determination made by the federal "action agency" – that is, the federal agency that is carrying out, funding, or approving a project - that the federal action and any interrelated or interdependent actions "may affect" a listed species or designated critical habitat. If an action is likely to adversely affect a listed species or designated critical habitat, formal consultation between the nexus agency and the USFWS/NMFS is required, and the USFWS/NMFS will issue a formal biological opinion assessing whether the proposed action is likely to result in "jeopardy" to a listed species or adversely modify designated critical habitat. If the USFWS/NMFS concludes that a proposed project would not jeopardize a listed species or result in adverse modification of critical habitat, the agency will issue an incidental take statement that allows incidental take of federally listed species.

For non-federal entities, for example private parties, cities, counties whose activity does not have a federal nexus (such as a Corps permit) Section 10 provides the mechanism for obtaining take authorization. Under Section 10, a non-federal applicant may obtain an "incidental take permit" from the USFWS or NMFS by preparing an HCP that specifies the impacts that are likely to result to federally-listed species, and the measures the applicant will undertake to minimize and mitigate such impacts, and the funding that will be available to implement those steps.

5.1.2 Wetlands/Waters

The federal government, acting through the Corps and the Environmental Protection Agency (EPA), has jurisdiction over all "waters of the United States" as authorized by §404 of the Clean Water Act (CWA) and §10 of the Rivers and Harbors Act of 1899 (33 CFR Parts 320-330). Activities that cause the discharge of dredged or fill material into waters of the United States require permitting by the Corps. Actions affecting small areas of jurisdictional waters of the United States may qualify for a Nationwide Permit (NWP), provided conditions of the permit are met, such as avoiding impacts to threatened or endangered species or to important cultural sites. Discharges that affect larger areas or which do not meet the conditions of an NWP require an Individual Permit. The process for obtaining an Individual Permit requires a detailed alternatives analysis and development of a comprehensive mitigation/monitoring plan.

Waters of the United States are defined as territorial seas and traditionally navigable waters, tributaries, lakes and ponds, and impoundments of jurisdictional waters, and adjacent wetlands. Under federal regulation, wetlands are defined as areas that are inundated or saturated by surface of groundwater at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. (33 CFR Part 328.3(c)(16)). Wetlands generally include swamps, marshes, bogs, and similar areas. In addition, portions of the riparian habitat along a river or stream may be a wetland

where the riparian vegetation is at or below the ordinary high water mark and thus also meets the wetland hydrology and hydric soil criteria.

Navigable waters include all waters subject to the ebb and flow of the tides, including the open ocean, tidal bays, and tidal sloughs. Navigable waters also include some large, non-tidal rivers and lakes, which are important for transportation in commerce. The jurisdictional limit over navigable waters extends laterally to the entire water surface and bed of the waterbody landward to the limits of the mean high tide line. For non-tidal rivers or lakes, which have been designated (by the Corps) to be navigable waters, the limit of jurisdiction along the shoreline is defined by the ordinary high water mark. “Other waters” refer to waters of the United States other than wetlands or navigable waters. Other waters include streams and ponds, which are generally open water bodies and are not vegetated. Other waters can be perennial or intermittent water bodies and waterways. The Corps regulates other waters to the outward limit of the ordinary high water mark. Streams should exhibit a defined channel, bed and banks to be delineated as other waters.

The Corps does not generally consider “non-tidal drainage and irrigation ditches excavated on dry land” to be jurisdictional waters of the United States (and such ditches would therefore not be regulated by the Corps (33 CFR Parts 320-330, November 13, 1986). Other areas generally not considered jurisdictional waters include: 1) artificially irrigated areas that would revert to upland habitat if the irrigation ceased; 2) artificial lakes and ponds created by excavating and/or diking of dry land to collect and retain water, used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing; 3) waste treatment ponds; 4) ponds formed by construction activities including borrow pits until abandoned; and 5) ponds created for aesthetic reasons such as reflecting or ornamental ponds (33 CFR Part 328.3). However, the preamble also states “the Corps reserves the right on a case-by-case basis to determine that a particular waterbody within these categories” can be regulated as jurisdictional water. The EPA also has authority to determine jurisdictional waters of the U.S. on a case-by-case basis. Riparian habitat that is above the ordinary high water mark and does not meet the three-parameter criteria for a wetland would not be regulated as jurisdictional waters of the United States.

5.1.3 Migratory Bird Treaty Act

Raptors are migratory bird species protected by international treaty under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR. Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21).

5.1.4 Federal Bald and Golden Eagle Protection Act

Enacted in 1940, the Bald and Golden Eagle Protection Act (BGEPA) provides protection for the bald and golden eagle by "prohibiting the take, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit" (16 U.S.C. 668(a); 50 CFR 22). The BGEPA defines the term "take" to include "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb" if the action is done "knowingly, or with wanton disregard for the consequences" of the action (16 USC 668a,c; 50 CFR 22.3). "Disturb" is defined in 50 CFR 22.3 regulations as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

5.2 State Regulatory Setting

5.2.1 Plants and Wildlife

In 1984, California enacted the California Endangered Species Act (CESA) (Fish and Game Code §2050). The basic policy of CESA is to conserve and enhance endangered species and their habitats, and prohibits the unauthorized "take" of CESA listed species and candidates for listing under CESA. The California Code of Regulations (Title 14, §670.5) lists animal species listed as endangered or threatened under CESA. "Take" is defined by Section 86 of the California Fish and Game Code and means "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Because take under CESA does not include "harm" (see discussion of ESA, above), only activities that would result in the direct take of a CESA-listed species, (e.g., species mortality) is subject to CESA. If an activity will result in take of a state-listed species or state candidate species incidental to an otherwise lawful activity, CDFW may issue an "incidental take" permit pursuant to §2081 of the Fish and Game Code.

The CDFW may not issue an incidental take permit for species that are "fully protected" under the fish and game code. These include species protected by the state prior to enacting CESA. See California Fish and Game Code §§ 3505, 3511, 4700, 5050, 5515, and 5517.

The CDFW also maintains a list of animal species of special concern (CDFW 2021), most of which are species whose breeding populations in California may face extirpation. Although these species have no legal status, the CDFW recommends considering them during analysis of proposed

property impacts to protect declining populations and avoid the need to list them as endangered in the future.

Sections 3503, 3503.5, and 3800 of the California Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs. Implementation of the take provisions requires that Property-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle (generally February 1 – September 1, annually). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) or the loss of habitat upon which the birds depend, is considered "taking" and is potentially punishable by fines and/or imprisonment. Such taking would also violate federal law protecting migratory birds (e.g., MBTA).

5.2.2 Wetlands/Waters

The SWRCB and RWQCBs regulate the discharge of pollutants to wetlands and other waters through §401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act. Section 401 requires a state water quality certification of permits issued by federal agencies, such as the Corps. Water quality certifications require the SWRCB or applicable RWQCB to find that the activities permitted by the federal permit will not violate state water quality standards individually or cumulatively over the term of the permit, and that the federal permit will not (the term is typically for five years).

The Porter-Cologne Water Quality Control Act, Water Code § 13260, requires that any person discharging waste, or proposing to discharge waste, that could affect the waters of the State to file a report of discharge with the SWRCB or applicable RWQCB through an application for waste discharge (Water Code Section 13260(a)(1). The term "waters of the State" is defined as any surface water or groundwater, including saline waters, within the boundaries of the State (Water Code §13050(e)), and may include "isolated wetlands," or those wetlands considered to be outside of the Corps' jurisdiction. Placing fill material into a water of the State generally constitutes "pollution". Pollution is defined as an alteration of the quality of the waters of the state by waste that unreasonably affects its beneficial uses (Water Code §13050(1)).

California Fish and Game Code §§1600-1607 require the CDFW be notified of any activity that may substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. Upon notification, the CDFW may require a Streambed Alteration Agreement. The CDFW defines a stream as follows:

"... a body of water that flows at least periodically...through a bed or channel having banks and supporting fish and other aquatic life. This includes watercourses having a subsurface flow that supports or has supported riparian vegetation."

(Source: Streambed Alteration Program, California Department of Fish and Wildlife, 2016).

In practice, CDFW authority is extended to any "blue line" stream shown on a USGS topographic map, as well as unmapped channels with a definable bank and bed. Wetlands, as defined by the Corps, need not be present for CDFW to exert authority.

5.2.3 California Environmental Quality Act

According to Appendix G of the CEQA (CEQA 2021) Guidelines, a proposed project would have a significant impact on biological resources if it would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW and USFWS?

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS?

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

5.2.4 Contra Costa County Tree Ordinance – Chapter 816-6 - Tree Protection and Preservation Ordinance

According to the Contra Costa County tree ordinance, a “protected tree” is defined as the following:

(1) On all properties within the unincorporated area of the county:

(A) Where the tree to be cut down, destroyed or trimmed by topping is adjacent to or part of a riparian, foothill woodland or oak savanna area, or part of a stand of four or more trees, measures twenty inches or larger in circumference (approximately 6.5 inches in diameter) as measured four and one-half feet from ground level, and is included in the following list of indigenous trees: Acer macrophyllum (Bigleaf Maple), Acer negundo (Box Elder), Aesculus californica (California Buckeye), Alnus Rhombifolia (White Alder), Arbutus menziesii (Madrone), Heteromeles arbutifolia (Toyon), Juglans Hindsii (California Black Walnut), Juniperus californica (California Juniper), Lithocarpus densiflora (Tanoak or Tanbark Oak), Pinus attenuata (Knobcone Pine), Pinus sabiniana (Digger Pine), Platanus Racemosa (California Sycamore), Populus fremontii (Fremont Cottonwood), Populus trichocarpa (Black Cottonwood), Quercus agrifolia (California or Coast Live Oak), Quercus chrysolepis (Canyon Live Oak), Quercus douglasii (Blue Oak), Quercus kelloggii (California Black Oak), Quercus lobata (Valley Oak), Quercus wislizenii (Interior Live Oak), Salix lasiandra (Yellow Willow), Salix laevigata (Red Willow), Salix lasiolepis (Arroyo Willow), Sambucus callicarpa (Coast Red Elderberry), Sequoia sempervirens (Coast Redwood), Umbellularia californica (California Bay or Laurel);

(B) Any tree shown to be preserved on an approved tentative map, development or site plan or required to be retained as a condition of approval;

(C) Any tree required to be planted as a replacement for an unlawfully removed tree.

(2) On any of the properties specified in subsection (3) of this section:

(A) Any tree measuring twenty inches or larger in circumference (approximately six and one-half inches diameter), measured four and one-half feet from ground level including the oak trees listed above;

(B) Any multistemmed tree with the sum of the circumferences measuring forty inches or larger, measured four and one-half feet from ground level;

(C) And any significant grouping of trees, including groves of four or more trees.

(3) Specified properties referred to in subsection (2) of this section includes:

(A) Any developed property within any commercial, professional office or industrial district;

(B) Any undeveloped property within any district;

(C) Any area designated on the general plan for recreational purposes or open space;

(D) Any area designated in the county general plan open space element as visually significant riparian or ridge line vegetation and where the tree is adjacent to or part of a riparian, foothill woodland or oak savanna area. (Ords. 94-59, 94-22).

Any person proposing to trench, grade or fill within the dripline of any protected tree or cut down, destroy, trim by topping or remove any protected tree shall apply to the department for a tree permit, not less than ten days prior to the proposed tree removal or tree alterations. Persons who would be eligible to apply for three or more individual tree permits under provisions of this chapter may apply for a collective tree permit for the site. (Ords. 94-59, 94-22).

If the reasons for alteration or removal relate to the health of the tree or if grading, trenching or filling is proposed under the dripline of an existing tree, or the review is of a collective tree permit and the director determines that more technical expertise is necessary to make the decision, a report prepared by an arborist may be required, to be paid for by the applicant. (Ords. 94-59, 94-22).

5.2.5 Contra Costa County Creek Setback Ordinance – Chapter 914 – Rights-of-Ways and Setbacks

No permanent structures of any kind may be built within the structure setback area. Creek structure setback requirements are outlined in Title 9, Division 914, (Sections 914-14.010, .012, .014) of the Contra Costa County Ordinance Code and are described as follows:

No permanent structures of any kind other than drainage structures may be constructed within or over any easement described in this chapter. Encroachments such as filled slopes, retaining walls, fencing and landscaping shall not be permitted. Public utilities may be installed within easements upon approval by the public works department. (Ords. 89-28, 8540 § 4, 78-5).

(a) "Structure setback line" means the line separating the structure setback area from the remainder of the lot. For unimproved earth channels within the subdivision, a structure setback line shall be shown on the final map or parcel map as follows: The thread of the channel shall be shown as accurately as possible, and a dashed line shall indicate the appropriate setback with a note describing the method used to determine the top of bank, selected from those set forth herein. The development rights for that portion of the lot on the creek side of the setback line, which is defined

as the "structure setback area," shall be offered for dedication to Contra Costa County by separate instrument.

(b) "Top of bank" means the point where the water surface plus sufficient freeboard for the design average recurrence interval runoff intersects the existing ground, or the point where a line with a slope of 2.5 horizontal to 1 vertical extending from the toe of the channel intersects the existing ground, whichever point is the greatest vertical distance above the channel invert. A separate top of bank shall be determined for each side of the channel.

(c) The structure setback line for unimproved channels shall be determined by measuring the following horizontal distance away from the top of bank on each side of the watercourse:

Height of top of bank above channel invert	Horizontal distance between top of bank and setback line
less than 20'	30'
20' - 29.99'	35'
30' - 39.99'	40'
40' - 49.99'	45'
50' and greater	50'

(d) Where significant riparian vegetation exists beyond the limits required above, the advisory agency may extend the setback line to include such areas. (Chapter 914-14, Ords. 89-28, 85-40 § 6, 78-5, Contra Costa County Code).

6.0 METHODS OF ANALYSIS FOR GENERAL BIOLOGICAL RESOURCES

A special-status plant and wildlife species database search and review was conducted using the CNDDB and other sources. An additional search was conducted for special-status plants using CNPS *Inventory* on-line. Special-status species reports were accessed by searching the CNDDB database for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo USGS 7.5-minute quadrangles which surround the Property, and by examining those species that have been identified in the vicinity of the Property. These quadrangles will be henceforth noted as surrounding quads. The database report identified special-status species known to occur in the region or those that have the potential to occur in the vicinity

of the Property. The CNDDB report was used to focus special-status species analysis of the site prior to the reconnaissance surveys.

An Olberding Environmental biologist conducted a reconnaissance-level survey of the Property on April 6, 2021. The survey consisted of walking throughout the Property and evaluating the site and adjacent lands for potential biological resources. Existing conditions observed plants and wildlife, adjacent land use, soils and potential biological resources were recorded during the visit. Plant and wildlife species observed within and adjacent to the Property during the reconnaissance survey are listed in Attachment 2, Table 1. Site photographs are provided in Attachment 3 of this document. Attachment 1, Figure 9 shows where each site photo was taken.

The objectives of the field survey were to determine the potential presence or absence of special-status species habitat listed in the CNDDB database report and to identify any wetland areas that could be potentially regulated by the Corps, RWQCB, and/or CDFW (CNDDB 2021). In addition, the Olberding Environmental biologist looked for other potential sensitive species or habitats that may not have been obvious from background database reports or research. Surveys conducted after the growing season or conducted outside of the specific flowering period for a special-status plant cannot conclusively determine the presence or absence of such plant species; therefore, site conditions and habitat type were used to determine potential for occurrence. When suitable habitat was observed to support a special-status plant or animal species, it was noted in the discussion for that particular species. Regulatory agencies evaluate the possibility of occurrence based on habitats observed on-site and the degree of connectivity with other special-status animal habitats in the vicinity of the Property. These factors are discussed in each special-status plant or animal section. This report also identifies the potential impacts to species that would be defined as endangered or rare pursuant to Section 15380 of the CEQA Guidelines. Additionally, this report identifies potential impacts to sensitive biological resources and provides mitigation recommendations to reduce impacts to a less than significant level. Potential for occurrence of each special-status or protected plant and animal species was evaluated using the following criteria.

- **Present**: The species has been recorded by CNDDB or other literature as occurring on the Property and/or was observed on the Property during the reconnaissance survey or protocol surveys.

- **May Occur**: The species has been recorded by CNDDB or other literature as occurring within five miles of the Property, and/or was observed within five miles of the Property, and/or suitable habitat for the species is present on the Property or its immediate vicinity.

- **Not Likely to Occur**: The species has historically occurred on or within five miles of the Property but has no current records. The species occurs within five miles of the Property

but only marginally suitable habitat conditions are present. The Property is likely to be used only as incidental foraging habitat or as an occasional migratory corridor.

- **Presumed Absent**: The species will not occur on the Property due to the absence of suitable habitat conditions, and/or the lack of current occurrences. Alternatively, if directed or protocol-level surveys were done during the proper occurrence period and the species was not found, it is presumed absent.

Sources consulted for agency status information include USFWS (2020) for federally listed species and CDFW (2021) for State of California listed species. Based on information from the above sources, Olberding Environmental developed a target list of special-status plants and animals with the potential to occur within or in the vicinity of the Property (Attachment 2, Table 2).

6.1 Soils Evaluation

The soils present on a property may determine if habitat on the site is suitable for certain special-status plants and animals. The host plants of some special-status invertebrates may also require specific soil conditions. In the absence of suitable soil conditions, special-status plants or animals requiring those conditions would be presumed absent. Information regarding soil characteristics for the Property was obtained by viewing the Natural Resources Conservation Service (NRCS) Web Soil Survey report for the Property (NRCS 2019).

6.2 Plant Survey Methods

The purposes of the botanical surveys were (1) to characterize the habitat types (plant communities) of the study area; (2) to determine whether any suitable habitat for any special-status plant species occurs within the study area; and (3) to determine whether any sensitive habitat types (wetlands) occur within the study area. Site conditions and plant habitat surveys are important tools in determining the potential occurrence of plants not recorded during surveys (e.g., special-status plants) because presence cannot conclusively be determined if field surveys are conducted after the growing season or conducted outside a specific flowering period.

6.2.1 Review of Literature and Data Sources

The biologist conducted focused surveys of literature and special-status species databases in order to identify special-status plant species and sensitive habitat types with potential to occur in the study area. Sources reviewed included the CNDDB occurrence records (CNDDB 2021) and CNPS *Inventory* (Skinner and Pavlik 1994) for the surrounding quads; and standard flora (The Jepson

Manual 2012). From the above sources, a list of special-status plant species with potential to occur in the Property vicinity was developed (Attachment 2, Table 2).

6.2.2 Field Surveys

A biologist from Olberding Environmental conducted a reconnaissance-level survey to determine habitat types and the potential for special-status plants based on the observed habitat types. All vascular plant species that were identifiable at the time of the survey were recorded and identified using keys and descriptions in The Jepson Manual (2012).

The habitat types occurring on the Property were characterized according to pre-established categories. In classifying the habitat types on the site, the generalized plant community classification schemes of *A Manual of California Vegetation* (Sawyer, Keeler-Wolf, and Evens 2009) were consulted. The final classification and characterization of the habitat types of the study area were based on field observations.

6.3 Wildlife Survey Methods

The purposes of the wildlife survey were to identify special-status wildlife species and/or potential special-status wildlife habitats within the study area.

6.3.1 Review of Literature and Data Sources

A focused review of literature and data sources was conducted in order to determine which special-status wildlife species had potential to occur in the vicinity of the Property. Current agency status information was obtained from USFWS (2020) for species listed as Threatened or Endangered, as well as Proposed and Candidate species for listing, under the federal ESA; and from CDFW (2021b, 2021) for species listed as Threatened or Endangered by the state of California under the CESA or listed as "species of special concern" by CDFW. From the above sources, a list of special-status wildlife species with potential to occur in the Property vicinity was developed (Attachment 2, Table 2).

6.3.2 Field Surveys

General Wildlife Survey – An Olberding Environmental biologist conducted a survey of species habitat within the entire study area, including visible portions of the adjacent properties. The purpose of the habitat survey was to evaluate wildlife habitats and the potential for any protected species to occur on or adjacent to the Property.

Reconnaissance-Level Raptor Survey – A reconnaissance-level raptor survey was conducted on the Property. Observation points were established on the periphery of the site to view raptor activity over a fifteen- to thirty-minute time period. This survey was conducted with the use of binoculars and notes were taken for each species occurrence. Additionally, utility poles and perch sites in the vicinity of the Property were observed. All raptor activity within and adjacent to the Property was recorded during the reconnaissance-level observation period.

Reconnaissance-Level Burrowing Owl (Athene cunicularia) Survey – A reconnaissance-level burrowing owl (*Athene cunicularia*) survey was also conducted on the Property to identify potential burrow sites or burrowing owl use of on-site habitat. The general presence and density of suitable burrow sites (e.g., rodent burrows) was evaluated for the Property.

7.0 RESULTS FOR GENERAL BIOLOGICAL RESOURCES

The search and review of the CNDDB database reports revealed the occurrence of special-status plant and wildlife species that occur in the habitats found within the Property boundaries (CNDDB 2021). The CNDDB database and background data were reviewed for the surrounding quads. Animal occurrences shown on Attachment 1, Figure 5 and plant occurrences shown on Attachment 1, Figure 6 are located within 5 miles of the Property and were reviewed for their potential to occur on the Property based on general habitat types. Results of the species review is tabulated on Attachment 2, Table 2. Critical habitat within the surrounding quads is shown on Attachment 1, Figure 7.

7.1 Soil Evaluation Results

The NRCS (2019) reports two soil types within the Property. A map of this soil type can be found in Attachment 1, Figure 8. The soil type mapped included the following:

- **TaD: Tierra loam, 9 to 15 percent slopes –** Tierra soils are gently sloping to steep and are on dissected terraces and low hills at elevations of 100 to 1,200 feet. The composition of this soil type within the Property consists of 85 percent Tierra and similar soils and 10 percent of minor components including Los Osos (5%) and Millsholm (5%).

  The Tierra series consists of deep, moderately well drained soils that formed in alluvial materials from sedimentary rocks. Typically, Tierra soils exhibit slow to rapid runoff and very slow permeability. These soils are used mainly for grazing and growing small grains and small areas of large number of crops. Many cultivated areas have reverted to grass. Vegetation dominantly is annual grasses and forbs. This series shows no frequency of ponding or flooding and is nonsaline. Its stratified layers consist of the

following (colors are for dry soil unless otherwise stated):

Ap--0 to 7 inches; grayish brown loam, very dark grayish brown moist; hard, friable, slightly sticky; strongly acid (pH 5.5).

A12--7 to 11 inches; gray loam, very dark gray moist; hard, friable, slightly sticky; medium acid (pH 6.0).

B21t--12 to 16 inches; very dark grayish brown clay, very dark brown moist; very hard, very firm, very sticky; slightly acid (pH 6.5).

B22t--16 to 25 inches; dark brown clay, dark brown moist; very hard, very firm, very sticky; slightly acid (pH 6.5).

B3t--25 to 43 inches; light brownish gray heavy clay loam, grayish brown moist; very hard, firm, sticky; moderately alkaline (pH 8.0).

C--43 to 62 inches; pale brown clay loam, dark brown moist; very hard, firm, sticky; mildly alkaline (pH 7.5).

- **CeA: Conejo Clay Loam, 0-2 percent slopes –** The Conejo series consists of very deep, well drained soils with a parent material of alluvium derived from sedimentary rock. These soils are found within valleys at elevation of 10 to 1,000 feet above sea level. The composition of this soil type within the Property consists of 85 percent Conejo and similar soils and 15 percent of minor components including unnamed (5%), Botella (5%), Clear Lake (3%), and Garretson (2%).

  Ap--0 to 5 inches, (0 to 13 cm); dark gray (10YR 4/1) clay loam, very dark gray (10YR 3/1) moist; 31 percent clay, moderate medium and coarse subangular blocky and strong medium granular structure; very hard, friable, moderately sticky and moderately plastic; many fine and medium irregular pores; slightly alkaline, (pH 7.5)

  A1--5 to 19 inches, (13 to 48 cm); very dark grayish brown (10YR 3/2) clay loam, very dark brown (10YR 2/2) moist; 31 percent clay, moderate coarse subangular blocky structure; very hard, friable, moderately sticky and moderately plastic; common very fine roots; many very fine and fine tubular and many fine irregular pores; slightly alkaline (pH 7.5).

A2--19 to 30 inches, (48 to 76 cm); very dark grayish brown (10YR 3/2) clay loam, very dark grayish brown (10YR 3/2) moist; 31 percent clay, moderate medium subangular blocky structure; very hard, friable, moderately sticky and moderately plastic; common very fine roots; many very fine and few fine tubular pores; few pressure faces; common fine iron-manganese nodules about l mm diameter; 1 percent gravel; slightly alkaline (pH 7.5).

Bw1--30 to 48 inches, (76 to 122 cm); dark grayish brown (10YR 4/2) clay loam, very dark grayish brown (10YR 3/2) moist; 29 percent clay; moderate coarse subangular blocky structure; very hard, friable, moderately sticky and moderately plastic; common very fine roots; many very fine and fine tubular and many fine irregular pores; many pressure faces; few fine iron-manganese nodules about 1 mm diameter; 2 percent gravel; slightly alkaline (pH 7.5).

Bw2--48 to 70 inches, (122 to 178 cm); brown (10YR 5/3) loam, dark yellowish brown (10YR 4/4) moist; 19 percent clay, weak fine and medium subangular blocky structure; slightly hard, weakly brittle but friable, nonsticky and slightly plastic; common very fine roots; many very fine and few fine and medium tubular pores; slightly effervescent in seams; common medium oxidized iron masses; 1 percent gravel; moderately alkaline (pH 8.0).

7.2 Plant Survey Results

7.2.1 Floristic Inventory and Habitat Characterization

The Property supports four habitat types consisting of developed, mixed woodland, perennial creek, and riparian woodland. In classifying the habitat types on the Property, generalized plant community classification schemes were used (Sawyer, Keeler-Wolf, and Evens 2009). The final classification and characterization of the habitat type of the Property was based on field observations. Plant species that occurred within 5 miles of the Property are shown in Attachment 1, Figure 6.

The habitat type and a description of the plant species present within the habitat type are provided below. The habitats found on the Property are mapped on Attachment 1, Figure 10. Dominant plant species are also noted. A complete list of plant species observed on the Property can be found within Attachment 2, Table 1.

Mixed Woodland

A substantial portion of the 3.05-acre Property, 1.35 acres, is dominated by mixed woodland habitat. Mixed woodland habitat exists in the northern, eastern and western portions of the Property. Dominant vegetation observed within this habitat type includes but is not limited to wild oat, Italian ryegrass, ripgut brome, common vetch (Vicia sativa), cleavers (*Galium aparine*), Italian thistle (*Carduus pycnocephalus*) and Bermuda buttercup (*Oxalis pes-caprae*). Valley and coast live oaks are present in the central portion of the western mixed woodland habitat. Black walnut and elm trees are located centrally in the eastern portion of the woodland habitat. Monterey pine (*Pinus radiata*), coast redwood (*Sequoia sempervirens*), and blue gum (*Eucalyptus globulus*) are also present throughout the mixed woodland habitat.

Developed

The Property contains two existing residential homes that, combined, encompass approximately 0.22 acres. A two-story home is located on the northwestern boundary along Grayson Road while the other home (one-story) is located centrally near the southern boundary of the Property. The northern residential home is immediately surrounded by mixed woodland habitat to the north in which a large cedar tree is present, coast live oak trees and additional structures including a shed and chicken coop to the south, and black walnut and elm trees to the east. A graded driveway starting at Grayson Road, runs south along the western side of the northern residential home to the southern residential home. The southern home is immediately surrounded by mixed woodland habitat to the north, south and west and woodland riparian habitat to the east. A large coast live oak tree exists at the northeast corner of the residential structure.

Perennial Creek

Running southwest to northeast along the southern boundary of the property is Grayson Creek, a perennial creek originating in Briones Regional Park. Grayson Creek encompasses approximately 0.06 acres (755 linear feet) of the Property. Approximately 4.6 miles northeast of the Property, Grayson Creek drains into Pacheco Slough, which in turn drains into Suisun Bay, approximately 3.75 miles further north.

Dominant vegetation along the banks of Grayson Creek include but are not limited to English ivy (*Hedera helix*), cleavers and Bermuda buttercup. An oak woodland corridor exists adjacent to Grayson Creek within the Property.

Riparian Woodland

A riparian woodland corridor of approximately 1.50 acres occurs along Grayson Creek in the southern portion of the Property. Native species found in the riparian habitat include coast live oak, willow (*Salix spp.*), California buckeye (*Aesculus californica*) and California bay laurel (*Umbellularia californica*). Non-native species present in the riparian woodland include blue gum (*Eucalyptus globulus*) and tree of heaven (*Ailanthus altissima*). Dominant understory plants include English ivy, Bermuda buttercup, periwinkle (*Vinca major*) and poison oak (*Toxicodendron diversilobum*).

Special-Status Plant Species

Special-status plant species include species listed as Rare, Threatened, or Endangered by the USFWS (2020) or by the State of California (CDFW 2021b). Federal Proposed and Candidate species (USFWS, 2019) are also special-status species. Special-status species also include species listed on List 1A, List 1B, or List 2 of the CNPS Inventory (Skinner and Pavlik, 1994; CNPS 2021). All species in the above categories fall under state regulatory authority under the provisions of CEQA and may also fall under federal regulatory authority. Considered special-status species are species included on List 3 (Plants About Which We Need More Information—A Review List) or List 4 (Plants of Limited Distribution—A Watch List) of the CNPS *Inventory*. These species are considered to be of lower sensitivity and generally do not fall under specific state or federal regulatory authority. Specific mitigation considerations are not generally required for List 3 and List 4 species.

Attachment 2, Table 2 includes a list of special-status plants with the potential to occur within or in the immediate vicinity of the Property based on a review of the surrounding quads. The special-status plant species identified by the CNDDB as potentially occurring on the Property are known to grow only from specific habitat types. The specific habitats or "micro-climate" necessary for many of the plant species to occur are not found within the boundaries of the Property. The habitats necessary for the CNDDB reported plant species consist of valley and foothill grassland, cismontane woodlands, chaparral, playas, chenopod scrub, adobe clay soils, alkaline soils, serpentine soils, sandy soils, gravelly soils, coastal prairie, coastal scrub, coastal dunes, coastal bluff scrub, coastal salt marsh, vernal pools, seeps, meadows and sinks, marshes or swamps, riparian woodlands, on slopes near drainages, closed cone coniferous forest, north coast coniferous forest, redwood forest, lower montane coniferous forest, and broad-leafed upland forest.

Occurrences of special-status plants within a five-mile radius of the point roughly representing the center of the Property are described in detail. Occurrence distance from the Property is estimated from this center point (Attachment 1, Figure 6).

Congdon's Tarplant (*Centromadia parryi* ssp. *congdonii*). CNPS List 1B.

Congdon's tarplant is a member of the genus *Hemizonia* in the sunflower family (*Asteraceae*). It is one of four subspecies of Parry's tarplant (*Hemizonia parryi*). Congdon's tarplant is a prostrate to erect, annual herb with rigidly spine-tipped leaves and yellow ray- and disk-flowers (head). It occurs in valley and foothill grasslands in moist alkaline soils and blooms between June and November. Historically, Congdon's tarplant was distributed from Solano County south to San Luis Obispo County.

Four CNDDB occurrences of this species have occurred within five miles of the Property. The closest occurrence (Occurrence #2) was located approximately 1.2 miles southeast of the Property. A survey completed in 1998 observed that the population previously seen in this location is considered extirpated. Suitable habitat for Congdon's tarplant exists within the mixed woodland habitat of the Property; however, no plants were present at the time of the survey. The survey performed for this report consisted of a reconnaissance survey performed outside of the identified blooming period of this species (June-November), however remnant plants would have been observed if they were present. For these reasons Congdon's tarplant is presumed absent from the property. As a result, no significant impact is identified to Congdon's Tarplant.

Diablo Helianthella (*Helianthella castanea*). CNPS List 1B.

Diablo helianthella is a perennial that exhibits yellow sunflowers that bloom between April and June. The plant has simple broad leaves that are attached at the base of the stem and grows up to two feet in height. The Diablo helianthella is known to grow on open grassy sites in cismontane woodland and closed-cone coniferous forests.

Eleven CNDDB occurrences of this species have occurred within five miles of the Property. The closest occurrence (Occurrence #46) was located approximately 1.5 miles southwest of the Property in Briones Regional Park. This occurrence involved the observation of 25 plants in 2004. Potentially suitable habitat exists in the understory of the riparian woodland habitat and the mixed woodland habitat. However, the April 2021 survey occurred during the blooming period for Diablo Helianthella and this species was not observed. Therefore, this species has a low potential to occur on site and is presumed absent from the Property. As a result, no significant impact is identified to Diablo helianthella.

Mount Diablo Fairy-Lantern (*Calochortus pulchellus*). CNPS List 1B.

Mount Diablo fairy-lantern is a spring blooming bulb that is in flower between April and June. This species exhibits light yellow globe-shaped flowers that turn down as if nodding. The plant grows to approximately one and a half feet tall and has between one to several flowers on the stem

and long, narrow, pointed leaves. This bulb specifically grows on wooded slopes in chaparral and in valley and foothill grassland habitat.

CNDDB listed six occurrences of this species within five miles of the Property. The closest and most recent occurrence (Occurrence #23) was located approximately 1.5 miles west of the Property in Briones Regional Park. This occurrence involved the observation of 52 plants along Spengler Trail in 2006. The wooded slopes of the oak woodland habitat and the mixed woodland areas of the Property offer potentially suitable habitat for the Mount Diablo fairy-lantern. However, the April 2021 survey coincided with the blooming period for Mount Diablo fairy-lantern and this species was not observed. Therefore, Mount Diablo fairy-lantern has a low potential to occur on site and is presumed absent from the Property. As a result, no significant impact is identified to Mount Diablo fairy-lantern.

Bent-Flowered Fiddleneck (*Amsinckia lunaris*). CNPS List 1B.

Bent-flowered fiddleneck is an annual of the family *Boraginaceae*. The inflorescence is a scorpiod-cyme and coiled at the tip with multiple small orange flowers. It is distributed throughout the inner north coast ranges of California, in the west Central Valley, and the San Francisco Bay Area. Habitat consists of coastal bluff scrub, cismontane woodlands, and valley and foothill grasslands. The blooming period is between March and June.

CNDDB listed four occurrences (Occurrence #75, #41, #30, #43) of this species within five miles of the Property. All occurrences were located within Briones Hills in Briones Regional Park. Although potentially suitable habitat occurs within the mixed woodland habitat, the April 2021 survey of the Property occurred during the blooming period for bent-flowered fiddleneck and this species was not observed. Therefore, bent-flowered fiddleneck has a low potential to occur on site, and is presumed absent from the Property. As a result, no significant impact is identified to bent-flowered fiddleneck.

7.3 Wildlife Survey Results

7.3.1 General Wildlife Species and Habitats

A complete list of wildlife species observed within the Property can be found in Attachment 2, Table 1. Wildlife species commonly occurring within habitat types present on the Property are discussed below:

Mixed Woodland

The mixed woodland habitat provides many foraging opportunities for a wide range of species. Passerine species observed during the survey include dark-eyed junco (*Junco hyemalis*), California towhee (*Melozone crissalis*), black phoebe (*Sayornis nigricans*), bushtit (*Psaltriparus minimus*), spotted towhee (*Pipilo maculatus*), and white-crowned sparrow (*Zonotrichia leucophrys*). Other avian species observed include American crow (*Corvus bracyrynchos*), acorn woodpecker (*Melanerpes formicivorus*), Anna's hummingbird (*Calypte anna*) and turkey vulture (*Cathartes aura*).

Raptor species observed foraging during the survey included red-tailed hawk, red-shouldered hawk, and Cooper's hawk. However, the mixed woodland habit could potentially be utilized for foraging by other species including sharp-shinned hawk and American kestrel.

Scattered burrow colonies created by small mammals including but not limited to Botta's pocket gopher (*Thomomys bottae*) and various vole species (*Microtus spp.*) were observed along the southern edge of the mixed woodland habitat adjacent to the riparian woodland.

The cover from the grasses throughout the mixed woodland habitat and the small mammal burrows present offer suitable habitat for various reptile species. Numerous western fence lizards (*Sceloporus occidentalis*) were observed throughout the Property. Other reptile species including Pacific gopher snake (*Pituophis catenifer catenifer*) and California king snake (*Lampropeltis californiae*) may also occur.

Developed

The existing structures and adjacent mature oak, cedar and ornamental trees provide suitable habitat for numerous bird species and potentially some bats. Avian species observed in the developed area include acorn woodpecker, western scrub jay (*Aphelocoma californica*), Steller's jay (*Cyanocitta stelleri*), hermit thrush (*Catharus guttatus*) and dark-eyed junco. Bat species that could utilize this habitat for roosting include hoary bat (*Lasiurus cinereus*), Yuma myotis (*Myotis yumanensis*), and Western red bat.

Perennial Creek

Grayson Creek offers suitable foraging opportunities for various insectivorous avian species such as black phoebe and mammalian species such as hoary bat and Yuma myotis.

The creek could offer suitable foraging and dispersal habitat for western pond turtle and many amphibian species including, California red-legged frog, Sierran tree frog (*Pseudacris sierra*), and western toad (*Anaxyrus boreas*).

Riparian Woodland

The riparian woodland corridor running adjacent to Grayson Creek has the most chance to provide nesting habitat for passerine and raptor avian species as well as provide roosting habitat for bats including potentially sensitive species like the Western red bat.

Numerous avian species were observed in the woodland habitat including spotted towhee, dark-eyed junco, and Steller's jay. Additionally, a Cooper's hawk was observed displaying territorial behavior towards a red-tailed hawk which may be indicative of defensive behavior of a nesting site. Pacific tree frog and other amphibian species may also use the area for foraging and breeding.

BIRDS

Red-shouldered Hawk (*Buteo lineatus*). MBTA.

The red-shouldered hawk is a medium-sized, slender *Buteo* with long legs and a long tail and is smaller than the red-tailed hawk. Upperparts are dark with pale spotting, and rusty-reddish feathers on the wing create the distinctive shoulder patch. The tail has several wide, dark bars; the intervening narrow stripes and the tip of the tail are white, and there is variation in the number of tail bars among adults and juveniles.

The habitat that the red-shouldered hawk prefers varies from bottomland hardwoods and riparian areas to upland deciduous or mixed deciduous-conifer forest, and almost always includes some form of water, such as a swamp, marsh, river, or pond. In the west, the red-shouldered hawk sometimes occurs in coniferous forests, and has been expanding its range of occupied habitats to include various woodlands, including stands of eucalyptus trees amid urban sprawl. They typically place their nests in a broad-leaved tree (occasionally in a conifer), below the forest canopy but toward the tree top, usually in the crotch of the main trunk. Nest trees are often near a pond, stream, or swamp, and can be in suburban neighborhoods or parks. These hawks eat mostly small mammals, lizards, snakes, and amphibians. They also eat toads, snakes, and crayfish. They occasionally eat birds, sometimes from bird feeders; recorded prey includes sparrows, starlings, and doves.

The CNDDB does not track occurrences of red-shouldered hawk. However, two red-shouldered hawks were observed foraging and pair bonding on the Property during the survey. The large trees present within the mixed woodland area, and those found along the riparian corridor offer suitable

nesting habitat. In addition, foraging opportunities occur throughout the Property in the mixed woodland habitat. Given the information above the red-shouldered hawk has high potential to occur on the Property in a nesting capacity and was present in a foraging capacity.

Red-Tailed Hawk (*Buteo jamaicensis*). MBTA.

The red-tailed hawk is a large *Buteo* that is distinct due to the red color of its tail feathers in contrast to the brown color of its body. Not all red-tailed hawks exhibit the distinct coloration on their tail and gradations may occur especially in young birds. Red-tailed hawks hunt rodents by soaring over grassland habitat. Nest trees for red-tailed hawks are usually tall trees with a well-developed canopy that includes a strong branching structure on which to build a nest.

The CNDDB does not track occurrences of red-tailed hawk. However, red-tailed hawks were observed foraging on the Property during the April 2021 survey. The large trees present within and around the Property offer suitable nesting habitat. In addition, foraging opportunities occur throughout the Property. Given the information above the red-tailed hawk has high potential to occur on the Property in a nesting capacity and was present in a foraging capacity.

Cooper's Hawk (*Accipiter cooperii*). MBTA.

Coopers' hawk is a medium to large-size raptor, reaching an average of 28-34 in wingspan. They are distinctive for the black and white horizontal banding on the elongated tail, blue gray head, back and upper wings. Additional markings include rusty red horizontal barring on a white breast, a large square head, and long yellow legs and feet. The diet of Cooper's hawk consists mainly of small to medium-sized birds which they ambush by surprise, but they will also consume squirrels and other small mammals.

CNDDB did not list any occurrences of Cooper's hawk. The large trees present within the riparian habitat on the Property offer suitable nesting habitat. A Cooper's hawk was observed foraging on the Property and displaying territorial behavior towards a red-tailed hawk during the April 2021 survey. This display may indicate defensive behavior of a nesting site. Given the information above, the Cooper's hawk has high potential to occur on the Property in a nesting capacity and was present in a foraging capacity.

Sharp-Shinned Hawk (Accipiter striatus). MBTA.

The sharp-shinned hawk is a small raptor with short, rounded wings, and has an average wingspan of 17" to 23". This hawk has a long tail that is squared-off at tip with prominent corners. This raptor typically flies with several quick, snappy wing beats and a short glide, but also soars. Its small, rounded head does not project far beyond the wings when soaring. The adult sharp-shinned

hawk exhibits a red eye, black cap, and a blue-gray back and upper wings. The white breast, belly and under wing coverts are marked by fine, thin, reddish bars.

Sharp-shinned hawks specialize in hunting avian prey with songbirds making up 90 percent of its diet. These hawks will occasionally eat small rodents, such as mice and voles, and even some insects. Throughout their range, sharp-shinned hawks favor conifer trees (pine, spruce, or fir) as nesting sites, but may also use aspens and hardwood trees. The nest is always placed under dense forest cover, usually toward the top of a tall tree, but well under the canopy. Most nests are anchored between horizontal limbs and the tree trunk.

CNDDB did not list any occurrences of sharp-shinned hawk. However, the large trees present within the riparian habitat on the Property offer suitable nesting habitat. Additionally, foraging opportunities are present in the woodland habitats with the number of passerine bird species observed during the April 2021 survey. Given the information above, sharp-shinned hawk has a moderate potential to occur on the Property in a nesting and foraging capacity and may occur.

American Kestrel (Falco sparverius). MBTA.

The American kestrel is the smallest of raptor species and is distinct due to the black barring on its face. The female kestrel is slightly larger than the male bird and is differentiated by its brown and red coloration. The male kestrel is slightly smaller than the female and has gray wing patches near the top of the wing.

Kestrels favor open areas with short ground vegetation and sparse trees. They are generally found in meadows, grasslands, deserts, parks, farm fields, cities, and suburbs, and are attracted to many habitats modified by humans. Kestrels utilize cavities in trees and structures for nesting. They're diet consists mostly of insects and other invertebrates, but they also hunt small rodents, birds, and reptiles.

CNDDB did not list any occurrences of American kestrel. However, cavities within the large trees present on the Property offer suitable nesting habitat. Additionally, foraging opportunities are present in the woodland habitats with the number of insects, lizards, and passerine bird species observed during the April 2021 survey. Given the information above, American kestrel has a moderate potential to occur on the Property in a nesting and foraging capacity and may occur.

Burrowing Owl (*Athene cunicularia*). Federal Species of Special Concern, California Species of Special Concern.

The U.S. Fish and Wildlife Service has identified the burrowing owl is as a "candidate" species. Candidate species are animals and plants that may warrant official listing as threatened or

endangered, but there is no conclusive data to give them this protection at the present time. As a candidate species, burrowing owls receive no legal protection under the Endangered Species Act (ESA). However, this species does receive some legal protection from the U.S. through the Migratory Bird Treaty Act, which forbids the destruction of the birds and active nests. In California, the burrowing owl considered a "species of special concern."

Burrowing owls are ground dwelling members of the owl family and are small brown to tan colored birds with bold spots and barring. Burrowing owls generally require open annual grassland habitats in which to nest, but can be found on abandoned lots, roads, airports, and other urban areas. Burrowing owls generally use abandoned California ground squirrel holes for their nesting burrow but are also known to use pipes or other debris for nesting purposes. Burrowing owls prefer annual grassland habitats with low vegetative cover. The breeding season for burrowing owls occurs from March through August. Burrowing owls often nest in loose colonies about 100 yards apart. They lay three to twelve eggs from mid-May to early June. The female incubates the clutch for about 28 days, while the male provides her with food. The young owls begin appearing at the burrow's entrance two weeks after hatching and leave the nest to hunt for insects on their own after about 45 days. The chicks can fly well at six weeks old.

CNDDB listed two occurrences of burrowing owl within five miles of the Property. The closest occurrence (Occurrence #1164) was observed approximately 3.0 miles northeast of the Property in Buchanan Field Airport in the City of Concord. During this observation, two unpaired adults were observed along the runway in January 2008. The Property does not have suitable grassland habitat for burrowing owl. Additionally, no ground squirrel burrows were observed on site. A few mammal burrows were present on site however these burrows were most likely constructed by smaller mammals such as pocket gophers and voles, which are inadequate for burrowing owls. Additionally, high vegetative cover is present in the woodland habitat which is a characteristic that burrowing owl do not generally prefer. For these reasons the burrowing owl has a low potential to occur on the Property in nesting and foraging capacity and is not likely to occur.

MAMMALS

Special-status Bats

Bats (Order - *Chiroptera*) are the only mammals capable of "true" flight. They are nocturnal feeders and locate their prey, which consists of small to medium sized insects by echolocation. Bats consume vast amounts of insects making them very effective pest control agents. They may eat as much as their weight in insects per day. Maternity roosts comprised of only females, may be found in buildings or mine shafts with temperatures up to 40 degrees Celsius and a high percentage of humidity to ensure rapid growth in the young. Female bats give birth to only one or

two young annually and roost in small or large numbers. Males may live singly or in small groups, but scientists are still unsure of the whereabouts of most males in summer.

Special-status bats with the potential to occur on the Property are listed below:

- Western Red Bat (*Lasiurus blossevillii)*
- Hoary Bat (*Lasiurus cinereus*)
- Yuma myotis (*Myotis yumanensis*)

CNDDB listed the hoary bat (Occurrence #20) as occurring within the 5-mile radius of the Property. This occurrence was recorded approximately 2.0 miles east of the Property. The large oak and redwood trees and the existing residential homes could potentially offer roosting sites for multiple bat species. The woodland habitat and Grayson Creek provide an array of insects, allowing for abundant foraging opportunities. Given the above information, multiple species of bats have a moderate potential to occur on the Property in roosting and foraging capacity.

AMPHIBIANS

California Red-Legged Frog (*Rana draytonii*). Federally Threatened, California Species of Special Concern.

California red-legged frog (CRLF) was listed as a Federal threatened species on May 31, 1996 (61 FR 25813) and is considered threatened throughout its range. If a proposed federal action may affect, and is likely to adversely affect, a listed species, Section 7 of the ESA requires consideration of those species through formal consultations with the USFWS. On April 13, 2006, USFWS designated critical habitat for the CRLF under the ESA. In total, approximately 450,288 acres fell within the boundaries of critical habitat designation. A new ruling by the USFWS on March 17, 2010, revised the designation of critical habitat for CRLF (75 FR 12815 12959). In total, approximately 1,636,609 acres of critical habitat in 27 California counties fall within the boundaries of the final revised critical habitat designation. This rule became effective on April 16, 2010.

The CRLF is a rather large frog, measuring one and a half to five inches in length. They are reddish-brown to gray in color, with many poorly defined dark specks and blotches. Dorsolateral folds are present. The underside of the CRLF is washed with red on the lower abdomen and hind legs. The CRLF has a dark mask bordered by a light stripe on the jaw, smooth eardrums, and not fully webbed toes. The male has enlarged forearms and swollen thumbs. Its vocals consist of a series of

weak throaty notes, rather harsh, and lasting two to three seconds. Breeding occurs from December to March with egg masses laid in permanent bodies of water.

The CRLF is found in lowlands, foothill woodland and grasslands, near marshes, lakes, ponds or other water sources. These amphibians require dense shrubby or emergent vegetation closely associated with deep still or slow-moving water. Generally, these frogs favor intermittent streams with water at least two and a half feet deep and where the shoreline has relatively intact emergent or shoreline vegetation. CRLF is known from streams with relatively low gradients and those waters where introduced fish and bullfrogs are absent. CRLF are known to take refuge upland in small mammal burrows during periods of high-water flow. CRLF occurs west of the Sierra Nevada-Cascade and in the Coast Ranges along the entire length of the state. Historically, they occurred throughout the Central Valley and Sierra Nevada foothills south to northern Baja California. Now they are found from Sonoma and Butte Counties south to Riverside County, but mainly in Monterey, San Luis Obispo, and Santa Barbara Counties.

CNDDB listed 5 occurrences of CRLF occurring within five miles of the Property. The closest occurrence (#158) observed in 2004 was located approximately 2 miles west of the Property. During this occurrence, 3 adult CRLF were observed in two permanent freshwater ponds located within Briones Regional Park. The Property is located approximately 1.3 miles east from USFWS-designated critical habitat for CRLF (Unit ALA-1B)(Attachment 1, Figure 7). Although deep plunge pools are not present within the portion of Grayson Creek that borders the Property, water was present in the entire length of the creek bordering the Property during the April 2021 survey. Vegetative debris throughout the riparian woodland corridor offers suitable upland refugial habitat for CRLF. Therefore, Grayson Creek could offer potential aquatic dispersal and foraging opportunities for CRLF, and the surrounding riparian habitat could offer terrestrial dispersal habitat. For these reasons CRLF has a moderate potential to occur on site in the creek channel and riparian wood habitats in a dispersal capacity only (see Table 2).

California Tiger Salamander (*Ambystoma californiense*). Federally Threatened, State Threatened.

Adult California tiger salamanders (CTS) inhabit rolling grassland and oak savannah. Adults spend most of the year in subterranean retreats such as rodent burrows but may be found on the surface during dispersal to and from breeding sites. The preferred breeding sites are vernal pools and other temporary ponds. However, CTS may use permanent manmade ponds as breeding habitat. CTS adults begin migrating to ponds after the first heavy rains of fall and can be found in or around the breeding ponds during and after winter rainstorm events. In extremely dry years, CTS may not reproduce.

After mating, females lay several small clusters of eggs, which contain from one to over 100 eggs. The eggs are deposited on both emergent and submerged vegetation, as well as submerged detritus. A minimum of ten weeks is required to complete larval development through metamorphosis, at which time the larvae will normally weigh about ten grams. Larvae remaining in pools for a longer time period can grow to much larger sizes. Upon metamorphosis, juvenile CTS migrate in large masses at night from the drying breeding sites to refuge sites. Prior to this migration, the juveniles spend anywhere from a few hours to a few days near the pond margin. Adult CTS are largely opportunistic feeders, preying upon arthropod and annelid species that occur in burrow systems, as well as aquatic invertebrates found within seasonal pools. The larvae feed on aquatic invertebrates and insects, showing a distinct preference for larvae of the Pacific tree frog.

On August 4, 2004, the USFWS announced the listing of the CTS as threatened throughout its range with the exception of the Sonoma and Santa Barbara County populations which are listed as endangered (USFWS 2004). On March 3, 2010, the California Fish and Game Commission designated CTS as threatened under the California Endangered Species Act. On August 23, 2005, the Service designated 199,109 acres of critical habitat in 19 counties for the central California population of the CTS. On August 2, 2005, they proposed 74,223 acres of critical habitat for CTS in Sonoma County, California. This habitat is located in the Santa Rosa Plain in central Sonoma and includes lands bordered on the west by Laguna de Santa Rosa, to the south by Skillman Road, northwest of Petaluma, to the east by foothills, and to the north by Windsor Creek. On December 14, 2005, in a final decision, USFWS designated and excluded 17,418 acres of critical habitat for CTS, so that no critical habitat is being designated for the Sonoma County population.

CNDDB has listed four occurrences (Occurrence #413, #43, #582, #418) of CTS occurring within five miles of the Property. All four of these occurrences are considered to be historical with the most recent occurrence (Occurrence #418) observed in 1954 and the sites are considered to be extirpated. The Property lacks vernal pools or other ponds suitable for breeding habitat. For these reasons there is a low potential for CTS to occur on the Property and CTS is presumed absent.

REPTILES

Alameda Whipsnake (*Masticophis lateralis euryxanthus*). Federally Threatened, State Threatened.

The Alameda whipsnake is one of two subspecies of the California whipsnake. It is distinguished from the chaparral whipsnake (*M. l. lateralis*) by the broad orange striping on its sides. Adults reach approximately three to five feet in length and show a sooty black to dark brown back, cream colored undersides and pinkish tail. This species is typically found in chaparral, northern coastal sage scrub, and coastal sage habitats; however, annual grasslands, oak woodlands, and oak

savannah serve as habitat during the breeding season. Egg-laying occurs near scrub habitat on ungrazed grasslands with scattered shrub cover. The known distribution for Alameda whipsnake includes Sobrante Ridge, Oakland Hills, Mount Diablo, the Black Hills, and Wauhab Ridge.

Male and female snakes are active from April to November finding mates. During the breeding season from late March through mid-June, male snakes exhibit more movement throughout their home range, while female snakes remain sedentary from March until egg laying. Females lay a clutch of 6 to 11 eggs, usually in loose soil or under logs or rocks.

CNDDB listed 13 occurrences of the Alameda whipsnake within the vicinity of the Property. The exact locations of these collections were not recorded in the CNDDB due to the sensitivity of this species. Refer to Attachment 1 Figure 5 to see approximate range of listed occurrences. The Property is located approximately 0.9 miles from USFWS designated critical habitat in Briones Regional Park (unit: 3) (See Attachment 1 Figure 7). The most recent occurrence (# 180) occurred approximately 3.5 miles in 2018. During this occurrence, two Alameda whipsnake were detected in April 2018 on Mount Wanda in Martinez. The closest occurrence (# 62) involved the observation of 1 adult whipsnake in coyote brush scrub in August 2002. This occurrence was located approximately 1.2 miles southwest just outside Briones Regional Park. The Property does not support scrub or rocky outcrop habitat which the Alameda whipsnake prefers. Residential development surrounds the Property which may discourage Alameda whipsnake from using the Property. However, open space parks are also present within the vicinity of the Property; thus, whipsnake could disperse through the Property as it moves to more suitable habitat. For these reasons, Alameda whipsnake has a low potential to occur on the Property in a dispersal capacity only.

Western Pond Turtle (*Emys marmorata*). California Species of Special Concern.

The western pond turtle is a thoroughly aquatic turtle that may be found in marshes, ponds, streams and irrigation ditches where aquatic vegetation is present. The turtles, which range from nine to ten inches in size, require basking sites and suitable upland habitat for egg laying. Suitable breeding upland habitats may consist of sandy banks or grassy open fields. The western pond turtle has a dark brown to olive-colored carapace with hexagonal scales that lack prominent markings.

Nesting and incubation occur from April to September, with a peak time for mating and egg laying occurring from March to May. After a 73 to 80-day gestation or incubation period, 5 to 13 eggs will be laid from July to October. Eggs are produced either once or twice a year. Females may travel some distance from water for egg-laying, moving as much as 0.8 kilometers (a half mile) away from and up to 90 meters (300 feet) above the nearest source of water. Most nests are within

90 meters (300 feet) of water. The female usually leaves the water in the evening and may wander far before selecting a nest site, often in an open area of sand or hardpan that is facing southwards. The nest is flask-shaped with an opening of about five centimeters (two inches). Females spend considerable time covering up the nest with soil and adjacent low vegetation, making it difficult for a person to find unless it has been disturbed by a predator.

Activity slows from November to February. During the winter when water and air temperatures cool, usually from September to March, the turtles begin to hibernate. During hibernation, turtles either bury themselves in the mud at the bottom of ponds or will bury themselves on land in duff (top layer of decomposing vegetation and soil). Some turtles travel more than a half mile to over-winter on land, though many select the nearest wooded or shrubby area they can bury in. Turtles then emerge from hibernation in the spring to start the yearly cycle again.

CNDDB listed 5 occurrences of the western pond turtle within the vicinity of the Property. The closest occurrence (Occurrence #1360) was located approximately 4 miles northeast of the Property. During this occurrence one adult was observed during a survey of the Clayton Valley drain prior to routine maintenance. The portion of Grayson Creek bordering the Property lacks basking pools and is mostly shaded, however water was present in the creek during the April 2021 survey. Therefore, western pond turtle could potentially use the creek channel and the surrounding riparian woodland corridor as dispersal habitat. Given the information above, western pond turtle has a moderate potential to occur on the Property and may occur in a dispersal capacity only.

7.0 CONCLUSIONS AND IMPACT ANALYSIS

7.1 Waters

Results of the biological resource analysis survey conducted by Olberding Environmental indicate that the Property contains waters that may be considered jurisdictional by the Army Corps of Engineers, RWQCB or CDFW. Grayson Creek runs along the southern boundary of the Property. Although the proposed project does not include conducting any activities within Grayson Creek or the associated riparian corridor, the waters mitigation presented in Section 8.0 would reduce any potential impacts to less-than-significant levels.

7.2 Riparian Habitat

The proposed project plans on the removal of approximately 84 trees including native species such as coast live oak, valley oak, black walnut, and buckeye. Native trees that are part of or adjacent to a riparian area, and measure greater than 6.5 inches in diameter at breast height (dbh) are

considered protected under the Contra Costa County Tree Protection and Preservation Ordinance (Chapter 816-6, Ordinances 94-59, 94-22, Contra Costa County Code). Adherence to County ordinances that pertain to riparian habitat protection including the Tree Protection and Preservation Ordinance described above and the Contra Costa County Creek Setback Ordinance (Chapter 914) (Attachment 1, Figure 11), and implementation of the mitigation measures presented in Section 8.0 would reduce any potential impacts to less-than-significant levels.

7.3 Special-status Plants

No special-status plant species were determined to have a potential to occur on the Property. The April 2021 survey coincided with the blooming period of three special-status plants (Diablo helianthella, Mt. Diablo fairy-lantern, bent-flowered fiddleneck) that may have had the potential to occur on the Property and these plants were not observed. Although the survey occurred outside the blooming period for Congdon's tarplant, remnant plants were not observed. The proposed project will not have an impact to special status plants and no further measures related to protection of special-status plants are recommended.

7.4 Special-status Wildlife

Foraging or Nesting Raptor/Passerine Species – A total of five raptor species were identified as having potential to occur on the Property. Three species including red-shouldered hawk, red-tailed hawk, and Cooper's hawk had a high potential to occur in a foraging and nesting capacity and were present in a foraging capacity. The sharp-shinned hawk and American kestrel had a moderate potential to occur in a foraging and nesting capacity. Implementation of the special-status wildlife mitigation measures presented in Section 8.0 below would reduce any potential impacts to nesting avian species protected under the MBTA to less-than-significant levels.

Special-Status Mammals – Given the presence of suitable onsite habitat; the Western red bat, hoary bat and Yuma myotis have a moderate potential to occur on the Property in a foraging and roosting capacity. No immediate signs were present during the initial survey; however, large trees throughout the riparian and mixed woodland habitats, and the existing residential structures could provide roosting sites. Implementation of the special-status wildlife mitigation measures presented in Section 8.0 below would reduce any potential impacts to bat species to less-than-significant levels.

Special-Status Amphibians – One amphibian species, CRLF, has been identified as having a moderate potential to occur on the Property in a dispersal capacity. Multiple CNDDB occurrences and USFWS designated critical habitat of CRLF are recorded in the vicinity of the Property. The Property contains suitable aquatic dispersal habitat and foraging opportunities in Grayson Creek

and suitable upland habitat in the riparian corridor. For these reasons CRLF has a moderate potential to occur in a foraging and dispersal capacity throughout the creek channel and associated riparian woodland corridor. Implementation of the special-status wildlife mitigation measures presented in Section 8.0 below would reduce any potential impacts to CRLF to less-than-significant levels.

Special-Status Reptiles – The Alameda whipsnake and western pond turtle were identified by the CNDDB as occurring in the vicinity of the Property. An assessment of the Property concluded that the Property does not support the shrub and rock outcrop habitat that Alameda whipsnake prefers. More suitable habitat is located west and north of the Property in Briones Regional Park and the surrounding open space. Thus, Alameda whipsnake is not likely to occur on the Property in a breeding capacity or as a permanent resident. The Property is essentially surrounded by residential development; however, areas of open space do occur within the vicinity of the Property. Whipsnake could disperse through the riparian and mixed woodland habitat present within the Property as it migrates through to more suitable habitat. Therefore, Alameda whipsnake has a low potential to occur on the Property in a dispersal capacity only. Western pond turtle could utilize Grayson Creek for aquatic dispersal and the surrounding riparian woodland corridor as terrestrial dispersal. Therefore, western pond turtle has a moderate potential to occur on the Property in a dispersal capacity only. Implementation of the special-status wildlife mitigation measures presented in Section 8.0 below would reduce any potential impacts to western pond turtle or Alameda whipsnake to less-than-significant levels.

8.0 RECOMMENDED MITIGATION MEASURES

Implementation of the following mitigation measures will reduce potential Project impacts, listed in Section 4.3.2 (California Environmental Quality Act) of this report, to less than significant levels for the biological resources discussed below.

Corps and State Regulated Waters - With implementation of the mitigation measure (MM #1) provided below, the Project would have a less than significant adverse effect on federally protected waters as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

> **MM #1) Corps and State Regulated Waters** – Jurisdictional waters potentially regulated under the authority of the Corps, RWQCB, and CDFW are present on the Property. The proposed project shall implement all County ordinances that require a setback from Grayson Creek to prevent the fill of waters or impacts to Grayson Creek or the bed or bank of the creek.

Riparian Habitat - If removal of any trees deemed "protected" by the Contra Costa County Tree Ordinance (Chapter 816-6) from the riparian habitat during project activities is to occur, the above tree ordinance and the Contra Costa County Creek Setback Ordinance (Chapter 914) must be adhered to. With implementation of the mitigation measure (MM #2) provided below, the Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by CDFW or USFWS.

> **MM #2) Trees** – For all riparian associated trees that are removed from the Property, a 3:1 replacement ratio for all native trees and a 1:1 replacement ratio for all non-native trees (with native species) is recommended by Olberding Environmental.

Special-Status Wildlife Species - With implementation of the mitigation measures (MM #3; MM #4; MM #5; MM #6; MM #7; and MM #8) provided below, the Project is not expected to have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW and USFWS.

Wildlife corridors and native nurseries - With implementation of the mitigation measures (MM #3; MM #4; MM #5; MM #6; and MM #7) provided below, the Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

> **MM #3) Pre-Construction Avian Survey** – If project construction-related activities would take place during the nesting season (February through August), preconstruction surveys for nesting passerine birds and raptors (birds of prey) within the Property and the large trees within the adjacent riparian area should be conducted by a qualified biologist 14 days prior to the commencement of the tree removal or site grading activities. If any bird listed under the Migratory Bird Treaty Act is found to be nesting within the project site or within the area of influence, an adequate protective buffer zone should be established by a qualified biologist to protect the nesting site. This buffer shall be a minimum of 75 feet from the project activities for passerine birds, and a minimum of 200 feet for raptors. The distance shall be determined by a qualified biologist based on the site conditions (topography, if the nest is in a line of sight of the construction and the sensitivity of the birds nesting). The nest site(s) shall be monitored by a biologist periodically to see if the birds are stressed by the construction activities and if the protective buffer needs to be increased. Once the young have fledged and are flying well enough to avoid project

construction zones (typically by August), the project can proceed without further regard to the nest site(s).

MM #4) Pre-construction Bat Survey – To avoid "take" of special–status bats, the following mitigation measures shall be implemented prior to the removal of any existing trees or structures on the project site:

a) A bat habitat assessment shall be conducted by a qualified bat biologist during seasonal periods of bat activity (mid–February through mid–October – ca. Feb. 15 – Apr. 15, and Aug. 15 – October 30), to determine suitability of each existing structure as bat roost habitat.

b) Structures found to have no suitable openings can be considered clear for project activities as long as they are maintained so that new openings do not occur.

c) Structures found to provide suitable roosting habitat, but without evidence of use by bats, may be sealed until project activities occur, as recommended by the bat biologist. Structures with openings and exhibiting evidence of use by bats shall be scheduled for humane bat exclusion and eviction, conducted during appropriate seasons, and under supervision of a qualified bat biologist.

d) Bat exclusion and eviction shall only occur between February 15 and April 15, and from August 15 through October 30, in order to avoid take of non–volant (non–flying or inactive, either young, or seasonally torpid) individuals.

OR

A qualified wildlife biologist experienced in surveying for and identifying bat species should survey the portion of the Property with large trees and abandoned structures. If tree removal is proposed to determine if any special–status bats reside in the trees. Any special–status bats identified should be removed without harm. Bat houses sufficient to shelter the number of bats removed should be erected in open space areas that would not be disturbed by project development.

MM #5) Pre-construction Reptile Survey – While potential occurrence of Alameda whipsnake and western pond turtle is limited to dispersal throughout the creek channel, riparian woodland corridor, and mixed woodland habitats, a pre-construction survey for special status reptile species should be performed no more than 48 hours prior to ground disturbance or vegetation removal to determine presence/absence of these species. Worker Environmental Awareness training discussing the potential for these species should be

conducted by the Designated Biologist or Biological Monitor for all construction personnel working within the project site.

MM #6) Pre-construction Amphibian Surveys – Directed pre-construction surveys for CRLF are recommended prior to construction activities. The creek channel and associated riparian woodland may serve as dispersal areas for CRLF. A Designated Biologist shall conduct a pre-construction survey of these habitats for CRLF preceding the commencement of construction activities to verify presence/absence of this species. Wildlife exclusion fencing (ERTEC fencing) should be installed along the grading limit of the Project site in order to prevent dispersal into the grading and work areas of the site from the creek channel and/or the riparian corridor. Fencing should be trenched into the ground at a minimum of 6 inches and a lip should be formed along the top of the fence line. A Designated Biologist or Biological Monitor shall be onsite during initial ground-disturbing activities in order to inspect the work area and fence lines daily for special status amphibians and other wildlife. Worker Environmental Awareness training discussing the potential for these species should be conducted by the Designated Biologist or Biological Monitor for all construction personnel working within the project site. If any CRLF or other listed amphibians are found during construction activities, the U.S. Fish and Wildlife Service should be consulted to approve capture and relocation by a Qualified Biologist.

MM #7) Wildlife Exclusion Fencing – In order to mitigate for potential impacts to CRLF and western pond turtle, heavy-duty wildlife exclusion fencing (ERTEC) should be installed along the grading limit of the proposed project site to prevent these species from entering the project site during construction activities. Exclusion fencing should be trenched into the ground at a minimum of 6 inches and a lip shall be folded along the upper portion of the fence line. Pre-construction surveys shall be conducted by a Designated Biologist prior to vegetation clearing and fence installation.

MM #8) Erosion Control – Grading and excavation activities could expose soil to increased rates of erosion during construction periods. During construction, runoff from the Property could adversely affect aquatic life within the adjacent water features. Surface water runoff could remove particles of fill or excavated soil from the site, or could erode soil down-gradient, if the flow were not controlled. Deposition of eroded material in adjacent water features could increase turbidity, thereby endangering aquatic life, and reducing wildlife habitat. Implementation of appropriate mitigation measures would ensure that impacts to aquatic organisms would be avoided or minimized. Mitigation measures may include best management practices (BMP's) such as hay bales, silt fencing, placement of straw mulch and hydro seeding of exposed soils after construction as identified in the Storm Water Pollution Prevention Plan (SWPPP).

Habitat Conservation Plans - The proposed project does not lie within the East Contra Costa County HCP/NCCP or any other HCP/NCCP. Therefore, the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

L**ocal Ordinances** - With implementation of the mitigation measures provided above, plus MM #2 provided above, the project is not expected to conflict with local policies and ordinances protecting biological resources, including the Contra Costa County tree protection and setback ordinances:

- Contra Costa County Tree Ordinance – Chapter 816-6 – Tree Protection and Preservation Ordinance discussed in Section 4.2.4 of this report

- Contra Costa County Creek Setback Ordinance – Chapter 914 – Rights-of-Ways and Setbacks discussed in Section 4.2.5 of this report

9.0 LITERATURE CITED

California Department of Fish and Wildlife (CDFW) Natural Diversity Data Base. 2021. Computer listings and map locations of historic and current recorded occurrences of special-status species and natural communities of special concern for USGS 7.5-minute quadrangle map: Walnut Creek. Accessed on April 5, 2021.

_____.2021a. California Wildlife Habitat Relationships. https://www.wildlife.ca.gov/Data/CWHR/Wildlife-Habitats

_____.2021b. State and federally listed Endangered, Threatened, and Rare plants of California. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109390&inline

_____.2021. Special animals. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline

California Native Plant Society (CNPS), Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org Accessed April 5, 2021.

CEQA. 2021. The California Environmental Quality Act. Appendix G, Environmental Checklist Form. Accessed on April 6, 2021. Available online at https://www.califaep.org/statute_and_guidelines.php

Ehrlich, P.R., D.S. Dobkin, and D. Wheye. 1988. The Birder's Handbook: a field guide to the natural history of North American birds. Simon & Schuster, Inc., New York. 785 pp.

The Jepson Manual: Vascular Plants of California, Second Edition, Thoroughly Revised and Expanded. University of California Press, Berkeley, CA. 2012. 1400 pp.

Holland (1986) Preliminary Description of the Natural Communities of California. CDFW.

Mayer, K. E. and Laudenslayer W.F. 1988. A Guide to Wildlife Habitats of California. California.

Natural Resources Conservation Service (NRCS). 2019. United States Department of Agriculture. Web Soil Survey. Accessed April 5, 2021. Available on-line at http://websoilsurvey.nrcs.usda.gov

Pierce, Robert J. 1995. Wetland Delineation Lecture Notes. Wetland Training Institute, Inc., Poolesville, MD. WTI 95-2. 200pp.

Sawyer, J.O., T. Keeler-Wolf, and J. Evens. 2009. A manual of California vegetation. 2nd Ed. California Native Plant Society, Sacramento, CA.

Skinner, M. W. and B. M. Pavlik (eds.). 1994. Inventory of rare and endangered vascular plants of California. California Native Plant Society Special Publication No. 1 (5th edition). California Native Plant Society, Sacramento, CA. 338 pp.

Sibley, D.A. 2000. The Sibley Guide to Birds. Alfred Knopf, New York.

Sibley, C.G., and B.L. Munroe, Jr. 1990. Distribution and taxonomy of birds of the world. Yale University Press, New Haven and London. 1111 pp.

United States Fish and Wildlife Service (USFWS). 2020. Endangered and threatened plant and animal species. Accessed on April 6, 2021. https://ecos.fws.gov/ecp/listedSpecies/speciesListingsByTaxGroupTotalsPage

_____. 2019. Endangered and threatened wildlife and plants; review of plant and animal taxa that are Candidates or Proposed for listing as Endangered or Threatened; annual notice of findings on recycled petitions; annual description of progress on listing actions; proposed rule. Federal Register 68: 54732-54757.

_____. 2007. Bald Eagle Management Guidelines and Conservation Measures. The Bald and Golden Eagle Protection Act. Accessed on April 6, 2021. Available on-line at http://www.fws.gov/northeast/ecologicalservices/pdf/NationalBaldEagleManagementGuidelines.pdf.

_____. 2006. Endangered and Threatened Wildlife and Plants: Designation of Critical Habitat for the California Red-Legged Frog, and Special Rule Exemption Assocaited with Final Listing for Existing Routine Ranching Activities; Final Rule. Federal Register 71: 19244-19346.

_____. 2004. Endangered and Threatened Wildlife and Plants: Determination of Threatened Status for the California Tiger Salamander; and Special Rule Exemption for Existing Routine Ranching Activities; Final Rule. Federal Register 69: 47212-47248.

ATTACHMENTS

ATTACHMENT 1
FIGURES

Figure 1
Regional Map

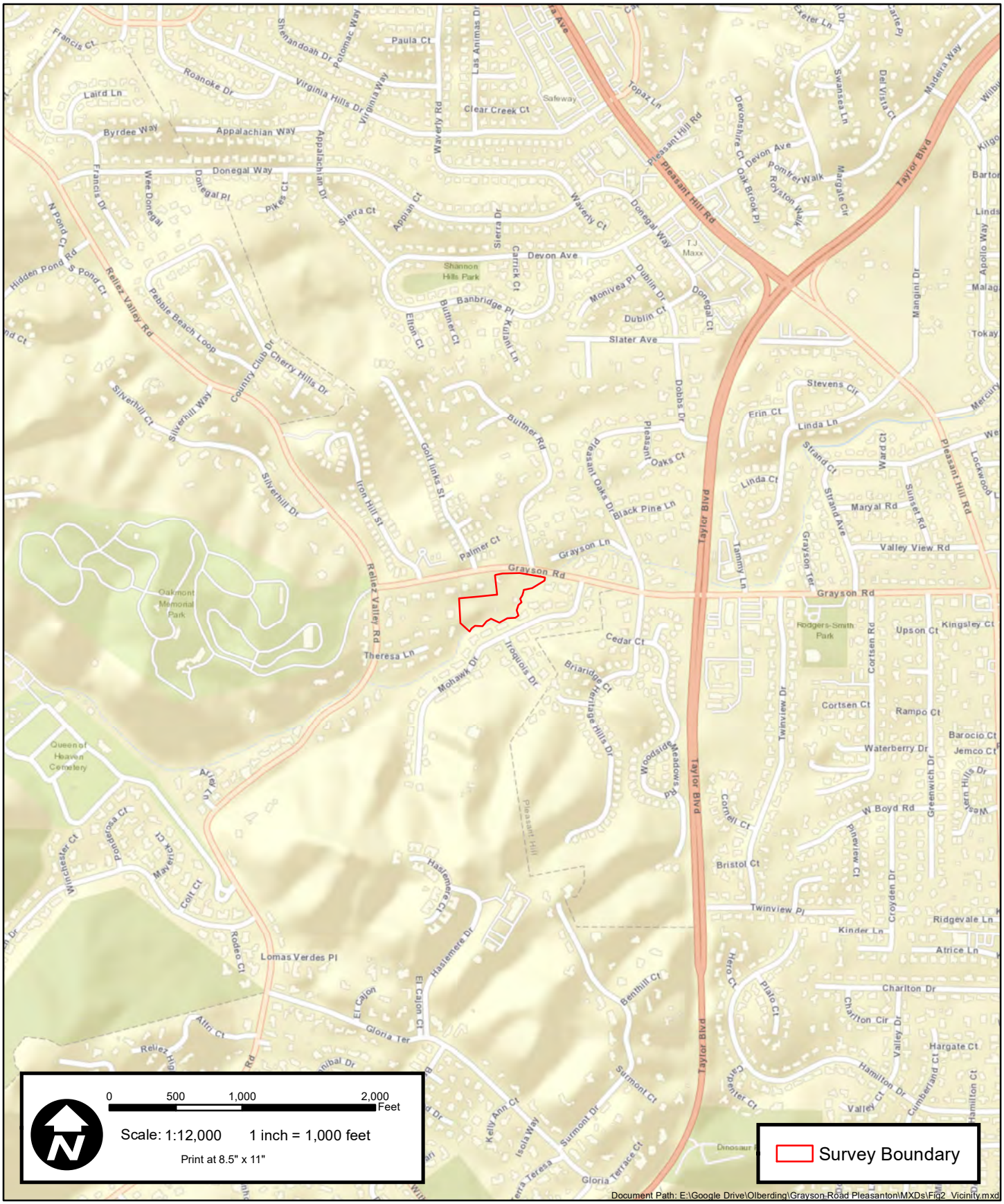
OLBERDING -ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

Figure 1: Regional Map
Grayson Road Property
Contra Costa County, California

Revision Date: 4/15/2021

Figure 2
Vicinity Map



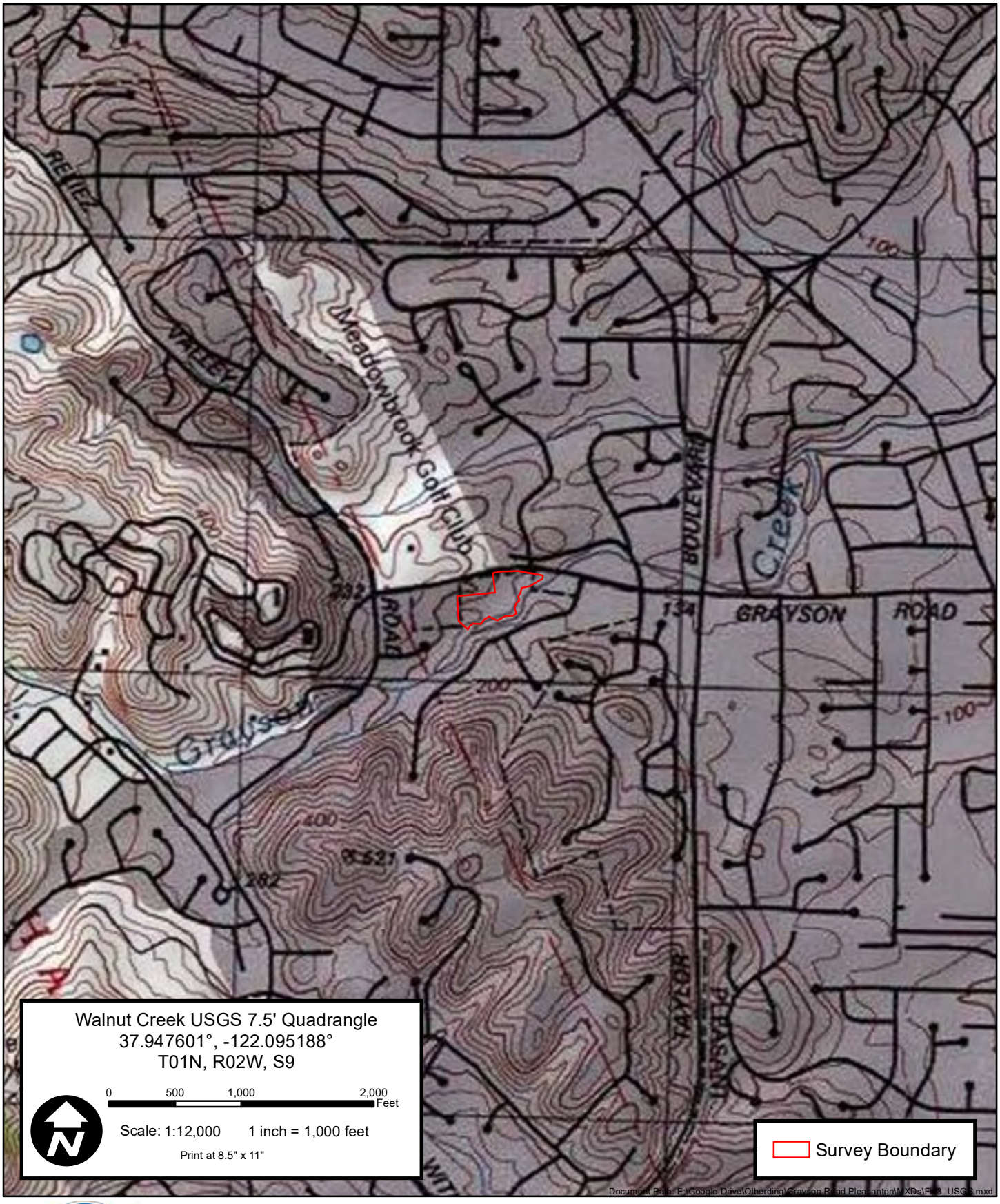
OLBERDING
-ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

Figure 2: Vicinity Map
Grayson Road Property
Contra Costa County, California

Revision Date: 4/15/2021

Figure 3
USGS Quadrangle Map



OLBERDING
-ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 165
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Phone: (916) 985-1188

Figure 3: USGS Topographic Map
Grayson Road Property
Contra Costa County, California

Revision Date: 4/15/2021

Figure 4
Aerial Photograph

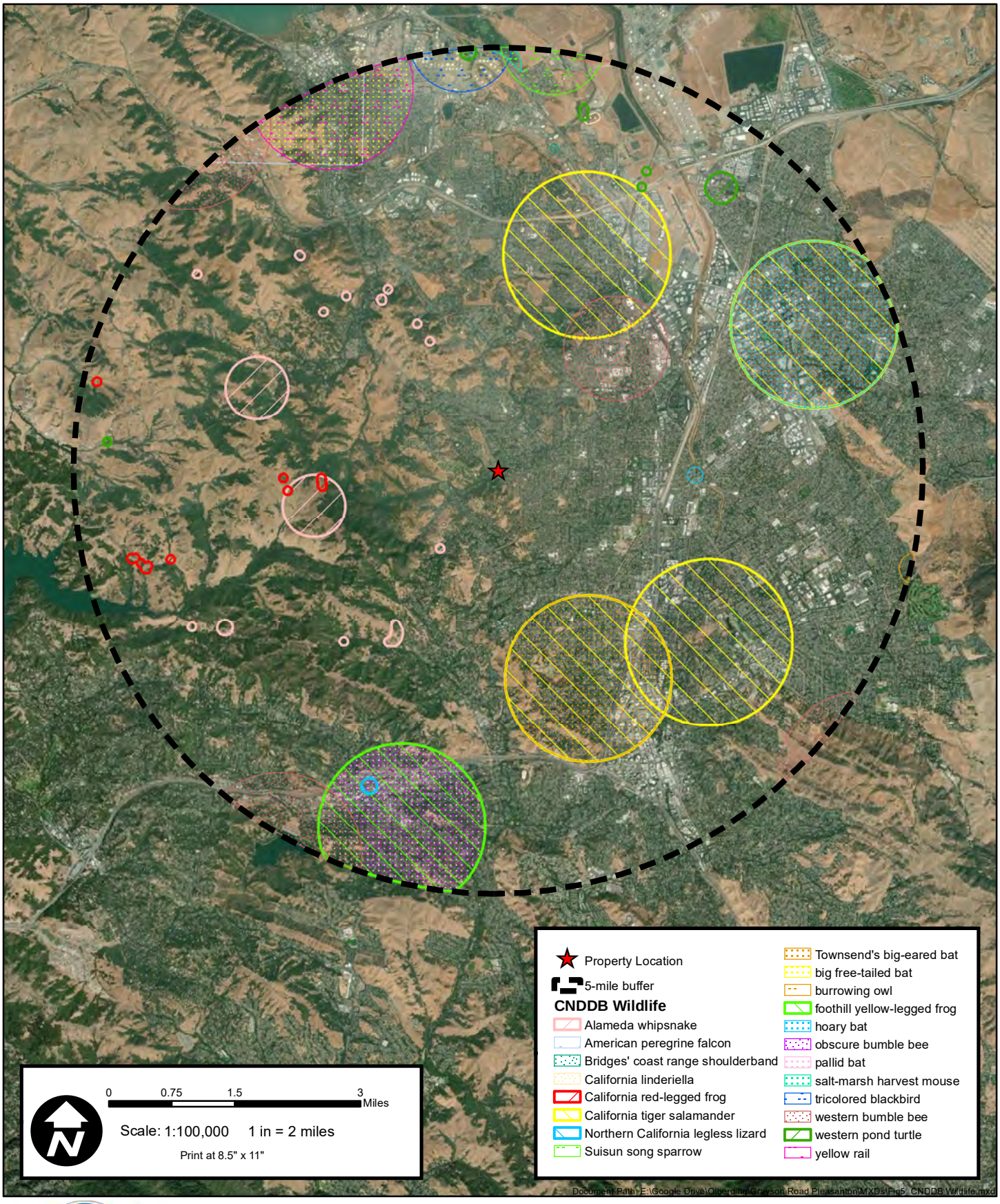
OLBERDING
-ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

Figure 4: Aerial Map
Grayson Road Property
Contra Costa County, California

Revision Date: 4/15/2021

Figure 5
CNDDB Map of Special Status Wildlife



OLBERDING -ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

Figure 5: CNDDB Wildlife Map
Grayson Road Property
Contra Costa County, California

Revision Date: 4/15/2021

Figure 6
CNDDB Map of Special Status Plants

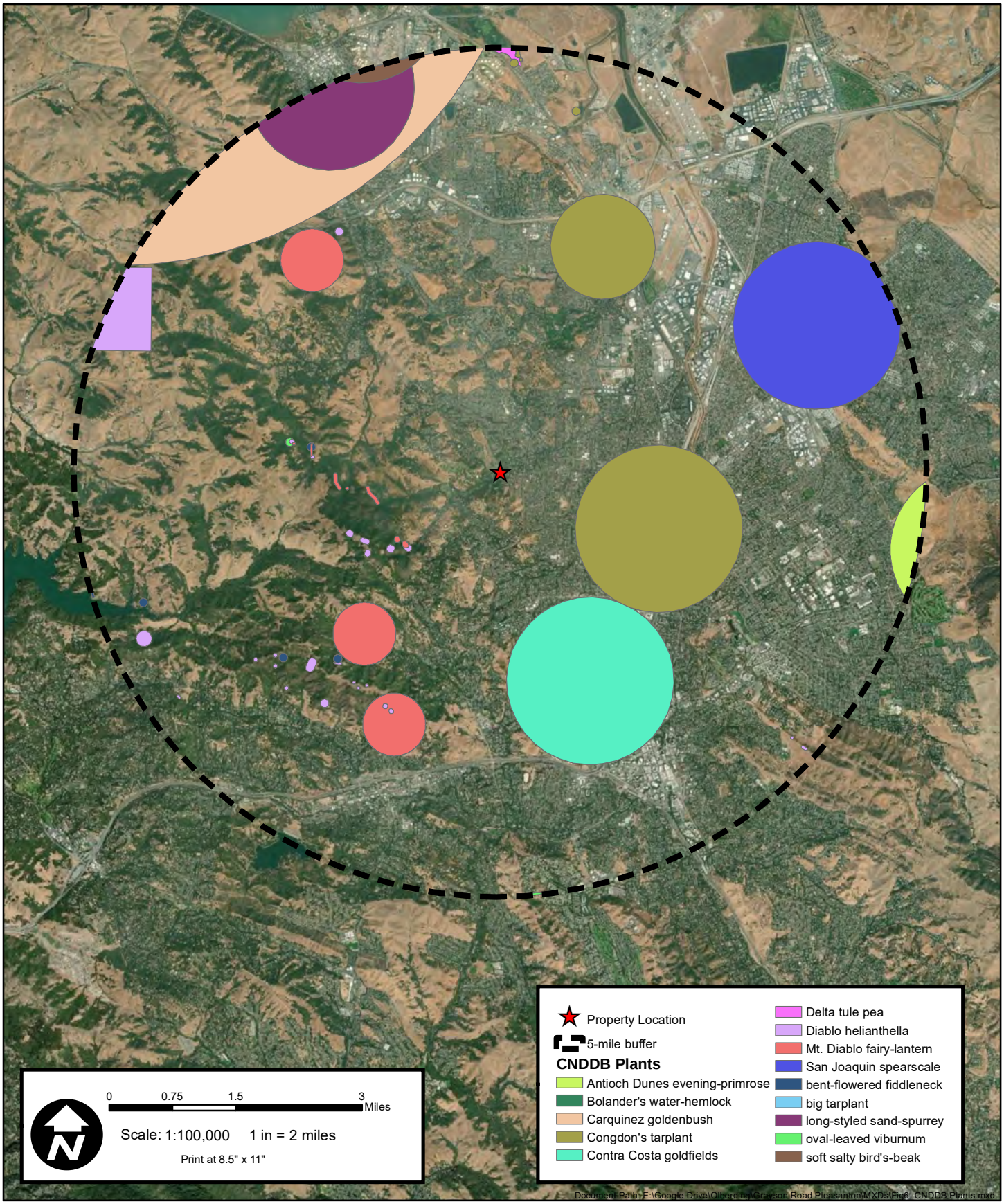


Figure 6: CNDDB Plants Map
Grayson Road Property
Contra Costa County, California

OLBERDING -ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

Revision Date: 4/15/2021

Figure 7
USFWS Designated Critical Habitat

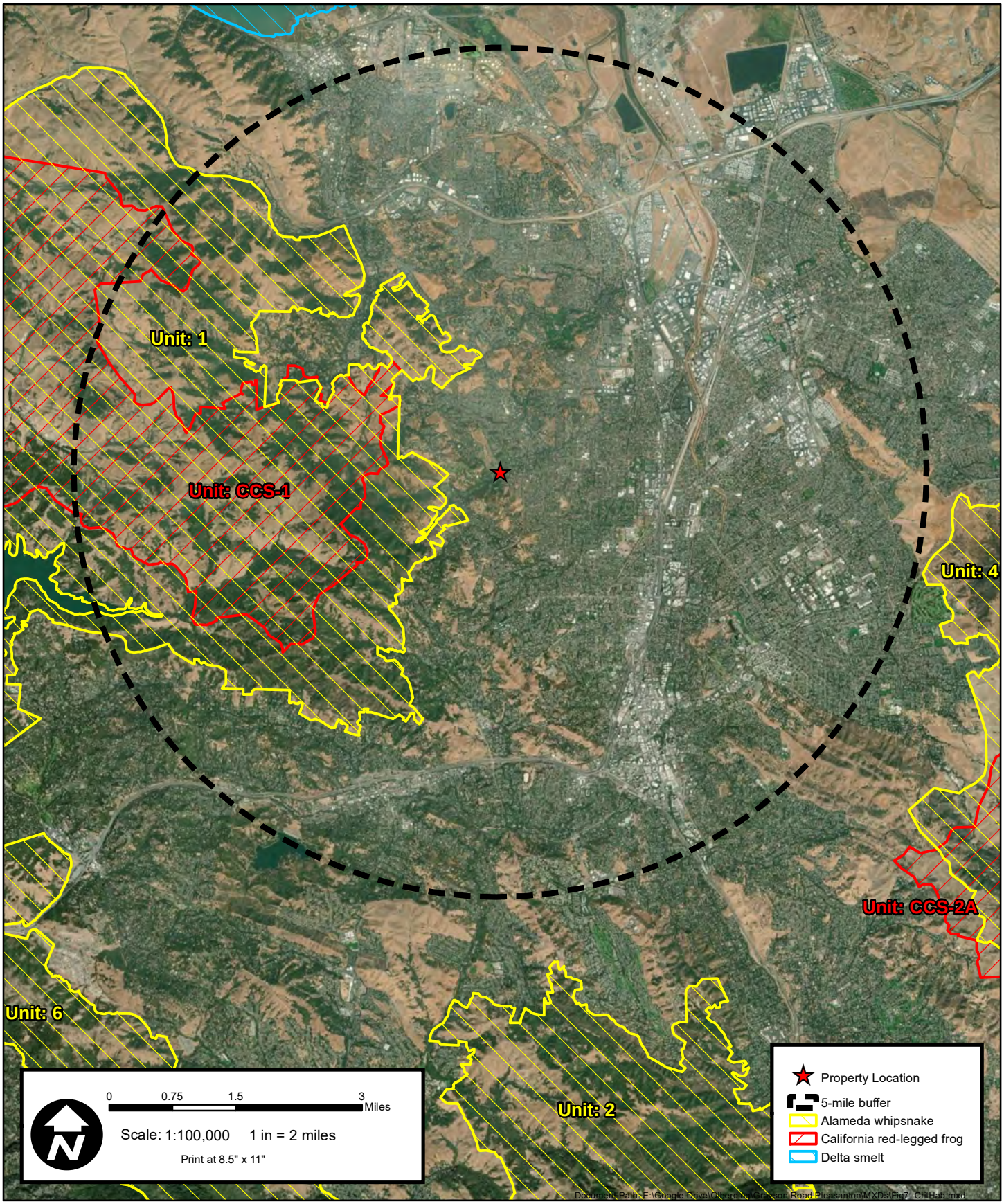


Figure 7: USFWS Designated Critical Habitat Map
Grayson Road Property
Contra Costa County, California

OLBERDING -ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

Revision Date: 4/15/2021

Figure 8
Soils Map

OLBERDING
-ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

Figure 8: Soils Map
Grayson Road Property
Contra Costa County, California

Revision Date: 4/16/2021

Figure 9
Photo Location Map

OLBERDING
-ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

Figure 9: Photo Points Map
Grayson Road Property
Contra Costa County, California

Revision Date: 4/16/2021

Figure 10
Habitat Map

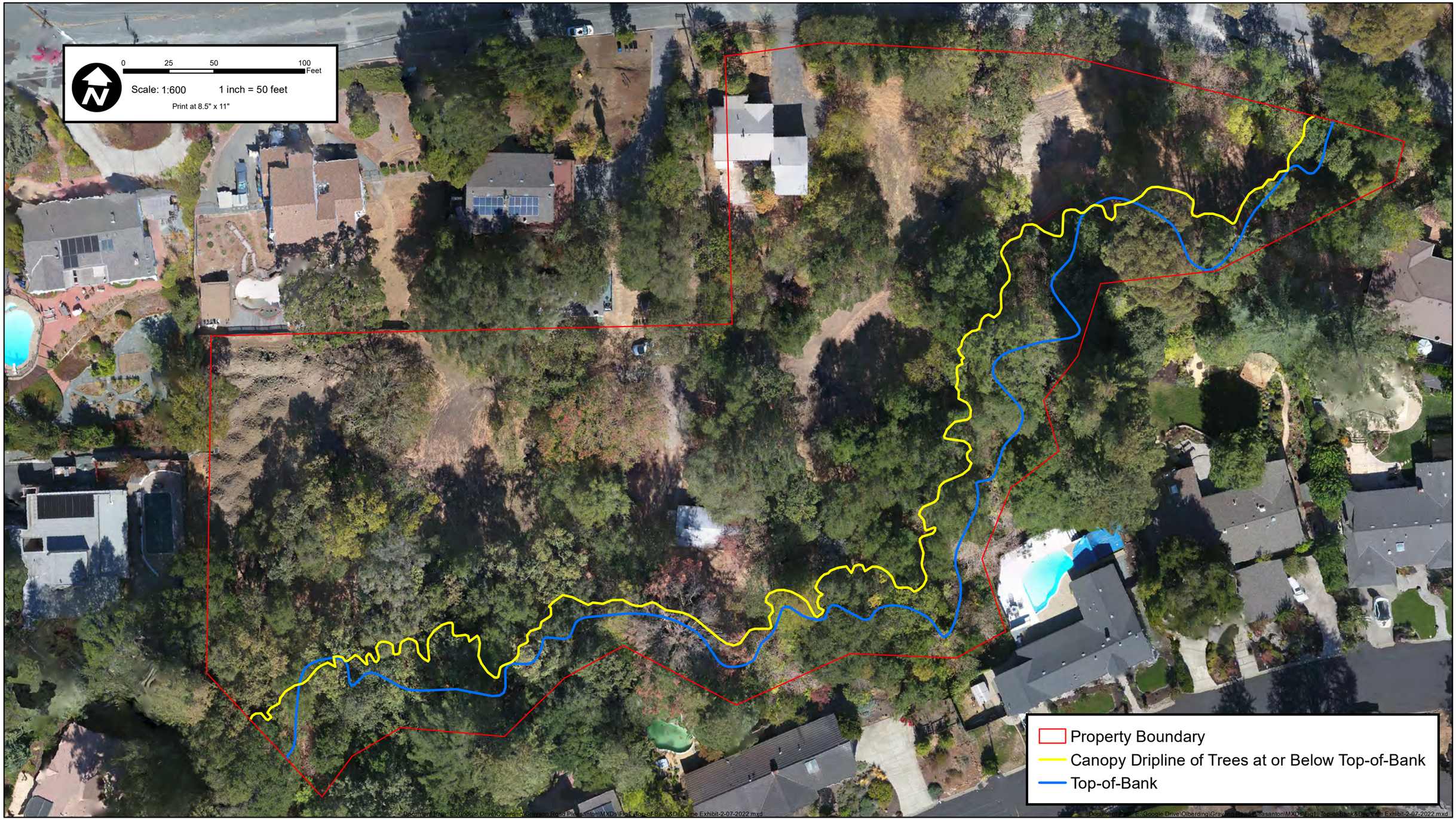
Figure 10: Habitat Map
Grayson Road Property
Contra Costa County, California

OLBERDING
-ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

Revision Date: 4/16/2021

Figure 11
Canopy Dripline of Trees at or Below Top-of-Bank



OLBERDING
-ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

Figure 11: Drip Line Exhibit
Grayson Road Property
Contra Costa County, California

Aerial Imagery: Drone Flight Orthomosaic - 10/16/2021
Revision Date: 2/7/2022

ATTACHMENT 2

SITE PLANS

ALL PLANS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS SIGNED AND STAMPED BY THE ENGINEER AND REVIEWING AGENCY.

CONCEPTUAL BUILDING LAYOUT

1024 & 1026 GRAYSON ROAD
SUBDIVISION SD20-9531

VICINITY OF PLEASANT HILL CONTRA COSTA COUNTY

REGISTERED PROFESSIONAL ENGINEER
EASTON C. McALLISTER
No. 61148
EXP. 12/31/20
CIVIL
STATE OF CALIFORNIA
CALIFORNIA

EASTON C McALLISTER - R.C.E. 61148
RENEWAL DATE: 12/31/22

#	REVISIONS	DATE

DEBOLT CIVIL ENGINEERING
45+ YEARS
811 SAN RAMON VALLEY BLVD #201
DANVILLE, CALIFORNIA 94526
(925) 837-3780 | DEBOLTCIVIL.COM

Date: 08/20/21
Scale: 1" = 20'
By: EM
Job No.: 19300

ATTACHMENT 3

TABLES

Table 1

Plant and Wildlife Species Observed

Within/Adjacent to the Survey Area

Table 1

Wildlife Species Observed Within/Adjacent to the Survey Area

Scientific Name	Common Name
Plant Species Observed	
Salix spp.	Willow species
Aesculus californica	California buckeye
Avena fatua	Wild oat
Galium aparine	Cleavers
Ulmus pumila	Siberian Elm
Bromus diandrus	Ripgut brome
Vinca major	Periwinkle
Carduus pycnocephalus	Italian thistle
Claytonia perfoliata	Miner's lettuce
Medicago polymoprha	Bur clover
Festuca perennis	Italian rye grass
Oxalis pes-caprae	Bermuda buttercup
Torilis arvensis	Field hedgeparsley
Sequoia sempervirens	Coast redwood
Pyrus communis	Common pear
Prunus cerasifera	Cherry plum
Calocedrus spp.	Cedar
Hedera helix	English ivy
Vicia sativa	Common vetch
Plantago lanceolata	English plantain
Quercus agrifolia	Coast live oak
Quercus lobata	Valley oak
Juglans nigra	Black walnut
Rubus armeniacus	Himalayan blackberry
Silybum marianum	Milk thistle
Toxicodendron diversilobum	Western poison oak
Pinus radiata	Monterey pine
Umbellularia californica	California bay laurel
Eucalyptus globulus	Blue gum
Animal Species Observed	
Birds	
Aphelocoma californica	Western scrub jay

Table 1

Wildlife Species Observed Within/Adjacent to the Survey Area

Scientific Name	Common Name
Buteo jamaicensis	Red-tailed hawk
Calypte anna	Anna's hummingbird
Cathartes aura	Turkey vulture
Cyanocitta stelleri	Steller's Jay
Junco hyemalis	Dark-eyed junco
Melanerpes formicivorus	Acorn woodpecker
Melozone crissalis	California towhee
Pipilo maculatus	Spotted towhee
Sayornis nigricans	Black phoebe
Psaltriparus minimus	Bushtit
Corvus brachyrhynchos	American crow
Accipiter cooperii	Cooper's hawk
Buteo lineatus	Red-shouldered hawk
Zonotrichia leucophrys	White-crowned sparrow
Reptiles	
Sceloporus occidentalis	Western fence lizard

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
PLANTS					
Antioch Dunes Evening Primrose (*Oenothera deltoides ssp. howellii*)	E/E/1B	March – September	Inland dunes.	Low Surveyed during blooming period	Presumed absent
Bent-flower Fiddleneck (*Amsinckia lunaris*)	-/-/1B	March – June	Coastal bluff scrub, cismontane woodland, and valley and foothill grassland	Low Surveyed during blooming period	Presumed absent
Big tarplant (*Blepharizonia plumosa)*	-/-/1	July - October	Valley grassland, foothill woodland, chaparral.	Low Suitable habitat present	Not likely to occur
Bolander's Water-Hemlock (*Cicuta maculata var. bolanderi*)	-/-/2B	July – September	Coastal, salt marsh and wetland riparian.	Low No suitable habitat present	Presumed absent
California Linderiella (*Linderiella occidentalis*)	SOC/-/-	December – May (dependent on the timing of winter and spring rains)	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity and conductivity.	Low Surveyed during blooming period	Presumed absent
Carquinez Goldenbush (*Isocoma arguta*)	-/-/1B	August – December	Alkaline valley and foothill grassland.	Low Suitable habitat present	Not likely to occur

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Congdon's Tarplant (*Centromadia parryi* ssp. *congdonii*)	-/-/1B	June – November	Valley and foothill grasslands in alkaline soils.	Moderate Suitable habitat present.	Presumed absent
Contra Costa Goldfields (*Lasthenia conjugens*)	E/-/1B	March – June	Valley and foothill grassland, cismontane woodland, and vernal pools, swales, and low depressions in open grassy areas.	Low Surveyed during blooming period	Presumed absent
Delta Tule Pea (*Lathyrus jepsonii var. jepsonii*)	-/-/1B	May – July	Freshwater wetlands, wetland-riparian, freshwater marsh, brackish marsh.	Low No suitable habitat present	Presumed absent
Diablo Helianthella (*Helianthella castanea*)	-/-/1B	March – June	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Usually in chaparral/oak woodland interface in rocky, azonal soils, often in partial shade.	Low Surveyed during blooming period	Presumed absent
Hall's Bush-Mallow (*Malacothamnus hallii)*	-/-/1B	May – September	Chaparral, coastal scrub.	Low No suitable habitat present	Presumed absent
Long-Styled Sand Spurrey (*Spergularia macrotheca longistyla*)	-/-/1B	February – May	Alkaline meadows and seeps, marshes and swamps.	Low Surveyed during blooming period	Presumed absent

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Mount Diablo Fairy-Lantern (*Calochortus pulchellus*)	-/-/1B	April – June	Chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland; on wooded and brushy slopes.	Low Surveyed during blooming period	Presumed absent
Oval-Leaved Viburnum (*Viburnum ellipticum*)	-/-/2B	May – June	Chaparral, cismontane woodland, lower montane coniferous forest.	Low Suitable habitat present	Not likely to occur
San Joaquin spearscale (*Atriplex joaquiniana)*	-/-/1B	April-October	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland in seasonal alkali wetlands or alkali sink scrub with *Distichlis spicata, Frankenia,* etc.	Low Surveyed during blooming period	Presumed absent
Soft Salty Bird's Beak (*Chloropyron molle ssp. molle*)	E/R/1B	July – November	Coastal salt marsh, wetland-riparian.	Low No suitable habitat present	Presumed absent

BIRDS					
American Kestrel (*Falco sparverius)*	-/CP/-	February – August	Various grassland habitats, urban land, oak woodlands with grassland for foraging.	Moderate Suitable habitat present	May occur
American Peregrine Falcon (*Falco peregrinus anatum*)	-/-CP/-	February – August	Nests near wetlands, lakes, rivers, or other water. On cliffs, banks, dunes, mounds, and human-made structures.	Low No suitable habitat present	Not likely to occur
Burrowing Owl (*Athene cunicularia*)	SOC/-/SC	February – August	Dry open annual or perennial grassland, desert and scrubland. Uses abandoned mammal burrows for nesting.	Low No suitable habitat present	Not likely to occur
Cooper's Hawk (*Accipiter cooperii*)	-/CP/-	February – August	Oak woodlands, coniferous forests, riparian corridors. Often hunts on edges between habitats.	High Suitable habitat present	Present
Ferruginous Hawk (*Buteo regalis*)	-/CP/-	Late Fall – Winter	Open country such as semiarid grasslands with few trees, rocky outcrops, and open valleys. Also along streams or in agricultural areas during migration.	Low No suitable habitat present	Not likely to occur
Golden Eagle (*Aquila chrysaetos*)	-/CP/SC	February – August	Nests in cliff-walled canyons and tall trees in open areas. (Nesting and wintering) Rolling foothills mountain areas, sage-juniper flats, and desert.	Low No suitable habitat present	Not Likely to Occur
Great Blue Heron (*Ardea herodias*) ROOKERIES	-/-/-	February – August	(Rookery) Nests in tall trees in close proximity to foraging areas such as marshes and streams.	Low No suitable habitat present	Not likely to occur
Great Egret (*Ardea alba*) ROOKERIES	-/-/-	February – August	Freshwater, brackish and marine wetlands. Form breeding colonies on lakes, ponds, marshes, estuaries or islands. Forage in marshes, swamps, streams, rivers, ponds, tidal flats, canals and flooded fam fields.	Low Suitable habitat present	Not likely to occur

Red-shouldered Hawk (*Buteo lineatus*)	-/CP/-	February – August	Forages in variety of semi-developed habitats including orchards. Forages in woodlands and riparian areas. Nests in riparian habitat but also eucalyptus groves.	High Suitable habitat present	Present
Red-tailed Hawk (*Buteo jamaicensis*)	-/CP/-	February – August	Various grassland habitats, urban land, oak woodlands with grassland for foraging.	High Suitable habitat present	Present
Sharp-Shinned Hawk (*Accipiter striatus*)	-/CP/-	February – August	Oak woodlands, coniferous forests, riparian corridors. Often hunts on edges between habitats. (Nesting) Ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers riparian areas.	Moderate Suitable habitat present	May occur
Suisun Song Sparrow (*Melospiza melodia maxillaris)*	-/-/SC	February – August	Inhabits tidal salt marshes, needs vegetation for nesting sites.	Low No suitable habitat present	Not likely to occur
Swainson's Hawk (*Buteo swainsonii)*	-/T/-	February – October	Nests in riparian areas and in oak savannah near foraging areas. Forages in alfalfa and grain fields with rodent populations.	Low No suitable habitat present	Not likely to occur
Tricolored Blackbird (*Agelaius tricolor*)	SOC/-/SSC	February – August	Nesting within seasonal wetland marshes, blackberry brambles or other protected substrates. Forages in annual grassland and wetland habitats.	Low No suitable habitat present	Not likely to occur
White-tailed Kite (*Elanus leucurus*)	SOC/CP/FP	February – August	Various grassland habitats, urban land, oak woodlands with grassland for foraging.	Low Suitable habitat present	Not likely to occur
Yellow Rail (*Coturnicops noveboracensis)*	-/-/SSC	February - August	Salt or brackish marshes or wet meadows. Prefers habitats with tall, dense vegetation such as sedges or cattails.	Low No suitable habitat present	Presumed absent
MAMMALS					

Big Free-Tailed Bat (*Nyctinomops macrotis*)	-/-/SSC	Resident	Inhabits rocky or canyon country where it roosts in crevices. Arid landscapes such as desert shrub, woodlands and evergreen forests.	Low No suitable habitat present	Not likely to occur
Hoary Bat (*Lasiurus cinereus*)	-/-/-	Resident	Prefers open habitats or habitat mosaics with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees near water. Feeds mainly on moths.	Moderate Suitable habitat present	May occur
Pallid Bat (*Antrozous pallidus*)	-/SC/-	N/A	Forages in grasslands, shrublands, deserts, forests, and woodlands. Most common in open, dry habitats. Roosts in rock crevices, caves, tree hollows, and buildings. Roosts must protect bats from high temperatures; very sensitive to disturbance of roosting sites.	Low Suitable habitat present	Not likely to occur
Salt Marsh Harvest Mouse (*Reithrodontomys raviventris)*	E/E/FP	Resident	Salt marshes with dense stands of pickleweed and other dense wetland vegetation such as cattails or bullrush.	Low No suitable habitat present	Presumed absent
Townsend's Big-Eared Bat (*Corynorhinus townsendii*)	-/SSC/-	Resident	Throughout California in a wide variety of habitats; roosts in the open, hanging from walls and ceilings. Needs sites free from human disturbance. Most common in mesic sites.	Low Suitable habitat present	Not likely to occur
Western Red Bat (*Lasiurus blossevillii)*	-/-/SSC	Resident	Winter in western lowlands and coastal regions of the San Francisco Bay. Roosts in forests and woodlands. Feed in grasslands, shrublands, open woodlands and forests and croplands.	Moderate Suitable habitat present	May occur
Yuma Myotis (*Myotis yumanensis*)	-/-/-	Resident	Optimal habitats are open forests and woodlands with sources of water over which to feed. Maternal colonies occur in caves, mines, buildings or crevices.	Moderate Suitable habitat present	May occur
AMPHIBIAN					

California Red-Legged Frog (*Rana draytonii*)	T/-/SC	May 1 – November 1	Lowlands and foothills in or near permanent deep water with dense, shrubby or emergent riparian habitat. Requires 11-20 weeks of permanent water for breeding and larval development. Must have access to aestivation habitat.	Moderate Suitable dispersal habitat present	May occur in a dispersal capacity only
California Tiger Salamander (*Ambystoma californiense*)	T/T/-	Aquatic Surveys - Once each in March, April, and May with at least 10 days between surveys. Upland Surveys - 20 nights of surveying under proper conditions beginning October 15 and ending March 15.	Vernal pools, swales and depressions for breeding, needs underground refugia.	Low No suitable habitat present	Presumed absent
Foothill Yellow-Legged Frog (*Rana boylii*)	SOC/-/SC	Year-round resident	Partially-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need cobble for egg-laying.	Low Suitable habitat present	Not likely to occur
REPTILE					
Alameda Whipsnake (*Masticophis lateralis euryxanthus*)	T/T/-	Year-round resident	Valley-foothill hardwood habitat of the coast ranges between Monterey and north San Francisco Bay areas. Inhabits south-facing slopes and ravines where shrubs form a vegetative mosaic with oak trees and grasses.	Low Suitable dispersal habitat present	May occur in a dispersal capacity only
Western Pond Turtle (*Emys marmorata*)	-/-/SC	March – October	Aquatic turtle needs permanent water in ponds, streams, irrigation ditches. Nests on sandy banks or grassy fields.	Moderate Suitable dispersal habitat present	May occur in a dispersal capacity only

1. Special-status plants and animals as reported by the California Natural Diversity Data Base, California Native Plant Society, and other background research April 2021
2. Order of Codes for Plants - Fed/State/CNPS

Order of Codes for Animals - Fed/State/CDFW

Codes:

SOC - Federal Species of Concern

SC - California Species of Special Concern

E - Federally/State Listed as an Endangered Species

T - Federally/State Listed as a Threatened Species

C - Species listed as a Candidate for Federal Threatened or Endangered Status

R - Rare

D - Delisted

CP- California protected

FP - State Fully Protected

DFG: SC California Special Concern species

1B - California Native Plant Society considers the plant Rare, Threatened, or Endangered in California and elsewhere.

1A - CNPS Plants presumed extinct in California.

2 - CNPS Plants Rare, Threatened or Endangered in California, but more common elsewhere.

3 - CNPS Plants on a review list to find more information about a particular species.

4 - CNPS Plants of limited distribution - a watch list.

ATTACHMENT 4

SITE PHOTOGRAPHS

1. Photo taken facing south showing the two-story residential home and surrounding woodland habitat at northwestern boundary of Property. Photo taken April 6, 2021.

2. Photo taken facing west showing mixed woodland habitat within the northeastern portion of the Property. Photo taken April 6, 2021.

3. Photo taken facing west showing riparian woodland habitat within the eastern portion of the Property. Photo taken April 6, 2021.

4. Photo taken facing northeast showing mixed woodland habitat in the western portion of the Property. Photo taken April 6, 2021.

5. Photo taken facing southeast showing mixed woodland and riparian woodland habitat within the western portion of the Property. Photo taken April 6, 2021.

6. Photo taken facing south showing the single-story residential home and surrounding woodland habitat located near the southern boundary of the Property. Photo taken April 6, 2021.

7. Photo taken facing west showing mixed woodland habitat in the western portion of the Property. Photo taken April 6, 2021.

8. Photo taken facing south showing mixed woodland and riparian woodland habitat in the western portion of the Property. Photo taken April 6, 2021.

9. Photo taken facing southeast showing portion of Grayson Creek. Photo taken April 6, 2021.

10. Photo taken facing southeast showing Grayson Creek and associated riparian woodland corridor. Photo taken April 6, 2021.

11. Photo taken facing northwest showing mixed woodland with existing residential structure in the background. Photo taken April 6, 2021.

12. Photo taken facing northwest showing mixed woodland habitat in the eastern portion of the Property. Photo taken April 6, 2021.

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May 6, 2020 (revised 10/17/22)

Andy Byde
Calibr Ventures
bydeandy@gmail.com

RE: Revised Arborist Report for the Development of 1024-1026 Grayson Road

Project Summary
This report updates the 2006 arborist report with current tree assessment and measurements, and anticipated tree impact. Trees proposed for removal are estimated based on proposed grading and building footprints. Actual impacts may vary once homes are designed. A supplemental arborist report may be necessary at that time.

This 10/17/22 revision adds 13 trees (#301-313) along the creek that were omitted in prior reports. The scope of work did not include review of updated plans and health/structure reassessment of other trees, though the locations of a few trees were adjusted.

Site Summary
A total of 130 trees > 6" in diameter were inventoried. It is my opinion that 97 trees will need to be removed to accommodate the proposed project. The remaining trees can be retained given that the protection measures within this report are followed.

Assumptions & Limitations
This report is based on my site visit on 5/4/20 & 10/11/22, and existing conditions & demolition plan by Debolt Civil Engineering dated 3/9/22 (plot date 10/13/22). It was assumed that the trees and the proposed improvements were accurately surveyed. Several trees were not surveyed or appear to be located incorrectly, so I roughly located them on the tree protection plan based on their proximity to adjacent surveyed trees. Since it was difficult to tell which trees were accurately located, the approximate locations will likely need to be resurveyed if precision is needed.

The health and structure of the trees were assessed visually from ground level. No drilling, root excavation, or aerial inspections were performed. Internal or non-detectable defects may exist and could lead to part or whole tree failures. Due to the dynamic nature of trees and their environment, it is not possible for arborists to guarantee that trees will not fail in the future.

Tree Inventory & Assessment Table
#s: Each tree was given a square metal tag with numbers ranging from 102-206 & circular tags from #301-313. (Note: as of 2022, tags are likely engulfed by trunk growth.) Trees with letters attached (a, b, or c) were new young trees that have grown up to protected size since the 2006 inventory. Their locations are shown on the attached the tree inventory plan.
DBH (Diameter at Breast Height): Trunk diameters in inches were measured at 4.5' above average grade with a diameter tape. Height of measurement may deviate slightly from the standard on atypical trunks.

Health & Structural Condition Rating
Dead: Dead or declining past chance of recovery.
Poor (P): Stunted or declining canopy, poor foliar color, possible disease or insect issues. Severe structural defects that may or may not be correctable. Usually not a reliable specimen for preservation.
Fair (F)*:* Fair to moderate vigor. Minor structural defects that can be corrected. More susceptible to construction impacts than a tree in good condition.
Good (G): Good vigor and color, with no obvious problems or defects. Generally more resilient to impacts.
Very Good (VG): Exceptional specimen with excellent vigor and structure. Unusually nice.

Dripline: Canopy radius was visually estimated in each cardinal direction.

Age
Young (Y): Within the first 20% of expected life span. High resiliency to encroachment.
Mature (M): Between 20% - 80% of expected life span. Moderate resiliency to encroachment.
Overmature (OM): In >80% of expected life span. Low resiliency to encroachment.

DE: Dripline Encroachment (X indicates encroachment)
CI: Anticipated Construction Impact (L = Low, M = Moderate, H = High)

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
101	Coast live oak											This tree no longer exists. Old report stated it as a 9" tree. No evidence of a stump was found.	N/A
102	Valley oak	16	G-F	G	20	25	20	20	Y	X	M	Epicormic sprouts along scaffold branches. Within west p/l set back, some grading will likely occur within dripline.	Save Set protection fencing at dripline (d/l), and have arborist on site for any d/l encroachment.
103	Fruiting pear	10, 5, 5, 4, 4	P	P	10	0	10	10	OM	X	H	Declining tree. In proposed driveway	Remove
104	Valley oak	18, 19, 20, 12	G	G	30	30	30	30	M	X	H	Co-dominant stems at 3'. In proposed driveway.	Remove
105	Coast live oak	11, 7, 6	F-P	F	15	15	10	0	M	X	H	Co-dominant stems. Understory tree. Within building footprint.	Remove
106	Valley oak	11, 12	G	F	25NW-W				M	X	H	Co-dominant stems. Within building footprint.	Remove
107	Valley oak	4, 3, 12, 11, 5, 7, 5	G	F	25	0	18	25	M	X	H	Basal shoot from old stump. In proposed driveway. Within building footprint.	Remove
107 B	Coast live oak	11, 5, 8	F	P	15	0	0	25	M	X	H	Growing out from base of #107. Co-dominant trunks. Within building footprint.	Remove
108	Coast live oak	17	F	F	25NW-W				M	X	H	Curved trunk. Within building footprint.	Remove
109	Valley oak	12, 11, 7, 6	F	F	30N				M	X	H	One sided tree to the N/W. Dieback & epicormic sprouting. Within building footprint.	Remove
110	Valley oak	20, 11, 11, 16	G	F	25	25	0	25	M	X	H	Co-dominant trunks. Within building footprint.	Remove
111	Coast live oak	19	F-P	F	20	25	20	20	M	X	H	Bark inclusion on all 3 attachments. Sparse with stunted growth. Within building footprint.	Remove
112	Coast live oak	11	F	P	0	6	10	10	Y	X	H	Top broken at 12' with sprouting. Within building footprint.	Remove
113	Valley oak	7	F	P	6S				Y	X	H	Sparse canopy, 2 trunks removed. Within building footprint.	Remove
114	Valley oak	7, 4	F	F	6	6	6	6	Y	X	H	Crowded. Within building footprint.	Remove
115	Coast live oak	13	G	G	12	0	8	10	Y	X	H	3" from base of #116; crowded. Within building footprint.	Remove

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
116	Valley oak	7, 6	F	F	18N				Y	X	H	Very crowded. Co-dominant trunks; sweeping lean to N. Within building footprint.	Remove
117	Coast live oak	17	F-P	F-P	15NE				M		L	Sparse understory tree. Outside of grading limits.	Save
118	Valley oak	14, 18	F	F	15	15	20	20	M		L	Co-dominant stem bends to N. Outside of grading limits.	Save
119	Coast live oak	17	Dead										Remove.
120	Coast live oak	17	F-P	F	10	10	10	10	M		L	Ivy covering trunk. In decline; sycamore borer damage. Treat for Borer. Outside of grading limits in creek setback.	Save
121	Valley oak	13	F	F	20S				Y		L	Ivy covering trunk. Outside of grading limits in creek setback.	Save
122	Valley oak	22	P	P	25N				M		L	Ivy covering trunk. Declining canopy; sweeping lean to N. Outside of grading limits in creek setback.	Save
122 A	Coast live oak	30	F	F	50N				M		L	In creek structure setback. Significant lean to N. Ivy covering trunk. Outside of grading limits in creek setback.	Save
123	Valley oak	14, 7, 7, 10, 10	F	F	0	25	0	15	M	X	H	Sparse canopy. Co-dominant stems at 6'. Within grading limits	Remove
124	Valley oak	16	F	G	15	20	15	8	M	X	H	Tag embedded in trunk. Epicormic sprouts. Within grading limits	Remove
124 B	Coast live oak	7	F	P	6	10	4	0	Y	X	H	90° correcting bend in trunk. Within grading limits	Remove
125	Chinese pistache	27	G	G	25	25	25	25	OM	X	H	Dieback; slightly drought stressed. Within grading limits	Remove
126	Chinese pistache	17, 17, 10, 8	F	G	25	25	25	6	OM	X	H	Within grading limits	Remove
127	Coast live oak	17	G	G	15	0	0	20	M	X	H	Within grading limits	Remove
128	Valley oak	19	G	F	20	25	0	20	M	X	H	Within grading limits	Remove
129	Valley oak	14	G	F	0	20	20	20	Y	X	H	Within grading limits	Remove
130	Coast live oak	16	F	G	15	15	10	0	Y	X	H	Sparse lower canopy. Within grading limits	Remove
131	Calif. Buckeye	11, 8	F	F	15	20	25	20	M	X	H	Dead lower/interior canopy. Within grading limits	Remove
131 B	Valley oak	18	F	F	35N				M	X	H	Not surveyed. 35° lean to N. Ivy and poison oak covering trunk. Within grading limits	Remove
132	Coast live oak	11	F	F	40N				Y	X	H	10° lean to N. Tag engulfed by trunk. Within grading limits	Remove

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
133	Coast live oak	14	G	F	40N-20NW				Y	X	H	10° lean to N. Within grading limits	Remove
134	Monterey pine	50	P	F	50	50	50	50	OM	X	M	Over mature tree, in declining years. Sparse canopy.	Removed
135	Coast redwood	18, 18, 10	F	G	20	20	20	20	M	X	H	Drought stressed, needs irrigation. Within grading limits.	Remove
135 A	Calif. Buckeye	6, 8, 11, 7, 7, 9, 11, 8	G	G	20	20	20	20	M		L	Within creek structure set back. ~3 trunk clusters treated as one.	Save
136	Silver dollar eucalyptus (*Eucalyptus cinerea*)	13, 16	F	F	25	15	10	0	M	X	H	Failed trunk. Within grading limits.	Remove
137	Coast live oak	40	G-F	P	35	35	35	35	M	X	M-H	Ivy covering trunk. Co-dominant stems at 4' with included bark. Grading just north of trunk proposed. Pull grade limits at least 15' from trunk in order to save tree.	Save If grading can be adjusted.
138	Valley oak	18	F	F	15	15	5	0	M	X	M-H	Ivy covering trunk. Grading just north of trunk. Recommend pulling grade limits at least 10' from trunk.	Save If grading can be adjusted
138 B	Buckeye	17, 12, 13, 14, 15, 13, 12, 10, 10, 13	F-P/P	F	20	20	20	20	M		L	In creek structure setback. Top dieback.	Save
139	Mimosa		Dead									Within grading limits.	Remove
140	Coast live oak	17	G	G	18	18	18	18	M	X	H	Within grading limits.	Remove
141	Coast live oak	9	G	G	10	10	10	10	Y	X	H	Tag embedded in trunk but readable. Within grading limits.	Remove
142	Coast live oak	19, 20	G	F	30	30	10	10	M	X	H	Co-dominant trunks. Within grading limits.	Remove
142 B	Coast live oak	20	G	F	30	0	0	20	M	X	H	In creek structure setback. Within grading limits.	Remove
142 C	Coast live oak	14	G	G	20	15	0	0	Y	X	H	Not surveyed.	
143	Valley oak	15	G-F	G	12	12	12	12	Y	X	H	Ivy on trunk. Within grading limits.	Remove
144	Valley oak	11	G	F	15SE				Y	X	H	Ivy on trunk. Understory tree. Within grading limits.	Remove
145	Coast live oak	22	G-F	G	25	20	18	20	M	X	H	Ivy on trunk. Within grading limits.	Remove
146	Coast live oak	18, 15	G	F	25	0	20	25	M	X	H	Co-dominant trunks. Within grading limits.	Remove
147	Fruiting plum		Dead							X	H	Within grading limits.	Remove

#	Species	DBH	Health	Structure	Dripline N	E	S	W	Age	DE	CI	Comments	Action
148	Persimmon	6, 7	G	P	6	15SE		5	M	X	H	Leaders poorly attached, breaking apart. Within grading limits.	Remove
149	Black Walnut	7, 6	G	F	8	15	15	0	Y	X	H	Within grading limits.	Remove
149 B	Valley oak	7	G	F	25NE				Y	X	H	Not surveyed. Within grading limits.	Remove
150	Coast live oak	19	G	F	0	25	20	20	M	X	H	One stem topped by PG&E, Poor location. Within grading limits.	Remove
151	Coast live oak	15	F-P	P	25N-NE		0	20	Y	X	H	Topped by PG&E. Sparse canopy and deadwood. Within proposed driveway	Remove
152	Coast live oak	15	G	F	10	15	0	0	Y	X	H	Sided by PG&E. Within proposed driveway.	Remove
153	Valley oak	20, 15	G	F	10	25	30	30	M	X	H	Somewhat lions tailed, branches elongated to S. Within grading and sewer easement.	Remove
154	Valley oak	13	G	G-F	10	0	20	20	Y	X	M-H	1' from existing gravel driveway. Trunk buried. At edge grading limits. Arborist on site for grading.	Save Arborist to pull fill back from base of tree.
155	Coast live oak	11	G	F	8	12	15	0	Y	X	H	Topped by PG&E. Within proposed driveway.	Remove
156	Coast live oak	9	G	F	6	8	6	0				Growing up under PG&E wires. Within proposed driveway.	Remove
157	Coast live oak	10	G	F	10	0	10	18	Y	X	L	Off-site. Trunk buried. 1.5' from existing gravel driveway. Grading at edge of dripline.	Save Arborist to pull fill back from base of tree.
158	Chinese pistache	12	F	F	15	12	0	10	M	X	H	Partially topped. Within grading for road.	Remove
159	Coast live oak	8	G	F-P	12NW				Y	X	L	Off-site. Trunk buried. Sided by PG&E. Grading at edge of dripline.	Save
160	Valley oak	7	G	F	8	8	0	0	Y	X	L	Off-site. Co-dominant stems at 7'. Topped by PG&E. Trunk buried. Grading at edge of dripline.	Save
160 B	Coast live oak	7	G	F	15N-NE				Y	X	L	Off-site; not surveyed. Lean to NE. 6" NW of #160. . Grading at edge of dripline.	Save
161	Iron bark euc.	11, 7										Previously removed. Suspect by PG&E (under wires)	N/A
162	Coast live oak	15, 11	G	P	15	15	15	15	M	X	L	Topped by PG&E, co-dominant stems. Grading for road at edge of dripline.	Save
163	Coast live oak	11	G	G	6	6	6	6	Y	X	L	Reduced by PG&E. Grading at edge of dripline	Save
164	Incense cedar	15	F	F	7	7	7	7	M	X	H	Sweeping S shaped trunk. Within proposed road.	Remove
165	Incense cedar											Removed.	N/A
166	Coast live oak	19, 20	G-F	F	30	30	30	0	M	X	H	Co-dominant stems. Moderate sycamore borer. Within grading limits.	Remove

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
166 B	Siberian elm	7, 11	F-P	P	18	0	0	18	M	X	H	Not surveyed. Co-dominant stems at 2'. Within grading limits.	Remove
166 C	Siberian elm	9, 8, 7	P	P	20	0	0	20	M	X	H	Not surveyed. Basal sprouts; decay. Within grading limits.	Remove
167	Black walnut	9, 4, 4	F	F	20	0	0	20	M	X	H	Within grading limits.	Remove
168	Black walnut	8	P	P	20NW				Y	X	H	Understory tree; no growth in past 14 years. Within grading limits.	Remove
169	Coast live oak	20	G	F	35	20	20	20	M	X	H	Within grading limits.	Remove
169 B	Coast live oak	9	G	F	30NW				Y	X	H	Not surveyed. Understory tree. 40° phototropic lean to NW. Within grading limits.	Remove
170	Coast live oak	14	G	G	8	8	8	8	Y	X	H	Trunk buried. Within grading limits.	Remove
171	Coast live oak	14	F-P	F	35N-NW				Y	X	H	Ivy around base, upper branches are damaged by a fungal canker at 15'. On creek bank well. Within grading limits.	Remove
171 B	Coast live oak	14	G	G	35NW				Y	X	H	In creek structure setback. 40° lean to NW. Within grading limits.	Remove
172	Monterey pine	48	F-P	F-P	30	30	30	30	OM	X	H	5° lean to N/W. Grading up to base of tree. Only 3-5 years of anticipated lifespan left.	Remove
173	Calif. Buckeye	14, 14, 8, 8, 8, 7, 7, 5	G	F	35	20	0	20	M	X	M-H	Low branching (trunks laying on ground). Grading limits well within N/W dripline. Pull grade limits back so 15’ from trunk.	Save Assuming grade limits can be adjusted.
173 B	Calif. Buckeye	11, 12	G	F	10	10	10	10	M		L	In creek structure setback. Ivy covering tree.	Save
173 C	Coast live oak	8	F	P	25N				Y	X	L-M	Understory tree with heavy lean (trunk horizontal before correcting) to NW. Young tree with some dripline grading encroachment.	Save
174	Black walnut	23	F-P	F	20	20	20	25	M	X	H	Low branching, old mistletoe in canopy; dieback. Within grade limits.	Remove
175	Siberian elm	17, 17, 15	P	P	20	20	20	20	M	X	H	Tree in decline, poorly structured. Within grade limits.	Remove
176	Coast redwood	30	F/F-P	G	15	15	15	15	M	X	H	Drought-stressed. Within grade limits.	Remove
177	Coast redwood	26	F/F-P	G	15	15	15	15	M	X	H	Drought-stressed. Within grade limits.	Remove
177 B	Valley oak	11	G	G	8	8	8	8	Y	X	H	Not surveyed. Chain on trunk. Within grade limits.	Remove
178	Valley oak	14, 6	G	F	15	15	20	20	Y	X	H	Lean to SW. Within grade limits.	Remove
178 B	Valley oak	8	G	F	12	12	0	0	Y			Not surveyed. Within grade limits.	Remove
179	Calif. Buckeye	8, 7, 6	G	G	12	12	12	12	M	X	H	Within grade limits	Remove

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
180	Mulberry	18	P	P	0	10	10	0	OM	X	H	Previously topped. Within grade limits.	Remove
181	Valley oak	11	F	F	15NE-NW				Y		L	Grading just outside dripline.	Save
182	Valley oak	11	F	F	15S				Y	X	L-M	Grading at edge of dripline.	Save
183	Valley oak	13	F	F	20 NE	15	0	0	Y	X	L-M	Grading at edge of dripline.	Save
184	Black walnut	8, 8, 7	P	P	8	8	8	8	M	X	H	Declining health. Within grade limits.	Remove
185	Valley oak	11	F	F	18 NE	10	0	0	Y	X	L-M	S shaped trunk. Grading at edge of dripline.	Save
186	Calif. Buckeye	7, 7, 6, 6, 5, 5, 5	G	G	18	18	18	18	M	X	M	Tangled with mulberry, and walnut. Grading withn dripline.	Save Arborist on site during grading.
187	Mulberry	18	P	P	15	15	15	15	M	X	H	Drought stressed, tangled with buckeye. Within grading limits.	Remove
188	Black walnut	9	F	F	20S				Y	X	H	Competing with buckeye, recommend removal. Within grade limits.	Remove
188 B	Coast live oak	11	F	G	12	12	12	12	Y	X	H	Not surveyed. Within storm treatment area.	Remove
188 C	Coast live oak	11	G	G	6	0	10	15	Y	X	H	Not surveyed. Within storm treatment area.	Remove
189	Calif. Buckeye	9, 9, 8, 7, 7, 5, 5, 5, 3, 3, 3	G	G	15	20	25	20	M	X	L-M	Grading limits at edge of dripline.	Save
190	Mulberry	16	Dead										Remove.
191	Coast live oak	14	G	G	10	10	10	10	Y		L	Grade limits just outside dripline.	Save
191 B	Coast live oak	11, 9	F	F	18NE-NW				M		L	Not surveyed. Lean over road.	Save
192	Mulberry	19	P	P	8	8	8	8	OM	X	H	Drought stressed. In decline. Within grade limits.	Remove
192 A	Coast live oak	17	G	F	18 NE	10	10	18 NW	M		L	In creek structure setback. Reduced by PG&E. By street, lifting asphalt curb.	Save
192 B	Willow	20, 20	P	P	15	0	0	0	OM		L	Outside northeast property corner along Grayson. Topped by PG&E; sparse canopy. Recommend removal	Remove
192 C	Willow	24	F	P	0	0	25	30 SW	OM		L	Outside northeast property corner along Grayson. Uprooted to S. Fallen tree.	Remove
193	Siberian elm	12, 12, 10, 5, 5, 4	P	P	8	8	8	8	M	X	H	Dying tree. Within grading limits	Remove

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
194	Siberian elm	12, 9, 4	P	P	0	15	15	15	M	X	H	Dying tree. Within grade limits.	Remove
194 B	Coast live oak	9	G	F	15N				Y	X	H	Not surveyed. Up against elm.	Remove
195	Siberian elm	13, 4	P	P	20N				M	X	H	Declining health. Within grade limits.	Remove
196	Coast live oak	19	G	F	20 NW	0	20	20	M		L	Sweeping trunk	Save
197	Bush eucalyptus	10, 8, 8	Dead						M		L	Dead/failed. Fire hazard.	Remove
198	Bush eucalyptus	15, 15	P	P	10N				M		L	Dying, fire hazard.	Remove
199	Blue gum euc.	50	F	F-P	25	20	20	20	M		L	10" branch failure to N in 2006; minor sprouting from failure. Prune for safety if targets within 50ft.	Save
200	Bush eucalyptus	18, 5, 6	F	P	15S				M		L	Declining health. Recent failures. Prune for safety.	Save
201	Monterey pine	24	F	P	20	20	20	20	OM		L	Over mature tree, badly included co-dominant stems. Anticipate short life span, recommend removal.	Remove
202	Monterey pine	22	P	P	0	20	20	0	OM		L	Over mature tree, declining health. Recommend removal.	Remove
203	Monterey pine											Removed.	N/A
204	Monterey pine	18	F	P	25E				M		L	Poorly tapered trunk; lean to E. Recommend removal.	Remove
205	Monterey pine											Removed.	N/A
206	Calif. Buckeye	15, 15, 10, 10	G	G	25	25	25	25	M		L	Healthy tree.	Save
301	Calif. Buckeye	10, 10	G	G-F	8	12	10	12	M	X	H	Co-dominant trunks. In proposed grading.	Remove.
302	Coast live oak	9	F/F-P	F-P	25N- 20NE				Y	X	H	Dominated by poison oak and ivy. In proposed grading.	Remove.
303	Valley oak	19	G-F	F	25N				M	X	H	Corrected phototropic lean (about 20' above grade). Slightly sparse canopy. Ivy & poison oak dominating lower trunk. In proposed grading.	Remove.
304	Coast live oak	20	G	F	15	6	10	25	M	X	H	Ivy climbing trunk. Canopy in upper half. In proposed grading.	Remove.
305	Valley oak	19.5	F-P/P	F-P	25N				M	X	H	Dead secondary stem at base, branches dead to very top. Remaining canopy sparse & stunted with deadwood. In proposed grading.	Remove.
306	Valley oak	12	P	P	30N				M-OM	X	H	Lower branches dead. Remaining canopy very sparse and stunted, concentrated at top of tree about 15' N of trunk. In proposed grading.	Remove.
307	Coast live oak	24	G	G-F	20	20	15	15	M	X	H	Ivy climbing trunk. Trunk has slight kink to E at 6' but has reoriented vertically. Canopy in upper half of tree. In proposed grading.	Remove.

#	Species	DBH	Health	Structure	Dripline N E S W	Age	DE	CI	Comments	Action
308	Coast live oak	13, 16, 7	G-F	F/F-P	30N	M	X	H	Multiple co-dominant trunks. Phototropic lean to N, all canopy in upper 1/4. Ivy climbing trunk. In proposed grading.	Remove.
309	Coast live oak	11	G-F	F-P	25N	Y-M	X	H	Phototropic lean to N, all canopy in upper 1/6. In proposed grading. In proposed grading.	Remove.
310	Coast live oak	10	F	P	0 0 8 12	Y-M	X	H	1/3 canopy dead, remaining branch extends to W. Ivy climbing trunk. In proposed grading.	Remove.
311	Coast live oak	21	F	F	30N	M	X	H	Phototropic lean to N, all canopy in upper 1/3, slightly corrected lean In proposed grading.	Remove.
312	Coast live oak	28	G-F	F/F-P	30N	M	X	H	Phototropic lean to N, all canopy in upper 1/4. Ivy climbing trunk. In proposed grading.	Remove.
313	Valley oak	9	F-P	F	30NW	Y	X	H	Phototropic lean to NW, ivy. In proposed grading.	Remove.

Tree Encroachment Summary

A total of 130 trees were inventoried. At least four additional trees (#101, 134, 203 & 205) that were shown on the survey were removed since the original site visit.

- Trees that will need to be removed: #'s 103-116, 119, 123-135, 136, 139-153, 155-156, 158, 164, 166-172, 174-180, 184, 187-188c, 190, 192, 192b-195, 197, 198, 201-201, 301-313 (97 trees)
- Trees to be saved that will be subjected to dripline encroachment, and will need arborist supervision during grading within driplines: #'s 102, 137, 138, 154, 157, 159, 160, 160b, 162, 163, 173, 173c, 182, 183, 185, 186, 189 (17 trees)
- Additional trees to be saved that will not have dripline encroachment: #'s 117, 118, 120, 121, 122, 122a, 135a, 173a, 181, 191, 191b, 192a, 196, 199, 200, 266 (16 trees)

Tree Protection Recommendations (to be printed on site plans)

Pre- Grading Phase

- Remove trees #103-116, 119, 123-135, 136, 139-153, 155-156, 158, 164, 166-172, 174-180, 184, 187-188c, 190, 192, 192b-195, 197, 198, 201-201, 301-313 (97 trees)
- Mulch from tree removals may be spread out under the driplines of trees that will be retained, keeping at least 12" away from the trunks.
- Prior to construction or grading, contractor shall install protection fencing to construct a temporary Tree Protection Zone (TPZ) around each tree or grove of trees to be saved. TPZ fencing shall encompass the driplines and be approved by the project arborist.
- TPZ fencing shall remain in an upright sturdy manner from the start of grading until the completion of construction. Fencing shall not be adjusted or removed without consulting the project arborist.

Grading and Construction Phase

- The project arborist shall be on-site during excavation/grading within driplines, especially trees: #'s 102, 137, 138, 154, 157, 159, 160, 160b, 162, 163, 173, 173c, 182, 183, 185, 186, 189.
- Should roots ≥ 2" be encountered, arborist shall cleanly prune roots with a handsaw or sawzall, and immediately re-cover. Irrigate as necessary.
- If needed, canopy pruning shall be performed by personnel certified by the International Society of Arboriculture (ISA). All pruning shall adhere to ISA and American National Standards Institute (ANSI) Standards and Best Management Practices. Project arborist to set guidelines prior to pruning.
- Should Tree Protection Zone (TPZ) encroachment be necessary, the contractor shall contact the project arborist for consultation and recommendations.
- Contractor shall keep TPZs free of all construction-related materials, debris, fill soil, equipment, etc. The only acceptable material is mulch spread out beneath the trees.
- Should any damage to the trees occur, the contractor shall promptly notify the project arborist to appropriately mitigate the damage.

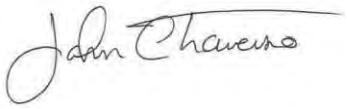
Landscaping Phase (if applicable)

- The Tree Protection Zone (TPZ) fencing shall remain in place with the same restrictions until landscape contractor notifies and meets with the project arborist.
- Avoid all fill work, grade changes, and trenching within driplines unless it is performed by hand, and approved by the project arborist.
- Pipes shall be threaded under or through large roots without damaging them.
- Contractor shall avoid trenching and grade changes within driplines.
- All planting and irrigation shall be kept a minimum of 10' away from native oaks. All irrigation within the driplines shall be targeted at specific plants, such as drip emitters or bubblers. No overhead irrigation shall occur within the driplines of native oaks.
- All planting within oak driplines shall be compatible with oaks, consisting of plant material that requires little to no water after two years' establishment. A list of oak-compatible plants can be found in a publication from the California Oak Foundation, available at: http://californiaoaks.org/wp-content/uploads/2016/04/CompatiblePlantsUnderAroundOaks.pdf

Thank you for the opportunity to provide this report, and please do not hesitate to contact me if there are any questions or concerns.

Please see attached tree inventory plan.

Sincerely,



John C Traverso
ISA Board Certified Master Arborist #WE0206-B
ISA Tree Risk Assessor Qualified
TCIA Certified Tree Care Safety Professional #01802

(10/17/22 Revision by

Jennifer Tso
Board Certified Master Arborist #WE-10270B
ISA Tree Risk Assessor Qualified)

HATCH LEGEND

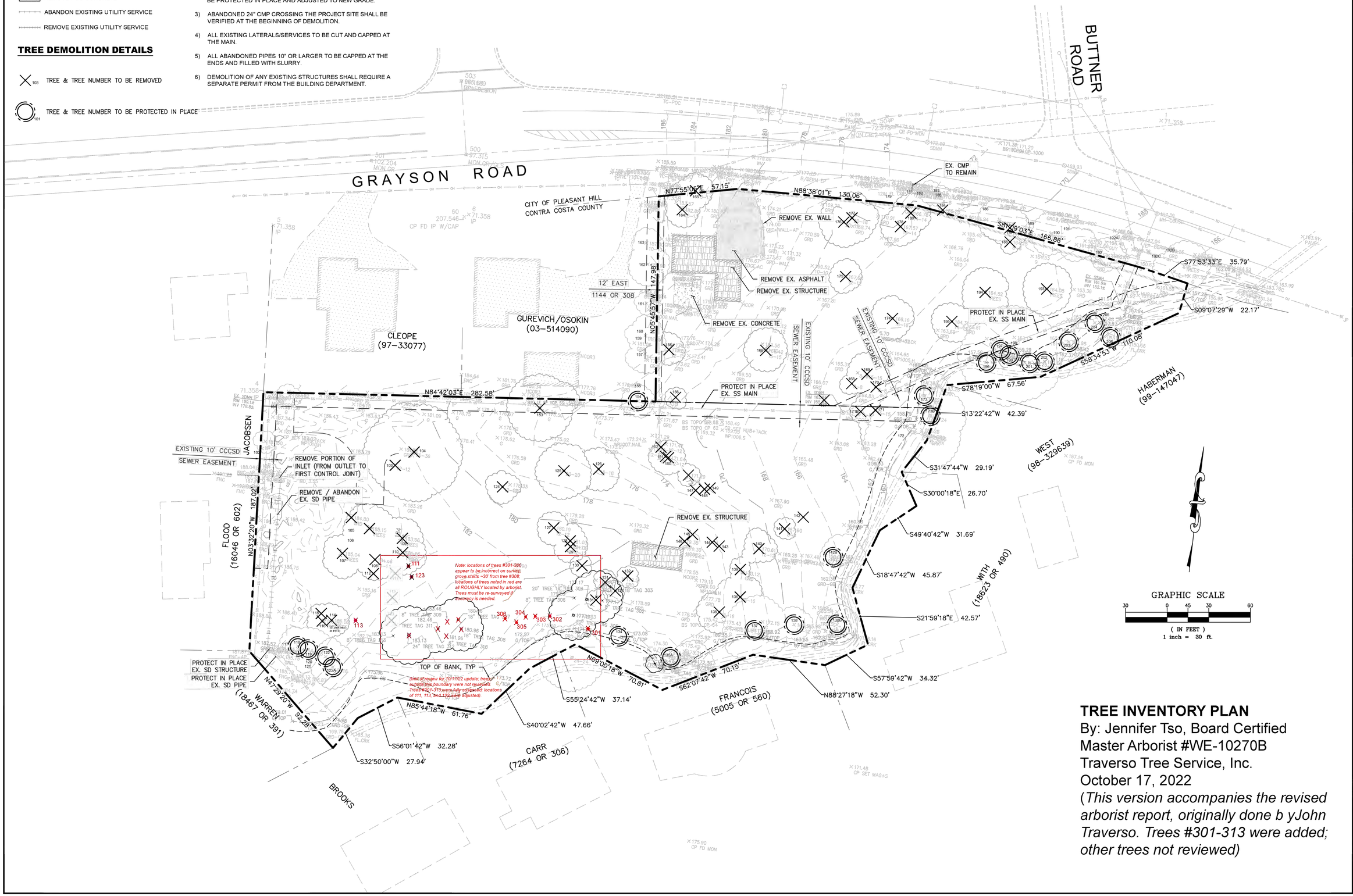
- REMOVE BUILDING
- REMOVE ASPHALT PAVEMENT
- REMOVE PCC CONCRETE
- ABANDON EXISTING UTILITY SERVICE
- REMOVE EXISTING UTILITY SERVICE

TREE DEMOLITION DETAILS

- 103 — TREE & TREE NUMBER TO BE REMOVED
- 101 — TREE & TREE NUMBER TO BE PROTECTED IN PLACE

CONTRACTOR NOTES

1) CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL THE PROPOSED WORK IN CONFORMANCE WITH OTHER RECENT AND ACTIVE PROJECTS IN THE AREA.
2) ALL EXISTING UTILITIES NOT DESIGNATED FOR REMOVAL SHALL BE PROTECTED IN PLACE AND ADJUSTED TO NEW GRADE.
3) ABANDONED 24" CMP CROSSING THE PROJECT SITE SHALL BE VERIFIED AT THE BEGINNING OF DEMOLITION.
4) ALL EXISTING LATERALS/SERVICES TO BE CUT AND CAPPED AT THE MAIN.
5) ALL ABANDONED PIPES 10" OR LARGER TO BE CAPPED AT THE ENDS AND FILLED WITH SLURRY.
6) DEMOLITION OF ANY EXISTING STRUCTURES SHALL REQUIRE A SEPARATE PERMIT FROM THE BUILDING DEPARTMENT.



TREE INVENTORY PLAN

By: Jennifer Tso, Board Certified Master Arborist #WE-10270B
Traverso Tree Service, Inc.
October 17, 2022
(*This version accompanies the revised arborist report, originally done b yJohn Traverso. Trees #301-313 were added; other trees not reviewed)*

TALUS
ENGINEERING | PLANNING | DEVELOPMENT

IMPROVEMENT PLANS FOR 1024 GRAYSON ROAD (SUBD SD20-9531)
EXISTING CONDITIONS AND DEMOLITION PLAN

CONTRA COSTA COUNTY CALIFORNIA
PLEASANT HILL (UNINC.)

Revisions

No.	

Stamp: REGISTERED PROFESSIONAL ENGINEER — PORTER C. McCARTER — No. 61148 — EXP. 12/31/22 — CIVIL — STATE OF CALIFORNIA

Date	03/09/22
Scale	1" = 30'
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3 OF **14**

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PLOT DATE: 10-13-22 PLOTTED BY: karin

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BIOLOGICAL RESOURCE ANALYSIS ADDENDUM

GRAYSON ROAD 10-LOT SUBDIVISION PROJECT

Contra Costa County, California

December 2022

Prepared by:
Johnson Marigot Consulting, LLC
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433 Visitacion Ave
Brisbane, California 94005

Prepared for:
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Mr. Andy Byde
PO Box 1162
Alamo, CA 94507

JOHNSON MARIGOT
CONSULTING, LLC

Grayson Road 10-Lot Subdivision Project

Biological Resource Analysis

Contents

List of Figures

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SECTION 1. INTRODUCTION

1.1 PURPOSE OF THE DOCUMENT

The purpose of this Biological Resource Analysis (BRA) Addendum is to consolidate previous efforts and add additional detail and analysis to complete a review of potential effects of the Grayson Road 10-Lot Subdivision Project (Project) on biological resources in accordance with the requirements of the California Environmental Quality Act (CEQA) (California Public Resources Code, Division 13, Section 2100 et seq.) and CEQA Guidelines (Title 14, California Code of Regulations, Chapter 3, Section 15000 et seq.). The analysis herein considers the Project location in conjunction with proposed work activities, as described at the time of this analysis, to consider potential Project-related impacts on the natural environment.

A BRA Report for the Grayson Road Property was prepared by Olberding Environmental, Inc dated February 2022 (Olberding BRA) (Attachment A). This BRA Addendum for the Grayson Road 10-Lot Subdivision Project incorporates findings from the Olberding BRA and expands upon the analysis provided therein regarding potential Project-impacts to biological resources. In addition to the Olberding BRA, this BRA Addendum provides a complete analysis of potential impacts to biological resources that could be incurred as a result of Project implementation, consistent with CEQA requirements.

1.2 PROJECT LOCATION

The 3.05-acre Project site is located at 1028 Grayson Road, immediately south of the intersection of Grayson Road and Buttner Road, in unincorporated Contra Costa County, California (approximate center of the property is located at 37.94749146° N, 122.09525324° W) (Figure 1). The Project is located on the Walnut Creek Quadrangle within Section 9, Township 1N, and Range 2W. The Project site consists of parcels (Accessor Parcel Numbers 166-030-001 and -002).

1.3 PROPOSED PROJECT

Calibr Ventures proposes to construct a small residential subdivision consisting of 10 four- to five-bedroom single family homes, as well as associated access, drainage, and utility facilities, including a detention basin. Implementation of the proposed Project would include the demolition of two abandoned residences and ancillary structures and the removal of 97 trees. Project implementation would include the demolition and removal of all existing onsite structures, mass grading of the northern 2.08 acres of the Project site, and construction of project components. Offsite construction activities include the grading of approximately 0.05 acre along the northern parcel boundary to accommodate site leveling.

The proposed Project was designed to include a creek setback to avoid impacts to the adjacent Grayson Creek to the greatest extent feasible. The proposed Project has been designed to incorporate a creek setback that includes above-ground permanent elements such as roads/driveways and structures to be constructed a minimum of 50 feet from the centerline of Grayson Creek (as mapped by Debolt Civil Engineering) (Figure 2).

1.4 PROJECT SCHEDULE AND DURATION

Project construction is expected to take up to two years to complete and is anticipated to commence in Spring of 2023. Construction work for the Project would be completed during daylight hours.

SECTION 2. EXISTING ENVIRONMENTAL CONDITIONS

Based on reconnaissance level site visits performed by JMC staff, Ms. Sadie McGarvey on August 18 and 25, 2022, conditions described within the Olberding BRA accurately reflect conditions onsite with the exception of the extent of riparian habitat located on the Project site. Additional information obtained during Ms. McGarvey's August 24, 2022 site visit included the delineation of the extent of riparian canopy within the Project site. Additional site description is provided below to supplement analysis necessary to evaluate effects to onsite habitats. An updated arborist report is included as Attachment B.

2.1 RIPARIAN

The term "riparian" generally refers the transition zone between wetlands and uplands, often referring to the primarily woody vegetation associated with both lentic and lotic systems. The California Department of Fish and Wildlife (CDFW) defines riparian vegetation as "native vegetation occurring naturally along banks or margins of lakes or streams (CDFG 1994). The United States Fish and Wildlife Services (USFWS) further defines riparian areas as "plant communities contiguous to and affected by surface and subsurface hydrologic features of perennial or intermittent lotic and lentic water bodies (rivers, streams, lakes, or drainage ways)" that exhibit "distinctly different vegetative species than adjacent areas and/or "species similar to adjacent areas but exhibiting more vigorous or robust growth forms" (USFWS 2019).

As described in Section 7.2.1 of the Olberding BRA, a significant portion of the Project site is dominated by riparian woodland associated with the site-adjacent Grayson Creek. This riparian woodland is dominated by large oak trees (*Quercus agrifolia* and *Q. lobata*), with trunks that generally occur at or above the TOB of Grayson Creek, and high canopies that shade both the creek channel and the adjacent upland areas. The lower canopy within this oak-dominated riparian woodland is comprised largely of willows (*Salix* spp.), California buckeye (*Aesculus californica*), and California bay laurel (*Umbellularia californica*). Riparian trees with trunks that occur above TOB are generally located within a low terrace that occurs outside of the creek channel, but would potentially receive channel overflows during rare episodic flood events.

The northernmost riparian trees, especially on the western portion of the Project site, exhibit strong phototropism - leaning outwards from the dense innermost riparian canopy seeking sufficient light to continue growth. The extent of riparian canopy was determined as the dripline of all trees with trunks occurring below TOB, or those with trunks occurring at or above top of bank which exhibit phototropic characteristics that indicate the inclusion of those trees within a riparian community that has clearly expanded beyond the resources provided within the footprint of the Grayson Creek channel and abutting uplands. The extent of the riparian woodland is depicted in Figure 3.

Photos 1 and 2 within Attachment C clearly illustrate the distinction between the upright growth forms of the trees within the mixed woodland (discussed in Section 7.2.1 of the Olberding BRA) compared to the outstretched and leaning growth forms of the riparian trees that occur in close proximity. In some areas, the canopy of the riparian trees overlap with the canopy of the upland mixed woodland. In these instances, the edge of riparian canopy was mapped as the dripline of the riparian trees. A total of 1.01 acres of riparian woodland has been mapped on the Project site.

2.2 UPLAND WOODLANDS

As described in Section 7.2.1 of the Olberding BRA, the majority of the Project site is comprised of upland, mixed woodland habitat dominated by valley and coast live oaks, with minor components of black walnut (*Juglans hindsii*), Siberian elm *(Ulmus pumila*), Monterey pine (*Pinus radiata*), coast redwood (*Sequoia sempervirens*), and blue gum (*Eucalyptus globulus*), as well as other ornamental and/or non-indigenous species such as mimosa (*Albizia julibrissin*), Chinese pistache (*Pistacia chinensis*), and incense cedar (*Calocedrus decurrens*). The herbaceous layer of the upland woodland habitat is dominated by non-native grasses such as wild oat (*Avena fatua*), Italian rye grass (*Festuca perennis*), and ripgut brome (*Bromus diandrus*), and is regularly disced for fire suppression. The onsite woodland habitat within the southwestern portion of the site is appreciably different than that found in the northeastern portion of the Project site. These two woodland habitats are further discussed below and depicted in Figure 3.

2.2.1 Mixed Woodland

The northeastern portion of the Project site is comprised of a variety of native, non-indigenous, and non-native trees, associated with the northernmost abandoned residence and roadside plantings along Grayson Road. A total of 0.6 acre of mixed woodland occurs on the Project site.

2.2.2 Valley Oak Woodland

The southwestern portion of the Project site is dominated by valley and coast live oaks, with minor components of fruit and ornamental trees located near the southernmost abandoned residence. A total of 1.18 acres of valley oak woodland occurs on the Project site.

SECTION 3. POTENTIAL IMPACTS TO SPECIAL-STATUS HABITATS

3.1 APPLICABLE LAWS

Aquatic resources and special status habitats are regulated by state and federal resource agencies (United States Army Corps of Engineers [USACE], California State Water Resources Control Board [SWRCB], and CDFW) and are accordingly legally protected via the federal and/or state laws in addition to CEQA. The Olberding BRA addresses local, state, and federal regulatory settings regarding impacts to special-status habitats, as well as impacts to special-status habitats on the Project site. Additional discussion of impacts to riparian habitat, wildlife corridors/nursery sites, and Sensitive Natural Communities (as defined by CDFW) is included below.

3.2 METHODOLOGY

Information about aquatic resources and special-status habitats that could occur on the Project site was obtained from the following sources:

- Olberding BRA
- JMC Riparian Delineation (August 2022, see Section 2.1 and Figure 3)
- California Natural Diversity Database (CNDDB) RareFind 5 (CDFW 2022)
- Existing literature as cited in the text

3.3 AQUATIC RESOURCES

While no seasonal wetlands occur on the Project site, the southern portion of the Project site is dominated by Grayson Creek and its associated riparian habitat. As discussed in the Olberding BRA, the Grayson Creek channel is a water of the U.S./State (WOTUS) regulated by USACE pursuant to Section 404 of the Clean Water Act (CWA), and the Grayson Creek riparian corridor is regulated by the RWQCB pursuant to the Section 401 of the CWA and the Porter Cologne Water Quality Control Act, and CDFW pursuant to California Fish and Game Code (FGC) §§1600-1607.

3.4 WILDLIFE CORRIDORS AND NURSERY SITES

The Grayson Creek corridor and its associated riparian habitat are presumed to act as a wildlife corridor and a nursery site.

A wildlife corridor is a portion of land that adjoins two or more larger areas of similar natural environment, often connecting wildlife populations separated by natural or created activities, disturbances, or structures. Wildlife corridors are used for dispersal and migration of wildlife, allowing for genetic exchange, population growth, and access to larger stretches of suitable habitats, and reducing habitat fragmentation. The Olberding BRA identifies the Grayson Creek corridor as providing suitable foraging and/or dispersal habitat for California red-legged frog (*Rana draytonii*) (CRLF), Alameda whipsnake (*Masticophis lateralis euryxanthus*) (AWS), and western pond turtle (*Actinemys marmorata*).

A nursery site is an area where juveniles occur at higher densities, avoid predation more successfully, or grow faster there than in a different habitat (Beck et. al. 2001). The Olberding BRA identifies suitable habitat for nesting birds and roosting bats both throughout the greater Project site as well as within the Grayson Creek riparian corridor. It is presumed that the Grayson Creek riparian habitat

would act as a wildlife nursery due to the combination of presence of suitable nesting/roosting habitat and the creek corridor's protected nature.

3.5 SENSITIVE NATURAL COMMUNITIES

The CNDDB was used to query all special-status habitats with known occurrences within 3 miles of the Project site. According to the CNDDB, no Sensitive Natural Communities occur within 3 miles of the Project site. However, the valley oak and riparian woodland habitats occurring on the Project site, as described in the Olberding BRA and herein, meet the definition of a Valley Oak Woodland and Forest (*Quercus lobata – Quercus agrifolia*/grass) (Code 71.040.06). Valley Oak Woodland and Forest has a State Rarity rank of S3, and is further protected under the Oak Woodland Conservation Act. The collective definition of Valley oak woodland and forest provided by CNPS (CNPS 2022) includes valley oak as a dominant or co-dominant within an open to continuous tree canopy, or sparse but evenly distributed savanna-like canopy, that includes coast live oak (*Quercus agrifolia*), blue oak (*Quercus douglasii*), California black oak (*Quercus kelloggii*), interior live oak (*Quercus wislizeni*), California buckeye, and/or California bay laurel.

As discussed within the Olberding BRA, the riparian habitat occurring onsite is within the jurisdiction of CDFW pursuant to California Fish and Game Code (FGC) §§1600-1607 which regulates activities within or affecting rivers, streams, or lakes. Riparian habitat is generally likewise identified as a sensitive natural community by CDFW. Riparian habitat occurs on the Project site and is addressed in Section 2.1.

3.6 IMPACT ASSESSMENT

3.6.1 Aquatic Resources

The Project design incorporates a stream setback surrounding the Grayson Creek corridor. While a majority of the Grayson Creek riparian corridor will be avoided by Project activities (0.80 acre of the 1.01 acres of riparian habitat occurring onsite [79% of the onsite riparian habitat] will be avoided), project implementation would require grading and the removal of trees within the Grayson Creek riparian corridor. As Project implementation would result in impacts to CDFW's FGC §§1600-1607 jurisdiction, a Lake and Streambed Alteration Agreement would be required.

In addition, implementation of the Olberding BRA Mitigation Measures MM#2 and MM #8 which would include replacement of riparian trees removed from the Project site and installation of erosion control measures would reduce impacts to WOTUS and resources under CDFW's FGC §§1600-1607 jurisdiction to a level considered less than significant pursuant to CEQA through avoidance and minimization of impacts to waters/habitat and/or compensatory mitigation for impacts to riparian trees.

3.6.2 Wildlife Corridors and Nursery Sites

The Project design incorporates a stream setback surrounding the Grayson Creek corridor. While a majority of the Grayson Creek riparian corridor will be avoided by Project activities, Project implementation would require grading and the removal of trees within the Grayson Creek riparian wildlife corridor and nursery site. Grading activities within this wildlife corridor could result in direct

impacts to terrestrial individuals using the corridor for dispersal. Tree removal would result in loss of nesting bird and roosting bat habitat.

Implementation of the Olberding BRA Mitigation Measures MM #2, MM #5, MM #6, and MM#7, and Mitigation Measures BIO-2B, BIO-3, BIO-4 (below) which require tree replacement for riparian trees removed from the Project site, preconstruction surveys for dispersing, roosting, and/or nesting wildlife, and installation of wildlife exclusion fencing, and implementing post-construction measures for protection of the riparian corridor from site occupation would reduce impacts to wildlife corridors and nursery sites to a level considered less than significant pursuant to CEQA through avoidance and minimization of impacts to species and habitat and/or compensatory mitigation for impacts to riparian trees.

3.6.3 Sensitive Natural Communities

Project implementation would result in removal of approximately 1.18 acres of valley oak woodland (including 40 trees, 32 of which are native species) considered a Sensitive Natural Community and an oak woodland protected under the Oak Woodland Conservation Act. Implementation of Mitigation Measures BIO-9A and BIO-9B below, which would include replacement of trees removed from the Project site to offset the temporal loss of biomass, canopy, and habitat diversity value of the removed trees would reduce impacts to valley oak woodland to a level considered less than significant pursuant to CEQA through compensatory mitigation for impacts to valley oak woodland.

The Project design incorporates a stream setback surrounding the Grayson Creek corridor. While a majority of the Grayson Creek riparian corridor will be avoided by Project activities, Project implementation would require grading work within 0.21 acre of the riparian habitat located on the Project site (requiring the removal of 18 riparian trees). Implementation of the Olberding BRA Mitigation Measures MM#2 and MM #8, and Mitigation Measure BIO-2B below, which would include replacement of riparian trees removed from the Project site, installation of erosion control measures, and implementing post-construction measures for protection of the riparian corridor from site occupation would reduce impacts to riparian habitat to a level considered less than significant pursuant to CEQA through avoidance and minimization of impacts to riparian habitat and/or compensatory mitigation for impacts to riparian trees.

SECTION 4. POTENTIAL IMPACTS TO SPECIAL-STATUS SPECIES

4.1 APPLICABLE LAWS

Special-status species include species considered to be rare by federal and/or state resource agencies (USFWS, National Marine Fisheries Service (NMFS), CDFW) and/or the scientific community (CNPS) and are accordingly legally protected pursuant to the federal, state, and/or local laws described below in addition to CEQA. The Olberding BRA addresses local, state, and federal regulatory settings regarding impacts to special-status habitats, as well as impacts to special-status habitats on the Project site. Additional discussion of impacts to rare plants, nesting birds, and roosting bats is discussed below.

4.2 METHODOLOGY

Information about suitability of the Project site for special-status species was obtained from the following sources:

- Olberding BRA
- California Natural Diversity Database (CNDDB) RareFind 5 (CDFW 2022)
- Existing literature as cited in the text

4.3 SPECIAL-STATUS PLANTS

The Olberding BRA identified suitable habitat for four special-status plant species on the Project site: Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), Diablo Helianthella (*Helianthella castanea*), Mount Diablo fairy-lantern (*Calochortus pulchellus*), and bent-flowered fiddleneck (*Amsinckia lunaris*). A single floristic survey was conducted by Olberding Environmental, Inc during the April 2021 site investigation. While this survey was conducted during the bloom period for three of these species, it does not constitute a protocol-level survey effort, which generally includes multiple surveys throughout the focal species' bloom period. The remnants of the previous year's Congdon's tarplant would have been identifiable during the April 2021 survey, and accordingly, the Olberding BRA ruled out presence of this species. However, in the absence of protocol-level rare plant surveys for the remaining three species, the presence of Diablo Helianthella, Mount Diablo fairy-lantern, and bent-flowered fiddleneck cannot be ruled out.

4.4 SPECIAL-STATUS WILDLIFE

The Olberding BRA identified suitable habitat for nesting birds and roosting bats on the Project site. The trees, shrubs, grassland areas, and existing structures throughout the Project site provide suitable nesting habitat for a variety of passerines and raptors protected pursuant to the Migratory Bird Treaty Act and California Fish and Game Code, Sections 3503, 3503.5, and 3511. The large trees and existing structures throughout the Project site provide suitable roosting habitat for special-status bats.

4.5 IMPACT ASSESSMENT

4.5.1 Special-Status Plants

Project implementation would require grading within suitable habitat for special-status plants. Grading activities within this suitable habitat could result in direct impacts special-status plants.

Implementation of Mitigation Measure BIO-10 below, which would include conducting rare plant surveys in advance of construction commencement, would reduce impacts to special-status plants to a level considered less than significant pursuant to CEQA through avoidance of impacts to special-status species.

4.5.2 Special-Status Wildlife

Project implementation would require grading within suitable habitat for nesting birds, as well as the removal of trees and structures that provide suitable habitat for nesting birds and roosting bats. Implementation of Mitigation Measures BIO-3 and BIO-4 below, which would include preconstruction surveys for nesting birds and roosting bats reduce impacts to nesting birds and roosting bats to a level considered less than significant pursuant to CEQA through avoidance of impacts to these special-status species.

SECTION 5. CONTRA COSTA COUNTY GENERAL PLAN POLICIES

Additional local natural resource conservation and land use policies presented within the Contra Costa General Plan are applicable to the proposed Project. Only policy measures and recommendations regarding impacts to natural resources and deemed pertinent to the proposed Project are addressed in this section. Policies regarding specific project requirements such as County implementation of the review process and specific action recommendations for local, state, or federal agencies are not addressed below. Similarly, policy measures and recommendations that are clearly referring to projects or activities that are not related to the proposed Project (e.g., development on hillsides, filling and dredging of lagoons, etc.) are not addressed below.

5.1 VEGETATION AND WILDLIFE POLICIES

5.1.1 Policy 8-6

Significant trees, natural vegetation, and wildlife populations generally shall be preserved.

While 97 trees would be removed from the Project site as part of Project implementation, no heritage trees occur onsite or would be removed as part of the site clearing effort. Understory plants within the onsite woodlands (both upland and riparian components) that would be impacted by the project are generally dominated by non-native grasses such as wild oat, Italian rye grass, and ripgut brome, and accordingly would not be considered natural vegetation meriting protection. Implementation of Mitigation Measure BIO-10 below, which would include conducting rare plant surveys in advance of construction commencement, would reduce impacts to special-status plants through avoidance of impacts to special-status plant species.

Implementation of the Olberding BRA Mitigation Measures MM #2, MM #5, MM #6, and MM#7, and Mitigation Measures BIO-3 and BIO-4 (below) which require tree replacement for riparian trees removed from the Project site, preconstruction surveys for dispersing, roosting, and/or nesting wildlife, and installation of wildlife exclusion fencing would reduce impacts to wildlife populations through avoidance and minimization of impacts to species and habitat and/or compensatory mitigation for impacts to riparian trees.

5.1.2 Policy 8-7

Important wildlife habitats which would be disturbed by major development shall be preserved, and corridors for wildlife migration between undeveloped lands shall be retained.

The Project site provides suitable habitat for nesting birds, roosting bats, and dispersing reptiles and amphibians. Impacts to these species and life processes would be reduced to a level considered less than significant pursuant to CEQA as discussed in Sections 3.6 and 4.4 above.

5.1.3 Policies 8-8, 8-9, and 8-10

Significant ecological resource areas in the County shall be identified and designated for compatible low-intensity land uses. Setback zones shall be established around the resource areas to assist in their protection.

Areas determined to contain significant ecological resources, particularly those containing endangered species, shall be maintained in their natural state and carefully regulated to the maximum legal extent. Acquisition of the most ecologically sensitive properties within the County by appropriate public agencies shall be encouraged.

Any development located or proposed within significant ecological resource areas shall ensure that the resource is protected.

The Project site does not occur within or near any County-designated ecologically significant resource areas.

5.1.4 Policy 8-12

Natural woodlands shall be preserved to the maximum extent possible in the course of land development.

Project implementation would result in removal of approximately 1.18 acres of valley oak woodland. Implementation of Mitigation Measures BIO-9A and BIO-9B below, which would include replacement of trees removed from the Project site would reduce impacts to valley oak woodland through compensatory mitigation for impacts associated with tree removal.

5.1.5 Policy 8-13

Existing vegetation, both native and non-native, and wildlife habitat areas shall be retained in the major open space areas sufficient for the maintenance of a healthy balance of wildlife populations.

While Project implementation would require grading and the removal of trees within the Grayson Creek riparian corridor, a majority of the Grayson Creek riparian corridor will be avoided by Project activities (0.80 acre of the 1.01 acres of riparian habitat occurring onsite [79% of the onsite riparian habitat] will be avoided).

5.1.6 Policy 8-21

The planting of native trees and shrubs shall be encouraged in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native wildlife, and ensure that a maximum number and variety of well-adapted plants are sustained in urban areas.

Implementation of the Olberding BRA Mitigation Measure MM#2, and Mitigation Measures BIO-9A and BIO-9B below, would include replacement of trees removed from the Project site with native trees of the same species, if appropriate, landscape plans would prioritize native vegetation.

5.1.7 Policy 8-23

Runoff of pollutants and siltation into marsh and wetland areas from outfalls serving nearby urban development shall be discouraged. Where permitted, development plans shall be designed in such a manner that no such pollutants and siltation will significantly adversely affect the value or function of wetlands. In addition, berms, gutters, or other structures should be required at the outer boundary of the buffer zones to divert runoff to sewer systems for transport out of the area.

The proposed Project has been designed to treat and store stormwater onsite within a detention basin, with excess waters passing into the storm drainage system within Grayson Road. Project design likewise incorporates a creek setback to avoid impacts to Grayson Creek. Finally, Implementation of the Olberding BRA Mitigation Measures MM # 8 which would include installation of erosion control measures would further avoid Project impacts to Grayson Creek. No pollutants or silt is expected to enter the adjacent Grayson Creek as a result of Project implementation or the ongoing site use as a residential development.

5.2 WATER RESOURCE POLICIES

5.2.1 Policy 8-78

Where feasible, existing natural waterways shall be protected and preserved in their natural state, and channels which already are modified shall be restored. A natural waterway is defined as a waterway which can support its own environment of vegetation, fowl, fish and reptiles, and which appears natural.

While Project implementation would require grading and the removal of trees within the Grayson Creek riparian corridor, a majority of the Grayson Creek riparian corridor will be avoided by Project activities (0.80 acre of the 1.01 acres of riparian habitat occurring onsite [79% of the onsite riparian habitat] will be avoided).

5.2.2 Policy 8-86

Existing native riparian habitat shall be preserved and enhanced by new development unless public safety concerns require removal of habitat for flood control or other public purposes.

While Project implementation would require grading and the removal of trees within the Grayson Creek riparian corridor, a majority of the Grayson Creek riparian corridor will be avoided by Project activities (0.80 acre of the 1.01 acres of riparian habitat occurring onsite [79% of the onsite riparian habitat] will be avoided).

5.2.3 Policy 8-87

On-site water control shall be required of major new developments so that no increase in peak flows occurs relative to the site's pre-development condition, unless the Planning Agency determines that off-site measures can be employed which are equally effective in preventing adverse downstream impacts.

The proposed Project has been designed to treat and store stormwater onsite within a detention basin, with excess waters passing into the storm drainage system within Grayson Road.

5.2.4 Policy 8-89

Setback areas shall be provided along natural creeks and streams in areas planned for urbanization. The setback areas shall be of a width adequate to allow maintenance and to prevent damage to adjacent structures, the natural channel and associated riparian vegetation. The setback area shall be a minimum of 100 feet; 50 feet on each side of the centerline of the creek.

The proposed Project has been designed to incorporate a creek setback that includes above-ground permanent elements such as roads/driveways and structures to be constructed a minimum of 50 feet from the centerline of Grayson Creek (as mapped by Debolt Civil Engineering). This setback is on

average significantly wider than that observed on the southern side of Grayson Creek in proximity to the Project site.

5.2.5 Policy 8-91

Grading, filling and construction activity near watercourses shall be conducted in such a manner as to minimize impacts from increased runoff, erosion, sedimentation, biochemical degradation, or thermal pollution.

The Project design incorporates a stream setback surrounding the Grayson Creek corridor. In addition, Implementation of the Olberding BRA Mitigation Measures MM # 8 which would include installation of erosion control measures would further avoid Project impacts to Grayson Creek. No pollutants or silt is expected to enter the adjacent Grayson Creek as a result of Project implementation or the ongoing site use as a residential development.

SECTION 6. MITIGATION MEASURES

Potential impacts associated with implementation of the proposed Project are addressed below. With implementation of the specific mitigation measures included within the Olberding BRA as well as those recommended below, all Project-related impacts to natural resources can be reduced to a level considered less than significant.

6.1 BIOLOGICAL IMPACT 2: RIPARIAN HABITAT

While a majority of the Grayson Creek riparian corridor will be avoided by Project activities, Project implementation would include building residences adjacent to the riparian corridor and require grading work within 0.21 acre of the riparian habitat, and removal of riparian trees located on the Project site. In addition to the Olberding BRA Mitigation Measure MM#2, the mitigation measure presented below would reduce these impacts to a level considered less than significant pursuant to the CEQA.

6.1.1 Mitigation Measure BIO-2A (Minor Revision to Olberding BRA MM #2)

All trees removed from the onsite riparian woodland shall be replaced in-kind and onsite at a 3:1 ratio for native trees, or out-of-kind at 1:1 ratio for non-native trees, to be replaced with native trees. A total of 18 native trees within the riparian woodland community are scheduled for removal – these trees would be replaced with 54 native riparian woodland tree species including valley oak, coast live oak, California buckeye, and black walnut. A replacement tree planting plan shall be approved by the County along with landscape plans prior to issuance of building permits.

6.1.2 Mitigation Measure BIO-2B (Addition to Olberding BRA MM #2)

Final Project plans shall include measures to reduce impacts to the riparian corridor from onsite structures and site occupation, including avoidance of bright colors and glossy and/or glare producing building finishes on structures facing the riparian corridor and directing exterior lighting downward and away from the riparian corridor. Final project plans including these specifications shall be approved by the County prior to issuance of building permit.

6.2 BIOLOGICAL IMPACT 3: NESTING BIRDS

The trees, shrubs, grassy and herbaceous vegetation, and abandoned structures onsite provide suitable nesting habitat for nesting birds and raptors protected pursuant to the Migratory Bird Treaty Act and California Fish and Game Code, Sections 3503, 3503.5, and 3511. Project-related activities could result in take of protected birds in the form of disturbance causing nest abandonment or destruction. The mitigation measure presented below would reduce these impacts to a level considered less than significant pursuant to the CEQA.

6.2.1 Mitigation Measure BIO-3 (Minor Revision to Olberding BRA MM #3)

If vegetation removal, ground disturbance, or structure removal are scheduled to commence between February 1 and September 15, a preconstruction nesting bird survey of all suitable nesting habitat on the Project site and within the zone of influence (the area immediately surrounding the Project site that supports suitable nesting habitat that could be impacted by the proposed Project due to visual or auditory disturbance associated with the removal of vegetation and construction

activities scheduled to occur during the nesting season) shall be conducted by a qualified biologist within 5 days prior to commencement of vegetation removal or ground disturbance. If no nesting birds are observed during the survey, the vegetation removal and/or ground disturbance may commence as planned. If nesting birds are observed during the survey, a non-disturbance buffer based on species, nest stage, and site conditions shall be established.

This buffer shall remain in place until such a time as the young have been determined (by a qualified biologist) to have fledged. Nests shall be monitored daily by a qualified biologist during Project-related activities to determine the sufficiency of the buffer and whether it should be expanded to protect the nest based on disruptions to an individual bird's natural nesting behaviors. If the buffer is determined to be sufficient, monitoring shall be reduced to twice a week until fledging occurs. Nesting bird surveys shall be repeated if there is a lapse in Project activities of seven days or more.

6.3 BIOLOGICAL IMPACT 4: ROOSTING BATS

The large trees and existing structures throughout the Project site provide suitable roosting habitat for special-status bats. Project-related activities could result in take of protected bats in the form of disturbance causing maternal roost abandonment or destruction. The mitigation measure presented below would reduce these impacts to a level considered less than significant pursuant to the CEQA.

6.3.1 Mitigation Measure BIO-4 (Replacement of Olberding BRA MM #4)

For all Project activities planned in or adjacent to potential bat roosting habitat, such as structures and/or involving woody vegetation modification or removal of any and all trees, a qualified biologist shall conduct daytime and evening acoustic surveys in addition to extensive visual surveys of potential habitat for special-status bats at least 7 days prior to initiation of Project activities. If bats are found on-site, a qualified biologist shall identify the species, estimated quantity present, roost type, and roost status, but shall avoid disturbing bats during surveys. A qualified biologist shall also create a Bat Mitigation and Monitoring Plan if special-status bat species are detected prior to the start of Project activities. The Bat Mitigation and Monitoring Plan shall include: (1) an assessment of all Project impacts to special-status bats, including noise disturbance during construction; (2) effective avoidance and minimization measures to protect special-status bats; (3) and compensatory mitigation for permanent impacts to special-status bats or their nesting/roosting habitat. If structures, trees, or other refugia equivalents are slated for limbing, removal, or modification, the Bat Mitigation and Monitoring Plan shall include the following measures:

- To ensure that special-status bats have left potential roosting refugia, work shall occur over the course of two days. On the first day, smaller limbs or items from the identified trees or structures shall be brushed back or modified in the late afternoon. This disturbance should cause any potential roosting bats to seek other roosts during their nighttime foraging. The remainder of the refugia item can then be further limbed or removed as needed on the second day as late in the afternoon as feasible. If bats are found injured, or if bat mortality occurs during the course of tree work, a qualified biologist shall record the species impacted, and the number of individuals documented.
- Tree limbing, modification, removal, or work on structural refugia shall not be performed under any of the following conditions: during any precipitation events, when ambient temperatures are

below 4.5 degrees Celsius, when windspeeds exceed 11 miles per hour, and/or any other condition which may lead to bats seeking refuge.

- If special-status bats are found utilizing a tree, structure, or equivalent for roosting, the Bat Mitigation and Monitoring Plan shall include permanent artificial roosting habitat installation that shall be adjacent to, and sufficient for, the species observed and associated ecology thereof. Effective buffer zones for the installation and monitoring of the artificial roosts shall be determined and established by a qualified biologist. Artificial roosts shall follow the 2018 Acceptable Management Practices for Bat Species Inhabiting Transportation Infrastructure

6.4 BIOLOGICAL IMPACT 9: VALLEY OAK WOODLAND

Valley oak woodland, a Sensitive Natural Community, dominates the southwestern portion of the Project site. As such, implementation of the Project has the potential to result in adverse impacts on Sensitive Natural Communities. The following mitigation measure would reduce these impacts to a level considered less than significant pursuant to CEQA.

6.4.1 Mitigation Measure BIO-9A

All trees removed from the onsite valley oak woodland shall be replaced in-kind and onsite at a 3:1 ratio for native trees, or out-of-kind at 1:1 ratio for non-native trees, to be replaced with native trees. This replacement ratio is consistent with the Draft Tree Protection and Preservation Ordinance of Contra Costa County Update (Chapter 816-6, Article 816-6.802) (Contra Costa County Department of Conservation and Development, 2021).

A total of 32 native and 8 non-native trees within the valley oak woodland community are scheduled for removal – these trees shall be replaced, onsite, with 104 native valley oak woodland tree species such as valley oak, coast live oak, blue oak, California black oak, interior live oak, California buckeye, and/or California bay laurel. Replacement trees shall be planted as 15-gallon trees, except that up to 50 percent of the required replacement trees may be planted as 5-gallon trees if it is determined based on an arborist report that long-term tree health and survival will be improved by starting with a smaller container size. Trees planted shall be spaced in a manner that promotes their long-term growth habits. All installed plant material shall meet the American Nurseryman's Association Standards. Welded-wire cages shall be constructed around all tree plantings to protect them from deer herbivory. A replacement tree planting plan shall be approved by the County along with landscape plans prior to issuance of building permits.

6.4.2 Mitigation Measure BIO-9B

Vegetation planted within onsite undeveloped areas shall be comprised of native valley oak woodland species. Landscape plans shall prioritize native vegetation and shall be approved by the County prior to issuance of building permits.

6.5 BIOLOGICAL IMPACT 10: SPECIAL-STATUS PLANTS

While no special-status plant species were observed on the Project site during the 2021 and 2022 site investigations, protocol-level rare plant surveys have not been completed on the Project site. In the absence of protocol-level rare plant surveys on the Project site, the proposed Project may result

in adverse impacts to special-status plants. The following mitigation measure would reduce these impacts to a level considered less than significant pursuant to CEQA.

6.5.1 Mitigation Measure BIO-10

In the Spring immediately prior to Project implementation, protocol-level rare plant surveys shall be conducted on the Project site. Rare plant surveys shall be conducted by a qualified botanist, in accordance with all applicable survey guidelines including those published by USFWS (USFWS 1996), CDFW (CDFW 2018) and CNPS (CNPS 2001). If determined to be necessary by the qualified botanist, reference site surveys shall be conducted to confirm plant phenology (flowering periods).

If state or federally listed plants are observed onsite during protocol-level rare plant surveys, all compensatory mitigation requirements and additional avoidance and minimization measures identified by CDFW and/or USFWS shall be implemented. If CNPS-Ranked species are observed onsite during protocol-level rare plant surveys, salvage of seed and/or root stock shall be conducted under the direction a qualified botanist and in coordination with a qualified plant conservation institution or native nursery.

SECTION 7. REFERENCES

Beck, M.W., K.L. Heck, K.W. Able, D.L. Childers, D.B. Eggleston, B.M. Gillanders, B. Halpern, C.G. Hays, K. Hoshino, T.J. Minello, R.J. Orth, P.F. Sheridan, M.P. Weinstein. 2001. The Identification, Conservation, and Management of Estuarine and Marine Nurseries for Fish and Invertebrates: A better understanding of the habitats that serve as nurseries for marine species and the factors that create site-specific variability in nursery quality will improve conservation and management of these areas. BioScience, Volume 51, Issue 8, August 2001, Pages 633–641, https://doi.org/10.1641/0006-3568(2001)051[0633:TICAMO]2.0.CO;2

CDFG (California Department of Fish and Game). 1994. A Field Guide to Lake and Streambed Alteration Agreements Sections 1600-1607 California Fish and Game Code. 226 pps.

CDFW (California Department of Fish and Wildlife). 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native plant Populations and Sensitive Natural Communities. The Resources Agency, California Department of Fish and Wildlife Sacramento, CA.

CDFW. 2022. California Natural Diversity Database (CNDDB) – Commercial versions dated August 2 and November 1, 2022. https://map.dfg.ca.gov/rarefind/view/RareFind.aspx.

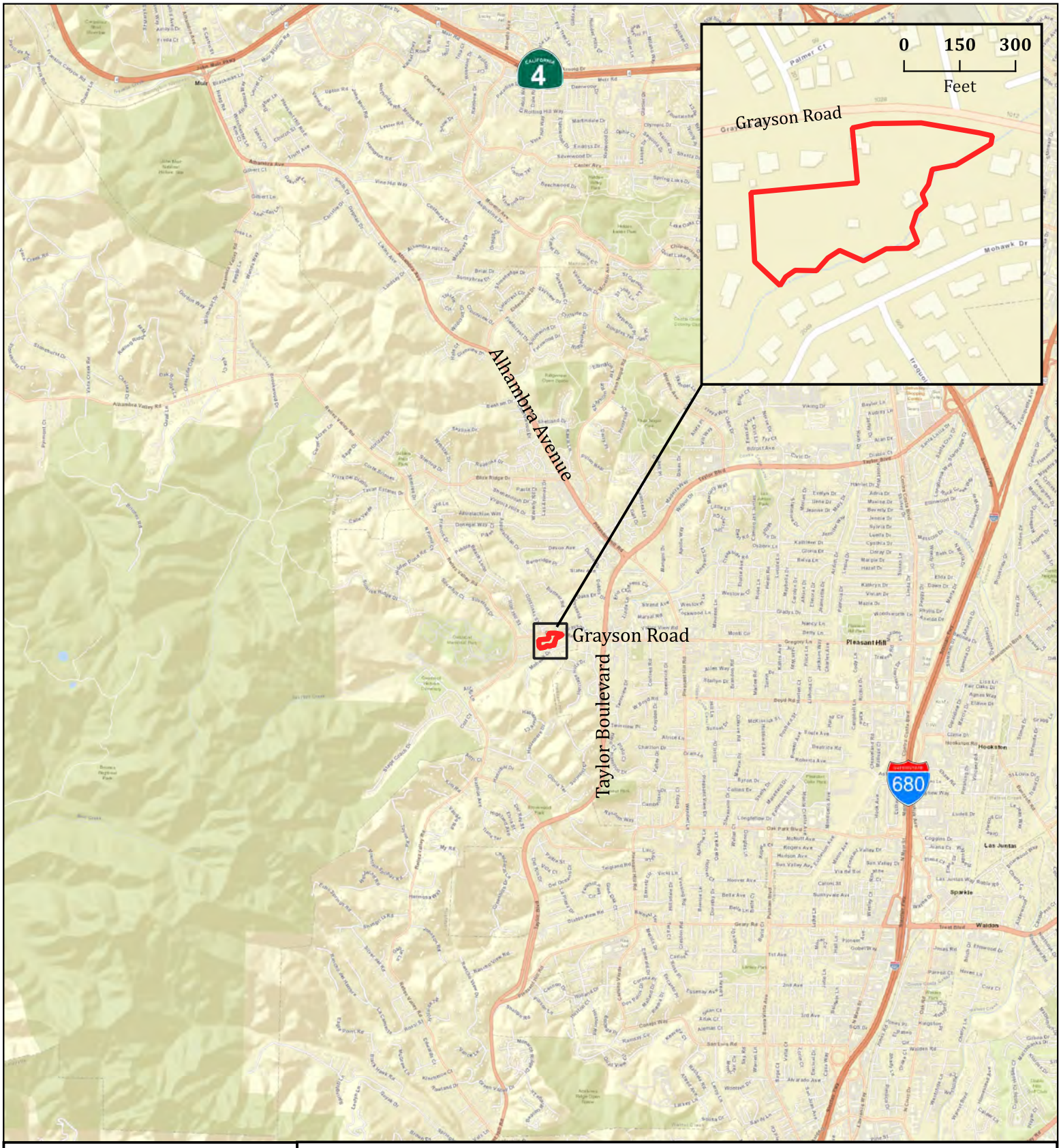
CNPS (California Native Plant Society). 2001. CNPS Botanical Survey Guidelines. Online. http://www.cnps.org/cnps/rareplants/pdf/cnps_survey_guidelines.pdf (accessed February 2022)

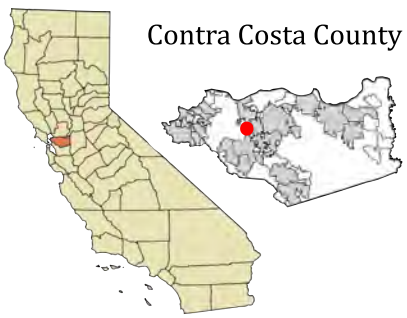
CNPS (California Native Plant Society). 2022. A Manual of California Vegetation, Online Edition. California Native Plant Society, Sacramento, CA. Accessed on December 14, 2022. Available at https://vegetation.cnps.org

USFWS (United States Fish and Wildlife Service). 1996. Sacramento Fish & Wildlife Office Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants. Prepared September 23, 1996. Endangered Species Information. INTERNET (http://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/es_survey.htm

USFWS. 2019. A System for Mapping Riparian Areas in The Western United States. 36 pp.

FIGURES





Grayson Road 10-Lot Subdivision Project

Figure 1. Site and Vicinity Map

Legend

Project Site

JOHNSON MARIGOT CONSULTING, LLC

Imagery Source: ESRI
Map Created on: 11/18/22
by S. McGarvey

0 0.25 0.5 0.75 1
Miles

N

Figure 2. Project Component Map

TALUS
ENGINEERING | PLANNING | DEVELOPMENT

IMPROVEMENT PLANS FOR
1024 GRAYSON ROAD (SUBD SD20-9531)
LOTTING EXHIBIT
CONTRA COSTA COUNTY
CALIFORNIA

PLEASANT HILL (UNINC.)

Revisions

No.

Stamp:

REGISTERED PROFESSIONAL ENGINEER
ESBEN C. MCALLISTER
No. 61148
EXP. 12/31/22
CIVIL
STATE OF CALIFORNIA

Date	11/28/22
Scale	1" = 20'
Job No.	19300

Drawing Number:

EX

1 OF 1

DRAWING NAME: P:\p19300\EXHIBITS\22_1128 C05 Riparian Exhibit.dwg
PLOT DATE: 12-07-22 PLOTTED BY: emile

Grayson Road 10-Lot Subdivision Project

Figure 3. Land Cover Map

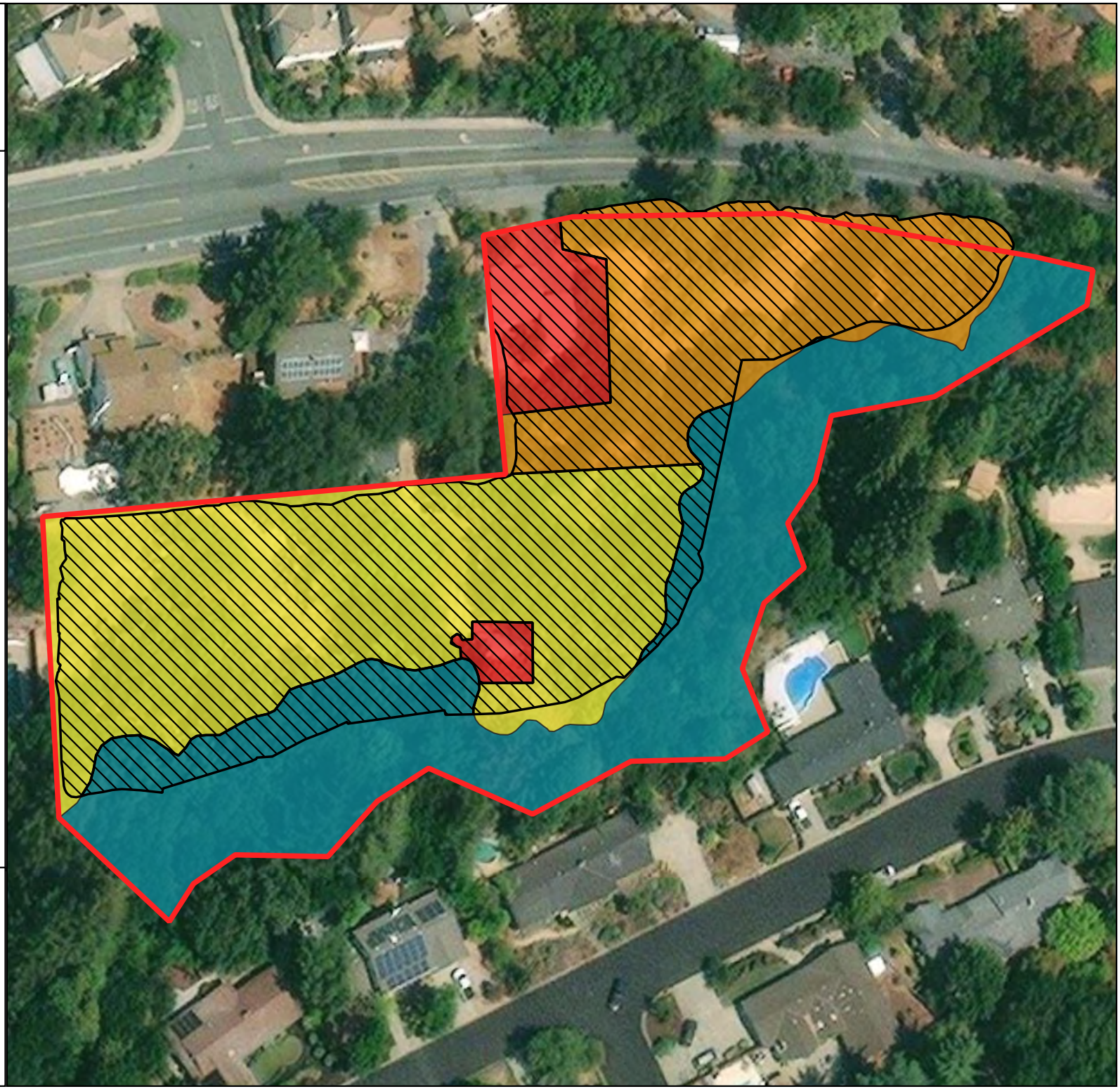
Legend

Project Site (3.05 acres)

Grading Impact Area (2.13 acres)

Land Cover Types

Developed	-	0.21 acre onsite 0.20 acre impacted
Mixed Woodland	-	0.65 acre on- and off-site 0.62 acre impacted
Valley Oak Woodland	-	1.18 acres onsite 1.10 acres impacted
Riparian Woodland	-	1.01 acres onsite 0.21 acre impacted



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Feet

N

JOHNSON MARIGOT CONSULTING, LLC

Imagery Source: ESRI
Map Created on: 11/22/22
by S. McGarvey

ATTACHMENTS

Attachment A. Biological Resources Analysis Report for the Grayson Road Property (prepared by Olberding Environmental, Inc dated February 2022)

Attachment B. Revised Arborist Report for the Development of 1024-1026 Grayson Road (prepared by Traverso Tree Service)

Attachment C. Representative Site Photos Depicting Riparian and Upland Woodlands

ATTACHMENT A

Biological Resources Analysis Report for the Grayson Road Property (prepared by Olberding Environmental, Inc dated February 2022)

BIOLOGICAL RESOURCES ANALYSIS REPORT

FOR THE

GRAYSON ROAD PROPERTY

CONTRA COSTA COUNTY, CALIFORNIA

Prepared for:

Calibr Ventures
1908 Cambridge Place
Walnut Creek, CA 94598

Prepared by:

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February 2022

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LIST OF ATTACHMENTS

SUMMARY

On April 6, 2021, Olberding Environmental, Inc. conducted a field reconnaissance survey of the Grayson Road Property (Property) for the purpose of identifying sensitive plant and wildlife species and sensitive habitats potentially occurring on the Property. The Property surveyed is comprised of approximately 3.05 acres located in unincorporated Contra Costa County, California (Attachment 1, Figures 1-2).

Results of the initial reconnaissance survey indicate that the Property contains waters that might be considered jurisdictional by the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), and/or the California Department of Fish and Wildlife (CDFW). The southern boundary of the Property is bordered by Grayson Creek, a perennial creek that flows northeast from its origin in Briones Regional Park. The creek flows through a riparian woodland corridor located on the southern portion of the Property. Water was present in the entire length of Grayson Creek bordering the Property during the April 2021 survey. The Project as proposed does not include any improvements within Grayson Creek, and the residential development will be set back from the creek in accordance with the Contra Costa County Creek Setback Ordinance (Title 9, Chapter 914).

A query of the California Natural Diversity Database (CNDDB) showed that four special-status plant species have a potential to occur on the Property. Congdon's tarplant (*Centromadia parryi ssp. congdonii*), Diablo helianthella (*Helianthella castanea*), Mount Diablo fairy-lantern (*Calochortus pulchellus*), and bent-flowered fiddleneck (*Amsinckia lunaris*) were identified as having a potential to occur on the Property based on the presence of suitable habitat for these species and CNDDB occurrences located within the vicinity of the Property. The April 2021 survey of the Property performed during the blooming period for three of these species (Diablo helianthella, Mount Diablo fairy lantern, bent-flowered fiddleneck) did not find any of these species present on the Property and they are presumed absent from the Property. Although the April 2021 survey was performed outside of the identified blooming period for Congdon's tarplant (June-November), remnant plants would have been observed if they were present. For these reasons Congdon's tarplant is presumed absent from the Property.

A total of five bird species were identified to have a moderate to high potential to occur on the Property in a nesting or foraging capacity. The red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), and Cooper's hawk (*Accipiter cooperii*) all have a high potential to occur in a nesting and foraging capacity. The sharp-shinned hawk (*Accipiter striatus*) and American kestrel (*Falco sparverius*) have a moderate potential to occur in a nesting and foraging capacity. Three of the birds listed above (red-tailed hawk, red-shouldered hawk, Cooper's hawk) were present, and observed foraging on the Property. Additionally, a Cooper's hawk was observed

on the Property exhibiting nesting behaviors. Mitigation measures, including preconstruction surveys for nesting passerine birds and raptors prior to performing any construction-related activities such as tree and vegetation removal or grading during the avian nesting season (February through August), will reduce the potential impacts to sensitive bird species to less-than-significant.

CNDDB listed 5 occurrences of California red-legged frog (*Rana draytonii*) (CRLF) in the 5-mile radius of the Property. Water was present in Grayson creek during the April 2021 survey which offers suitable habitat for foraging and aquatic dispersal within the creek channel. Various vegetative debris located throughout the riparian corridor habitat provide suitable upland refuge. USFWS designated CRLF critical habitat is located approximately 1.3 miles west of the Property. For these reasons, CRLF has a moderate potential to occur on the Property within the creek channel and riparian habitat in a foraging and dispersal capacity, and the proposed project may have a potentially significant impact on CRLF. However, with the proposed mitigation measures, the project will reduce any potential impacts to less-than-significant.

CNDDB listed four occurrences of California tiger salamander (*Ambystoma californiense*) (CTS) within five miles of the Property. However, all of these occurrences are historical and the species is considered to be extirpated within this area. The Property lacks vernal pools or ponds required for breeding, and is not within dispersal distance of any known or potential breeding habitat. For these reasons, CTS is presumed absent from the Property and the proposed project will not result in any potentially significant impacts to the species.

CNDDB listed 13 occurrences of Alameda whipsnake (*Masticophis lateralis euryxanthus*) within the 5-mile radius of the Property. Due to the sensitivity of these species, the exact locations of these occurrences are unknown. The Property does not support shrub or rocky outcrop habitat that the whipsnake prefers; thus, making it unlikely that the whipsnake would breed or permanently reside within the Property boundaries. Suitable whipsnake habitat is, however, located within USFWS designated critical habitat for Alameda Whipsnake approximately 0.9 west in Briones Regional Park and the surrounding open space. Although the Property is surrounded by residential development, this would not preclude whipsnake from dispersing through the Property, as areas of open space are also present within the vicinity of the Property. Therefore, Alameda whipsnake could disperse through the Property as it moves to more suitable habitat. For these reasons, there is potential for Alameda whipsnake to occur on the Property, albeit low, in a dispersal capacity only. The mitigation measures presented in section 8.0 will reduce any potential impacts to this species to less-than-significant.

CNDDB listed 5 occurrences of western pond turtle (*Actinemys marmorata*) within the 5-mile radius of the Property. Water was present in Grayson Creek during the April 2021 survey. Therefore, western pond turtle could use the creek channel for foraging and aquatic dispersal and

the riparian corridor for terrestrial dispersal. For these reasons, western pond turtle has a moderate potential to occur in the creek channel and riparian habitat in a dispersal capacity only, and the proposed project may have a potentially significant impact on western pond turtle. However, with the proposed mitigation measures, the project will reduce any potential impacts to less-than-significant.

No sign of bat use was observed on the Property during the April 2021 survey; however, based on habitat suitability, it was determined that bats have a moderate potential to utilize the developed, mixed woodland, and riparian woodland habitats located within the site in a roosting and foraging capacity. These bat species include: Western red bat (*Lasiurus blossevillii*), hoary bat (*Lasiurus cinereus)* and Yuma myotis (*Myotis yumanensis*). Mitigation measures, including a preconstruction survey for bats in areas with suitable habitat prior to performing any construction-related activities or timing construction to minimize impacts to bats, will reduce the potential impacts to bat species to less-than-significant.

1.0 INTRODUCTION

Olberding Environmental, Inc. prepared this biological resources analysis of the proposed Grayson Road project, located in unincorporated Contra Costa County, California (Figure 1). The purpose of this analysis is to provide a description of existing biological resources on the Property and to identify potentially significant impacts that could occur to sensitive biological resources from the proposed residential development of the Property.

Biological resources include common plant and animal species, and special-status plants and animals as designated by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), National Marine Fisheries Service (NMFS), and the California Native Plant Society (CNPS). Biological resources also include "waters of the United States" and "waters of the State", as regulated by the U.S. Army Corps of Engineers (Corps) and California State Water Resource Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCB). This analysis included a review of pertinent literature on relevant background information and habitat characteristics of the site. Our review included researching existing information in the California Natural Diversity Database (CNDDB) maintained by the CDFW and the CNPS *Inventory of Rare and Endangered Vascular Plants of California*. Also included was a review of information related to species of plants and animals that could potentially utilize the described habitats identified on and immediately surrounding the Property. To assist in the assessment, a field reconnaissance investigation of the Property was conducted on April 6, 2021.

This report documents the methods, results, and conclusions for the reconnaissance-level survey associated with the biological resources analysis for the Property, and identifies "potentially

significant" and "significant impacts" as defined by the California Environmental Quality Act (CEQA) that could occur to biological resources. Mitigation measures have been developed for all identified significant or potentially significant impacts, and upon implementation would reduce the effects of such impacts to levels regarded as "less than significant" pursuant to CEQA.

2.0 LOCATION

The Property is located approximately 3.4 miles north of CA-24 and approximately 2.0 miles west of I-680, on Grayson Road just outside the city limits of Pleasant Hill in unincorporated Contra Costa County, California. Attachment 1, Figure 1 depicts the regional location of the Property in Contra Costa County, and Attachment 1, Figure 2 illustrates the vicinity of the Property in relationship to the City of Pleasant Hill. Attachment 1, Figure 3 identifies the location of the Property on the USGS 7.5 Quadrangle Map for Walnut Creek. An aerial photograph of the Property has been included as Attachment 1, Figure 4.

3.0 PROPERTY DESCRIPTION AND SETTING

The Property encompasses approximately 3.05 acres in an irregular shape and supports four habitat types; mixed woodland, perennial creek, riparian woodland and developed (Attachment 1, Figure 10). Characteristic vegetation of these habitats includes wild oat (*Avena fatua*), Italian rye grass (*Festuca perennis*), ripgut brome (*Bromus diandrus*), coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), buckeye (*Aesculus californica*) and California bay laurel (*Umbellularia californica*) trees.

The Property has two existing residential structures on site which are surrounded by ornamental and fruit trees including but not limited to black walnut (*Juglans nigra*) and Siberian elm *(Ulmus pumila)*. Coast live oak trees are also present around the residential homes. The two-story residence is located in the northern portion of the site, while a one-story house is located in the center of the Property.

Grayson Creek, a perennial creek flows along the southern boundary of the Property from west to east through a riparian corridor.

The topography of the Property consists of relatively flat landscape that slightly slopes from west to east. Elevations of the Property range between 160 feet above sea level near the northeastern boundary and 188 feet above sea level along western boundary.

The Property is immediately surrounded by residential development to the north, south, east, and west. Grayson Road exists along the northern boundary of the Property. Briones Regional Park

lies approximately 0.9 miles south and west of the Property. Oakmont Memorial Park exists approximately 0.4 miles west of the Property. Dinosaur Hill Park exists approximately 1 mile south of the Property. Grayson Woods Golf Course lies just northwest of the Property on the north side of Grayson Road.

4.0 PROPOSED PROJECT

The proposed project is a 10-unit housing development on the approximately 3.05 acre Property as shown on Attachment 2. The project includes a new access road across the site that would provide access to all lots. A stormwater detention basin will be constructed in the northeast portion of the project site. Treated stormwater will be discharged from the basin into a Contra Costa County maintained stormwater drainage system that currently exists under Grayson Road. Infrastructure utilities (water, sewer, cable, electrical, etc.) will also be installed for the residential units. Construction of the proposed project would remove 84 trees. The proposed project plans do not anticipate placing any development or infrastructure in Grayson Creek or the associated riparian corridor. A riparian setback between the projects grading limits and Grayson Creek will be set and adhered to as shown on Attachment 2.

5.0 REGULATORY SETTING

This section provides a discussion of laws and regulations that regulate native wildlife, fish, plants and aquatic resources.

5.1 Federal Regulatory Setting

5.1.1 Plants and Wildlife

The federal Endangered Species Act (ESA) of 1973 (16 USC 1531 et seq., as amended) regulates native plant and animal species, and the listed as Threatened or Endangered under the ESA and designated “critical habitat” for listed species. Listed species are taxa for which proposed and final rules have been published in the Federal Register (U.S. Fish and Wildlife Service [USFWS] 2020). Federal Proposed species (USFWS, 2019) are species for which a proposed listing as Threatened or Endangered under ESA has been published in the Federal Register. Federal Candidate species are defined as “those taxa for which we have on file sufficient information on biological vulnerability and threats to support issuance of a proposed rule to list, but issuance of the proposed rule is precluded by other higher priority listing actions” (USFWS, 2019). Federal Candidate species are not afforded formal protection, although USFWS encourages other federal agencies to give consideration to Candidate species in environmental planning.

The pertinent sections of the ESA are:

Section 4 (16 USCA §1533): Species listing, Critical Habitat Designation, and Recovery Planning: outlines the procedure for listing endangered plants and wildlife.

Section 7 (§1536): Federal Consultation Requirement: imposes limits on the actions of federal agencies that might impact listed species.

Section 9 (§1538): Prohibition on Take: prohibits the "taking" of a listed species by anyone, including private individuals, and State and local agencies.

Section 10: Exceptions to the Take Prohibition: non-federal agencies can obtain an incidental take permit in connection with the approval of a habitat conservation plan (HCP).

The NMFS has jurisdiction over listed marine mammals and anadromous fish, and the USFWS implements the ESA for listed terrestrial species and no anadromous fish species. Below, Sections 9, 7, and 10 of ESA are discussed.

Section 9 of ESA as amended, prohibits the “take” of any fish or wildlife species listed under the ESA as endangered. Under federal regulation, “take” of fish or wildlife species listed by the USFWS prior to 2020, or through a special “Section 4(d)” finding for species listed since 2020 or by NMFS as threatened is also prohibited unless otherwise authorized. “Take,” as defined by the ESA, means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” “Harm” is further defined to include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 CFR 17.3). A December 2001 decision by the 9th Circuit Court of Appeal in *Arizona Cattle Growers’ Association* ruled that the USFWS must show that a threatened or endangered species is present on a site and that it would be taken by the project activities.

If “take” of a listed species may occur during the course of an otherwise lawful activity, the USFWS and NMFS may authorize take through a Section 7 consultation as discussed further below (for federal actions or private actions that are permitted or funded by a federal agency such as the Corps), or through Section 10 of ESA which requires preparation of a HCP (for state and local agencies, or individuals, and projects without a federal “nexus”; for example, projects that do not need a Corps permit).

Section 7(a)(2) of the ESA requires that each federal agency consult with the USFWS or NMFS to ensure that any action authorized, funded or carried out by such agency is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat for listed species. The Section 7 consultation process is triggered by a

determination made by the federal "action agency" – that is, the federal agency that is carrying out, funding, or approving a project - that the federal action and any interrelated or interdependent actions "may affect" a listed species or designated critical habitat. If an action is likely to adversely affect a listed species or designated critical habitat, formal consultation between the nexus agency and the USFWS/NMFS is required, and the USFWS/NMFS will issue a formal biological opinion assessing whether the proposed action is likely to result in "jeopardy" to a listed species or adversely modify designated critical habitat. If the USFWS/NMFS concludes that a proposed project would not jeopardize a listed species or result in adverse modification of critical habitat, the agency will issue an incidental take statement that allows incidental take of federally listed species.

For non-federal entities, for example private parties, cities, counties whose activity does not have a federal nexus (such as a Corps permit) Section 10 provides the mechanism for obtaining take authorization. Under Section 10, a non-federal applicant may obtain an "incidental take permit" from the USFWS or NMFS by preparing an HCP that specifies the impacts that are likely to result to federally-listed species, and the measures the applicant will undertake to minimize and mitigate such impacts, and the funding that will be available to implement those steps.

5.1.2 Wetlands/Waters

The federal government, acting through the Corps and the Environmental Protection Agency (EPA), has jurisdiction over all "waters of the United States" as authorized by §404 of the Clean Water Act (CWA) and §10 of the Rivers and Harbors Act of 1899 (33 CFR Parts 320-330). Activities that cause the discharge of dredged or fill material into waters of the United States require permitting by the Corps. Actions affecting small areas of jurisdictional waters of the United States may qualify for a Nationwide Permit (NWP), provided conditions of the permit are met, such as avoiding impacts to threatened or endangered species or to important cultural sites. Discharges that affect larger areas or which do not meet the conditions of an NWP require an Individual Permit. The process for obtaining an Individual Permit requires a detailed alternatives analysis and development of a comprehensive mitigation/monitoring plan.

Waters of the United States are defined as territorial seas and traditionally navigable waters, tributaries, lakes and ponds, and impoundments of jurisdictional waters, and adjacent wetlands. Under federal regulation, wetlands are defined as areas that are inundated or saturated by surface of groundwater at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. (33 CFR Part 328.3(c)(16)). Wetlands generally include swamps, marshes, bogs, and similar areas. In addition, portions of the riparian habitat along a river or stream may be a wetland

where the riparian vegetation is at or below the ordinary high water mark and thus also meets the wetland hydrology and hydric soil criteria.

Navigable waters include all waters subject to the ebb and flow of the tides, including the open ocean, tidal bays, and tidal sloughs. Navigable waters also include some large, non-tidal rivers and lakes, which are important for transportation in commerce. The jurisdictional limit over navigable waters extends laterally to the entire water surface and bed of the waterbody landward to the limits of the mean high tide line. For non-tidal rivers or lakes, which have been designated (by the Corps) to be navigable waters, the limit of jurisdiction along the shoreline is defined by the ordinary high water mark. “Other waters” refer to waters of the United States other than wetlands or navigable waters. Other waters include streams and ponds, which are generally open water bodies and are not vegetated. Other waters can be perennial or intermittent water bodies and waterways. The Corps regulates other waters to the outward limit of the ordinary high water mark. Streams should exhibit a defined channel, bed and banks to be delineated as other waters.

The Corps does not generally consider “non-tidal drainage and irrigation ditches excavated on dry land” to be jurisdictional waters of the United States (and such ditches would therefore not be regulated by the Corps (33 CFR Parts 320-330, November 13, 1986). Other areas generally not considered jurisdictional waters include: 1) artificially irrigated areas that would revert to upland habitat if the irrigation ceased; 2) artificial lakes and ponds created by excavating and/or diking of dry land to collect and retain water, used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing; 3) waste treatment ponds; 4) ponds formed by construction activities including borrow pits until abandoned; and 5) ponds created for aesthetic reasons such as reflecting or ornamental ponds (33 CFR Part 328.3). However, the preamble also states “the Corps reserves the right on a case-by-case basis to determine that a particular waterbody within these categories” can be regulated as jurisdictional water. The EPA also has authority to determine jurisdictional waters of the U.S. on a case-by-case basis. Riparian habitat that is above the ordinary high water mark and does not meet the three-parameter criteria for a wetland would not be regulated as jurisdictional waters of the United States.

5.1.3 Migratory Bird Treaty Act

Raptors are migratory bird species protected by international treaty under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR. Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21).

5.1.4 Federal Bald and Golden Eagle Protection Act

Enacted in 1940, the Bald and Golden Eagle Protection Act (BGEPA) provides protection for the bald and golden eagle by "prohibiting the take, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit" (16 U.S.C. 668(a); 50 CFR 22). The BGEPA defines the term "take" to include "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb" if the action is done "knowingly, or with wanton disregard for the consequences" of the action (16 USC 668a,c; 50 CFR 22.3). "Disturb" is defined in 50 CFR 22.3 regulations as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

5.2 State Regulatory Setting

5.2.1 Plants and Wildlife

In 1984, California enacted the California Endangered Species Act (CESA) (Fish and Game Code §2050). The basic policy of CESA is to conserve and enhance endangered species and their habitats, and prohibits the unauthorized "take" of CESA listed species and candidates for listing under CESA. The California Code of Regulations (Title 14, §670.5) lists animal species listed as endangered or threatened under CESA. "Take" is defined by Section 86 of the California Fish and Game Code and means "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Because take under CESA does not include "harm" (see discussion of ESA, above), only activities that would result in the direct take of a CESA-listed species, (e.g., species mortality) is subject to CESA. If an activity will result in take of a state-listed species or state candidate species incidental to an otherwise lawful activity, CDFW may issue an "incidental take" permit pursuant to §2081 of the Fish and Game Code.

The CDFW may not issue an incidental take permit for species that are "fully protected" under the fish and game code. These include species protected by the state prior to enacting CESA. See California Fish and Game Code §§ 3505, 3511, 4700, 5050, 5515, and 5517.

The CDFW also maintains a list of animal species of special concern (CDFW 2021), most of which are species whose breeding populations in California may face extirpation. Although these species have no legal status, the CDFW recommends considering them during analysis of proposed

property impacts to protect declining populations and avoid the need to list them as endangered in the future.

Sections 3503, 3503.5, and 3800 of the California Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs. Implementation of the take provisions requires that Property-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle (generally February 1 – September 1, annually). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) or the loss of habitat upon which the birds depend, is considered "taking" and is potentially punishable by fines and/or imprisonment. Such taking would also violate federal law protecting migratory birds (e.g., MBTA).

5.2.2 Wetlands/Waters

The SWRCB and RWQCBs regulate the discharge of pollutants to wetlands and other waters through §401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act. Section 401 requires a state water quality certification of permits issued by federal agencies, such as the Corps. Water quality certifications require the SWRCB or applicable RWQCB to find that the activities permitted by the federal permit will not violate state water quality standards individually or cumulatively over the term of the permit, and that the federal permit will not (the term is typically for five years).

The Porter-Cologne Water Quality Control Act, Water Code § 13260, requires that any person discharging waste, or proposing to discharge waste, that could affect the waters of the State to file a report of discharge with the SWRCB or applicable RWQCB through an application for waste discharge (Water Code Section 13260(a)(1). The term "waters of the State" is defined as any surface water or groundwater, including saline waters, within the boundaries of the State (Water Code §13050(e)), and may include "isolated wetlands," or those wetlands considered to be outside of the Corps' jurisdiction. Placing fill material into a water of the State generally constitutes "pollution". Pollution is defined as an alteration of the quality of the waters of the state by waste that unreasonably affects its beneficial uses (Water Code §13050(1)).

California Fish and Game Code §§1600-1607 require the CDFW be notified of any activity that may substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. Upon notification, the CDFW may require a Streambed Alteration Agreement. The CDFW defines a stream as follows:

"... a body of water that flows at least periodically...through a bed or channel having banks and supporting fish and other aquatic life. This includes watercourses having a subsurface flow that supports or has supported riparian vegetation."

(Source: Streambed Alteration Program, California Department of Fish and Wildlife, 2016).

In practice, CDFW authority is extended to any "blue line" stream shown on a USGS topographic map, as well as unmapped channels with a definable bank and bed. Wetlands, as defined by the Corps, need not be present for CDFW to exert authority.

5.2.3 California Environmental Quality Act

According to Appendix G of the CEQA (CEQA 2021) Guidelines, a proposed project would have a significant impact on biological resources if it would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW and USFWS?

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS?

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

5.2.4 Contra Costa County Tree Ordinance – Chapter 816-6 - Tree Protection and Preservation Ordinance

According to the Contra Costa County tree ordinance, a “protected tree” is defined as the following:

(1) On all properties within the unincorporated area of the county:

(A) Where the tree to be cut down, destroyed or trimmed by topping is adjacent to or part of a riparian, foothill woodland or oak savanna area, or part of a stand of four or more trees, measures twenty inches or larger in circumference (approximately 6.5 inches in diameter) as measured four and one-half feet from ground level, and is included in the following list of indigenous trees: Acer macrophyllum (Bigleaf Maple), Acer negundo (Box Elder), Aesculus californica (California Buckeye), Alnus Rhombifolia (White Alder), Arbutus menziesii (Madrone), Heteromeles arbutifolia (Toyon), Juglans Hindsii (California Black Walnut), Juniperus californica (California Juniper), Lithocarpus densiflora (Tanoak or Tanbark Oak), Pinus attenuata (Knobcone Pine), Pinus sabiniana (Digger Pine), Platanus Racemosa (California Sycamore), Populus fremontii (Fremont Cottonwood), Populus trichocarpa (Black Cottonwood), Quercus agrifolia (California or Coast Live Oak), Quercus chrysolepis (Canyon Live Oak), Quercus douglasii (Blue Oak), Quercus kelloggii (California Black Oak), Quercus lobata (Valley Oak), Quercus wislizenii (Interior Live Oak), Salix lasiandra (Yellow Willow), Salix laevigata (Red Willow), Salix lasiolepis (Arroyo Willow), Sambucus callicarpa (Coast Red Elderberry), Sequoia sempervirens (Coast Redwood), Umbellularia californica (California Bay or Laurel);

(B) Any tree shown to be preserved on an approved tentative map, development or site plan or required to be retained as a condition of approval;

(C) Any tree required to be planted as a replacement for an unlawfully removed tree.

(2) On any of the properties specified in subsection (3) of this section:

(A) Any tree measuring twenty inches or larger in circumference (approximately six and one-half inches diameter), measured four and one-half feet from ground level including the oak trees listed above;

(B) Any multistemmed tree with the sum of the circumferences measuring forty inches or larger, measured four and one-half feet from ground level;

(C) And any significant grouping of trees, including groves of four or more trees.

(3) Specified properties referred to in subsection (2) of this section includes:

(A) Any developed property within any commercial, professional office or industrial district;

(B) Any undeveloped property within any district;

(C) Any area designated on the general plan for recreational purposes or open space;

(D) Any area designated in the county general plan open space element as visually significant riparian or ridge line vegetation and where the tree is adjacent to or part of a riparian, foothill woodland or oak savanna area. (Ords. 94-59, 94-22).

Any person proposing to trench, grade or fill within the dripline of any protected tree or cut down, destroy, trim by topping or remove any protected tree shall apply to the department for a tree permit, not less than ten days prior to the proposed tree removal or tree alterations. Persons who would be eligible to apply for three or more individual tree permits under provisions of this chapter may apply for a collective tree permit for the site. (Ords. 94-59, 94-22).

If the reasons for alteration or removal relate to the health of the tree or if grading, trenching or filling is proposed under the dripline of an existing tree, or the review is of a collective tree permit and the director determines that more technical expertise is necessary to make the decision, a report prepared by an arborist may be required, to be paid for by the applicant. (Ords. 94-59, 94-22).

5.2.5 Contra Costa County Creek Setback Ordinance – Chapter 914 – Rights-of-Ways and Setbacks

No permanent structures of any kind may be built within the structure setback area. Creek structure setback requirements are outlined in Title 9, Division 914, (Sections 914-14.010, .012, .014) of the Contra Costa County Ordinance Code and are described as follows:

No permanent structures of any kind other than drainage structures may be constructed within or over any easement described in this chapter. Encroachments such as filled slopes, retaining walls, fencing and landscaping shall not be permitted. Public utilities may be installed within easements upon approval by the public works department. (Ords. 89-28, 8540 § 4, 78-5).

(a) "Structure setback line" means the line separating the structure setback area from the remainder of the lot. For unimproved earth channels within the subdivision, a structure setback line shall be shown on the final map or parcel map as follows: The thread of the channel shall be shown as accurately as possible, and a dashed line shall indicate the appropriate setback with a note describing the method used to determine the top of bank, selected from those set forth herein. The development rights for that portion of the lot on the creek side of the setback line, which is defined

as the "structure setback area," shall be offered for dedication to Contra Costa County by separate instrument.

(b) "Top of bank" means the point where the water surface plus sufficient freeboard for the design average recurrence interval runoff intersects the existing ground, or the point where a line with a slope of 2.5 horizontal to 1 vertical extending from the toe of the channel intersects the existing ground, whichever point is the greatest vertical distance above the channel invert. A separate top of bank shall be determined for each side of the channel.

(c) The structure setback line for unimproved channels shall be determined by measuring the following horizontal distance away from the top of bank on each side of the watercourse:

Height of top of bank above channel invert	Horizontal distance between top of bank and setback line
less than 20'	30'
20' - 29.99'	35'
30' - 39.99'	40'
40' - 49.99'	45'
50' and greater	50'

(d) Where significant riparian vegetation exists beyond the limits required above, the advisory agency may extend the setback line to include such areas. (Chapter 914-14, Ords. 89-28, 85-40 § 6, 78-5, Contra Costa County Code).

6.0 METHODS OF ANALYSIS FOR GENERAL BIOLOGICAL RESOURCES

A special-status plant and wildlife species database search and review was conducted using the CNDDB and other sources. An additional search was conducted for special-status plants using CNPS *Inventory* on-line. Special-status species reports were accessed by searching the CNDDB database for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo USGS 7.5-minute quadrangles which surround the Property, and by examining those species that have been identified in the vicinity of the Property. These quadrangles will be henceforth noted as surrounding quads. The database report identified special-status species known to occur in the region or those that have the potential to occur in the vicinity

of the Property. The CNDDB report was used to focus special-status species analysis of the site prior to the reconnaissance surveys.

An Olberding Environmental biologist conducted a reconnaissance-level survey of the Property on April 6, 2021. The survey consisted of walking throughout the Property and evaluating the site and adjacent lands for potential biological resources. Existing conditions observed plants and wildlife, adjacent land use, soils and potential biological resources were recorded during the visit. Plant and wildlife species observed within and adjacent to the Property during the reconnaissance survey are listed in Attachment 2, Table 1. Site photographs are provided in Attachment 3 of this document. Attachment 1, Figure 9 shows where each site photo was taken.

The objectives of the field survey were to determine the potential presence or absence of special-status species habitat listed in the CNDDB database report and to identify any wetland areas that could be potentially regulated by the Corps, RWQCB, and/or CDFW (CNDDB 2021). In addition, the Olberding Environmental biologist looked for other potential sensitive species or habitats that may not have been obvious from background database reports or research. Surveys conducted after the growing season or conducted outside of the specific flowering period for a special-status plant cannot conclusively determine the presence or absence of such plant species; therefore, site conditions and habitat type were used to determine potential for occurrence. When suitable habitat was observed to support a special-status plant or animal species, it was noted in the discussion for that particular species. Regulatory agencies evaluate the possibility of occurrence based on habitats observed on-site and the degree of connectivity with other special-status animal habitats in the vicinity of the Property. These factors are discussed in each special-status plant or animal section. This report also identifies the potential impacts to species that would be defined as endangered or rare pursuant to Section 15380 of the CEQA Guidelines. Additionally, this report identifies potential impacts to sensitive biological resources and provides mitigation recommendations to reduce impacts to a less than significant level. Potential for occurrence of each special-status or protected plant and animal species was evaluated using the following criteria.

- **Present**: The species has been recorded by CNDDB or other literature as occurring on the Property and/or was observed on the Property during the reconnaissance survey or protocol surveys.

- **May Occur**: The species has been recorded by CNDDB or other literature as occurring within five miles of the Property, and/or was observed within five miles of the Property, and/or suitable habitat for the species is present on the Property or its immediate vicinity.

- **Not Likely to Occur**: The species has historically occurred on or within five miles of the Property but has no current records. The species occurs within five miles of the Property

but only marginally suitable habitat conditions are present. The Property is likely to be used only as incidental foraging habitat or as an occasional migratory corridor.

- **Presumed Absent**: The species will not occur on the Property due to the absence of suitable habitat conditions, and/or the lack of current occurrences. Alternatively, if directed or protocol-level surveys were done during the proper occurrence period and the species was not found, it is presumed absent.

Sources consulted for agency status information include USFWS (2020) for federally listed species and CDFW (2021) for State of California listed species. Based on information from the above sources, Olberding Environmental developed a target list of special-status plants and animals with the potential to occur within or in the vicinity of the Property (Attachment 2, Table 2).

6.1 Soils Evaluation

The soils present on a property may determine if habitat on the site is suitable for certain special-status plants and animals. The host plants of some special-status invertebrates may also require specific soil conditions. In the absence of suitable soil conditions, special-status plants or animals requiring those conditions would be presumed absent. Information regarding soil characteristics for the Property was obtained by viewing the Natural Resources Conservation Service (NRCS) Web Soil Survey report for the Property (NRCS 2019).

6.2 Plant Survey Methods

The purposes of the botanical surveys were (1) to characterize the habitat types (plant communities) of the study area; (2) to determine whether any suitable habitat for any special-status plant species occurs within the study area; and (3) to determine whether any sensitive habitat types (wetlands) occur within the study area. Site conditions and plant habitat surveys are important tools in determining the potential occurrence of plants not recorded during surveys (e.g., special-status plants) because presence cannot conclusively be determined if field surveys are conducted after the growing season or conducted outside a specific flowering period.

6.2.1 Review of Literature and Data Sources

The biologist conducted focused surveys of literature and special-status species databases in order to identify special-status plant species and sensitive habitat types with potential to occur in the study area. Sources reviewed included the CNDDB occurrence records (CNDDB 2021) and CNPS *Inventory* (Skinner and Pavlik 1994) for the surrounding quads; and standard flora (The Jepson

Manual 2012). From the above sources, a list of special-status plant species with potential to occur in the Property vicinity was developed (Attachment 2, Table 2).

6.2.2 Field Surveys

A biologist from Olberding Environmental conducted a reconnaissance-level survey to determine habitat types and the potential for special-status plants based on the observed habitat types. All vascular plant species that were identifiable at the time of the survey were recorded and identified using keys and descriptions in The Jepson Manual (2012).

The habitat types occurring on the Property were characterized according to pre-established categories. In classifying the habitat types on the site, the generalized plant community classification schemes of *A Manual of California Vegetation* (Sawyer, Keeler-Wolf, and Evens 2009) were consulted. The final classification and characterization of the habitat types of the study area were based on field observations.

6.3 Wildlife Survey Methods

The purposes of the wildlife survey were to identify special-status wildlife species and/or potential special-status wildlife habitats within the study area.

6.3.1 Review of Literature and Data Sources

A focused review of literature and data sources was conducted in order to determine which special-status wildlife species had potential to occur in the vicinity of the Property. Current agency status information was obtained from USFWS (2020) for species listed as Threatened or Endangered, as well as Proposed and Candidate species for listing, under the federal ESA; and from CDFW (2021b, 2021) for species listed as Threatened or Endangered by the state of California under the CESA or listed as "species of special concern" by CDFW. From the above sources, a list of special-status wildlife species with potential to occur in the Property vicinity was developed (Attachment 2, Table 2).

6.3.2 Field Surveys

General Wildlife Survey – An Olberding Environmental biologist conducted a survey of species habitat within the entire study area, including visible portions of the adjacent properties. The purpose of the habitat survey was to evaluate wildlife habitats and the potential for any protected species to occur on or adjacent to the Property.

Reconnaissance-Level Raptor Survey – A reconnaissance-level raptor survey was conducted on the Property. Observation points were established on the periphery of the site to view raptor activity over a fifteen- to thirty-minute time period. This survey was conducted with the use of binoculars and notes were taken for each species occurrence. Additionally, utility poles and perch sites in the vicinity of the Property were observed. All raptor activity within and adjacent to the Property was recorded during the reconnaissance-level observation period.

Reconnaissance-Level Burrowing Owl (Athene cunicularia) Survey – A reconnaissance-level burrowing owl (*Athene cunicularia*) survey was also conducted on the Property to identify potential burrow sites or burrowing owl use of on-site habitat. The general presence and density of suitable burrow sites (e.g., rodent burrows) was evaluated for the Property.

7.0 RESULTS FOR GENERAL BIOLOGICAL RESOURCES

The search and review of the CNDDB database reports revealed the occurrence of special-status plant and wildlife species that occur in the habitats found within the Property boundaries (CNDDB 2021). The CNDDB database and background data were reviewed for the surrounding quads. Animal occurrences shown on Attachment 1, Figure 5 and plant occurrences shown on Attachment 1, Figure 6 are located within 5 miles of the Property and were reviewed for their potential to occur on the Property based on general habitat types. Results of the species review is tabulated on Attachment 2, Table 2. Critical habitat within the surrounding quads is shown on Attachment 1, Figure 7.

7.1 Soil Evaluation Results

The NRCS (2019) reports two soil types within the Property. A map of this soil type can be found in Attachment 1, Figure 8. The soil type mapped included the following:

- **TaD: Tierra loam, 9 to 15 percent slopes –** Tierra soils are gently sloping to steep and are on dissected terraces and low hills at elevations of 100 to 1,200 feet. The composition of this soil type within the Property consists of 85 percent Tierra and similar soils and 10 percent of minor components including Los Osos (5%) and Millsholm (5%).

  The Tierra series consists of deep, moderately well drained soils that formed in alluvial materials from sedimentary rocks. Typically, Tierra soils exhibit slow to rapid runoff and very slow permeability. These soils are used mainly for grazing and growing small grains and small areas of large number of crops. Many cultivated areas have reverted to grass. Vegetation dominantly is annual grasses and forbs. This series shows no frequency of ponding or flooding and is nonsaline. Its stratified layers consist of the

following (colors are for dry soil unless otherwise stated):

Ap--0 to 7 inches; grayish brown loam, very dark grayish brown moist; hard, friable, slightly sticky; strongly acid (pH 5.5).

A12--7 to 11 inches; gray loam, very dark gray moist; hard, friable, slightly sticky; medium acid (pH 6.0).

B21t--12 to 16 inches; very dark grayish brown clay, very dark brown moist; very hard, very firm, very sticky; slightly acid (pH 6.5).

B22t--16 to 25 inches; dark brown clay, dark brown moist; very hard, very firm, very sticky; slightly acid (pH 6.5).

B3t--25 to 43 inches; light brownish gray heavy clay loam, grayish brown moist; very hard, firm, sticky; moderately alkaline (pH 8.0).

C--43 to 62 inches; pale brown clay loam, dark brown moist; very hard, firm, sticky; mildly alkaline (pH 7.5).

- **CeA: Conejo Clay Loam, 0-2 percent slopes –** The Conejo series consists of very deep, well drained soils with a parent material of alluvium derived from sedimentary rock. These soils are found within valleys at elevation of 10 to 1,000 feet above sea level. The composition of this soil type within the Property consists of 85 percent Conejo and similar soils and 15 percent of minor components including unnamed (5%), Botella (5%), Clear Lake (3%), and Garretson (2%).

  Ap--0 to 5 inches, (0 to 13 cm); dark gray (10YR 4/1) clay loam, very dark gray (10YR 3/1) moist; 31 percent clay, moderate medium and coarse subangular blocky and strong medium granular structure; very hard, friable, moderately sticky and moderately plastic; many fine and medium irregular pores; slightly alkaline, (pH 7.5)

  A1--5 to 19 inches, (13 to 48 cm); very dark grayish brown (10YR 3/2) clay loam, very dark brown (10YR 2/2) moist; 31 percent clay, moderate coarse subangular blocky structure; very hard, friable, moderately sticky and moderately plastic; common very fine roots; many very fine and fine tubular and many fine irregular pores; slightly alkaline (pH 7.5).

A2--19 to 30 inches, (48 to 76 cm); very dark grayish brown (10YR 3/2) clay loam, very dark grayish brown (10YR 3/2) moist; 31 percent clay, moderate medium subangular blocky structure; very hard, friable, moderately sticky and moderately plastic; common very fine roots; many very fine and few fine tubular pores; few pressure faces; common fine iron-manganese nodules about l mm diameter; 1 percent gravel; slightly alkaline (pH 7.5).

Bw1--30 to 48 inches, (76 to 122 cm); dark grayish brown (10YR 4/2) clay loam, very dark grayish brown (10YR 3/2) moist; 29 percent clay; moderate coarse subangular blocky structure; very hard, friable, moderately sticky and moderately plastic; common very fine roots; many very fine and fine tubular and many fine irregular pores; many pressure faces; few fine iron-manganese nodules about 1 mm diameter; 2 percent gravel; slightly alkaline (pH 7.5).

Bw2--48 to 70 inches, (122 to 178 cm); brown (10YR 5/3) loam, dark yellowish brown (10YR 4/4) moist; 19 percent clay, weak fine and medium subangular blocky structure; slightly hard, weakly brittle but friable, nonsticky and slightly plastic; common very fine roots; many very fine and few fine and medium tubular pores; slightly effervescent in seams; common medium oxidized iron masses; 1 percent gravel; moderately alkaline (pH 8.0).

7.2 Plant Survey Results

7.2.1 Floristic Inventory and Habitat Characterization

The Property supports four habitat types consisting of developed, mixed woodland, perennial creek, and riparian woodland. In classifying the habitat types on the Property, generalized plant community classification schemes were used (Sawyer, Keeler-Wolf, and Evens 2009). The final classification and characterization of the habitat type of the Property was based on field observations. Plant species that occurred within 5 miles of the Property are shown in Attachment 1, Figure 6.

The habitat type and a description of the plant species present within the habitat type are provided below. The habitats found on the Property are mapped on Attachment 1, Figure 10. Dominant plant species are also noted. A complete list of plant species observed on the Property can be found within Attachment 2, Table 1.

Mixed Woodland

A substantial portion of the 3.05-acre Property, 1.35 acres, is dominated by mixed woodland habitat. Mixed woodland habitat exists in the northern, eastern and western portions of the Property. Dominant vegetation observed within this habitat type includes but is not limited to wild oat, Italian ryegrass, ripgut brome, common vetch (Vicia sativa), cleavers (*Galium aparine*), Italian thistle (*Carduus pycnocephalus*) and Bermuda buttercup (*Oxalis pes-caprae*). Valley and coast live oaks are present in the central portion of the western mixed woodland habitat. Black walnut and elm trees are located centrally in the eastern portion of the woodland habitat. Monterey pine (*Pinus radiata*), coast redwood (*Sequoia sempervirens*), and blue gum (*Eucalyptus globulus*) are also present throughout the mixed woodland habitat.

Developed

The Property contains two existing residential homes that, combined, encompass approximately 0.22 acres. A two-story home is located on the northwestern boundary along Grayson Road while the other home (one-story) is located centrally near the southern boundary of the Property. The northern residential home is immediately surrounded by mixed woodland habitat to the north in which a large cedar tree is present, coast live oak trees and additional structures including a shed and chicken coop to the south, and black walnut and elm trees to the east. A graded driveway starting at Grayson Road, runs south along the western side of the northern residential home to the southern residential home. The southern home is immediately surrounded by mixed woodland habitat to the north, south and west and woodland riparian habitat to the east. A large coast live oak tree exists at the northeast corner of the residential structure.

Perennial Creek

Running southwest to northeast along the southern boundary of the property is Grayson Creek, a perennial creek originating in Briones Regional Park. Grayson Creek encompasses approximately 0.06 acres (755 linear feet) of the Property. Approximately 4.6 miles northeast of the Property, Grayson Creek drains into Pacheco Slough, which in turn drains into Suisun Bay, approximately 3.75 miles further north.

Dominant vegetation along the banks of Grayson Creek include but are not limited to English ivy (*Hedera helix*), cleavers and Bermuda buttercup. An oak woodland corridor exists adjacent to Grayson Creek within the Property.

Riparian Woodland

A riparian woodland corridor of approximately 1.50 acres occurs along Grayson Creek in the southern portion of the Property. Native species found in the riparian habitat include coast live oak, willow (*Salix spp.*), California buckeye (*Aesculus californica*) and California bay laurel (*Umbellularia californica*). Non-native species present in the riparian woodland include blue gum (*Eucalyptus globulus*) and tree of heaven (*Ailanthus altissima*). Dominant understory plants include English ivy, Bermuda buttercup, periwinkle (*Vinca major*) and poison oak (*Toxicodendron diversilobum*).

Special-Status Plant Species

Special-status plant species include species listed as Rare, Threatened, or Endangered by the USFWS (2020) or by the State of California (CDFW 2021b). Federal Proposed and Candidate species (USFWS, 2019) are also special-status species. Special-status species also include species listed on List 1A, List 1B, or List 2 of the CNPS Inventory (Skinner and Pavlik, 1994; CNPS 2021). All species in the above categories fall under state regulatory authority under the provisions of CEQA and may also fall under federal regulatory authority. Considered special-status species are species included on List 3 (Plants About Which We Need More Information—A Review List) or List 4 (Plants of Limited Distribution—A Watch List) of the CNPS *Inventory*. These species are considered to be of lower sensitivity and generally do not fall under specific state or federal regulatory authority. Specific mitigation considerations are not generally required for List 3 and List 4 species.

Attachment 2, Table 2 includes a list of special-status plants with the potential to occur within or in the immediate vicinity of the Property based on a review of the surrounding quads. The special-status plant species identified by the CNDDB as potentially occurring on the Property are known to grow only from specific habitat types. The specific habitats or "micro-climate" necessary for many of the plant species to occur are not found within the boundaries of the Property. The habitats necessary for the CNDDB reported plant species consist of valley and foothill grassland, cismontane woodlands, chaparral, playas, chenopod scrub, adobe clay soils, alkaline soils, serpentine soils, sandy soils, gravelly soils, coastal prairie, coastal scrub, coastal dunes, coastal bluff scrub, coastal salt marsh, vernal pools, seeps, meadows and sinks, marshes or swamps, riparian woodlands, on slopes near drainages, closed cone coniferous forest, north coast coniferous forest, redwood forest, lower montane coniferous forest, and broad-leafed upland forest.

Occurrences of special-status plants within a five-mile radius of the point roughly representing the center of the Property are described in detail. Occurrence distance from the Property is estimated from this center point (Attachment 1, Figure 6).

Congdon's Tarplant (*Centromadia parryi* ssp. *congdonii*). CNPS List 1B.

Congdon's tarplant is a member of the genus *Hemizonia* in the sunflower family (*Asteraceae*). It is one of four subspecies of Parry's tarplant (*Hemizonia parryi*). Congdon's tarplant is a prostrate to erect, annual herb with rigidly spine-tipped leaves and yellow ray- and disk-flowers (head). It occurs in valley and foothill grasslands in moist alkaline soils and blooms between June and November. Historically, Congdon's tarplant was distributed from Solano County south to San Luis Obispo County.

Four CNDDB occurrences of this species have occurred within five miles of the Property. The closest occurrence (Occurrence #2) was located approximately 1.2 miles southeast of the Property. A survey completed in 1998 observed that the population previously seen in this location is considered extirpated. Suitable habitat for Congdon's tarplant exists within the mixed woodland habitat of the Property; however, no plants were present at the time of the survey. The survey performed for this report consisted of a reconnaissance survey performed outside of the identified blooming period of this species (June-November), however remnant plants would have been observed if they were present. For these reasons Congdon's tarplant is presumed absent from the property. As a result, no significant impact is identified to Congdon's Tarplant.

Diablo Helianthella (*Helianthella castanea*). CNPS List 1B.

Diablo helianthella is a perennial that exhibits yellow sunflowers that bloom between April and June. The plant has simple broad leaves that are attached at the base of the stem and grows up to two feet in height. The Diablo helianthella is known to grow on open grassy sites in cismontane woodland and closed-cone coniferous forests.

Eleven CNDDB occurrences of this species have occurred within five miles of the Property. The closest occurrence (Occurrence #46) was located approximately 1.5 miles southwest of the Property in Briones Regional Park. This occurrence involved the observation of 25 plants in 2004. Potentially suitable habitat exists in the understory of the riparian woodland habitat and the mixed woodland habitat. However, the April 2021 survey occurred during the blooming period for Diablo Helianthella and this species was not observed. Therefore, this species has a low potential to occur on site and is presumed absent from the Property. As a result, no significant impact is identified to Diablo helianthella.

Mount Diablo Fairy-Lantern (*Calochortus pulchellus*). CNPS List 1B.

Mount Diablo fairy-lantern is a spring blooming bulb that is in flower between April and June. This species exhibits light yellow globe-shaped flowers that turn down as if nodding. The plant grows to approximately one and a half feet tall and has between one to several flowers on the stem

and long, narrow, pointed leaves. This bulb specifically grows on wooded slopes in chaparral and in valley and foothill grassland habitat.

CNDDB listed six occurrences of this species within five miles of the Property. The closest and most recent occurrence (Occurrence #23) was located approximately 1.5 miles west of the Property in Briones Regional Park. This occurrence involved the observation of 52 plants along Spengler Trail in 2006. The wooded slopes of the oak woodland habitat and the mixed woodland areas of the Property offer potentially suitable habitat for the Mount Diablo fairy-lantern. However, the April 2021 survey coincided with the blooming period for Mount Diablo fairy-lantern and this species was not observed. Therefore, Mount Diablo fairy-lantern has a low potential to occur on site and is presumed absent from the Property. As a result, no significant impact is identified to Mount Diablo fairy-lantern.

Bent-Flowered Fiddleneck (*Amsinckia lunaris*). CNPS List 1B.

Bent-flowered fiddleneck is an annual of the family *Boraginaceae*. The inflorescence is a scorpiod-cyme and coiled at the tip with multiple small orange flowers. It is distributed throughout the inner north coast ranges of California, in the west Central Valley, and the San Francisco Bay Area. Habitat consists of coastal bluff scrub, cismontane woodlands, and valley and foothill grasslands. The blooming period is between March and June.

CNDDB listed four occurrences (Occurrence #75, #41, #30, #43) of this species within five miles of the Property. All occurrences were located within Briones Hills in Briones Regional Park. Although potentially suitable habitat occurs within the mixed woodland habitat, the April 2021 survey of the Property occurred during the blooming period for bent-flowered fiddleneck and this species was not observed. Therefore, bent-flowered fiddleneck has a low potential to occur on site, and is presumed absent from the Property. As a result, no significant impact is identified to bent-flowered fiddleneck.

7.3 Wildlife Survey Results

7.3.1 General Wildlife Species and Habitats

A complete list of wildlife species observed within the Property can be found in Attachment 2, Table 1. Wildlife species commonly occurring within habitat types present on the Property are discussed below:

Mixed Woodland

The mixed woodland habitat provides many foraging opportunities for a wide range of species. Passerine species observed during the survey include dark-eyed junco (*Junco hyemalis*), California towhee (*Melozone crissalis*), black phoebe (*Sayornis nigricans*), bushtit (*Psaltriparus minimus*), spotted towhee (*Pipilo maculatus*), and white-crowned sparrow (*Zonotrichia leucophrys*). Other avian species observed include American crow (*Corvus bracyrynchos*), acorn woodpecker (*Melanerpes formicivorus*), Anna's hummingbird (*Calypte anna*) and turkey vulture (*Cathartes aura*).

Raptor species observed foraging during the survey included red-tailed hawk, red-shouldered hawk, and Cooper's hawk. However, the mixed woodland habit could potentially be utilized for foraging by other species including sharp-shinned hawk and American kestrel.

Scattered burrow colonies created by small mammals including but not limited to Botta's pocket gopher (*Thomomys bottae*) and various vole species (*Microtus spp.*) were observed along the southern edge of the mixed woodland habitat adjacent to the riparian woodland.

The cover from the grasses throughout the mixed woodland habitat and the small mammal burrows present offer suitable habitat for various reptile species. Numerous western fence lizards (*Sceloporus occidentalis*) were observed throughout the Property. Other reptile species including Pacific gopher snake (*Pituophis catenifer catenifer*) and California king snake (*Lampropeltis californiae*) may also occur.

Developed

The existing structures and adjacent mature oak, cedar and ornamental trees provide suitable habitat for numerous bird species and potentially some bats. Avian species observed in the developed area include acorn woodpecker, western scrub jay (*Aphelocoma californica*), Steller's jay (*Cyanocitta stelleri*), hermit thrush (*Catharus guttatus*) and dark-eyed junco. Bat species that could utilize this habitat for roosting include hoary bat (*Lasiurus cinereus*), Yuma myotis (*Myotis yumanensis*), and Western red bat.

Perennial Creek

Grayson Creek offers suitable foraging opportunities for various insectivorous avian species such as black phoebe and mammalian species such as hoary bat and Yuma myotis.

The creek could offer suitable foraging and dispersal habitat for western pond turtle and many amphibian species including, California red-legged frog, Sierran tree frog (*Pseudacris sierra*), and western toad (*Anaxyrus boreas*).

Riparian Woodland

The riparian woodland corridor running adjacent to Grayson Creek has the most chance to provide nesting habitat for passerine and raptor avian species as well as provide roosting habitat for bats including potentially sensitive species like the Western red bat.

Numerous avian species were observed in the woodland habitat including spotted towhee, dark-eyed junco, and Steller's jay. Additionally, a Cooper's hawk was observed displaying territorial behavior towards a red-tailed hawk which may be indicative of defensive behavior of a nesting site. Pacific tree frog and other amphibian species may also use the area for foraging and breeding.

BIRDS

Red-shouldered Hawk (*Buteo lineatus*). MBTA.

The red-shouldered hawk is a medium-sized, slender *Buteo* with long legs and a long tail and is smaller than the red-tailed hawk. Upperparts are dark with pale spotting, and rusty-reddish feathers on the wing create the distinctive shoulder patch. The tail has several wide, dark bars; the intervening narrow stripes and the tip of the tail are white, and there is variation in the number of tail bars among adults and juveniles.

The habitat that the red-shouldered hawk prefers varies from bottomland hardwoods and riparian areas to upland deciduous or mixed deciduous-conifer forest, and almost always includes some form of water, such as a swamp, marsh, river, or pond. In the west, the red-shouldered hawk sometimes occurs in coniferous forests, and has been expanding its range of occupied habitats to include various woodlands, including stands of eucalyptus trees amid urban sprawl. They typically place their nests in a broad-leaved tree (occasionally in a conifer), below the forest canopy but toward the tree top, usually in the crotch of the main trunk. Nest trees are often near a pond, stream, or swamp, and can be in suburban neighborhoods or parks. These hawks eat mostly small mammals, lizards, snakes, and amphibians. They also eat toads, snakes, and crayfish. They occasionally eat birds, sometimes from bird feeders; recorded prey includes sparrows, starlings, and doves.

The CNDDB does not track occurrences of red-shouldered hawk. However, two red-shouldered hawks were observed foraging and pair bonding on the Property during the survey. The large trees present within the mixed woodland area, and those found along the riparian corridor offer suitable

nesting habitat. In addition, foraging opportunities occur throughout the Property in the mixed woodland habitat. Given the information above the red-shouldered hawk has high potential to occur on the Property in a nesting capacity and was present in a foraging capacity.

Red-Tailed Hawk (*Buteo jamaicensis*). MBTA.

The red-tailed hawk is a large *Buteo* that is distinct due to the red color of its tail feathers in contrast to the brown color of its body. Not all red-tailed hawks exhibit the distinct coloration on their tail and gradations may occur especially in young birds. Red-tailed hawks hunt rodents by soaring over grassland habitat. Nest trees for red-tailed hawks are usually tall trees with a well-developed canopy that includes a strong branching structure on which to build a nest.

The CNDDB does not track occurrences of red-tailed hawk. However, red-tailed hawks were observed foraging on the Property during the April 2021 survey. The large trees present within and around the Property offer suitable nesting habitat. In addition, foraging opportunities occur throughout the Property. Given the information above the red-tailed hawk has high potential to occur on the Property in a nesting capacity and was present in a foraging capacity.

Cooper's Hawk (*Accipiter cooperii*). MBTA.

Coopers' hawk is a medium to large-size raptor, reaching an average of 28-34 in wingspan. They are distinctive for the black and white horizontal banding on the elongated tail, blue gray head, back and upper wings. Additional markings include rusty red horizontal barring on a white breast, a large square head, and long yellow legs and feet. The diet of Cooper's hawk consists mainly of small to medium-sized birds which they ambush by surprise, but they will also consume squirrels and other small mammals.

CNDDB did not list any occurrences of Cooper's hawk. The large trees present within the riparian habitat on the Property offer suitable nesting habitat. A Cooper's hawk was observed foraging on the Property and displaying territorial behavior towards a red-tailed hawk during the April 2021 survey. This display may indicate defensive behavior of a nesting site. Given the information above, the Cooper's hawk has high potential to occur on the Property in a nesting capacity and was present in a foraging capacity.

Sharp-Shinned Hawk (Accipiter striatus). MBTA.

The sharp-shinned hawk is a small raptor with short, rounded wings, and has an average wingspan of 17" to 23". This hawk has a long tail that is squared-off at tip with prominent corners. This raptor typically flies with several quick, snappy wing beats and a short glide, but also soars. Its small, rounded head does not project far beyond the wings when soaring. The adult sharp-shinned

hawk exhibits a red eye, black cap, and a blue-gray back and upper wings. The white breast, belly and under wing coverts are marked by fine, thin, reddish bars.

Sharp-shinned hawks specialize in hunting avian prey with songbirds making up 90 percent of its diet. These hawks will occasionally eat small rodents, such as mice and voles, and even some insects. Throughout their range, sharp-shinned hawks favor conifer trees (pine, spruce, or fir) as nesting sites, but may also use aspens and hardwood trees. The nest is always placed under dense forest cover, usually toward the top of a tall tree, but well under the canopy. Most nests are anchored between horizontal limbs and the tree trunk.

CNDDB did not list any occurrences of sharp-shinned hawk. However, the large trees present within the riparian habitat on the Property offer suitable nesting habitat. Additionally, foraging opportunities are present in the woodland habitats with the number of passerine bird species observed during the April 2021 survey. Given the information above, sharp-shinned hawk has a moderate potential to occur on the Property in a nesting and foraging capacity and may occur.

American Kestrel (Falco sparverius). MBTA.

The American kestrel is the smallest of raptor species and is distinct due to the black barring on its face. The female kestrel is slightly larger than the male bird and is differentiated by its brown and red coloration. The male kestrel is slightly smaller than the female and has gray wing patches near the top of the wing.

Kestrels favor open areas with short ground vegetation and sparse trees. They are generally found in meadows, grasslands, deserts, parks, farm fields, cities, and suburbs, and are attracted to many habitats modified by humans. Kestrels utilize cavities in trees and structures for nesting. They're diet consists mostly of insects and other invertebrates, but they also hunt small rodents, birds, and reptiles.

CNDDB did not list any occurrences of American kestrel. However, cavities within the large trees present on the Property offer suitable nesting habitat. Additionally, foraging opportunities are present in the woodland habitats with the number of insects, lizards, and passerine bird species observed during the April 2021 survey. Given the information above, American kestrel has a moderate potential to occur on the Property in a nesting and foraging capacity and may occur.

Burrowing Owl (*Athene cunicularia*). Federal Species of Special Concern, California Species of Special Concern.

The U.S. Fish and Wildlife Service has identified the burrowing owl is as a "candidate" species. Candidate species are animals and plants that may warrant official listing as threatened or

endangered, but there is no conclusive data to give them this protection at the present time. As a candidate species, burrowing owls receive no legal protection under the Endangered Species Act (ESA). However, this species does receive some legal protection from the U.S. through the Migratory Bird Treaty Act, which forbids the destruction of the birds and active nests. In California, the burrowing owl considered a "species of special concern."

Burrowing owls are ground dwelling members of the owl family and are small brown to tan colored birds with bold spots and barring. Burrowing owls generally require open annual grassland habitats in which to nest, but can be found on abandoned lots, roads, airports, and other urban areas. Burrowing owls generally use abandoned California ground squirrel holes for their nesting burrow but are also known to use pipes or other debris for nesting purposes. Burrowing owls prefer annual grassland habitats with low vegetative cover. The breeding season for burrowing owls occurs from March through August. Burrowing owls often nest in loose colonies about 100 yards apart. They lay three to twelve eggs from mid-May to early June. The female incubates the clutch for about 28 days, while the male provides her with food. The young owls begin appearing at the burrow's entrance two weeks after hatching and leave the nest to hunt for insects on their own after about 45 days. The chicks can fly well at six weeks old.

CNDDB listed two occurrences of burrowing owl within five miles of the Property. The closest occurrence (Occurrence #1164) was observed approximately 3.0 miles northeast of the Property in Buchanan Field Airport in the City of Concord. During this observation, two unpaired adults were observed along the runway in January 2008. The Property does not have suitable grassland habitat for burrowing owl. Additionally, no ground squirrel burrows were observed on site. A few mammal burrows were present on site however these burrows were most likely constructed by smaller mammals such as pocket gophers and voles, which are inadequate for burrowing owls. Additionally, high vegetative cover is present in the woodland habitat which is a characteristic that burrowing owl do not generally prefer. For these reasons the burrowing owl has a low potential to occur on the Property in nesting and foraging capacity and is not likely to occur.

MAMMALS

Special-status Bats

Bats (Order - *Chiroptera*) are the only mammals capable of "true" flight. They are nocturnal feeders and locate their prey, which consists of small to medium sized insects by echolocation. Bats consume vast amounts of insects making them very effective pest control agents. They may eat as much as their weight in insects per day. Maternity roosts comprised of only females, may be found in buildings or mine shafts with temperatures up to 40 degrees Celsius and a high percentage of humidity to ensure rapid growth in the young. Female bats give birth to only one or

two young annually and roost in small or large numbers. Males may live singly or in small groups, but scientists are still unsure of the whereabouts of most males in summer.

Special-status bats with the potential to occur on the Property are listed below:

- Western Red Bat (*Lasiurus blossevillii)*
- Hoary Bat (*Lasiurus cinereus*)
- Yuma myotis (*Myotis yumanensis*)

CNDDB listed the hoary bat (Occurrence #20) as occurring within the 5-mile radius of the Property. This occurrence was recorded approximately 2.0 miles east of the Property. The large oak and redwood trees and the existing residential homes could potentially offer roosting sites for multiple bat species. The woodland habitat and Grayson Creek provide an array of insects, allowing for abundant foraging opportunities. Given the above information, multiple species of bats have a moderate potential to occur on the Property in roosting and foraging capacity.

AMPHIBIANS

California Red-Legged Frog (*Rana draytonii*). Federally Threatened, California Species of Special Concern.

California red-legged frog (CRLF) was listed as a Federal threatened species on May 31, 1996 (61 FR 25813) and is considered threatened throughout its range. If a proposed federal action may affect, and is likely to adversely affect, a listed species, Section 7 of the ESA requires consideration of those species through formal consultations with the USFWS. On April 13, 2006, USFWS designated critical habitat for the CRLF under the ESA. In total, approximately 450,288 acres fell within the boundaries of critical habitat designation. A new ruling by the USFWS on March 17, 2010, revised the designation of critical habitat for CRLF (75 FR 12815 12959). In total, approximately 1,636,609 acres of critical habitat in 27 California counties fall within the boundaries of the final revised critical habitat designation. This rule became effective on April 16, 2010.

The CRLF is a rather large frog, measuring one and a half to five inches in length. They are reddish-brown to gray in color, with many poorly defined dark specks and blotches. Dorsolateral folds are present. The underside of the CRLF is washed with red on the lower abdomen and hind legs. The CRLF has a dark mask bordered by a light stripe on the jaw, smooth eardrums, and not fully webbed toes. The male has enlarged forearms and swollen thumbs. Its vocals consist of a series of

weak throaty notes, rather harsh, and lasting two to three seconds. Breeding occurs from December to March with egg masses laid in permanent bodies of water.

The CRLF is found in lowlands, foothill woodland and grasslands, near marshes, lakes, ponds or other water sources. These amphibians require dense shrubby or emergent vegetation closely associated with deep still or slow-moving water. Generally, these frogs favor intermittent streams with water at least two and a half feet deep and where the shoreline has relatively intact emergent or shoreline vegetation. CRLF is known from streams with relatively low gradients and those waters where introduced fish and bullfrogs are absent. CRLF are known to take refuge upland in small mammal burrows during periods of high-water flow. CRLF occurs west of the Sierra Nevada-Cascade and in the Coast Ranges along the entire length of the state. Historically, they occurred throughout the Central Valley and Sierra Nevada foothills south to northern Baja California. Now they are found from Sonoma and Butte Counties south to Riverside County, but mainly in Monterey, San Luis Obispo, and Santa Barbara Counties.

CNDDB listed 5 occurrences of CRLF occurring within five miles of the Property. The closest occurrence (#158) observed in 2004 was located approximately 2 miles west of the Property. During this occurrence, 3 adult CRLF were observed in two permanent freshwater ponds located within Briones Regional Park. The Property is located approximately 1.3 miles east from USFWS-designated critical habitat for CRLF (Unit ALA-1B)(Attachment 1, Figure 7). Although deep plunge pools are not present within the portion of Grayson Creek that borders the Property, water was present in the entire length of the creek bordering the Property during the April 2021 survey. Vegetative debris throughout the riparian woodland corridor offers suitable upland refugial habitat for CRLF. Therefore, Grayson Creek could offer potential aquatic dispersal and foraging opportunities for CRLF, and the surrounding riparian habitat could offer terrestrial dispersal habitat. For these reasons CRLF has a moderate potential to occur on site in the creek channel and riparian wood habitats in a dispersal capacity only (see Table 2).

California Tiger Salamander (*Ambystoma californiense*). Federally Threatened, State Threatened.

Adult California tiger salamanders (CTS) inhabit rolling grassland and oak savannah. Adults spend most of the year in subterranean retreats such as rodent burrows but may be found on the surface during dispersal to and from breeding sites. The preferred breeding sites are vernal pools and other temporary ponds. However, CTS may use permanent manmade ponds as breeding habitat. CTS adults begin migrating to ponds after the first heavy rains of fall and can be found in or around the breeding ponds during and after winter rainstorm events. In extremely dry years, CTS may not reproduce.

After mating, females lay several small clusters of eggs, which contain from one to over 100 eggs. The eggs are deposited on both emergent and submerged vegetation, as well as submerged detritus. A minimum of ten weeks is required to complete larval development through metamorphosis, at which time the larvae will normally weigh about ten grams. Larvae remaining in pools for a longer time period can grow to much larger sizes. Upon metamorphosis, juvenile CTS migrate in large masses at night from the drying breeding sites to refuge sites. Prior to this migration, the juveniles spend anywhere from a few hours to a few days near the pond margin. Adult CTS are largely opportunistic feeders, preying upon arthropod and annelid species that occur in burrow systems, as well as aquatic invertebrates found within seasonal pools. The larvae feed on aquatic invertebrates and insects, showing a distinct preference for larvae of the Pacific tree frog.

On August 4, 2004, the USFWS announced the listing of the CTS as threatened throughout its range with the exception of the Sonoma and Santa Barbara County populations which are listed as endangered (USFWS 2004). On March 3, 2010, the California Fish and Game Commission designated CTS as threatened under the California Endangered Species Act. On August 23, 2005, the Service designated 199,109 acres of critical habitat in 19 counties for the central California population of the CTS. On August 2, 2005, they proposed 74,223 acres of critical habitat for CTS in Sonoma County, California. This habitat is located in the Santa Rosa Plain in central Sonoma and includes lands bordered on the west by Laguna de Santa Rosa, to the south by Skillman Road, northwest of Petaluma, to the east by foothills, and to the north by Windsor Creek. On December 14, 2005, in a final decision, USFWS designated and excluded 17,418 acres of critical habitat for CTS, so that no critical habitat is being designated for the Sonoma County population.

CNDDB has listed four occurrences (Occurrence #413, #43, #582, #418) of CTS occurring within five miles of the Property. All four of these occurrences are considered to be historical with the most recent occurrence (Occurrence #418) observed in 1954 and the sites are considered to be extirpated. The Property lacks vernal pools or other ponds suitable for breeding habitat. For these reasons there is a low potential for CTS to occur on the Property and CTS is presumed absent.

REPTILES

Alameda Whipsnake (*Masticophis lateralis euryxanthus*). Federally Threatened, State Threatened.

The Alameda whipsnake is one of two subspecies of the California whipsnake. It is distinguished from the chaparral whipsnake (*M. l. lateralis*) by the broad orange striping on its sides. Adults reach approximately three to five feet in length and show a sooty black to dark brown back, cream colored undersides and pinkish tail. This species is typically found in chaparral, northern coastal sage scrub, and coastal sage habitats; however, annual grasslands, oak woodlands, and oak

savannah serve as habitat during the breeding season. Egg-laying occurs near scrub habitat on ungrazed grasslands with scattered shrub cover. The known distribution for Alameda whipsnake includes Sobrante Ridge, Oakland Hills, Mount Diablo, the Black Hills, and Wauhab Ridge.

Male and female snakes are active from April to November finding mates. During the breeding season from late March through mid-June, male snakes exhibit more movement throughout their home range, while female snakes remain sedentary from March until egg laying. Females lay a clutch of 6 to 11 eggs, usually in loose soil or under logs or rocks.

CNDDB listed 13 occurrences of the Alameda whipsnake within the vicinity of the Property. The exact locations of these collections were not recorded in the CNDDB due to the sensitivity of this species. Refer to Attachment 1 Figure 5 to see approximate range of listed occurrences. The Property is located approximately 0.9 miles from USFWS designated critical habitat in Briones Regional Park (unit: 3) (See Attachment 1 Figure 7). The most recent occurrence (# 180) occurred approximately 3.5 miles in 2018. During this occurrence, two Alameda whipsnake were detected in April 2018 on Mount Wanda in Martinez. The closest occurrence (# 62) involved the observation of 1 adult whipsnake in coyote brush scrub in August 2002. This occurrence was located approximately 1.2 miles southwest just outside Briones Regional Park. The Property does not support scrub or rocky outcrop habitat which the Alameda whipsnake prefers. Residential development surrounds the Property which may discourage Alameda whipsnake from using the Property. However, open space parks are also present within the vicinity of the Property; thus, whipsnake could disperse through the Property as it moves to more suitable habitat. For these reasons, Alameda whipsnake has a low potential to occur on the Property in a dispersal capacity only.

Western Pond Turtle (*Emys marmorata*). California Species of Special Concern.

The western pond turtle is a thoroughly aquatic turtle that may be found in marshes, ponds, streams and irrigation ditches where aquatic vegetation is present. The turtles, which range from nine to ten inches in size, require basking sites and suitable upland habitat for egg laying. Suitable breeding upland habitats may consist of sandy banks or grassy open fields. The western pond turtle has a dark brown to olive-colored carapace with hexagonal scales that lack prominent markings.

Nesting and incubation occur from April to September, with a peak time for mating and egg laying occurring from March to May. After a 73 to 80-day gestation or incubation period, 5 to 13 eggs will be laid from July to October. Eggs are produced either once or twice a year. Females may travel some distance from water for egg-laying, moving as much as 0.8 kilometers (a half mile) away from and up to 90 meters (300 feet) above the nearest source of water. Most nests are within

90 meters (300 feet) of water. The female usually leaves the water in the evening and may wander far before selecting a nest site, often in an open area of sand or hardpan that is facing southwards. The nest is flask-shaped with an opening of about five centimeters (two inches). Females spend considerable time covering up the nest with soil and adjacent low vegetation, making it difficult for a person to find unless it has been disturbed by a predator.

Activity slows from November to February. During the winter when water and air temperatures cool, usually from September to March, the turtles begin to hibernate. During hibernation, turtles either bury themselves in the mud at the bottom of ponds or will bury themselves on land in duff (top layer of decomposing vegetation and soil). Some turtles travel more than a half mile to over-winter on land, though many select the nearest wooded or shrubby area they can bury in. Turtles then emerge from hibernation in the spring to start the yearly cycle again.

CNDDB listed 5 occurrences of the western pond turtle within the vicinity of the Property. The closest occurrence (Occurrence #1360) was located approximately 4 miles northeast of the Property. During this occurrence one adult was observed during a survey of the Clayton Valley drain prior to routine maintenance. The portion of Grayson Creek bordering the Property lacks basking pools and is mostly shaded, however water was present in the creek during the April 2021 survey. Therefore, western pond turtle could potentially use the creek channel and the surrounding riparian woodland corridor as dispersal habitat. Given the information above, western pond turtle has a moderate potential to occur on the Property and may occur in a dispersal capacity only.

7.0 CONCLUSIONS AND IMPACT ANALYSIS

7.1 Waters

Results of the biological resource analysis survey conducted by Olberding Environmental indicate that the Property contains waters that may be considered jurisdictional by the Army Corps of Engineers, RWQCB or CDFW. Grayson Creek runs along the southern boundary of the Property. Although the proposed project does not include conducting any activities within Grayson Creek or the associated riparian corridor, the waters mitigation presented in Section 8.0 would reduce any potential impacts to less-than-significant levels.

7.2 Riparian Habitat

The proposed project plans on the removal of approximately 84 trees including native species such as coast live oak, valley oak, black walnut, and buckeye. Native trees that are part of or adjacent to a riparian area, and measure greater than 6.5 inches in diameter at breast height (dbh) are

considered protected under the Contra Costa County Tree Protection and Preservation Ordinance (Chapter 816-6, Ordinances 94-59, 94-22, Contra Costa County Code). Adherence to County ordinances that pertain to riparian habitat protection including the Tree Protection and Preservation Ordinance described above and the Contra Costa County Creek Setback Ordinance (Chapter 914) (Attachment 1, Figure 11), and implementation of the mitigation measures presented in Section 8.0 would reduce any potential impacts to less-than-significant levels.

7.3 Special-status Plants

No special-status plant species were determined to have a potential to occur on the Property. The April 2021 survey coincided with the blooming period of three special-status plants (Diablo helianthella, Mt. Diablo fairy-lantern, bent-flowered fiddleneck) that may have had the potential to occur on the Property and these plants were not observed. Although the survey occurred outside the blooming period for Congdon's tarplant, remnant plants were not observed. The proposed project will not have an impact to special status plants and no further measures related to protection of special-status plants are recommended.

7.4 Special-status Wildlife

Foraging or Nesting Raptor/Passerine Species – A total of five raptor species were identified as having potential to occur on the Property. Three species including red-shouldered hawk, red-tailed hawk, and Cooper's hawk had a high potential to occur in a foraging and nesting capacity and were present in a foraging capacity. The sharp-shinned hawk and American kestrel had a moderate potential to occur in a foraging and nesting capacity. Implementation of the special-status wildlife mitigation measures presented in Section 8.0 below would reduce any potential impacts to nesting avian species protected under the MBTA to less-than-significant levels.

Special-Status Mammals – Given the presence of suitable onsite habitat; the Western red bat, hoary bat and Yuma myotis have a moderate potential to occur on the Property in a foraging and roosting capacity. No immediate signs were present during the initial survey; however, large trees throughout the riparian and mixed woodland habitats, and the existing residential structures could provide roosting sites. Implementation of the special-status wildlife mitigation measures presented in Section 8.0 below would reduce any potential impacts to bat species to less-than-significant levels.

Special-Status Amphibians – One amphibian species, CRLF, has been identified as having a moderate potential to occur on the Property in a dispersal capacity. Multiple CNDDB occurrences and USFWS designated critical habitat of CRLF are recorded in the vicinity of the Property. The Property contains suitable aquatic dispersal habitat and foraging opportunities in Grayson Creek

and suitable upland habitat in the riparian corridor. For these reasons CRLF has a moderate potential to occur in a foraging and dispersal capacity throughout the creek channel and associated riparian woodland corridor. Implementation of the special-status wildlife mitigation measures presented in Section 8.0 below would reduce any potential impacts to CRLF to less-than-significant levels.

Special-Status Reptiles – The Alameda whipsnake and western pond turtle were identified by the CNDDB as occurring in the vicinity of the Property. An assessment of the Property concluded that the Property does not support the shrub and rock outcrop habitat that Alameda whipsnake prefers. More suitable habitat is located west and north of the Property in Briones Regional Park and the surrounding open space. Thus, Alameda whipsnake is not likely to occur on the Property in a breeding capacity or as a permanent resident. The Property is essentially surrounded by residential development; however, areas of open space do occur within the vicinity of the Property. Whipsnake could disperse through the riparian and mixed woodland habitat present within the Property as it migrates through to more suitable habitat. Therefore, Alameda whipsnake has a low potential to occur on the Property in a dispersal capacity only. Western pond turtle could utilize Grayson Creek for aquatic dispersal and the surrounding riparian woodland corridor as terrestrial dispersal. Therefore, western pond turtle has a moderate potential to occur on the Property in a dispersal capacity only. Implementation of the special-status wildlife mitigation measures presented in Section 8.0 below would reduce any potential impacts to western pond turtle or Alameda whipsnake to less-than-significant levels.

8.0 RECOMMENDED MITIGATION MEASURES

Implementation of the following mitigation measures will reduce potential Project impacts, listed in Section 4.3.2 (California Environmental Quality Act) of this report, to less than significant levels for the biological resources discussed below.

Corps and State Regulated Waters - With implementation of the mitigation measure (MM #1) provided below, the Project would have a less than significant adverse effect on federally protected waters as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

> **MM #1) Corps and State Regulated Waters** – Jurisdictional waters potentially regulated under the authority of the Corps, RWQCB, and CDFW are present on the Property. The proposed project shall implement all County ordinances that require a setback from Grayson Creek to prevent the fill of waters or impacts to Grayson Creek or the bed or bank of the creek.

Riparian Habitat - If removal of any trees deemed "protected" by the Contra Costa County Tree Ordinance (Chapter 816-6) from the riparian habitat during project activities is to occur, the above tree ordinance and the Contra Costa County Creek Setback Ordinance (Chapter 914) must be adhered to. With implementation of the mitigation measure (MM #2) provided below, the Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by CDFW or USFWS.

> **MM #2) Trees** – For all riparian associated trees that are removed from the Property, a 3:1 replacement ratio for all native trees and a 1:1 replacement ratio for all non-native trees (with native species) is recommended by Olberding Environmental.

Special-Status Wildlife Species - With implementation of the mitigation measures (MM #3; MM #4; MM #5; MM #6; MM #7; and MM #8) provided below, the Project is not expected to have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW and USFWS.

Wildlife corridors and native nurseries - With implementation of the mitigation measures (MM #3; MM #4; MM #5; MM #6; and MM #7) provided below, the Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

> **MM #3) Pre-Construction Avian Survey** – If project construction-related activities would take place during the nesting season (February through August), preconstruction surveys for nesting passerine birds and raptors (birds of prey) within the Property and the large trees within the adjacent riparian area should be conducted by a qualified biologist 14 days prior to the commencement of the tree removal or site grading activities. If any bird listed under the Migratory Bird Treaty Act is found to be nesting within the project site or within the area of influence, an adequate protective buffer zone should be established by a qualified biologist to protect the nesting site. This buffer shall be a minimum of 75 feet from the project activities for passerine birds, and a minimum of 200 feet for raptors. The distance shall be determined by a qualified biologist based on the site conditions (topography, if the nest is in a line of sight of the construction and the sensitivity of the birds nesting). The nest site(s) shall be monitored by a biologist periodically to see if the birds are stressed by the construction activities and if the protective buffer needs to be increased. Once the young have fledged and are flying well enough to avoid project

construction zones (typically by August), the project can proceed without further regard to the nest site(s).

MM #4) Pre-construction Bat Survey – To avoid "take" of special–status bats, the following mitigation measures shall be implemented prior to the removal of any existing trees or structures on the project site:

a) A bat habitat assessment shall be conducted by a qualified bat biologist during seasonal periods of bat activity (mid–February through mid–October – ca. Feb. 15 – Apr. 15, and Aug. 15 – October 30), to determine suitability of each existing structure as bat roost habitat.

b) Structures found to have no suitable openings can be considered clear for project activities as long as they are maintained so that new openings do not occur.

c) Structures found to provide suitable roosting habitat, but without evidence of use by bats, may be sealed until project activities occur, as recommended by the bat biologist. Structures with openings and exhibiting evidence of use by bats shall be scheduled for humane bat exclusion and eviction, conducted during appropriate seasons, and under supervision of a qualified bat biologist.

d) Bat exclusion and eviction shall only occur between February 15 and April 15, and from August 15 through October 30, in order to avoid take of non–volant (non–flying or inactive, either young, or seasonally torpid) individuals.

OR

A qualified wildlife biologist experienced in surveying for and identifying bat species should survey the portion of the Property with large trees and abandoned structures. If tree removal is proposed to determine if any special–status bats reside in the trees. Any special–status bats identified should be removed without harm. Bat houses sufficient to shelter the number of bats removed should be erected in open space areas that would not be disturbed by project development.

MM #5) Pre-construction Reptile Survey – While potential occurrence of Alameda whipsnake and western pond turtle is limited to dispersal throughout the creek channel, riparian woodland corridor, and mixed woodland habitats, a pre-construction survey for special status reptile species should be performed no more than 48 hours prior to ground disturbance or vegetation removal to determine presence/absence of these species. Worker Environmental Awareness training discussing the potential for these species should be

conducted by the Designated Biologist or Biological Monitor for all construction personnel working within the project site.

MM #6) Pre-construction Amphibian Surveys – Directed pre-construction surveys for CRLF are recommended prior to construction activities. The creek channel and associated riparian woodland may serve as dispersal areas for CRLF. A Designated Biologist shall conduct a pre-construction survey of these habitats for CRLF preceding the commencement of construction activities to verify presence/absence of this species. Wildlife exclusion fencing (ERTEC fencing) should be installed along the grading limit of the Project site in order to prevent dispersal into the grading and work areas of the site from the creek channel and/or the riparian corridor. Fencing should be trenched into the ground at a minimum of 6 inches and a lip should be formed along the top of the fence line. A Designated Biologist or Biological Monitor shall be onsite during initial ground-disturbing activities in order to inspect the work area and fence lines daily for special status amphibians and other wildlife. Worker Environmental Awareness training discussing the potential for these species should be conducted by the Designated Biologist or Biological Monitor for all construction personnel working within the project site. If any CRLF or other listed amphibians are found during construction activities, the U.S. Fish and Wildlife Service should be consulted to approve capture and relocation by a Qualified Biologist.

MM #7) Wildlife Exclusion Fencing – In order to mitigate for potential impacts to CRLF and western pond turtle, heavy-duty wildlife exclusion fencing (ERTEC) should be installed along the grading limit of the proposed project site to prevent these species from entering the project site during construction activities. Exclusion fencing should be trenched into the ground at a minimum of 6 inches and a lip shall be folded along the upper portion of the fence line. Pre-construction surveys shall be conducted by a Designated Biologist prior to vegetation clearing and fence installation.

MM #8) Erosion Control – Grading and excavation activities could expose soil to increased rates of erosion during construction periods. During construction, runoff from the Property could adversely affect aquatic life within the adjacent water features. Surface water runoff could remove particles of fill or excavated soil from the site, or could erode soil down-gradient, if the flow were not controlled. Deposition of eroded material in adjacent water features could increase turbidity, thereby endangering aquatic life, and reducing wildlife habitat. Implementation of appropriate mitigation measures would ensure that impacts to aquatic organisms would be avoided or minimized. Mitigation measures may include best management practices (BMP's) such as hay bales, silt fencing, placement of straw mulch and hydro seeding of exposed soils after construction as identified in the Storm Water Pollution Prevention Plan (SWPPP).

Habitat Conservation Plans - The proposed project does not lie within the East Contra Costa County HCP/NCCP or any other HCP/NCCP. Therefore, the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

L**ocal Ordinances** - With implementation of the mitigation measures provided above, plus MM #2 provided above, the project is not expected to conflict with local policies and ordinances protecting biological resources, including the Contra Costa County tree protection and setback ordinances:

- Contra Costa County Tree Ordinance – Chapter 816-6 – Tree Protection and Preservation Ordinance discussed in Section 4.2.4 of this report

- Contra Costa County Creek Setback Ordinance – Chapter 914 – Rights-of-Ways and Setbacks discussed in Section 4.2.5 of this report

9.0 LITERATURE CITED

California Department of Fish and Wildlife (CDFW) Natural Diversity Data Base. 2021. Computer listings and map locations of historic and current recorded occurrences of special-status species and natural communities of special concern for USGS 7.5-minute quadrangle map: Walnut Creek. Accessed on April 5, 2021.

_____.2021a. California Wildlife Habitat Relationships. https://www.wildlife.ca.gov/Data/CWHR/Wildlife-Habitats

_____.2021b. State and federally listed Endangered, Threatened, and Rare plants of California. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109390&inline

_____.2021. Special animals. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline

California Native Plant Society (CNPS), Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org Accessed April 5, 2021.

CEQA. 2021. The California Environmental Quality Act. Appendix G, Environmental Checklist Form. Accessed on April 6, 2021. Available online at https://www.califaep.org/statute_and_guidelines.php

Ehrlich, P.R., D.S. Dobkin, and D. Wheye. 1988. The Birder's Handbook: a field guide to the natural history of North American birds. Simon & Schuster, Inc., New York. 785 pp.

The Jepson Manual: Vascular Plants of California, Second Edition, Thoroughly Revised and Expanded. University of California Press, Berkeley, CA. 2012. 1400 pp.

Holland (1986) Preliminary Description of the Natural Communities of California. CDFW.

Mayer, K. E. and Laudenslayer W.F. 1988. A Guide to Wildlife Habitats of California. California.

Natural Resources Conservation Service (NRCS). 2019. United States Department of Agriculture. Web Soil Survey. Accessed April 5, 2021. Available on-line at http://websoilsurvey.nrcs.usda.gov

Pierce, Robert J. 1995. Wetland Delineation Lecture Notes. Wetland Training Institute, Inc., Poolesville, MD. WTI 95-2. 200pp.

Sawyer, J.O., T. Keeler-Wolf, and J. Evens. 2009. A manual of California vegetation. 2nd Ed. California Native Plant Society, Sacramento, CA.

Skinner, M. W. and B. M. Pavlik (eds.). 1994. Inventory of rare and endangered vascular plants of California. California Native Plant Society Special Publication No. 1 (5th edition). California Native Plant Society, Sacramento, CA. 338 pp.

Sibley, D.A. 2000. The Sibley Guide to Birds. Alfred Knopf, New York.

Sibley, C.G., and B.L. Munroe, Jr. 1990. Distribution and taxonomy of birds of the world. Yale University Press, New Haven and London. 1111 pp.

United States Fish and Wildlife Service (USFWS). 2020. Endangered and threatened plant and animal species. Accessed on April 6, 2021. https://ecos.fws.gov/ecp/listedSpecies/speciesListingsByTaxGroupTotalsPage

_____. 2019. Endangered and threatened wildlife and plants; review of plant and animal taxa that are Candidates or Proposed for listing as Endangered or Threatened; annual notice of findings on recycled petitions; annual description of progress on listing actions; proposed rule. Federal Register 68: 54732-54757.

_____. 2007. Bald Eagle Management Guidelines and Conservation Measures. The Bald and Golden Eagle Protection Act. Accessed on April 6, 2021. Available on-line at http://www.fws.gov/northeast/ecologicalservices/pdf/NationalBaldEagleManagementGuidelines.pdf.

_____. 2006. Endangered and Threatened Wildlife and Plants: Designation of Critical Habitat for the California Red-Legged Frog, and Special Rule Exemption Assocaited with Final Listing for Existing Routine Ranching Activities; Final Rule. Federal Register 71: 19244-19346.

_____. 2004. Endangered and Threatened Wildlife and Plants: Determination of Threatened Status for the California Tiger Salamander; and Special Rule Exemption for Existing Routine Ranching Activities; Final Rule. Federal Register 69: 47212-47248.

ATTACHMENTS

ATTACHMENT 1
FIGURES

Figure 1
Regional Map

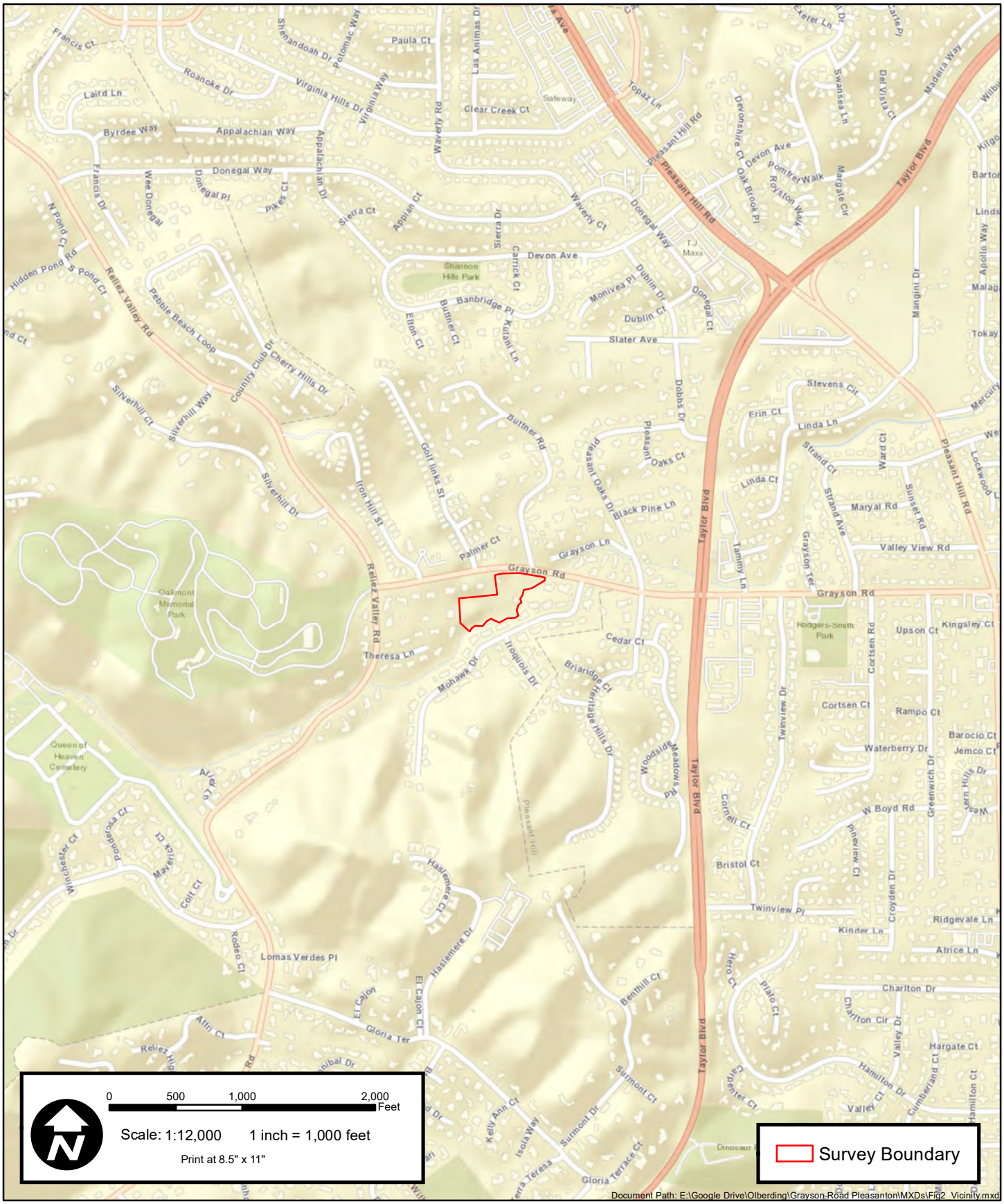
OLBERDING -ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

Figure 1: Regional Map
Grayson Road Property
Contra Costa County, California

Revision Date: 4/15/2021

Figure 2
Vicinity Map



OLBERDING
-ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 165
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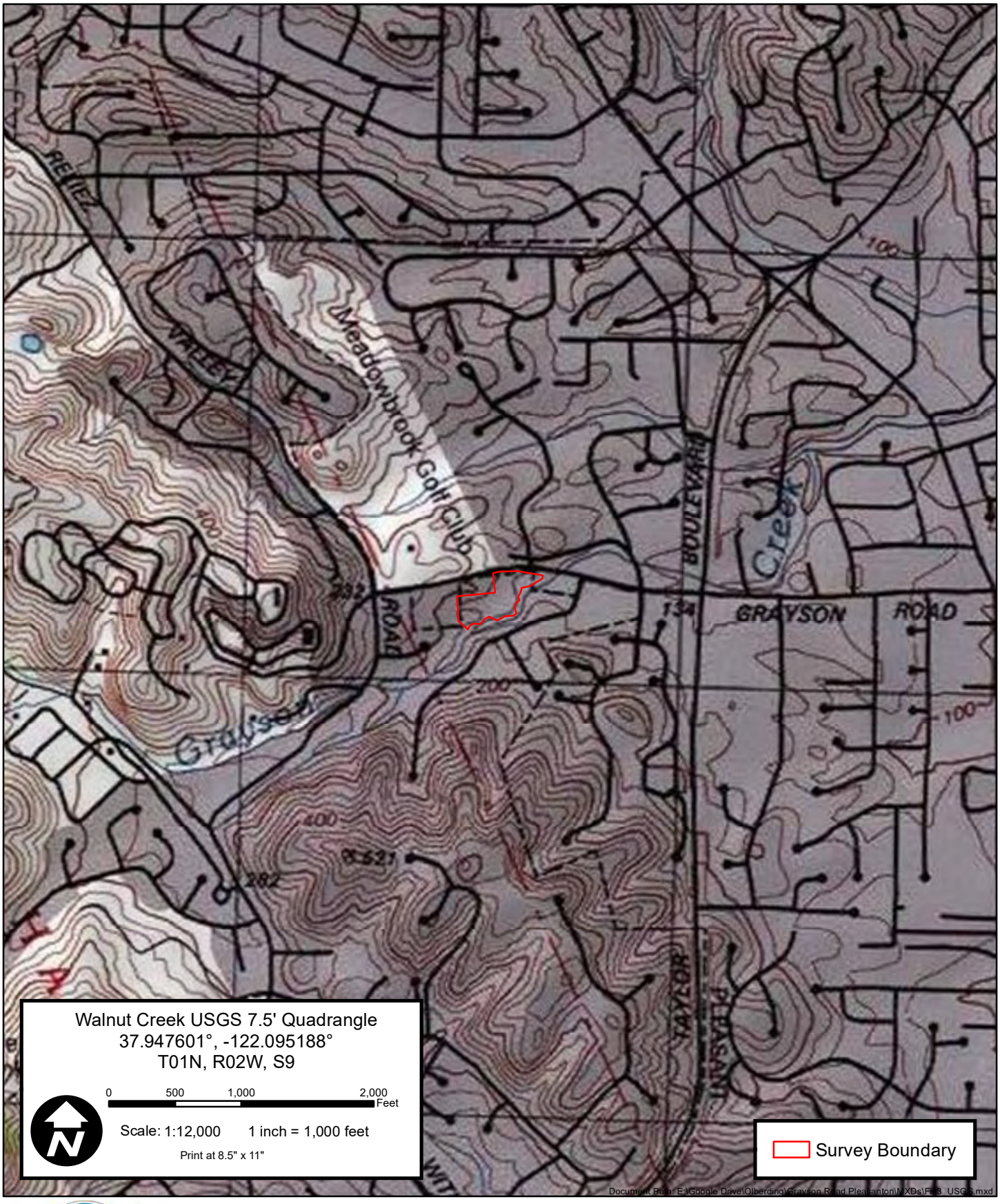
Phone: (916) 985-1188

Figure 2: Vicinity Map
Grayson Road Property
Contra Costa County, California

Revision Date: 4/15/2021

Figure 3
USGS Quadrangle Map



OLBERDING
-ENVIRONMENTAL-

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Figure 3: USGS Topographic Map
Grayson Road Property
Contra Costa County, California

Revision Date: 4/15/2021

Figure 4
Aerial Photograph

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-ENVIRONMENTAL-

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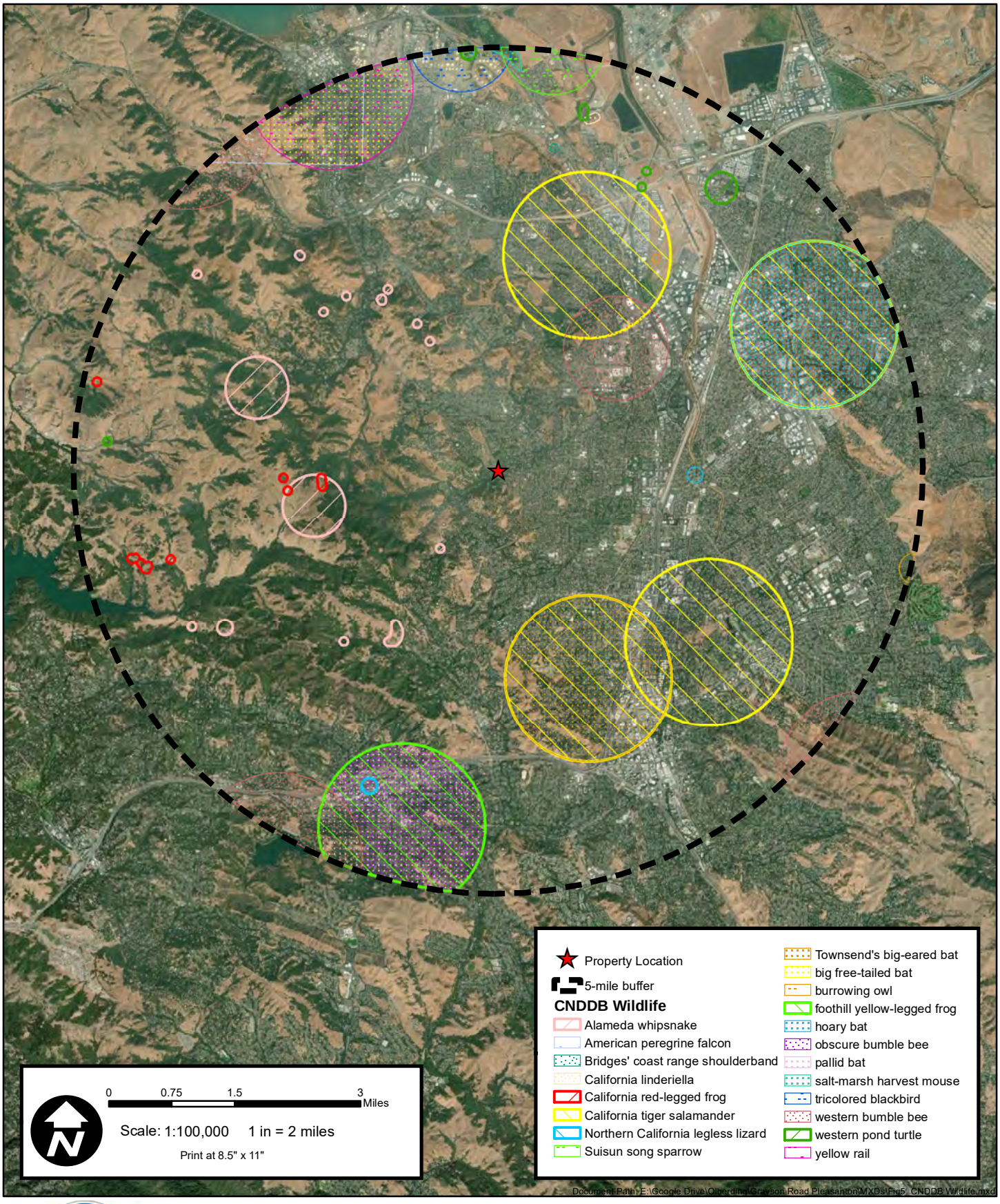
Figure 4: Aerial Map
Grayson Road Property
Contra Costa County, California

Revision Date: 4/15/2021

Figure 5
CNDDB Map of Special Status Wildlife



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Folsom, CA 95630
Phone: (916) 985-1188

Figure 5: CNDDB Wildlife Map
Grayson Road Property
Contra Costa County, California

Revision Date: 4/15/2021

Figure 6
CNDDB Map of Special Status Plants

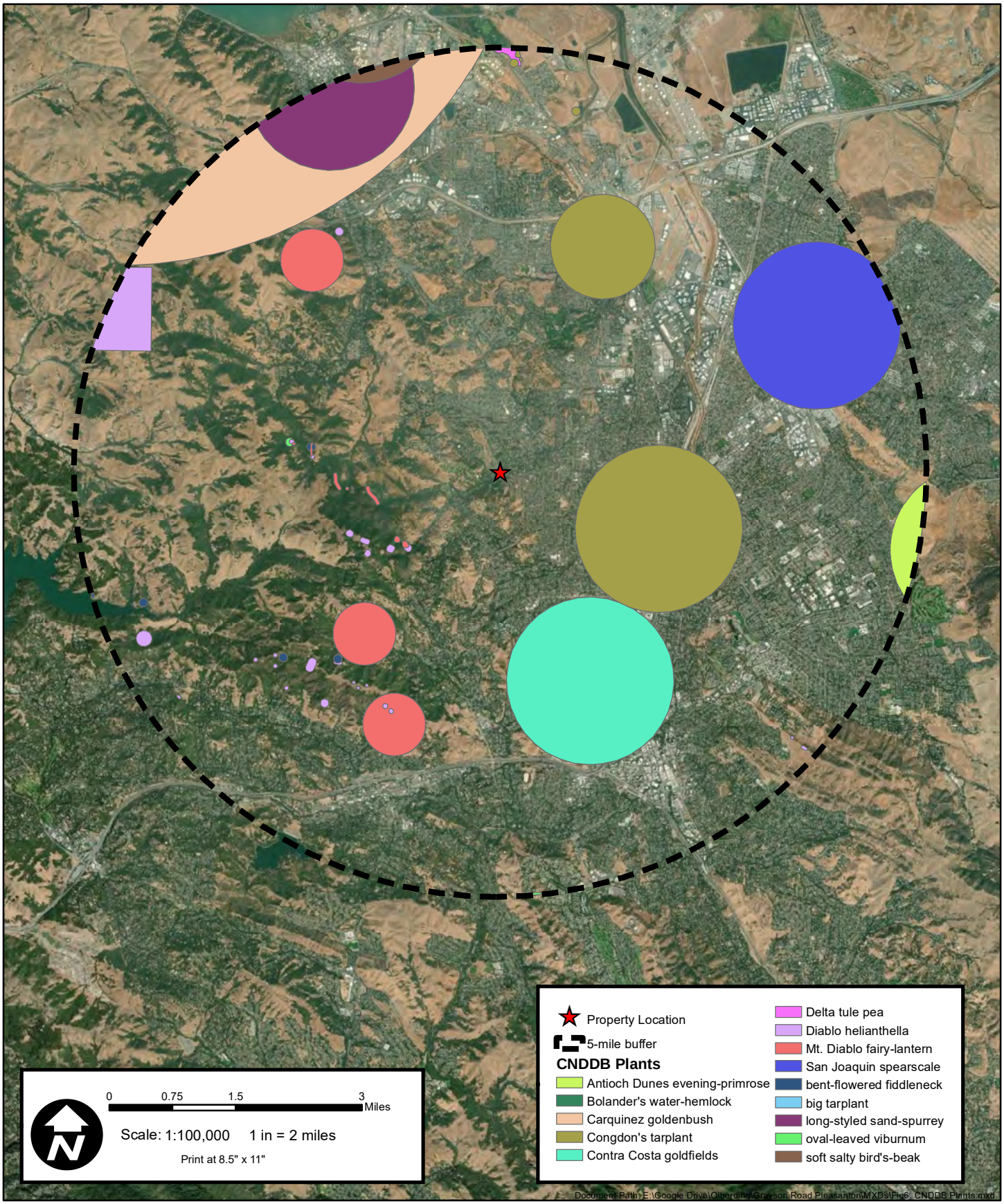

Figure 6: CNDDB Plants Map
Grayson Road Property
Contra Costa County, California

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193 Blue Ravine Road, Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

Revision Date: 4/15/2021

Figure 7
USFWS Designated Critical Habitat

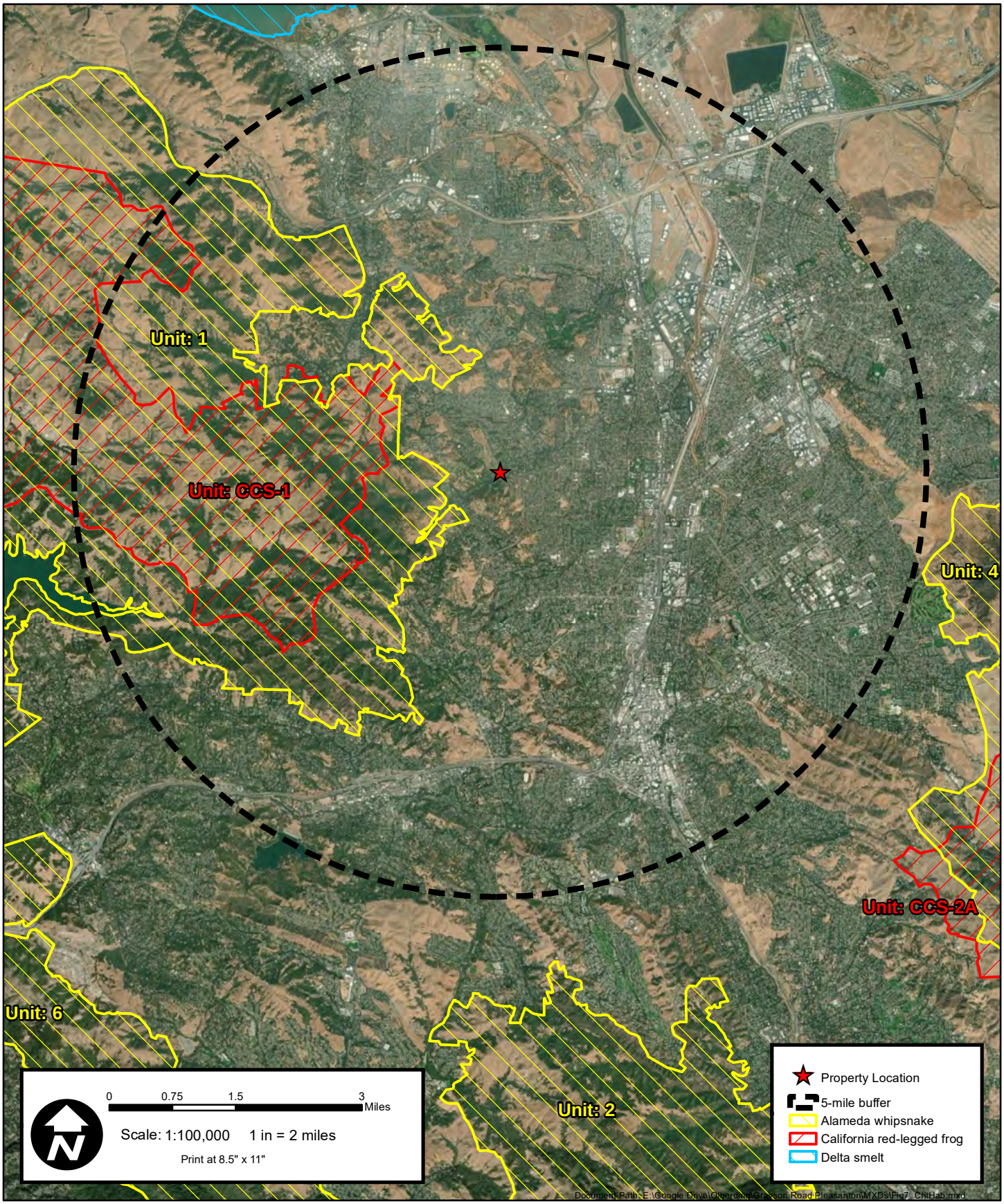

Figure 7: USFWS Designated Critical Habitat Map
Grayson Road Property
Contra Costa County, California

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Folsom, CA 95630
Phone: (916) 985-1188

Revision Date: 4/15/2021

Figure 8
Soils Map

OLBERDING
-ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 165
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Figure 8: Soils Map
Grayson Road Property
Contra Costa County, California

Revision Date: 4/16/2021

Figure 9
Photo Location Map

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-ENVIRONMENTAL-

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Phone: (916) 985-1188

Figure 9: Photo Points Map
Grayson Road Property
Contra Costa County, California

Revision Date: 4/16/2021

Figure 10
Habitat Map

Figure 10: Habitat Map
Grayson Road Property
Contra Costa County, California

OLBERDING
-ENVIRONMENTAL-

193 Blue Ravine Road, Ste. 165
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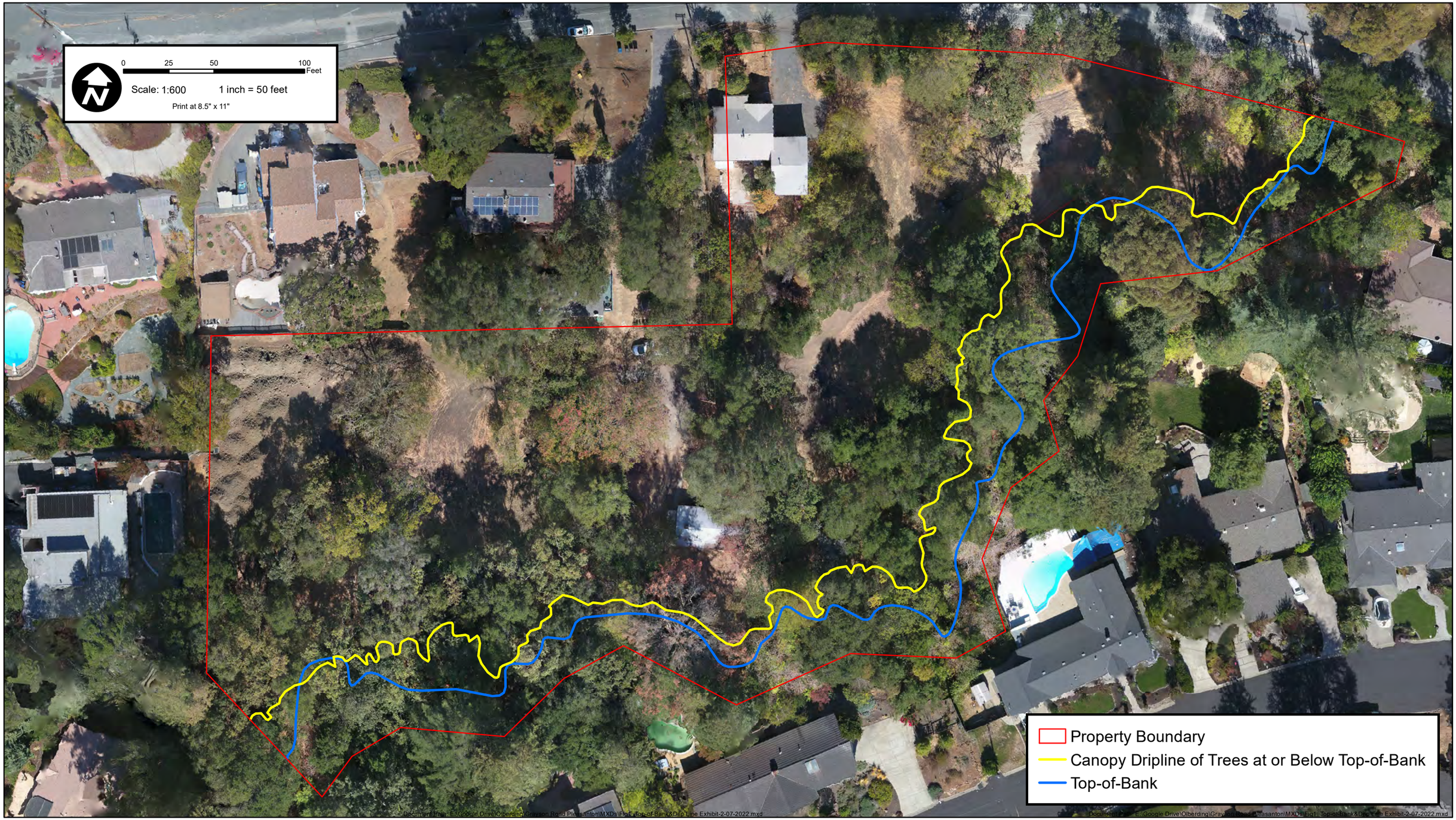
Phone: (916) 985-1188

Revision Date: 4/16/2021

Figure 11
Canopy Dripline of Trees at or Below Top-of-Bank



OLBERDING
-ENVIRONMENTAL-

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Figure 11: Drip Line Exhibit
Grayson Road Property
Contra Costa County, California

Aerial Imagery: Drone Flight Orthomosaic - 10/16/2021
Revision Date: 2/7/2022

ATTACHMENT 2

SITE PLANS

ALL PLANS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS SIGNED AND STAMPED BY THE ENGINEER AND REVIEWING AGENCY.

CONCEPTUAL BUILDING LAYOUT

1024 & 1026 GRAYSON ROAD
SUBDIVISION SD20-9531

VICINITY OF PLEASANT HILL CONTRA COSTA COUNTY

REGISTERED PROFESSIONAL ENGINEER
EASTON C. McALLISTER
No. 61148
EXP. 12/31/20
CIVIL
STATE OF CALIFORNIA
CALIFORNIA

EASTON C McALLISTER - R.C.E. 61148
RENEWAL DATE: 12/31/22

#	REVISIONS	DATE

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Date: 08/20/21
Scale: 1" = 20'
By: EM
Job No.: 19300

ATTACHMENT 3

TABLES

Table 1

Plant and Wildlife Species Observed

Within/Adjacent to the Survey Area

Table 1

Wildlife Species Observed Within/Adjacent to the Survey Area

Scientific Name	Common Name
Plant Species Observed	
Salix spp.	Willow species
Aesculus californica	California buckeye
Avena fatua	Wild oat
Galium aparine	Cleavers
Ulmus pumila	Siberian Elm
Bromus diandrus	Ripgut brome
Vinca major	Periwinkle
Carduus pycnocephalus	Italian thistle
Claytonia perfoliata	Miner's lettuce
Medicago polymoprha	Bur clover
Festuca perennis	Italian rye grass
Oxalis pes-caprae	Bermuda buttercup
Torilis arvensis	Field hedgeparsley
Sequoia sempervirens	Coast redwood
Pyrus communis	Common pear
Prunus cerasifera	Cherry plum
Calocedrus spp.	Cedar
Hedera helix	English ivy
Vicia sativa	Common vetch
Plantago lanceolata	English plantain
Quercus agrifolia	Coast live oak
Quercus lobata	Valley oak
Juglans nigra	Black walnut
Rubus armeniacus	Himalayan blackberry
Silybum marianum	Milk thistle
Toxicodendron diversilobum	Western poison oak
Pinus radiata	Monterey pine
Umbellularia californica	California bay laurel
Eucalyptus globulus	Blue gum
Animal Species Observed	
Birds	
Aphelocoma californica	Western scrub jay

Table 1

Wildlife Species Observed Within/Adjacent to the Survey Area

Scientific Name	Common Name
Buteo jamaicensis	Red-tailed hawk
Calypte anna	Anna's hummingbird
Cathartes aura	Turkey vulture
Cyanocitta stelleri	Steller's Jay
Junco hyemalis	Dark-eyed junco
Melanerpes formicivorus	Acorn woodpecker
Melozone crissalis	California towhee
Pipilo maculatus	Spotted towhee
Sayornis nigricans	Black phoebe
Psaltriparus minimus	Bushtit
Corvus brachyrhynchos	American crow
Accipiter cooperii	Cooper's hawk
Buteo lineatus	Red-shouldered hawk
Zonotrichia leucophrys	White-crowned sparrow
Reptiles	
Sceloporus occidentalis	Western fence lizard

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
PLANTS					
Antioch Dunes Evening Primrose (*Oenothera deltoides ssp. howellii*)	E/E/1B	March – September	Inland dunes.	Low Surveyed during blooming period	Presumed absent
Bent-flower Fiddleneck (*Amsinckia lunaris*)	-/-/1B	March – June	Coastal bluff scrub, cismontane woodland, and valley and foothill grassland	Low Surveyed during blooming period	Presumed absent
Big tarplant (*Blepharizonia plumosa)*	-/-/1	July - October	Valley grassland, foothill woodland, chaparral.	Low Suitable habitat present	Not likely to occur
Bolander's Water-Hemlock (*Cicuta maculata var. bolanderi*)	-/-/2B	July – September	Coastal, salt marsh and wetland riparian.	Low No suitable habitat present	Presumed absent
California Linderiella (*Linderiella occidentalis*)	SOC/-/-	December – May (dependent on the timing of winter and spring rains)	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity and conductivity.	Low Surveyed during blooming period	Presumed absent
Carquinez Goldenbush (*Isocoma arguta*)	-/-/1B	August – December	Alkaline valley and foothill grassland.	Low Suitable habitat present	Not likely to occur

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Congdon's Tarplant (*Centromadia parryi* ssp. *congdonii*)	-/-/1B	June – November	Valley and foothill grasslands in alkaline soils.	Moderate Suitable habitat present.	Presumed absent
Contra Costa Goldfields (*Lasthenia conjugens*)	E/-/1B	March – June	Valley and foothill grassland, cismontane woodland, and vernal pools, swales, and low depressions in open grassy areas.	Low Surveyed during blooming period	Presumed absent
Delta Tule Pea (*Lathyrus jepsonii var. jepsonii*)	-/-/1B	May – July	Freshwater wetlands, wetland-riparian, freshwater marsh, brackish marsh.	Low No suitable habitat present	Presumed absent
Diablo Helianthella (*Helianthella castanea*)	-/-/1B	March – June	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Usually in chaparral/oak woodland interface in rocky, azonal soils, often in partial shade.	Low Surveyed during blooming period	Presumed absent
Hall's Bush-Mallow (*Malacothamnus hallii)*	-/-/1B	May – September	Chaparral, coastal scrub.	Low No suitable habitat present	Presumed absent
Long-Styled Sand Spurrey (*Spergularia macrotheca longistyla*)	-/-/1B	February – May	Alkaline meadows and seeps, marshes and swamps.	Low Surveyed during blooming period	Presumed absent

Table 2

Special-Status Species for the Walnut Creek, Benicia, Vine Hill, Honker Bay, Briones Valley, Clayton, Oakland East, Las Trampas Ridge, Diablo 7.5 Minute Quadrangle Maps[1]

Common Name/Scientific Name	Status (Fed/State/ CNPS)[2]	Blooming or Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Mount Diablo Fairy-Lantern (*Calochortus pulchellus*)	-/-/1B	April – June	Chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland; on wooded and brushy slopes.	Low Surveyed during blooming period	Presumed absent
Oval-Leaved Viburnum (*Viburnum ellipticum*)	-/-/2B	May – June	Chaparral, cismontane woodland, lower montane coniferous forest.	Low Suitable habitat present	Not likely to occur
San Joaquin spearscale (*Atriplex joaquiniana)*	-/-/1B	April-October	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland in seasonal alkali wetlands or alkali sink scrub with *Distichlis spicata, Frankenia,* etc.	Low Surveyed during blooming period	Presumed absent
Soft Salty Bird's Beak (*Chloropyron molle ssp. molle*)	E/R/1B	July – November	Coastal salt marsh, wetland-riparian.	Low No suitable habitat present	Presumed absent

BIRDS					
American Kestrel (*Falco sparverius)*	-/CP/-	February – August	Various grassland habitats, urban land, oak woodlands with grassland for foraging.	Moderate Suitable habitat present	May occur
American Peregrine Falcon (*Falco peregrinus anatum*)	-/-CP/-	February – August	Nests near wetlands, lakes, rivers, or other water. On cliffs, banks, dunes, mounds, and human-made structures.	Low No suitable habitat present	Not likely to occur
Burrowing Owl (*Athene cunicularia*)	SOC/-/SC	February – August	Dry open annual or perennial grassland, desert and scrubland. Uses abandoned mammal burrows for nesting.	Low No suitable habitat present	Not likely to occur
Cooper's Hawk (*Accipiter cooperii*)	-/CP/-	February – August	Oak woodlands, coniferous forests, riparian corridors. Often hunts on edges between habitats.	High Suitable habitat present	Present
Ferruginous Hawk (*Buteo regalis*)	-/CP/-	Late Fall – Winter	Open country such as semiarid grasslands with few trees, rocky outcrops, and open valleys. Also along streams or in agricultural areas during migration.	Low No suitable habitat present	Not likely to occur
Golden Eagle (*Aquila chrysaetos*)	-/CP/SC	February – August	Nests in cliff-walled canyons and tall trees in open areas. (Nesting and wintering) Rolling foothills mountain areas, sage-juniper flats, and desert.	Low No suitable habitat present	Not Likely to Occur
Great Blue Heron (*Ardea herodias*) ROOKERIES	-/-/-	February – August	(Rookery) Nests in tall trees in close proximity to foraging areas such as marshes and streams.	Low No suitable habitat present	Not likely to occur
Great Egret (*Ardea alba*) ROOKERIES	-/-/-	February – August	Freshwater, brackish and marine wetlands. Form breeding colonies on lakes, ponds, marshes, estuaries or islands. Forage in marshes, swamps, streams, rivers, ponds, tidal flats, canals and flooded fam fields.	Low Suitable habitat present	Not likely to occur

Red-shouldered Hawk (*Buteo lineatus*)	-/CP/-	February – August	Forages in variety of semi-developed habitats including orchards. Forages in woodlands and riparian areas. Nests in riparian habitat but also eucalyptus groves.	High Suitable habitat present	Present
Red-tailed Hawk (*Buteo jamaicensis*)	-/CP/-	February – August	Various grassland habitats, urban land, oak woodlands with grassland for foraging.	High Suitable habitat present	Present
Sharp-Shinned Hawk (*Accipiter striatus*)	-/CP/-	February – August	Oak woodlands, coniferous forests, riparian corridors. Often hunts on edges between habitats. (Nesting) Ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers riparian areas.	Moderate Suitable habitat present	May occur
Suisun Song Sparrow (*Melospiza melodia maxillaris)*	-/-/SC	February – August	Inhabits tidal salt marshes, needs vegetation for nesting sites.	Low No suitable habitat present	Not likely to occur
Swainson's Hawk (*Buteo swainsonii)*	-/T/-	February – October	Nests in riparian areas and in oak savannah near foraging areas. Forages in alfalfa and grain fields with rodent populations.	Low No suitable habitat present	Not likely to occur
Tricolored Blackbird (*Agelaius tricolor*)	SOC/-/SSC	February – August	Nesting within seasonal wetland marshes, blackberry brambles or other protected substrates. Forages in annual grassland and wetland habitats.	Low No suitable habitat present	Not likely to occur
White-tailed Kite (*Elanus leucurus*)	SOC/CP/FP	February – August	Various grassland habitats, urban land, oak woodlands with grassland for foraging.	Low Suitable habitat present	Not likely to occur
Yellow Rail (*Coturnicops noveboracensis)*	-/-/SSC	February - August	Salt or brackish marshes or wet meadows. Prefers habitats with tall, dense vegetation such as sedges or cattails.	Low No suitable habitat present	Presumed absent
MAMMALS					

Big Free-Tailed Bat (*Nyctinomops macrotis*)	-/-/SSC	Resident	Inhabits rocky or canyon country where it roosts in crevices. Arid landscapes such as desert shrub, woodlands and evergreen forests.	Low No suitable habitat present	Not likely to occur
Hoary Bat (*Lasiurus cinereus*)	-/-/-	Resident	Prefers open habitats or habitat mosaics with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees near water. Feeds mainly on moths.	Moderate Suitable habitat present	May occur
Pallid Bat (*Antrozous pallidus*)	-/SC/-	N/A	Forages in grasslands, shrublands, deserts, forests, and woodlands. Most common in open, dry habitats. Roosts in rock crevices, caves, tree hollows, and buildings. Roosts must protect bats from high temperatures; very sensitive to disturbance of roosting sites.	Low Suitable habitat present	Not likely to occur
Salt Marsh Harvest Mouse (*Reithrodontomys raviventris)*	E/E/FP	Resident	Salt marshes with dense stands of pickleweed and other dense wetland vegetation such as cattails or bullrush.	Low No suitable habitat present	Presumed absent
Townsend's Big-Eared Bat (*Corynorhinus townsendii*)	-/SSC/-	Resident	Throughout California in a wide variety of habitats; roosts in the open, hanging from walls and ceilings. Needs sites free from human disturbance. Most common in mesic sites.	Low Suitable habitat present	Not likely to occur
Western Red Bat (*Lasiurus blossevillii)*	-/-/SSC	Resident	Winter in western lowlands and coastal regions of the San Francisco Bay. Roosts in forests and woodlands. Feed in grasslands, shrublands, open woodlands and forests and croplands.	Moderate Suitable habitat present	May occur
Yuma Myotis (*Myotis yumanensis*)	-/-/-	Resident	Optimal habitats are open forests and woodlands with sources of water over which to feed. Maternal colonies occur in caves, mines, buildings or crevices.	Moderate Suitable habitat present	May occur
AMPHIBIAN					

California Red-Legged Frog (*Rana draytonii*)	T/-/SC	May 1 – November 1	Lowlands and foothills in or near permanent deep water with dense, shrubby or emergent riparian habitat. Requires 11-20 weeks of permanent water for breeding and larval development. Must have access to aestivation habitat.	Moderate Suitable dispersal habitat present	May occur in a dispersal capacity only
California Tiger Salamander (*Ambystoma californiense*)	T/T/-	Aquatic Surveys - Once each in March, April, and May with at least 10 days between surveys. Upland Surveys - 20 nights of surveying under proper conditions beginning October 15 and ending March 15.	Vernal pools, swales and depressions for breeding, needs underground refugia.	Low No suitable habitat present	Presumed absent
Foothill Yellow-Legged Frog (*Rana boylii*)	SOC/-/SC	Year-round resident	Partially-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need cobble for egg-laying.	Low Suitable habitat present	Not likely to occur
REPTILE					
Alameda Whipsnake (*Masticophis lateralis euryxanthus*)	T/T/-	Year-round resident	Valley-foothill hardwood habitat of the coast ranges between Monterey and north San Francisco Bay areas. Inhabits south-facing slopes and ravines where shrubs form a vegetative mosaic with oak trees and grasses.	Low Suitable dispersal habitat present	May occur in a dispersal capacity only
Western Pond Turtle (*Emys marmorata*)	-/-/SC	March – October	Aquatic turtle needs permanent water in ponds, streams, irrigation ditches. Nests on sandy banks or grassy fields.	Moderate Suitable dispersal habitat present	May occur in a dispersal capacity only

1. Special-status plants and animals as reported by the California Natural Diversity Data Base, California Native Plant Society, and other background research April 2021
2. Order of Codes for Plants - Fed/State/CNPS

Order of Codes for Animals - Fed/State/CDFW

Codes:

SOC - Federal Species of Concern

SC - California Species of Special Concern

E - Federally/State Listed as an Endangered Species

T - Federally/State Listed as a Threatened Species

C - Species listed as a Candidate for Federal Threatened or Endangered Status

R - Rare

D - Delisted

CP- California protected

FP - State Fully Protected

DFG: SC California Special Concern species

1B - California Native Plant Society considers the plant Rare, Threatened, or Endangered in California and elsewhere.

1A - CNPS Plants presumed extinct in California.

2 - CNPS Plants Rare, Threatened or Endangered in California, but more common elsewhere.

3 - CNPS Plants on a review list to find more information about a particular species.

4 - CNPS Plants of limited distribution - a watch list.

ATTACHMENT 4

SITE PHOTOGRAPHS

1. Photo taken facing south showing the two-story residential home and surrounding woodland habitat at northwestern boundary of Property. Photo taken April 6, 2021.

2. Photo taken facing west showing mixed woodland habitat within the northeastern portion of the Property. Photo taken April 6, 2021.

3. Photo taken facing west showing riparian woodland habitat within the eastern portion of the Property. Photo taken April 6, 2021.

4. Photo taken facing northeast showing mixed woodland habitat in the western portion of the Property. Photo taken April 6, 2021.

5. Photo taken facing southeast showing mixed woodland and riparian woodland habitat within the western portion of the Property. Photo taken April 6, 2021.

6. Photo taken facing south showing the single-story residential home and surrounding woodland habitat located near the southern boundary of the Property. Photo taken April 6, 2021.

7. Photo taken facing west showing mixed woodland habitat in the western portion of the Property. Photo taken April 6, 2021.

8. Photo taken facing south showing mixed woodland and riparian woodland habitat in the western portion of the Property. Photo taken April 6, 2021.

9. Photo taken facing southeast showing portion of Grayson Creek. Photo taken April 6, 2021.

10. Photo taken facing southeast showing Grayson Creek and associated riparian woodland corridor. Photo taken April 6, 2021.

11. Photo taken facing northwest showing mixed woodland with existing residential structure in the background. Photo taken April 6, 2021.

12. Photo taken facing northwest showing mixed woodland habitat in the eastern portion of the Property. Photo taken April 6, 2021.

ATTACHMENT B

Revised Arborist Report for the Development of 1024-1026 Grayson Road (prepared by Traverso Tree Service)

May 6, 2020 (revised 10/17/22)

Andy Byde
Calibr Ventures
bydeandy@gmail.com

RE: Revised Arborist Report for the Development of 1024-1026 Grayson Road

Project Summary
This report updates the 2006 arborist report with current tree assessment and measurements, and anticipated tree impact. Trees proposed for removal are estimated based on proposed grading and building footprints. Actual impacts may vary once homes are designed. A supplemental arborist report may be necessary at that time.

This 10/17/22 revision adds 13 trees (#301-313) along the creek that were omitted in prior reports. The scope of work did not include review of updated plans and health/structure reassessment of other trees, though the locations of a few trees were adjusted.

Site Summary
A total of 130 trees > 6" in diameter were inventoried. It is my opinion that 97 trees will need to be removed to accommodate the proposed project. The remaining trees can be retained given that the protection measures within this report are followed.

Assumptions & Limitations
This report is based on my site visit on 5/4/20 & 10/11/22, and existing conditions & demolition plan by Debolt Civil Engineering dated 3/9/22 (plot date 10/13/22). It was assumed that the trees and the proposed improvements were accurately surveyed. Several trees were not surveyed or appear to be located incorrectly, so I roughly located them on the tree protection plan based on their proximity to adjacent surveyed trees. Since it was difficult to tell which trees were accurately located, the approximate locations will likely need to be resurveyed if precision is needed.

The health and structure of the trees were assessed visually from ground level. No drilling, root excavation, or aerial inspections were performed. Internal or non-detectable defects may exist and could lead to part or whole tree failures. Due to the dynamic nature of trees and their environment, it is not possible for arborists to guarantee that trees will not fail in the future.

Tree Inventory & Assessment Table
#s: Each tree was given a square metal tag with numbers ranging from 102-206 & circular tags from #301-313. (Note: as of 2022, tags are likely engulfed by trunk growth.) Trees with letters attached (a, b, or c) were new young trees that have grown up to protected size since the 2006 inventory. Their locations are shown on the attached the tree inventory plan.
DBH (Diameter at Breast Height): Trunk diameters in inches were measured at 4.5' above average grade with a diameter tape. Height of measurement may deviate slightly from the standard on atypical trunks.

Health & Structural Condition Rating
Dead: Dead or declining past chance of recovery.
Poor (P): Stunted or declining canopy, poor foliar color, possible disease or insect issues. Severe structural defects that may or may not be correctable. Usually not a reliable specimen for preservation.
Fair (F)*:* Fair to moderate vigor. Minor structural defects that can be corrected. More susceptible to construction impacts than a tree in good condition.
Good (G): Good vigor and color, with no obvious problems or defects. Generally more resilient to impacts.
Very Good (VG): Exceptional specimen with excellent vigor and structure. Unusually nice.

Dripline: Canopy radius was visually estimated in each cardinal direction.

Age
Young (Y): Within the first 20% of expected life span. High resiliency to encroachment.
Mature (M): Between 20% - 80% of expected life span. Moderate resiliency to encroachment.
Overmature (OM): In >80% of expected life span. Low resiliency to encroachment.

DE: Dripline Encroachment (X indicates encroachment)
CI: Anticipated Construction Impact (L = Low, M = Moderate, H = High)

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
101	Coast live oak											This tree no longer exists. Old report stated it as a 9" tree. No evidence of a stump was found.	N/A
102	Valley oak	16	G-F	G	20	25	20	20	Y	X	M	Epicormic sprouts along scaffold branches. Within west p/l set back, some grading will likely occur within dripline.	Save Set protection fencing at dripline (d/l), and have arborist on site for any d/l encroachment.
103	Fruiting pear	10, 5, 5, 4, 4	P	P	10	0	10	10	OM	X	H	Declining tree. In proposed driveway	Remove
104	Valley oak	18, 19, 20, 12	G	G	30	30	30	30	M	X	H	Co-dominant stems at 3'. In proposed driveway.	Remove
105	Coast live oak	11, 7, 6	F-P	F	15	15	10	0	M	X	H	Co-dominant stems. Understory tree. Within building footprint.	Remove
106	Valley oak	11, 12	G	F	25NW-W				M	X	H	Co-dominant stems. Within building footprint.	Remove
107	Valley oak	4, 3, 12, 11, 5, 7, 5	G	F	25	0	18	25	M	X	H	Basal shoot from old stump. In proposed driveway. Within building footprint.	Remove
107 B	Coast live oak	11, 5, 8	F	P	15	0	0	25	M	X	H	Growing out from base of #107. Co-dominant trunks. Within building footprint.	Remove
108	Coast live oak	17	F	F	25NW-W				M	X	H	Curved trunk. Within building footprint.	Remove
109	Valley oak	12, 11, 7, 6	F	F	30N				M	X	H	One sided tree to the N/W. Dieback & epicormic sprouting. Within building footprint.	Remove
110	Valley oak	20, 11, 11, 16	G	F	25	25	0	25	M	X	H	Co-dominant trunks. Within building footprint.	Remove
111	Coast live oak	19	F-P	F	20	25	20	20	M	X	H	Bark inclusion on all 3 attachments. Sparse with stunted growth. Within building footprint.	Remove
112	Coast live oak	11	F	P	0	6	10	10	Y	X	H	Top broken at 12' with sprouting. Within building footprint.	Remove
113	Valley oak	7	F	P	6S				Y	X	H	Sparse canopy, 2 trunks removed. Within building footprint.	Remove
114	Valley oak	7, 4	F	F	6	6	6	6	Y	X	H	Crowded. Within building footprint.	Remove
115	Coast live oak	13	G	G	12	0	8	10	Y	X	H	3" from base of #116; crowded. Within building footprint.	Remove

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
116	Valley oak	7, 6	F	F	18N				Y	X	H	Very crowded. Co-dominant trunks; sweeping lean to N. Within building footprint.	Remove
117	Coast live oak	17	F-P	F-P	15NE				M		L	Sparse understory tree. Outside of grading limits.	Save
118	Valley oak	14, 18	F	F	15	15	20	20	M		L	Co-dominant stem bends to N. Outside of grading limits.	Save
119	Coast live oak	17	Dead										Remove.
120	Coast live oak	17	F-P	F	10	10	10	10	M		L	Ivy covering trunk. In decline; sycamore borer damage. Treat for Borer. Outside of grading limits in creek setback.	Save
121	Valley oak	13	F	F	20S				Y		L	Ivy covering trunk. Outside of grading limits in creek setback.	Save
122	Valley oak	22	P	P	25N				M		L	Ivy covering trunk. Declining canopy; sweeping lean to N. Outside of grading limits in creek setback.	Save
122 A	Coast live oak	30	F	F	50N				M		L	In creek structure setback. Significant lean to N. Ivy covering trunk. Outside of grading limits in creek setback.	Save
123	Valley oak	14, 7, 7, 10, 10	F	F	0	25	0	15	M	X	H	Sparse canopy. Co-dominant stems at 6'. Within grading limits	Remove
124	Valley oak	16	F	G	15	20	15	8	M	X	H	Tag embedded in trunk. Epicormic sprouts. Within grading limits	Remove
124 B	Coast live oak	7	F	P	6	10	4	0	Y	X	H	90° correcting bend in trunk. Within grading limits	Remove
125	Chinese pistache	27	G	G	25	25	25	25	OM	X	H	Dieback; slightly drought stressed. Within grading limits	Remove
126	Chinese pistache	17, 17, 10, 8	F	G	25	25	25	6	OM	X	H	Within grading limits	Remove
127	Coast live oak	17	G	G	15	0	0	20	M	X	H	Within grading limits	Remove
128	Valley oak	19	G	F	20	25	0	20	M	X	H	Within grading limits	Remove
129	Valley oak	14	G	F	0	20	20	20	Y	X	H	Within grading limits	Remove
130	Coast live oak	16	F	G	15	15	10	0	Y	X	H	Sparse lower canopy. Within grading limits	Remove
131	Calif. Buckeye	11, 8	F	F	15	20	25	20	M	X	H	Dead lower/interior canopy. Within grading limits	Remove
131 B	Valley oak	18	F	F	35N				M	X	H	Not surveyed. 35° lean to N. Ivy and poison oak covering trunk. Within grading limits	Remove
132	Coast live oak	11	F	F	40N				Y	X	H	10° lean to N. Tag engulfed by trunk. Within grading limits	Remove

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
133	Coast live oak	14	G	F	40N-20NW				Y	X	H	10° lean to N. Within grading limits	Remove
134	Monterey pine	50	P	F	50	50	50	50	OM	X	M	Over mature tree, in declining years. Sparse canopy.	Removed
135	Coast redwood	18, 18, 10	F	G	20	20	20	20	M	X	H	Drought stressed, needs irrigation. Within grading limits.	Remove
135 A	Calif. Buckeye	6, 8, 11, 7, 7, 9, 11, 8	G	G	20	20	20	20	M		L	Within creek structure set back. ~3 trunk clusters treated as one.	Save
136	Silver dollar eucalyptus (*Eucalyptus cinerea*)	13, 16	F	F	25	15	10	0	M	X	H	Failed trunk. Within grading limits.	Remove
137	Coast live oak	40	G-F	P	35	35	35	35	M	X	M-H	Ivy covering trunk. Co-dominant stems at 4' with included bark. Grading just north of trunk proposed. Pull grade limits at least 15' from trunk in order to save tree.	Save If grading can be adjusted.
138	Valley oak	18	F	F	15	15	5	0	M	X	M-H	Ivy covering trunk. Grading just north of trunk. Recommend pulling grade limits at least 10' from trunk.	Save If grading can be adjusted
138 B	Buckeye	17, 12, 13, 14, 15, 13, 12, 10, 10, 13	F-P/P	F	20	20	20	20	M		L	In creek structure setback. Top dieback.	Save
139	Mimosa		Dead									Within grading limits.	Remove
140	Coast live oak	17	G	G	18	18	18	18	M	X	H	Within grading limits.	Remove
141	Coast live oak	9	G	G	10	10	10	10	Y	X	H	Tag embedded in trunk but readable. Within grading limits.	Remove
142	Coast live oak	19, 20	G	F	30	30	10	10	M	X	H	Co-dominant trunks. Within grading limits.	Remove
142 B	Coast live oak	20	G	F	30	0	0	20	M	X	H	In creek structure setback. Within grading limits.	Remove
142 C	Coast live oak	14	G	G	20	15	0	0	Y	X	H	Not surveyed.	
143	Valley oak	15	G-F	G	12	12	12	12	Y	X	H	Ivy on trunk. Within grading limits.	Remove
144	Valley oak	11	G	F	15SE				Y	X	H	Ivy on trunk. Understory tree. Within grading limits.	Remove
145	Coast live oak	22	G-F	G	25	20	18	20	M	X	H	Ivy on trunk. Within grading limits.	Remove
146	Coast live oak	18, 15	G	F	25	0	20	25	M	X	H	Co-dominant trunks. Within grading limits.	Remove
147	Fruiting plum		Dead							X	H	Within grading limits.	Remove

#	Species	DBH	Health	Structure	Dripline N	E	S	W	Age	DE	CI	Comments	Action
148	Persimmon	6, 7	G	P	6	15SE		5	M	X	H	Leaders poorly attached, breaking apart. Within grading limits.	Remove
149	Black Walnut	7, 6	G	F	8	15	15	0	Y	X	H	Within grading limits.	Remove
149 B	Valley oak	7	G	F	25NE				Y	X	H	Not surveyed. Within grading limits.	Remove
150	Coast live oak	19	G	F	0	25	20	20	M	X	H	One stem topped by PG&E, Poor location. Within grading limits.	Remove
151	Coast live oak	15	F-P	P	25N-NE		0	20	Y	X	H	Topped by PG&E. Sparse canopy and deadwood. Within proposed driveway	Remove
152	Coast live oak	15	G	F	10	15	0	0	Y	X	H	Sided by PG&E. Within proposed driveway.	Remove
153	Valley oak	20, 15	G	F	10	25	30	30	M	X	H	Somewhat lions tailed, branches elongated to S. Within grading and sewer easement.	Remove
154	Valley oak	13	G	G-F	10	0	20	20	Y	X	M-H	1' from existing gravel driveway. Trunk buried. At edge grading limits. Arborist on site for grading.	Save Arborist to pull fill back from base of tree.
155	Coast live oak	11	G	F	8	12	15	0	Y	X	H	Topped by PG&E. Within proposed driveway.	Remove
156	Coast live oak	9	G	F	6	8	6	0				Growing up under PG&E wires. Within proposed driveway.	Remove
157	Coast live oak	10	G	F	10	0	10	18	Y	X	L	Off-site. Trunk buried. 1.5' from existing gravel driveway. Grading at edge of dripline.	Save Arborist to pull fill back from base of tree.
158	Chinese pistache	12	F	F	15	12	0	10	M	X	H	Partially topped. Within grading for road.	Remove
159	Coast live oak	8	G	F-P	12NW				Y	X	L	Off-site. Trunk buried. Sided by PG&E. Grading at edge of dripline.	Save
160	Valley oak	7	G	F	8	8	0	0	Y	X	L	Off-site. Co-dominant stems at 7'. Topped by PG&E. Trunk buried. Grading at edge of dripline.	Save
160 B	Coast live oak	7	G	F	15N-NE				Y	X	L	Off-site; not surveyed. Lean to NE. 6" NW of #160. . Grading at edge of dripline.	Save
161	Iron bark euc.	11, 7										Previously removed. Suspect by PG&E (under wires)	N/A
162	Coast live oak	15, 11	G	P	15	15	15	15	M	X	L	Topped by PG&E, co-dominant stems. Grading for road at edge of dripline.	Save
163	Coast live oak	11	G	G	6	6	6	6	Y	X	L	Reduced by PG&E. Grading at edge of dripline	Save
164	Incense cedar	15	F	F	7	7	7	7	M	X	H	Sweeping S shaped trunk. Within proposed road.	Remove
165	Incense cedar											Removed.	N/A
166	Coast live oak	19, 20	G-F	F	30	30	30	0	M	X	H	Co-dominant stems. Moderate sycamore borer. Within grading limits.	Remove

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
166 B	Siberian elm	7, 11	F-P	P	18	0	0	18	M	X	H	Not surveyed. Co-dominant stems at 2'. Within grading limits.	Remove
166 C	Siberian elm	9, 8, 7	P	P	20	0	0	20	M	X	H	Not surveyed. Basal sprouts; decay. Within grading limits.	Remove
167	Black walnut	9, 4, 4	F	F	20	0	0	20	M	X	H	Within grading limits.	Remove
168	Black walnut	8	P	P	20NW				Y	X	H	Understory tree; no growth in past 14 years. Within grading limits.	Remove
169	Coast live oak	20	G	F	35	20	20	20	M	X	H	Within grading limits.	Remove
169 B	Coast live oak	9	G	F	30NW				Y	X	H	Not surveyed. Understory tree. 40° phototropic lean to NW. Within grading limits.	Remove
170	Coast live oak	14	G	G	8	8	8	8	Y	X	H	Trunk buried. Within grading limits.	Remove
171	Coast live oak	14	F-P	F	35N-NW				Y	X	H	Ivy around base, upper branches are damaged by a fungal canker at 15'. On creek bank well. Within grading limits.	Remove
171 B	Coast live oak	14	G	G	35NW				Y	X	H	In creek structure setback. 40° lean to NW. Within grading limits.	Remove
172	Monterey pine	48	F-P	F-P	30	30	30	30	OM	X	H	5° lean to N/W. Grading up to base of tree. Only 3-5 years of anticipated lifespan left.	Remove
173	Calif. Buckeye	14, 14, 8, 8, 8, 7, 7, 5	G	F	35	20	0	20	M	X	M-H	Low branching (trunks laying on ground). Grading limits well within N/W dripline. Pull grade limits back so 15’ from trunk.	Save Assuming grade limits can be adjusted.
173 B	Calif. Buckeye	11, 12	G	F	10	10	10	10	M		L	In creek structure setback. Ivy covering tree.	Save
173 C	Coast live oak	8	F	P	25N				Y	X	L-M	Understory tree with heavy lean (trunk horizontal before correcting) to NW. Young tree with some dripline grading encroachment.	Save
174	Black walnut	23	F-P	F	20	20	20	25	M	X	H	Low branching, old mistletoe in canopy; dieback. Within grade limits.	Remove
175	Siberian elm	17, 17, 15	P	P	20	20	20	20	M	X	H	Tree in decline, poorly structured. Within grade limits.	Remove
176	Coast redwood	30	F/F-P	G	15	15	15	15	M	X	H	Drought-stressed. Within grade limits.	Remove
177	Coast redwood	26	F/F-P	G	15	15	15	15	M	X	H	Drought-stressed. Within grade limits.	Remove
177 B	Valley oak	11	G	G	8	8	8	8	Y	X	H	Not surveyed. Chain on trunk. Within grade limits.	Remove
178	Valley oak	14, 6	G	F	15	15	20	20	Y	X	H	Lean to SW. Within grade limits.	Remove
178 B	Valley oak	8	G	F	12	12	0	0	Y			Not surveyed. Within grade limits.	Remove
179	Calif. Buckeye	8, 7, 6	G	G	12	12	12	12	M	X	H	Within grade limits	Remove

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
180	Mulberry	18	P	P	0	10	10	0	OM	X	H	Previously topped. Within grade limits.	Remove
181	Valley oak	11	F	F	15NE-NW				Y		L	Grading just outside dripline.	Save
182	Valley oak	11	F	F	15S				Y	X	L-M	Grading at edge of dripline.	Save
183	Valley oak	13	F	F	20 NE	15	0	0	Y	X	L-M	Grading at edge of dripline.	Save
184	Black walnut	8, 8, 7	P	P	8	8	8	8	M	X	H	Declining health. Within grade limits.	Remove
185	Valley oak	11	F	F	18 NE	10	0	0	Y	X	L-M	S shaped trunk. Grading at edge of dripline.	Save
186	Calif. Buckeye	7, 7, 6, 6, 5, 5, 5	G	G	18	18	18	18	M	X	M	Tangled with mulberry, and walnut. Grading withn dripline.	Save Arborist on site during grading.
187	Mulberry	18	P	P	15	15	15	15	M	X	H	Drought stressed, tangled with buckeye. Within grading limits.	Remove
188	Black walnut	9	F	F	20S				Y	X	H	Competing with buckeye, recommend removal. Within grade limits.	Remove
188 B	Coast live oak	11	F	G	12	12	12	12	Y	X	H	Not surveyed. Within storm treatment area.	Remove
188 C	Coast live oak	11	G	G	6	0	10	15	Y	X	H	Not surveyed. Within storm treatment area.	Remove
189	Calif. Buckeye	9, 9, 8, 7, 7, 5, 5, 5, 3, 3, 3	G	G	15	20	25	20	M	X	L-M	Grading limits at edge of dripline.	Save
190	Mulberry	16	Dead										Remove.
191	Coast live oak	14	G	G	10	10	10	10	Y		L	Grade limits just outside dripline.	Save
191 B	Coast live oak	11, 9	F	F	18NE-NW				M		L	Not surveyed. Lean over road.	Save
192	Mulberry	19	P	P	8	8	8	8	OM	X	H	Drought stressed. In decline. Within grade limits.	Remove
192 A	Coast live oak	17	G	F	18 NE	10	10	18 NW	M		L	In creek structure setback. Reduced by PG&E. By street, lifting asphalt curb.	Save
192 B	Willow	20, 20	P	P	15	0	0	0	OM		L	Outside northeast property corner along Grayson. Topped by PG&E; sparse canopy. Recommend removal	Remove
192 C	Willow	24	F	P	0	0	25	30 SW	OM		L	Outside northeast property corner along Grayson. Uprooted to S. Fallen tree.	Remove
193	Siberian elm	12, 12, 10, 5, 5, 4	P	P	8	8	8	8	M	X	H	Dying tree. Within grading limits	Remove

#	Species	DBH	Health	Structure	Dripline N	Dripline E	Dripline S	Dripline W	Age	DE	CI	Comments	Action
194	Siberian elm	12, 9, 4	P	P	0	15	15	15	M	X	H	Dying tree. Within grade limits.	Remove
194 B	Coast live oak	9	G	F	15N				Y	X	H	Not surveyed. Up against elm.	Remove
195	Siberian elm	13, 4	P	P	20N				M	X	H	Declining health. Within grade limits.	Remove
196	Coast live oak	19	G	F	20 NW	0	20	20	M		L	Sweeping trunk	Save
197	Bush eucalyptus	10, 8, 8	Dead						M		L	Dead/failed. Fire hazard.	Remove
198	Bush eucalyptus	15, 15	P	P	10N				M		L	Dying, fire hazard.	Remove
199	Blue gum euc.	50	F	F-P	25	20	20	20	M		L	10" branch failure to N in 2006; minor sprouting from failure. Prune for safety if targets within 50ft.	Save
200	Bush eucalyptus	18, 5, 6	F	P	15S				M		L	Declining health. Recent failures. Prune for safety.	Save
201	Monterey pine	24	F	P	20	20	20	20	OM		L	Over mature tree, badly included co-dominant stems. Anticipate short life span, recommend removal.	Remove
202	Monterey pine	22	P	P	0	20	20	0	OM		L	Over mature tree, declining health. Recommend removal.	Remove
203	Monterey pine											Removed.	N/A
204	Monterey pine	18	F	P	25E				M		L	Poorly tapered trunk; lean to E. Recommend removal.	Remove
205	Monterey pine											Removed.	N/A
206	Calif. Buckeye	15, 15, 10, 10	G	G	25	25	25	25	M		L	Healthy tree.	Save
301	Calif. Buckeye	10, 10	G	G-F	8	12	10	12	M	X	H	Co-dominant trunks. In proposed grading.	Remove.
302	Coast live oak	9	F/F-P	F-P	25N- 20NE				Y	X	H	Dominated by poison oak and ivy. In proposed grading.	Remove.
303	Valley oak	19	G-F	F	25N				M	X	H	Corrected phototropic lean (about 20' above grade). Slightly sparse canopy. Ivy & poison oak dominating lower trunk. In proposed grading.	Remove.
304	Coast live oak	20	G	F	15	6	10	25	M	X	H	Ivy climbing trunk. Canopy in upper half. In proposed grading.	Remove.
305	Valley oak	19.5	F-P/P	F-P	25N				M	X	H	Dead secondary stem at base, branches dead to very top. Remaining canopy sparse & stunted with deadwood. In proposed grading.	Remove.
306	Valley oak	12	P	P	30N				M-OM	X	H	Lower branches dead. Remaining canopy very sparse and stunted, concentrated at top of tree about 15' N of trunk. In proposed grading.	Remove.
307	Coast live oak	24	G	G-F	20	20	15	15	M	X	H	Ivy climbing trunk. Trunk has slight kink to E at 6' but has reoriented vertically. Canopy in upper half of tree. In proposed grading.	Remove.

#	Species	DBH	Health	Structure	Dripline N E S W	Age	DE	CI	Comments	Action
308	Coast live oak	13, 16, 7	G-F	F/F-P	30N	M	X	H	Multiple co-dominant trunks. Phototropic lean to N, all canopy in upper 1/4. Ivy climbing trunk. In proposed grading.	Remove.
309	Coast live oak	11	G-F	F-P	25N	Y-M	X	H	Phototropic lean to N, all canopy in upper 1/6. In proposed grading. In proposed grading.	Remove.
310	Coast live oak	10	F	P	0 0 8 12	Y-M	X	H	1/3 canopy dead, remaining branch extends to W. Ivy climbing trunk. In proposed grading.	Remove.
311	Coast live oak	21	F	F	30N	M	X	H	Phototropic lean to N, all canopy in upper 1/3, slightly corrected lean In proposed grading.	Remove.
312	Coast live oak	28	G-F	F/F-P	30N	M	X	H	Phototropic lean to N, all canopy in upper 1/4. Ivy climbing trunk. In proposed grading.	Remove.
313	Valley oak	9	F-P	F	30NW	Y	X	H	Phototropic lean to NW, ivy. In proposed grading.	Remove.

Tree Encroachment Summary

A total of 130 trees were inventoried. At least four additional trees (#101, 134, 203 & 205) that were shown on the survey were removed since the original site visit.

- Trees that will need to be removed: #'s 103-116, 119, 123-135, 136, 139-153, 155-156, 158, 164, 166-172, 174-180, 184, 187-188c, 190, 192, 192b-195, 197, 198, 201-201, 301-313 (97 trees)
- Trees to be saved that will be subjected to dripline encroachment, and will need arborist supervision during grading within driplines: #'s 102, 137, 138, 154, 157, 159, 160, 160b, 162, 163, 173, 173c, 182, 183, 185, 186, 189 (17 trees)
- Additional trees to be saved that will not have dripline encroachment: #'s 117, 118, 120, 121, 122, 122a, 135a, 173a, 181, 191, 191b, 192a, 196, 199, 200, 266 (16 trees)

Tree Protection Recommendations (to be printed on site plans)

Pre- Grading Phase

- Remove trees #103-116, 119, 123-135, 136, 139-153, 155-156, 158, 164, 166-172, 174-180, 184, 187-188c, 190, 192, 192b-195, 197, 198, 201-201, 301-313 (97 trees)
- Mulch from tree removals may be spread out under the driplines of trees that will be retained, keeping at least 12" away from the trunks.
- Prior to construction or grading, contractor shall install protection fencing to construct a temporary Tree Protection Zone (TPZ) around each tree or grove of trees to be saved. TPZ fencing shall encompass the driplines and be approved by the project arborist.
- TPZ fencing shall remain in an upright sturdy manner from the start of grading until the completion of construction. Fencing shall not be adjusted or removed without consulting the project arborist.

Grading and Construction Phase

- The project arborist shall be on-site during excavation/grading within driplines, especially trees: #'s 102, 137, 138, 154, 157, 159, 160, 160b, 162, 163, 173, 173c, 182, 183, 185, 186, 189.
- Should roots ≥ 2" be encountered, arborist shall cleanly prune roots with a handsaw or sawzall, and immediately re-cover. Irrigate as necessary.
- If needed, canopy pruning shall be performed by personnel certified by the International Society of Arboriculture (ISA). All pruning shall adhere to ISA and American National Standards Institute (ANSI) Standards and Best Management Practices. Project arborist to set guidelines prior to pruning.
- Should Tree Protection Zone (TPZ) encroachment be necessary, the contractor shall contact the project arborist for consultation and recommendations.
- Contractor shall keep TPZs free of all construction-related materials, debris, fill soil, equipment, etc. The only acceptable material is mulch spread out beneath the trees.
- Should any damage to the trees occur, the contractor shall promptly notify the project arborist to appropriately mitigate the damage.

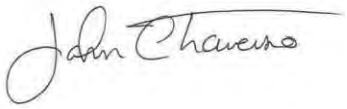
Landscaping Phase (if applicable)

- The Tree Protection Zone (TPZ) fencing shall remain in place with the same restrictions until landscape contractor notifies and meets with the project arborist.
- Avoid all fill work, grade changes, and trenching within driplines unless it is performed by hand, and approved by the project arborist.
- Pipes shall be threaded under or through large roots without damaging them.
- Contractor shall avoid trenching and grade changes within driplines.
- All planting and irrigation shall be kept a minimum of 10' away from native oaks. All irrigation within the driplines shall be targeted at specific plants, such as drip emitters or bubblers. No overhead irrigation shall occur within the driplines of native oaks.
- All planting within oak driplines shall be compatible with oaks, consisting of plant material that requires little to no water after two years' establishment. A list of oak-compatible plants can be found in a publication from the California Oak Foundation, available at: http://californiaoaks.org/wp-content/uploads/2016/04/CompatiblePlantsUnderAroundOaks.pdf

Thank you for the opportunity to provide this report, and please do not hesitate to contact me if there are any questions or concerns.

Please see attached tree inventory plan.

Sincerely,



John C Traverso
ISA Board Certified Master Arborist #WE0206-B
ISA Tree Risk Assessor Qualified
TCIA Certified Tree Care Safety Professional #01802

(10/17/22 Revision by

Jennifer Tso
Board Certified Master Arborist #WE-10270B
ISA Tree Risk Assessor Qualified)

HATCH LEGEND

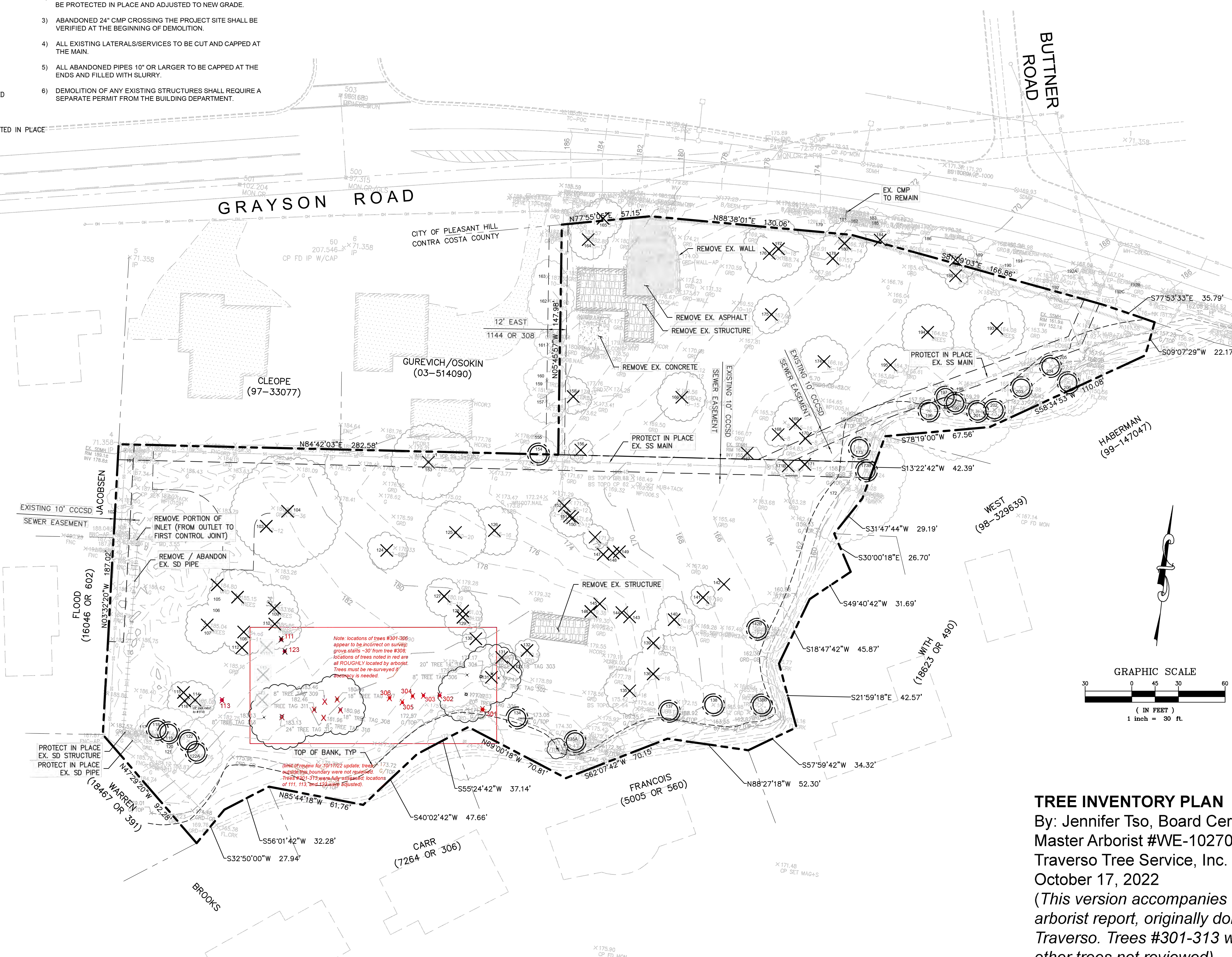
- REMOVE BUILDING
- REMOVE ASPHALT PAVEMENT
- REMOVE PCC CONCRETE
- ABANDON EXISTING UTILITY SERVICE
- REMOVE EXISTING UTILITY SERVICE

TREE DEMOLITION DETAILS

- TREE & TREE NUMBER TO BE REMOVED
- TREE & TREE NUMBER TO BE PROTECTED IN PLACE

CONTRACTOR NOTES

1) CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL THE PROPOSED WORK IN CONFORMANCE WITH OTHER RECENT AND ACTIVE PROJECTS IN THE AREA.
2) ALL EXISTING UTILITIES NOT DESIGNATED FOR REMOVAL SHALL BE PROTECTED IN PLACE AND ADJUSTED TO NEW GRADE.
3) ABANDONED 24" CMP CROSSING THE PROJECT SITE SHALL BE VERIFIED AT THE BEGINNING OF DEMOLITION.
4) ALL EXISTING LATERALS/SERVICES TO BE CUT AND CAPPED AT THE MAIN.
5) ALL ABANDONED PIPES 10" OR LARGER TO BE CAPPED AT THE ENDS AND FILLED WITH SLURRY.
6) DEMOLITION OF ANY EXISTING STRUCTURES SHALL REQUIRE A SEPARATE PERMIT FROM THE BUILDING DEPARTMENT.



TREE INVENTORY PLAN

By: Jennifer Tso, Board Certified Master Arborist #WE-10270B
Traverso Tree Service, Inc.
October 17, 2022
(*This version accompanies the revised arborist report, originally done b yJohn Traverso. Trees #301-313 were added; other trees not reviewed*)

TALUS
ENGINEERING | PLANNING | DEVELOPMENT

IMPROVEMENT PLANS FOR 1024 GRAYSON ROAD (SUBD SD20-9531)
EXISTING CONDITIONS AND DEMOLITION PLAN
PLEASANT HILL (UNINC.) CONTRA COSTA COUNTY CALIFORNIA

Revisions | No.

Stamp: REGISTERED PROFESSIONAL ENGINEER No. 61148 EXP. 12/31/22 CIVIL STATE OF CALIFORNIA

Date	03/09/22
Scale	1" = 30'
Job No.	19300

Drawing Number: C.03
3 OF 14

DRAWING NAME: P:\p19300\IMP_PLANS\C03 19300 EXIST.dwg
PLOT DATE: 10-13-22 PLOTTED BY: karin

ATTACHMENT C

Representative Site Photos Depicting Riparian and Upland Woodlands

Photo 1. Representative photo of riparian trees leaning northwards, exhibiting clear phototropism.

Photo 2. Representative photo of the distinction between the upland valley oak woodland on the left (trees exhibiting upright growth form) and the riparian valley oak woodland on the right (trees exhibiting a leaning growth form, resulting from phototropic growth outwards from the dense inner riparian canopy).

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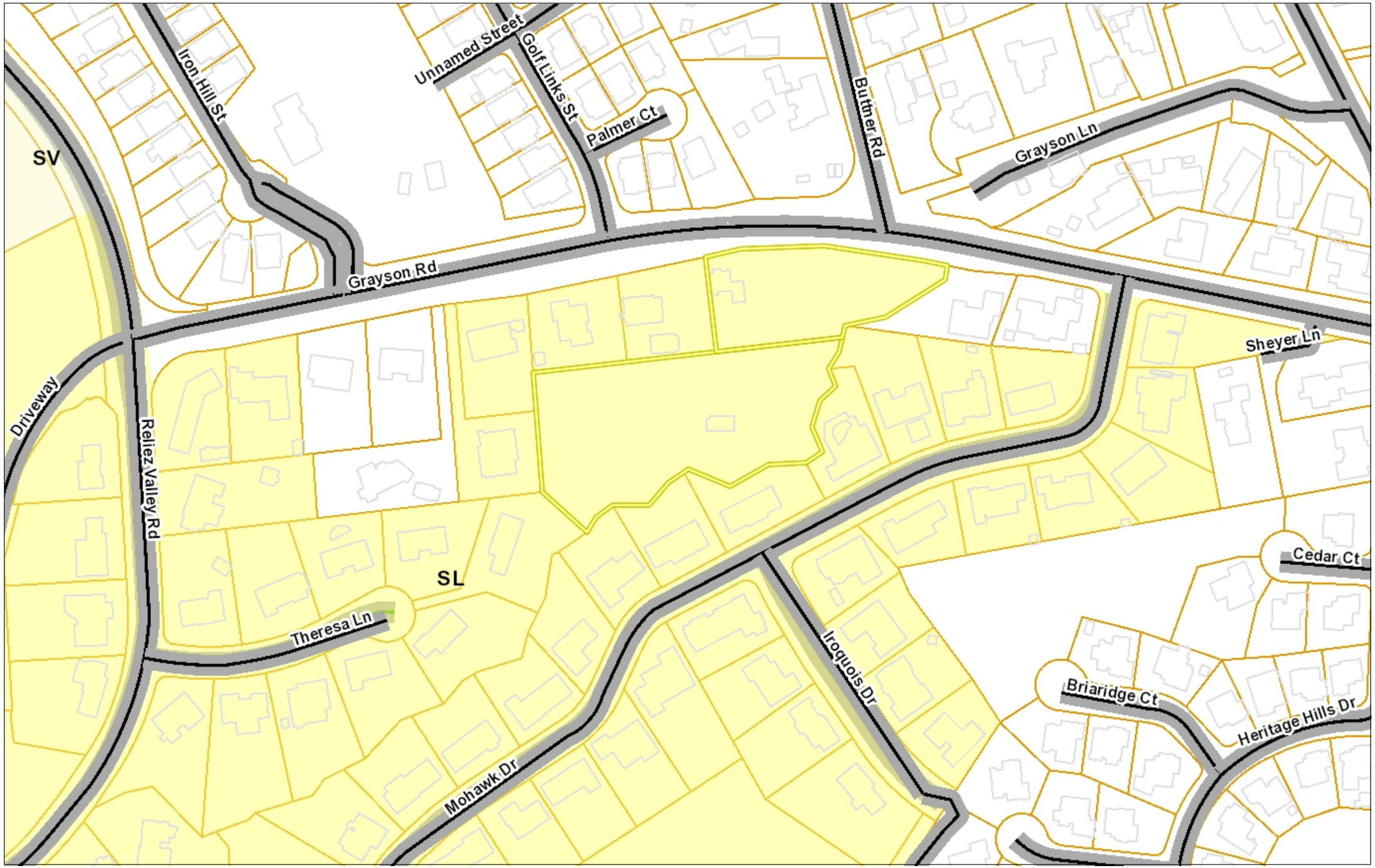
SL General Plan



Legend

- Building Outlines
- Highways
- Highways Bay Area
- Streets
- General Plan
  - SV (Single Family Residential - Ver
  - SL (Single Family Residential - Low
  - SM (Single Family Residential - Me
  - SH (Single Family Residential - Hig
  - ML (Multiple Family Residential - Lo
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  - MV (Multiple Family Residential - V
  - MS (Multiple Family Residential - V
  - CC (Congregate Care/Senior Housi
  - MO (Mobile Home)
  - M-1 (Parker Avenue Mixed Use)
  - M-2 (Downtown/Waterfront Rodeo I
  - M-3 (Pleasant Hill BART Mixed Use
  - M-4 (Willow Pass Road Mixed Use)
  - M-5 (Willow Pass Road Commercia
  - M-6 (Bay Point Residential Mixed U
  - M-7 (Pittsburg/Bay Point BART Sta
  - M-8 (Dougherty Valley Village Cent
  - M-9 (Montalvin Manor Mixed Use)
  - M-10 (Willow Pass Business Park M
  - M-11 (Appian Way Mixed Use)
  - M-12 (Triangle Area Mixed Use)
  - M-13 (San Pablo Dam Road Mixed
  - M-14 (Heritage Mixed Use)
  - CO (Commercial)
  - OF (Office)
  - BP (Business Park)
  - LI (Light Industry)
  - HI (Heavy Industry)
  - AL, OIBA (Agricultural Lands & Off
  - CR (Commercial Recreation)
  - ACO (Airport Commercial)
  - LF (Landfill)

1: 2,257

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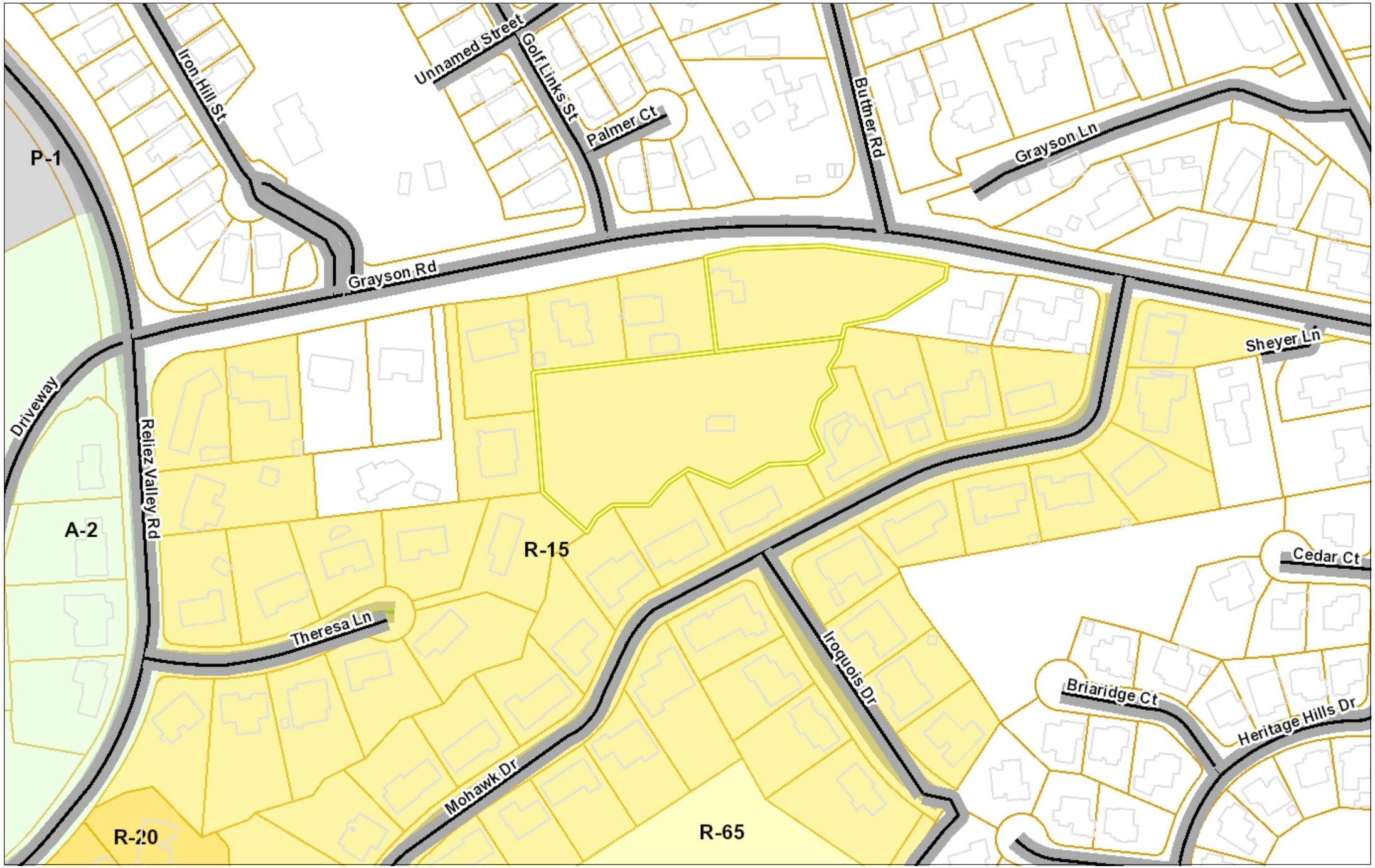
Notes

Contra Costa County -DOIT GIS

R-15 Zoning



Legend

- Building Outlines
- Highways
- Highways Bay Area
- Streets
- Zoning
  - R-6 (Single Family Residential)
  - R-6, -FH -UE (Flood Hazard and A
  - R-6 -SD-1 (Slope Density Hillside D
  - R-6 -TOV -K (Tree Obstruction and
  - R-6, -UE (Urban Farm Animal Exclu
  - R-6 -X (Railroad Corridor Combinin
  - R-7 (Single Family Residential)
  - R-7 -X (Railroad Corridor Combinin
  - R-10 (Single Family Residential)
  - R-10, -UE (Urban Farm Animal Exc
  - R-12 (Single Family Residential)
  - R-15 (Single Family Residential)
  - R-20 (Single Family Residential)
  - R-20, -UE (Urban Farm Animal Exc
  - R-40 (Single Family Residential)
  - R-40, -FH -UE (Flood Hazard and A
  - R-40, -UE (Urban Farm Animal Exc
  - R-65 (Single Family Residential)
  - R-100 (Single Family Residential)
  - D-1 (Two Family Residential)
  - D-1 -T (Transitional Combining Dist
  - D-1, -UE (Urban Farm Animal Exclu
  - M-12 (Multiple Family Residential)
  - M-12 -FH (Flood Hazard Combining
  - M-17 (Multiple Family Residential)
  - M-29 (Multiple Family Residential)
  - F-R (Forestry Recreational)
  - F-R -FH (Flood Hazard Combining
  - F-1 (Water Recreational)
  - F-1 -FH (Flood Hazard Combining D
  - A-2 (General Agriculture)
  - A-2, -BS (Boat Storage Combining
  - A-2, -BS -SG (Boat Storage and So
  - A-2 -FH (Flood Hazard Combining D

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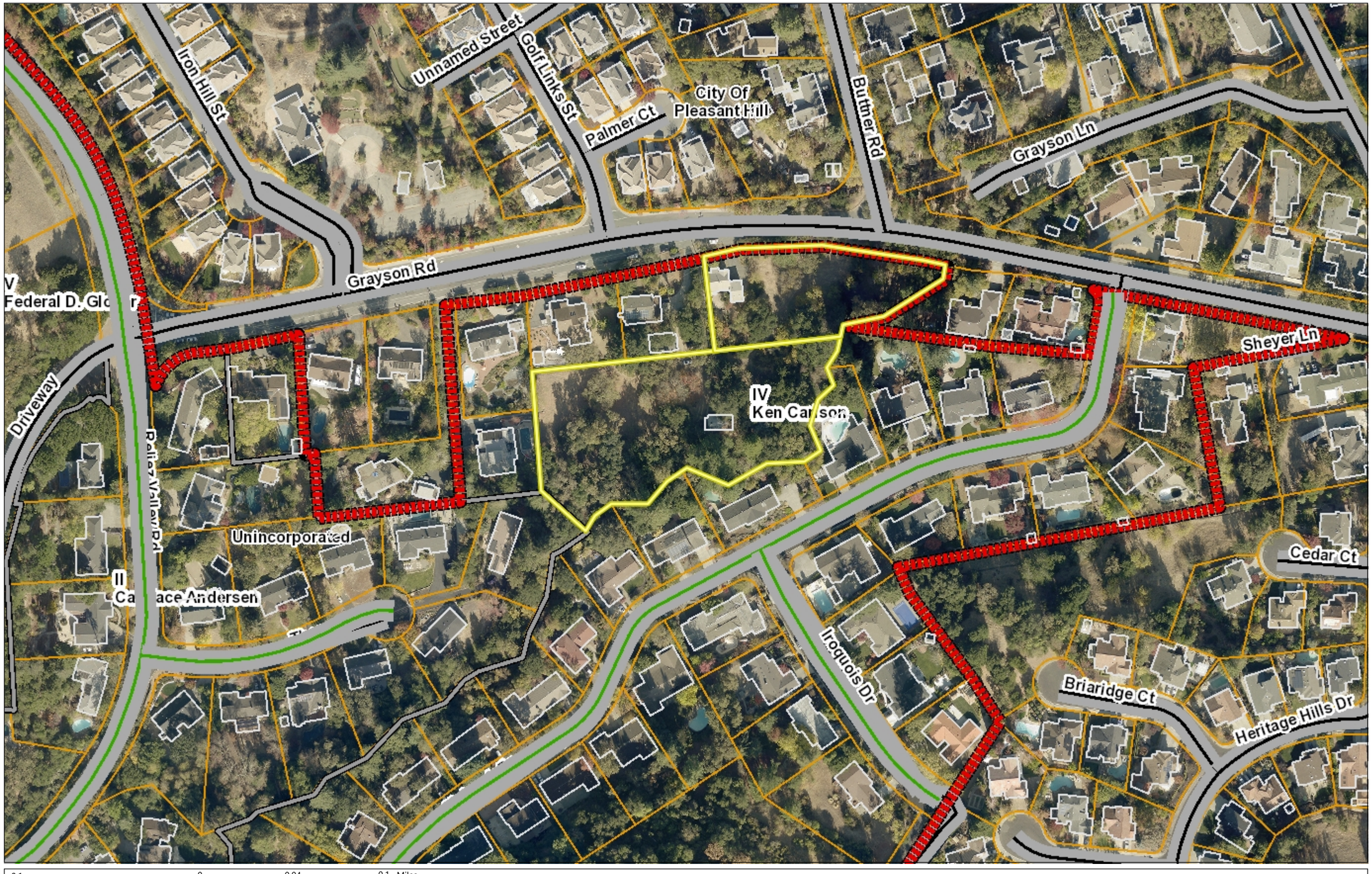
Notes

Contra Costa County -DOIT GIS

Aerial



Legend

- Building Outlines
- Maintained Roads
- City Limits
- Unincorporated
- Highways
- Highways Bay Area
- Streets
- Maintained Roads
- Board of Supervisors' Districts
- Water Bodies
- County Boundary
- Bay Area Counties
- Assessment Parcels
- Aerials 2019
  - Red: Band_1
  - Green: Band_2
  - Blue: Band_3
- World Imagery
- Low Resolution 15m Imagery
- High Resolution 60cm Imagery
- High Resolution 30cm Imagery
- Citations

1: 2,257

0.1 0 0.04 0.1 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

Notes

Contra Costa County -DOIT GIS