CONTRA COSTA COUNTY

AGENDA - PUBLISHED

Alamo Municipal Advisory Council

Tuesday, December 2, 2025 **6:00 PM** **Alamo Women's Club - 1401 Danville Blvd., Alamo**

Agenda Items: Items may be taken out of order based on the business of the day and preference of the Committee

1. Call to Order - Pledge of Allegiance - Roll Call

2. Agency Reports

San Ramon Valley Fire Protection District (SRVFPD) and Contra Costa Sheriff

3. District Two Staff Report **25-4958**

4. Public Comment

5. Public Works/Flood Control

6. CDVR25-01036 - 236 Angela Avenue. **25-4959**

Attachments: CDVR25-01036 ACR
Intent to Deny CDVR25-01036

7. CDVR25-01054 - 1048 Adrienne Drive, Alamo **25-4960**

Attachments: CDVR25-01054 Agency Comment Packet_11.19.25

8. CDSD25-09717 - 455 Livorna Road, Alamo **25-4961**

Attachments: CDSD25-09717 Agency Comment Packet

9. CSA R7 Budget **25-4962**

Attachments: CSA R7 MAC Report FY 25-26 Q1 (New Template)

10. Zones 36, 45 and 54 Budgets **25-4963**

Attachments: LL-2 Zones 36 45 and 54 2025-26 Qrt 1

11. Subcommittee Reports **25-4964**

12. November 2025 Record of Actions **25-4965**

Attachments: DRAFT Alamo MAC ROA 11.4.2025

13. Alamo MAC Member Comments

Adjourn

The next meeting is currently scheduled for Tuesday, January 6, 2025.

The Committee will provide reasonable accommodations for persons with disabilities planning to attend the Committee meetings. Contact the staff person listed below at least 72 hours before the meeting. Any disclosable public records related to an open session item on a regular meeting agenda and distributed by the County to a majority of members of the Committee less than 96 hours prior to that meeting are available for public inspection at 309 Diablo Road, Danville, during normal business hours.

For Additional Information Contact: Cameron Collins at Cameron.Collins@bos.cccounty.us

1025 ESCOBAR STREET
MARTINEZ, CA 94553

CONTRA COSTA COUNTY

Staff Report

File #: 25-4958 **Agenda Date:** 12/2/2025 **Agenda #:** 3.

Advisory Board: Alamo Municipal Advisory Council
Subject: District Two Staff Report

Information:
Livorna Park Budget Update
Zone 54 Fence Replacement

Staff Report

File #: 25-4959 **Agenda Date:** 12/2/2025 **Agenda #:** 6.

Advisory Board: Alamo Municipal Advisory Council
Subject: 236 Angela Avenue, Alamo
Contact: Syd Sotoodeh, syd.sotoodeh@dcd.cccounty.us <mailto:syd.sotoodeh@dcd.cccounty.us>

Information:
The applicant requests approval of a variance to allow a 18ft front yard setback (where 25 ft is the minimum) for a new garage This includes a Small Lot Design Review due to the parcel being substandard in average width (approx. 104 ft where 120 is required).

Referral History and Update:
The Department of Conservation and Development is going to recommend partial approval of a small lot design review for the rear addition and a small front porch addition/new entry.

CONTRA COSTA COUNTY
DEPARTMENT OF CONSERVATION AND DEVELOPMENT
COMMUNITY DEVELOPMENT DIVISION
30 Muir Road
Martinez, CA 94553-4601
Phone: 925-655-2700
Fax: 925-655-2758

CONTRA COSTA
CONSERVATION & DEVELOPMENT

AGENCY COMMENT REQUEST

Date 08/21/2025

We request your comments regarding the attached application currently under review.

DISTRIBUTION

INTERNAL

- ✔ Building Inspection
- Grading Inspection
- Advance Planning
- Housing Programs
- Trans. Planning
- Telecom Planner
- ALUC Staff
- HCP/NCCP Staff
- County Geologist

HEALTH SERVICES DEPARTMENT

- Environmental Health
- Hazardous Materials

PUBLIC WORKS DEPARTMENT

- Engineering Services
- Special Districts
- Traffic
- Flood Control (Full-size)

LOCAL

- ✔ Fire District _____
  - ✔ San Ramon Valley – (email) rwendel@srvfire.ca.gov
  - Consolidated – (email) fire@cccfpd.org
- ✔ Sanitary District Central Sanitary
- ✔ Water District East Bay MUD
- City of _____
- School District(s) _____
- LAFCO
- Reclamation District #_____
- East Bay Regional Park District
- Diablo/Discovery Bay/Crockett CSD
- ✔ MAC/TAC Alamo MAC
- ✔ Improvement/Community Association
- CC Mosquito & Vector Control Dist (email)

OTHERS/NON-LOCAL

- CHRIS (email only: nwic@sonoma.edu)
- CA Fish and Wildlife, Region 3 – Bay Delta
- Native American Tribes

ADDITIONAL RECIPIENTS

Alamo Improvement Association

_____

Please submit your comments to:

Project Planner Syd Sotoodeh
Phone # 925-655-2877
E-mail syd.sotoodeh@dcd.cccounty.us
County File # CDVR25-01036

Prior to 09/19/2025

* * * * *

We have found the following special programs apply to this application:

- Landslide
- Active Fault Zone (A-P)
- ✔ Liquefaction
- ✔ Flood Hazard Area
- ✔ 60-dBA Noise Control
- CA EPA Hazardous Waste Site
- High or Very High FHSZ

* * * * *

AGENCIES: Please indicate the applicable code section for any recommendation required by law or ordinance. Please send copies of your response to the Applicant and Owner.

Comments: None Below ___ Attached

Print Name _____

_____
Signature DATE

Agency phone # _____

CONTRA COSTA
CONSERVATION & DEVELOPMENT

Planning Application Summary

County File Number: CDVR25-01036 **File Date: 7/14/2025**

Applicant:
Darrin Derita, Tiki Tom's
236 Angela Ave
Alamo, CA 94507
darrin680@comcast.net
(925) 216-6970

Property Owner:
Darrin Derita
236 Angela Ave
Alamo, CA 94507
darrin680@comcast.net
(925) 216-6970

Project Description:
The applicant requests approval of a variance to allow a 18ft front yard setback (where 25 ft is the minimum) for a new garage This includes a Small Lot Design Review due to the parcel being substandard in average width (approx. 104 ft where 120 is required).

Project Location: (Address: 236 ANGELA AVE, ALAMO, CA 945071335), (APN: 192090007)

Additional APNs:

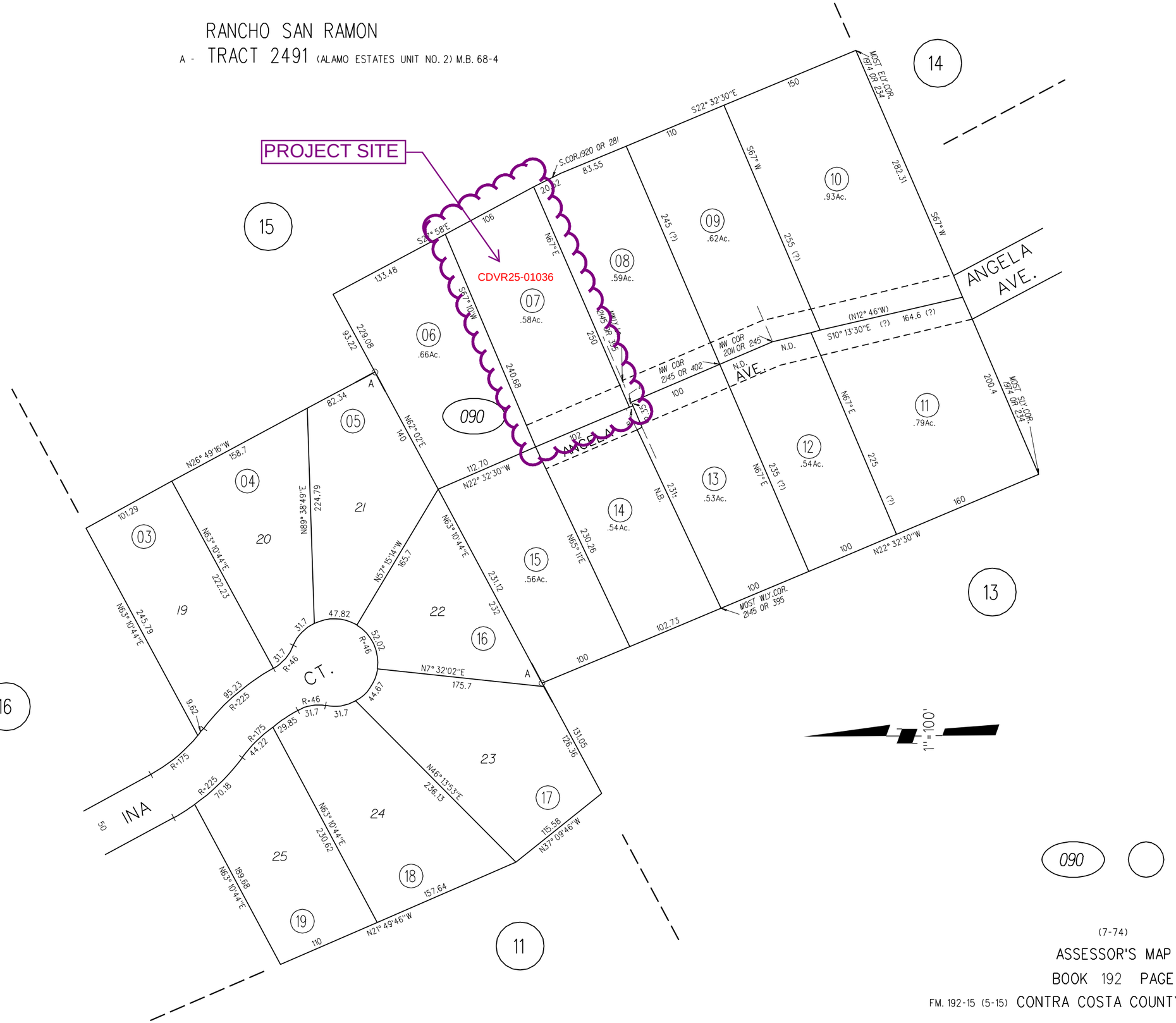
General Plan Designation(s): RL
Zoning District(s): R-20
Flood Hazard Areas: B
AP Fault Zone: No
60-dBA Noise Control: Yes
MAC/TAC: Alamo MAC
Sphere of Influence: None
Fire District: SAN RAMON VLY FIRE
Sanitary District: CENTRAL SANITARY
Housing Inventory Site: NO
Specific Plan: None

Fees:

Fee Item	Description	Account Code	Total Fee	Paid
052B	Notification Fee ($30)	002606-9660-REV-000-5B052B	30.00	30.00
HSDR	Environmental Health Fee ($57)	002606-9660-REV-000-5BHSDR| $5.00	57.00	57.00
VRS0044	Zone Variance - DCD	002606-9660-REV-000-5B0044	3250.00	3250.00
		Total:	**3337.00**	**3337.00**

RANCHO SAN RAMON

A - TRACT 2491 (ALAMO ESTATES UNIT NO. 2) M.B. 68-4



(7-74)

ASSESSOR'S MAP

BOOK 192 PAGE 09

FM. 192-15 (5-15) CONTRA COSTA COUNTY, CALIF.

General Plan: RL, Residential Low Density



Map Legend

- Assessment Parcels

General Plan

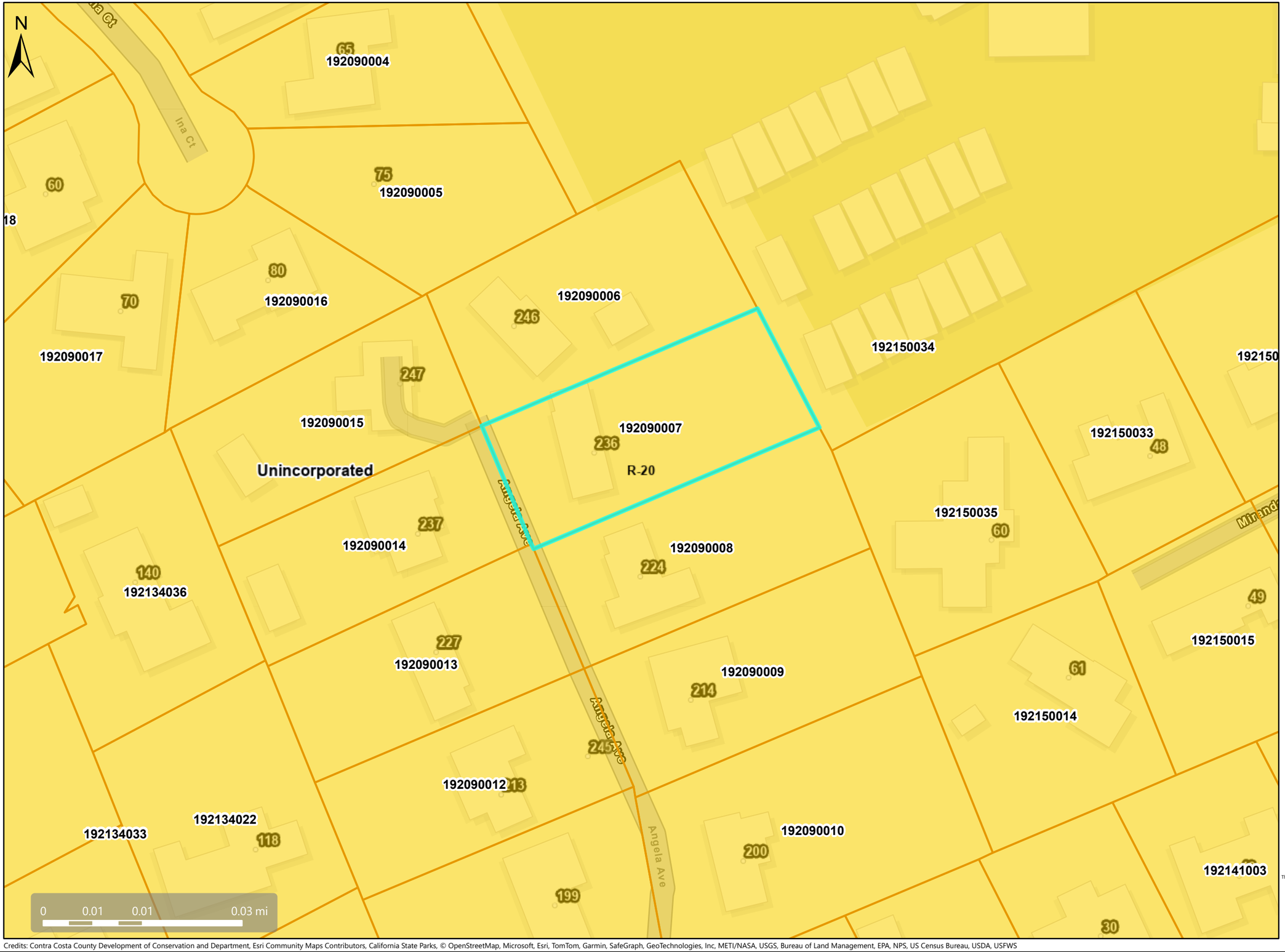
- RL (Residential Low Density) (1-3 du/na)
- PS (Public and Semi-Public)
- Unincorporated
- Address Points

This map is a user generated, static output from an internet mapping application and is intended for reference use only.
Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.
THIS MAP IS NOT TO BE USED FOR NAVIGATION.
CCMap is maintained by Contra Costa County Department of Information Technology, County GIS.
Data layers contained within the CCMap application are provided by various Contra Costa County Departments.
Please direct all data inquires to the appropriate department.

Spatial Reference
PCS: WGS 1984 Web Mercator Auxiliary Sphere
Datum: WGS 1984

Credits: Contra Costa County Development of Conservation and Department, Esri Community Maps Contributors, California State Parks, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS

Zoning: R-20



Map Legend

- Assessment Parcels
- Zoning
- ZONE_OVER
- R-20 (Single Family Residential)
- Unincorporated
- Address Points

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Aerial View



Map Legend

- Assessment Parcels
- Unincorporated
- Address Points

Aerials 2019

RGB

- Red: Band_1
- Green: Band_2
- Blue: Band_3

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Applicant's request for variance/statement

Original permit was declined do to architects misunderstanding of setbacks. He assumed 25 feet for utility easement and 20' for setback to structure. The land surveyor noted those measurements on his record. The required setback is 25' for access and utility easement and 25' setback to structure, total 50'. Our plans show only 45 total feet setback to structure. We are applying for a variance to encroach onto the secondary setback by 5' -

Three required findings as requested by

Section 26-2.2006

1 - Included in documents are photos of neighbor's home 224 Angela Ave. By satellite photo program and proprietary measuring tool, it shows only 37'7" total setback from easement line to structure. Using a laser line on the street as easement line per set spikes, the actual measurement is 43'6" Either way, the required 50' total setback is not met. We are asking for a greater setback of 45' with only 5' variance

2- We purchased this home a few years ago. Some earlier modifications had been made and part of the home was expanded into the garage by 7'8". This leaves the garage depth at less than 12 feet. Our proposed plans would include the expansion of the garage slightly past the set back by 5 feet to accommodate a regulation depth garage. Construction would also include the rework of the previous 7'8" section taken from the garage to insure that it meets building code.

3 - The requested variance substantially meets the intent and purpose of the respective land use district.

The garage expansion is a part of a larger renovation which adds a primary suite at rear of home and slight extension of the remaining rear wall.

GENERAL NOTES

THE CONSTRUCTION DOCUMENTS PRESENTED BY R.E. HURTADO & ASSOCIATES HAVE BEEN DEVELOPED FOR THE EXPERIECED BUILDER AND CONFORM TO THE CURRENT I.B.C. STANDARDS. SAID STANDARDS INCORPORATE BUILDING AND ENGINEERING PRACTICES THAT MAY NOT BE SPECIFICALLY NOTED ON THE DOCUMENTS. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR CONFORMING TO THE CODES AND REGULATIONS OF THE ENFORCING BODY.

R.E. HURTADO & ASSOCIATES SHALL BE PROMPTLY NOTIFIED OF ANY ERRORS, OMISSIONS AND DESIGN FLAWS APPEARING IN THE DRAWINGS OR SPECIFICATIONS, AND SHALL ISSUE INSTRUCTIONS TO THE CONTRACTOR. SHOULD THE CONTRACTOR PROCEED WITH THE WORK SO AFFECTED WITHOUT SAID INSTRUCTIONS, HE SHALL MAKE GOOD ANY RESULTING DAMAGE OR DEFECT.

DETAILS AND NOTES ON THESE DRAWINGS ARE TYPICAL AND SHALL APPLY UNLESS OTHERWISE NOTED. DETAILS NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONDITIONS.

THE ENERGY COMPLIANCE FORMS FOR THIS PROJECT, DATED 8-19-2024 **, ISSUED UNDER SEPARATE COVER ARE AN INTEGRAL PART OF THE CONSTRUTION DOCUMENTS AND SHALL GOVERN IN CASE OF DISCREPENCIES. CHANGES IN SPECIFIED MATERIALS SHALL NOT BE PERMITTED NLESS THE PROPOSED CHAGE(S) WILL RESULT IN LOWER OVERALL HEAT TRANSFER COEFFICIENT (U) FOR THE ASSEMBLY.**

THE SITE PLAN PROVIDED IS NOT A PROPERTY SURVEY. ALL INFORMATION REGARDING THE PROPERTY BOUNDARIES WAS TAKE3N FROM RECORDED MAPS FILED WITH THE COUNTY OR CITY. R.E. HURTADO & ASSOCIATES DOES NOT TAKE RESPONSIBILITY FOR THE ACCURACY OF THE DATA PRESENTED AND DRAWN. IF A DISCREPENCY ARISES, THE PROPERTY SHOULD BE RESURVEYED. R.E. HURTADO & ASSOCIATES IS NOT RESPONSIBLE NOR LIABLE FOR THE EXISTING SOILS CONDITIONS OR TOPOGRAPHY OF THE PROPERTY SHOWN.

ALL UTILITY INFORMATION SHALL BE VERIFIED BY THE CONTRACTOR. R.E. HURTADO & ASSOCIATES ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE UTILITY LOCATIONS SHOWN.

THE CONTRACTOR SHALL RESTORE ALL EXISTING BUILDING SITE IMPROVEMENTS, INCLUDING SIDEWALK, CURB & GUTTER, WALKWAYS, PATIOS, FENCES, LANDSCAPING & IRRIGATION, PLUMBING ETC. WHICH HAVE BEEN DAMAGED OR ALTERED BY REASON OF THE CONTRACTOR'S OPERATIONS, TO A NEW CONDITION AND TO THE COMPLETE SATISFACTION OF THE OWNER.

ENERGY NOTES

THE PROJECT HEREIN COMPLIES WITH ALL CURRENT GENERAL ENERGY CONSERVATION REGULATIONS AS KNOWN TO PRESENTLY EXIST IN THE COUNTY OF CONTRA COSTA . INSULATION SHALL BE MINIMUM AS SHOWN ON PLANS. ALL DOORS AND WINDOWS SHALL BE TIGHT FITTING AND FULLY WEATHERSTRIPPED. SOLE PLATE, EXTERIOR CORNERS, WINDOW AND DOOR FRAMES SHALL BE PROPERLY CAULKED TO AVOID THE TRANSFER OF CONDITIONED AIR. INSULATION, CAULKING, WATER FLOW RATES, GAS PILOTS, AND LIGHTING SHALL BE AS PER CURRENT TITLE 24 REGULATIONS. ALL FIREPLACES SHALL HAVE TIGHT FITTING CLOSEABLE METAL OR GLASS DOORS, OUTSIDE AIR INTAKE WITH DAMPER, FLUE DAMPER, NO CONTINUOUS PILOT AND SHALL COMPLY TO ALL LOCAL CODES. TOTAL GLAZING INSTALLED SHALL COMPLY TO SPECIFIC TITLE 24 PACKAGE, MEET GLAZING REQUIREMENTS FOR NEW RESIDENTIAL BUILDINGS ANDALL PERFORMANCE REGULATIONS IN EFFECT AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT.

APPLICABLE CODES & STANDARDS

2022 California Building Code
2022 California Electrical Code
2022 California Fire Code
2022 California Green Building Standards Code
2022 California Mechanical Code
2022 California Plumbing Code
2022 California Residential Code
2022 California Energy Code
Energy Efficiency Standards for Residential and Nonresidential Buildings, July 2022
CONTRA COSTA COUNTY Municipal Code

THE DESIGNS HEREIN PRESENTED ARE THOSE OF DARREN & TINA DERITA , AND HAVE BEEN PREPARED BY R.E. HURTADO & ASSOC. UNDER THE DIRECTION OF THE ABOVE.

CALGREEN NOTES

TO MANAGE STORM WATER DRAINAGE DURING CONSTRUTION AND WHERE STORM WATER IS CONVEYED TO A PUBLIC DRAINAGE SYSTEM, COLLECTION POINT OR SIMILAR DISPOSAL METHOD.
WATER SHALL BE FILTERED BY USE OF A BARRIER SYSTEM, WATTLE OR OTHER METHOD APPROVED BY THE ENFORCEMENT AGENCY.
CONTRACTOR TO SUBMIT WASTE REDUCTION, DISPOSAL, AND RECYCLING PLAN DOCUMENT THROUGH GREEN HALO.
BUILDING MATERIALS WITH VISIBLE SIGNS OF WATER DAMAGE SHALL NOT BE INSTALLED. WALL AND FLOOR FRAMING SHALL NOT BE ENCLOSED WHEN THE FRAMING MEMBERS EXCEED 19% MOISTURE CONTENT.
FINISH MATERIALS SHALL COMPLY WITH SECTION 4.502.2 OF THE 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE FOR ADHESIVES, SEALANTS AND CAULKS; PAINTS AND COATINGS; RESILIENT FLOORING SYSTEMS; AND COMPOSITE WOOD PRODUCTS.

Residential
CALGreen Code Checklist

Project designer may use this checklist to indicate the **sheet number of the project plans** that shows compliance with the specific CALGREEN code sections for residential projects. ***Residential*** projects consist of any project with a residential occupancy group (R-3, R-2, etc.). CALGreen applies to all new residential structures, and also applies to additions and alterations that increase the building's condition area, volume, or size. For sections that do not apply to the specific project, please write "N/A" as the sheet number.

This guideline also identifies:

- **Which city division** has responsibility for **plan check** and **inspection** for the listed sections of the CALGreen provisions: **B** Building Division; **E** Current Engineering Division;

When using this checklist: reviewer or inspector place a check mark ✓ next to the division letter; reviewer circle the appropriate letter E or B to indicate which division will do the inspection.

Permit No. Reviewed by:

Code Section	Section Title	Sheet Number	Primary responsibility (office use) Plan Check	Inspection **
4.106	**Site Development**			
	.2 Storm water drainage and retention during construction	ONE	E	E/B
	.3 Grading and paving (Surface Drainage) (on Site or Grading Plan)	N/A	E	E/B
	.4 Electrical vehicle charging	N/A	B	B
4.201	**Energy Efficiency**			
	.1 Mandatory Energy Standards of Title 24	ELEVEN(T24.3)	B	B
4.303	**Indoor Water Use**			
	.1 Water conserving plumbing fixtures and fittings	EIGHT	B	B
	.2 Plumbing fixtures and fittings to meet CPC	EIGHT	B	B
4.304	**Outdoor Water Use**			
	.1 Irrigation controllers	N/A	B	B
4.406	**Enhanced Durability and Reduced Maintenance**			
	.1 Rodent proofing	EIGHT	B	B
4.408	**Construction Waste Reduction, Disposal and Recycling**			
	.1 Submit local ordinance waste management plan and final report for *Covered Projects*, as defined in City of Concord Municipal Code ("CCMC") Section 8.20.350, and meet the *Diversion Requirements* of CCMC Section 8.20.360.	ONE Document through GreenHalo	B	B
4.410	**Building Maintenance and Operation**			
	.1 Operation and maintenance manual	EIGHT	B	B
4.503	**Fireplaces**			
	.1 Direct-vent sealed-combustion gas fireplace or woodstove with U.S. EPA New Source Performance Standards	N/A	B	B
4.504	**Pollutant Control**			
	.1 Covering of duct openings and protection of equipment during construction	EIGHT	B	B
	.2 Finish material pollution control	EIGHT	B	B
	.3 Carpet systems	EIGHT	B	B
	.4 Resilient flooring systems	EIGHT	B	B
	.5 Composite wood products	EIGHT	B	B
4.505	**Indoor Moisture Control**			
	.2 Concrete slab foundations	N/A	B	B
	.3 Moisture content of building materials	N/A	B	B
4.506	**Indoor Air Quality and Exhaust**			
	.1 Bathroom exhaust fans	EIGHT	B	B
4.507	**Environmental Comfort**			
	.2 Heating and air-conditioning system design	EIGHT	B	B

** For inspection items with E/B, Engineering Division will inspect when a grading permit is issued, otherwise Building Division WILL INSPECT

PROJECT DATA

ZONING	R-20
OCCUPANCY TYPE	R-3
BUILDING TYPE	V-B
NUMBER OF STORIES	ONE
AUTOMATIC FIRE SPRINKLER SYSTEM	NONE
DESCRIPTION	**SQ. FT.**
TOTAL LOT AREA	25,440
EXISTING LIVING AREA	1,657
NEW LIVING AREA	1,455
TOTAL LIVING AREA	3,112
EXISTING GARAGE AREA	400
NEW GARAGE AREA (ADDED)	306
NEW GARAGE AREA (ADJUSTED)	506
BUILDING FOOTPRINT	3,618
LOT COVERAGE	14.2 %

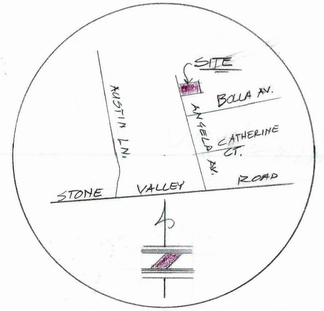
PROJECT INDEX

DESCRIPTION	SHEET No.
SITE/ROOF PLAN, VICINITY MAP, NOTES	ONE
EXISTING FLOOR PLAN, BUILDING SECTIONS	TWO
NEW FLOOR PLAN, BUILDING SECTIONS	THREE
EXTERIOR ELEVATIONS	FOUR
FOUNDATION/FLOOR FRAMING PLAN, DETAILS	FIVE
ROOF FRAMING/ SEISMIC PLAN, DETAILS	SIX
STRUCTURAL DETAILS	SEVEN
ELECTRICAL/HVAC/PLUMBING PLAN, NOTES	EIGHT
ENERGY CALCULATIONS	NINE
ENERGY CALCULATIONS	TEN
T-24 MANDATORY MEASURES	ELEVEN

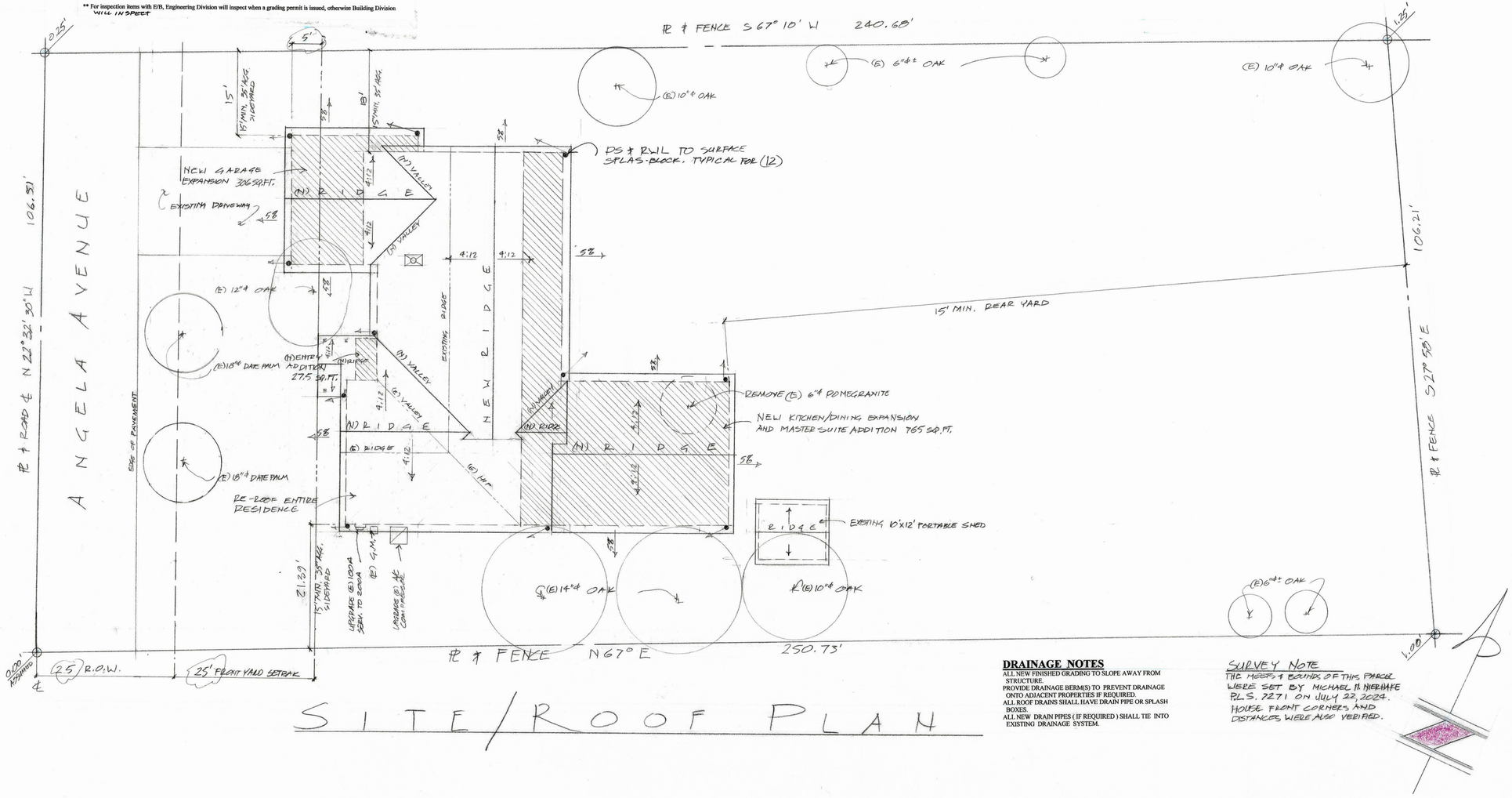
SCOPE OF WORK

ADD 1,455 SQ.FT. OF LIVING AREA.
ADD 306 SQ. FT. OF GARAGE AREA.
RECONFIGURE ROOF FRAMING.
RE-ROOF ENTIRE STRUCTURE.
UPGRADE ELECTRICAL MAIN SERVICE TO 200A.
UPGRADE HVAC UNITS PER HVAC CONTRACTOR AND TITLE 24 ENERGY DOCUMENTS.
REPLACE EXISTING WATER HEATER WITH TANKLESS UNIT.
ADD ELECTRICAL OUTLETS, SWITCHES AND LIGHTING.
ADD PLUMBING AND FIXTURES PER PLAN.
REPLACE EXISTING, MASONRY CHIMNEY WITH WOOD AND MFRD TRIPLE WALL FLUE PER PLAN.

RECEIVED on 07/14/2025 CDVR25-01036
By Contra Costa County
Department of Conservation and Development



VICINITY MAP
N.T.S.



SITE/ROOF PLAN

DRAINAGE NOTES
ALL NEW FINISHED GRADING TO SLOPE AWAY FROM STRUCTURE.
PROVIDE DRAINAGE BERM(S) TO PREVENT DRAINAGE ONTO ADJACENT PROPERTIES IF REQUIRED.
ALL ROOF DRAINS SHALL HAVE DRAIN PIPE OR SPLASH BOXES.
ALL NEW DRAIN PIPES (IF REQUIRED) SHALL TIE INTO EXISTING DRAINAGE SYSTEM.

SURVEY NOTE
THE MEETS & BOUNDS OF THIS PARCEL WERE SET BY MICHAEL H. NIERMAKE PLS. 7271 ON JULY 22, 2024. HOUSE FRONT CORNERS AND DISTANCES WERE ALSO VERIFIED.

REVISIONS
PER PLAN'S 4-9-25

R.E. HURTADO & ASSOC.
RESIDENTIAL / LIGHT COMMERCIAL
P.O. BOX 6152
CONCORD, CA 94524-0152
925-686-5322
Hurtado.Assoc@gmail.com

ADDITION/REMODEL PLAN
DARREN & TINA DERITA
236 ANGELA AVENUE, LAMO, CONTRA COSTA COUNTY, CA
APN: 192-090-007

SCALE
1"=10'
DATE
4-9-'25
JOB No.
R2309

1 of 11

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THE CONTRACTOR SHALL RESTORE ALL EXISTING BUILDING SITE IMPROVEMENTS, INCLUDING SIDEWALK, CURB & GUTTER, WALKWAYS, PATIOS, FENCES, LANDSCAPING & IRRIGATION, PLUMBING ETC. WHICH HAVE BEEN DAMAGED OR ALTERED BY REASON OF THE CONTRACTOR'S OPERATIONS, TO A NEW CONDITION AND TO THE COMPLETE SATISFACTION OF THE OWNER.

ENERGY NOTES

THE PROJECT HEREIN COMPLIES WITH ALL CURRENT GENERAL ENERGY CONSERVATION REGULATIONS AS KNOWN TO PRESENTLY EXIST IN THE COUNTY OF CONTRA COSTA . INSULATION SHALL BE MINIMUM AS SHOWN ON PLANS. ALL DOORS AND WINDOWS SHALL BE TIGHT FITTING AND FULLY WEATHERSTRIPPED. SOLE PLATE, EXTERIOR CORNERS, WINDOW AND DOOR FRAMES SHALL BE PROPERLY CAULKED TO AVOID THE TRANSFER OF CONDITIONED AIR. INSULATION, CAULKING, WATER FLOW RATES, GAS PILOTS, AND LIGHTING SHALL BE AS PER CURRENT TITLE 24 REGULATIONS. ALL FIREPLACES SHALL HAVE TIGHT FITTING CLOSEABLE METAL OR GLASS DOORS, OUTSIDE AIR INTAKE WITH DAMPER, FLUE DAMPER, NO CONTINUOUS PILOT AND SHALL COMPLY TO ALL LOCAL CODES. TOTAL GLAZING INSTALLED SHALL COMPLY TO SPECIFIC TITLE 24 PACKAGE, MEET GLAZING REQUIREMENTS FOR NEW RESIDENTIAL BUILDINGS ANDALL PERFORMANCE REGULATIONS IN EFFECT AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT.

APPLICABLE CODES & STANDARDS

2022 California Building Code
2022 California Electrical Code
2022 California Fire Code
2022 California Green Building Standards Code
2022 California Mechanical Code
2022 California Plumbing Code
2022 California Residential Code
2022 California Energy Code
Energy Efficiency Standards for Residential and Nonresidential Buildings, July 2022
CONTRA COSTA COUNTY Municipal Code

THE DESIGNS HEREIN PRESENTED ARE THOSE OF DARREN & TINA DERITA , AND HAVE BEEN PREPARED BY R.E. HURTADO & ASSOC. UNDER THE DIRECTION OF THE ABOVE.

CALGREEN NOTES

TO MANAGE STORM WATER DRAINAGE DURING CONSTRUTION AND WHERE STORM WATER IS CONVEYED TO A PUBLIC DRAINAGE SYSTEM, COLLECTION POINT OR SIMILAR DISPOSAL METHOD. WATER SHALL BE FILTERED BY USE OF A BARRIER SYSTEM, WATTLE OR OTHER METHOD APPROVED BY THE ENFORCEMENT AGENCY. CONTRACTOR TO SUBMIT WASTE REDUCTION, DISPOSAL, AND RECYCLING PLAN DOCUMENT THROUGH GREEN HALO.
BUILDING MATERIALS WITH VISIBLE SIGNS OF WATER DAMAGE SHALL NOT BE INSTALLED. WALL AND FLOOR FRAMING SHALL NOT BE ENCLOSED WHEN THE FRAMING MEMBERS EXCEED 19% MOISTURE CONTENT.
FINISH MATERIALS SHALL COMPLY WITH SECTION 4.502.2 OF THE 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE FOR ADHESIVES, SEALANTS AND CAULKS; PAINTS AND COATINGS; RESILIENT FLOORING SYSTEMS; AND COMPOSITE WOOD PRODUCTS.

Residential
CALGreen Code Checklist

Project designer may use this checklist to indicate the **sheet number of the project plans** that shows compliance with the specific CALGREEN code sections for residential projects. ***Residential*** projects consist of any project with a residential occupancy group (R-3, R-2, etc.). CALGreen applies to all new residential structures, and also applies to additions and alterations that increase the building's condition area, volume, or size. For sections that do not apply to the specific project, please write "N/A" as the sheet number.

This guideline also identifies:

- Which **city division** has responsibility for **plan check** and **inspection** for the listed sections of the CALGreen provisions: B Building Division; E Current Engineering Division;

When using this checklist: reviewer or inspector place a check mark ✓ next to the division letter; reviewer circle the appropriate letter E or B to indicate which division will do the inspection.

Permit No. Reviewed by:

Code Section	Section Title	Sheet Number	Primary responsibility (office use) Plan Check	Inspection **
4.106	**Site Development**			
	.2 Storm water drainage and retention during construction	ONE	E	E/B
	.3 Grading and paving (Surface Drainage) (on Site or Grading Plan)	N/A	E	E/B
	.4 Electrical vehicle charging	N/A	B	B
4.201	**Energy Efficiency** .1 Mandatory Energy Standards of Title 24	ELEVEN (T24.3)	B	B
4.303	**Indoor Water Use** .1 Water conserving plumbing fixtures and fittings	EIGHT	B	B
	.2 Plumbing fixtures and fittings to meet CPC	EIGHT	B	B
4.304	**Outdoor Water Use** .1 Irrigation controllers	N/A	B	B
4.406	**Enhanced Durability and Reduced Maintenance** .1 Rodent proofing	EIGHT	B	B
4.408	**Construction Waste Reduction, Disposal and Recycling** .1 Submit local ordinance waste management plan and final report for *Covered Projects*, as defined in City of Concord Municipal Code ("CCMC") Section 8.20.350, and meet the *Diversion Requirements* of CCMC Section 8.20.360.	ONE Document through GreenHalo	B	B
4.410	**Building Maintenance and Operation** .1 Operation and maintenance manual	EIGHT	B	B
4.503	**Fireplaces** .1 Direct-vent sealed-combustion gas fireplace or woodstove with U.S. EPA New Source Performance Standards	N/A	B	B
4.504	**Pollutant Control** .1 Covering of duct openings and protection of equipment during construction	EIGHT	B	B
	.2 Finish material pollution control	ONE	B	B
	.3 Carpet systems	ONE	B	B
	.4 Resilient flooring systems	ONE	B	B
	.5 Composite wood products	ONE	B	B
4.505	**Indoor Moisture Control** .2 Concrete slab foundations	N/A	B	B
	.3 Moisture content of building materials	CONC.	B	B
4.506	**Indoor Air Quality and Exhaust** .1 Bathroom exhaust fans	EIGHT	B	B
4.507	**Environmental Comfort** .2 Heating and air-conditioning system design	EIGHT	B	B

** For inspection items with E/B, Engineering Division will inspect when a grading permit is issued, otherwise Building Division will inspect

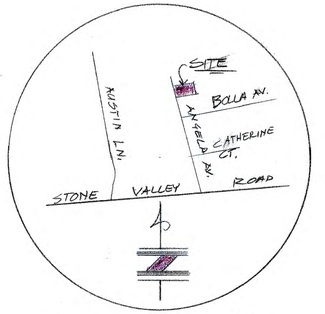
PROJECT DATA	
ZONING	R-20
OCCUPANCY TYPE	R-3
BUILDING TYPE	V-B
NUMBER OF STORIES	ONE
AUTOMATIC FIRE SPRINKLER SYSTEM	NONE
DESCRIPTION	**SQ. FT.**
TOTAL LOT AREA	25,440
EXISTING LIVING AREA	1,657
NEW LIVING AREA	1,455
TOTAL LIVING AREA	3,112
EXISTING GARAGE AREA	400
NEW GARAGE AREA (ADDED)	306
NEW GARAGE AREA (ADJUSTED)	506
BUILDING FOOTPRINT	3,618
LOT COVERAGE	14.2 %

PROJECT INDEX	
DESCRIPTION	**SHEET No.**
SITE/ROOF PLAN, VICINITY MAP, NOTES	ONE
EXISTING FLOOR PLAN, BUILDING SECTIONS	TWO
NEW FLOOR PLAN, BUILDING SECTIONS	THREE
EXTERIOR ELEVATIONS	FOUR
FOUNDATION/FLOOR FRAMING PLAN, DETAILS	FIVE
ROOF FRAMING/SEISMIC PLAN, DETAILS	SIX
STRUCTURAL DETAILS	SEVEN
ELECTRICAL/HVAC/PLUMBING PLAN, NOTES	EIGHT
ENERGY CALCULATIONS	NINE
ENERGY CALCULATIONS	TEN
T-24 MANDATORY MEASURES	ELEVEN

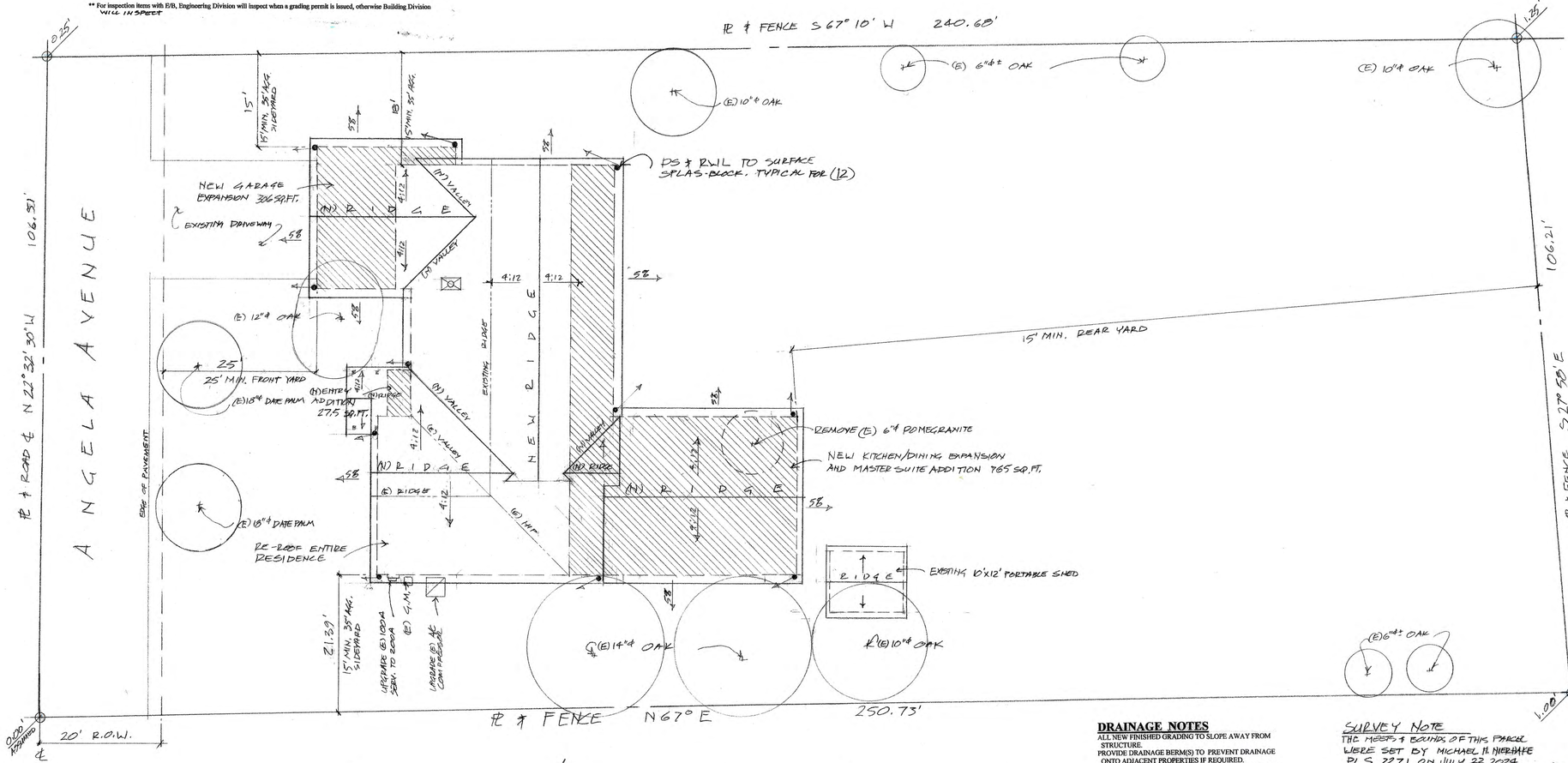
SCOPE OF WORK

ADD 1,455 SQ. FT. OF LIVING AREA.
ADD 306 SQ. FT. OF GARAGE AREA.
RECONFIGURE ROOF FRAMING.
RE-ROOF ENTIRE STRUCTURE.
UPGRADE ELECTRICAL MAIN SERVICE TO 200 A.
UPGRADE HVAC UNITS PER HVAC CONTRACTOR AND TITLE 24 ENERGY DOCUMENTS.
REPLACE EXISTING WATER HEATER WITH TANKLESS UNIT.
ADD ELECTRICAL OUTLETS, SWITCHES AND LIGHTING.
ADD PLUMBING AND FIXTURES PER PLAN.
REPLACE EXISTING MASONRY CHIMNEY WITH WOOD AND MFR'D TRIPLE WALL FLUE PER PLAN.

RECEIVED on 07/14/2025 CDVR25-01036
By Contra Costa County
Department of Conservation and Development



VICINITY MAP
N.T.S.



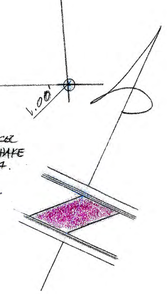
SITE/ROOF PLAN

DRAINAGE NOTES

ALL NEW FINISHED GRADING TO SLOPE AWAY FROM STRUCTURE.
PROVIDE DRAINAGE BERM(S) TO PREVENT DRAINAGE ONTO ADJACENT PROPERTIES IF REQUIRED.
ALL ROOF DRAINS SHALL HAVE DRAIN PIPE OR SPLASH BOXES.
ALL NEW DRAIN PIPES (IF REQUIRED) SHALL TIE INTO EXISTING DRAINAGE SYSTEM.

SURVEY NOTE

THE MEETS & BOUNDS OF THIS PARCEL WERE SET BY MICHAEL H. NIEHAUS PLS. 7271 ON JULY 22, 2024. HOUSE FRONT CORNERS AND DISTANCES WERE ALSO VERIFIED.



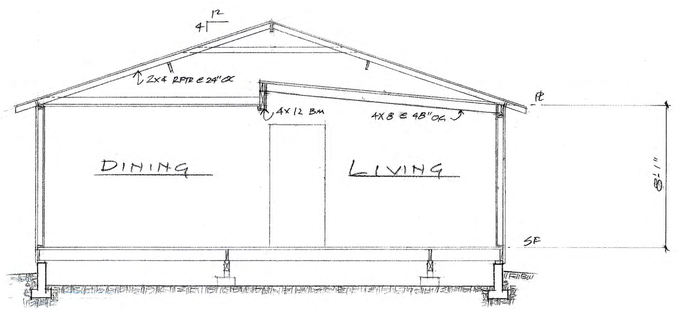
REVISIONS

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CONCORD, CA 94524-0152
925-685-5834
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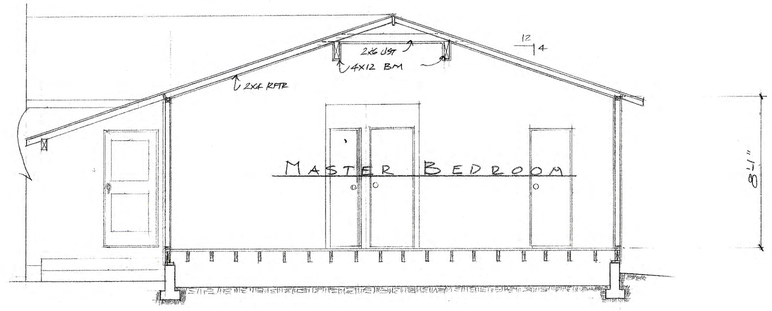
ADDITION/REMODEL FOR
DARREN & TINA DERITA
236 ANGELA AVENUE, ALAMO, CONTRA COSTA COUNTY, CA
APN: 192-090-007

SCALE
1" = 10'
DATE
8-20-'24
JOB No.
R2309

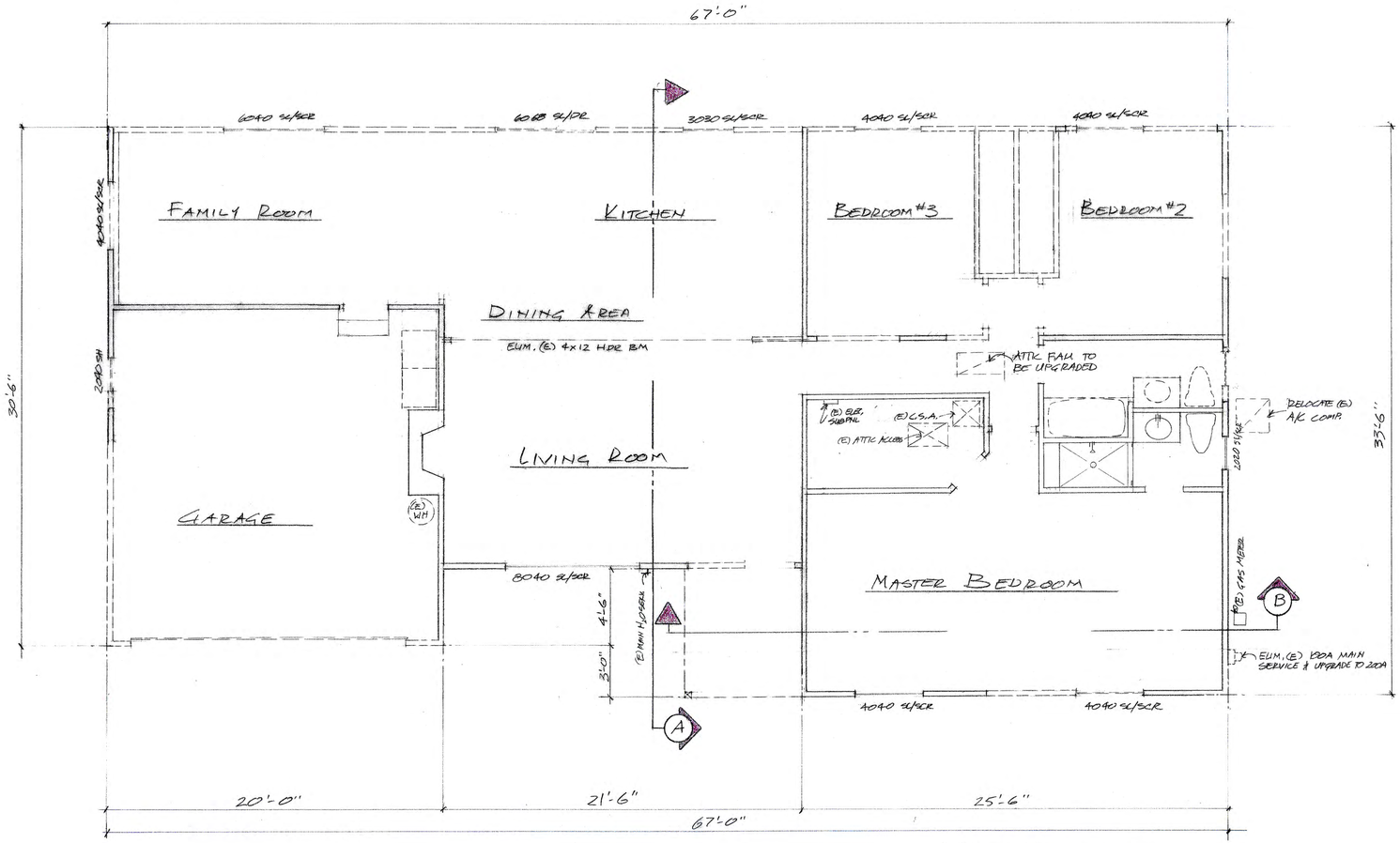
1 of 11



A SECTION



B SECTION



EXISTING/DEMOLITION FLOOR PLAN

WALL LEGEND
INDICATES EXISTING CONSTRUCTION
INDICATES EXISTING REMOVED

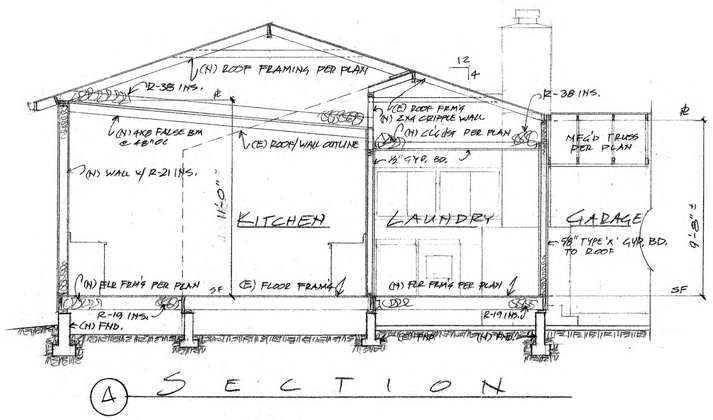
REVISIONS

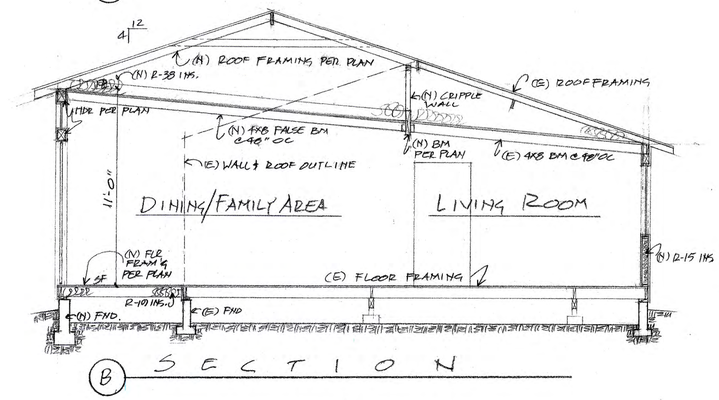
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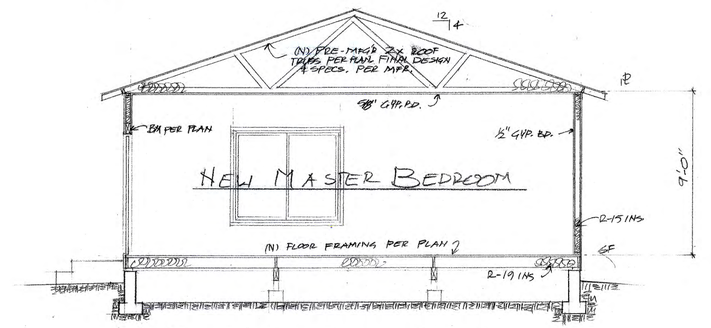
ADDITION/REMODEL PLAN
DARREN & TINA DERITA
236 ANGELA AVENUE, ALAMO, CONTRA COSTA, CA
APN. 192-090-007

SCALE
1/4"=1'-0"
DATE
8-20-24
JOB No.
R2309

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WALL LEGEND

INDICATES EXISTING CONSTRUCTION
INDICATES NEW CONSTRUCTION

DOOR & WINDOW NOTES

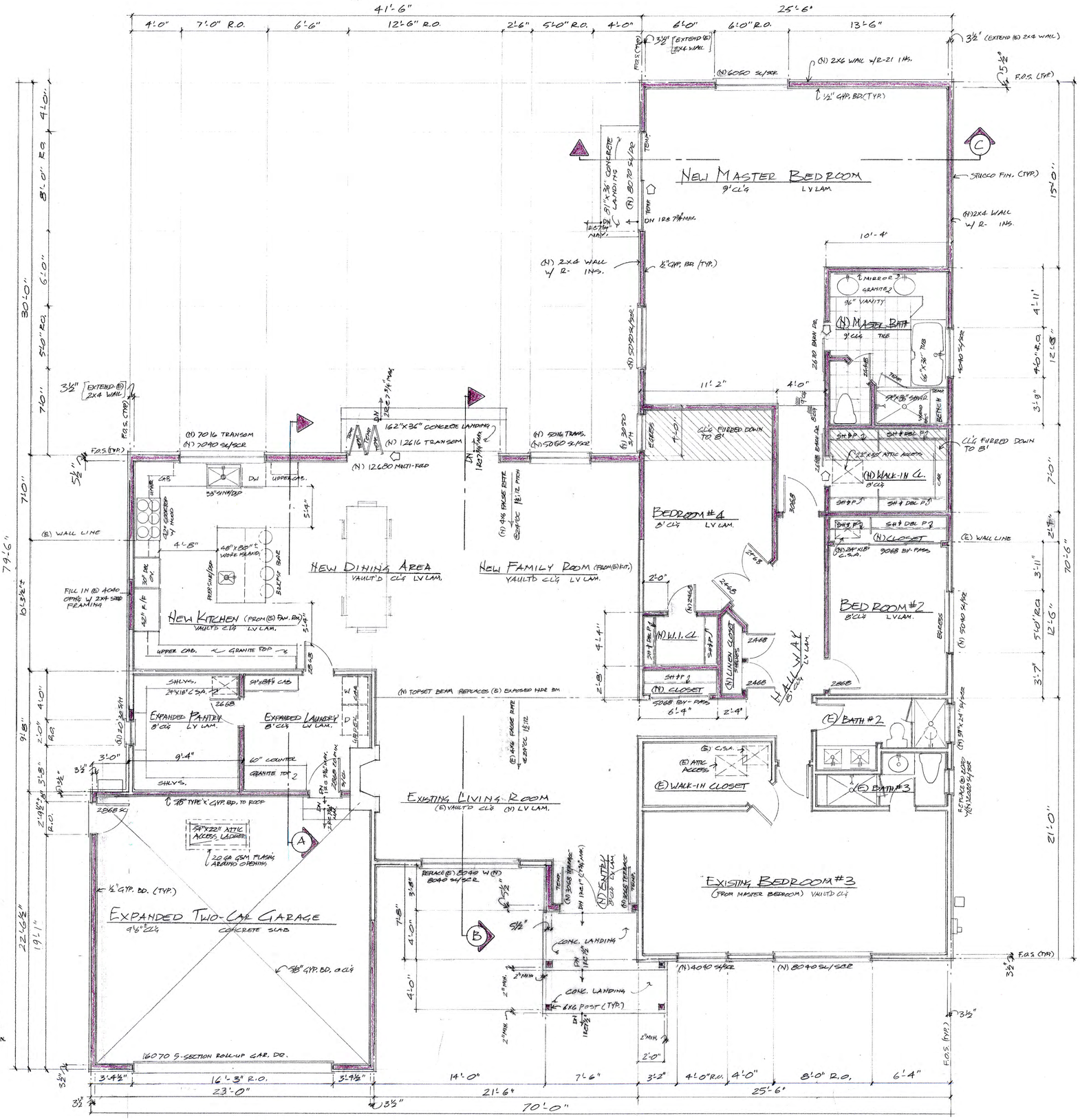
ALL NEW DOORS SHALL BE SOLID-CORE, MIN. 1 3/4" THICK. GLAZING TO BE DOUBLE-PANE, LOW-E U=0.32 OR BETTER, SHGC=0.21 MIN
ALL NEW WINDOWS SHALL BE DOUBLE-GLAZED, LOW-E VINYL FRAMED UNITS. U=0.32 OR BETTER, SHGC=0.21 OR BETTER.

INTERIOR FINISH NOTES

WALLS SHALL BE FINISHED WITH ½" GYP. BOARD, TAPED & TEXTURE PER OWNER.
WINDOW & DOOR CASINGS, BASEBOARDS & MOULDING PER OWNER.
COUNTERTOPS & FLOORING SHALL BE AS PER OWNER.

FLOOR PLAN NOTES

MINIMUM WINDOW AREA SHALL BE 8% OF THE FLOOR AREA OF ANY HABITABLE SPACE WITH 1/2 OPENABLE. SECTION 1204 & 1205 '22 CBC.
BEDROOM WINDOWS SHALL COMPLY TO ALL EGRESS CODES SEC. 1026 '22 CBC, '22 CMC, '22 CPC, '22 CEC.
GLASS DOORS AND WINDOWS WITHIN 18" OF FINISH FLOOR AND WITHIN 24" OF A DOOR JAMB SHALL COMPLY WITH SEC. 2406 '22 CBC.
TUB AND SHOWER ENCLOSURES SHALL COMPLY WITH SEC. 2406 '22 CBC.
HEATING, VENTILATING, AND AIR CONDITIONING SHALL COMPLY TO '22 CMC AND LOCAL ORDINANCES AND REGULATIONS CURRENTLY IN EFFECT.
STAIRS SHALL COMPLY WITH SEC. 1009 '22 CBC.
ALL NEW DOOR AND WINDOW RETURNS SHALL BE 4" UNLESS OTHERWISE NOTED.
SEE STRUCTURAL PLANS FOR SHEARWALL LOCATIONS WHERE APPLICABLE.
VERIFY ALL DIMENSIONS IN FIELD PRIOR TO CONSTRUCTION.



NEW FLOOR PLAN

EXIST'G LIVING = 1,657 ♯ NEW LIVING (TOTAL) = 3,112 ♯

REVISIONS

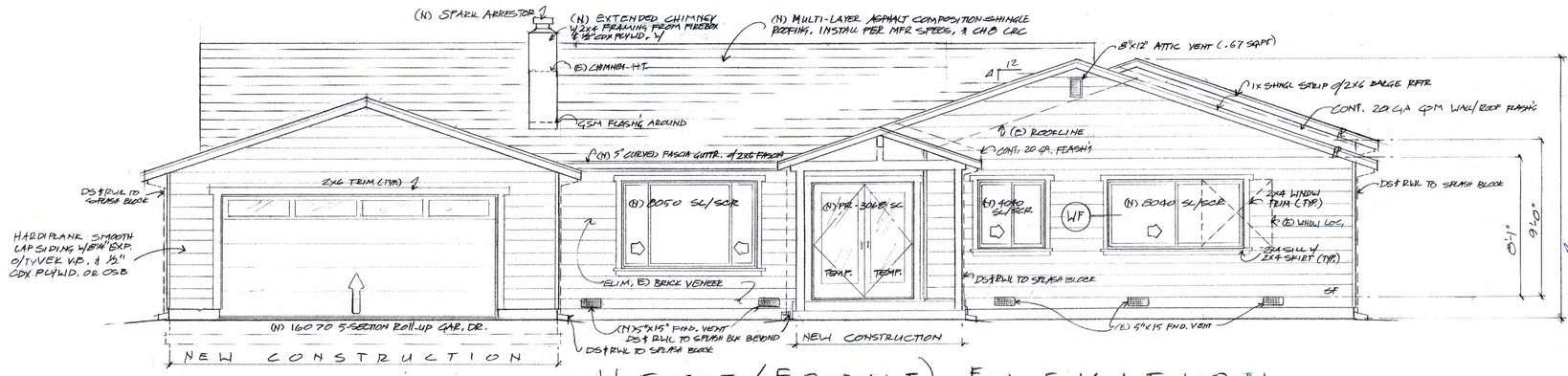
R.E. HURTADO & ASSOC.
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CONCORD, CA 94524-6152
925-685-5834
hurtado.Assoc@gmail.com

ADDITION / REMODEL PLAN

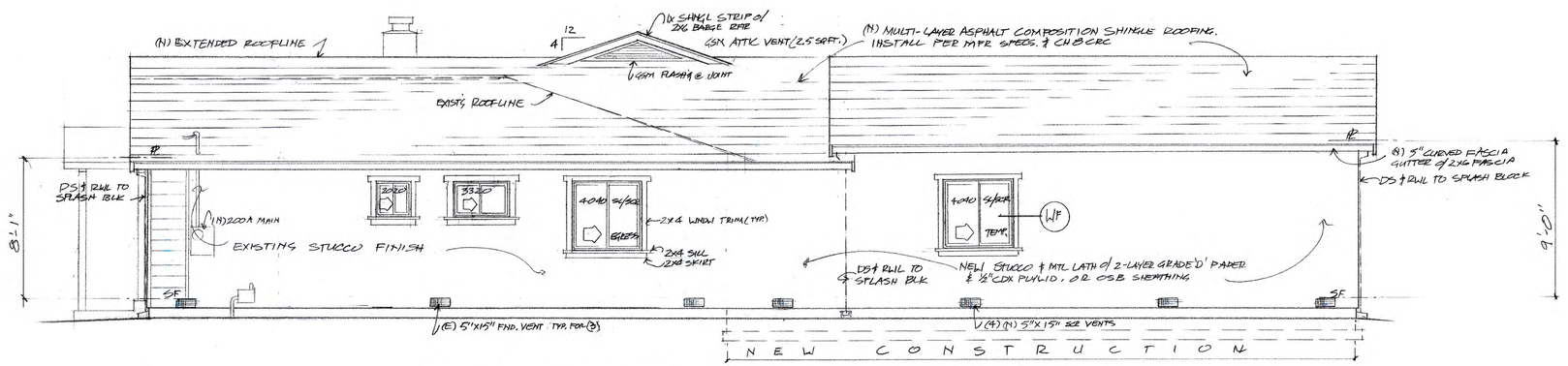
DARREN & TINA DERITA
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APN. 192-090-007

SCALE
¼"=1'-0"
DATE
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JOB No.
R2309

3 of 11

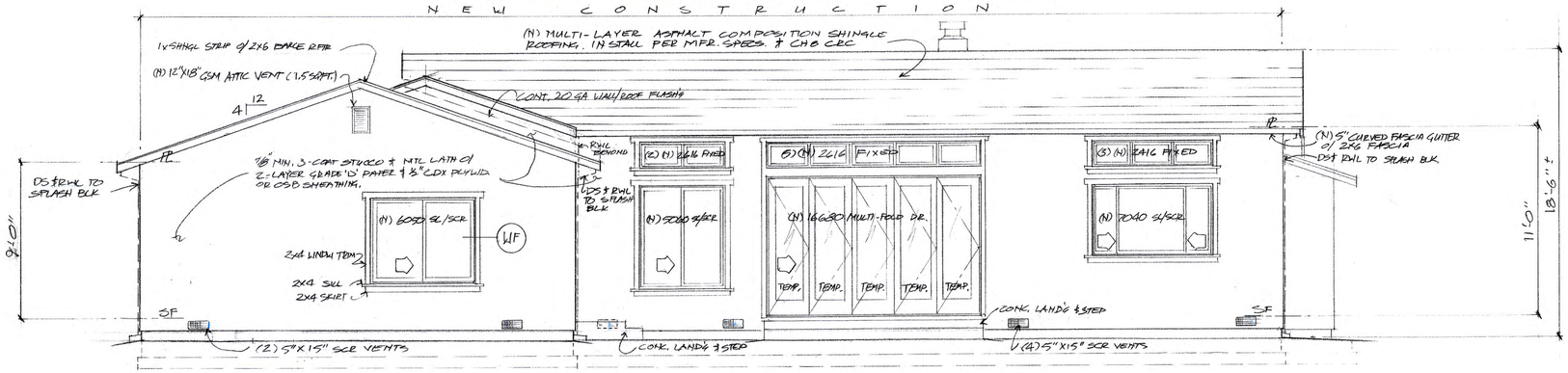


WEST (FRONT) ELEVATION



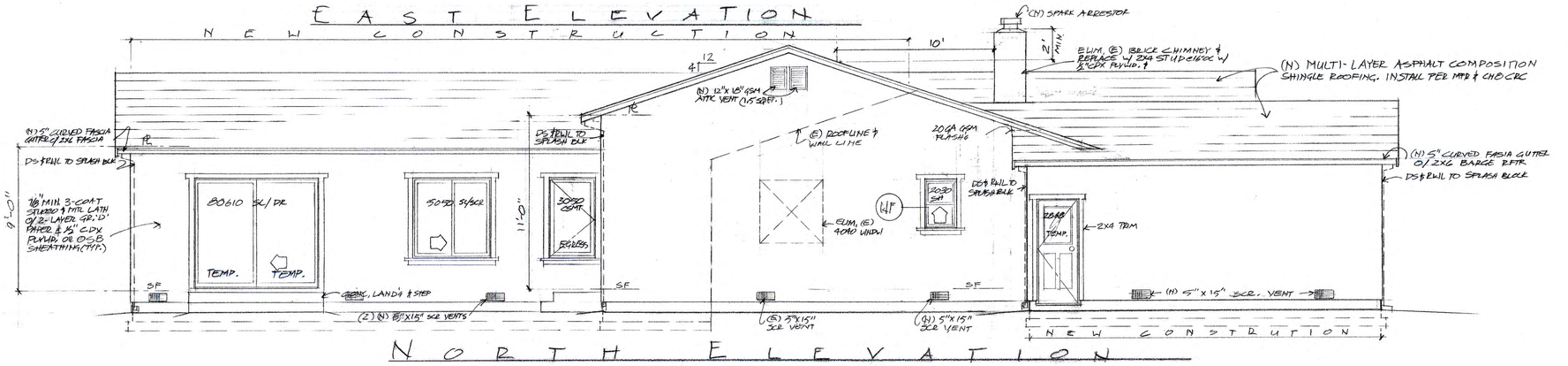
SOUTH ELEVATION

NEW CONSTRUCTION

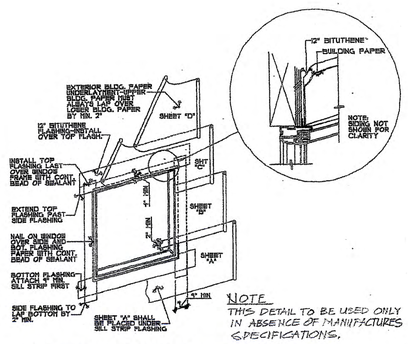


EAST ELEVATION

NEW CONSTRUCTION



NORTH ELEVATION



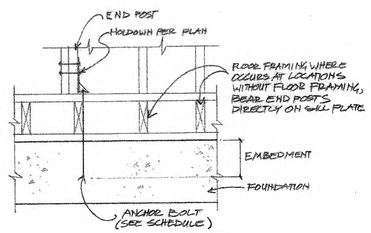
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ADDITION/REMODEL PLAN
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APN. 192-090-007

SCALE
1/4"=1'-0"
DATE
8-20-24
JOB No.
R22309

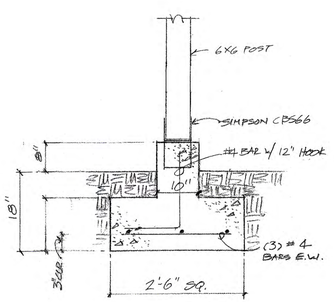
4 of 11



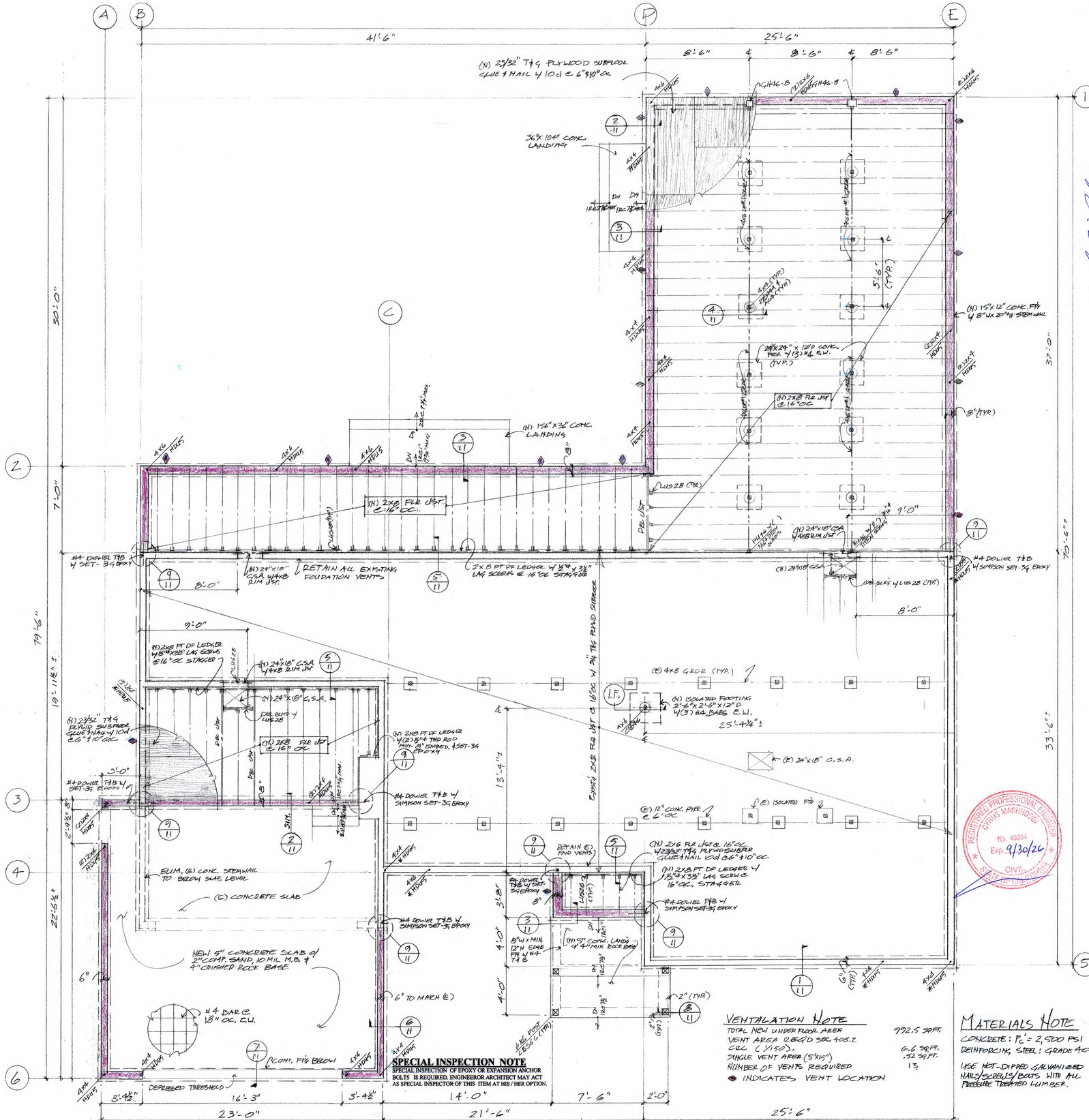
HOLDOWN	STUD BOLT	ANCHOR BOLT	EMBEDMENT
* HDU5	(14) SDS ⅝"x2½"	PAB5	12"

* TO INSTALL INTO (E) FOUNDATION USE ⅝" THREADED RODS, W/ 12" EMBEDMENT & SIMPSON SET-3G EPOXY (SPECIAL INSPECTION)

HD TYPICAL HOLDOWN @ FOUNDATION
N.T.S.



I.F. ISOLATED FT'G @ POST
3/4" = 1'-0"



EXISTING / NEW FOUNDATION & FLOOR FRM'G PLAN

VENTILATION NOTE

TOTAL NEW UNDER FLOOR AREA	992.5 SQ.FT.
VENT AREA REQ'D SEC. 408.2 CRC (1/150).	6.6 SQ.FT.
SINGLE VENT AREA (5"x15")	.52 SQ.FT.
NUMBER OF VENTS REQUIRED	13

◆ INDICATES VENT LOCATION

MATERIALS NOTE

CONCRETE: F'_c = 2,500 PSI
REINFORCING STEEL: GRADE 40

USE HOT-DIPPED GALVANIZED NAILS/SCREWS/BOLTS WITH ALL PRESSURE TREATED LUMBER.

REGISTERED PROFESSIONAL ENGINEER CYRUS MASHHOODI No. 49394 Exp. 9/30/26 CIVIL STATE OF CALIFORNIA

REVISIONS

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ADDITION / REMODEL PLAN
DAREEN & TINA DERITA
236 ANGELA AVENUE, ALAMO, CONTRA COSTA COUNTY, CA
APN. 192-080-007

SCALE
1/4"=1'-0" U.O.N.
DATE
8-20-'24
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R2309

Sq 11

SHEAR WALL SCHEDULE		RIM/BLK'G CONNECTION	PL NAILING	ANCHOR BOLT SPACING	SILL PLATE
△1	15/32" APA OR TECO PERFORMANCE - RATED PLYWOOD STRUC. I PANEL W/8d NAILS @ 6" O.C. AT ALL PLYWOOD EDGES AND 12" O. C. ON FIELD (6,6,12) ..... 280 plf	A35 @ 24" O.C.	16d @ 6" O.C.	32"	2x
* △2	15/32" APA OR TECO PERFORMANCE - RATED PLYWOOD STRUC. I PANEL W / 8d NAILS @ 4" O.C. AT ALL PLYWOOD EDGES AND 12" O. C. ON FIELD (4,4,12) ..... 430 plf	A35 @ 16" O.C.	16d @ 4" O.C.	24"	3x
* △3	15/32" APA OR TECO PERFORMANCE - RATED PLYWOOD STRUC. I PANEL W / 8d NAILS @ 2" O.C. AT ALL PLYWOOD EDGES AND 12" O. C. ON FIELD (2,2,12) ..... 730 plf	A35 @ 6" O.C.	SDS 1/4" x 5 - 1/2" @ 5" O.C.	16"	3x

* FRAMING SHALL BE 3" NOMINAL AND NAIL SHALL BE STAGGERED. USE 3xSTUD AT VERTICAL PANEL SPLICES AND (1) 3x BLOCK ON EDGES AT HORIZONTAL PANEL SPLICES.

FOR DOUBLE SIDED SHEAR WALLS, USE HALF THE SPACING FOR A35'S & ANCHOR BOLTS.

1) SEE ARCH. ROOF PLAN FOR REQUIRE ROOF PITCH
2) SEE ARCH. SECTION AND/OR FLOOR PLAN FOR THE REQUIRE CEILING PITCH
3) THE CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL AND PRIOR TO CONSTRUCTION OR DEMOLITION
4) REFER TO ARCH. PLAN FOR ALL DIMENSIONS
5) VERIFY ALL DIMENSIONS PRIOR TO STARTING WORK. CONFLICTS, DISCREPANCIES OR QUESTIONS SHALL BE BROUGHT TO THE ATTENTION OF SUPERINTENDENT, ARCHITECT, OR THE ENGINEER.
6) CONTRACTOR SHALL VERIFY THAT INTERIOR WALLS TO BE REMOVED ARE IN FACT NON-BEARING WALLS CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY WALL IS FOUND TO BE A BEARING WALL.

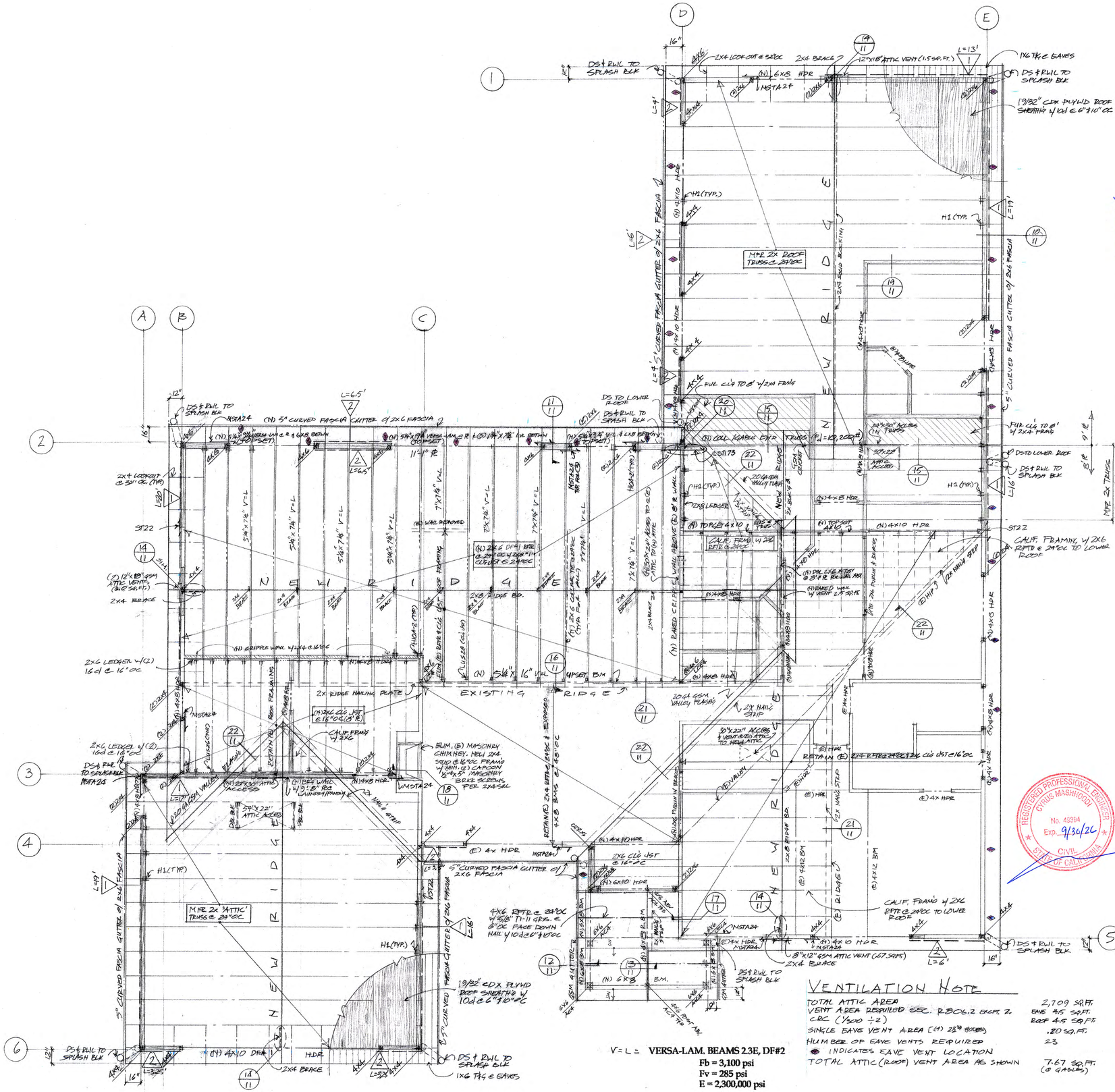
——— INDICATES NEW PLYWOOD SHEAR WALL WITH NEW END POSTS AND HOLD-DOWN.
X SEE SCHEDULE ON SHEET S-1. PROVIDE ST22 @ TOP PLATES SPLICE FOR THE ENTIRE WALL LENGTH U.N.O.
LENGTH

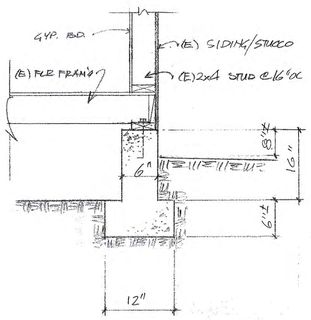
V = L - VERSA-LAM. LVL 2.3E BY BOISE CASCADE OR EQUIVALENT
Fb = 3,100 psi
Fv = 285 psi
E = 2,300,000 psi

ROOF FRAMING: Manufactured Trusses, U.N.O.
Design & Calcs. By others

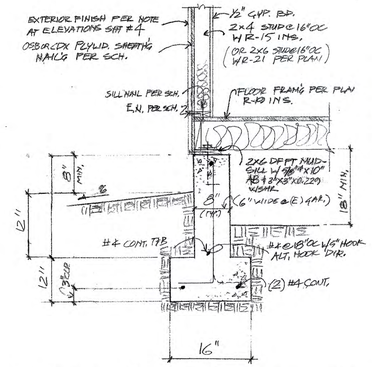
DL = 12 psf
LL = 20 psf

Note: Fabricated trusses must be submitted to the building department for review at least two weeks prior to frame inspection. Two copies containing the following material bearing wet stamp and signature of the truss engineer and approval of the project engineer, (in the form of "shop drawing approval" or separate letter). (1) Truss layout drawings: and (2) truss calculations and details showing axial and bending stresses and joint designs, clearly indicating that design conform to the 2022 CBC.

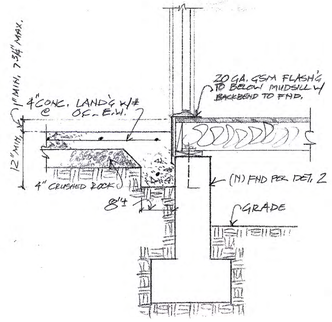

A
B
C
D
E
1
2
3
4
5
6
NEW/EXISTING ROOF FRAMING PLAN
(N) 5"x16" LVL
EXISTING RIDGE
(E) RIDGE BM
(N) 6x8 HDR
(N) 4x10 HDR
(N) 4x8 HDR
(N) 6x8
(N) 4x10 DFIR
(N) 2x6 DFIR HDR @ 24" OC W/ 2-16d NAILS @ 24" OC
(N) 2x6 CLG JST @ 16" OC
(N) 2x6 RAFTER @ 24" OC W/ 5/8" T1-11 GBRS. @ 6" OC FACE DOWN NAIL W/ 10d @ 6" & 10" OC
(N) 5" CURVED FASCIA GUTTER W/ 2x6 FASCIA
5" CURVED FASCIA GUTTER W/ 2x6 FASCIA
2x6 LOOKOUT @ 32" OC (TYP)
2x4 BRACE
2x6 LEDGER W/ (2) 16d @ 16" OC
2x RIDGE NAILING PLATE
(N) GRIPPLE WAL W/ 2x4 @ 16" OC
(N) 2x6 CLG JST @ 16" OC (TYP)
(E) WALL REMOVED
(E) 2x6 RAFTER @ 24" OC
(E) 2x6 CEILING JOIST @ 24" OC
(E) 2x6 COLLAR TIE @ 48" OC (TYP)
(E) 2x6 RIDGE BD.
(E) 2x8 RIDGE BD.
(E) 4x HDR
(E) 4x10 HDR
(E) 4x12 BM
(E) 4x12 HDR
(E) 2x6 RAFTER @ 24" OC
(E) 2x6 CLG JST @ 16" OC
(E) 2x8 RIDGE BD.
(E) 2x8 RAFTER @ 24" OC
(E) 2x6 RAFTER @ 24" OC
(E) 2x6 CLG JST @ 16" OC
(E) 2x8 RIDGE BD.
(E) 2x8



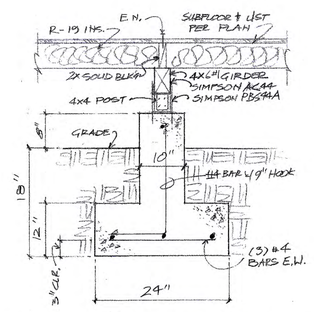
1 EXISTING FOUNDATION
FOR REFERENCE ONLY
3/4"=1'-0"



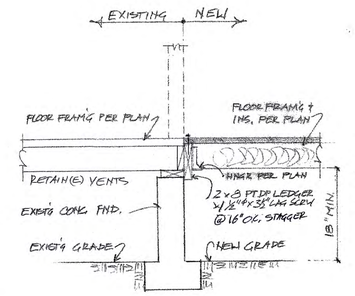
2 TYPICAL PERIMETER FOUNDATION
3/4"=1'-0"



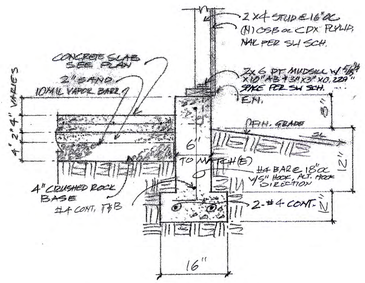
3 /HOUSE CONNECTION
3/4"=1'-0"



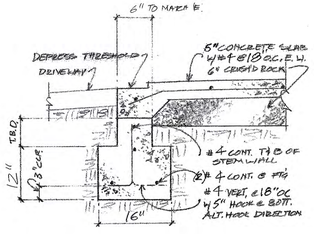
4 CONCRETE PIER & GIRDER
3/4"=1'-0"



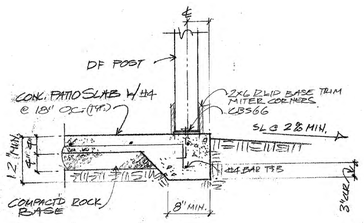
5 EXIST'G/NEW JOIST CONNECTION
3/4"=1'-0"



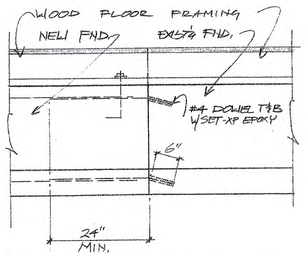
6 GARAGE PERIMETER
3/4"=1'-0"



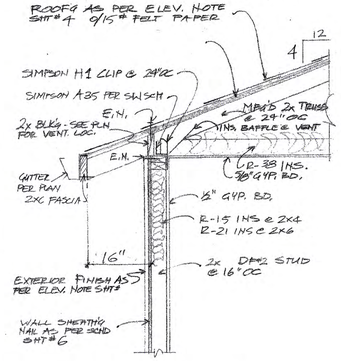
7 GARAGE THRESHOLD
3/4"=1'-0"



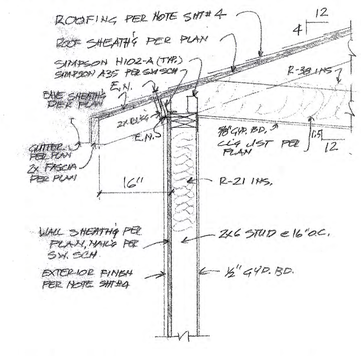
8 SLAB EDGE & PATIO
3/4"=1'-0"



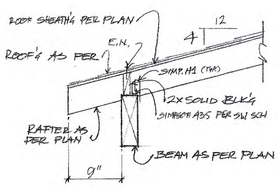
9 TYPICAL NEW/EXIST'G FND. CONN.
3/4"=1'-0"



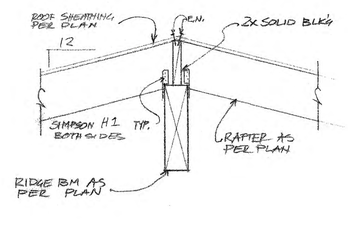
10 TYPICAL CORNICE
3/4"=1'-0"



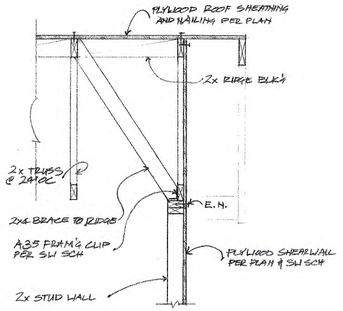
11 CORNICE @ ROOM
3/4"=1'-0"



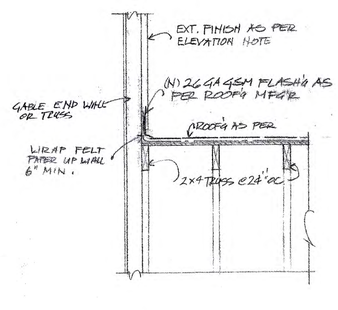
12 BEAM/RAFTER DETAIL
3/4"=1'-0"



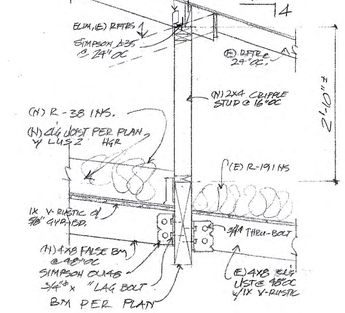
13 RIDGE BEAM DETAIL
3/4"=1'-0"



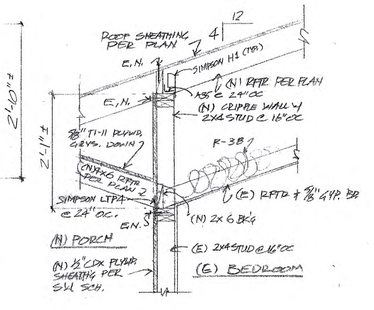
14 RAKED WALL (GABLE) END
3/4"=1'-0"



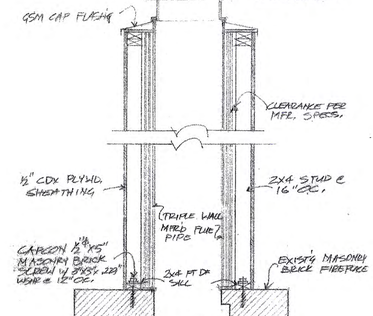
15 WALL/ROOF CONN.
3/4"=1'-0"



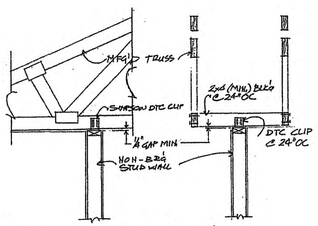
16 SUPPORT @ (N) BEAM
3/4"=1'-0"



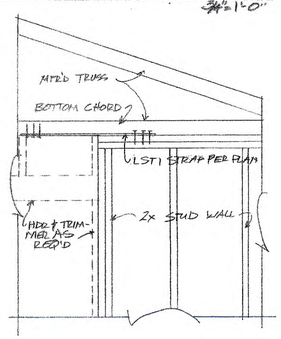
17 PORCH/HOUSE CONN.
3/4"=1'-0"



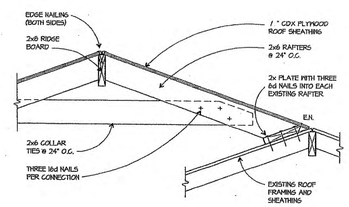
18 WOOD CHIMNEY/BRICK FP. CONN.
3/4"=1'-0"



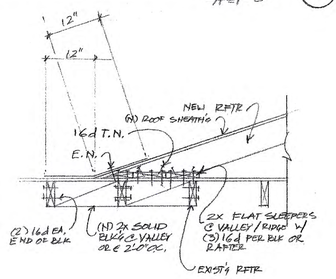
19 TYPICAL NON-BEAR'G WALL/TRUSS CONNECTION DETAIL (SCISSOR TRUSS SIMILAR)
3/4"=1'-0"



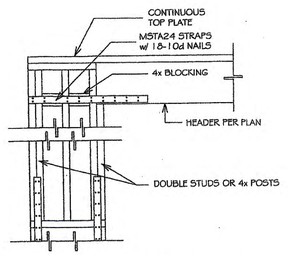
20 LSTI STRAP TO TRUSS
3/4"=1'-0"



21 RIDGE NAILING PLATE
3/4"=1'-0"



22 VALLEY FRAMING
3/4"=1'-0"



23 TYPICAL MSTA24 INSTALLATION

REVISIONS

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RESIDENTIAL / LIGHT COMMERCIAL
P.O. BOX 6152
CONCORD, CA 94524-0152
925-685-5604
HurtadoAssoc@gmail.com

ADDITION/REMODEL PLAN
DARREN & TINA DELITA
236 ANGELA AVENUE, ALAMO, CONTRA COSTA COUNTY, CA
APN. 192-090-007

REGISTERED PROFESSIONAL ENGINEER CYRUS MASHHOOD No. 49394 Exp. 9/30/24 CIVIL STATE OF CALIFORNIA

SCALE AS NOTED
DATE 8-20-24
JOB NO. R2309

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ELECTRICAL LEGEND

$ SINGLE POLE SWITCH	CABLE TV/COMPUTER JACK
$D DIMMER SWITCH	HVAC FLOOR REGISTER
$3 3-WAY SWITCH	HVAC CEILING REGISTER
$4 4-WAY SWITCH	TOE-KICK/WALL REGISTER
DUPLEX CONVENIENCE OUTLET	
GFI GROUND FAULT CIRCUIT INTERRUPTER	
DBL. PLEX CONV. OUTLET	
SURFACE MOUNT LED LIGHT FIXTURE	
WALL MOUNT LED LIGHT FIXTURE	
6" LED RECESSED CEILING FIXTURE	
" FLUORESCENT RECESSED FIXTURE	
4" LOW VOLTAGE RECESSED FIXTURE	
" DIRECTIONAL CEILING FIXTURE	
EXHAUST FAN W/LED LIGHT 130 CFM CAPACITY	
EXHAUST FAN ONLY	
TELEPHONE JACK	

CEILING CIRCULATION FAN & LIGHT

NOTE: REFER TO MANUFACTURER'S SPECIFICATIONS FOR ELECTRICAL REQUIREMENTS ON ALL APPLIANCES AND LIGHT FIXTURES.

ELECTRICAL NOTES

SPACE OUTLETS AS PER 210-52 NEC.
PROVIDE METAL BOX @ ALL 230V OUTLETS.
PROVIDE SSU AND HARD WIRE FURNACE.
SMOKE DETECTORS SHALL BE 110V DIRECT WIRE, WITH BATTERY BACKUP IN NEW CONSTRUTION. BATTERY POWER ONLY IN RE-MODELS AND ADDITIONS.
SMOKE DETECTORS REQUIRED AND LOCATED AS PER SEC. 314 '22 CBC.
PROVIDE GFCI OUTLET @ PATIO AREA AND ALL BATHS AND KITCHENS.
PROVIDE 24" HORIZONTAL CLEARANCE BE-TWEEN CEILING MOUNTED LIGHT AND ANY SHELF IN CLOSETS PER 410-8(a) NEC.
PROVIDE BRANCH CIRCUITS AS PER 220-3 NEC.
ALL ELECTRICAL EQUIPMENT SHALL BE LISTED BY A RECOGNIZED TEST LAB.
ALL WIRING REQUIRES INSPECTION, INCLUDING LANDSCAPE WIRING.
AT LEAST ONE RECEPTICLE OUTLET SHALL BE INSTALLED AT EACH AT EACH COUNTER OTHER THAN KITCHEN.
ALL RECEPTACLES SHALL BE TAMPER RESISTANT PER 2022 CEC 406.11.
RECESSED LIGHT FIXTURES IN INSULATED CEIL-INGS SHALL HAVE IC RATED CANS (ZERO CLEARANCE RATED PER TITLE 24).

PLUMBING NOTES

1. TUB/SHOWER MIXING VAVLE SHALL BE A PRESSURE BALANCE OR THERMOSTATIC TYPE (MAX. SETTING 120 DEGREES F.).
2. SHOWER AND TUB/SHOWER WALLS SHALL A MOISTURE RESISTANT UNDERLAYMENT (e.g. WATER RESISTANT GYPSUM OR MORTAR BOARD) TO A HEIGHT OF 70" ABOVE THE DRAIN INLET.
3. SHOWER AND TUB/SHOWER WALLS SHALL HAVE A SMOOTH, IMPERVIOUS SUFACE TO AT LEAST 70" ABOVE THE DRAIN INLET. MULTIPLE SHOWER HEADS SERVING A SINGLE SHOWER AND CONTROLLED BY A SINGLE VALVE SHALL HAVE A COMBINED FLOW RATE NOT TO EXCEED ... gpm AT 80 PSI, OR THE SHOWER SHALL BE DESIGNED TO ALLOW ONLY ONE SHOWER OUTLET TO BE IN OPER-ATION AT A TIME.
4. SHOWER HEADS SHALL HAVE A MAXIMUM OF ... gpm FLOW RATE.
6. PIPING MATERIALS AND SIZES: WATER METER TO HOUSE SHALL BE 1 1/2" COPPER L. INTERIOR WATER PIPES COPPER M AND SIZED PER CPC TABLE 6-5.
7. APPROVED AIR GAP FITTING SHALL BE PRO-VIDED AT DISHWASHER TO WASTE CONNECTION.
8. AIR PRESSURE ABSORBING DEVICES SHALL BE PROVIDED DISHWASHING AND CLOTHES WASH-ING MACHINES.

GENERAL LIGHTING NOTE

a. All installed luminaires shall meet the requirements of CEC Table 150.0-A
b. Bathroom shall have at least one luminaire controlled by a vacancy or occupancy sensor providing automatic-off functionality [CEC 150.0(k)2i]. If an occupant sensor is installed, it shall be initially configured to manual-on operation
c. Exterior luminaires are to have a manual on/off switch and be controlled by a photocell and motion sensor or a photocell and time switch [CEC 150.0(k)3A].
d. All other luminaires that contain light sources that meet Reference Joint Appendix JA8 requirements are to be controlled by a vacancy/occupancy sensor or dimmer [CEC 150.0(k)2j]. Note that closets with an area less than 70 ft2 and hallway lighting are exempt from this requirement

ARC-FAULT NOTE

ALL 120-VOLT, SINGLE PHASE, 15- AND 20-AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT FAMILY, DINING AND LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALL-WAYS OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERUPTER, COMBINATION TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT.

EXHAUST FAN NOTE

BATH AND/OR LAUNDRY ROOM
EXHAUST FAN TO BE HUMIDISTAT CONTROL CRC 303.3.1.
FANS SHALL BE ENERGY STAR COMPLIANT.

WATER PIPINGNOTE

HOT WATER PIPE INSULATION SHALL HAVE A MIN-IMUM WALL THICKNESS OF NOT LESS THAN THE DIAMETER OF THE PIPE FOR A PIPE UP TO 2" IN DIAMETER. CPC 609.11
ALL HOT WATER PIPING WITH A NOMINAL DIAMETER EQUAL TO OR GREATER THAN 3/4" AND LESS THAN 1" SHALL HAVE A MINIMUM INSULATION THICKNESS OF 1" OR A MINIMUM INSULATION VALUE OF 7.7

HOSE BIBB NOTE

ALL NEW HOSE BIBBS SHALL HAVE A LISTED NON-REMOVABLE BACKFLOW PREVENTER OR ATMOSPHERIC VACU-UM BREAKER.

GAS SHUTOFF VALVE NOTE

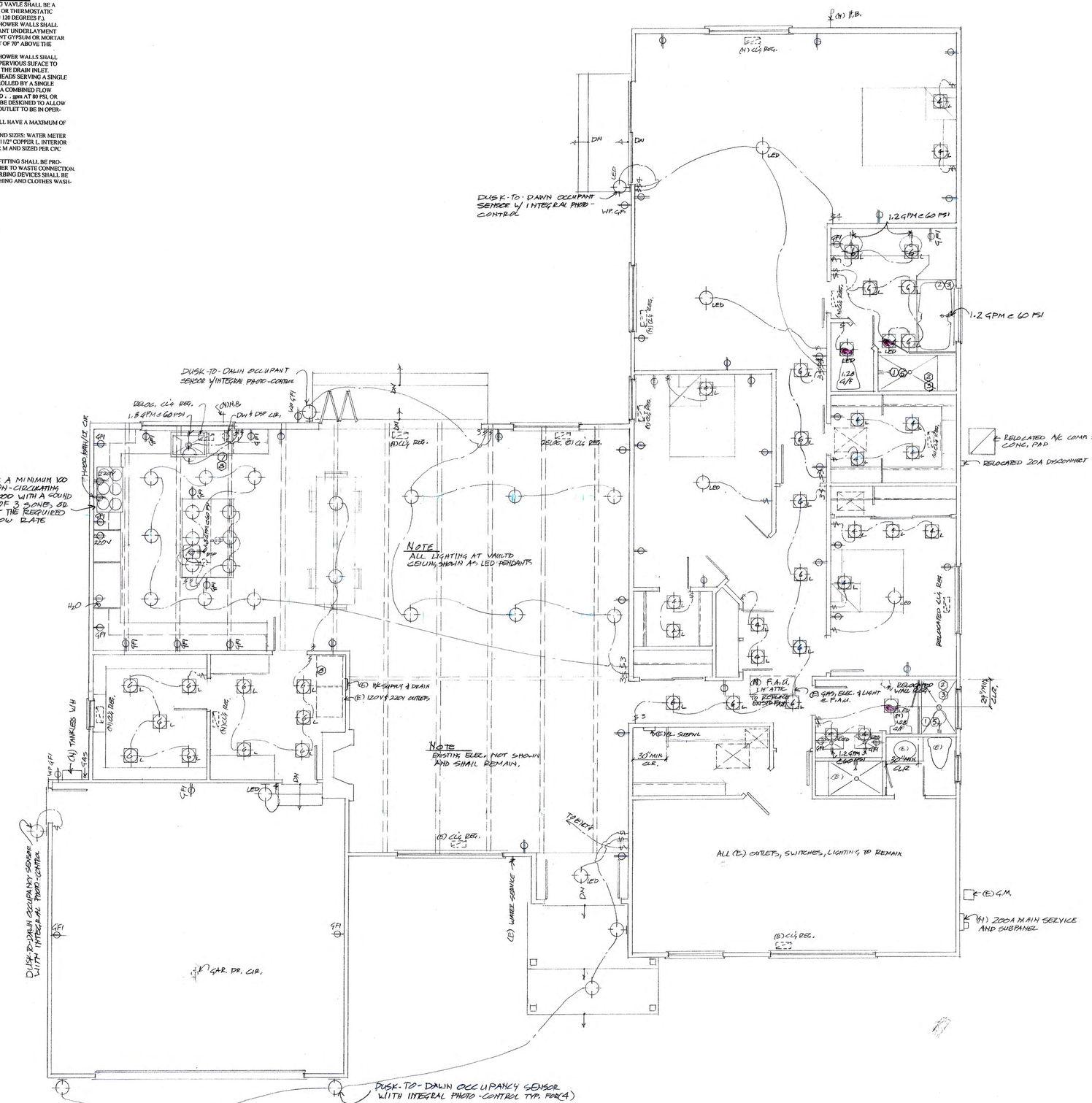
AN ACCESSIBLE SHUTOFF VALVE OF A TYPE SET FORTH IN SECTION 1312.13 CMC SHALL BE INSTALLED IN THE FUEL-SUPPLY PIPING OUTSIDE OF EACH APPLIANCE AND AHEAD OF THE UNION CONNECTION THERETO, AND IN ADDITION TO ANY VALVE ON THE APPLIANCE. SHUTOFF VALVES SHALL BE WITHIN 3 FEET OF THE APPLIANCE THEY SERVE, AND IN THE SAME ROOM OR SPACE WHERE THE APPLIANCE IS LOCATED.
SHUTOFF VALVES MAY BE LOCATED IMMEDIATELY AD-JACENT TO AND INSIDE OR UNDER AN APPLIANCE WHEN PLACED IN AN ACCESSIBLE AND PROTECTED LOCATION AND WHEN SUCH APPLIANCE MAY BE REMOVED WITHOUT REMOVAL OF VALVE.

MISCELLANEOUS NOTES

ELECTRICAL: TWO 20-AMP SMALL-APPLIANCE BRANCH CIRCUITS ARE REQUIRED FOR THE KITCHEN, PANTRY, BREAKFAST AND DINING ROOMS, AND SIMILAR AREAS, AND ARE LIMITED TO SUPPLY-ING WALL AND COUNTER SPACE OUTLETS. THESE CIRCUITS CAN-NOT SERVE OUTSIDE PLUGS, RANGE HOOD, DISPOSALS, DISHWASHERS OR MICROWAVES, BUT CAN SERVE THE REFRIGERATOR. NEC 210.11(c)(1) and 210.52(b).
A SEPARATE 20-AMP CIRCUIT IS REQUIRED FOR THE LAUNDRY. NEC SEC. 220.4
CONDUCTOR WIRES WITH AN INSULATED NEUTRAL AND A FOUR-PRONG OUTLET ARE REQUIRED FOR DRYERS AND COOKING UNITS. NEC SEC: 250.138 and 250.140.
HVAC: ALL NEW DUCTWORK SHALL USE PESSURE-SENSITIVE TAPES. MASTICS, AEROSOL SEALANTS OR OTHER CLOSURE SYSTEMS MEET-ING APPLICABLE UL 181A & B REQUIREMENTS. DRAWBANDS USED WITH FLEXIBLE DUCTS SHALL BE EITHER STAINLESS STEEL, WORM-DRIVEN HOSE CLAMPS OR UV-RESISTANT NYLON DUCT TIES. IN AD-DITION, DRAWBANDS MUST HAVE A MINIMUM TENSILE STRENGTH RATING OF 150 POUNDS AND BE TIGHTENED AS RECOMMENDED BY MANUFACTURER.
IF APPLICABLE, THE NEW FURNACE SYSTEM(S) SHALL BE REGISTERED WITH A **HERS** PROVIDER PRYOR TO ISSUANCE OF BUILDING PERMIT.
MECHANICAL EQUIPTMENT: INSTALLATION INSTRUCTIONS FOR ALL LISTED EQUIPTMENT SHALL BE PROVIDED TO THE FEILD INSPECTOR AT THE TIME OF INSPECTION.
TERMINATION OF ALL ENVIRONMENTAL AIR DUCTS SHALL BE A MIN-IMUM OF 3 FEET FROM PROPERTY LINES OR ANY OPENINGS INTO THE BUILDING.

CALGREEN NOTES

ANNULAR SPACES AROUNND PIPES, ELECTRICAL CABLES, CONDUITS OR OTHER OPENINGS IN SOLE/BOTTOM PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOS-SUCH OPENINGS CEMENT MORTAR, CONCRETE MASONRY,OR SIMILAR METHOD APPROVED ENFORCING AGENCY.
AT THE TIME OF FINAL INSPECTIONS, THE CONTRACTOR SHALL PRO-VIDE A BUILDING MAINTENENCE AND OPERATION MANUAL, CD, WEB-BASED REFERENCE, OR OTHER MEDIA ACCEPTABLE TO THE ENFORCING AGENCY WHICH INCLUDES THE INFORMATION OUTLINED IN SEC.4.410.1 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE.
ANY INSTALLED GAS FIREPLACE SHALL BE A DIRECT-VENT SEALED-COMBUSTION UNIT.
HEATING AND AIR CONDITIONING SYSTEMS SHALL BE SIZED, DESIGNED AND HAVE THEIR EQUIPMENT SELECTED USING THE METHODS DE-SCRIBED IN SEC.4.507 OF THE 2022 CALIFORNIA GREEN BUILDING STAND-ARDS CODE.



ELECTRICAL/HVAC/PLUMBING PLAN

REVISIONS

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925-685-6534
hurtado.assoc@gmail.com

ADDITION/REMODEL
DARREN & TINA DEBITA
236 ANGELA AVENUE, ALAMO, CONTRA COSTA COUNTY, CA
APN. 192-090-007

SCALE
1/4"=1'-0"
DATE
8-20-24
JOB No.
R2309

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GENERAL INFORMATION

01	Project Name	Derita Residence			
02	Run Title	California Title-24 Energy Code Compliance			
03	Project Location	236 Angela Ave			
04	City	Alamo	05	Standards Version	2022
06	Zip code	94507	07	Software Version	CBECC-Res 2022.3.0
08	Climate Zone	12	09	Front Orientation (deg/ Cardinal)	248
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	Addition and/or Alteration	13	Number of Bedrooms	4
14	Addition Cond. Floor Area (ft^2)	1455	15	Number of Stories	1
16	Existing Cond. Floor Area (ft^2)	1657	17	Fenestration Average U-factor	0.36
18	Total Cond. Floor Area (ft^2)	3112	19	Glazing Percentage (%)	15.81%
20	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area	n/a
22	Fuel Type	Natural gas	23	No Dwelling Unit:	No

COMPLIANCE RESULTS

01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.
03	This building incorporates one or more Special Features shown below

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ENERGY USE SUMMARY

Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft^2 -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft^2 -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	0	77.64	0	75.15	0	2.49
Space Cooling	0	65.33	0	67.29	0	-1.96
IAQ Ventilation	0	3.39	0	3.39	0	0
Water Heating	0	14.89	0	15.23	0	-0.34
Self Utilization/Flexibility Credit						
Efficiency Compliance Total	**0**	**161.25**	**0**	**161.06**	**0**	**0.19**
Photovoltaics		0		0		
Battery				0		
Flexibility						
Indoor Lighting	0	6.86	0	6.86		
Appl. & Cooking	0	17.89	0	17.92		
Plug Loads	0	21.37	0	21.37		
Outdoor Lighting	0	1.68	0	1.68		
TOTAL COMPLIANCE	**0**	**209.05**	**0**	**208.89**		

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ENERGY USE INTENSITY

	Standard Design (kBtu/ft^2 - yr)	Proposed Design (kBtu/ft^2 - yr)	Compliance Margin (kBtu/ft^2 - yr)	Margin Percentage
Gross EUI[1]	34.87	34.42	0.45	1.29
Net EUI[2]	34.87	34.42	0.45	1.29

Notes
1. Gross EUI is Energy Use Total (not including PV) / Total Building Area.
2. Net EUI is Energy Use Total (including PV) / Total Building Area.

REQUIRED SPECIAL FEATURES

The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.

- Window overhangs and/or fins
- Non-standard duct location (any location other than attic)
- Recirculating with demand control, occupancy/motion sensor

HERS FEATURE SUMMARY

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry

- Quality insulation installation (QII)
- Indoor air quality ventilation
- Kitchen range hood
- Verified Refrigerant Charge
- Duct leakage testing

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft^2)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Derita Residence	3112	1	4	2	0	1

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ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft^2)	Avg. Ceiling Height	Water Heating System 1	Status
Existing	Conditioned	Replace HVAC System	1657	8	Replace DHW System	Existing Unchanged
Addition	Conditioned	Replace HVAC System	1455	9	Replace DHW System	New

OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
EeFront s2x4	Existing	Stud s2x4 16oc R-0	248	Front	316	80	90	none	Existing	No
EeLeft s2x4	Existing	Stud s2x4 16oc R-0	338	Left	32	6	90	none	Existing	No
EaLeft s2x4	Existing	Stud s2x4 16oc R-15	338	Left	82	0	90	none	Altered	No
EeRight s2x4	Existing	Stud s2x4 16oc R-0	158	Right	268	30.5	90	none	Existing	No
NnFront s2x6	Addition	Stud s2x6 16oc R-21	248	Front	68	40.02	90	none	New	n/a
NnBack s2x6	Addition	Stud s2x6 16oc R-21	68	Back	686	224.735	90	none	New	n/a
NnLeft s2x6	Addition	Stud s2x6 16oc R-21	338	Left	33	0	90	none	New	n/a
NxLeft s2x4	Addition	Stud s2x4 16oc R-15	338	Left	423	94.64	90	Extension	New	n/a
NxRight s2x4	Addition	Stud s2x4 16oc R-15	158	Right	333	16	90	Extension	New	n/a
NnDemising 2x4	Addition>>Garage	Demising Stud 2x4 16oc R-15	n/a	n/a	230	17.8	n/a		New	n/a
EeCeiling	Existing	Ceiling Joist 2x6 16oc R-0	n/a	n/a	1657	n/a	n/a		Existing	No
NnCeiling	Addition	Ceiling Joist 2x6 16oc R-38	n/a	n/a	511	n/a	n/a		New	n/a
NnCeiling at Truss	Addition	Ceiling Truss Joist R-38	n/a	n/a	944	n/a	n/a		New	n/a
GeCeiling	Garage	Ceiling Joist 2x6 16oc R-0	n/a	n/a	506	n/a	n/a		Altered	No

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OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
EeFloor	Existing	Floor Joist 2x8 16oc R-0	n/a	n/a	1657	n/a	n/a		Existing	No
NnFloor	Addition	Floor Joist 2x8 16oc R-19	n/a	n/a	1455	n/a	n/a		New	n/a
GnFront s2x4	Garage	Stud s2x4 16oc R-0	248	Front	207	112	90	none	New	n/a
GnBack s2x4	Garage	Stud s2x4 16oc R-0	68	Back	27	0	90	none	New	n/a
GnLeft s2x4	Garage	Stud s2x4 16oc R-0	338	Left	203	17.8	90	none	New	n/a
GeRight s2x4	Garage	Stud s2x4 16oc R-0	158	Right	40	0	90	none	Existing	No
GnRight s2x4	Garage	Stud s2x4 16oc R-0	158	Right	111	0	90	none	New	n/a

ATTIC

01	02	03	04	05	06	07	08	09	10
Name	Construction	Type	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Radiant Barrier	Cool Roof	Status	Verified Existing Condition
Attic at Existing	eAttic Rafter 2x4 24oc w/Asphalt Roofing	Ventilated	4	0.1	0.85	No	No	Existing	No
Attic at Addition	nAttic Rafter 2x4 24oc w/Asphalt Roofing	Ventilated	4	0.1	0.85	No	No	New	n/a
Attic at Addition Truss	nAttic Truss Rafter w/Asphalt Roofing	Ventilated	4	0.1	0.85	No	No	New	n/a
Attic at Garage	eAttic Rafter 2x4 24oc w/Asphalt Roofing	Ventilated	4	0.1	0.85	No	No	Existing	No

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
F5|8040a S	Window	EeFront s2x4	Front	248	8	4	1	32	0.38	NFRC	0.29	NFRC	Bug Screen	Altered	No
F3|4040a S	Window	EeFront s2x4	Front	248	4	4	1	16	0.38	NFRC	0.29	NFRC	Bug Screen	Altered	No

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FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
F4|8040a S	Window	EeFront s2x4	Front	248	8	4	1	32	0.38	NFRC	0.29	NFRC	Bug Screen	Altered	No
L4|2030a SH	Window	EeLeft s2x4	Left	338	2	3	1	6	0.39	NFRC	0.29	NFRC	Bug Screen	Altered	No
R1|2020a S	Window	EeRight s2x4	Right	158	2	2	1	4	0.38	NFRC	0.29	NFRC	Bug Screen	Altered	No
R2|3320a S	Window	EeRight s2x4	Right	158	3.25	2	1	6.5	0.38	NFRC	0.29	NFRC	Bug Screen	Altered	No
R3|5040a S	Window	EeRight s2x4	Right	158	5	4	1	20	0.38	NFRC	0.29	NFRC	Bug Screen	Altered	No
F2|2-3068n FD	Window	NnFront s2x6	Front	248	3	6.67	2	40.02	0.34	NFRC	0.3	NFRC	Bug Screen	New	NA
B1|6050n S	Window	NnBack s2x6	Back	68	6	5	1	30	0.38	NFRC	0.29	NFRC	Bug Screen	New	NA
B2|5060n S	Window	NnBack s2x6	Back	68	5	6	1	30	0.38	NFRC	0.29	NFRC	Bug Screen	New	NA
B3|2616n T	Window	NnBack s2x6	Back	68	2.5	1.5	2	7.5	0.35	NFRC	0.3	NFRC	Bug Screen	New	NA
B4|12680n FDS	Window	NnBack s2x6	Back	68	12.5	8	1	100	0.34	NFRC	0.31	NFRC	Bug Screen	New	NA
B5|2616n T	Window	NnBack s2x6	Back	68	2.5	1.5	5	18.75	0.35	NFRC	0.3	NFRC	Bug Screen	New	NA
B6|7040n S	Window	NnBack s2x6	Back	68	7	4	1	28	0.38	NFRC	0.29	NFRC	Bug Screen	New	NA
B7|2416n T	Window	NnBack s2x6	Back	68	2.33	1.5	3	10.48	0.35	NFRC	0.3	NFRC	Bug Screen	New	NA
L3|80610n FDS	Window	NxLeft s2x4	Left	338	8	6.83	1	54.64	0.34	NFRC	0.31	NFRC	Bug Screen	New	NA
L2|5050n S	Window	NxLeft s2x4	Left	338	5	5	1	25	0.38	NFRC	0.29	NFRC	Bug Screen	New	NA

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FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
L3|3050n C	Window	NxLeft s2x4	Left	338	3	5	1	15	0.38	NFRC	0.26	NFRC	Bug Screen	New	NA
R4|4040n S	Window	NxRight s2x4	Right	158	4	4	1	16	0.38	NFRC	0.29	NFRC	Bug Screen	New	NA

OPAQUE DOORS

01	02	03	04	05	06
Name	Side of Building	Area (ft^2)	U-factor	Status	Verified Existing Condition
F5|2868n to Garage	NnDemising 2x4	17.8	0.2	New	n/a
F6|16070n Garage Door	GnFront s2x4	112	1	New	n/a
L5|2868n Man Door	GnLeft s2x4	17.8	0.2	New	n/a

OVERHANGS AND FINS

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17
Window	Overhang					Left Fin				Right Fin						
	Depth	Dist Up	Left Extent	Right Extent	Flap Ht.	Depth	Top Up	Dist L	Bot Up	Depth	Top Up	Dist R	Bot Up	Status	Verified Existing Condition	Existing Construction
F5|8040a S	1.3	0.5	28	36.5	0	16.7	1.3	3.5	0	3.7	1	2	0	Altered	No	
F3|4040a S	1	5.3	11.5	19.5	0	0	0	0	0	0	0	0	0	Altered	No	
F4|8040a S	1	4.5	19.3	8	0	0	0	0	0	0	0	0	0	Altered	No	
L4|2030a SH	1	4.5	22.7	27.5	0	0	0	0	0	3	1.5	3.5	0	Altered	No	

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OVERHANGS AND FINS

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17
Window	Overhang					Left Fin				Right Fin						
	Depth	Dist Up	Left Extent	Right Extent	Flap Ht.	Depth	Top Up	Dist L	Bot Up	Depth	Top Up	Dist R	Bot Up	Status	Verified Existing Condition	Existing Construction
R1|2020a S	1.3	0.5	14	25.7	0	0	0	0	0	0	0	0	0	Altered	No	
R2|3320a S	1.3	0.5	18.3	20	0	0	0	0	0	0	0	0	0	Altered	No	
R3|5040a S	1.3	0.5	25.5	12.5	0	0	0	0	0	0	0	0	0	Altered	No	
F2|2-3068n FD	8	0.7	2	4	0	13	1.5	15	0	4	1	0.5	0	New	NA	
B1|6050n S	1	5	14.7	7.5	0	0	0	0	0	0	0	0	0	New	NA	
B2|5060n S	1.3	3	31	33.5	0	30	1.7	4	0	0	0	0	0	New	NA	
B3|2616n T	1.3	0.3	31	33.5	0	30	0	4	0	0	0	0	0	New	NA	
B4|12680n FDS	1.3	3	38.3	18.5	0	30	1.7	11.5	0	0	0	0	0	New	NA	
B5|2616n T	1.3	0.3	38.3	18.5	0	30	0	11.5	0	0	0	0	0	New	NA	
B6|7040n S	1.3	3	57.5	5	0	30	1.7	30.5	0	0	0	0	0	New	NA	
B7|2416n T	1.3	0.3	57.5	5	0	30	0	30.5	0	0	0	0	0	New	NA	
L1|80610n FDS	1.3	1.5	5	63.5	0	0	0	0	0	41.5	4.5	17.7	0	New	NA	
L2|5050n S	1.3	1.5	19	52.5	0	0	0	0	0	41.5	4.5	6.5	0	New	NA	
L3|3050n C	1.3	1.5	27.7	46	0	0	0	0	0	41.5	4.5	0.3	0	New	NA	
R4|4040n S	1.3	1.5	48	21	0	0	0	0	0	0	0	0	0	New	NA	

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REVISIONS	DATE

COMPLIANCE BY:
West Coast ENERGY DESIGN
1075 VICTORINE ROAD LIVERMORE, CA 94551

Project:
THE DERITA RESIDENCE
236 ANGELA AVE
ALAMO, CALIFORNIA

CALIFORNIA TITLE-24 ENERGY CODE COMPLIANCE

DRAWN	DANA
STAGE	
DATE	08/19/2024
FILE	REH0224
PROJECT	DERITA
SHEET	T24.1

SLAB FLOORS

01	02	03	04	05	06	07	08	09	10
Name	Zone	Area (ft²)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated	Status	Verified Existing Condition
GeSlab	Garage	506	61	none	0	0%	No	Existing	No

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
Stud s2x4 16oc R-0	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.361	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Exterior Finish: 3 Coat Stucco
Stud s2x4 16oc R-15	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-15	None / None	0.087	Inside Finish: Gypsum Board Cavity / Frame: R-15 / 2x4 Sheathing / Insulation: Wood Siding/sheathing/decking Exterior Finish: 3 Coat Stucco
Stud s2x6 16oc R-21	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-21	None / None	0.065	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Sheathing / Insulation: Wood Siding/sheathing/decking Exterior Finish: 3 Coat Stucco
Demising Stud 2x4 16oc R-15	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-15	None / None	0.086	Inside Finish: Gypsum Board Cavity / Frame: R-15 / 2x4 Other Side Finish: Gypsum Board
eAttic Rafter 2x4 24oc w/Asphalt Roofing	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / None	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
nAttic Truss Rafter w/Asphalt Roofing	Attic Roofs	Wood Framed Ceiling	2x4 Top Chord of Roof Truss @ 24 in. O. C.	R-0	None / None	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4 Top Chrd
nAttic Rafter 2x4 24oc w/Asphalt Roofing	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / None	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4
Floor Joist 2x8 16oc R-0	Floors Over Crawlspace	Wood Framed Floor	2x8 @ 16 in. O. C.	R-0	None / None	0.218	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x8
Floor Joist 2x8 16oc R-19	Floors Over Crawlspace	Wood Framed Floor	2x8 @ 16 in. O. C.	R-19	None / None	0.047	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x8
Ceiling Joist 2x6 16oc R-0	Ceilings (below attic)	Wood Framed Ceiling	2x6 @ 16 in. O. C.	R-0	None / None	0.467	Cavity / Frame: no insul. / 2x6 Inside Finish: Gypsum Board
Ceiling Truss Joist R-38	Ceilings (below attic)	Wood Framed Ceiling	2x4 Bottom Chord of Truss @ 24 in. O. C.	R-38	None / None	0.025	Over Ceiling Joists: R-28.9 insul. Cavity / Frame: R-9.1 / 2x4 Btm Chrd Inside Finish: Gypsum Board
Ceiling Joist 2x6 16oc R-38	Ceilings (below attic)	Wood Framed Ceiling	2x6 @ 16 in. O. C.	R-38	None / None	0.026	Over Ceiling Joists: R-23.7 Insul. Cavity / Frame: R-14.3 / 2x6 Inside Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

01	02	03	04	05
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50	CFM50
Required	Not Required	N/A	n/a	n/a

WATER HEATING SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (#)	Status	Verified Existing Condition	Existing Water Heating System
Replace DHW System	Domestic Hot Water (DHW)	Demand Recirculation Sensor Controls	Tankless	1	n/a	None	n/a	Tankless (1)	Altered	No	

WATER HEATERS

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Heating Efficiency Type	Efficiency	Rated Input Type	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff	1st Hr. Rating or Flow Rate	Tank Location	Status	Verified Existing Condition
Tankless	Gas	Consumer Instantaneous	1	0	UEF	0.96	Btu/Hr	200000	0	n/a	n/a		Altered	No

WATER HEATING - HERS VERIFICATION

01	02	03	04	05	06	07
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Shower Drain Water Heat Recovery
Replace DHW System - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required

SPACE CONDITIONING SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Cooling Equipment Count	Fan Name	Distribution Name	Required Thermostat Type	Status	Verified Existing Condition	Existing HVAC System
Replace HVAC System	Heating and cooling system other	FAU Gas AFUE=92	1	AC Split SEER=14 EER=12.2	1	Standard Fan	Ducts	Setback	Altered	No	

HVAC - HEATING UNIT TYPES

01	02	03	04	05
Name	System Type	Number of Units	Heating Efficiency	Heating Unit Brand
FAU Gas AFUE=92	Central gas furnace	1	AFUE - 92	n/a

HVAC - COOLING UNIT TYPES

01	02	03	04	05	06	07	08	09
Name	System Type	Number of Units	Efficiency Metric	Efficiency EER/EER2/CEER	Efficiency SEER/SEER2	Zonally Controlled	Mulit-speed Compressor	HERS Verification
AC Split SEER=14 EER=12.2	Central split AC	1	EER/SEER	12.2	14	Not Zonal	Single Speed	AC Split SEER=14 EER=12.2-hers-cool

HVAC COOLING - HERS VERIFICATION

01	02	03	04	05	06
Name	Verified Airflow	Airflow Target	Verified EER/EER2	Verified SEERSEER2	Verified Refrigerant Charge
AC Split SEER=14 EER=12.2-hers-cool	Not Required	0	Not Required	Not Required	Required

HVAC - DISTRIBUTION SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Design Type	Duct Ins. R-value		Duct Location		Surface Area		Bypass Duct	Duct Leakage	HERS Verification	Status	Verified Existing Condition	Existing Distribution system	New Ducts >= 25 ft
			Supply	Return	Supply	Return	Supply	Return							
Ducts	Ducts located in multiple places	Non-Verified	R-6	R-6	Attic	Attic	n/a	n/a	No Bypass Duct	Sealed and Tested	Ducts-hers-dist	Existing + New	No		Yes

HVAC DISTRIBUTION - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low-leakage Air Handler	Low Leakage Ducts Entirely in Conditioned Space
Ducts-hers-dist	Yes	10.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No

HVAC - FAN SYSTEMS

01	02	03	04
Name	Type	Fan Power (Watts/CFM)	Name
Standard Fan	HVAC Fan	0.45	Standard Fan-hers-fan

HVAC FAN SYSTEMS - HERS VERIFICATION

01	02	03
Name	Verified Fan Watt Draw	Required Fan Efficacy (Watts/CFM)
Standard Fan-hers-fan	Not Required	0

INDOOR AIR QUALITY (IAQ) FANS

01	02	03	04	05	06	07	08	09
Dwelling Unit	Airflow (CFM)	Fan Efficacy (W/CFM)	IAQ Fan Type	Includes Heat/Energy Recovery?	IAQ Recovery Effectiveness - SRE/ASRE	Includes Fault Indicator Display?	HERS Verification	Status
SFam IAQVentRpt	127	0.35	Exhaust	No	n/a / n/a	No	Yes	

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Lanny Dana	Documentation Author Signature: Lanny Dana
Company: West Coast Energy Design	Signature Date: 08/19/2024
Address: 1075 Victorine Road	CEA/ HERS Certification Identification (If applicable): R19-22-30117
City/State/Zip: Livermore, CA 94551	Phone: 925-243-1767

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name: Rod Hurtado	Responsible Designer Signature: Rod Hurtado
Company: R.E. Hurtado & Associates	Date Signed: 08/19/2024
Address: PO Box 6152	License:
City/State/Zip: Concord, CA 94524	Phone: 925-685-5834

Digitally signed by California Home Energy Efficiency Rating Services (CHEERS). This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

REVISIONS	DATE

COMPLIANCE BY:
West Coast ENERGY DESIGN
1075 VICTORINE ROAD LIVERMORE, CA 94551

Project:
THE DERITA RESIDENCE
236 ANGELA AVE
ALAMO, CALIFORNIA

CALIFORNIA TITLE-24 ENERGY CODE COMPLIANCE

DRAWN	DANA
STAGE	
DATE	08/19/2024
FILE	REH0224
PROJECT	DERITA
SHEET	T24.2

2022 Single-Family Residential Mandatory Requirements Summary

NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. (04/2022)

Building Envelope:

§ 110.6(a)1:	**Air Leakage.** Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 101/I.S.2/A440-2011. *
§ 110.6(a)5:	**Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4-5 for exterior doors. They must be caulked and/or weather-stripped.
§ 110.7:	**Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.9(a):	**Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	**Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.9(i):	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	**Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	**Roof Deck, Ceiling and Rafter Roof Insulation.** Roof decks in newly constructed attics in climate zones 4 and 6-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs min.um R-22 insulation in wood-frame ceiling, or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration, as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.
§ 150.0(b):	**Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labelled R-value.
§ 150.0(c):	**Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B. *
§ 150.0(d):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor. *
§ 150.0(f):	**Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	**Vapor Retarder.** In climate zones 11 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to §150.0(d).
§ 150.0(g)2:	**Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(k):	**Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45, or area-weighted average U-factor of all fenestration must not exceed 0.45. *

Fireplaces, Decorative Gas Appliances, and Gas Log:

§ 110.5(e):	**Pilot Light.** Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.
§ 150.0(e)3:	**Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. *

Space Conditioning, Water Heating, and Plumbing System:

§ 110.0-§ 110.3:	**Certification.** Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.
§ 110.2(a):	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N. *
§ 110.2(b):	**Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating. *
§ 110.2(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
§ 110.3(c)3:	**Insulation.** Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(c)6:	**Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

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2022 Single-Family Residential Mandatory Requirements Summary

§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters. *
§ 150.0(h)1:	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.
§ 150.0(h)3A:	**Clearances.** Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(h)3B:	**Liquid Line Drier.** Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	**Water Piping. Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in § 609.11 of the California Plumbing Code. *
§ 150.0(j)2:	**Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	**Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5 x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2" higher than the base of the water heater.
§ 150.0(n)3:	**Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.

Ducts and Fans:

§ 110.8(d)3:	**Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	**CMC Compliance.** All air-distribution system ducts and plenums must meet CMC §§ 601.2-606.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-8.0 or higher, ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than ¼". If mastic or tape is used, Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in these spaces must not be compressed. *
§ 150.0(m)2:	**Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	**Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	**Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
§ 150.0(m)10:	**Porous Inner Core Flex Duct.** Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner-core and outer vapor barrier.
§ 150.0(m)11:	**Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)12:	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the filter. *

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2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(m)13:	**Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3. *

Ventilation and Indoor Air Quality:

§ 150.0(o)1:	**Requirements for Ventilation and Indoor Air Quality.** All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. *
§ 150.0(o)1B:	**Central Fan Integrated (CFI) Ventilation Systems.** Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per § 150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed and controlled per § 150.0(o) 1Bii&iv. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o)1C.
§ 150.0(o)1C:	**Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses.** Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1Ci-iii
§ 150.0(o)1G:	**Local Mechanical Exhaust.** Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled exhaust system meeting requirements of § 150.0(o)1Gii; enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(o)1Gii-iv. Airflow must be measured by the installer per § 150.0(o) 1Gv, and rated for sound per §150.0(o)1Gvi. *
§ 150.0(o)1H&I:	**Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems.** The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling Unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by § 150.0(o)1C.
§ 150.0(o)2:	**Field Verification and Diagnostic Testing.** Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G.

Pool and Spa Systems and Equipment:

§ 110.4(a):	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDbS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting, a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. *
§ 110.4(b)1:	**Piping.** Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	**Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	**Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	**Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves. *

Lighting:

§ 110.9:	**Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9. *
§ 150.0(k)1A:	**Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting internal to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt.
§ 150.0(k)1B:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1C:	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.
§ 150.0(k)1D:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1E:	**Blank Electrical Boxes.** The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 150.0(k)1F:	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k). *

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2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(k)1G:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1H:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	**Light Sources in Drawers, Cabinets, and Linen Closets.** Light sources internal to drawers, cabinets or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	**Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	**Accessible Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off. *
§ 150.0(k)2B:	**Multiple Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	**Mandatory Requirements.** Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2D:	**Energy Management Control Systems.** An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A.
§ 150.0(k)2E:	**Automatic Shutoff Controls.** In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F:	**Dimmers.** Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)2K:	**Independent controls.** Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)3A:	**Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
§ 150.0(k)4:	**Internally illuminated address signs.** Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	**Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.

Solar Readiness:

§ 110.10(a)1:	**Single-family Residences.** Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
§110.10(b)1A:	**Minimum Solar Zone Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. *
§ 110.10(b)2:	**Azimuth.** All sections of the solar zone located on sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)3A:	**Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.
§ 110.10(b)3B:	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane. *
§ 110.10(b)4:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways.** The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.
§ 110.10(e)1:	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

Electric and Energy Storage Ready:

5/6/22

2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(s):	**Energy Storage System (ESS) Ready.** All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source.
§ 150.0(t):	**Heat Pump Space Heater Ready.** Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank-cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(u):	**Electric Cooktop Ready.** Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(v):	**Electric Clothes Dryer Ready.** Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

5/6/22 *Exceptions may apply.

REVISIONS	DATE

COMPLIANCE BY:
West Coast ENERGY DESIGN
1075 VICTORINE ROAD LIVERMORE, CA 94551

Project:
THE DERITA RESIDENCE
236 ANGELA AVE
ALAMO, CALIFORNIA

LOW-RISE RESIDENTIAL MANDATORY MEASURES

DRAWN
DANA
STAGE
DATE
08/19/2024
FILE
RES2024
PROJECT
DERITA
SHEET
T24.3

Department of Conservation and Development

30 Muir Road
Martinez, CA 94553

Phone:1-855-323-2626

Contra Costa County

John Kopchik
Director

Jason Crapo
Deputy Director

Deidra Dingman
Deputy Director

Ruben Hernandez
Deputy Director

Gabriel Lemus
Deputy Director

August 26, 2025

Darrin Derita
236 Angela Ave
Alamo, CA 94507

BY EMAIL

RE: Notice of Intent to Recommend Denial of Variance for Garage Addition
Site Address: 236 Angela Avenue, Alamo, CA; APN: 192-090-007
County File #CDVR25-01036

Dear Mr. Derita:

The Department of Conservation and Development, Community Development Division (CDD) received your application on July 14, 2025, for a Variance Permit to allow an approximately 18-foot front setback (where 25 feet is the minimum) and a small lot design review for construction of an addition to an existing garage for an existing single-family residence.

Required Variance Findings

This is to advise that, based on the materials and documents submitted, staff is unable to make the findings required by County Code Section 26-2.2006 to grant variance approval[1].

1.) *That any variance authorized shall not constitute a grant of special privilege inconsistent with the limitations on other properties in the vicinity and the respective land use district in which the subject property is located;*

2.) *That because of special circumstances applicable to the subject property because of its size, shape, topography, location or surroundings, the strict application of the respective zoning regulations is found to deprive the subject property of rights enjoyed by other properties in the vicinity and within the identical land use district;*

[1] LinkTo: Guide to Variances

3.) That any variance authorized shall substantially meet the intent and purpose of the respective land use district in which the subject property is located. Failure to so find shall result in a denial.

The proposed project would construct new living space in an area where a portion of the existing garage is located. The project proposes an addition to the existing garage to accommodate for the resulting reduction in garage space due to the new living space. Also, according to the applicant's project description and statement, the variance is requested due to prior modifications made to the garage which resulted in an expansion of living space into the existing garage area and a decrease in the depth of the existing garage. There is no evidence in the records that the prior expansion of living space into the garage was permitted. The project also proposes an addition of living space to the eastern side of the residence.

The subject property has a substandard width (approximately 104 feet where 120 feet is required). However, given that there is an existing garage and that an addition on the eastern side of the residence is proposed, the lot does not exhibit the type of extraordinary physical characteristics that must exist in order to justify relief from zoning regulations and standards of the R-20, Single-Family Residential zoning district. Therefore, based upon the entire record for this application, it is staff's intent to recommend that the Zoning Administrator administratively deny your application for a variance to allow a substandard front setback for the construction of an addition to the existing garage.

Opportunity to Revise Project Design

You have the opportunity to revise the project design in a manner that eliminates the need for a variance. Based on the information provided, staff is recommending that the existing garage be renovated if/as needed in order to comply with off-street parking requirements pursuant to County Code Section 84-14.1202 and consistent with the development standards of the R-20 zoning district. Staff will review any revised plans submitted for this application and determine if the variance element has been eliminated from the alternative design. Upon redesigning the project to eliminate the variance, the subject variance application may be withdrawn.

Public Hearing/Appeal

If you choose to move forward with the variance application, staff will prepare a 10-day *Notice of Intent to Deny a Variance Application* which will be sent to all property owners within 300 feet of your property. During the 10-day notification period, if a public hearing is requested, a hearing will be scheduled before the County Zoning Administrator with a staff recommendation for denial.

If no requests for a hearing is received, staff would forward the recommendation for denial directly to the Zoning Administrator. If the Zoning Administrator accepts staff's recommendation and the application is denied you will have the opportunity to appeal the Zoning Administrator's within 10-days of the decision, upon payment of a $250 appeal fee. An appeal of the Zoning Administrator's decision would be heard by the County Planning Commission. Please be aware that all staff time and material costs are required to be paid by the applicant, including staff time for preparation of a staff report.

Application Withdrawal

You may also consider withdrawing your application to avoid a denial of your proposal. To do so, please submit to my attention a signed letter or an email referencing County File #CDVR25-01036 and stating your intention to withdraw your application.

If you have any questions, feel free to contact me by email at syd.sotoodeh@dcd.cccounty.us or directly at (925) 655-2877 so that I may be of further assistance or to request a meeting.

Sincerely,

Syd Sotoodeh
Project Planner

cc: File #CDVR25-01036

File #: 25-4960 **Agenda Date:** 12/2/2025 **Agenda #:** 7.

Advisory Board: Alamo Municipal Advisory Council
Subject: 1048 Adrienne Drive, Alamo
Contact: Dulce Reckmeyer-Walton, dulce.reckmeyer-walton@dcd.cccounty.us <mailto:dulce.reckmeyer-walton@dcd.cccounty.us>

Information:
The applicant requests approval of a Variance for a 10-foot side yard setback (where 15 feet is required) to rebuild a portion of the existing garage and to allow an addition to an existing single-family residence. The project also includes a small lot design review for a roof change, from flat to pitched and an approximately 347-square-foot addition on a substandard lot. The subject property is located at 1048 Adrienne Drive in the Alamo area. (Zoning R-20, Single-Family Residential District; APN: 197-060-017).

Referral History and Update:

CONTRA COSTA COUNTY
DEPARTMENT OF CONSERVATION AND DEVELOPMENT
COMMUNITY DEVELOPMENT DIVISION
30 Muir Road
Martinez, CA 94553-4601
Phone: 925-655-2700
Fax: 925-655-2758

CONTRA COSTA
CONSERVATION & DEVELOPMENT

AGENCY COMMENT REQUEST

Date 10/27/25

We request your comments regarding the attached application currently under review.

DISTRIBUTION

INTERNAL

- ✔ Building Inspection
- Grading Inspection
- Advance Planning
- Housing Programs
- Trans. Planning
- Telecom Planner
- ALUC Staff
- HCP/NCCP Staff
- County Geologist

HEALTH SERVICES DEPARTMENT

- ✔ Environmental Health
- Hazardous Materials

PUBLIC WORKS DEPARTMENT

- Engineering Services
- Special Districts
- Traffic
- Flood Control (Full-size)

LOCAL

- ✔ Fire District _____
  - ✔ San Ramon Valley – (email) rwendel@srvfire.ca.gov
  - Consolidated – (email) fire@cccfpd.org
- ✔ Sanitary District Central San
- ✔ Water District EBMUD
- City of _____
- School District(s) _____
- LAFCO
- Reclamation District #_____
- East Bay Regional Park District
- Diablo/Discovery Bay/Crockett CSD
- ✔ MAC/TAC Alamo MAC
- ✔ Improvement/Community Association
- ✔ CC Mosquito & Vector Control Dist (email)

OTHERS/NON-LOCAL

- CHRIS (email only: nwic@sonoma.edu)
- CA Fish and Wildlife, Region 3 – Bay Delta
- Native American Tribes

ADDITIONAL RECIPIENTS

Alamo AIA

_____

Please submit your comments to:

Project Planner Dulce Reckmeyer-Walton
Phone # 925-655-2854
E-mail dulce.reckmeyer-walton@dcd.cccoun
County File # CDVR25-01054

Prior to Nov. 24, 2025

* * * * *

We have found the following special programs apply to this application:

- Landslide
- Active Fault Zone (A-P)
- ✔ Liquefaction
- ✔ Flood Hazard Area
- ✔ 60-dBA Noise Control
- CA EPA Hazardous Waste Site
- High or Very High FHSZ

* * * * *

AGENCIES: Please indicate the applicable code section for any recommendation required by law or ordinance. Please send copies of your response to the Applicant and Owner.

Comments: None Below ___ Attached

Print Name _____

_____
Signature DATE

Agency phone # _____

CONTRA COSTA
CONSERVATION & DEVELOPMENT

Planning Application Summary

County File Number: CDVR25-01054 **File Date: 10/23/2025**

Applicant:
Mason Wodhams MWAC
23 RAILROAD AVE # 352
DANVILLE, CA 94526
mason@mjwarch.com
(805) 234-3812

Property Owner:
ERIC TRE MOCZULSKI
1048 ADRIENNE DR
ALAMO, CA 94507 240
shan353@yahoo.com
(310) 720-4683

Project Description:
The applicant requests approval of a variance to allow a 10-foot side yard setback (where 15'-0" is the minimum required) to rebuild a portion of the existing garage and allow an addition to an existing single-family residence. The project also includes a small lot design review for a roof change, from flat to pitched and an approximately 347-square-foot addition on a substandard lot.

Project Location: (Address: 1048 ADRIENNE DR, ALAMO, CA 94507 240), (APN: 197060017)

General Plan Designation(s): RC:RL
Flood Hazard Areas: A
60-dBA Noise Control: YES
Sphere of Influence: N/A
Sanitary District: CENTRAL SANITARY
Specific Plan: N/A

Zoning District(s): R-20
AP Fault Zone: NO
MAC/TAC: Alamo MAC
Fire District: SAN RAMON VLY FIRE
Housing Inventory Site: NO

Fees:

Fee Item	Description	Account Code	Total Fee	Paid
052B	Notification Fee ($30)	002606-9660-REV-000-5B052B	30.00	30.00
VRS0044	Zone Variance - DCD	002606-9660-REV-000-5B0044	3250.00	3250.00
		Total:	**3280.00**	**3280.00**

RECEIVED on 10/23/2025 CDVR25-01054
By Contra Costa County
Department of Conservation and Development

Mason Wodhams Architectural Corp.
23 Railroad Ave. #352
Danville, CA 94526
(805) 234-3812

October 22, 2025

Contra Costa County
Department of Conservation and Development
30 Muir Rd.
Martinez, CA 94553

RE: Variance Findings

To whom it may concern,

Please see the required findings for a variance included herein. Please let us know if you have any questions or need any additional information.

1. The existing structure is already non-conforming with the setbacks, and our project proposes to bring the building setbacks closer to the zoning requirements. The neighborhood consists of several non-conforming lots mainly due to their width and as a result several neighboring properties fail to meet the setbacks prescribed in the zoning code; as such allowing this proposal would not constitute a granting of special privilege.
2. The existing home located on this property is already as close as 4'-6" from the property line at its closest point. We are proposing to remove a portion of the building closest to the property line. We are extending that new line of the building backwards, angling away from said property line. The end result takes the structure from 4'-6" at the closest point, to 10'-0" for the existing structure and the new addition will start at 14'-0" from the property line and angle away until it hits the 15'-0" minimum setback. The homeowners would not be afforded the same development rights as the neighboring properties without allowing us to address and work within these existing circumstances.
3. The intent and purpose of the zoning code is to allow for consistency within the neighborhood. This project would improve an already non-conforming structure to bring it closer to the zoning standards and in line the surrounding neighborhood. As such this project substantially meets the intent and purpose of the zoning code.

Thank you for your time and consideration in this matter. Please let us know if you have any questions or need any additional information.

Sincerely,

Mason Wodhams

1976 ROLL TRACT 4480 (ALAMO BRIDGE) P.U.D. M.B. 179-1

PB 192

DANVILLE BLVD.

ALAMO SQUARE

R=579.95 N88° 42'33"E 136.30 R=120 33.58

15.64 DRAINAGE EASEMENT

R=910 39.82

83.18 N88° 42'33"E

196.38

N3° 14'36"E

154.69

N2° 17'42"E

N17° 19'36"E 146.01

N34° 47'37"W

SAN RAMON

273.58

N75° 53'11"W 154.33 82.79 N80° 56'37"W 119.61 N76° 27'04"E N55° 14'30"W 198.62

CREEK

STORM DRAIN EASEMENT

COMMON AREA

N86° 25'28"W 49.50

R=1095 99.05

N30° 24'55"W

168

N72° 53'54"W 58.22

INTERSTATE 680 FREEWAY

N52° 23'37"W

WATER LINE EASEMENT

310.76

N15° 18'48"W

217.80

N41° 03'37"W

201.19

N27° 28'35"W 262.57

ALAMO SQUARE DRIVE

N4° 10'E

N37° 36'25"E

N52° 23'37"W

N2° E

N23° 10'W

N2° W

N42° W

N36° 30'W

N74° 40'W

PCL. A=13.049Ac.

310

56

1

2

32

1" = 100'

310

FM 192-8

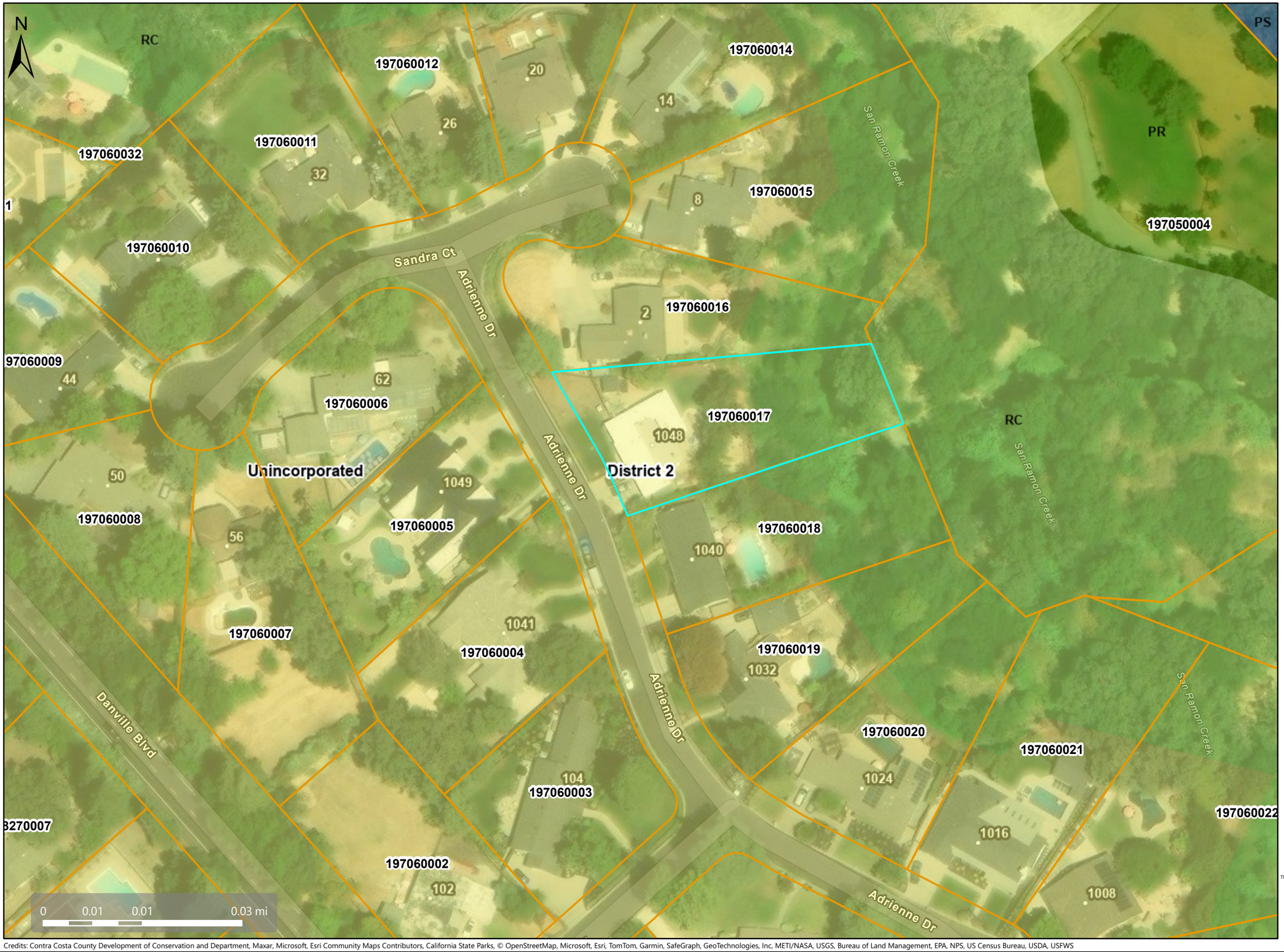
7-30-75 FM 197-2, 3

ASSESSOR'S MAP

BOOK 197 PAGE 31

CONTRA COSTA COUNTY, CA

General Plan



Map Legend

- Assessment Parcels

General Plan

- RL (Residential Low Density) (1-3 du/na)
- PS (Public and Semi-Public)
- PR (Park and Recreation)
- RC (Resource Conservation)
- Unincorporated
- Board of Supervisors' Districts
- Address Points

This map is a user generated, static output from an internet mapping application and is intended for reference use only.
Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.
THIS MAP IS NOT TO BE USED FOR NAVIGATION.
CCMap is maintained by Contra Costa County Department of Information Technology, County GIS.
Data layers contained within the CCMap application are provided by various Contra Costa County Departments.
Please direct all data inquires to the appropriate department.

Spatial Reference
PCS: WGS 1984 Web Mercator Auxiliary Sphere
Datum: WGS 1984

Credits: Contra Costa County Development of Conservation and Department, Maxar, Microsoft, Esri Community Maps Contributors, California State Parks, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS

Zoning



Map Legend

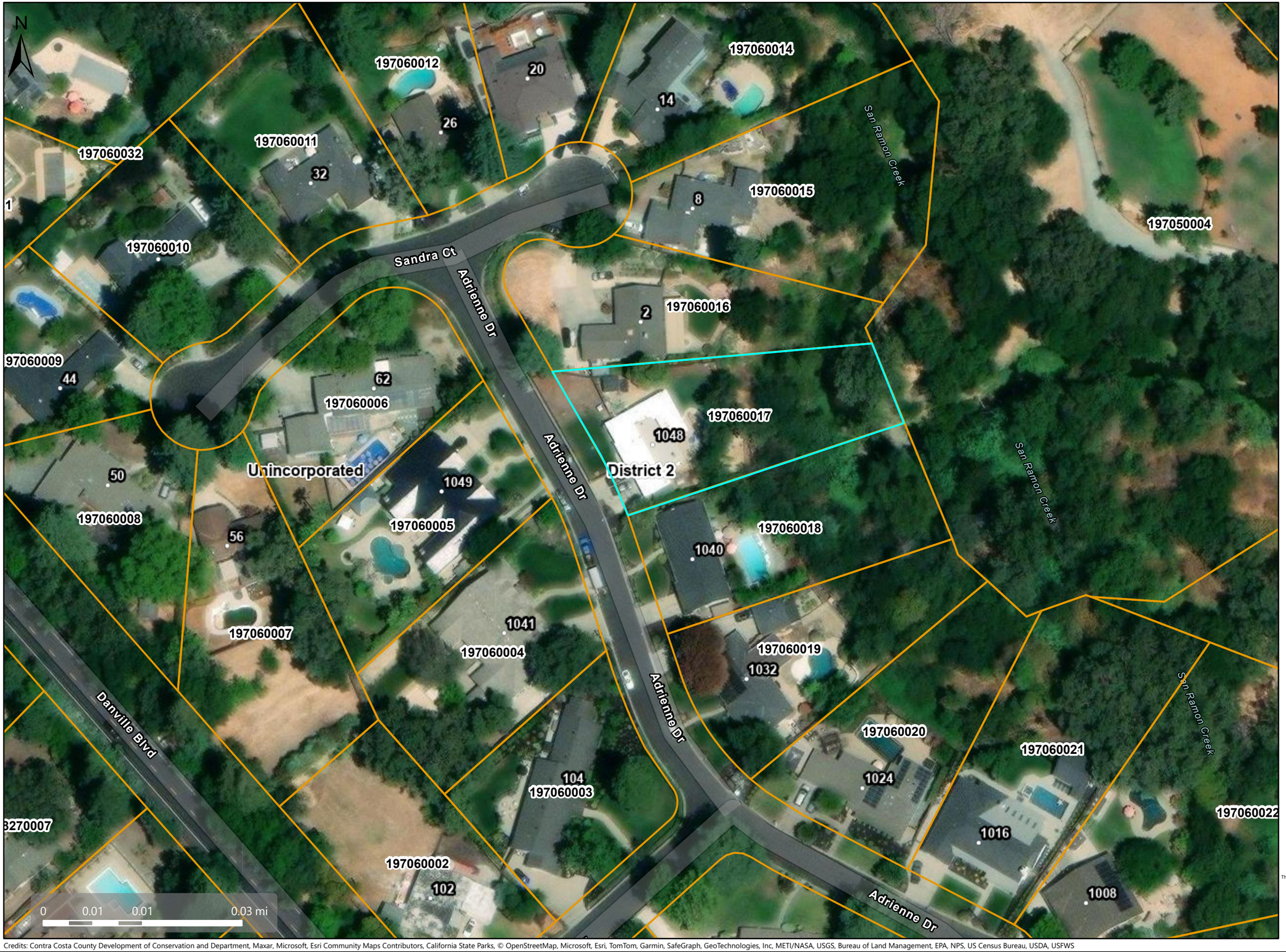
- Assessment Parcels
- Zoning
- ZONE_OVER
- R-20 (Single Family Residential)
- Unincorporated
- Board of Supervisors' Districts
- Address Points

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Orthophotography



Map Legend

- Assessment Parcels
- Unincorporated
- Board of Supervisors' Districts
- Address Points

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ABBREVIATIONS

A.B.	ANCHOR BOLT
ABV	ABOVE
A.C.	ASPHALT CONCRETE
A/C	AIR CONDITIONING
A.T.	ACOUSTICAL TILE
A.C.P.	ACOUSTICAL CEILING PANEL
ACOUST	ACOUSTICAL
A.D.	AREA DRAIN
ADJ	ADJUSTABLE / ADJACENT
A.F.F.	ABOVE FINISHED FLOOR
AGGR	AGGREGATE
ALUM	ALUMINUM
ALT	ALTERNATE
ANC	ANCHOR / ANCHORAGE
ARCH	ARCHITECTURAL
AVG	AVERAGE
AWN	AWNING
BD	BOARD
B.F.	BOTH FACES
BLDG	BUILDING
BLK.	BLOCK
BLKG	BLOCKING
BM	BEAM
B.P.	BUILDING PAPER
BDRM	BEDROOM
BLW	BELOW
BRG	BEARING
BRKT	BRACKET
BRZ	BRONZE
BTM	BOTTOM
BTN	BATTEN
BTR	BETTER
BTWN	BETWEEN
B.U.R.	BUILT UP ROOFING
BVL	BEVELED
B.W.	BOTH WAYS
C.B.	CATCH BASIN
CAB	CABINET
C.A.R.	COLD AIR
C.C.	CENTER TO CENTER
C.F.	CUBIC FEET
C.G.	CORNER GUARD
C.I.P.	CAST IRON PIPE
C.I.P.C.	CAST-IN-PLACE CONCRETE
C.J.	CONTROL JOINT
CLKG	CAULK / CAULKING
CLG	CEILING
CLR	CLEAR
C.M.U.	CONCRETE MASONRY UNIT
C.M.P.	CORRUGATED METAL PIPE
CNTR	COUNTER
C.O.	CLEAN OUT
C.O.T.G.	CLEAN OUT TO GRADE
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CORR	CORRUGATED
CPT	CARPET
CRS	COURSE / COURSES
CSK. S.	COUNTERSUNK SCREW
C.T.	CERAMIC TILE
CTR	CENTER
C.W.	COLD WATER
C.Y.	CUBIC YARD
DBL	DOUBLE
D.H.	DOUBLE HUNG
H.D.	HOLD DOWN
HDR	HEADER
HDWR	HARDWARE
HGR	HANGER
H.M.	HOLLOW METAL
HORIZ	HORIZONTAL
H.P.	HIGH POINT
HR	HOUR
HT	HEIGHT
HTG	HEATING
H.V.A.C.	HEATING / VENTILATING / AIR CONDITIONING
H.W.	HOT WATER
I.B.	INFILTRATION BARRIER
I.D.	INSIDE DIAMETER
IN	INCH
INCL.	INCLUDED / INCLUDING
INFO	INFORMATION
INSUL	INSULATION / INSULATED
INT	INTERIOR
INTER	INTERMEDIATE
INV	INVERT
JAN	JANITOR
JST	JOIST
JT	JOINT
K.P.	KICK PLATE
KIT	KITCHEN
LAM	LAMINATED
LAV	LAVATORY
L.B.	LAG BOLT
LB	POUND
L.F.	LINEAR FOOT
L.L.	LIVE LOAD
LT	LIGHT
LTL	LINTEL
LKR	LOCKER
L.P.	LOW POINT
LVR	LOUVER
L.V.L.	LAMINATED VENEER LUMBER
LACQ	LACQUER
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
M.B.	MACHINE BOLT
M.C.	MEDICINE CABINET
MECH	MECHANICAL
MED	MEDIUM
MFD	MANUFACTURED
MFR	MANUFACTURER
MH	MANHOLE
MICRO	MICROWAVE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
M.O.	MASONRY OPENING
M.R.	MOISTURE RESISTANT
M.R.O.	MASONRY ROUGH OPENING
MOD	MODULAR
MOV	MOVABLE
MTD	MOUNTED
MTL	METAL
MUL	MULLION
N	NORTH
(N)	NEW
N.I.C.	NOT IN CONTRACT
N.A.	NOT APPLICABLE
NO.	NUMBER
N.T.S.	NOT TO SCALE
O/	OVER
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OFF	OFFICE
OH	OVERHEAD
OPNG	OPENING
OPP	OPPOSITE
O.R.D.	OVERFLOW ROOF DRAIN
O.S.B.	ORIENTED STRAND BOARD
PART	PARTITION
P.C.	PRE CAST CONCRETE
P.C.F.	POUNDS PER CUBIC FOOT
PFB	PREFABRICATED
PL.	PLATE
P.D.F.	POWDER DRIVEN FASTENER
P.L.F.	POUNDS PER LINEAL FOOT
P.LAM.	PLASTIC LAMINATE
PLYWD	PLYWOOD
P.H.	PAPER HOLDER
PNT	PAINT
PRJ	PROJECT / PROJECTED
P.S.F.	POUNDS PER SQUARE FOOT
P.S.I.	POUNDS PER SQUARE INCH
P.T.	PRESSURE TREATED
PT	POINT
P.T.D.	PAPER TOWEL DISPENSER
P.T.D./R.	PAPER TOWEL DISPENSER & RECEPTACLE
P.T.R.	PAPER TOWEL RECEPTACLE
P.V.C./P.	POLYVINYL CHLORIDE PIPE
PVMT	PAVEMENT
Q.T.	QUARRY TILE
R	RISER
R.A.	RETURN AIR
RAD	RADIUS
R.B.	RUBBER BASE
RUB	RUBBER
R/C	REINFORCED CONCRETE
R.D.	ROOF DRAIN
REDWD	REDWOOD
REINF. or RE-BAR	REINFORCING STEEL BARS
REF	REFERENCE
REFR	REFRIGERATOR / REFRIGERATION
REG	REGISTER
REQ'D	REQUIRED
RET	RETAIN / RETAINING
REV	REVISION
RM	ROOM
R.O.	ROUGH OPENING
R/S	REINFORCING STEEL
R.W.L.	RAIN WATER LEADER
S	SOUTH
S.B.	SOLID BLOCKING
S.C.	SOLID CORE
S.C.D.	SEAT COVER DISPENSER
SCHED	SCHEDULE
S.D.	SOAP DISPENSER
S.DR.	STORM DRAIN
SECT	SECTION
S.E.D.	SEE ELECTRICAL DRAWINGS
S.F.	SQUARE FOOT
S.F.B.	SPIT FACE BLOCK
S.F.S.D.	SEE FOOD SERVICE DRAWINGS
S.G.D.	SLIDING GLASS DOOR
SHT	SHEET
SHTHG	SHEATHING
SHLS	SHELVES / SHELVING
SHWR	SHOWER
SIM	SIMILAR
SLR	SEALER
SLDR	SLIDER
S.M.D.	SEE MECHANICAL DRAWINGS
S.M.D.	SANITARY NAPKIN DISPENSER
S.N.R.	SANITARY NAPKIN RECEPTACLE
SPEC	SPECIFICATIONS
S.P.D.	SEE PLUMBING DRAWINGS
SPL.BLK.	SPLASH BLOCK
SQ	SQUARE
S.R.	SHELF AND ROD
S.S.	SANITARY SEWER
S.S.D.	SEE STRUCTURAL DRAWINGS
S.SK.	SERVICE SINK
S.ST.	STAINLESS STEEL
STA	STATION
S.T.C.	SOUND TRANSMISSION COEFFICIENT
STN	STAIN
STD	STANDARD
STL	STEEL
STO	STORAGE
STRUCT	STRUCTURE / STRUCTURAL
SUSP	SUSPENDED
S.W.	SHEAR WALL
S.Y.	SQUARE YARD
SYS	SYSTEM
T	TREAD
T.B.	TOWEL BAR
T.C.	TRASH COMPACTOR
TEL	TELEPHONE
TEMP	TEMPERED
T.O.C.	TOP OF CURB
T.&G.	TONGUE AND GROOVE
THK	THICK (NESS)
THR	THRESHOLD
T.O.B.	TOP OF BEAM
T.O.BLK.	TOP OF BLOCK
T.O.G.	TOP OF GRATE
T.O.PL.	TOP OF PLATE
T.O.S.	TOP OF SLAB
T.O.STL.	TOP OF STEEL
T.O.W.	TOP OF WALL
T.P.D.	TOILET PAPER DISPENSER
T.S.	TUBE STEEL
TV	TELEVISION
TXT	TEXTURE
TYP	TYPICAL
U.B.C.	UNIFORM BUILDING CODE
UNF	UNFINISHED
U.O.N.	UNLESS OTHERWISE NOTED
UR	URINAL
VAR	VARIES
V.B.	VINYL BASE
V.BR.	VAPOR BARRIER
V.C.P.	VITRIFIED CLAY PIPE
V.C.T.	VINYL COMPOSITION TILE
VENT	VENTILATOR / VENTILATION
VERT	VERTICAL
VEST	VESTIBULE
V.G.D.F.	VERTICAL GRAIN DOUGLAS FIR
V.I.F.	VERIFY IN FIELD
VIN	VINYL
VNR	VENEER
V.T.	VINYL TILE
W	WEST
W/	WITH
W.C.	WATER CLOSET
WD	WOOD
W/D	WASHER / DRYER
W.G.	WIRED GLASS
W.H.	WATER HEATER
W.HYD.	WALL HYDRANT
WNDW	WINDOW
W/O	WITHOUT
WP	WATERPROOF
WSCT	WAINSCOT
WT	WEIGHT
W.W.F.	WELDED WIRE FABRIC
YD	YARD

REFERENCE SYMBOLS

GRID LINE

SECTION
SECTION IDENTIFICATION
SHEET DESIGNATION

DETAIL
DETAIL IDENTIFICATION
SHEET DESIGNATION

INTERIOR ELEVATION
SHEET DESIGNATION
ELEVATION DESIGNATION

EXTERIOR ELEVATION
ELEVATION IDENTIFICATION
SHEET DESIGNATION

ELEVATION

SPOT ELEVATION

ROOM IDENTIFICATION

WINDOW IDENTIFICATION

DOOR IDENTIFICATION

MATCH LINE

WALL ASSEMBLY TYPE

ROOF OR FLOOR / CEILING ASSEMBLY TYPE

REVISION IDENTIFICATION

CONTOUR LINES
EXISTING
PROPOSED

MATERIAL SYMBOLS

EARTH (SECTION)

CONCRETE (PLAN & SECTION)

BRICK MASONRY UNIT (PLAN & SECTION)

CONCRETE MASONRY UNIT (PLAN & SECTION)

FRAMING MEMBER (BLOCKING)

12
2
FRAMING MEMBER (CONTINUOUS NOMINAL SIZE INDICATED)

PLYWOOD

FINISH MILLWORK (ARCH) (SECTION)

GYPSUM WALL BOARD OR SAND (SECTION)

ASPHALTIC CONCRETE PAVING (SECTION)

METAL STEEL OR IRON (SECTION)

BATT INSULATION (SECTION)

RIGID INSULATION BOARD OR TILE (SECTION)

SYMBOLS

&	AND	'	FEET
∠	ANGLE	d	PENNY
@	AT	⊥	PERPENDICULAR
℄	CENTER LINE	ℙ	PROPERTY LINE
[	CHANNEL	□	SQUARE FEET
Ø	DIAMETER	#	POUND
"	INCHES		

ASSEMBLIES

1 TYPICAL ROOF ASSEMBLY-CATHEDRAL

CLASS "A" MTL OR COMP SHINGLE ROOFING (SEE ROOF PLAN SHT. A2.2)
ROOFING UNDERLAYMENT
PLYWOOD SHEATHING, S.S.D.
RADIANT BARRIER
1 1/4" CLEAR VENTILATION SPACE.
SCHEDULED RAFTERS, S.S.D.
INSULATION PER T-24 REPORT FOR ATTIC SPACE
5/8" G.W.B.
NOTE: ALL EXTERIOR EAVES AND OVERHANGS TO RECEIVE W/ 1X6 T&G SOFFIT MIN.

2 TYPICAL ROOF W/ CEILING JST ASSEMBLY

SCHEDULED FINISH ROOFING
ROOFING UNDERLAYMENT
PLYWOOD SHEATHING, S.S.D.
RADIANT BARRIER
1 1/4" CLEAR VENTILATION SPACE.
SCHEDULED RAFTERS, S.S.D.
INSULATION PER T-24 REPORT FOR ATTIC SPACE
2X CEILING JOISTS @ 16" O.C., S.S.D.
5/8" G.W.B.

3 TYPICAL ROOF ASSEMBLY-NON CONDITIONED SPACE

CLASS "A" MTL OR COMP SHINGLE ROOFING (SEE ROOF PLAN SHT. A2.4)
ROOFING UNDERLAYMENT
PLYWOOD SHEATHING, S.S.D.

4 LOWER LEVEL FLOOR ASSEMBLY

SCHEDULED FINISH FLOORING
PLYWOOD T&G SHEATHING, S.S.D.
BATT INSULATION PER TITLE 24
JOIST PER PLAN, S.S.D.

5 UPPER LEVEL FLOOR ASSEMBLY

SCHEDULED FINISH FLOORING
PLYWOOD T&G SHEATHING, S.S.D.
JOIST PER PLAN, S.S.D.
BATT INSULATION (OPTIONAL)
5/8" G.W.B.
(USE 5/8" TYPE 'X' G.W.B. AT FLOORS OVER GARAGE AND ADU)

6 SLAB FLOOR ASSEMBLY

SLOPE FOR DRAINAGE @ GARAGE

REINFORCED CONC SLAB, S.S.D.
SAND, S.S.D.
VAPOR RETARDING MEMBRANE
COMPACTED AGGREGATE BASE, S.S.D.
PREPARE AND SLOPE SUB-GRADE TO UNDER SLAB DRAIN SYSTEM (SEE GEOTECH SITE ASSESSMENT FOR MORE INFORMATION)

7 TYPICAL EXTERIOR WALL

EXTERIOR SCHEDULED SIDING SYSTEM (SEE ELEVATIONS)
WEATHER RESISTIVE BARRIER
PLYWOOD SHEATHING, S.S.D.
2X4 OR 2X6 STUDS @ 16" O.C.
BATT INSULATION W/ INTEGRAL VAPOR BARRIER PER TITLE 24
5/8" G.W.B. (OMIT AT CRAWL SPACE)

8 TYPICAL INTERIOR PARTITION

5/8" G.W.B.
2X4 OR 2X6 STUDS @ 16" O.C.
BATT INSULATION (FOR SOUND DEADENING INSULATION - OPTIONAL)
5/8" G.W.B.
(USE 5/8" TYPE 'X' G.W.B. WITH FIRE TAPE AT GARAGE AND ADU WALLS)

GENERAL NOTES:

GENERAL NOTES:

1. ALL WORK SHALL BE DONE TO THE HIGHEST STANDARDS OF CRAFTSMANSHIP AND BEST TRADE PRACTICES. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH ALL APPLICABLE NATIONAL, STATE AND/OR LOCAL CODES, LAWS AND ORDINANCES, RULES AND REGULATIONS. REFERENCES IN THE SPECIFICATIONS TO "CODE" OR TO "BUILDING CODE" NOT OTHERWISE IDENTIFIED SHALL MEAN THE CALIFORNIA BUILDING CODE, 2022 EDITION, TOGETHER WITH ADDITIONS, AND IN EFFECT ON THE DATE OF RECEIPT OF BIDS, NOTHING IN THE DRAWINGS IS TO BE CONSTRUED AS OR PERMITTING WORK THAT IS CONTRARY TO THESE RULES, REGULATIONS, AND CODES.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS WITH THOSE AT THE SITE. WRITTEN DIMENSIONS ARE TO BE USED, DO NOT SCALE PLANS. ANY VARIATION WHICH REQUIRES PHYSICAL CHANGE SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING. NOTIFY THE ARCHITECT BEFORE PROCEEDING WITH THE WORK IF DISCREPANCIES, INCONSISTENCIES OR UNANTICIPATED CONDITIONS ARE ENCOUNTERED.
3. ALL PERMITS EXCEEDING $1,000 IN VALUATION SHALL REQUIRE INSTALLATION OF APPROVED SMOKE AND CARBON MONOXIDE DETECTORS WITHIN THE DWELLING.

   ALL PERMITS EXCEEDING $10,000 IN VALUATION SHALL REQUIRE INSTALLATION OF AN APPROVED AUTOMATIC GAS SHUT-OFF DEVICE ON THE CUSTOMER OWNED PIPING AT THE UTILITY METER.

   BUILDING ADDRESS NUMBERS MUST BE A MINIMUM OF 4 INCHES IN HEIGHT OR 3 INCHES IN HEIGHT AND SELF-ILLUMINATED.

SCOPE OF WORK:

SCOPE OF PROJECT SHALL INCLUDE THE ADDITION AND REMODEL OF AN EXISTING SINGLE FAMILY RESIDENCE ON AN EXISTING LOT OF RECORD. PROJECT ADDS 347 S.F. OF CONDITIONED AREA AND 321 S.F. OF COVERED PORCH. PROJECT ALSO REMOVES 130 S.F. OF STORAGE AREA FROM THE SIDE YARD TO CREATE A FINAL RESIDENCE TOTALING 2,580 S.F. OF CONDITIONED SPACE WITH A 250 S.F. GARAGE AND 410 S.F. OF COVERED PORCH. EXISTING LIVING ROOM AND KITCHEN TO BE INCLUDED IN REMODEL PLUS VARIOUS FINISH UPGRADES THROUGHOUT.

ASSEMBLY NOTES:

ASSEMBLY NOTES:

1. REFER TO PROJECT SPECIFICATIONS FOR INFORMATION ON PRODUCTS LISTED IN THE FLOOR, ROOF AND WALL ASSEMBLIES.
2. REFER TO FINISH SCHEDULE FOR SCHEDULED INTERIOR FINISHES.
3. PROVIDE HORIZONTAL & VERTICAL FIRE BLOCKING & DRAFT STOPPING AT ALL ASSEMBLIES AS REQUIRED BY CODE.
4. PROVIDE REINFORCED BACKING AT WALLS & CEILINGS AS REQUIRED TO SUPPORT ALL EQUIPMENT,FIXTURES, FURNISHINGS, ETC. TO BE ATTACHED TO FRAMING.
5. SEAL ALL PENETRATIONS AT FIRE & SOUND RATED PARTITIONS WITH APPROVED SYSTEMS TO MAINTAIN REQUIRED RATINGS.
6. PROVIDE FIRE RATED GYP. BOARD ENCLOSURE AT ALL RECESSED FIXTURES TO MAINTAIN REQUIRED RATINGS.
7. METAL STUD GAUGES WHERE SHOWN ARE MINIMUM REQUIRED. PROVIDE STUD GAUGES & CONNECTIONS AS REQUIRED BY BUILDING CODE FOR ALL CONDITIONS.
8. ALL INTERIOR PARTITIONS SHALL EXTEND TO STRUCTURE, UNLESS NOTED OTHERWISE.
9. WOOD STUD SIZES SHOWN ARE THE MINIMUM REQUIRED AND STUD SPACING IS THE MAXIMUM ALLOWED. REFER TO THE STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND OTHER REQUIREMENTS.
10. REQUIRED STRUCTURAL PLYWOOD SHEATHING IS NOT SHOWN ON ALL WALL ASSEMBLIES. REFER TO STRUCTURAL DRAWINGS FOR LOCATIONS AND REQUIREMENTS FOR PLYWOOD SHEATHING.
11. REFER TO THE REFERENCED STANDARDS FOR SPECIFIC CONSTRUCTION REQUIREMENTS AT FIRE RATED ASSEMBLIES. U.L. - UNDERWRITERS LABORATORIES, C.B.C. - CALIFORNIA BUILDING CODE.
12. PROVIDE CEMENTITIOUS BACKER BOARD @ WALL AREAS SCHEDULED TO RECEIVE TILE.

STONE VENEER ANCHORING SYSTEM:

Stone veneer units not exceeding 10 inches in thickness may be anchored directly to structural masonry, concrete, or to studs.

1. WITH CONCRETE OR MASONRY BACKING:
   Anchor ties shall not be less than 0.109-inch (No. 12 B.W. gage) galvanized wire, or approved equal, formed as an exposed eye extending not less than 1/2 inch beyond the face of the backing. The legs of the loops shall not be less than 6 inches in length bent at right angles and laid in the masonry mortar joint and spaced so that the eyes or loops are 12 inches maximum on center in both directions. There shall be provided not less than a 0.109-inch (No. 12 B.W. gage) galvanized wire tie, or approved equal, threaded through the exposed loops for every 2 square feet of stone veneer. This tie shall be a loop having legs not less than 15 inches in length bent so that it will lie in the stone veneer mortar joint. The last 2 inches of each wire leg shall have a right angle bend. One inch of cement grout shall be placed between the backing and the stone veneer.
2. WITH STUD BACKING:
   A 2-inch-by-2-inch 0.065-inch (No. 16 B.W. gage) galvanized wire mesh with two layers of waterproof paper backing shall be applied directly to 2x4 wood studs spaced a maximum of 16 inches on center or 2x6 wood studs space a maximum of 24 inches on center. On studs, the mesh shall be attached with 2-inch-long galvanized steel wire furring nails at 4 inches on center providing a minimum 1-1/8-inch penetration into each stud and with 8-penny common nailes at 8 inches on center into top and bottom plates. The galvanized wire mesh may be attached to steel studs with equivalent wire ties. There shall not be less than 0.109-inch (No. 12 B.W. gage) galvanized wire, or approved equal, looped through the mesh for every 2 square feet of stone veneer. This tie shall be a loop having legs not less than 15 inches in length, bent so that it will lie in the veneer mortar joint. The last 2 inches of each wire leg shall have a right angle bend. One-inch-minimum thickness of cement grout shall be placed between the backing and the stone veneer.

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A0.1	GENERAL INFORMATION
A1.1	PROPOSED SITE PLAN
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A2.1	PROPOSED FLOOR PLAN
A2.2	PROPOSED ROOF PLAN
A2.3	PROPOSED DOOR AND WINDOW SCHEDULES
A3.1	PROPOSED ELEVATIONS
A3.2	PROPOSED PERSPECTIVES
E2.1	EXISTING FLOOR PLAN
E2.2	EXISTING ROOF PLAN
E3.1	EXISTING ELEVATIONS

RECEIVED on 10/23/2025 CDVR25-01054
By Contra Costa County
Department of Conservation and Development

CBC CHAPTER 7A COMPLIANCE

CBC CHAPTER 7A COMPLIANCE SUMMARY:

THIS PROPERTY IS LOCATED WITHIN A NON-VERY HIGH FIRE HAZARD SEVERITY ZONE. 7A COMPLIANT DESIGN NOT REQUIRED.

VICINITY MAP (N.T.S.)



PROJECT INFORMATION

PROJECT LOCATION

1048 ADRIENNE DR.
ALAMO, CA 94507
A.P.N: 197-060-017

OWNER INFORMATION

ERIC MOCZULSKI AND SHANNON DAUGHTON
1048 ADRIENNE DR.
ALAMO, CA 94507

ARCHITECT

MASON WODHAMS ARCHITECTURE CORP.
23 RAILROAD AVE. #352
DANVILLE, CA 94526
PH: 805.234.3812
CONTACT: MASON WODHAMS

CODE INFORMATION

PARCEL ZONING:	R-20
CONSTRUCTION TYPE:	V-B
OCCUPANCY	R-3/U
SPRINKLERS:	NO

CODE INFORMATION

2022 CALIFORNIA BUILDING CODE
2022 CALIFORNIA ELECTRICAL CODE
2022 CALIFORNIA MECHANICAL CODE
2022 CALIFORNIA PLUMBING CODE
2022 CALIFORNIA FIRE CODE
2022 CALIFORNIA RESIDENTIAL CODE
2022 CALIFORNIA ENERGY CODE
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

CONSULTANTS

STRUCTURAL ENGINEERING
TBD

ARBORIST
N/A

SURVEYOR/CIVIL ENGINEER
DEBOLT CIVIL ENGINEERING
480 SAN RAMON VALLEY BLVD. UNIT L
DANVILLE, CA 94526
PH (925) 837-3780
CONTACT: EASTON MCALLISTER

TITLE 24 ENERGY CALCULATIONS
TBD

MASON WODHAMS ARCHITECTURAL CORP.
23 RAILROAD AVE. #352
DANVILLE, CA 94526
(805) 234-3812

CLIENT
ERIC MOCZULSKI AND SHANNON DAUGHTON

PROJECT
ADRIENNE RESIDENCE
1048 ADRIENNE DR.
ALAMO, CA 94549

APN: 197-060-017

LICENSED ARCHITECT
MASON J. WODHAMS
No. C-33064
12.31.25
RENEWAL DATE
STATE OF CALIFORNIA

REVISIONS

DATE
09.30.25

SCALE
N/A

COVER SHEET

SHEET
A0.1



PROJECT SUMMARY

EXISTING LOT SIZE:	22,829 S.F.
EXISTING RESIDENCE:	
MAIN FLOOR LIVING AREA	2,233 S.F.
TOTAL LIVING AREA	2,233 S.F.
ATTACHED 1-CAR GARAGE	380 S.F.
PROPOSED RESIDENCE:	
MAIN FLOOR LIVING AREA	2,580 S.F.
TOTAL LIVING AREA	2,580 S.F.
ATTACHED 1-CAR GARAGE	250 S.F.

IMPERVIOUS CALCULATIONS

EXISTING COVERAGE:	
BUILDINGS	2,613 S.F.
COVERED PORCHES	89 S.F.
HARDSCAPE	1,950 S.F.
TOTAL PROPOSED COVERAGE	4,652 S.F.
PROPOSED COVERAGE:	
BUILDINGS	2,830 S.F.
COVERED PORCHES	410 S.F.
HARDSCAPE	1,140 S.F.
TOTAL PROPOSED COVERAGE	4,380 S.F.
TOTAL PROPOSED COVERAGE:	4,380 S.F.
LOT SIZE:	22,829 S.F.
% LOT COVERAGE	19.19%

PARKING SUMMARY

SPACES PROVIDED	
COVERED	1
UNCOVERED	2

PROPOSED SITE PLAN

00 05 10 20 feet

MASON WODHAMS ARCHITECTURAL CORP.

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CLIENT
ERIC MOCZULSKI AND SHANNON DAUGHTON

PROJECT
ADRIENNE RESIDENCE

1048 ADRIENNE DR.
ALAMO, CA 94549

APN: 197-060-017

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MASON J. WODHAMS
No. C-33064
12.31.25
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STATE OF CALIFORNIA

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DATE
09.30.25

SCALE
1"=10'-0"

PROPOSED SITE PLAN

SHEET
A1.1

ABBREVIATIONS

AC	ASPHALT CONCRETE
TFC	TOP FACE OF CURB
FL	FLOW LINE
LIP	LIP OF GUTTER
CB	CATCH BASIN
DI	DRAIN INLET
FNC	FENCE
INT	INTERSECTION
G	GROUND
GB	GRADE BREAK
T/BNK	TOP BANK
SSMH	SANITARY SEWER MANHOLE
MH	MANHOLE
WM	WATER METER
CONC	CONCRETE
FF	FINISH FLOOR
TW	TOP OF WALL
BW	BOTTOM OF WALL

LEGEND

BOUNDARY LINE
ADJACENT BOUNDARY
EASEMENT LINE
CONCRETE
CURB
DECK/PATIO
FENCE
GRADE BREAK
PAVEMENT
UTILITIES
WALL
STRUCTURE
TREE

NOTE

THIS SURVEY SHOWS ALL EASEMENTS OF RECORD PER THE PRELIMINARY TITLE REPORT PREPARED BY OLD REPUBLIC TITLE COMPANY, ORDER NO. 0118030511-DDC, DATED MAY 08, 2020.

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 inch = 10 ft.

ADRIENNE DRIVE
EX JP POLE w/ANCHOR
EX 5' PUE (67-M-11)
N29°07'05"W 79.31'
45.4'
EX CONC PAD
25.3'
N85°55'12"E 256.43'
25.6'
EX CLEANOUT
EX CONC WALKWAY
EXIST RESIDENCE
EX CONC PATIO
23.7'
EX PILLAR
EX CONC DRIVEWAY
L=49.50' R=300.00' D=009°27'11"
25.8'
9.8'
5.1'
4.5'
28.3'
EX FENCE
EX WALL
GRADE BREAK
APPROX TOP OF CREEK BANK
EX DRAINAGE EASEMENT (67-M-11)
S21°26'15"E 67.93'
S72°37'39"W 232.19'

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

PARTIAL TOPOGRAPHIC SURVEY

1048 ADRIENNE DRIVE

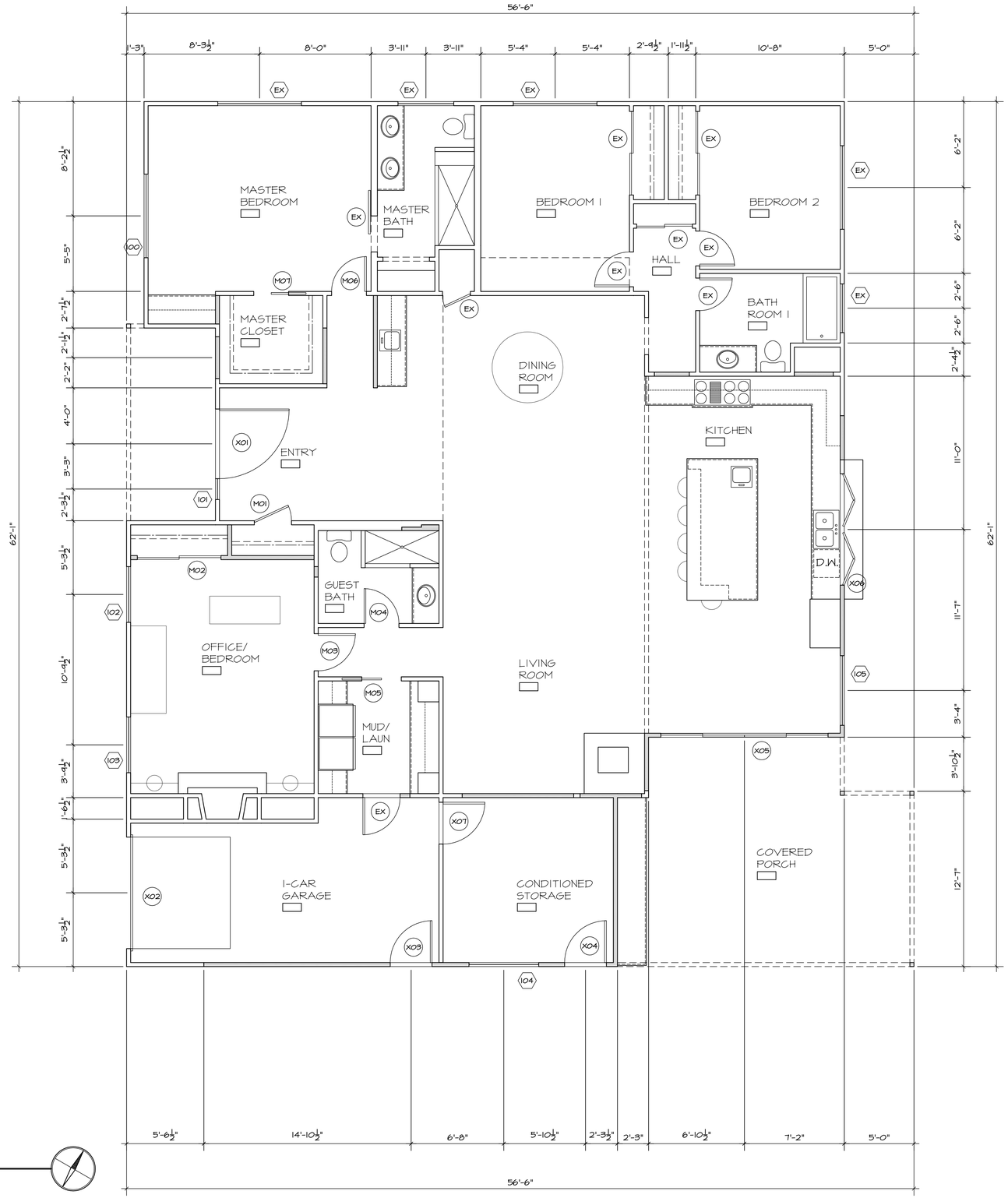
ALAMO CONTRA COSTA COUNTY CALIFORNIA

EASTON C McALLISTER - PE 61148 / PLS 9583
RENEWAL DATE: 12/31/26 (PE) 03/31/27 (PLS)

#	REVISIONS	DATE

DEBOLT 50+ YEARS CIVIL ENGINEERING
(925) 837-3780 | OFFICE@DEBOLTCIVIL.COM
480 SAN RAMON VALLEY BLVD UNIT L, DANVILLE, CA 94526

Date: 10/03/2025
Scale: 1" = 10'
By: EM / kl
Job No.: 25225



PROPOSED FLOOR PLAN

00 02 04 08 feet

LEGEND

- EXISTING WALL
- PROPOSED WALL
- EXISTING WALL TO BE REMOVED
- # ASSEMBLIES SEE SHEET A0.1

CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD

MASON WODHAMS ARCHITECTURAL CORP.

23 RAILROAD AVE. #352
DANVILLE, CA 94526
(805) 234-3812

CLIENT
ERIC MOCZULSKI AND SHANNON DAUGHTON

PROJECT
ADRIENNE RESIDENCE

1048 ADRIENNE DR.
ALAMO, CA 94549

APN: 197-060-017

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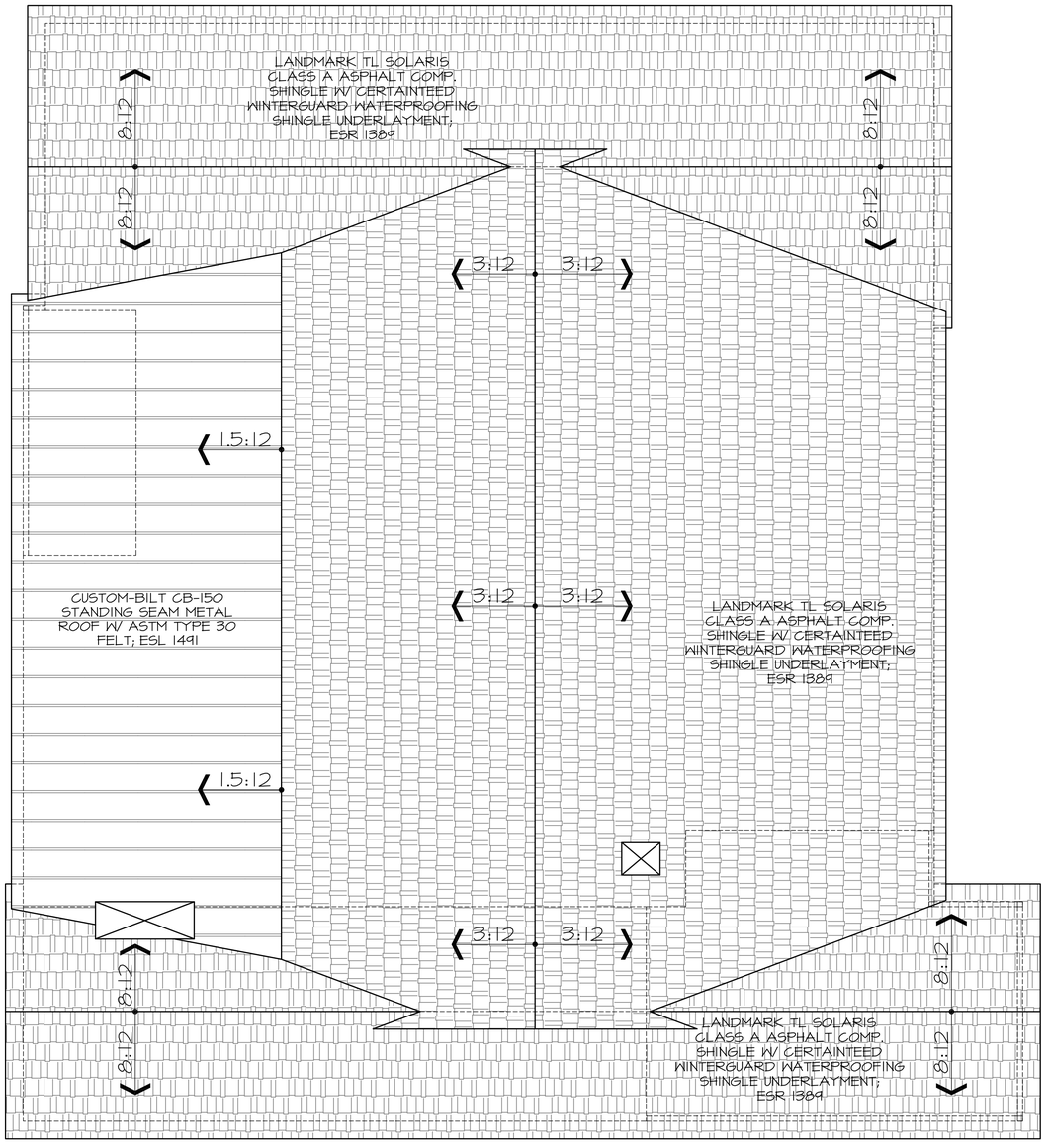
REVISIONS

DATE
09.30.25

SCALE
1/4"=1'-0"

PROPOSED FLOOR PLAN

SHEET
A2.1



LEGEND

- EXISTING WALL
- PROPOSED WALL
- EXISTING WALL TO BE REMOVED
- # ASSEMBLIES SEE SHEET A0.1

CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD

PROPOSED ROOF PLAN

00 02 04 08 feet

MASON WODHAMS ARCHITECTURAL CORP.

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DATE
09.30.25

SCALE
1/4"=1'-0"

PROPOSED ROOF PLAN

SHEET
A2.2

DOOR SCHEDULE

LOCATION	SYM	SIZE			MATERIAL		FINISH		TYPE	COMMENTS
		WIDTH	HEIGHT	HEAD HT.	DOOR	FRAME	DOOR	FRAME		
01 MAIN	X01	5'-0"	8'-0"	8'-0"					PIVOT	-
01 MAIN	X02	8'-0"	8'-0"	8'-0"					OVERHEAD	-
01 MAIN	X03	3'-0"	8'-0"	8'-0"					-	TEMPERED
01 MAIN	X02	3'-0"	8'-0"	8'-0"					-	TEMPERED
01 MAIN	X03	12'-0"	8'-0"	8'-0"					CENTER SLIDE	TEMPERED
01 MAIN	X02	8'-0"	5'-0"	8'-0"					CENTER FOLDING	RECESSED TRACK, TEMPERED
01 MAIN	X03	3'-0"	8'-0"	8'-0"					-	-
01 MAIN	M01	2'-8"	8'-0"	8'-0"					-	-
01 MAIN	M02	6'-0"	8'-0"	8'-0"					-	-
01 MAIN	M03	2'-8"	8'-0"	8'-0"					-	-
01 MAIN	M04	2'-6"	8'-0"	8'-0"					-	-
01 MAIN	M05	2'-10"	8'-0"	8'-0"					POCKET	-
01 MAIN	M06	2'-6"	8'-0"	8'-0"					-	-
01 MAIN	M07	2'-6"	8'-0"	8'-0"					POCKET	-

WINDOW SCHEDULE

LOCATION	SYM	SIZE			MATERIAL		FINISH		TYPE	COMMENTS
		WIDTH	HEIGHT	HEAD HT.	WINDOW	FRAME	WINDOW	FRAME		
01 MAIN	100	6'-0"	5'-0"	8'-0"					CASEMENT	-
01 MAIN	101	1'-6"	8'-0"	8'-0"					CASEMENT	TEMPERED
01 MAIN	102	4'-0"	5'-0"	8'-0"					CASEMENT	-
01 MAIN	103	4'-0"	5'-0"	8'-0"					CASEMENT	-
01 MAIN	104	5'-0"	5'-0"	8'-0"					CASEMENT	-
01 MAIN	105	5'-0"	7'-0"	8'-0"					CASEMENT	TEMPERED

NOTES:

1. ALL DOOR TYPES, STYLES, FUNCTIONS, DETAILS, MATERIALS, HARDWARE, ETC SHALL BE SPECIFIED BY THE INTERIOR DESIGNER IN CONJUNCTION WITH THE OWNERS APPROVAL. DOOR REPRESENTATIVE SHALL PROVIDE THE INTERIOR DESIGNER A COMPLETE DOOR SCHEDULE FOR THEIR REVIEW AND APPROVAL. ALL FRAMING ROUGH OPENINGS SHALL BE VERIFIED BY THE DOOR REPRESENTATIVE PRIOR TO ORDERING ANY DOORS.

2. ALL WINDOW TYPES, STYLES, FUNCTIONS, DETAILS, MATERIALS, HARDWARE, ETC SHALL BE SPECIFIED BY THE INTERIOR DESIGNER IN CONJUNCTION WITH THE OWNERS APPROVAL. WINDOW REPRESENTATIVE SHALL PROVIDE THE INTERIOR DESIGNER A COMPLETE WINDOW SCHEDULE FOR THEIR REVIEW AND APPROVAL. ALL FRAMING ROUGH OPENINGS SHALL BE VERIFIED BY THE WINDOW REPRESENTATIVE PRIOR TO ORDERING ANY WINDOWS.

3. AN EXTERIOR EGRESS DOOR SHALL BE PROVIDED FOR EACH DWELLING UNIT THAT IS READILY-OPENABLE FROM INSIDE THE DWELLING WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

4. CONTRACTOR TO CONFIRM WINDOW SIZES TO PROVIDE ADEQUATE EGRESS.

5. AT LEAST ONE WINDOW IN BEDROOM, HABITABLE ATTIC AREA, OR BASEMENT SHALL PROVIDE THE MINIMUM REQUIRED MEANS OF EMERGENCY ESCAPE.

6. NET CLEAR OPENING OF 5.7 S.F., A MINIMUM NET CLEAR OPENING HEIGHT OF 24", A MINIMUM NET CLEAR OPENING WIDTH OF 20" REQUIRED FOR EGRESS.

7. SILL HEIGHT NO MORE THAN 44" ABOVE THE FINISH FLOOR REQUIRED FOR EGRESS.

8. OPERATION SHALL BE FROM INSIDE THE ROOM WITHOUT THE USE OF SPECIAL KEYS, TOOLS OR KNOWLEDGE REQUIRED FOR EGRESS.

MASON WODHAMS ARCHITECTURAL CORP.

23 RAILROAD AVE. #352
DANVILLE, CA 94526
(805) 234-3812

CLIENT
ERIC MOCZULSKI AND SHANNON DAUGHTON

PROJECT
ADRIENNE RESIDENCE
1048 ADRIENNE DR.
ALAMO, CA 94549

APN: 197-060-017

LICENSED ARCHITECT
MASON J. WODHAMS
No. C-33064
12.31.25
RENEWAL DATE
STATE OF CALIFORNIA

REVISIONS

DATE
09.30.25

SCALE
1/4"=1'-0"

PROPOSED WINDOW AND DOOR SCHEDULES

SHEET
A2.3



PROPOSED NORTH ELEVATION

00 02 04 08 FEET



PROPOSED EAST ELEVATION

00 02 04 08 FEET



PROPOSED SOUTH ELEVATION

00 02 04 08 FEET



PROPOSED WEST ELEVATION

00 02 04 08 FEET

MASON WODHAMS ARCHITECTURAL CORPORATION

23 RAILROAD AVE. #352
DANVILLE, CA 94526

CLIENT:

ERIC MOCZULSKI AND SHANNON DAUGHTON

PROJECT:

ADRIENNE RESIDENCE

1048 ADRIENNE DR.
ALAMO, CA 94507

APN: 197-060-017

LICENSED ARCHITECT
MASON J. WODHAMS
No. C-33064
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STATE OF CALIFORNIA

REVISIONS:

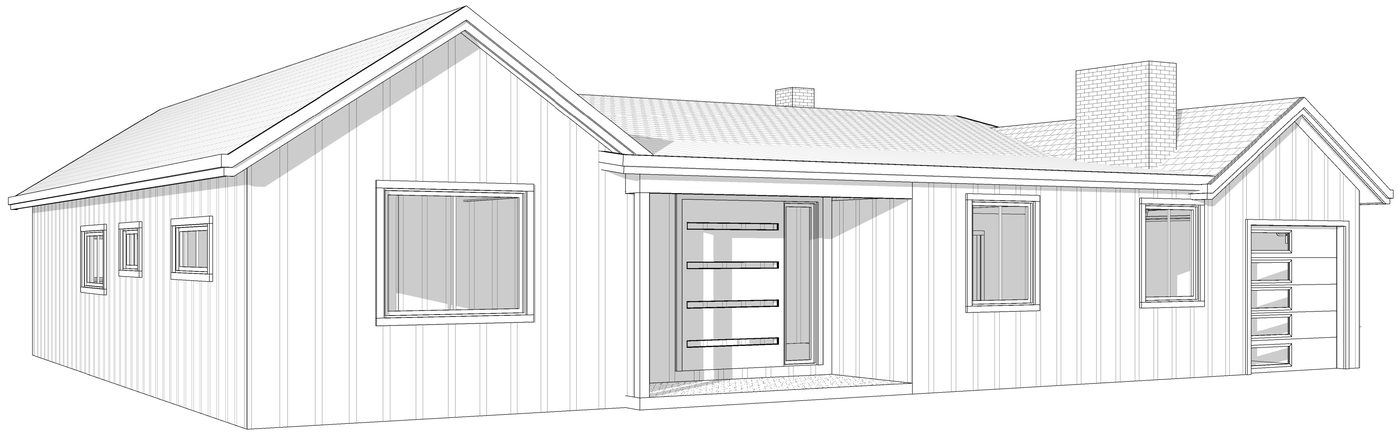
DATE:
09/30/2025

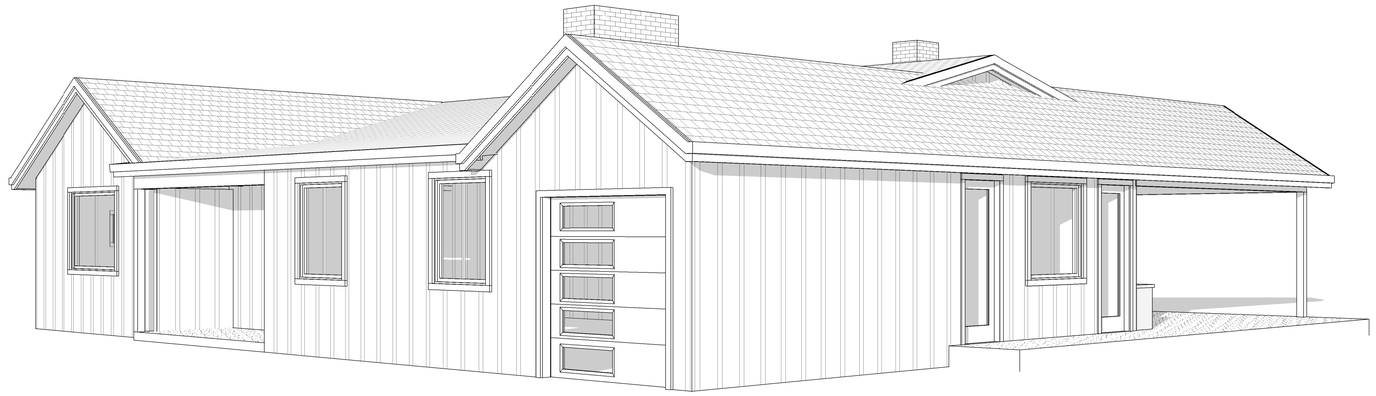
SCALE:
1/4" = 1'-0"

TITLE:
PROPOSED ELEVATIONS

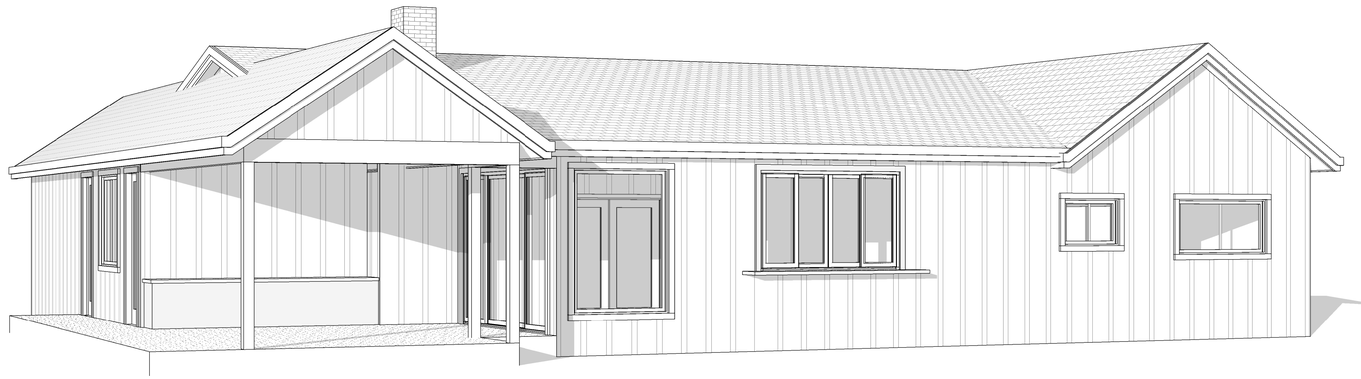
SHEET:
A3.1

1 FRONT LEFT PERSPECTIVE





2 FRONT RIGHT PERSPECTIVE



3 REAR PERSPECTIVE

MASON WODHAMS ARCHITECTURAL CORPORATION

23 RAILROAD AVE. #352
DANVILLE, CA 94526

CLIENT:

ERIC MOCZULSKI AND SHANNON DAUGHTON

PROJECT:

ADRIENNE RESIDENCE

1048 ADRIENNE DR.
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RENEWAL DATE
STATE OF CALIFORNIA

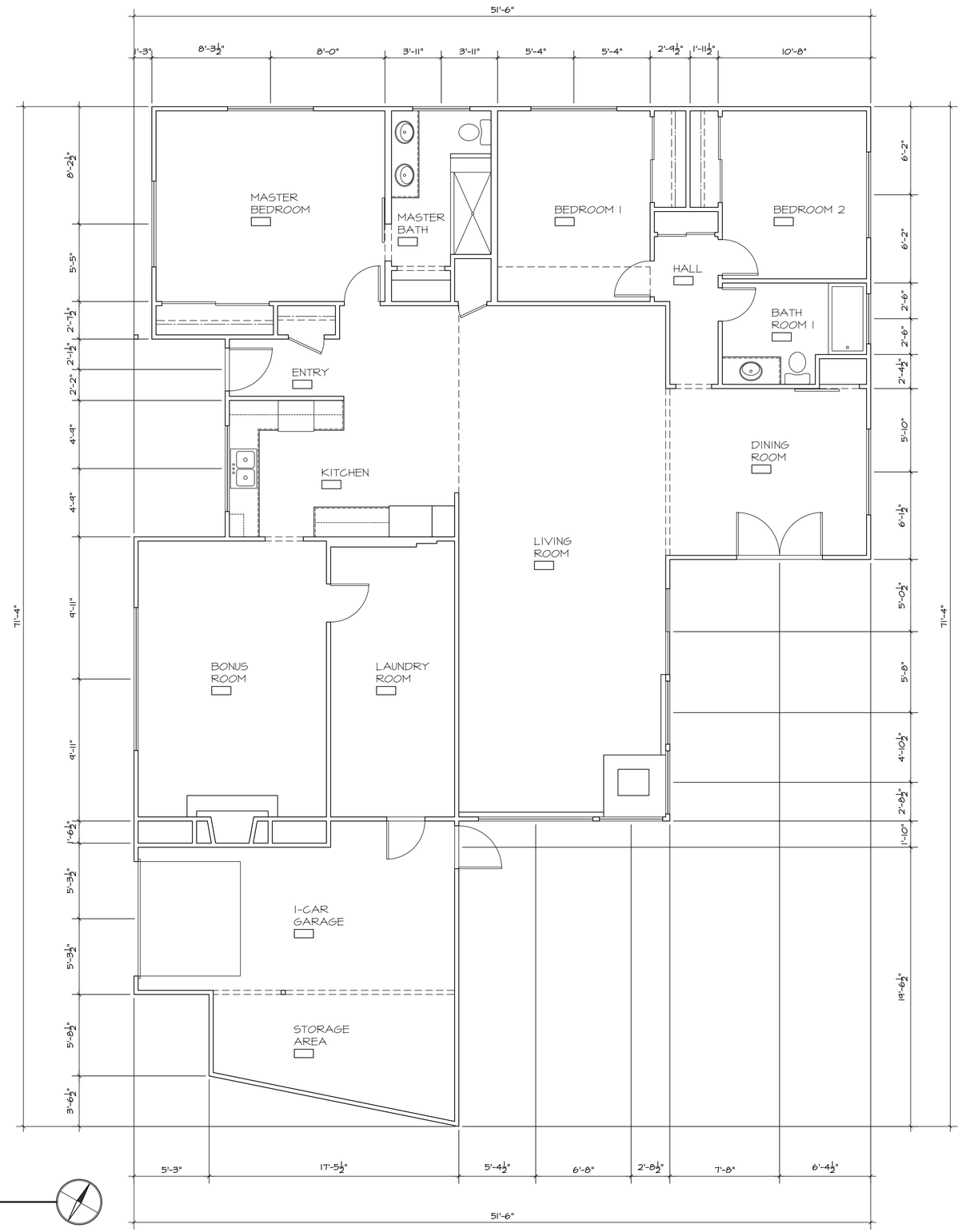
REVISIONS:

DATE:
09/30/2025

SCALE:

TITLE:
PROPOSED PERSPECTIVES

SHEET:
A3.2



EXISTING FLOOR PLAN

00 02 04 08 feet

LEGEND

- EXISTING WALL
- PROPOSED WALL
- EXISTING WALL TO BE REMOVED
- # ASSEMBLIES SEE SHEET A0.1

CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD

MASON WODHAMS ARCHITECTURAL CORP.

23 RAILROAD AVE. #352
DANVILLE, CA 94526
(805) 234-3812

CLIENT
ERIC MOCZULSKI AND SHANNON DAUGHTON

PROJECT
ADRIENNE RESIDENCE

1048 ADRIENNE DR.
ALAMO, CA 94549

APN: 197-060-017

LICENSED ARCHITECT
MASON J. WODHAMS
No. C-33064
12.31.25
RENEWAL DATE
STATE OF CALIFORNIA

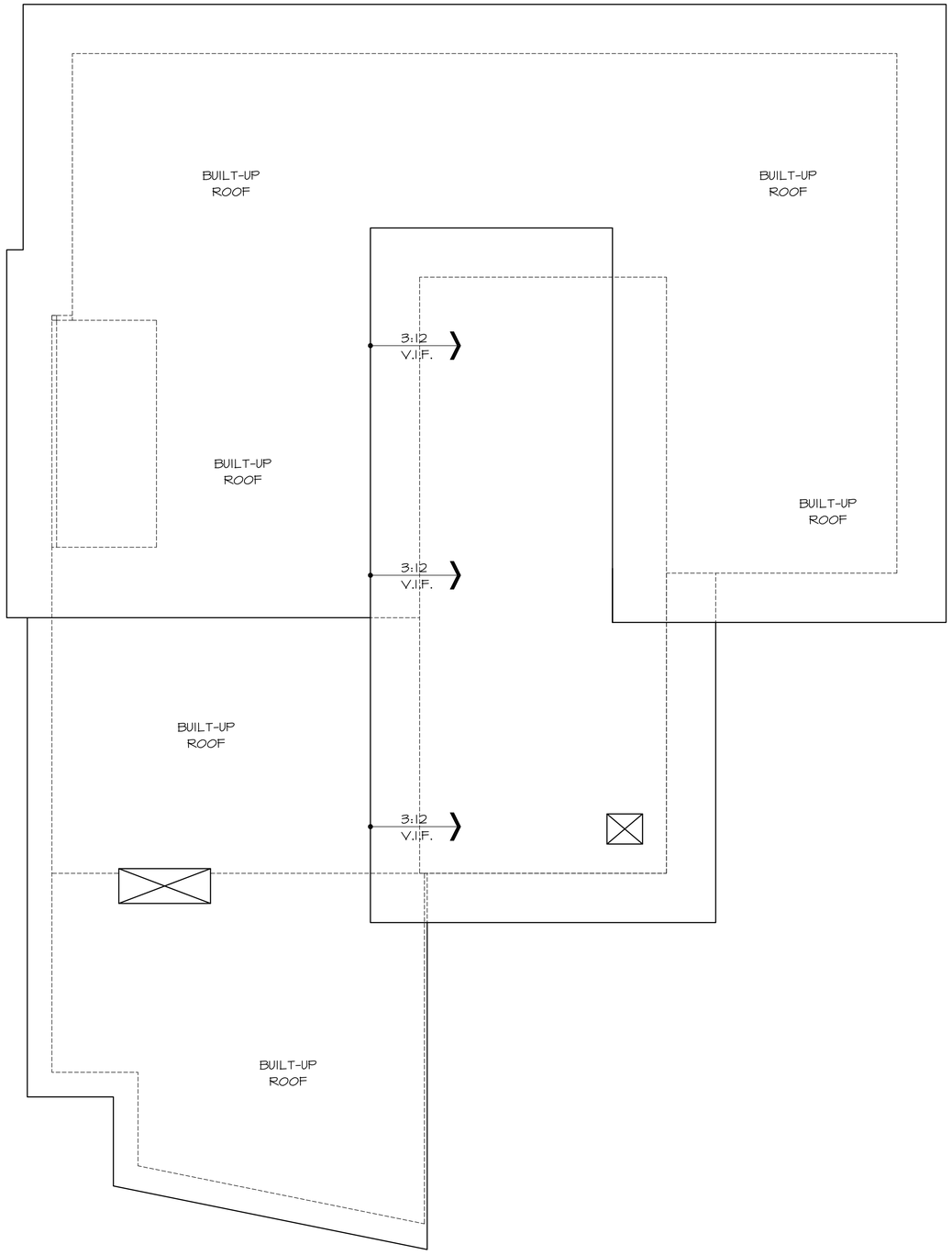
REVISIONS

DATE
09.30.25

SCALE
1/4"=1'-0"

EXISTING FLOOR PLAN

SHEET
E2.1



LEGEND

- EXISTING WALL
- PROPOSED WALL
- EXISTING WALL TO BE REMOVED
- # ASSEMBLIES SEE SHEET A0.1

CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD

EXISTING ROOF PLAN

00 02 04 08 feet

MASON WODHAMS ARCHITECTURAL CORP.

23 RAILROAD AVE. #352
DANVILLE, CA 94526
(805) 234-3812

CLIENT
ERIC MOCZULSKI AND SHANNON DAUGHTON

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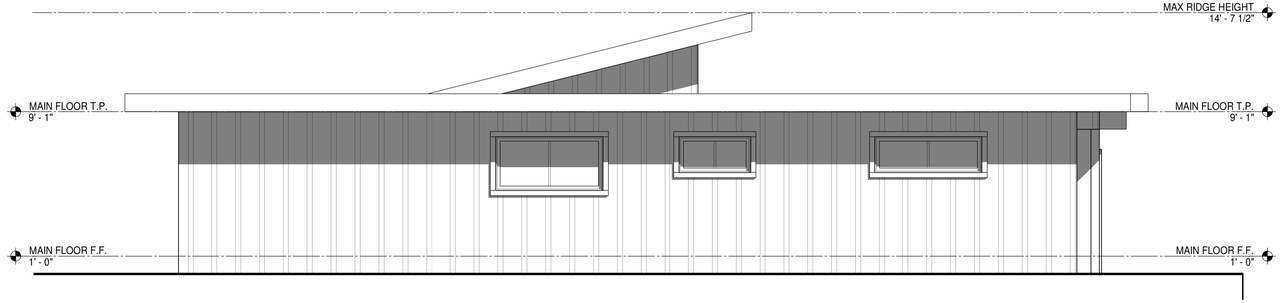
REVISIONS

DATE
09.30.25

SCALE
1/4"=1'-0"

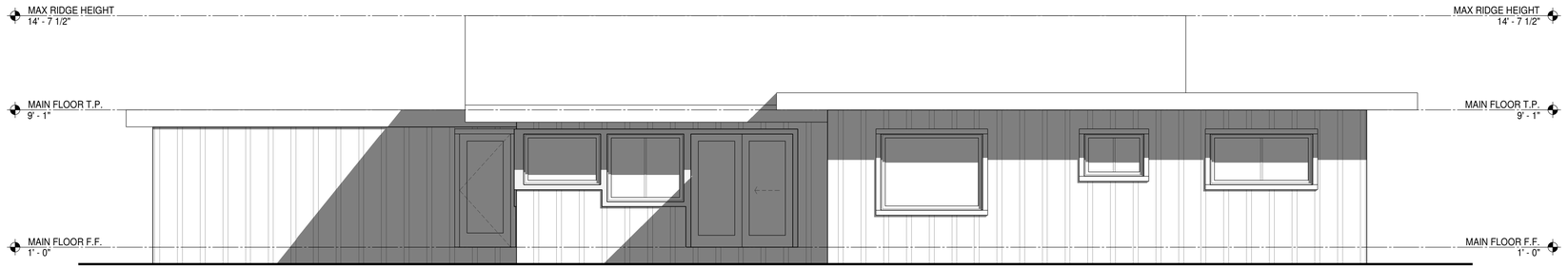
EXISTING ROOF PLAN

SHEET
E2.2



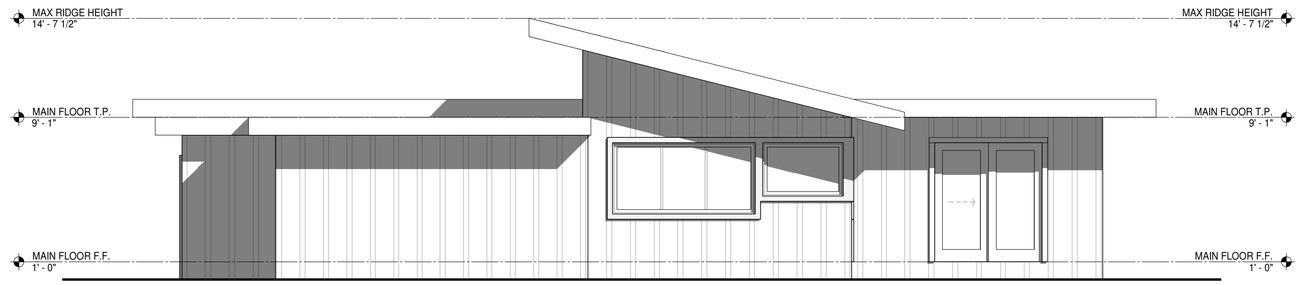
EXISTING NORTH ELEVATION

00 02 04 08 FEET



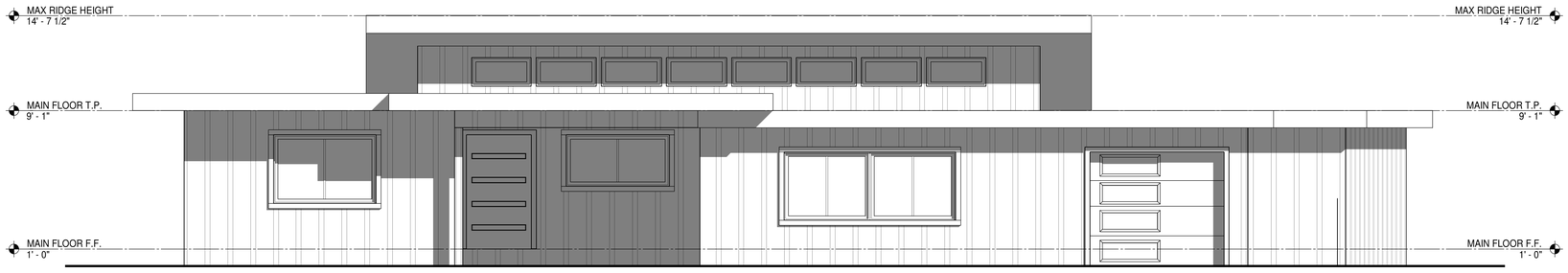
EXISTING EAST ELEVATION

00 02 04 08 FEET



EXISTING SOUTH ELEVATION

00 02 04 08 FEET



EXISTING WEST ELEVATION

00 02 04 08 FEET

MASON WODHAMS ARCHITECTURAL CORPORATION

23 RAILROAD AVE. #352
DANVILLE, CA 94526

CLIENT:

ERIC MOCZULSKI AND SHANNON DAUGHTON

PROJECT:

ADRIENNE RESIDENCE

1048 ADRIENNE DR.
ALAMO, CA 94507

APN: 197-060-017

LICENSED ARCHITECT
MASON J. WODHAMS
No. C-33064
12.31.25
RENEWAL DATE
STATE OF CALIFORNIA

REVISIONS:

DATE:
09/30/2025

SCALE:
1/4" = 1'-0"

TITLE:
EXISTING ELEVATIONS

SHEET:
E3.1

File #: 25-4961 **Agenda Date:** 12/2/2025 **Agenda #:** 8.

CONTRA COSTA COUNTY
DEPARTMENT OF CONSERVATION AND DEVELOPMENT
COMMUNITY DEVELOPMENT DIVISION
30 Muir Road
Martinez, CA 94553-4601
Phone: 925-655-2700
Fax: 925-655-2758

CONTRA COSTA
CONSERVATION & DEVELOPMENT

AGENCY COMMENT REQUEST

Date 5/2/25

We request your comments regarding the attached application currently under review.

DISTRIBUTION

INTERNAL

- ✔ Building Inspection
- ✔ Advance Planning
- ✔ Trans. Planning
- ALUC Staff
- County Geologist
- Grading Inspection
- ✔ Housing Programs
- Telecom Planner
- HCP/NCCP Staff

HEALTH SERVICES DEPARTMENT

- ✔ Environmental Health
- Hazardous Materials

PUBLIC WORKS DEPARTMENT

- ✔ Engineering Services
- Traffic
- Flood Control (Full-size)
- Special Districts

LOCAL

Fire District _____

- ✔ San Ramon Valley – (email) rwendel@srvfire.ca.gov
- Consolidated – (email) fire@cccfpd.org

- ✔ Sanitary District Central Sanitary
- ✔ Water District EBMUD
- City of _____
- School District(s) _____
- LAFCO
- Reclamation District #_____
- East Bay Regional Park District
- Diablo/Discovery Bay/Crockett CSD
- ✔ MAC/TAC Alamo
- Improvement/Community Association
- ✔ CC Mosquito & Vector Control Dist (email)

OTHERS/NON-LOCAL

- ✔ CHRIS (email only: nwic@sonoma.edu)
- CA Fish and Wildlife, Region 3 – Bay Delta
- Native American Tribes

ADDITIONAL RECIPIENTS

Alamo Improvement Association (AIA)

Please submit your comments to:

Project Planner Grant Farrington
Phone # 925-655-2868
E-mail grant.farrington@dcd.cccounty.us
County File # CDSD25-09717

Prior to May 30, 2025

* * * * *

We have found the following special programs apply to this application:

- Landslide
- ✔ Liquefaction
- 60-dBA Noise Control
- CA EPA Hazardous Waste Site
- ✔ High or Very High FHSZ
- Active Fault Zone (A-P)
- Flood Hazard Area

* * * * *

AGENCIES: Please indicate the applicable code section for any recommendation required by law or ordinance. Please send copies of your response to the Applicant and Owner.

Comments: None Below ___ Attached

Print Name _____

_____
Signature DATE

Agency phone # _____

CONTRA COSTA
CONSERVATION & DEVELOPMENT

Planning Application Summary

County File Number: CDSD25-09717 **File Date: 5/1/2025**

Applicant:
Adam Nieting
812 Trotter Ct
Walnut Creek, CA 94596

adam@nietingdevelopment.com
(415) 963-2326

Property Owner:
ARTHUR ANDERSON
5303 PINE HOLLOW RD
CONCORD, CA 945214602

Art@stonevalleyfarm.com
(925) 997-2599

Project Description:
The applicant requests approval of a Vesting Tentative Map for a proposed subdivision of approximately 13.65 acres into eight single-family residential lots.

Project Location: (Address: 455 LIVORNA RD, ALAMO, CA 945071469), (APN: 193010014)

Additional APNs: APN: 193-010-014, 193-010-039

General Plan Designation(s): RVL

Zoning District(s): A-2

Flood Hazard Areas: X

AP Fault Zone: NO

60-dBA Noise Control: NO

MAC/TAC: Alamo

Sphere of Influence: N/A

Fire District: SAN RAMON VLY FIRE

Sanitary District: CENTRAL SANITARY

Housing Inventory Site: NO

Specific Plan: N/A

Fees:

Fee Item	Description	Account Code	Total Fee	Paid
052B	Notification Fee ($30)	002606-9660-REV-000-5B052B	30.00	30.00
HSDR	Environmental Health Fee ($57)	002606-9660-REV-000-5BHSDR| $5.00	57.00	57.00
SDS0033	Tentative Subdivision Map Review Major	000350-9665-REV-000-5B0033	10000.00	10000.00
		Total:	**10087.00**	**10087.00**

RECEIVED on 04/30/2025 CDSD25-09717
By Contra Costa County
Department of Conservation and Development

Art Anderson
34 Alamo Square, Suite 200
Alamo, CA 94507

April 28, 2025

Joseph W. Lawlor, Jr.
Senior Planner
Contra Costa County Department of
Conservation and Development
30 Muir Road
Martinez, CA 94553

Re: Filing of Development Applications under SB 330 for Tentative Subdivision Map/ Density Bonus Information County File No. CDPC24-00005/APN: 193-010-014, 193-010-039

Dear Mr. Lawlor:

I am the owner of property at 455 Livorna Road in Contra Costa County. I am submitting a housing development project application under SB 330 for a tentative subdivision map which includes a density bonus request ("Project Application"), to develop 8 dwelling units on 13.5 gross acres (or 7.7 net acres) ("Proposed Project"). One of the eight units is proposed as affordable for a moderate-income household.

An SB 330 Preliminary Application ("Preliminary Application") for the Proposed Project was filed on November 6, 2024. On December 5, 2024, you acknowledged receipt of the Preliminary Application. The Project Application was submitted within the required 180 days from the date the Preliminary Application was filed.

The purpose of this letter is to explain the filing of the Project Application and provide the information necessary for the density bonus request.

I. FILING OF HOUSING DEVELOPMENT APPLICATIONS.

A. Preliminary Application.

As you know, SB 330 was approved in an effort to address the housing shortage and limits a local government's ability to deny housing projects that comply with the General Plan and/or zoning designation. SB 330 strengthen the Housing Accountability Act ("HAA") and requires counties to approve a housing development that is consistent with the General Plan and zoning standards that are in effect at the time a preliminary application is filed, unless there is an unavoidable public health or safety impact. Our due diligence confirms that the Proposed Project will not result in any such impacts.

The property has land use designations of RVL (Residential Very Low) and RC (Resource Conservation). Approximately 8.74 gross acres are designated RVL allowing 1

du/acre. The remaining 4.83 gross acres are designated RC. The net acreage of RVL as defined by the County after land is dedicated for rights of ways, and other public uses is 7.7 acres.

The zoning designation across the property is A2. This designation is inconsistent with the RVL General Plan designation. A rezoning can not required since the Project is consistent with the objective standards in the General Plan (Gov't Code Sect 65589.5 (j)(4)). In this instance, per General Plan Table LU-1, the Project is applying the R-40 zoning which is consistent with land use designation RVL. The Proposed Project includes eight units consistent with the density allowed in the General Plan and supported by the zoning.

B. Project Application.

The County has 30 days from the filing date to inform the applicant if the Project Application is complete since the project proposes less than 150 units. If the County determines the Project Application is incomplete, it must specify those parts of the application which are incomplete (limited to those items required on the County's checklist) and include a list and thorough description of specific information needed to complete the Project Application.

We will then have 90 days to resubmit and respond to the list of incomplete items. This resubmittal allows the County 30 days to determine if the resubmittal is complete. The County cannot request new information from the applicant that was not identified during its first round of review. If the County determines a Project Application is still incomplete, the applicant has the right to appeal the completeness review pursuant to the process established by the County.

Another provision in SB 330 to assist in promoting the construction of needed housing requires a final determination on the Proposed Project to be made in no more than five public hearings. We do not believe this will be difficult to accomplish since the Project is consistent with the General Plan.

II. DENSITY BONUS PROPOSAL.

A. Density Bonus Calculation.

The Proposed Project includes a density bonus request. The base density is 7.7 (using gross acreage[1]) rounded up to 8 units. Out of the eight proposed units, one unit will be restricted for a moderate-income household. The applicant agrees to construct 12.5% (which rounds to 13%) of the total units for a moderate-income household. With the inclusion of at least 10% of the units in the for-sale development restricted to moderate income, the Proposed Project is allowed one bonus unit; however the applicant will not use this bonus unit.

[1] State Density Bonus Law allows "maximum allowable gross residential density" to be used in calculating a density bonus (Gov't Code Sect. 65589.5(f)). The calculation of base density in using gross or net acreage produces the same result (eight units).

The Proposed Project is eligible for an unlimited number of waivers to development standards that have the effect of physically precluding the construction of a development under Gov't Code Sect. 65915(b)(1). The Project also qualifies for an incentive or concession under Gov't Code Sect. 65915(d)(1) and is additionally eligible for a vehicular parking reduction pursuant to Gov't Code Sect. 65915(p)(1).

B. Requested Waivers.

Waivers (deviations from a development standard) must be granted if imposition of the standards would physically preclude the construction of a project at the proposed density. Gov't Code section 65915(e)(1). We need not show the waivers are needed for economic feasibility, but just that it if imposed they will have the effect of physically precluding construction of the development.

Waivers can only be denied if the County finds that they would have a "specific, adverse impact upon the health, safety, or the physical environment, and for which there is no feasible way to mitigate or avoid the specific adverse impact." Gov't Code section 65915(e)(1). A "specific, adverse impact" means a "significant, quantifiable, direct, and unavoidable impact, based on objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete." Gov't Code section 65589.5(d)(2). An inconsistency with the general plan designation, a zoning requirement or development standard does not constitute a specific, adverse impact upon the public health or safety. Gov't Code section 65589.5(d)(2).

The following waivers are requested:

WAIVERS		
WAIVER #	COUNTY STANDARD/CODE	WAIVER NEEDED
WAIVER 1	84-16.602	LOT-AREA
WAIVER 2	84-16.604	LOT-WIDTH
WAIVER 3	84-16.606	LOT-DEPTH
WAIVER 4	84-16.10002	YARD-SIDE
WAIVER 5	84-14.1004	YARD-SETBACK
WAIVER 6	84-16.1006	YARD-REAR
WAIVER 7	82-4.214	BUILDING HEIGHT

CONCESSIONS	
CONCESSION	NOTES
CONCESSION #1	WE RESERVE THE RIGHT TO IDENTIFY A CONCESSION AS NECESSARY TO ACCOMMODATE THE PROJECT AS DESIGNED.

If these waivers are not granted, we will be physically precluded from constructing the project as proposed. I am also reserving the right to request additional waivers if needed.

C. Requested Concession.

A concession is a regulatory incentive or relaxation of development standards that results in identifiable cost reductions for the Proposed Project. I am not requesting a concession currently, but I am reserving the right to request a concession, if needed.

D. Parking Reduction.

I am meeting the parking requirements under the R-40 zone and if additional parking is required, I may seek a reduction.

E. Additional Information Requested on County's Application Form.

1. Vicinity/Location Map.

Included with Project Application

2. Site Plan.

Included with Project Application.

3. Location of Affordable Unit.

See Site Plan. Lot 2 is the affordable unit.

4. Existing Residence on Site.

A residence exists on the site which is owned and inhabited by owner.

5. Deed Restrictions.

There are no deed restrictions on the Property that will restrict the ownership of the affordable unit.

6. Distribution of Affordable Unit.

The affordable unit on Lot 2 is four bedrooms with 2.5 bathrooms and is approximately 2,063 sq ft. (gross of 2,570 sq ft.).

7. Phasing of development.

The affordable unit on Lot 2 will be constructed with the other 7 units.

8. Inclusionary Housing Plan.

As required by Chapter 822-4 of the County's Code, below is the required Inclusionary Housing Plan:

(a) A brief description of the residential development, including the number of market rate units and inclusionary units proposed, and the basis for the calculation of the number of units.

See above.

(b) The unit mix, location, structure type, and size (including number of bedrooms) of the market rate and inclusionary units. A site plan depicting the location of the inclusionary units must be provided.

UNIT BREAKDOWN

	BEDROOMS	BATHROOMS	TOTAL LIVING AREA	GARAGE AREA	COVERED PORCH/BALCONY	GROSS SQUARE FOOTAGE	COVERED PARKING
LOT 1 (PLAN B)	5	5.5	5,234 SQ/FT	872 SQ/FT	546 SQ/FT	6,652 SQ/FT	3 SPACES
LOT 2 (PLAN D)	4	2.5	2,063 SQ/FT	437 SQ/FT	70 SQ/FT	2,570 SQ/FT	2 SPACES
LOT 3 (PLAN A)	5	4.5	5,207 SQ/FT	989 SQ/FT	203 SQ/FT	6,399 SQ/FT	4 SPACES
LOT 4 (PLAN B REVERSED)	5	5.5	5,234 SQ/FT	872 SQ/FT	546 SQ/FT	6,652 SQ/FT	3 SPACES
LOT 5 (PLAN A)	5	4.5	5,207 SQ/FT	989 SQ/FT	203 SQ/FT	6,399 SQ/FT	4 SPACES
LOT 6 (PLAN C)	5	5.5	4,456 SQ/FT	842 SQ/FT	838 SQ/FT	6,136 SQ/FT	4 SPACES
LOT 7 (PLAN C REVERSED)	5	5.5	4,456 SQ/FT	842 SQ/FT	838 SQ/FT	6,136 SQ/FT	4 SPACES
LOT 8 (PLAN B)	5	5.5	5,234 SQ/FT	872 SQ/FT	546 SQ/FT	6,652 SQ/FT	3 SPACES

(c) The targeted household income levels of the inclusionary units.

Moderate income.

(d) For a phased project, a phasing plan that provides for the timely development of the inclusionary units as the residential development is built out.

The affordable unit on Lot 2 will be built concurrently with the remaining units.

(e) Any proposed density bonus and a description of any incentives requested of the county.

See above.

(f) If the developer intends to satisfy the inclusionary unit requirement by payment of an in-lieu fee, a statement to that effect, and a calculation of the total in-lieu fee payment required.

The Proposed Project includes one affordable unit on-site and will pay a fee for any remaining obligation.

(g) If an alternative compliance method is proposed, information sufficient to allow the county to determine either that on-site construction of inclusionary units is infeasible or that an alternative method of compliance could provide equivalent or greater benefit than would result from providing those inclusionary units on-site.

N/A

My team and I look forward to processing the Proposed Project with the County. Please call if you have any questions.

Very truly yours,



Art Anderson

POR SEC 6 T1S R1W MDB&M

A- TRACT 7744 MB 446-3 8-5-02

1- 22LSM22 6-6-63

2- 190PM15 5-12-04

APNs 193-010-014 & 193-010-039

P.B. 187

LIVORNA RD

SERAFIX RD

MIRANDA AVE

LEGACY DR

LEGACY CT

LAS QUEBRADAS LN

SECTION LINE

38' ACCESS EASE.

30' EBMUD EASE

FROM PCL 187-480-033

1" = 200'

03

010

02

18

08

TR 6960

"A"

"B"

1.123AC

5.441Ac.

.48Ac

.52Ac

.701Ac

1.445Ac

.059Ac

3.861Ac.

9.732Ac

3.148Ac.

2.486Ac.

1.065Ac.

6.088Ac.

5.191Ac.

4.161Ac.

1.866Ac.

2.60Ac.

2.790Ac.

3.188Ac.

2.580Ac.

3.222Ac.

2.889Ac.

1.38Ac.

FROM PG.8

FROM PG.8

FROM PG.8

NOTE: THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE INFORMATION DELINEATED HEREON. ASSESSOR'S PARCELS MAY NOT COMPLY WITH LOCAL LOT SPLIT OR BUILDING SITE ORDINANCES.

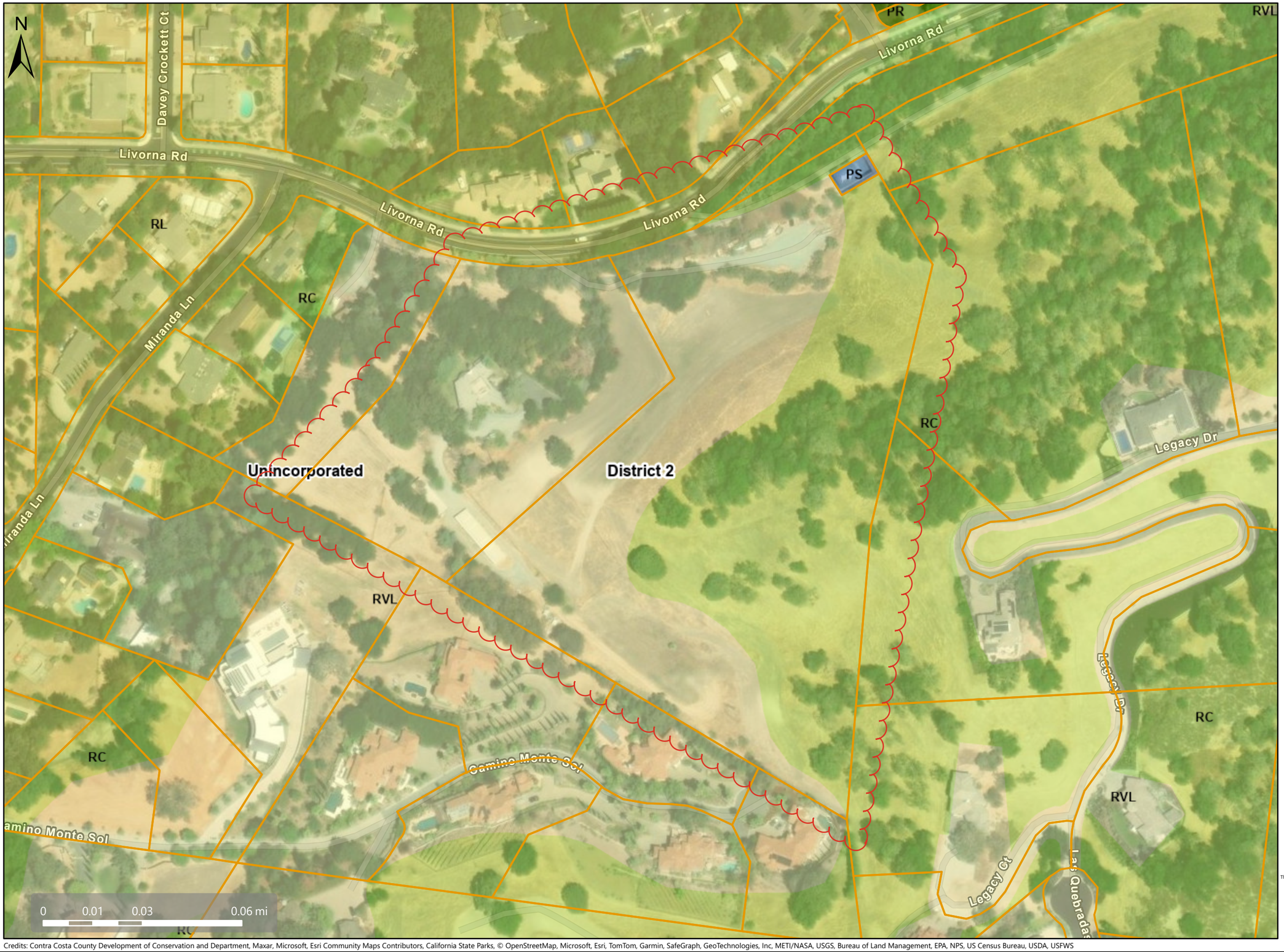
010 39,40 11/28/12

ASSESSOR'S MAP

BOOK 193 PAGE 1

CONTRA COSTA COUNTY, CA 55

General Plan



Map Legend

- Assessment Parcels

General Plan

- RVL (Residential Very-Low Density) (≤1 du/na)
- RL (Residential Low Density) (1-3 du/na)
- PS (Public and Semi-Public)
- PR (Park and Recreation)
- RC (Resource Conservation)
- Unincorporated
- Board of Supervisors' Districts

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Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.
THIS MAP IS NOT TO BE USED FOR NAVIGATION.
CCMap is maintained by Contra Costa County Department of Information Technology, County GIS.
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Please direct all data inquires to the appropriate department.

Spatial Reference
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Datum: WGS 1984

Credits: Contra Costa County Development of Conservation and Department, Maxar, Microsoft, Esri Community Maps Contributors, California State Parks, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS

Zoning



Map Legend

- Assessment Parcels
- Zoning
- ZONE_OVER
- R-20 (Single Family Residential)
- A-2 (General Agriculture)
- P-1 (Planned Unit)
- Unincorporated
- Board of Supervisors' Districts

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Orthophotography



Map Legend

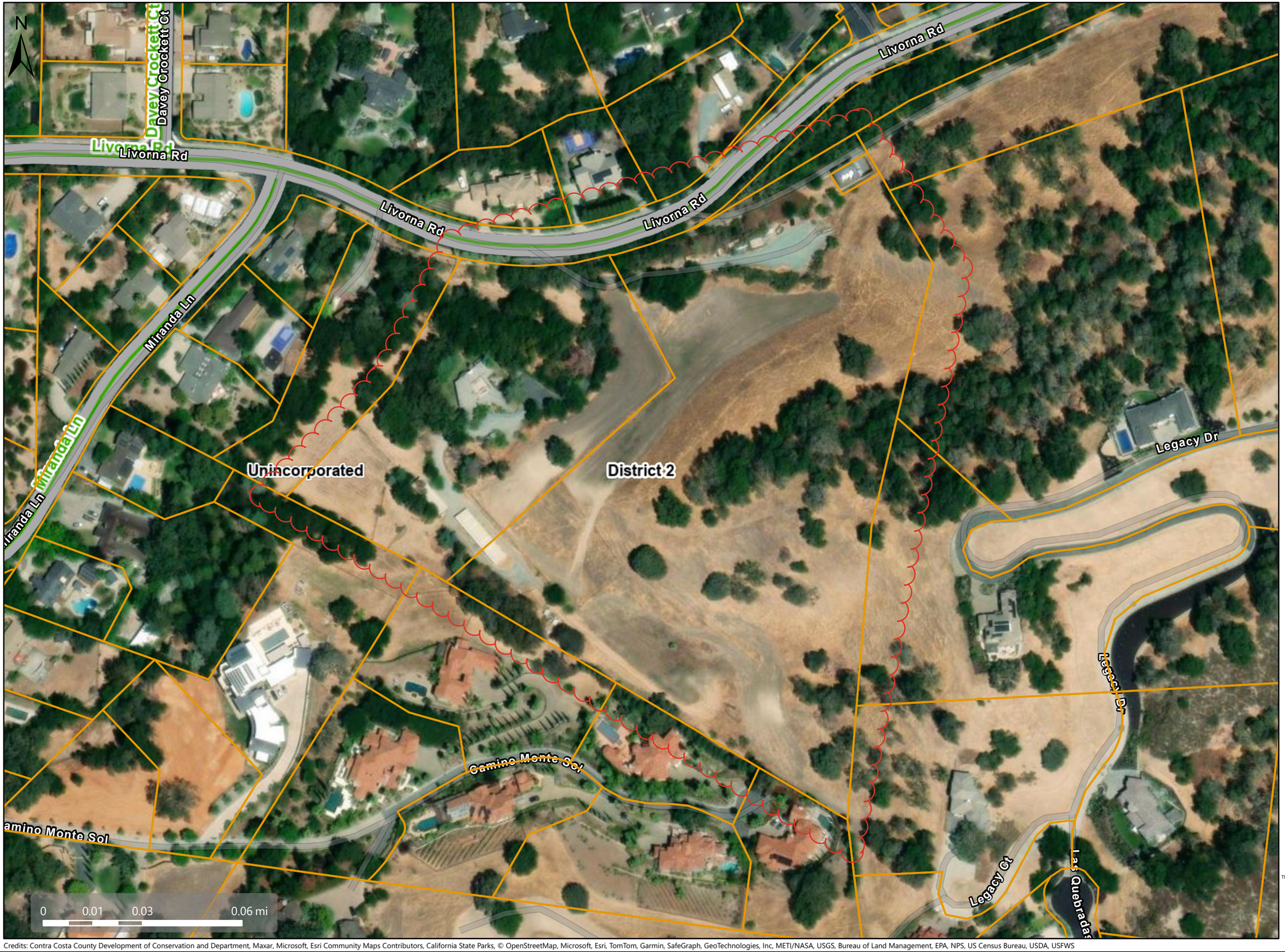
- Assessment Parcels
- Unincorporated
- Board of Supervisors' Districts

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PWD Maintained Roads



Map Legend

- Assessment Parcels
- Unincorporated
- Board of Supervisors' Districts
- Maintained Roads

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RECEIVED on 04/30/2025 CDSD25-09717
By Contra Costa County
Department of Conservation and Development

STONE VALLEY FARM
455 LIVORNA ROAD
VESTING TENTATIVE MAP
COVER SHEET
CONTRA COSTA COUNTY, CA
APRIL 28, 2025

SHEET INDEX – CIVIL

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
1	REGIONAL CONTEXT MAP
2	BOUNDARY & TOPOGRAPHY
3	TREE REMOVAL & DEMOLITION PLAN
4	PRELIMINARY SITE PLAN
5	PRELIMINARY UTILITY PLAN
6	PRELIMINARY GRADING & DRAINAGE PLAN
7	GRADING SECTIONS
8	STREET SECTIONS
9	VESTING TENTATIVE MAP
10	STORM WATER CONTROL PLAN
11	FIRE ACCESS PLAN
12	STRIPING & PARKING

SHEET INDEX – ARCHITECT

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
A1	COVER SHEET
A2	MASTER SITE PLAN
A3	PARTIAL SITE PLAN LOT 1&2
A4	PARTIAL SITE PLAN LOT 3–8
A5	PARTIAL SITE PLAN LOT 9
A6	FLOOR PLAN A
A7	EXTERIOR ELEVATIONS – PLAN A
A8	FLOOR PLAN B
A9	EXTERIOR ELEVATIONS – PLAN B
A10	FLOOR PLAN C
A11	EXTERIOR ELEVATIONS – PLAN C
A12	EXTERIOR ELEVATIONS – PLAN C (ALTERNATE)
A13	FLOOR PLAN D
A14	EXTERIOR ELEVATIONS – PLAN D
A15	COLOR BOARDS
A16	COLOR BOARDS

SHEET INDEX – LANDSCAPE

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
L–1	TREE PLAN
L–2	TREE PRESERVATION PLAN
L–3	WALL & FENCE PLAN
L–4	SCHEMATIC HYDROZONE PLAN
L–5	PLANTING TYPICALS – PLAN A
L–6	PLANTING TYPICALS – PLAN B
L–7	PLANTING TYPICALS – PLAN C
L–8	PLANT PALETTE
L–9	CHARACTER IMAGES
L–10	LANDSCAPE DETAILS



PROJECT DESCRIPTION

THE STONE VALLEY FARM PROPERTY IS LOCATED AT 455 LIVORNA DRIVE IN ALAMO, CA 94507 WITH APNS 193–010–014 AND 193–010–039 IN CONTRA COSTA COUNTY AND IS APPROXIMATELY 13.5 GROSS ACRES. THE LAND OWNER IS PROPOSING EIGHT SINGLE FAMILY UNITS AND ONE OF THESE UNITS WILL BE RESTRICTED FOR A MODERATE INCOME HOUSEHOLD ("PROJECT") AS REQUIRED UNDER THE COUNTY'S INCLUSIONARY HOUSING ORDINANCE AND PERMITTED BY STATE DENSITY BONUS LAWS.

THE PROPERTY HAS LAND USE DESIGNATIONS OF RVL (RESIDENTIAL VERY LOW) AND RC (RESOURCE CONSERVATION). APPROXIMATELY 8.74 GROSS ACRES ARE DESIGNATED RVL ALLOWING 1 DU/ACRE. THE REMAINING 4.83 GROSS ACRES ARE UNDER THE RESOURCE CONSERVATION DESIGNATION. THE NET ACREAGE OF RVL AS DEFINED BY CONTRA COSTA COUNTY AFTER LAND IS DEDICATED FOR RIGHTS OF WAYS, AND OTHER PUBLIC USES IS 7.7 ACRES.

THE ZONING IS A2 ACROSS THE ENTIRE PROPERTY. THE ZONING DESIGNATION IS INCONSISTENT WITH THE RVL GENERAL PLAN. A REZONING CAN NOT BE REQUIRED SINCE THE PROJECT IS CONSISTENT WITH THE OBJECTIVE STANDARDS IN THE GENERAL PLAN (GOV'T CODE SECT 65589.5 (J)(4)). IN THIS INSTANCE, PER GENERAL PLAN TABLE LU–1, THE PROJECT IS APPLYING AN R–40 ZONING WHICH IS CONSISTENT WITH LAND USE DESIGNATION RVL. PURSUANT TO GOVERNMENT CODE SECTION 65589.5(H)(2) THE PROJECT IS A HOUSING DEVELOPMENT THAT COMPLIES WITH ALL APPLICABLE OBJECTIVE GENERAL PLAN AND SUBDIVISION STANDARDS AND CRITERIA IN EFFECT AT THE TIME THE SB 330 PRELIMINARY APPLICATION WAS FILED ON NOVEMBER 6, 2024 (GOV'T CODE SECT. 65589.5(O)(1)).

THE EXISTING SITE CONSISTS OF ONE SINGLE FAMILY HOME OCCUPIED BY THE CURRENT LANDOWNER. THE LAND OWNER PROPOSES TO SUBDIVIDE THE PORTIONS OF THE TWO–PARCEL SITE DESIGNATED AS RVL INTO EIGHT SINGLE FAMILY FOR SALE LOTS ON THE DEVELOPABLE AREA AND PRESERVING THE REMAINING AREA DESIGNATED AS RC. ONE OF THE LOTS WOULD BE RESTRICTED FOR–SALE TO MODERATE INCOME HOUSEHOLDS AND THE REMAINING SEVEN LOTS WOULD BE UNRESTRICTED.

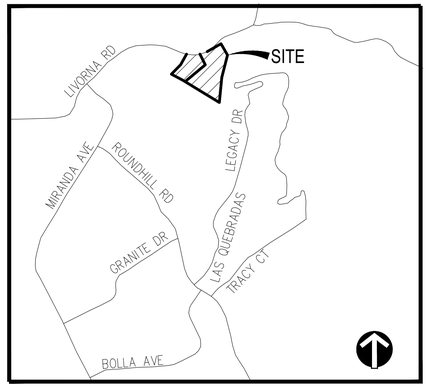
A HOMEOWNER'S ASSOCIATION (HOA) WOULD BE CREATED PURSUANT TO DAVIS STERLING COMMON INTEREST DEVELOPMENT ACT TO OWN AND MAINTAIN THE COMMON AREAS SUCH AS ROADS, STREETLIGHTS AND OPEN SPACE.

AFFORDABILITY AND STATE DENSITY BONUS

IN COMPLIANCE WITH THE DENSITY BONUS LAW, THE APPLICANT SEEKS AND AGREES TO CONSTRUCT 12.5%(WHICH ROUNDS TO 13%) OF TOTAL UNITS IN THIS DEVELOPMENT FOR MODERATE INCOME HOUSEHOLDS. WITH THE INCLUSION OF AT LEAST 10% OF THE UNITS IN THE FOR–SALE DEVELOPMENT RESTRICTED TO MODERATE INCOME, THE PROJECT IS ALLOWED ONE BONUS UNIT AND ELIGIBLE FOR WAIVERS AND REDUCTIONS TO DEVELOPMENT STANDARDS THAT HAVE THE EFFECT OF PHYSICALLY PRECLUDING THE CONSTRUCTION OF A DEVELOPMENT UNDER GOV'T CODE SECT. 65915(B)(1). THE PROJECT QUALIFIES FOR AN INCENTIVE OR CONCESSION UNDER GOV'T CODE SECT. 65915(D)(1). THE PROJECT IS ADDITIONALLY ELIGIBLE FOR A VEHICULAR PARKING REDUCTION PURSUANT TO GOV'T CODE SECT. 65915(P)(1).

THE AMOUNT OF THE DENSITY BONUS IS 8% PER GOV. CODE 65915(F)(4), I.E. 8 X 8% = .64 BONUS UNITS. FRACTIONAL UNITS ARE ROUNDED UP (PER 65915(F)(5)), SO THE PROJECT IS ENTITLED TO ONE BONUS UNIT TO THE BASE PROJECT OF 8 FOR 9 UNITS TOTAL. THE PROJECT APPLICANT IS ELECTING NOT TO USE THIS BONUS UNIT.

STONE VALLEY FARMS IS PROPOSING WAIVERS AS DEFINED ON THE COVER SHEET, WHILE RESERVING THE RIGHT TO USE ADDITIONAL WAIVERS AND CONCESSIONS IN THE FUTURE.



VICINITY MAP
NOT TO SCALE

PROJECT TEAM

APPLICANT/OWNER:
STONE VALLEY FARM
455 LIVORNA ROAD
ALAMO, CA 94507

CIVIL ENGINEER:
dk ENGINEERING
1931 SAN MIGUEL DR, SUITE 100
WALNUT CREEK, CA 94596
(925) 932–6868
CONTACT: ANDREW PALFFY

ARCHITECT:
WILLIAM WOOD ARCHITECTS
301 HARTZ AVENUE, SUITE 203
DANVILLE, CALIFORNIA 94526
(925) 820–8233
CONTACT: BILL WOOD

LANDSCAPE ARCHITECT:
GATES AND ASSOCIATES
1655 N. MAIN STREET, SUITE 365
WALNUT CREEK, CALIFORNIA 94596
(925) 360–8411
CONTACT: RUSTY CASE

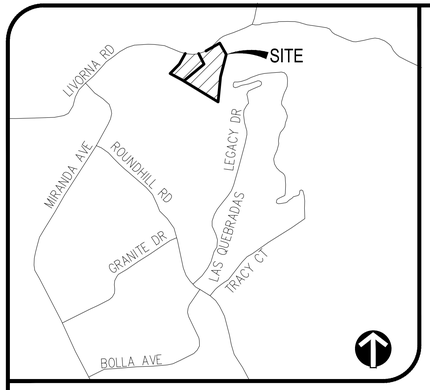
GEOTECHNICAL ENGINEER:
ENGEO
2633 CAMINO RAMON, SUITE 250
SAN RAMON, CA 94583
(925) 786–8883
CONTACT: BROOKS RAMSDELL

ARBORIST:
WOODREEVE CONSULTING
5627 TELEGRAPH AVE, SUITE #385
OAKLAND, CA 94609
(510) 387–5241
CONTACT: JOHN LEFFINGWELL

BIOLOGIST:
RES
2125 19TH STREET, SUITE 200
SACRAMENTO, CA 95818
(713) 520–5400
CONTACT: TIM DEGRAFF

WAIVERS		
WAIVER #	COUNTY STANDARD/CODE	WAIVER NEEDED
WAIVER 1	84–16.602	LOT–AREA
WAIVER 2	84–16.604	LOT–WIDTH
WAIVER 3	84–16.606	LOT–DEPTH
WAIVER 4	84–16.10002	YARD–SIDE
WAIVER 5	84–14.1004	YARD–SETBACK
WAIVER 6	84–16.1006	YARD–REAR
WAIVER 7	82–4.214	BUILDING HEIGHT

CONCESSIONS	
CONCESSION	NOTES
CONCESSION #1	WE RESERVE THE RIGHT TO IDENTIFY A CONCESSION AS NECESSARY TO ACCOMMODATE THE PROJECT AS DESIGNED.



VICINITY MAP
NOT TO SCALE

PROJECT TEAM

APPLICANT/OWNER:
STONE VALLEY FARM
455 LIVORNA ROAD
ALAMO, CA 94507

CIVIL ENGINEER:
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SACRAMENTO, CA 95818
(713) 520-5400
CONTACT: TIM DEGRAFF

SITE INFORMATION

SITE LOCATION:
455 LIVORNA ROAD
CONTRA COSTA COUNTY, CA

BENCHMARK:
VERTICAL DATUM NAVD88 GEOID18 DERIVED FROM OPUS SOLUTION

BASIS OF BEARINGS:
BEARINGS BASED ON LINE BETWEEN TWO MONUMENTS ON LIVORNA RD BEARING SOUTH 59°13'26" WEST 93.24 FEET AS SHOWN ON BOOK 103 LAND SURVEY MAPS PAGE 2, HAVING A MEASURED BEARING SOUTH 59°15'55" WEST 93.24 FEET. DISTANCES SHOWN ARE GRID DISTANCES.

ASSESSORS PARCEL NUMBER:
193-010-014 & 193-010-039

PROJECT FLOOD ZONE:
ZONE X; AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL FLOODPLAIN
FEMA MAP NO. 06013C0432F
EFFECTIVE DATE: 6/16/2009

EXISTING ZONING:
A-2

PROPOSED ZONING[1]:
R-40

GENERAL PLAN USE:
SINGLE FAMILY RESIDENTIAL – VERY LOW DENSITY
RESOURCE CONSERVATION (UNDEVELOPED AREA)

NUMBER OF UNITS:
8 SINGLE FAMILY RESIDENTIAL HOMES

PROPOSED PHASING:
NONE

SITE ACREAGE:

TOTAL ACRES:	13.65 ACRE
GROSS ACRES OF RESIDENTIAL VERY LOW (RVL):	8.80 ACRE
GROSS ACRES OF RESOURCE CONSERVATION (RC):	4.85 ACRE
NET ACREAGE[2] RESIDENTIAL VERY LOW:	7.70 ACRE
NET ACREAGE[2] RESOURCE CONSERVATION:	4.22 ACRE

EXISTING CONTOURS:
2' INTERVAL

PROPOSED CONTOURS:
2' INTERVAL

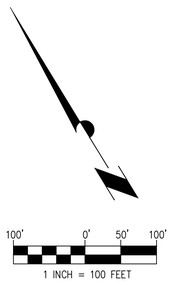
UTILITIES & SERVICES:

WATER:	EAST BAY MUNICIPAL UTILITY DISTRICT
SEWER:	CONTRA COSTA COUNTY SANITARY DISTRICT
GAS & ELECTRIC:	PACIFIC GAS & ELECTRIC

NOTES:

1. GENERAL PLAN LAND USE ELEMENT CONSIDERS R-40 ZONING CONSISTENT WITH EXISTING LAND USE.
2. AREA REMAINING AFTER LAND DEDICATED TO RIGHTS OF WAY AND OTHER PUBLIC OR COMMON USE.





SITE ACREAGE SUMMARY

TOTAL ACRES:	13.65 ACRES
GROSS ACRES RVL:	8.80 ACRES
EASEMENTS/ROADWAYS IN RVL:	1.10 ACRES
NET ACREAGE OF RVL:	7.70 ACRES
GROSS ACRES RC:	4.85 ACRES
EASEMENTS IN RC:	0.63 ACRES
NET ACREAGE OF RC:	4.22 ACRES

LEGEND

EXISTING	DESCRIPTION	PROPOSED
	BOUNDARY LINE	
	EASEMENT LINE	
	PARCEL LINE	
	MAJOR CONTOUR	100
	MINOR CONTOUR	
	BACK OF CURB, FACE OF CURB, LIP OF GUTTER	
	ROLLED CURB	
	STREET CENTERLINE	
	SPOT ELEVATION	×72.32
	SLOPE DIRECTION	
	STREET LIGHT	
X	FENCE	
	FLOW LINE	
W EX 12" W	WATER MAIN	W
S EX 8" SS	SANITARY SEWER MAIN, MANHOLE	SS
(S)	SANITARY SEWER FORCE MAIN	SS FM
EX SD	STORM DRAIN LINE, CATCH BASIN, FIELD INLET	SD
	FIRE HYDRANT	
(G)	GAS	
(JT)	JOINT TRENCH	
	BIORETENTION BASIN	
	UNIT NUMBER	2
	TREATED STORM DRAIN SYSTEM	
	GRADING DAYLIGHT LINE	
	BIOLOGICAL RIPARIAN LIMIT/TOP OF BANK	
	CREEK STRUCTURE SETBACK LINE	
	LAND USE DELINEATION LINE	
	PROPOSED RETAINING WALL	
	RIPRAP FLOW DISSIPATORS	

SHEET INDEX

SHEET NUMBER	SHEET TITLE
1	REGIONAL CONTEXT MAP
2	BOUNDARY & TOPOGRAPHY
3	TREE REMOVAL & DEMOLITION PLAN
4	PRELIMINARY SITE PLAN
5	PRELIMINARY UTILITY PLAN
6	PRELIMINARY GRADING & DRAINAGE PLAN
7	GRADING SECTIONS
8	STREET SECTIONS
9	VESTING TENTATIVE MAP
10	STORM WATER CONTROL PLAN
11	FIRE ACCESS PLAN
12	STRIPING & PARKING

ABBREVIATIONS

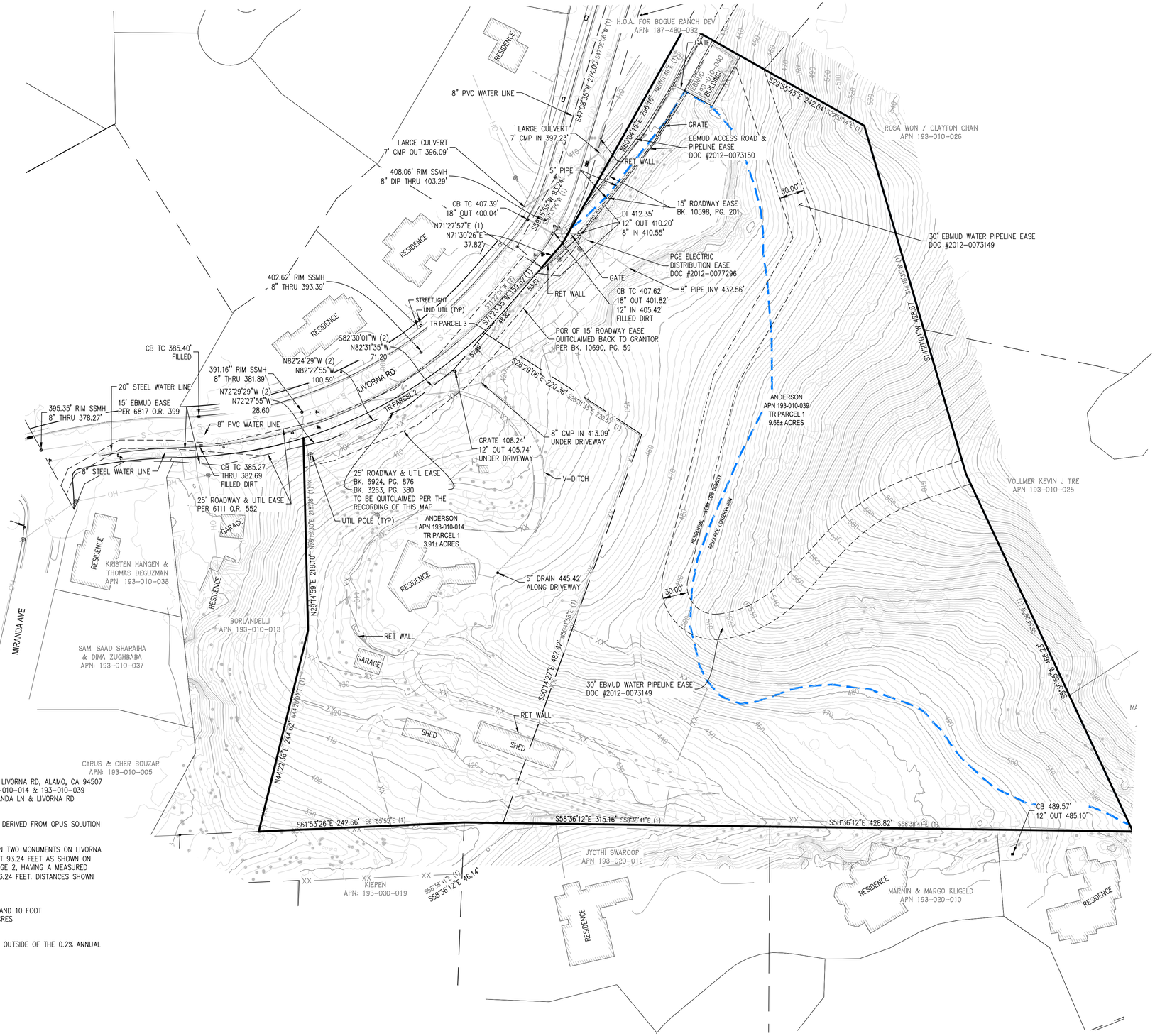
AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
APN	ACCESSOR'S PARCEL NUMBER
BK.	BOOK
C&G	CURB AND GUTTER
CB	CATCH BASIN
CCC	CONTRA COSTA COUNTY
CL	CENTER LINE
CMP	CORRUGATED METAL PIPE
COR	CORNER
CY	CUBIC YARDS
D	DEPTH
DIP	DUCTILE IRON PIPE
DOC	DOCUMENT
DWY	DRIVEWAY
E	EAST
EASE	EASEMENT
EBMUD	EAST BAY MUNICIPAL UTILITY DISTRICT
EVAE	EMERGENCY VEHICLE ACCESS EASEMENT
EX	EXISTING
FL	FLOW LINE
FT	FEET
H.O.A.	HOMEOWNERS ASSOCIATION
INST.	INSTRUMENT
INV	INVERT
L	LENGTH
MAX	MAXIMUM
MIN	MINIMUM
NO.	NUMBER
NW	NORTHWEST
PAE	PRIVATE ACCESS EASEMENT
PCL	PARCEL
PG.	PAGE
PGE	PACIFIC GAS & ELECTRIC
PL	PROPERTY LINE
POR.	PORTION
PROP	PROPOSED
PSDE	PRIVATE STORM DRAIN EASEMENT
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
R	RADIUS
R/W	RIGHT OF WAY
RET	RETAINING
SF	SQUARE FEET
SSE	SANITARY SEWER EASEMENT
SSMH	SANITARY SEWER MANHOLE
SS	SANITARY SEWER
SW	SOUTHWEST
SWCP	STORM WATER CONTROL PLAN
TC	TOP OF CURB
THRU	THROUGH
TOB	TOP OF BANK
TR#-#	TITLE REPORT & EXCEPTION NUMBER
TS	TOE OF SLOPE
TYP	TYPICAL FEATURE
UTIL	UTILITY
UNID	UNIDENTIFIED
VAR	VARIABLE
W	WIDTH/WEST
WLE	WATER LINE EASEMENT

REGISTERED PROFESSIONAL ENGINEER
ANDREW D. PALFFY
No. 85704
CIVIL
STATE OF CALIFORNIA
PRELIMINARY

STONE VALLEY FARM
455 LIVORNA ROAD
REGIONAL CONTEXT MAP
CONTRA COSTA COUNTY, CA
APRIL 28, 2025

ENGINEERING
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I:\PROJECTS\2024\24-1035 455 LIVORNA - ALAMO, CA\DWG\ENTITLE MAPS\P - REGIONAL CONTEXT MAP.DWG 4/28/2025



LEGEND

- BOUNDARY LINE
- RIGHT OF WAY LINE
- PROPERTY LINE
- EASEMENT LINE
- SECTION LINE
- BUILDING
- MAJOR CONTOUR
- MINOR CONTOUR
- TREE DRIP LINE
- SIDEWALK
- CURB LINE
- CONCRETE GUTTER
- WALL
- EDGE OF PAVEMENT
- CHAIN LINK FENCE
- WOOD FENCE
- BARBED WIRE FENCE
- WROUGHT IRON FENCE/RAILING
- GATE
- STORM DRAIN LINE, CATCH BASIN, DRAINAGE INLET
- STORM DRAIN MANHOLE, FIELD INLET, AREA DRAIN
- SANITARY SEWER LINE, MANHOLE, CLEANOUT
- WATER LINE, METER, VALVE
- FIRE HYDRANT, BACK FLOW PREVENTER
- ELECTRIC UNDERGROUND LINE, MANHOLE,
- UTILITY VAULT, SUBSURFACE BOX, ABOVEGROUND BOX
- GUY WIRE, OVERHEAD UTILITY LINE, POLE
- GAS LINE, VALVE, METER
- TREE, DIAMETER OF TRUNK AT 6' HIGH
- BOLLARD, SIGN, BUTTON/PARKING METER, MAILBOX
- UNIDENTIFIED MANHOLE, TELEPHONE MANHOLE
- SPOT ELEVATION
- TOP OF CURB ELEVATION
- ELECTROLIER
- IRON PIPE, AS NOTED
- STANDARD C.C.C. STREET MONUMENT
- RECORD STORM DRAIN LINE
- RECORD SANITARY SEWER LINE
- RECORD GAS LINE
- RECORD ELECTRIC LINE
- RECORD JOINT TRENCH LINE
- RECORD WATER LINE
- RECORD TV LINE
- RECORD TELEPHONE LINE
- TOP OF DITCH/SWALE
- BOTTOM OF DITCH/SWALE
- FLOW LINE
- LAND USE DELINEATION LINE

ABBREVIATIONS

AC	ASPHALT CONCRETE
APN	ASSESSOR PARCEL NUMBER
BK.	BOOK
CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
COR	CORNER
DIP	DUCTILE IRON PIPE
DOC	DOCUMENT
DWY	DRIVEWAY
E	EAST
EASE	EASEMENT
EBMUD	EAST BAY MUNICIPAL UTILITY DISTRICT
FL	FLOWLINE ELEVATION
H.O.A.	HOMEOWNERS ASSOCIATION
INV	INVERT
NW	NORTHWEST
PG.	PAGE
PGE	PACIFIC GAS & ELECTRIC
PL	PROPERTY LINE
PVC	POLYVINYL CHLORIDE
RET	RETAINING
SSMH	SANITARY SEWER MANHOLE
SS	SANITARY SEWER
SW	SOUTHWEST
TC	TOP OF CURB
THRU	THROUGH
TR#—#	TITLE REPORT & EXCEPTION NUMBER
TYP	TYPICAL FEATURE
UTIL	UTILITY
UNID	UNIDENTIFIED
W	WEST

60' 0' 30' 60'

1 INCH = 60 FEET

LOCATION:
- ADDRESS: 455 LIVORNA RD, ALAMO, CA 94507
- SITE APNS: 193-010-014 & 193-010-039
- NEAREST INTERSECTION: MIRANDA LN & LIVORNA RD

BENCHMARK:
VERTICAL DATUM NAVD88 GEOID18 DERIVED FROM OPUS SOLUTION

BASIS OF BEARINGS:
BEARINGS BASED ON LINE BETWEEN TWO MONUMENTS ON LIVORNA RD BEARING SOUTH 59°13'26" WEST 93.24 FEET AS SHOWN ON BOOK 103 LAND SURVEY MAPS PAGE 2, HAVING A MEASURED BEARING SOUTH 59°15'55" WEST 93.24 FEET. DISTANCES SHOWN ARE GRID DISTANCES.

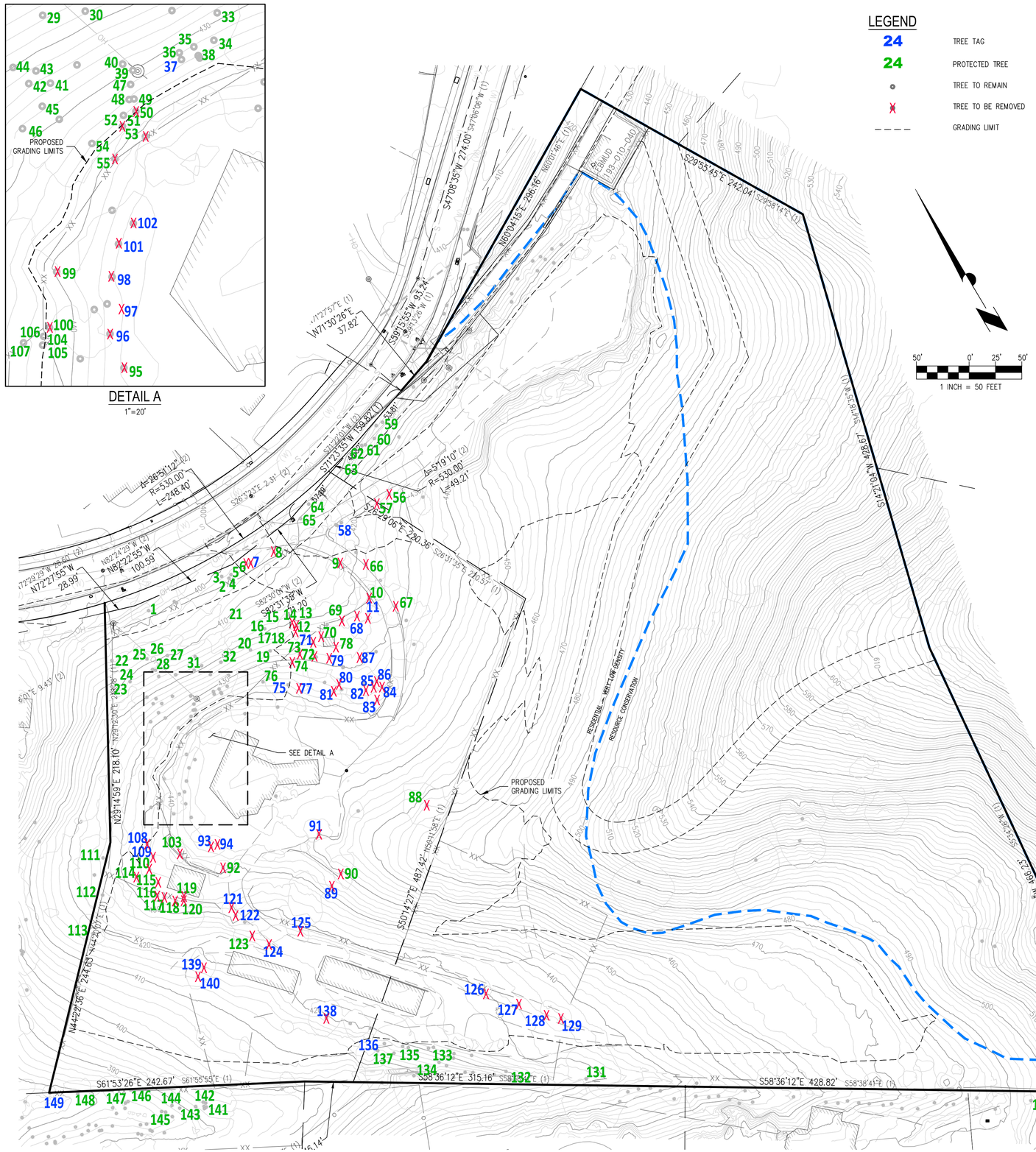
TOPOGRAPHIC SURVEY
- CONTOUR INTERVAL: 2 FOOT AND 10 FOOT
- GROSS LAND AREA: 13.6± ACRES

PROJECT FLOOD ZONE:
ZONE X; AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL FLOODPLAIN
FEMA MAP NO. 06013C0432F
EFFECTIVE DATE: 6/16/2009

REFERENCES:
- (1) = 103LSM2
- (2) = 89LSM34

STONE VALLEY FARM
455 LIVORNA ROAD
BOUNDARY & TOPOGRAPHY
CONTRA COSTA COUNTY, CA
APRIL 28, 2025

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1931 SAN MIGUEL DRIVE, SUITE 100, WALNUT CREEK, CA 94596
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LEGEND
24 TREE TAG
24 PROTECTED TREE
TREE TO REMAIN
TREE TO BE REMOVED
GRADING LIMIT
50' 0' 25' 50'
1 INCH = 50 FEET
DETAIL A
1"=20'
PROPOSED GRADING LIMITS
SEE DETAIL A
PROPOSED GRADING LIMITS
RESIDENTIAL - VERY LOW DENSITY
RESOURCE CONSERVATION
S47°08'35"W 274.00' S47°08'08"W (1)
N60°04'15"E 296.16' N60°04'48"E (1)
S29°55'45"E 242.04' S29°58'14"E (1)
S47°10'41"W 488.67' S47°16'55"W (1)
N29°14'59"E 218.10' N29°12'30"E (1)
N44°27'36"E 244.63' N44°31'08"E (1)
S61°53'26"E 242.67' S61°55'55"E (1)
S58°36'12"E 315.16' S58°38'41"E (1)
S58°36'12"E 428.82' S58°38'41"E (1)
S01°47'27"E 487.42' N.S01°11'58"E (1)
N.S01°11'58"E 466.23' (1)
S17°30'26"E 37.82'
S17°27'57"E (1)
S59°15'55"W 93.24'
S59°17'26"W (1)
S17°35'51"W 159.42' (1)
Δ=26°51'12" R=530.00' L=248.40'
Δ=5°19'10" R=530.00' L=49.21'
S26°49'06"E 290.36' S26°51'35"E 290.57' (1)
S82°31'38"W 20.00' S82°31'08"W (2)
N82°22'55"W 100.59'
N72°27'55"W 28.99' N72°29'29"W 28.60' (2)
S26°12'29"E 2.31' (2)
S26°12'29"E 2.34' (2)
S26°12'29"E 9.43' (2)
S26°12'29"E 9.43' (2)
S26°12'29"E 9.43

LEGEND

LAND USE DELINEATION LINE

PROPOSED RETAINING WALL

LIVORNA RD

15' ROADWAY EASEMENT

20' EBMUD ACCESS ROAD & PIPELINE EASEMENT

EBMUD 193-010-040

PGE ELECTRIC DISTRIBUTION EASEMENT

71.79'

69.10'

28.54'

43.16'

SDE

PAE, EVAE

PAE, EVAE

45.60'

75.19'

53.94'

30' EBMUD

VAR. WIDTH SSE, EBMUD, EVAE, PAE, PUE, SDE

84.50'

20.00'

16.00'

PARCEL A

SDE

90.63'

EBMUD, EVAE, PAE, PUE, SSE, SSE

56.57'

22.60'

25.91'

20.00'

88.63'

60.06'

15.00'

15.10'

14.76'

25.06'

10' SDE

51.40'

30.48'

35.79'

SDE

PARCEL B

VAR. WIDTH SDE

57.46'

17.01'

30.00'

20.00'

17.01'

30.00'

VAR. WIDTH SDE

77.13'

89.90'

52.35'

16.00' PUE

PUE

311.22'

SDE

SDE

49.66'

24.85'

43.57'

RESIDENTIAL - VERY LOW DENSITY

RESOURCE CONSERVATION

1 INCH = 50 FEET

50' 0' 25' 50'

REGISTERED PROFESSIONAL ENGINEER ANDREW D. KNOX No. 89704 CIVIL STATE OF CALIFORNIA

PRELIMINARY

STONE VALLEY FARM

455 LIVORNA ROAD

PRELIMINARY SITE PLAN

CONTRA COSTA COUNTY, CA

APRIL 28, 2025

ENGINEERING SURVEYING • PLANNING

1931 SAN MIGUEL DRIVE, SUITE 100, WALNUT CREEK, CA 94596

WWW.DKENGIN.COM (925) 932-6868

C:\PROJECTS\2024\24-1035 455 LIVORNA - AVAIL CD\MD\EXHIBIT MAPS\24-1035 - PRELIMINARY SITE PLAN.DWG 4/28/2025



LEGEND

- POTABLE WATER SYSTEM
- STORM DRAIN SYSTEM DIRECTED TO TREATMENT
- TREATED STORM DRAIN SYSTEM
- SANITARY SEWER SYSTEM
- FIRE HYDRANT
- PROPOSED STREET LIGHTS
- BIOLOGICAL RIPARIAN LIMIT/TOP OF BANK
- CREEK STRUCTURE SETBACK LINE
- GRADING DAYLIGHT LINE
- LAND USE DELINEATION LINE
- RIPRAP FLOW DISSIPATORS

40' 0' 20' 40'

1 INCH = 40 FEET

REGISTERED PROFESSIONAL ENGINEER ANDREW D. PARKER No. 93704 CIVIL STATE OF CALIFORNIA

PRELIMINARY

STONE VALLEY FARM

455 LIVORNA ROAD

PRELIMINARY UTILITY PLAN

CONTRA COSTA COUNTY, CA

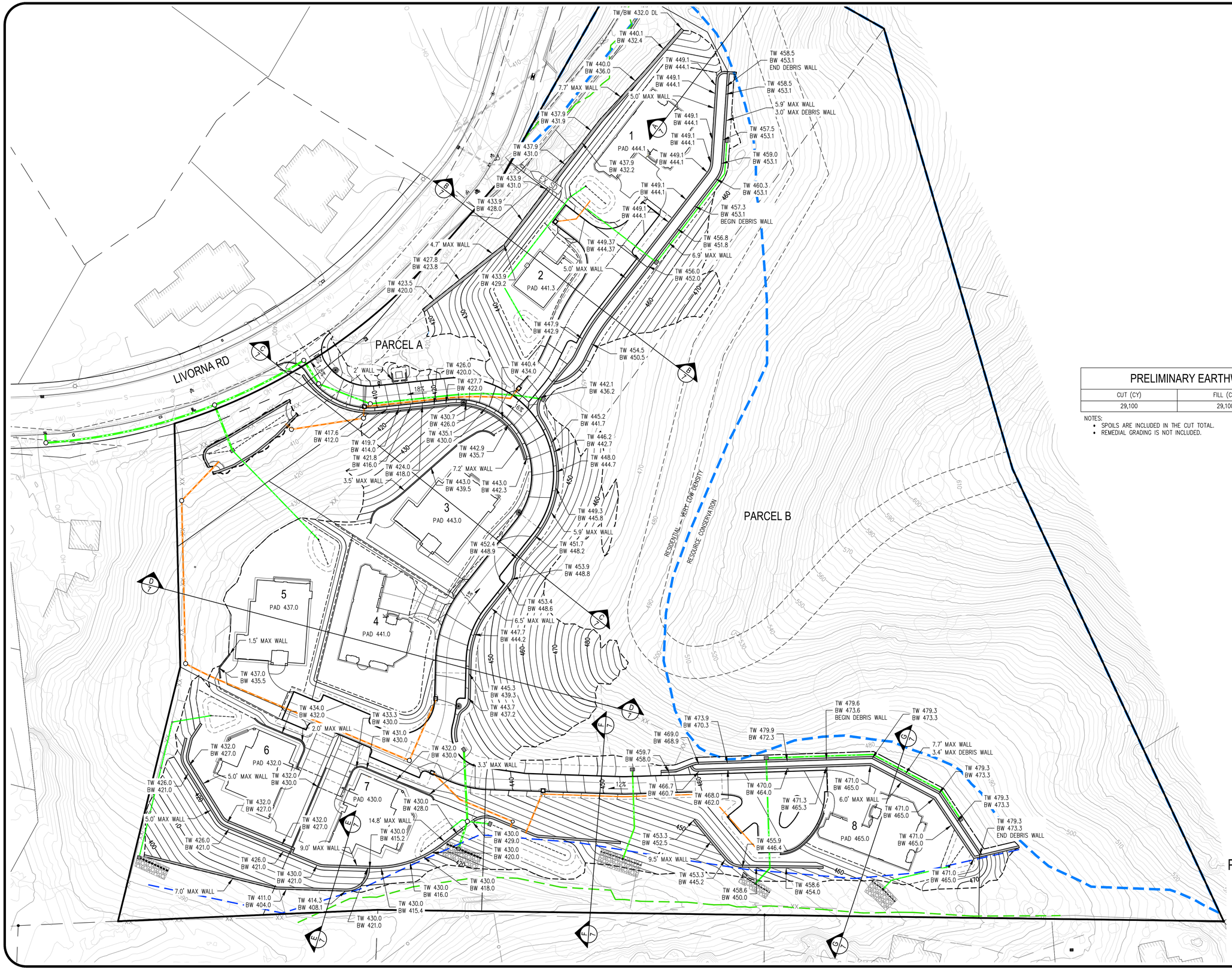
APRIL 28, 2025

dk ENGINEERING SURVEYING • PLANNING

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LEGEND

- STORM DRAIN SYSTEM DIRECTED TO TREATMENT
- TREATED STORM DRAIN SYSTEM
- GRADING DAYLIGHT LINE
- BIOLOGICAL RIPARIAN LIMIT/TOP OF BANK
- CREEK STRUCTURE SETBACK LINE
- LAND USE DELINEATION LINE
- RIPRAP FLOW DISSIPATORS

PRELIMINARY EARTHWORK QUANTITIES

CUT (CY)	FILL (CY)	IMPORT/EXPORT (CY)
29,100	29,100	0

NOTES:
- SPOILS ARE INCLUDED IN THE CUT TOTAL.
- REMEDIAL GRADING IS NOT INCLUDED.

40' 0' 20' 40'

1 INCH = 40 FEET

REGISTERED PROFESSIONAL ENGINEER
ANDREW D. PARR
No. 88704
CIVIL
STATE OF CALIFORNIA
PRELIMINARY

STONE VALLEY FARM

455 LIVORNA ROAD

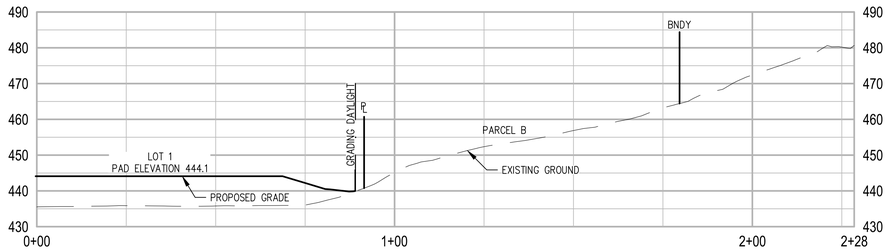
PRELIMINARY GRADING & DRAINAGE PLAN

CONTRA COSTA COUNTY, CA

APRIL 28, 2025

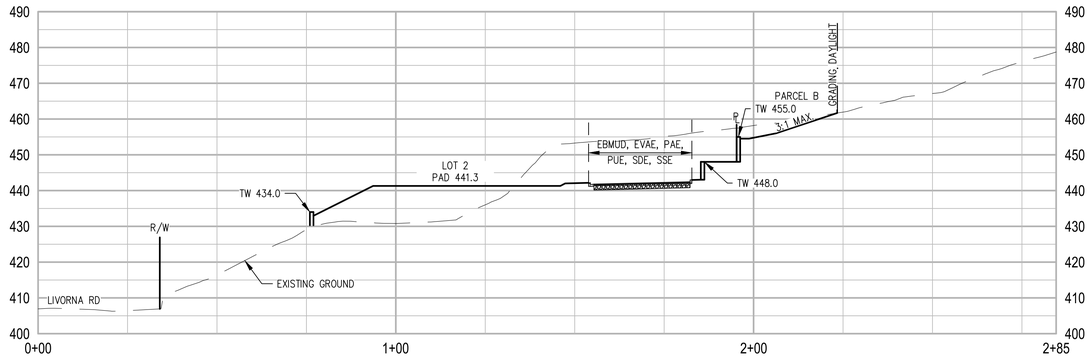
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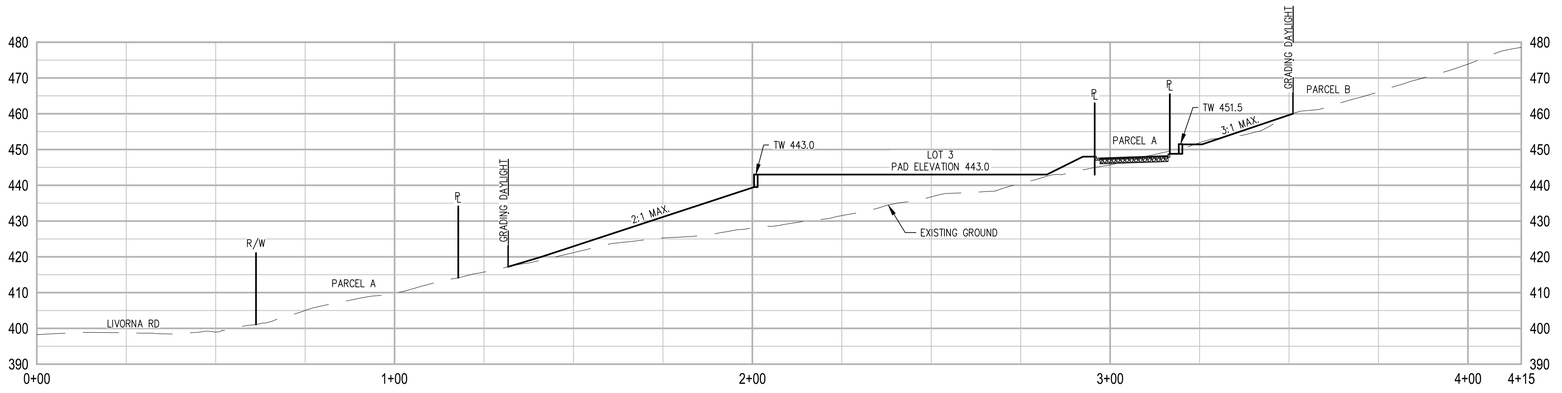
SECTION A

SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=20'



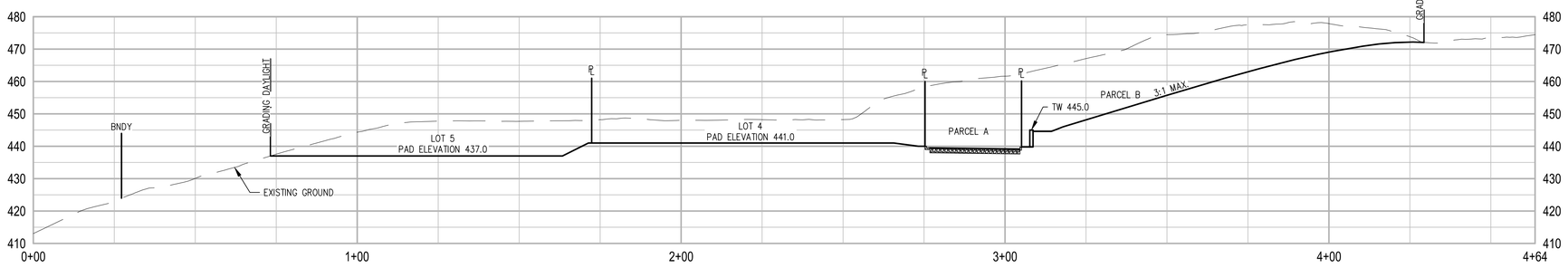
SECTION B

SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=20'



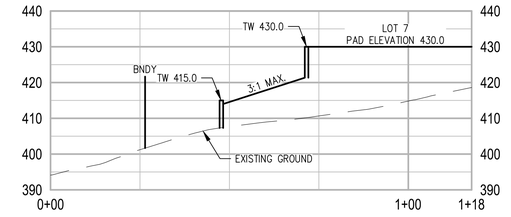
SECTION C

SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=20'



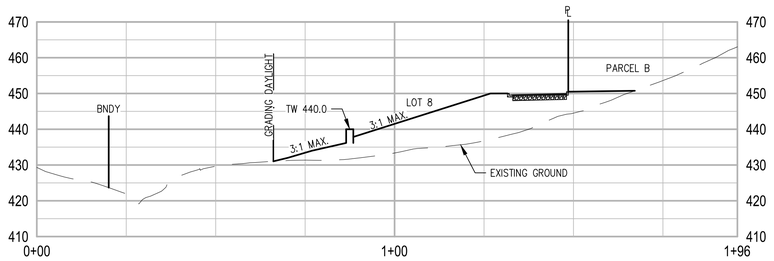
SECTION D

SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=20'



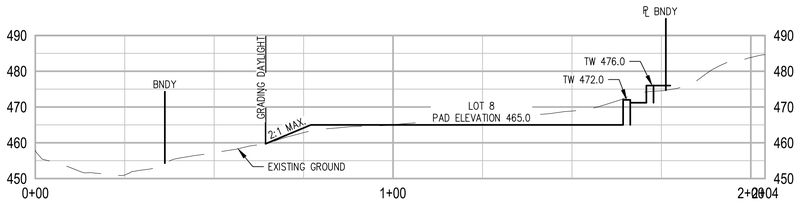
SECTION E

SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=20'



SECTION F

SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=20'



SECTION G

SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=20'

REGISTERED PROFESSIONAL ENGINEER
ANDREW D. R[illegible]
No. 85704
CIVIL
STATE OF CALIFORNIA

PRELIMINARY

STONE VALLEY FARM

455 LIVORNA ROAD

GRADING SECTIONS

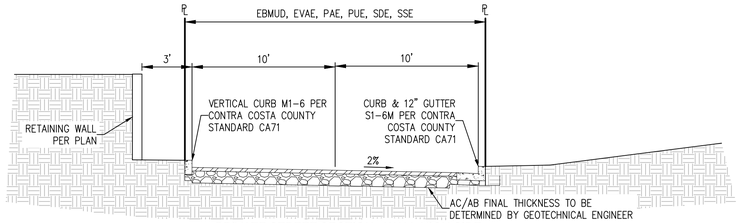
CONTRA COSTA COUNTY, CA

APRIL 28, 2025

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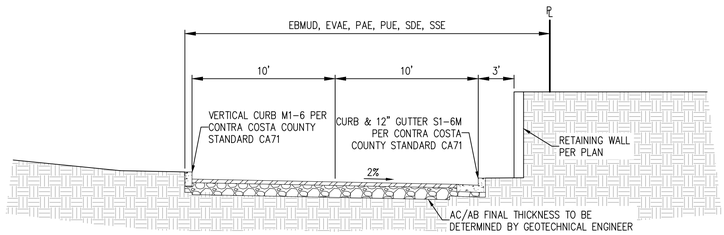
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dk JOB# 24-1035



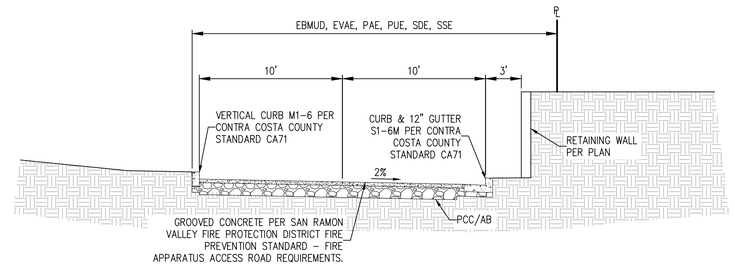
PRIVATE STREET SECTION - WALL HIGH SIDE

NOT TO SCALE



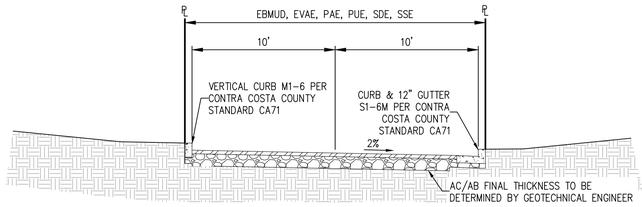
PRIVATE STREET SECTION - WALL LOW SIDE

NOT TO SCALE



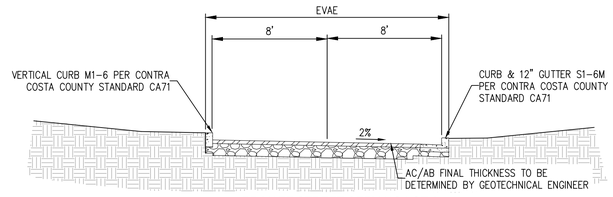
GROOVED CONCRETE ROADWAY

NOT TO SCALE



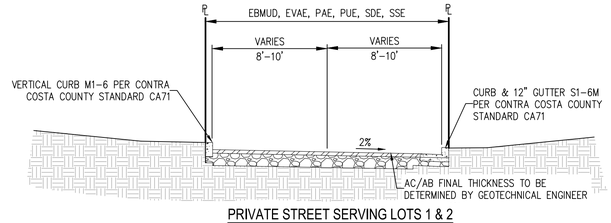
PRIVATE STREET FRONTING LOTS 7 & 8

NOT TO SCALE



PRIVATE STREET SERVING LOT 9

NOT TO SCALE



PRIVATE STREET SERVING LOTS 1 & 2

NOT TO SCALE

STONE VALLEY FARM

455 LIVORNA ROAD

STREET SECTIONS

CONTRA COSTA COUNTY, CA

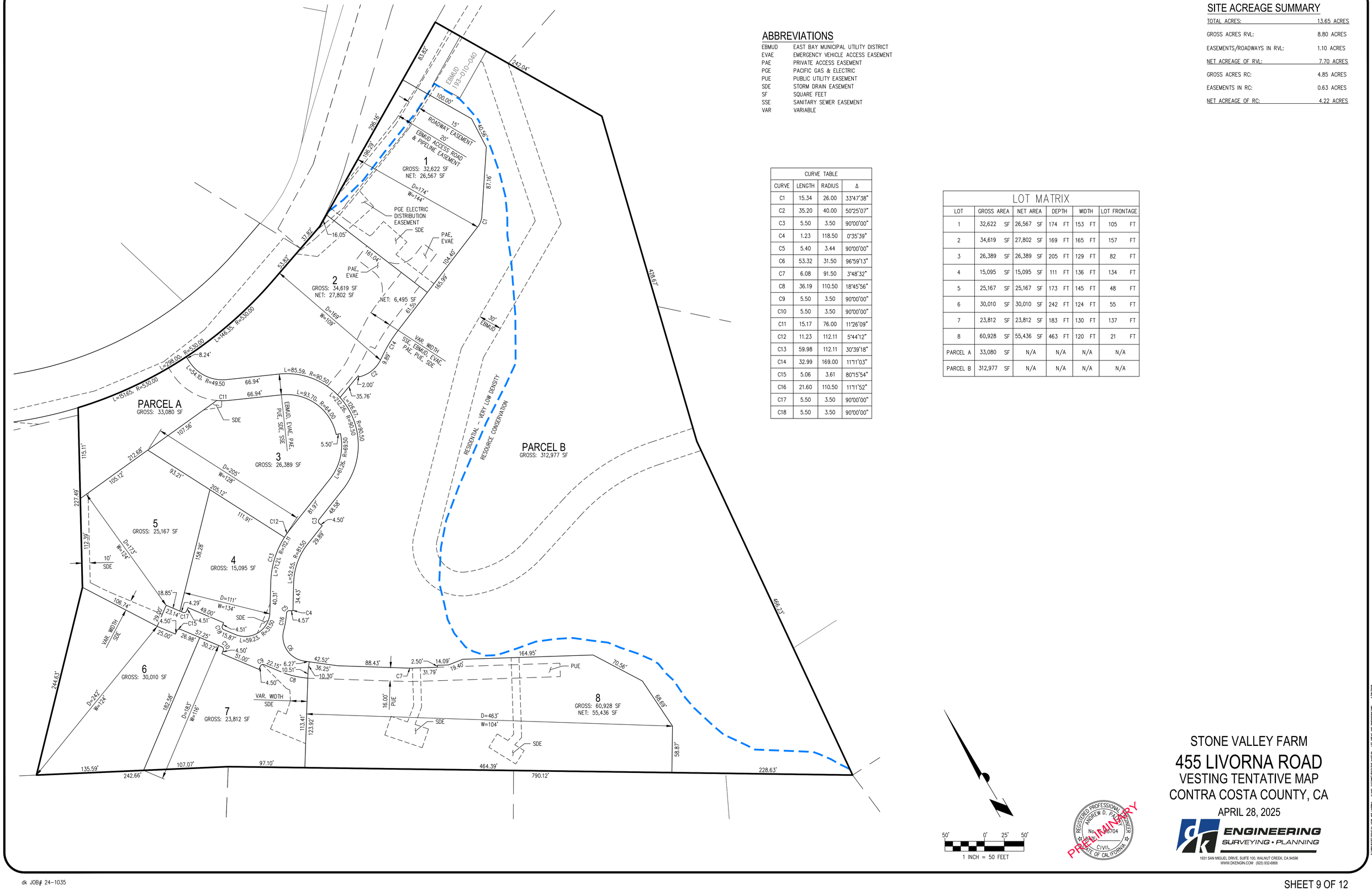
APRIL 28, 2025

PRELIMINARY

REGISTERED PROFESSIONAL ENGINEER
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ABBREVIATIONS

EBMUD	EAST BAY MUNICIPAL UTILITY DISTRICT
EVAE	EMERGENCY VEHICLE ACCESS EASEMENT
PAE	PRIVATE ACCESS EASEMENT
PGE	PACIFIC GAS & ELECTRIC
PUE	PUBLIC UTILITY EASEMENT
SDE	STORM DRAIN EASEMENT
SF	SQUARE FEET
SSE	SANITARY SEWER EASEMENT
VAR	VARIABLE

SITE ACREAGE SUMMARY

TOTAL ACRES:	13.65 ACRES
GROSS ACRES RVL:	8.80 ACRES
EASEMENTS/ROADWAYS IN RVL:	1.10 ACRES
NET ACREAGE OF RVL:	7.70 ACRES
GROSS ACRES RC:	4.85 ACRES
EASEMENTS IN RC:	0.63 ACRES
NET ACREAGE OF RC:	4.22 ACRES

CURVE TABLE			
CURVE	LENGTH	RADIUS	Δ
C1	15.34	26.00	33°47'38"
C2	35.20	40.00	50°25'07"
C3	5.50	3.50	90°00'00"
C4	1.23	118.50	0°35'39"
C5	5.40	3.44	90°00'00"
C6	53.32	31.50	96°59'13"
C7	6.08	91.50	3°48'32"
C8	36.19	110.50	18°45'56"
C9	5.50	3.50	90°00'00"
C10	5.50	3.50	90°00'00"
C11	15.17	76.00	11°26'09"
C12	11.23	112.11	5°44'12"
C13	59.98	112.11	30°39'18"
C14	32.99	169.00	11°11'03"
C15	5.06	3.61	80°15'54"
C16	21.60	110.50	11°11'52"
C17	5.50	3.50	90°00'00"
C18	5.50	3.50	90°00'00"

LOT MATRIX

LOT	GROSS AREA	NET AREA	DEPTH	WIDTH	LOT FRONTAGE
1	32,622 SF	26,567 SF	174 FT	153 FT	105 FT
2	34,619 SF	27,802 SF	169 FT	165 FT	157 FT
3	26,389 SF	26,389 SF	205 FT	129 FT	82 FT
4	15,095 SF	15,095 SF	111 FT	136 FT	134 FT
5	25,167 SF	25,167 SF	173 FT	145 FT	48 FT
6	30,010 SF	30,010 SF	242 FT	124 FT	55 FT
7	23,812 SF	23,812 SF	183 FT	130 FT	137 FT
8	60,928 SF	55,436 SF	463 FT	120 FT	21 FT
PARCEL A	33,080 SF	N/A	N/A	N/A	N/A
PARCEL B	312,977 SF	N/A	N/A	N/A	N/A

50' 0' 25' 50'
1 INCH = 50 FEET

REGISTERED PROFESSIONAL ENGINEER
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No. 75704
CIVIL
STATE OF CALIFORNIA

PRELIMINARY

STONE VALLEY FARM

455 LIVORNA ROAD

VESTING TENTATIVE MAP
CONTRA COSTA COUNTY, CA
APRIL 28, 2025

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LEGEND

- BIOLOGICAL RIPARIAN LIMIT/TOP OF BANK
- CREEK STRUCTURE SETBACK LINE
- GRADING DAYLIGHT LINE

SWCP LEGEND

IMP	IMPERVIOUS	PERVIOUS	
	ROOF, CONCRETE, PAVEMENT, ETC.	LANDSCAPING	PROVIDED BIORETENTION
IMP-1	7,754 SF	9,233 SF	424 SF
IMP-2	2,077 SF	4,014 SF	221 SF
IMP-3	28,180 SF	31,814 SF	1,737 SF
IMP-4	6,064 SF	8,800 SF	420 SF
IMP-5	6,071 SF	7,483 SF	394 SF
IMP-6	6,071 SF	7,004 SF	429 SF
IMP-7	5,325 SF	6,588 SF	429 SF
IMP-8	16,589 SF	10,022 SF	891 SF
SELF TREATING	N/A	404,554 SF	

50' 0' 25' 50'

1 INCH = 50 FEET

REGISTERED PROFESSIONAL ENGINEER
ANDREW D. PEARSON
No. 73704
CIVIL
STATE OF CALIFORNIA

PRELIMINARY

STONE VALLEY FARM

455 LIVORNA ROAD

STORM WATER CONTROL PLAN
CONTRA COSTA COUNTY, CA

APRIL 28, 2025

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LEGEND

- FIRE ACCESS ROAD
- GROOVED CONCRETE FIRE ACCESS ROAD PER SAN RAMON VALLEY FIRE PROTECTION DISTRICT'S "FIRE PREVENTION STANDARD – FIRE APPARATUS ACCESS ROAD REQUIREMENTS" DATED JANUARY 2023
- FIRE HYDRANT

40' 0' 20' 40'

1 INCH = 40 FEET

STONE VALLEY FARM

455 LIVORNA ROAD

FIRE ACCESS PLAN

CONTRA COSTA COUNTY, CA

APRIL 28, 2025

REGISTERED PROFESSIONAL ENGINEER
ANDREW D. RILEY
No. 78704
CIVIL
STATE OF CALIFORNIA

PRELIMINARY

ENGINEERING
SURVEYING • PLANNING
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LEGEND

STOP	"STOP" PAVEMENT MARKING
	FIRE HYDRANT
	REFLECTIVE "BLUE DOT" FIRE HYDRANT MARKER
	RED CURB
	6" WHITE STRIPING
	GUEST PARKING (62 SHOWN)
	WASTE STREAM CARTS
	STREET LIGHT
	SIGN
	LAND USE DELINEATION LINE

SIGNING AND STRIPING NOTES:

1. ALL STRIPING, PAVEMENT MARKING, AND SIGNING SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD) WITH REVISIONS AND THE 2018 CALTRANS STANDARD PLANS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER A MINIMUM OF TWO WORKING DAYS PRIOR TO THE DAY OF LAYOUT OF THE PROPOSED SIGNING AND STRIPING.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT AND TRACKING OF ALL PROPOSED STRIPING AND MARKING. NO PERMANENT STRIPING OR MARKING SHALL BE PLACED UNTIL THE TRACKING IS APPROVED BY THE CITY TRAFFIC ENGINEER.
4. ALL DETAILS REFER TO THE LATEST EDITION OF THE CALTRANS STANDARD PLANS.
5. CONFLICTING STRIPING AND PAVEMENT MARKINGS SHALL BE REMOVED BY SANDBLASTING BY THE CONTRACTOR.
6. BLUE PAVEMENT MARKERS SHALL BE INSTALLED AT EVERY FIRE HYDRANT PER MUTCD SECTION 38.11.
7. EXISTING STRIPING TO REMAIN UNLESS OTHERWISE NOTED.
8. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE THERMOPLASTIC WITH THE EXCEPTION OF RED CURB WHICH SHALL BE TRAFFIC PAINT.
9. SIGNS SHALL BE INSTALLED ON ELECTROLIERS WHERE SHOWN ON THE PLANS.
10. RESTRIPING SHALL EXTEND BEYOND THE CONFORM LIMITS SHOWN ON THE PLANS IF THE EXISTING STRIPING IS DAMAGED OR ALTERED DUE TO PROJECT RELATED CONSTRUCTION AND/OR PAVING ACTIVITIES. THIS SHALL BE DETERMINED BY THE CITY INSPECTOR.

40' 0' 20' 40'
1 INCH = 40 FEET

REGISTERED PROFESSIONAL ENGINEER
ANDREW D. RILEY
No. 48704
CIVIL
STATE OF CALIFORNIA

PRELIMINARY

STONE VALLEY FARM
455 LIVORNA ROAD
STRIPING & PARKING
CONTRA COSTA COUNTY, CA
APRIL 28, 2025

ENGINEERING
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STONE VALLEY FARM

UNIT BREAKDOWN

	BEDROOMS	BATHROOMS	TOTAL LIVING AREA	GARAGE AREA	COVERED PORCH/BALCONY	GROSS SQUARE FOOTAGE	COVERED PARKING
LOT 1 (PLAN B)	5	5.5	5,234 SQ/FT	872 SQ/FT	546 SQ/FT	6,652 SQ/FT	3 SPACES
LOT 2 (PLAN D)	4	2.5	2,063 SQ/FT	437 SQ/FT	70 SQ/FT	2,570 SQ/FT	2 SPACES
LOT 3 (PLAN A)	5	4.5	5,207 SQ/FT	989 SQ/FT	203 SQ/FT	6,399 SQ/FT	4 SPACES
LOT 4 (PLAN B REVERSED)	5	5.5	5,234 SQ/FT	872 SQ/FT	546 SQ/FT	6,652 SQ/FT	3 SPACES
LOT 5 (PLAN A)	5	4.5	5,207 SQ/FT	989 SQ/FT	203 SQ/FT	6,399 SQ/FT	4 SPACES
LOT 6 (PLAN C)	5	5.5	4,456 SQ/FT	842 SQ/FT	838 SQ/FT	6,136 SQ/FT	4 SPACES
LOT 7 (PLAN C REVERSED)	5	5.5	4,456 SQ/FT	842 SQ/FT	838 SQ/FT	6,136 SQ/FT	4 SPACES
LOT 8 (PLAN B)	5	5.5	5,234 SQ/FT	872 SQ/FT	546 SQ/FT	6,652 SQ/FT	3 SPACES

SETBACKS & BUILDING HEIGHTS

	FRONT	SIDES	REAR	HEIGHT
LOT 1 (PLAN B)	43'-1"	28'-6" & 69'-2"	56'-0"	27'-11"
LOT 2 (PLAN D)	10'-6"	12'-6" & 71'-7"	84'-6"	25'-2"
LOT 3 (PLAN A)	25'-0"	25'-11" & 44'-1"	82'-11"	25'-9"
LOT 4 (PLAN B REVERSED)	25'-0"	15'-2" & 35'-9"	14'-9"	27'-11"
LOT 5 (PLAN A)	24'-7"	15'-0" & 51'-4"	60'-0"	25'-9"
LOT 6 (PLAN C)	17'-0"	29'-0" & 57'-5"	89'-5"	28'-4"
LOT 7 (PLAN C REVERSED)	17'-0"	29'-0" & 66'-6"	52'-4"	28'-4"
LOT 8 (PLAN B)	310'-7"	17'-9" & 44'-10"	50'-10"	27'-11"

BUILDING DATA

LEGAL OWNER:

ART ANDERSON
34 ALAMO SQUARE SUITE 120
ALAMO, CA 94507

PROJECT ADDRESS:

455 LIVORNA ROAD
ALAMO, CA

APN:

193-010-014
193-010-039

FLOOR PLANS:

PLAN A (LOTS 3 & 5)

FIRST FLOOR	3,136 S.F.
SECOND FLOOR	2,071 S.F.
TOTAL LIVING SPACE	5,207 S.F.
4 CAR GARAGE	989 S.F.
COVERED PORCH	203 S.F.
TOTAL GROSS AREA	6,399 S.F.

PLAN B (LOTS 1, 4 & 8)

FIRST FLOOR	2,708 S.F.
SECOND FLOOR	2,526 S.F.
TOTAL LIVING SPACE	5,234 S.F.
3 CAR GARAGE	872 S.F.
COVERED PORCH	546 S.F.
TOTAL GROSS AREA	6,652 S.F.

PLAN C (LOTS 6 & 7)

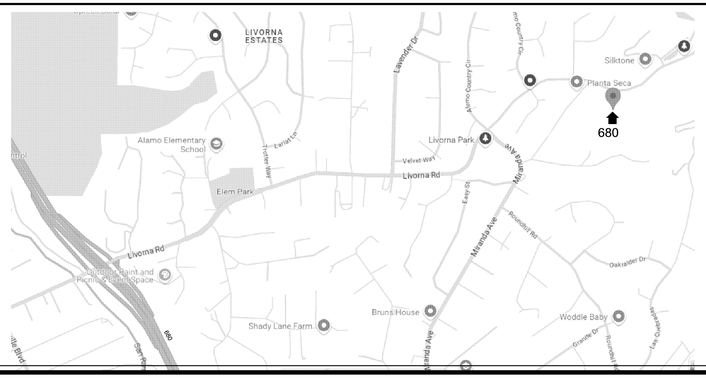
FIRST FLOOR	2,364 S.F.
SECOND FLOOR	2,092 S.F.
TOTAL LIVING SPACE	4,456 S.F.
3 CAR GARAGE	842 S.F.
COVERED PORCH	838 S.F.
TOTAL GROSS AREA	6,136 S.F.

PLAN D (LOT 2)

FIRST FLOOR	1,024 S.F.
SECOND FLOOR	1,039 S.F.
TOTAL LIVING SPACE	2,063 S.F.
3 CAR GARAGE	437 S.F.
COVERED PORCH	70 S.F.
TOTAL GROSS AREA	2,570 S.F.

TOTAL GROSS AREA FOR ALL LOTS 47,596 S.F.

VICINITY MAP



INDEX TO DRAWINGS

A1	COVER SHEET
A2	MASTER SITE PLAN
A3	PARTIAL SITE PLAN LOT 1 & 2
A4	PARTIAL SITE PLAN LOT 3 - 8
A5	PARTIAL SITE PLAN LOT 9
A6	FLOOR PLAN A
A7	EXTERIOR ELEVATIONS - PLAN A
A8	FLOOR PLAN B
A9	EXTERIOR ELEVATIONS - PLAN B
A10	FLOOR PLAN C
A11	EXTERIOR ELEVATIONS - PLAN C
A12	EXTERIOR ELEVATIONS - PLAN C (ALTERNTE)
A13	FLOOR PLAN D
A14	EXTERIOR ELEVATIONS - PLAN D
A15	COLOR BOARDS
A16	COLOR BOARDS

	REVISIONS	DATE
1		
2		
3		
4		
5		
6		
7		

LICENSED ARCHITECT
WILLIAM A. WOOD
C 13874
Jan. 31, 2027
REN. DATE
STATE OF CALIFORNIA

STONE VALLEY FARM
455 LIVORNA ROAD
ALAMO, CA 94507

WILLIAM WOOD ARCHITECTS
301 HARTZ AVENUE, SUITE 203
DANVILLE, CALIFORNIA 94526
(925) 820-8233

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DRAWN	JJ
CHECKED	WW
DATE	
SCALE	AS SHOWN
JOB NO.	25.2098R
SHEET	A1
OF	SHEETS

PLOT DATE: Apr 25, 2025 - 11:56am CSI Cover Sheet.dwg



OVERALL SITE PLAN

SCALE: 1" = 40'-0"

	REVISIONS	DATE

LICENSED ARCHITECT
WILLIAM A. WOOD
C 13874
Jan. 31, 2027
REN. DATE
STATE OF CALIFORNIA

STONE VALLEY FARM

455 LIVORNA ROAD
ALAMO, CA 94507

WILLIAM WOOD ARCHITECTS
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(925) 820-8233

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DRAWN	JJ
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DATE	
SCALE	AS SHOWN
JOB NO.	25.2098R
SHEET	A2
OF	SHEETS

PLOT DATE: Apr 25, 2025 - 12:00pm A1 Site Plan.dwg



NORTH

N

PARTIAL SITE PLAN (LOT 1 AND 2)

SCALE: 1" = 20'-0"

	REVISIONS	DATE

LICENSED ARCHITECT
WILLIAM A. WOOD
C 13874
Jan. 31, 2027
REN. DATE
STATE OF CALIFORNIA

STONE VALLEY FARM

455 LIVORNA ROAD
ALAMO, CA 94507

WILLIAM WOOD ARCHITECTS
301 HARTZ AVENUE, SUITE 203
DANVILLE, CALIFORNIA 94526
(925) 820-8233

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DATE	
SCALE	AS SHOWN
JOB NO.	25.2098R
SHEET	A3
	OF SHEETS

PLOT DATE: Apr 25, 2025 - 11:54am A1 Site Plan.dwg



PARTIAL SITE PLAN (LOTS 3 - 7)

SCALE: 1" = 20'-0"

	REVISIONS	DATE

LICENSED ARCHITECT
WILLIAM A. WOOD
C 13874
Jan. 31, 2027
REN. DATE
STATE OF CALIFORNIA

STONE VALLEY FARM

455 LIVORNA ROAD
ALAMO, CA 94507

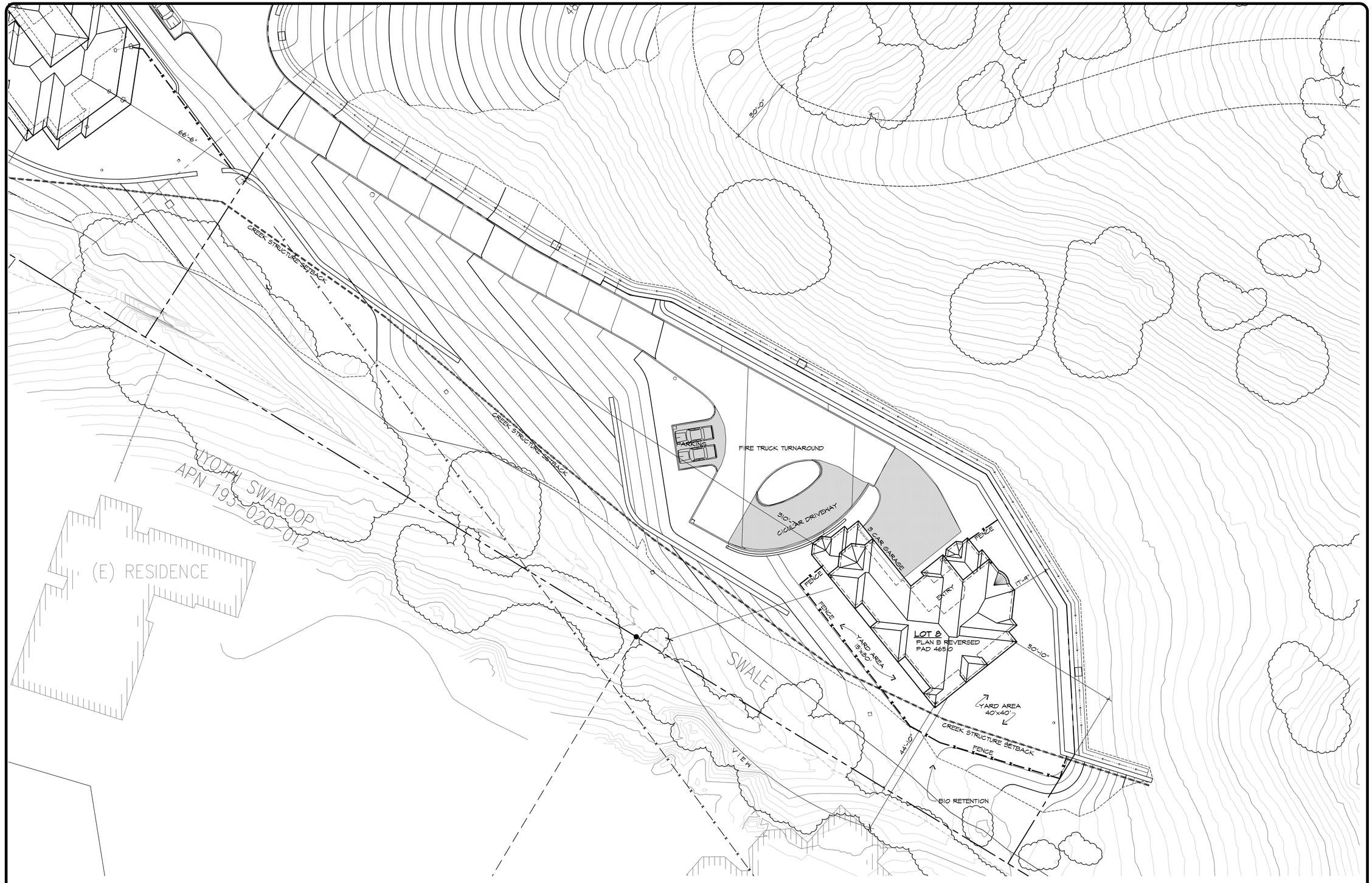
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DANVILLE, CALIFORNIA 94526
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CHECKED	WW
DATE	
SCALE	AS SHOWN
JOB NO.	25.2098R
SHEET	A4
	OF SHEETS

PLOT DATE: Apr 25 2025 - 12:57pm A1 Site Plan.dwg



PARTIAL SITE PLAN (LOT 8)

SCALE: 1" = 20'-0"

	REVISIONS	DATE
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LICENSED ARCHITECT
WILLIAM A. WOOD
C 13874
Jan. 31, 2027
REN. DATE
STATE OF CALIFORNIA

STONE VALLEY FARM

455 LIVORNA ROAD
ALAMO, CA 94507

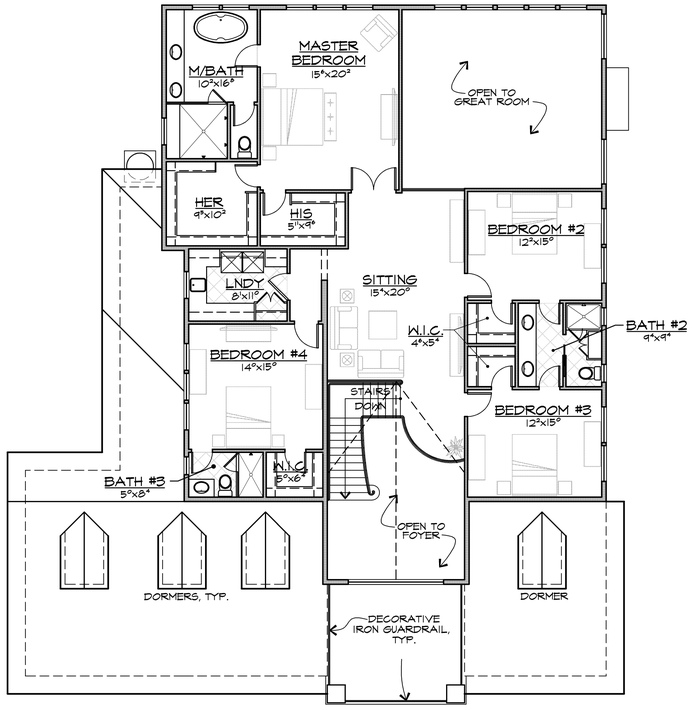
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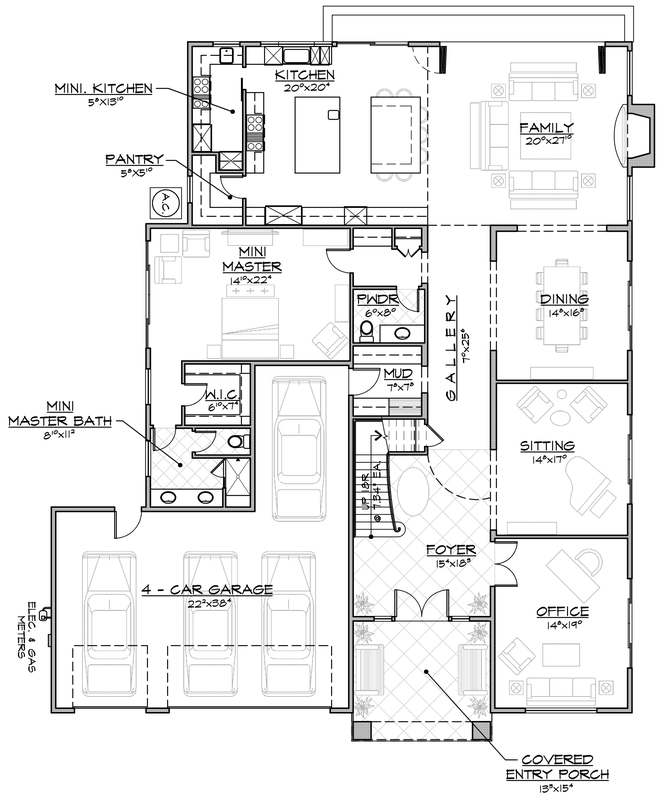
DRAWN	JJ
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SCALE	AS SHOWN
JOB NO.	25.2098R
SHEET	A5
OF	SHEETS

PLOT DATE: Apr 25, 2025 - 12:57pm A1 Site Plan.dwg



SECOND FLOOR PLAN

SCALE: 1/8" = 1'-0"



FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

PLAN A (LOTS 3 & 5)

FLOOR AREA:

FIRST FLOOR	3,136	S.F.
SECOND FLOOR	2,071	S.F.
TOTAL AREA	5,207	S.F.
3 - CAR GARAGE	989	S.F.
COVERED PORCH	203	S.F.
TOTAL GROSS AREA	6,399	S.F.

	REVISIONS	DATE
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LICENSED ARCHITECT
WILLIAM A. WOOD
C 13874
Jan. 31, 2027
REN. DATE
STATE OF CALIFORNIA

STONE VALLEY FARM

455 LIVORNA ROAD
ALAMO, CA 94507

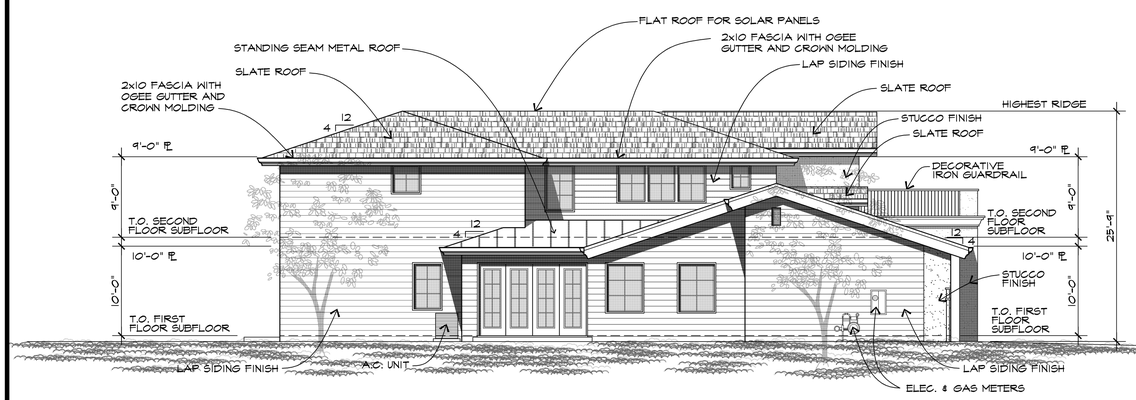
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DANVILLE, CALIFORNIA 94526
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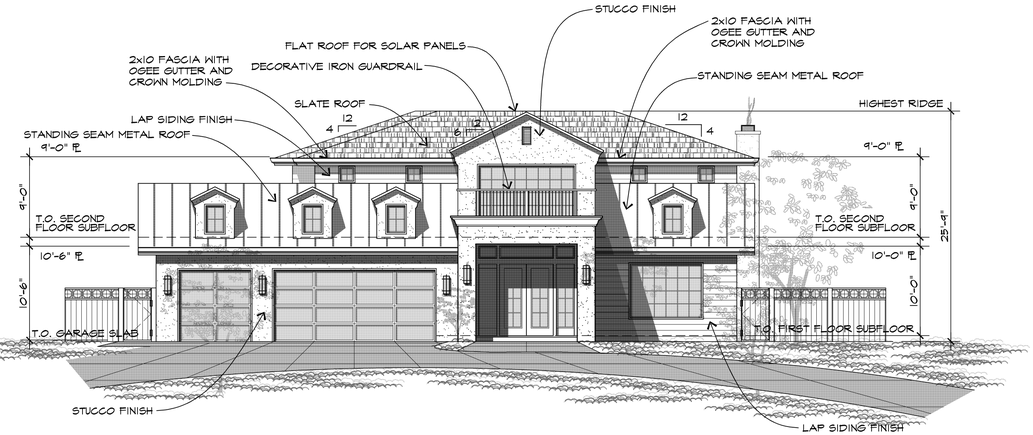
DRAWN	JJ
CHECKED	WW
DATE	
SCALE	AS SHOWN
JOB NO.	25.2098R
SHEET	A6
	OF SHEETS

PLOT DATE: Apr 25, 2025 - 1:39pm A6 First-Second Floor Plans.dwg



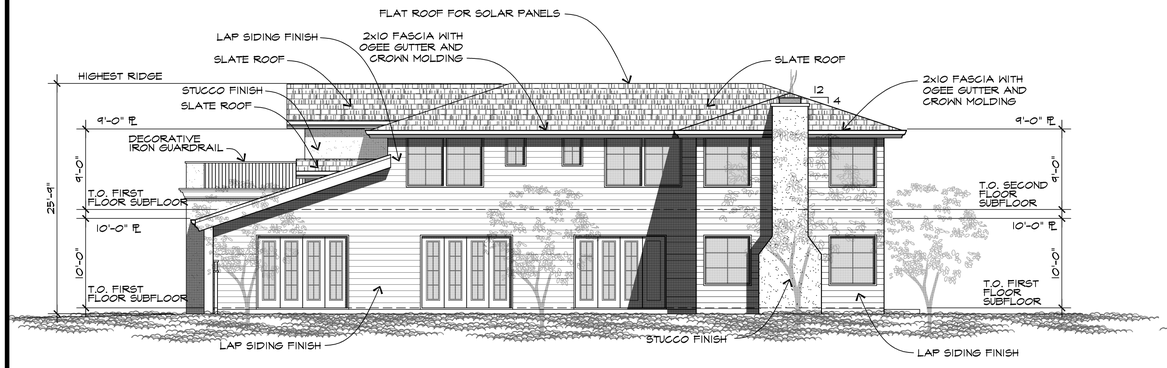
LEFT ELEVATION

SCALE: ⅛" = 1'-0"



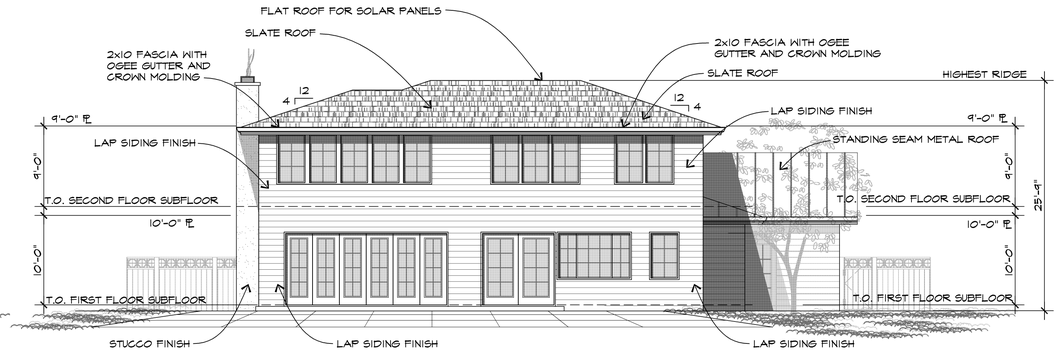
FRONT ELEVATION

SCALE: ⅛" = 1'-0"



RIGHT ELEVATION

SCALE: ⅛" = 1'-0"



REAR ELEVATION

SCALE: ⅛" = 1'-0"

PLAN A

	REVISIONS	DATE
1		
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LICENSED ARCHITECT
WILLIAM A. WOOD
C 13874
Jan. 31, 2027
REN. DATE
STATE OF CALIFORNIA

STONE VALLEY FARM

455 LIVORNA ROAD
ALAMO, CA 94507

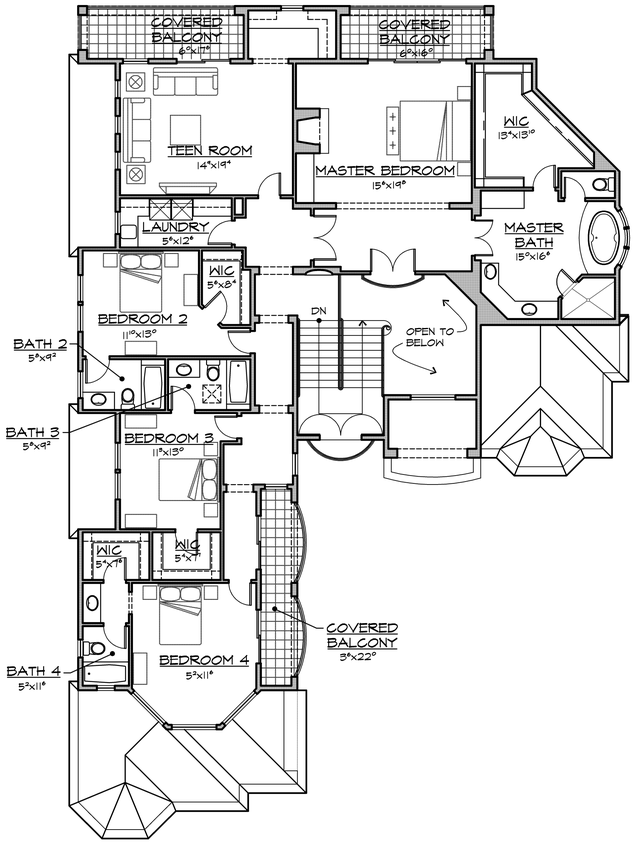
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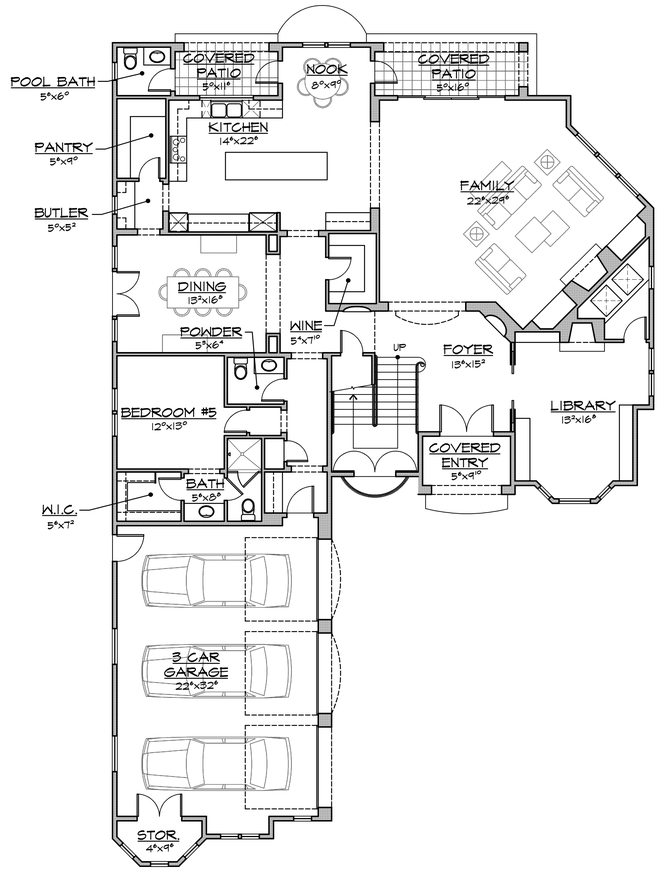
DRAWN	JJ
CHECKED	WW
DATE	
SCALE	AS SHOWN
JOB NO.	25.2098R
SHEET	A7
OF	SHEETS

PLOT DATE: Apr 25, 2025 - 11:09pm A7 Exterior Elevations.dwg



SECOND FLOOR PLAN

SCALE: 1/8" = 1'-0"



FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

PLAN B (LOTS 1, 4 & 8)

FLOOR AREA:

FIRST FLOOR	2,708	S.F.
SECOND FLOOR	2,526	S.F.
TOTAL AREA	5,234	S.F.
3 - CAR GARAGE	872	S.F.
COVERED PORCH	546	S.F.
TOTAL GROSS AREA	6,652	S.F.

	REVISIONS	DATE
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LICENSED ARCHITECT
WILLIAM A. WOOD
C 13874
Jan. 31, 2027
REN. DATE
STATE OF CALIFORNIA

STONE VALLEY FARM

455 LIVORNA ROAD
ALAMO, CA 94507

WILLIAM WOOD ARCHITECTS
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DRAWN: JJ
CHECKED: WW
DATE:
SCALE: AS SHOWN
JOB NO.: 25.2098R
SHEET: A8
OF SHEETS

PLOT DATE: Apr 25, 2025 - 1:40pm A8 1ST -2ND FLOOR Plans.dwg



LEFT SIDE ELEVATION

SCALE: 1/8" = 1'-0"



FRONT ELEVATION

SCALE: 1/8" = 1'-0"



RIGHT SIDE ELEVATION

SCALE: 1/8" = 1'-0"



REAR ELEVATION

SCALE: 1/8" = 1'-0"

PLAN B

	REVISIONS	DATE
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LICENSED ARCHITECT
WILLIAM A. WOOD
C 13874
Jan. 31, 2027
REN. DATE
STATE OF CALIFORNIA

STONE VALLEY FARM

455 LIVORNA ROAD
ALAMO, CA 94507

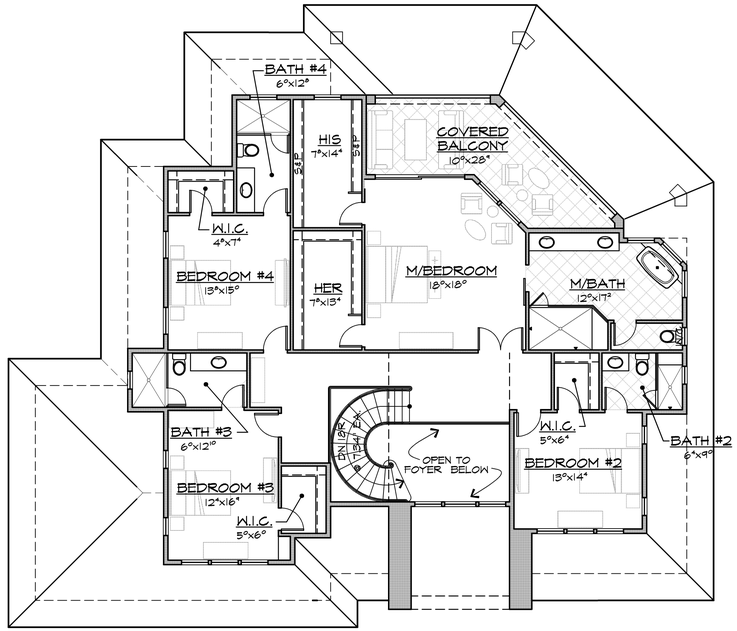
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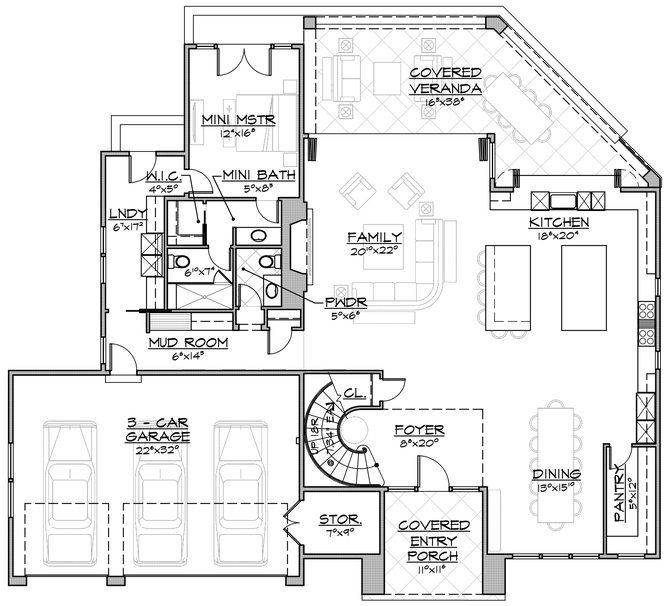
DRAWN	JJ
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DATE	
SCALE	AS SHOWN
JOB NO.	25.2098R
SHEET	A9
OF	SHEETS

PLOT DATE: Apr 25, 2025 - 4:13pm A9 EXT Elevations.DWG



SECOND FLOOR PLAN

SCALE: ⅛" = 1'-0"



FIRST FLOOR PLAN

SCALE: ⅛" = 1'-0"

PLAN C (LOTS 6 & 7)

FLOOR AREA:

FIRST FLOOR	2,364	S.F.
SECOND FLOOR	2,092	S.F.
TOTAL AREA	4,456	S.F.
3 - CAR GARAGE	842	S.F.
COVERED PORCH	838	S.F.
TOTAL GROSS AREA	6,136	S.F.

	REVISIONS	DATE
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LICENSED ARCHITECT
WILLIAM A. WOOD
C 13874
Jan. 31, 2027
REN. DATE
STATE OF CALIFORNIA

STONE VALLEY FARM

455 LIVORNA ROAD
ALAMO, CA 94507

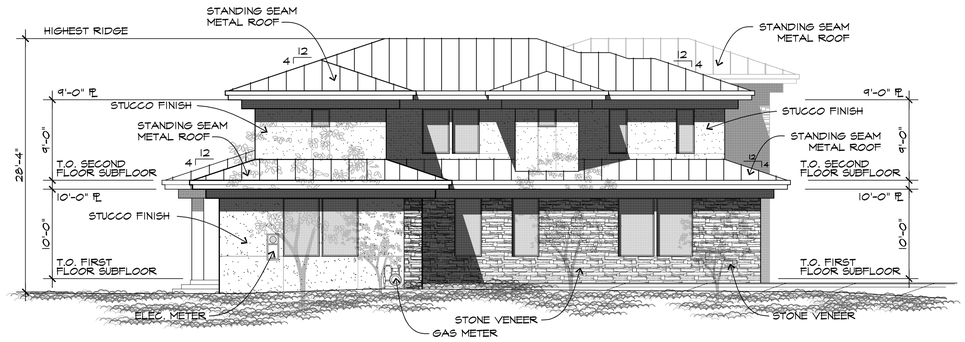
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PLOT DATE: Apr 25, 2025 - 1:43pm A10 First-Second Floor Plans.dwg

DRAWN	JJ
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DATE	
SCALE	AS SHOWN
JOB NO.	25.2058R
SHEET	A10
OF	SHEETS



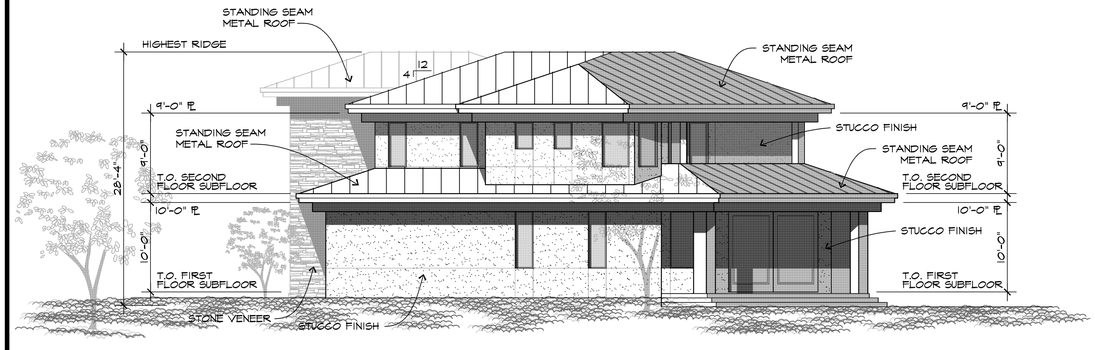
LEFT ELEVATION

SCALE: 3/16" = 1'-0"



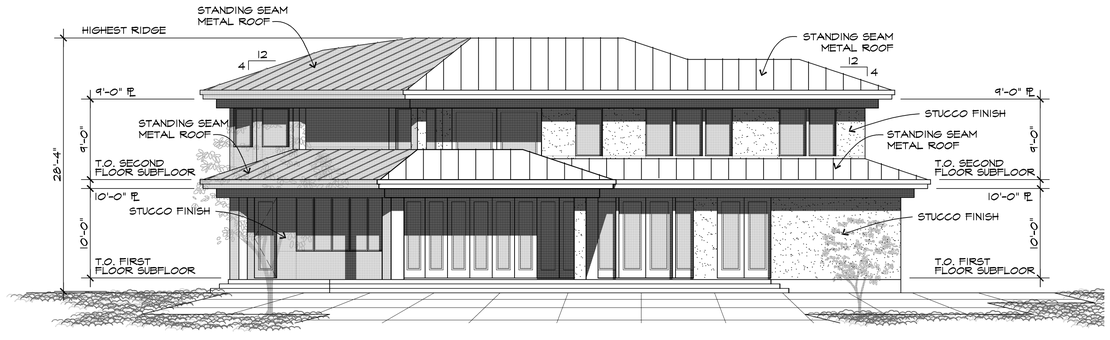
FRONT ELEVATION

SCALE: 3/16" = 1'-0"



RIGHT ELEVATION

SCALE: 3/16" = 1'-0"



REAR ELEVATION

SCALE: 3/16" = 1'-0"

PLAN C

	REVISIONS	DATE
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LICENSED ARCHITECT
WILLIAM A. WOOD
C 13874
Jan. 31, 2027
REN. DATE
STATE OF CALIFORNIA

STONE VALLEY FARM

455 LIVORNA ROAD
ALAMO, CA 94507

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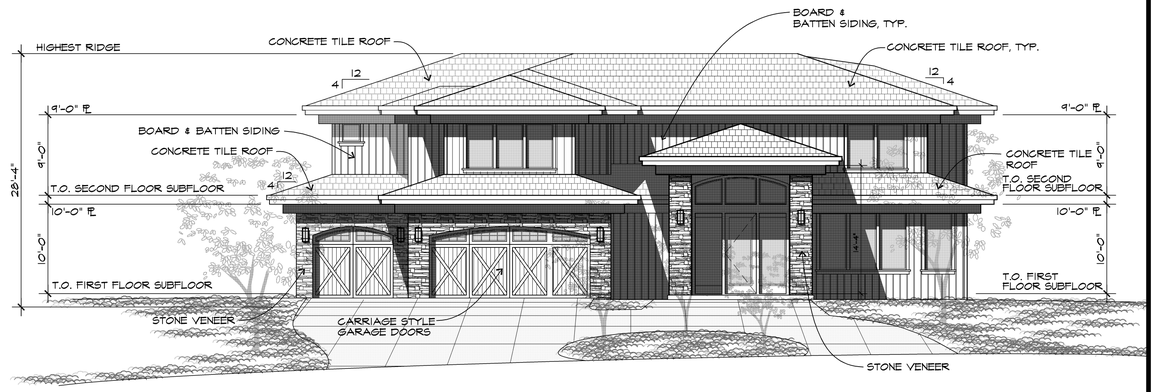
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JOB NO.	25.2098R
SHEET	A11
OF	SHEETS

PLOT DATE: Apr 25, 2025 - 1:52pm All Elevations.dwg



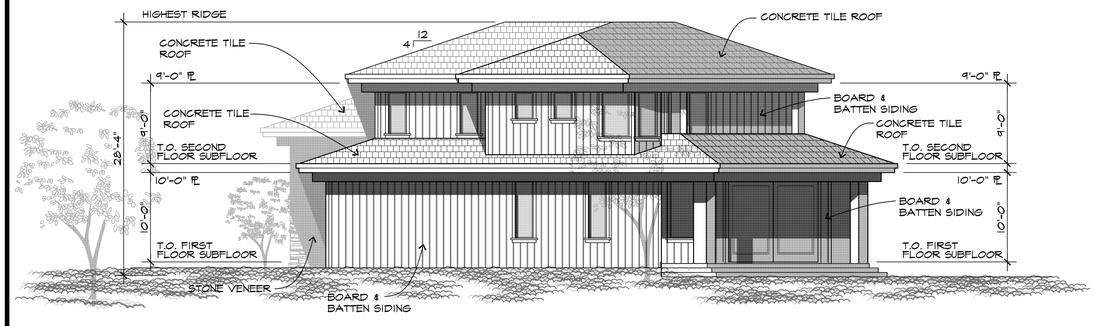
LEFT ELEVATION

SCALE: 3/16" = 1'-0"



FRONT ELEVATION

SCALE: 3/16" = 1'-0"



RIGHT ELEVATION

SCALE: 3/16" = 1'-0"



REAR ELEVATION

SCALE: 3/16" = 1'-0"

PLAN C (ALTERNATE)

	REVISIONS	DATE
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LICENSED ARCHITECT
WILLIAM A. WOOD
C 13874
Jan. 31, 2027
REN. DATE
STATE OF CALIFORNIA

STONE VALLEY FARM

455 LIVORNA ROAD
ALAMO, CA 94507

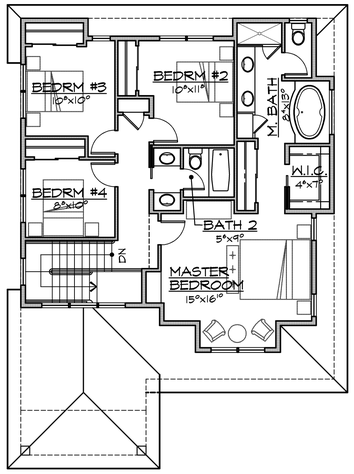
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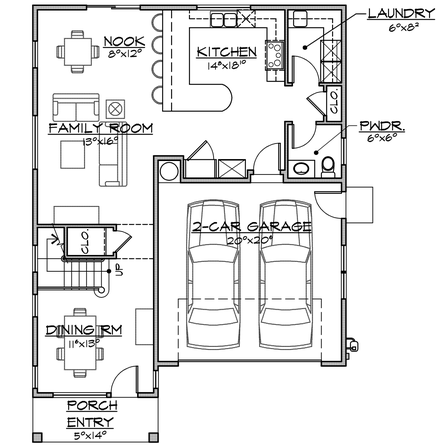
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DATE	
SCALE	AS SHOWN
JOB NO.	25.2098R
SHEET	A12
OF	SHEETS

PLOT DATE: Apr 25, 2025 - 2:19pm All Elevations.dwg



SECOND FLOOR PLAN

SCALE: 1/8" = 1'-0"



FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

PLAN D (LOT 2)

FLOOR AREA:

FIRST FLOOR	1,024	S.F.
SECOND FLOOR	1,039	S.F.
TOTAL AREA	2,063	S.F.
2 - CAR GARAGE	437	S.F.
COVERED PORCH	70	S.F.
TOTAL GROSS AREA	2,570	S.F.

	REVISIONS	DATE
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LICENSED ARCHITECT
WILLIAM A. WOOD
C 13874
Jan. 31, 2027
REN. DATE
STATE OF CALIFORNIA

STONE VALLEY FARM

455 LIVORNA ROAD
ALAMO, CA 94507

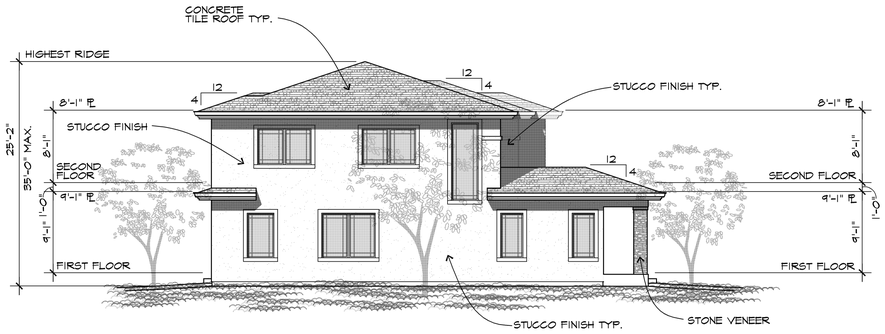
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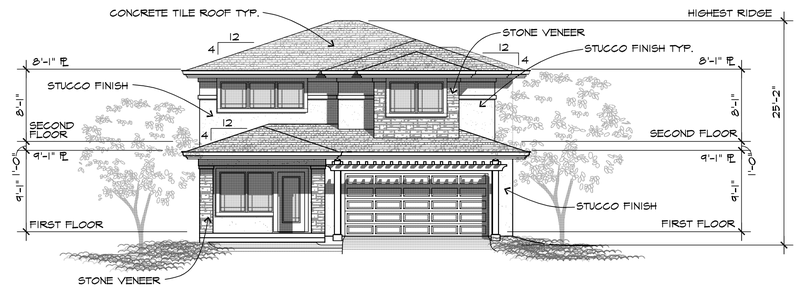
DRAWN	JJ
CHECKED	WW
DATE	
SCALE	AS SHOWN
JOB NO.	25.2098R
SHEET	A13
	OF SHEETS

PLOT DATE: Apr 25, 2025 - 11:47pm A12 plan D.dwg



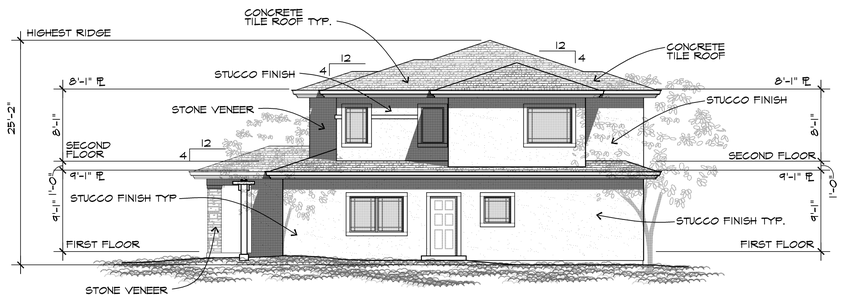
LEFT ELEVATION

SCALE: 1/8" = 1'-0"



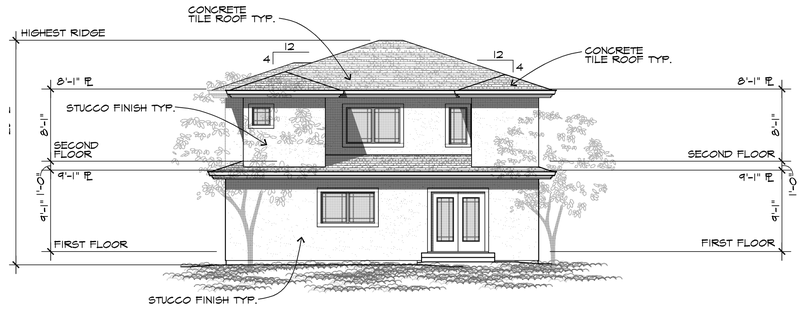
FRONT ELEVATION

SCALE: 1/8" = 1'-0"



RIGHT ELEVATION

SCALE: 1/8" = 1'-0"



REAR ELEVATION

SCALE: 1/8" = 1'-0"

PLAN D

	REVISIONS	DATE
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LICENSED ARCHITECT
WILLIAM A. WOOD
C 13874
Jan. 31, 2027
REN. DATE
STATE OF CALIFORNIA

STONE VALLEY FARM

455 LIVORNA ROAD
ALAMO, CA 94507

WILLIAM WOOD ARCHITECTS
301 HARTZ AVENUE, SUITE 203
DANVILLE, CALIFORNIA 94526
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DATE	
SCALE	AS SHOWN
JOB NO.	25.2098R
SHEET	A14
OF	SHEETS

PLOT DATE: Apr 25, 2025 - 1:56pm A13 elevations plan D.dwg

ANDERSON SUBDIVISION
455 LIVORNA ROAD
ALAMO, CA 94507
LOT 1

WILLIAM WOOD
ARCHITECTS
301 HARTZ AVENUE, SUITE 203
DANVILLE, CALIFORNIA
(925) 820-8233 FAX (925) 820-8793

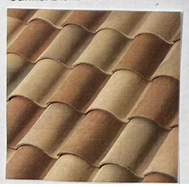
BODY STUCCO
Dunn Edwards
Pigeon Gray DE6214



TRIM
Dunn Edwards
Fine Grain DE6213



ROOF
Boral
Carmel Blend - Old World



WINDOWS
Black



ANDERSON SUBDIVISION
455 LIVORNA ROAD
ALAMO, CA 94507
LOT 2

WILLIAM WOOD
ARCHITECTS
301 HARTZ AVENUE, SUITE 203
DANVILLE, CALIFORNIA
(925) 820-8233 FAX (925) 820-8793

BODY STUCCO
Dunn Edwards
Wooden Peg DE6215



TRIM
Dunn Edwards
Barrel Stove DE6216



WINDOWS
Black



ROOF
Eagle - Bel-Air
Dark Charcoal



ANDERSON SUBDIVISION
455 LIVORNA ROAD
ALAMO, CA 94507
LOT 3

WILLIAM WOOD
ARCHITECTS
301 HARTZ AVENUE, SUITE 203
DANVILLE, CALIFORNIA
(925) 820-8233 FAX (925) 820-8793

BODY STUCCO
Dunn Edwards
Barnwood Gray DET620



TRIM
Dunn Edwards
Reclaimed Wood DET625



ROOF
Eagle
Dark Charcoal Tapered Slate



WINDOWS
Black



ANDERSON SUBDIVISION
455 LIVORNA ROAD
ALAMO, CA 94507
LOT 4

WILLIAM WOOD
ARCHITECTS
301 HARTZ AVENUE, SUITE 203
DANVILLE, CALIFORNIA
(925) 820-8233 FAX (925) 820-8793

BODY STUCCO
Dunn Edwards
Stucco Tan DE6205



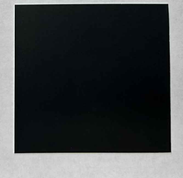
TRIM
Dunn Edwards
Bison Beige DEC750



ROOF
Boral
Carmel Blend - Old World



WINDOWS
Black



	REVISIONS	DATE

LICENSED ARCHITECT
WILLIAM A. WOOD
C 13874
Jan. 31, 2027
REN. DATE
STATE OF CALIFORNIA

ANDERSON SUBDIVISION
455 LIVORNA ROAD
ALAMO, CA 94507

WILLIAM WOOD ARCHITECTS
301 Hartz Avenue, Suite 203
Danville, California 94526
(925) 820-8233

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DRAWN	JJ
CHECKED	WW
DATE	
SCALE	AS SHOWN
JOB NO.	25.2098R
SHEET	A15
	OF SHEETS

PLOT DATE: Apr 17, 2025 - 4:50pm A15-A16 Color Boards.dwg

ANDERSON SUBDIVISION
455 LIVORNA ROAD
ALAMO, CA 94507
LOT 5

WILLIAM WOOD
ARCHITECTS
301 HARTZ AVENUE, SUITE 203
DANVILLE, CALIFORNIA
(925) 820-8233 FAX (925) 820-8793

BODY STUCCO
Dunn Edwards
Barnwood Gray DET620



TRIM
Dunn Edwards
Reclaimed Wood DET625



ROOF
Eagle
Dark Charcoal Tapered Slate



WINDOWS
Black



ANDERSON SUBDIVISION
455 LIVORNA ROAD
ALAMO, CA 94507
LOT 6

WILLIAM WOOD
ARCHITECTS
301 HARTZ AVENUE, SUITE 203
DANVILLE, CALIFORNIA
(925) 820-8233 FAX (925) 820-8793

BODY STUCCO
Dunn Edwards
Flintstone DE6221



TRIM
Dunn Edwards
Calico Rock DE6229



STONE
Boral - Bucks County Country Ledgestone



METAL ROOF
Medium Bronze



WINDOWS
Black



ANDERSON SUBDIVISION
455 LIVORNA ROAD
ALAMO, CA 94507
LOT 7

WILLIAM WOOD
ARCHITECTS
301 HARTZ AVENUE, SUITE 203
DANVILLE, CALIFORNIA
(925) 820-8233 FAX (925) 820-8793

BODY STUCCO
Dunn Edwards
Stucco Tan DE6205



TRIM
Dunn Edwards
Bison Beige DEC750



ROOF
Boral
Carmel Blend - Old World



WINDOWS
Black



ANDERSON SUBDIVISION
455 LIVORNA ROAD
ALAMO, CA 94507
LOT 8

WILLIAM WOOD
ARCHITECTS
301 HARTZ AVENUE, SUITE 203
DANVILLE, CALIFORNIA
(925) 820-8233 FAX (925) 820-8793

BODY STUCCO
Dunn Edwards
Pigeon Gray DE6214



TRIM
Dunn Edwards
Fine Grain DE6213



ROOF
Boral
Carmel Blend - Old World



WINDOWS
Black



	REVISIONS	DATE
1		
2		
3		
4		
5		
6		
7		

LICENSED ARCHITECT
WILLIAM A. WOOD
C 13874
Jan. 31, 2027
REN. DATE
STATE OF CALIFORNIA

ANDERSON SUBDIVISION
455 LIVORNA ROAD
ALAMO, CA 94507

WILLIAM WOOD ARCHITECTS
301 Hartz Avenue, Suite 203
Danville, California 94526
(925) 820-8233

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DRAWN	JJ
CHECKED	WW
DATE	
SCALE	AS SHOWN
JOB NO.	25.2098R
SHEET	A16
OF	SHEETS

PLOT DATE: Apr 17, 2025 - 4:09pm A15-A16 Color Boards.dwg

RECEIVED on 04/30/2025 CDSD25-09717
By Contra Costa County
Department of Conservation and Development

Applicant Art Anderson
Project Name Stone Valley Farm
Subdivision # _____
County File # CDPC24-00005

Property Owner Art Anderson
Site Address 455 Livorna Rd, Alamo, CA 94507
APN 193-010-014 and 193-010-039
Date Submitted 4/29/25

Contra Costa County
Department of Conservation and Development
Density Bonus Proposal

DENSITY BONUS SUBMITTAL REQUIREMENTS

Requests for Density Bonuses are reviewed and processed for approval or denial by the Community Development and the Housing and Community Improvement Divisions. Density Bonus requests are processed pursuant to Section 65915 et seq. of the California Government Code and Title 8, Division 822, Chapter 822-2 of the Contra Costa County Ordinance Code. Density Bonus proposals are intended to provide incentives and/or concessions for housing developments for the production of housing for very low-income, lower-income, moderate-income, or senior households; to facilitate the development of affordable housing; to implement the goals, objectives, and policies of the County General Plan's Housing Element.

The Density Bonus request will be reviewed and processed concurrently with the complete submittal of a development application, which may include but is not limited to applications, for subdivisions, planned unit developments, development plans, land use permits, rezones, and/or general plan amendments.

1. DENSITY BONUS PROPOSAL. The proposal must include:
    a. A full description of the proposed project.
    b. The type of housing development proposed as required by the State's Density Bonus law (rental, for-sale, low-income, senior housing, foster youth, common interest development, student housing, etc.).
    c. Maximum base unit calculation for the site.
    d. The percentage of density bonus requested.
    e. The total number of units and the affordability level (based on percentage of area median income) of all units in the project.
    f. The number of incentives/concessions for the project, including the referenced Government Code Section that supports the number requested for the project.
    g. The requested incentive/concession.
    h. A list of requested waivers or reductions of development standards.
    i. The number of existing residential units on site. Are the existing units rental units?
    j. Are there any deed restrictions on the parcel that restricts the ownership or rental of the property/unit to persons below the area median income?
    k. The number of buildings proposed in the project.
    l. The unit types, numbers, and distribution (i.e. studio, 1 bedroom, 3 bedroom, etc.).
    m. Whether the project will be phased and the approximate timeline for development.
    n. Location of the affordable units and what phase they will be developed.
2. VICINITY/LOCATION MAP.
3. SITE PLAN. Site plan should be legibly drawn to scale, and include the following:
    a. Square footage and acreage of parcel(s)
    b. Property lines and dimensions
    c. Street right-of-way
    d. Existing easements
    e. Existing/proposed on-site buildings and any buildings within 100 feet of property
    f. Driveway and parking layout

g. Existing and proposed trees and landscaping
h. Location of the proposed affordable units
i. Zoning
j. General Plan
k. Gross acreage
l. Net acreage

4. FINANCIAL ANALYSIS REPORT. The financial analysis report for the project should indicate that the proposed Density Bonus and concessions and/or incentives are necessary to provide the proposed affordable units. (Optional)
5. ADDITIONAL INFORMATION.
   a. Any pertinent information that is relevant for staff's review and processing of the request.
   b. Is the proposed development located on property that includes or included affordable units that have been subject to a recorded covenant, ordinance, or law restricting rents or sales prices?
   c. Is the proposed development located on property where dwelling units have been vacated or demolished in the five-year period preceding the submittal of the application proposal for development?
   d. Are any existing housing units on the site proposed to be demolished? If so, are the units currently occupied, when were they last occupied, and what is the current/last known rent and bedroom size?"
6. ATTACH COMPLETED INCLUSIONARY HOUSING ORDINANCE HOUSING PLAN. This Housing Plan is required for projects of five or more residential units to demonstrate compliance with the County's Inclusionary Housing Ordinance. See Chapter 822-4 of the County Ordinance Code for the standards and requirements for applicability and compliance.

Applicant & Property Owner Verification:

I/We verify that all the information stated and submitted is complete and accurate to the best of my/our knowledge, and should it be found that any of the information is incorrect, incomplete, or inconsistent with the requirements of the ordinance that it may result in increased processing time and/or costs.

Applicant Signature: _____ Name: ARTHUR L ANDERSON Date: 4/28/25

Owner Signature: _____ Name: ARTHUR L ANDERSON Date: 4/28/25

Applicant Art Anderson
Project Name Stone Valley Farm
Subdivision #
County File # CDPC24-00005

Property Owner Art Anderson
Site Address 455 Livorna Rd, Alamo, CA 94507
APN 193-010-014 and 193-010-039
Date Submitted 4/29/25

Density Bonus Agreement Requirements

A density bonus agreement is typically combined with an inclusionary housing agreement (Agreement) for compliance with both the density bonus ordinance/density bonus state law and inclusionary housing ordinance deed restriction requirements.

Prior to the issuance of a demolition permit, grading permit, building permit, or recordation of a subdivision map for the development, whichever occurs first, the applicant/owner must execute an Agreement, and it shall be recorded. The preparation and approval of an Agreement will be a minimum three-month process or may be longer due to the complexities of the project and scheduling before the Board of Supervisors for approval of the Agreement prior to the Department of Conservation and Development's signature on behalf of the County and subsequent recordation. The Agreement is not considered to be executed until all parties have signed and the document is recorded.

To initiate the preparation of an Agreement on the normal timeline, the applicant must file a COA Compliance Review Application after the final entitlement approval (discuss earlier options with Housing staff early in the process), accompanied by the following information:

- Preliminary Title Report
- Written Narrative to include:
  - List all owners of the property.
  - If the owners are entities, please provide the names and titles of the two managers of the LLC who have the authority to sign the agreement on behalf of the entity. If the owner is an LLC, or multiple LLCs that were not consistent with owners listed on the entitlement application, proof of ownership and a copy of the Articles of Incorporation for each entity are required.
  - Developer's mailing address. This must be a local contact and address for notices required by the IHA.
  - Identify the lender who has been or will provide financing for the development and the recorded deed of trust that has been recorded, including the referenced document number of the recorded deed of trust.
- Exhibit A Legal Description
- Density Bonus Plan Maps that are legible, in black and white, and scaled to 8 ½" x 11" sheets that comply with document recording requirements
- Detailed timeline for the project including constructing the units, including phasing of the development, marketing the units, reviewing applications for qualified households, and sale of density bonus for-sale units or occupancy of density bonus rental units.
- Any other information that may be required for staff to prepare the Agreement.

Applicant & Property Owner Verification:

I/We verify that all the information stated and submitted is complete and accurate to the best of my/our knowledge, and should it be found that any of the information is incorrect, incomplete, or inconsistent with the requirements of the ordinance that it may result in increased processing time and/or costs.

Applicant Signature: _____ Name: ARTHUR L ANDERSON Date: 4/28/25

Owner Signature: _____ Name: ARTHUR L ANDERSON Date: 4/28/25

Applicant Art Anderson
Project Name Stone Valley Farm
Subdivision #
County File # CDPC24-00005

Property Owner Art Anderson
Site Address 455 Livorna Rd, Alamo, CA 94507
APN 193-010-014 and 193-010-039
Date Submitted

Density Bonus Units Construction and Occupancy

For all projects where density bonus housing will be built for sale or rental, the applicant must submit documentation and other information to DCD for review and approval along with the filing of a condition of approval compliance review application and fees at least 90 days prior to construction completion and the request for a final building inspection and occupancy of the building. The following documents and information required for review and approval include, but are not limited to the following:

- Marketing Plan
- Marketing Materials, including translated Marketing Materials
- Proof of Publication of the advertising of the Density Bonus Units to all publications listed in the Marketing Plan
- Certification Statement listing all organizations and groups that were distributed marketing materials for the density bonus units
- Tenant Selection Plan or Homeowner Selection Plan, whichever is applicable to the project
- Tenant Rent Roll (pre-certified households for DCD review)

The expectation is for the developer to market the units in the project prior to construction completion, select qualified tenants or qualified homeowners for density bonus units prior to construction completion, and submit a list of the qualified households to DCD for review prior to final inspection/final occupancy.

A copy of the prequalified households for for-sale units will be submitted to DCD for review and approval and the file record. The prequalification approval by DCD will include the applicant's submittal of income documentation and income certification forms for review. The prequalification approval will be valid for six months. The income must be recertified by DCD at least 30 days prior to sale.

For density bonus rental units, a copy of the tenant rent roll must be submitted for review and approval by DCD and kept in the file record. The tenant rent roll should include information including, but not limited to, the tenant's name, income, unit number, unit affordability level, household size, tenant rents, utility costs, and gross rents. The owner/property manager may be instructed to upload this information to a secure database as indicated by DCD for review and approval.

Annual monitoring reports will be required from the property manager and a sample of the density bonus units will be selected by DCD for periodic review of tenant income documentation, certification, and unit occupancy qualification. The annual monitoring reports must be submitted with a condition of approval compliance review application and fees.

Applicant & Property Owner Verification:

I/We verify that all the information stated and submitted is complete and accurate to the best of my/our knowledge, and should it be found that any of the information is incorrect, incomplete, or inconsistent with the requirements of the ordinance that it may result in increased processing time and/or costs.

Applicant Signature: _____ Name: ARTHUR L ANDERSON Date: 4/28/25

Owner Signature: _____ Name: ARTHUR L ANDERSON Date: 4/28/25

Applicant Art Anderson
Project Name Stone Valley Farm
Subdivision #
County File # CDPC24-00005

Property Owner Art Anderson
Site Address 455 Livorna Rd, Alamo, CA 94507
APN 193-010-014 and 193-010-039
Date Submitted 4/29/25

Density Bonus Housing Maximum Sales Price Calculation

The maximum affordable sales price will be calculated by DCD, no more than once annually for a project's density bonus units. A density bonus unit may also be an inclusionary housing unit. In this case, the most restrictive requirements would apply to the unit. The calculation of the maximum affordable sales price will be according to the ordinance, state law, conditions of approval, and agreement.

The following is a list of non-mortgage costs that will be included in the calculation of the maximum sales price for the density bonus units. The developer will provide DCD staff with the following information for staff review and use accompanied by a written request for DCD to calculate the maximum purchase price for the respective density bonus units for the project at the respective affordability levels and unit size.

Non-Mortgage Costs	Housing Costs in Dollars
HOA Dues (annual)	
Property Insurance (estimated annual for fire and casualty covering replacement value of property improvements)	
Utility Allowance (monthly)	
Solar Lease (annual cost)	
Property Taxes and Assessments	
CFD (annual)	
Mello Roos Tax (annual)	
Property maintenance and repairs (annual)	
Space rent, if the housing unit is on rented land	
Other Costs (annual, including third-party)	

Applicant & Property Owner Verification:

I/We verify that all the information stated and submitted is complete and accurate to the best of my/our knowledge, and should it be found that any of the information is incorrect, incomplete, or inconsistent with the requirements of the ordinance that it may result in increased processing time and/or costs.

Applicant Signature: _____ Name: ARTHUR L ANDERSON Date: 4/28/25

Owner Signature: _____ Name: ARTHUR L ANDERSON Date: 4/28/25

Applicant Art Anderson
Project Name Stone Valley Farm
Subdivision #
County File # CDPC24-00005

Property Owner Art Anderson
Site Address 455 Livorna Rd, Alamo, CA 94507
APN 193-010-014 and 193-010-039
Date Submitted 4/29/25

Housing Element Sites Inventory Findings

The Housing Element Sites Inventory's no net loss rule is a separate requirement of the State of California and is distinct from the State's Density Bonus Code or the County's Density Bonus Ordinance Requirements. Government Code Section 65863 requires the county to ensure that its housing element sites inventory can accommodate its share of the regional housing need throughout the planning period. The law prohibits the county from reducing, requiring, or permitting the reduction of the residential density to a lower residential density on sites listed in the inventory. It also prohibits the county from permitting or causing the inventory of sites identified in the housing element to be insufficient to meet its remaining unmet share of the regional housing need for lower and moderate-income households.

Housing developments that are located on a parcel(s) identified in the County's Housing Element sites inventory will require written findings for the proposal if the housing development includes fewer units by income category or fewer units by density from that which is identified in the sites inventory. Compliance with the no net loss rule is required prior to a recommendation for approval or entitlement decision. Compliance with the law may include the requirement for the applicant/developer to assist in identifying an alternative site to be rezoned and/or added to the sites inventory to account for any net loss in the county's share of the regional housing needs due to the proposed housing development.

To determine if your parcel(s) is listed in the County's Housing Element sites inventory, please contact the DCD Application and Permits Center staff and they can verify whether the property is listed in the County's Housing Element sites inventory.

* To assist the project planner in preparing the required findings for a parcel or parcels identified in the housing element sites inventory, you may attach a narrative and explanation of the project's compliance with the no net loss requirement. (optional)

Applicant & Property Owner Verification:

I/We certify that all statements made on this form or any accompanying attachment or exhibit are true and complete to the best of my knowledge. Should it be found that any of the information is incorrect, incomplete, or inconsistent with the requirements of the County Ordinance or State law that it may result in denial of the request and increased processing time and/or costs. I/We understand that any false statements may result in denial of the requested permit, revocation of any issued permit, or penalties. I/We further certify that permission has been granted by the property owner to conduct the proposed development applied for herein.

Applicant Signature: _____ Name: ARTHUR L ANDERSON Date: 4/28/25

Owner Signature: _____ Name: ARTHUR L ANDERSON Date: 4/28/25



PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE
TREES					
	CER	CERCIS OCCIDENTALIS	WESTERN REDBUD	15 GAL STD.	L (WUCOLS IV)
	LAG	LAGERSTROEMIA INDICA X FAURIEI 'NATCHEZ'	NATCHEZ CRAPE MYRTLE	24"BOX STD.	M (WUCOLS IV)
	PIS	PISTACIA CHINENSIS 'KEITH DAVEY'	KEITH DAVEY CHINESE PISTACHE	24"BOX STD.	M (WUCOLS IV)
	PLA	PLATANUS X ACERIFOLIA 'COLUMBIA'	COLUMBIA LONDON PLANE TREE	24"BOX STD.	M (WUCOLS IV)
	QUA	QUERCUS AGRIFOLIA	COAST LIVE OAK	24"BOX STD.	VL (WUCOLS IV)
	QUL	QUERCUS LOBATA	VALLEY OAK	24"BOX STD.	L (WUCOLS IV)

MITIGATION TREE

76 EXISTING TREE TO REMAIN

MITIGATION LEGEND

40 PROTECTED TREES TO BE REMOVED

80 NEW MITIGATION TREES PLANTED

RECEIVED on 04/30/2025 CDSD25-09717
By Contra Costa County
Department of Conservation and Development

0 40' 80' 160'

GATES +ASSOCIATES

STONE VALLEY FARM

455 LIVORNA ALAMO, CALIFORNIA

TREE PLAN

MAY, 2025

L-1



Tag #	Species	Diameter	Protected	Condition	Suitability	P/R	Impacts
1	Calif. black walnut	20,19	Yes	2	Low	**Preserve**	Outside impacts
2	Coast live oak	13	Yes	2	Low	**Preserve?**	Adj. to bioswale
3	Coast live oak	26	Yes	4	Moderate	**Preserve?**	Adj. to bioswale
4	Coast live oak	9	Yes	2	Low	**Preserve**	Outside impacts
5	Valley oak	24	Yes	4	Moderate	**Preserve**	Outside impacts
6	Coast live oak	13	Yes	3	Low	Remove	Within road
7	Coast live oak	6	No	5	High	Remove	Within road
8	Valley oak	20	Yes	4	High	Remove	Within grading
9	Coast live oak	8	Yes	4	Moderate	Remove	Within road
10	Valley oak	13	Yes	4	Moderate	Remove	Within grading
11	Valley oak	5	No	3	Low	Remove	Within grading
12	Coast live oak	11,5	Yes	3	Moderate	Remove	Within grading
13	Valley oak	7	Yes	3	Moderate	Remove	Within grading
14	Valley oak	10,6	Yes	3	Moderate	Remove	Within grading
15	Coast live oak	6,4	Yes	3	Moderate	**Preserve**	Outside impacts
16	Coast live oak	14	Yes	3	Moderate	**Preserve**	Outside impacts
17	Coast live oak	16	Yes	3	Moderate	**Preserve**	Outside impacts
18	Coast live oak	14	Yes	4	Moderate	**Preserve**	Outside impacts
19	Coast live oak	9,6,4	Yes	3	Moderate	**Preserve?**	Adj. to grading
20	Coast live oak	18	Yes	2	Low	**Preserve**	Outside impacts
21	Coast live oak	12,10,7,6	Yes	3	Moderate	**Preserve**	Outside impacts
22	Valley oak	10,6	Yes	4	Moderate	**Preserve**	Outside impacts
23	Coast live oak	15	Yes	3	Moderate	**Preserve**	Outside impacts
24	Valley oak	8	Yes	4	High	**Preserve**	Outside impacts
25	Valley oak	12	Yes	3	Moderate	**Preserve**	Adj. to bioswale
26	Valley oak	6	No	3	Moderate	**Preserve**	Adj. to bioswale
27	Valley oak	10,6	Yes	3	Moderate	**Preserve**	Adj. to bioswale
28	Valley oak	7,6,6,5	Yes	3	Low	**Preserve**	Outside impacts
29	Valley oak	14	Yes	3	Low	**Preserve**	Outside impacts
30	Coast live oak	17,14,11,10	Yes	3	Moderate	**Preserve**	Outside impacts
31	Valley oak	12,10	Yes	3	Moderate	**Preserve**	Outside impacts
32	Valley oak	11	Yes	3	Low	**Preserve**	Outside impacts
33	Coast live oak	14,12	Yes	3	Moderate	**Preserve**	Outside impacts
34	Coast live oak	8,4	Yes	3	Moderate	**Preserve**	Outside impacts
35	Coast live oak	13	Yes	3	Moderate	**Preserve**	Outside impacts
36	Coast live oak	8	Yes	3	Moderate	**Preserve**	Outside impacts
37	Valley oak	6	No	3	Low	**Preserve?**	Adj. to grading
38	Valley oak	8	Yes	3	Moderate	**Preserve?**	Adj. to grading
39	Coast live oak	10,7,7	Yes	3	Low	**Preserve**	Outside impacts
40	Valley oak	7	Yes	3	Low	**Preserve**	Outside impacts
41	Valley oak	8	Yes	3	Low	**Preserve**	Outside impacts
42	Coast live oak	16	Yes	4	Moderate	**Preserve**	Outside impacts
43	Coast live oak	11,5,3	Yes	3	Moderate	**Preserve**	Outside impacts
44	Coast live oak	6,5	Yes	3	Moderate	**Preserve**	Outside impacts
45	Coast live oak	21	Yes	4	High	**Preserve**	Outside impacts
46	Valley oak	9	Yes	3	Moderate	**Preserve**	Outside impacts
47	Coast live oak	7,6,5	Yes	3	Moderate	**Preserve**	Outside impacts
48	Coast live oak	9	Yes	3	Low	**Preserve?**	Adj. to grading
49	Coast live oak	16	Yes	4	Moderate	**Preserve?**	Adj. to grading
50	Coast live oak	9,8	Yes	3	Moderate	Remove	Impacted by grading
51	Coast live oak	13,12	Yes	4	Moderate	Remove	Impacted by grading
52	Coast live oak	6	No	3	Low	Remove	Impacted by grading
53	Coast live oak	7	Yes	3	Low	Remove	Within grading
54	Valley oak	7,5	Yes	3	Low	Remove	Impacted by grading
55	Valley oak	9	Yes	3	Moderate	Remove	Within grading
56	Coast live oak	9,8	Yes	4	Moderate	Remove	Within grading
57	Coast live oak	8	Yes	4	Moderate	Remove	Within grading
58	Coast live oak	6	No	4	Moderate	**Preserve**	Outside impacts
59	Coast live oak	28	Yes	3	Moderate	**Preserve**	Outside impacts
60	Valley oak	18	Yes	3	Moderate	**Preserve**	Outside impacts
61	Valley oak	20	Yes	3	Moderate	**Preserve**	Outside impacts
62	Valley oak	15	Yes	3	Moderate	**Preserve**	Outside impacts
63	Coast live oak	36	Yes	3	Moderate	**Preserve**	Outside impacts
64	Valley oak	19,10	Yes	3	Moderate	**Preserve**	Outside impacts
65	Valley oak	15	Yes	3	Moderate	**Preserve**	Outside impacts
66	Valley oak	21	Yes	5	High	Remove	Within road
67	Valley oak	16	Yes	5	High	Remove	Within grading
68	Evergreen ash	9	No	3	Moderate	Remove	Within grading
69	Valley oak	12	Yes	4	Moderate	Remove	Within grading
70	Coast live oak	21	Yes	4	Moderate	Remove	Within grading
71	Olive	7,6,6,4	No	3	Moderate	Remove	Within grading
72	Coast live oak	15	Yes	4	Moderate	Remove	Within grading
73	Coast live oak	21	Yes	4	High	Remove	Within grading
74	Coast live oak	18,14	Yes	3	Moderate	Remove	Within grading
75	Catalina ironwood	18,14,10	No	4	Moderate	Remove	Within grading
76	Coast live oak	17	Yes	3	Moderate	**Preserve**	Outside impacts
77	Chinese pistache	7	No	4	Moderate	Remove	Within grading
78	Coast live oak	7	Yes	3	Moderate	Remove	Within grading
79	Catalina ironwood	7	No	3	Moderate	Remove	Within grading
80	Evergreen ash	7	No	3	Moderate	Remove	Within building
81	Evergreen ash	7	No	3	Moderate	Remove	Within building
82	Evergreen ash	12	No	4	Moderate	Remove	Within building
83	Deodar cedar	10	No	2	Low	Remove	Within building
84	Evergreen ash	8	No	3	Moderate	Remove	Within building
85	Evergreen ash	7	No	3	Moderate	Remove	Within building
86	Evergreen ash	10	No	2	Low	Remove	Within building
87	Evergreen ash	12	No	3	Moderate	Remove	Within grading
88	Valley oak	23	Yes	5	High	Remove	Within grading
89	Aleppo pine	38	No	2	Low	Remove	Within grading
90	Coast live oak	16	Yes	2	Low	Remove	Within grading
91	Mulberry	16	No	3	Moderate	Remove	Within building
92	Coast redwood	13	Yes	4	Moderate	Remove	Within driveway
93	Deodar cedar	10	No	5	High	Remove	Within building
94	Deodar cedar	6	No	3	Low	Remove	Within building
95	Coast redwood	28	Yes	4	Moderate	Remove	Within building
96	Deodar cedar	9	No	4	High	Remove	Within building
97	Coast live oak	6	No	4	Moderate	Remove	Within grading
98	Deodar cedar	24	No	3	Moderate	Remove	Within grading
99	Coast live oak	20,7	Yes	1	Low	Remove	Within grading
100	Coast live oak	13	Yes	4	Moderate	Remove	Within grading
101	Deodar cedar	17	No	4	Moderate	Remove	Within building
102	Deodar cedar	11	No	3	Low	Remove	Within building
103	Coast redwood	8	Yes	3	Moderate	Remove	Within grading
104	Coast live oak	13	Yes	4	Moderate	Remove	Within grading
105	Valley oak	11	Yes	3	Moderate	Remove	Within grading
106	Valley oak	16	Yes	4	Moderate	**Preserve**	Adj. to grading
107	Coast live oak	7,4	Yes	3	Moderate	**Preserve?**	Adj. to grading
108	Coast live oak	6	No	4	Moderate	Remove	Within grading
109	Aleppo pine	14	No	2	Low	Remove	Within grading
110	Coast live oak	24	Yes	4	High	Remove	Within grading
111	Coast live oak	19	Yes	4	High	**Preserve**	Outside impacts
112	Coast live oak	14,10,8,6	Yes	4	High	**Preserve?**	Outside impacts
113	Coast live oak	12,8	Yes	4	High	**Preserve?**	Adj. to grading
114	Coast live oak	8	Yes	3	Low	Remove	Within bioswale
115	Coast live oak	21	Yes	4	Moderate	Remove	Within bioswale
116	Coast live oak	21	Yes	3	Moderate	Remove	Within bioswale
117	Coast live oak	9,8,6	Yes	3	Moderate	Remove	Within bioswale
118	Coast live oak	19	Yes	3	Moderate	Remove	Within grading
119	Coast live oak	14	Yes	3	Moderate	Remove	Within grading
120	Coast live oak	19	Yes	3	Low	Remove	Within grading
121	Coast live oak	6	No	4	High	Remove	Within grading
122	Mulberry	7	No	2	Low	Remove	Within driveway
123	Coast live oak	10,10,5	Yes	5	High	Remove	Within driveway
124	Mulberry	12	No	2	Low	Remove	Within grading
125	Mulberry	6	No	2	Low	Remove	Within parking
126	Mulberry	7	No	1	Low	Remove	Within grading
127	Mulberry	7	No	1	Low	Remove	Within grading
128	Mulberry	7	No	1	Low	Remove	Within grading
129	Mulberry	7	No	2	Low	Remove	Within grading
130	Valley oak	36	Yes	5	High	**Preserve**	Outside impacts
131	Valley oak	38	Yes	3	Low	**Preserve**	Outside impacts
132	Valley oak	48	Yes	4	Moderate	**Preserve**	Outside impacts
133	Valley oak	16	Yes	3	Moderate	**Preserve**	Outside impacts
134	Valley oak	28	Yes	3	Moderate	**Preserve**	Outside impacts
135	Buckeye	8,7,4	Yes	3	Moderate	**Preserve?**	Adj. to grading
136	Aleppo pine	22	No	2	Low	Remove	Low suitability
137	Coast live oak	7,6	Yes	4	High	**Preserve**	Outside impacts
138	Deodar cedar	23	No	4	High	Remove	Within building
139	Deodar cedar	13,11,6	No	3	Moderate	Remove	Within building
140	Deodar cedar	11	No	3	Moderate	Remove	Within building
141	Coast live oak	15	Yes	3	Moderate	**Preserve**	Outside impacts
142	Coast live oak	14	Yes	3	Moderate	**Preserve**	Outside impacts
143	Coast live oak	16	Yes	3	Moderate	**Preserve**	Outside impacts
144	Coast live oak	18	Yes	3	Moderate	**Preserve**	Outside impacts
145	Coast live oak	18	Yes	3	Moderate	**Preserve**	Outside impacts
146	Coast live oak	10	Yes	3	Low	**Preserve**	Outside impacts
147	Coast live oak	21,18,10	Yes	4	Moderate	**Preserve**	Outside impacts
148	Coast live oak	18	Yes	4	High	**Preserve**	Outside impacts
149	Coast live oak	12	Yes	4	High	**Preserve**	Outside impacts

MITIGATION LEGEND

40 PROTECTED TREES TO BE REMOVED

120 NEW MITIGATION TREES PLANTED

0 40' 80' 160'

GATES +ASSOCIATES

STONE VALLEY FARM

455 LIVORNA ALAMO, CALIFORNIA

TREE PRESERVATION PLAN

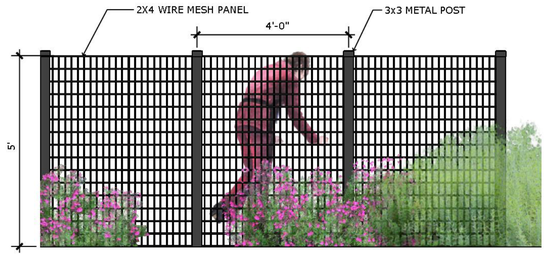
MAY, 2025

L-2



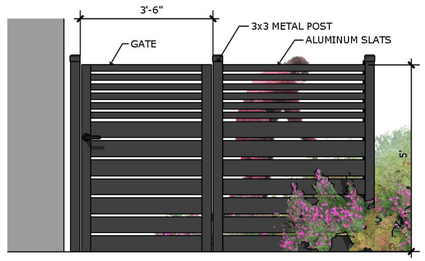
PRIVACY FENCE

RETAINING WALL



7 VIEW FENCE

SCALE: 1/2" = 1'-0"



8 PRIVACY FENCE / GATE

SCALE: 1/2" = 1'-0"

0 40' 80' 160'

GATES +ASSOCIATES

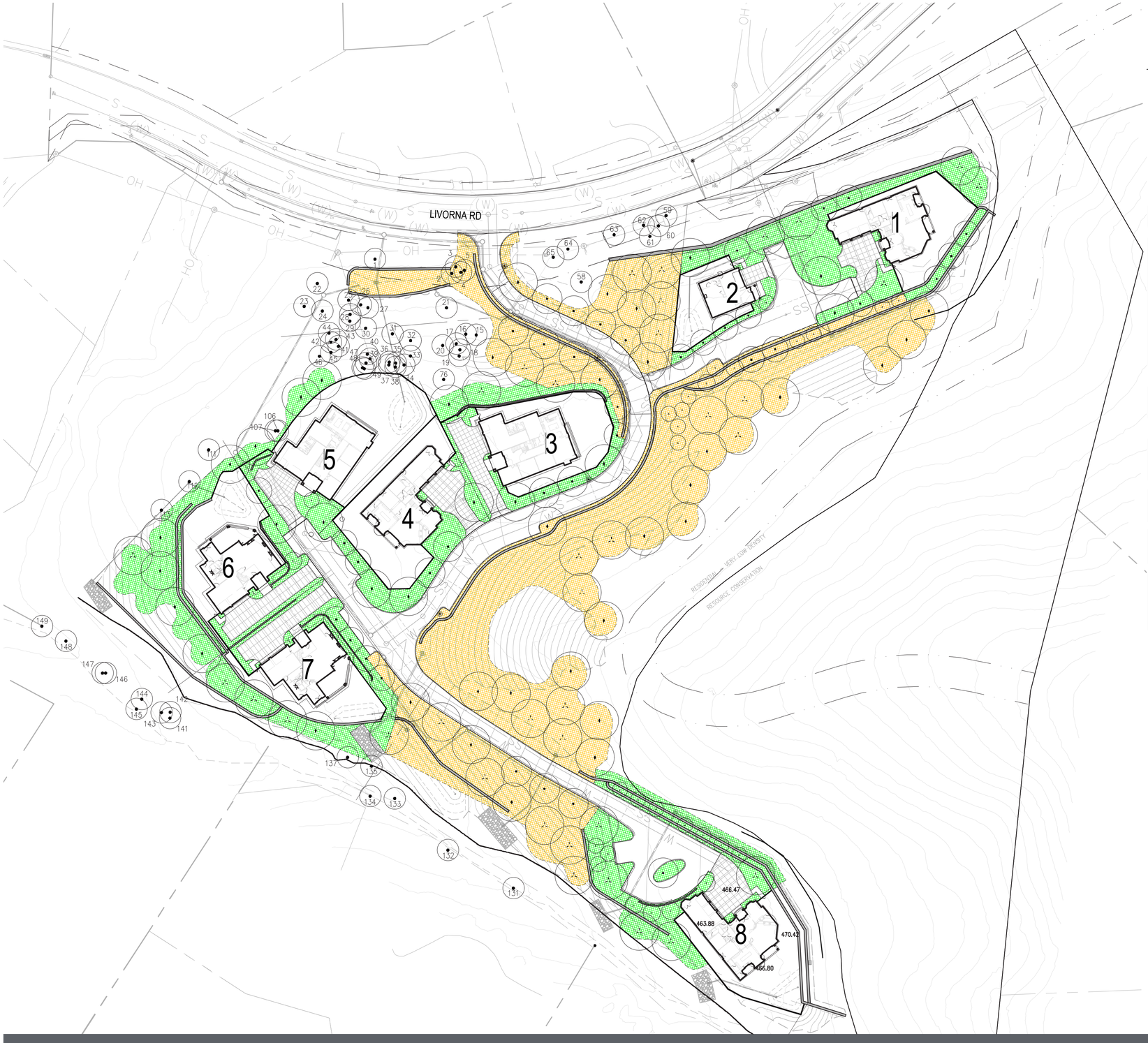
STONE VALLEY FARM

455 LIVORNA ALAMO, CALIFORNIA

WALL & FENCE PLAN

MAY, 2025

L-3



HYDROZONE LEGEND

ZONE A – COS:
DRIP EMITTERS, LOW WATER USE

ZONE B – POS:
DRIP EMITTERS, LOW WATER USE

WATER EFFICIENT LANDSCAPE WORKSHEET

WATER TYPE	POTABLE
SITE ETO=	46.1 Alamo, CA

REGULAR LAND SCAPE AREAS

HYDROZONE #	HYDROZONE NAME	PLANT WATER USE TYPE	PLANT FACTOR (PF)	IRRIGATION METHOD	IRRIGATION EFFICIENCY (IE)	ETAF (PF/IE)	AREA (SQ. FT) (HA)	ETAF X AREA (HA)	ETWU (GAL/YR)	ACRE FEET / YEAR	HCF/ YEAR	PERCENTAGE OF LANDSCAPE
COS-1	TREES	MOD	0.5	BUBBLER	0.81	0.62	580	358	10,233	0.031	13.66	0%
COS-2	SHRUBS	LOW	0.2	DRIP	0.81	0.25	67,456	16,656	476,070	1.461	636.46	58%
POS-1	TREES	MOD	0.5	BUBBLER	0.81	0.62	780	481	13,762	0.042	18.40	1%
POS-2	SHRUBS	LOW	0.2	DRIP	0.81	0.25	47,432	11,712	334,741	1.027	447.51	41%
						TOTALS	116,250	29,207	834,806	2.56	1,116.05	100%

SPECIAL LANDSCAPE AREAS

HYDROZONE #	HYDROZONE NAME										
					TOTALS		0				0%

MAWA	GALLONS/YR	1,827,462
	ACRE FEET/YR	5.61
	HCF/YR	2,443.13
ETWU	GALLONS/YR	834,806
	ACRE FEET/YR	2.56
	HCF/YR	1,116.05

SITE IRRIGATION EFFICIENCY	SITE PLANT FACTOR	MAWA COMPLIANT
81.0%	0.20	YES

ETAF Calculations	
REGULAR LANDSCAPE AREAS	
TOTAL ETAF x AREA	29,207
TOTAL AREA	116,250
AVG. ETAF	25.12%

MAWA FORMULA

MAXIMUM APPLIED WATER ALLOWANCE (MAWA) GALLONS PER YEAR

MAWA = (ETo)(0.62)[(LA x 0.55) + (0.45 x SLA)]

ETo = REFERENCE EVAPOTRANSPIRATION
0.55= ET ADJUSTMENT FACTOR
LA=LANDSCAPED AREA (SQUARE FEET)
0.62 = CONVERSION FACTOR (GALLONS/SQ.FT/YR)

ETWU FORMULA

ESTIMATED TOTAL WATER USE (ETWU) GALLONS PER YEAR

ETWU= ((ETO)(.62)(ETAF x LA))

ETo = REFERENCE EVAPOTRANSPIRATION
PF = PLANT FACTOR FOR HYDROZONES
HA = HYDROZONE AREA (SQ.FT)
0.62 = CONVERSION FACTOR (GALLONS/SQ.FT/YR)

IE = IRRIGATION EFFICIENCY (0.81)-BUBBLER/DRIP
IE = IRRIGATION EFFICIENCY (0.75)-ROTORS/SPRAY

0 40' 80' 160'

GATES +ASSOCIATES

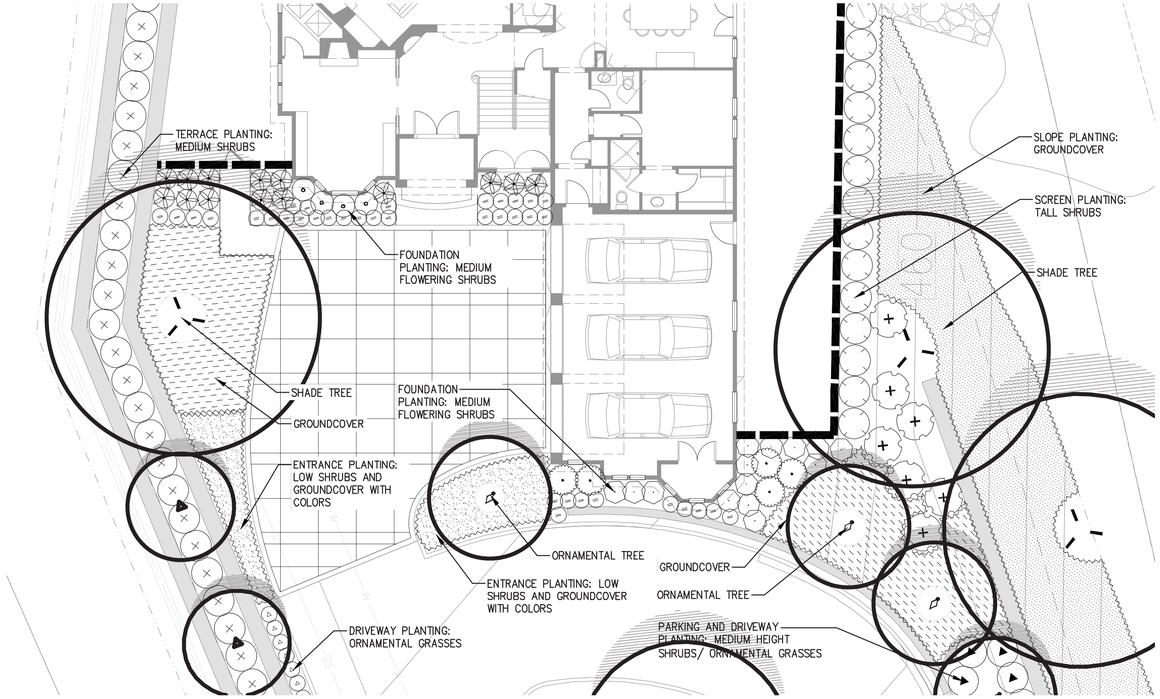
STONE VALLEY FARM

455 LIVORNA ALAMO, CALIFORNIA

SCHEMATIC HYDROZONE PLAN

MAY, 2025

L-4

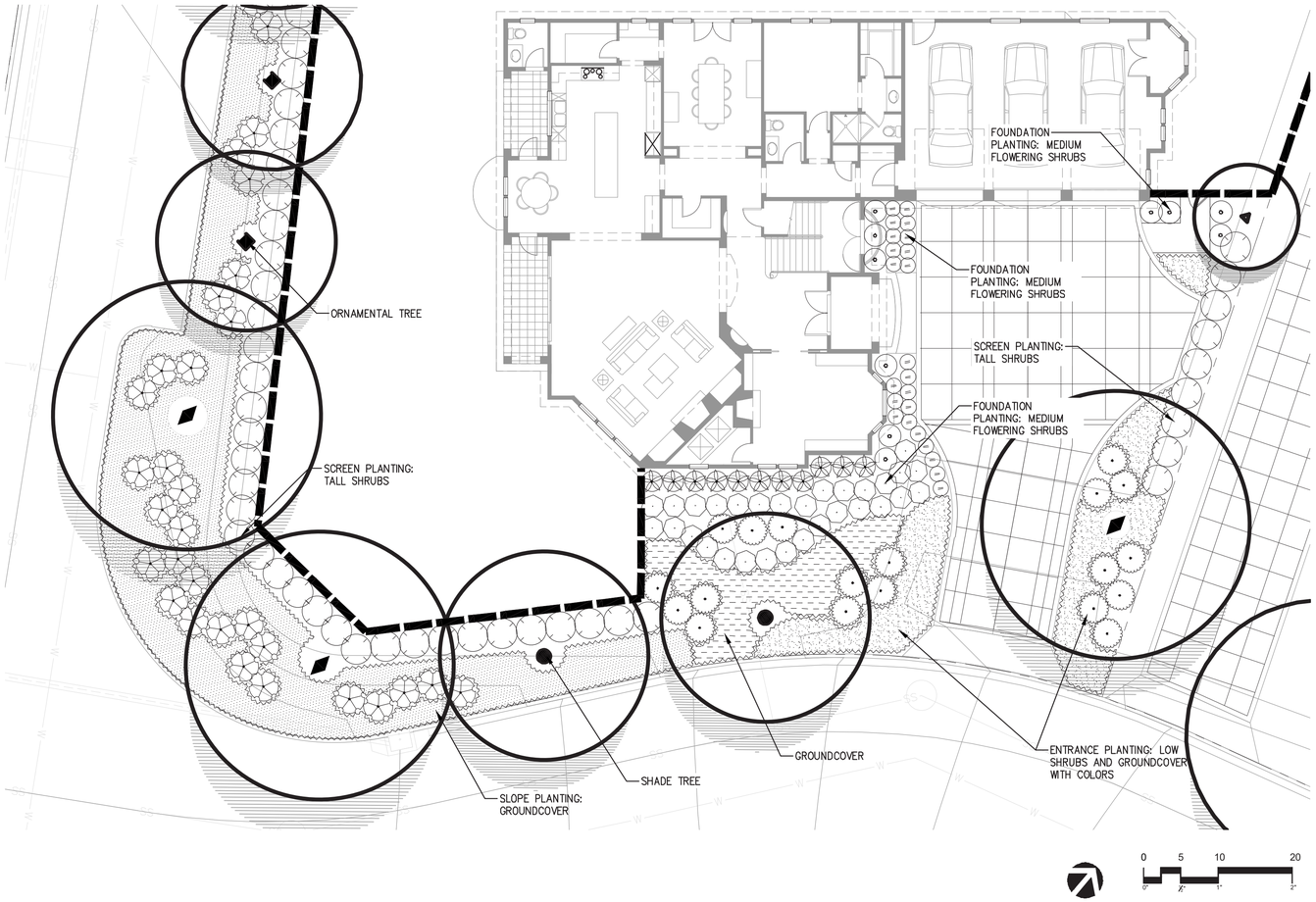


PLANT SCHEDULE

TREES	CODE	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE
	ARB	ARBUTUS UNEDO	STRAWBERRY TREE MULTI-TRUNK	24"BOX	L
	COC	CERCIS OCCIDENTALIS	WESTERN REDBUD MULTI-TRUNK	24"BOX	VL
	LAG	LAGERSTROEMIA INDICA	CRAPE MYRTLE	24"BOX	L
	OLE	OLEA EUROPAEA 'SWAN HILL'	SWAN HILL OLIVE MULTI-TRUNK	24"BOX	VL
	PIS	PISTACIA CHINENSIS 'KEITH DAVEY'	KEITH DAVEY CHINESE PISTACHE	24"BOX	L
	PLA	PLATANUS X ACERIFOLIA 'COLUMBIA'	COLUMBIA LONDON PLANE TREE	24"BOX	L
	QUE	QUERCUS AGRIFOLIA	COAST LIVE OAK	24"BOX	L
	QUL	QUERCUS LOBATA	VALLEY OAK	24"BOX	L
	RHU	RHUS LANCEA	AFRICAN SUMAC	24"BOX	L
	SCH	SCHINUS MOLLE	CALIFORNIA PEPPER	24"BOX	L
	VAC	VITEX AGNUS-CASTUS	CHASTE TREE	24"BOX	L

SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE
AB	ANIGOZANTHOS SPP.	KANGAROO PAW	1 GAL	L
AH	ARCTOSTAPHYLOS DENSIFLORA 'HOWARD MCMINN'	HOWARD MCMINN MANZANITA	1 GAL	L
AR	ARTEMISIA CALIFORNICA 'POWIS CASTLE'	WORMWOOD	1 GAL	L
BD	BUDDLEJA DAVIDII	BUTTERFLY BUSH	1 GAL	L
CT	CHONDROPETALUM TECTORUM	CAPE RUSH	1 GAL	L
CX	CISTUS SPP.	ROCKROSE	1 GAL	L
DV	DIETES VEGETA	AFRICAN IRIS	1 GAL	L
GL	GAURA LINDHEIMERI	GAURA	1 GAL	L
JP	JUNCUS PATENS 'ELK BLUE'	ELK BLUE CALIFORNIA GRAY RUSH	1 GAL	L
KA	KNIPHOFIA SPP.	RED HOT POKER	1 GAL	L
LG	LOROPETALUM CHINENSE	CHINESE FRINGE FLOWER	1 GAL	L
MA	MIMULUS AURANTIACUS	STICKY MONKEYFLOWER	1 GAL	VL
MR	MUHLENBERGIA RIGENS	DEER GRASS	1 GAL	L
PF	PENNISETUM X 'FAIRY TAILS'	FAIRY TAILS FOUNTAIN GRASS	1 GAL	L
PN	PUNICA GRANATUM 'NANA'	DWARF POMEGRANATE	1 GAL	L
RH	RHAMNUS CALIFORNICA	CALIFORNIA COFFEEBERRY	1 GAL	L
RC	ROSA CALIFORNICA	CALIFORNIA WILD ROSE	1 GAL	L

GROUND COVERS	BOTANICAL NAME	COMMON NAME	CONT	WATER USE
AU	ARCTOSTAPHYLOS UVA-URSI 'POINT REYES'	POINT REYES KINNIKINNICK	1 GAL	L
AE	ARCTOSTAPHYLOS X 'EMERALD CARPET'	EMERALD CARPET MANZANITA	1 GAL	L
BP	BACCHARIS PILULARIS 'TWIN PEAKS'	TWIN PEAKS COYOTE BRUSH	1 GAL	L
CY	CEANOTHUS GRISEUS HORIZONTALIS 'YANKEE POINT'	YANKEE POINT CARMEL CREEPER	1 GAL	L
CD	COTONEASTER DAMMERI 'LOWFAST'	LOWFAST BEARBERRY COTONEASTER	1 GAL	L
MP	MYOPORUM PARVIFOLIUM 'PINK'	PINK TRAILING MYOPORUM	1 GAL	L

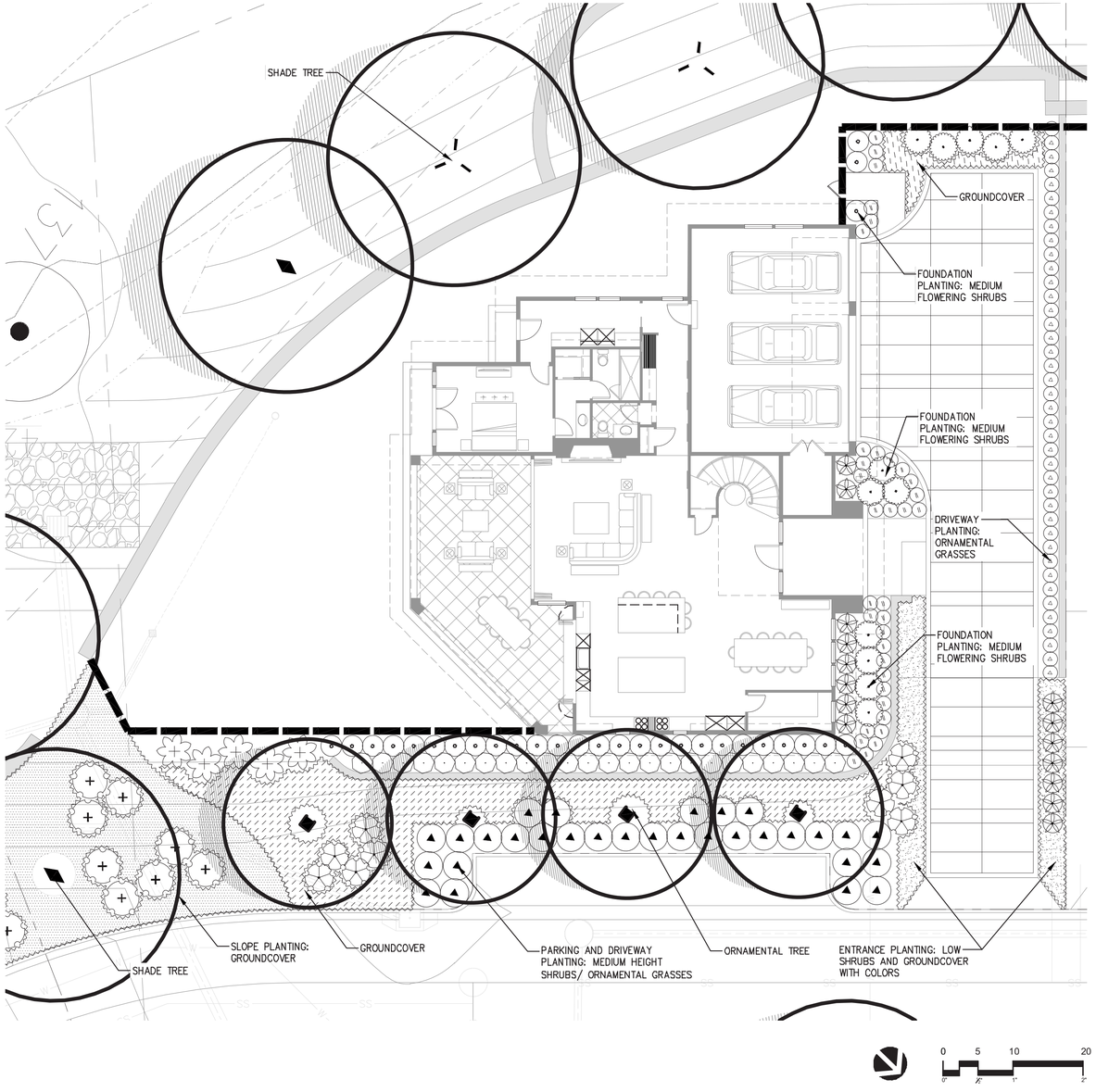


PLANT SCHEDULE

TREES	CODE	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE
	ARB	ARBUTUS UNEDO	STRAWBERRY TREE MULTI-TRUNK	24"BOX	L
	COC	CERCIS OCCIDENTALIS	WESTERN REDBUD MULTI-TRUNK	24"BOX	VL
	LAG	LAGERSTROEMIA INDICA	CRAPE MYRTLE	24"BOX	L
	OLE	OLEA EUROPAEA 'SWAN HILL'	SWAN HILL OLIVE MULTI-TRUNK	24"BOX	VL
	PIS	PISTACIA CHINENSIS 'KEITH DAVEY'	KEITH DAVEY CHINESE PISTACHE	24"BOX	L
	PLA	PLATANUS X ACERIFOLIA 'COLUMBIA'	COLUMBIA LONDON PLANE TREE	24"BOX	L
	QUE	QUERCUS AGRIFOLIA	COAST LIVE OAK	24"BOX	L
	QUL	QUERCUS LOBATA	VALLEY OAK	24"BOX	L
	RHU	RHUS LANCEA	AFRICAN SUMAC	24"BOX	L
	SCH	SCHINUS MOLLE	CALIFORNIA PEPPER	24"BOX	L
	VAC	VITEX AGNUS-CASTUS	CHASTE TREE	24"BOX	L

SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE
AB	ANIGOZANTHOS SPP.	KANGAROO PAW	1 GAL	L
AH	ARCTOSTAPHYLOS DENSIFLORA 'HOWARD MCMINN'	HOWARD MCMINN MANZANITA	1 GAL	L
AR	ARTEMISIA CALIFORNICA 'POWIS CASTLE'	WORMWOOD	1 GAL	L
BD	BUDDLEJA DAVIDII	BUTTERFLY BUSH	1 GAL	L
CT	CHONDROPETALUM TECTORUM	CAPE RUSH	1 GAL	L
CX	CISTUS SPP.	ROCKROSE	1 GAL	L
DV	DIETES VEGETA	AFRICAN IRIS	1 GAL	L
GL	GAURA LINDHEIMERI	GAURA	1 GAL	L
JP	JUNCUS PATENS 'ELK BLUE'	ELK BLUE CALIFORNIA GRAY RUSH	1 GAL	L
KA	KNIPHOFIA SPP.	RED HOT POKER	1 GAL	L
LG	LOROPETALUM CHINENSE	CHINESE FRINGE FLOWER	1 GAL	L
MA	MIMULUS AURANTIACUS	STICKY MONKEYFLOWER	1 GAL	VL
MR	MUHLENBERGIA RIGENS	DEER GRASS	1 GAL	L
PF	PENNISETUM X 'FAIRY TAILS'	FAIRY TAILS FOUNTAIN GRASS	1 GAL	L
PN	PUNICA GRANATUM 'NANA'	DWARF POMEGRANATE	1 GAL	L
RH	RHAMNUS CALIFORNICA	CALIFORNIA COFFEEBERRY	1 GAL	L
RC	ROSA CALIFORNICA	CALIFORNIA WILD ROSE	1 GAL	L

GROUND COVERS	BOTANICAL NAME	COMMON NAME	CONT	WATER USE
AU	ARCTOSTAPHYLOS UVA-URSI 'POINT REYES'	POINT REYES KINNIKINNICK	1 GAL	L
AE	ARCTOSTAPHYLOS X 'EMERALD CARPET'	EMERALD CARPET MANZANITA	1 GAL	L
BP	BACCHARIS PILULARIS 'TWIN PEAKS'	TWIN PEAKS COYOTE BRUSH	1 GAL	L
CY	CEANOTHUS GRISEUS HORIZONTALIS 'YANKEE POINT'	YANKEE POINT CARMEL CREEPER	1 GAL	L
CD	COTONEASTER DAMMERI 'LOWFAST'	LOWFAST BEARBERRY COTONEASTER	1 GAL	L
MP	MYOPORUM PARVIFOLIUM 'PINK'	PINK TRAILING MYOPORUM	1 GAL	L



PLANT SCHEDULE

TREES	CODE	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE
	ARB	ARBUTUS UNEDO	STRAWBERRY TREE MULTI-TRUNK	24"BOX	L
	COC	CERCIS OCCIDENTALIS	WESTERN REDBUD MULTI-TRUNK	24"BOX	VL
	LAG	LAGERSTROEMIA INDICA	CRAPE MYRTLE	24"BOX	L
	OLE	OLEA EUROPAEA 'SWAN HILL'	SWAN HILL OLIVE MULTI-TRUNK	24"BOX	VL
	PIS	PISTACIA CHINENSIS 'KEITH DAVEY'	KEITH DAVEY CHINESE PISTACHE	24"BOX	L
	PLA	PLATANUS X ACERIFOLIA 'COLUMBIA'	COLUMBIA LONDON PLANE TREE	24"BOX	L
	QUE	QUERCUS AGRIFOLIA	COAST LIVE OAK	24"BOX	L
	QUL	QUERCUS LOBATA	VALLEY OAK	24"BOX	L
	RHU	RHUS LANCEA	AFRICAN SUMAC	24"BOX	L
	SCH	SCHINUS MOLLE	CALIFORNIA PEPPER	24"BOX	L
	VAC	VITEX AGNUS-CASTUS	CHASTE TREE	24"BOX	L

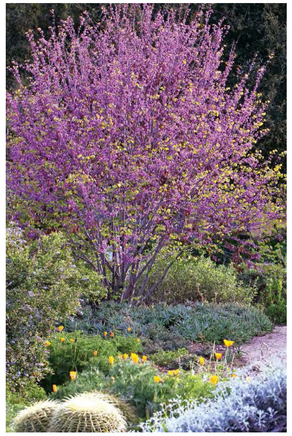
SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WATER USE
AB	ANIGOZANTHOS SPP.	KANGAROO PAW	1 GAL	L
AH	ARCTOSTAPHYLOS DENSIFLORA 'HOWARD MCMINN'	HOWARD MCMINN MANZANITA	1 GAL	L
AR	ARTEMISIA CALIFORNICA 'POWIS CASTLE'	WORMWOOD	1 GAL	L
BD	BUDDLEJA DAVIDII	BUTTERFLY BUSH	1 GAL	L
CT	CHONDROPETALUM TECTORUM	CAPE RUSH	1 GAL	L
CX	CISTUS SPP.	ROCKROSE	1 GAL	L
DV	DIETES VEGETA	AFRICAN IRIS	1 GAL	L
GL	GAURA LINDHEIMERI	GAURA	1 GAL	L
JP	JUNCUS PATENS 'ELK BLUE'	ELK BLUE CALIFORNIA GRAY RUSH	1 GAL	L
KA	KNIPHOFIA SPP.	RED HOT POKER	1 GAL	L
LG	LOROPETALUM CHINENSE	CHINESE FRINGE FLOWER	1 GAL	L
MA	MIMULUS AURANTIACUS	STICKY MONKEYFLOWER	1 GAL	VL
MR	MUHLENBERGIA RIGENS	DEER GRASS	1 GAL	L
PF	PENNISETUM X 'FAIRY TAILS'	FAIRY TAILS FOUNTAIN GRASS	1 GAL	L
PN	PUNICA GRANATUM 'NANA'	DWARF POMEGRANATE	1 GAL	L
RH	RHAMNUS CALIFORNICA	CALIFORNIA COFFEEBERRY	1 GAL	L
RC	ROSA CALIFORNICA	CALIFORNIA WILD ROSE	1 GAL	L

GROUND COVERS	BOTANICAL NAME	COMMON NAME	CONT	WATER USE
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BP	BACCHARIS PILULARIS 'TWIN PEAKS'	TWIN PEAKS COYOTE BRUSH	1 GAL	L
CY	CEANOTHUS GRISEUS HORIZONTALIS 'YANKEE POINT'	YANKEE POINT CARMEL CREEPER	1 GAL	L
CD	COTONEASTER DAMMERI 'LOWFAST'	LOWFAST BEARBERRY COTONEASTER	1 GAL	L
MP	MYOPORUM PARVIFOLIUM 'PINK'	PINK TRAILING MYOPORUM	1 GAL	L

TREES



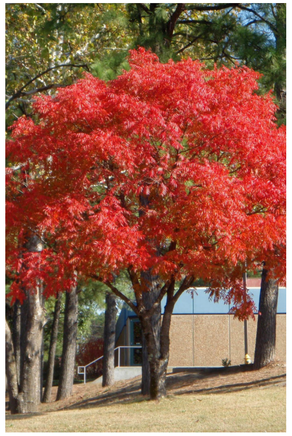
Arbutus unedo
Strawberry Tree Multi-Trunk



Cercis occidentalis
Western Redbud Multi-Trunk



Olea europaea 'Swan Hill'
Fruitless Olive



Pistacia chinensis 'Keith Davey'
Keith Davey Chinese Pistache



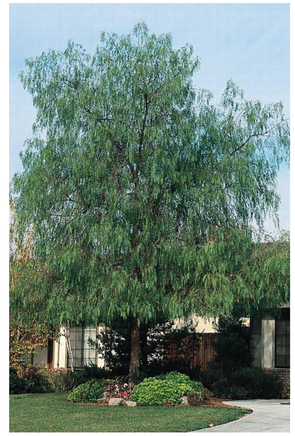
Platanus x acerifolia 'Columbia'
Columbia London Plane Tree



Quercus agrifolia
Coast Live Oak



Quercus lobata
Valley oak



Schinus molle
California Pepper Tree

SHRUBS



Anigozanthus spp.
Kangaroo Paw



Artemisia californica 'Powis Castle'
Wormwood



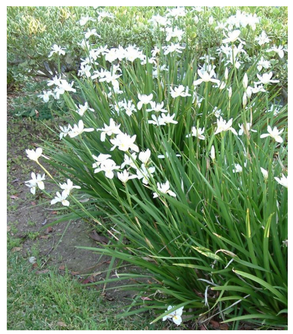
Bouteloua gracilis
Blue Grama Grass



Buddleja davidii
Butterfly Bush



Chondropetalum tectorum
Cape Rush



Dietes vegeta
African Iris



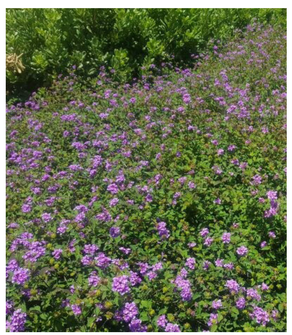
Gaura lindheimeri
Gaura



Hypericum x moseranum
Gold Flower



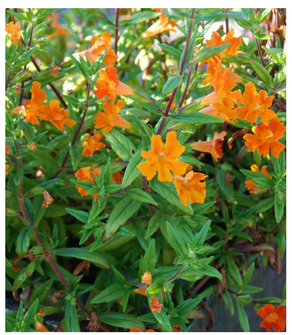
Kniphofia spp.
Red Hot Poker



Lantana montevidensis
Purple Trailing Lantana



Lomandra longifolia 'Breeze'
Dwarf Mat Rush



Mimulus aurantiacus 'Jelly Bean Orange'
Jelly Bean Orange Sticky Monkeyflower



Nepeta x faassenii
Catmint



Pennisetum x 'Fairy Tails'
Fairy Tails Fountain Grass

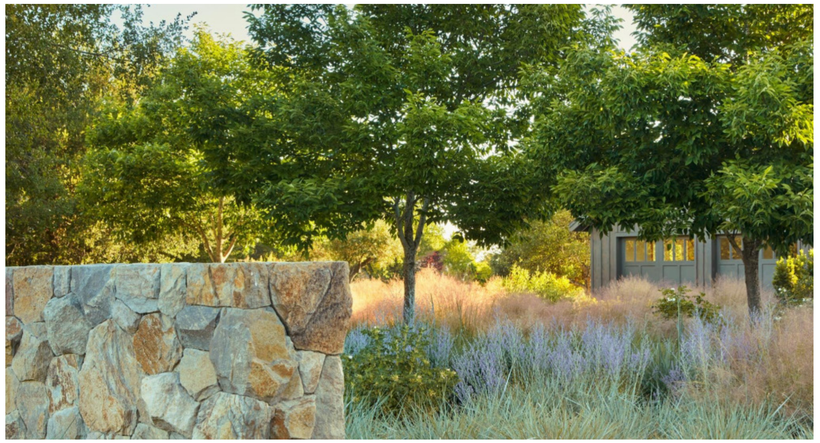


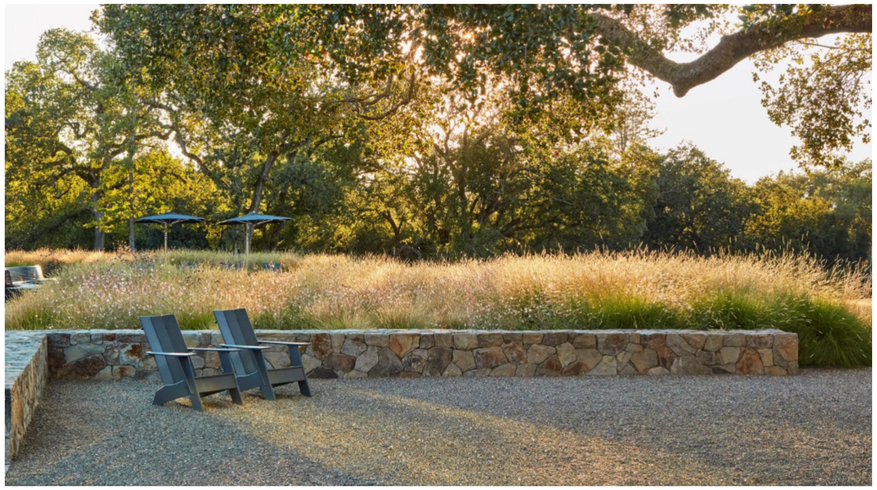
Salvia microphylla 'Hot Lips'
Hot Lips Littleleaf Sage



Scaevola albida 'Mauve Clusters'
Botanical Name

















GATES +ASSOCIATES

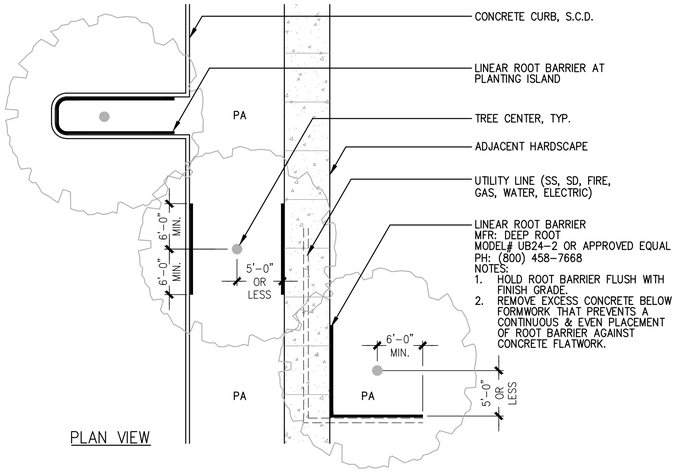
STONE VALLEY FARM

455 LIVORNA ALAMO, CALIFORNIA

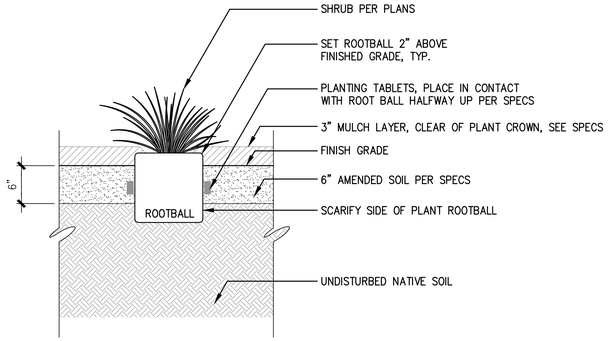
CHARACTER IMAGES

MAY, 2025

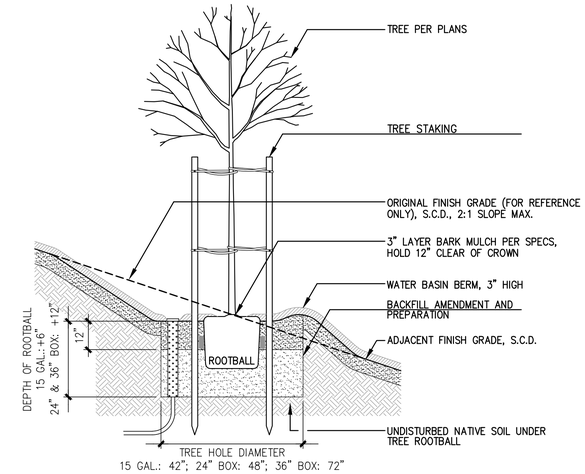
L-9



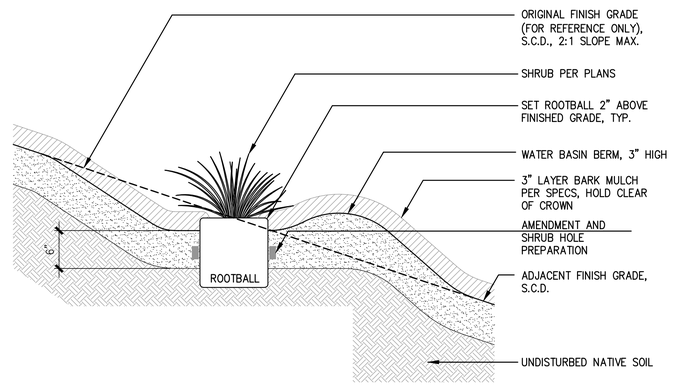
6 LINEAR ROOT BARRIER
SCALE: 1" = 10'-0"



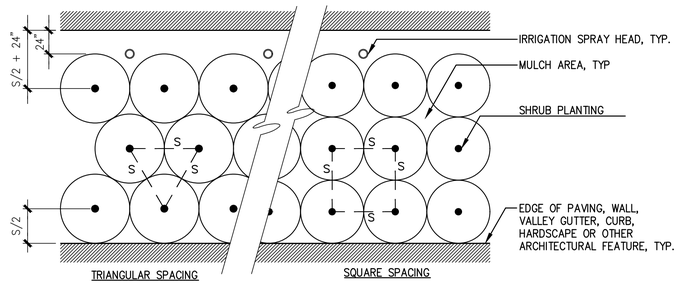
4 SHRUB PLANTING
SCALE: 1" = 1'-0"



2 TREE PLANTING ON SLOPE
SCALE: 3/8" = 1'-0"



5 SHRUB PLANTING ON SLOPE
SCALE: 1" = 1'-0"

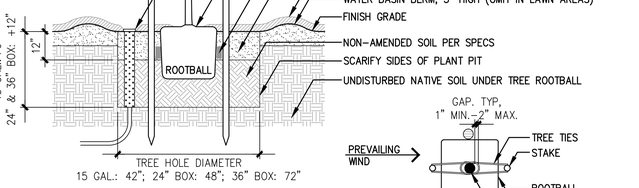


NOTES:

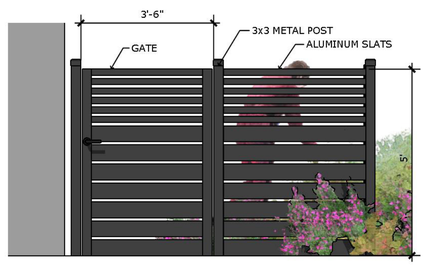
1. S = PLANT SPACING DISTANCE ON CENTER. SEE PLANT QUANTITY CHART FOR USE AS A GUIDE FOR SHRUBS AND GROUNDCOVERS WHEN PLANTS ARE SPACED EQUIDISTANT FROM EACH OTHER.
2. AT ALL SHRUB AND GROUNDCOVER LOCATIONS WHERE SPRAY IRRIGATION IS USED, HOLD PLANTING 24" CLEAR OF CURB LINE IN CONJUNCTION WITH IRRIGATION PER AB 1881.

PLANT QUANTITY CHART	
SPACING	# OF PLANTS/S.F.
12" o.c.	1.15
18" o.c.	.512
24" o.c.	.290
30" o.c.	.185
36" o.c.	.128
42" o.c.	.087
48" o.c.	.063

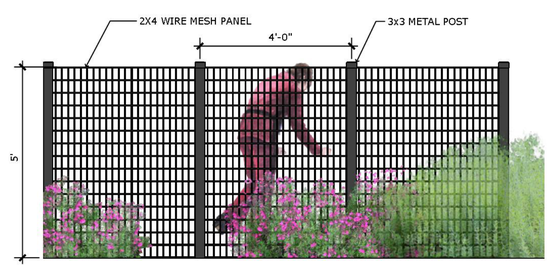
3 PLANT SPACING
SCALE: 1" = 1'-0"



1 TREE PLANTING
SCALE: 3/8" = 1'-0"



8 PRIVACY FENCE / GATE
SCALE: 1/2" = 1'-0"



7 VIEW FENCE
SCALE: 1/2" = 1'-0"

RECEIVED on 04/30/2025 CDSD25-09717
By Contra Costa County
Department of Conservation and Development

PRELIMINARY STORMWATER CONTROL PLAN

for

455 Livorna Road

Alamo, California

April, 2025

Stone Valley Farm
455 Livorna Road
Alamo, CA 94507

prepared by:

dk Engineering
1931 San Miguel Dr., Suite 100
(925) 932-6868

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Attachment A: Stormwater Control Plan Exhibit

Attachment B: BAHM Livorna Road Output

Attachment C: IMP Calculator Sizing Output

I. PROJECT DATA

Table 1. Project Data

Project Name/Number	455 Livorna Road
Application Submittal Date	
Project Location	455 Livorna Road 193-010-014 & 193-010-039
Name of Developer	Stone Valley Farm
Project Phase No.	N/A
Project Type and Description	Construction of nine single-family residential homes
Project Watershed	Las Trampas Creek Watershed
Total Project Site Area (acres)	±13.65
Total Area of Land Disturbed (acres)	±8.80
Total New Impervious Surface Area (sq. ft.)	43,794 square feet
Total Replaced Impervious Surface Area	38,814 square feet
Total Pre-Project Impervious Surface Area	38,814 square feet
Total Post-Project Impervious Surface Area	82,608 square feet
50% Rule[*]	Does not apply
Project Density	≤1 Dwelling Units/Acre (Very Low Density)
Applicable Special Project Categories [Complete even if all treatment is LID]	None
Percent LID and non-LID treatment	100% impervious surface is treated by bioretention
HM Compliance [†]	Applies

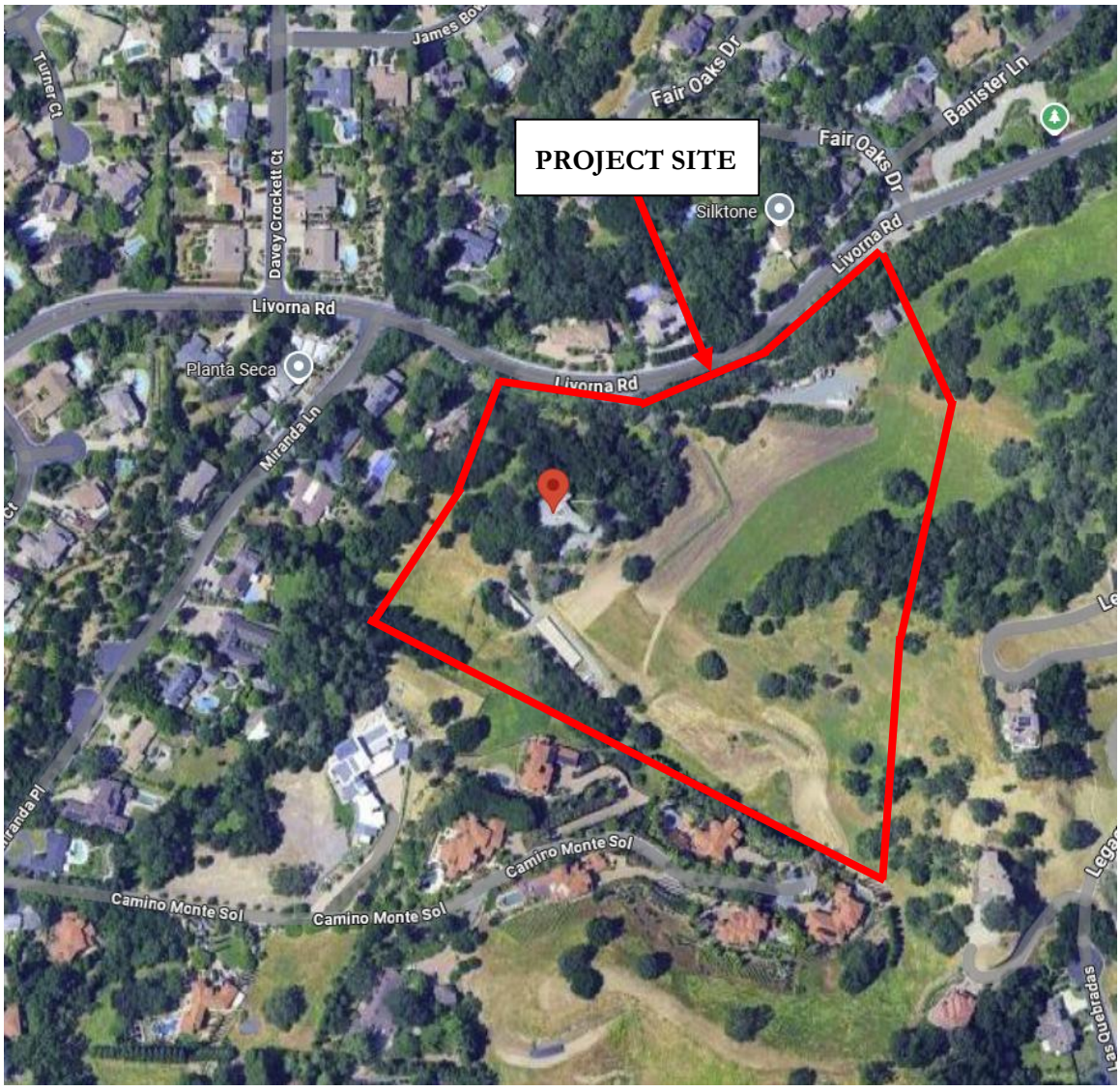
[*50% rule applies if:
Total Replaced Impervious Surface Area > 0.5 x Pre-Project Impervious Surface Area]

[†HM required (unless project meets one of the exemptions in *Guidebook Chapter 1 – Hydromodification Management Requirements – Exemptions*) if:
(Total New Impervious Surface Area + Total Replaced Impervious Surface Area) ≥ 1 acre]

II. SETTING

II.A. Project Location and Description

The project is located at 455 Livorna Road in Alamo, California, and consists of nine single-family homes developed on a 13.65-acre site zoned R-40 for very low-density residential use. The design incorporates eight on-site detention basins to manage and treat stormwater runoff prior to discharge. Emphasizing sustainability and site sensitivity, the layout aims to preserve the existing topography as much as possible, maintaining natural drainage patterns and maximizing pervious surfaces throughout the development.



II.B. Existing Site Features and Conditions

The site, encompassing 13.65 total acres, was previously developed as a single-family residence and includes existing improvements such as a driveway, detached garage, and multiple accessory sheds. With an average slope of approximately 37%, the topography generally directs drainage from east to west, descending from the hillside near Legacy Drive. As stormwater moves downslope, it diverges—

flowing either north toward Livorna Road or south toward an existing ephemeral stream located adjacent to the residential development along the southern boundary of the property. The site is predominantly covered with pervious, grassy vegetation, with only a minimal amount of impervious surfaces. The existing site is comprised of hydrologic soil group D and has a mean annual precipitation of 23 inches.

II.C. Opportunities and Constraints for Stormwater Control

The project includes eight on-site detention basins designed to manage, treat, and discharge surface runoff in accordance with existing drainage patterns. Four basins located along the southern portion of the site collect stormwater and discharges through flow dissipators into an existing ephemeral stream that runs adjacent to the neighboring residential development on Camino Monte Sol. The remaining four basins, situated on the northern side, direct treated runoff into the existing stormwater infrastructure along Livorna Road. The grading and drainage design prioritizes maximizing landscaped, pervious areas to reduce overall runoff, while ensuring that all impervious surfaces are routed efficiently to the appropriate detention basins for treatment and controlled discharge.

III. LOW IMPACT DEVELOPMENT DESIGN STRATEGIES

III.A. Optimization of Site Layout

The drainage design directs stormwater runoff through eight strategically placed detention basins, as detailed in Attachment A – Stormwater Control Plan Exhibit. These basins treat runoff before discharging through flow dissipators to either the ephemeral stream along the southern boundary or the storm drain infrastructure along Livorna Road. The site layout is optimized to reduce the extent of impervious surfaces and maintains the natural flow direction of stormwater across the property.

III.B. Bioretention or other Integrated Management Practices

In addition to following the 4% sizing rule under the Contra Costa County C3 guidebook, the bioretention facilities have been designed with the Bay Area Hydrology Model to meet hydromodification management requirements for the development.

IV. DOCUMENTATION OF DRAINAGE DESIGN

IV.A. Descriptions of each Drainage Management Area

Table 2. Drainage Management Areas

DMA Name	*Area (SF)*	*Surface Type/Description*	*DMA Type/Drains to*
DMA 1-R	*3,527*	*Conventional Roof*	*Bioretention Facility IMP 1*
DMA 1-A	*3,741*	*Concrete or Asphalt*	
DMA 1-C	*486*	*Concrete or Asphalt*	
DMA 1-L	*9,234*	*Landscape*	
DMA 2-R	*1,519*	*Conventional Roof*	*Bioretention Facility IMP 2*
DMA 2-A	*386*	*Concrete or Asphalt*	
DMA 2-C	*172*	*Concrete or Asphalt*	
DMA 2-L	*4,014*	*Landscape*	
DMA 3-R	*7,580*	*Conventional Roof*	*Bioretention Facility IMP 3*
DMA 3-A	*19,502*	*Concrete or Asphalt*	
DMA 3-C	*1,099*	*Concrete or Asphalt*	
DMA 3-L	*31,814*	*Landscape*	
DMA 4-R	*4,053*	*Conventional Roof*	*Bioretention Facility IMP 4*
DMA 4-A	*1,443*	*Concrete or Asphalt*	
DMA 4-C	*568*	*Concrete or Asphalt*	
DMA 4-L	*8,800*	*Landscape*	
DMA 5-L	*234,047*	*Landscape*	*Self-Treating*
DMA 6-R	*3,018*	*Conventional Roof*	*Bioretention Facility IMP 5*
DMA 6-A	*2,041*	*Concrete or Asphalt*	
DMA 6-C	*1,012*	*Concrete or Asphalt*	
DMA 6-L	*7,482*	*Landscape*	

DMA 7-R	*3,018*	*Conventional Roof*	*Bioretention Facility IMP 6*
DMA 7-A	*2,041*	*Concrete or Asphalt*	
DMA 7-C	*1,012*	*Concrete or Asphalt*	
DMA 7-L	*7,004*	*Landscape*	
DMA 8-R	*3,591*	*Conventional Roof*	*Bioretention Facility IMP 7*
DMA 8-A	*1,516*	*Concrete or Asphalt*	
DMA 8-C	*218*	*Concrete or Asphalt*	
DMA 8-L	*6,588*	*Landscape*	
DMA 9-A	*16,589*	*Concrete or Asphalt*	*Bioretention Facility IMP 8*
DMA 9-L	*10,023*	*Landscape*	
DMA 10-L	*170,507*	*Landscape*	*Self-Treating*

IV.A.1. Drainage Management Area Descriptions

DMA 1, totaling approximately 16,988 square feet, is composed of multiple surfaces including roof, asphalt, concrete or hardscape, and landscaping. Runoff from DMA 1 is sent to a 424 square foot "IMP 1 – Bioretention Facility" where the runoff is treated and discharged into the existing stormwater infrastructure located on Livorna Road.

DMA 2, totaling approximately 6,091 square feet, is composed of multiple surfaces including roof, asphalt, concrete or hardscape, and landscaping. Runoff from DMA 2 is sent to a 221 square foot "IMP 2 – Bioretention Facility" where the runoff is treated and discharged into the existing stormwater infrastructure located on Livorna Road.

DMA 3, totaling approximately 59,995 square feet, is composed of multiple surfaces including roof, asphalt, concrete or hardscape, and landscaping. Runoff from DMA 3 is sent to a 1,737 square foot "IMP 3 – Bioretention Facility" where the runoff is treated and discharged into the existing stormwater infrastructure located on Livorna Road.

DMA 4, totaling approximately 14,864 square feet, is composed of multiple surfaces including roof, asphalt, concrete or hardscape, and landscaping. Runoff from DMA 4 is sent to a 420 square foot "IMP 4 – Bioretention Facility" where the runoff is treated and discharged into the existing stormwater infrastructure located on Livorna Road.

DMA 5, totaling approximately 234,047 square feet, drains by self-treating landscape.

DMA 6, totaling approximately 13,553 square feet, is composed of multiple surfaces including roof, asphalt, concrete or hardscape, and landscaping. Runoff from DMA 6 is sent to a 394 square foot "IMP 5 – Bioretention Facility" where the runoff is treated and discharged through flow dissipators into the existing ephemeral stream that runs adjacent to the neighboring residential development on Camino Monte Sol.

DMA 7, totaling approximately 13,075 square feet, is composed of multiple surfaces including roof, asphalt, concrete or hardscape, and landscaping. Runoff from DMA 7 is sent to a 429 square foot

"IMP 6 – Bioretention Facility" where the runoff is treated and discharged through flow dissipators into the existing ephemeral stream that runs adjacent to the neighboring residential development on Camino Monte Sol.

DMA 8, totaling approximately 11,913 square feet, is composed of multiple surfaces including roof, asphalt, concrete or hardscape, and landscaping. Runoff from DMA 8 is sent to a 429 square foot "IMP 7 – Bioretention Facility" where the runoff is treated and discharged through flow dissipators into the existing ephemeral stream that runs adjacent to the neighboring residential development on Camino Monte Sol.

DMA 9, totaling approximately 26,612 square feet, is composed of asphalt, concrete or hardscape, and landscaping. Runoff from DMA 9 is sent to a 891 square foot "IMP 8 – Bioretention Facility" where the runoff is treated and discharged through flow dissipators into the existing ephemeral stream that runs adjacent to the neighboring residential development on Camino Monte Sol.

DMA 10, totaling approximately 170,507 square feet, drains by self-treating landscape.

IV.B. Integrated Management Practice Descriptions

The IMP for the site is bioretention (as shown on Attachment A). The bioretention area is designed with a minimum ponding depth of 6", minimum 2" of freeboard, a bioretention soil mix depth of 18" and a minimum base rock depth of 12".

IV.C. Tabulation and Sizing Calculations

All Bioretention Facilities (IMP 1 – 8) have been sized and designed based on the 4% sizing rule under the Contra Costa County C3 guidebook as well as the Contra Costa Clean Water Program IMP Sizing Tool. The output from the IMP Sizing Tool is provided in Attachment C. In addition, the facility was modeled using the Bay Area Hydrology Model to meet hydromodification management requirements, with the results available in Attachment B.

V. SOURCE CONTROL MEASURES

V.A. Site activities and potential sources of pollutants

Potential sources of pollutants may include on-site dumping into storm drain inlets, the need for future or structural pest control, landscape/outdoor pesticide use, unprotected materials used for roofing, gutters and trim, air conditioning condensation, streets and sidewalk debris, and trash enclosures. To account for these potential sources, the source control table below lists control opportunities.

V.B. Source Control Table

Table 3. Source Controls

Potential source of runoff pollutants	Permanent source control BMPs	Operational source control BMPs
On-site dumping into storm drain inlets	All accessible on-site inlets require stainless steel markers with statement "No Dumping – Drains to Creek"	Markings will be periodically replaced. Inlets and pipes conveying stormwater to BMPs will be inspected and maintained as part of BMP Operation and Maintenance Plan.
Need for future indoor or structural pest		Integrated Pest Management (IPM) information will be provided to

control		property owners.
Landscape/outdoor pesticide use	Final landscape plans will: Be designed to minimize irrigation and runoff and to minimize use of fertilizers and pesticides that can contribute to stormwater pollution. Specific plantings within bioretention areas and swales that are tolerant of the sandy loam soil and periodic inundation. Include pest-resistant plants. Include plantings appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	Landscape will be maintained using minimum or no pesticides. IPM information will be provided to property owners
Roofing, gutters and Trim	Do not utilize roofing, gutter or architecture trim materials made of copper or other unprotected materials that would leach into the storm water runoff.	
Air conditioning	Air conditioner condensation shall be directed to landscaped areas or plumbed to the sanitary sewer.	
Streets and Sidewalks		Sweep streets and sidewalks to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect wash water containing any cleaning agent or degreaser and discharge to the sanitary sewer, not to the storm drain.

VI. STORMWATER FACILITY MAINTENANCE

VI.A. Ownership and Responsibility for Maintenance in Perpetuity

The ownership and responsibility for maintenance of the facilities will be determined when approved project improvements are available.

VI.B. Summary of Maintenance Requirements for Each Stormwater Facility

The maintenance requirements will be provided when approved project improvements are available.

VII. CONSTRUCTION PLAN C.3 CHECKLIST

Table 4. Construction Plan C.3 Checklist

Stormwater Control Plan Page #	*BMP Description*	*See Plan Sheet #s*
Attachment A	IMP 1 – 8 Bioretention Facilities	10

VIII. CERTIFICATIONS

The selection, sizing, and preliminary design of stormwater treatment and other control measures in this plan meet the requirements of Regional Water Quality Control Board Order R2-2015-0049.

_____

By

_____

Print Name

ATTACHMENT A
STORMWATER CONTROL PLAN EXHIBIT



LEGEND

- BIOLOGICAL RIPARIAN LIMIT/TOP OF BANK
- CREEK STRUCTURE SETBACK LINE
- GRADING DAYLIGHT LINE

SWCP LEGEND

IMP	IMPERVIOUS	PERVIOUS	
	ROOF, CONCRETE, PAVEMENT, ETC.	LANDSCAPING	PROVIDED BIORETENTION
IMP-1	7,754 SF	9,233 SF	424 SF
IMP-2	2,077 SF	4,014 SF	221 SF
IMP-3	28,180 SF	31,814 SF	1,737 SF
IMP-4	6,064 SF	8,800 SF	420 SF
IMP-5	6,071 SF	7,483 SF	394 SF
IMP-6	6,071 SF	7,004 SF	429 SF
IMP-7	5,325 SF	6,588 SF	429 SF
IMP-8	16,589 SF	10,022 SF	891 SF
SELF TREATING	N/A	404,554 SF	

50' 0' 25' 50'

1 INCH = 50 FEET

REGISTERED PROFESSIONAL ENGINEER
ANDREW D. PEARY
No. 73704
CIVIL
STATE OF CALIFORNIA

PRELIMINARY

STONE VALLEY FARM

455 LIVORNA ROAD

STORM WATER CONTROL PLAN
CONTRA COSTA COUNTY, CA

APRIL 28, 2025

ENGINEERING
SURVEYING • PLANNING
1931 SAN MIGUEL DRIVE, SUITE 100, WALNUT CREEK, CA 94596
WWW.DKENGIN.COM (925) 932-6868

F:\PROJECTS\DK\24-1035 455 LIVORNA - ALAMO, CA\PC\DETAILS.MWF\15 - STORM WATER CONTROL PLAN.DWG 4/25/2025

ATTACHMENT B
BAHM LIVORNA ROAD OUTPUT

BAHM2023

PROJECT REPORT

General Model Information

BAHM2023 Project Name: 24-1035 BAHM

Site Name:	Livorna
Site Address:	455 Livorna rd
City:	Alamo CA
Report Date:	4/24/2025
Gage:	St Marys
Data Start:	1972/10/01
Data End:	2021/09/30
Timestep:	Hourly
Precip Scale:	1.000
Version Date:	2024/06/19

POC Thresholds

Low Flow Threshold for POC1:	10 Percent of the 2 Year
High Flow Threshold for POC1:	10 Year
Low Flow Threshold for POC2:	10 Percent of the 2 Year
High Flow Threshold for POC2:	10 Year

Landuse Basin Data

Pre-Project Land Use

Basin 3

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C D,Grass,Mod(5-10%)	0.28
C D,Grass,Ste(10-20)	0.89
C D,Grass,Very(>20%)	3.88
Pervious Total	5.05

Impervious Land Use	acre
Roof Area	0.12
Driveways,Flat(0-5%)	0.02
Driveways,Mod(5-10%)	0.21
Driveways,St(10-20%)	0.04
Impervious Total	0.39
Basin Total	5.44

Element Flow Componants:

Surface	Interflow	Groundwater
Componant Flows To:		
POC 2	POC 2	

Basin 2

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C D,Grass,Mod(5-10%)	0.03
C D,Grass,Ste(10-20)	0.03
C D,Grass,Very(>20%)	0.36
Pervious Total	0.42

Impervious Land Use	acre
Impervious Total	0
Basin Total	0.42

Element Flow Componants:

Surface	Interflow	Groundwater
Componant Flows To:		
POC 1	POC 1	

Basin 1

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C D,Grass,Mod(5-10%)	0.34
C D,Grass,Ste(10-20)	0.6
C D,Grass,Very(>20%)	5.77
Pervious Total	6.71

Impervious Land Use	acre
Roof Area	0.08
Driveways,Flat(0-5%)	0.19
Driveways,Mod(5-10%)	0.04
Driveways,St(10-20%)	0.19
Impervious Total	0.5
Basin Total	7.21

Element Flow Componants:

Surface	Interflow	Groundwater
Componant Flows To:		
POC 1	POC 1	

Mitigated Land Use

Basin 1

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C D,Shrub,Flat(0-5%)	0.17
C D,Shrub,Very(>20%)	0.05
Pervious Total	0.22

Impervious Land Use	acre
Roads,Flat(0-5%)	0.06
Roof Area	0.08
Driveways,Flat(0-5%)	0.03
Sidewalks,Flat(0-5%)	0.01
Impervious Total	0.18
Basin Total	0.4

Element Flow Componants:

Surface	Interflow	Groundwater
Componant Flows To:		
Surface retention 1	Surface retention 1	

Basin 5

Bypass:	Yes
GroundWater:	No

Pervious Land Use	acre
C D,Grass,Ste(10-20)	0.26
C D,Grass,Very(>20%)	5.07
Pervious Total	5.33

Impervious Land Use	acre
Sidewalks,Flat(0-5%)	0.04
Impervious Total	0.04
Basin Total	5.37

Element Flow Componants:

Surface	Interflow	Groundwater
Componant Flows To:		
POC 1	POC 1	

Basin 3

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C D,Shrub,Flat(0-5%)	0.32
C D,Grass,Very(>20%)	0.27
C D,Grass,Ste(10-20)	0.13
Pervious Total	0.72

Impervious Land Use	acre
Roads,Flat(0-5%)	0.06
Roads,Steep(10-20%)	0.22
Roof Area	0.17
Driveways,Flat(0-5%)	0.08
Driveways,St(10-20%)	0.01
Driveways,Very(>20%)	0.09
Sidewalks,Flat(0-5%)	0.02
Impervious Total	0.65
Basin Total	1.37

Element Flow Componants:

Surface	Interflow	Groundwater
Componant Flows To:		
Surface retention 3	Surface retention 3	

Basin 4

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C D,Shrub,Flat(0-5%)	0.2
Pervious Total	0.2

Impervious Land Use	acre
Roof Area	0.09
Driveways,Flat(0-5%)	0.03
Sidewalks,Flat(0-5%)	0.01
Impervious Total	0.13
Basin Total	0.33

Element Flow Componants:

Surface	Interflow	Groundwater
Componant Flows To:		
Surface retention 4	Surface retention 4	

Basin 2

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C D,Shrub,Flat(0-5%)	0.08
Pervious Total	0.08

Impervious Land Use	acre
Roof Area	0.03
Driveways,Flat(0-5%)	0.01
Impervious Total	0.04
Basin Total	0.12

Element Flow Componants:

Surface	Interflow	Groundwater
Componant Flows To:		
Surface retention 2	Surface retention 2	

Basin 6

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C D,Shrub,Flat(0-5%)	0.16
C D,Shrub,Very(>20%)	0.01
Pervious Total	0.17

Impervious Land Use	acre
Roof Area	0.07
Driveways,Flat(0-5%)	0.03
Driveways,St(10-20%)	0.01
Sidewalks,Flat(0-5%)	0.02
Impervious Total	0.13
Basin Total	0.3

Element Flow Componants:

Surface	Interflow	Groundwater
Componant Flows To:		
Surface retention 5	Surface retention 5	

Basin 7

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C D,Shrub,Flat(0-5%)	0.16
C D,Shrub,Very(>20%)	0.01
Pervious Total	0.17

Impervious Land Use	acre
Roof Area	0.07
Driveways,Flat(0-5%)	0.03
Driveways,Mod(5-10%)	0.01
Sidewalks,Flat(0-5%)	0.02
Impervious Total	0.13
Basin Total	0.3

Element Flow Componants:

Surface	Interflow	Groundwater
Componant Flows To:		
Surface retention 6	Surface retention 6	

Basin 8

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C D,Shrub,Flat(0-5%)	0.19
Pervious Total	0.19

Impervious Land Use	acre
Roof Area	0.06
Impervious Total	0.06
Basin Total	0.25

Element Flow Componants:

Surface	Interflow	Groundwater
Componant Flows To:		
Surface retention 7	Surface retention 7	

Basin 9

Bypass:	No
GroundWater:	No

Pervious Land Use	acre
C D,Grass,Very(>20%)	0.16
C D,Shrub,Mod(5-10%)	0.05
C D,Grass,Ste(10-20)	0.02
Pervious Total	0.23

Impervious Land Use	acre
Roads,Mod(5-10%)	0.29
Roads,Steep(10-20%)	0.09
Impervious Total	0.38
Basin Total	0.61

Element Flow Componants:

Surface	Interflow	Groundwater
Componant Flows To:		
Surface retention 8	Surface retention 8	

Basin 10

Bypass:	Yes
GroundWater:	No

Pervious Land Use	acre
C D,Grass,Very(>20%)	3.62
C D,Grass,Ste(10-20)	0.18
C D,Grass,Mod(5-10%)	0.02
C D,Grass,Flat(0-5%)	0.03
Pervious Total	3.85

Impervious Land Use	acre
Sidewalks,Flat(0-5%)	0.06
Impervious Total	0.06
Basin Total	3.91

Element Flow Componants:

Surface	Interflow	Groundwater
Componant Flows To:		
POC 2	POC 2	

Mitigated Routing

Bioretention 1

Bottom Length:	28.28 ft.
Bottom Width:	15.00 ft.
Material thickness of first layer:	1.5
Material type for first layer:	BAHM 5
Material thickness of second layer:	1
Material type for second layer:	GRAVEL
Material thickness of third layer:	0
Material type for third layer:	GRAVEL
Infiltration On	
Infiltration rate:	0.2
Infiltration reduction factor:	0.5
Total Volume Infiltrated (ac-ft.):	6.647
Total Volume Through Riser (ac-ft.):	0.326
Total Volume Through Facility (ac-ft.):	29.205
Percent Infiltrated:	22.76
Total Precip Applied to Facility:	2.259
Total Evap From Facility:	0.877
Underdrain used	
Underdrain Diameter (feet):	0.5
Orifice Diameter (in.):	2
Offset (in.):	6
Flow Through Underdrain (ac-ft.):	22.232
Total Outflow (ac-ft.):	29.205
Percent Through Underdrain:	76.12
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Element Outlets:	
Outlet 1	Outlet 2
Outlet Flows To:	

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.0298	0.0000	0.0000	0.0000
0.0440	0.0294	0.0002	0.0000	0.0000
0.0879	0.0290	0.0003	0.0000	0.0000
0.1319	0.0285	0.0005	0.0000	0.0000
0.1758	0.0281	0.0007	0.0000	0.0000
0.2198	0.0277	0.0009	0.0000	0.0000
0.2637	0.0273	0.0011	0.0000	0.0000
0.3077	0.0268	0.0012	0.0000	0.0000
0.3516	0.0264	0.0014	0.0000	0.0000
0.3956	0.0260	0.0016	0.0000	0.0000
0.4396	0.0256	0.0019	0.0010	0.0010
0.4835	0.0252	0.0021	0.0010	0.0010
0.5275	0.0248	0.0023	0.0010	0.0010
0.5714	0.0244	0.0025	0.0010	0.0010
0.6154	0.0240	0.0027	0.0010	0.0010
0.6593	0.0236	0.0030	0.0010	0.0010
0.7033	0.0232	0.0032	0.0010	0.0010
0.7473	0.0228	0.0034	0.0010	0.0010
0.7912	0.0224	0.0037	0.0010	0.0010

0.8352	0.0220	0.0039	0.0010	0.0010
0.8791	0.0216	0.0042	0.0010	0.0010
0.9231	0.0212	0.0045	0.0010	0.0010
0.9670	0.0209	0.0047	0.0010	0.0010
1.0110	0.0205	0.0050	0.0010	0.0010
1.0549	0.0201	0.0053	0.0010	0.0010
1.0989	0.0198	0.0056	0.0010	0.0010
1.1429	0.0194	0.0059	0.0010	0.0010
1.1868	0.0190	0.0062	0.0010	0.0010
1.2308	0.0187	0.0065	0.0010	0.0010
1.2747	0.0183	0.0068	0.0010	0.0010
1.3187	0.0180	0.0071	0.0010	0.0010
1.3626	0.0176	0.0074	0.0010	0.0010
1.4066	0.0173	0.0077	0.0010	0.0010
1.4505	0.0169	0.0081	0.0010	0.0010
1.4945	0.0166	0.0084	0.0010	0.0010
1.5385	0.0163	0.0088	0.0010	0.0010
1.5824	0.0159	0.0092	0.0010	0.0010
1.6264	0.0156	0.0096	0.0010	0.0010
1.6703	0.0153	0.0100	0.0010	0.0010
1.7143	0.0150	0.0104	0.0010	0.0010
1.7582	0.0147	0.0108	0.0010	0.0010
1.8022	0.0143	0.0112	0.0010	0.0010
1.8462	0.0140	0.0116	0.0010	0.0010
1.8901	0.0137	0.0121	0.0010	0.0010
1.9341	0.0134	0.0125	0.0010	0.0010
1.9780	0.0131	0.0129	0.0010	0.0010
2.0220	0.0128	0.0134	0.0010	0.0010
2.0659	0.0125	0.0139	0.0010	0.0010
2.1099	0.0122	0.0143	0.0010	0.0010
2.1538	0.0119	0.0148	0.0010	0.0010
2.1978	0.0117	0.0153	0.0010	0.0010
2.2418	0.0114	0.0158	0.0010	0.0010
2.2857	0.0111	0.0163	0.0010	0.0010
2.3297	0.0108	0.0168	0.0010	0.0010
2.3736	0.0105	0.0173	0.0010	0.0010
2.4176	0.0103	0.0178	0.0010	0.0010
2.4615	0.0100	0.0184	0.0010	0.0010
2.5000	0.0097	0.0188	0.0010	0.0010

Bioretention Surface Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infilt(cfs)
2.5000	0.0298	0.0188	0.0000	0.0491	0.0000
2.5440	0.0303	0.0202	0.0000	0.0491	0.0000
2.5879	0.0307	0.0215	0.0000	0.0520	0.0000
2.6319	0.0312	0.0229	0.0000	0.0534	0.0000
2.6758	0.0316	0.0242	0.0000	0.0549	0.0000
2.7198	0.0321	0.0256	0.0000	0.0563	0.0000
2.7637	0.0325	0.0271	0.0000	0.0577	0.0000
2.8077	0.0330	0.0285	0.0000	0.0592	0.0000
2.8516	0.0335	0.0300	0.0000	0.0606	0.0000
2.8956	0.0339	0.0314	0.0000	0.0620	0.0000
2.9396	0.0344	0.0329	0.0000	0.0635	0.0000
2.9835	0.0349	0.0345	0.0000	0.0649	0.0000
3.0275	0.0354	0.0360	0.0000	0.0664	0.0000
3.0714	0.0358	0.0376	0.0000	0.0678	0.0000
3.1154	0.0363	0.0392	0.0000	0.0692	0.0000
3.1593	0.0368	0.0408	0.0000	0.0707	0.0000

3.2033	0.0373	0.0424	0.0000	0.0721	0.0000
3.2473	0.0378	0.0441	0.0000	0.0736	0.0000
3.2912	0.0383	0.0457	0.0000	0.0750	0.0000
3.3352	0.0388	0.0474	0.0000	0.0764	0.0000
3.3791	0.0393	0.0491	0.0000	0.0779	0.0000
3.4231	0.0398	0.0509	0.0000	0.0792	0.0000
3.4670	0.0403	0.0526	0.0000	0.0792	0.0000
3.5110	0.0409	0.0544	0.0000	0.0792	0.0000
3.5549	0.0414	0.0562	0.0000	0.0792	0.0000
3.5989	0.0419	0.0581	0.0000	0.0792	0.0000
3.6429	0.0424	0.0599	0.0000	0.0792	0.0000
3.6868	0.0430	0.0618	0.0000	0.0792	0.0000
3.7308	0.0435	0.0637	0.0000	0.0792	0.0000
3.7747	0.0440	0.0656	0.0000	0.0792	0.0000
3.8187	0.0446	0.0676	0.0000	0.0792	0.0000
3.8626	0.0451	0.0695	0.0113	0.0792	0.0000
3.9066	0.0456	0.0715	0.0120	0.0792	0.0000
3.9505	0.0462	0.0735	0.0136	0.0792	0.0000
3.9945	0.0467	0.0756	0.0153	0.0792	0.0000
4.0000	0.0468	0.0758	0.0162	0.0792	0.0000

Bioretention 2

Bottom Length:	19.70 ft.
Bottom Width:	11.20 ft.
Material thickness of first layer:	1.5
Material type for first layer:	BAHM 5
Material thickness of second layer:	1
Material type for second layer:	GRAVEL
Material thickness of third layer:	0
Material type for third layer:	GRAVEL
Infiltration On	
Infiltration rate:	0.2
Infiltration reduction factor:	0.5
Total Volume Infiltrated (ac-ft.):	2.763
Total Volume Through Riser (ac-ft.):	0.009
Total Volume Through Facility (ac-ft.):	7.785
Percent Infiltrated:	35.49
Total Precip Applied to Facility:	0.802
Total Evap From Facility:	0.38
Underdrain used	
Underdrain Diameter (feet):	0.5
Orifice Diameter (in.):	2
Offset (in.):	6
Flow Through Underdrain (ac-ft.):	5.013
Total Outflow (ac-ft.):	7.785
Percent Through Underdrain:	64.39
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Element Outlets:	
Outlet 1	Outlet 2
Outlet Flows To:	

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.0118	0.0000	0.0000	0.0000
0.0440	0.0117	0.0001	0.0000	0.0000
0.0879	0.0116	0.0002	0.0000	0.0000
0.1319	0.0115	0.0003	0.0000	0.0000
0.1758	0.0114	0.0004	0.0000	0.0000
0.2198	0.0113	0.0004	0.0000	0.0000
0.2637	0.0111	0.0005	0.0000	0.0000
0.3077	0.0110	0.0006	0.0000	0.0000
0.3516	0.0109	0.0007	0.0000	0.0000
0.3956	0.0108	0.0008	0.0000	0.0000
0.4396	0.0107	0.0009	0.0005	0.0005
0.4835	0.0106	0.0011	0.0005	0.0005
0.5275	0.0104	0.0012	0.0005	0.0005
0.5714	0.0103	0.0013	0.0005	0.0005
0.6154	0.0102	0.0014	0.0005	0.0005
0.6593	0.0101	0.0015	0.0005	0.0005
0.7033	0.0100	0.0016	0.0005	0.0005
0.7473	0.0098	0.0017	0.0005	0.0005
0.7912	0.0097	0.0018	0.0005	0.0005
0.8352	0.0096	0.0020	0.0005	0.0005
0.8791	0.0095	0.0021	0.0005	0.0005

0.9231	0.0094	0.0022	0.0005	0.0005
0.9670	0.0092	0.0023	0.0005	0.0005
1.0110	0.0091	0.0025	0.0005	0.0005
1.0549	0.0090	0.0026	0.0005	0.0005
1.0989	0.0089	0.0027	0.0005	0.0005
1.1429	0.0088	0.0029	0.0005	0.0005
1.1868	0.0086	0.0030	0.0005	0.0005
1.2308	0.0085	0.0031	0.0005	0.0005
1.2747	0.0084	0.0033	0.0005	0.0005
1.3187	0.0083	0.0034	0.0005	0.0005
1.3626	0.0082	0.0036	0.0005	0.0005
1.4066	0.0080	0.0037	0.0005	0.0005
1.4505	0.0079	0.0039	0.0005	0.0005
1.4945	0.0078	0.0040	0.0005	0.0005
1.5385	0.0077	0.0042	0.0005	0.0005
1.5824	0.0076	0.0044	0.0005	0.0005
1.6264	0.0075	0.0045	0.0005	0.0005
1.6703	0.0073	0.0047	0.0005	0.0005
1.7143	0.0072	0.0049	0.0005	0.0005
1.7582	0.0071	0.0051	0.0005	0.0005
1.8022	0.0070	0.0052	0.0005	0.0005
1.8462	0.0069	0.0054	0.0005	0.0005
1.8901	0.0067	0.0056	0.0005	0.0005
1.9341	0.0066	0.0058	0.0005	0.0005
1.9780	0.0065	0.0060	0.0005	0.0005
2.0220	0.0064	0.0062	0.0005	0.0005
2.0659	0.0063	0.0064	0.0005	0.0005
2.1099	0.0061	0.0066	0.0005	0.0005
2.1538	0.0060	0.0068	0.0005	0.0005
2.1978	0.0059	0.0070	0.0005	0.0005
2.2418	0.0058	0.0072	0.0005	0.0005
2.2857	0.0057	0.0074	0.0005	0.0005
2.3297	0.0055	0.0076	0.0005	0.0005
2.3736	0.0054	0.0078	0.0005	0.0005
2.4176	0.0053	0.0080	0.0005	0.0005
2.4615	0.0052	0.0082	0.0005	0.0005
2.5000	0.0051	0.0084	0.0005	0.0005

Bioretention Surface Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infilt(cfs)
2.5000	0.0118	0.0084	0.0000	0.0255	0.0000
2.5440	0.0120	0.0089	0.0000	0.0255	0.0000
2.5879	0.0121	0.0095	0.0000	0.0270	0.0000
2.6319	0.0122	0.0100	0.0000	0.0278	0.0000
2.6758	0.0123	0.0105	0.0000	0.0285	0.0000
2.7198	0.0124	0.0111	0.0000	0.0293	0.0000
2.7637	0.0126	0.0116	0.0000	0.0300	0.0000
2.8077	0.0127	0.0122	0.0000	0.0308	0.0000
2.8516	0.0128	0.0127	0.0000	0.0315	0.0000
2.8956	0.0129	0.0133	0.0000	0.0323	0.0000
2.9396	0.0130	0.0139	0.0000	0.0330	0.0000
2.9835	0.0132	0.0144	0.0000	0.0338	0.0000
3.0275	0.0133	0.0150	0.0000	0.0345	0.0000
3.0714	0.0134	0.0156	0.0000	0.0353	0.0000
3.1154	0.0135	0.0162	0.0000	0.0360	0.0000
3.1593	0.0136	0.0168	0.0000	0.0368	0.0000
3.2033	0.0138	0.0174	0.0000	0.0375	0.0000
3.2473	0.0139	0.0180	0.0000	0.0383	0.0000

3.2912	0.0140	0.0186	0.0000	0.0390	0.0000
3.3352	0.0141	0.0192	0.0000	0.0398	0.0000
3.3791	0.0142	0.0199	0.0000	0.0405	0.0000
3.4231	0.0144	0.0205	0.0000	0.0413	0.0000
3.4670	0.0145	0.0211	0.0000	0.0420	0.0000
3.5110	0.0146	0.0218	0.0000	0.0426	0.0000
3.5549	0.0147	0.0224	0.0000	0.0426	0.0000
3.5989	0.0148	0.0231	0.0000	0.0426	0.0000
3.6429	0.0150	0.0237	0.0000	0.0426	0.0000
3.6868	0.0151	0.0244	0.0000	0.0426	0.0000
3.7308	0.0152	0.0250	0.0000	0.0426	0.0000
3.7747	0.0153	0.0257	0.0000	0.0426	0.0000
3.8187	0.0154	0.0264	0.0000	0.0426	0.0000
3.8626	0.0155	0.0271	0.0059	0.0426	0.0000
3.9066	0.0157	0.0278	0.0062	0.0426	0.0000
3.9505	0.0158	0.0284	0.0071	0.0426	0.0000
3.9945	0.0159	0.0291	0.0080	0.0426	0.0000
4.0000	0.0159	0.0292	0.0089	0.0426	0.0000

Bioretention 3

Bottom Length:	69.50 ft.
Bottom Width:	25.00 ft.
Material thickness of first layer:	1.5
Material type for first layer:	BAHM 5
Material thickness of second layer:	2
Material type for second layer:	GRAVEL
Material thickness of third layer:	0
Material type for third layer:	GRAVEL
Infiltration On	
Infiltration rate:	0.2
Infiltration reduction factor:	0.5
Total Volume Infiltrated (ac-ft.):	35.167
Total Volume Through Riser (ac-ft.):	5.878
Total Volume Through Facility (ac-ft.):	103.177
Percent Infiltrated:	34.08
Total Precip Applied to Facility:	4.989
Total Evap From Facility:	2.192
Underdrain used	
Underdrain Diameter (feet):	0.5
Orifice Diameter (in.):	3
Offset (in.):	18
Flow Through Underdrain (ac-ft.):	62.132
Total Outflow (ac-ft.):	103.177
Percent Through Underdrain:	60.22
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Element Outlets:	
Outlet 1	Outlet 2
Outlet Flows To:	

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.0519	0.0000	0.0000	0.0000
0.0549	0.0518	0.0008	0.0000	0.0000
0.1099	0.0516	0.0017	0.0000	0.0000
0.1648	0.0514	0.0025	0.0000	0.0000
0.2198	0.0512	0.0034	0.0000	0.0000
0.2747	0.0511	0.0042	0.0000	0.0000
0.3297	0.0509	0.0051	0.0000	0.0000
0.3846	0.0507	0.0059	0.0040	0.0040
0.4396	0.0505	0.0068	0.0040	0.0040
0.4945	0.0503	0.0077	0.0040	0.0040
0.5495	0.0501	0.0085	0.0040	0.0040
0.6044	0.0499	0.0094	0.0040	0.0040
0.6593	0.0497	0.0103	0.0040	0.0040
0.7143	0.0495	0.0112	0.0040	0.0040
0.7692	0.0493	0.0120	0.0040	0.0040
0.8242	0.0492	0.0129	0.0040	0.0040
0.8791	0.0490	0.0138	0.0040	0.0040
0.9341	0.0488	0.0147	0.0040	0.0040
0.9890	0.0486	0.0156	0.0040	0.0040
1.0440	0.0484	0.0165	0.0040	0.0040
1.0989	0.0482	0.0174	0.0040	0.0040

1.1538	0.0480	0.0184	0.0040	0.0040
1.2088	0.0478	0.0193	0.0040	0.0040
1.2637	0.0476	0.0202	0.0040	0.0040
1.3187	0.0475	0.0211	0.0040	0.0040
1.3736	0.0473	0.0221	0.0040	0.0040
1.4286	0.0471	0.0230	0.0040	0.0040
1.4835	0.0469	0.0239	0.0040	0.0040
1.5385	0.0467	0.0250	0.0040	0.0040
1.5934	0.0465	0.0260	0.0040	0.0040
1.6484	0.0463	0.0270	0.0040	0.0040
1.7033	0.0461	0.0281	0.0040	0.0040
1.7582	0.0459	0.0291	0.0040	0.0040
1.8132	0.0458	0.0302	0.0040	0.0040
1.8681	0.0456	0.0312	0.0040	0.0040
1.9231	0.0454	0.0323	0.0040	0.0040
1.9780	0.0452	0.0333	0.0040	0.0040
2.0330	0.0450	0.0344	0.0040	0.0040
2.0879	0.0448	0.0355	0.0040	0.0040
2.1429	0.0446	0.0365	0.0040	0.0040
2.1978	0.0444	0.0376	0.0040	0.0040
2.2527	0.0442	0.0387	0.0040	0.0040
2.3077	0.0441	0.0398	0.0040	0.0040
2.3626	0.0439	0.0409	0.0040	0.0040
2.4176	0.0437	0.0420	0.0040	0.0040
2.4725	0.0435	0.0431	0.0040	0.0040
2.5275	0.0433	0.0442	0.0040	0.0040
2.5824	0.0431	0.0453	0.0040	0.0040
2.6374	0.0429	0.0464	0.0040	0.0040
2.6923	0.0427	0.0475	0.0040	0.0040
2.7473	0.0425	0.0487	0.0040	0.0040
2.8022	0.0423	0.0498	0.0040	0.0040
2.8571	0.0422	0.0509	0.0040	0.0040
2.9121	0.0420	0.0521	0.0040	0.0040
2.9670	0.0418	0.0532	0.0040	0.0040
3.0220	0.0416	0.0543	0.0040	0.0040
3.0769	0.0414	0.0555	0.0040	0.0040
3.1319	0.0412	0.0566	0.0040	0.0040
3.1868	0.0410	0.0578	0.0040	0.0040
3.2418	0.0408	0.0590	0.0040	0.0040
3.2967	0.0406	0.0601	0.0040	0.0040
3.3516	0.0405	0.0613	0.0040	0.0040
3.4066	0.0403	0.0625	0.0040	0.0040
3.4615	0.0401	0.0637	0.0040	0.0040
3.5000	0.0399	0.0645	0.0040	0.0040

Bioretention Surface Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infilt(cfs)
3.5000	0.0519	0.0645	0.0000	0.1800	0.0000
3.5549	0.0521	0.0673	0.0000	0.1800	0.0000
3.6099	0.0523	0.0702	0.0000	0.1800	0.0000
3.6648	0.0525	0.0731	0.0000	0.1800	0.0000
3.7198	0.0527	0.0760	0.0000	0.1800	0.0000
3.7747	0.0529	0.0789	0.0000	0.1800	0.0000
3.8297	0.0531	0.0818	0.0000	0.1800	0.0000
3.8846	0.0533	0.0847	0.0000	0.1800	0.0000
3.9396	0.0535	0.0876	0.0000	0.1800	0.0000
3.9945	0.0536	0.0906	0.0000	0.1800	0.0000
4.0495	0.0538	0.0935	0.0000	0.1800	0.0000

4.1044	0.0540	0.0965	0.0000	0.1800	0.0000
4.1593	0.0542	0.0995	0.0000	0.1800	0.0000
4.2143	0.0544	0.1025	0.0000	0.1800	0.0000
4.2692	0.0546	0.1055	0.0000	0.1800	0.0000
4.3242	0.0548	0.1085	0.0000	0.1800	0.0000
4.3791	0.0550	0.1115	0.0000	0.1800	0.0000
4.4341	0.0552	0.1145	0.0000	0.1800	0.0000
4.4890	0.0553	0.1175	0.0000	0.1800	0.0000
4.5440	0.0555	0.1206	0.0000	0.1800	0.0000
4.5989	0.0557	0.1236	0.0000	0.1800	0.0000
4.6538	0.0559	0.1267	0.0000	0.1800	0.0000
4.7088	0.0561	0.1298	0.0000	0.1800	0.0000
4.7637	0.0563	0.1329	0.0000	0.1800	0.0000
4.8187	0.0565	0.1360	0.0000	0.1800	0.0000
4.8736	0.0567	0.1391	0.0000	0.1800	0.0000
4.9286	0.0569	0.1422	0.0000	0.1800	0.0000
4.9835	0.0570	0.1453	0.0000	0.1800	0.0000
5.0000	0.0571	0.1463	0.0000	0.1800	0.0000

Bioretention 4

Bottom Length:	20.50 ft.
Bottom Width:	20.50 ft.
Material thickness of first layer:	1.5
Material type for first layer:	BAHM 5
Material thickness of second layer:	1
Material type for second layer:	GRAVEL
Material thickness of third layer:	0
Material type for third layer:	GRAVEL
Infiltration On	
Infiltration rate:	0.2
Infiltration reduction factor:	0.5
Total Volume Infiltrated (ac-ft.):	6.219
Total Volume Through Riser (ac-ft.):	0.098
Total Volume Through Facility (ac-ft.):	22.611
Percent Infiltrated:	27.5
Total Precip Applied to Facility:	2.037
Total Evap From Facility:	0.845
Underdrain used	
Underdrain Diameter (feet):	0.5
Orifice Diameter (in.):	2
Offset (in.):	6
Flow Through Underdrain (ac-ft.):	16.294
Total Outflow (ac-ft.):	22.611
Percent Through Underdrain:	72.06
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Element Outlets:	
Outlet 1	Outlet 2
Outlet Flows To:	

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.0289	0.0000	0.0000	0.0000
0.0440	0.0286	0.0002	0.0000	0.0000
0.0879	0.0281	0.0003	0.0000	0.0000
0.1319	0.0277	0.0005	0.0000	0.0000
0.1758	0.0273	0.0007	0.0000	0.0000
0.2198	0.0269	0.0009	0.0000	0.0000
0.2637	0.0265	0.0010	0.0000	0.0000
0.3077	0.0261	0.0012	0.0000	0.0000
0.3516	0.0256	0.0014	0.0000	0.0000
0.3956	0.0252	0.0016	0.0000	0.0000
0.4396	0.0248	0.0018	0.0000	0.0010
0.4835	0.0244	0.0020	0.0000	0.0010
0.5275	0.0241	0.0022	0.0000	0.0010
0.5714	0.0237	0.0025	0.0000	0.0010
0.6154	0.0233	0.0027	0.0000	0.0010
0.6593	0.0229	0.0029	0.0000	0.0010
0.7033	0.0225	0.0031	0.0000	0.0010
0.7473	0.0221	0.0034	0.0000	0.0010
0.7912	0.0218	0.0036	0.0000	0.0010
0.8352	0.0214	0.0039	0.0000	0.0010
0.8791	0.0210	0.0041	0.0000	0.0010

0.9231	0.0207	0.0044	0.0000	0.0010
0.9670	0.0203	0.0046	0.0000	0.0010
1.0110	0.0199	0.0049	0.0000	0.0010
1.0549	0.0196	0.0052	0.0000	0.0010
1.0989	0.0192	0.0055	0.0000	0.0010
1.1429	0.0189	0.0057	0.0000	0.0010
1.1868	0.0185	0.0060	0.0000	0.0010
1.2308	0.0182	0.0063	0.0000	0.0010
1.2747	0.0179	0.0066	0.0000	0.0010
1.3187	0.0175	0.0069	0.0000	0.0010
1.3626	0.0172	0.0073	0.0111	0.0010
1.4066	0.0169	0.0076	0.0119	0.0010
1.4505	0.0165	0.0079	0.0135	0.0010
1.4945	0.0162	0.0082	0.0152	0.0010
1.5385	0.0159	0.0086	0.0161	0.0010
1.5824	0.0156	0.0090	0.0179	0.0010
1.6264	0.0153	0.0093	0.0200	0.0010
1.6703	0.0149	0.0097	0.0215	0.0010
1.7143	0.0146	0.0101	0.0244	0.0010
1.7582	0.0143	0.0105	0.0255	0.0010
1.8022	0.0140	0.0109	0.0269	0.0010
1.8462	0.0137	0.0113	0.0306	0.0010
1.8901	0.0134	0.0118	0.0320	0.0010
1.9341	0.0131	0.0122	0.0333	0.0010
1.9780	0.0129	0.0126	0.0353	0.0010
2.0220	0.0126	0.0131	0.0389	0.0010
2.0659	0.0123	0.0135	0.0408	0.0010
2.1099	0.0120	0.0140	0.0421	0.0010
2.1538	0.0117	0.0144	0.0451	0.0010
2.1978	0.0115	0.0149	0.0473	0.0010
2.2418	0.0112	0.0154	0.0525	0.0010
2.2857	0.0109	0.0159	0.0573	0.0010
2.3297	0.0107	0.0164	0.0618	0.0010
2.3736	0.0104	0.0169	0.0659	0.0010
2.4176	0.0102	0.0174	0.0699	0.0010
2.4615	0.0099	0.0179	0.0737	0.0010
2.5000	0.0096	0.0184	0.0782	0.0010

Bioretention Surface Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infilt(cfs)
2.5000	0.0289	0.0184	0.0000	0.0486	0.0000
2.5440	0.0294	0.0196	0.0000	0.0486	0.0000
2.5879	0.0298	0.0209	0.0000	0.0515	0.0000
2.6319	0.0302	0.0223	0.0000	0.0529	0.0000
2.6758	0.0307	0.0236	0.0000	0.0543	0.0000
2.7198	0.0311	0.0250	0.0000	0.0558	0.0000
2.7637	0.0316	0.0263	0.0000	0.0572	0.0000
2.8077	0.0320	0.0277	0.0000	0.0586	0.0000
2.8516	0.0325	0.0292	0.0000	0.0600	0.0000
2.8956	0.0329	0.0306	0.0000	0.0615	0.0000
2.9396	0.0334	0.0320	0.0000	0.0629	0.0000
2.9835	0.0339	0.0335	0.0000	0.0643	0.0000
3.0275	0.0343	0.0350	0.0000	0.0657	0.0000
3.0714	0.0348	0.0365	0.0000	0.0672	0.0000
3.1154	0.0353	0.0381	0.0000	0.0686	0.0000
3.1593	0.0357	0.0396	0.0000	0.0700	0.0000
3.2033	0.0362	0.0412	0.0000	0.0714	0.0000
3.2473	0.0367	0.0428	0.0000	0.0729	0.0000

3.2912	0.0372	0.0445	0.0000	0.0743	0.0000
3.3352	0.0377	0.0461	0.0000	0.0757	0.0000
3.3791	0.0382	0.0478	0.0000	0.0771	0.0000
3.4231	0.0387	0.0495	0.0000	0.0786	0.0000
3.4670	0.0392	0.0512	0.0000	0.0792	0.0000
3.5110	0.0397	0.0529	0.0122	0.0792	0.0000
3.5549	0.0402	0.0546	0.1365	0.0792	0.0000
3.5989	0.0407	0.0564	0.3281	0.0792	0.0000
3.6429	0.0412	0.0582	0.5635	0.0792	0.0000
3.6868	0.0417	0.0600	0.8261	0.0792	0.0000
3.7308	0.0422	0.0619	1.0991	0.0792	0.0000
3.7747	0.0427	0.0638	1.3657	0.0792	0.0000
3.8187	0.0433	0.0656	1.6096	0.0792	0.0000
3.8626	0.0438	0.0676	1.8176	0.0792	0.0000
3.9066	0.0443	0.0695	1.9818	0.0792	0.0000
3.9505	0.0449	0.0715	2.1028	0.0792	0.0000
3.9945	0.0454	0.0734	2.1930	0.0792	0.0000
4.0000	0.0455	0.0737	2.3112	0.0792	0.0000

Bioretention 5

Bottom Length:	19.70 ft.
Bottom Width:	20.00 ft.
Material thickness of first layer:	1.5
Material type for first layer:	BAHM 5
Material thickness of second layer:	1
Material type for second layer:	GRAVEL
Material thickness of third layer:	0
Material type for third layer:	GRAVEL
Infiltration On	
Infiltration rate:	0.2
Infiltration reduction factor:	0.5
Total Volume Infiltrated (ac-ft.):	5.874
Total Volume Through Riser (ac-ft.):	0.078
Total Volume Through Facility (ac-ft.):	21.445
Percent Infiltrated:	27.39
Total Precip Applied to Facility:	1.975
Total Evap From Facility:	0.807
Underdrain used	
Underdrain Diameter (feet):	0.5
Orifice Diameter (in.):	2
Offset (in.):	6
Flow Through Underdrain (ac-ft.):	15.493
Total Outflow (ac-ft.):	21.445
Percent Through Underdrain:	72.25
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Element Outlets:	
Outlet 1	Outlet 2
Outlet Flows To:	

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.0279	0.0000	0.0000	0.0000
0.0440	0.0275	0.0002	0.0000	0.0000
0.0879	0.0271	0.0003	0.0000	0.0000
0.1319	0.0267	0.0005	0.0000	0.0000
0.1758	0.0263	0.0006	0.0000	0.0000
0.2198	0.0259	0.0008	0.0000	0.0000
0.2637	0.0255	0.0010	0.0000	0.0000
0.3077	0.0251	0.0012	0.0000	0.0000
0.3516	0.0247	0.0013	0.0000	0.0000
0.3956	0.0243	0.0015	0.0000	0.0000
0.4396	0.0239	0.0017	0.0009	0.0009
0.4835	0.0235	0.0019	0.0009	0.0009
0.5275	0.0231	0.0021	0.0009	0.0009
0.5714	0.0227	0.0023	0.0009	0.0009
0.6154	0.0223	0.0025	0.0009	0.0009
0.6593	0.0220	0.0027	0.0009	0.0009
0.7033	0.0216	0.0030	0.0009	0.0009
0.7473	0.0212	0.0032	0.0009	0.0009
0.7912	0.0208	0.0034	0.0009	0.0009
0.8352	0.0205	0.0037	0.0009	0.0009
0.8791	0.0201	0.0039	0.0009	0.0009

0.9231	0.0198	0.0041	0.0009	0.0009
0.9670	0.0194	0.0044	0.0009	0.0009
1.0110	0.0191	0.0046	0.0009	0.0009
1.0549	0.0187	0.0049	0.0009	0.0009
1.0989	0.0184	0.0052	0.0009	0.0009
1.1429	0.0180	0.0054	0.0009	0.0009
1.1868	0.0177	0.0057	0.0009	0.0009
1.2308	0.0174	0.0060	0.0009	0.0009
1.2747	0.0170	0.0063	0.0009	0.0009
1.3187	0.0167	0.0066	0.0009	0.0009
1.3626	0.0164	0.0069	0.0009	0.0009
1.4066	0.0161	0.0072	0.0009	0.0009
1.4505	0.0157	0.0075	0.0009	0.0009
1.4945	0.0154	0.0078	0.0009	0.0009
1.5385	0.0151	0.0082	0.0009	0.0009
1.5824	0.0148	0.0085	0.0009	0.0009
1.6264	0.0145	0.0089	0.0009	0.0009
1.6703	0.0142	0.0092	0.0009	0.0009
1.7143	0.0139	0.0096	0.0009	0.0009
1.7582	0.0136	0.0100	0.0009	0.0009
1.8022	0.0133	0.0104	0.0009	0.0009
1.8462	0.0130	0.0108	0.0009	0.0009
1.8901	0.0127	0.0112	0.0009	0.0009
1.9341	0.0124	0.0116	0.0009	0.0009
1.9780	0.0122	0.0120	0.0009	0.0009
2.0220	0.0119	0.0125	0.0009	0.0009
2.0659	0.0116	0.0129	0.0009	0.0009
2.1099	0.0113	0.0133	0.0009	0.0009
2.1538	0.0111	0.0138	0.0009	0.0009
2.1978	0.0108	0.0142	0.0009	0.0009
2.2418	0.0105	0.0147	0.0009	0.0009
2.2857	0.0103	0.0152	0.0009	0.0009
2.3297	0.0100	0.0156	0.0009	0.0009
2.3736	0.0098	0.0161	0.0009	0.0009
2.4176	0.0095	0.0166	0.0009	0.0009
2.4615	0.0093	0.0171	0.0009	0.0009
2.5000	0.0090	0.0175	0.0009	0.0009

Bioretention Surface Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infilt(cfs)
2.5000	0.0279	0.0175	0.0000	0.0456	0.0000
2.5440	0.0283	0.0188	0.0000	0.0456	0.0000
2.5879	0.0287	0.0200	0.0000	0.0483	0.0000
2.6319	0.0292	0.0213	0.0000	0.0496	0.0000
2.6758	0.0296	0.0226	0.0000	0.0509	0.0000
2.7198	0.0300	0.0239	0.0000	0.0523	0.0000
2.7637	0.0305	0.0252	0.0000	0.0536	0.0000
2.8077	0.0309	0.0266	0.0000	0.0550	0.0000
2.8516	0.0314	0.0280	0.0000	0.0563	0.0000
2.8956	0.0318	0.0293	0.0000	0.0576	0.0000
2.9396	0.0323	0.0307	0.0000	0.0590	0.0000
2.9835	0.0327	0.0322	0.0000	0.0603	0.0000
3.0275	0.0332	0.0336	0.0000	0.0616	0.0000
3.0714	0.0336	0.0351	0.0000	0.0630	0.0000
3.1154	0.0341	0.0366	0.0000	0.0643	0.0000
3.1593	0.0346	0.0381	0.0000	0.0656	0.0000
3.2033	0.0350	0.0396	0.0000	0.0670	0.0000
3.2473	0.0355	0.0412	0.0000	0.0683	0.0000

3.2912	0.0360	0.0427	0.0000	0.0697	0.0000
3.3352	0.0365	0.0443	0.0000	0.0710	0.0000
3.3791	0.0370	0.0460	0.0000	0.0723	0.0000
3.4231	0.0374	0.0476	0.0000	0.0737	0.0000
3.4670	0.0379	0.0492	0.0000	0.0750	0.0000
3.5110	0.0384	0.0509	0.0000	0.0760	0.0000
3.5549	0.0389	0.0526	0.0000	0.0760	0.0000
3.5989	0.0394	0.0543	0.0000	0.0760	0.0000
3.6429	0.0399	0.0561	0.0000	0.0760	0.0000
3.6868	0.0404	0.0579	0.0000	0.0760	0.0000
3.7308	0.0409	0.0596	0.0000	0.0760	0.0000
3.7747	0.0415	0.0615	0.0000	0.0760	0.0000
3.8187	0.0420	0.0633	0.0000	0.0760	0.0000
3.8626	0.0425	0.0651	0.0104	0.0760	0.0000
3.9066	0.0430	0.0670	0.0111	0.0760	0.0000
3.9505	0.0435	0.0689	0.0126	0.0760	0.0000
3.9945	0.0441	0.0709	0.0141	0.0760	0.0000
4.0000	0.0441	0.0711	0.0159	0.0760	0.0000

Bioretention 6

Bottom Length:	35.75 ft.
Bottom Width:	12.00 ft.
Material thickness of first layer:	1.5
Material type for first layer:	BAHM 5
Material thickness of second layer:	1
Material type for second layer:	GRAVEL
Material thickness of third layer:	0
Material type for third layer:	GRAVEL
Infiltration On	
Infiltration rate:	0.2
Infiltration reduction factor:	0.5
Total Volume Infiltrated (ac-ft.):	6.284
Total Volume Through Riser (ac-ft.):	0.054
Total Volume Through Facility (ac-ft.):	21.532
Percent Infiltrated:	29.18
Total Precip Applied to Facility:	2.155
Total Evap From Facility:	0.894
Underdrain used	
Underdrain Diameter (feet):	0.5
Orifice Diameter (in.):	2
Offset (in.):	6
Flow Through Underdrain (ac-ft.):	15.194
Total Outflow (ac-ft.):	21.532
Percent Through Underdrain:	70.56
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Element Outlets:	
Outlet 1	Outlet 2
Outlet Flows To:	

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.0315	0.0000	0.0000	0.0000
0.0440	0.0310	0.0002	0.0000	0.0000
0.0879	0.0306	0.0003	0.0000	0.0000
0.1319	0.0301	0.0005	0.0000	0.0000
0.1758	0.0297	0.0007	0.0000	0.0000
0.2198	0.0292	0.0009	0.0000	0.0000
0.2637	0.0287	0.0011	0.0000	0.0000
0.3077	0.0283	0.0013	0.0000	0.0000
0.3516	0.0278	0.0015	0.0000	0.0000
0.3956	0.0274	0.0017	0.0000	0.0000
0.4396	0.0270	0.0019	0.0010	0.0010
0.4835	0.0265	0.0021	0.0010	0.0010
0.5275	0.0261	0.0023	0.0010	0.0010
0.5714	0.0257	0.0026	0.0010	0.0010
0.6154	0.0252	0.0028	0.0010	0.0010
0.6593	0.0248	0.0030	0.0010	0.0010
0.7033	0.0244	0.0033	0.0010	0.0010
0.7473	0.0240	0.0035	0.0010	0.0010
0.7912	0.0236	0.0038	0.0010	0.0010
0.8352	0.0231	0.0041	0.0010	0.0010
0.8791	0.0227	0.0043	0.0010	0.0010

0.9231	0.0223	0.0046	0.0010	0.0010
0.9670	0.0219	0.0049	0.0010	0.0010
1.0110	0.0215	0.0052	0.0010	0.0010
1.0549	0.0211	0.0055	0.0010	0.0010
1.0989	0.0207	0.0058	0.0010	0.0010
1.1429	0.0203	0.0061	0.0010	0.0010
1.1868	0.0200	0.0064	0.0010	0.0010
1.2308	0.0196	0.0067	0.0010	0.0010
1.2747	0.0192	0.0070	0.0010	0.0010
1.3187	0.0188	0.0073	0.0010	0.0010
1.3626	0.0184	0.0077	0.0010	0.0010
1.4066	0.0181	0.0080	0.0010	0.0010
1.4505	0.0177	0.0084	0.0010	0.0010
1.4945	0.0173	0.0087	0.0010	0.0010
1.5385	0.0170	0.0091	0.0010	0.0010
1.5824	0.0166	0.0095	0.0010	0.0010
1.6264	0.0163	0.0099	0.0010	0.0010
1.6703	0.0159	0.0104	0.0010	0.0010
1.7143	0.0156	0.0108	0.0010	0.0010
1.7582	0.0152	0.0112	0.0010	0.0010
1.8022	0.0149	0.0117	0.0010	0.0010
1.8462	0.0145	0.0121	0.0010	0.0010
1.8901	0.0142	0.0126	0.0010	0.0010
1.9341	0.0139	0.0130	0.0010	0.0010
1.9780	0.0135	0.0135	0.0010	0.0010
2.0220	0.0132	0.0140	0.0010	0.0010
2.0659	0.0129	0.0145	0.0010	0.0010
2.1099	0.0126	0.0150	0.0010	0.0010
2.1538	0.0123	0.0155	0.0010	0.0010
2.1978	0.0120	0.0160	0.0010	0.0010
2.2418	0.0116	0.0165	0.0010	0.0010
2.2857	0.0113	0.0170	0.0010	0.0010
2.3297	0.0110	0.0176	0.0010	0.0010
2.3736	0.0107	0.0181	0.0010	0.0010
2.4176	0.0104	0.0187	0.0010	0.0010
2.4615	0.0101	0.0192	0.0010	0.0010
2.5000	0.0098	0.0197	0.0010	0.0010

Bioretention Surface Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infilt(cfs)
2.5000	0.0315	0.0197	0.0000	0.0497	0.0000
2.5440	0.0319	0.0211	0.0000	0.0497	0.0000
2.5879	0.0324	0.0225	0.0000	0.0526	0.0000
2.6319	0.0329	0.0240	0.0000	0.0540	0.0000
2.6758	0.0334	0.0254	0.0000	0.0555	0.0000
2.7198	0.0339	0.0269	0.0000	0.0569	0.0000
2.7637	0.0343	0.0284	0.0000	0.0584	0.0000
2.8077	0.0348	0.0299	0.0000	0.0598	0.0000
2.8516	0.0353	0.0315	0.0000	0.0613	0.0000
2.8956	0.0358	0.0330	0.0000	0.0627	0.0000
2.9396	0.0363	0.0346	0.0000	0.0642	0.0000
2.9835	0.0368	0.0362	0.0000	0.0657	0.0000
3.0275	0.0373	0.0379	0.0000	0.0671	0.0000
3.0714	0.0378	0.0395	0.0000	0.0686	0.0000
3.1154	0.0384	0.0412	0.0000	0.0700	0.0000
3.1593	0.0389	0.0429	0.0000	0.0715	0.0000
3.2033	0.0394	0.0446	0.0000	0.0729	0.0000
3.2473	0.0399	0.0463	0.0000	0.0744	0.0000

3.2912	0.0404	0.0481	0.0000	0.0758	0.0000
3.3352	0.0410	0.0499	0.0000	0.0773	0.0000
3.3791	0.0415	0.0517	0.0000	0.0788	0.0000
3.4231	0.0420	0.0535	0.0000	0.0792	0.0000
3.4670	0.0426	0.0554	0.0000	0.0792	0.0000
3.5110	0.0431	0.0573	0.0000	0.0792	0.0000
3.5549	0.0437	0.0592	0.0000	0.0792	0.0000
3.5989	0.0442	0.0611	0.0000	0.0792	0.0000
3.6429	0.0448	0.0631	0.0000	0.0792	0.0000
3.6868	0.0453	0.0651	0.0000	0.0792	0.0000
3.7308	0.0459	0.0671	0.0000	0.0792	0.0000
3.7747	0.0465	0.0691	0.0000	0.0792	0.0000
3.8187	0.0470	0.0712	0.0000	0.0792	0.0000
3.8626	0.0476	0.0732	0.0114	0.0792	0.0000
3.9066	0.0482	0.0753	0.0121	0.0792	0.0000
3.9505	0.0487	0.0775	0.0138	0.0792	0.0000
3.9945	0.0493	0.0796	0.0155	0.0792	0.0000
4.0000	0.0494	0.0799	0.0164	0.0792	0.0000

Bioretention 7

Bottom Length:	40.88 ft.
Bottom Width:	10.50 ft.
Material thickness of first layer:	1.5
Material type for first layer:	BAHM 5
Material thickness of second layer:	1
Material type for second layer:	GRAVEL
Material thickness of third layer:	0
Material type for third layer:	GRAVEL
Infiltration On	
Infiltration rate:	0.2
Infiltration reduction factor:	0.5
Total Volume Infiltrated (ac-ft.):	5.326
Total Volume Through Riser (ac-ft.):	0.01
Total Volume Through Facility (ac-ft.):	15.119
Percent Infiltrated:	35.23
Total Precip Applied to Facility:	1.961
Total Evap From Facility:	0.862
Underdrain used	
Underdrain Diameter (feet):	0.5
Orifice Diameter (in.):	2
Offset (in.):	6
Flow Through Underdrain (ac-ft.):	9.783
Total Outflow (ac-ft.):	15.119
Percent Through Underdrain:	64.71
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Element Outlets:	
Outlet 1	Outlet 2
Outlet Flows To:	

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.0327	0.0000	0.0000	0.0000
0.0440	0.0323	0.0002	0.0000	0.0000
0.0879	0.0318	0.0003	0.0000	0.0000
0.1319	0.0313	0.0005	0.0000	0.0000
0.1758	0.0308	0.0007	0.0000	0.0000
0.2198	0.0303	0.0009	0.0000	0.0000
0.2637	0.0299	0.0011	0.0000	0.0000
0.3077	0.0294	0.0013	0.0000	0.0000
0.3516	0.0289	0.0015	0.0000	0.0000
0.3956	0.0285	0.0017	0.0000	0.0000
0.4396	0.0280	0.0019	0.0010	0.0010
0.4835	0.0275	0.0021	0.0010	0.0010
0.5275	0.0271	0.0024	0.0010	0.0010
0.5714	0.0266	0.0026	0.0010	0.0010
0.6154	0.0262	0.0028	0.0010	0.0010
0.6593	0.0257	0.0031	0.0010	0.0010
0.7033	0.0253	0.0033	0.0010	0.0010
0.7473	0.0249	0.0036	0.0010	0.0010
0.7912	0.0244	0.0039	0.0010	0.0010
0.8352	0.0240	0.0041	0.0010	0.0010
0.8791	0.0236	0.0044	0.0010	0.0010

0.9231	0.0231	0.0047	0.0010	0.0010
0.9670	0.0227	0.0050	0.0010	0.0010
1.0110	0.0223	0.0053	0.0010	0.0010
1.0549	0.0219	0.0056	0.0010	0.0010
1.0989	0.0214	0.0059	0.0010	0.0010
1.1429	0.0210	0.0062	0.0010	0.0010
1.1868	0.0206	0.0065	0.0010	0.0010
1.2308	0.0202	0.0068	0.0010	0.0010
1.2747	0.0198	0.0072	0.0010	0.0010
1.3187	0.0194	0.0075	0.0010	0.0010
1.3626	0.0190	0.0079	0.0010	0.0010
1.4066	0.0186	0.0082	0.0010	0.0010
1.4505	0.0182	0.0086	0.0010	0.0010
1.4945	0.0179	0.0089	0.0010	0.0010
1.5385	0.0175	0.0094	0.0010	0.0010
1.5824	0.0171	0.0098	0.0010	0.0010
1.6264	0.0167	0.0102	0.0010	0.0010
1.6703	0.0163	0.0106	0.0010	0.0010
1.7143	0.0160	0.0111	0.0010	0.0010
1.7582	0.0156	0.0115	0.0010	0.0010
1.8022	0.0152	0.0120	0.0010	0.0010
1.8462	0.0149	0.0125	0.0010	0.0010
1.8901	0.0145	0.0129	0.0010	0.0010
1.9341	0.0142	0.0134	0.0010	0.0010
1.9780	0.0138	0.0139	0.0010	0.0010
2.0220	0.0135	0.0144	0.0010	0.0010
2.0659	0.0131	0.0149	0.0010	0.0010
2.1099	0.0128	0.0154	0.0010	0.0010
2.1538	0.0124	0.0159	0.0010	0.0010
2.1978	0.0121	0.0165	0.0010	0.0010
2.2418	0.0118	0.0170	0.0010	0.0010
2.2857	0.0114	0.0176	0.0010	0.0010
2.3297	0.0111	0.0181	0.0010	0.0010
2.3736	0.0108	0.0187	0.0010	0.0010
2.4176	0.0105	0.0193	0.0010	0.0010
2.4615	0.0102	0.0198	0.0010	0.0010
2.5000	0.0099	0.0204	0.0010	0.0010

Bioretention Surface Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infilt(cfs)
2.5000	0.0327	0.0204	0.0000	0.0497	0.0000
2.5440	0.0332	0.0218	0.0000	0.0497	0.0000
2.5879	0.0337	0.0233	0.0000	0.0526	0.0000
2.6319	0.0342	0.0248	0.0000	0.0540	0.0000
2.6758	0.0347	0.0263	0.0000	0.0555	0.0000
2.7198	0.0352	0.0278	0.0000	0.0570	0.0000
2.7637	0.0357	0.0294	0.0000	0.0584	0.0000
2.8077	0.0362	0.0310	0.0000	0.0599	0.0000
2.8516	0.0368	0.0326	0.0000	0.0613	0.0000
2.8956	0.0373	0.0342	0.0000	0.0628	0.0000
2.9396	0.0378	0.0358	0.0000	0.0642	0.0000
2.9835	0.0383	0.0375	0.0000	0.0657	0.0000
3.0275	0.0389	0.0392	0.0000	0.0672	0.0000
3.0714	0.0394	0.0409	0.0000	0.0686	0.0000
3.1154	0.0399	0.0427	0.0000	0.0701	0.0000
3.1593	0.0405	0.0444	0.0000	0.0715	0.0000
3.2033	0.0410	0.0462	0.0000	0.0730	0.0000
3.2473	0.0415	0.0481	0.0000	0.0744	0.0000

3.2912	0.0421	0.0499	0.0000	0.0759	0.0000
3.3352	0.0427	0.0518	0.0000	0.0773	0.0000
3.3791	0.0432	0.0536	0.0000	0.0788	0.0000
3.4231	0.0438	0.0556	0.0000	0.0792	0.0000
3.4670	0.0443	0.0575	0.0000	0.0792	0.0000
3.5110	0.0449	0.0594	0.0000	0.0792	0.0000
3.5549	0.0455	0.0614	0.0000	0.0792	0.0000
3.5989	0.0460	0.0634	0.0000	0.0792	0.0000
3.6429	0.0466	0.0655	0.0000	0.0792	0.0000
3.6868	0.0472	0.0675	0.0000	0.0792	0.0000
3.7308	0.0478	0.0696	0.0000	0.0792	0.0000
3.7747	0.0483	0.0717	0.0000	0.0792	0.0000
3.8187	0.0489	0.0739	0.0000	0.0792	0.0000
3.8626	0.0495	0.0760	0.0114	0.0792	0.0000
3.9066	0.0501	0.0782	0.0121	0.0792	0.0000
3.9505	0.0507	0.0804	0.0138	0.0792	0.0000
3.9945	0.0513	0.0827	0.0155	0.0792	0.0000
4.0000	0.0514	0.0830	0.0164	0.0792	0.0000

Bioretention 8

Bottom Length:	84.83 ft.
Bottom Width:	10.50 ft.
Material thickness of first layer:	1.5
Material type for first layer:	BAHM 5
Material thickness of second layer:	1
Material type for second layer:	GRAVEL
Material thickness of third layer:	0
Material type for third layer:	GRAVEL
Infiltration On	
Infiltration rate:	0.2
Infiltration reduction factor:	0.5
Total Volume Infiltrated (ac-ft.):	12.981
Total Volume Through Riser (ac-ft.):	1.339
Total Volume Through Facility (ac-ft.):	52.725
Percent Infiltrated:	24.62
Total Precip Applied to Facility:	4.021
Total Evap From Facility:	1.61
Underdrain used	
Underdrain Diameter (feet):	0.5
Orifice Diameter (in.):	2
Offset (in.):	6
Flow Through Underdrain (ac-ft.):	38.405
Total Outflow (ac-ft.):	52.725
Percent Through Underdrain:	72.84
Discharge Structure	
Riser Height:	1 ft.
Riser Diameter:	12 in.
Element Outlets:	
Outlet 1	Outlet 2
Outlet Flows To:	

Bioretention Hydraulic Table

Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	Infilt(cfs)
0.0000	0.0497	0.0000	0.0000	0.0000
0.0440	0.0492	0.0003	0.0000	0.0000
0.0879	0.0487	0.0007	0.0000	0.0000
0.1319	0.0482	0.0011	0.0000	0.0000
0.1758	0.0477	0.0014	0.0000	0.0000
0.2198	0.0472	0.0018	0.0000	0.0000
0.2637	0.0466	0.0022	0.0000	0.0000
0.3077	0.0461	0.0026	0.0000	0.0000
0.3516	0.0456	0.0030	0.0000	0.0000
0.3956	0.0451	0.0034	0.0000	0.0000
0.4396	0.0446	0.0038	0.0021	0.0021
0.4835	0.0441	0.0043	0.0021	0.0021
0.5275	0.0436	0.0047	0.0021	0.0021
0.5714	0.0430	0.0052	0.0021	0.0021
0.6154	0.0425	0.0056	0.0021	0.0021
0.6593	0.0420	0.0061	0.0021	0.0021
0.7033	0.0415	0.0066	0.0021	0.0021
0.7473	0.0410	0.0070	0.0021	0.0021
0.7912	0.0405	0.0075	0.0021	0.0021
0.8352	0.0400	0.0080	0.0021	0.0021
0.8791	0.0395	0.0085	0.0021	0.0021

0.9231	0.0389	0.0091	0.0021	0.0021
0.9670	0.0384	0.0096	0.0021	0.0021
1.0110	0.0379	0.0101	0.0021	0.0021
1.0549	0.0374	0.0107	0.0021	0.0021
1.0989	0.0369	0.0112	0.0021	0.0021
1.1429	0.0364	0.0118	0.0021	0.0021
1.1868	0.0359	0.0123	0.0021	0.0021
1.2308	0.0353	0.0129	0.0021	0.0021
1.2747	0.0348	0.0135	0.0021	0.0021
1.3187	0.0343	0.0141	0.0021	0.0021
1.3626	0.0338	0.0147	0.0021	0.0021
1.4066	0.0333	0.0153	0.0021	0.0021
1.4505	0.0328	0.0159	0.0021	0.0021
1.4945	0.0323	0.0166	0.0021	0.0021
1.5385	0.0317	0.0173	0.0021	0.0021
1.5824	0.0312	0.0180	0.0021	0.0021
1.6264	0.0307	0.0187	0.0021	0.0021
1.6703	0.0302	0.0194	0.0021	0.0021
1.7143	0.0297	0.0201	0.0021	0.0021
1.7582	0.0292	0.0209	0.0021	0.0021
1.8022	0.0287	0.0216	0.0021	0.0021
1.8462	0.0282	0.0224	0.0021	0.0021
1.8901	0.0276	0.0232	0.0021	0.0021
1.9341	0.0271	0.0240	0.0021	0.0021
1.9780	0.0266	0.0247	0.0021	0.0021
2.0220	0.0261	0.0255	0.0021	0.0021
2.0659	0.0256	0.0264	0.0021	0.0021
2.1099	0.0251	0.0272	0.0021	0.0021
2.1538	0.0246	0.0280	0.0021	0.0021
2.1978	0.0240	0.0288	0.0021	0.0021
2.2418	0.0235	0.0297	0.0021	0.0021
2.2857	0.0230	0.0305	0.0021	0.0021
2.3297	0.0225	0.0314	0.0021	0.0021
2.3736	0.0220	0.0323	0.0021	0.0021
2.4176	0.0215	0.0332	0.0021	0.0021
2.4615	0.0210	0.0341	0.0021	0.0021
2.5000	0.0204	0.0348	0.0021	0.0021

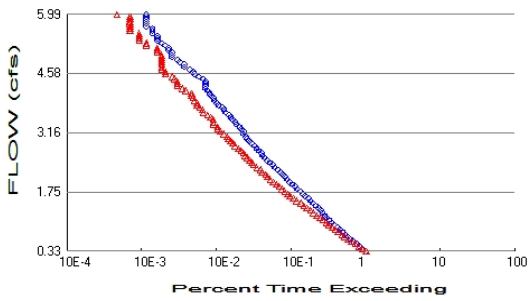
Bioretention Surface Hydraulic Table

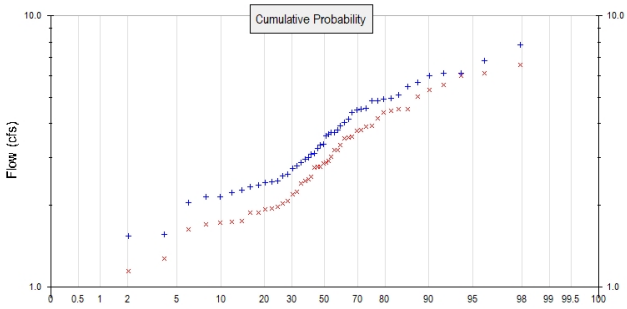
Stage(feet)	Area(ac.)	Volume(ac-ft.)	Discharge(cfs)	To Amended(cfs)	Infilt(cfs)
2.5000	0.0497	0.0348	0.0000	0.0843	0.0000
2.5440	0.0502	0.0370	0.0000	0.0843	0.0000
2.5879	0.0507	0.0393	0.0000	0.0843	0.0000
2.6319	0.0512	0.0415	0.0000	0.0843	0.0000
2.6758	0.0517	0.0438	0.0000	0.0843	0.0000
2.7198	0.0522	0.0460	0.0000	0.0843	0.0000
2.7637	0.0527	0.0483	0.0000	0.0843	0.0000
2.8077	0.0533	0.0507	0.0000	0.0843	0.0000
2.8516	0.0538	0.0530	0.0000	0.0843	0.0000
2.8956	0.0543	0.0554	0.0000	0.0843	0.0000
2.9396	0.0548	0.0578	0.0000	0.0843	0.0000
2.9835	0.0553	0.0602	0.0000	0.0843	0.0000
3.0275	0.0558	0.0627	0.0000	0.0843	0.0000
3.0714	0.0563	0.0651	0.0000	0.0843	0.0000
3.1154	0.0568	0.0676	0.0000	0.0843	0.0000
3.1593	0.0574	0.0701	0.0000	0.0843	0.0000
3.2033	0.0579	0.0727	0.0000	0.0843	0.0000
3.2473	0.0584	0.0752	0.0000	0.0843	0.0000

3.2912	0.0589	0.0778	0.0000	0.0843	0.0000
3.3352	0.0594	0.0804	0.0000	0.0843	0.0000
3.3791	0.0599	0.0830	0.0000	0.0843	0.0000
3.4231	0.0604	0.0857	0.0000	0.0843	0.0000
3.4670	0.0610	0.0883	0.0000	0.0843	0.0000
3.5110	0.0615	0.0910	0.0000	0.0843	0.0000
3.5549	0.0620	0.0937	0.0000	0.0843	0.0000
3.5989	0.0625	0.0965	0.0000	0.0843	0.0000
3.6429	0.0630	0.0992	0.0000	0.0843	0.0000
3.6868	0.0635	0.1020	0.0000	0.0843	0.0000
3.7308	0.0640	0.1048	0.0000	0.0843	0.0000
3.7747	0.0646	0.1076	0.0000	0.0843	0.0000
3.8187	0.0651	0.1105	0.0000	0.0843	0.0000
3.8626	0.0656	0.1134	0.0141	0.0843	0.0000
3.9066	0.0661	0.1163	0.0215	0.0843	0.0000
3.9505	0.0666	0.1192	0.0268	0.0843	0.0000
3.9945	0.0671	0.1221	0.0286	0.0843	0.0000
4.0000	0.0672	0.1225	0.0303	0.0843	0.0000

Analysis Results

POC 1





\+ Pre-Project x Mitigated

Pre-Project Landuse Totals for POC #1
Total Pervious Area: 7.13
Total Impervious Area: 0.5

Mitigated Landuse Totals for POC #1
Total Pervious Area: 6.55
Total Impervious Area: 1.04

Flow Frequency Method: Weibull

Flow Frequency Return Periods for Pre-Project. POC #1

Return Period	**Flow(cfs)**
2 year	3.34928
5 year	4.92345
10 year	5.99002
25 year	6.84963

Flow Frequency Return Periods for Mitigated. POC #1

Return Period	**Flow(cfs)**
2 year	2.85954
5 year	4.40583
10 year	5.32024
25 year	6.11964

Annual Peaks

Annual Peaks for Pre-Project and Mitigated. POC #1

Year	**Pre-Project**	**Mitigated**
1973	5.499	5.044
1974	3.089	2.451
1975	4.543	3.915
1976	2.148	1.702
1977	2.041	1.632
1978	4.049	3.589
1979	2.563	2.236
1980	3.331	2.867
1981	3.114	2.402
1982	3.349	3.325
1983	5.990	5.571
1984	3.607	2.918
1985	5.687	4.532
1986	3.717	3.189

1987	2.953	2.756
1988	3.252	2.547
1989	2.270	1.721
1990	2.793	2.030
1991	1.542	1.275
1992	3.668	3.187
1993	4.958	3.779
1994	0.756	0.665
1995	4.412	3.529
1996	2.374	1.880
1997	7.814	6.612
1998	4.872	3.908
1999	2.442	1.927
2000	2.733	2.197
2001	2.232	1.754
2002	3.010	2.781
2003	6.850	6.120
2004	4.489	4.174
2005	3.792	2.860
2006	6.132	5.990
2007	2.453	1.949
2008	4.148	3.770
2009	2.346	1.872
2010	4.842	4.535
2011	2.880	2.501
2012	3.717	3.021
2013	4.923	4.454
2014	2.419	1.973
2015	3.931	2.774
2016	5.120	4.406
2017	6.148	5.320
2018	2.143	1.732
2019	4.524	3.562
2020	2.609	2.079
2021	1.557	1.147

Ranked Annual Peaks

Ranked Annual Peaks for Pre-Project and Mitigated. POC #1

Rank	Pre-Project	Mitigated
1	7.8144	6.6120
2	6.8496	6.1196
3	6.1482	5.9896
4	6.1322	5.5705
5	5.9900	5.3202
6	5.6873	5.0442
7	5.4993	4.5348
8	5.1205	4.5317
9	4.9584	4.4536
10	4.9235	4.4058
11	4.8716	4.1741
12	4.8423	3.9150
13	4.5426	3.9083
14	4.5239	3.7794
15	4.4886	3.7696
16	4.4118	3.5885
17	4.1476	3.5621
18	4.0491	3.5292
19	3.9306	3.3248

20	3.7919	3.1895
21	3.7173	3.1872
22	3.7170	3.0209
23	3.6679	2.9178
24	3.6074	2.8674
25	3.3493	2.8595
26	3.3314	2.7808
27	3.2522	2.7737
28	3.1140	2.7562
29	3.0886	2.5468
30	3.0102	2.5014
31	2.9528	2.4512
32	2.8800	2.4020
33	2.7928	2.2363
34	2.7329	2.1970
35	2.6088	2.0794
36	2.5631	2.0299
37	2.4526	1.9728
38	2.4425	1.9488
39	2.4191	1.9275
40	2.3738	1.8800
41	2.3464	1.8722
42	2.2695	1.7541
43	2.2322	1.7318
44	2.1482	1.7206
45	2.1430	1.7017
46	2.0410	1.6316
47	1.5572	1.2751
48	1.5421	1.1468
49	0.7560	0.6655

Duration Flows

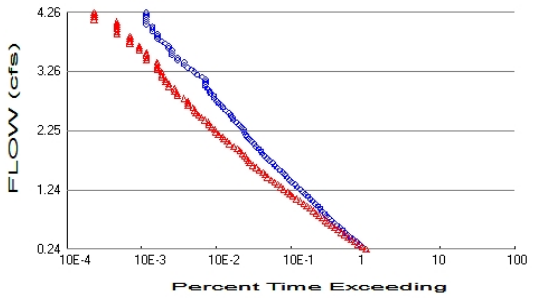
The Facility PASSED

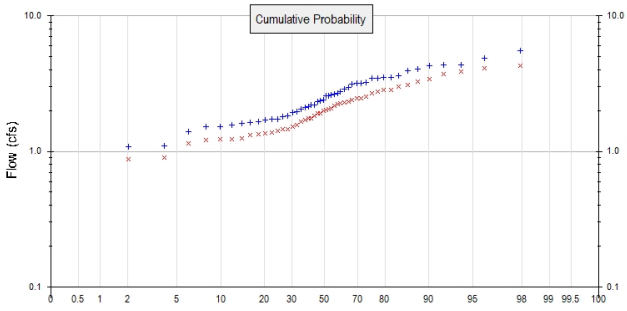
Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.3349	4300	4407	102	Pass
0.3921	3896	3897	100	Pass
0.4492	3579	3487	97	Pass
0.5063	3258	3149	96	Pass
0.5634	2981	2813	94	Pass
0.6205	2712	2538	93	Pass
0.6777	2503	2284	91	Pass
0.7348	2310	2075	89	Pass
0.7919	2139	1860	86	Pass
0.8490	1971	1686	85	Pass
0.9061	1805	1550	85	Pass
0.9633	1659	1377	83	Pass
1.0204	1522	1278	83	Pass
1.0775	1407	1162	82	Pass
1.1346	1303	1058	81	Pass
1.1918	1230	949	77	Pass
1.2489	1142	863	75	Pass
1.3060	1073	787	73	Pass
1.3631	1008	707	70	Pass
1.4202	926	640	69	Pass
1.4774	860	590	68	Pass
1.5345	791	519	65	Pass
1.5916	735	466	63	Pass
1.6487	666	418	62	Pass
1.7059	627	393	62	Pass
1.7630	584	359	61	Pass
1.8201	530	325	61	Pass
1.8772	491	302	61	Pass
1.9343	451	274	60	Pass
1.9915	414	250	60	Pass
2.0486	388	227	58	Pass
2.1057	363	208	57	Pass
2.1628	335	199	59	Pass
2.2200	312	178	57	Pass
2.2771	287	169	58	Pass
2.3342	264	151	57	Pass
2.3913	247	136	55	Pass
2.4484	226	129	57	Pass
2.5056	207	121	58	Pass
2.5627	193	112	58	Pass
2.6198	180	105	58	Pass
2.6769	173	99	57	Pass
2.7341	160	93	58	Pass
2.7912	149	85	57	Pass
2.8483	142	77	54	Pass
2.9054	128	72	56	Pass
2.9625	120	67	55	Pass
3.0197	111	63	56	Pass
3.0768	108	60	55	Pass
3.1339	101	55	54	Pass
3.1910	99	49	49	Pass
3.2482	94	45	47	Pass
3.3053	89	45	50	Pass

3.3624	80	40	50	Pass
3.4195	77	39	50	Pass
3.4766	71	39	54	Pass
3.5338	67	36	53	Pass
3.5909	64	33	51	Pass
3.6480	58	29	50	Pass
3.7051	55	28	50	Pass
3.7623	52	26	50	Pass
3.8194	46	24	52	Pass
3.8765	44	24	54	Pass
3.9336	41	22	53	Pass
3.9907	39	21	53	Pass
4.0479	37	20	54	Pass
4.1050	35	20	57	Pass
4.1621	33	17	51	Pass
4.2192	31	15	48	Pass
4.2764	31	13	41	Pass
4.3335	31	13	41	Pass
4.3906	31	13	41	Pass
4.4477	29	12	41	Pass
4.5048	25	11	44	Pass
4.5620	22	9	40	Pass
4.6191	21	9	42	Pass
4.6762	19	8	42	Pass
4.7333	16	8	50	Pass
4.7905	16	8	50	Pass
4.8476	14	8	57	Pass
4.9047	13	8	61	Pass
4.9618	11	8	72	Pass
5.0189	11	8	72	Pass
5.0761	11	7	63	Pass
5.1332	10	7	70	Pass
5.1903	10	7	70	Pass
5.2474	9	5	55	Pass
5.3046	8	5	62	Pass
5.3617	7	4	57	Pass
5.4188	7	4	57	Pass
5.4759	7	4	57	Pass
5.5330	6	4	66	Pass
5.5902	6	3	50	Pass
5.6473	6	3	50	Pass
5.7044	5	3	60	Pass
5.7615	5	3	60	Pass
5.8187	5	3	60	Pass
5.8758	5	3	60	Pass
5.9329	5	3	60	Pass
5.9900	5	2	40	Pass

Water Quality

POC 2





\+ Pre-Project x Mitigated

Pre-Project Landuse Totals for POC #2
Total Pervious Area: 5.05
Total Impervious Area: 0.39

Mitigated Landuse Totals for POC #2
Total Pervious Area: 4.61
Total Impervious Area: 0.76

Flow Frequency Method: Weibull

Flow Frequency Return Periods for Pre-Project. POC #2

Return Period	**Flow(cfs)**
2 year	2.38657
5 year	3.50777
10 year	4.26285
25 year	4.86957

Flow Frequency Return Periods for Mitigated. POC #2

Return Period	**Flow(cfs)**
2 year	2.00066
5 year	2.83223
10 year	3.41988
25 year	4.11132

Annual Peaks

Annual Peaks for Pre-Project and Mitigated. POC #2

Year	**Pre-Project**	**Mitigated**
1973	3.911	3.282
1974	2.187	1.762
1975	3.228	2.476
1976	1.522	1.220
1977	1.393	1.139
1978	2.881	2.282
1979	1.806	1.466
1980	2.372	1.895
1981	2.207	1.714
1982	2.387	2.259
1983	4.263	3.694
1984	2.562	2.001
1985	4.034	2.997
1986	2.648	2.174
1987	2.103	1.906

1988	2.312	1.817
1989	1.610	1.224
1990	1.953	1.513
1991	1.093	0.895
1992	2.584	2.220
1993	3.516	2.666
1994	0.527	0.449
1995	3.137	2.401
1996	1.630	1.315
1997	5.554	4.273
1998	3.444	2.549
1999	1.731	1.367
2000	1.943	1.575
2001	1.575	1.242
2002	2.145	1.744
2003	4.870	3.875
2004	3.196	2.760
2005	2.686	2.062
2006	4.359	4.111
2007	1.734	1.381
2008	2.954	2.474
2009	1.666	1.331
2010	3.441	3.077
2011	2.047	1.652
2012	2.615	2.069
2013	3.508	2.837
2014	1.716	1.413
2015	2.778	2.011
2016	3.637	2.832
2017	4.363	3.420
2018	1.523	1.223
2019	3.197	2.319
2020	1.819	1.449
2021	1.088	0.872

Ranked Annual Peaks

Ranked Annual Peaks for Pre-Project and Mitigated. POC #2

Rank	Pre-Project	Mitigated
1	5.5541	4.2733
2	4.8696	4.1113
3	4.3629	3.8755
4	4.3587	3.6939
5	4.2629	3.4199
6	4.0336	3.2817
7	3.9106	3.0774
8	3.6375	2.9975
9	3.5161	2.8371
10	3.5078	2.8322
11	3.4445	2.7598
12	3.4406	2.6657
13	3.2281	2.5487
14	3.1966	2.4755
15	3.1962	2.4739
16	3.1371	2.4012
17	2.9542	2.3188
18	2.8813	2.2823
19	2.7776	2.2591
20	2.6858	2.2199

21	2.6476	2.1737
22	2.6152	2.0694
23	2.5844	2.0616
24	2.5616	2.0107
25	2.3866	2.0007
26	2.3720	1.9063
27	2.3119	1.8948
28	2.2068	1.8170
29	2.1874	1.7620
30	2.1453	1.7442
31	2.1026	1.7144
32	2.0467	1.6524
33	1.9526	1.5752
34	1.9429	1.5126
35	1.8192	1.4662
36	1.8060	1.4494
37	1.7343	1.4127
38	1.7314	1.3814
39	1.7156	1.3671
40	1.6659	1.3308
41	1.6303	1.3148
42	1.6097	1.2420
43	1.5748	1.2245
44	1.5232	1.2232
45	1.5220	1.2202
46	1.3929	1.1388
47	1.0930	0.8950
48	1.0877	0.8725
49	0.5267	0.4487

Duration Flows

The Facility PASSED

Flow(cfs)	Predev	Mit	Percentage	Pass/Fail
0.2387	4287	4411	102	Pass
0.2793	3884	3891	100	Pass
0.3200	3559	3456	97	Pass
0.3606	3246	3102	95	Pass
0.4013	2964	2788	94	Pass
0.4419	2701	2495	92	Pass
0.4825	2491	2258	90	Pass
0.5232	2292	2029	88	Pass
0.5638	2125	1834	86	Pass
0.6045	1951	1651	84	Pass
0.6451	1789	1500	83	Pass
0.6858	1650	1365	82	Pass
0.7264	1516	1256	82	Pass
0.7671	1394	1144	82	Pass
0.8077	1302	1030	79	Pass
0.8484	1226	938	76	Pass
0.8890	1134	866	76	Pass
0.9297	1068	783	73	Pass
0.9703	999	703	70	Pass
1.0110	920	645	70	Pass
1.0516	855	577	67	Pass
1.0923	785	512	65	Pass
1.1329	732	457	62	Pass
1.1736	664	420	63	Pass
1.2142	624	391	62	Pass
1.2549	573	346	60	Pass
1.2955	527	313	59	Pass
1.3362	485	286	58	Pass
1.3768	446	261	58	Pass
1.4175	408	235	57	Pass
1.4581	386	211	54	Pass
1.4988	361	194	53	Pass
1.5394	334	183	54	Pass
1.5801	309	162	52	Pass
1.6207	285	149	52	Pass
1.6614	265	132	49	Pass
1.7020	244	121	49	Pass
1.7426	223	116	52	Pass
1.7833	206	111	53	Pass
1.8239	189	104	55	Pass
1.8646	181	96	53	Pass
1.9052	171	90	52	Pass
1.9459	160	83	51	Pass
1.9865	148	74	50	Pass
2.0272	139	65	46	Pass
2.0678	128	60	46	Pass
2.1085	120	55	45	Pass
2.1491	110	52	47	Pass
2.1898	107	46	42	Pass
2.2304	102	43	42	Pass
2.2711	99	41	41	Pass
2.3117	94	37	39	Pass
2.3524	87	34	39	Pass

2.3930	80	34	42	Pass
2.4337	74	30	40	Pass
2.4743	71	27	38	Pass
2.5150	67	25	37	Pass
2.5556	64	23	35	Pass
2.5963	57	22	38	Pass
2.6369	53	21	39	Pass
2.6776	50	18	36	Pass
2.7182	46	18	39	Pass
2.7589	44	18	40	Pass
2.7995	41	16	39	Pass
2.8402	40	13	32	Pass
2.8808	36	13	36	Pass
2.9215	35	12	34	Pass
2.9621	33	12	36	Pass
3.0027	31	10	32	Pass
3.0434	31	10	32	Pass
3.0840	31	9	29	Pass
3.1247	31	9	29	Pass
3.1653	28	8	28	Pass
3.2060	24	8	33	Pass
3.2466	22	8	36	Pass
3.2873	20	7	35	Pass
3.3279	18	7	38	Pass
3.3686	16	7	43	Pass
3.4092	16	7	43	Pass
3.4499	13	5	38	Pass
3.4905	13	5	38	Pass
3.5312	11	5	45	Pass
3.5718	11	5	45	Pass
3.6125	11	4	36	Pass
3.6531	10	4	40	Pass
3.6938	10	4	40	Pass
3.7344	9	3	33	Pass
3.7751	8	3	37	Pass
3.8157	7	3	42	Pass
3.8564	7	3	42	Pass
3.8970	7	2	28	Pass
3.9377	6	2	33	Pass
3.9783	6	2	33	Pass
4.0190	6	2	33	Pass
4.0596	5	2	40	Pass
4.1003	5	2	40	Pass
4.1409	5	1	20	Pass
4.1816	5	1	20	Pass
4.2222	5	1	20	Pass
4.2629	5	1	20	Pass

Water Quality

Model Default Modifications

Total of 0 changes have been made.

PERLND Changes

No PERLND changes have been made.

IMPLND Changes

No IMPLND changes have been made.

Appendix

Pre-Project Schematic



Mitigated Schematic



Disclaimer

Legal Notice

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ATTACHMENT C
IMP CALCULATOR SIZING OUTPUT

Project Name: Livorna Road
Project Type: Standard LID WQ Treatment
Location: 455 Livorna Road
APN: 193-010-014 & 193-010-039
Drainage Area: 572585 sf
Mean Annual Precipitation: 23 in

I. Self-Treating Areas

DMA Name	Area (sq ft)
DMA5-L	234047
DMA10-L	170507

IV. Areas Draining to IMPs

IMP Name: IMP1

IMP Type: Bioretention Facility
Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor
DMA1-R	3,527	Conventional Roof	1.00	3,527
DMA1-A	3,741	Concrete or Asphalt	1.00	3,741
DMA1-C	486	Concrete or Asphalt	1.00	486
DMA1-L	9,233	Landscape	0.10	923
			Total	8,677

	IMP Sizing Factor	Minimum	Proposed
Area	0.040	347	424

IMP Name: IMP2

IMP Type: Bioretention Facility
Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor
DMA2-R	1,519	Conventional Roof	1.00	1,519
DMA2-A	386	Concrete or Asphalt	1.00	386
DMA2-C	172	Concrete or Asphalt	1.00	172
DMA2-L	4,014	Landscape	0.10	401
			Total	2,478

	IMP Sizing Factor	Minimum	Proposed
Area	0.040	99	221

IMP Name: IMP3

IMP Type: Bioretention Facility
Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor
DMA3-R	7,580	Conventional Roof	1.00	7,580
DMA3-A	19,502	Concrete or Asphalt	1.00	19,502
DMA3-C	1,099	Concrete or Asphalt	1.00	1,099
DMA3-L	31,814	Landscape	0.10	3,181
			Total	31,362

	IMP Sizing Factor	Minimum	Proposed
Area	0.040	1,254	1,737

IMP Name: IMP4

IMP Type: Bioretention Facility
Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor
DMA4-R	4,053	Conventional Roof	1.00	4,053
DMA4-A	1,443	Concrete or Asphalt	1.00	1,443
DMA4-C	568	Concrete or Asphalt	1.00	568
DMA4-L	8,800	Landscape	0.10	880
			Total	6,944

	IMP Sizing Factor	Minimum	Proposed
Area	0.040	278	420

IMP Name: IMP5

IMP Type: Bioretention Facility
Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor
DMA6-R	3,018	Conventional Roof	1.00	3,018
DMA6-A	2,041	Concrete or Asphalt	1.00	2,041
DMA6-C	1,012	Concrete or Asphalt	1.00	1,012
DMA6-L	7,482	Landscape	0.10	748
			Total	6,819

	IMP Sizing Factor	Minimum	Proposed
Area	0.040	273	394

IMP Name: IMP6

IMP Type: Bioretention Facility
Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor
DMA7-R	3,018	Conventional Roof	1.00	3,018
DMA7-A	2,041	Concrete or Asphalt	1.00	2,041
DMA7-C	1,012	Concrete or Asphalt	1.00	1,012
DMA7-L	7,004	Landscape	0.10	700
			Total	6,771

	IMP Sizing Factor	Minimum	Proposed
Area	0.040	271	429

IMP Name: IMP7

IMP Type: Bioretention Facility
Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor
DMA8-R	3,591	Conventional Roof	1.00	3,591

DMA8-A	1,516	Concrete or Asphalt	1.00	1,516
DMA8-C	218	Concrete or Asphalt	1.00	218
DMA8-L	6,588	Landscape	0.10	659
			Total	5,984

	IMP Sizing Factor	Minimum	Proposed
Area	0.040	239	429

IMP Name: IMP8

IMP Type: Bioretention Facility
Soil Type: D

DMA Name	DMA Area (sq ft)	Post-Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor
DMA9-A	16,589	Concrete or Asphalt	1.00	16,589
DMA9-L	10,023	Landscape	0.10	1,002
			Total	17,591

	IMP Sizing Factor	Minimum	Proposed
Area	0.040	704	891

Software Tool Warnings

No warnings to report.

Report generated on 4/24/2025 12:00:00 AM by the Contra Costa Clean Water Program IMP Sizing Tool software (version 1.4.1.0).

File #: 25-4962 **Agenda Date:** 12/2/2025 **Agenda #:** 9.

Advisory Board: Alamo Municipal Advisory Council
Subject: CSA R7 Budgets
Contact: Scott Anderson, Public Works Special Districts

QUARTERLY FINANCIAL REPORT CSA R-7A Alamo Fund 275800 Org 7758	FY 2024-25 YTD Total	FY 2025-26 Budget	FY 2025-26 1st Quarter	FY 2025-26 YTD Total	% of YTD Total Vs. Budget	Comments
Carry over from prior year:	**$ 5,749,667.00**	**$ 6,293,187.15**	**$ 6,293,187.15**	**$ 6,293,187.15**		
Revenue:						
Current Property Taxes	1,678,179.58	1,595,370.00	1,630,139.81	1,630,139.81	102%	
Prior Property Taxes	(12,117.99)	(8,000.00)	964.95	964.95	-12%	
Earnings on Investment	56,845.59	10,000.00		-	0%	
HO Prop Tax Relief	6,926.25	8,000.00		-	0%	
Other In Lieu Taxes	49.60	-	47.18	47.18	0%	
Alamo Sports Field Fee Revenue	18,768.04	8,000.00	12,705.52	12,705.52	159%	
TOTAL CURRENT REVENUE	$ 1,748,651.07	$ 1,613,370.00	$ 1,643,857.46	$ 1,643,857.46	102%	
Total Revenue + Carryover:	**$ 7,498,318.07**	**$ 7,906,557.15**	**$ 7,937,044.61**	**$ 7,937,044.61**		
Expenditures:						
Services and Supplies						
Print & Mail	5,583.40	1,000.00	100.02	100.02	10%	
Utilities - Hemme Park	5,951.25	10,000.00	2,869.47	2,869.47	29%	
Utilities - Andrew Young Park	490.17	1,000.00	137.65	137.65	14%	
Utilities - Livorna Park	7,131.29	14,000.00	2,416.48	2,416.48	17%	
Janitorial - Events	1,099.72	1,000.00	-	-	0%	
Janitorial - Hemme Park	52,597.40	29,000.00	8,184.17	8,184.17	28%	
Janitorial - Livorna Park	57,841.41	49,300.00	9,028.06	9,028.06	18%	
Equipment Maintenance - Hemme Park	145.40	333.00	-	-	0%	
Equipment Maintenance - Andrew Young Park	108.43	333.00	-	-	0%	
Equipment Maintenance - Livorna Park	213.91	334.00	-	-	0%	
Grounds Maintenance Contractor - Alamo Elem.	159.80	2,000.00	35.00	35.00	2%	
Grounds Maintenance Contractor - Hemme Park	329.45	2,000.00	85.70	85.70	4%	
Grounds Maintenance Contractor - Andrew Young	65.00	2,000.00	42.90	42.90	2%	
Grounds Maintenance Contractor - Livorna Park	719.30	4,000.00	150.00	150.00	4%	
Pest Control - Alamo Elementary	3,520.00	3,500.00	960.00	960.00	27%	
Pest Control - Hemme Park	7,184.84	2,000.00	480.00	480.00	24%	
Pest Control - Andrew Young Park	2,300.00	2,000.00	480.00	480.00	24%	
Pest Control - Livorna Park	4,077.14	3,500.00	720.00	720.00	21%	
Landscape Improvements - Latent Powers	66,174.06	5,000.00	18,375.40	18,375.40	368%	
Professional Services - Admin	175.00	100.00	-	-	0%	
Operating Expenses - Hap McGee	333,533.07	262,650.00	40,853.40	40,853.40	16%	
Professional Services - Andrew Young Park	12,534.66	10,000.00	-	-	0%	

QUARTERLY FINANCIAL REPORT CSA R-7A Alamo	FY 2024-25 YTD Total	FY 2025-26 Budget	FY 2025-26 1st Quarter	FY 2025-26 YTD Total	% of YTD Total Vs. Budget	Comments
Fund 275800 Org 7758						
Professional Services - Livorna Park	3,040.00	3,000.00	-	-	0%	
Livorna Park Event Series	32,786.40	28,000.00	13,493.64	13,493.64	48%	
Other Special Dept Expense - Andrew Young	264.00	1,000.00	132.00	132.00	13%	
Other Special Dept Expense - Livorna Park	396.00	400.00	396.00	396.00	99%	
Misc Services and Supplies - Events	187.77	200.00	-	-	0%	
Services and Supplies Total	**$ 598,608.87**	**$ 438,650.00**	**$ 98,939.89**	**$ 98,939.89**	23%	
Other Charges						
Interfund Exp - Gov/Gov (EHS Permit)	58.51	1,000.00	248.00	248.00	25%	
Interfund Exp - Gov/Gov (Prop Tax Admin)	11,442.00	24,000.00	-	-	0%	
Building Maintenance - Hemme Park	2,960.54	45,640.00	148.89	148.89	0%	
Property Maintenance - Andrew Young	38.58	1,000.00		-	0%	
Building Maintenance - Livorna Park	5,486.38	45,940.00	2,713.35	2,713.35	6%	
Building Maintenance - Hap McGee	4,506.76	4,300.00	-	-	0%	
Proprety Maintenance - Alamo Elementary	21.08	29.00	23.46	23.46	81%	
Routine Maintenance - Iron Horse Trail	808.04	1,000.00	-	-	0%	
Routine Maintenance - Alamo Elementary	31,545.07	32,000.00	12,164.44	12,164.44	38%	
Routine Maintenance - Hap McGee Park	286.24	500.00	-	-	0%	
Routine Maintenance - Hemme Park	43,942.42	45,000.00	40,267.64	40,267.64	89%	Power washing, Plumbing/leaks,
Routine Maintenance - Andrew Young Park	63,478.32	60,000.00	6,921.74	6,921.74	12%	
Routine Maintenance - Livorna Park	177,288.63	208,000.00	58,594.22	58,594.22	28%	
Special Requests - Livorna Park	3,737.54	4,000.00	2,412.67	2,412.67	60%	
Other Charges Total	**$ 345,600.11**	**$ 472,409.00**	**$ 123,494.41**	**$ 123,494.41**	26%	
Capital Projects						
Hap McGee Park Improvements	-	45,000.00	-	-	0%	
Livorna Playground Improvements Project	82,394.98	500,000.00	40,816.68	40,816.68	8%	
Captial Projects Total	**82,394.98**	**545,000.00**	**40,816.68**	**40,816.68**	7%	
Public Works Staff Administration						
County Staff - Events	34,817.45	31,800.00	19,279.61	19,279.61	61%	
County Staff - Iron Horse Trail	-	10,000.00	742.38	742.38	7%	
County Staff - Alamo Elementary	3,939.76	10,000.00	633.37	633.37	6%	
County Staff - General Alamo Admin	121,533.71	208,200.00	14,628.39	14,628.39	7%	
County Staff - Hap McGee	3,698.20	10,000.00	-	-	0%	
County Staff - Hemme Park	7,562.65	10,000.00	1,224.06	1,224.06	12%	
County Staff - Andrew Young Park	6,658.91	10,000.00	676.03	676.03	7%	
County Staff - Livorna Park Mtnce Staff	316.28	10,000.00	-	-	0%	
Public Works Staff Total	**$ 178,526.96**	**$ 300,000.00**	**$ 37,183.84**	**$ 37,183.84**	12%	
Total Expenditures	**$ 1,205,130.92**	**$ 1,756,059.00**	**$ 300,434.82**	**$ 300,434.82**	17%	
FUND BALANCE AVAILABLE	**$ 6,293,187.15**	**$ 6,150,498.15**	**$ 7,636,609.79**	**$ 7,636,609.79**	-	

Alamo Parks and Recreation, CSA R-7

Events

	FY 2025-26	FY 2025-26	FY 2025-26
	Budget	Year to Date 9/30/2025	% of Total Expenditures
Movie Under the Stars			
Services and Supplies	4,300	926	0%
Public Works Staff (Administration)	8,500	3,239	1%
Total	**12,800**	**4,165**	1%
Summer Concert Series			
Services and Supplies	23,000	12,816	4%
Public Works Staff (Administration)	23,000	15,111	5%
Total	**46,000**	**27,927**	9%
Tree Lighting			
Services and Supplies	2,000	0	0%
Public Works Staff (Administration)	300	930	0%
Total	**2,300**	**930**	0%

Events Summary

	FY 2025-26	FY 2025-26	FY 2025-26
	BUDGET	Year to Date 9/30/2025	% of Total Expenditures
Services and Supplies	29,300	13,742	5%
Public Works Staff (Administration)	31,800	19,280	6%
Total Event Summary	**61,100**	**33,021**	11%

File #: 25-4963 **Agenda Date:** 12/2/2025 **Agenda #:** 10.

Advisory Board: Alamo Municipal Advisory Council
Subject: Zones 36, 45 and 54 Budgets
Presenter: Scott Anderson, Public Works/Special Districts

Countywide Landscape and Lighting District
2025-26 1st Quarter Finance Report

Description: LL-2 Zone 36 (Alamo Area) has 5,493 parcels and was formed August 6, 1991. Each parcel is assessed at an equal rate of $9.36 per year for a single family residence. Maintenance includes: Landscaping, irrigation, recreational facilities and related improvements located within the public right-of-way along Stone Valley Rd., Danville Blvd., Livorna Rd., Miranda Ave., medians at Stone Valley Rd. and Green Valley Rd. and the Danville Boulevard of Trees.

LL2 Zone 36 ALAMO Fund 285200 ORG 7803	Acct Codes	WO#	FY 2024-25 Year to Date as of 6/30/2025	FY 2025-26 Budget	FY 2025-26 Year to Date as of 9/30/2025
CARRYOVER FR PRIOR YR			**$49,498**	**$37,942**	**$37,942**
Revenue:					
Taxes and Assessments	9895		50,757	50,762	50,785
Earnings on Investment	9181		0	0	0
One Time Allocation - Tree Project/Weed Abatement Svcs	9956	5472	55,785	0	0
Transfer Z54 to Z36	9967		1,741	870	0
TOTAL REVENUE			**108,283**	**51,632**	**50,785**
Total Revenue + Carryover:			**157,780**	**89,574**	**88,727**
Expenditures:					
Utilities (Water & Electric)	2120	5548	2,666	2,200	385
Professional/Specialized Services (Non-County Staff)	3611	5498	557	1,000	0
Tax & Assessment Fees	3530	5498	4,945	4,950	0
Grounds Maintenance	3620	5555	23,363	31,332	5,843
Tree Project/Weed Abatement	2282	5472	75,259	0	5,925
Professional/Specialized Services (County Staff)	2282	5498	13,048	10,000	3,371
Streetscape Improvements	5011	5509	0	15,348	0
Operating Reserves			0	24,744	0
Total Expenditures			**119,839**	**89,574**	**15,525**
Fund Balance Available			**$37,942**	**$0**	**$73,202**

Countywide Landscape and Lighting District
2025-26 1st Quarter Finance Report

Description: LL-2 Zone 45 (Alamo Villas) Tract 7559 has 10 parcels and was formed July 26, 1994. Each parcel is assessed at an equal rate of $120 per year. Maintenance includes: Landscaping and related improvements located within the public right-of-way along the median island, approximately 120 linear feet along Danville Boulevard by Tract 7559.

LL2 Zone 45 ALAMO VILLAS - ALAMO	Acct Codes	WO#	FY 2024-25	FY 2025-26	FY 2025-26
Fund 286900 ORG 7769			Year to Date as of 6/30/25	Budget	Year to Date as of 9/30/2025
CARRYOVER FR PRIOR YR			2,051	$ 549	$ 549
Revenue:					
Taxes and assessments	9895		1,200	1,200	1,200
Tree Work Project - One Time Allocation	9956		0	0	0
TOTAL REVENUE			1,200	1,200	1,200
Total Revenue + Carryover			3,251	1,749	1,749
Expenditures:					
Professional/Specialized Svc. (Non-County Staff)	3611	5015	13	25	0
Tax & Assessment Fees	3530	5015	259	259	0
Grounds Maintenance	3620	5016	845	650	0
Professional/Specialized Svc. (County Staff)	5011	5015	66	200	95
Capital Improvements			1,520	49	0
Operating Reserves			0	567	0
Total Expenditures			2,702	1749	95
Fund Balance Available			549	0	1,654

Countywide Landscape and Lighting District
2025-26 1st Quarter Finance Report

Description: LL-2 Zone 54 (Alamo Country) Tracts 7601 and 7818 have 93 parcels and the Zone was formed on December 20, 1994. Each parcel is assessed at an equal rate of $373.77 per year. Maintenance includes: Landscaping, irrigation and related improvements located within the public right-of-way of Livorna Rd and Miranda Ave, fronting Subdivisions 7601 and 7818, totaling approximately 4,320 linear feet. Landscaping varies in width from 23 feet to 170 feet. A financial contribution of approximately $870.80 (93 units *$9.36) for the Zone 36 medians is included below.

LL2 Zone 54 ALAMO COUNTRY - ALAMO Fund 287600 - ORG 7809	Acct Codes	WO#	FY 2024-25 Year to Date as of 6/30/25	FY 2025-26 Budget	FY 2025-26 Year to Date as of 9/30/2025
CARRYOVER FR PRIOR YR			**$46,186**	**$47,314**	**$47,314**
Revenue:					
Taxes and assessments	9895		45,689	46,919	46,919
Earnings on Investment	9181		0	0	0
One Time Allocation - Landscape Trimming Project	9956		4,850	0	0
TOTAL REVENUE			50,539	46,919	46,919
Total Revenue + Carryover:			**96,725**	**94,233**	**94,233**
Expenditures					
Utilities (Water & Electric)	2120	5063	5,956	8,500	1,992
Professional/Specialized Svcs. (Non-County)	3611	5062	485	900	0
Tax & Assessment Fees	3530	5062	329	329	0
Contrib to Other Agencies- Z54 to Z36 Per Eng Rt	3611	5063	1,741	870	0
Grounds Maintenance	3620	5063	32,683	25,000	9,132
Grounds Maintenance - Landscape Trimming Project	3620	5063	0	0	0
Professional/Specialized Svcs. (County Staff)	5011	5062	8,216	5,000	479
Capital Improvements			0	33,333	0
Operating Reserves			0	20,300	0
Total Expenditures			**49,411**	**94,233**	**11,603**
Fund Balance Available			**47,314**	**0**	**82,630**

File #: 25-4964 **Agenda Date:** 12/2/2025 **Agenda #:** 11.

Advisory Board: Alamo Municipal Advisory Council
Subject: Subcommittee Reports

Information:
Alamo Subcommittee for Schools
Alamo AOB/Roundabout Subcommittee
Land Use Planning Subcommittee
Iron Horse Corridor Subcommittee
Parks and Recreation Subcommittee
Public Safety Subcommittee (Police P-2, Fire, Emergency)
Trees and Landscape Subcommittee

File #: 25-4965 **Agenda Date:** 12/2/2025 **Agenda #:** 12.

Alamo Municipal Advisory Council
Michaela Straznicka, Chair
Anne Struthers
Cecily Barclay
Robert Brannan
Robert Mowat
Sharon Burke
Michelle Parkinson
Michael Sene, Alternate

Candace Andersen, Supervisor
Contra Costa County, District 2
309 Diablo Road
Danville, CA 94526
925.655.2300
cameron.collins@bos.cccounty.us

The Alamo Municipal Advisory Council serves as an advisory body to the Contra Costa County Board of Supervisors and the Department of Conservation and Development.

RECORD OF ACTIONS
Tuesday, November 4, 2025
6:00 p.m.
Alamo Women's Club
1401 Danville Blvd., Alamo

1. **Call to Order – Pledge of Allegiance – Roll Call**
   Member Parkinson, Absent

2. **Agency Reports *(15 minutes)***
   Rachel Zenner, Senator Grayson's Office

3. **District II Board of Supervisors Staff**

4. **Public Comment**

5. **2025 Summer Series Review**
   See attached report.

6. **2026 Summer Series Planning**
   Alamo Parks and Recreation Subcommittee to discuss plans for 2026 bands
   Send over list of Walnut Creek and Danville bands
   No movies for 2026
   Schedule a Parks and Recreation meeting
   MAC to take a vote on the center of the roundabout
   Add bands

7. **Subcommittee Reports** *(20 minutes)*
   - Alamo Subcommittee for Schools: Straznicka, Parkinson
   - Alamo AOB/Roundabout: Struthers, Barclay, Burke
   - Land Use Planning Subcommittee: Barclay (Chair), Brannan, Burke
   - Iron Horse Corridor Subcommittee: Struthers
   - Parks and Recreation Subcommittee: Struthers, Mowat
   - Public Safety (Police P-2, Fire, Emergency): Brannan
   - Trees and Landscape Subcommittee: Mowat, Burke

8. **Alamo MAC Member Comments**

Adjourn to the Alamo MAC Meeting on Tuesday, November 4, 2025 at the Alamo Women's Club.

The Alamo Municipal Advisory Council will provide reasonable accommodations for persons with disabilities planning to attend the meeting who contact Supervisor Candace Andersen's office at least 72 hours before the meeting at 925.655.2300

Materials distributed for the meeting are available for viewing at the District 2 Office at 309 Diablo Road, Danville, CA 94526. To receive a copy of the Alamo MAC agenda via mail or email, please submit your request in writing using a speaker card or by contacting Supervisor Andersen's office at 925.655.2300. Complete name and address must be submitted to be added to the list.