North Fair Oaks Community Council
San Mateo County Coordinated
Departmental Response

DATE: May 20, 2026
NFOCC MEETING DATE: May 28, 2026
SPECIAL NOTICE/HEARING: 10 Days, within 300 feet
VOTE REQUIRED: Majority

TO: Members, North Fair Oaks Community Council

FROM: Planning Staff

SUBJECT: Consideration of an Off-Street Parking Exception, pursuant to Section 8.344.040 of the San Mateo County Zoning Regulations, to allow for the continued use of one covered parking space where two covered parking spaces are required, in association with a proposed addition to an existing single-family residence, which includes the creation of one bedroom.

County File Number: PLN2026-00096 (Schaefer)

PROPOSAL

The applicant, David Schaefer, is requesting an Off-Street Parking Exception to allow the continued use of a one-car attached garage where two covered parking spaces are required outside of the required front yard setback. This exception is associated with a proposed 500-square-foot addition to the rear of an existing single-family residence which includes the creation of one new bedroom for a total bedroom count of three bedrooms. The project will include partial roof replacement, interior remodeling, and widening the existing driveway. No trees are being proposed for removal. The project is associated with BLD2025-03690.

RECOMMENDATION

That the North Fair Oaks Community Council provide a recommendation to the Director of Planning and Building on the proposed Off-Street Parking Exception.

BACKGROUND

Report Prepared By: Robby Miller, Project Planner

Owner/Applicant: SLM LLC/David Schaefer

Location: 836 11th Avenue, Redwood City (North Fair Oaks)

APN: 055-102-190

Parcel Size: 5,495.5 sq. ft.

Existing Zoning: R-1/S-73 (One-Family Residential District/Residential Density District 73)

General Plan Designation: Residential, Medium Density Residential

Existing Land Use: Single-Family Residence

Water Supply: City of Redwood City Municipal Water Department

Sewage Disposal: Fair Oaks Sewer District

Flood Zone: Zone X (Area of Minimal Flood Hazard); FEMA Panel No. 06081C0302E, Effective October 16, 2012

Environmental Evaluation: This project is categorically exempt from the California Environmental Quality Act (CEQA), pursuant to Section 15301, Class 1, as the project involves minor alterations to an existing structure, involving negligible or no expansion of existing or former use.

Setting: The project site is developed with a 1,100 sq. ft. single-family residence and a 240 sq. ft. attached garage. The property is an interior lot fronting 11th Avenue and has trees along the right property line in the backyard. The surrounding parcels are developed and are comprised largely of single-family residences also with one-car covered parking garages.

Chronology:

Date		Action
December 31, 2025	-	Building Permit BLD2025-03690, submitted for the proposed addition/remodel to the existing residence
March 9, 2026	-	Off-Street Parking Exception application submitted.
April 21, 2026	-	Project Deemed Complete.
May 28, 2026	-	North Fair Oaks Council Meeting.

DISCUSSION

A. KEY ISSUES

1. Compliance with the General Plan/North Fair Oaks Community Plan

Urban Land Use Policies

Policy 8.9 (*Designation of Existing Urban Communities*) of the General Plan identifies North Fair Oaks as an urban community, and the North Fair Oaks Community Plan has designated the land use density as Single-Family Residential. Policy 8.36 (*Uses*) seeks to allow uses in zoning districts that are consistent with the overall land use designation and to adopt the land use designations of the North Fair Oaks Community Plan.

The subject parcel is zoned R-1/S-73 (One-Family Residential / 5,000 sq. ft. minimum parcel size). The subject property is developed with a single-family residential development which is allowed in this zoning district. The proposed project would continue the single-family residential use of the parcel and does not introduce any new or incompatible uses.

Policy 8.40 (*Parking Regulations*) seeks to establish minimum on-site parking requirements and parking development standards to accommodate the parking needs of development, provide convenient and safe access, and prevent congestion of public streets.

Chapter 8.344 of the Zoning Regulations establishes the minimum parking requirements for development. The regulations require two-covered on-site parking spaces for each dwelling unit having three or more bedrooms. While this project seeks an exception to this provision, the Zoning Regulations provide an exception process for cases where compliance would result in practical difficulties and/or an unusual hardship.

Chapter 3: Circulation and Parking

Chapter 3 of the North Fair Oaks Community Plan provides in part, an overview of current and future parking needs and recommended parking management strategies for North Fair Oaks. Policy 5E seeks to modify parking policies to allow affordable housing development projects, minor expansions of single-family homes, transit-supportive development projects, and other uses where reduced parking demand can be demonstrated to qualify for further reduced parking requirements or exemptions per approval from the San Mateo County Current Planning Division.

The project proposes a minor addition and remodel to the existing residence with no modifications to the attached one car covered garage. The minor addition is located in the rear of the residence. The area in which the garage is located is not sufficient to enlarge the garage without doing a major remodel to the front of the house. The Off-Street Parking Exception is intended to remedy the non-conforming situation as compliance with the current parking requirement (two-covered parking spaces) would not be practical given existing site conditions and proposed scope of work.

2. Compliance with the Zoning Regulations

a. S-73 Development Standards

The proposed project involves the minor addition and remodel to the existing residence, resulting in a new primary bedroom with bathroom, laundry room, half bath, and new kitchen. The remodel will consist largely of relocating the kitchen and reconfiguring the roof. The project will include the addition of 500 new square feet, which will alter the rear setback, and lot coverage of the existing structure. There is no change in height to the existing residence. The rear setback, lot coverage, and height will remain in compliance with zoning standards. As mentioned previously, the off-street parking exception is required because the project proposes to create a new bedroom, and the current residence only has a one-car attached garage where two covered spaces are required. However, given the limited project scope and layout of the existing residence, the creation of an additional covered space would be impractical.

b. Parking Requirements

The proposed project includes the request to allow for continued use of a one-car attached garage, where two covered parking spaces are required. The project, as proposed, includes widening the driveway to create two uncovered, off-street parking spaces in the front yard area.

Section 8.344.030 of the County's Zoning Regulations defines the number of parking spaces required for development. As mentioned previously, the regulations require that, for each dwelling unit having two or more bedrooms, two off-street covered spaces are provided. The project proposes adding a third bedroom to the existing residence which triggers compliance with the parking requirements currently in effect. The existing residence has an attached 240-square foot one-car garage that was constructed as part of the original residence. The applicants propose to continue the use of the driveway on site to accommodate parking of at least two additional off-street parking spaces, albeit uncovered.

3. Compliance with Off-Street Parking Exception Findings

The granting of an Off-Street Parking Exception is subject to the following findings:

a. **That the establishment, maintenance and/or conducting of the off-street parking facilities as proposed are as nearly in compliance with the requirements set forth in Section 8.344.030 of the Zoning Regulations as are reasonably possible.**

The project proposes to allow the continued use of an existing one-car attached garage, where two covered spaces are required for the proposed scope of work. Given the location of the existing structures on the property and in relation to the property lines, there is insufficient space to enlarge the garage to a conforming size/configuration. However, the proposed widening of the driveway provides one additional off-street space albeit uncovered and within the front yard area brings the project into substantial conformance with the Zoning Regulations.

b. **That the establishment, maintenance and/or conducting of the use will not, under the circumstances of the particular case, be detrimental to the public welfare or injurious to property or improvements in said neighborhood.**

The project parcel is zoned and developed for single-family residential development. The proposed project is limited to the project parcel and does not propose a new use. The resulting development remains consistent with the Zoning Regulations and North Fair Oaks Community Plan. The project was reviewed in consultation with the Department of Public Works and received conditional approval. All neighbors within 300 feet of the subject property have been notified of the project. The notice was mailed out May 11, 2026. At the time of this report, no comments were received in support of or against this project. Therefore, the project involves no aspects that are detrimental to public welfare or injurious to property or improvement in said neighborhood.

ATTACHMENTS

A. Location Map
B. Plans

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT A

ATTACHMENT A

San Mateo County

LOCATION MAP

0.07 0 0.04 0.07 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

1: 2,257

This map is a user generated static output from an Internet mapping site and is for reference 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

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT B

ATTACHMENT B

GENERAL NOTES:
1. SMOKE AND CO2 DETECTORS USED THROUGHOUT.
2. DRAWINGS ARE NOT TO BE SCALED. BUILDING/STRUCTURAL DIMENSIONS SHOWN ARE FOR GENERAL REFERENCE ONLY U.O.N.
3. STANDARD DETAILS AND NOTES ARE TYPICAL AND SHALL APPLY UNLESS OTHERWISE NOTED OR SHOWN. DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONDITIONS.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO CONSTRUCTION AND COMMUNICATE ANY VARIATION OR DISCREPANCIES TO THE DESIGN TEAM.

ELECTRICAL NOTES
1. LIGHTING IS ILLUSTRATED FOR QUANTITY AND LOCATION. SPECIFIC MANUFACTURER AND MODEL TO BE DETERMINED BY OWNER.

2. ALL LIGHTING FIXTURES MUST BE HIGH EFFICIENCY, ALL INTERIOR LIGHTING CONTROLS MUST BE DIMMABLE.
3. ALL KITCHEN AND BATHROOM OUTLETS TO BE GFCI.
4. ELECTRICAL AND TELEPHONE OUTLETS TO BE LOCATED 18" ABOVE FINISH FLOOR UNLESS NOTED OTHERWISE.
5. SWITCHES AND THERMOSTATS TO BE LOCATED 44" ABOVE FINISHED FLOOR UNLESS OTHERWISE STATED.
6. SMOKE DETECTORS TO BE HARDWIRED WITH BATTERY BACKUP TO COMPLY WITH UBC REQUIREMENTS.
7. LIGHT FIXTURES OCCURRING OVER BATHTUB OR SHOWER ENCLOSURES SHALL BE LABELED "SUITABLE FOR DAMP AREAS".
8. ALL BATHROOMS, KITCHENS, DINING ROOM, BEDROOMS, HALLWAY, LIVING ROOM, STORAGE CLOSET AND MASTER CLOSET SHALL BE POWERED BY A SEPARATE 20AMP BRANCH CIRCUIT IN ACCORDANCE WITH CEC 210.11(C)
9. ALL BRANCH CIRCUITS WILL BE PROTECTED BY AN ARC-FAULT- CIRCUIT INTERRUPTER IDENTIFIED IN THE CEC 210.21
10. TAMPER RESISTANT RECEPTACLES WILL BE PROVIDED IN ACCORDANCE WITH CEC 406.12
11. ALL LIGHTING FIXTURES IN SHOWER COMPARTMENTS WILL COMPLY WITH CEC 410.10
12. SMOKE DETECTORS 10FT FROM STOVE PER CBC 907.2.11.8 AND NFPA 29.11.3.4.4

PLUMBING NOTES
1. CONTROL VALVES AND SHOWER HEADS SHALL BE LOCATED ON THE SIDEWALL OF THE SHOWER COMPARTMENT OR OTHERWISE ARRANGED SO THE SHOWERHEAD DOES NOT DISCHARGE DIRECTLY AT THE ENTRANCE TO THE COMPARTMENT. SO THE BATHER CAN ADJUST THE VALVES BEFORE STEPPING INTO THE SHOWER SPRAY. PER CPC 408.9

2. WATER CLOSETS/TOILETS 1.28 GALLONS PER FLUSH, BATHROOM SINKS/LAVATORY FAUCETS 1.2GPM, KITCHEN SINK/FAUCET 1.8GPM, SHOWERHEAD(S) 1.8GPM. TO APPLICABLE LOW FLOW RATES

836 11th Avenue REDWOOD CITY, CA 94063

PROEJCT TEAM

COWNER ONTACT:
DAVID SCHAFFER, SLM LLC
650-296-6767
david@slmllc.com

CONSTRUCTION CONTACT:
RHINO'S CONSTRUCTION
RIAN CAROLL
650-787-7160
rian@ghinosgeneralconstruction.com

ENGINEERING CONTACT:
ROCA3 ENGINEERING
JOEY ROCA III
408.821.1335
joey@roca3.com

PROJECT DATA:

ADDRESS: 836 11TH REDWOOD CITY 94063

JURISDICTION: COUNTY OF SAN MATEO
(UNINCORPORATED REDWOOD CITY)

APN:055-102-190
ZONING RA-1
CONSTRUCTION TYPE: VB
FIRE SPRINKLERS: NO EXISTING FIRE SPRINKLERS
ADDITION <50%

BUILDING COVERAGE: 1600SF
LOT SIZE 5,900SSF
NEW DECK 310 SF

EXISTING CONDITIONED : 1100 SQ FT
EXISTING UNCONDITIONED: 240 SQ FT

PROPOSED ADDITION SIZE: 500 SQ FT
TOTAL CONDITIONED: 1600 SQ FT
PROPOSED UNCONDITIONED: 0 SQ FT
TOTAL UNCONDITIONED: 240 SQ FT GARAGE

SHEET INDEX

SCOPE OF WORK:

ADDITION AT REAR (STRUCTURAL)
NEW PRIMARY SUITE:
BEDROOM
PRIMARY BATHROOM
LAUNDRY ROOM
POWDER ROOM

REMODEL EXISTING HALLWAY BATH
REPLACE AND DOUBLE DRIVEWAY
NEW DECK AT REAR
LANDSCAPING THROUGHOUT

APPLICABLE CODES
ALL CONSTRUCTION SHALL COMPLY WITH COUNTY OF SAN MATEO *ORDINANCES INCLUDING THE FOLLOWING:*

2022 CALIFORNIA BUILDING CODE (CBC)
2022 CALIFORNIA RESIDENTIAL CODE (CRC)
2022 CALIFORNIA MECHANICAL CODE (CMC)
2022 CALIFORNIA PLUMBING CODE (CPC)
2022 CALIFORNIA ELECTRICAL CODE (CEC)
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CAL GREEN)
2022 CALIFORNIA FIRE CODE (CFC)
CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS

SITE LOCATION

CONTACT:
DAVID SCHAFFER, SLM LLC
650-296-6767
david@slmllc.com

836 11TH AVENUE, REDWOOD CITY, CA 94063

INITIAL SUB
12/10/2025
RESUB1
3/6/2026

PREPARED BY
ROCKWELL CHAN
RPC STUDIO RWC
ROCKC1216@GMAIL.COM

A0

BENCHMARK STATEMENT:
THE ELEVATIONS SHOWN ARE ON AN ASSUMED DATUM.

SURVEYOR'S STATEMENT:
THIS TOPOGRAPHIC SURVEY WAS MADE BY ME OR UNDER MY DIRECTION ON THE GROUND AND REPRESENTS MEASUREMENTS MADE OCTOBER 2025. THE BOUNDARY SHOWN IS A RECORD BOUNDARY ONLY. A TITLE REPORT WAS NOT PROVIDED TO THE SURVEYOR BY THE CLIENT. NO PROPERTY CORNERS WERE FOUND ON THE SUBJECT PROPERTY AND NO WARRANTY IS MADE ABOUT THE BOUNDARY SHOWN. NO EASEMENTS ARE SHOWN.

LICENSED L.A. ON SURVEYOR
SAVIOR MICALLEF No. 8289
STATE OF CALIFORNIA

SAVIOR P. MICALLEF
LAND SURVEYOR, LS 8289
(805) 709-2423

10-15-25
DATE

SAVIOR P. MICALLEF LAND SURVEYING
421 WILDWOOD DRIVE
SOUTH SAN FRANCISCO, CA 94080
805/709-2423

TOPOGRAPHIC SURVEY OF PORTION OF 836 ELEVENTH AVENUE

CITY OF REDWOOD CITY SAN MATEO COUNTY CALIFORNIA

No.	Revisions

Date 10-15-25
Scale 1"=10'
Design
Drawn PHS
Approved MHS
Job No

Drawing Number:

1 OF 1

CONTACT:
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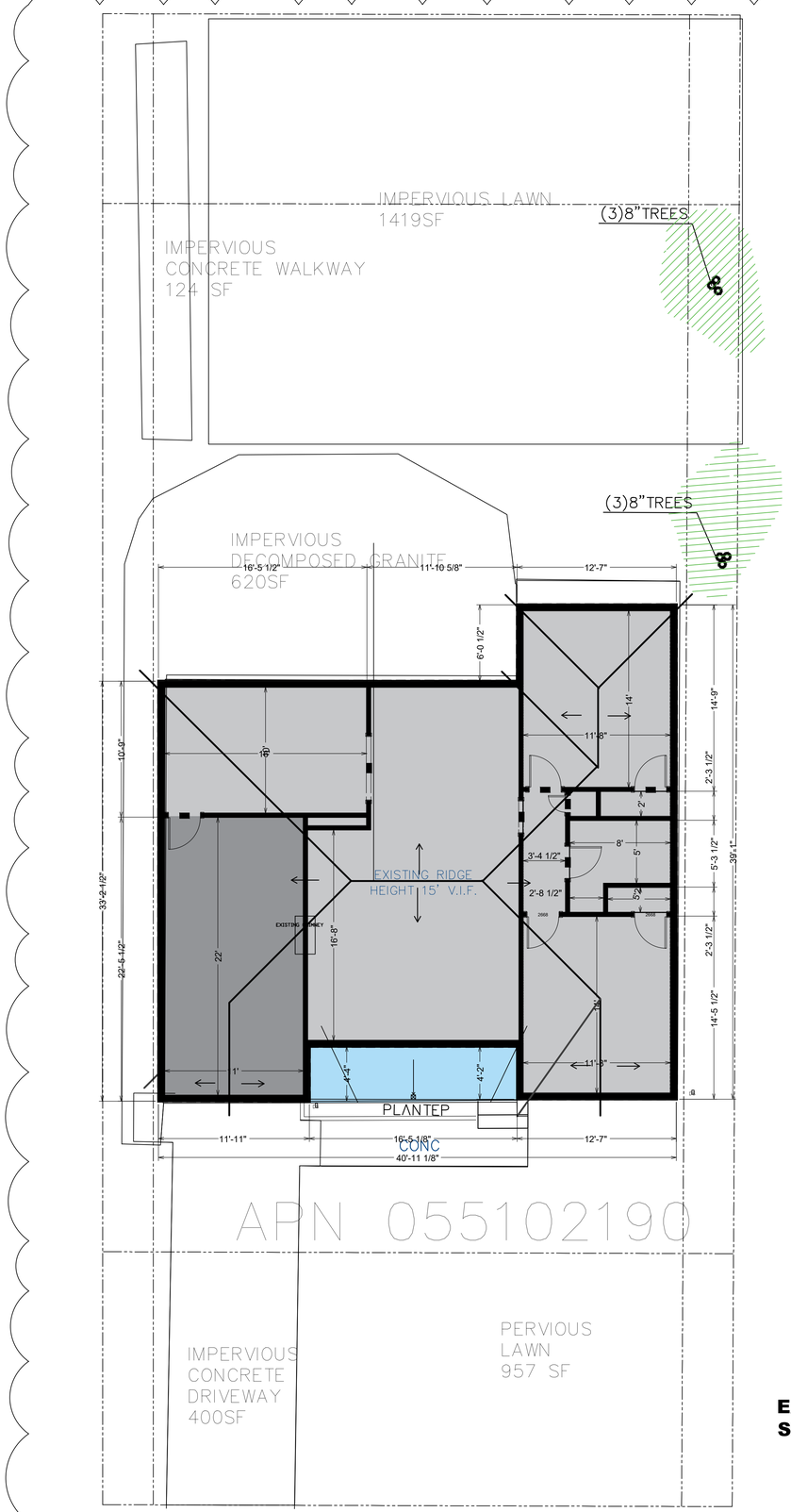
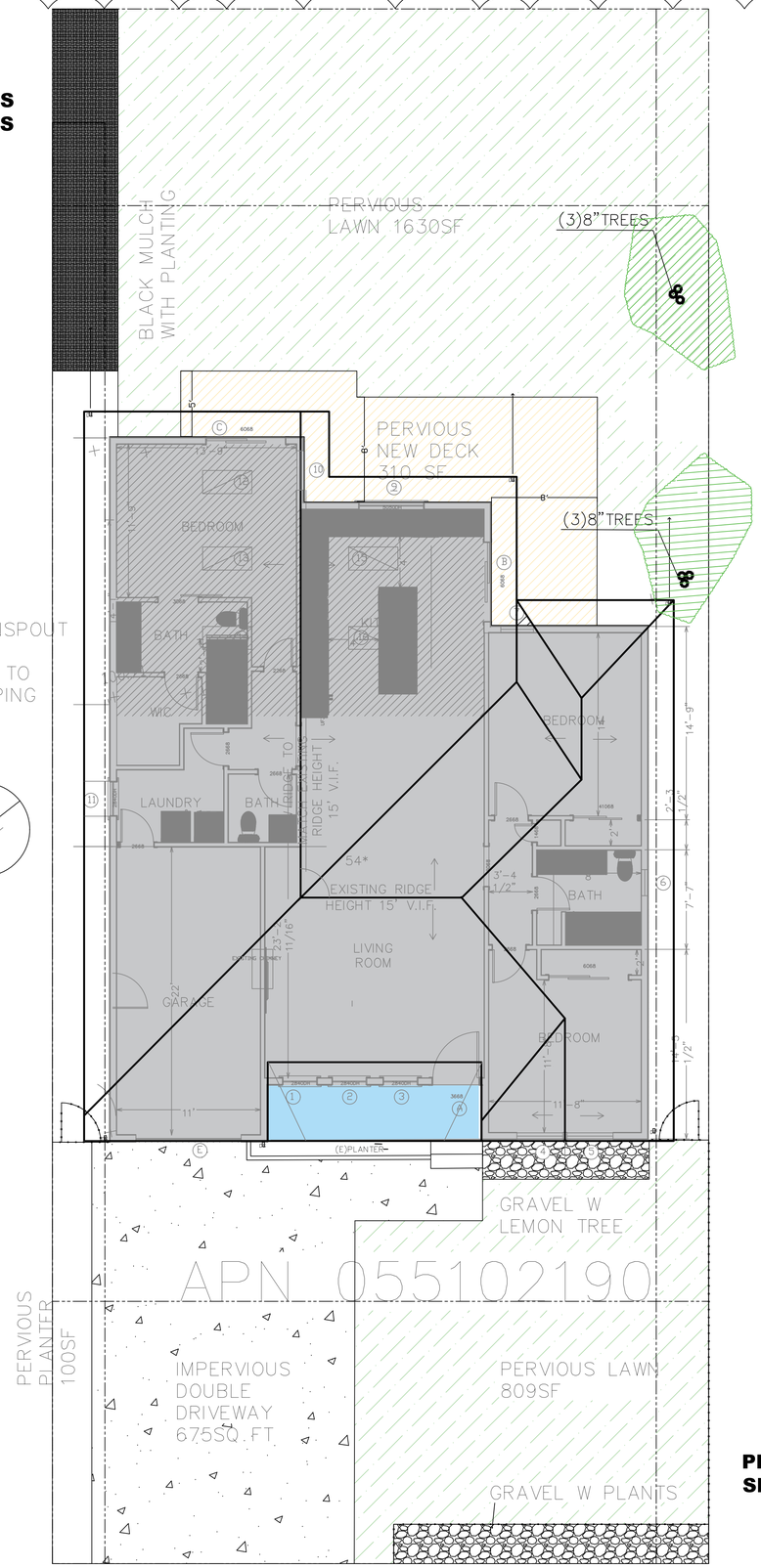
A1



EXISTING SITE PLAN

DOWNSPOUTS INDICATED AS DS

ALL DOWNSPOUT RUNOFF DIRECTED TO LANDSCAPING



PROPOSED SITE PLAN

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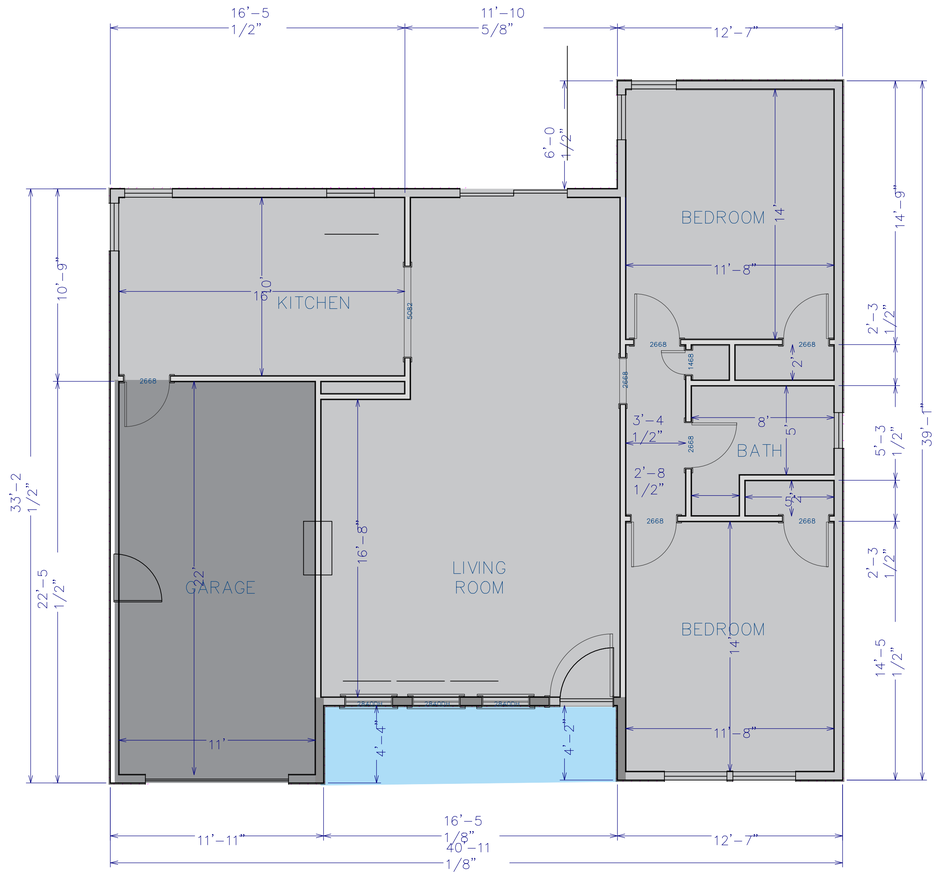
SITE PLAN

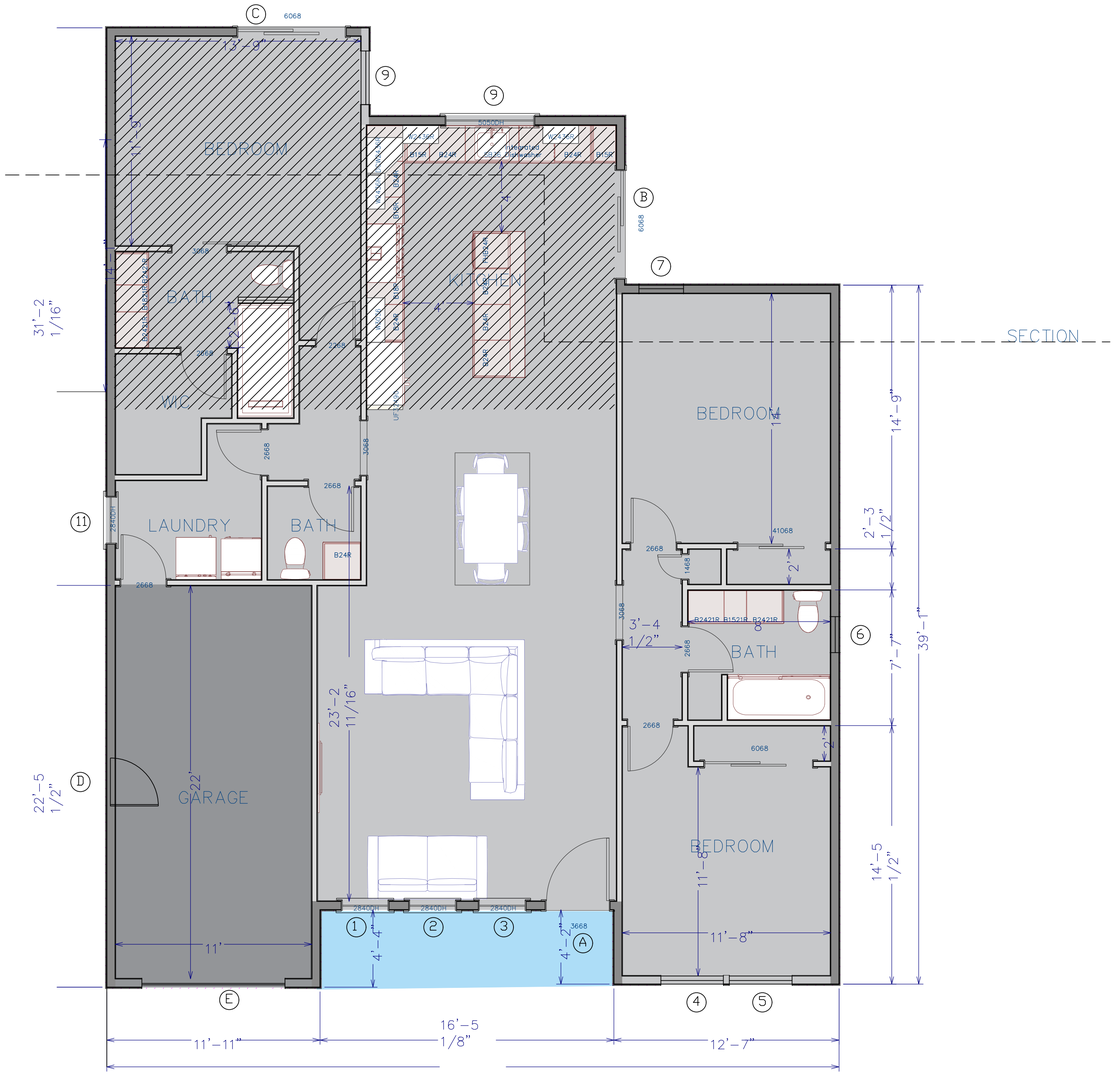
A1.1

No net increase in stormwater runoff (relative to undeveloped conditions) may drain onto adjacent properties. The existing storm drainage from the adjacent properties shall not be blocked by the new development. The owner shall adequately maintain the property's stormwater management facilities.



EXISTING FLOOR PLAN

ADDITION



PROPOSED FLOOR PLAN

FLOOR PLANS
SCALE $\frac{1}{4}$"=1'

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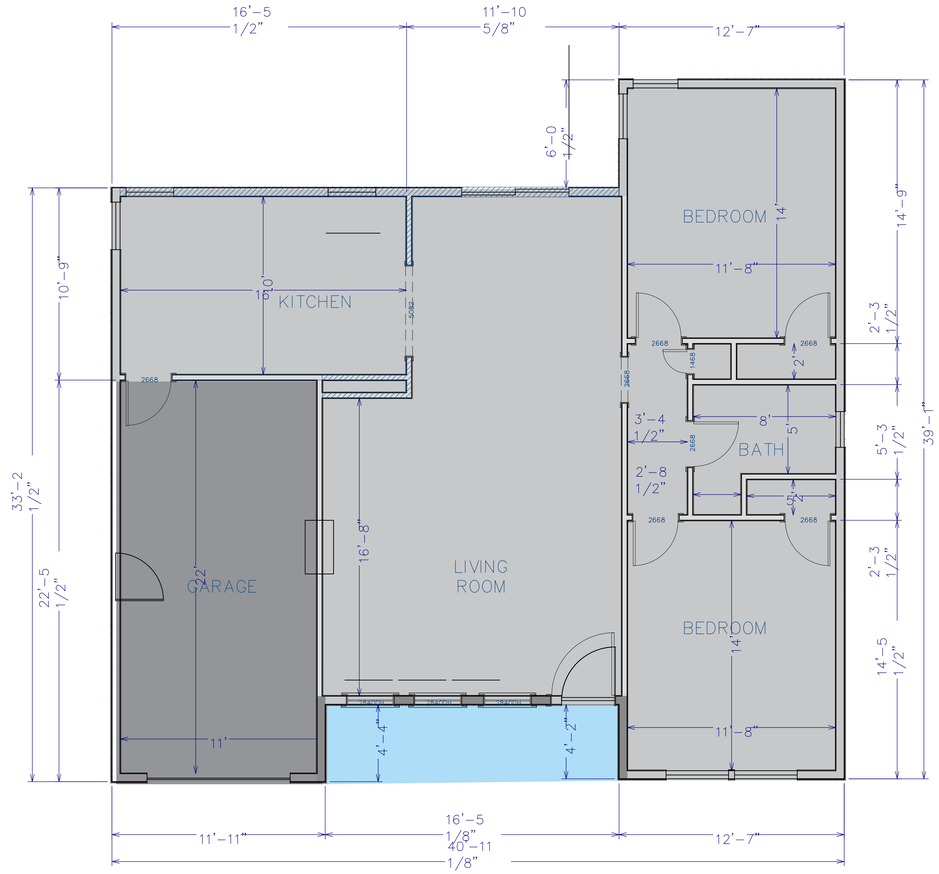
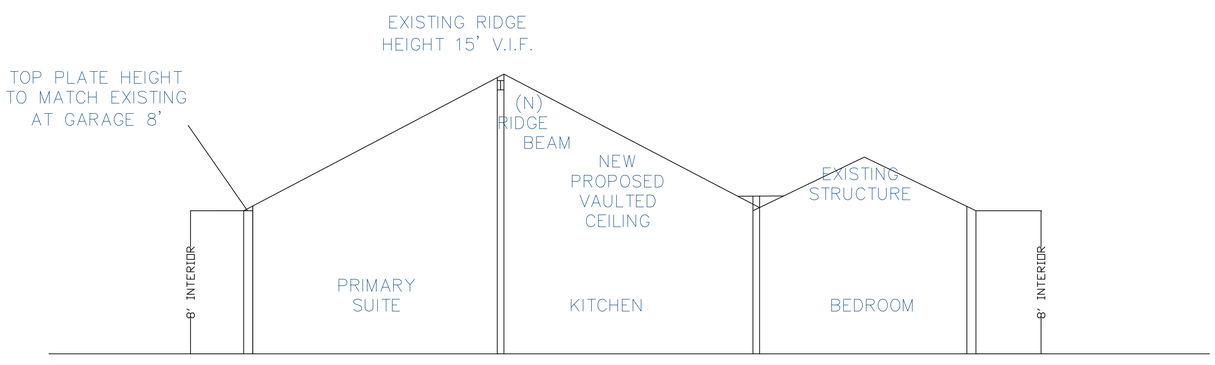
A2



LEGEND

SHADED WALL TO BE REMOVED

DEMO PLAN
SCALE $\frac{1}{4}$"=1'



SCHEMATIC SECTION
SCALE $\frac{1}{4}$"=1'

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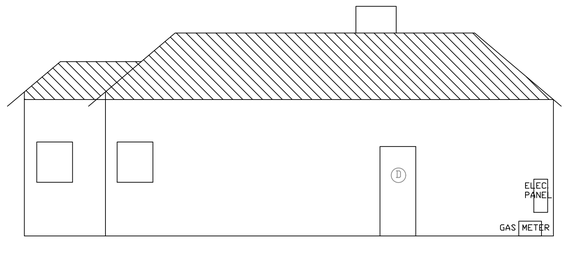
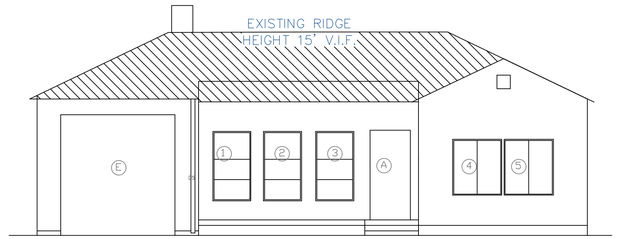
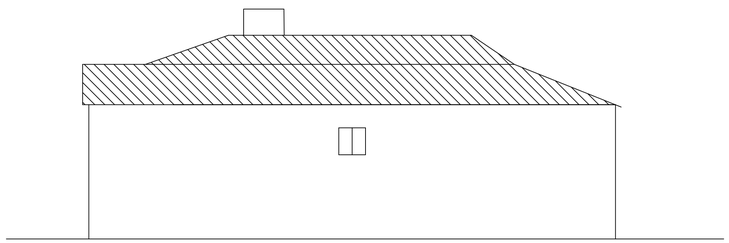


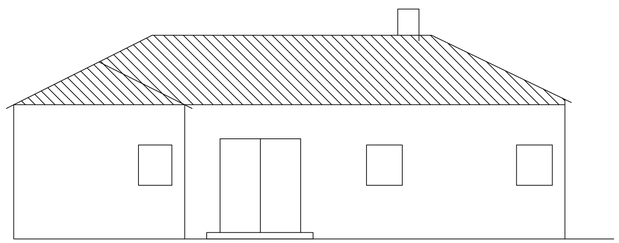
LEFT SIDE ELEVATION



FRONT ELEVATION



RIGHT SIDE ELEVATION



REAR ELEVATION

EXISTING ELEVATIONS
SCALE $\frac{3}{16}$ "=1'

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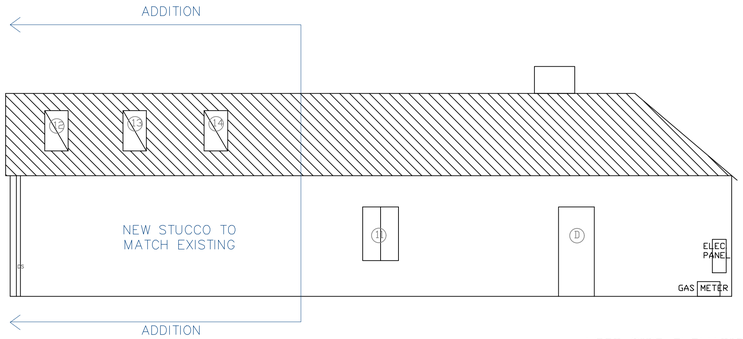
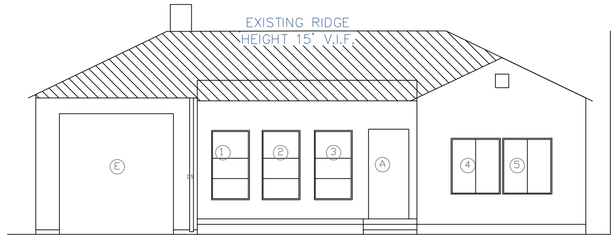
R308.4 HAZARDOUS LOCATIONS
GLAZING IN THE FOLLOWING LOCATIONS SHALL BE SAFETY GLAZING CONFORMING TO THE HUMAN IMPACT LOADS OF SECTION R308.3 (SEE EXCEPTIONS):

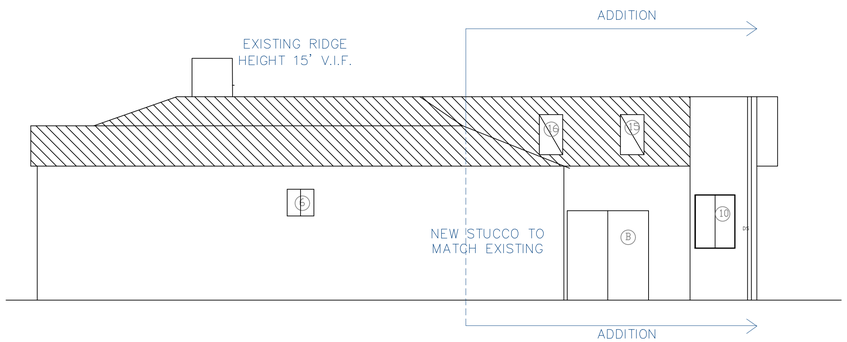
a. DOOR ASSEMBLIES: FIXED AND OPERABLE PANELS OF SWINGING, SLIDING, AND BI-FOLD DOOR ASSEMBLIES.
b. GLAZING ADJACENT TO DOORS: GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE IS WITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR OR WALKING SURFACE.
c. LARGE INDIVIDUAL PANELS: GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS:
i. EXPOSED AREA OF AN INDIVIDUAL PANE IS GREATER THAN 9 SQUARE FEET.
ii. BOTTOM EDGE IS LESS THAN 18 INCHES ABOVE THE FLOOR.
iii. TOP EDGE IS GREATER THAN 36 INCHES ABOVE THE FLOOR.
iv. ONE OR MORE WALKING SURFACES ARE WITHIN 36 INCHES HORIZONTALLY OF THE GLAZING.
d. RAILINGS: GLAZING IN GUARDS AND RAILINGS.
e. WET AREAS: GLAZING IN ENCLOSURES FOR OR WALLS FACING HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, AND SHOWERS WHERE THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE.
f. POOLS AND SPAS: GLAZING IN WALLS AND FENCES ADJACENT TO INDOOR AND OUTDOOR SWIMMING POOLS, HOT TUBS, AND SPAS WHERE THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE A WALKING SURFACE AND WITHIN 60 INCHES, MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE WATER'S EDGE.
g. STAIRS AND RAMPS: GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 36 INCHES ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE OF STAIRWAYS, LANDINGS BETWEEN FLIGHTS OF STAIRS, AND RAMPS.
h. BOTTOM OF STAIRWAYS: GLAZING ADJACENT TO THE LANDING AT THE BOTTOM OF A STAIRWAY WHERE THE GLAZING IS LESS THAN 36 INCHES ABOVE THE LANDING AND WITHIN A 60-INCH HORIZONTAL ARC LESS THAN 180 DEGREES FROM THE BOTTOM TREAD NOSING.



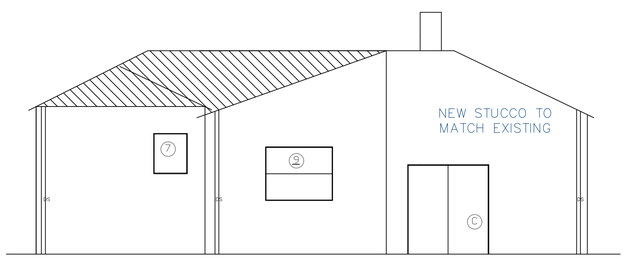
LEFT SIDE ELEVATION



FRONT ELEVATION



RIGHT SIDE ELEVATION



REAR ELEVATION

WINDOW, DOOR SCHEDULE

1. 2840 AT FRONT (E)
2. 2840 AT FRONT (E)
3. 2840 AT FRONT (E)
4. 4040 FRONT BEDROOM (E)
5. 4040 FRONT BEDROOM (E)
6. 2020 HALLWAY BATH (E)
7. 3232 REAR BEDROOM (E)
8.
9. NEW 5050DH KITCHEN
10. NEW 3240SH PRIMARY BEDROOM
11. NEW 2840DH LAUNDRY
12. NEW 22X45 SKYLIGHT
13. NEW 22X45 SKYLIGHT
14. NEW 22X45 SKYLIGHT
15. NEW 22X45 SKYLIGHT
16. NEW 22X45 SKYLIGHT

A. FRONT DOOR (E)
B. NEW 6068 SLIDING DOOR AT KITCHEN
C. NEW 6068 SLIDING DOOR AT PRIMARY BEDROOM
D. 32 DOOR AT SIDE OF GARAGE (E)
E. GARAGE DOOR (E)

ELEVATIONS
SCALE $\frac{3}{16}$ "=1'

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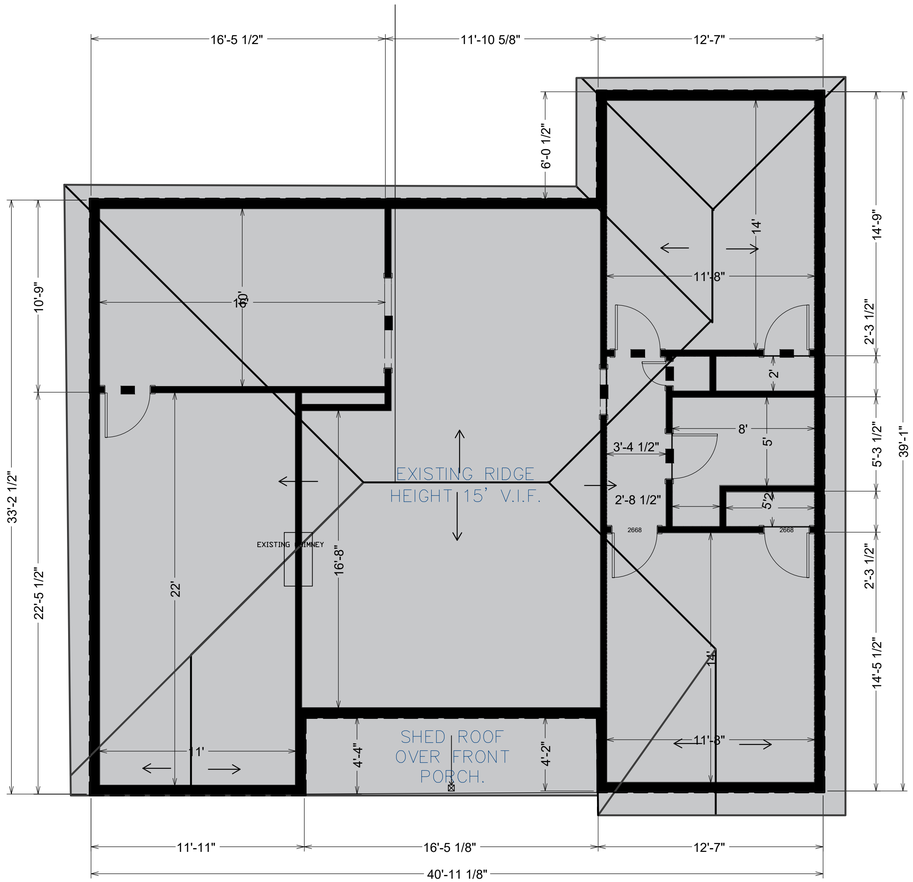
ROCKC1216@GMAIL.COM

A4.1



EXISTING ROOF PLAN
SCALE $\frac{1}{4}$=1'

CONTACT:
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650-296-6767
david@slmllc.com

836 11TH AVENUE, REDWOOD CITY, CA 94063

INITIAL SUB
12/10/2025
RESUB1
3/6/2026

PREPARED BY
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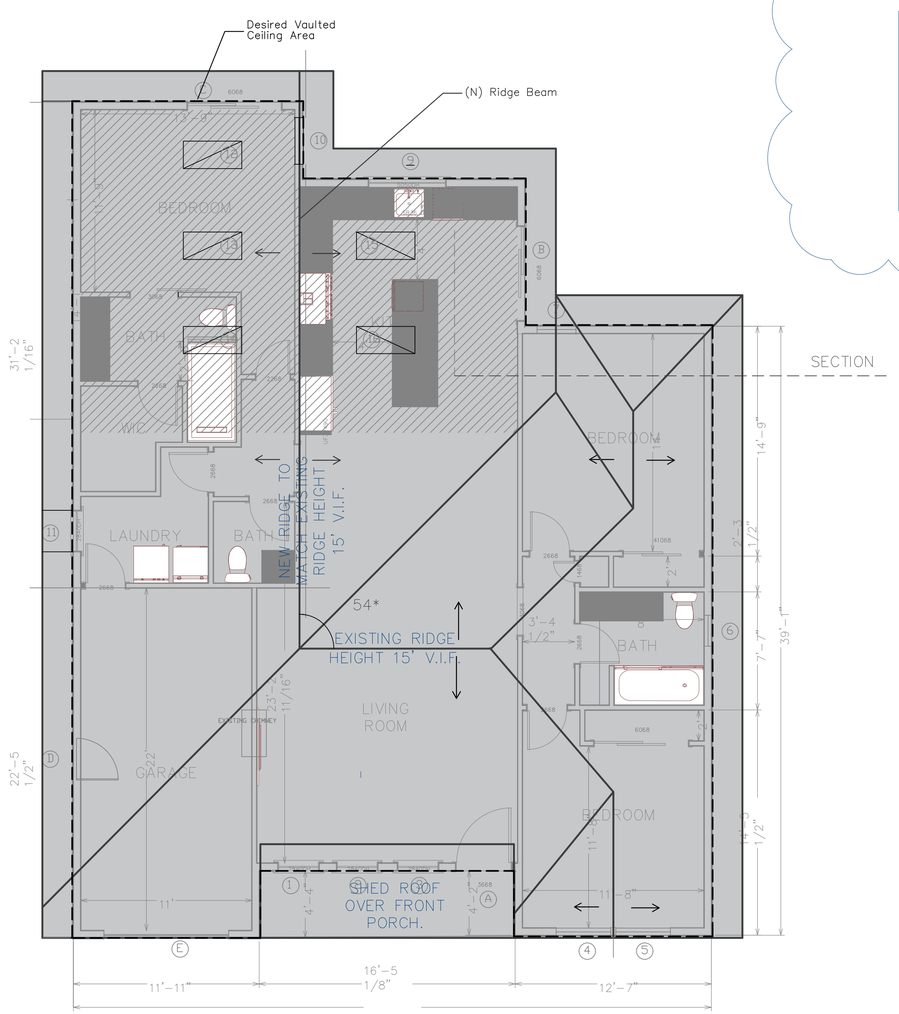
A5



LEGEND

SHADED ADDITION

SHINGLES TO MATCH EXISTING

PROPOSED ROOF PLAN

SCALE $\frac{1}{4}$"=1'

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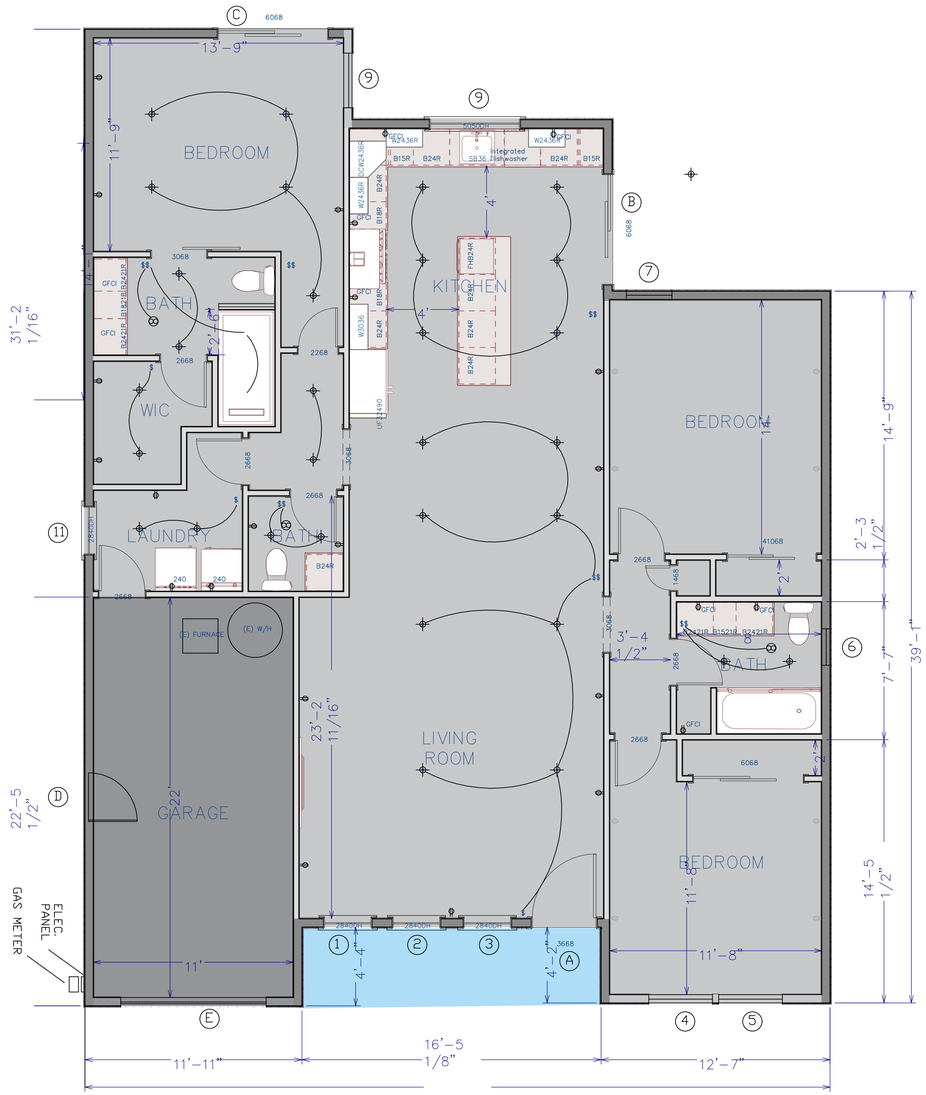

ELECTRICAL NOTES
1. LIGHTING IS ILLUSTRATED FOR QUANTITY AND LOCATION. SPECIFIC MANUFACTURER AND MODEL TO BE DETERMINED BY OWNER.

2. ALL LIGHTING FIXTURES MUST BE HIGH EFFICIENCY, ALL INTERIOR LIGHTING CONTROLS MUST BE DIMMABLE.
3. ALL KITCHEN AND BATHROOM OUTLETS TO BE GFCI.
4. ELECTRICAL AND TELEPHONE OUTLETS TO BE LOCATED 18"ABOVE FINISH FLOOR UNLESS NOTED OTHERWISE.
5. SWITCHES AND THERMOSTATS TO BE LOCATED 44" ABOVE FINISHED FLOOR UNLESS OTHERWISE STATED.
6. SMOKE DETECTORS TO BE HARDWIRED WITH BATTERY BACKUP TO COMPLY WITH UBC REQUIREMENTS.
7. LIGHT FIXTURES OCCURRING OVER BATHTUB OR SHOWER ENCLOSURES SHALL BE LABELED "SUITABLE FOR DAMP AREAS".
8. ALL BATHROOMS, KITCHENS, DINING ROOM, BEDROOMS, HALLWAY, LIVING ROOM, STORAGE CLOSET AND MASTER CLOSET SHALL BE POWERED BY A SEPARATE 20AMP BRANCH CIRCUIT IN ACCORDANCE WITH CEC 210.11(C)
9. ALL BRANCH CIRCUITS WILL BE PROTECTED BY AN ARC-FAULT- CIRCUIT INTERRUPTER IDENTIFIED IN THE CEC 210.21
10. TAMPER RESISTANT RECEPTACLES WILL BE PROVIDED IN ACCORDANCE WITH CEC 406.12
11. ALL LIGHTING FIXTURES IN SHOWER COMPARTMENTS WILL COMPLY WITH CEC 410.10
12. SMOKE DETECTORS 10FT FROM STOVE PER CBC 907.2.11.8 AND NFPA 29.11.3.4.4

PLUMBING NOTES
1. CONTROL VALVES AND SHOWER HEADS SHALL BE LOCATED ON THE SIDEWALL OF THE SHOWER COMPARTMENT OR OTHERWISE ARRANGED SO THE SHOWERHEAD DOES NOT DISCHARGE DIRECTLY AT THE ENTRANCE TO THE COMPARTMENT. SO THE BATHER CAN ADJUST THE VALVES BEFORE STEPPING INTO THE SHOWER SPRAY. PER CPC 408.9

2. WATER CLOSETS/TOILETS 1.28 GALLONS PER FLUSH, BATHROOM SINKS/LAVATORY FAUCETS 1.2GPM, KITCHEN SINK/FAUCET 1.8GPM, SHOWERHEAD(S) 1.8GPM. TO APPLICABLE LOW FLOW RATES

MECHANICAL - ELECTRICAL PLAN
SCALE $\frac{1}{4}$"=1'

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A7

GENERAL INFORMATION

01	Project Name	Schaefer Addition			
02	Run Title	Compliance			
03	Project Location	836 11th Avenue			
04	City	Redwood City, CA	05	Standards Version	2022
06	Zip code	94063	07	Software Version	CBECC-Res 2022 3.2
08	Climate Zone	3	09	Front Orientation (deg/ Cardinal)	295
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	Addition and/or Alteration	13	Number of Bedrooms	3
14	Addition Cond. Floor Area (ft²)	900	15	Number of Stories	1
16	Existing Cond. Floor Area (ft²)	2100	17	Fenestration Average U-factor	0.32
18	Total Cond. Floor Area (ft²)	3000	19	Glazing Percentage (%)	15.06%
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	Building does not incorporate Special Features

ENERGY USE SUMMARY

Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft²-yr)	Standard Design TDV Energy (EDR2) (kTDV/ft²-yr)	Proposed Design Source Energy (EDR1) (kBtu/ft²-yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft²-yr)	Margin (EDR1)	Margin (EDR2)
Space Heating	0	75.04	0	71.38	0	3.65
Space Cooling	0	13.54	0	18.69	0	-5.15
IAQ Ventilation	0	0	0	0	0	0
Water Heating	0	36.75	0	36.75	0	0
Self Utilization/Flexibility Credit				0		0
Efficiency Compliance Total	0	127.33	0	129.82	0	0.51
Photovoltaics		0		0		
Battery				0		
Flexibility						
Indoor Lighting	0	8.27	0	8.27		
Appl. & Cooking	0	25.69	0	25.69		
Plug Loads	0	90.17	0	90.17		
Outdoor Lighting	0	1.82	0	1.82		
TOTAL COMPLIANCE	0	199.25	0	198.77		

ENERGY USE INTENSITY

	Standard Design (kBtu/ft² - yr)	Proposed Design (kBtu/ft² - yr)	Margin (kBtu/ft² - yr)	Margin Percentage
Gross EUI[1]	40.22	39.5	0.72	1.79
Net EUI[2]	40.22	39.5	0.72	1.79

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.

- NO SPECIAL FEATURES REQUIRED

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

- Kitchen range hood
- Duct leakage testing

BUILDING - FEATURES INFORMATION

01 Project Name	02 Conditioned Floor Area (ft²)	03 Number of Dwelling Units	04 Number of Bedrooms	05 Number of Zones	06 Number of Ventilation Cooling Systems	07 Number of Water Heating Systems
Schaefer Addition	1600	1	3	2	0	1

ZONE INFORMATION

01 Zone Name	02 Zone Type	03 HVAC System Name	04 Zone Floor Area (ft²)	05 Avg. Ceiling Height	06 Water Heating System 1	07 Status
Existing	Conditioned	HVAC System	1100	8	DHW System	Existing Unchanged
Addition	Conditioned	HVAC System	500	11.5	DHW System	New

OPAQUE SURFACES

01 Name	02 Zone	03 Construction	04 Azimuth	05 Orientation	06 Gross Area (ft²)	07 Window and Door Area (ft2)	08 Tilt (deg)	09 Wall Exceptions	10 Status	11 Verified Existing Condition
(ex) Front Wall	Existing	R-0 Wall	295	Front	292	64	90	none	Existing	No
(ex) Left Wall	Existing	R-0 Wall	25	Left	220	10.7	90	none	Existing	No
(ex) Back Wall	Existing	R-0 Wall	115	Back	94	10	90	none	Existing	No
(addn) Back Wall	Addition	R-15 Wall	115	Back	104	65	90	none	New	n/a
(addn) Left Wall	Addition	R-15 Wall	25	Left	164	0	90	Extension	New	n/a
(addn) Right Wall	Addition	R-15 Wall	309	Right	119	52.7	90	none	New	n/a
(ex) Right Wall	Existing	R-0 Wall	205	Right	312	4	90	none	Existing	No
(ex) Ex to Addition	Existing<>Addition	R-15 Interior	n/a	n/a	131	0	n/a		New	n/a
(ex) Interior Wall to Garage	Existing<>Garage	R-15 Interior	n/a	n/a	82	0	n/a		Existing	No
(gar) Interior Wall to Existing	Garage<>Existing	R-15 Interior	n/a	n/a	146	0	n/a		Existing	No
(ex) Ceiling	Existing	R-11 Ceiling	n/a	n/a	1100	n/a	n/a		Existing	No
(gar) Ceiling	Garage	Garage Roof	n/a	n/a	270	n/a	n/a		Existing	No
(ex) Floor Over Crawlspace	Existing	R-0 Raised Crawl	n/a	n/a	1830	n/a	n/a		Existing	No
(addn) Floor Over Crawlspace	Addition	R-19 Raised Crawl	n/a	n/a	500	n/a	n/a		New	n/a
(gar) Front Wall	Garage	R-0 Wall	295	Front	96	0	90	none	Existing	No
(gar) Left Wall	Garage	R-0 Wall	25	Left	180	0	90	none	Existing	No
(gar) Right Wall	Garage	R-0 Wall	205	Right	35	0	90	none	Existing	No

OPAQUE SURFACES - CATHEDRAL CEILINGS

01 Name	02 Zone	03 Construction	04 Azimuth	05 Orientation	06 Area (ft²)	07 Skylight Area (ft²)	08 Roof Rise (x in 12)	09 Roof Reflectance	10 Roof Emittance	11 Cool Roof	12 Status	13 Verified Existing Condition	14 Construction
(addn) Left Vault	Addition	R-30 Cathedral	25	Left	275	20.2	4	0.1	0.85	No	New	n/a	
(addn) Right Vault	Addition	R-30 Cathedral	205	Right	210	13.8	4	0.1	0.85	No	New	n/a	

ATTIC

01 Name	02 Construction	03 Type	04 Roof Reflectance	05 Roof Emittance	06 Radiant Barrier	07 Cool Roof	08 Status	09 Verified Existing Condition
Ex Attic	(ex) Asphalt Shingle	Ventilated	0.1	0.85	No	No	Existing	No

FENESTRATION / GLAZING

01 Name	02 Type	03 Surface	04 Orientation	05 Azimuth	06 Width (ft)	07 Height (ft)	08 Mult.	09 Area (ft²)	10 U-factor	11 U-factor Source	12 SHGC	13 SHGC Source	14 Exterior Shading	15 Status	16 Verified Existing Condition
(ex) Front Glass	Window	(ex) Front Wall	Front	295			1	64	1.28	Table 110.6-A	0.8	Table 110.6-B	Bug Screen	Existing	No
(alt) Left Glass	Window	(ex) Left Wall	Left	25			1	10.7	0.3	NFRC	0.45	NFRC	Bug Screen	Altered	No
(ex) Back Glass	Window	(ex) Back Wall	Back	115			1	10	1.28	Table 110.6-A	0.8	Table 110.6-B	Bug Screen	Existing	No
(addn) Back Glass	Window	(addn) Back Wall	Back	115			1	65	0.3	NFRC	0.45	NFRC	Bug Screen	New	NA
(addn) Right Glass	Window	(addn) Right Wall	Right	205			1	52.7	0.3	NFRC	0.45	NFRC	Bug Screen	New	NA

FENESTRATION / GLAZING

01 Name	02 Type	03 Surface	04 Orientation	05 Azimuth	06 Width (ft)	07 Height (ft)	08 Mult.	09 Area (ft²)	10 U-factor	11 U-factor Source	12 SHGC	13 SHGC Source	14 Exterior Shading	15 Status	16 Verified Existing Condition
(ex) Right Glass	Window	(ex) Right Wall	Right	205			1	4	1.28	Table 110.6-A	0.8	Table 110.6-B	Bug Screen	Existing	No
(L) Skylights	Skylight	(addn) Left Vault	Left	25			1	20.7	0.4	NFRC	0.36	NFRC		New	NA
(R) Skylights	Skylight	(addn) Right Vault	Right	205			1	13.8	0.4	NFRC	0.36	NFRC		New	NA

SLAB FLOORS

01 Name	02 Zone	03 Area (ft²)	04 Perimeter (ft)	05 Edge Insul. R-value and Depth	06 Edge Insul. R-value and Depth	07 Carpeted Fraction	08 Heated	09 Status	10 Verified Existing Condition
(pre) Slab On Grade	Garage	270	34.5	none	0	0%	No	Existing	No

OPAQUE SURFACE CONSTRUCTIONS

01 Construction Name	02 Surface Type	03 Construction Type	04 Framing	05 Total Cavity R-value	06 Interior / Exterior Continuous R-value	07 U-factor	08 Assembly Layers
R-0 Wall	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
R-15 Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-15	None / None	0.095	Inside Finish: Gypsum Board Cavity / Frame: R-15 / 2x6 Exterior Finish: 3 Coat Stucco

OPAQUE SURFACE CONSTRUCTIONS

01 Construction Name	02 Surface Type	03 Construction Type	04 Framing	05 Total Cavity R-value	06 Interior / Exterior Continuous R-value	07 U-factor	08 Assembly Layers
R-30 Cathedral	Cathedral Ceilings	Wood Framed Ceiling	2x4 @ 16 in. O. C.	R-30	None / None	0.048	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-30 / 2x6 Inside Finish: Gypsum Board
R-15 Interior	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
(ex) Asphalt Shingle	Attic Roofs	Wood Framed Ceiling	2x6 @ 16 in. O. C.	R-0	None / None	0.621	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x6
R-0 Raised Crawl	Floors Over Crawlspace	Wood Framed Floor	2x6 @ 16 in. O. C.	R-0	None / None	0.22	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x6
R-19 Raised Crawl	Floors Over Crawlspace	Wood Framed Floor	2x12 @ 16 in. O. C.	R-19	None / None	0.045	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x12
R-11 Ceiling	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 16 in. O. C.	R-11	None / None	0.083	Over Ceiling Joists: R-1.5 insul. Cavity / Frame: R-9.5 / 2x4 Inside Finish: Gypsum Board
Garage Roof	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 16 in. O. C.	R-0	None / None	0.472	Cavity / Frame: no insul. / 2x4 Inside Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

01 Quality Insulation Installation (QII)	02 High R-value Spray Foam Insulation	03 Building Envelope Air Leakage	04 CFMF50	05 CFMF50
Not Required	Not Required	n/a	n/a	n/a

WATER HEATING SYSTEMS

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

WATER HEATERS

01 Name	02 Heating Element Type	03 Tank Type	04 # of Units	05 Tank Vol. (gal)	06 Heating Efficiency Type	07 Efficiency	08 Rated Input Type	09 Input Rating or Pilot	10 Tank Insulation R-value (Int/Ext)	11 Standby Loss or Recovery Eff	12 1st Hr. Rating or Flow Rate	13 Tank Location	14 Status	15 Verified Existing Condition
Gas Storage	Gas	Small Storage	1	50	EF	0.8	Btu/Hr	75000	0	20	n/a		Existing	No

WATER HEATING - HERS VERIFICATION

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

SPACE CONDITIONING SYSTEMS

01 Name	02 System Type	03 Heating Unit Name	04 Heating Equipment Count	05 Cooling Unit Name	06 Cooling Equipment Count	07 Fan Name	08 Distribution Name	09 Status	10 Verified Existing Condition	11 Existing HVAC System
HVAC System	Heating and cooling system other	FAU	1	Cooling	1	HVAC Fan	Ducts	Existing	No	

HVAC - HEATING UNIT TYPES

01 Name	02 System Type	03 Number of Units	04 Heating Efficiency	05 Heating Unit Brand
FAU	Central gas furnace	1	AFUE - 80	n/a

HVAC - COOLING UNIT TYPES

01 Name	02 System Type	03 Number of Units	04 Efficiency Metric	05 Efficiency EER/CEER/CEER	06 Efficiency SEER/HSPF2	07 Zonally Controlled	08 Multi-speed Compressor	09 HERS Verification
Cooling	Central split AC	1	EER/SEER	8.3	11	Not Zonal	Single Speed	Cooling-hvac-cool

HVAC - DISTRIBUTION SYSTEMS

01 Name	02 Type	03 Design Type	04 Duct Ins. R-value Supply	05 Duct Ins. R-value Return	06 Duct Location Supply	07 Duct Location Return	08 Surface Area Supply	09 Surface Area Return	10 Bypass Duct	11 Duct Leakage	12 HERS Verification	13 Status	14 Verified Existing Condition	15 Existing Distribution system	16 New Ducts >= 25 ft
Ducts	Unconditioned attic	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 Name	02 Duct Leakage Verification	03 Duct Leakage Target (%)	04 Verified Duct Location	05 Verified Duct Design	06 Buried Ducts	07 Deeply Buried Ducts	08 Low-leakage Air Handler	09 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 Name	02 Type	03 Fan Power (Watts/CFM)	04 Name
HVAC Fan	HVAC Fan	0.45	HVAC Fan-hers-fan

HVAC FAN SYSTEMS - HERS VERIFICATION

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

HERS RATER VERIFICATION OF EXISTING CONDITIONS

OVERHANGS AND FINS - VERIFIED AND ALTERED

This section does not apply to this project.

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Heather Clark	Documentation Author Signature: Heather Clark
Company: Builders Energy Services	Signature Date: 12/29/2025
Address: 460 W. Edmundson Avenue	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Morgan Hill, CA 95037	Phone: (408) 202-9075

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: David Schaefer	Responsible Designer Signature: David Schaefer
Company: Homeowner - David Schaefer	Date Signed: 12/30/2025
Address: 14640 Skislope Way	License:
City/State/Zip: Truckee, CA 96161	Phone: 6502966767

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.

TITLE 24 ENERGY DOCUMENTATION

REVISIONS	BY

BUILDERS' ENERGY SERVICES, INC.
460 WEST EDMUNDSON AVENUE, MORGAN HILL, CA 95037
(408) 202-9075 www.buildersenergy.net
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WITH OFFICES IN:
MORGAN HILL
SAN JOSE

SCHAEFER ADDITION
836 11TH AVENUE
REDWOOD CITY, CA 94063

Date	12/30/25
Drawn	HEC
Client's Job #	
BES Job #	12549
Sheet	T24.1

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2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(n)	**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."

*Exceptions may apply.

5/6/22

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 are 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)1Biii&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)1Giii-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). *

5/6/22

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.
§ 110.8(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).
§ 110.8(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 8-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum 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 labeled 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 1 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(q):	**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

5/6/22

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, cabinetry 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

§ 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 §§ 601.0-605.0 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-6.0 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 tosunlight, 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. *

5/6/22

TITLE 24 ENERGY DOCUMENTATION

REVISIONS	BY

BUILDERS' ENERGY SERVICES, INC.
460 WEST EDMUNDSON AVENUE, MORGAN HILL, CA 95037
(408) 202-9075 www.title24.com heather@builders-energy.net
Making a Difference in Energy Design since 1978

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TITLE 24
HERS RATINGS
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ENERGY STAR PARTNERS
HERS II CERTIFIED
CEA CERTIFIED

WITH OFFICES IN:
MORGAN HILL
SAN JOSE

SCHAEFER ADDITION
836 11TH AVENUE
REDWOOD CITY, CA 94063

Date	12/30/25
Drawn	HEC
Client's Job #	
BES Job #	12549
Sheet	T24.2

CONTACT:
DAVID SCHAFFER, SLM LLC
650-296-6767
david@slmllc.com

836 11TH AVENUE, REDWOOD CITY, CA 94063

INITIAL SUB
12/10/2025
RESUB1
3/6/2026

PREPARED BY
ROCKWELL CHAN
RPC STUDIO RWC
ROCKC1216@GMAIL.COM

San Mateo County Planning & Building Department

Stormwater Management Owner's Consent Form

Part A shall be completed and signed by the property owner before building permit issuance and submitted to the County Planning and Building Department via email to drainage@smcgov.org.

PART A

OWNER: SLM LLC/David Schaefer PERMIT NO.: BLD2025-03690

SITE LOCATION: 836 11th Ave APN NO.: 055-102-190

CIVIL ENGINEER OF RECORD: Joey Roca, Roca3 Engineering

The Owner, as named above, is responsible to ensure proper inspection and maintenance of the property's stormwater management features in accordance with their design and requirements on approved plans for the project (Sheet #, date, revision #):

SOCF, 3/6/2026, Resubmittal #1

in order to keep excessive stormwater and surface runoff from flowing onto and/or flooding adjacent lands (e.g., neighboring properties and the right-of-way) for the duration of property ownership. The Owner shall retain the stormwater management permit-set plans and as-built plans, if any. The Owner shall transfer this form and relevant plans/documents at the time of property transfer to a new Owner.

OWNER'S NAME (PRINT): David Schaefer

SIGNATURE: DATE: 3/6/2026

STOP! OFFICIAL USE ONLY:

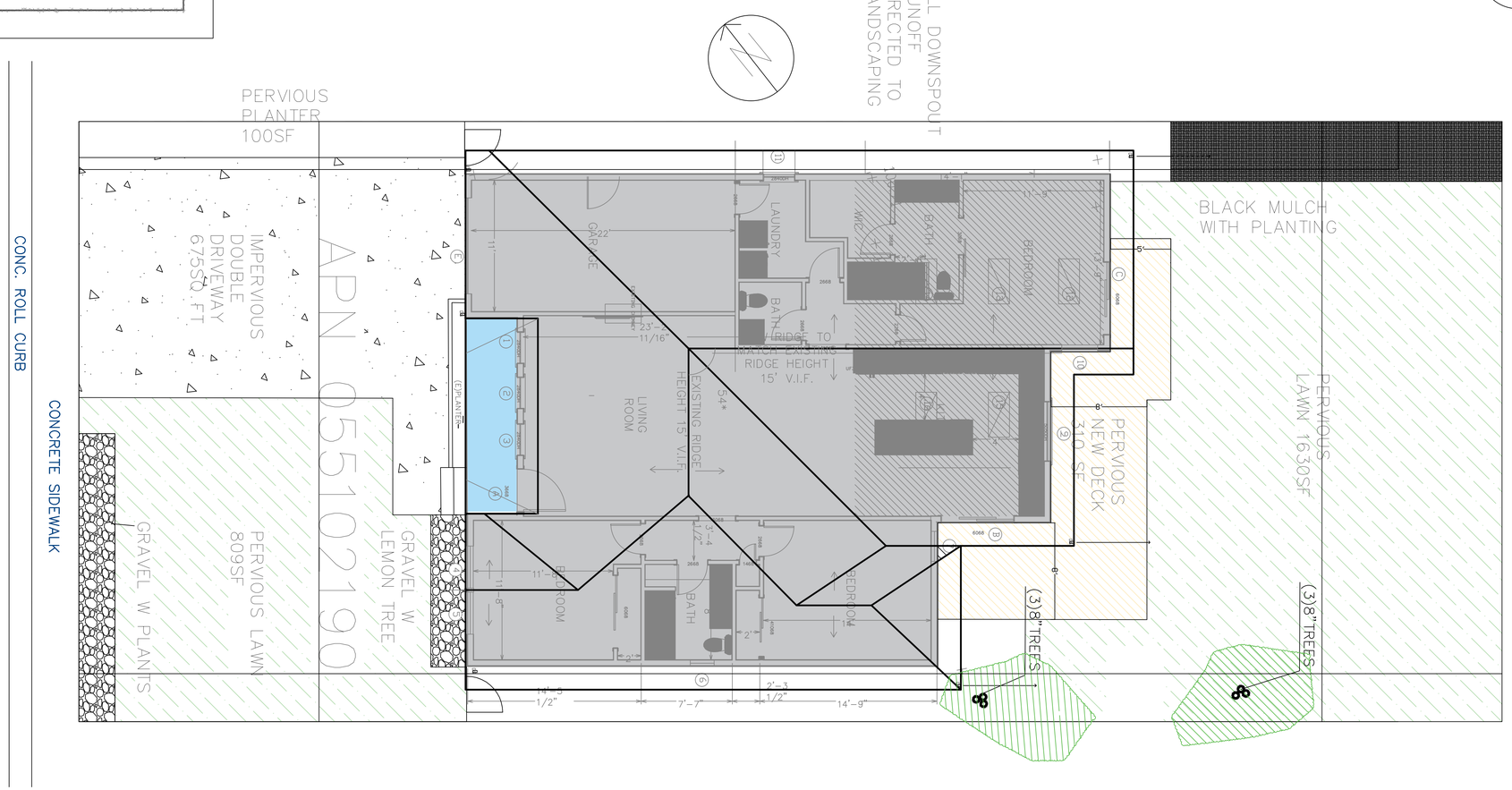
PART B

COUNTY'S NOTES:

COUNTY OFFICIAL: DATE:

455 County Center, 2nd Floor, Redwood City, CA 94063 | https://planning.smcgov.org

No net increase in stormwater runoff (relative to undeveloped conditions) may drain onto adjacent properties. The existing storm drainage from the adjacent properties shall not be blocked by the new development. The owner shall adequately maintain the property's stormwater management facilities.



CONTACT:
DAVID SCHAFFER, SLM LLC
650-296-6767
david@slmllc.com

836 11TH AVENUE, REDWOOD CITY, CA 94063

INITIAL SUB
12/10/2025
RESUB1
3/6/2026

PREPARED BY
ROCKWELL CHAN
RPC STUDIO RWC
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SOCF

SAN MATEO COUNTYWIDE
Water Pollution Prevention Program
Clean Water. Healthy Community.

COUNTY OF SAN MATEO
Planning & Building Department
455 County Center, 2nd Floor
Redwood City, CA 94063
BLD: 650-599-7311/PLN: 650-363-1825
http://planning.smcgov.org

C.3 and C.6 Development Review Checklist

Municipal Regional Stormwater Permit (MRP 3.0)
Stormwater Controls for Development Projects
Effective Date: July 1, 2024

Project Information (Enter information only into blue-highlighted cells - other cells are locked.)

I.A Enter Project Data (For "C.3 Regulated Projects," data will be reported in the municipality's stormwater Annual Report.)

Project Name:	836 Remodel	Case Number	
Project Address:	836 11th Redwood City, CA	Cross Street:	Bay Road
Project APN:	055-102-190	Project Watershed:	
Applicant Name:	David Schaefer	Project Phase No.	
Applicant Phone:	650-296-6767	Applicant Email Address:	david@slmllc.com

Development Type: (check all that apply)

- Small Single-Family Home Project (<10,000 sq. ft. of created and/or replaced impervious surface1)
- Large Single-Family Home Project (≥10,000 sq. ft. of created and/or replaced impervious surface1)
- Subdivision - Residential: Two or more lot development2 # of units:
- Multi-Family Residential # of units:
- Commercial
- Industrial, Manufacturing
- Mixed-Use # of units:
- New, widened or reconstructed roads related to parcel-based projects3
- Stand-alone pavement maintenance or construction work, or similar work related to parcel-based projects3
- Other redevelopment project as defined by MRP: creating, adding and/or replacing exterior existing impervious surface on a site where past development has occurred.
- Institutional: schools, libraries, jails, etc.
- Parks and trails, camp grounds, other recreational
- Kennels, Ranches
- Other, Please specify

Project Description (Don't include past or future phases)4: Addition at rear (structural) new primary suite, new primary bathroom, new laundry room, new powder room, remodel existing hallway bath, replace and double driveway, landcsaping front and rear yard.

I.A.1 Total Project Area: 5,900 square feet (on and off-site)
I.A.2 Total Area on-site: 5,900 square feet (on the private property)
I.A.3 Total Area off-site: 0 square feet (frontage or area in Public Right of Way being improved)
I.A.4 Total Area of land disturbed during construction: 3,654 square feet
(Include all project on-site and off-site areas of clearing, grading, excavating and stockpiling)
I.A.5 Site slope: 0 %

I.A.6 Certification:

I certify that the information provided on this form is correct and acknowledge that, should the project exceed the amount of new and/or replaced impervious surface provided in this form, the as-built project may be subject to additional improvements.

Preliminary Calculations Attached | Final Calculations Attached | Stormwater Control Plan Attached

Name of person completing the form: Rockwell Chan | Title: Designer
Signature: | Date:
Phone Number: 6502605931 | E-mail: rockc1216@gmail.com

1 Small and Large Detached Single-Family Homes that are not part of a common plan of development2.
2 Common Plans of Development (subdivisions or contiguous, commonly owned lots, for the construction of two or more homes developed within 1 year of each other), and/or constructed with shared utilities, are not considered single family home projects by the MRP.
3 Stand-alone roadway or pavement projects, or pavement work that is part of a project, creating or replacing 5,000 sq. ft. or more of impervious surface may be subject to C.3 requirements - both in public and private areas. See the Roads Factsheet at: www.flowstobay.org/newdevelopment
4 Project description examples: 5-story office building, industrial warehouse, residential with five 4-story buildings for 200 condominiums, etc.
7/1/24

I.B Is the project a "C.3 Regulated Project" per MRP Provision C.3.b? (Use table below to make determination.)
I.B.1 Enter the amount of Impervious surface Retained, Replaced or Created5 by the project (use DMA Table in Worksheet D):

Table I.B.1 Impervious6 and Pervious6 Surfaces (Match DMA Summary Table in Worksheet D, if applicable)

	Pre-Project	Post-Project			
	I.B.1.a	**I.B.1.b**	**I.B.1.c**	**I.B.1.d**	**I.B.1.e**
Impervious Surfaces (IS) (e.g., sidewalks, driveways, parking areas, patios, roads, rooftops, pools, pathways, etc.)	Existing (Pre-Project) Impervious Surface (sq.ft.)	Existing Impervious Surface to be Retained (sq.ft.)	Existing Impervious Surface to be Replaced5 (sq. ft.)	New Impervious Surface to be Created5 (sq. ft.)	Post-Project Impervious Surface (sq.ft.) (=b+c+d)
On-site area (within the parcel/private site boundaries)	2,736	413	260	760	1,433
Off-site area (e.g., frontage/other area in Public Right of Way)	289	60	-	-	60
Subtotal:	3,025	473	260	760	1,493
Total Impervious Surface Replaced and Created: ***(sum of totals for columns I.B.1.c and I.B.1.d):***		**I.B.1.f**	**1,020**	**sq. ft.**	

	Existing (Pre-Project) Pervious Surface (sq.ft.)			Post-project Pervious Surface (sq.ft.)
Pervious Surfaces (PS) (e.g., landscaping, pervious pavement, bioretention areas, parking strips, street trees, etc. - both on-site and off-site)				
All pervious off-site area (e.g., frontage/Public Right of Way)6	-			-
Landscaping area on-site	3,041			2,536
Pervious Pavement area on-site	-		**I.B.1.g**	-
Green Roof area on-site	-			-
Subtotal:	3,041	**50% Rule Calculation7**		2,536
Total Project Area (should be equal to **I.A.1**)	6,066	**I.B.1.h**	9 %	4,029

I.B.2 Please review and attach additional worksheets as required below using the Total Impervious Surface (IS) Replaced or Created in cell **I.B.1.f** from Table **I.B.1** above and other factors:

	Review Steps	Check One: Yes	Check One: No	Attach Worksheet
I.B.2.a	Does this project involve any earthwork and/or stockpiling of soil, aggregates etc? If YES, then Check Yes, and Complete Worksheet A. If NO, then Check No, and go to I.B.2.b	x		A
I.B.2.b	Is **I.B.1.f** greater than or equal to 2,500 sq ft? If YES, then the Project is subject to Provision C.3.i. - complete Worksheets B, C and go to I.B.2.c. If NO, go to I.B.2.i		x	B, C
I.B.2.c	Does the 50% rule apply to the project? Is **I.B.1.h** 50% or more? If YES, site design, source control and treatment requirements apply to the entire on-site area. Continue to I.B.2.d If NO, these requirements apply only to the impervious surface created and/or replaced. Continue to I.B.2.d		x	
I.B.2.d	Is this project a Roadway Project and is **I.B.1.f** greater than or equal to 5,000 sq ft? If YES, project may be C.3 Regulated Project. See the Roadways Fact Sheet at: www.flowstobay.org/newdevelopment If NO, go to I.B.2.e		x	
I.B.2.e	Is **I.B.1.f** greater than or equal to 5,000 sq ft? Or 10,000 sq.ft. for a Large Single-Family Home? (Small Single-Family Homes are exempt) If YES, project is a C.3 Regulated Project - complete Worksheet D. Then continue to I.B.2.f. If NO, then skip to I.B.2.g.		x	D
I.B.2.f	Is **I.B.1.f** greater than or equal to 43,560 sq ft, (i.e., one acre)? If YES, project may be subject to Hydromodification Management requirements - complete Worksheet E then go to I.B.2.g. If NO, then go to I.B.2.g.		x	E
I.B.2.g	Is **I.A.4** greater than or equal to 43,560 sq ft., (i.e., one acre)? [**SWRS Site**: Subject to monthly inspections from Oct 1 to April 30, weekly inspections if located in ASBS Watershed] For more information see: www.swrcb.ca.gov/water_issues/programs/stormwater/construction.shtml If YES, check box, obtain coverage under CA Construction General Permit & submit Notice of Intent to municipality- go to I. B.2.h. If NO, then go to I.B.2.h.		x	
I.B.2.h	Is this a Special Project or does it have the potential to be a Special Project? If YES, complete Worksheet F - then continue to I.B.2.i. If NO, go to I.B.2.i.		x	F
I.B.2.i	Is this project a **Hillside Site**? Or a **High Priority Site**? A. Any site with land disturbance of 1-acre or more; OR B. "High priority sites" involve land disturbance of less than 1-acre on the following site types: 1. All sites where the scope of development or land alteration requires a Grading or Land Clearing Permit; 2. Project with land disturbance of: a) 1 sq. ft. or greater within the ASBS watershed"; b) 1,000 sq. ft. or greater for areas within 100 feet of a creek, wetland, or coastline; c) Hillside Projects (20% slope or greater); c-1) 1,000 sq. ft. if project area has average slope >50%; c-2) 5,000 sq. ft. if project area has slope between 20% - 50%; d) 10,000 sq. ft. if project area has average slope <20%. 3. Any public project involving work within a waterway or any private project involving work within a waterway that requires a permit issued by the Planning and Building Department. [**SWRS Site**: Subject to monthly inspections from Oct 1 to April 30; weekly inspections if located in ASBS Watershed] If YES, complete section G-2 on Worksheet G - then continue to I.B.2.j. and complete the Certification in Section **I.A.6** If NO, then go to I.B.2.j and complete the Certification in Section **I.A.6**		x	G
I.B.2.j	**For Municipal Staff Use Only**: Are you using Alternative Certification for the project review? If YES, then fill out section G-1 on Worksheet G. Fill out other sections of Worksheet G as appropriate. See cell **I.B.1.g** above - Is the project installing 3,000 square feet or more of pervious pavement? If YES, then fill out section G-3 on Worksheet G. Add to Municipal Inspection Lists (C.3 and C.3.h)			G

5 "Retained" means to leave existing impervious surfaces in place; "Replaced" means to install new impervious surface where existing impervious surface is removed anywhere on the same site; and "Created" means the amount of new impervious surface being proposed which exceeds the total amount of existing impervious surface at the site.
6 Per the MRP, pavement that meets the following definition of pervious pavement is NOT an impervious surface: pavement that stores and infiltrates rainfall at a rate equal to immediately surrounding unpaved, landscaped areas, or that stores and infiltrates the rainfall runoff volume described in Provision C.3. Gravel pavement is not pervious unless it is constructed using pervious pavement system designs or runoff flows to adjacent landscaping. Pervious off-site areas include landscaped areas such as parking strips and street trees; off-site pervious pavement includes pervious concrete gutters and interlocking permeable concrete paver sidewalks, etc.
7 Per MRP 3, the 50% rule now applies to both the on-site and off-site areas (typically the frontage areas), so replacement of IS in the off-site area is included.
7/1/24

Worksheet A

C.6 – Construction Stormwater BMPs

Identify Plan sheet showing the appropriate construction Best Management Practices (BMPs) used on this project:
(Applies to all projects with earthwork)

Yes	Plan Sheet	Best Management Practice (BMP)
X		Control and prevent the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, rinse water from architectural copper, and non-stormwater discharges to storm drains and watercourses.
X		Store, handle, and dispose of construction materials/wastes properly to prevent contact with stormwater.
X		Do not clean, fuel, or maintain vehicles on-site, except in a designated area where wash water is contained and treated.
X		Train and provide instruction to all employees/subcontractors re: construction BMPs.
X		Protect all storm drain inlets in vicinity of site using sediment controls such as berms, fiber rolls, or filters.
		Limit construction access routes and stabilize designated access points.
X		Attach the San Mateo Countywide Water Pollution Prevention Program's construction BMP plan sheet to project plans and require contractor to implement the applicable BMPs on the plan sheet.
X		Use temporary erosion controls to stabilize all denuded areas until permanent erosion controls are established.
X		Delineate with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.
X		Provide notes, specifications, or attachments describing the following: ■ Construction, operation and maintenance of erosion and sediment controls, include inspection frequency; ■ Methods and schedule for grading, excavation, filling, clearing of vegetation, and storage and disposal of excavated or cleared material; ■ Specifications for vegetative cover & mulch, include methods and schedules for planting and fertilization; ■ Provisions for temporary and/or permanent irrigation.
X		Perform clearing and earth moving activities only during dry weather.
		Use sediment controls or filtration to remove sediment when dewatering and obtain all necessary permits.
X		Trap sediment on-site, using BMPs such as sediment basins or traps, earthen dikes or berms, silt fences, check dams, soil blankets or mats, covers for soil stock piles, etc.
X		Divert on-site runoff around exposed areas; divert off-site runoff around the site (e.g., swales and dikes).
X		Protect adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.

7-1-24

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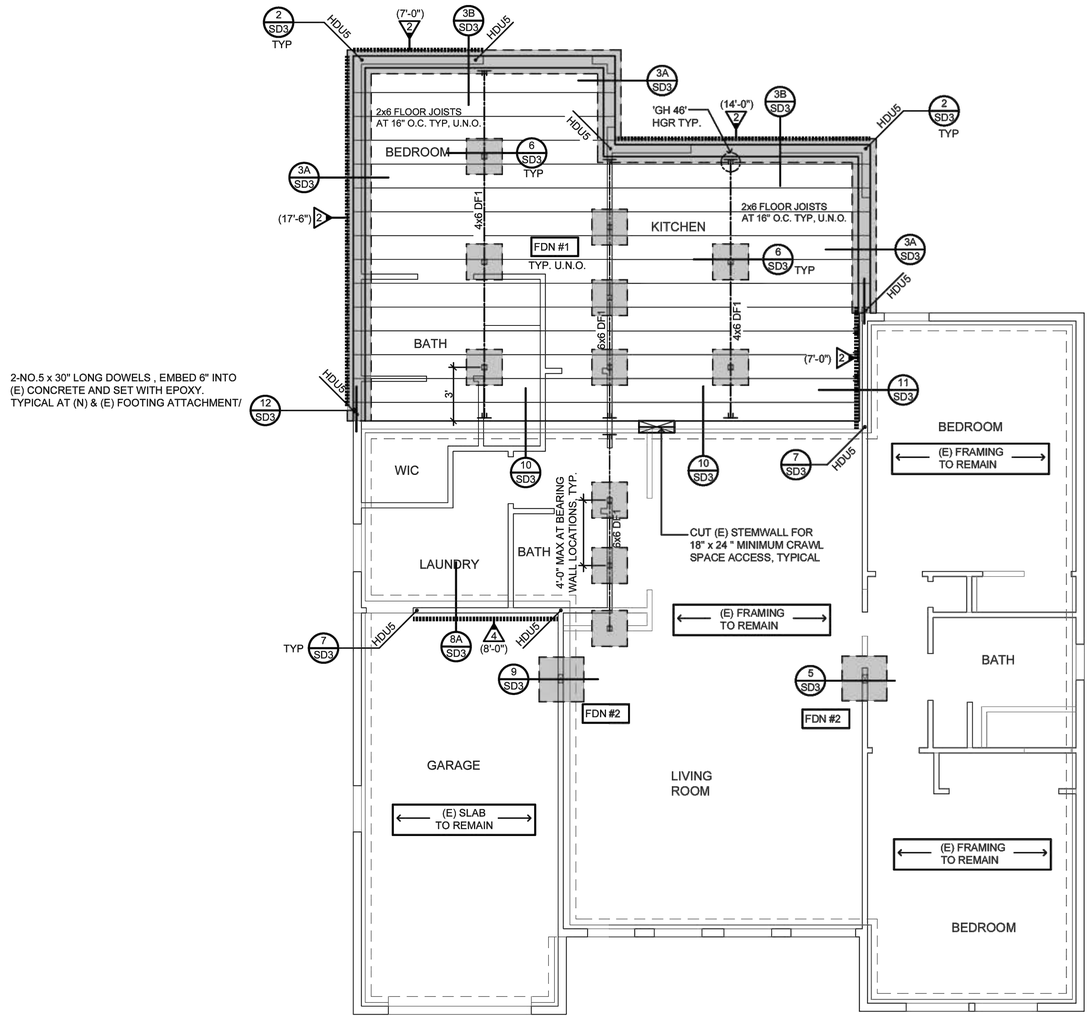
836 11TH AVENUE, REDWOOD CITY, CA 94063

INITIAL SUB
12/10/2025
RESUB1
3/6/2026

PREPARED BY
ROCKWELL CHAN
RPC STUDIO RWC
ROCKC1216@GMAIL.COM

C3C6



FOUNDATION PLAN

SCALE $\frac{1}{4}$"=1-0"

LEGENDS AND GENERAL NOTES:

1. SEE SHEET SD1 FOR GENERAL NOTES AND MATERIAL SPECIFICATION.
2. SEE SHEET SD1 FOR HANGER SCHEDULE & MIN. FRAMING CONNECTORS.
3. REFER TO SHEET SD2 FOR TYPICAL FRAMING DETAILS.
4. ALL DIMENSION SHOWN ARE FOR REFERENCE ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR ACTUAL MEASUREMENT. DO NOT SCALE DRAWINGS.

2 (LENGTH) — SHEAR WALL LOCATIONS. (SEE PLANS AND SHEET SD1 FOR SHEAR WALL SCHEDULE AND ANCHOR BOLT SPACING) USE TYPE 1 PLYWOOD AT EXTERIOR NON-SHEAR WALL LOCATIONS.

DENOTES (N) 15" WIDE CONTINUOUS FOOTING/ 1 SD3

DENOTES (E) 12" WIDE x 12" DEEP MINIMUM (EMBEDMENT) CONTINUOUS FOOTING. VERIFY IN FIELD TO MATCH (N) FOOTING. SEE FOUNDATION NOTES ON SHEET SD1

INDICATES LOCATION OF 18" DEEP x 24" WIDE MINIMUM CRAWL SPACE ACCESS. CUT (E) STEMWALL AT (E) FOOTING CONDITION & BLOCK FORMS AT (N) CONCRETE.

DENOTES ISOLATED SPREAD FOOTING, SEE PLAN LOCATION. FOOTING SIZE AND REINFORCEMENT AS FOLLOWS: 1

FDN #1	2'-0" SQUARE x 24" DEEP FOOTING WITH (2)- NO.4 BARS BOTH WAYS
FDN #2	2'-6" SQUARE x 24" DEEP FOOTING WITH (3)- NO.4 BARS BOTH WAYS

HDU — DENOTES SIMPSON HDU HOLD-DOWN, SEE PLAN FOR SIZE AND LOCATIONS. H.A. - REFERES TO HOLD-DOWN TRASFER FROM ABOVE

TYPICAL PLYWOOD DIAPHRAGM		
LOCATION	GRADING	NAILING (U.N.O.)
FLOOR - 1 1/8" CDX	APA (32/16)	10d COMMON @ 6" E.N.,10"F.N.
E.N. - EDGE NAILING F.N. - FIELD NAILING	UNBLOCKED DIAPHRAGM TYPICAL, U.N.O.	

FRAMING NOTE:

VERIFY EXISTING FRAMING/ FOUNDATION LAYOUT AND NOTIFY ENGINEER FOR FURTHER FRAMING/ FOUNDATION RECOMMENDATION WHEN EXISTING FRAMING CONDITION DOES NOT MATCH AS SHOWN ON PLANS

REGISTERED PROFESSIONAL ENGINEER
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Exp.12-31-27
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STATE OF CALIFORNIA
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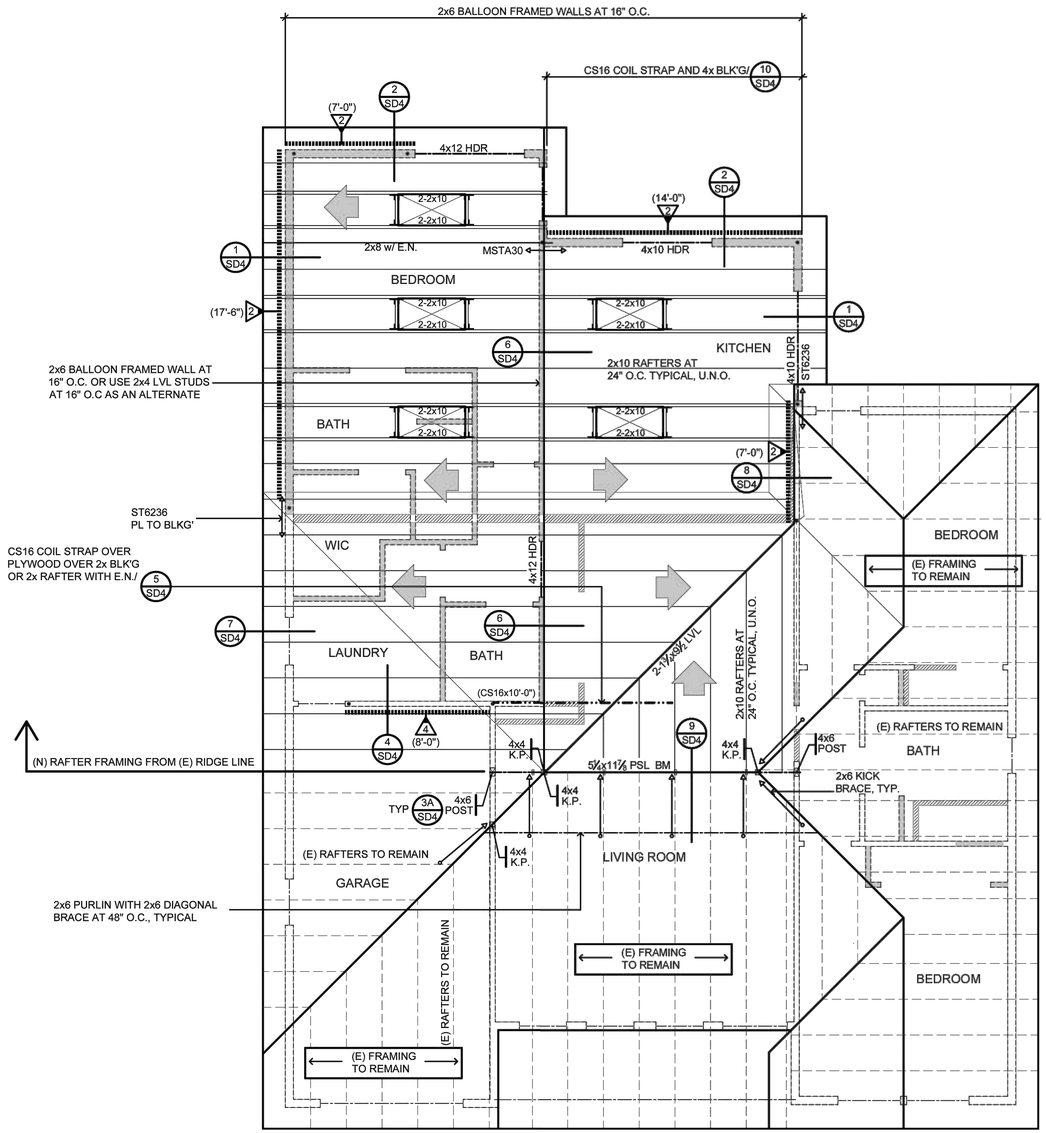
PROJECT TITLE:
PROPOSED ADDITION AND REMODEL FOR :
SCHAEFER RESIDENCE
836 11TH AVENUE, REDWOOD CITY, CALIFORNIA

NO.	DESCRIPTION	DATE
1	PLAN CHECK	02.1.2.26

REVISIONS

DRAWN:	JR	CHECKED:	JR
SCALE:	AS NOTED		
ISSUED:	12/17/2025		
PROJECT NO.	1355.112025		

SHEET NO. S1 REV. 0

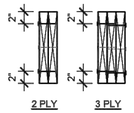


LEGENDS AND GENERAL NOTES:

1. SEE SHEET SD1 FOR GENERAL NOTES AND MATERIAL SPECIFICATION.
2. SEE SHEET SD1 FOR CEILING JOIST SPAN SCHEDULE.
3. SEE SHEET SD1 FOR HANGER SCHEDULE & MIN. FRAMING CONNECTORS.
4. REFER TO SHEET SD2 FOR TYPICAL FRAMING DETAILS.
5. ALL DIMENSION SHOWN ARE FOR REFERENCE ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR ACTUAL MEASUREMENT. DO NOT SCALE DRAWINGS.

A (LENGTH)	SHEAR WALL LOCATIONS. (SEE PLANS AND SHEET SD1 FOR SHEAR WALL SCHEDULE AND ANCHOR BOLT SPACING) USE TYPE 1 PLYWOOD AT EXTERIOR NON-SHEAR WALL LOCATIONS.
E HEADERS	SEE SCHEDULE FOR MINIMUM HEADER SIZE TYPICAL U.N.O.
	DENOTES WALL FRAMING BELOW
	INDICATES (E) WALL TO BE REMOVED
	INDICATES (N) WALL SEE ARCH'L PLANS
POST	DENOTES POST LOCATIONS AT LOWER FRAMING. SEE PLAN FOR POST SIZES (4x4 MIN.) P- POST, KP- KING POST
STRAP	INDICATES SIMPSON COLLECTOR STRAP. SEE PLANS FOR SIZES AND LOCATION. INSTALL PER REFERNCE DETAIL / 1A SD2 UNLESS OTHER CONNECTION IS NOTED
CS16 x LENGTH	DENOTES SIMPSON CS 16 COLLECTOR STRAP NAILED OVER PLYWOOD OVER 2x BLK'G OR RAFTER WITH EDGE NAIL. SEE PLANS FOR LENGTH AND LOCATION
	2x4 VERTICAL BRACE TO CEILING BEAM MAX (48" O.C.)
	2x DIAGONAL KICK BRACE TO CEILING BEAM PER PLAN
	DENOTES SIMPSON HDU HOLD-DOWN TYPICAL, U.N.O. SEE PLAN FOR SIZE AND LOCATIONS. USE 4x MINIMUM HOLD-DOWN POST

TYPICAL PLYWOOD DIAPHRAGM		
LOCATION	GRADING	NAILING (U.N.O.)
ROOF - 1/2" CDX	APA (32/16)	8d COMMON @ 6" E.N., 12" F.N.
FLOOR - 3/4" T&G CDX	APA (32/16)	10d COMMON @ 6" E.N.,10"F.N.
E.N. - EDGE NAILING F.N. - FIELD NAILING	UNBLOCKED DIAPHRAGM TYPICAL, U.N.O.	



2 PLY 3 PLY

MULTI-LVL (MICROLAM) CONNECTION SCHEDULE			
DESIGNATION	MEMBER SIZE	NO. OF ROWS	CONNECTOR O.C. SPACING
5½ LVL	1¾ x 5½ LVL	2	10d AT 12" O.C.
7¼ LVL	1¾ x 7¼ LVL	2	10d AT 12" O.C.
9¼ LVL	1¾ x 9¼ LVL	2	10d AT 12" O.C.
11⅞ LVL	1¾ x 11⅞ LVL	3	10d AT 12" O.C.
14 LVL	1¾ x 14 LVL	3	10d AT 12" O.C.
16 LVL	1¾ x 16 LVL	3	10d AT 12" O.C.

FRAMING NOTE:

VERIFY EXISTING FRAMING LAYOUT AND NOTIFY ENGINEER FOR FURTHER FRAMING RECOMMENDATION WHEN EXISTING FRAMING CONDITION DOES NOT MATCH AS SHOWN ON PLANS

ROOF FRAMING PLAN

SCALE 1/4"=1-0"

REGISTERED PROFESSIONAL ENGINEER
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PROJECT TITLE:
PROPOSED ADDITION AND REMODEL FOR :
SCHAEFER RESIDENCE
836 11TH AVENUE, REDWOOD CITY, CALIFORNIA

NO.	DESCRIPTION	DATE
1	PLAN CHECK	02.1.2.26

REVISIONS

DRAWN:	JR	CHECKED:	JR
SCALE:	AS NOTED		
ISSUED:	12/17/2025		
PROJECT NO.	1355.112025		

SHEET NO. S2 REV. 0

CBC TABLE 2304.10.2 FASTENING SCHEDULE

CONNECTION	NAILING	CONNECTION	NAILING
1. BLOCKING BETWEEN CEILING JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW. TOE NAIL	3-8d 3-10d box EACH END	21. 1"x 8" AND WIDER SHEATHING TO EACH BEARING. FACE NAIL	3-8d 3-10d box
BLOCKING BETWEEN RAFTERS OR TRUSS NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS.	2-8d TOE EACH END 2-16d FACE	22. JOIST TO SILL, TOP PLATE OR GIRDER. TOE NAIL	3-8d 3-10d box
FLAT BLOCKING TO TRUSS OR WEB FILLER, FACE NAIL	16d AT 6"	23. RIM JOISTS, BAND JOISTS, OR BLK'G TO TOP PLATE, SILL OR OTHER FRAMING BELOW. 6" O.C. TOE NAIL	8d 10d box
2. CEILING JOISTS TO TOP PLATES EACH JOIST, TOE NAIL	3-8d 3-10d box		
3. CEILING JOISTS NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITION (NO THRUST) FACE NAIL SECT 2308.7.3.1. TABLE 2308.7.3.1.	3-16d 4-10d box	24. 1"x 6" SUBFLOOR OR LESS TO EACH JOIST. FACE NAIL	2-8d 2-10d box
4. CLG. JOISTS ATTACHED TO PARALLEL RAFTER (HEEL JOINT), FACE NAIL SECT 2308.7.3.1. TABLE 2308.7.3.1.	TABLE 2308.7.3.1	25. 2" SUBFLOOR TO JOIST OR GIRDER. FACE NAIL	2-16d
5. COLLAR TIE TO RAFTER, FACE NAIL	3-10d 4-10d box	26. 2" PLANKS (PLANK & BEAM- FLOOR AND ROOF) EACH BEARING, FACE NAIL	2-16d
6. RAFTER OR ROOF TRUSS TO TOP PL TOE NAIL, SECT 2308.7.5 TABLE 2308.7.5	3-10d 4-10d box	27. BUILT-UP GIRDER & BEAMS. 2" LUMBER LAYERS. FACE NAIL 24" O.C. T& B STAGGERED AT OPPOSITE SIDES	20d 10d box
7. ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2 INCH RIDGE BEAM	3-10d box END 3-16d box TOE	END & EACH SPLICE	3-10d box
8. STUD TO STUD, 16" O.C. FACE NAIL (NOT AT BRACED WALL PANELS)	10d box	28. LEDGER STRIP SUPPORTING JOISTS OR RAFTERS. FACE NAIL EACH	3-16d 4-10d box
9. STUD TO STUD & ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANELS) 12" O.C. FACE	16d box	29. JOIST TO BAND JOISTS OR RIM JOISTS. END NAIL.	3-16d 4-10d box
10. BUILT-UP HEADER (2" TO 2" HEADER) 12" O.C. EACH EDGE, FACE NAIL	16d box	30. BRIDGING OR BLOCKING TO JOIST, RAFTER OR TRUSS. END NAIL	2-8d 2-10d box
11. CONTINUOUS HEADER TO STUD TOE NAIL	4-8d 4-10d box	31. WOOD STRUCTURAL PANELS SUBFLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING & PARTICLE BOARD WALL SHEATHING TO FRAMING.	
12. TOP PLATE TO TOP PLATE 12" O.C. FACE NAIL	10d box	1/2" AND LESS	6d [c,l]
13. TOP PL TO TOP PL, AT END JOINTS (EACH SIDE OF END JOINT) FACE NAIL MIN 24" LAP SPLICE LENGTH EACH SIDE	8-16d 12-10d box	32. 19/32" TO 3/4"	8d[d] OR 6d[e]
		33. 7/8" TO 1 1/4"	10d[d] OR 8d[d]
14. BOTTOM PL TO JOIST, TO RIM JOIST, BAND JOIST OR BLK'G, 12" O.C. FACE NAIL (NOT AT BRACED WALL PANELS)	16d box	34. OTHER EXTERIOR WALL SHEATHING 3" O.C. EDGE, 6" O.C. INTERMEDIATE SUPPORTS	
15. BOTTOM PL TO JOIST, TO RIM JOIST, BAND JOIST OR BLK'G, 16" O.C. FACE NAIL AT BRACED WALL PANELS	3-16d box	1/2" FIBERBOARD SHEATHING	6d
		35. 25/32" FIBERBOARD SHEATHING	8d
16. STUD TO TOP OR BOTTOM PLATE TOE / END	4-10d box 3-10d box	36. WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING	
17. TOP OR BOTTOM PLATE TO STUD	2-16d 3-10d box	3/4" AND LESS	6d[e]
		37. 7/8" TO 1"	8d[e]
18. TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS, FACE NAIL	2-16d 3-10d box	38. 1 1/8" TO 11/4"	10d[d] OR 8d[e]
19. 1" BRACE TO EACH STUD AND PLATE FACE NAIL	2-10d box	39. PANEL SIDING TO FRAMING 1/2" OR LESS	6d[f]
20. 1"x 6" SHEATHING TO EACH BEARING FACE NAIL	2-8d 2-10d box	40. 5/8"	8d[f]

CBC TABLE 2304.10.2 FASTENING SCHEDULE NOTES

a. Common or box nails are permitted to be used except where otherwise stated.
b. Nails spaced at 6 inches on center at edges, 12 inches at intermediate supports except 6 inches at supports where spans are 48 inches or more. For nailing of wood structural panel and particle board diaphragms and shear walls, refer to Section 2305. Nails for wall sheathing are permitted to be common, box or casing.
c. Common or deformed shank (6d - 2" x 0.113"; 8d - 2½" x 0.131"; 10d - 3" x 0.148").
d. Common (6d - 2" x 0.113"; 8d - 2½" x 0.131"; 10d - 3" x 0.148").
e. Deformed shank (6d - 2" x 0.113"; 8d - 2½" x 0.131"; 10d - 3" x 0.148").
f. Corrosion-resistant siding (6d - 1⅞" x 0.106"; 8d - 2⅜" x 0.128") or casing (6d - 2" x 0.099"; 8d - 2½" x 0.113") nail.
g. Fasteners spaced 3 inches on center at exterior edges and 6 inches on center at intermediate supports, when used as structural sheathing. Spacing shall be 6 inches on center on the edges and 12 inches on center at intermediate supports for nonstructural applications.
h. Corrosion-resistant roofing nails with 7/16-inch-diameter head and 1½-inch length for ½-inch sheathing and 1¾-inch length for 25/32-inch sheathing.
i. Corrosion-resistant staples with nominal 7/16-inch crown and 1⅛-inch length for ½-inch sheathing and 1½-inch length for 25/32-inch sheathing. Panel supports at 16 inches (20 inches if strength axis in the long direction of the panel, unless otherwise marked).
j. Casing (1½" x 0.080") or finish (1½" x 0.072") nails spaced 6 inches on panel edges, 12" at intermediate supports.
k. Panel supports at 24 inches. Casing or finish nails spaced 6 inches on panel edges, 12" at intermediate supports.
l. For roof sheathing applications, 8d nails (2½" x 0.113") are the minimum required for wood structural panels.
m. Staples shall have a minimum crown width of 7/16 inch.
n. For roof sheathing applications, fasteners spaced 4 inches on center at edges, 8 inches at intermediate supports.
o. Fasteners spaced 4 inches on center at edges, 8 inches at intermediate supports for subfloor and wall sheathing and 3 inches on center at edges, 6 inches at intermediate supports for roof sheathing.
p. Fasteners spaced 4 inches on center at edges, 8 inches at intermediate supports.

ABBREVIATIONS

A.B. ANCHOR BOLT
ABV. ABOVE
BD BOARD
BM. BEAM
BLW. BELOW
BLK. BLOCK
BLK'G BLOCKING
B.N. BOUNDRY NAILING
C.B.C. CALIFORNIA BLDG CODE
CLG. CEILING
C.B. CEILING BEAM
OC ON CENTER
COL. COLUMN
CONC. CONCRETE
CONT. CONTINUOUS
DL DEAD LOAD
 DIAMETER
D.F. DOUGLAS FIR
D.S. DOUBLE STUD
EA. EACH
(E) EXISTING
E.N. EDGE NAILING
EXT. EXTERIOR
F.O.S. FACE OF STUD
F.O.C. FACE OF CONCRETE
F.N. FIELD NAILING
FIN. FINISH
FHWS FLAT HEAD WOOD SCREW
FLR. FLOOR
F.C.B. FLUSH CEILING BM
FTG. FOOTING
GYP. GYPSUM
GLB GLUED, PRESSURE LAMINATED BEAM
H.F. HEM FIR
HGR. HANGER
HDR.. HEADER
H.D. HOLDOWN
HORIZ. HORIZONTAL
H.D.G. HOT DIPPED GALVANIZED
ICBO INT'L. CONF. OF BUILDING. OFFICIALS
INT. INTERIOR
JST. JOIST
LVL LAMINATED VENEER LUMBER
L.S. LAG SCREW
LL LIVE LOAD
K.B. KICK BRACE
K.P. KING POST
M.A. MST ABOVE
M.B. MACHINE BOLT
MFR. MANUFACTURER
MAX. MAXIMUM
MIN. MINIMUM
MTL. METAL
(N) NEW
N.T.S.. NOT TO SCALE
OC ON CENTER
O.F. OUTSIDE FACE
O.H. OPPOSITE HAND
P.A. POST ABOVE
PL PLATE
PLY. PLYWOOD
PLYWD. PLYWOOD
P.E.N. PLYWOOD EDGE NAILING
PLF POUNDS PER LINEAR FOOT
P.S.I. POUNDS PER SQ. INCH
P.S.F. POUNDS PER SQ. FOOT
PSL PARALLAM STRAND LUMBER
P.T. PRESSURE TREATED
P.T.D.F PRESSURE TREATED DOUGLAS FIR
REBAR DEFORMED REINF. BAR
S.A.D. SEE ARCHITECTURAL DRAWINGS
S.W.S SHEAR WALL SCHEDULE
SHTG. SHEATHING
SHT. SHEET
SPECS. SPECIFICATIONS
STD. STANDARD
STL. STEEL
SQ. SQUARE
THD. THREAD
T.O.BM. TOP OF BEAM., ETC.
T & G TONGUE & GROOVE
T & B TOP & BOTTOM
TL TOTAL LOAD
TYP. TYPICAL
U.B.C. UNIFORM BUILDING CODE
U.N.O. UNLESS NOTED OTHERWISE
U.O.N. UNLESS OTHERWISE NOTED
VERT. VERTICAL
W/ WITH
W.W.F. WELDED WIRE FABRIC

TYPICAL HANGER SCHEDULE JOISTS & BEAMS, U.N.O.	
JOISTS/ BEAM	HANGER *
3½ x 5½ LSL, (2) 5½ LVL OR 4x6	HGUS46
3½ x 7¼ LSL, (2) 7¼ LVL OR 4x8	HGUS48
3½ x 9¼- 9½ PSL, (2) 9¼- 9½ LVL OR 4x10	HGUS410
3½ x 11¼- 11⅞ PSL, (2) 11¼-11⅞ LVL OR 4x12	HGUS412
3½ x 14 PSL, 2- 14 LVL OR 4x14	HGUS414
3½ x 16 PSL, 2- 16 LVL OR 4x16	HGUS414
3½ x 18 PSL, 2- 18 LVL OR 4x18	HGUS414
5¼ x 5½ LSL, (3) 5½ LVL OR 6x6	HU66
5¼ x 7¼ LSL, (3) 7¼ LVL OR 6x8	HGUS5.50/8
5¼ x 9¼- 9½ PSL, (3) 9¼- 9½ LVL OR 6x10	HGUS5.50/10
5¼ x 11¼-11⅞ PSL, (3) 11¼- 11⅞ LVL OR 6x12	HGUS5.50/12
5¼ x 14 PSL, (3) 14 LVL OR 6x14	HGUS5.50/14
5¼ x 16 PSL, (3) 16 LVL OR 6x16	HGUS5.50/14
5¼ x 18 PSL, (3) 18 LVL OR 6x18	HGUS5.50/14
7 x 9¼- 9½ PSL, (4) 9¼- 9½ LVL	HGUS7.25/10
7 x 11¼-11⅞ PSL, (4) 11¼-11⅞ LVL	HGUS7.25/12
7 x 14 PSL, (4) 14 LVL	HGUS7.25/14
7 x 16 PSL, (4) 16 LVL	HGUS7.25/14
7 x 18 PSL, (4) 18 LVL	HGUS7.25/14
1¾ x 5½ LVL	HU1.81/5
1¾ x 7¼ -9 ½ LVL	HU7
1¾ x 11 ⅞ LVL	HU11
1¾ x 14 LVL	HU14
1¾ x 16-18 LVL	MIU1.181/16
9½ -16 TJI FLOOR JOISTS	IUS, ITT
3⅛ - 6¾ WIDE GLULAM BEAM	HGUS

* USE HUC CONCEALED HANGER AT CORNER CONDITIONS WHERE REQUIRED

TYPICAL NAILING AND HANGER SCHEDULE

MATERIAL SPECIFICATIONS

LUMBER :

ALL FRAMING LUMBER SHALL BE DOUGLAS FIR-LARCH AS FOLLOWS, UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS:

STUDS:	2x4 CONSTRUCTION GRADE, 2x6 D.F.#2
RAFTERS & JOISTS:	D.F.#2
PLATES, BLOCKS & MISC.:	CONSTRUCTION GRADE
POSTS:	4x D.F.#2, 6x D.F. #1 (CONCEALED & EXPOSED)
BEAMS & HEADERS:	D.F.#1
EXPOSED BEAMS:	4x12 D.F.#1, APPEARANCE GRADE FOHC
GLU-LAMINATED BEAMS:	24F-V4, 24F-V8 AT CANTILEVER
MUDSILL:	2x OR 3x P.T.D.F.

GLU-LAMS SHALL BE ARCHITECTURAL GRADE IF EXPOSED. PROVIDE AITC CERTIFICATE OF COMPLIANCE FOR ALL GLU-LAM MEMBERS TO BUILDING INSPECTOR PRIOR TO INSTALLATION. PROVIDE STANDARD CAMBER (UNLESS OTHERWISE NOTED).

PLYWOOD :

LOCATION	GRADING	NAILING (U.N.O.)
ROOF - 1/2" CDX	APA (32/16)	8d @ 6" EDGE, 12" FIELD
FLOOR - 3/4" T&G CDX	APA (32/16)	10d @ 6" EDGE, 10" FIELD

NOTE: ALL GRADE MARKS ON PLYWOOD SHEATHING AND LUMBER SHALL BE LEGIBLE. USE OSB SHEATHING AS ALTERNATE.

FLOOR I-JOIST

TRUS JOIST (TJI) I- JOIST ARE TO BE THE SIZE SHOWN ON PLANS, AND TO BE MANUFACTURED BY TRUS JOIST CORP. OR APPROVED EQUAL.

TIMBERSTRAND :

TIMBERSTRAND (LSL) MEMBERS ARE TO BE THE SIZE SHOWN ON PLANS AND TO BE MANUFACTURED BY TRUSS JOIST CORP. OR APPROVED EQUAL.

MICROLAM BEAMS:

MICROLAM (ML OR LVL) BEAMS ARE TO BE THE SIZE SHOWN ON PLANS, AND TO BE MANUFACTURED BY TRUS JOIST CORP. OR APPROVED EQUAL. MICROLAM BEAMS SHALL HAVE THE FOLLOWING ALLOWABLE DESIGN STRESSES: E = 1,800,000 PSI, Fb = 2,600 PSI, Fv = 285 PSI

PARALLAM BEAMS:

PARALLAM (PSL) BEAMS ARE TO BE THE SIZE SHOWN ON PLANS, AND TO BE MANUFACTURED BY TRUSS JOIST CORP.OR APPROVED EQUAL. PARALLAM BEAMS SHALL HAVE THE FOLLOWING ALLOWABLE DESIGN STRESSES. E = 2,000,000 PSI, Fb = 2,900 PSI, Fv = 290 PSI

GLB NOTES:

1. ALL FABRICATION AND WORKMANSHIP SHALL CONFORM TO THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR STRUCTURAL GLUED LAMINATED DOUGLAS FIR (COAST REGION) LUMBER BY THE WEST COAST LUMBER MAN'S ASSOCIATION AND THE CURRENT EDITION OF TIMBER CONSTRUCTION.
2. ALL GLUED LAMINATED MEMBERS SHALL BE DOUGLAS FIR, COMBINATION 24F-V4 (U.N.O.) OR 24F-V8 WITH WATERPROOF RESORCINOL OR PHENOL RESORCINOL GLUE CONFORMING TO THE FEDERAL SPECIFICATIONS MIL-A-397. (USE 24F-V8 AT CANTILEVER CONDITION).
3. FINISH OF THE MEMBERS SHALL BE INDUSTRIAL APPEARANCE GRADE IN CONFORMANCE WITH THE STANDARD APPEARANCE GRADES OF THE A.I.T.C.
4. A CERTIFICATE OF INSPECTION FOR EACH GLU-LAM BEAM FROM AN APPROVED TESTING AGENCY SHALL BE SUBMITTED TO AND APPROVED BY THE LOCAL BUILDING DEPT. AND BY THE ENGINEER PRIOR TO ERECTION.

STEEL/ WELDING:

TYPICAL STEEL STRENGTHS	
WIDE FLANGE COLUMNS BEAMS & TEES	ASTM A992 (Fy=50 KSI)
CHANNELS, PLATES AND ANGLES	ASTM A36 (Fy=36 KSI)
PIPE STEEL	ASTM A501 (Fy=36 KSI) OR ASTM A53 TYPE E OR S, GRADE B (Fy=35 KSI)
TUBULAR STEEL	ASTM A500 GRADE B (Fy=46 KSI)
BOLTS	ASTM F1852 TYPE 1 OR ASTM A325

1. ALL CONNECTION AND ANCHOR BOLTS SHALL BE A307 STEEL.
2. ALL WELDING SHALL BE ELECTRIC ARC PER AWS D1.1, WITH E70XX ELECTRODES.
3. ALL SHOP WELDING TO BE DONE IN AN APPROVED FABRICATOR'S SHOP.
4. ALL FIELD WELDING TO HAVE SPECIAL INSPECTION.
5. PAINTING OF STRUCTURAL STEEL SHALL COMPLY WITH THE REQUIREMENTS CONTAINED IN THE LATEST AISC PROVISION.

CONCRETE BLOCK:

1. ALL CONCRETE BLOCKS SHALL BE TYPE N OR S M f'm= 1500 PSI MIN., WITH NO SPECIAL INSPECTION REQUIRED. ALL BLOCK WALLS SHALL BE GROUTED SOLID (U.N.O.), AND SHALL CONFORM TO ACI REPORT #67-23.
2. GROUT SHALL ATTAIN A MIN. COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS.
3. WALLS SHALL BE GROUTED IN 4' MAXIMUM LIFTS, WITHOUT CLEANOUTS.

ANCHOR AND HOLDOWN BOLTS :

1. ANCHOR BOLTS SHALL BE AS A MINIMUM: 5/8" DIA. x12" LONG, SPACED AT 6'-0" O.C. THEY SHALL HAVE A MINIMUM EMBEDMENT OF 7" INTO THE CONCRETE, AND BE CONFIGURED WITH A STANDARD HOOK OR "J" AT THE EMBEDDED END. A MINIMUM OF TWO ANCHOR BOLTS SHALL BE PLACED PER SILL PIECE, 12" MAX OR 7 BOLT DIAMETER MIN. AT EACH END.
   ALL ANCHOR BOLTS TO BE A307 STEEL, GRADE "A", HOT DIPPED GALVANIZED UNLESS OTHERWISE NOTED. A 3"x3"x1/4" THICK PLATE WASHER SHALL BE INSTALLED UNDER EACH ANCHOR BOLT HEAD.
2. HOLD-DOWN ANCHORS SHALL BE INSTALLED PER SHEARWALL SCHEDULES AS SHOWN ON THE PLANS. FOR EXISTING FOUNDATIONS, OR REVISIONS REQUIRING ANCHORS TO BE INSERTED, ADHESIVE ANCHORS SUCH AS SIMPSON 'SET-3G' EPOXY OR APPROVED EQUIVALENT, SHALL BE USED AND INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S SPECIFICATIONS. SEE PLANS AND DETAILS FOR REQUIRED SIZE AND DEPTH OF EMBEDMENT.
3. SPECIAL INSPECTION REQUIRED FOR ALL ADHESIVE HOLDOWN ANCHORS.

EPOXY AND ANCHORS: (ICC ESR-4057)

1. EPOXY GROUT USED FOR THE SETTING OR DEFORMED REINFORCING BARS SHALL BE SIMPSON 'SET-3G' EPOXY SURFACE OF EXISTING CONCRETE SHALL BE FREE FROM DUST OR DEBRIS PRIOR TO INJECTION EPOXY PRODUCT TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. EPOXY USED FOR THE SETTING OF ALL-THREAD ROD BOLTS SHALL BE SIMPSON 'SET-3G' EPOXY. EPOXY SHALL BE INSTALLED W/ MANUFACTURER'S RECOMMENDATIONS AND PROVIDE SPECIAL INSPECTION BY CERTIFIED TESTING AGENCY.

CORROSION PROTECTION NOTE:

FASTENERS FOR PRESSURE-PRESERVATIVE TREATED AND FIRE-RETARDANT TREATED WOOD SHALL BE OF HOT-DIPPED ZINC COATED GALVANIZED, STAINLESS STEEL, SILICON BRONZE OR COPPER.

USE PRESSURE TREATED WOOD, CEDAR, REDWOOD OR EQUIVALENT AT WOOD FRAMING EXPOSED TO ELEMENTS. USE HOT DIPPED GALVANIZED CONNECTORS AND HARDWARES.

SHOP DRAWINGS:

SHOP DRAWINGS ARE AN AID FOR FIELD PLACEMENT AND ARE SUPERSEDED BY THE STRUCTURAL DRAWINGS. ANY REVIEW OF SHOP DRAWINGS BY THIS OFFICE IS ONLY FOR GENERAL CONFORMANCE TO THE STRUCTURAL REQUIREMENTS & IN NO WAY GUARANTEES THE ACCURACY OR COMPLETENESS OF INFORMATION THEREON. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSURE ALL CONSTRUCTION IS IN FULL COMPLIANCE WITH THE LATEST SET OF STRUCTURAL DRAWINGS.

GENERAL MATERIAL SPECIFICATIONS

GENERAL FRAMING AND CARPENTRY

01. RAFTERS SHALL BE FRAMED DIRECTLY OPPOSITE EACH OTHER RIDGES, VALLEYS AND HIPS. ALL RIDGE BOARDS, MAIN VALLEY AND HIP RAFTERS SHALL BE AT LEAST 2 IN. THICK (NOMINAL). IN NO CASE SHALL THE DEPTH BE LESS THAN THE CUT OF THE END OF THE RAFTER (U.N.O.)
02. WHERE APPLICABLE, RAFTERS SHALL BE NAILED TO ADJACENT PARALLEL CLG JST TO FORM A CONTINUOUS TIE BETWEEN EXTERIOR WALLS, (U.N.O.). WHERE CLG JST ARE NOT PARALLEL, RAFTERS SHALL BE TIED BY A 1 x 4 (MIN.) CROSS TIE. THE CROSS TIES SHALL BE SPACED NOT MORE THAN 4'-0" O.C.
03. UNLESS SUPPORTED LATERALLY BY ADEQUATE FRAMING, THE MAXIMUM ALLOWABLE HEIGHT SHALL BE 10'-0" FOR 2 X 4 AND 16'-0" FOR 3 X 4 STUD AND OR 2 X 6 STUD WALL (U.N.O.).
04. JOISTS SHALL BE SUPPORTED LATERALLY BY SOLID BLOCKING OR END HANGERS AT EACH END AND AT EACH SUPPORT. SOLID BLOCKING SHALL NOT BE LESS THAN 2" THICK (NOMINAL) AND THE FULL DEPTH OF THE JOISTS.
05. THE ENDS OF JOISTS, BEAMS, AND GIRDERS SHALL HAVE AT LEAST 1 1/2" OF BEARING ON WOOD OR METAL AND 3" OF BEARING ON CONCRETE OF MASONRY, (U.N.O.).
06. WHEN BOLTS ARE IN USE A WASHER NOT LESS THAN A STANDARD CUT WASHER OR A METAL PLATE OR STRAP IN LIEU THEREOF, SHALL BE BETWEEN THE WOOD AND THE BOLT HEAD AND BETWEEN THE WOOD AND THE NUT.
07. MACHINE BOLTS AND ANCHOR BOLTS SHALL CONFORM TO ASTM A307 (U.N.O.)
08. WOOD JOISTS AND FLOORS CLOSER THAN 18" OR WOOD GIRDERS AND SUPPORTS CLOSER THAN 12" TO THE GROUND SHALL BE PRESSURE TREATED WOOD
09. CONTRACTOR SHALL SUBMIT A CERTIFICATION OF CONFORMANCE FOR ALL GLUED-LAMINATED BEAMS TO BUILDING INSPECTION DEPT., PRIOR TO ERECTION.
10. PURLINS SHALL BE 2 X 6 OR THE SAME SIZE AS RAFTERS, WHICHEVER IS GREATER, (U.N.O.).
11 ALL WOOD BEARING ON CONCRETE OR MASONRY SHALL BE PRESSURE TREATED DOUGLAS FIR.
12. ALL METAL CONNECTORS SHALL BE SIMPSON STRONG-TIE CONNECTORS. THE NAILS FOR THESE CONNECTORS SHALL BE JOIST HANGER NAILS AS MANUFACTURED BY THE SIMPSON CO.
13. PROVIDE FIRE STOPS AT ALL INTERSECTIONS OF STUD WALLS AT FLOOR, CEILING AND ROOF. FIRE STOPS SHALL BE 2x NOMINAL THICKNESS OF WOOD AND SHALL BE THE FULL WITH OF THE ENCLOSED SPACE. PLACE FIRE STOPS AT A MAXIMUM SPACING OF 10'-0" IN EACH DIRECTION AND AT THE SAME LINES AS FIRE STOPS IN ADJACENT STUD WALLS.
14. TOP PLATES OF ALL STUD WALLS SHALL BE 2 PIECES THE SAME STUD SIZES. SPLICES TO LAP 4'-0" MINIMUM AND BE NAILED PER THE DETAILS.
15. BOLT HOLES IN WOOD SHALL BE 1/32" TO 1/16" LARGER THAN THE NORMAL BOLT DIAMETER. ALL BOLTS SHALL HAVE STANDARD CUT WASHER UNDER HEAD AND NUT UNLESS NOTED OTHERWISE.
16. ALL BOLTS SHALL BE RETIGHTENED PRIOR TO THE APPLICATION OF SHEATHING PLASTER, ETC.
17. STRUCTURAL MEMBERS SHALL NOT BE CUT FOR PIPES, ETC. UNLESS SPECIFICALLY DETAILED
18. PROVIDE 2x SOLID BLOCKING BETWEEN JOISTS AND RAFTERS AT ALL SUPPORTS BLOCKING SHALL BE ONE PIECE AND THE FULL DEPTH OF THE JOIST RAFTER.
19. CROSS BRIDGING OR SOLID BLOCKING SHALL BE PROVIDED AT 8'-0" O.C. MAXIMUM FOR ALL FLOOR JOISTS MORE THAN 12" DEEP AND AT 10'-0" O.C. MAXIMUM FOR ALL RAFTERS MORE THAN 8" DEEP.
20. PROVIDE DOUBLE JOISTS UNDER WALLS PARALLEL TO FLOOR FRAMING AND BLOCKING UNDER WALLS PERPENDICULAR TO FLOOR FRAMING, UNLESS OTHERWISE NOTED.
21. ROOF SHEATHING: 1/2" CDX, SPAN RATING 32/16 STD. EXT. NAIL WITH 8d COMMON NAILS @ 6" O.C. EDGE, AND 12" O.C. FIELD. ALL ROOF SHEATHING UNBLOCKED, UNLESS NOTED OTHERWISE. PLYWOOD LONG EDGES TO BE PLACED PERPENDICULAR TO FRAMING (U.N.O.) MINIMUM DIMENSION SHALL BE 24". USE OSB SHEATHIHG AS ALTERNATE.
22. FLOOR SHEATHING: MIN. 3/4" CDX, T&G, OR BETTER; PANEL RATING 32/16 OR BETTER, STD. EXT. GLUE & NAIL FLOOR SHEATHING WITH 10d COMMON NAILS @ 6" O.C. EDGES, AND 10" O.C. FIELD. ALL FLOOR SHEATHING UNBLOCKED AND LONG EDGES PLACED PERPENDICULAR TO FRAMING, UNLESS OTHERWISE NOTED. MINIMUM DIMENSION SHALL BE 24". USE OSB SHEATHING AS ALTERNATE.
23. ALL NAILING SHALL BE AS SHOWN ON THE DRAWINGS. IF NOT SPECIFIED, THEN NAILING SHALL CONFORM TO THE LATEST BUILDING CODE. ALL NAILS SHALL BE COMMONS. IF POWER DRIVEN NAILS ARE TO BE USED, SUBMIT WIRE GAUGE, LENGTH AND HEAD DIAMETER FOR REVIEW. IF NOT EQUAL TO COMMON WIRE SPECIFICATIONS, PLYWOOD TO BE NAILED WITH RING-SHANKED NAILS.
24. FASTENERS, HANGERS, AND CONNECTIONS FOR FRAMING SHALL BE SIMPSON STRONG-TIE PRODUCTS, OR APPROVED EQUAL, UNLESS OTHERWISE NOTED ON THE DRAWINGS. INSTALL WITH FASTENERS RECOMMENDED BY THE MANUFACTURER PER THEIR INSTRUCTIONS.
25. ALL INTERIOR SHEATHING TO BE 1/2" GYPBOARD w/ 5d COOLER NAILS @ 7" O.C. OR EQUIVALENT STAPLES OR SEE ARCHITECTURAL REQUIREMENTS.
26. STRUCTURAL MEMBERS SHALL NOT BE NOTCHED OR CUT WITHOUT APPROVAL FROM THE ENGINEER, UNLESS OTHERWISE DEFINED ON THE PLANS.
27. WHERE TOP OR SOLE PLATES ARE CUT FOR PIPES, A METAL TIE OF 0.058 INCHES THICK AND 1.5 INCHES WIDE SHALL BE FASTENED ACROSS THE OPENINGS WITH 6-16d NAILS ON EACH SIDE TYP., U.N.O.
28. NEW FRAMING LUMBER SHALL HAVE 19% MAXIMUM MOISTURE CONTENT AT THE TIME OF INSTALLATION.
29. UNLESS NOTED OTHERWISE ON THE PLANS, THE FOLLOWING MINIMUM CONNECTIONS, WITH REGARDS TO PROPER FIT AND SIZE, SHALL APPLY TO STRUCTURAL MEMBERS:

MINIMUM FRAMING CONNECTORS, U.N.O.	
POST TO BEAM	SIMPSON PC OR EPC POST CAPS
POST TO SILL PLATE	(2) SIMPSON A35 CLIPS
POST TO FOUNDATION	SIMPSON PB POST BASES
BEAM TO BEAM	SIMPSON HGUS HANGERS
BEAM TO PLATE	SIMPSON LPCZ CAP
JOIST TO BEAM	SIMPSON U HANGERS
2x RAFTERS	LRUZ OR U HGR (L>6'-0"), 3-16d (L<6'-0")
2x FLOOR JOIST	U HGR

CEILING JOIST SCHEDULE (CBC TABLE 2308.7.1)			
UNINHABITABLE ATTIC DL=5 psf, LL= 10 psf		UNINHABITABLE ATTIC w/ LIMITED STORAGE: DL=10 psf, LL=20 psf	
SIZE & SPACING	JOIST SPAN	SIZE & SPACING	JOIST SPAN
2x6 AT 16" O.C.	17'-6" MAX	2x6 AT 16" O.C.	12'-6" MAX
2x8 AT 16" O.C.	23'-0" MAX	2x8 AT 16" O.C.	16'-0" MAX
2x10 AT 16" O.C.	26'-0" MAX	2x10 AT 16" O.C.	19'-6" MAX
2x6 AT 24" O.C.	14'-6" MAX	2x6 AT 12" O.C.	14'-6" MAX
2x8 AT 24" O.C.	18'-6" MAX	2x8 AT 12" O.C.	18'-6" MAX
2x10 AT 24" O.C.	22'-6" MAX	2x10 AT 12" O.C.	22'-6" MAX

GENERAL FRAMING AND CARPENTRY

FOUNDATION DESIGN CRITERIA

CBC/ CRC MINIMUM CODE REQUIREMENTS
MINIMUM EMBEDMENT = 12"
ALLOW. BEARING PRESSURE = 1500 PSF

SEISMIC DESIGN CRITERIA

EQUIVALENT LATERAL FORCE PROCEDURE
SITE CLASS = D-DEFAULT
SEISMIC DESIGN CATEGORY = D
SHORT PERIOD RESPONSE (Ss) = 1.555
1 SEC. PERIOD RESPONSE (S1) = 0.628
RISK CATEGORY = II
IMPORTANCE FACTOR (I) = 1.0
RESPONSE MODIFICATION FACTOR (R) = 6.5
SPECTRAL RESPONSE COEFF SDS=1.244, SD1=0.712
SEISMIC RESPONSE COEFFICIENTS(S) Cs= 0.191
BASE SHEAR V= 10.594 KIPS
SEISMIC-FORCE-RESISTING SYSTEM(S)= BEARING WALL
WOOD WALLS SHEATHED w/ WOOD STRUCTURAL PANELS

WIND DESIGN CRITERIA

WIND SPEED Vu = 110 MPH
WIND SPEED Vasd = 85 MPH
RISK CATEGORY = II
EXPOSURE = C
Cp =0.80, Gcpi= 0.18

DEAD LOADS
TOTAL ROOF DL = 15 PSF
TOTAL FLOOR DL = 15 PSF

LIVE LOADS
TOTAL ROOF LL = 20 PSF
TOTAL FLOOR LL = 40 PSF
TOTAL DECK LL = 60 PSF

PROJECT DESIGN CRITERIA: 2022 CBC/CRC

GENERAL STRUCTURAL CONSTRUCTION NOTES AND SPECIFICATIONS:

01. THE ENGINEER IS NOT RESPONSIBLE FOR THE FABRICATION, ERECTION, NOR THE SAFETY OF THIS PROJECT. THE CONTRACTOR SHALL COMPLY WITH ALL SAFETY REGULATIONS, AND OSHA REQUIREMENTS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL TEMPORARY BRACING AND SHORING, FORMWORK, ETC., AS REQUIRED FOR THE PRESERVATION AND PROTECTION OF LIFE & PROPERTY DURING THE CONSTRUCTION OF THE BUILDING.
02. THESE DRAWINGS ARE INTENDED TO SHOW ALL ITEMS NECESSARY TO COMPLETE THE STRUCTURE. TYPICAL DETAILS AND NOTES AS SHOWN ON THE DRAWINGS SHALL APPLY TO SIMILAR CONDITIONS, UNLESS OTHERWISE SPECIFICALLY NOTED. ALL WORK AND CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES, REGULATIONS AND SAFETY REQUIREMENTS.
03. THE CONTRACTOR SHALL INFORM ROCA3 ENGINEERING'S OFFICE OF ALL REQUIRED ENGINEERING INSPECTIONS AS NOTED ON THE PLANS, OR REQUIRED BY THE LOCAL BUILDING DEPARTMENT, 48 HOURS PRIOR TO THE TIME REQUIRED FOR INSPECTION.
04. ALL CONSTRUCTION AND WORKMANSHIP SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE AND CALIFORNIA RESIDENTIAL CODE.
05. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ELEVATIONS AND CONDITIONS PRIOR TO STARTING CONSTRUCTION.
06 ANY DEVIATIONS FROM THE PLANS. WHICH ARE NECESSITATED BY FIELD CONDITIONS OR ANY CONDITIONS DIFFERENT FROM THOSE INDICATED ON PLAN SHALL BE CALLED TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO CONTINUING CONSTRUCTION. ALL WORK IS TO BE COORDINATED SO THAT COOPERATION BETWEEN THE TRADES, WHERE REQUIRED,IS ACCOMPLISHED
07. ALL DIMENSIONS TO TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, ELEVATIONS SECTIONS AND DETAILS.
08. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
09. MATERIAL NOTES AND SPECIFICATIONS ON DRAWINGS SHALL TAKE PRECEDENCE OVER THE PROJECT SPECIFICATIONS.
10. SEE ARCHITECTURAL PLANS FOR SIZES AND LOCATIONS OF ALL DOOR AND WINDOW OPENINGS, LOCATION OF ALL NON-BEARING PARTITIONS, CONCRETE CURBS, FLOOR AND ROOF SLOPES, DRAINS, ELEVATIONS, LOCATIONS OF ALL STAIRWAYS, (IF ANY), MISCELLANEOUS HANDRAILS, LADDERS. HANGERS, STEEL GRATING, LOCATION OF ALL CONCRETE INSERTS, CLIPS, GROOVES, GROUNDS AND VENEER ANCHORS, LOCATION AND DETAIL OF MISCELLANEOUS YARDWORK INCLUDING WALKS, CURBS, DRIVEWAYS, TUNNELS AND FINISHED GRADING PLANS.
11. CONTRACTOR SHALL REPAIR OR REPLACE ALL DAMAGED FINISH MATERIAL AND/OR STRUCTURAL MEMBERS AS REQUIRED AND AS CONFIRMED BY THE BUILDING INSPECTOR AND STRUCTURAL ENGINEER.
12. FRAMING CONDITIONS NOT SPECIFICALLY SHOWN SHALL BE FRAMED SIMILAR TO TYPICAL DETAILS FOR THE RESPECTIVE MATERIAL.
13. TRADE NAMES AND MANUFACTURERS REFERRED TO ARE FOR QUALITY STANDARDS ONLY, EQUIVALENT SUBSTITUTIONS WILL BE PERMITTED.

GENERAL NOTES AND STANDARDS

CONCRETE NOTES:

01. ALL CONCRETE SHALL BE REGULAR WEIGHT HARD ROCK, AND HAVE A MIN. 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI (CRC R404.1.3.3.1), UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. MAXIMUM SLUMP SHALL BE 4 INCHES. TYPE II CEMENT PER ASTM C150. WATER - CEMENT RATIO SHALL NOT EXCEED 0.45.NO SPECIAL INSPECTION IS REQUIRED (CBC1705.3.2.3) UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. (NOTE: 2500 PSI CONC.COMPRESSIVE STRENGTH WAS USED DESIGN)
02. ALL REINFORCING STEEL TO BE ASTM A615, DEFORMED BARS, AS FOLLOWS (UNLESS OTHERWISE NOTED ON THE PLANS): #3 & SMALLER, GR. 40, #4 & LARGER, GR. 60
03. MINIMUM COVER FOR ALL REBAR IS:
    3" FOR CONCRETE CAST AGAINST THE EARTH
    2" FOR FORMED CONCRETE AGAINST THE EARTH
    1.5" FOR CONCRETE NOT EXPOSED TO EARTH OR WEATHER
04. SUPPORT HORIZONTAL STEEL AT BOTTOM OF FOOTINGS, GRADE BEAMS AND PADS, WITH 3" MORTAR BLOCKS (DOBIES).
05. PIPES MAY PASS THROUGH STRUCTURAL CONCRETE IN SLEEVES, BUT SHALL NOT BE EMBEDDED THEREIN. PIPES OF DUCTS EXCEEDING ONE-THIRD THE SLAB OR FOOTING THICKNESS SHALL BE PLACE IN THE STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED.
06. ALL BENDING OF REINFORCING STEEL SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE AND ACI.
07. REINFORCING SHALL BE PLACED AND SUPPORTED IN A TRUE LINE AS SHOWN.
08. ALL REINFORCING SHALL BE CLEAN AND FREE OF EXTRANEOUS MATERIAL.
09. DOWELS, ANCHOR BOLTS AND OTHER EMBEDDED ITEMS ARE TO BE SECURED IN PLACE BEFORE CONCRETE IS POURED.
10. OPTIONAL COLD JOINTS MAY BE USED WHERE SHOWN, COLD JOINT EDGES SHALL BE CLEAN, FREE OF EXTRANEOUS AND INTENTIONALLY ROUGHENED.
11. ALL BARS IN CONCRETE SHALL BE LAPPED A MINIMUM OF 48 BARS DIAMETERS (2'-0" MIN.) AT ALL SPLICES UNLESS NOTED OTHERWISE.
12. SPLICES OF HORIZONTAL REBAR IN FOOTINGS SHALL BE STAGGERED 4'-0" MIN.
13. REFER TO ARCHITECTURAL DRAWINGS FOR REVEALS, AREAS OF TEXTURED CONCRETE OR SPECIAL FINISHES, ITEMS REQUIRED TO BE CAST INTO CONCRETE, CURBS AND SLAB DEPRESSIONS.

FOUNDATIONS

01. ALL EXISTING FILL SOIL AND DISTURBED NATURAL SOILS ARE TO BE EXCAVATED AND REPLACED WITH PROPERLY COMPACTED FILL. COMPACTED FILL SHALL BE 90% DENSITY.
02. RELATIVELY NON-EXPANSIVE FILL SHOULD BE USED IN BACKFILLING BEHIND WALLS ALL WALLS SHALL BE ADEQUATELY SHORED DURING THE BACKFILL OPERATION.
03. ALL FINISHED LANDSCAPE SURFACES SHALL BE GRADED SO AS TO PROVIDE 5% POSITIVE DRAINAGE AWAY FROM THE HOUSE.
04. THE NEW FOUNDATION SYSTEM SHALL MATCH THE EXISTING TYPE OF FOUNDATION SYSTEM. PARTS OF THE EXISTING FOUNDATION SHALL BE UNCOVERED BY THE PERMITTEE TO ALLOW THE FIELD INSPECTOR TO VERIFY COMPLIANCE AT THE TIME OF FOUNDATION INSPECTION.
05. ALL EARTHWORK, DRAINAGE, EXCAVATIONS AND SURFACE PREPARATIONS SHALL BE PERFORMED IN ACCORDANCE TO SOILS REPORT (IF AVAILABLE).

CONCRETE AND FOUNDATION NOTES

SHEAR WALL SCHEDULE

MARK	MATERIAL AND PANEL NAILING (NOTES #2 #3 #8)	(T.N.) TRANSFER NAILING CLIPS	(S.N.) SOLE PLATE NAILING	ANCHOR BOLTS SPACING 2x MUDSILL (NOTES #9 #13 #14)	ANCHOR BOLTS SPACING 3x MUDSILL	SHEAR WALL CAPACITY (#/') ASD (NOTE#18)	LRFD
1 *	1/2" CDX PLYWD 8d AT 6"o.c. E.N. 8d AT 12"o.c. F.N.	A35 @ 16" o.c. OR LTP4 AT 24" o.c	1/4"Ø x 4 1/2" SIMPSON SDS AT 16" o.c.	5/8"Ø A.B. @ 48" o.c.	5/8"Ø A.B. @ 48" o.c.	260	365
2 *	1/2" CDX PLYWD 8d AT 4"o.c. E.N. 8d AT 12"o.c. F.N.	A35 @ 12" o.c. OR LTP4 AT 20" o.c	1/4"Ø x 4 1/2" SIMPSON SDS AT 12" o.c.	5/8"Ø A.B. @ 36" o.c.	5/8"Ø A.B. @ 36" o.c.	380	532
3 **	1/2" CDX PLYWD 8d AT 3"o.c. E.N. 8d AT 12"o.c. F.N.	A35 @ 10" o.c. OR LTP4 AT 12" o.c	1/4"Ø x 4 1/2" SIMPSON SDS AT 8" o.c.	5/8"Ø A.B. @ 14" o.c.	5/8"Ø A.B. @ 28" o.c.	490	685
4 **	1/2" CDX PLYWD 8d AT 2"o.c. E.N. 8d AT 12"o.c. F.N.	A35 @ 10" o.c. OR LTP4 AT 10" o.c	1/4"Ø x 4 1/2" SIMPSON SDS AT 6" o.c.	5/8"Ø A.B. @ 10" o.c.	5/8"Ø A.B. @ 20" o.c.	636	895
5 **	1/2" CDX PLYWD 10d AT 2"o.c. E.N. 10d AT 12"o.c. F.N.	2 -A35 @ 12" o.c OR LTP4 AT 8" o.c	1/4"Ø x 4 1/2" SIMPSON SDS AT 5" o.c.	NOTE#6 N.A.	5/8"Ø A.B. @ 18" o.c.	770	1077
6 **	1/2" STRUCT 1 PLY 10d AT 2"o.c. E.N. 10d AT 12"o.c. F.N.	2 -A35 @ 12" o.c OR LTP4 AT 8" o.c	1/4"Ø x 4 1/2" SIMPSON SDS AT 4" o.c. STAGGERED	NOTE#6 N.A.	5/8"Ø A.B. @ 16" o.c.	870	1217
3 / 3 **	1/2" CDX PLYWD EA. SIDE 8d AT 3"o.c. E.N. 8d AT 12"o.c. F.N.	NOTE#10 LTP4 AT 12" o.c EACH SIDE STAGGERED	1/4"Ø x 4 1/2" SIMPSON SDS AT 3" o.c. STAGGERED	NOTE#6 N.A.	5/8"Ø A.B. @ 12" o.c.	980	1370
4 / 4 **	1/2" CDX PLYWD EA. SIDE 8d AT 2"o.c. E.N. 8d AT 12"o.c. F.N.	NOTE#10 LTP4 AT 10" o.c EACH SIDE STAGGERED	1/4"Ø x 4 1/2" SIMPSON SDS @ 5" o.c.,2 RWS STAGGERED	NOTE#6 N.A.	5/8"Ø A.B. @ 10" o.c.	1272	1790
6 / 6 **	1/2" STRUCT 1 PLY EA. SIDE 10d AT 2"o.c. E.N. 10d AT 12"o.c. F.N.	NOTE#10 LTP4 AT 8" o.c EACH SIDE STAGGERED	1/4"Ø x 4 1/2" SIMPSON SDS @ 4" o.c.,2 RWS STAGGERED	NOTE#6 N.A.	5/8"Ø A.B. @ 8" o.c.	1740	2434

NOTES: (U.N.O. ON PLANS)

1. "*" BLOCK ALL EDGES
2. "**" BLOCK ALL ADJOINING PLYWOOD EDGES WITH 3x LUMBER AND STAGGER NAILS (PLATES, STUDS, POST, BLOCKING, ETC.) SPECIAL INSPECTION IS REQUIRED
3. OFFSET PANEL JNTS ON DIFFERENT FRAMING MEMBERS WHERE PLYWOOD SHEAR MATERIAL OCCURS ON EACH SIDE OF WALL. OTHERWISE USE 3x MIN. LUMBER, NAILS SHALL BESTAGGERED ON BOTH SIDES.
4. USE PNEUMATICALLY DRIVEN 16d NAILS FOR ALL SPACING LESS THAN 6"o.c.. IF SILL PLATES SPLITS, NAILS SHALL BE DRIVEN IN PRE-DRILLED HOLES. NAILS SHALL NOT BE UNDERDRIVEN, OVERDRIVEN AND/OR SLANTED.
5. ALL NAILS SHALL BE COMMON.
6. "N/A" INDICATES NOT APPLICABLE, MININIM 3x MUDSILL IS REQUIRED. SEE PLANS FOR CONNECTION DETAILS.
7. PROVIDE STUDS AT 16" O.C. (MAX.)
8. OSB APA RATED SHEATHING MAY BE USED, EXCEPT FOR STRUCTURAL I PLYWOOD SHEAR WALL TYPE 6.
9. USE 5/8Ø GALV. ALL-THREAD ROD EMBED 7" INTO (E) CONCRETE & SET W/ SIMPSON 'SET-3G' EPOXY AT EXISTING FOOTING CONDITIONS ONLY.
10. USE BLK'G OR RIM BOARD EACH SIDE OF WALL FOR LTP4.
11. T.N.- INDICATES TRANSFER NAILING CLIP
12. ALL SILL NAILING T.N. & S.N. APPLY TO THE EXTENT OF SHEAR WALLS ONLY.
13. USE 3" x 3" x 1/4" WASHER PLATE FOR ALL ANCHOR BOLTS.
14. SCHEDULE SHOWS THE MIN. MUDSILL SIZE AND REQUIRED ANCHOR BOLT SPACING AS A GUIDE, CONTRACTOR SHALL USE SIMILAR SIZE MUDSILL FOR UNIFORMITY.
15. ALL EXTERIOR WALLS SHALL HAVE 1/2" CDX PLYWOOD WITH SHEAR 1 NAILING UNLESS OTHERWISE NOTED ON PLANS.
16. ALL EXTERIOR AND INTERIOR CRIPPLE WALLS SHALL HAVE 1/2" CDX PLYWOODWITH SHEAR 1 NAILING UNLESS OTHERWISE NOTED ON PLANS.
17. ALL CRIPPLE WALLS, EXTERIOR OR INTERIOR, WITH TWO FLOORS OR STORIES ABOVE, SHALL BE 2x6 STUD WALL WITH SHEAR 1 NAILING UNLESS OTHERWISE NOTED ON PLANS.
18. SHEAR CAPACITIES TAKEN FROM LATEST AWC- SDPWS

HORIZONTAL DIAPHRAGMS

ROOF: 1/2" CDX PLYWOOD WITH 8d COMMON NAILS AT 6" O.C. EDGES, & 12" O.C. FIELD. (UNBLOCKED UNLESS OTHERWISE NOTED ON PLANS)

FLOOR: 3/4" CDX PLYWOOD WITH 10d COMMON NAILS AT 6" O.C.EDGES, & 10" O.C. FIELD. (UNBLOCKED UNLESS OTHERWISE NOTED ON PLANS)

SHEARWALL SCHEDULE AND ANCHOR BOLT SPACING

SPECIAL INSPECTION TO COMPLY WITH SECTION 1705 OF 2022 CALIFORNIA BUILDING CODE. THE ENGINEER OF RECORD OR APPROVED AGENCY SHALL SUBMIT REPORTS OF SPECIAL INSPECTION AND TESTS TO THE BUILDING DEPARTMENT.

SECTION	TYPE OF INSPECTION	CONTINUOUS	PERIODIC
1705.2	STRUCTURAL STEEL		
	SHOP IDENTIFICATION & WELDING INSPECTION		
	FIELD WELDING INSPECTION		
1705.3	CONCRETE CONSTRUCTION		
	REINFORCEMENT PLACEMENT & SPECIFICATIONS		
	ANCHORS POST- INSTALLED IN HARDENED CONCRETE	X	
	CONCRETE AND SHOTCRETE PLACEMENT		
1705.6	SOILS		
	VERIFY MATERIAL BELOW FOUNDATION IS ADEQUATE TO ACHIEVE DESIGN BEARING CAPACITY		
	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		
	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT & COMPACTION OF FILL		
1705.8	CAST-IN-PLACE DEEP FOUNDATION		
	INSPECT DRILLING OPERATIONS & RECORD EACH ELEMENT		
	VERIFY LOCATIONS, PLUMBNESS, ELEMENT DIAMETERS, LENGTHS AND END ADEQUATE END-BEARING STRATA.		
1705.12	SEISMIC RESISTANCE		
	WOOD SHEAR WALLS INCLUDING NAILING, BOLTING, ANCHORING AND OTHER FASTENING TO OTHERS ELEMENTS OF THE SEISMIC FORCE- RESISTING SYSTEM WHERE THE FASTENER SPACING OF THE SHEATHING IS 4 INCHES ON CENTER OR LESS.		X
	OTHERS		
ICC ESR-1679	SIMPSON STRONG WALL INSTALLATION (ANCHOR BOLT & STRONG WALL CONNECTION)		

SPECIAL INSPECTION

REGISTERED PROFESSIONAL ENGINEER
JOEY G. ROCA III
No. 71615
Exp.12-31-27
CIVIL
STATE OF CALIFORNIA

SIGNATURE

Roca3
ENGINEERING

ROCA3 ENGINEERING
STRUCTURAL DESIGN
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PHONE: (408) 821-1335
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e-mail : joey@roca3.com
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PROJECT TITLE:
PROPOSED ADDITION AND REMODEL FOR :
SCHAEFER RESIDENCE
836 11TH AVENUE, REDWOOD CITY, CALIFORNIA

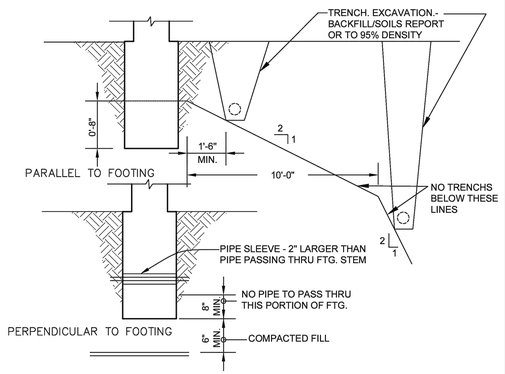
NO.	DESCRIPTION	DATE
1	PLAN CHECK	02.1.2.26

REVISIONS

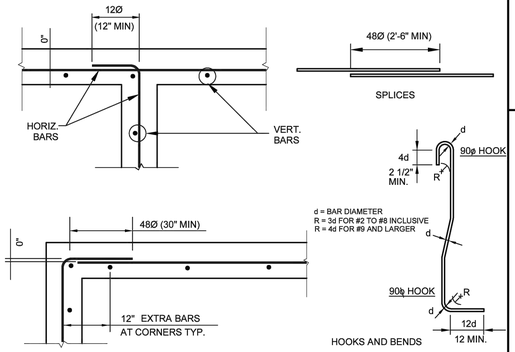
DRAWN:	JR	CHECKED:	JR
SCALE:		AS NOTED	
ISSUED:		12/17/2025	
PROJECT NO.		1355.112025	

SHEET NO. REV. 0

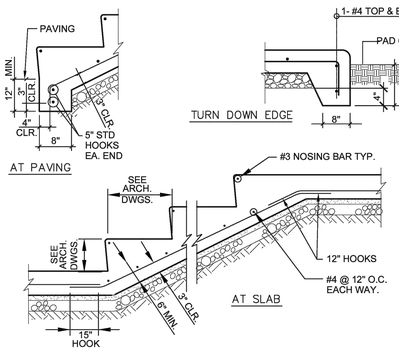
SD1



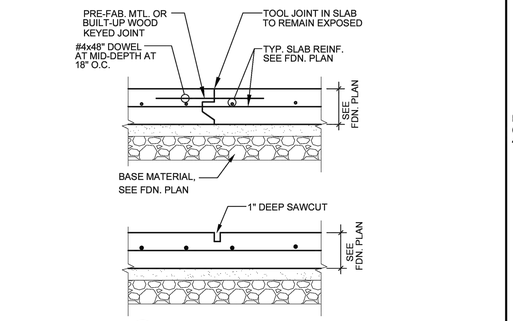
A TRENCH DETAIL



B REINFORCEMENT AT CORNERS AND INTERSECTIONS

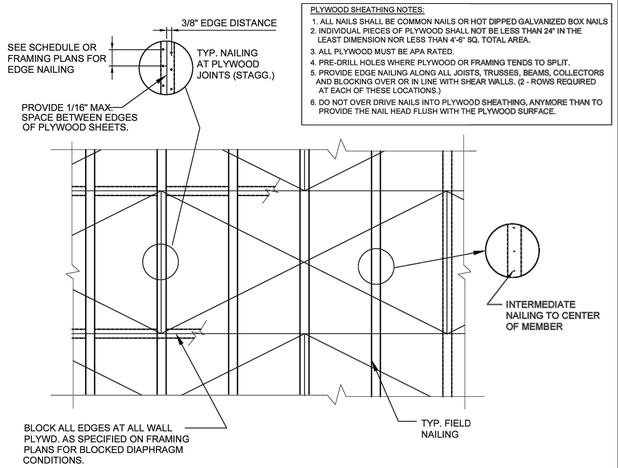


C STAIR/ SLAB TURNDOWN EDGE



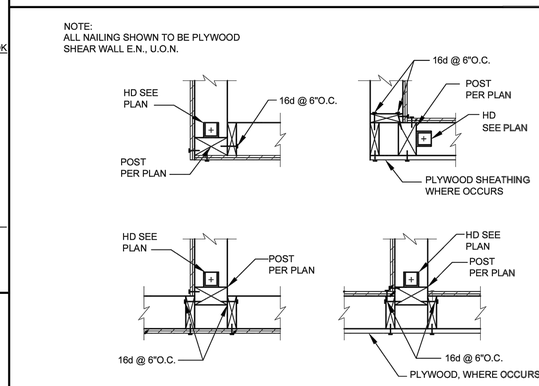
D CONTROL JOINTS

4. TYPICAL CONCRETE/ REINFORCEMENT DETAILS

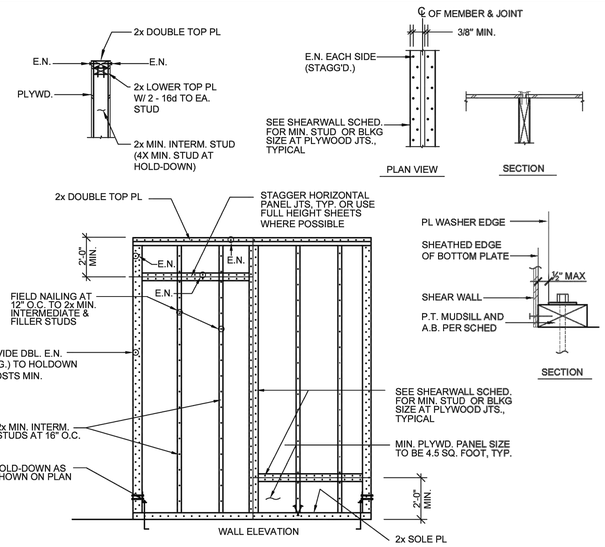


PLYWOOD SHEATHING NOTES:
1. ALL NAILS SHALL BE COMMON NAILS OR HOT DIPPED GALVANIZED BOX NAILS
2. INDIVIDUAL PIECES OF PLYWOOD SHALL NOT BE LESS THAN 24" IN THE LEAST DIMENSION NOR LESS THAN 4'-6" SQ. TOTAL AREA.
3. ALL PLYWOOD MUST BE APA RATED.
4. PRE-DRILL HOLES WHERE PLYWOOD OR FRAMING TENDS TO SPLIT.
5. PROVIDE EDGE NAILING ALONG ALL JOISTS, TRUSSES, BEAMS, COLLECTORS AND BLOCKING OVER OR IN LINE WITH SHEAR WALLS. (2 - ROWS REQUIRED AT EACH OF THESE LOCATIONS.)
6. DO NOT OVER DRIVE NAILS INTO PLYWOOD SHEATHING, ANYMORE THAN TO PROVIDE THE NAIL HEAD FLUSH WITH THE PLYWOOD SURFACE.

A PLYWOOD SHEATING DETAIL



B SHEAR WALL INTERSECTIONS

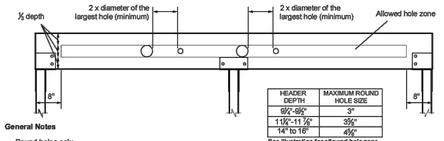


G PLYWOOD SHEAR WALLS

3. TYPICAL SHEAR WALL CONNECTION DETAILS

ALLOWABLE HOLES - Headers and Beams

1.55E TimberStrand® LSL Headers and Beams

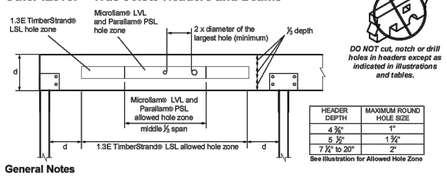


HEADER DEPTH	MAXIMUM ROUND HOLE SIZE
6¼"-9¼"	3"
11⅞"-11 7/8"	3½"
14" to 16"	4½"

See Illustration for allowed hole zone

General Notes
- Round holes only
- No holes in headers or beams in plank orientation.

Other iLevel™ Trus Joist® Headers and Beams



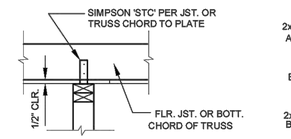
DO NOT cut, notch or drill holes in headers except as indicated in illustrations and tables.

HEADER DEPTH	MAXIMUM ROUND HOLE SIZE
4 3/4"	1"
5 1/2"	1 3/4"
7 1/4" to 20"	2"

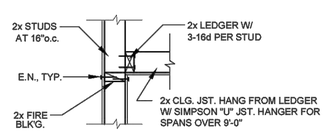
See Illustration for Allowed Hole Zone

General Notes
- Allowed hole zone suitable for **uniformly loaded headers and beams only.**
- Round holes only
- No holes in cantilevers.
- No holes in headers or beams in plank orientation.

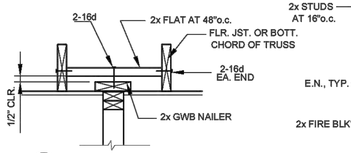
A HEADER/ BEAMS OPENINGS (iLEVEL MANUFACTURED BEAMS)



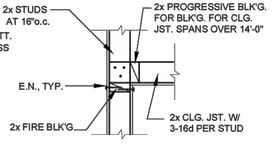
B NORMAL TO INTERIOR NON-BEARING WALL



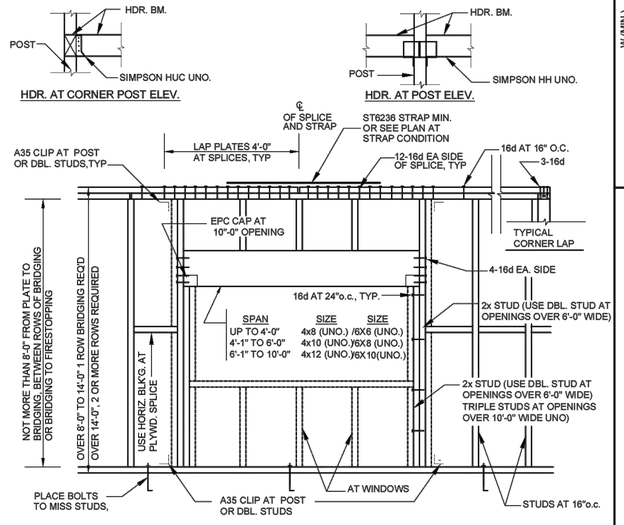
D CEILING JOISTS/ BALLOON FRAMING



C PARALLEL TO INTERIOR NON-BEARING WALL

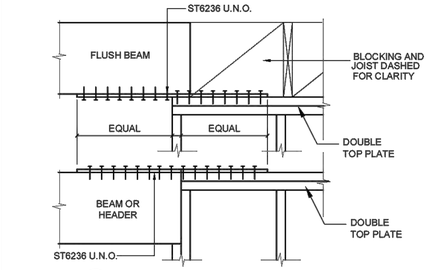


E CEILING JOISTS/ BALLOON FRAMING

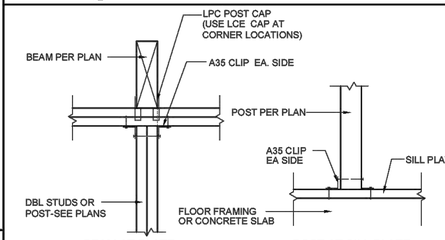


F FRAMED WALL OPENINGS/ TOP PL SPILCE

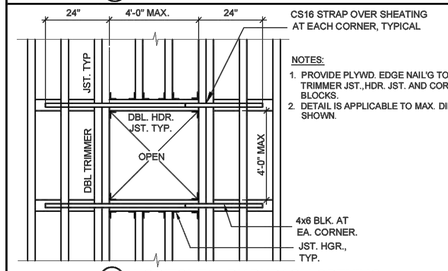
2. TYPICAL WOOD FRAME DETAILS



A TYPICAL BEAM STRAP DETAIL

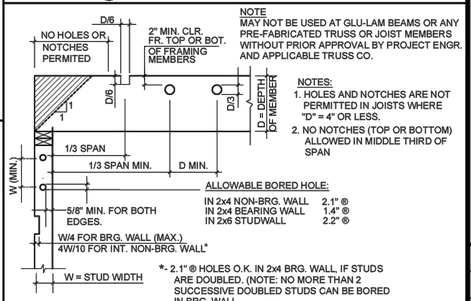


B TYPICAL BEAM TO POST CONNECTION



NOTES:
1. PROVIDE PLYWD. EDGE NAIL'G TO TRIMMER JST.,HDR. JST. AND CORNER BLOCKS.
2. DETAIL IS APPLICABLE TO MAX. DIMEN. SHOWN.

C HORIZONTAL DIAPHRAGM OPENING



NOTE
MAY NOT BE USED AT GLU-LAM BEAMS OR ANY PRE-FABRICATED TRUSS OR JOIST MEMBERS WITHOUT PRIOR APPROVAL BY PROJECT ENGR. AND APPLICABLE TRUSS CO.

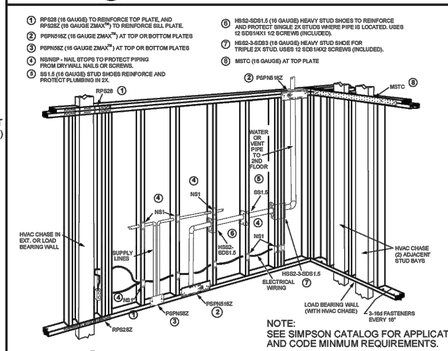
NOTES:
1. HOLES AND NOTCHES ARE NOT PERMITTED IN JOISTS WHERE "D" = 4" OR LESS.
2. NO NOTCHES (TOP OR BOTTOM) ALLOWED IN MIDDLE THIRD OF SPAN

ALLOWABLE BORED HOLE:

IN 2x4 NON-BRG. WALL	2.1" @
IN 2x4 BEARING WALL	1.4" @
IN 2x6 STUDWALL	2.2" @

*- 2.1" @ HOLES O.K. IN 2x4 BRG. WALL, IF STUDS ARE DOUBLED. (NOTE: NO MORE THAN 2 SUCCESSIVE DOUBLED STUDS CAN BE BORED IN BRG. WALL.

D JOIST AND STUD CUTOUT DETAIL



NOTE:
SEE SIMPSON CATALOG FOR APPLICATION AND CODE MINIMUM REQUIREMENTS.

E WOOD FRAME REPAIR AND PROTECTION

1. TYPICAL WOOD FRAME DETAILS

REGISTERED PROFESSIONAL ENGINEER
JOEY G. ROCA III
No. 71615
Exp.12-31-27
CIVIL
STATE OF CALIFORNIA
SIGNATURE

Roca3 ENGINEERING

ROCA3 ENGINEERING
STRUCTURAL DESIGN
RESIDENTIAL /COMMERCIAL

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PROJECT TITLE:
PROPOSED ADDITION AND REMODEL FOR :

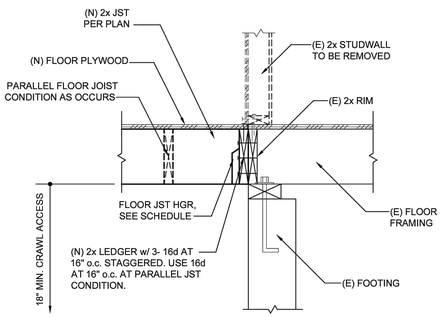
SCHAEFER RESIDENCE

836 11TH AVENUE, REDWOOD CITY, CALIFORNIA

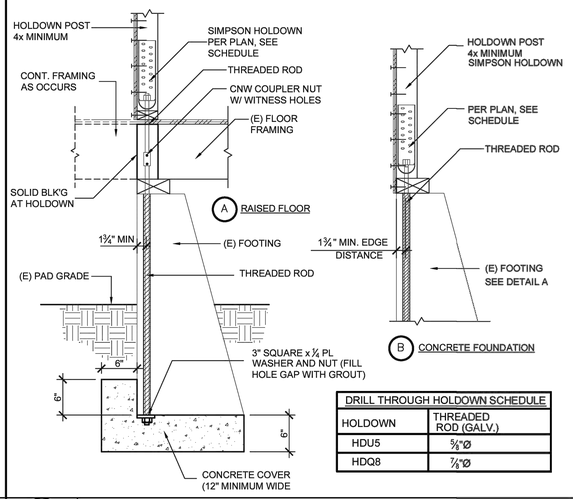
NO.	DESCRIPTION	DATE
1	PLAN CHECK	02.1.2.26
	REVISIONS	

DRAWN:	JR	CHECKED:	JR
SCALE:	AS NOTED		
ISSUED:	12/17/2025		
PROJECT NO.	1355.112025		

SHEET NO. SD2 REV. 1

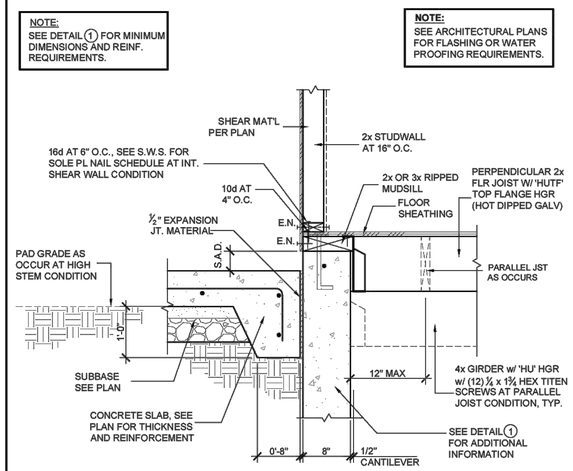


10 FLOOR FRAMING ADDITION

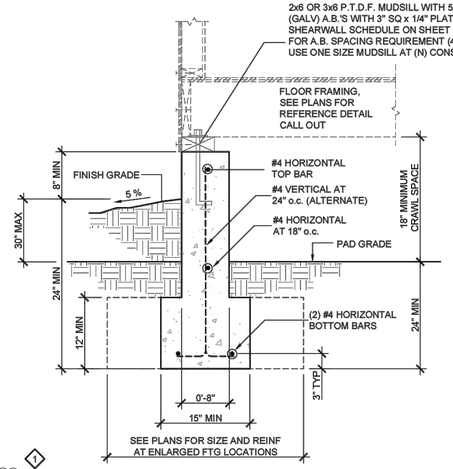


DRILL THROUGH HOLDOWN SCHEDULE	
HOLDOWN	THREADED ROD (GALV.)
HDU5	⅝"Ø
HDQ8	⅞"Ø

7 DRILL THROUGH HOLDOWN



4 ALTERNATE HIGH STEM WALL DETAIL



1 TYPICAL FOOTING

NOTE:

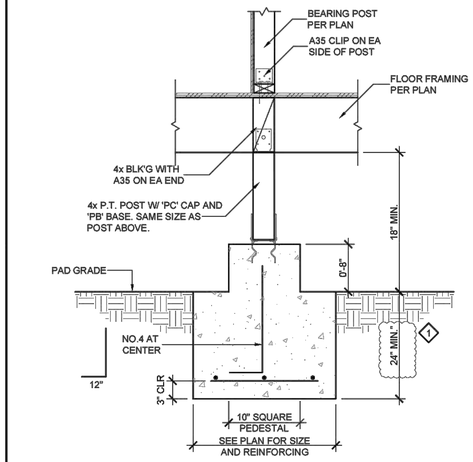
INSTALL SIMPSON SET-3G EPOXY PER MANUFACTURER'S SPECIFICATION.

11 FLOOR FRAMING ADDITION AT SHEARWALL

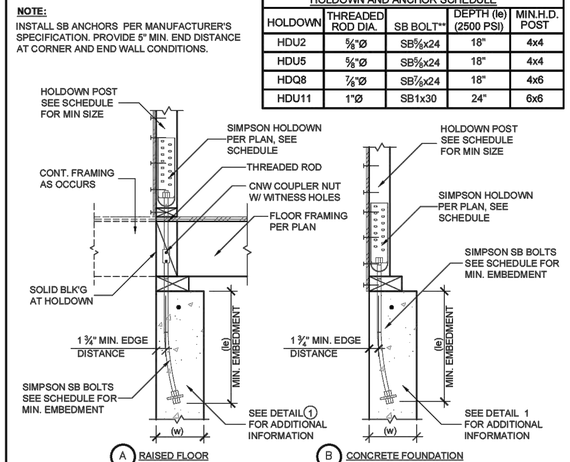
NOTE:

INSTALL SIMPSON SET-3G EPOXY PER MANUFACTURER'S SPECIFICATION.

8 SHEARWALL ON (E) FOOTING

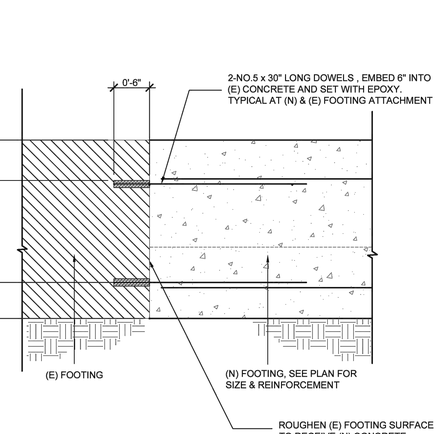


5 ISOLATED FOOTING

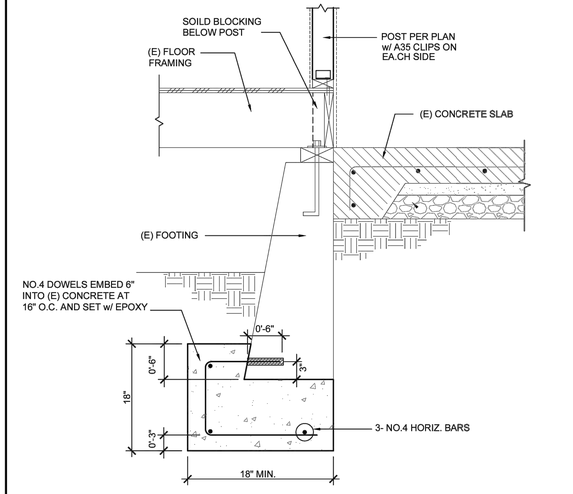


HOLDOWN AND ANCHOR SCHEDULE				
HOLDOWN	THREADED ROD DIA.	SB BOLT**	DEPTH (le) (2500 PSI)	MIN.H.D. POST
HDU2	⅝"Ø	SB⅝x24	18"	4x4
HDU5	⅝"Ø	SB⅝x24	18"	4x4
HDQ8	⅞"Ø	SB⅞x24	18"	4x6
HDU11	1"Ø	SB1x30	24"	6x6

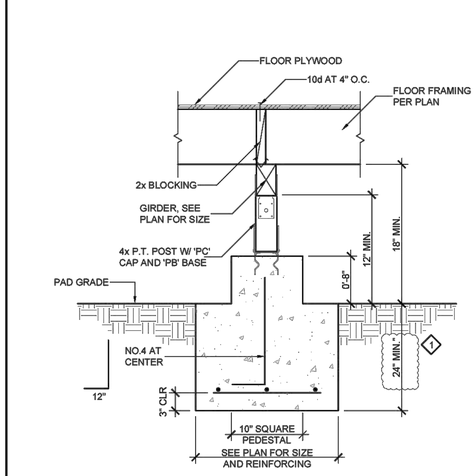
2 TYPICAL HOLDOWN



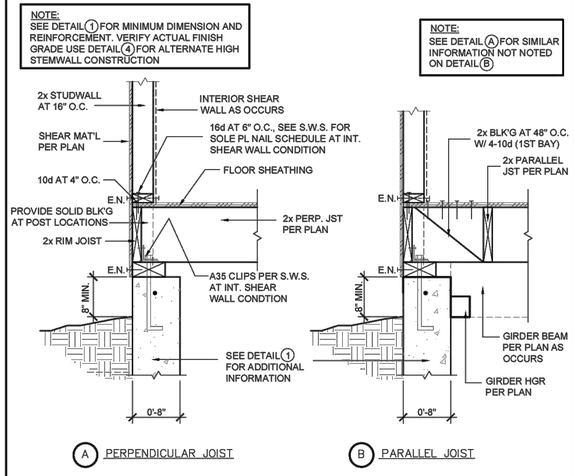
12 NEW TO EXISTING FOOTING



9 UNDERPIN FOOTING



6 TYPICAL FLOOR GIRDER



3 EXTERIOR FOOTING

REGISTERED PROFESSIONAL ENGINEER
JOEY G. ROCA III
No. 71615
Exp.12-31-27
CIVIL
STATE OF CALIFORNIA
SIGNATURE

Roca3 ENGINEERING

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STRUCTURAL DESIGN
RESIDENTIAL /COMMERCIAL

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P.O. BOX 362100
MILPITAS, CA 95036

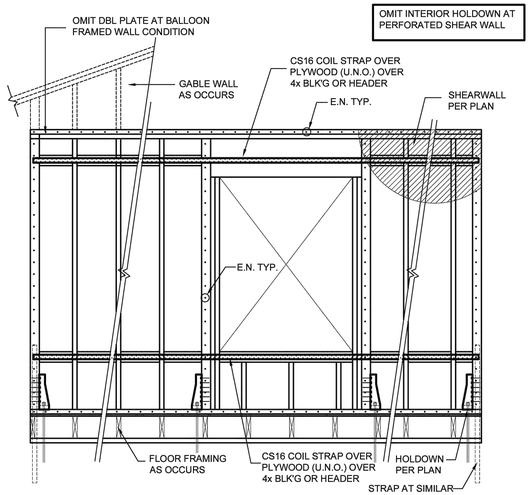
PHONE: (408) 821-1335
FAX: (408) 825-2333
e-mail : joey@roca3.com
web : www.roca3.com

PROJECT TITLE:
PROPOSED ADDITION AND REMODEL FOR :
SCHAEFER RESIDENCE
836 11TH AVENUE, REDWOOD CITY, CALIFORNIA

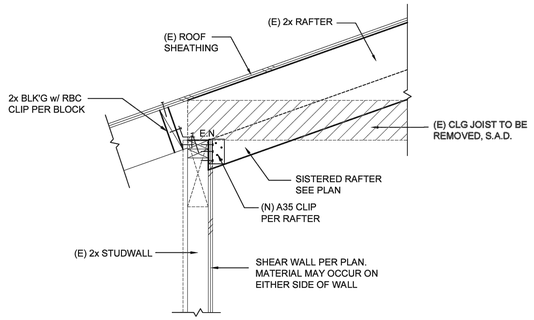
NO.	DESCRIPTION	DATE
1	PLAN CHECK	02.1.2.26
REVISIONS		

DRAWN:	JR	CHECKED:	JR
SCALE:	AS NOTED		
ISSUED:	12/17/2025		
PROJECT NO.	1355.112025		

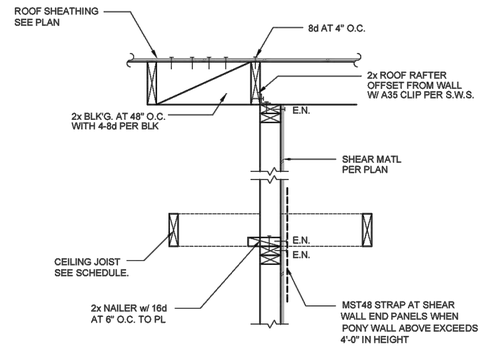
SHEET NO. SD3 REV. 0



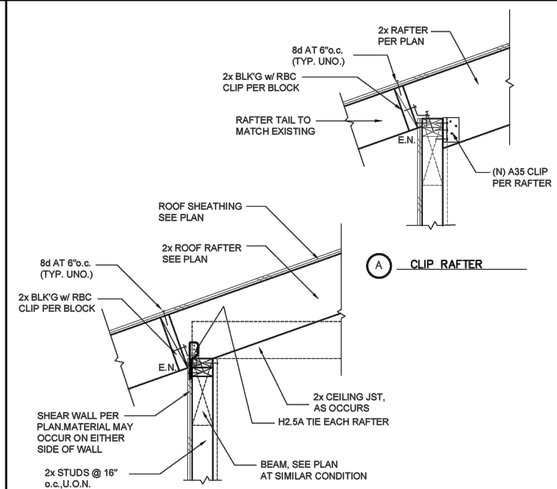
10 WINDOW STRAP AND BLOCKING



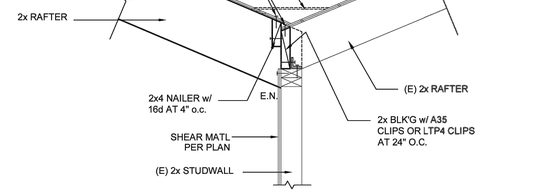
7 PERPENDICULAR RAFTER



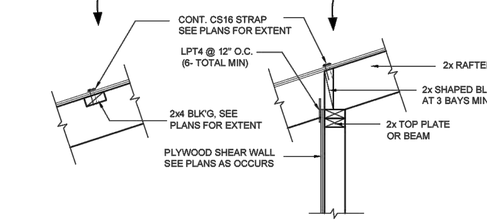
4 INTERIOR SHEARWALL



1 PERPENDICULAR RAFTER

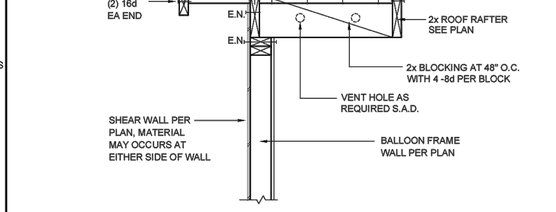


8 SHEAR TRANSFER DETAIL

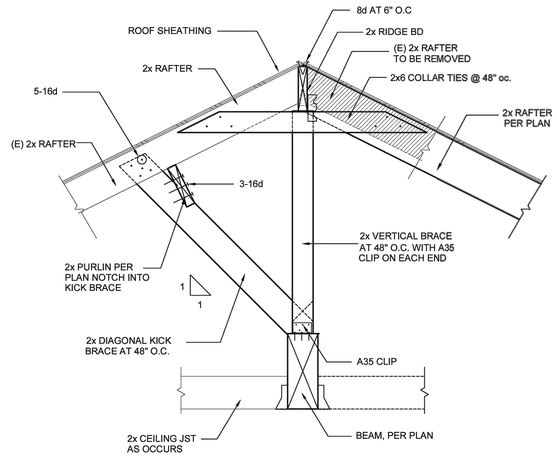


COLLECTOR DETAIL

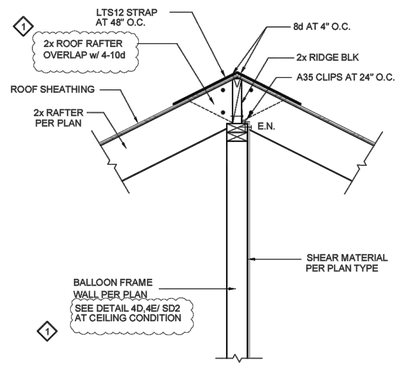
5



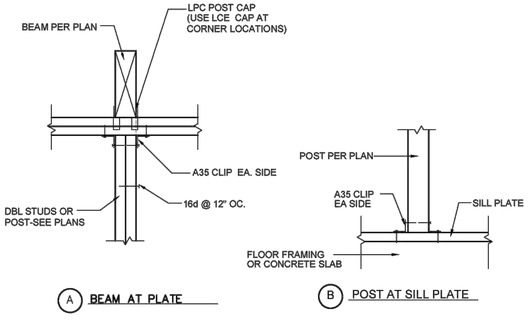
2 PARALLEL RAFTERS- BALLOON FRAMED



9 CEILING BEAM RIDGE SUPPORT



6 SHEAR WALL AT RIDGE



3 TYPICAL BEAM TO POST CONNECTION

REGISTERED PROFESSIONAL ENGINEER
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REVISIONS

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SCALE:	AS NOTED		
ISSUED:	12/17/2025		
PROJECT NO.	1355.112025		

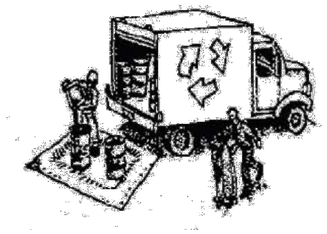
SHEET NO. SD4 REV. 0

SAN MATEO COUNTYWIDE
Water Pollution Prevention Program
Clean Water. Healthy Community.

Construction Best Management Practices (BMPs)

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project, all year long.

Materials & Waste Management



Non-Hazardous Materials

- ❑ Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.
- ❑ Use (but don't overuse) reclaimed water for dust control.

Hazardous Materials

- ❑ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.
- ❑ Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- ❑ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- ❑ Arrange for appropriate disposal of all hazardous wastes.

Waste Management

- ❑ Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.
- ❑ Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site.
- ❑ Clean or replace portable toilets, and inspect them frequently for leaks and spills.
- ❑ Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.)
- ❑ Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.

Construction Entrances and Perimeter

- ❑ Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- ❑ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

Equipment Management & Spill Control

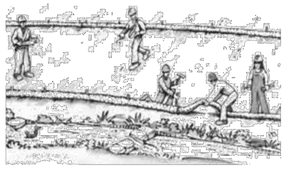
Maintenance and Parking

- ❑ Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage.
- ❑ Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
- ❑ If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
- ❑ If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
- ❑ Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment.

Spill Prevention and Control

- ❑ Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times.
- ❑ Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
- ❑ Clean up spills or leaks immediately and dispose of cleanup materials properly.
- ❑ Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
- ❑ Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them.
- ❑ Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- ❑ Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

Earthmoving



- ❑ Schedule grading and excavation work during dry weather.
- ❑ Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- ❑ Remove existing vegetation only when absolutely necessary, and seed or plant vegetation for erosion control on slopes or where construction is not immediately planned.
- ❑ Prevent sediment from migrating offsite and protect storm drain inlets, gutters, ditches, and drainage courses by installing and maintaining appropriate BMPs, such as fiber rolls, silt fences, sediment basins, gravel bags, berms, etc.
- ❑ Keep excavated soil on site and transfer it to dump trucks on site, not in the streets.

Contaminated Soils

- ❑ If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
  - Unusual soil conditions, discoloration, or odor.
  - Abandoned underground tanks.
  - Abandoned wells
  - Buried barrels, debris, or trash.

Paving/Asphalt Work

- ❑ Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- ❑ Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- ❑ Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.
- ❑ Do not use water to wash down fresh asphalt concrete pavement.

Sawcutting & Asphalt/Concrete Removal

- ❑ Protect nearby storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system.
- ❑ Shovel, abosorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- ❑ If sawcut slurry enters a catch basin, clean it up immediately.

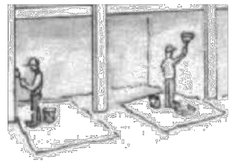
Concrete, Grout & Mortar Application

- ❑ Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind.
- ❑ Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that will prevent leaching into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage.
- ❑ When washing exposed aggregate, prevent washwater from entering storm drains. Block any inlets and vacuum gutters, hose washwater onto dirt areas, or drain onto a bermed surface to be pumped and disposed of properly.

Landscaping

- ❑ Protect stockpiled landscaping materials from wind and rain by storing them under tarps all year-round.
- ❑ Stack bagged material on pallets and under cover.
- ❑ Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

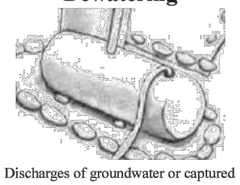
Painting & Paint Removal



Painting Cleanup and Removal

- ❑ Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
- ❑ For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain.
- ❑ For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
- ❑ Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.
- ❑ Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a state-certified contractor.

Dewatering



- ❑ Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer call your local wastewater treatment plant.
- ❑ Divert run-on water from offsite away from all disturbed areas.
- ❑ When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ❑ In areas of known or suspected contamination, call your local agency to determine whether the ground water must be tested. Pumped groundwater may need to be collected and hauled off-site for treatment and proper disposal.

Storm drain polluters may be liable for fines of up to $10,000 per day!

CONTACT:
DAVID SCHAFFER, SLM LLC
650-296-6767
david@slmllc.com

836 11TH AVENUE, REDWOOD CITY, CA 94063

INITIAL SUB
12/10/2025
RESUB1
3/6/2026

PREPARED BY
ROCKWELL CHAN
RPC STUDIO RWC
ROCKC1216@GMAIL.COM

BMP

Rhino's Construction, Inc.

1503 Woodside Rd
Redwood City, Ca 94061
Phone: (650) 787-7160
Email: rian@rhinosgeneralconstruction.com
Web: rhinosgeneralconstruction.com

2/23/26

Fire Flow Test:

To Whom It May Concern,

This letter is to confirm that a fire flow test was completed at 836 11th Ave., Redwood City, CA 94063.

The results are as follows: 70 psi at 15.81 gallons per minute x 120 minutes (2hrs)=1,821 gallons of flow. This confirms there is adequate amount of flow for the property.

Rian F. Carroll
CA LIC# 992564

CONTACT:
DAVID SCHAFFER, SLM LLC
650-296-6767
david@slmllc.com

836 11TH AVENUE, REDWOOD CITY, CA 94063

INITIAL SUB
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DOC