THE BEYER RESIDENCE
FAMILY HOME RENOVATION

426 PINE ST.
SAUSALITO, CA
APN: 065-054-11

SYMBOLS

- DATUM POINT
- REVISION NUMBER REFERENCE
- ROOM NAME AND FINISH (RM-NAME / WOOD)
- ANNOTATION
- DIMENSIONS (1")
- NORTH REFERENCE
- SECTION CUT
- GRID LINE (1)
- DOOR NUMBER (D3)
- WINDOW NUMBER (W1)
- FINISH REFERENCES (W1 PL1 P1 / M1 C1)
- DETAIL REFERECE SHEET NUMBER (1 / A5.0 TYP)
- ELEVATION REFERENCE SHEET NUMBER (1 / A5.0)
- SECTION REFERENCE SHEET NUMBER (1 / A5.0)
- INTERIOR ELEVATION REFERENCE SHEET NUMBER (1 / A3.0 / 1 2 3 4)

DEFERRED SUBMITTAL

FIRE SPRINKLERS PERMIT
FIRE HYDRANT UPGRADE PERMIT
HOT TUB PERMIT
FIRE PIT PERMIT

ENERGY SPECIAL FEATURES

- SOLAR PANELS 3.2KW
- BATTERY SYSTEM: 5 KWH
- NORTHWEST ENERGY EFFICIENCY ALLIANCE (NEEA) RATED HEAT PUMP WATER HEATER; SPECIFIC BRAND/MODEL, OR EQUIVALENT, MUST BE INSTALLED

HERS FEATURE SUMMARY
- QUALITY INSULATION INSTALLATION (QII)
- INDOOR AIR QUALITY VENTILATION
- KITCHEN RANGE HOOD
- VERIFIED HEAT PUMP RATED HEATING CAPACITY

J#: ASB138362

FIRE HYDRANT UPGRADE NOTE:
THE NEAREST FIRE HYDRANT, LOCATED AT 20 BONITA (MMWD HYDRANT: HY-00927), SHALL BE UPGRADED TO THE MINIMUM STANDARD OF ONE 4.5" OUTLET AND ONE 2.5" OUTLET. THE HYDRANT BODY REPLACEMENT/INSTALLATION WILL BE APPROVED AND INSPECTED BY THE FIRE DISTRICT STAFF OR REPRESENTATIVES

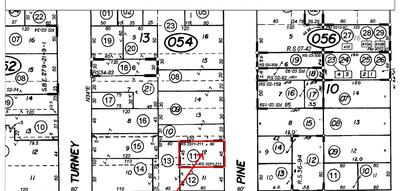
ABBREVIATIONS

@	AT
(E)	EXISTING
(N)	NEW
ADJ.	ADJACENT
ADJUST.	ADJUSTABLE
APPROX.	APPROXIMATE
ARCH.	ARCHITECT (URAL) (URE)
AVG	AVERAGE
BLDG.	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM.	BEAM
B.O.	BOTTOM OF
B.O.C.	BOTTOM OF CONCRETE
B.O.F.	BOTTOM OF FOOTING
B.O.W.	BOTTOM OF WALL
B.S.	BOTH SIDES
C.M.U.	CONCRETE MASONRY UNIT
CEM.	CEMENT
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CL.	CLOSET
CLG.	CEILING
COL.	COLUMN
CONC.	CONCRETE
CONT.	CONTINUOUS
CNTR	COUNTER
CTR	CENTER
CY	CUBIC YARDS
DBL	DOUBLE
DEMO.	DEMOLITION
DEPT.	DEPARTMENT
DTL	DETAIL
DF	DOUGLAS FIR
DIA.	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
DN	DOWN
DS	DOWNSPOUT
EA.	EACH
EL.	ELEVATION
ELEC.	ELECTRICAL
EMER.	EMERGENCY
ENCL.	ENCLOSURE
EQ.	EQUAL
EQUIP.	EQUIPMENT
EXT.	EXTERIOR
FDN	FOUNDATION
FF	FINISHED FLOOR
FLR	FLOOR
FRMG	FRAMING
FT	FEET OR FOOT
FTG.	FOOTING
GAL.	GALLON
GALV.	GALVANIZED
GYP.	GYPSUM BOARD
HORIZ.	HORIZONTAL
HDR	HEADER
HSS	HOLLOW STRUCTURAL STEEL
HT	HEIGHT
IN.	INCH
INCL.	INCLUDED
INFO.	INFORMATION
INSP.	INSPECTION
INSUL.	INSULATION
INT.	INTERIOR
JST	JOIST
LB.	POUND
MAX.	MAXIMUM
MECH.	MECHANICAL
MEZZ.	MEZZANINE
MFR.	MANUFACTURER
MIN.	MINIMUM
MTL.	METAL
N/A	NOT APPLICABLE
NO.	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
OPNG	OPENING
OPP.	OPPOSITE
PL	PROPERTY LINE
PLY	PLYWOOD
REF.	REFERENCE
REQ'D	REQUIRED
RET.	RETAINING
REV.	REVIS(E)(ION)
RECIRC.	RECIRCULATING
SB	SETBACK
SD	STORM DRAIN
S.O.G.	SLAB ON GRADE
SPEC	SPECIFICATION
SQ.	SQUARE
S.S.	STAINLESS STEEL
T&B	TOP & BOTTOM
T&G	TONGUE & GROOVE
TYP.	TYPICAL
TW	TOP OF WALL
VOL.	VOLUME
V.I.F.	VERIFY IN FIELD

FINISHED RENDERING

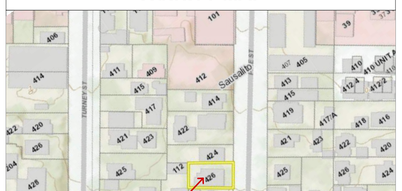


ASSESOR MAP



NOTE – Assessor's Block Numbers Shown in Ellipses.
Assessor's Parcel Numbers Shown in Circles.

VICINITY MAP



PROJECT DIRECTORY

OWNER:	JAKE & GEORGIA BEYER 426 PINE ST. SAUSALITO, CA 94965 415-721-7340
DESIGNER:	G DESIGN, LLC DAVID GRABHAM 1112 2ND STREET SAN RAFAEL , CA 94901 415-721-7340
STRUCTURAL:	HOGAN LAND SERVICES MICHAEL BOUREY 4780 SONOMA HIGHWAY SANTA ROSA, CA 95409 877-544-2104
TITLE 24:	AURORA BUILDING PERFORMANCE JON MITGUARD 2 FREDSON COURT NOVATO, CA 94947 415-847-2332
CIVIL:	AURORA BUILDING PERFORMANCE JON MITGUARD 2 FREDSON COURT NOVATO, CA 94947 415-847-2332

SCOPE OF WORK

NEW THREE-STORY, 2196 SF HOME CONSTRUCTION WITH A 428 SF ADU, INCLUDING NEW FRONT AND BACK YARD AND DRIVEWAY APRON REPLACEMENT.

PROJECT VALUATION: $ 1,680,000

CODES

ALL CONSTRUCTION SHALL COMPLY WITH THE:

2022 CALIFORNIA BUILDING CODE
2022 CALIFORNIA PLUMBING CODE
2022 CALIFORNIA MECHANICAL CODE
2022 CALIFORNIA ELECTRICAL CODE
2022 CALIFORNIA FIRE CODE/ SMFD 2022-23 ORDINANCE
2022 CALIFORNIA ENERGY CODE
2022 CALIFORNIA RESIDENTIAL CODE
2022 CALGREEN RESIDENTIAL MANDATORY MEASURES

THE SAUSALITO MUNICIPAL CODE

TABLE OF CONTENTS (CONT')

UTILITY PLAN	C-2.1
UTILITY PLAN - DETAILS	C-2.2
DETAILS	C-3.0
DETAILS (CONT')	C-3.1
DETAILS (CONT')	C-3.2
DETAILS (CONT')	C-3.3
IMPERVIOUS DATA	C-4.0
EROSION AND SEDIMENTATION CONTROL PLAN	C-4.1
BMPS	C-5.0
ORGINIAL TOPOGRAPHIC SURVEY	TP1

TABLE OF CONTENTS

COVER SHEET	A0.0
PLANNING CONDITION OF APPROVAL	A0.1
GENERAL NOTES	A0.2
BEST MANAGEMENT PRACTICE	A0.3
CONSTRUCTION MANAGEMENT PRACTICE	A0.4
SITE PLAN	A1.0
LANDSCAPE & IRRIGATION PLAN	A1.1
FAR COVERAGE DIAGRAM	A1.3
BUILDING COVERAGE DIAGRAM	A1.4
DEMO MAIN FLOOR PLAN	A2.0
PROPOSED FIRST FLOOR PLAN	A2.1
PROPOSED SECOND FLOOR PLAN	A2.2
PROPOSED THIRD FLOOR PLAN	A2.3
DEMO & PROPOSED ROOF PLAN	A2.4
EAST (FRONT) ELEVATION VIEWS	A3.0
NORTH (RIGHT-SIDE) ELEVATION VIEWS	A3.1
WEST (REAR) ELEVATION VIEWS	A3.2
SOUTH (LEFT-SIDE) ELEVATION VIEWS	A3.3
EAST SECTION CUTS	A4.0
EAST & NORTH SECTION CUTS	A4.1
NORTH SECTION CUTS	A4.2
NORTH SECTION CUTS	A4.3
WINDOW, DOOR, SKYLIGHT SCHEDULES	A5.0
FIRST FLOOR ELECTRICAL PLAN	A6.0
SECOND FLOOR ELECTRICAL PLAN	A6.1
THIRD FLOOR ELECTRICAL PLAN	A6.2
DETAILS	A7.0
DETAILS	A7.1
DETAILS	A7.2
DETAILS	A7.3
TITLE 24	A8.0
TITLE 24	A8.1
TITLE 24	A8.2
CALGREEN STANDARD	A9.0
CALGREEN STANDARD	A9.1
STRUCTURAL COVER SHEET	S-CS
GENERAL NOTES	S0.0
STANDARD FOUNDATION DETAILS	S0.1
STANDARD WOOD DETAILS	S0.2
FLOOR-TO-FLOOR DETAILS	S0.3
FOUNDATION PLAN	S1.0
1ST LEVEL SHEAR WALL & FRAMING PLAN	S2.0
2ND LEVEL FLOOR FRAMING PLAN	S3.0
2ND LEVEL SHEAR WALL & FRAMING PLAN	S4.0
3RD LEVEL FLOOR FRAMING PLAN	S5.0
3RD LEVEL SHEAR WALL & FRAMING PLAN	S6.0
ROOF FRAMING PLAN	S7.0
STRUCTURAL DETAILS	SD1
STRUCTURAL DETAILS	SD2
STRUCTURAL DETAILS	SD3
STRUCTURAL DETAILS	SD4
STRUCTURAL DETAILS	SD5
STRUCTURAL DETAILS	SD6
STRUCTURAL DETAILS	SD7
STRUCTURAL DETAILS	SD8
STRUCTURAL DETAILS	SD9
STRONG-WALL WSWH: FRAMING DETAILS	WSWH2
STRONG-WALL WSWH: FRAMING DETAIL...2-STORY	WSWH3
SITE OVERVIEW PLAN	C-1.0
PROJECT NOTES	C-1.1
GRADING AND DRAINAGE PLANS	C-2.0

PROJECT DATA

PROJECT ADDRESS:	426 PINE ST. (APN: 070-182-16)
CONSTRUCTION YEAR:	1926
ZONING:	R-3
OCCUPANCY TYPE:	RESIDENTIAL
BUILDING TYPE:	V-B
WUI:	YES
FLOOD:	NO
FIRE SPRINKLER:	YES (PROPOSED)
ON-SITE PARKING:	2-CAR OUTDOOR PARKING

LOT INFORMATION	CODE	EXISTING	PROPOSED	(CHANGES)
AREA		3,600 SF	3,600 SF	0 SF
LIVING UNIT		1	2	+1 (428.75 SF ADU)
BEDROOMS		3	5 (1 FOR ADU)	+2
BATHROOM		2	4 (1 FOR ADU)	+2
FLOOR AREA RATIO (SEE A1.3 FOR MORE DETAILS)				
FIRST FLOOR		1,319 SF	581 SF	-738 SF
SECOND FLOOR		0 SF	1,057 SF	+1,057 SF
THIRD FLOOR		0 SF	470.75 SF	+470.75 SF
STAIR (COUNTED ONCE)		0 SF	87.25 SF	+87.25 SF
ADU		0 SF	428 SF (EXCLUDED)	+428 SF
ADJUSTED FLOOR AREA	N/A	1,319 SF	2,196 SF	+877 SF
FLOOR AREA RATIO	**2196SF (61%)**	**36.64%**	**61%**	**24.36%**
BUILDING COVERAGE (SEE A1.4 FOR MORE DETAILS)				
MAIN HOUSE		1,343 SF	1,318.75 SF	-24.25 SF
(INLCUDED PORCH, & ALL DECKS)				
MISC. STRUCTURES > 2' IN HEIGHT		97.75 SF	0 SF	-97.75 SF
TOTAL	**1,692SF (47%)**	**1,440.75 SF**	**1,318.75 SF**	-122 **SF**
IMPERVIOUS SURFACES AREA (SEE A1.5 FOR MORE DETAILS)				
BUILDING		1,343 SF	1,736.5 SF	+393.5 SF
MISC. PAVED AREAS & FEATURES		1,141.25 SF	833.25 SF	-308 SF
TOTAL	**2,646SF (73.5%)**	**2,484.25 SF**	**2,569.75 SF**	**+85.5 SF**
SETBACKS				
FRONT YARD	0'	17'-4"	17'-4"	0'
INTERIOR SIDE YARD (LEFT) REDUCED PER 10.40.080(A)	4'-7"	5'-3"	5'-3" (ADU @ 4')	0' (-1'-3" FOR ADU)
INTERIOR SIDE YARD (RIGHT) REDUCED PER 10.40.080(A)	4'-7"	11'-6"	4'-7"	- 6'-11"
REAR YARD	15'	10'-5"	15'-7.25"	+ 5'-2.5"
BUILDING HEIGHT				
	32'	18'- 6"	32'	+ 13'-6"

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APN 065-054-11

MARK	DATE	DESCRIPTION
1	01/13/2025	RESPONSE TO PLAN CHECK COMMENTS

STATUS: **DR SET**
DATE: **1/14/2025**
DRAWN BY: **LAM NGUYEN**
DESIGN OFFICIAL

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SHEET TITLE

COVER SHEET

A0.0

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RESOLUTION NO. 19-2024

ATTACHMENT 2 – CONDITIONS OF APPROVAL

426 PINE STREET
PROJECT ID NUMBER 2023-00013

Community Development Department

1. Construction shall remain in substantial conformance with the project plans on file with the City under application 2023-00013, prepared by G Design LLC and titled "The Beyer Residence Family Home Renovation, for 426 Pine Street, Sausalito" and dated October 16, 2023, subject to the following amendments:

   a. To meet the minimum required side yard setback under SMC Section 10.40.070 D. 1. the two rear decks, one on the second level and one on the third level of the proposed residence shall be removed where they project beyond the building length of 40-foot 3.5 inches.

   b. Exterior light fixtures and light sources on the second and third story patios and decks shall be low voltage, downlit and shielded, and shall not be installed on, or attached to, the understory of an overhead deck, any roof, roof beam or rafter, or above doorways.

   c. The third story shall be stepped in a minimum of 10 inches on the south side to provide a minimum setback of 6-foot 1 inch from the south side lot line.

2. The approval of this permit is subject to the condition that no rear deck shall ever be permitted by the City that would project off rear elevation at the second and third levels beyond the 40-foot 3.5 inch length of the building.

3. Any necessary pruning of overhanging tree branches from the Japanese Maple located on 428 Pine Street shall be completed by a qualified tree service in accordance with American National Standards for tree maintenance

4. The Applicant/Property Owners shall indemnify, defend, and hold harmless the City and its elected and appointed officials, officers, agents and employees, from and against any and all liability, loss, damage, or expense, including without limitation reasonable attorney's fees which City may suffer or incur as a result of any claims relating to or arising from the City's approval of the project (including without limitation, challenges under the California Environmental Quality Act) or applicant's construction activities..

5. The Design Review Permit shall expire two years following the effective date of the permit if the project entitlement has not been implemented, and provided no extension has been filed prior to the expiration date. The project entitlement pursuant to the Design Review Permit is determined to be implemented if the applicable conditions of approval prerequisite to construction have been satisfied and any required construction permits have been issued.

6. No demolition permit shall be issued unless a building permit is simultaneously issued by the Community Development Department.

Department of Public Works

General Items

7. As part of the Building Permit application, all final Conditions of Approval shall be restated on the construction drawings and applicant shall thoroughly and accurately document in writing compliance with each Condition of Approval at the time of Building Permit application and any other subsequent submittals.

Right of Way Items

8. Applicant shall repair or replace, at no expense to the City, damage to public facilities that results from applicant's construction activities. Applicant is advised that applicant's contractor shall save and protect all existing facilities not designated for removal or modification within the public right of way.

Engineering Items

9. Emergency vehicle access and access to adjacent properties shall be maintained at all times throughout the duration of this project.

10. An encroachment permit shall be obtained from the DPW prior to using the public right of way for non-public purposes (e.g., material storage, construction, staging or demolition) including any and all construction and demolition activities. Encroachment submittal information can be found here: https://www.sausalito.gov/departments/public-works/engineering-division/encroachment-permits.

11. Applicant shall ensure that construction materials, equipment, vehicles, and properly-permitted debris boxes (Bay Cities Refuse Service is the sole authorized solid waste hauler permitted to provide debris box service in the City of Sausalito) that are placed in the right-of-way are not placed in a manner that poses a traffic hazard, and are placed to minimize obstruction of roads and gutters, and are equipped with reflectors or lighting to ensure visibility at night and in inclement weather, and are maintained in a clean and safe condition, and not maintained in a manner that becomes a nuisance to the neighborhood. Debris boxes shall be emptied on a regular basis, or as directed by the City. Material stockpiles & debris boxes shall be covered when not being accessed or filled to prevent dust or liquid from being released to the environment. Construction materials, equipment, vehicles, and debris boxes shall be placed in the public right of way only after securing an encroachment permit.

12. Applicant shall ensure appropriate best management practices (BMPs) are used during construction activity to prevent construction materials, pollution and sedimentation from entering into City storm water infrastructure. This includes erosion and sediment controls and pollution prevention practices. Erosion control BMPs may include, but are not limited to, scheduling and timing of grading activities, timely re-vegetation of graded areas, the use of hydroseed and hydraulic mulches, and installation of erosion control blankets. Sediment control may include properly sized detention basins, dams, or filters to reduce entry of suspended sediment into the storm drain system and watercourses, and installation of construction entrances to prevent tracking of sediment onto adjacent streets. Pollution prevention practices may include: designated washout areas or facilities, control of trash and recycled materials, covering of materials stored on-site, and proper location of and maintenance of temporary sanitary facilities. The combination of BMPs used, and their execution in the field, must be customized to the site using up-to-date standards and practices. The Applicant shall refer to the Marin County Stormwater Pollution Prevention Program's website, https://www.marincounty.org/~/media/files/departments/pw/mcstoppp/development/erosionsediment-control-measures-for-small-construction-projects-_2015.pdf?la=en

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SHEET TITLE

PLANNING CONDITION OF APPROVAL

A0.1

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EXTERIOR DOOR NOTE

ALL EXTERIOR DOORS IN THERMAL ENVELOPE MUST LIMIT AIR LEAKAGE TO 0.3 CFM/FT2 OR LESS IN ACCORDANCE WITH SECTION 110.6A1

ALL EXTERIOR DOORS HAVE MAX 1 1/2" DROP FROM THRESHOLD TO PATIO OR LANDING

ALL LANDINGS HAVE MINIMUM OF 3' DEEP X 5' WIDE

ALL EXISTING (E) LANDINGS TO REMAIN

SMOKE DETECTOR

1. ALL SMOKE DETECTORS IN THE RESIDENCE SHALL BE PROVIDED WITH AC POWER AND BE INTERCONNECTED FOR SIMULTANEOUS ALARM. DETECTORS SHALL BE LOCATED IN EACH SLEEPING ROOM, OUTSIDE OF SLEEPING ROOMS CENTRALLY LOCATED IN THE CORRIDOR AND OVER THE CENTER OF ALL STAIRWAYS WITH A MINIMUM OF ONE DETECTOR PER STORY OF THE OCCUPIED PORTION OF THE RESIDENCE.

CARBON MONOXIDE

1. CARBON MONOXIDE ALARMS SHALL BE PROVIDED IN EXISTING DWELLINGS WHEN A PERMIT IS REQUIRED FOR ALTERATIONS, REPAIRS, OR ADDITION EXCEEDS ONE THOUSAND DOLLARS. CARBON MONOXIDE ALARMS SHALL BE LOCATED OUTSIDE OF EACH DWELLING UNIT SLEEPING ARE IN THE IMMEDIATE VICINITY OF THE BEDROOM(S) AND ON EVERY LEVEL OF A DWELLING UNIT INCLUDING BASEMENTS.

WATER DISTRICT COMPLIANCE

THIS PROJECT SHALL COMPLY WITH ORDINANCE NO. 429 REQUIRING THE INSTALLATION OF A GREY WATER RECYCLING SYSTEM WHEN PRACTICABLE FOR ALL PROJECTS REQUIRED TO INSTALL NEW WATER SERVICE AND EXISTING STRUCTURES UNDERGOING "SUBSTANTIAL REMODEL" THAT NECESSITATES AN ENLARGED WATER SERVICE.

BAY AREA MANAGEMENT PLAN

1.DEMOLITION MAY NOT START UNTIL THE CONTRACTOR HAS OBTAINED A PERMIT FROM THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT. THE PERMIT NUMBER (J#) WILL BE PROVIDED TO THE INSPECTOR AND NOTED ON THE JOB SITE INSPECTION CARD. IF THE BAAQMD HAS DETERMINED THE PROJECT IS EXEMPT A LETTER FROM THE AGENCY MUST BE PROVIDED.

ENERGY CONSERVATION

1. FOR PLANS SUBMITTED FOR PLAN CHECK ON OR AFTER 7/1/14, PROVIDE A PRESCRIPTIVE OR PERFORMANCE ENERGY DESIGN, DEMONSTRATING COMPLIANCE WITH CURRENT 2022 ENERGY EFFICIENCY STANDARDS. INFORMATION AND FORMS ARE AVAILABLE AT: HTTP:WWW.ENERGY.CA.GOV/TITLE24/2022STANDARDS CURRENT PERFORMANCE ENERGY DESIGN VERSIONS ARE:

- CBECC-RES VER. 2 (PUBLIC DOMAIN SOFTWARE) HTTP://WWW.BWILCOX.COM/BEES/BEES.HTML
- ENERGYPRO V6.1 & V6.2 (6.1 IS NOT VALID AFTER 07/31/14) WWW.ENERGYSOFT.COM
- RIGHT-ENERGY TITLE 24 V1.0 WWW.WRIGHTSOFT.COM

2. INCLUDE ON THE TITLE SHEET OF THE PLANS THE FOLLOWING STATEMENT:"COMPLIANCE WITH THE DOCUMENTATION REQUIREMENTS OF THE 2022 ENERGY EFFICIENCY STANDARDS IS NECESSARY FOR THIS PROJECT. REGISTERED, SIGNED, AND DATED COPIES OF THE APPROPRIATE CF1R, CF2R, AND CF3R FORMS SHALL BE MADE AVAILABLE AT NECESSARY INTERVALS FOR BUILDING INSPECTOR REVIEW. FINAL COMPLETED FORMS WILL BE AVAILABLE FOR THE BUILDING OWNER."
3. INCLUDE ALL APPLICABLE SECTIONS OF THE MF-1R FORM WITH THE PLANS.
4. ALL HOT WATER PIPING SIZED ¾" OR LARGER IS REQUIRED TO BE INSULATED AS FOLLOWS: 1" PIPE SIZE OR LESS: 1" THICK INSULATION; LARGER PIPE SIZES REQUIRE 1½" THICK INSULATION. NOTE: IN ADDITION, THE ½" SIZE HOT WATER PIPE TO THE KITCHEN SINK IS REQUIRED TO BE INSULATED. ES 150.0(J)2
5. RESIDENTIAL ENERGY LIGHTING REQUIREMENTS: ES 150.0(K)

- IN THE KITCHEN ALL OF THE WATTAGE RATING OF THE FIXTURES MUST BE HIGH EFFICACY.
- IN BATHROOMS, ALL SHALL BE HIGH EFFICACY AND SHALL BE CONTROLLED BY A VACANCY SENSOR.
- HIGH EFFICACY FIXTURES ARE REQUIRED FOR ALL OTHER ROOMS (NOT DESCRIBED ABOVE)
- OUTDOOR LIGHTING FIXTURES THAT ARE ATTACHED TO A BUILDING ARE REQUIRED TO BE HIGH EFFICACY AND BE CONTROLLED BY A COMBINATION PHOTO-CONTROL/ MOTION SENSOR.

ELECTRICAL, PLUMBING & MECHANICAL

1. EXTERIOR LIGHTING. ALL PROJECTS SHALL COMPLY WITH THE CITYS LIGHTING ORDINANCE. GFCI OUTLETS. GROUND FAULT CIRCUIT INTERRUPTER (GFCI) OUTLETS ARE REQUIRED IN BATHROOMS, AT KITCHEN COUNTERTOPS, AT LAUNDRY AND WET BAR SINKS, IN GARAGES, IN CRAWLSPACES, IN UNFINISHED BASEMENTS, AND OUTDOORS. (CEC 210.8)
2. AFCI OUTLETS. ELECTRICAL CIRCUITS IN BEDROOMS, LIVING ROOMS, DINING ROOMS, DENS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS MUST BE PROTECTED BY ARC FAULT CIRCUIT INTERRUPTERS (AFCI). (2016 CEC 150.2)
3. LUMINAIRE REQUIREMENTS. INSTALLED LUMINAIRES SHALL MEET THE EFFICACY AND FIXTURE REQUIREMENTS OF CBEES 150.0(K)
4. SMOKE DETECTORS IN BUILDING REMODELS. SMOKE DETECTORS ARE REQUIRED IN EACH EXISTING SLEEPING ROOM, OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF SLEEPING ROOMS, AND ON EACH STORY OF A DWELLING INCLUDING BASEMENTS. BATTERY-OPERATED DETECTORS ARE ACCEPTABLE IN EXISTING AREAS WITH NO CONSTRUCTION TAKING PLACE AND IN ALTERATIONS NOT RESULTING IN REMOVAL OF INTERIOR WALL OR CEILING FINISHES AND WITHOUT ACCESS VIA AN ATTIC, CRAWL SPACE, OR BASEMENT (CRC R314.3)
5. CARBON MONOXIDE DETECTORS IN BUILDING REMODELS. CARBON MONOXIDE DETECTORS ARE REQUIRED OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF SLEEPING ROOMS AND ON EACH STORY OF A DWELLING INCLUDING BASEMENTS. BATTERY-OPERATED DETECTORS ARE ACCEPTABLE IN EXISTING AREAS WITH NO CONSTRUCTION TAKING PLACE AND IN ALTERATIONS NOT RESULTING IN REMOVAL OF INTERIOR WALL OR CEILING FINISHES AND WITHOUT ACCESS VIA AN ATTIC, CRAWL SPACE, OR BASEMENT. (CRC R315.3)
6. WATER HEATER SEISMIC STRAPPING. MINIMUM TWO 3/4-INCH-BY-24-GAUGE STRAPS REQUIRED AROUND WATER HEATERS, WITH 1/4-INCH-BY-3-INCH LAG BOLTS ATTACHED DIRECTLY TO FRAMING. STRAPS SHALL BE AT POINTS WITHIN UPPER THIRD AND LOWER THIRD OF WATER HEATER VERTICAL DIMENSION. LOWER CONNECTION SHALL OCCUR MINIMUM 4 INCHES ABOVE CONTROLS. (CPC 507.2)
7. GAS APPLIANCES IN GARAGES. WATER HEATERS AND HEATING/COOLING EQUIPMENT CAPABLE OF IGNITING FLAMMABLE VAPORS SHALL BE PLACED ON MINIMUM 18-INCH-HIGH PLATFORM UNLESS LISTING REPORT NUMBER PROVIDED SHOWING IGNITION-RESISTANT APPLIANCE. (CPC 507.13 AND CMC 305.1)
8. IMPACT PROTECTION OF APPLIANCES. WATER HEATERS AND HEATING/COOLING EQUIPMENT SUBJECT TO VEHICULAR IMPACT SHALL BE PROTECTED BY BOLLARDS OR AN EQUIVALENT MEASURE. (CPC 507.13.1 AND CMC 305.11)
9. WATER CLOSET CLEARANCE. MINIMUM 30-INCH-WIDE BY 24-INCH-DEEP CLEARANCE REQUIRED AT FRONT OF WATER CLOSETS. (CPC 402.5)
10. SHOWER SIZE. SHOWER COMPARTMENTS SHALL HAVE MINIMUM AREA OF 1024 SQUARE INCHES AND BE ABLE TO ENCOMPASS A 30-INCH-DIAMETER CIRCLE. SHOWER DOORS SHALL HAVE A MINIMUM 22-INCH UNOBSTRUCTED WIDTH. (CPC 408.5 AND CPC 408.6)
11. FIREPLACE APPLIANCES. FIREPLACES WITH GAS APPLIANCES ARE REQUIRED TO HAVE THE FLUE DAMPER PERMANENTLY FIXED IN THE OPEN POSITION AND FIREPLACES WITH LPG APPLIANCES ARE TO HAVE NO 'PIT' OR 'SUMP' CONFIGURATIONS. (CMC 303.7.1)
12. CHIMNEY CLEARANCE. MINIMUM 2-FOOT CHIMNEY CLEARANCE REQUIRED ABOVE BUILDING WITHIN 10-FOOT HORIZONTALLY OF CHIMNEY. THE CHIMNEY SHALL EXTEND MINIMUM 3 FEET ABOVE HIGHEST POINT WHERE CHIMNEY PASSES THROUGH ROOF. (CRC R1003.9)
13. THE MINIMUM ROOF COVERING INSTALLED ON BUILDINGS SHALL HAVE CLASS "A" ROOF ASSEMBLIES. SPECIFY TYPE OF ROOF COVERING AND SHOW DETAIL(S) OF ASSEMBLY.
SEC. 1505 & 1507 OF C.B.C. OR SEC. R905 OF C.R.C. & SEC. 19.04.080 MARIN COUNTY CODE
14. WHEN NO CROSS VENTILATION IS PROVIDED AT ENCLOSED RAFTER SPACE. THE ENTIRE DEPTH OF THE RAFTER SHALL BE FILLER WITH RIGID INSULATION AND VAPOR BARRIER. SEE R806.4 OF C.R.C.

SPECIALTIES

1. ACCESS SHALL BE PROVIDED TO ALL UNDER-FLOOR SPACES. ACCESS THROUGH THE FLOOR SHALL BE MINIMUM 18"x24". ACCESS THROUGH THE PERIMETER WALL SHALL BE MINIMUM 16"x24" PER CRC 408.4. SHOW ACCESS INTO THE NEW FOUNDATION FOR ADDITION.
2. PROVIDE A VENT FOR DOMESTIC CLOTHES DRYERS TO THE EXTERIOR OF THE BUILDING PER SECTION 504.3 OF CMC. SHOW PATH OF THE VENT AND LOCATION OF THE TERMINATION ON THE PLAN (4 INCHES MINIMUM DIAMETER, 14 FEET MAXIMUM OF COMBINED HORIZONTAL AND VERTICAL LENGTH, INCLUDING TWO 90 DEGREE ELBOWS).
3. APPLIANCES CONNECTED TO PIPING SYSTEM SHALL HAVE AN ACCESSIBLE, APPROVED MANUAL SHUTOFF VALVE WITH A NON-DISPLACEABLE VALVE MEMBER OR LISTED GAS CONVENIENCE OUTLET. VALVE SHALL BE LOCATED WITHIN 6 FEET OF THE APPLIANCE PER CPC 1212.5.
4. AN APPROVED SEISMIC: GASS SHUT-OFF DEVICE (MOTION SENSITIVE) OR APPROVED EXESS FLOW GAS SHUTOFF DEVICES (NON-MOTION SENSITIVE) SHALL BE INSTALLED PER MCC 19.04.090.

RESIDENTIAL GREEN BUILDING STANDARDS

STANDARDS CODE WHICH BECAME EFFECTIVE JANUARY 1, 2022 AND MUST BE ENFORCED BY THE LOCAL BUILDING OFFICIAL. THE FOLLOWING MANDATORY REQUIREMENTS FOR RESIDENTIAL CONSTRUCTION MUST BE INCLUDED ON YOUR PLANS. CGC SECTION 101.3. THE STANDARDS APPLY TO NEWLY CONSTRUCTED RESIDENTIAL BUILDINGS, ALONG WITH ADDITIONS/ALTERATIONS THAT INCREASE THE BUILDING'S CONDITIONED AREA, VOLUME OR SIZE. CGC SECTION 303.1.1. PROVIDE A SHEET ON THE PLANS LABELED "GREEN BUILDING CODE REQUIREMENTS" AND INCLUDE THE FOLLOWING NOTES AS APPLICABLE.
1. RECYCLING. A MINIMUM OF 50% OF CONSTRUCTION WASTE IS TO BE RECYCLED. CGC 4.408.1.
2. RECYCLING. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION WASTE MANAGEMENT PLAN TO THE JURISDICTION AGENCY THAT REGULATES WASTE MANAGEMENT, PER CGC 4.408.2.
3. INDOOR WATER USE. FOR NEW/REPLACED FIXTURES, PER CGC 4.303.1. FIXTURE FLOW RATES:

FIXTURE TYPE:	MAXIMUM FLOW RATE:
WATER CLOSETS	1.28 GALLONS/FLUSH
URINALS	0.5 GALLON/FLUSH
SHOWERHEADS	2 GPM @ 80 PSI
LAVATORY FAUCETS	1.2 GPM @ 60 PSI[1]
KITCHEN FAUCETS	1.8 GPM @ 60 PSI
METERING FAUCETS	0.2 GALLONS PER CYCLE

1. LAVATORY FAUCETS SHALL NOT HAVE A FLOW RATE LESS THAN 0.8 GPM AT 20 PSI.
4. POLLUTANT CONTROL. DURING CONSTRUCTION, ENDS OF DUCT OPENINGS ARE TO BE SEALED, AND MECHANICAL EQUIPMENT IS TO BE COVERED. CGC 4.504.1.
5. POLLUTANT CONTROL. VOC'S MUST COMPLY WITH THE LIMITATIONS LISTED IN SECTION 4.504.3 AND TABLES 4.504.1, 4.504.2, 4.504.3 AND 4.504.5 FOR: ADHESIVES, PAINTS AND COATINGS, CARPET AND COMPOSITION WOOD PRODUCTS. CGC 4.504.2.
6. INTERIOR MOISTURE CONTROL. THE MOISTURE CONTENT OF WOOD SHALL NOT EXCEED 19% BEFORE IT IS ENCLOSED IN CONSTRUCTION. THE MOISTURE CONTENT NEEDS TO BE CERTIFIED BY ONE OF 3 METHODS SPECIFIED IN SECTION 4.505.3. BUILDING MATERIALS WITH VISIBLE SIGNS OF WATER DAMAGE SHOULD NOT BE USED IN CONSTRUCTION. THE MOISTURE CONTENT MUST BE DETERMINED BY THE CONTRACTOR BY ONE OF THE METHODS LISTED IN CGC 4.505.3.
7. INDOOR AIR QUALITY. BATHROOM FANS SHALL BE ENERGY STAR RATED, VENTED DIRECTLY TO THE OUTSIDE AND CONTROLLED BY A HUMIDISTAT. CGC 4.506.1.
8. PRIOR TO FINAL INSPECTION THE LICENSED CONTRACTOR, ARCHITECT OR ENGINEER IN RESPONSIBLE CHARGE OF THE OVERALL CONSTRUCTION MUST PROVIDE TO THE BUILDING DEPARTMENT OFFICIAL WRITTEN VERIFICATION THAT ALL APPLICABLE PROVISIONS FROM THE GREEN BUILDING STANDARDS CODE HAVE BEEN IMPLEMENTED AS PART OF THE CONSTRUCTION. CGC 102.3.
9. THE TOWN'S CONSTRUCTION AND DEMOLITION MATERIALS RECOVERY DIVERSION REQUIREMENTS FOR ALL PROJECTS CONTRACT WITH A CERTIFIED C&D RECOVERY FACILITY SHALL BE A MINIMUM OF EIGHTY FIVE PERCENT(85%) EFFECTIVE DECEMBER 31, 2015, AND TO BE REVISED DECEMBER 31, 2018 TOWN ORD. CHAPTER 20 SECTION 9-20.05.
11. CONTRACTOR IS EXPECTED TO REVIEW AND UNERSTAND THE CALGREEN CHECKLIST. RELEVANT MEASURES ON THAT LIST TO BE THIRD PARTY VERIFIED BEFORE FINAL.
12. CONTRACTOR IS EXPECTED TO REVIEW AND UNERSTAND THE TITLE 24 REPORT PARTICULARLY THE HERS FEATURE SUMMARY AND TO ARRANGE THIRD PARTY VERIFICATIONS.

WOOD FRAMING

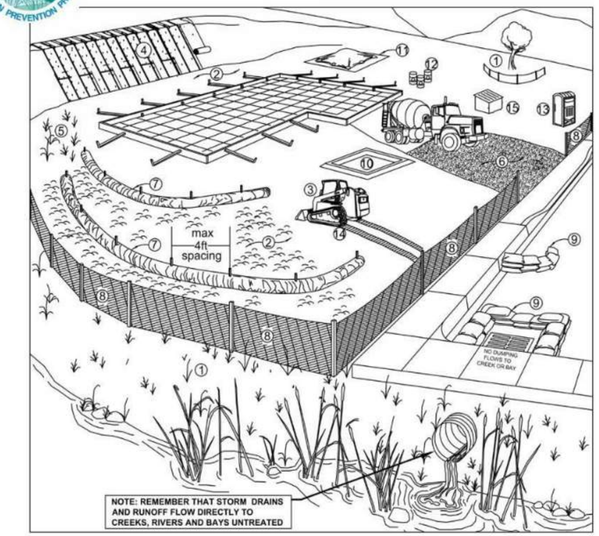
1. FASTENER REQUIREMENTS. THE NUMBER, SIZE, AND SPACING OF FASTENERS CONNECTING WOOD MEMBERS/ ELEMENTS SHALL NOT BE LESS THAN THAT SET FORTH IN CRC TABLE R602.3(1). (CRC R502.9, CRC R602.3, AND CRC R802.2)
2. STUD SIZE, HEIGHT, AND SPACING. THE SIZE, HEIGHT, AND SPACING OF STUDS SHALL BE IN ACCORDANCE WITH CRC TABLE R602.3(5). (CRC R602.3.1)
3. SILL PLATE. STUDS SHALL HAVE FULL BEARING ON NOMINAL 2 -INCH THICK OR LARGER SILL PLATE WITH WIDTH AT LEAST EQUAL TO STUD WIDTH. (CRC R602.3.4)
4. BEARING STUDS. WHERE JOISTS, TRUSSES, OR RAFTERS ARE SPACED MORE THAN 16 INCHES ON CENTER AND THE BEARING STUDS BELOW ARE SPACED 24 INCHES ON CENTER, SUCH MEMBERS SHALL BEAR WITHIN 5 INCHES OF THE STUDS BENEATH. (CRC R602.3.3)
5. DRILLING AND NOTCHING OF STUDS. ANY STUD IN AN EXTERIOR WALL OR BEARING PARTITION MAY BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25% OF ITS WIDTH. STUDS IN NONBEARING PARTITIONS MAY BE NOTCHED TO A DEPTH NOT TO EXCEED 40% OF A SINGLE STUD WIDTH. AN Y STUD MAY BE BORED OR DRILLED, PROVIDED THE DIAMETER OF THE RESULTING HOLE IS NO MORE THAN 60% OF THE STUD WIDTH, THE EDGE OF THE HOLE IS NO MORE THAN 5/8 INCH TO THE EDGE OF THE STUD, AND THE HOLE IS NOT LOCATED IN THE SAME SECTION AS A CUT OR NOTCH. STUDS LOCATED IN EXTERIOR WALL OR BEARING PARTITIONS DRILLED OVER 40% AND UP TO 60% SHALL ALSO BE DOUBLED WITH NO MORE THAN TWO SUCCESSIVE STUDS BORED. (CRC R602.6)
6. TOP PLATE. WOOD STUD WALLS SHALL BE CAPPED WITH A DOUBLE TOP PLATE INSTALLED TO PROVIDE OVERLAPPING AT CORNERS AND AT INTERSECTIONS WITH OTHER PARTITIONS. END JOINTS IN DOUBLE TOP PLATES SHALL BE OFFSET AT LEAST 24 INCHES. JOINTS IN PLATES NEED NOT OCCUR OVER STUDS. PLATES SHALL BE MINIMUM NOMINAL 2 INCHES THICK AND HAVE WIDTH AT LEAST EQUAL TO WIDTH OF STUDS. (CRCR602.3.2)
7. TOP PLATE SPLICES. TOP PLATE LAP SPLICES SHALL BE FACE-NAILED WITH MINIMUM 8 16D NAILS ON EACH SIDE OF SPLICE. (CRC R602.10.8.1)
8. DRILLING AND NOTCHING OF TOP PLATE. WHEN PIPING OR DUCTWORK IS PLACED IN OR PARTLY I N AN EXTERIOR WALL OR INTERIOR LOAD-BEARING WALL, NECESSITATING CUTTING, DRILLING, OR NOTCHING OF THE TOP PLATE BY MORE THAN 50% OF ITS WIDTH, A GALVANIZED METAL TIE NOT LESS THAN 0.054 -INCH THICK AND 1-1/2-INCHES WIDE SHALL BE FASTENED ACROSS AND TO THE PLATE AT EACH SIDE OF THE OPENING WITH NOT LESS THAN 8-10D NAILS HAVING A MINIMUM LENGTH OF 1-1/2 INCHES AT EACH SIDE OR EQUIVALENT. THE METAL TIE MUST EXTEND MINIMUM 6 INCHES PAST THE OPENING (CRC R602.6.1)
9. FLOOR JOIST BRIDGING. FLOOR JOISTS EXCEEDING NOMINAL 2 INCHES BY 12 INCHES SHALL BE SUPPORTED LATERALLY BY SOLID BLOCKING, DIAGONAL BRIDGING (WOOD OR METAL), OR A CONTINUOUS 1 -INCH-BY-3-INCH STRIP NAILED ACROSS THE BOTTOM OF JOISTS PERPENDICULAR TO JOISTS AT MAXIMUM 8-FOOT INTERVALS. (CRC R502.7.1)
10. FRAMING OF FLOOR OPENINGS. OPENINGS IN FLOOR FRAMING SHALL BE FRAMED WITH A HEADER AND TRIMMER JOISTS. WHEN THE HEADER JOIST SPAN DOES NOT EXCEED 4 FEET, THE HEADER JOIST MAY BE A SINGLE MEMBER THE SAME SIZE AS THE FLOOR JOIST. SINGLE TRIMMER JOISTS MAY BE USED TO CARRY A SINGLE HEADER JOIST LOCATED WITHIN 3 FEET OF THE TRIMMER JOIST BEARING. WHEN THE HEADER JOIST SPAN EXCEEDS 4 FEET, THE TRIMMER JOISTS AND HEADER JOIST SHALL BE DOUBLED AND OF SUFFICIENT CROSS SECTION TO SUPPORT THE FLOOR JOISTS FRAMING INTO THE HEADER. APPROVED HANGERS SHALL BE USED FOR THE HEADER -JOIST-TO- TRIMMER-JOIST CONNECTIONS WHEN THE HEADER JOIST SPAN EXCEEDS 6 FEET. TAIL JOISTS OVER 12 FEET LONG SHALL BE SUPPORTED AT THE HEADER BY FRAMING ANCHORS OR ON LEDGER STRIPS MINIMUM 2 INCHES BY 2 INCHES. (CRC R502.10)
11. GIRDERS. GIRDERS FOR SINGLE-STORY CONSTRUCTION OR GIRDERS SUPPORTING LOADS FROM A SINGLE FLOOR SHALL NOT BE LESS THAN 4 INCHES BY 6 INCHES FOR SPANS 6 FEET OR LESS, PROVIDED THAT GIRDERS ARE SPACED NOT MORE THAN 8 FEET ON CENTER. OTHER GIRDERS SHALL BE DESIGNED TO SUPPORT THE LOADS SPECIFIED IN THE CBC. GIRDER END JOINTS SHALL OCCUR OVER SUPPORTS. WHEN A GIRDER IS SPLICED OVER A SUPPORT, AN ADEQUATE TIE SHALL BE PROVIDED. THE ENDS OF BEAMS OR GIRDERS SUPPO RTED ON MASONRY OR CONCRETE SHALL NOT HAVE LESS THAN 3 INCHES OF BEARING. (CBC 2308.7)
12. RIDGES, HIPS, AND VALLEYS. RAFTERS SHALL BE FRAMED TO A RIDGE BOARD OR TO EACH OTHER WITH A GUSSET PLATE AS A TIE. RIDGE BOARDS SHALL BE MINIMUM 1 -INCH NOMINAL THICKNESS AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER. AT ALL VALLEY AND HIPS, THERE SHALL BE A VALLEY OR HIP RAFTER NOT LESS THAN 2 - INCH NOMINAL THICKNESS AND NOT LESS IN DEPTH THAN THE CUT END OF THE RAFTER. HIP AND VALLEY RAFTERS SHALL BE SUPPORTED AT THE RIDGE BY A BRACE TO A BEARING PARTITION OR BE DESIGNED TO CARRY AND DISTRIBUTE THE SPECIFIC LOAD AT THAT POINT. WHERE THE ROOF PITCH IS LESS THAN 3:12 SLOPE (25% GRADIENT), STRUCTURAL MEMBERS THAT SUPPORT RAFTERS AND CEILINGS JOISTS, SUCH AS RIDGES, HIPS, AND VALLEYS, SHALL BE DESIGNED AS BEAMS. (CRC R802.3)
13. CEILING JOIST AND RAFTER CONNECTIONS. CEILING JOISTS AND RAFTERS SHALL BE NAILED TO EACH OTHER PER CRC TABLE R802.5.1(9), AND THE RAFTER SHALL BE NAILED TO THE WALL TOP PLATE PER CRC TA BLE R602.3(1). CEILING JOISTS SHALL BE CONTINUOUS OR SECURELY JOINED PER CRC TABLE R802.5.1(9) WHERE THEY MEET OVER INTERIOR PARTITIONS AND ARE NAILED TO ADJACENT RAFTERS TO PROVIDE A CONTINUOUS TIE ACROSS THE BUILDING WHEN SUCH JOISTS ARE PARALLEL TO RAF TERS. WHERE CEILING JOISTS ARE NOT CONNECTED TO THE RAFTERS AT THE WALL TOP PLATE, JOISTS CONNECTED HIGHER IN THE ATTIC SHALL BE INSTALLED AS RAFTER TIES, OR RAFTER TIES SHALL BE INSTALLED TO PROVIDE A CONTINUOUS TIE. WHERE CEILING JOISTS ARE NOT PARALLE L TO RAFTERS, RAFTER TIES SHALL BE INSTALLED. RAFTER TIES SHALL BE MINIMUM 2 INCHES BY 4 INCHES NOMINAL, INSTALLED PER CRC TABLE R802.5.1(9), OR CONNECTIONS OF EQUIVALENT CAPACITIES SHALL BE PROVIDED. WHERE CEILINGS JOISTS OR RAFTER TIES ARE NOT PROVIDED, THE RIDGE FORMED BY THESE RAFTERS SHALL BE SUPPORTED BY A WALL OR ENGINEER -DESIGNED GIRDER. (CRC R802.3.1)
14. CEILING JOISTS LAPPED. ENDS OF CEILING JOISTS SHALL BE LAPPED MINIMUM 3 INCHES OR BUTTED OVER BEARING PARTITIONS OR BEAMS AND TOENAILED TO THE BEARING ELEMENT. WHERE CEILING JOISTS PROVIDE RESISTANCE TO RAFTER THRUST, LAPPED JOISTS SHALL BE NAILED TOGETHER PER CRC TABLE R602.3(1) AND BUTTED JOISTS SHALL BE TIED TOGETHER IN A MANNER TO RESIST SUCH THRUST. (CRC R802.3.2)
15. COLLAR TIES. COLLAR TIES OR RIDGE STRAPS TO RESIST WIND UPLIFT SHALL BE CONNECTED IN THE UPPER THIRD OF THE ATTIC SPACE. COLLAR TIES SHALL BE A MINIMUM 1 INCH BY 4 INCHES NOMINAL AND SPACED AT MAXIMUM 4 FEET ON CENTER. (CRC R802.3.1)
16. PURLINS. PURLINS INSTALLED TO REDUCE THE SPAN OF RAFTERS SHALL BE SIZED NOT LESS THAN THE REQUIRED SIZE OF THE RAFTERS THEY SUPPORT. PURLINS SHALL BE CONTINUOUS AND SHALL BE SUPPORTED BY 2-INCH-BY-4-INCH NOMINAL BRACES INSTALLED TO BEARING WALLS AT A MINIMUM 45-DEGREE SLOPE FROM HORIZONTAL. THE BRACES SHALL BE SPACED MAXIMUM 4 FEET ON CENTER WITH A MAXIMUM 8-FOOT UNBRACED LENGTH. (CRC R802.5.1)
17. ROOF/CEILING MEMBER BEARING. THE ENDS OF EACH RAFTER OR CEILING JOIST SHALL HAVE NOT LESS THAN 1-1/2 INCHES OF BEARING ON WOOD OR METAL AND NOT LESS THAN 3 INCHES OF BEARING ON MASONRY OR CONCRETE. (CRC R802.6)
18. ROOF/CEILING MEMBER LATERAL SUPPORT. ROOF FRAMING MEMBERS AND CEILING JOISTS WITH A NOMINAL DEPTH - TO-THICKNESS RATIO EXCEEDING 5:1 SHALL BE PROVIDED WITH LATERAL SUPPORT AT POINTS OF BEA RING TO PREVENT ROTATION. (CRC R802.8)

WOOD FRAMING (CONTINUED)...

19. ROOF/CEILING BRIDGING. RAFTERS AND CEILING JOISTS WITH A NOMINAL DEPTH-TO-THICKNESS RATIO EXCEEDING 6:1 SHALL BE SUPPORTED LATERALLY BY SOLID BLOCKING, DIAGONAL BRIDGING (WOOD OR METAL), OR A CONTINUOUS 1-INCH-BY-3-INCH WOOD STRIP NAILED ACROSS THE RAFTERS OR CEILING JOISTS AT MAXIMUM 8 -FOOT INTERVALS. (CRC R802.8.1)
20. FRAMING OF ROOF/CEILING OPENINGS. OPENINGS IN ROOF AND CEILING FRAMING SHALL BE FRAMED WITH A HEADER AND TRIMMER JOISTS. WHEN THE HEADER JOIST SPAN DOES NOT EXCEED 4 FEET, THE HEADER JOIST MAY BE A SINGLE MEMBER THE SAME SIZE AS THE CEILING JOIST OR RAFTER. SINGLE TRIMMER JOISTS MAY BE USED TO CARRY A SINGLE HEADER JOIST LOCATED WITHIN 3 FEET OF THE TRIMMER JOIST BEARING. WHEN THE HEADER JOIST SPAN EXCEEDS 4 FEET, THE TRIMMER JOISTS AND HEADER JOIST SHALL BE DOUBLED AND OF SUFFICIENT CROSS SECTION TO SUPPORT THE CEILING JOISTS OR RAFTERS FRAMING INTO THE HEADER. APPROVED HANGERS SHALL BE USED FOR THE HEADER-JOIST-TO-TRIMMER-JOIST CONNECTIONS WHEN THE HEADER JOIST SPAN EXCEEDS 6 FEET. TAIL JOISTS OVER 12 FEET LONG SHALL BE SUPPORTED AT THE HEADER BY FRAMING ANCHORS OR ON LEDGER STRIPS MINIMUM 2 INCHES BY 2 INCHES. (CRC R502.10)
21. ROOF FRAMING ABOVE SHEAR WALLS. RAFTERS OR ROOF TRUSSES SHALL BE CONNECTED TO TOP PLATES OF SHEAR WALLS WITH BLOCKING BETWEEN THE RAFTERS OR TRUSSES. (CRC R602.10.8)
22. ROOF DIAPHRAGM UNDER FILL FRAMING. ROOF PLYWOOD SHALL BE CONTINUOUS UNDER CALIFORNIA FILL FRAMING.
23. ROOF DIAPHRAGM AT RIDGES. MINIMUM 2 -INCH NOMINAL BLOCKING REQUIRED FOR ROOF DIAPHRAGM NAILING AT RIDGES.
24. BLOCKING OF ROOF TRUSSES. MINIMUM 2-INCH NOMINAL BLOCKING REQUIRED BETWEEN TRUSSES AT RIDGE LINES AND AT POINTS OF BEARING AT EXTERIOR WALLS.
25. TRUSS CLEARANCE. MINIMUM 1/2-INCH CLEARANCE REQUIRED BETWEEN TOP PLATES OF INTERIOR NON-BEARING PARTITIONS AND BOTTOM CHORDS OF TRUSSES.
26. DRILLING, CUTTING, AND NOTCHING OF ROOF/FLOOR FRAMING. NOTCHES IN SOLID LUMBER JOISTS, RAFTERS, BLOCKING, AND BEAMS SHALL NOT EXCEED ONE-SIXTH THE MEMBER DEPTH, SHALL BE NOT LONGER THAN ONE-THIRD THE MEMBER DEPTH, AND SHALL NOT BE LOCATED IN THE MIDDLE ONE-THIRD OF THE SPAN. NOTCHES AT MEMBER ENDS SHALL NOT EXCEED ONE-FOURTH THE MEMBER DEPTH. THE TENSION SIDE OF MEMBERS 4 INCHES OR GREATER IN NOMINAL THICKNESS SHALL NOT BE NOTCHED EXCEPT AT MEMBER ENDS. THE DIAMETER OF HOLES BORED OR CUT INTO MEMBERS SHALL NOT EXCEED ONE-THIRD THE MEMBER DEPTH. HOLES SHALL NOT BE CLOSER THAN 2 INCHES TO THE TOP OR BOTTOM OF THE MEMBER OR TO ANY OTHER HOLE LOCATED IN THE MEMBER. WHERE THE MEMBER IS ALSO NOTCHED, THE HOLE SHALL NOT BE CLOSER THAN 2 INCHES TO THE NOTCH. (CRC R502.8.1)
27. EXTERIOR LANDINGS, DECKS, BALCONIES, AND STAIRS. SUCH ELEMENTS SHALL BE POSITIVELY ANCHORED TO THE PRIMARY STRUCTURE TO RESIST BOTH VERTICAL AND LATERAL FORCES OR SHALL BE DESIGNED TO BE SELF - SUPPORTING. ATTACHMENT SHALL NOT BE ACCOMPLISHED BY USE OF TOENAILS OR NAILS SUBJECT TO WITHDRAWAL. (CRC R311.3)
28. FIRE-BLOCKING. FIRE-BLOCKING SHALL BE PROVIDED IN THE FOLLOWING LOCATIONS (CR C R302.11 AND CRC R1003.19): -IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES, AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS, AS FOLLOWS: -VERTICALLY AT THE CEILING AND FLOOR LEVELS -HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET -AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS, AND COVE CEILINGS IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN -AT OPENINGS AROUND VENTS , PIPES, DUCTS, CABLES AND WIRES AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION -AT CHIMNEYS AND FIREPLACES PER ITEM E.49 -CORNICES OF A TWO-FAMILY DWELLING AT THE LINE OF DWELLING -UNIT SEPARATION
29. FIRE-BLOCKING MATERIALS. EXCEPT AS OTHERWISE SPECIFIED IN ITEMS E.48 AND E.49, FIRE-BLOCKING SHALL CONSIST OF THE FOLLOWING MATERIALS WITH THE INTEGRITY MAINTAINED (CRC R302.11.1): -TWO-INCH NOMINAL LUMBER -TWO THICKNESSES OF ONE-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS -ONE THICKNESS OF 23/32-INCH WOOD STRUCTURAL PANEL WITH JOINTS BACKED BY 23/32-INCH WOOD STRUCTURAL PANEL -ONE THICKNESS OF 3/4-INCH PARTICLEBOARD WITH JOINTS BACKED BY 3/4-INCH PARTICLEBOARD -1/2-INCH GYPSUM BOARD -1/4-INCH CEMENT-BASED MILLBOARD
30. BATTS OR BLANKETS OF MINERAL OR GLASS FIBER OF OTHER APPROVED MATERIALS INSTALLED IN SUCH A MANNER AS TO BE SECURELY RETAINED IN PLACE. BATTS OR BLANKETS OF MINERAL OR GLASS FIBER OR OTHER APPROVED NON-RIGID MATERIALS SHALL BE PERMITTED FOR COMPLIANCE WITH THE 10-FOOT HORIZONTAL FIRE-BLOCKING IN WALLS CONSTRUCTED USING PARALLEL ROWS OF STUDS OR STAGGERED STUDS. UN-FACED FIBERGLASS BATT INSULATION USED AS FIRE-BLOCKING SHALL FILL THE ENTIRE CROSS -SECTION OF THE WALL CAVITY TO A MINIMUM HEIGHT OF

BEST MANAGEMENT PRACTICES

Marin County Stormwater Pollution Prevention Program
Minimum Control Measures For Small Construction Projects



Erosion Controls	Sediment Controls	Good Housekeeping
NS Scheduling	6. Tracking Controls	10. Concrete Washout
1. Preserve Vegetation & Creek Set Backs	7. Fiber Rolls	11. Stockpile Management
2. Soil Cover	8. Silt Fence	12. Hazardous Material Management
3. Soil Preparation/ Roughening	9. Drain Inlet Protection	13. Sanitary Waste Management
4. Erosion Control Blankets	NS Trench Dewatering	14. Equipment and Vehicle Maintenance
5. Revegetation		15. Litter and Waste Management

NS=not shown on graphic

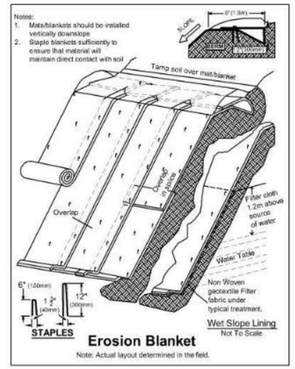
Note: Select an **effective combination of control measures from each category**, Erosion Control, Sediment Control, and Good Housekeeping. Control measures shall be **continually implemented and maintained throughout the project** until activities are complete, disturbed areas are stabilized with permanent erosion controls, and the local agency has signed off on permits that may have been required for the project. **Inspect and maintain the control measures** before and after rain events, and as required by the local agency or state permit.

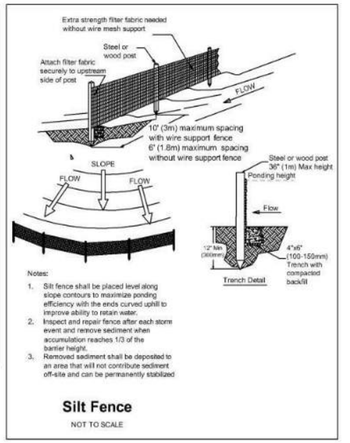
More detailed information on the BMPs can be found in the related California Stormwater Quality Association (CASQA) and California Department of Transportation (Caltrans) BMP Factsheets. CASQA factsheets are available by subscription in the *California Best Management Practices Handbook Portal: Construction* at http://www.casqa.org. Caltrans factsheets are available in the *Construction Site BMP Manual* at https://dot.ca.gov/programs/construction/storm-water-and-water-pollution-control/manuals-and-handbooks.

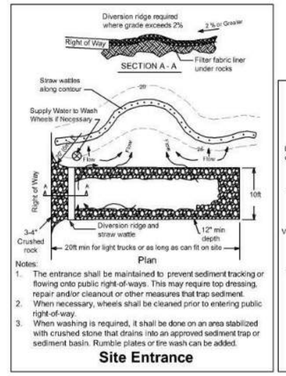
Visit www.mcstoppp.org for more information on construction site management and Erosion and Sediment Control Plans.

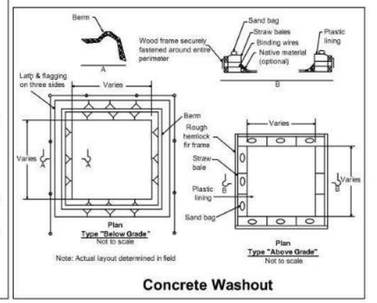
If you require materials in alternative formats, please contact:
415-473-4381 voice/TTY or disabilityaccess@co.marin.ca.us

Control Measure		General Description
Erosion Control Best Management Practices		
N/A	Scheduling	Plan the project and develop a schedule showing each phase of construction. Schedule construction activities to reduce erosion potential, such as scheduling ground disturbing activities during the summer and phasing projects to minimize the amount of area disturbed. *For more info see the following factsheets: CASQA: EC-1; or Caltrans: SS-1.*
1	Preserve Existing Vegetation and Creek Setbacks	Preserve existing vegetation to the extent possible, especially along creek buffers. Show creek buffers on maps and identify areas to be preserved in the field with temporary fencing. Check with the local Planning and Public Works Departments for specific creek set back requirements. *For more info see the following factsheets: CASQA: EC-2; or Caltrans: SS-2.*
2	Soil Cover	Cover exposed soil with straw mulch and tackifier (or equivalent). *For more info see the following factsheets: CASQA: EC-3, EC-5, EC-6, EC-7, EC-8, EC-14, EC-16; or Caltrans: SS-2, SS-4, SS-5, SS-6, SS-7, SS-8.*
3	Soil Preparation/ Roughening	Soil preparation is essential to vegetation establishment and BMP installation. It includes soil testing and amendments to promote vegetation growth as well as roughening surface soils by mechanical methods (decompacting, scarifying, stair stepping, etc.). *For more info see the following factsheets: CASQA: EC-15.*
4	Erosion Control Blankets	Install erosion control blankets (or equivalent) on disturbed sites with 3:1 slopes or steeper. Use wildlife-friendly blankets made of biodegradable natural materials. Avoid using blankets made with plastic netting or fixed aperture netting. See: http://www.coastal.ca.gov/nps/Wildlife-Friendly_Products.pdf. *For more info see the following factsheets: CASQA: EC-7; or Caltrans: SS-7.*
5	Revegetation	Re-vegetate areas of disturbed soil or vegetation as soon as practical. *For more info see the following factsheets: CASQA: EC-4; or Caltrans: SS-4.*
Sediment Control Best Management Practices		
6	Tracking Controls	Stabilize site entrance to prevent tracking soil offsite. Inspect streets daily and sweep street as needed. Require vehicles and workers to use stabilized entrance. Place crushed rock 12-inches deep over a geotextile, using angular rock between 4 and 6-in. Make the entrance as long as can be accommodated on the site, ideally long enough for 2 revolutions of the maximum tire size (16-20 feet long for most light trucks). Make the entrance wide enough to accommodate the largest vehicle that will access the site, ideally 10 feet wide with sufficient radii for turning in and out of the site. Rumble pads or rumble racks can be used in lieu of or in conjunction with rock entrances. Wheel washes may be needed where space is limited or where the site entrance and sweeping is not effective. *For more info see the following factsheets: CASQA: TC-1; TC-3; or Caltrans: TC-1; TC-3.*
7	Fiber Rolls	Use fiber rolls as a perimeter control measure, along contours of slopes, and around soil stockpiles. On slopes space rolls 10 to 20 feet apart (using closer spacing on steeper slopes). Install parallel to contour. If more than one roll is used in a row overlap roll do not abut. J-hook end of roll upslope. Install rolls per either Type 1 (stake rolls into shallow trenches) or Type 2 (stake in front and behind roll and lash with rope). Use wildlife-friendly fiber rolls made of biodegradable natural materials. Avoid using fiber rolls made with plastic netting or fixed aperture netting. See: http://www.coastal.ca.gov/nps/Wildlife-Friendly_Products.pdf. Manufactured linear sediment control or compost socks can be used in lieu of fiber rolls. *For more info see the following factsheets: CASQA: SE-5 (Type 1); SE-12, SE-13; or Caltrans: SC-5 (Type 1 and Type 2).*
8	Silt Fence	Use silt fence as a perimeter control measure, and around soil stockpiles. Install silt fence along contours. Key silt fence into the soil and stake. Do not use silt fence for concentrated water flows. Install fence at least 3 feet back from the slope to allow for sediment storage. Wire backed fence can be used for extra strength. Avoid installing silt fence on slopes because they are hard to maintain. Manufactured linear sediment control can be used in lieu of silt fences. *For more info see the following factsheets: CASQA: SE-1; SE-12; or Caltrans: SC-1.*
9	Drain Inlet Protection	Use gravel bags, (or similar product) around drain inlets located both onsite and in gutter as a last line of defense. Bags should be made of a woven fabric resistant to photo-degradation filled with 0.5-1-in washed crushed rock. Do not use sand bags or silt fence fabric for drain inlet protection. *For more info see the following factsheets: CASQA: SE-10; or, Caltrans: SC-10.*
N/A	Trench Dewatering	Follow MCSTOPPP BMPs for trench dewatering. http://www.marincounty.org/depts/pw/divisions/mcstoppp/development/~/media/Files/Departments/PW/mcstoppp/development/TrenchingSWReqMCSTOPPPFinal6_09.pdf. *For more info see the following factsheets: CASQA: NS-2; or Caltrans: NS-2.*
Good Housekeeping Best Management Practices		
10	Concrete Washout	Construct a lined concrete washout site away from storm drains, waterbodies, or other drainages. Ideally, place adjacent to stabilized entrance. Clean as needed and remove at end of project. *For more info see the following factsheets: CASQA: WM-8; or Caltrans: WM-8.*
11	Stockpile Management	Cover all stockpiles and landscape material and berm properly with fiber rolls or sand bags. Keep behind the site perimeter control and away from waterbodies. *For more info see the following factsheets: CASQA: WM-3 or Caltrans: WM-3.*
12	Hazardous Material Management	Hazardous materials must be kept in closed containers that are covered and within secondary containment; do not place containers directly on soil. *For more info see the following factsheets: CASQA: WM-6; or Caltrans: WM-6.*
13	Sanitary Waste Management	Place portable toilets near stabilized site entrance, behind the curb and away from gutters, storm drain inlets, and waterbodies. Tie or stake portable toilets to prevent tipping and equip units with overflow pan/tray (most vendors provide these). *For more info see the following factsheets: CASQA: WM-9; or Caltrans: WM-9.*
14	Equipment and Vehicle Maintenance	Prevent equipment fluid leaks onto ground by placing drip pans or plastic tarps under equipment. Immediately clean up any spills or drips. *For more info see the following factsheets: CASQA: NS-8, NS-9, and NS-10; or Caltrans: NS-8, NS-9, and NS-10.*
15	Litter and Waste Management	Designate waste collection areas on site. Use watertight dumpsters and trash cans; inspect for leaks. Cover at the end of each work day and when it is raining or windy. Arrange for regular waste collection. Pick up site litter daily. *For more info see the following factsheets: CASQA: WM-5; or Caltrans: WM-5.*











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APN 065-054-11

MARK	DATE	DESCRIPTION
1	01/13/2025	RESPONSE TO PLAN CHECK COMMENTS

STATUS: DR SET
DATE: 1/14/2025
DRAWN BY: LAM NGUYEN
DESIGN OFFICIAL
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SHEET TITLE

BEST MANAGEMENT PRACTICE

A0.3

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CONSTRUCTION HOURS
MONDAY - FRIDAYS: 8AM TO 6PM.
SATURDAY: 9AM TO 5PM
NO WORK ON SUNDAY AND HOLIDAYS.
REFER TO SMC 12.16.140. (B) FOR CONSTRUCTION HOURS WHERE WORKS ARE DONE BY HOMEOWNER OR LEGAL RESIDENTS

DELIVERIES/OFF-HAUL

DELIEVERS ARE LIMTED TO WEEKDAYS FROM 8 AM TO 5 PM. FOR TRUCKS EXCEEDING 26 FT IN LENGTH, A TRANSPORTATION PERMIT MUST BE OBTAINED FROM THE DEPARTMENT OF PUBLIC WORKS A MINIMUM OF 72 HOURS IN ADVANCE.

ROAD/LANE CLOSURES

PERMITS MUST BE OBTAINED FROM THE DEPARTMENT OF PUBLIC WORKS. ROAD CLOSURES REQUIRE POSTING SIGNS A MINIMUM OF 72 HRS IN ADVANCE. COPIES OF THESE PERMITS MUST BE MAINTAINED AT THE JOB SITE FOR THE DURATION OF THE CLOSURE.

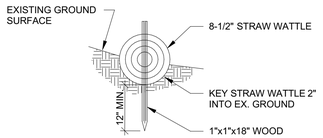
PARKING
ALL WORKER VEHICLES MUST PARK AT THE JOB SITE OR CARPOOL. OFF-SITE WORKER PARKING LOCATIONS, AND CARPOOL PICK-UP DROP-OFF LOCATIONS ARE SHOWN.

ENFORCEMENT
1ST OFFENSE VIOLATION OF ANY PORTION OF THE APPROVED CMP OR OTHER APPLICABLE CONSTRUCTION MANAGEMENT REQUIREMENTS WILL BE ADDRESSED BY A WRITTEN WARNING FROM THE TOWN, ANY FURTHER OR SUBSEQUENT VIOLATIONS WILL BE ADDRESSED BY A 'STOP WORK ORDER'.

GENERAL CONTRACTOR INFORMATION
G FAMILY CONSTRUCTION
DAVID GRABHAM
(415) 721-7340

PROJECT MANAGER AND EMERGENCY CONTACT INFORMATION
DAVID GRABHAM
(415) 261-7643

1 CONSTRUCTION MANAGEMENT NOTES

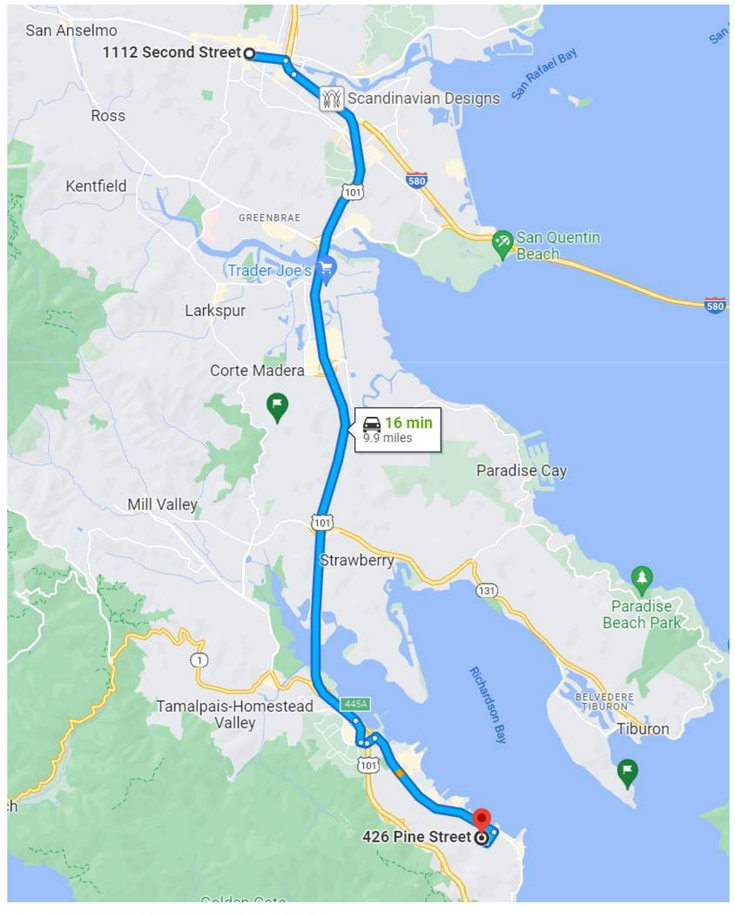


2 STRAW WATTLE & SILT FENCE DETAIL
NOT TO SCALE

NOTES:

1. ENCROACHMENT ON PUBLIC RIGHT OF WAY IS NOT PERMITTED.
2. ESTIMATED 2-4 WORKERS ON SITE FOR DURATION OF PROJECT.
3. WORKERS TO CARPOOL FROM 1112 SECOND STREET, SAN RAFAEL CALIFORNIA.
4. ANY DAMAGE TO THE STREET CAUSED BY HEAVY EQUIPMENT OR BECAUSE OF PROJECT CONSTRUCTION ACTIVITIES SHALL BE REPAIRED, AT THE APPLICANT'S EXPENSE, PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY. ALL HAZARDOUS DAMAGE SHALL BE REPAIRED IMMEDIATELY. ANY HEAVY EQUIPMENT BROUGHT TO THE CONSTRUCTION SITE SHALL BE TRANSPORTED BY TRUCK.

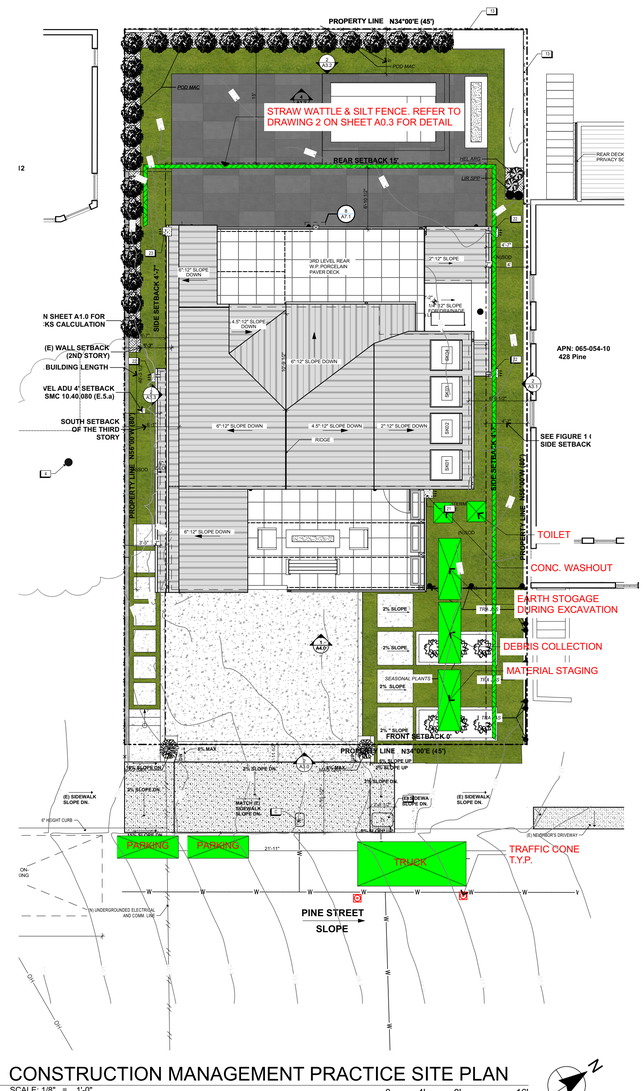
ENCROACHMENT ON PUBLIC RIGHT OF



3 CONSTRUCTION TRUCK ROUTE
NOT TO SCALE



4 STREET ELEVATION
NOT TO SCALE



5 CONSTRUCTION MANAGEMENT PRACTICE SITE PLAN
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

TRAFFIC CONTROL NOTE: THE STREET WILL NOT BE CLOSED AT ANYTIME DURING CONSTRUCTION.

DEBRIS BOX NOTE: DEBRIS BOX SERVICE MUST BE THROUGH BAY CITIES REFUSE. THE CITY OF SAUSALITO HAS AN EXCLUSIVE FRANCHISE AGREEMENT WITH BAY CITIES REFUSE AND RECYCLING SERVICES 415.332.3646. 1

NO GRADING OR EXCAVATION OPERATIONS SHALL OCCUR BETWEEN OCTOBER 15 AND APRIL 1 WITHOUT THE WRITTEN APPROVAL OF THE CITY ENGINEER. THE PROJECT EXCAVATION, CONSTRUCTION OF THE MAIN RETAINING WALLS AND ASSOCIATED APPURTENANT FEATURES SHALL COMMENCE NO LATER THAN AUGUST 1 OF THE DRY SEASON. THE PROJECT EXCAVATION, CONSTRUCTION OF THE MAIN RETAINING WALLS AND ASSOCIATED APPURTENANT FEATURES SHALL COMMENCE AND CONCLUDE WITHIN A SINGLE DRY SEASON. 1

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JAKE & GEORGIA BEYER
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426 PINE ST.
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APN 065-054-11

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DATE: 1/14/2025
DRAWN BY: LAM NGUYEN
DESIGN OFFICIAL

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SHEET TITLE

CONSTRUCTION MANAGEMENT PRACTICE

A0.4

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FIGURE 1: MINIMUM SIDE SETBACKS CALCULATION:

TYPICAL MINIMUM SETBACKS PER TABLE 10.22-2 = 5'

WITH EXCEPTION FOR NARROW LOT (WIDTH < 50'),
PER SMC. 10.40.080 (A), MINIMUM SETBACKS = 45' (LOT WIDTH)* x 10% = 4'-6"

REQUIRED INCREASE SETBACKS DUE TO BUILDING LENDTH IS GREATER THAN 40' PER 10.40.070 (D.1)

REQUIRED INCREASE SETBACKS = PORTION OF BUILDING LENGTH THAT IS GREATER 40' x 1/5 (1' FOR EACH 5')

TOTAL LENGTH OF BUILDING = 40'- 3.5"

REQUIRED INCREASE SETBACKS = 3.5" X (1/5) = 0.7"

HENCE, MINIMUM SIDE SETBACKS = 4'-7"

SANITARY NOTES:
ALL DISCHARGE FROM PROPOSED HOT TUB/SPA CANNOT BE DISCHARGED INTO THE STORM DRAIN SYSTEM BUT CAN BE DISCHARGED INTO THE SANITARY SYSTEM. SPA DRAINAGE SHOULD NOT BE DRAINED TO NEIGHBORING PROPERTY.

ABS PIPING CANNOT BE USED UNDERGROUND FOR SEWER LATERAL PIPING LOCATED BEYOND THE BUILDING DRAIN CLEAN OUT.

UTILITY IMPROVEMENT NOTES:
ALL OVERHEAD ELECTRICAL AND COMMUNICATION SERVICE DROPS BE PLACED UNDERGROUND

LEGEND

- PROPERTY LINE
- SETBACKS
- CONTOUR LINE
- FENCE
- OVERHEAD LINE
- WATER LINE
- COMMUNICATIONS LINE
- (N) UNDERGROUNDED ELECTRICAL & COMM. LINE

UTILITY LEGEND

- A GAS METER TO BE RELOCATED
- B ELECTRICAL METER TO BE RELOCATED
- C WATER METER TO REMAIN - NO WORK
- D COMMUNICATION BOX TO BE RELOCATED
- E GAS METER AT NEW LOCATION
- F ELECTRICAL METER AT NEW LOCATION
- G (E) ELECTRICAL POLE TO STAY - NO WORK
- H COMMUNICATION BOX AT NEW LOCATION

KEY NOTES

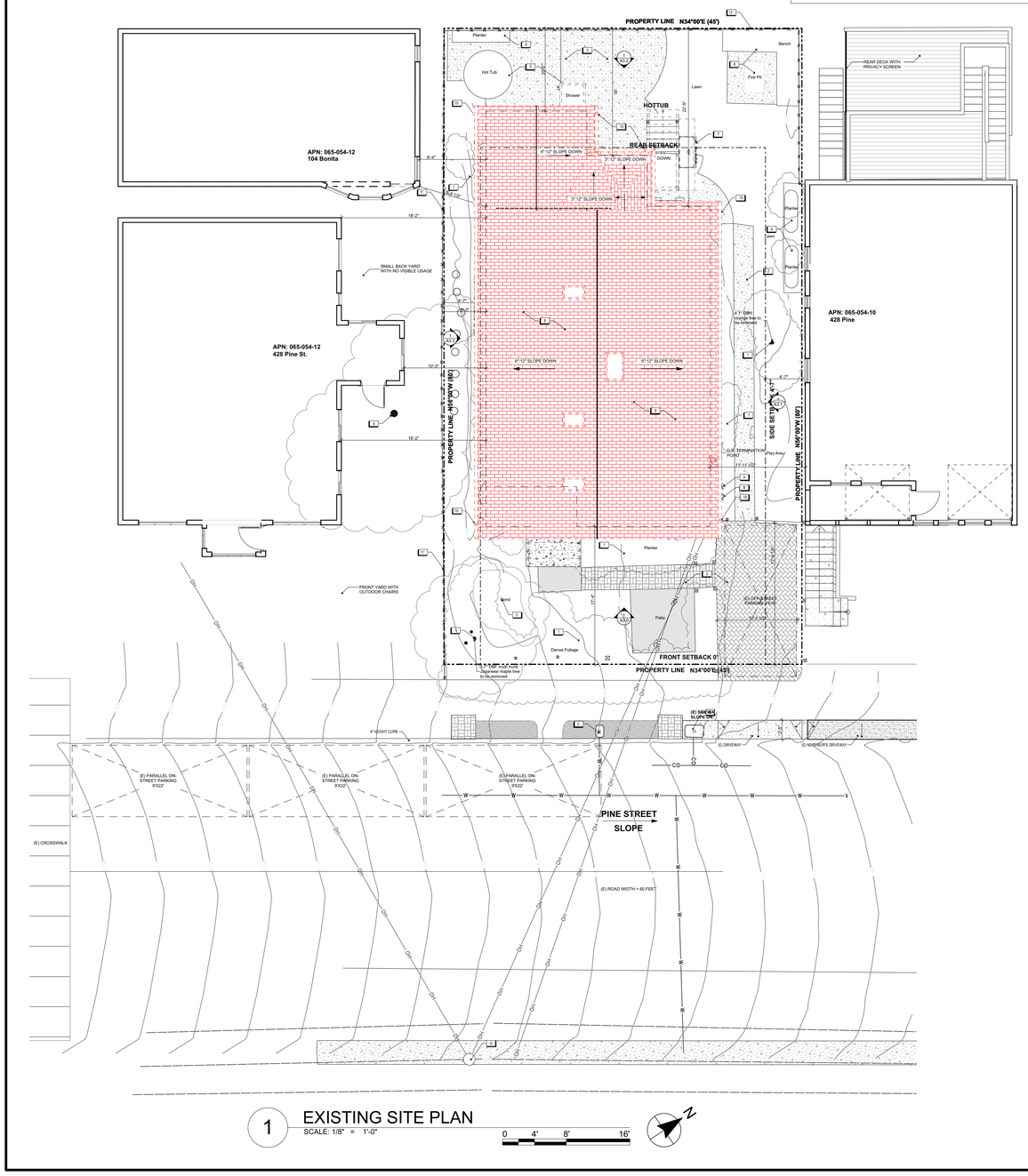
1. REMOVE (E) TREE OR VEGETATION.
2. REMOVE (E) PAVER.
3. REMOVE (E) POND.
4. (E) NEIGHBOR'S TREE TO STAY - NO WORK
5. REMOVE (E) HOT TUB & OUTDOOR SHOWER
6. REMOVE (E) PLANTER BOX.
7. REMOVE (E) OUTDOOR BBQ TABLE.
8. REMOVE (E) OUTDOOR FIRE PIT & BENCH.
9. REMOVE (E) ROOF THROUGH OUT.

KEY NOTES

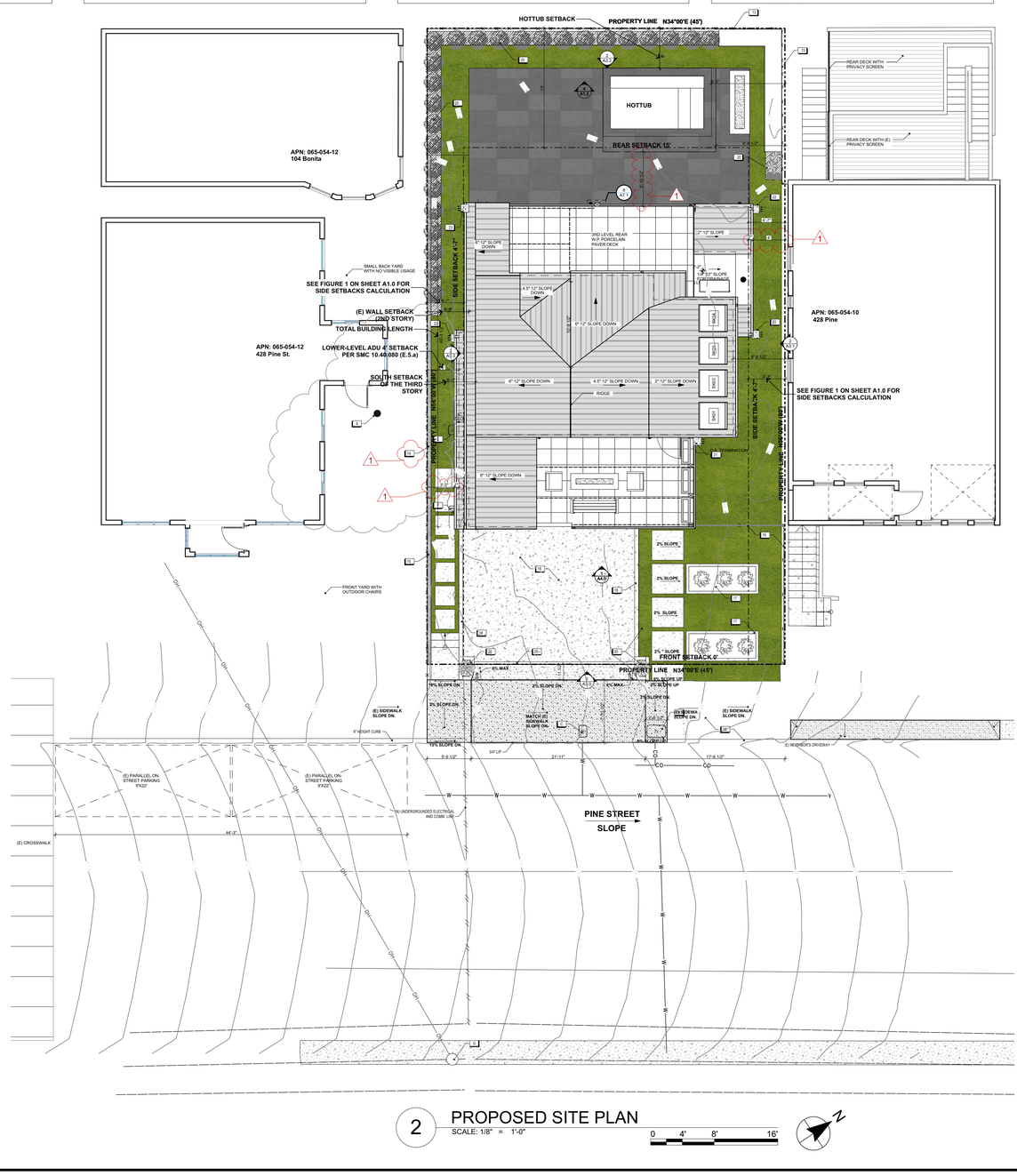
10. (E) DRAINAGE TERMINATION POINT
11. REPLACE (E) 5'-8" WOOD FENCE WITH (N) CEDAR FENCE. KEEP (E) HEIGHT.
12. REPLACE (E) 7'-6" WOOD FENCE WITH (N) CEDAR FENCE. KEEP (E) HEIGHT.
13. APPLY SMOOTH STUCCO CLADDING FOR (E) WOOD FENCE AT THE REAR AND RIGHT FENCE
14. 1'-8" HEIGHT RETAINING WALL. TOW = 40.02' & BOW = 38.3'.
15. 2'-5" HEIGHT RETAINING WALL. TOW = 40.72' & BOW = 38.3'.
16. CONC. SLAB FOR 2 (N) OUTDOOR PARKING SPACES
17. (N) CONC. GARDEN BED AT 20" HEIGHT WITH SEASONAL PLANTS
18. 5.5" CONC. CURB ON BOTH SIDES OF PARKING AREA

KEY NOTES

19. (N) HOG WIRE FENCE FOR VINES TO GROW ON TO CREATE GREEN SCREEN
20. LANDSCAPED PLANTS. SEE SHEET A1.1 FOR PROPOSED LANDSCAPED PLAN
21. 3RD FLOOR DECK RUNOFF TO DISSIPATE ONTO SPLASH BLOCK FROM DS. ALL DISCHARGE TO BE WITHIN PROPERTY LINE
22. 3RD FLOOR ROOF RUNOFF & 1ST FLOOR ROOF RUNOFF TO DISSIPATE ONTO SPLASH BLOCK FROM DS. ALL DISCHARGE TO BE WITHIN PROPERTY LINE
23. 3RD FLOOR REAR DECK & ROOF RUNOFF RUNOFF TO DISSIPATE ONTO SPLASH BLOCK FROM DS. ALL DISCHARGE TO BE WITHIN PROPERTY LINE
24.
25. TROUGH DRAIN FOR (N) OUTDOOR PARKING AREA
26. REPLACE (E) DRIVEWAY CUT WITH (N) SIDEWALK AND CURB



1 EXISTING SITE PLAN
SCALE: 1/8" = 1'-0"
0 4' 8' 16'



2 PROPOSED SITE PLAN
SCALE: 1/8" = 1'-0"
0 4' 8' 16'

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APN 065-054-11

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DATE: **1/14/2025**
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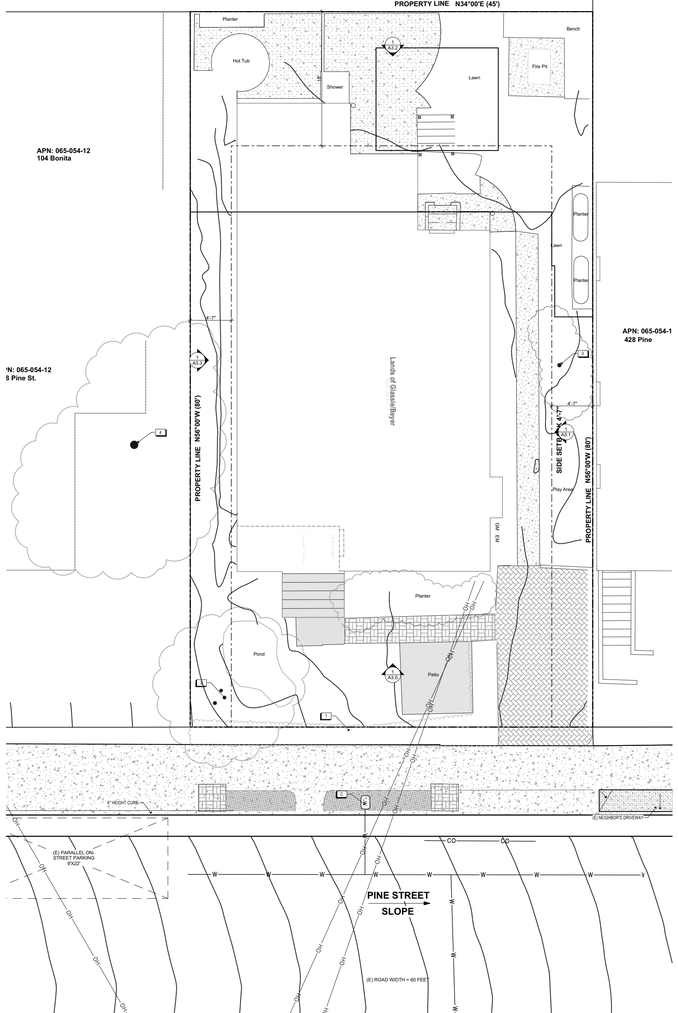
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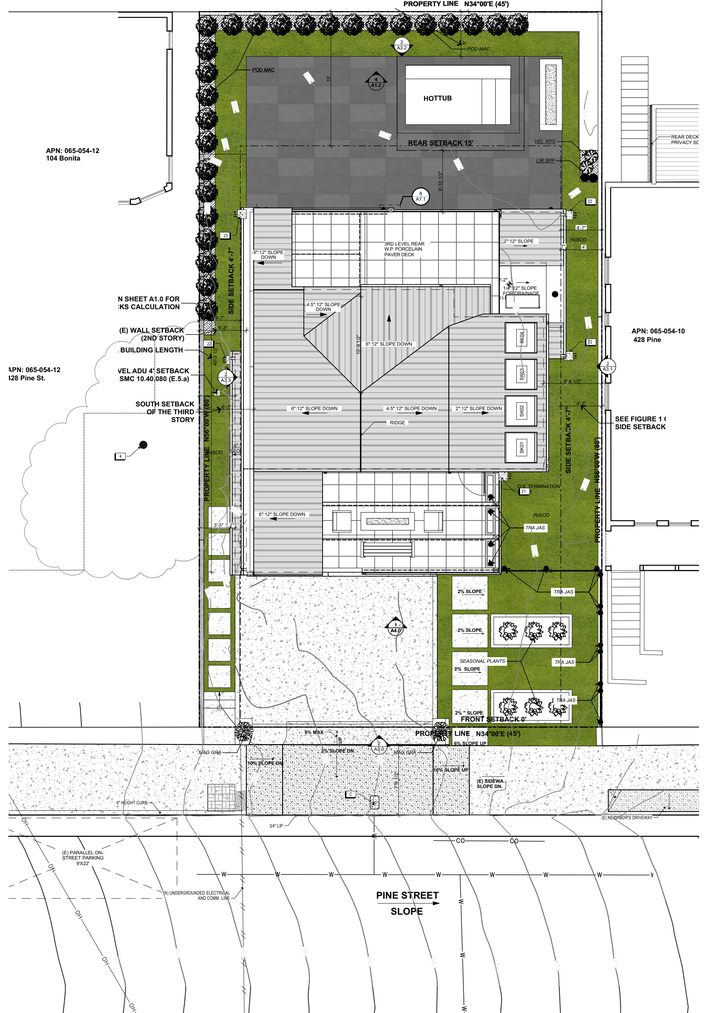
SITE PLAN

A1.0

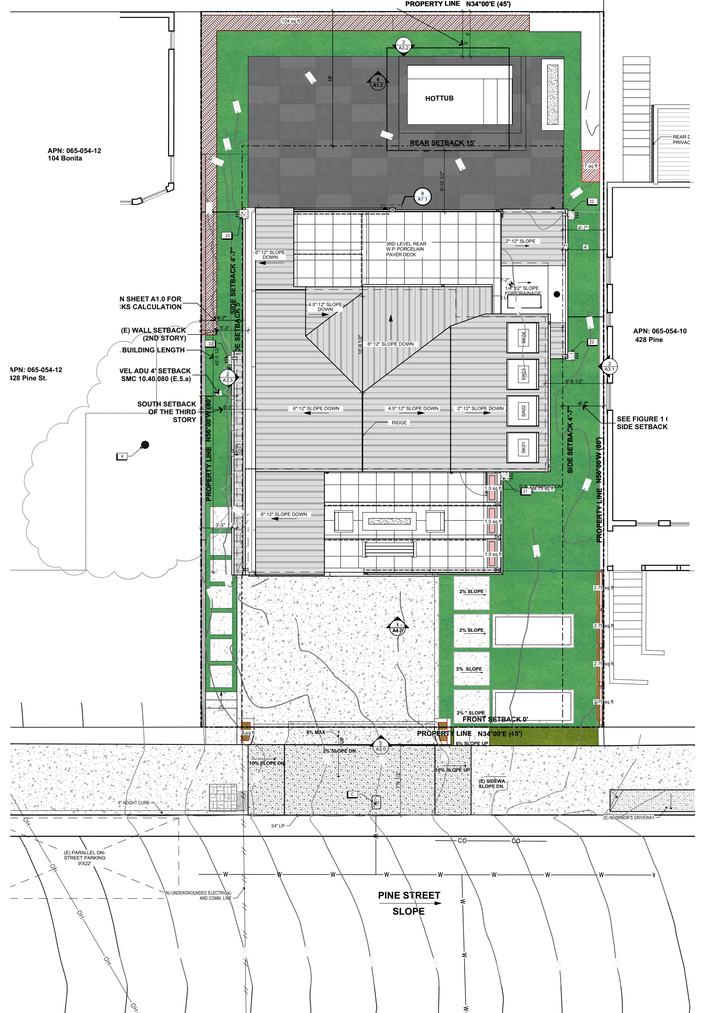
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1 EXISTING SITE PLAN
SCALE: 1/8" = 1'-0"
0 4' 8' 16'



2 PROPOSED LANDSCAPE PLAN
SCALE: 1/8" = 1'-0"
0 4' 8' 16'



3 PROPOSED IRRIGATION PLAN
SCALE: 1/8" = 1'-0"
0 4' 8' 16'

KEY NOTES

1. REMOVE (E) MIX HEDGE/VINES:
   ENGLISH IVY (*HEDERA HELIX),*
   PINK JASMINE *(JASMINUM POLYANTHUM)*
   RED TRUMPET VINE (*DISTICTIS BUCCINATORIA*)
2. REMOVE (E) MAPLE TREE (*ACER PALMATUM*) 18" IN CIRCUMFERENCE (5.7" DBH) AT 4.5 FEET ABOVE THE GROUND.
3. REMOVE (E) ORANGE TREE (*CITRUS SINENSIS*) 13" IN CIRCUMFERENCE (4.1" DBH) AT 4.5 FEET ABOVE THE GROUND.
4. (E) NEIGHBOR'S BIGLEAF MAPLE TREE *(ACER MACROPHYLLA*) TO STAY.NO WORK :

SYMBOL	LATIN NAME	COMMON NAME	QUANTITY	SIZE	HEIGHT	WUCOLS
MAG GRA	*MAGNOLIA GRANDIFLORA*	MAGNOLIA LITTLE GEM	3	15 GAL	6'	L
POD MAC	*PODOCARPUS MACROPHYLLUS*	YEW PINE	26	15 GAL	30'	M
HEL ARG	*HELLEBORUS ARGUTIFOLIUS*	CORSICAN HELLEBORE	2	1 GAL	2'	L
LIR SPP	*LIRIOPE SSP.*	LILYTURF	2	1 GAL	1'	M
SOD	SHADE MIX - TALL FESCUE & FINE FESCUE MIX		779.5 SQ FT	ROLL	N/A	M
TRA JAS	TRACHELOSPERMUM JASMINOIDES	STAR JASMINE	15	5 GAL	6'	M

IRRIGATION SCHEDULE:

AREA TO RECEIVE ROTARY POP-UP PROS-06-PRS-30
WITH MP-ROTATOR NOZZLES SPRINKLER SYSTEM CONNECTED TO
PGV-ASV PLASTIC ANTI-SIPHON INDUSTRIAL ELECTRIC REMOTE CONTROL VALVE
WITH ACCU-SYNC ADJUSTABLE PRESSURE REGULATING DIAL

AREA TO RECEIVE ACZ-075 REMOTE CONTROL DRIP ZONE KIT WITH FILTER
AND PRESSURE REGULATOR AND DRIP EMITTERS RAINBIRD XB-PC PER
SCHEDULE:
- 1 GAL PLANTS TO RECIVE 1 x 1.0 GPH EMITTER
- 5 GAL PLANTS TO RECEIVE 2 x 1.0 GPH EMITTERS
- 15 GAL PLANTS TO RECEIVE 2 x 2.0 GPH EMITTERS
- 24" BOX TREES TO RECEIVE RZWS-18-50-CV ROOT ZONE WATERING SYSTEM

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SHEET TITLE

LANDSCAPE & IRRIGATION PLAN

A1.1

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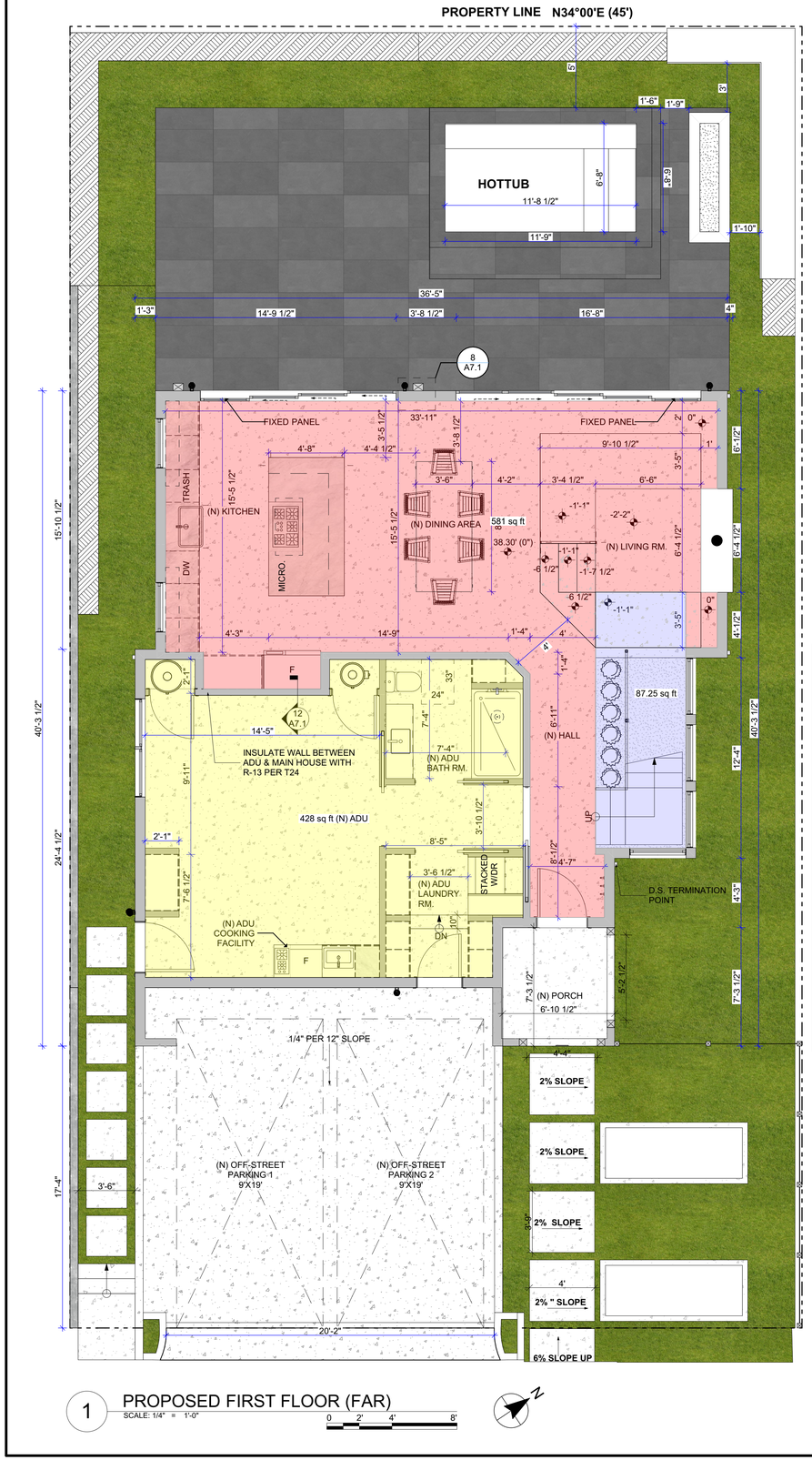
MAX. F.A.R.CALC. FOR R-3 ZONING
F.A.R. = 65% - ((TOTAL PARCEL SIZE - 3,000)/3,000)X0.2)
FOR 3,600 SF LOT SIZE:
F.A.R = 0.65 -((3,600-3,000)/3,000)x0.2) = 0.61
= 0.65 - 0.04 = 0.61
MAX. ALLOWABLE FLOOR AREA = 0.61*3600 SF = 2,196 SF

NOTES:(PER SMC 10.40.040)
1. FLOOR AREA (FAR) SHALL BE MEASURED FROM THE INTERIOR FACES OF THE EXTERIOR WALLS.
2. FLOOR AEA SHALL EXCLUDED 500 SQUARE FEET OF ENCLOSED AUTOMOBILE PARKING SPACE FOR SINGLE-FAMILY DWELLINGS.

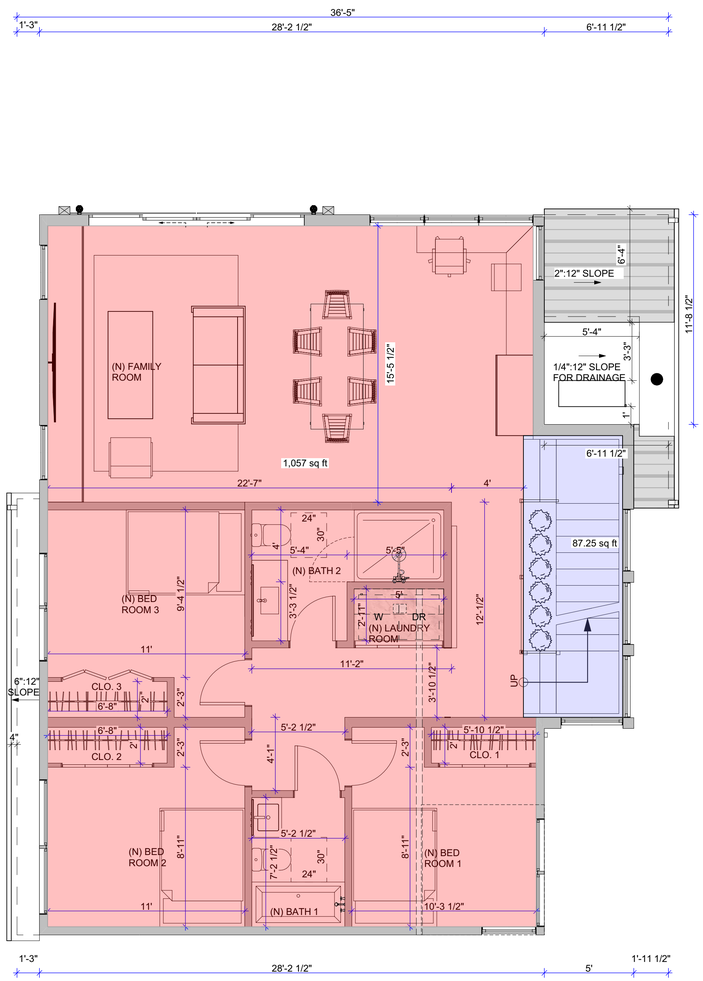
F.A.R. CALC.	
1ST FLOOR:	**581 SF**
2ND FLOOR:	**1,057 SF**
3RD FLOOR:	**470.75 SF**
STAIR:	**87.25 SF.** (COUNTED ONCE)
ADU:	428 SF (EXCLUDED)
TOTAL:	**2196 SF (PROPOSED)**
MAX. ALLOWABLE: 2196 SF	

LEGEND

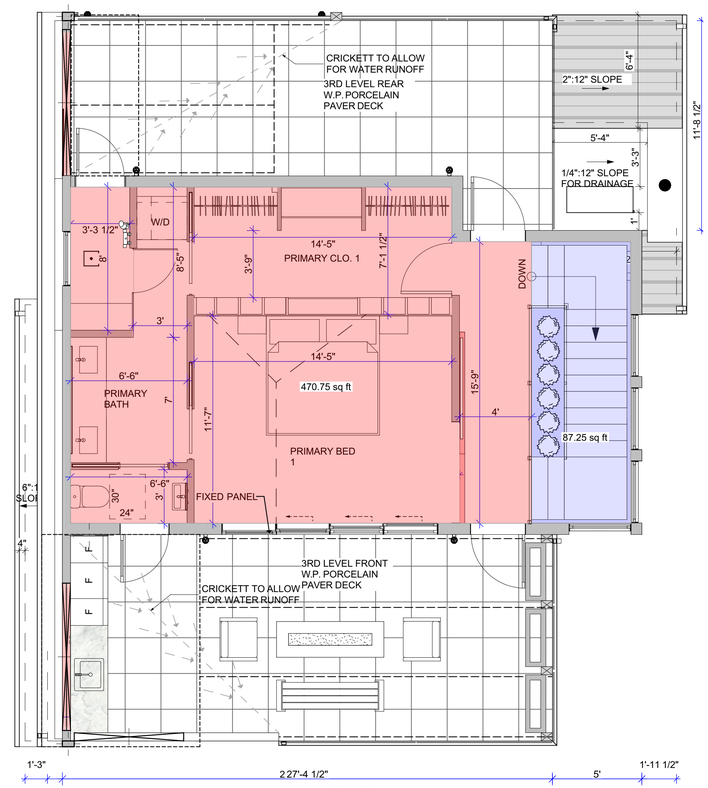
- (E) WALLS TO REMAIN.
- (N) WALLS
- PROPOSED FLOOR AREA (FAR) FOR ALL FLOOR
- PROPOSED CONTINIOUS STAIRCASES (STACKED) FLOOR AREA
- PROPOSED ADU FLOOR AREA (EXCLUDED IN FAR CALC.)



1 PROPOSED FIRST FLOOR (FAR)
SCALE: 1/4" = 1'-0"
0 2' 4' 8'



2 PROPOSED SECOND FLOOR PLAN (FAR)
SCALE: 1/4" = 1'-0"
0 2' 4' 8'



2 PROPOSED THIRD FLOOR PLAN (FAR)
SCALE: 1/4" = 1'-0"
0 2' 4' 8'

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APN 065-054-11

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1	01/13/2025	RESPONSE TO PLAN CHECK COMMENTS

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SHEET TITLE

FAR COVERAGE DIAGRAM

A1.3

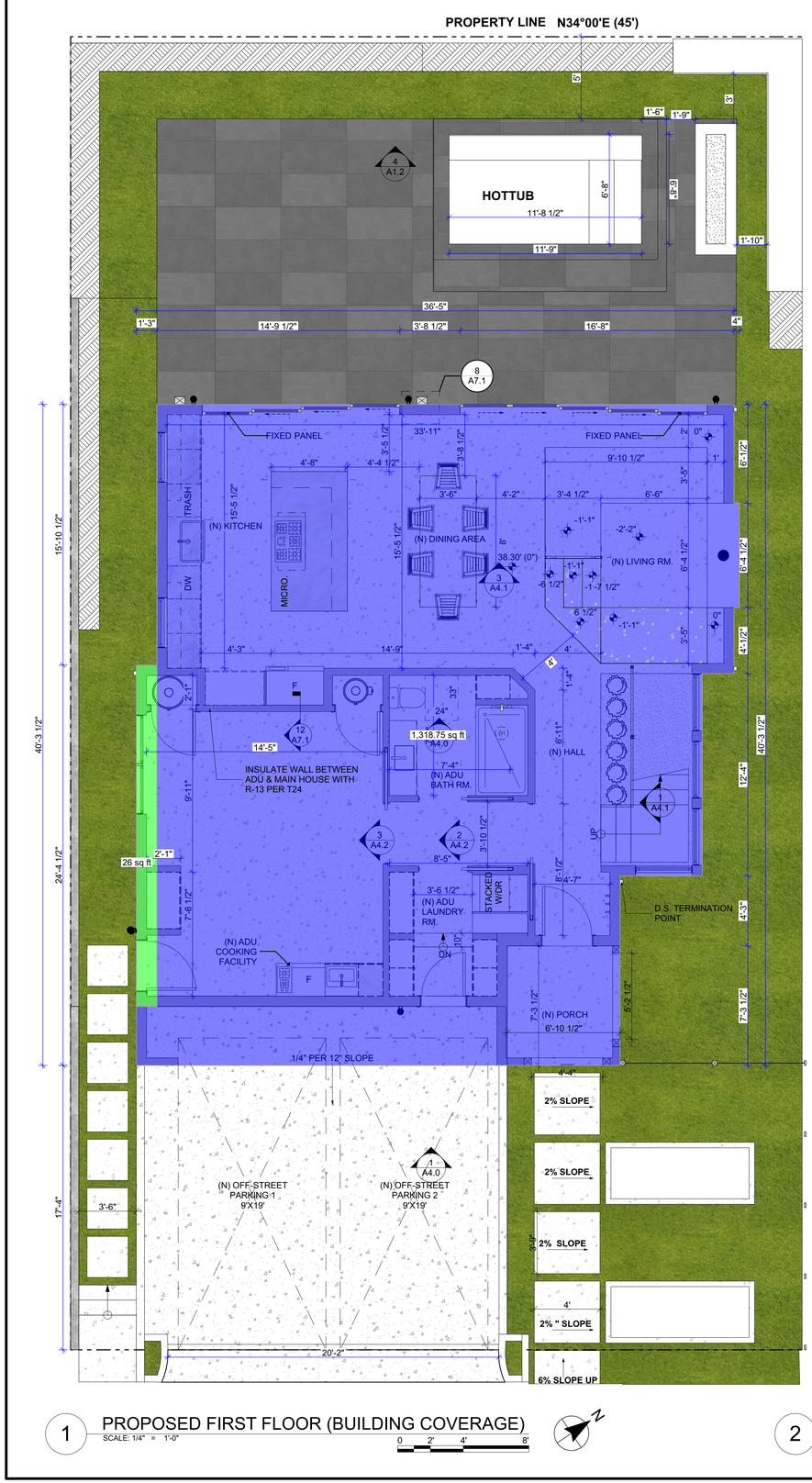
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MAX. BUILDING COVERAGE CALC. FOR R-3 ZONING
MAX. BUILDING COVERAGE = 50% - ((TOTAL PERCEL SIZE -3,000)/3,000)x0.15)%
FOR 3,600 SF LOT SIZE:
BUILDING COVERAGE = 50% -(((3,600-3,000)/3,000)x0.15)%
= 50% - 3% = 47%
MAX. BUILDING COVERAGE = 47%*3,600 SF = 1692 SF

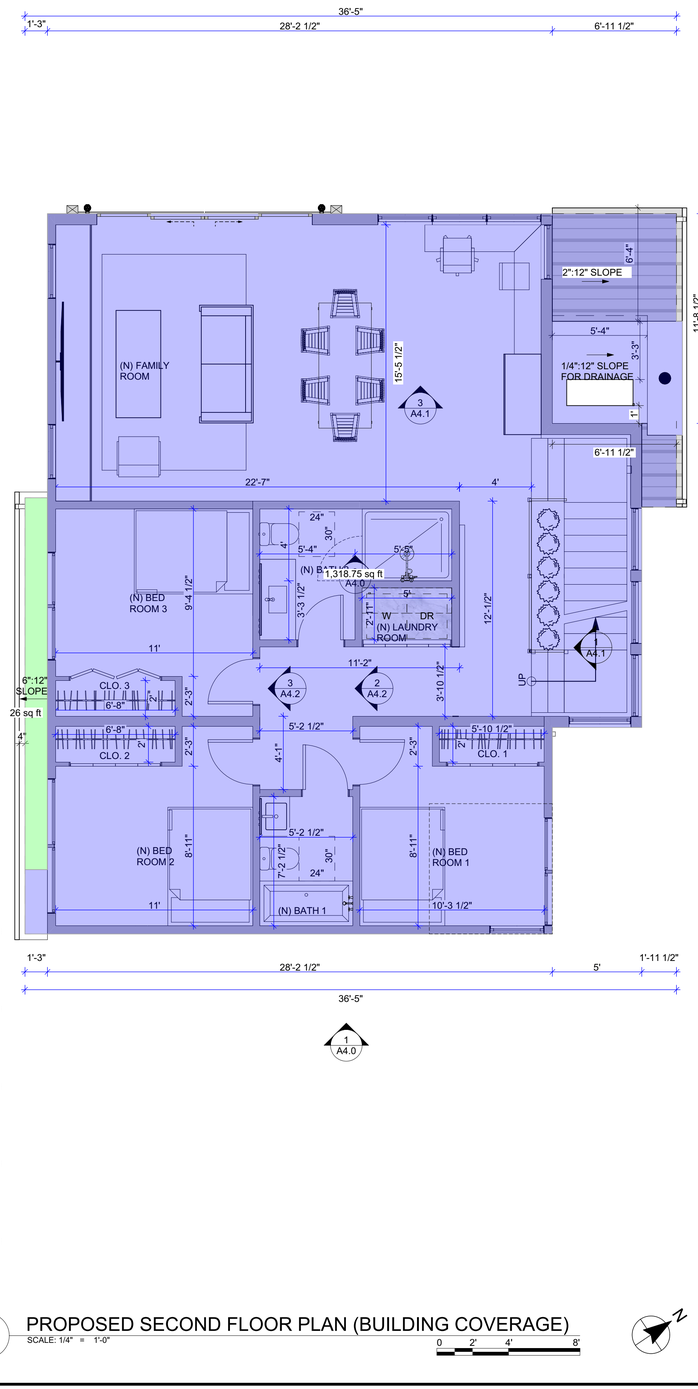
LOT COVERAGE CALC.
MAIN BUILDING: **1,318.75SF**
MISC. STRUCTURES > 2' IN HEIGHT: **0 SF**
ADU PORTION: 26 SF (EXCLUDED)
TOTAL: **1,318.75 SF (PROPOSED)**
MAX. ALLOWABLE: 1692 SF

LEGEND

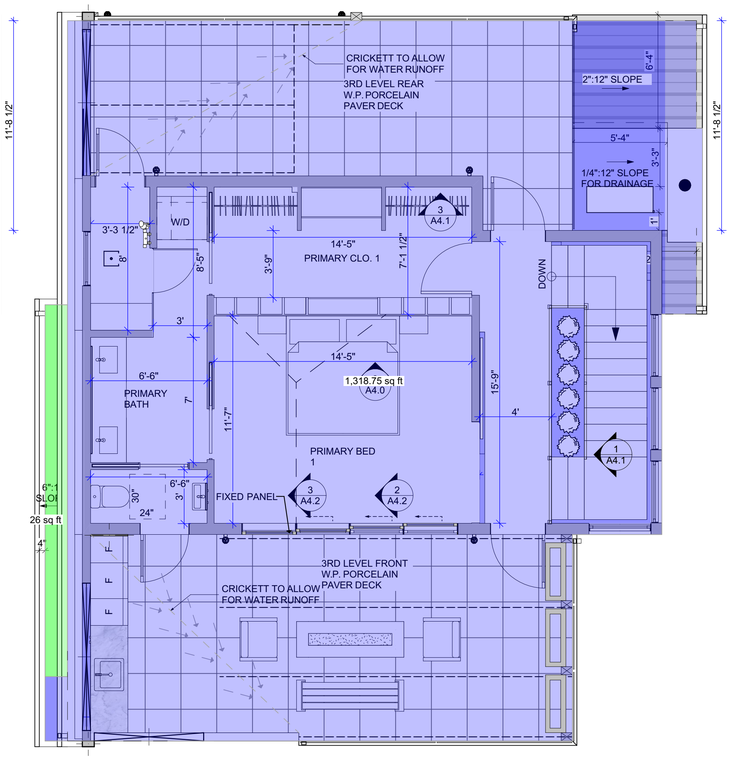
- (E) WALLS TO REMAIN.
- (N) WALLS
- PROPOSED BUILDING COVERAGE
- PORTION OF ADU NOT INCLUDED



1 PROPOSED FIRST FLOOR (BUILDING COVERAGE)
SCALE: 1/4" = 1'-0"



2 PROPOSED SECOND FLOOR PLAN (BUILDING COVERAGE)
SCALE: 1/4" = 1'-0"



3 PROPOSED THIRD FLOOR PLAN (BUILDING COVERAGE)
SCALE: 1/4" = 1'-0"

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SHEET TITLE

BUILDING COVERAGE DIAGRAM

A1.4

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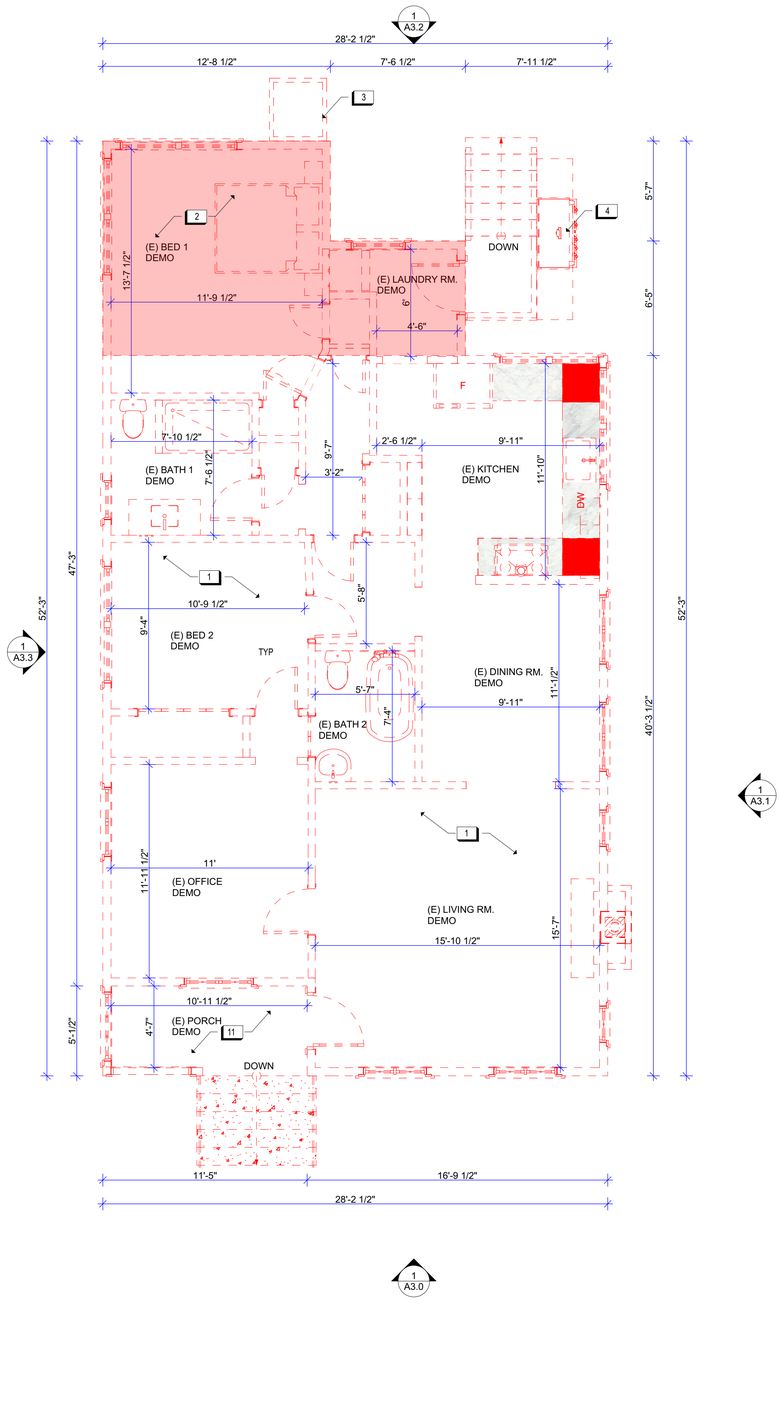
DEMO KEY NOTES

1. DEMO (E) HOUSE THROUGH OUT PER ENGINEER'S RECOMMENDATION. KEEP (E) FOOTFRINT FOR NEW BUILD.
2. REMOVE PORTION OF LAUNDRY ROOM & BEDROOM FOR SETBACK COMPLIANCE.
3. REMOVE (E) OUTDOOR SHOWER.
4. REMOVE (E) BBQ EQUIPMENT.
5. REMOVE FRONT PORCH TO ALLOW FOR (N) ADDITION.

LEGEND

(E) WALLS TO REMAIN TO ALLOW FOR HOUSE LIFT.

WALL OR ELEMENT TO BE REMOVED



1 DEMO MAIN FLOOR PLAN
SCALE: 1/4" = 1'-0"
0 2' 4' 8'

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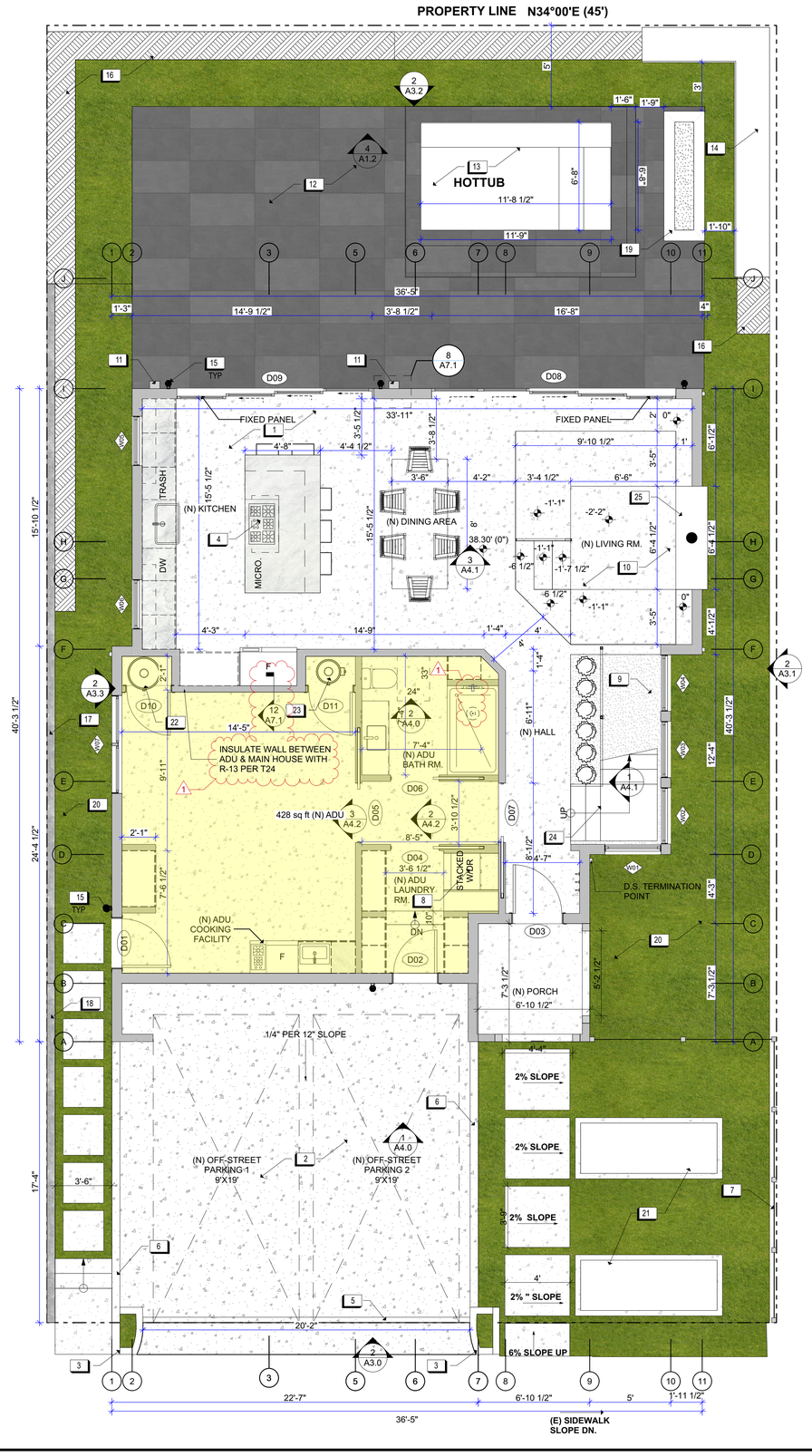
DEMO MAIN FLOOR PLAN

A2.0

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PROPOSED KEY NOTES

1. FINISHED CONC. POLISHED FLOOR THROUGH OUT FIRST FLOOR.
2. (N) CONC. SLAB FOR OUTDOOR PARKING AREA.
3. CONC. PLANTER BOX.
4. 36" GAS RANGE WITH HOOD ABOVE.
5. TROUGH DRAIN FOR (N) OUTDOOR PARKING AREA
6. 5.5" CONC. CURB ON BOTH SIDES OF PARKING AREA
7. (N) HOG WIRE FENCE FOR VINES TO GROW ON TO CREATE GREEN SCREEN.
8. STACK WASHER AND DRYER FOR ADU.
9. (N) INDOOR PLANTING AREA.
10. (N) CONVERSATION PIT.
11. ARCHITECTURE OPEN BEAMS AND POSTS WITH YELLOW CEDAR FINISH & SATIN SEALER
12. SAND SET PRE-CAST PAVERS 2'X4'.
13. (N) 18" HEIGHT IN-GROUND HOT TUB.
14. 18"X18" HEATED CONC. BENCH.
15. WALL SCONCE FOR LIGHTING. ALL EXTERIOR SCONCE TO BE DOWNLIGHT.
16. IN-GROUND PLANTER BOX FOR PLANTS PER PROPOSED LANDSCAPE PLAN A1.1.
17. 1'-8" HEIGHT RETAINING WALL TO ALLOW GRADING DOWN OF FOORPRINT & (N) PLANTING BOX. TOW = 40.02' & BOW = 38.3'.
18. 2'-5" HEIGHT RETAINING WALL TO ALLOW GRADING DOWN OF FOORPRINT & (N) PLANTING BOX. TOW = 40.72' & BOW = 38.3'.
19. GAS FIRE PIT AT 18" HEIGHT.
20. DROUGHT-TOLERANCE NATURAL GRASS FOR LANDSCAPE.
21. (N) CONC. GARDEN BED AT 20" HEIGHT WITH SEASONAL PLANTS.
22. CLOSET FOR MAIN STORAGE TANK, CHILTRIX DHW80 (80 GALLON), W/ RECIRC. PUMP AND PLUMBING EXPANSION TANK.
23. CLOSET FOR VTC CHILTRIX 19 BUFFER TANK & MANIFOLD.
24. (N) 7.5"X11" STEEL MONO RAIL FLOATING STAIR CASE. W/ 1.5"X1.5" POST FOR GLASS RAILING & 4" TREADS.
25. HEAT&GLOW 8000KX SERIES (DIRECT VENTED & SEALED-COMBUSTION) GAS FIREPLACE FOR CONVERSATION PIT.



1 PROPOSED FIRST FLOOR
SCALE: 1/4" = 1'-0"
0 2' 4' 8'

LEGEND

(E) WALLS TO REMAIN.

(N) WALLS

GENERAL NOTES:

1. ALL WALLS SURROUNDING TUBS AND SHOWERS SHALL BE FINISHED WITH A NONABSORBENT SURFACE EXTENDING TO A HEIGHT OF AT LEAST 6 FEET ABOVE THE FINISHED FLOOR. BACKER MATERIAL SHALL CONSIST OF NON-ASBESTOS FIBER-CEMENT BOARD, GLASS MAT GYPSUM PANELS, OR OTHER APPROVED MATERIALS, INSTALLED PER CRC R702.4.2 AND MANUFACTURER'S INSTRUCTIONS.

2. ALL GLASS IN THE SHOWER ENCLOSURE AND ANY GLAZING WITHIN 60 INCHES OF THE WATER'S EDGE, LESS THAN 60 INCHES ABOVE THE FINISHED FLOOR, SHALL BE TEMPERED OR SAFETY GLASS PER CRC R308.4.5.

3. CONTROL VALVES AND SHOWERHEADS SHALL BE LOCATED ON THE SIDEWALL OF SHOWER COMPARTMENTS OR OTHERWISE ARRANGED SO THAT THE SHOWERHEADS DOES NOT DISCHARGE DIRECTLY AT THE ENTRANCE TO THE COMPARTMENT SO THAT THE BATHER CAN ADJUST THE VALVES PRIOR TO STEPPING INTO THE SPRAY. **[CPC 408.9]**

4. ALL INSTALLED GAS FIREPLACE SHALL BE A DIRECT VENTED SEALED-COMBUSTION TYPE.

5. AGING- IN-PLACE REQUIREMENTS FOR BOTH MAIN RESIDENCE AND ADU:

- SPECIFY RECEPTACLE OUTLET, SWITCH AND CONTROL HEIGHTS ON PLANS AS NO MORE THAN 48" A.F.F. AND NO LESS THAN 15" A.F.F. **[R327.1.2]**
- PROVIDE REINFORCING FOR FUTURE GRAB BARS IN AT LEAST ONE RESTROOM ON THE ENTRY LEVEL, WHERE THERE IS NO BATHROOM ON THE ENTRY LEVEL, AT LEAST ONE BATHROOM ON THE SECOND OR THIRD FLOOR OF THE DWELLING SHALL INSTALL REINFORCEMENT. **[R327.1.1]**
- PROVIDE A DETAIL OF BLOCKING FOR FUTURE GRAB BARS. REINFORCEMENT SHALL BE NOT LESS THAN 2X8 BLOCKING LOCATED BETWEEN 32" AND 39¼" A.F.F, FLUSH WITH THE WALL FRAMING. **[R327.1.1 #2]**
- DOORBELL BUTTONS, WHEN INSTALLED, SHALL NOT EXCEED MORE THAN 48" ABOVE THE EXTERIOR FLOOR OR LANDING. **[R327.1.4]**
- SPECIFY THE LOCATIONS OF BLOCKING FOR FUTURE GRAB BARS.
  - WATER CLOSET REINFORCING SHALL BE INSTALLED ON BOTH SIDE WALLS OF THE FIXTURE, OR ONE SIDE WALL AND ONE REAR WALL.
  - SHOWER REINFORCEMENT SHALL BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED.
  - BATHTUB AND TUB/SHOWER REINFORCEMENT SHALL BE CONTINUOUS ON EACH END OF THE BATHTUB AND BACK WALL. ADDITIONALLY, BACK WALL REINFORCEMENT FOR A LOWER GRAB BAR SHALL BE PROVIDED WITH THE LOWER EDGE NO MORE THAN 6" ABOVE THE BATHTUB RIM. **[R327.1.1 #3 TO 5]**

AT LEAST ONE BATHROOM AND ONE BEDROOM ON THE ENTRY LEVEL SHALL PROVIDE A DOORWAY WITH A NET CLEAR OPENING OF NOT LESS THAN 32 INCHES, MEASURED WITH THE DOOR POSITIONED AT AN ANGLE OF 90 DEGREES FROM THE CLOSED POSITION, OR IN THE CASE OF A TWO OR THREE STORY SINGLE FAMILY DWELLING, ON THE SECOND OR THIRD FLOOR OF THE DWELLING IF A BATHROOM OR BEDROOM IS NOT LOCATED ON THE ENTRY LEVEL. **[R327.1.3]** PROVIDE DOOR OPENING OF NOT LESS THAN 32 INCHES AT ONE BEDROOM AND ONE BATHROOM FOR THE MAIN RESIDENCE.

6. ANY INSTALLED GAS FIREPLACE SHALL BE A DIRECT VENTED SEALED-COMBUSTION TYPE. **[CALGREEN 4.503.1]**

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SHEET TITLE

PROPOSED FIRST FLOOR PLAN

A2.1

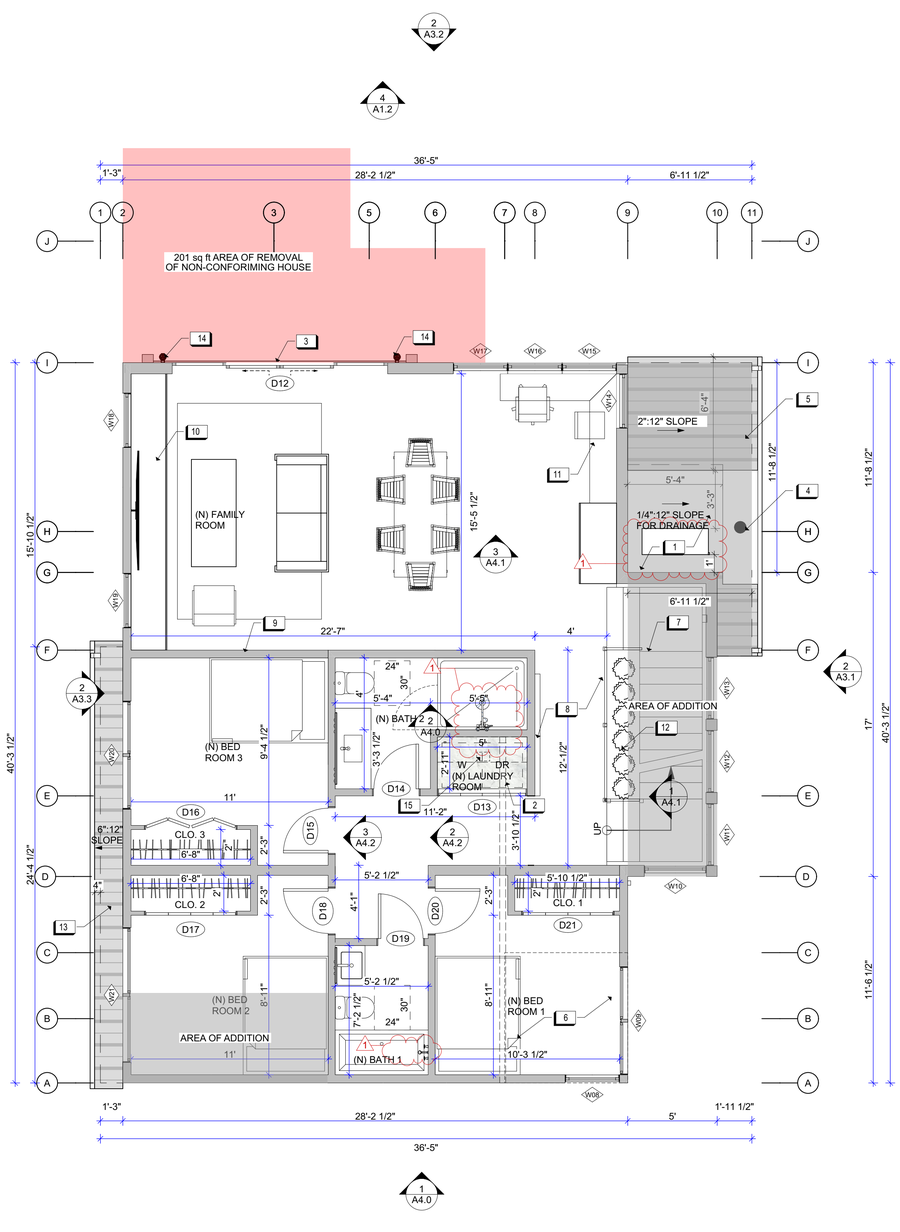
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PROPOSED KEY NOTES

1. DROP ROOF FOR OUTDOOR EQUIPMENT, CHILTRIX CX50, AREA FOR HEATING, AND DOMESTIC HOT WATER. PLATFORM TO BE W.P. & SLOPED AT 1/4" PER FOOT TO ALLOW FOR DRAINAGE.
2. LAUNDRY AREA WITH COUNTERTOP AND SHELVING ABOVE. VENTS TO BE INSTALLED IN DOOR TO ALLOW FOR A MIN. OF 100 IN^2.
3. 42" GLASS RAILING, SIDE-MOUNTED FOR JULIET BALCONY.
4. FIREPLACE CHIMNEY.
5. CLASS-S METAL STANDING SEAM ROOF FOR LIVING AREA BELOW.
6. AREA OVER (N) FRONT PORCH TO HAVE NICKLE GAP BORAL SIDING (FIRE RESISTANT METERIAL) FINISH ON CEILING.
7. (N) 7.5"X11" STEEL MONO RAIL FLOATING STAIR CASE. W/ 1.5"X1.5" POST FOR GLASS RAILING & 4" TREADS.
8. (N) STEEL FLOATING CATWALK HALLWAY W/ 3" GAP ALONG MASTER SUITE'S WALL.
9. (N) INTERIOR SHEAR WALL TO ALIGN UP W/ ABOVE AND BELOW WALLS.
10. BUILT-IN FLOATING CABS W/ DRAWERS.
11. BUILT-IN WORK SPACE.
12. FALLING IVY GROWN ON CABLE FROM GRADE TO CEILING.
13. ADU ROOF.
14. WALL SCONCE FOR LIGHTING. ALL EXTERIOR SCONCE TO BE DOWNLIGHT AND SET AT LOW LIGHTING LEVELS TO AVOID LIGHT POLLUTION.
15. MECH. BOOSTER FAN.

PLANNING CONDITIONS OF APPROVAL NOTES:

1. ALL PROPOSED DECK AREAS ON 2ND AND 3RD FLOOR TO INCOPERATE LOW LIGHTING LEVELS TO AVOID LIGHT POLLUTION WITH OVERHEAD LIGHTING PER PLANNING COMMISSION'S CONDITIONS OF APPROVAL



1 PROPOSED SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

LEGEND

- (E) WALLS TO REMAIN.
- (N) WALLS
- (N) STANDING SEAM ROOF
- WALL BELOW

GENERAL NOTES:

1. ALL WALLS SURROUNDING TUBS AND SHOWERS SHALL BE FINISHED WITH A NONABSORBENT SURFACE EXTENDING TO A HEIGHT OF AT LEAST 6 FEET ABOVE THE FINISHED FLOOR. BACKER MATERIAL SHALL CONSIST OF NON-ASBESTOS FIBER-CEMENT BOARD, GLASS MAT GYPSUM PANELS, OR OTHER APPROVED MATERIALS, INSTALLED PER CRC R702.4.2 AND MANUFACTURER'S INSTRUCTIONS.

2. ALL GLASS IN THE SHOWER ENCLOSURE AND ANY GLAZING WITHIN 60 INCHES OF THE WATER'S EDGE, LESS THAN 60 INCHES ABOVE THE FINISHED FLOOR, SHALL BE TEMPERED OR SAFETY GLASS PER CRC R308.4.5.

3. CONTROL VALVES AND SHOWERHEADS SHALL BE LOCATED ON THE SIDEWALL OF SHOWER COMPARTMENTS OR OTHERWISE ARRANGED SO THAT THE SHOWERHEADS DOES NOT DISCHARGE DIRECTLY AT THE ENTRANCE TO THE COMPARTMENT SO THAT THE BATHER CAN ADJUST THE VALVES PRIOR TO STEPPING INTO THE SPRAY. **[CPC 408.9]**

4. ALL INSTALLED GAS FIREPLACE SHALL BE A DIRECT VENTED SEALED-COMBUSTION TYPE.

5. AGING- IN-PLACE REQUIREMENTS FOR BOTH MAIN RESIDENCE AND ADU:

   - SPECIFY RECEPTACLE OUTLET, SWITCH AND CONTROL HEIGHTS ON PLANS AS NO MORE THAN 48" A.F.F. AND NO LESS THAN 15" A.F.F. **[R327.1.2]**
   - PROVIDE REINFORCING FOR FUTURE GRAB BARS IN AT LEAST ONE RESTROOM ON THE ENTRY LEVEL. WHERE THERE IS NO BATHROOM ON THE ENTRY LEVEL, AT LEAST ONE BATHROOM ON THE SECOND OR THIRD FLOOR OF THE DWELLING SHALL INSTALL REINFORCEMENT. **[R327.1.1]**
   - PROVIDE A DETAIL OF BLOCKING FOR FUTURE GRAB BARS. REINFORCEMENT SHALL BE NOT LESS THAN 2X8 BLOCKING LOCATED BETWEEN 32" AND 39¼" A.F.F, FLUSH WITH THE WALL FRAMING. **[R327.1.1 #2]**
   - DOORBELL BUTTONS, WHEN INSTALLED, SHALL NOT EXCEED MORE THAN 48" ABOVE THE EXTERIOR FLOOR OR LANDING. **[R327.1.4]**
   - SPECIFY THE LOCATIONS OF BLOCKING FOR FUTURE GRAB BARS.
     - WATER CLOSET REINFORCING SHALL BE INSTALLED ON BOTH SIDE WALLS OF THE FIXTURE, OR ONE SIDE WALL AND ONE REAR WALL.
     - SHOWER REINFORCEMENT SHALL BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED.
     - BATHTUB AND TUB/SHOWER REINFORCEMENT SHALL BE CONTINUOUS ON EACH END OF THE BATHTUB AND BACK WALL. ADDITIONALLY, BACK WALL REINFORCEMENT FOR A LOWER GRAB BAR SHALL BE PROVIDED WITH THE LOWER EDGE NO MORE THAN 6" ABOVE THE BATHTUB RIM. **[R327.1.1 #3 TO 5]**

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6. ANY INSTALLED GAS FIREPLACE SHALL BE A DIRECT VENTED SEALED-COMBUSTION TYPE. **[CALGREEN 4.503.1]**

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SHEET TITLE

PROPOSED SECOND FLOOR PLAN

A2.2

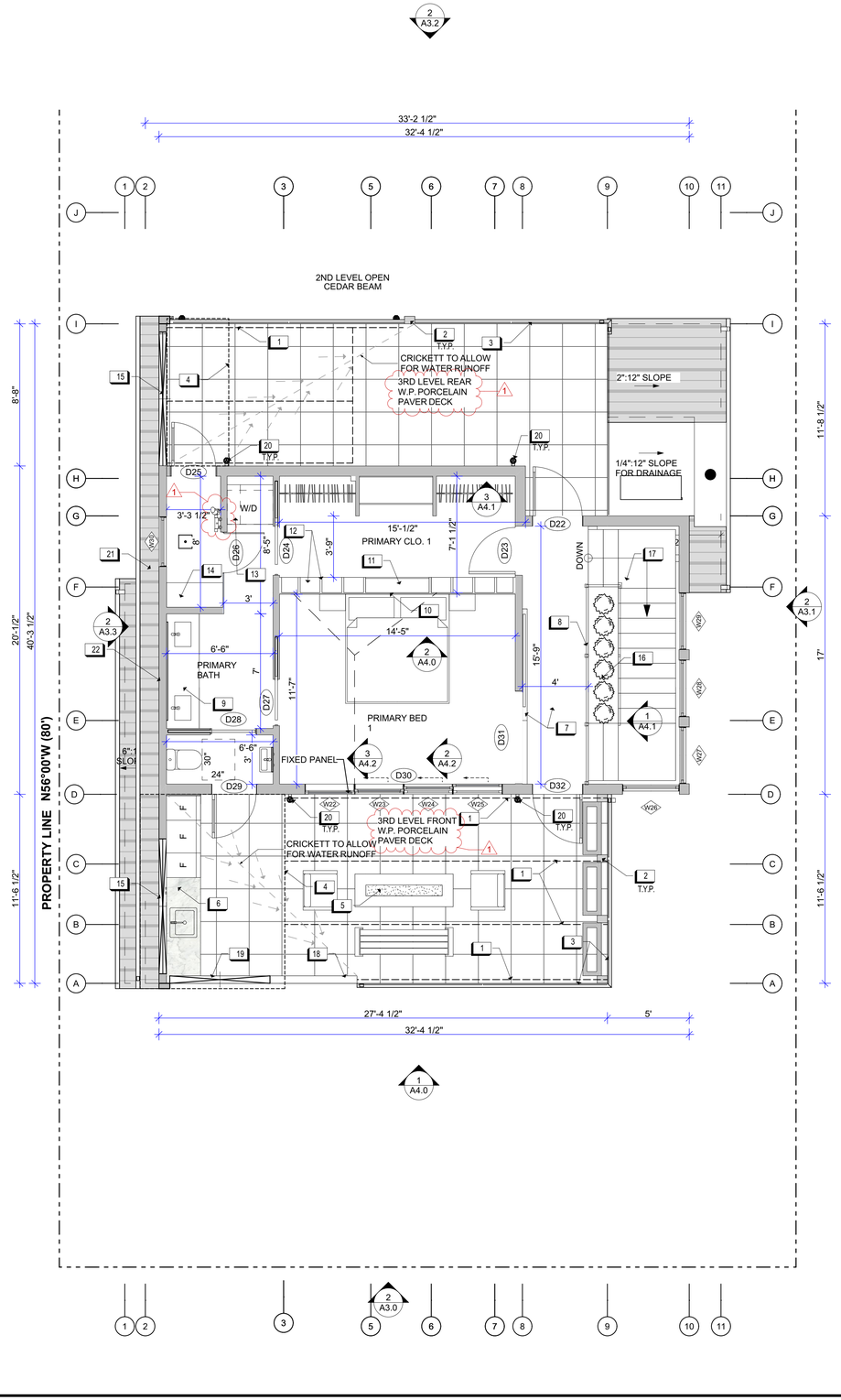
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PROPOSED KEY NOTES

1. 3RD LEVEL ARCHITECTURE OPEN BEAMS AND POSTS WITH YELLOW CEDAR FINISH & SATIN SEALER.
2. YELLOW CEDAR W/ SATIN SEALER POSTS TO SUPPORT CEDAR BEAMS ABOVE.
3. 42" GLASS RAILING, SIDE-MOUNTED, FOR DECKS.
4. REFLECTED CEILING OF ROOF ABOVE DECK.
5. GAS FIRE PLACE AT 3RD LEVELFRONT DECK.
6. OUTDOOR KITCHEN WITH SINK, TRASH CAN, CABS, & FRIDGE.
7. (N) FLOATING CATWALK HALLWAY W/ 3" GAP ALONG MASTER SUITE'S WALL.
8. 42" GLASS RAILING FOR CATWALK AREA & 36" FOR FLOATING STAIR.
9. 6' VANITY WITH TWO SINKS.
10. INTERIOR SHEAR WALL TO ALIGN WALLS BELOWS.
11. FULL HEIGHT DRESSER BASE WITH CLOSED SHELVING TOP.
12. 2X12 K.D. STUDS W/ STRUCTURAL FINISHED PLYWOOD SHEAR WALL & FINISHED ADJUSTABLE SHELVING.
13. WASHER & DRYER WITH COUNTERTOP AND CABS ABOVE.
14. SHOWER BENCH.
15. PRIVACY GLASS SCREEN FOR THIRD FLOOR DECK.
16. FALLING IVY GROWN ON CABLE FROM GRADE TO CEILING.
17. (N) 7.5"X11" STEEL MONO RAIL FLOATING STAIR CASE. W/ 1.5"X1.5" POST FOR GLASS RAILING & 4" TREADS.
18. PONY WALL AT 42" HEIGHT.
19. WALL OPENING TO ALLOW FOR LIGHT AND AIR FLOW.
20. WALL SCONCE FOR LIGHTING. ALL EXTERIOR SCONCE TO BE DOWNLIGHT AND SET AT LOW LIGHTING LEVELS TO AVOID LIGHT POLLUTION.
21. METAL STANDING SEAM ROOF FOR 2ND FLOOR TO ACCOMMODATE 10" INWARD SHIFT OF SOUTH THIRD WALL PER CONDITIONAL APPROVAL.
22. METAL STANDING SEAM FOR EXTERIOR FINISH OF ALL SOUTH THIRD WALL.

PLANNING CONDITIONS OF APPROVAL NOTES:

1. ALL PROPOSED DECK AREAS ON 2ND AND 3RD FLOOR TO INCOPERATE LOW LIGHTING LEVELS TO AVOID LIGHT POLLUTION WITH OVERHEAD LIGHTING PER PLANNING COMMISSION'S CONDITIONS OF APPROVAL.
2. THE THIRD STORY SHALL BE STEPPED IN A MINIMUM OF 10 INCHES ON THE SOUTH SIDE TO PROVIDE A MINIMUM SETBACK OF 6-FOOT 1 INCH FROM THE SOUTH SIDE LOT LINE. 1



LEGEND

- (E) WALLS TO REMAIN.
- (N) WALLS
- (N) STANDING SEAM ROOF
- WALL BELOW

GENERAL NOTES:

1. ALL WALLS SURROUNDING TUBS AND SHOWERS SHALL BE FINISHED WITH A NONABSORBENT SURFACE EXTENDING TO A HEIGHT OF AT LEAST 6 FEET ABOVE THE FINISHED FLOOR. BACKER MATERIAL SHALL CONSIST OF NON-ASBESTOS FIBER-CEMENT BOARD, GLASS MAT GYPSUM PANELS, OR OTHER APPROVED MATERIALS, INSTALLED PER CRC R702.4.2 AND MANUFACTURER'S INSTRUCTIONS.

2. ALL GLASS IN THE SHOWER ENCLOSURE AND ANY GLAZING WITHIN 60 INCHES OF THE WATER'S EDGE, LESS THAN 60 INCHES ABOVE THE FINISHED FLOOR, SHALL BE TEMPERED OR SAFETY GLASS PER CRC R308.4.5. 1

3. CONTROL VALVESAND SHOWERHEADS SHALL BE LOCATED ON THE SIDEWALL OF SHOWER COMPARTMENTS OR OTHERWISE ARRANGED SO THAT THE SHOWERHEADS DOES NOT DISCHARGE DIRECTLY AT THE ENTRANCE TO THE COMPARTMENT SO THAT THE BATHER CAN ADJUST THE VALVES PRIOR TO STEPPING INTO THE SPRAY. **[CPC 408.9]**

4. ALL INSTALLED GAS FIREPLACE SHALL BE A DIRECT VENTED SEALED-COMBUSTION TYPE.

5. AGING- IN-PLACE REQUIREMENTS FOR BOTH MAIN RESIDENCE AND ADU:

- SPECIFY RECEPTACLE OUTLET, SWITCH AND CONTROL HEIGHTS ON PLANS AS NO MORE THAN 48" A.F.F.AND NO LESS THAN 15" A.F.F. **[R327.1.2]**
- PROVIDE REINFORCING FOR FUTURE GRAB BARS IN AT LEAST ONE RESTROOM ON THE ENTRY LEVEL, WHERE THERE IS NO BATHROOM ON THE ENTRY LEVEL AT LEAST ONE BATHROOM ON THE SECOND OR THIRD FLOOR OF THE DWELLING SHALL INSTALL REINFORCEMENT. **[R327.1.1]**
- PROVIDE A DETAIL OF BLOCKING FOR FUTURE GRAB BARS. REINFORCEMENT SHALL BE NOT LESS THAN 2X8 BLOCKING LOCATED BETWEEN 32" AND 39¼" A.F.F, FLUSH WITH THE WALL FRAMING. **[R327.1.1 #2]**
- DOORBELL BUTTONS, WHEN INSTALLED, SHALL NOT EXCEED MORE THAN 48" ABOVE THE EXTERIOR FLOOR OR LANDING. **[R327.1.4]**
- SPECIFY THE LOCATIONS OF BLOCKING FOR FUTURE GRAB BARS.
  - WATER CLOSET REINFORCING SHALL BE INSTALLED ON BOTH SIDE WALLS OF THE FIXTURE, OR ONE SIDE WALL AND ONE REAR WALL.
  - SHOWER REINFORCEMENT SHALL BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED.
  - BATHTUB AND TUB/SHOWER REINFORCEMENT SHALL BE CONTINUOUS ON EACH END OF THE BATHTUB AND BACK WALL. ADDITIONALLY, BACK WALL REINFORCEMENT FOR A LOWER GRAB BAR SHALL BE PROVIDED WITH THE LOWER EDGE NO MORE THAN 6" ABOVE THE BATHTUB RIM. **[R327.1.1 #3 TO 5]**

AT LEAST ONE BATHROOM AND ONE BEDROOM ON THE ENTRY LEVEL SHALL PROVIDE A DOORWAY WITH A NET CLEAR OPENING OF NOT LESS THAN 32 INCHES, MEASURED WITH THE DOOR POSITIONED AT AN ANGLE OF 90 DEGREES FROM THE CLOSED POSITION, OR IN THE CASE OF A TWO OR THREE STORY SINGLE FAMILY DWELLING, ON THE SECOND OR THIRD FLOOR OF THE DWELLING IF A BATHROOM OR BEDROOM IS NOT LOCATED ON THE ENTRY LEVEL. **[R327.1.3]** PROVIDE DOOR OPENING OF NOT LESS THAN 32 INCHES AT ONE BEDROOM AND ONE BATHROOM FOR THE MAIN RESIDENCE.

6. ANY INSTALLED GAS FIREPLACE SHALL BE A DIRECT VENTED SEALED-COMBUSTION TYPE. **[CALGREEN 4.503.1]**

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MARK	DATE	DESCRIPTION
1	01/13/2025	RESPONSE TO PLAN CHECK COMMENTS

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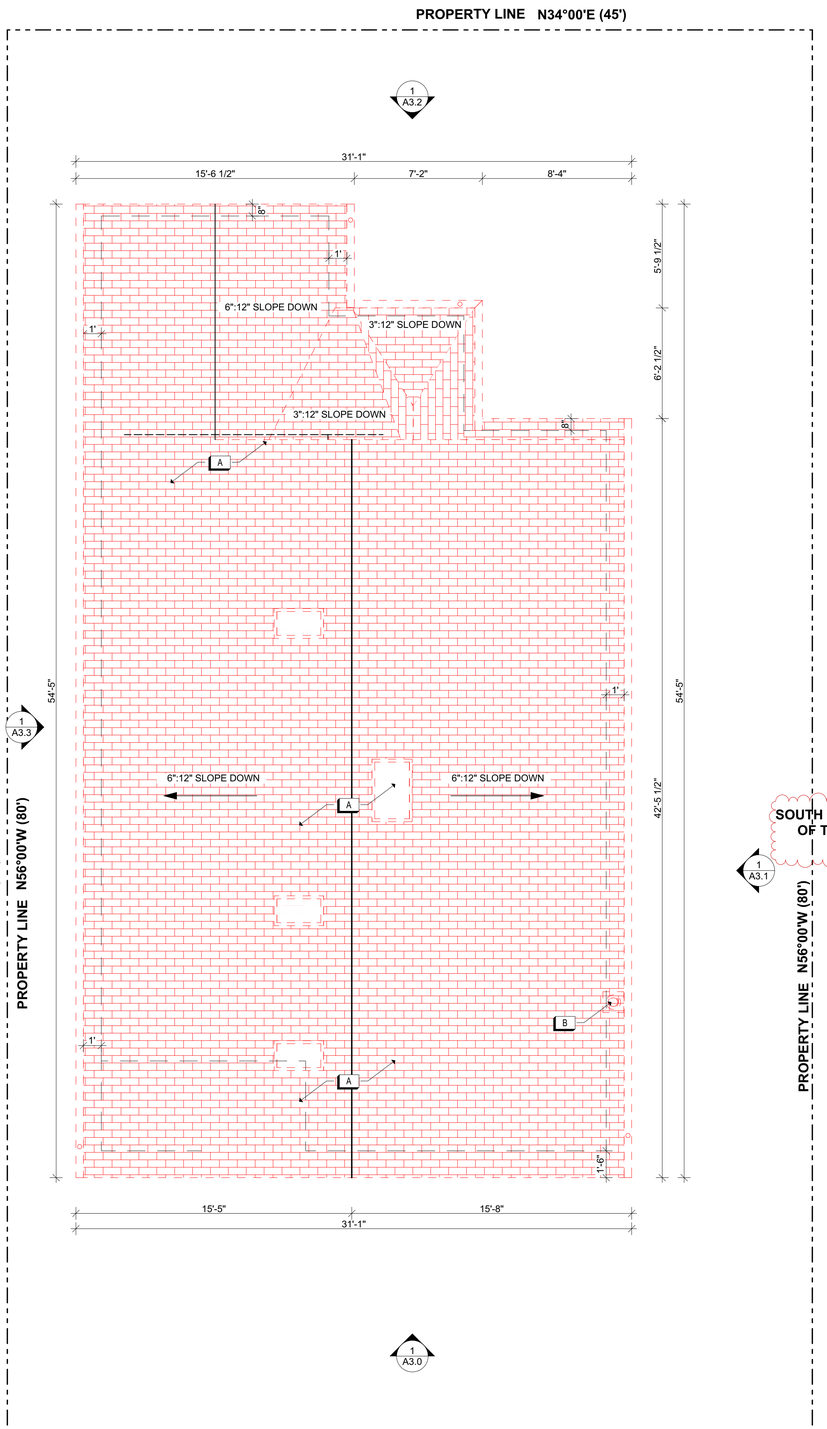
SHEET TITLE

PROPOSED THIRD FLOOR PLAN

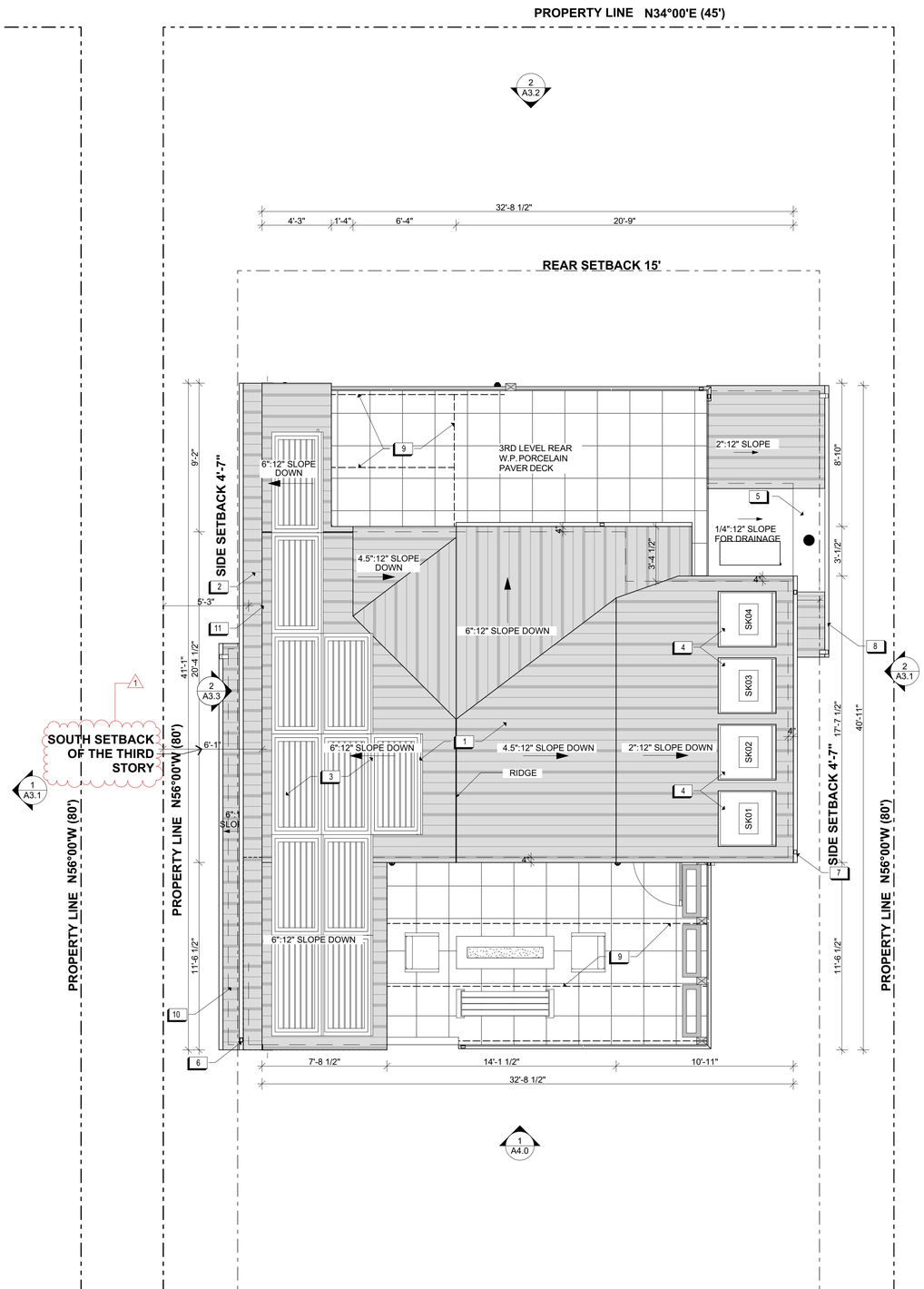
A2.3

1 PROPOSED THIRD FLOOR PLAN
SCALE: 1/4" = 1'-0"
0 2' 4' 8'

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1 DEMO ROOF PLAN
SCALE: 1/4" = 1'-0"
0 2' 4' 8'



2 PROPOSED ROOF PLAN
SCALE: 1/4" = 1'-0"
0 2' 4'

LEGEND

- (E) WALLS TO REMAIN.
- WALL OR ELEMENT TO BE REMOVED
- (N) WALLS
- EXISTING ROOF TO BE REMOVED
- (N) STANDING SEAM ROOF
- WALL BELOW

DEMO KEY NOTES

- A — ALL EXISTING ROOF TO BE DEMO TO ALLOW FLOOR ADDITION.
- B — (E) FIREPLACE & CHIMNEY TO BE DEMO

PROPOSED KEY NOTES

1. ALL (N) ROOF TO BE CLASS-A METAL STANDING SEAM ROOF WITH FX IRON OXIDE COLOR .
2. METAL STANDING SEAM ROOF FOR 2ND FLOOR TO ACCOMMODATE 10" INWARD SHIFT OF SOUTH THIRD WALL PER PLANNING C.O.A.
3. (N) SOLAR PANELS.
4. (N) SKYLIGHT @ STAIR TOWER. ALL UNIT SKYLIGHTS INSTALLED IN A ROOF WITH A PITCH FLATTER THAN 3:12 SHALL BE MOUNTED ON A 4-INCH CURB. USE LAMINATED GLASS FOR SKYLIGHT UNLESS SCREEN IS PROVIDED.
5. CHIMNEY OF GAS FIREPLACE
6. GUTTER AND D.S. FOR SECOND FLOOR ROOF.
7. GUTTER AND D.S. FOR THIRD FLOOR ROOF.
8. GUTTER AND D.S. FIRST FLOOR ROOF
9. OVERHEAD ARCHITECTURAL OPEN CEDAR BEAMS.
10. ADU ROOF BELOW.
11. NO GUTTER FOR SOUTH THIRD WALL. RUNOFF TO DRAIN DIRECTLY TO 2ND FLOOR ROOF VIA METAL STANDING SEAM WALL.

1 THE THIRD STORY SHALL BE STEPPED IN A MINIMUM OF 10 INCHES ON THE SOUTH SIDE TO PROVIDE A MINIMUM SETBACK OF 6-FOOT 1 INCH FROM THE SOUTH SIDE LOT LINE.

POLYSTICK® XFR

FIRE RESISTANT SELF-ADHERED ROOF UNDERLAYMENT

PRODUCT DESCRIPTION

Polystick XFR is a dual purpose fire resistant and self-adhered waterproofing underlayment. Utilizing ADESO® dual-compound self-adhered technology, Polystick XFR features a SBS (elastomeric) modified bitumen upper compound and an aggressive self-adhesive compound on the bottom. Polyglass' patent pending Burn-Shield Technology™ provides superior fire resistance.

Polystick XFR features a slip-resistant film surface which can be exposed up to 180 days. With a temperature resistance of up to 265°F, Polystick XFR is ideally suited for high-temperature roof covering systems such as steel and copper roofing, where fire resistance is required or desired.

Can be installed as part of a multi-ply underlayment system when used as a secondary layer above Polystick MTS PLUS or Polystick XFR.

TYPICAL APPLICATIONS

- Over combustible decks and under metal roof coverings to achieve class A fire ratings.**
- Specifically designed as underlayment for high temperature applications.
- Approved for application under metal roof panels, asphalt shingles, mechanically attached tiles.
- Can be used as part of a multi-ply underlayment system.

FEATURES AND BENEFITS

- Fire spread/penetration and ember resistance in systems tested under UL 790.
- 180 days exposure.
- Approved up to 265°F.
- Fiberglass reinforced for added strength and dimensional stability.

TECHNICAL DESCRIPTION*

Physical Properties	ASTM Method	ASTM Value	Typical Performance
Maximum Load, min	ASTM D5147	35 lbf/in [4.4 kN/m]	89 lbf/in [12 kN/m] MD 40 lbf/in [7 kN/m] XMD
Elongation at break, min of modified bitumen portion	ASTM D5147	10%	50% MD 60% XMD
Tear Resistance, min	ASTM D5147	20 lbf [89 N]	157 lbf [700 N] MD 79 lbf [350 N] XMD
Thermal Stability, max	ASTM D1970	0.1 in [3 mm]	pass
Adhesion to Plywood (min at 40°F)	ASTM D1970	2.0 lbf/in	15 lbf/in
Adhesion to Plywood (min at 73°F)	ASTM D1970	12.0 lbf/in	25.0 lbf/in
Waterproof integrity of Lap Seam	ASTM D1970	pass	pass
Flexibility at -29°C [-20°F]	ASTM D5147	pass	pass
Sealability around Nail	ASTM D5147	pass	pass
Slip Resistance	ASTM D1970	pass	pass
Moisture Vapor Permeance, max	ASTM E96	max 0.1 U.S. Perms [5.7 ng/Pa·S.M²]	pass

*The properties in this table are "as manufactured" unless otherwise noted



PRODUCT DATA***

Net Coverage (Approx)..... 150 ft² [13.9 m²]
Gross Coverage (Actual)..... 160 ft² [15 m²]
Weight (Approx)..... 75 lbs [34 kg]
Thickness (Nominal)..... 80 mils (2.0 mm)
Roll Size..... 49'3" x 39'4" [15 m x 1 m]
Rolls/Pallet..... 20

***All values are nominal at time of manufacturing

APPLICABLE STANDARDS

- ASTM D1970
- UL Classified
- ICC ESR-1697
- Florida Building Code
- Miami-Dade County Approved
- Texas Department of Insurance
- Listed by California State Fire Marshal

PRODUCT CODES

- P3XFR

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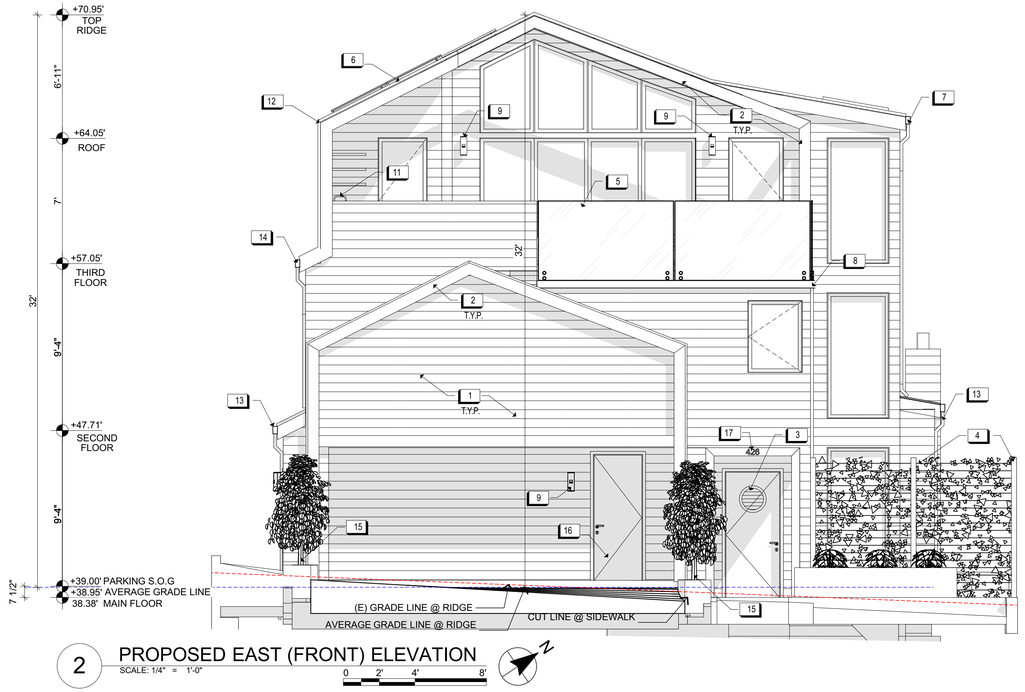
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DEMO & PROPOSED ROOF PLAN

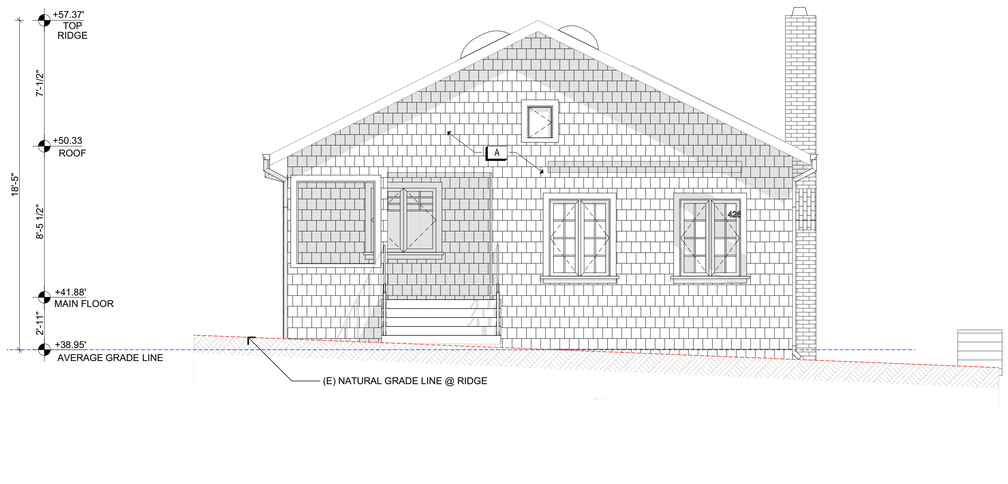
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2 PROPOSED EAST (FRONT) ELEVATION

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



1 EXISTING EAST (FRONT) ELEVATION

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

PROPOSED KEY NOTES

1. 7" HORIZONTAL NICKEL GAP BURNT CEDAR SIDING.
2. 3RD LEVEL ARCHITECTURE OPEN BEAMS AND POSTS WITH YELLOW CEDAR FINISH & SATIN SEALER.
3. VERTICAL CEDAR MAIN ENTRY DOOR WITH PORTHOLE.
4. (N) HOG WIRE FENCE FOR VINES TO GROW ON TO CREATE GREEN SCREEN.
5. 42" GLASS RAILING, SIDE MOUNTED, FOR FRONT 3RD LEVEL DECK.
6. SOLAR PANEL FOR ROOF. REFER A2.4 FOR ROUGH LAYOUT.
7. 3RD FLOOR GUTTER AND D.S TO TRANSFER COLLECTED RUNOFF OF MAIN ROOF TO 1ST FLOOR ROOF & THEN RECEIVING AREA FOR DISPERSAL.
8. GUTTER AND D.S TO TRANSFER COLLECTED RUNOFF OF 3RD FLOOR FRONT DECK TO RECEIVING AREA FOR DISPERSAL.
9. WALL SCONCE FOR LIGHTING. ALL EXTERIOR SCONCE TO BE DOWNLIGHT AND SET AT LOW LIGHTING LEVELS TO AVOID LIGHT POLLUTION.
10. ARCHITECTURE OPEN BEAMS AND POSTS WITH YELLOW CEDAR FINISH & SATIN SEALER. FOR OPENING AT ENTRY PORCH.
11. OUTDOOR KITCHEN AT 3RD LEVEL FRONT DECK.
12. NO GUTTER FOR SOUTH THIRD WALL. RUNOFF TO DRAIN DIRECTLY TO 2ND FLOOR ROOF VIA METAL STANDING SEAM WALL.
13. 1ST FLOOR ROOF RUNOFF TO DISSIPATE ONTO SPLASH BLOCK FROM DS. ALL DISCHARGE TO BE WITHIN PROPERTY LINE.
14. 2ND FLOOR GUTTER AND D.S TO TRANSFER COLLECTED RUNOFF OF MAIN ROOF TO 1ST FLOOR ROOF & THEN RECEIVING AREA FOR DISPERSAL.
15. LITTLE GEM MAGNOLIA TREE TO BRING SOFTNESS TO THE FRONT OF THE HOUSE.
16. DOOR FOR ADU ACCESS.
17. ADDRESS TO BE BACKLIT AND 4" TALL MIN.

GENERAL DEMO KEY NOTES

A. DEMO (E) HOUSE THROUGH OUT PER ENGINEER'S RECOMMENDATION. KEEP (E) FOOTFRINT FOR NEW BUILD.

1 NOTE: THE VALLEY FLASHING AS 26 GAGE MINIMUM THICKNESS, AND AT LEAST 36" WIDE.

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SHEET TITLE

EAST (FRONT) ELEVATION VIEWS

A3.0

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PROPOSED KEY NOTES

1. 7" HORIZONTAL NICKEL GAP BURNT CEDAR SIDING.
2. ALL ROOF TO BE STANDING SEAM ROOF WITH FX IRON OXIDE COLOR.
3. HORIZONTAL CEDAR FINISH AT CEILING FINISH FOR ROOF AT DECK.
4. GUTTER AND D.S TO TRANSFER COLLECTED RUNOFF OF 3RD FLOOR REAR DECK TO 1ST FLOOR ROOF & THEN RECEIVING AREA FOR DISPERSAL.
5. 42" GLASS RAILING FOR FRONT 3RD LEVEL DECK.
6. 3RD FLOOR GUTTER AND D.S TO TRANSFER COLLECTED RUNOFF OF MAIN ROOF TO 1ST FLOOR ROOF & THEN RECEIVING AREA FOR DISPERSAL.
7. GUTTER AND D.S TO TRANSFER COLLECTED RUNOFF OF 3RD FLOOR FRONT DECK TO RECEIVING AREA FOR DISPERSAL.
8. (N) HOG WIRE FENCE FOR VINES TO GROW ON TO CREATE GREEN SCREEN.
9. SKYLIGHT FOR MAIN HOUSE AT STAIR TOWER.

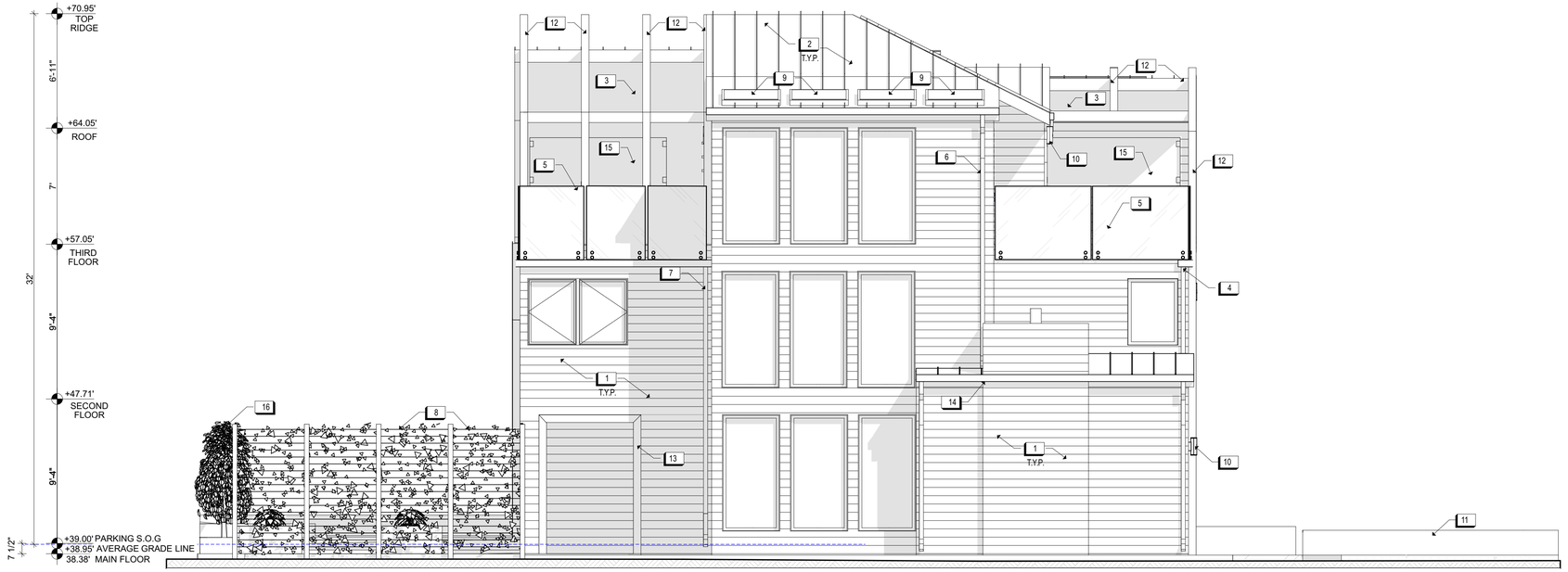
PROPOSED KEY NOTES

10. WALL SCONCE FOR LIGHTING. ALL EXTERIOR SCONCE TO BE DOWNLIGHT AND SET AT LOW LIGHTING LEVELS TO AVOID LIGHT POLLUTION.
11. OUTDOOR HEATED CONC. BENCH.
12. ARCHITECTURE OPEN BEAMS AND POSTS WITH YELLOW CEDAR FINISH & SATIN SEALER.
13. ARCHITECTURE OPEN BEAMS AND POSTS WITH YELLOW CEDAR FINISH & SATIN SEALER. FOR OPENING AT ENTRY PORCH.
14. 1ST FLOOR ROOF RUNOFF TO DISSIPATE ONTO SPLASH BLOCK FROM DS. ALL DISCHARGE TO BE WITHIN PROPERTY LINE.
15. PRIVACY GLASS SCREEN.
16. LITTLE GEM MAGNOLIA TREE.

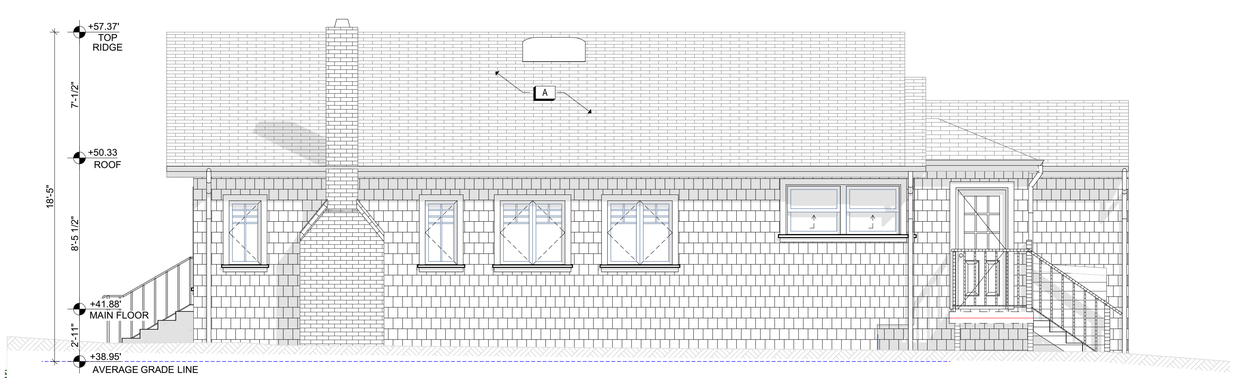
GENERAL DEMO KEY NOTES

A. DEMO (E) HOUSE THROUGH OUT PER ENGINEER'S RECOMMENDATION. KEEP (E) FOOTFRINT FOR NEW BUILD.

1 NOTE: THE VALLEY FLASHING AS 26 GAGE MINIMUM THICKNESS, AND AT LEAST 36" WIDE.



2 PROPOSED NORTH (RIGHT-SIDE) ELEVATION
SCALE: 1/4" = 1'-0"
0 2' 4' 8'



1 EXISTING NORTH (RIGHT-SIDE) ELEVATION
SCALE: 1/4" = 1'-0"
0 2' 4' 8'

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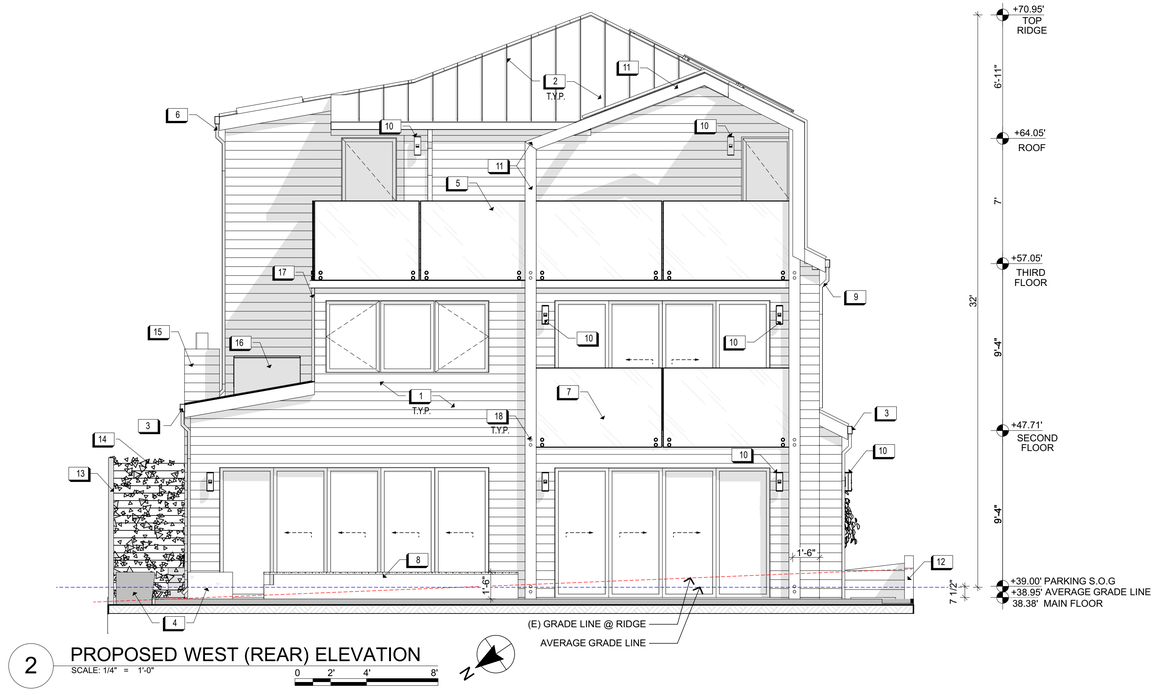
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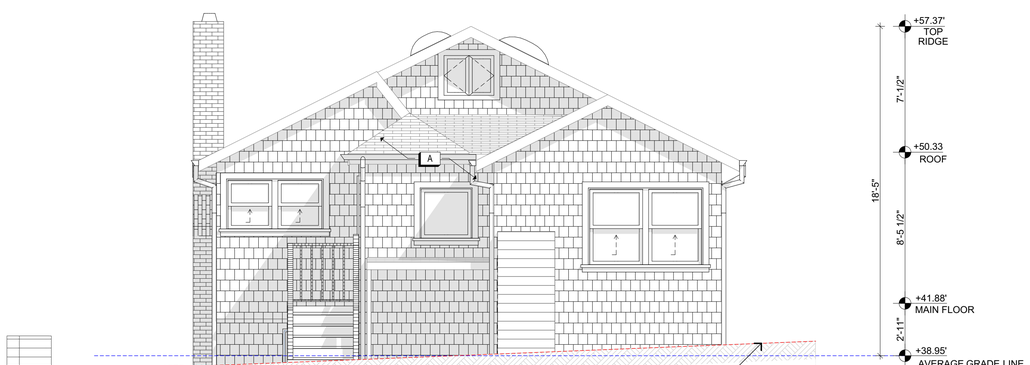
NORTH (RIGHT-SIDE) ELEVATION VIEWS

A3.1

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2 PROPOSED WEST (REAR) ELEVATION
SCALE: 1/4" = 1'-0"
0 2' 4' 8'



1 EXISTING WEST (REAR) ELEVATION
SCALE: 1/4" = 1'-0"
0 2' 4' 8'

PROPOSED KEY NOTES

1. 7" HORIZONTAL NICKEL GAP BURNT CEDAR SIDING.
2. ALL ROOF TO BE STANDING SEAM ROOF WITH FX IRON OXIDE COLOR.
3. 1ST FLOOR ROOF RUNOFF TO DISSIPATE ONTO SPLASH BLOCK FROM DS. ALL DISCHARGE TO BE WITHIN PROPERTY LINE.
4. OUTDOOR GAS FIRE PIT AND HEATED CONC. BENCH.
5. 42" GLASS RAILING, SIDE-MOUNTED, FOR FRONT 3RD LEVEL DECK.
6. 3RD FLOOR GUTTER AND D.S TO TRANSFER COLLECTED RUNOFF OF MAIN ROOF TO 1ST FLOOR ROOF & THEN RECEIVING AREA FOR DISPERSAL.
7. 42" GLASS RAILING, SIDE-MOUNTED, FOR 2ND FLOOR JULIET BALCONY.
8. RAISED HOT TUB COPPING AT 18" HEIGHT.
9. GUTTER AND D.S. TO TRANSFER COLLECTED RUNOFF OF 3RD FLOOR REAR DECK TO RECEIVING AREA FOR DISPERSAL.
10. WALL SCONCE FOR LIGHTING. ALL EXTERIOR SCONCE TO BE DOWNLIGHT AND SET AT LOW LIGHTING LEVELS TO AVOID LIGHT POLLUTION.
11. ARCHITECTURE OPEN BEAMS AND POSTS WITH YELLOW CEDAR FINISH AND CLR. SATIN SEALER.
12. 24" RETAINING WALL TO ALLOW GRADING DOWN OF FOOTPRINT & FORMING (N) PLANTING BOX.
13. APPLY SMOOTH STUCCO CLADDING FOR (N) WOOD FENCE AT THE REAR AND RIGHT FENCE.
14. (N) HOG WIRE FENCE FOR VINES TO GROW ON TO CREATE GREEN SCREEN.
15. FIREPLACE CHIMNEY.
16. OUTDOOR EQUIPMENT, CHILTRIX CX50-2, AREA FOR HEATING, COOLING, AND DOMESTIC HOT WATER.
17. GUTTER AND D.S TO TRANSFER COLLECTED RUNOFF OF 3RD FLOOR REAR DECK TO 1ST FLOOR ROOF & THEN RECEIVING AREA FOR DISPERSAL.
18. COUNTERSUNK BOLTS INTO 6X BLOCKING AT FLOOR FOR ARCHITECTURE POST ATTACHMENT.

GENERAL DEMO KEY NOTES

A. DEMO (E) HOUSE THROUGH OUT PER ENGINEER'S RECOMMENDATION. KEEP (E) FOOTFRINT FOR NEW BUILD.

1 NOTE: THE VALLEY FLASHING AS 26 GAGE MINIMUM THICKNESS, AND AT LEAST 36" WIDE.

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SHEET TITLE

WEST (REAR) ELEVATION VIEWS

A3.2

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PROPOSED KEY NOTES

1. 7" HORIZONTAL NICKEL GAP BURNT CEDAR SIDING.
2. ALL ROOF TO BE STANDING SEAM ROOF WITH FX IRON OXIDE COLOR.
3. METAL STANDING SEAM WALL MATCHING ROOF'S COLOR.
4. METAL STANDING SEAM ROOF FOR 2ND FLOOR TO ACCOMMODATE 10" INWARD SHIFT OF SOUTH THIRD WALL PER CONDITIONAL APPROVAL.
5. NO GUTTER FOR SOUTH THIRD WALL. RUNOFF TO DRAIN DIRECTLY TO 2ND FLOOR ROOF VIA METAL STANDING SEAM WALL.
6. 3RD FLOOR GUTTER AND D.S TO TRANSFER COLLECTED RUNOFF OF MAIN ROOF TO 1ST FLOOR ROOF & THEN RECEIVING AREA FOR DISPERSAL
7. 6.5"X11" CONC. STAIR.
8. 5.5" CONC. CURB ON BOTH SIDES OF PARKING AREA
9. 1ST FLOOR ROOF RUNOFF TO DISSIPATE ONTO SPLASH BLOCK FROM DS. ALL DISCHARGE TO BE WITHIN PROPERTY LINE.

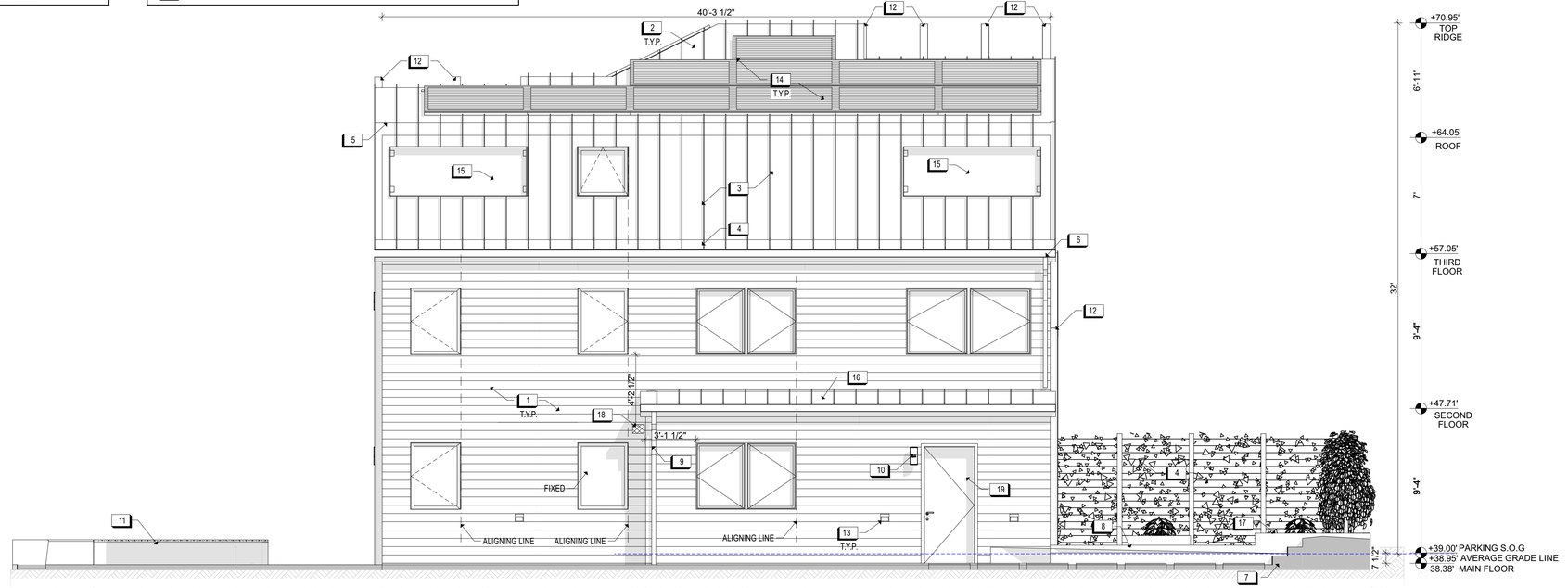
PROPOSED KEY NOTES

10. WALL SCONCE FOR LIGHTING. ALL EXTERIOR SCONCE TO BE DOWNLIGHT AND SET AT LOW LIGHTING LEVELS TO AVOID LIGHT POLLUTION.
11. OUTDOOR HEATED CONC. BENCH.
12. ARCHITECTURE OPEN BEAMS AND POSTS WITH YELLOW CEDAR FINISH & SATIN SEALER.
13. OUTDOOR LANDSCAPE LIGHTING ALONG GRAVEL PATH ON ASTRONOMICAL CLOCK.
14. SOLAR PANEL FOR ROOF. REFER A2.4 FOR ROUGH LAYOUT.
15. PRIVACY GLASS SCREEN.
16. ADU ROOF.
17. (N) 14" HEIGHT CONC. RETAINING WALL BETWEEN THE CONC. STAIR AND PARKING AREA.
18. KITCHEN HOOD VENT MEASURING MIN. 3' FROM OPERABLE WINDOW/DOOR.
19. MAIN ADU DOOR ACCESS.

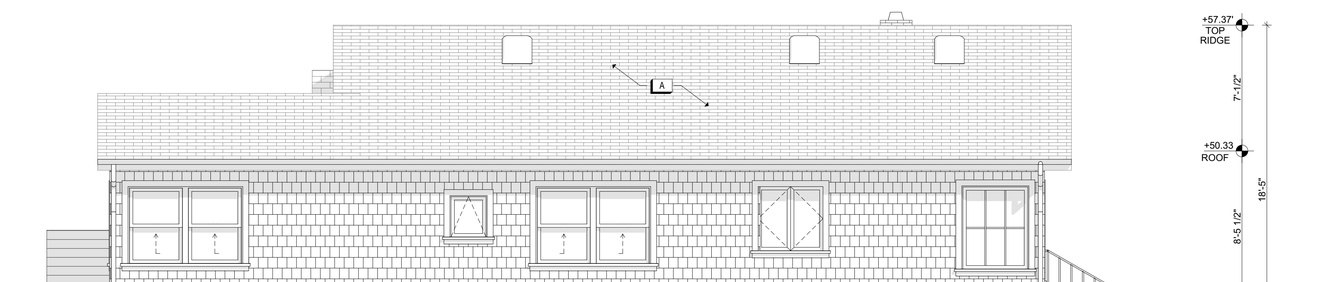
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1 NOTE: THE VALLEY FLASHING AS 26 GAGE MINIMUM THICKNESS, AND AT LEAST 36" WIDE.



2 PROPOSED SOUTH (LEFT-SIDE) ELEVATION
SCALE: 1/4" = 1'-0"
0 2' 4' 8'



1 EXISTING SOUTH (LEFT-SIDE) ELEVATION
SCALE: 1/4" = 1'-0"
0 2' 4' 8'

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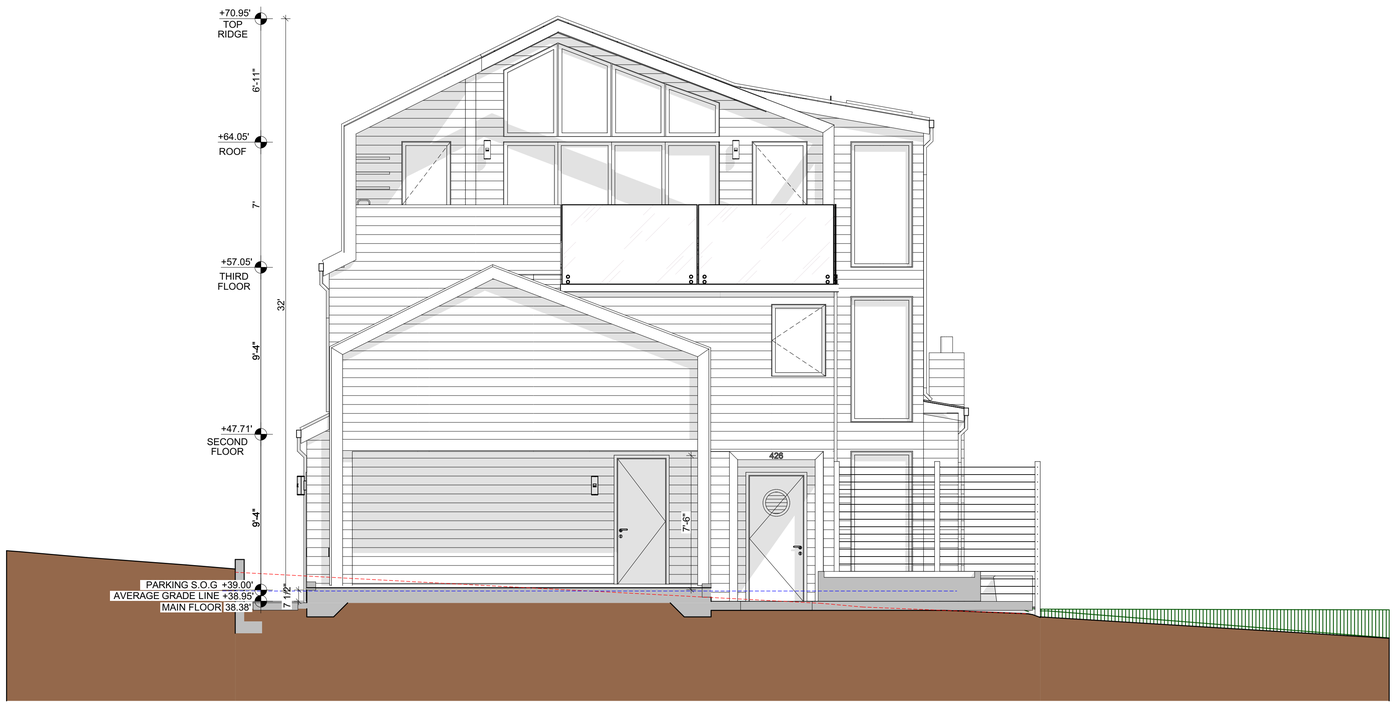
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SHEET TITLE

SOUTH (LEFT-SIDE) ELEVATION VIEWS

A3.3

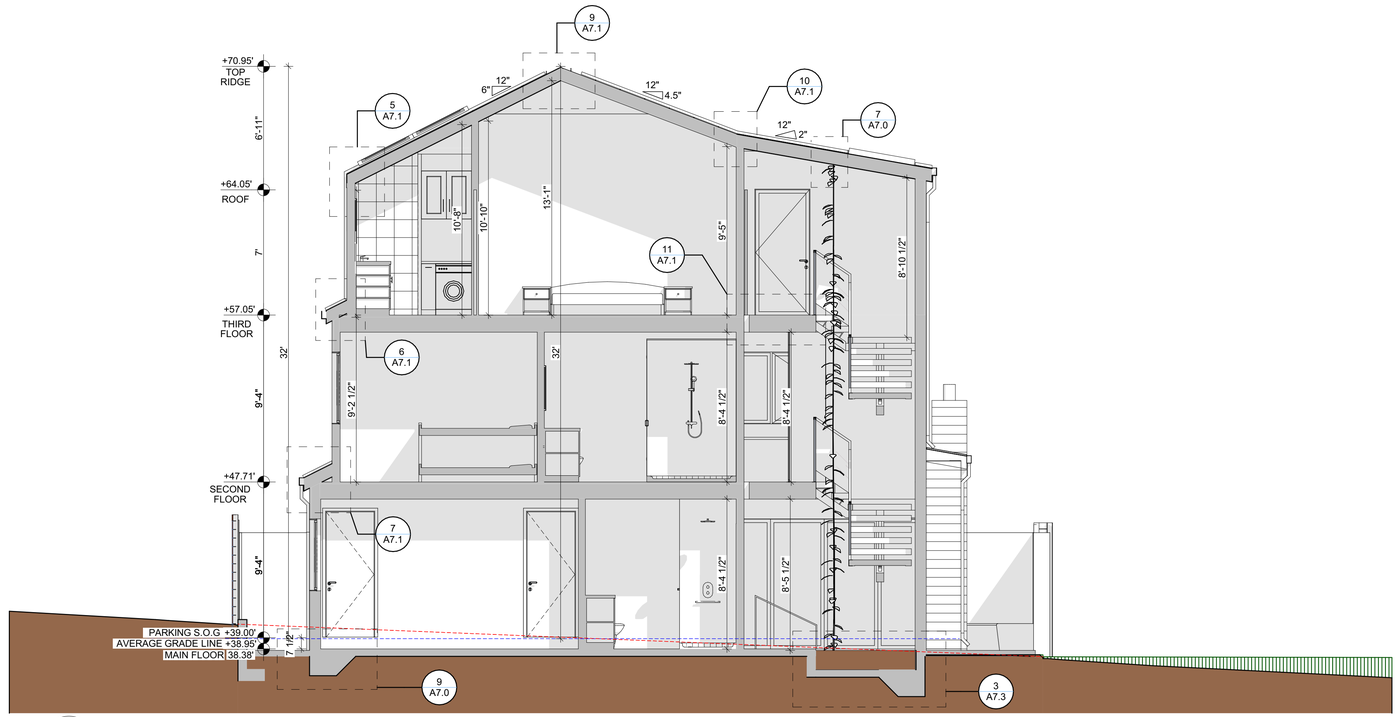
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1 EAST SECTION 1

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

0 2' 4' 8'



2 EAST SECTION 2

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

0 2' 4' 8'

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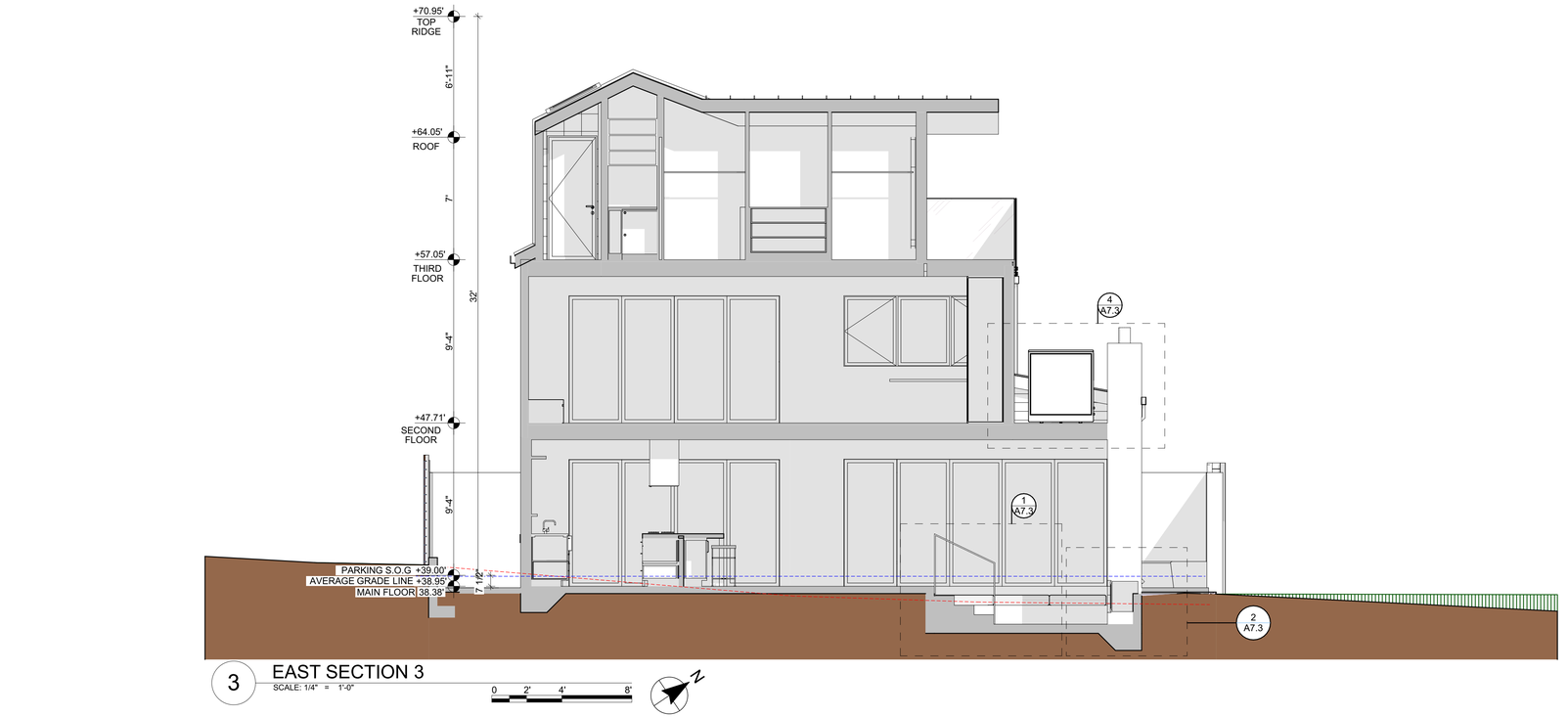
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SHEET TITLE

EAST SECTION CUTS

A4.0

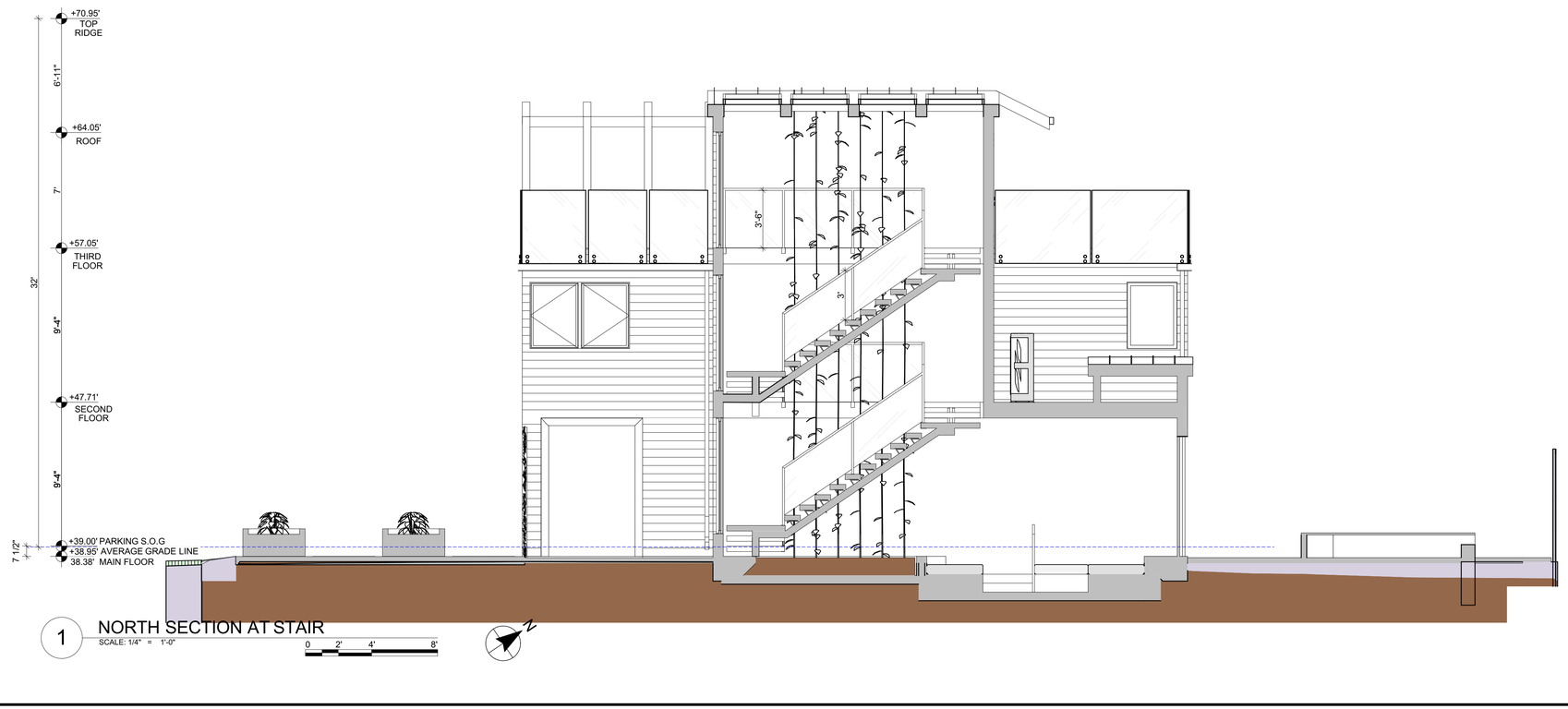
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3 EAST SECTION 3

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

0 2' 4' 8'



1 NORTH SECTION AT STAIR

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

0 2' 4' 8'

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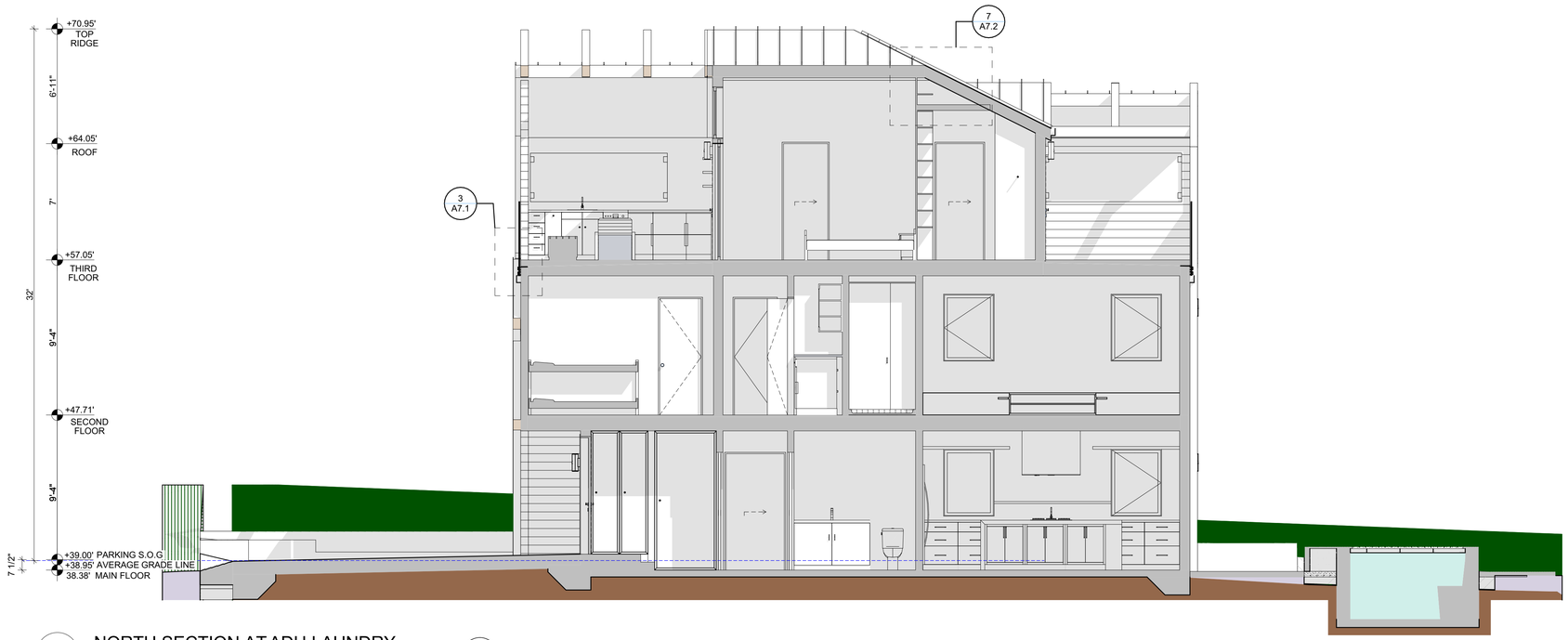
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SHEET TITLE

EAST & NORTH SECTION CUTS

A4.1

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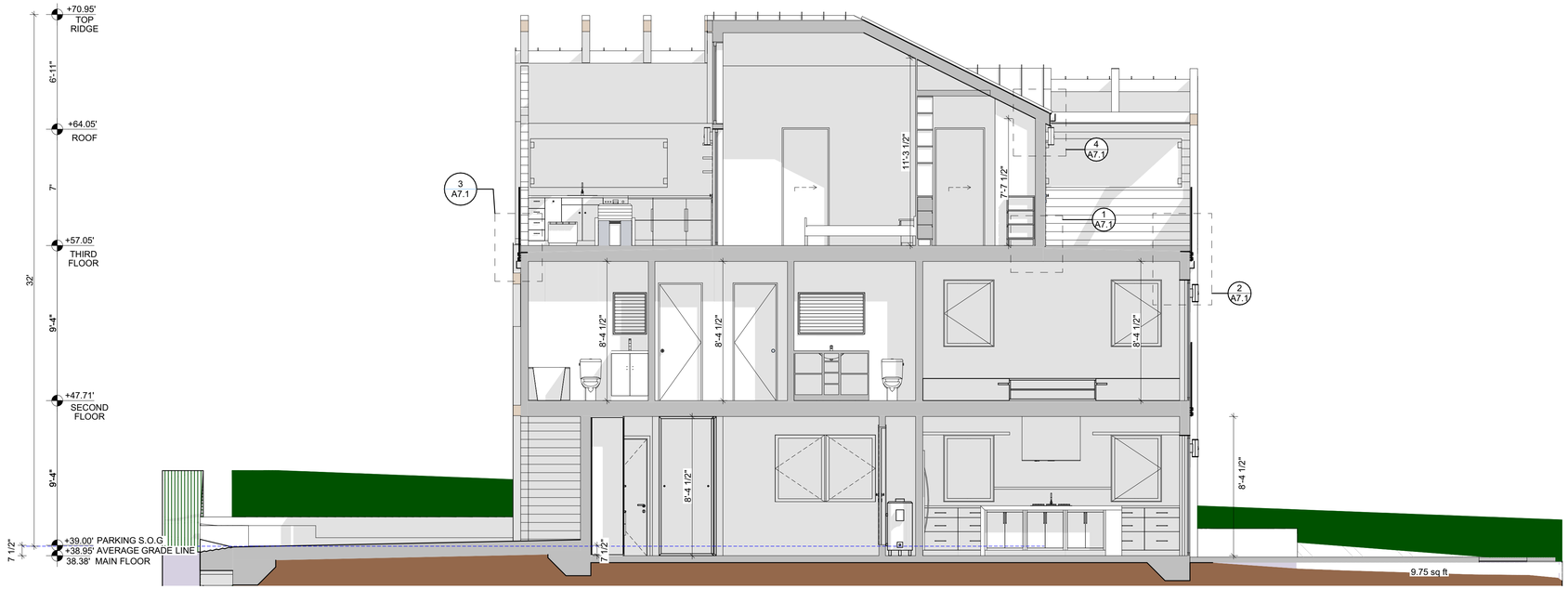


2 NORTH SECTION AT ADU LAUNDRY

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

0 2' 4' 8'

N



3 NORTH SECTION AT ADU

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

0 2' 4' 8'

N

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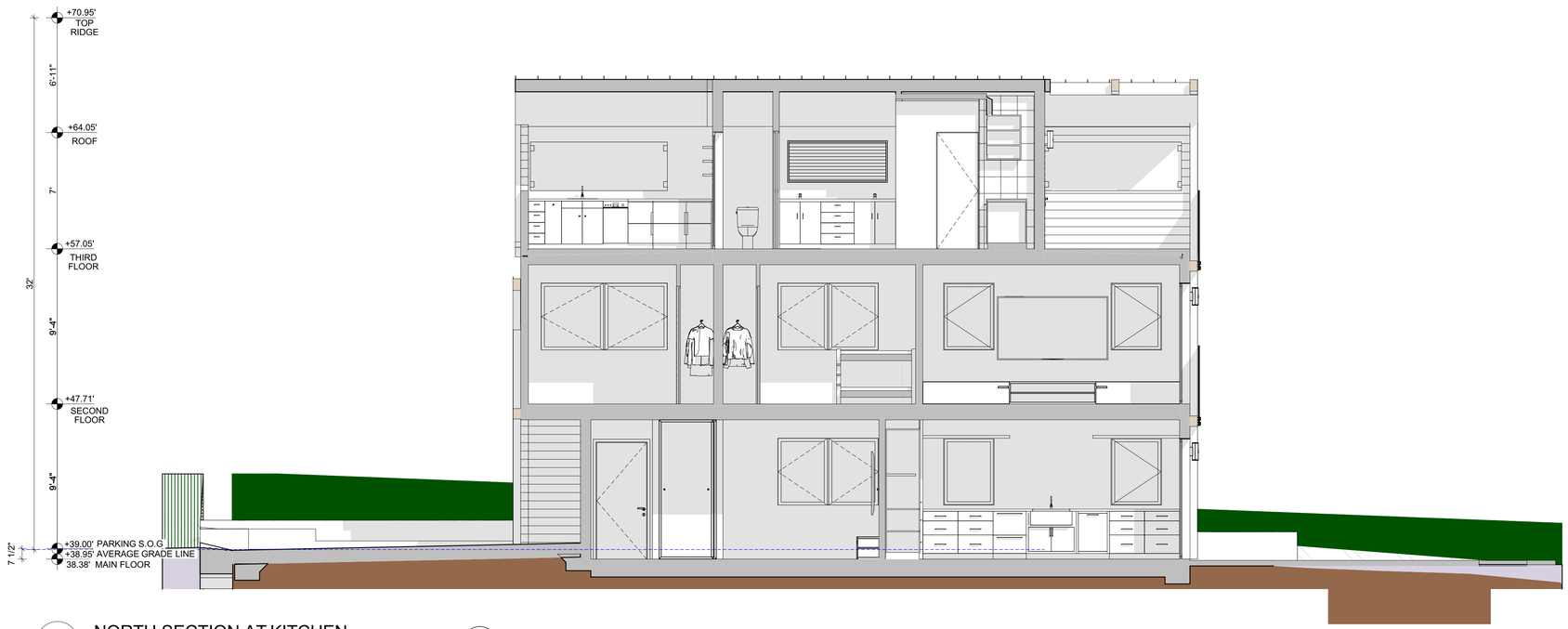
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SHEET TITLE

NORTH SECTION CUTS

A4.2

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4 NORTH SECTION AT KITCHEN

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

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NORTH SECTION CUTS

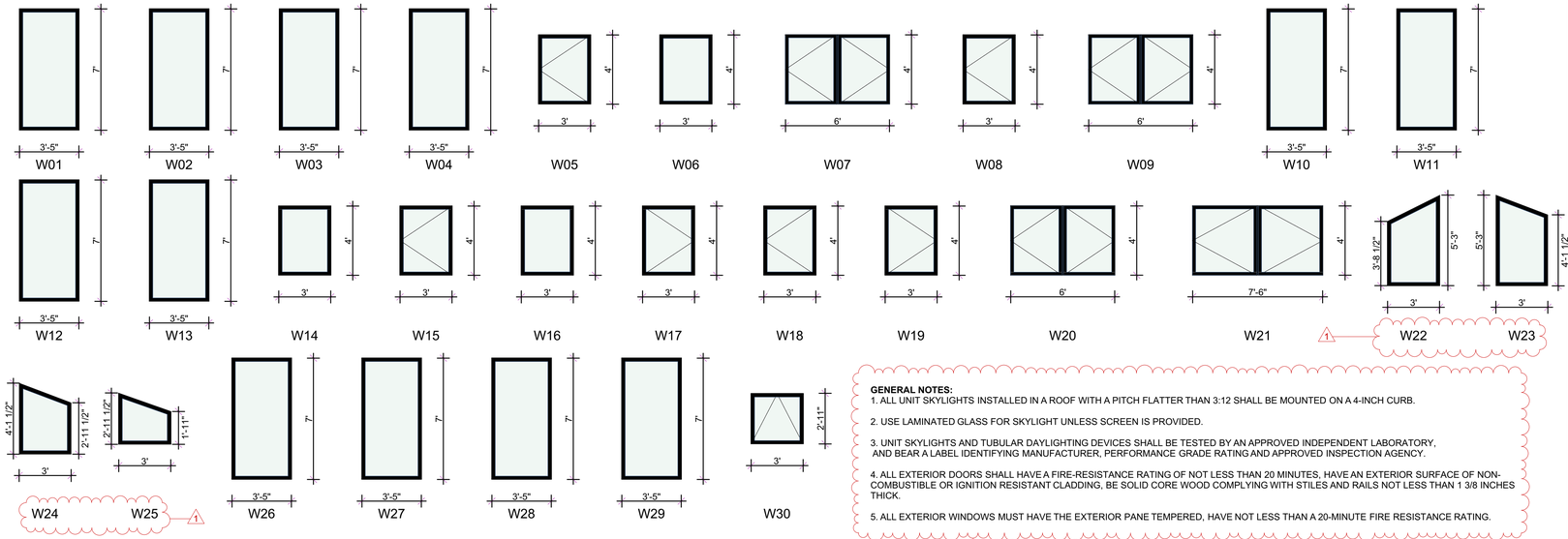
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WINDOW SCHEDULE							
ID	LOCATION	TYPE	SIZE (UNIT SIZE)		TRIM	TEMPERED	EGRESS
			WIDTH	HEIGHT			
W01	STAIR TOWER	FIXED	3'-5"	7'		N/A	N/A
W02	STAIR TOWER	FIXED	3'-5"	7'		N/A	N/A
W03	STAIR TOWER	FIXED	3'-5"	7'		N/A	N/A
W04	STAIR TOWER	FIXED	3'-5"	7'		N/A	N/A
W05	KITCHEN	CASEMENT	3'	4'		N/A	N/A
W06	KITCHEN	FIXED	3'	4'		N/A	N/A
W07	ADU	DOUBLE CASEMENT	6'	4'		N/A	YES
W08	BED RM. 1	CASEMENT	3'	4'		N/A	YES
W09	BED RM. 1	DOUBLE CASEMENT	6'	4'		N/A	YE
W10	STAIR TOWER	FIXED	3'-5"	7'		N/A	N/A
W11	STAIR TOWER	FIXED	3'-5"	7'		N/A	N/A
W12	STAIR TOWER	FIXED	3'-5"	7'		N/A	N/A
W13	STAIR TOWER	FIXED	3'-5"	7'		N/A	N/A
W14	FAMILY RM.	CASEMENT	3'	4'		N/A	N/A
W15	FAMILY RM.	CASEMENT	3'	4'		N/A	N/A
W16	FAMILY RM.	CASEMENT	3'	4'		N/A	N/A
W17	FAMILY RM.	CASEMENT	3'	4'		N/A	N/A
W18	FAMILY RM.	CASEMENT	3'	4'		N/A	N/A
W19	FAMILY RM.	CASEMENT	3'	4'		N/A	N/A
W20	BED RM. 3	DOUBLE CASEMENT	6'	4'		YES	YES
W21	BED RM. 2	DOUBLE CASEMENT	7'-6"	4'		TES	YES
W22	MASTER BED RM.	RAKE WINDOW	3'	3'-8 1/2"		N/A	N/A
W23	MASTER BED RM.	RAKE WINDOW	3'	4'-1 1/2"		N/A	N/A
W24	MASTER BED RM.	RAKE WINDOW	3'	3'		N/A	N/A
W25	MASTER BED RM.	RAKE WINDOW	3'	1'-11"		N/A	N/A
W26	STAIR TOWER	FIXED	3'-5"	7'		N/A	N/A
W27	STAIR TOWER	FIXED	3'-5"	7'		N/A	N/A
W28	STAIR TOWER	FIXED	3'-5"	7'		N/A	N/A
W29	STAIR TOWER	FIXED	3'-5"	7'		N/A	N/A
W30	MASTER BATH SHOWER	CASEMENT	3'	2'-11"		YES	N/A

1 WINDOW SCHEDULE
SCALE: 1' = 1'-0"

REFER TO T-24 SHEETS FOR U-VALUE AND SHGC REQUIREMENT.

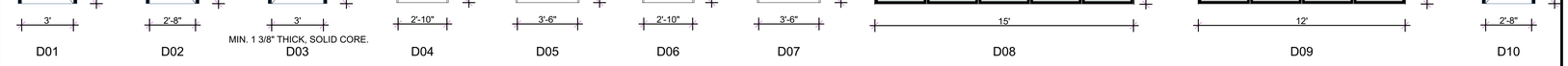


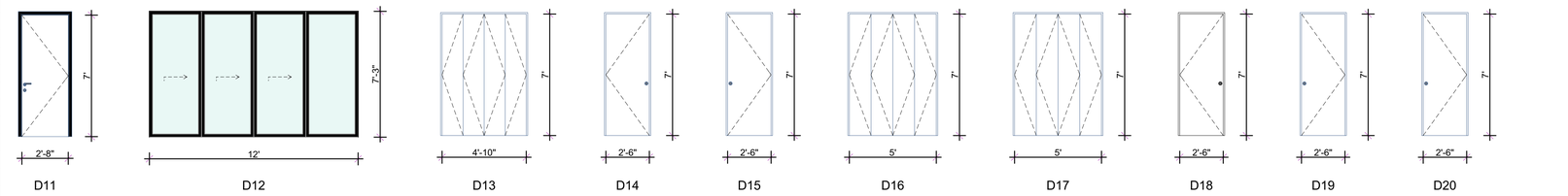
2 WINDOW LEGEND
SCALE: 1' = 1'-0"

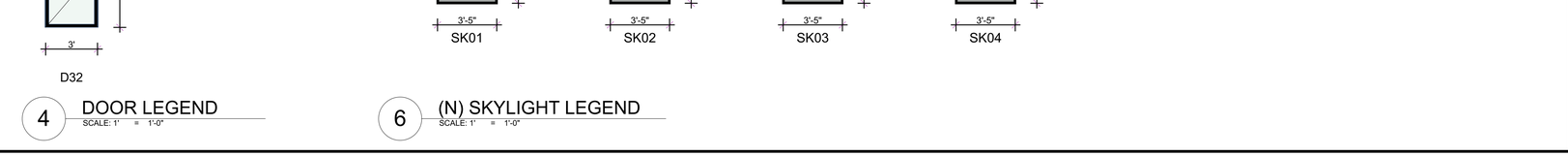
GENERAL NOTES:
1. ALL UNIT SKYLIGHTS INSTALLED IN A ROOF WITH A PITCH FLATTER THAN 3:12 SHALL BE MOUNTED ON A 4-INCH CURB.
2. USE LAMINATED GLASS FOR SKYLIGHT UNLESS SCREEN IS PROVIDED.
3. UNIT SKYLIGHTS AND TUBULAR DAYLIGHTING DEVICES SHALL BE TESTED BY AN APPROVED INDEPENDENT LABORATORY, AND BEAR A LABEL IDENTIFYING MANUFACTURER, PERFORMANCE GRADE RATING AND APPROVED INSPECTION AGENCY.
4. ALL EXTERIOR DOORS SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 20 MINUTES, HAVE AN EXTERIOR SURFACE OF NON-COMBUSTIBLE OR IGNITION RESISTANT CLADDING, BE SOLID CORE WOOD COMPLYING WITH STILES AND RAILS NOT LESS THAN 1 3/8 INCHES THICK.
5. ALL EXTERIOR WINDOWS MUST HAVE THE EXTERIOR PANE TEMPERED, HAVE NOT LESS THAN A 20-MINUTE FIRE RESISTANCE RATING.

DOOR SCHEDULE					
ID	LOCATION	TYPE	SIZE (PANEL DIMENSION)		NOTES
			WIDTH	HEIGHT	
D01	ADU ENTRY	SWING	3'	7'	
D02	ADU LAUNDRY RM.	SWING	2'-8"	7'	
D03	MAIN ENTRY	SWING	3'	7'	TEMPER GLASS FOR PORTHOLE.
D04	ADU LAUNDRY RM.	POCKET	2'-10"	7'	
D05	ADU	POCKET	3'-6"	7'	
D06	ADU BATH RM.	POCKET	2'-10"	7'	
D07	ADU VIA MAIN HOUSE	POCKET	3'-6"	7'	
D08	LIVING RM.	SLIDE OVER SLIDE	15'-1/2"	7'-3"	ONE FIXED PANEL
D09	DINING RM.	SLIDE OVER SLIDE	12'	7'-3"	ONE FIX PANEL
D10	ADU	SWING	2'-8"	7'	
D11	ADU	SWING	2'-8"	7'	
D12	FAMILY RM.	SLIDE OVER SLIDE	12'	7'-3"	
D13	LAUNDRY RM.	BI-FOLD	4'-10"	7'	
D14	BATH RM. 2	SWING	2'-6"	7'	
D15	BED RM. 3	SWING	2'-6"	7'	
D16	CLO. 3	BI-FOLD	5'	7'	
D17	CLO. 2	BI-FOLD	5'	7'	
D18	BED RM. 2	SWING	2'-6"	7'	
D19	BATH RM. 1	SWING	2'-6"	7'	
D20	BED RM. 1	SWING	2'-6"	7'	
D21	CLO. 1	BI-FOLD	5'	7'	
D22	REAR DECK ACCESS	SWING	3'	7'	
D23	PRIMARY CLO. 1	SWING	2'-10"	7'	
D24	PRIMARY CLO. 1	POCKET	2'-10"	7'	
D25	REAR DECK ACCESS	SWING	2'-8"	7'	
D26	SHOWER ACESS	SWING	2'-6"	7'	
D27	PRIMARY BATH	POCKET	2'-8"	7'	
D28	PRIMARY BATH	POCKET	2'-8"	7'	
D29	FRONT DECK ACCESS	SWING	2'-8"	7'	
D30	FRONT DECK ACCESS	SLIDE OVER SLIDE	12'-1/2"	7'	
D31	PRIMARY BED RM.	BARN	5'-8"	7'	
D32	FRONT DECK ACCESS	SWING	3'	7'	

3 DOOR SCHEDULE
SCALE: 1' = 1'-0"







SKYLIGHT SCHEDULE					
ID	LOCATION	TYPE	SIZE (UNIT)		TEMPERED
			WIDTH	HEIGHT	
SK01	STAIR TOWER	FIXED	3'-5"	3'-7 1/2"	N/A
SK02	STAIR TOWER	FIXED	3'-5"	3'-7 1/2"	N/A
SK03	STAIR TOWER	FIXED	3'-5"	3'-7 1/2"	N/A
SK04	STAIR TOWER	FIXED	3'-5"	3'-7 1/2"	N/A

5 (N) SKYLIGHT SCHEDULE
SCALE: 1' = 1'-0"

4 DOOR LEGEND
SCALE: 1' = 1'-0"

6 (N) SKYLIGHT LEGEND
SCALE: 1' = 1'-0"

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SHEET TITLE

WINDOW, DOOR, SKYLIGHT SCHEDULES

A5.0

C:\Users\lam\G Family Dropbox\Design Team\G Design\00 Design Clients\426 Pine Street, Sausalito, Jack Beyer\01 Drawings\02 Archi\CAD\CD Set\426 Pine St._Phase 1_Building Plans_022024.pln

PROPOSED KEY NOTES

A KITCHEN HOOD TO VENT TO ROOF ABOVE. SEE KEYNOTE 6 ON SHEET A2.4 FOR LOCATION

B LAUNDRY, AND MASTER BATHROOM 1 FANS DUCTS TO TERMIATE AT EXTERIOR WALL

C MASTER BATHROOM 2 FAN TO VENT TO ROOF ABOVE. SEE KEYNOTE 8 ON SHEET A2.4 FOR LOCATION.

PLANNING CONDITIONS OF APPROVAL NOTES:

1. ALL PROPOSED DECK AREAS ON 2ND AND 3RD FLOOR TO INCOPERATE LOW LIGHTING LEVELS TO AVOID LIGHT POLLUTION WITH OVERHEAD LIGHTING PER PLANNING COMMISSION'S CONDITIONS OF APPROVAL

GENERAL NOTES:

1.ALL EXHUST DUCTS MUST TERMINATE MIN. 3' FROM PROPERTY LINE OR FROM OTHER OPNENINGS INTO THE BUILDING.

2. AIR EXHAUST AND INTAKE OPENINGS THAT TERMINATE OUTDOORS SHALL BE PROTECTED WITH CORROSION-RESISTANT SCREENS, LOUVERS, OR GRILLES HAVING AN OPENING SIZE ON NOT LESS THAN ¼" AND NOT MORE THAN ½", OPENINGS SHALL BE PROTECTED AGAINST LOCAL WEATHER CONDITIONS.

3. WHEN INSTALLING GAS OR PROPANE APPLIANCES, PROVIDE A RESERVED DOUBLE POLE CIRCUIT BREAKER SPACE PERMANENTLY MARKED AS "FOR FUTURE 240V USE" FOR EACH NON-ELECTRIC APPLIANCE. ALSO PROVIDE THE FOLLOWING CIRCUIT WIRING.

COOKTOP. ELECTRIC COOKTOP READY. INSTALL A DEDICATED 240 VOLT BRANCH CIRCUIT WIRING WITHIN 3 FEET FROM THE COOKTOP AND ACCESSIBLE TO THE COOKTOP WITH NO OBSTRUCTIONS. THE BRANCH CIRCUIT CONDUCTORS SHALL BE RATED AT 50 AMPS MINIMUM. THE BLANK COVER SHALL BE IDENTIFIED AS "240V READY." **[CENC 150.0(U)]**

DRYER. ELECTRIC CLOTHES DRYER READY. A DEDICATED 240 VOLT BRANCH CIRCUIT WIRING SHALL BE INSTALLED WITHIN 3 FEET FROM THE CLOTHES DRYER LOCATION AND ACCESSIBLE TO THE CLOTHES DRYER LOCATION WITH NO OBSTRUCTIONS. THE BRANCH CIRCUIT CONDUCTORS SHALL BE RATED AT 30 AMPS MINIMUM. THE BLANK COVER SHALL BE IDENTIFIED AS "240V READY." **[CENC 150.0(V)]**

4.

ALL SINGLE-FAMILY RESIDENCES THAT INCLUDE ONE OR TWO DWELLING UNITS SHALL BE ESS READY OR INSTALL AN ESS SYSTEM. **[CENC 150.0(S)]** PROVIDE THE FOLLOWING:

a) A MINIMUM OF FOUR BRANCH CIRCUITS SHALL BE IDENTIFIED AND HAVE THEIR SOURCE OF SUPPLY COLLOCATED AT A SINGLE PANELBOARD SUITABLE TO BE SUPPLIED BY THE ESS. AT LEAST ONE CIRCUIT SHALL SUPPLY THE REFRIGERATOR, ONE LIGHTING CIRCUIT SHALL BE LOCATED NEAR THE PRIMARY EGRESS AND AT LEAST ONE CIRCUIT SHALL SUPPLY A SLEEPING ROOM RECEPTACLE OUTLET.

b) SUFFICIENT SPACE SHALL BE RESERVED TO ALLOW FUTURE INSTALLATION OF A SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH WITHIN 3 FEET OF THE MAIN PANELBOARD. RACEWAYS SHALL BE INSTALLED BETWEEN THE PANELBOARD AND THE SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH LOCATION TO ALLOW THE CONNECTION OF BACKUP POWER SOURCE.

c) THE MAIN PANELBOARD SHALL HAVE A MINIMUM BUSBAR RATING OF 225 AMPS, AND

D1) ESS READY INTERCONNECTION EQUIPMENT WITH A MINIMUM BACKED-UP CAPACITY OF 60 AMPS AND A MINIMUM OF FOUR ESS-SUPPLIED BRANCH CIRCUITS, **OR**

D2) A DEDICATED RACEWAY FROM THE MAIN SERVICE TO A PANELBOARD (SUBPANEL) THAT SUPPLIES THE BRANCH CIRCUITS IN **CENC 150.0(S)(2)**. ALL BRANCH CIRCUITS ARE PERMITTED TO BE SUPPLIED BY THE MAIN SERVICE PANEL PRIOR TO THE INSTALLATION OF AN ESS. THE TRADE SIZE OF THE RACEWAY SHALL BE NOT LESS THAN 1 INCH. THE PANELBOARD THAT SUPPLIES THE BRANCH CIRCUITS (SUBPANEL) MUST BE LABELED "SUBPANEL SHALL INCLUDE ALL BACKED UP LOAD CIRCUITS."

5. **AIR FILTERS NOTE:** MERV13 WITH A 2" NOMINAL DEPTH SHALL BE USED. **[CENC 150.0(M)12C]**

6. NO DOMESTIC DISHWASHING MACHINE SHALL BE DIRECTLY CONNECTED TO A DRAINAGE SYSTEM OR FOOD WASTE DISPOSER WITHOUT THE USE OF AN APPROVED DISHWASHER AIR GAP FITTING ON THE DISCHARGE SIDE OF THE DISHWASHING MACHINE. **[CPC 807.3]**

7. ALL DRYERS WILL BE DUCTLESS AND INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS

8. AT THE IAQ FAN SWITCH, NOTE A LABEL CLEARLY DISPLAYING THE FOLLOWING OR EQUIVALENT TEXT: "THIS SWITCH CONTROLS THE INDOOR AIR QUALITY VENTILATION FOR THE HOME. LEAVE IT ON UNLESS THE OUTDOOR AIR QUALITY IS VERY POOR."

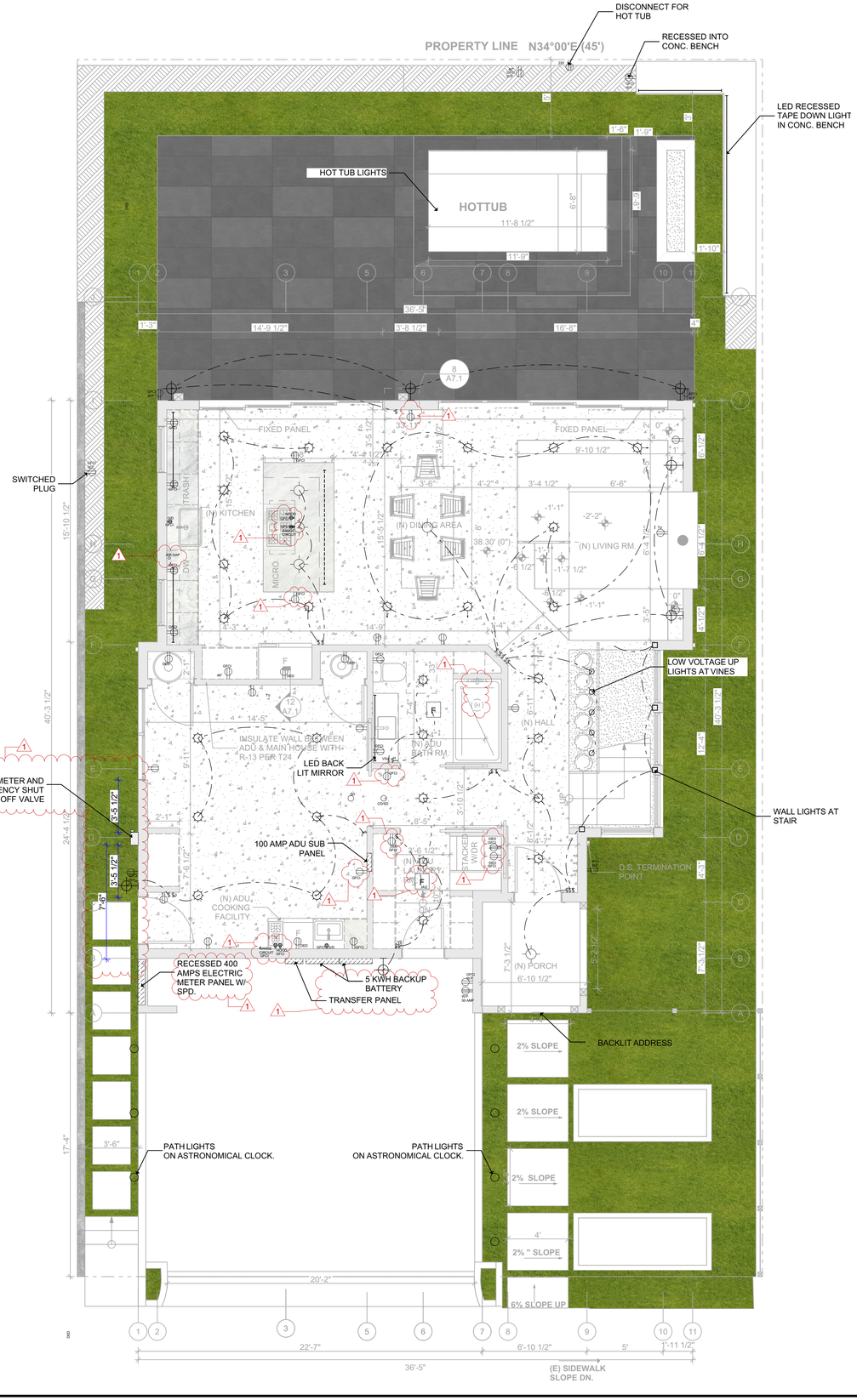
Panasonic

Whisper Choice DC Pick-A-Flow 80/110 CFM Ceiling Bathroom Exhaust Fan with Flex-Z Fast Bracket

★★★★½ (183) Questions & Answers (60)



- Ultra-quiet performance: operates at exceptionally low noise levels of less than 0.3 sones at 80 CFM and 0.5 sones at 110 CFM, ensuring a quiet environment



1 PROPOSED FIRST FLOOR
SCALE: 1/4" = 1'-0"

0 2' 4' 8'

ELECTRIC LEGEND

W.P. WATER PROOF 4" RECESSED CAN	LIGHTED ADDRESS SIGNAGE
F IAQ CONTINUOUS FAN (IAQ) AT 80 CFM MINIMUM	$ SWITCH
F BATH ROOM FAN AT 80 CFM MINIMUM	$3 3-WAY SWITCH
L.E.D. 4" RECESSED CAN	$VS VACANCY-SENSOR SWITCH
SURFACE MOUNTED LIGHT	$H FAN HUMIDISTAT CONTROL
WALL MOUNTED LIGHT	$D DIMMER SWITCH
TRACK LIGHT	RECEPTACLE
LED UNDER CABINET OR HEADER LIGHT	30 OR 50 AMP RECEPTACLE
LED SHOP LIGHT	FLR FLOOR RECEPTACLE
PENDANT LIGHT	DW DISHWASHER
SD SMOKE DETECTOR	G/D GARBAGE DISPOSAL
CO/SD CARBON MONOXIDE & SMOKE DETECTOR	DED DEDICATED RECEPTACLE
T.V. + CABLE	GFCI GFCI RECEPTACLE
DIRECTIONAL LIGHT	G GAS LINE
CEILING FAN	CLG CEILING RECEPTACLE

ELECTRICAL NOTES

1. ALL ELECTRICAL OUTLETS INSTALLED IN BATHROOMS, GARAGES, BASEMENTS, CRAWL SPACES, OUTDOORS, KITCHEN COUNTERS, AND AT WET BAR SINKS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION IN COMPLIANCE WITH CEC ART. 210-8, CONSISTING OF 125 VOLT, SINGLE-PHASE, 15- AND 20- AMPERE RECEPTACLES.

2. ALL 120-VOLT, SINGLE PHASE 15- AND 20- AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT KITCHENS, FAMILY ROOMS, LIVING ROOMS, DINING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS OR SIMILAR ROOMS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, OR A LISTED OUTLET BRANCH-CIRCUIT TYPE AFCI LOCATED AT THE FIRST RECEPTACLE OUTLET OF THE EXISTING BRANCH CIRCUIT INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT. CEC 210-12(B).

3. ALL RECEPTACLES TO BE LISTED, TAMPER-RESISTANT TYPE IN ACCORDANCE WITH CEC ARTICLE 406.12.

4. ALL NEW LIGHTS ARE DIMMED.

5. ALL EXTERIOR FIXTURES ARE CONTROLLED BY AN ASTRONOMICAL TIMER

6. A HUMIDISTAT IS REQUIRED

ELECTRICAL NOTES

7. BUILDER TO PROVIDE AN ELECTRICAL PANEL LOAD ANALYSIS AT TIME OF ROUGH INSPECTIONS TO VERIFY ELECTRICAL SERVICE ADEQUATE FOR ANY NEW LOCADS, INCLUDING 40A EV CHARGER

8. FOR KITCHEN RANGE HOOD VENTILATION IN ACCORDANCE WITH THE ENERGY CODE MANDATORY MEASURE, A MINIMUM 85% CE OR 280 CFM EXHAUST HOOD FOR ADU AND A 70% CE OR 180 CFM RATE FOR THE MAIN HOUSE. **[CENC TABLE 150.0-G]**

9. ENVIRONMENTAL AIR DUCTS SHALL TERMINATE AT LEAST 3' FROM ANY OPENINGS INTO A BUILDING

10. (E) ELECTRICALS ARE NOT SHOWN FOR CLARITY

11. (E) ELECTRICALS ARE TO REMAIN.

12. DRYER DUCT TO BE MINIMU 4" RIGID AND NOT MORE THAN 14' OVERALL LENGTH WITH NO MORE THAN TWO 90-DEGREE BENDS. CMC 504.4.2

13. BUILDER TO PROVIDE MAKE UP AIR FOR CLOTHES DRYER IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND CMC 504.4.1.

14. OUTSIDE DRYER VENT SHALL BE EQUIPPED WITH A BACK-DRAFT DAMPER.

ELECTRICAL NOTES

15. LOCATION OF THE RECEPTACLE OUTLETS SHALL BE DESIGNED TO COMPLY WITH C.E.C. SECTION 210.50 TO 215.0.

A. RECEPTACLES SHALL BE INSTALLED SO THAT NO POINT MEASURED HORIZONTALLY ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6 FEET FROM A RECEPTACLE OUTLET.

B. RECEPTACLES AT THE KITCHEN COUNTERTOPS SHALL BE INSTALLED SO THAT NO POINT ALONG THE WALL LINE IS MORE THAN 24 INCHES MEASURED HORIZONALTALLY FROM A RECEPTACLE OUTLET IN THAT SPACE.

C. AT LEAST ONE RECEPTACLE OUTLET SHALL BE INSTALLED IN BATHROOMS WITHIN 3 FEET OF THE OUTSIDE EDGE OF EACH BASIN.

16. RECESSED DOWNLIGHTS IN CEILINGS SHALL BE AIRTIGHT WHEN TESTED IN ACCORDANCE WITH ASTM E283 PER ENERGY CODE CEC 150.0(K)1C

17. WHERE MORE THAN ONE CARBON MONOXIDE DETECTOR IS REQUIRED, THE ALARM SHALL BE INTERCONNECTED IN A MANNER THAT THE ACTIVATION OF ONE ALARM SHALL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT.

18. CARBON MONOXIDE DETECTORS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING WHERE SUCH WIRING IS SERVED FROM A COMMERCIAL SOURCE AND, WHERE PRIMARY POWER IS INTERRUPTED, SHALL RECEIVE POWER FROM A BATTERY. WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTING SWITCH OTHER THAN THOSE REQUIRED FOR OVERCURRENT PROTECTION.

ELECTRICAL NOTES

19. PROVIDE AT LEAST TWO SEPARATE 20-AMP CIRCUITS FOR SMALL APPLIANCES IN KITCHEN, PANTRY, DINING ROOM AND SIMILAR AREAS, WITH NO OTHER OUTLETS ON THE CIRCUITS. CEC §210.11 (C)(1), 210.52(B).

20. PROVIDE AT LEAST ONE SEPARATE 20-AMP CIRCUIT TO LAUNDRY APPLIANCES WITH NO OTHER OUTLETS ON THE CIRCUIT. §210.11 (C)(2).

21. PROVIDE AT LEAST ONE 20-AMP CIRCUIT FOR BATHROOM OUTLETS, WITH NO OTHER OUTLETS ON THE CIRCUIT. §210.11(C) (3).

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JAKE & GEORGIA BEYER

THE BEYER RESIDENCE

426 PINE ST.
SAUSALITO, CA. 94965
APN 065-054-11

MARK	DATE	DESCRIPTION
1	01/13/2025	RESPONSE TO PLAN CHECK COMMENTS

STATUS: **DR SET**
DATE: **1/14/2025**
DRAWN BY: **LAM NGUYEN**
DESIGN OFFICIAL

X

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SHEET TITLE

FIRST FLOOR ELECTRICAL PLAN

A6.0

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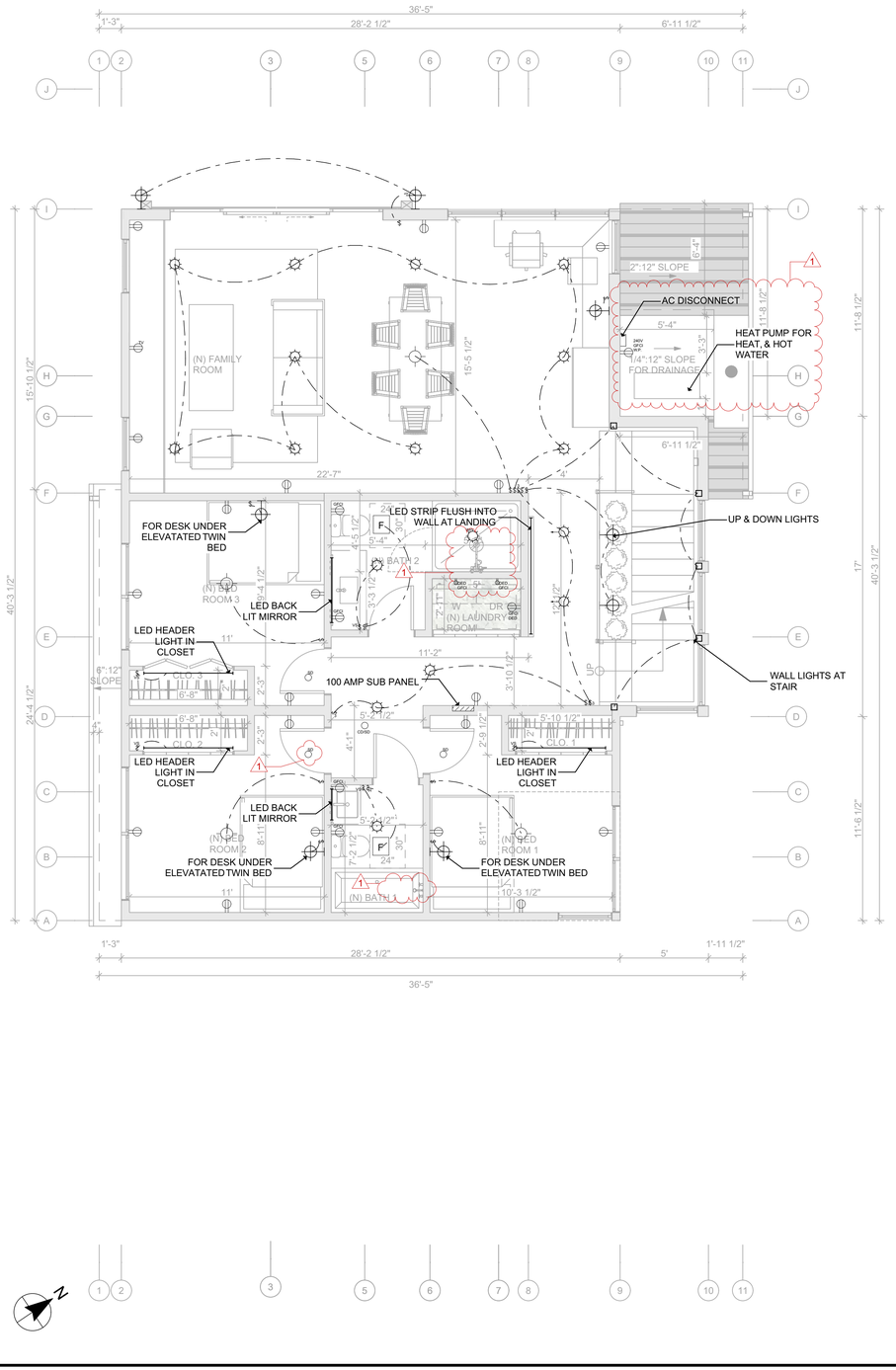
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1

Panasonic
Whisper Choice DC Pick-A-Flow 80/110 CFM Ceiling Bathroom Exhaust Fan with Flex-Z Fast Bracket
★★★★½ (183) Questions & Answers (60)



- Ultra-quiet performance: operates at exceptionally low noise levels of less than 0.3 sones at 80 CFM and 0.5 sones at 110 CFM, ensuring a quiet environment



1 PROPOSED SECOND FLOOR PLAN (LIFTED (E) MAIN FLOOR)
SCALE: 1/4" = 1'-0"
0 2' 4' 8'

ELECTRIC LEGEND

W.P. WATER PROOF 4" RECESSED CAN	LIGHTED ADDRESS SIGNAGE
F IAQ CONTINUOUS FAN (IAQ) AT 80 CFM MINIMUM	$ SWITCH
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WALL MOUNTED LIGHT	$D DIMMER SWITCH
TRACK LIGHT	RECEPTACLE
LED UNDER CABINET OR HEADER LIGHT	30 OR 50 AMP RECEPTACLE
LED SHOP LIGHT	FLR FLOOR RECEPTACLE
PENDANT LIGHT	DW DISHWASHER
SD SMOKE DETECTOR	G/D GARBAGE DISPOSAL
CD/SD CARBON MONOXIDE & SMOKE DETECTOR	DED DEDICATED RECEPTACLE
T.V. + CABLE	GFCI GFCI RECEPTACLE
DIRECTIONAL LIGHT	G GAS LINE
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JAKE & GEORGIA BEYER
THE BEYER RESIDENCE
426 PINE ST.
SAUSALITO, CA. 94965
APN 065-054-11

MARK	DATE	DESCRIPTION
1	01/13/2025	RESPONSE TO PLAN CHECK COMMENTS

STATUS: DR SET
DATE: 1/14/2025
DRAWN BY: LAM NGUYEN
DESIGN OFFICIAL

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SHEET TITLE

SECOND FLOOR ELECTRICAL PLAN

A6.1

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2. AIR EXHAUST AND INTAKE OPENINGS THAT TERMINATE OUTDOORS SHALL BE PROTECTED WITH CORROSION-RESISTANT SCREENS, LOUVERS, OR GRILLES HAVING AN OPENING SIZE ON NOT LESS THAN ¼" AND NOT MORE THAN ½". OPENINGS SHALL BE PROTECTED AGAINST LOCAL WEATHER CONDITIONS.

3. WHEN INSTALLING GAS OR PROPANE APPLIANCES, PROVIDE A RESERVED DOUBLE POLE CIRCUIT BREAKER SPACE PERMANENTLY MARKED AS "FOR FUTURE 240V USE" FOR EACH NON-ELECTRIC APPLIANCE. ALSO PROVIDE THE FOLLOWING CIRCUIT WIRING.

COOKTOP. ELECTRIC COOKTOP READY. INSTALL A DEDICATED 240 VOLT BRANCH CIRCUIT WIRING WITHIN 3 FEET FROM THE COOKTOP AND ACCESSIBLE TO THE COOKTOP WITH NO OBSTRUCTIONS. THE BRANCH CIRCUIT CONDUCTORS SHALL BE RATED AT 50 AMPS MINIMUM. THE BLANK COVER SHALL BE IDENTIFIED AS "240V READY." **[CENC 150.0(U)]**

DRYER. ELECTRIC CLOTHES DRYER READY. A DEDICATED 240 VOLT BRANCH CIRCUIT WIRING SHALL BE INSTALLED WITHIN 3 FEET FROM THE CLOTHES DRYER LOCATION AND ACCESSIBLE TO THE CLOTHES DRYER LOCATION WITH NO OBSTRUCTIONS. THE BRANCH CIRCUIT CONDUCTORS SHALL BE RATED AT 30 AMPS MINIMUM. THE BLANK COVER SHALL BE IDENTIFIED AS "240V READY." **[CENC 150.0(V)]**

4.
ALL SINGLE-FAMILY RESIDENCES THAT INCLUDE ONE OR TWO DWELLING UNITS SHALL BE ESS READY OR INSTALL AN ESS SYSTEM. **[CENC 150.0(S)]** PROVIDE THE FOLLOWING:

a) A MINIMUM OF FOUR BRANCH CIRCUITS SHALL BE IDENTIFIED AND HAVE THEIR SOURCE OF SUPPLY COLLOCATED AT A SINGLE PANELBOARD SUITABLE TO BE SUPPLIED BY THE ESS. AT LEAST ONE CIRCUIT SHALL SUPPLY THE REFRIGERATOR, ONE LIGHTING CIRCUIT SHALL BE LOCATED NEAR THE PRIMARY EGRESS AND AT LEAST ONE CIRCUIT SHALL SUPPLY A SLEEPING ROOM RECEPTACLE OUTLET.

b) SUFFICIENT SPACE SHALL BE RESERVED TO ALLOW FUTURE INSTALLATION OF A SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH WITHIN 3 FEET OF THE MAIN PANELBOARD. RACEWAYS SHALL BE INSTALLED BETWEEN THE PANELBOARD AND THE SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH LOCATION TO ALLOW THE CONNECTION OF BACKUP POWER SOURCE.

c) THE MAIN PANELBOARD SHALL HAVE A MINIMUM BUSBAR RATING OF 225 AMPS, AND

D1) ESS READY INTERCONNECTION EQUIPMENT WITH A MINIMUM BACKED-UP CAPACITY OF 60 AMPS AND A MINIMUM OF FOUR ESS-SUPPLIED BRANCH CIRCUITS, **OR**

D2) A DEDICATED RACEWAY FROM THE MAIN SERVICE TO A PANELBOARD (SUBPANEL) THAT SUPPLIES THE BRANCH CIRCUITS IN **CENC 150.0(S)(2)**. ALL BRANCH CIRCUITS ARE PERMITTED TO BE SUPPLIED BY THE MAIN SERVICE PANEL PRIOR TO THE INSTALLATION OF AN ESS. THE TRADE SIZE OF THE RACEWAY SHALL BE NOT LESS THAN 1 INCH. THE PANELBOARD THAT SUPPLIES THE BRANCH CIRCUITS (SUBPANEL) MUST BE LABELED "SUBPANEL SHALL INCLUDE ALL BACKED UP LOAD CIRCUITS."

5. **AIR FILTERS NOTE:** MERV13 WITH A 2" NOMINAL DEPTH SHALL BE USED. **[CENC 150.0(M)12C]**

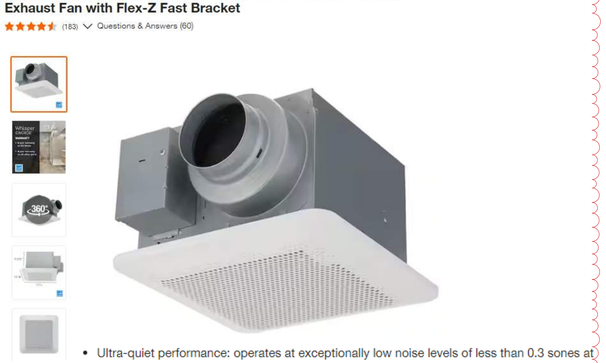
6. NO DOMESTIC DISHWASHING MACHINE SHALL BE DIRECTLY CONNECTED TO A DRAINAGE SYSTEM OR FOOD WASTE DISPOSER WITHOUT THE USE OF AN APPROVED DISHWASHER AIR GAP FITTING ON THE DISCHARGE SIDE OF THE DISHWASHING MACHINE. **[CPC 807.3]**

7. ALL DRYERS WILL BE DUCTLESS AND INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS

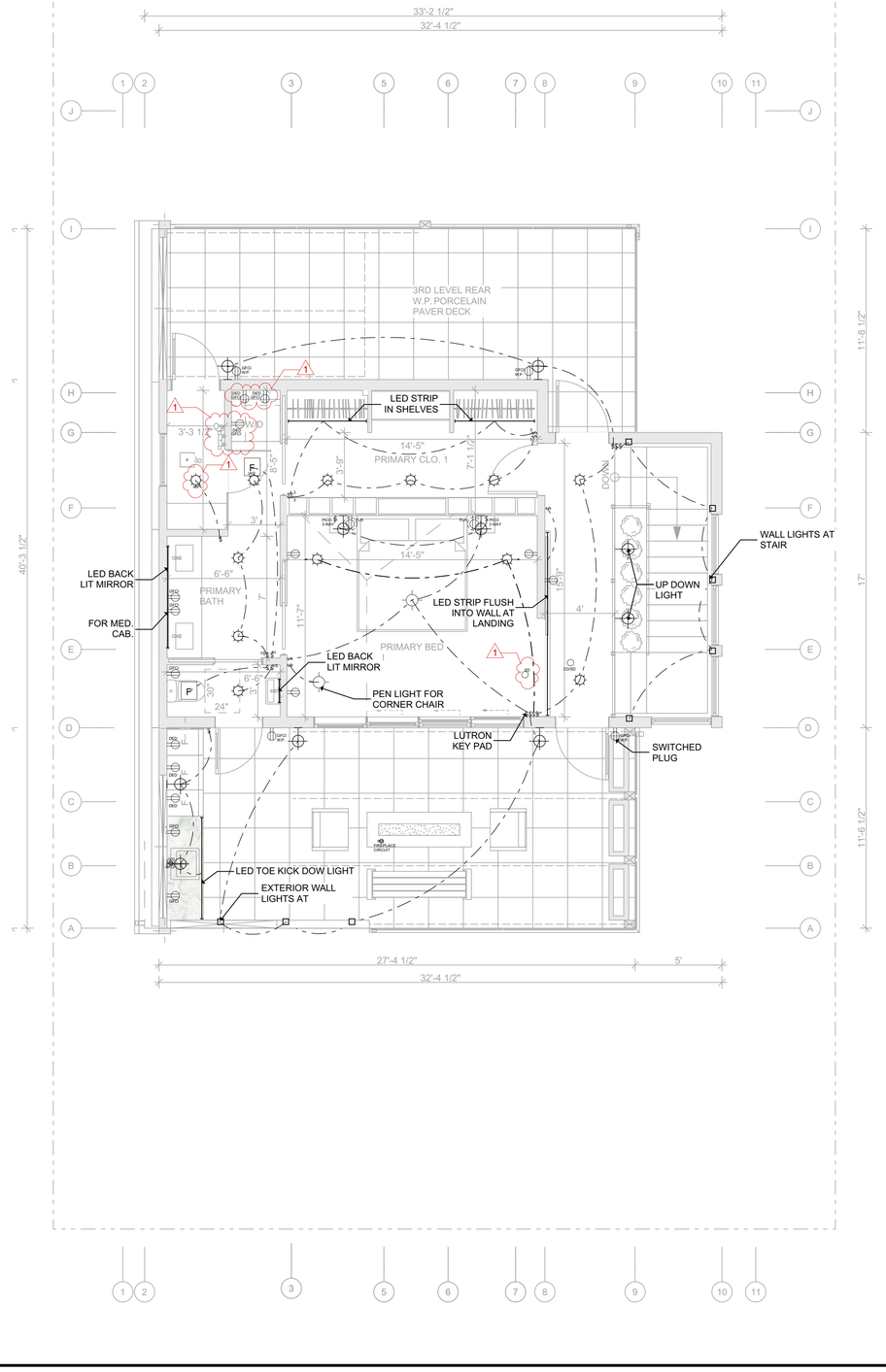
8. AT THE IAQ FAN SWITCH, NOTE A LABEL CLEARLY DISPLAYING THE FOLLOWING OR EQUIVALENT TEXT: "THIS SWITCH CONTROLS THE INDOOR AIR QUALITY VENTILATION FOR THE HOME. LEAVE IT ON UNLESS THE OUTDOOR AIR QUALITY IS VERY POOR."

1

Panasonic
Whisper Choice DC Pick-A-Flow 80/110 CFM Ceiling Bathroom Exhaust Fan with Flex-Z Fast Bracket
★★★★½ (183) Questions & Answers (60)



- Ultra-quiet performance: operates at exceptionally low noise levels of less than 0.3 sones at 80 CFM and 0.5 sones at 110 CFM, ensuring a quiet environment



1 PROPOSED THIRD FLOOR PLAN
SCALE: 1/4" = 1'-0"
0 2' 4' 8'

ELECTRIC LEGEND

W.P. WATER PROOF 4" RECESSED CAN	LIGHTED ADDRESS SIGNAGE
F IAQ CONTINUOUS FAN (IAQ) AT 80 CFM MINIMUM	$ SWITCH
F BATH ROOM FAN AT 80 CFM MINIMUM	$3 3-WAY SWITCH
L.E.D. 4" RECESSED CAN	$VS VACANCY-SENSOR SWITCH
SURFACE MOUNTED LIGHT	$H FAN HUMIDISTAT CONTROL
WALL MOUNTED LIGHT	$D DIMMER SWITCH
TRACK LIGHT	RECEPTACLE
LED UNDER CABINET OR HEADER LIGHT	30 OR 50 AMP RECEPTACLE
LED SHOP LIGHT	FLR FLOOR RECEPTACLE
PENDANT LIGHT	DW DISHWASHER
SD SMOKE DETECTOR	G/D GARBAGE DISPOSAL
CO/SD CARBON MONOXIDE & SMOKE DETECTOR	DED DEDICATED RECEPTACLE
T.V. + CABLE	GFCI GFCI RECEPTACLE
DIRECTIONAL LIGHT	G GAS LINE
CEILING FAN	CLG CEILING RECEPTACLE

ELECTRICAL NOTES

1. ALL ELECTRICAL OUTLETS INSTALLED IN BATHROOMS, GARAGES, BASEMENTS, CRAWL SPACES, OUTDOORS, KITCHEN COUNTERS, AND AT WET BAR SINKS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION IN COMPLIANCE WITH CEC ART. 210-8, CONSISTING OF 125 VOLT, SINGLE-PHASE, 15- AND 20- AMPERE RECEPTACLES.

2. ALL 120-VOLT, SINGLE PHASE 15- AND 20- AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT KITCHENS, FAMILY ROOMS, LIVING ROOMS, DINING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS LAUNDRY AREAS OR SIMILAR ROOMS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, OR A LISTED OUTLET BRANCH-CIRCUIT TYPE AFCI LOCATED AT THE FIRST RECEPTACLE OUTLET OF THE EXISTING BRANCH CIRCUIT INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT. CEC 210-12(B).

3. ALL RECEPTACLES TO BE LISTED, TAMPER-RESISTANT TYPE IN ACCORDANCE WITH CEC ARTICLE 406.12.

4. ALL NEW LIGHTS ARE DIMMED.

5. ALL EXTERIOR FIXTURES ARE CONTROLLED BY AN ASTRONOMICAL TIMER

6. A HUMIDISTAT IS REQUIRED

ELECTRICAL NOTES

7. BUILDER TO PROVIDE AN ELECTRICAL PANEL LOAD ANALYSIS AT TIME OF ROUGH INSPECTIONS TO VERIFY ELECTRICAL SERVICE ADEQUATE FOR ANY NEW LOCADS, INCLUDING 40A EV CHARGER

1 8. FOR KITCHEN RANGE HOOD VENTILATION IN ACCORDANCE WITH THE ENERGY CODE MANDATORY MEASURE., A MINIMUM 85% CE OR 280 CFM EXHAUST HOOD FOR ADU AND A 70% CE OR 180 CFM RATE FOR THE MAIN HOUSE. **[CENC TABLE 150.0-G]**

9. ENVIRONMENTAL AIR DUCTS SHALL TERMINATE AT LEAST 3' FROM ANY OPENINGS INTO A BUILDING

10. (E) ELECTRICALS ARE NOT SHOWN FOR CLARITY

11. (E) ELECTRICALS ARE TO REMAIN.

12. DRYER DUCT TO BE MINIMU 4" RIGID AND NOT MORE THAN 14' OVERALL LENGTH WITH NO MORE THAN TWO 90-DEGREE BENDS. CMC 504.4.2

13. BUILDER TO PROVIDE MAKE UP AIR FOR CLOTHES DRYER IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND CMC 504.4.1.

14. OUTSIDE DRYER VENT SHALL BE EQUIPPED WITH A BACK-DRAFT DAMPER.

ELECTRICAL NOTES

15. LOCATION OF THE RECEPTACLE OUTLETS SHALL BE DESIGNED TO COMPLY WITH C.E.C. SECTION 210.50 TO 215.0.

A. RECEPTACLES SHALL BE INSTALLED SO THAT NO POINT MEASURED HORIZONTALLY ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6 FEET FROM A RECEPTACLE OUTLET.

B. RECEPTACLES AT THE KITCHEN COUNTERTOPS SHALL BE INSTALLED SO THAT NO POINT ALONG THE WALL LINE IS MORE THAN 24 INCHES MEASURED HORIZONALTALLY FROM A RECEPTACLE OUTLET IN THAT SPACE.

C. AT LEAST ONE RECEPTACLE OUTLET SHALL BE INSTALLED IN BATHROOMS WITHIN 3 FEET OF THE OUTSIDE EDGE OF EACH BASIN.

16. RECESSED DOWNLIGHTS IN CEILINGS SHALL BE AIRTIGHT WHEN TESTED IN ACCORDANCE WITH ASTM E283 PER ENERGY CODE CEC 150.0(K)1C

17. WHERE MORE THAN ONE CARBON MONOXIDE DETECTOR IS REQUIRED, THE ALARM SHALL BE INTERCONNECTED IN A MANNER THAT THE ACTIVATION OF ONE ALARM SHALL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT.
18. CARBON MONOXIDE DETECTORS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING WHERE SUCH WIRING IS SERVED FROM A COMMERCIAL SOURCE AND, WHERE PRIMARY POWER IS INTERRUPTED, SHALL RECEIVE POWER FROM A BATTERY. WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTING SWITCH OTHER THAN THOSE REQUIRED FOR OVERCURRENT PROTECTION.

ELECTRICAL NOTES

19. PROVIDE AT LEAST TWO SEPARATE 20-AMP CIRCUITS FOR SMALL APPLIANCES IN KITCHEN, PANTRY, DINING ROOM AND SIMILAR AREAS, WITH NO OTHER OUTLETS ON THE CIRCUITS. CEC §210.11 (C)(1), 210.52(B).
20. PROVIDE AT LEAST ONE SEPARATE 20-AMP CIRCUIT TO LAUNDRY APPLIANCES WITH NO OTHER OUTLETS ON THE CIRCUIT. §210.11 (C)(2).
21. PROVIDE AT LEAST ONE 20-AMP CIRCUIT FOR BATHROOM OUTLETS, WITH NO OTHER OUTLETS ON THE CIRCUIT. §210.11(C) (3).

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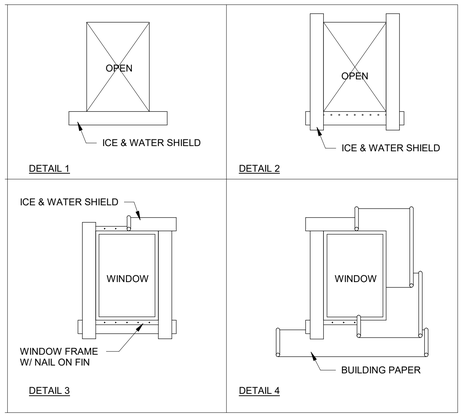
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THIRD FLOOR ELECTRICAL PLAN

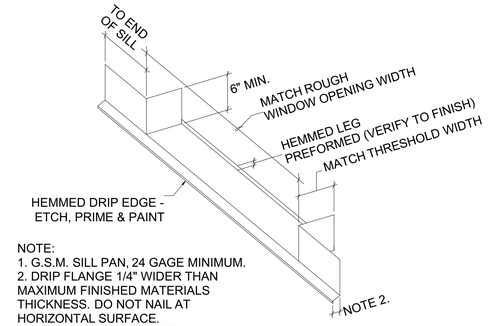
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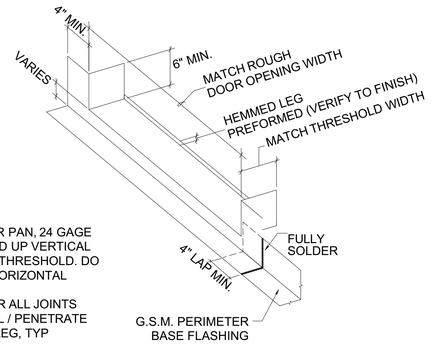
NOTE:
MATCH EXISTING WINDOW FRAMING DETAILS

1 WINDOW & DOOR FLASHING DETAILS
SCALE: 3" = 1'-0"



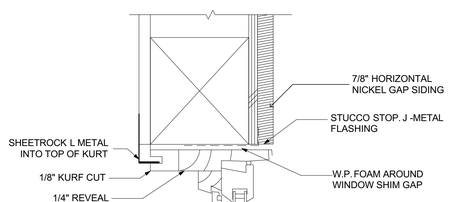
NOTE:
1. G.S.M. SILL PAN, 24 GAGE MINIMUM.
2. DRIP FLANGE 1/4" WIDER THAN MAXIMUM FINISHED MATERIALS THICKNESS. DO NOT NAIL AT HORIZONTAL SURFACE.
3. HOT SOLDER ALL JOINTS
4. DO NOT NAIL / PENETRATE HORIZANTAL LEG, TYP.

2 WINDOW SILL PAN DETAIL
SCALE: NTS

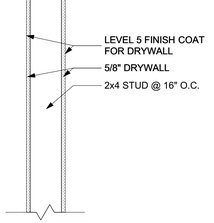


NOTE:
1. G.S.M. DOOR PAN, 24 GAGE MINIMUM. FOLD UP VERTICAL EDGE BELOW THRESHOLD. DO NOT NAIL AT HORIZONTAL SUFACE.
2. HOT SOLDER ALL JOINTS
3. DO NOT NAIL / PENETRATE HORIZONTAL LEG, TYP

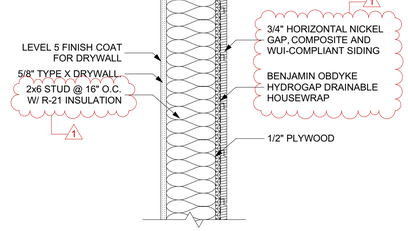
3 DOOR SILL PAN DETAIL
SCALE: NTS



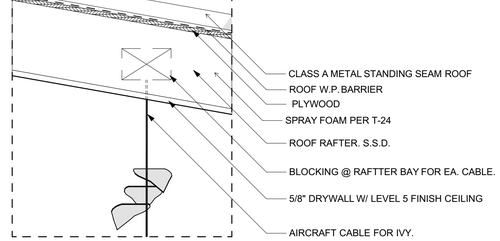
C JAMB



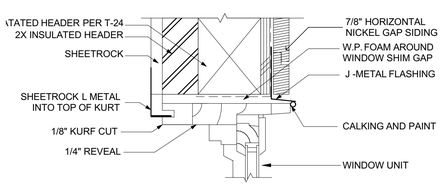
5 TYP. INT. WALL
SCALE: 1 1/2"= 1'-0"



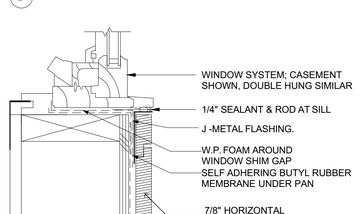
6 TYP. EXT. WALL - WUI COMPLIANT
SCALE: 1 1/2"= 1'-0"



7 STAIR DETAILS
SCALE: 1 1/2"= 1'-0"

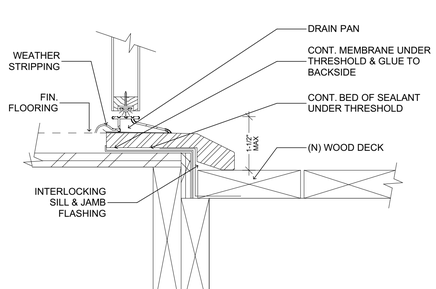


B HEAD

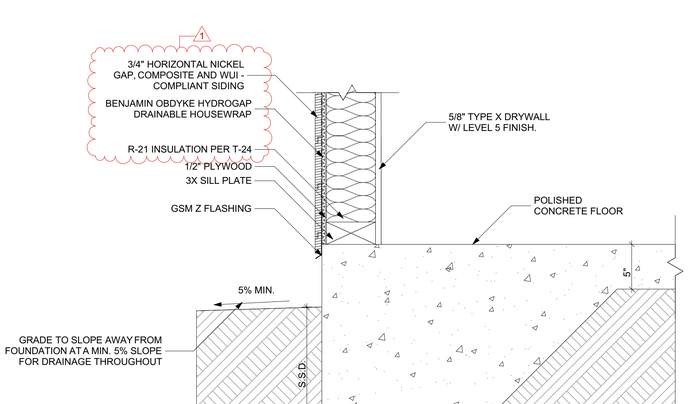


A SILL

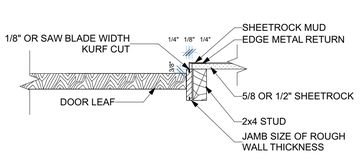
4 SILL, JAMB, & HEAD
SCALE: 3" = 1'-0"



8 EXT. DOOR THRESHOLD
SCALE: 6" = 1'-0"



9 BASE DETAIL
SCALE: 1 1/2"= 1'-0"



10 TRIMLESS DOOR INSTALL DETAIL
SCALE: 1 1/2"= 1'-0"

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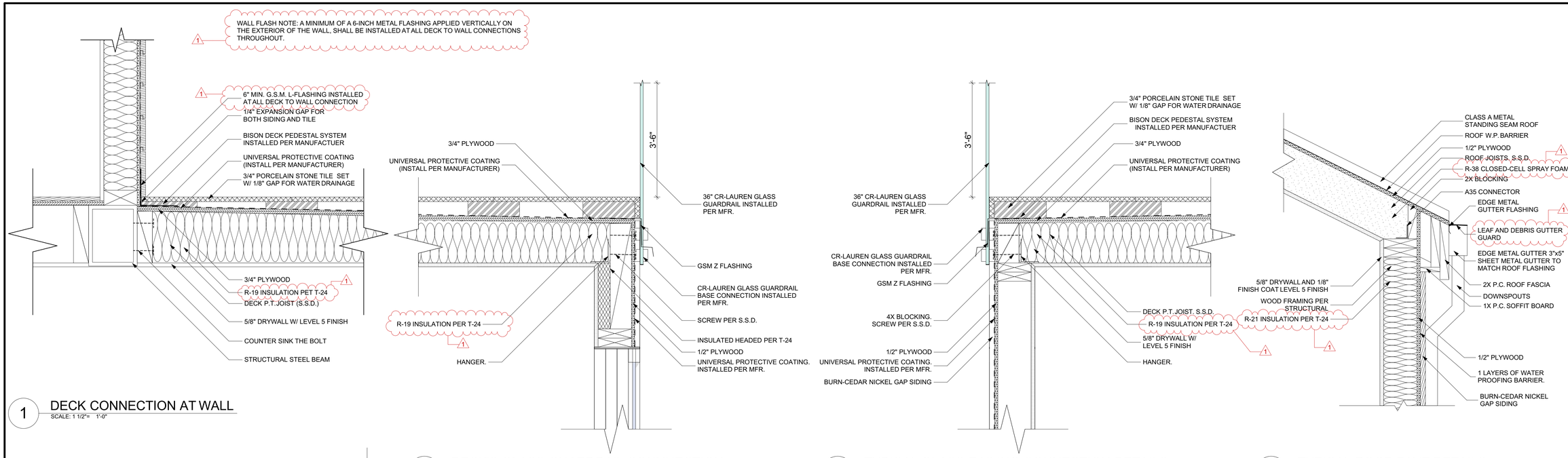
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DETAILS

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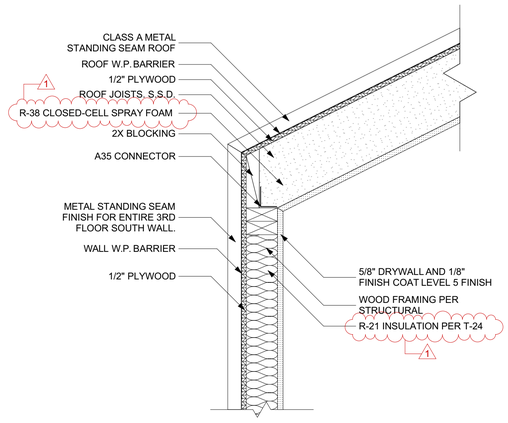


1 DECK CONNECTION AT WALL
SCALE: 1 1/2"= 1'-0"

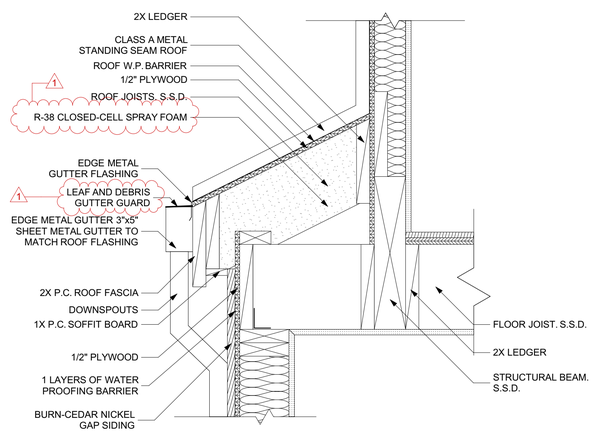
2 DECK'S GLASS GUARDRAIL CONNNECTION
SCALE: 1 1/2"= 1'-0"

3 TYPICAL GLASS RAILING CONNECTION DETAILS
SCALE: 1 1/2"= 1'-0"

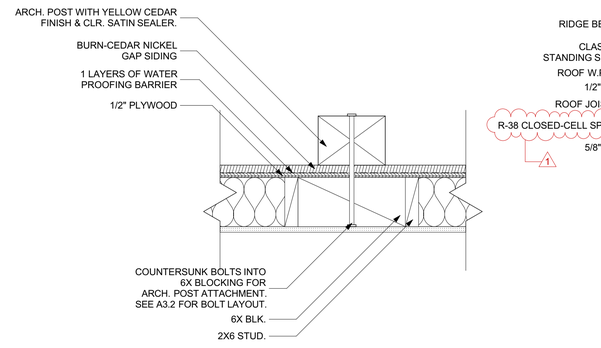
4 TYPICAL ROOF EAVE DETAILS
SCALE: 1 1/2"= 1'-0"



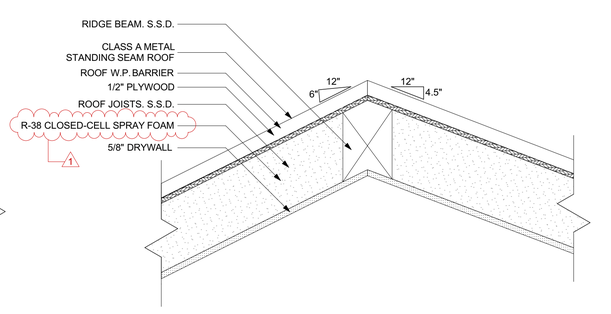
5 STANDING SEAM ROOF & WALL DETAIL
SCALE: 1 1/2"= 1'-0"



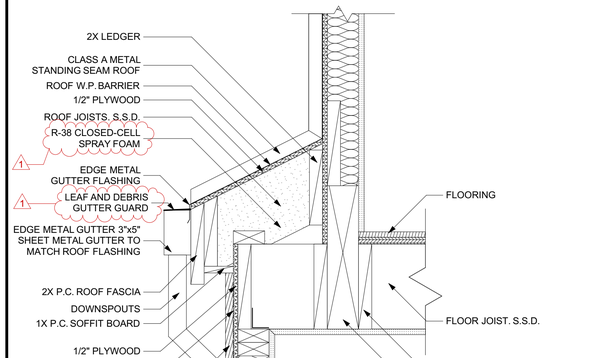
7 ADU ROOF DETAIL
SCALE: 1 1/2"= 1'-0"



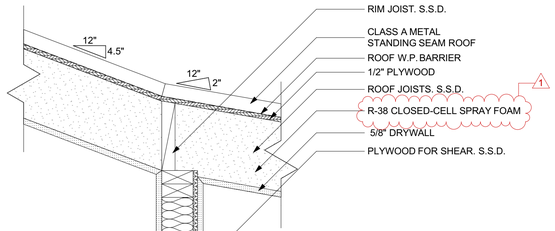
8 ARCH. POST ATTACHMENT DETAIL
SCALE: 1 1/2"= 1'-0"



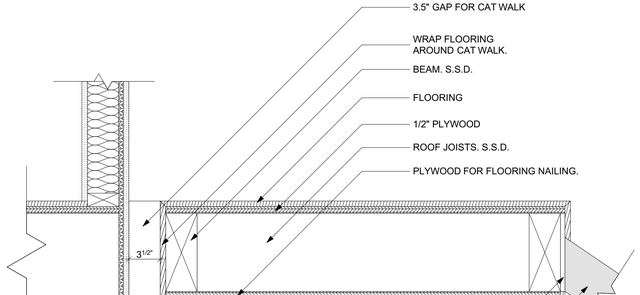
9 ROOF RIDGE DETAILS
SCALE: 1 1/2"= 1'-0"



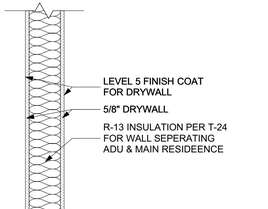
6 CONTINUED STANDING SEAM ROOF & WALL DETAIL
SCALE: 1 1/2"= 1'-0"



10 ROOF CONNECTION DETAILS
SCALE: 1 1/2"= 1'-0"



11 CATWALK DETAILS
SCALE: 1 1/2"= 1'-0"



12 INSULATED INTERIOR WALL
SCALE: 1 1/2"= 1'-0"

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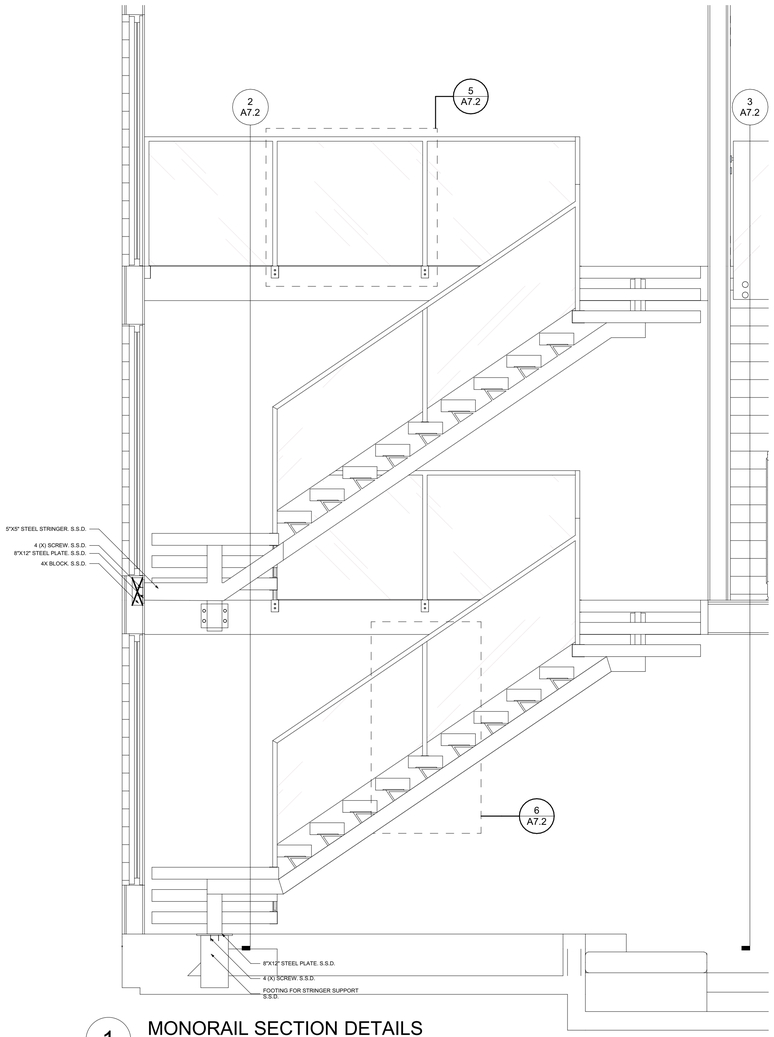
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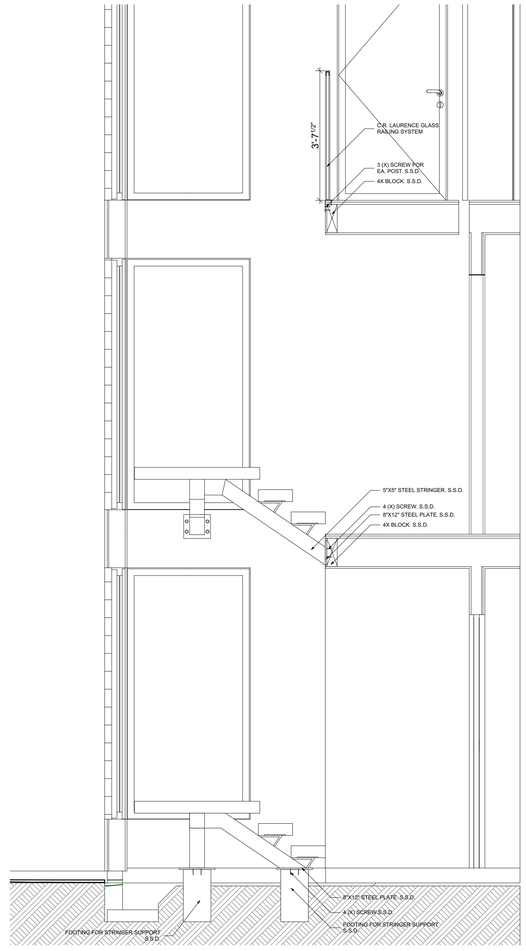
DETAILS

A7.1

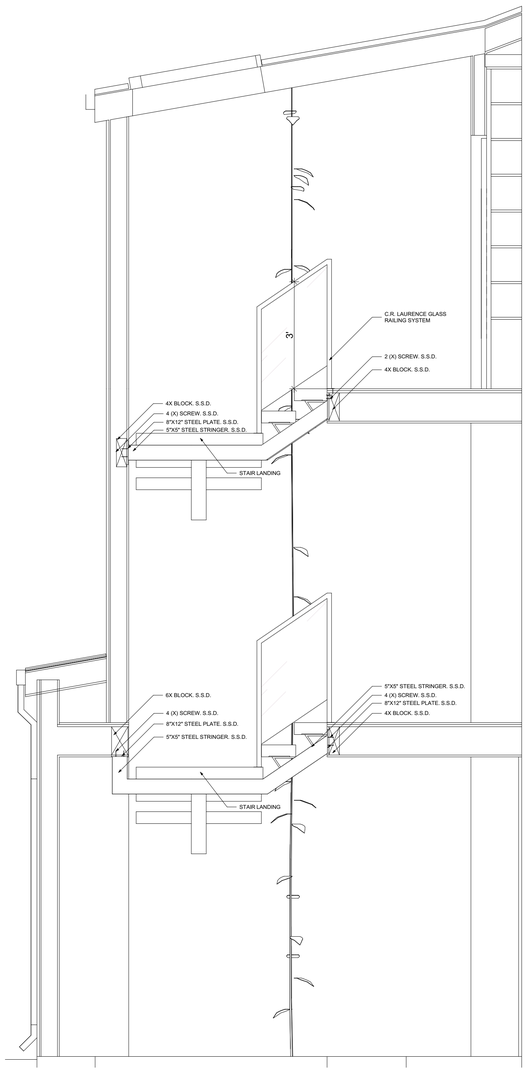
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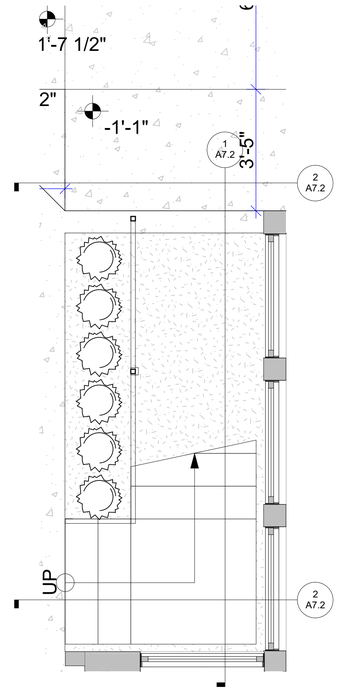
1 MONORAIL SECTION DETAILS
SCALE: 1/2" = 1'-0"



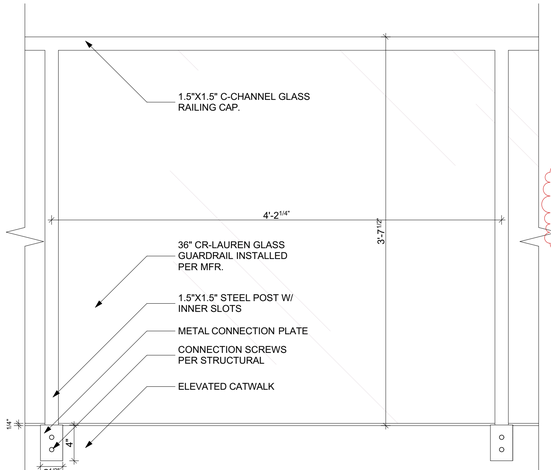
2 DETAILS SECTION
SCALE: 1/2" = 1'-0"



3 DETAILS SECTION
SCALE: 1/2" = 1'-0"

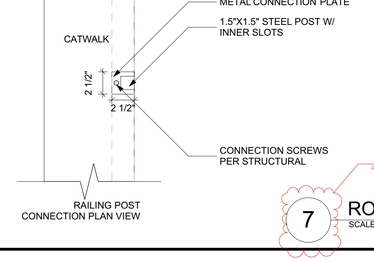


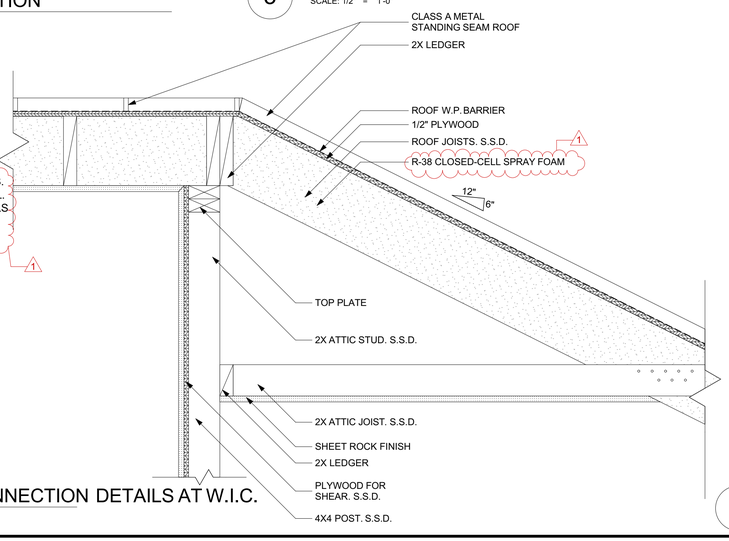
4 STAIR PLAN AT 1ST FLOOR
SCALE: 1/2" = 1'-0"



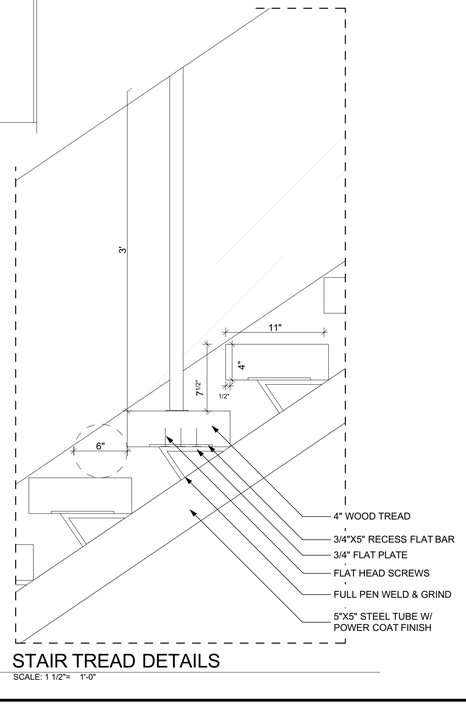
5 GLASS RAILING CONNECTION DETAILS
SCALE: 1 1/2"= 1'-0"

NOTE:
1. GRAB BAR TO BE 36" ABOVE STAIR NOSING, TYP.
2. MIN. ONE GRAB BAR REQUIRED AT STAIRS
3. EASE ALL EDGE ON HANDRAIL
4. ALL HANDRAIL ASSEMBLIES AND GUARDS SHALL BE MOUNTED SO THAT THE COMPLETED RAIL AND SUPPORTING STRUCTURE ARE CAPABLE OF WITHSTANDING A CONCENTRATED LOAD OF 200 LBS APPLIED IN ANY DIRECTION AT ANY POINT ALONG THE TOP PER CRC R301.5
5.IF HANDRAILS CROSS-SECTION IS NOT CIRCULAR, IT SHALL HAVE A PERIMETER DIMENSION OF AT LEAST 4" AND NOT GREATER 6.25".
6. HANDRAILS ADJACENT TO A WALL SHALL HAVE A SPACE OF NOT LESS THAN 1.5" BETWEEN THE WALL AND HANDRAILS.
7. ALL HANDRAIL ENDS TO RETURN TO WALL, GUARD, OR WALKING SURFACE CONTINUOUS TO ITSELF, OR TERMINATE TO A POST. (VOLUTE, TURNOUT OR STARTING EASING SHALL BE ALLOWED TO TERMINATE OVER THE LOWEST TREAD AND OVER THE TOP LANDING).
8. ALL GLAZING USED IN GUARDS AND RAILINGS SHALL BE LAMINATED SAFETY GLASS.
9. GUARDS WITH STRUCTURAL GLASS BALUSTER PANELS SHALL INCLUDE A TOP RAIL. THE RAIL SHALL BE SUPPORTED BY NOT LESS THAN THREE GLASS BALUSTER PANELS OR BE INDEPENDENTLY SUPPORTED TO REMAIN IN PLACE IF A SINGLE GLASS BALUSTER PANEL FAILS.





7 ROOF CONNECTION DETAILS AT W.I.C.
SCALE: 1 1/2"= 1'-0"



6 STAIR TREAD DETAILS
SCALE: 1 1/2"= 1'-0"

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426 PINE ST.
SAUSALITO, CA. 94965
APN 065-054-11

MARK	DATE	DESCRIPTION
1	01/13/2025	RESPONSE TO PLAN CHECK COMMENTS

STATUS: **DR SET**
DATE: **1/14/2025**
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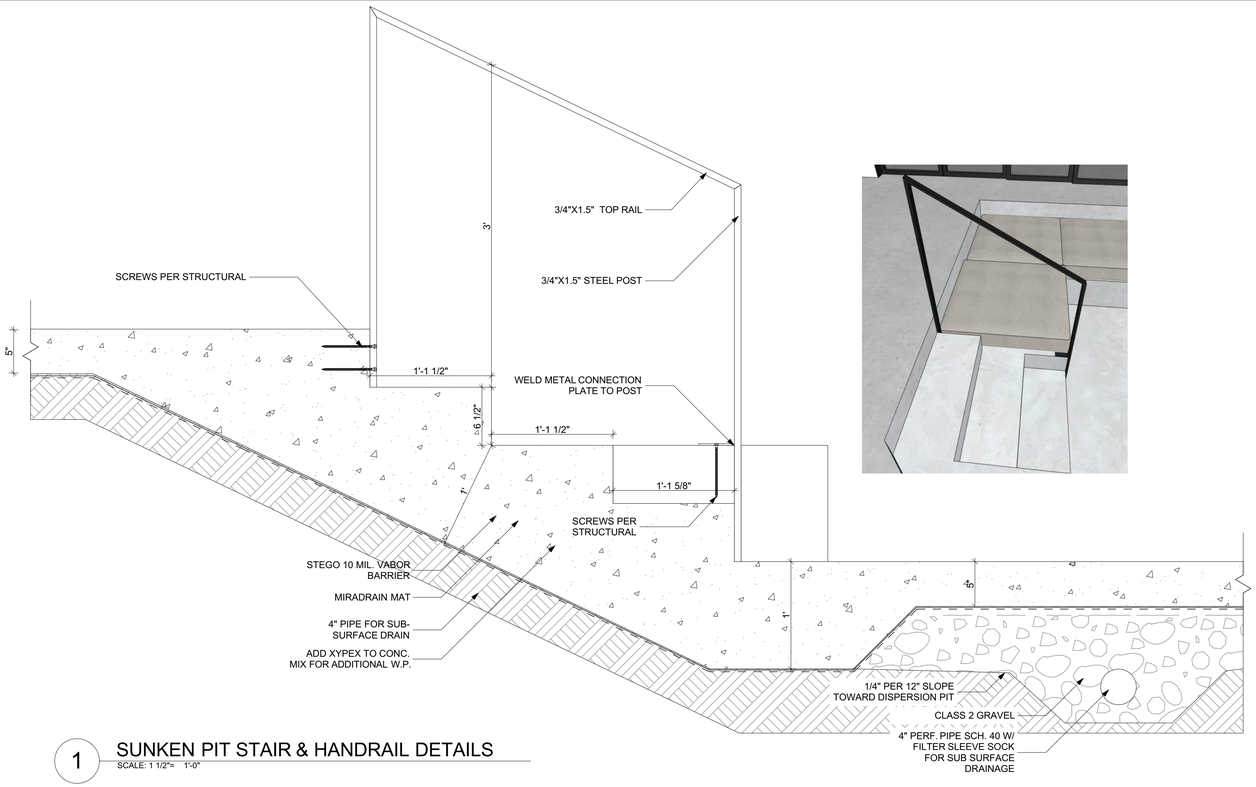
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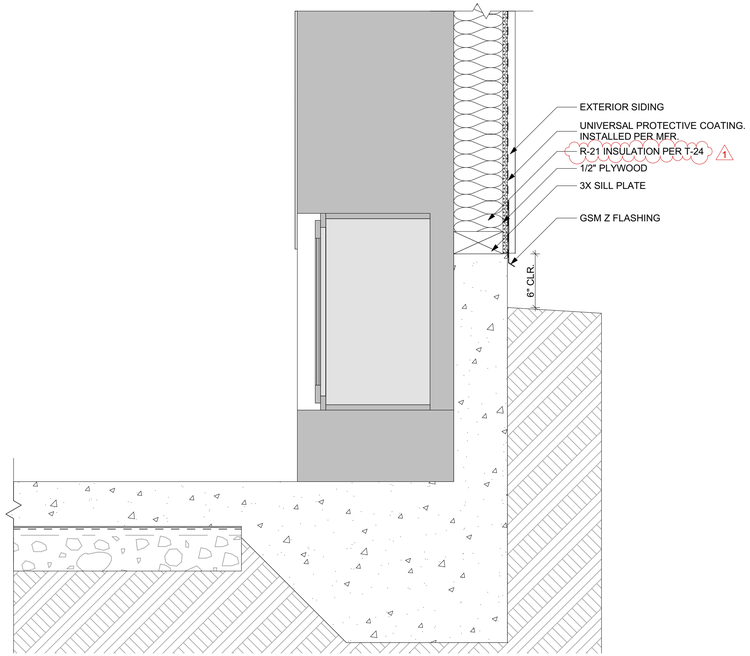
SHEET TITLE
DETAILS

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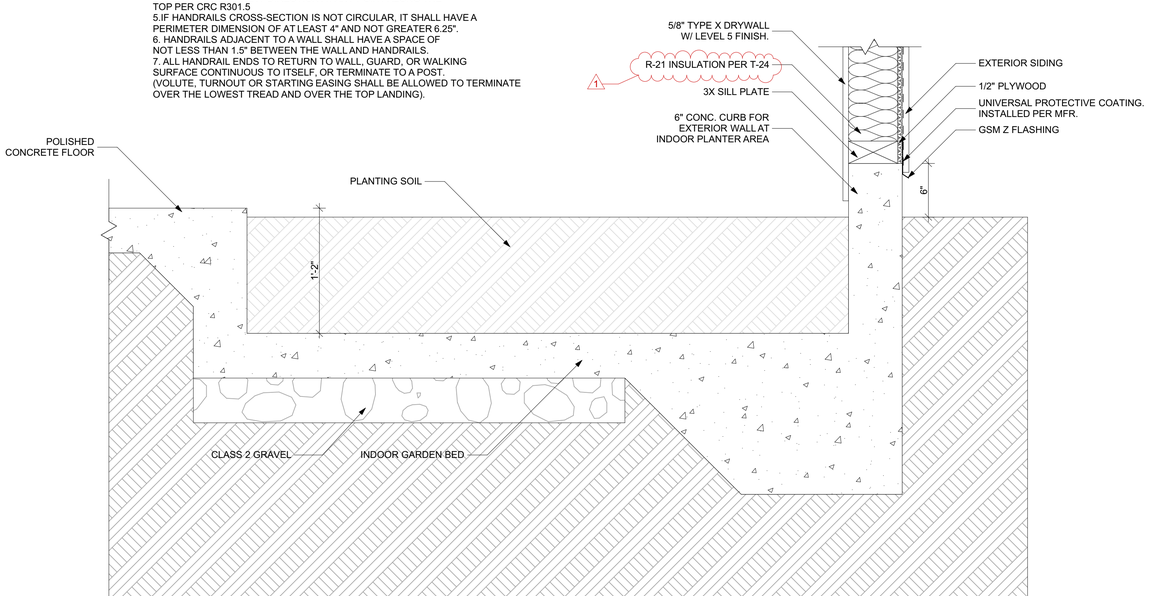


1 SUNKEN PIT STAIR & HANDRAIL DETAILS
SCALE: 1 1/2"= 1'-0"

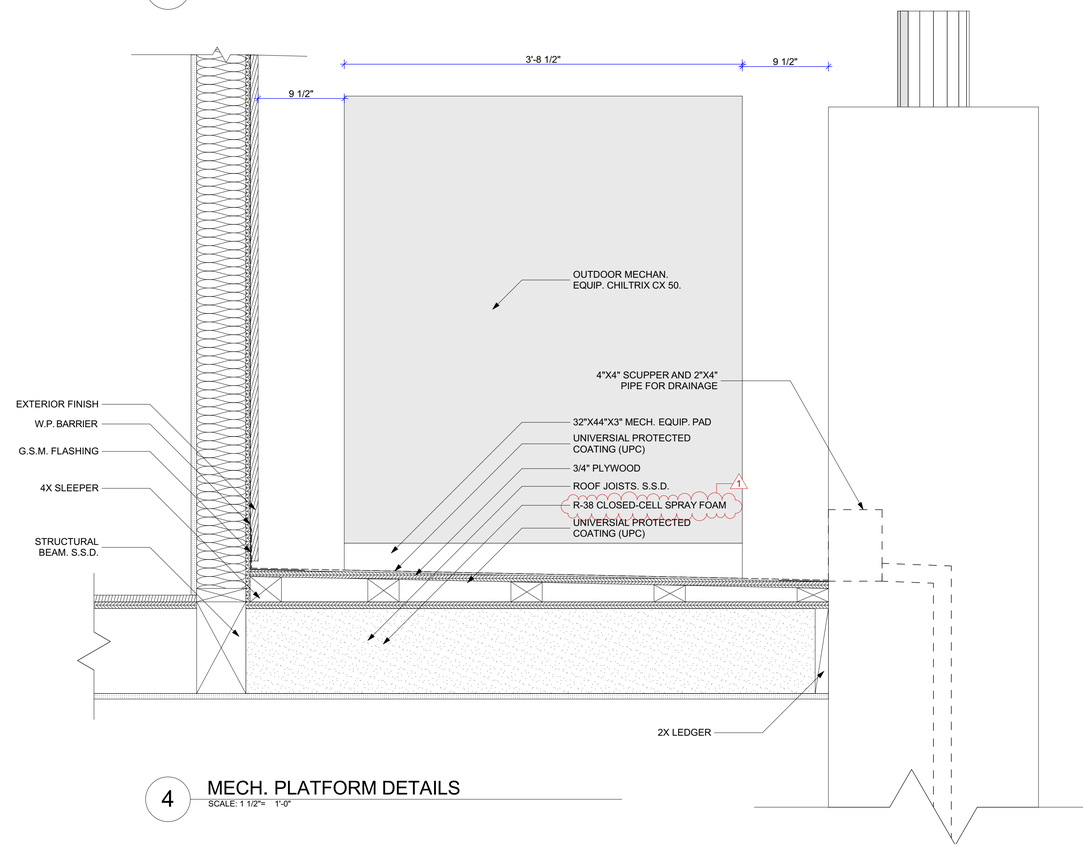


2 STEM WALL DETAILS AT FIRE PLACE
SCALE: 1 1/2"= 1'-0"

NOTE:
1. GRAB BAR TO BE 36" ABOVE STAIR NOSING, TYP.
2. MIN. ONE GRAB BAR REQUIRED AT STAIRS
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3 INDOOR PLANTER BOX DETAILS
SCALE: 1 1/2"= 1'-0"



4 MECH. PLATFORM DETAILS
SCALE: 1 1/2"= 1'-0"

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1	01/13/2025	RESPONSE TO PLAN CHECK COMMENTS

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Summary of Title 24 compliance measures

426 Pine Street, Sausalito, CA

All installers must understand these measures. Some HERS to be third party verified during construction and all verified before final. Contact HERS rater early to verify expectations.

- Roof insulation R-38
- Wall insulation R-21 2x6 and R-15 in 2x4. insulated headers (see below)
- Floor insulation R-19
- Windows Maximum U-factors/SHGC 0.30/25
- Sliding Glass Door Maximum U-factors/SHGC 0.32/23
- Skylight Maximum U-factors/SHGC 0.39/29
- Exterior solid doors Min R-5
- 80 Gal Heat Pump Water heater NEEA listed
- Air to water Heat pump Minimum UEF 3.2
- Solar PV providing at least 3.2KW
- 5 KW Battery Storagep
- Full Bath Fans controlled by Humidity sensor

HERS Measures requiring third party

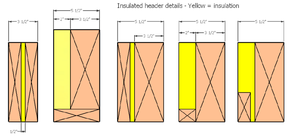
- Quality installation of insulation (QII) some items Should be in structural drawings contact HERS rater
- Verified heat pump rated heating capacity
- Ashrae 62.2 Indoor air quality (IAQ) requirement 114 CFM. Indoor air quality ventilation fan tests required
- Range Hood verification, Fan must be listed at HVI Or AHAM

See **CalGreen** and GreenPoint Checklists for other Mandatory Measures that need to be documented and verified during construction.

Prepared by Aurora Building Performance in good faith to be accurate based on supplied plans from and verbal consultations with the designer. Changes may incur further fees from ABP and the building department.

Min R3 for 3.5" R5 in 5.5" wall

Insulated header details - Yellow = insulation



CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD **CF1R-PRF-01-E**

Project Name: 426 Pine St. **Calculation Date/Time:** 2025-01-13T11:26:15-08:00 **(Page 1 of 13)**

Calculation Description: Title 24 Analysis **Input File Name:** 426 Pine St..ribd22x

GENERAL INFORMATION					
01	Project Name	426 Pine St.			
02	Run Title	Title 24 Analysis			
03	Project Location	426 Pine St.			
04	City	Sausalito	05	Standards Version	2022
06	Zip code	94965	07	Software Version	EnergyPro 9.3
08	Climate Zone	3	09	Front Orientation (deg/ Cardinal)	124
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	Newly Constructed	13	Number of Bedrooms	5
14	Addition Cond. Floor Area (ft^2)	0	15	Number of Stories	4
16	Existing Cond. Floor Area (ft^2)	n/a	17	Fenestration Average U-factor	0.31
18	Total Cond. Floor Area (ft^2)	2624	19	Glazing Percentage (%)	40.02%
20	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area	n/a
22	Fuel Type	Natural gas	23	No Dwelling Unit:	No

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

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD **CF1R-PRF-01-E**

Project Name: 426 Pine St. **Calculation Date/Time:** 2025-01-13T11:26:15-08:00 **(Page 2 of 13)**

Calculation Description: Title 24 Analysis **Input File Name:** 426 Pine St..ribd22x

ENERGY DESIGN RATINGS						
	Energy Design Ratings			Compliance Margins		
	Source Energy (EDR1)	Efficiency[1] EDR (EDR2efficiency)	Total[2] EDR (EDR2total)	Source Energy (EDR1)	Efficiency[1] EDR (EDR2efficiency)	Total[2] EDR (EDR2total)
Standard Design	36	44.4	34.3			
Proposed Design	24.9	37.9	27.6	11.1	6.5	6.7
RESULT[3]: PASS						

[1]Efficiency EDR includes improvements like a better building envelope and more efficient equipment
[2]Total EDR includes efficiency and demand response measures such as photovoltaic (PV) system and batteries
[3]Building complies when source energy, efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded

- Standard Design PV Capacity: 3.20 kWdc
- PV System resized to 3.20 kWdc (a factor of 3.198) to achieve 'Standard Design PV' PV scaling

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD **CF1R-PRF-01-E**

Project Name: 426 Pine St. **Calculation Date/Time:** 2025-01-13T11:26:15-08:00 **(Page 3 of 13)**

Calculation Description: Title 24 Analysis **Input File Name:** 426 Pine St..ribd22x

ENERGY USE SUMMARY						
Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft^2 -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft^2 -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	4.33	19.18	2.54	18.68	1.79	0.5
Space Cooling	0.05	3.61	0.05	4.16	0	-0.55
IAQ Ventilation	0.34	3.63	0.34	3.63	0	0
Water Heating	1.69	19.15	1.04	12.43	0.65	6.72
Self Utilization/Flexibility Credit			0	0	0	0
Efficiency Compliance Total	**6.41**	**45.57**	**3.97**	**38.9**	**2.44**	**6.67**
Photovoltaics	-1.04	-32.78	-1.04	-34.7		
Battery			-1.1	-4.39		
Flexibility			0			
Indoor Lighting	0.66	6.89	0.66	6.89		
Appl. & Cooking	2.52	16.16	2.51	16.1		
Plug Loads	2.78	29.55	2.78	29.55		
Outdoor Lighting	0.18	1.75	0.18	1.75		
TOTAL COMPLIANCE	**11.51**	**67.14**	**7.96**	**54.1**		

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD **CF1R-PRF-01-E**

Project Name: 426 Pine St. **Calculation Date/Time:** 2025-01-13T11:26:15-08:00 **(Page 4 of 13)**

Calculation Description: Title 24 Analysis **Input File Name:** 426 Pine St..ribd22x

ENERGY USE INTENSITY				
	Standard Design (kBtu/ft^2 - yr)	Proposed Design (kBtu/ft^2 - yr)	Margin (kBtu/ft^2 - yr)	Margin Percentage
Gross EUI[1]	15.41	12.64	2.77	17.98
Net EUI[2]	8.99	6.22	2.77	30.81

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 PV SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	**Exception**	**Module Type**	**Array Type**	**Power Electronics**	**CFI**	**Azimuth (deg)**	**Tilt Input**	**Array Angle (deg)**	**Tilt: (x in 12)**	**Inverter Eff. (%)**	**Annual Solar Access (%)**
3.2	NA	Standard (14-17%)	Fixed	none	true	150-270	n/a	n/a	<=7:12	96	98

BATTERY SYSTEMS

01	02	03	04	05	06	07
Control	**Capacity (kWh)**	**Charging**		**Discharging**		**Round Trip Efficiency**
		Charging Efficiency	**Charging Rate (kW)**	**Discharging Efficiency**	**Discharging Rate (kW)**	
Basic	5	0.8	n/a	0.8	n/a	0.9

REQUIRED SPECIAL FEATURES

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

- Battery System: 5 kWh
- Northwest Energy Efficiency Alliance (NEEA) rated heat pump water heater; specific brand/model, or equivalent, must be installed

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SHEET TITLE

TITLE 24

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HERS FEATURE SUMMARY

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

- Quality insulation installation (QII)
- Indoor air quality ventilation
- Kitchen range hood
- Verified heat pump rated heating capacity

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft²)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
426 Pine St.	2624	1	5	4	0	1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Status
1st Floor Zone ADU	Conditioned	Res HVAC1	428	8	DHW Sys 1	New
1st Floor Zone	Conditioned	Res HVAC1	668	8	DHW Sys 1	New
2nd Floor Zone	Conditioned	Res HVAC1	1057	9	DHW Sys 1	New
3rd Floor Zone	Conditioned	Res HVAC1	471	11	DHW Sys 1	New

OPAQUE SURFACES

01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft²)	Window and Door Area (ft2)	Tilt (deg)
Front Wall	1st Floor Zone ADU	R-21 Wall	124	Front	192	18	90
Left Wall	1st Floor Zone ADU	R-21 Wall	214	Left	160	45	90
Right Wall	1st Floor Zone ADU	R-21 Wall	34	Right	28	0	90
Front Wall 2	1st Floor Zone	R-21 Wall	124	Front	100	45.5	90

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OPAQUE SURFACES

01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft²)	Window and Door Area (ft2)	Tilt (deg)
Left Wall 2	1st Floor Zone	R-21 Wall	214	Left	132	24	90
Back Wall	1st Floor Zone	R-21 Wall	304	Back	280	196	90
Right Wall 2	1st Floor Zone	R-21 Wall	34	Right	264	73.5	90
Front 2X4	2nd Floor Zone	R-15 Wall1	124	Front	252	12	90
Front Wall 3	2nd Floor Zone	R-21 Wall	124	Front	45	24.5	90
Left Wall 2X4	2nd Floor Zone	R-15 Wall1	214	Left	360	78	90
BackWall	2nd Floor Zone	R-21 Wall	304	Back	297	123	90
Right Wall 2X4	2nd Floor Zone	R-15 Wall1	34	Right	103.5	24	90
Right Wall 3	2nd Floor Zone	R-21 Wall	34	Right	261	85.5	90
Front Wall 4	3rd Floor Zone	R-21 Wall	124	Front	352	189.7	90
Left Wall 3	3rd Floor Zone	R-21 Wall	214	Left	220	9	90
BackWall 2	3rd Floor Zone	R-21 Wall	304	Back	352	38.5	90
Right Wall 4	3rd Floor Zone	R-21 Wall	34	Right	220	73.5	90
Wall to lower	1st Floor Zone ADU>>1st Floor Zone	R-15 Wall	n/a	n/a	336	0	n/a
Raised Floor	2nd Floor Zone	R-19 Floor No Crawlspace1	n/a	n/a	136	n/a	n/a
To 1st fir	2nd Floor Zone	R-19 Floor No Crawlspace	n/a	n/a	668	n/a	n/a
To Adu	2nd Floor Zone	R-19 Floor No Crawlspace	n/a	n/a	428	n/a	n/a
To 2nd Floor	3rd Floor Zone	R-0 Floor No Crawlspace	n/a	n/a	471	n/a	n/a

OPAQUE SURFACES - CATHEDRAL CEILINGS

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Area (ft²)	Skylight Area (ft²)	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof
Roof	1st Floor Zone	R-38 Roof Cathedral	0	n/a	91	0	0	0.1	0.85	No

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OPAQUE SURFACES - CATHEDRAL CEILINGS

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Area (ft²)	Skylight Area (ft²)	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof
R-38 Roof	2nd Floor Zone	R-38 Roof Cathedral	124	Front	675	0	4	0.1	0.85	No
R-38 Roof 2	3rd Floor Zone	R-38 Roof Cathedral	124	Front	471	50.4	4	0.1	0.85	No

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
Window 7	Window	Left Wall	Left	214			1	24	0.3	NFRC	0.25	NFRC	Bug Screen
Window 1	Window	Front Wall 2	Front	124			1	24.5	0.3	NFRC	0.25	NFRC	Bug Screen
Window 5	Window	Left Wall 2	Left	214			1	12	0.3	NFRC	0.25	NFRC	Bug Screen
Window 6	Window	Left Wall 2	Left	214			1	12	0.3	NFRC	0.25	NFRC	Bug Screen
Door 8	Window	Back Wall	Back	304			1	109	0.32	NFRC	0.23	NFRC	Bug Screen
Door 9	Window	Back Wall	Back	304			1	87	0.32	NFRC	0.23	NFRC	Bug Screen
Windows 2,3,4	Window	Right Wall 2	Right	34			1	73.5	0.3	NFRC	0.25	NFRC	Bug Screen
Window 8	Window	Front 2X4	Front	124			1	12	0.3	NFRC	0.25	NFRC	Bug Screen
Window 10	Window	Front Wall 3	Front	124			1	24.5	0.3	NFRC	0.25	NFRC	Bug Screen
Window 18,19	Window	Left Wall 2X4	Left	214			1	24	0.3	NFRC	0.25	NFRC	Bug Screen
Window 20	Window	Left Wall 2X4	Left	214			1	24	0.3	NFRC	0.25	NFRC	Bug Screen
Window 21	Window	Left Wall 2X4	Left	214			1	30	0.3	NFRC	0.25	NFRC	Bug Screen

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FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
Window 15,16,17	Window	BackWall	Back	304			1	36	0.3	NFRC	0.25	NFRC	Bug Screen
Door 12	Window	BackWall	Back	304			1	87	0.32	NFRC	0.23	NFRC	Bug Screen
Window 9	Window	Right Wall 2X4	Right	34			1	24	0.3	NFRC	0.25	NFRC	Bug Screen
Window 11,12,13	Window	Right Wall 3	Right	34			1	73.5	0.3	NFRC	0.25	NFRC	Bug Screen
Window 14	Window	Right Wall 3	Right	34			1	12	0.3	NFRC	0.25	NFRC	Bug Screen
Window 26	Window	Front Wall 4	Front	124			1	24.5	0.3	NFRC	0.25	NFRC	Bug Screen
Door29	Window	Front Wall 4	Front	124			1	18.2	0.3	NFRC	0.25	NFRC	Bug Screen
Door 32	Window	Front Wall 4	Front	124			1	21	0.3	NFRC	0.25	NFRC	Bug Screen
Door 30	Window	Front Wall 4	Front	124			1	84	0.3	NFRC	0.25	NFRC	Bug Screen
Window 22,23	Window	Front Wall 4	Front	124			1	27	0.3	NFRC	0.25	NFRC	Bug Screen
Window 24,25	Window	Front Wall 4	Front	124			1	15	0.3	NFRC	0.25	NFRC	Bug Screen
Window 30	Window	Left Wall 3	Left	214			1	9	0.3	NFRC	0.25	NFRC	Bug Screen
door 25	Window	BackWall 2	Back	304			1	17.5	0.3	NFRC	0.25	NFRC	Bug Screen
door 22	Window	BackWall 2	Back	304			1	21	0.3	NFRC	0.25	NFRC	Bug Screen
Windows 27,28,29	Window	Right Wall 4	Right	34			1	73.5	0.3	NFRC	0.25	NFRC	Bug Screen
Skylight 1,2,3,4	Skylight	R-38 Roof 2	Front	124			1	50.4	0.39	NFRC	0.29	NFRC	

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OPAQUE DOORS

01	02	03	04
Name	Side of Building	Area (ft²)	U-factor
Door 2	Front Wall	18	0.2
Door 1	Left Wall	21	0.2
Door 1 2	Front Wall 2	21	0.2

SLAB FLOORS

01	02	03	04	05	06	07	08
Name	Zone	Area (ft²)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated
Covered Slab	1st Floor Zone ADU	428	65	none	0	80%	No
Covered Slab 2	1st Floor Zone	668	97	none	0	80%	No

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-21 Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-21	None / None	0.069	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Exterior Finish: 3 Coat Stucco
R-15 Wall1	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-15	None / None	0.095	Inside Finish: Gypsum Board Cavity / Frame: R-15 / 2x4 Exterior Finish: 3 Coat Stucco
R-38 Roof Cathedral	Cathedral Ceilings	Wood Framed Ceiling	2x12 @ 16 in. O. C.	R-38	None / None	0.03	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-38 / 2x12 Inside Finish: Gypsum Board

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OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-15 Wall	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
R-19 Floor No Crawlspace1	Exterior Floors	Wood Framed Floor	2x6 @ 16 in. O. C.	R-19	None / None	0.052	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 in 5-1/2 in. (R-18) / 2x6
R-19 Floor No Crawlspace	Interior Floors	Wood Framed Floor	2x6 @ 16 in. O. C.	R-19	None / None	0.049	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 in 5-1/2 in. (R-18) / 2x6 Ceiling Below Finish: Gypsum Board
R-0 Floor No Crawlspace	Interior Floors	Wood Framed Floor	2x12 @ 16 in. O. C.	R-0	None / None	0.196	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x12 Ceiling Below Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

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

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WATER HEATING SYSTEMS

01	02	03	04	05	06	07	08	09
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (#)
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	1	n/a	None	n/a	DHW Heater 1 (1)

WATER HEATERS - NEEA HEAT PUMP

01	02	03	04	05	06	07	08
Name	# of Units	Tank Vol. (gal)	NEEA Heat Pump Brand	NEEA Heat Pump Model	Tank Location	Duct Inlet Air Source	Duct Outlet Air Source
DHW Heater 1	1	80	Generic	NEEA Tier 4 Generic 80	TankZone	Outside	Outside

WATER HEATING - HERS VERIFICATION

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

SPACE CONDITIONING SYSTEMS

01	02	03	04	05	06	07	08	09
Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Cooling Equipment Count	Fan Name	Distribution Name	Required Thermostat Type
Res HVAC1	Heat pump heating cooling	Heat Pump System 1	1	Heat Pump System 1	1	n/a	n/a	Setback

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HVAC - HEAT PUMPS

01	02	03	04	05	06	07	08	09	10	11	12	13
Name	System Type	Number of Units	Heating				Cooling			Zonally Controlled	Compressor Type	HERS Verification
			Heating Efficiency Type	HSPF/HSPF2/COP	Cap 47	Cap 17	Cooling Efficiency Type	SEER/SEER2	EER/EER 2/CEER			
Heat Pump System 1	Air to water HP	1	n/a	n/a	56000	n/a	n/a	n/a	n/a	Not Zonal	Single Speed	Heat Pump System 1-hers-htpump

HVAC HEAT PUMPS - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	Verified Airflow	Airflow Target	Verified EER/EER2	Verified SEER/SEER2	Verified Refrigerant Charge	Verified HSPF/HSPF2	Verified Heating Cap 47	Verified Heating Cap 17
Heat Pump System 1-hers-htpump	Not Required	0	Not Required	Not Required	No	No	Yes	No

INDOOR AIR QUALITY (IAQ) FANS

01	02	03	04	05	06	07	08	09
Dwelling Unit	Airflow (CFM)	Fan Efficacy (W/CFM)	IAQ Fan Type	Includes Heat/Energy Recovery?	IAQ Recovery Effectiveness - SRE/ASRE	Includes Fault Indicator Display?	HERS Verification	Status
SFam IAQVentRpt	114	0.35	Exhaust	No	n/a / n/a	No	Yes	

PROJECT NOTES

This has a combined Hydronc system with radiant floor served by a air to water heat pump

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Jon Mitguard	Documentation Author Signature: Jon Mitguard
Company: Aurora Building Performance	Signature Date: 01/13/2025
Address: 3 Fredson Ct	CEA/ HERS Certification Identification (If applicable): RCN13475
City/State/Zip: Novato, CA 94947	Phone: (451) 847-2332

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: Lauren Schwartz	Responsible Designer Signature: Lauren Schwartz
Company: G Design LLC	Date Signed: 01/13/2025
Address: 1112 Second Street	License: 893848
City/State/Zip: San Rafael, CA 94901	Phone: 4152720051

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.

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1112 2ND STREET
SAN RAFAEL, CA 94901
WEB: gdesignpro.com
PHONE: 415-721-7340

JAKE & GEORGIA BEYER
THE BEYER RESIDENCE
426 PINE ST.
SAUSALITO, CA. 94965
APN 065-054-11

MARK	DATE	DESCRIPTION
1	01/13/2025	RESPONSE TO PLAN CHECK COMMENTS

STATUS: DR SET
DATE: 1/14/2025
DRAWN BY: LAM NGUYEN
DESIGN OFFICIAL

X

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SHEET TITLE

TITLE 24

A8.1

C:\Users\lam\G Family Dropbox\Design Team\Design\00 Design Clients\426 Pine Street, Sausalito, Jack Beyer\01 Drawings\02 Arch\CAD\CD Set\426 Pine St._Phase 1_Building Plans_062024.pln

RESIDENTIAL MEASURES SUMMARY — RMS-1

Project Name	Building Type			Date
426 Pine St.	☑ Single Family ☐ Multi Family	☐ Addition Alone ☐ Existing+ Addition/Alteration		1/13/2025
Project Address	**California Energy Climate Zone**	**Total Cond. Floor Area**	**Addition**	**# of Units**
426 Pine St. Sausalito	CA Climate Zone 03	2,624	n/a	1

INSULATION

Construction	Type	Cavity	Area (ft^2)	Special Features	Status
Wall	Wood Framed	R 21	1,957		New
Door	Opaque Door	R-5	60		New
Slab	Unheated Slab-on-Grade	- no insulation	1,096	Perim = 162'	New
Demising	Wood Framed	R 15	938		New
Roof	Wood Framed Rafter	R 38	1,187		New
Demising	Wood Framed w/o Crawl Space	R 19	1,232		New
Demising	Wood Framed w/o Crawl Space	- no insulation	471		New

FENESTRATION

Total Area: 1,050 | Glazing Percentage: 40.0% | New/Altered Average U-Factor: 0.31

Orientation	Area(ft^2)	U-Fac	SHGC	Overhang	Sidefins	Exterior Shades	Status
Left (SW)	135.0	0.300	0.25	none	none	N/A	New
Front (SE)	250.7	0.300	0.25	none	none	N/A	New
Rear (NW)	283.0	0.320	0.23	none	none	N/A	New
Right (NE)	256.5	0.300	0.25	none	none	N/A	New
Rear (NW)	74.5	0.300	0.25	none	none	N/A	New
Skylight	50.4	0.390	0.29	none	none	N/A	New

HVAC SYSTEMS

Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Electric Heat Pump	4.62 COP	Hydronic Heat Pump	16.0 EER	Setback	New

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Status
Res HVAC	Baseboard	Ductless	Outdoors	6.0	New

WATER HEATING

Qty.	Type	Gallons	Min. Eff	Distribution	Status
1	Heat Pump	80	3.20	Standard	New

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 steep-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:

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:	**Labelling.** 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.

2022 Single-Family Residential Mandatory Requirements Summary

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

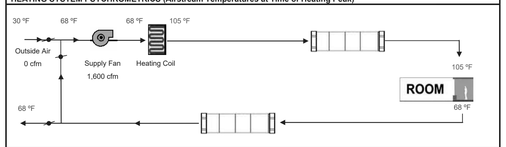
*Exceptions may apply.

HVAC SYSTEM HEATING AND COLOADS SUMMARY

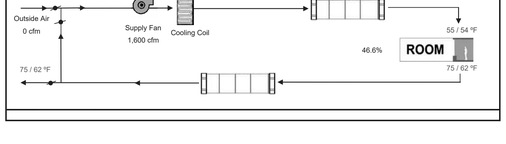
Project Name			Date
426 Pine St.			1/13/2025
System Name			Floor Area
Res HVAC			2,624

ENGINEERING CHECKS		SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Number of Systems	1		CFM	Sensible	Latent	CFM	Sensible
Heating System							
Output per System	56,000	Total Room Loads	1,452	31,348	1,744	828	33,078
Total Output (Btuh)	56,000	Return Vented Lighting		0			
Output (Btuh/sqft)	21.3	Return Air Ducts		0			0
Cooling System		Return Fan		0			0
Output per System	47,500	Ventilation	0	0	0	0	0
Total Output (Btuh)	47,500	Supply Fan		0			0
Total Output (Tons)	4.0	Supply Air Ducts		0			0
Total Output (Btuh/sqft)	18.1						
Total Output (sqft/Ton)	662.9	TOTAL SYSTEM LOAD		31,348	1,744		33,078
Air System							
CFM per System	1,600	HVAC EQUIPMENT SELECTION					
Airflow (cfm)	1,600	Hydronic Heat Pump Chiltrix CX50		38,767	6,697		48,873
Airflow (cfm/sqft)	0.61						
Airflow (cfm/Ton)	404.2						
Outside Air (%)	0.0%	Total Adjusted System Output (Adjusted for Peak Design conditions)		38,767	6,697		48,873
Outside Air (cfm/sqft)	0.00						
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK		Aug 3 PM			Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



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 ½", 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. *

2022 Single-Family Residential Mandatory Requirements Summary

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

Ventilation and Indoor Air Quality:

§ 150.0(o)1:	**Requirements for Ventilation and Indoor Air Quality.** All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. *
§ 150.0(o)1B:	**Central Fan Integrated (CFI) Ventilation Systems.** Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed andcontrolled 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)1Giii,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)1Giv, and rated for sound per §150.0(o)1Gvi. *
§ 150.0(o)1H&I:	**Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems.** The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(o)1C.
§ 150.0(o)2:	**Field Verification and Diagnostic Testing.** Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G

Pool and Spa Systems and Equipment:

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

Lighting:

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

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MARK	DATE	DESCRIPTION
1	01/13/2025	RESPONSE TO PLAN CHECK COMMENTS

STATUS: **DR SET**
DATE: **1/14/2025**
DRAWN BY: **LAM NGUYEN**
DESIGN OFFICIAL
X

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SHEET TITLE

TITLE 24

A8.2

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2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2023)

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

Y	N/A	RESPON. PARTY

CHAPTER 3
GREEN BUILDING
SECTION 301 GENERAL

301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

301.1.1 Additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration.

The mandatory provision of Section 4.106.4.2 may apply to additions or alterations of existing parking facilities or the addition of new parking facilities serving existing multifamily buildings. See Section 4.106.4.3 for application.

Note: Repairs including, but not limited to, resurfacing, restriping and repairing or maintaining existing lighting fixtures are not considered alterations for the purpose of this section.

Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used.

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

Exceptions:
1. [HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable.
2. [HCD] For purposes of *CALGreen*, live/work units, complying with Section 419 of the *California Building Code*, shall not be considered mixed occupancies. Live/Work units shall comply with Chapter 4 and Appendix A4, as applicable.

DIVISION 4.1 PLANNING AND DESIGN

ABBREVIATION DEFINITIONS:

HCD	Department of Housing and Community Development
BSC	California Building Standards Commission
DSA-SS	Division of the State Architect, Structural Safety
OSHPD	Office of Statewide Health Planning and Development
LR	Low Rise
HR	High Rise
AA	Additions and Alterations
N	New

CHAPTER 4
RESIDENTIAL MANDATORY MEASURES

SECTION 4.102 DEFINITIONS

4.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.

WATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.

4.106 SITE DEVELOPMENT

Y	N/A	RESPON. PARTY
X		

4.106.1 GENERAL. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.

Y	N/A	RESPON. PARTY
X		

4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.

1. Retention basins of sufficient size shall be utilized to retain storm water on the site.
2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency.
3. Compliance with a lawfully enacted storm water management ordinance.

Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil.

(Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)

Y	N/A	RESPON. PARTY
X		

4.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales
2. Water collection and disposal systems
3. French drains
4. Water retention gardens
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.

Exception: Additions and alterations not altering the drainage path.

Y	N/A	RESPON. PARTY
X		

4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Sections 4.106.4.1 or 4.106.4.2 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the *California Electrical Code,* Article 625.

Exceptions:
1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:
   1.1 Where there is no local utility power supply or the local utility is unable to supply adequate power.
   1.2 Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 4.106.4, may adversely impact the construction cost of the project.
2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities.

Y	N/A	RESPON. PARTY
X		

4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere 208/240-volt minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

Exemption: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger at the time of original construction in accordance with the *California Electrical Code.*

4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".

Y	N/A	RESPON. PARTY
	X	

4.106.4.2 New multifamily dwellings, hotels and motels and new residential parking facilities.
When parking is provided, parking spaces for new multifamily dwellings, hotels and motels shall meet the requirements of Sections 4.106.4.2.1 and 4.106.4.2.2. Calculations for spaces shall be rounded up to the nearest whole number. A parking space served by electric vehicle supply equipment or designed as a future EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2 for further details.

Y	N/A	RESPON. PARTY
	X	

4.106.4.2.1Multifamily development projects with less than 20 dwelling units; and hotels and motels with less than 20 sleeping units or guest rooms.
The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.

1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes.

The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

Exceptions:

1.When EV chargers (Level 2 EVSE) are installed in a number equal to or greater than the required number of EV capable spaces.

2.When EV chargers (Level 2 EVSE) are installed in a number less than the required number of EV capable spaces, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed.

Notes:

a.Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.

b.There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.

2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.

Exception: Areas of parking facilities served by parking lifts.

Y	N/A	RESPON. PARTY
	X	

4.106.4.2.2 Multifamily development projects with 20 or more dwelling units, hotels and motels with 20 or more sleeping units or guest rooms.
The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.

1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes.

The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

Exception: When EV chargers (Level 2 EVSE) are installed in a number greater than five (5) percent of parking spaces required by Section 4.106.4.2.2, Item 3, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed over the five (5) percent required.

Notes:

a.Construction documents shall show locations of future EV spaces.

b.There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.

2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles.

Exception: Areas of parking facilities served by parking lifts.

3.EV Chargers. Five (5) percent of the total number of parking spaces shall be equipped with Level 2 EVSE. Where common use parking is provided, at least one EV charger shall be located in the common use parking area and shall be available for use by all residents or guests.

When low power Level 2 EV charging receptacles or Level 2 EVSE are installed beyond the minimum required, an automatic load management system (ALMS) may be used to reduce the maximum required electrical capacity to each space served by the ALMS. The electrical system and any on-site distribution transformers shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) served by the ALMS. The branch circuit shall have a minimum capacity of 40 amperes, and installed EVSE shall have a capacity of not less than 30 amperes. ALMS shall not be used to reduce the minimum required electrical capacity to the required EV capable spaces.

4.106.4.2.2.1 Electric vehicle charging stations (EVCS).
Electric vehicle charging stations required by Section 4.106.4.2.2, Item 3, shall comply with Section 4.106.4.2.2.1.

Exception: Electric vehicle charging stations serving public accommodations, public housing, motels and hotels shall not be required to comply with this section. See California Building Code, Chapter 11B, for applicable requirements.

4.106.4.2.2.1.1 Location.
EVCS shall comply with at least one of the following options:

1.The charging space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.

2.The charging space shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building.

Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.2.1.1 and Section 4.106.4.2.2.1.2, Item 3.

4.106.4.2.2.1.2 Electric vehicle charging stations (EVCS) dimensions.
The charging spaces shall be designed to comply with the following:

1.The minimum length of each EV space shall be 18 feet (5486 mm).

2.The minimum width of each EV space shall be 9 feet (2743 mm).

3.One in every 25 charging spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm).

a.Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.

4.106.4.2.2.1.3 Accessible EV spaces.
In addition to the requirements in Sections 4.106.4.2.2.1.1 and 4.106.4.2.2.1.2, all EVSE, when installed, shall comply with the accessibility provisions for EV chargers in the California Building Code, Chapter 11B. EV ready spaces and EVCS in multifamily developments shall comply with California Building Code, Chapter 11A, Section 1109A.

4.106.4.2.3 EV space requirements.
1.Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the location or the proposed location of the EV space. Construction documents shall identify the raceway termination point, receptacle or charger location, as applicable. The service panel and/ or subpanel shall have a 40-ampere minimum dedicated branch circuit, including branch circuit overcurrent protective device installed, or space(s) reserved to permit installation of a branch circuit overcurrent protective device.

Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space, at the time of original construction in accordance with the California Electrical Code.

2.Multiple EV spaces required. Construction documents shall indicate the raceway termination point and the location of installed or future EV spaces, receptacles or EV chargers. Construction documents shall also provide information on amperage of installed or future receptacles or EVSE, raceway method(s), wiring schematics and electrical load calculations. Plan design shall be based upon a 40-ampere minimum branch circuit. Required raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.

Y	N/A	RESPON. PARTY
	X	

4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing multifamily buildings.
When new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or altered and the work requires a building permit, ten (10) percent of the total number of parking spaces added or altered shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE.

Notes:

1.Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.

2.There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

DIVISION 4.2 ENERGY EFFICIENCY

4.201 GENERAL

4.201.1 SCOPE. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards.

DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION

4.303 INDOOR WATER USE

4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the sections 4.303.1.1, 4.303.1.2, 4.303.1.3, and 4.303.4.4.

Note: All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Civil Code Section 1101.1, et seq. for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

4.303.1.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

4.303.1.2 Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.

4.303.1.3 Showerheads.

4.303.1.3.1 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

4.303.1.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to only allow one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

4.303.1.4 Faucets.

4.303.1.4.1 Residential Lavatory Faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi.

4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi.

4.303.1.4.3 Metering Faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.2 gallons per cycle.

4.303.1.4.4 Kitchen Faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

4.303.1.4.5 Pre-rinse spray valves.
When installed, shall meet the requirements in the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Sections 1605.1 (h)(4) Table H-2, Section 1605.3 (h)(4)(A), and Section 1607 (d)(7) and shall be equipped with an integral automatic shutoff.

FOR REFERENCE ONLY: The following table and code section have been reprinted from the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations),Section 1605.1 (h)(4) and Section 1605.3 (h)(4)(A).

TABLE H-2

STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALVES MANUFACTURED ON OR AFTER JANUARY 28, 2019

PRODUCT CLASS [spray force in ounce force (ozf)]	MAXIMUM FLOW RATE (gpm)
Product Class 1 (≤ 5.0 ozf)	1.00
Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf)	1.20
Product Class 3 (> 8.0 ozf)	1.28

Title 20 Section 1605.3 (h)(4)(A): Commercial prerinse spray values manufactured on or after January 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf)[113 grams-force(gf)]

	X	

4.303.2 Submeters for multifamily buildings and dwelling units in mixed-used residential/commercial buildings.
Submeters shall be installed to measure water usage of individual rental dwelling units in accordance with the *California Plumbing Code.*

X		

4.303.3 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the *California Plumbing Code*, and shall meet the applicable standards referenced in Table 1701.1 of the *California Plumbing Code.*

NOTE:
THIS TABLE COMPILES THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A CONVENIENCE FOR THE USER.

TABLE - MAXIMUM FIXTURE WATER USE

FIXTURE TYPE	FLOW RATE
SHOWER HEADS (RESIDENTIAL)	1.8 GMP @ 80 PSI
LAVATORY FAUCETS (RESIDENTIAL)	MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 PSI
LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 60 PSI
KITCHEN FAUCETS	1.8 GPM @ 60 PSI
METERING FAUCETS	0.2 GAL/CYCLE
WATER CLOSET	1.28 GAL/FLUSH
URINALS	0.125 GAL/FLUSH

Y	N/A	RESPON. PARTY
	X	

4.304 OUTDOOR WATER USE

4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

NOTES:

1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the *California Code Regulations,* Title 23, Chapter 2.7, Division 2. MWELO and supporting documents, including water budget calculator, are available at: https://www.water.ca.gov/

DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE

X		

4.406.1 RODENT PROOFING. Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

X		

4.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance.

Exceptions:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.
3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

X		

4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency.

1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
2. Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream).
3. Identify diversion facilities where the construction and demolition waste material collected will be taken.
4. Identify construction methods employed to reduce the amount of construction and demolition waste generated.
5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

	X	

4.408.3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1.

Note: The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.

	X	

4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR]. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 lbs./sq.ft. of the building area shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

X		

4.408.5 DOCUMENTATION. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, items 1 through 5, Section 4.408.3 or Section 4.408.4..

Notes:

1. Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in documenting compliance with this section.
2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

4.410 BUILDING MAINTENANCE AND OPERATION

4.410.1 OPERATION AND MAINTENANCE MANUAL. At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building:

1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.
2. Operation and maintenance instructions for the following:
   a. Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment.
   b. Roof and yard drainage, including gutters and downspouts.
   c. Space conditioning systems, including condensers and air filters.
   d. Landscape irrigation systems.
   e. Water reuse systems.
3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
4. Public transportation and/or carpool options available in the area.
5. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range.
6. Information about water-conserving landscape and irrigation design and controllers which conserve water.
7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
9. Information about state solar energy and incentive programs available.
10. A copy of all special inspections verifications required by the enforcing agency or this code.
11. Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures.
12. Information and/or drawings identifying the location of grab bar reinforcements.

	X	

4.410.2 RECYCLING BY OCCUPANTS. Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waster, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.

Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are note required to comply with the organic waste portion of this section.

DIVISION 4.5 ENVIRONMENTAL QUALITY

SECTION 4.501 GENERAL

4.501.1 Scope
The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous, irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors.

SECTION 4.502 DEFINITIONS

5.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of regulations (CCR), title 17, Section 93120.1.

DIRECT-VENT APPLIANCE. A fuel-burning appliance with a sealed combustion system that draws all air for combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.

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MARK	DATE	DESCRIPTION
1	01/13/2025	RESPONSE TO PLAN CHECK COMMENTS

STATUS: DR SET
DATE: 1/14/2025
DRAWN BY: LAM NGUYEN
DESIGN OFFICIAL

X

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2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
RESIDENTIAL MANDATORY MEASURES, SHEET 2 (January 2023)

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

Y	N/A	RESPON. PARTY

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g O^3/g ROC).
Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).
Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a).

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

4.503 FIREPLACES

Y	N/A	RESPON. PARTY
X	☐	

4.503.1 GENERAL. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.

4.504 POLLUTANT CONTROL

Y	N/A	RESPON. PARTY
X	☐	

4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust or debris which may enter the system.

Y	N/A	RESPON. PARTY
X	☐	

4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with this section.

Y	N/A	RESPON. PARTY
X	☐	

4.504.2.1 Adhesives, Sealants and Caulks. Adhesives, sealant and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products, as specified in Subsection 2 below.
2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with section 94507.

Y	N/A	RESPON. PARTY
X	☐	

4.504.2.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.

Y	N/A	RESPON. PARTY
X	☐	

4.504.2.3 Aerosol Paints and Coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in Section 94522(a)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(e)(1) and (f)(1) of *California Code of Regulations*, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.

Y	N/A	RESPON. PARTY
X	☐	

4.504.2.4 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification.
2. Field verification of on-site product containers.

TABLE 4.504.1 - ADHESIVE VOC LIMIT[1,2]
(Less Water and Less Exempt Compounds in Grams per Liter)

ARCHITECTURAL APPLICATIONS	VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT & ASPHALT TILE ADHESIVES	50
DRYWALL & PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVE	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT LISTED	50
SPECIALTY APPLICATIONS	
PVC WELDING	510
CPVC WELDING	490
ABS WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP & TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.

2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

TABLE 4.504.2 - SEALANT VOC LIMIT
(Less Water and Less Exempt Compounds in Grams per Liter)

SEALANTS	VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	
NON-POROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[2,3]
GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS

COATING CATEGORY	VOC LIMIT
FLAT COATINGS	50
NON-FLAT COATINGS	100
NONFLAT-HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS[1]	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS

2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.

3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

TABLE 4.504.5 - FORMALDEHYDE LIMITS[1]
MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

PRODUCT	CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD[2]	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIF. CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.

2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16" (8 MM).

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)

Y	N/A	RESPON. PARTY
X	☐	

4.504.3 CARPET SYSTEMS. All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

Y	N/A	RESPON. PARTY
X	☐	

4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

Y	N/A	RESPON. PARTY
X	☐	

4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.

Y	N/A	RESPON. PARTY
X	☐	

4.504.4 RESILIENT FLOORING SYSTEMS. Where resilient flooring is installed , at least 80% of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

hhttps://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

Y	N/A	RESPON. PARTY
X	☐	

4.504.5 COMPOSITE WOOD PRODUCTS. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5

Y	N/A	RESPON. PARTY
X	☐	

4.504.5.1 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269, European 636 3S standards, and Canadian CSA 0121, CSA 0151, CSA 0153 and CSA 0325 standards.
5. Other methods acceptable to the enforcing agency.

4.505 INTERIOR MOISTURE CONTROL

Y	N/A	RESPON. PARTY
X	☐	

4.505.1 General. Buildings shall meet or exceed the provisions of the *California Building Standards Code*.

Y	N/A	RESPON. PARTY
X	☐	

4.505.2 CONCRETE SLAB FOUNDATIONS. Concrete slab foundations required to have a vapor retarder by California Building Code, Chapter 19, or concrete slab-on-ground floors required to have a vapor retarder by the California Residential Code, Chapter 5, shall also comply with this section.

Y	N/A	RESPON. PARTY
X	☐	

4.505.2.1 Capillary break. A capillary break shall be installed in compliance with at least one of the following:

1. A 4-inch (101.6 mm) thick base of 1/2 inch (12.7mm) or larger clean aggregate shall be provided with a vapor barrier in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06.
2. Other equivalent methods approved by the enforcing agency.
3. A slab design specified by a licensed design professional.

Y	N/A	RESPON. PARTY
X	☐	

4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following:

1. Moisture content shall be determined with either a probe-type or contact-type moisture meter.Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements found in Section 101.8 of this code.
2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece verified.
3. At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing.

Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure.

4.506 INDOOR AIR QUALITY AND EXHAUST

Y	N/A	RESPON. PARTY
X	☐	

4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and shall comply with the following:

1. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
2. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control.
   a. Humidity controls shall be capable of adjustment between a relative humidity range less than or equal to 50% to a maximum of 80%. A humidity control may utilize manual or automatic means of adjustment.
   b. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in)

Notes:

1. For the purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination.
2. Lighting integral to bathroom exhaust fans shall comply with the *California Energy Code*.

4.507 ENVIRONMENTAL COMFORT

Y	N/A	RESPON. PARTY
X	☐	

4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN. Heating and air conditioning systems shall be sized, designed and have their equipment selected using the following methods:

1. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J - 2011 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods.
2. Duct systems are sized according to ANSI/ACCA 1 Manual D - 2014 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods.
3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S - 2014 (Residential Equipment Selection), or other equivalent design software or methods.

Exception: Use of alternate design temperatures necessary to ensure the system functions are acceptable.

Y	N/A	RESPON. PARTY
X	☐	

CHAPTER 7
INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS

702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:

1. State certified apprenticeship programs.
2. Public utility training programs.
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
4. Programs sponsored by manufacturing organizations.
5. Other programs acceptable to the enforcing agency.

Y	N/A	RESPON. PARTY
X	☐	

702.2 SPECIAL INSPECTION [HCD]. When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

1. Certification by a national or regional green building program or standard publisher.
2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.
3. Successful completion of a third party apprentice training program in the appropriate trade.
4. Other programs acceptable to the enforcing agency.

Notes:
1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

[BSC] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency.

Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

703 VERIFICATIONS

Y	N/A	RESPON. PARTY
X	☐	

703.1 DOCUMENTATION. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.

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1112 2ND STREET
SAN RAFAEL, CA 94901
WEB: gdesignpro.com
PHONE: 415-721-7340

JAKE & GEORGIA BEYER
THE BEYER RESIDENCE
426 PINE ST.
SAUSALITO, CA. 94965
APN 065-054-11

MARK	DATE	DESCRIPTION
1	01/13/2025	RESPONSE TO PLAN CHECK COMMENTS

STATUS: DR SET
DATE: 1/14/2025
DRAWN BY: LAM NGUYEN
DESIGN OFFICIAL

OWNERSHIP AND USE OF THESE DOCUMENTS

ALL DRAWINGS, SPECIFICATIONS, AND THEIR CONTENT, AND COPIES THERE OF FURNISHED BY G DESIGN LLC. ARE AND SHALL REMAIN THE PROPERTY OF THE COMPANY. THEY ARE TO BE USED ONLY WITH RESPECT TO THIS PROJECT AND SHALL NOT BE USED BY ANY PERSONS ON OTHER PROJECTS, OR EXTENSIONS TO THIS PROJECT WITHOUT THE EXPRESSED WRITTEN COMPENSATION TO G DESIGN LLC. THESE DRAWINGS ARE PROTECTED BY CALIFORNIA COMMON LAW COPYRIGHT AS WELL AS THE INTELLECTUAL PROPERTY ASSOCIATED WITH THIS PROJECT.

SHEET TITLE

CALGREEN STANDARD

A9.1

C:\Users\tam\G Family Dropbox\Design Team\G Design\00 Design Clients\426 Pine Street, Sausalito, Jack Beyer\01 Drawings\02 Arch\CAD\CD Set\426 Pine St_Phase 1_Building Plans_082024.pln

DISCLAIMER: *THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.*

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GENERAL NOTES

1. ALL WORK SHALL BE IN CONFORMANCE WITH THE 2021 INTERNATIONAL BUILDING CODE (IBC), THE 2022 CALIFORNIA BUILDING CODE (CBC) AND 2022 CALIFORNIA RESIDENTIAL CODE (C.R.C.) AS APPROPRIATE FOR THE CITY OF SAUSALITO, AND ANY APPLICABLE LOCAL ORDINANCES EXCEPT WHERE OTHER NOTES, DETAILS AND/OR SPECIFICATIONS ARE MORE RESTRICTIVE.
2. DRAWINGS ARE NOT TO BE SCALED. BUILDING/STRUCTURAL DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE FOR GENERAL REFERENCE ONLY U.O.N. SEE THE ARCHITECTURAL DRAWINGS FOR ALL ACTUAL BUILDING DIMENSIONS. THE CONTRACTOR IS RESPONSIBLE TO HOGAN LAND SERVICES IMMEDIATELY OF ANY DISCREPANCIES ON THE DRAWINGS. CLARIFICATION OF ALL DISCREPANCIES IS REQUIRED PRIOR TO COMMENCING WITH THE WORK.
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. DETAILS NOT SHOWN, NOR DETAILED ON DRAWINGS, NOR CALLED FOR IN THESE NOTES SHALL BE CONSTRUCTED TO SAME SIZE AND CHARACTER AS FOR SIMILAR CONDITIONS WHICH ARE SHOWN, DETAILED OR SPECIFIED.
4. AT ALL TIMES THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT THE JOB SITE INCLUDING SAFETY OF PERSONS AND PROPERTY.
5. THE CONTRACTOR IS AT ALL TIMES SOLELY AND COMPLETELY RESPONSIBLE FOR DESIGN, ADEQUACY AND SAFETY OF TEMPORARY SHORING, BRACING, FORM WORK, SCAFFOLDING, ERECTION METHODS, ETC. ANY JOB SITE VISIT BY THE ENGINEER IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES. THE CONTRACTOR SHALL WARRANT THAT ALL MATERIALS AND WORKMANSHIP ARE IN COMPLIANCE WITH THE DRAWINGS AND SPECIFICATIONS. ANY AND ALL CHANGES MUST HAVE THE ENGINEER'S APPROVAL.

PROJECT DESCRIPTION

THIS PLAN WAS PREPARED TO FACILITATE THE STRUCTURAL ASPECTS OF THE PROPOSED WORK UNDER THIS PERMIT.

SEE ARCHITECTURAL DRAWINGS FOR INFORMATION REGARDING EXTERIOR AND INTERIOR FINISH MATERIALS, WATERPROOFING, AND SIMILAR FINAL PRODUCT ITEMS.

SEE ARCHITECTURAL DRAWINGS FOR INFORMATION REGARDING THE ELECTRICAL AND MECHANICAL ITEMS. IF APPLICABLE, ANY AND ALL CHANGES OR MODIFICATIONS TO THE EXISTING ELECTRICAL OR MECHANICAL SYSTEMS WILL BE AT THE DIRECTION OF THE ARCHITECTURAL DRAWINGS.

ALL STRUCTURAL CHANGES DETERMINED IN THE FIELD OR ANY DEVIATION FROM THIS PLAN IS TO BE IMMEDIATELY COMMUNICATED TO THE PROJECT DESIGN PROFESSIONALS TO BE FORMALLY ADDRESSED AS A REVISION TO THE PLAN SET.

DESIGN CRITERIA

FOUNDATION DESIGN DATA:
SOILS REPORT: "GEOTECHNICAL INVESTIGATION" PREPARED BY PJC & ASSOCIATES, INC. DATED MARCH 4, 2024. {JOB No. R1160.01}

FOOTING TYPE	BEARING PRESSURE *	MINIMUM EMBEDMENT**	MINIMUM WIDTH
CONTINUOUS FOOTINGS	2,000 psf	12"	18"
ISOLATED COLUMN	2,500 psf	12"	24"

* DEAD PLUS LOVE LOAD.
** INTO COMPACTED ENGINEERED FILL

1. DESIGNATED VALUES ASSUME SOILS, GRADING, AND DRAINAGE RECOMMENDATIONS PROVIDED WITHIN THE GEOTECHNICAL REPORT ARE PERFORMED ONSITE AS OBSERVED AND APPROVED IN THE FIELD BY THE PROJECT GEOTECHNICAL ENGINEER; WHICH IS OUTSIDE THE SCOPE OF THIS PLAN SET.
2. EMBEDMENT DEPTH OF FOOTING ELEMENTS SHALL EXTEND A MINIMUM OF 12 INCHES INTO COMPACTED, LOW TO NON-EXPANSIVE ENGINEERED FILL AS VERIFIED IN THE FIELD BY THE PROJECT GEOTECHNICAL ENGINEER.

FOUNDATION DESIGN TO BE REVIEWED BY PROJECT GEOTECHNICAL ENGINEER.

LATERAL LOAD -- DESIGN CRITERIA
PASSIVE EARTH PRESSURE = 300 psf/ft w/ FRICTION FACTOR = 0.30
[UNLESS RESTRAINED AT THE SURFACE, THE TOP 6 INCHES SHOULD BE NEGLECTED FOR PASSIVE RESISTANCE.]

DESIGN LEVEL LIVE LOADS (U.O.N.)

FLOOR LIVE LOAD	40 psf
ROOF LIVE LOAD	20 psf
* SPECIAL LOADING	60 psf

* BALCONIES & DECKS (EXTERIOR ELEVATED ELEMENTS)

OTHER DESIGN LEVEL LOADS (U.O.N.)

SPECIAL LOADS	N/A
PHOTOVOLTAIC PANEL SYSTEMS	N/A

ROOF SNOW LOAD DATA (U.O.N.)

GROUND SNOW LOAD, P_g =	N/A
FLAT-ROOF SNOW LOAD, P_f =	N/A
SNOW EXPOSURE FACTOR, C_e =	N/A
SNOW LOAD IMPORTANCE FACTOR, I_s =	N/A
THERMAL FACTOR, C_t =	N/A
DRIFT SURCHARGE LOAD(S), P_d =	N/A
WIDTH OF SNOW DRIFTS, w =	N/A

WIND DESIGN DATA (U.O.N.)

ULTIMATE DESIGN WIND SPEED, V_{ult} =	110/85 mph
WIND EXPOSURE CATEGORY =	C
INTERNAL PRESSURE COEFFICIENT =	0.18/-0.18
COMPONENTS & CLADDING =	16 psf
WIND IMPORTANCE FACTOR =	1.0

ATC **-PROVIDED OUTPUT FOR THE PROJECT SITE:

S_S =	1.50
S_1 =	0.60
S_{MS} =	1.80
S_{M1} =	0.84
S_{DS} =	1.20
S_{D1} =	0.56

** OR AS PER SITE-SPECIFIC GEOTECHNICAL REPORT

EARTHQUAKE DESIGN DATA (U.O.N.)

ANALYSIS PROCEDURE USED	EQUIVALENT LATERAL FORCE PROCEDURE [ASCE 7-16 (12.8)]
RISK CATEGORY	II
SEISMIC IMPORTANCE FACTOR, I_e =	1.00
SITE CLASS	C
SEISMIC DESIGN CATEGORY (SDC)	D_2

** BASIC SEISMIC FORCE-RESISTING SYSTEM(S)	RESPONSE MODIFICATION COEFFICIENT, R	OVER-STRENGTH FACTOR, Ω_0	DEFLECTION AMPLIFICATION FACTOR, C_d	
LIGHT-FRAME (WOOD) WALLS SHEATHED WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE	6 1/2	3.0	4.0	☒
STEEL SPECIAL CANTILEVER COLUMN SYSTEMS	2 1/2	1-1/4	2-1/2	
TIMBER FRAMES	1-1/2	1-1/2	1-1/2	

** DESIGN VALUES FOR BASIC SEISMIC FORCE-RESISTING SYSTEM PER ASCE 7-16.
REFER TO STRUCTURAL CALCULATIONS PACKAGE FOR APPLICABLE DESIGN VALUES USED FOR THE LATERAL-FORCE-RESISTING SYSTEM USED AS PROPOSED HEREIN.

PERMIT APPLICATION, REVIEW, AND APPROVAL

ANY OWNER OR THE OWNER'S AUTHORIZED AGENT WHO INTENDS TO CONSTRUCT, ENLARGE, ALTER, REPAIR, MOVE, DEMOLISH OR CHANGE THE OCCUPANCY OF A BUILDING OR STRUCTURE, OR TO ERECT, INSTALL, ENLARGE, ALTER, REPAIR REMOVE, CONVERT OR REPLACE ANY ELECTRICAL, GAS, MECHANICAL OR PLUMBING SYSTEM, THE INSTALLATION OF WHICH IS REGULATED BY THIS CODE, OR TO CAUSE ANY SUCH WORK TO BE PERFORMED, SHALL FIRST MAKE APPLICATION TO THE BUILDING OFFICIAL AND OBTAIN THE REQUIRED PERMIT.

THE BUILDING OFFICIAL SHALL EXAMINE OR CAUSE TO BE EXAMINED CONSTRUCTION DOCUMENTS FOR CODE COMPLIANCE. THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL ACCEPTED UNDER THE ISSUED BUILDING PERMIT SHALL BE ENDORSED IN WRITING OR BY STAMP, AS "REVIEWED FOR CODE COMPLIANCE." ONE SET OF APPROVED CONSTRUCTION DOCUMENTS SHALL BE RETAINED BY THE BUILDING OFFICIAL. THE OTHER SET SHALL BE RETURNED TO THE APPLICANT, BE KEPT AT THE SITE OF WORK, AND BE OPEN TO INSPECTION BY THE REPRESENTATIVE OF THE BUILDING OFFICIAL. THE BUILDING PERMIT OR A COPY SHALL ALSO BE KEPT ON THE SITE OF THE WORK UNTIL THE COMPLETION OF THE PROJECT.

DEFERRAL OF ANY SUBMITTAL ITEMS SHALL HAVE PRIOR APPROVAL OF THE BUILDING OFFICIAL. THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE SHALL LIST THE DEFERRED SUBMITTALS ON THE CONSTRUCTION DOCUMENTS FOR REVIEW BY THE BUILDING OFFICIAL. DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS, AND ANY CHANGES MADE DURING CONSTRUCTION THAT ARE NOT IN COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS SHALL BE RESUBMITTED FOR REVIEW AND APPROVAL AS AN AMENDED SET OF CONSTRUCTION DOCUMENTS. THE RESUBMISSION PROCESS, REVIEW, AND APPROVAL SHALL BE AT THE SOLE DISCRETION OF THE BUILDING OFFICIAL.

THE ISSUANCE OR GRANTING OF A PERMIT SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE APPLICABLE CODES, ANY OTHER ORDINANCE OF THE JURISDICTION, OR THE REQUIREMENTS AND SPECIFICATIONS OF THE APPROVED CONSTRUCTION DOCUMENTS. PERMITS PRESUMING TO GIVE AUTHORITY TO VIOLATE OR CANCEL THE PROVISIONS OF THE APPLICABLE CODES OR OTHER ORDINANCES OF THE JURISDICTION SHALL NOT BE VALID. THE ISSUANCE OF A PERMIT BASED ON CONSTRUCTION DOCUMENTS AND OTHER DATA SHALL NOT PREVENT THE BUILDING OFFICIAL FROM REQUIRING THE CORRECTION OF ERRORS IN THE CONSTRUCTION DOCUMENTS AND OTHER DATA. THE BUILDING OFFICIAL IS AUTHORIZED TO PREVENT OCCUPANCY OR USE OF A STRUCTURE WHERE IN VIOLATION OF THIS CODE OR OF ANY OTHER ORDINANCES OF THE JURISDICTION.

IT SHALL BE THE DUTY OF EVERY PERSON WHO PERFORMS WORK FOR THE INSTALLATION OR REPAIRS OF BUILDING, STRUCTURE, ELECTRICAL, GAS, MECHANICAL OR PLUMBING SYSTEMS, TO COMPLY WITH THE APPLICABLE CODES, WITH ANY ORDINANCES OF THE JURISDICTION, AND WITH THE APPROVED CONSTRUCTION DOCUMENTS.

City of Sausalito - **BUILDING DIVISION**
420 Litho Street, Sausalito CA 94965 TEL. (415) 289-4136

SPECIAL INSPECTION AND TESTING SCHEDULE

****** THIS FORM SHOULD BE IMPRINTED ON THE APPROVED PLANS******

FAMILY HOME RENOVATION (Beyer Residence) — PROJECT DESCRIPTION
B2024-0769 — BUILDING PERMIT NO.
426 PINE STREET, SAUSALITO, CA — PROJECT ADDRESS
PJC & ASSOCIATES, INC. (PJC) — TESTING/INSPECTION AGENCY or SPECIAL INSPECTOR

REINFORCED CONCRETE, GUNITE, GROUT AND MORTAR: * HIGH-STRENGTH, NON-SHRINK STRUCTURAL GROUTING.

Concrete	Gunite	Grout *	Mortar	
				Aggregate Tests
				Reinforcing Tests
				Mix Designs
X				Reinforcing Placement
				Batch Plant Inspection
		X		Inspect Placing
				Cast Samples
				Pick-up Samples
				Compression Tests

PRECAST/PRESTRESSED CONCRETE: N/A

Piles	Post-Tens	Pre-tens	Cladding	
				Aggregate Tests
				Reinforcing Tests
				Tendon Tests
				Mix Designs
				Reinforcing Placement
				Insert Placement
				Concrete Batching
				Concrete Placement
				Installation Inspection
				Cast Samples
				Pick-up Samples
				Compression Tests

MASONRY: N/A
__ Special Inspection Stresses Used
__ Preliminary Acceptance Tests (Masonry Units, Wall Prisms)
__ Subsequent Tests (Mortar, Grout, Field Wall Prisms)
__ Placement Inspection of Units

STRUCTURAL WOOD:
X Shear Wall Nailing Inspection
__ Inspection of Glu-lam Fab
__ Inspection of Truss Joist Fab
__ Sample and Test Components
X EPOXY ANCHORS

ADDNL. INSTRUCTIONS OR OTHER TESTS AND INSPECTIONS:

STRUCTURAL STEEL/WELDING:
__ Sample and Test (list specific members below)
X Shop Material Identification
X Welding Inspection X Shop X Field
__ Ultrasonic Inspection __ Shop __ Field
__ High-strength Bolting
Inspection Shop __ Field __
__ A325 __ N __ X __ F
__ A490 __ N __ X __ F
__ Metal Deck Welding Inspection
__ Reinforcing Steel Welding Inspection
__ Metal Stud Welding Inspection
__ Concrete Insert Welding Inspection

FIREPROOFING:
__ Placement Inspection
__ Density Tests
__ Thickness Tests
__ Inspect Batching

INSULATING CONCRETE:
__ Sample and Test
__ Placement Inspection
__ Unit Weights

FILL MATERIAL: BY PROJECT GEOTECHNICAL ENGINEER, (PJC)
X Acceptance Tests
X Placement Inspection
X Field Density

X HOLDOWN ANCHOR BOLTS
X SUPPLEMENTAL REINF. AT ANCHORS
X DRAG CONNECTIONS (i.e. STRAPS & TIES, etc.)
X HOLDOWN DEVICE/ASSEMBLIES

5

THE OWNER SHALL RETAIN THE SERVICES OF A QUALIFIED 3RD PARTY SPECIAL INSPECTION AGENCY TO PERFORM ANY AND ALL REQUIRED SPECIAL INSPECTIONS FOR THE SCOPE OF WORK UNDER THIS PERMIT AS OUTLINED PER THE APPROVED PLANS, INDICATED PER THE SPECIAL INSPECTIONS AND TESTING AGREEMENT, AND IN ACCORDANCE WITH THE BUILDING OFFICIAL'S GENERAL PROCEDURAL REQUIREMENTS. THE OWNER/CONTRACTOR SHALL COORDINATE AND KEEP SCHEDULE WITH THE PROJECT ARCHITECT, THE GEOTECHNICAL ENGINEER, THE ENGINEER OF RECORD, AND ANY OTHER PROFESSIONAL CONSULTANTS OF ANY AND ALL FIELD REVIEWS, OBSERVATIONS, INSPECTIONS, AND MATERIALS TESTING AS REQUIRED BY THE BUILDING OFFICIAL IN ACCORDANCE WITH THE SPECIAL INSPECTIONS AGREEMENT, THIS STRUCTURAL IMPROVEMENT PLAN, AND IN CONJUNCTION WITH THE APPROVED BUILDING DESIGN DOCUMENTS PREPARED BY OTHERS. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF THE CONSTRUCTION AND ERECTION OF THE BUILDING STRUCTURAL ELEMENTS AND ARCHITECTURAL COMPONENTS IN COORDINATION WITH THE APPROVED BUILDING PLANS. THEREFORE, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO ENSURE THAT ALL SPECIAL INSPECTIONS, REQUIRED OBSERVATIONS, AND BUILDING OFFICIAL OVERSIGHT ARE CONDUCTED.

REFER TO THE APPROVED SPECIAL INSPECTION AND TESTING AGREEMENT (5-PAGE DOCUMENT) IN ACCORDANCE WITH THE GENERAL NOTES ON SHEET S-CS. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED BY A QUALIFIED 3RD PARTY SPECIAL INSPECTION AGENCY PREVIOUSLY APPROVED BY THE BUILDING OFFICIAL PRIOR TO ANY INSPECTIONS AND OBSERVATIONS OF WORK AND SUCH INSPECTORS/OBSERVERS SHALL PROVIDE REPORTS TO CERTIFY ALL INSPECTED AND APPROVED WORK.

SPECIAL INSPECTIONS & REQUIRED TESTING

THE FOLLOWING SPECIAL INSPECTIONS AND TESTS MAY BE REQUIRED AS DETAILED IN THESE PROJECT PLANS, SPECIFICATIONS, AND THE CALIFORNIA BUILDING CODE. THESE INSPECTIONS ARE IN ADDITION TO INSPECTIONS PERFORMED BY THE BUILDING INSPECTION DEPARTMENT (THE PERMITTING JURISDICTION), THE DESIGNER, OR THE ENGINEER. THE BUILDING OFFICIAL MAY WAIVE THE REQUIREMENTS FOR THE EMPLOYMENT OF A SPECIAL INSPECTOR IF HE FINDS THAT THE CONSTRUCTION IS OF A MINOR NATURE.

		INDICATES WHEN: NOT REQUIRED	INDICATES WHEN: REQUIRED
☒	1704.2.5 & 1705.10 FABRICATED ITEMS	☐	☒
☐	1704.6 STRUCTURAL OBSERVATIONS	☐	☒
☐	1705.1.1 SPECIAL CASES	☐	☒
☒	1705.2 STEEL CONSTRUCTION, QUALITY ASSURANCE PER AISC 360	☐	☒
☒	1705.3 CONCRETE CONSTRUCTION	☐	☒
☒	1705.6 VERIFICATION AND INSPECTION OF SOILS	☐	☒
☐	1705.8 VERIFICATION AND INSPECTION OF CAST-IN-PLACE DEEP FOUNDATION ELEMENTS	☐	☒
☐	1705.9 HELICAL PILE FOUNDATIONS	☐	☒
☒	1705.12 VERIFICATION AND INSPECTIONS FOR SEISMIC RESISTANCE	☐	☒
☐	1705.13 TESTING AND QUALIFICATIONS FOR SEISMIC RESISTANCE	☐	☒

INDIVIDUALS PERFORMING INSPECTIONS MUST BE QUALIFIED AND APPROVED BY THE BUILDING DEPARTMENT PRIOR TO PERFORMING THESE INSPECTIONS.

THE STATEMENT OF SPECIAL INSPECTIONS SHALL BE SUBMITTED IN FULFILLMENT OF THE REQUIREMENTS OF CRC SECTIONS R109.1.
SPECIAL INSPECTIONS AND TESTING WILL BE PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, THIS STATEMENT, AND CRC R109.1.

THE SCHEDULE OF SPECIAL INSPECTIONS SUMMARIZES THE SPECIAL INSPECTIONS AND TESTS REQUIRED FOR THIS PROJECT. SPECIAL INSPECTORS WILL REFER TO THE APPROVED PLANS AND SPECIFICATIONS FOR DETAILED SPECIAL INSPECTION REQUIREMENTS.
ANY ADDITIONAL TESTS AND INSPECTIONS REQUIRED BY THE APPROVED PLANS AND SPECIFICATIONS WILL ALSO BE PERFORMED.

THE CONTRACTOR SHALL SUBMIT INTERIM REPORTS TO THE BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONALS IN RESPONSIBLE CHARGE TO PROVIDE ADEQUATE VERIFICATION OF COMPLETED, QUALIFIED WORK. A FINAL REPORT OF SPECIAL INSPECTIONS DOCUMENTING REQUIRED SPECIAL INSPECTIONS, TESTING, AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED PRIOR TO ISSUANCE OF USE AND OCCUPANCY.

THE OWNER RECOGNIZES HIS OR HER OBLIGATIONS TO ENSURE THAT THE CONSTRUCTION COMPLIES WITH THE APPROVED PERMIT DOCUMENTS AND TO IMPLEMENT THIS PROGRAM OF SPECIAL INSPECTIONS. IN PARTIAL FULFILLMENT OF THESE OBLIGATIONS, THE OWNER WILL RETAIN AND DIRECTLY PAY FOR THE SPECIAL INSPECTIONS AS REQUIRED IN CRC SECTION 109.1.

STRUCTURAL OBSERVATIONS

THE OWNER OR THE OWNER'S AUTHORIZED AGENT SHALL EMPLOY A REGISTERED DESIGN PROFESSIONAL TO PERFORM STRUCTURAL OBSERVATIONS WHEN REQUIRED. THIS OFFICE MAY BE CONSIDERED AN APPROVED STRUCTURAL INSPECTOR FOR REQUIRED OBSERVATIONS FOR THE WORK PROPOSED AS SPECIFIED UNDER THIS PLAN SET. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE GENERAL CONSTRUCTION INSPECTIONS OR THE REQUIRED SPECIAL INSPECTIONS.
PRIOR TO THE COMMENCEMENT OF OBSERVATIONS, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT IDENTIFYING THE FREQUENCY AND EXTENT OF STRUCTURAL OBSERVATIONS (REFER TO THE APPROVED STATEMENT OF SPECIAL INSPECTIONS FOR THE PROJECT). AT THE CONCLUSION OF THE WORK INCLUDED IN THE PERMIT, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL, UPON FORMAL REQUEST, A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

		INDICATES WHEN: NOT REQUIRED	INDICATES WHEN: REQUIRED
☐	1704.6.1 STRUCTURAL OBSERVATIONS FOR SEISMIC RESISTANCE	☐	☒
☐	1704.6.2 STRUCTURAL OBSERVATIONS FOR WIND REQUIREMENTS	☐	☒

DIAPHRAGM ELEMENTS (ROOF, FLOOR, ETC.)

VERIFICATION OF ROOF &/OR FLOOR SYSTEM ASSEMBLIES:
☐ SHEATHING MATERIALS, FASTENER SPACING, BLOCKING, FRAMING MEMBERS
☐ DESIGNATED DRAG CONNECTIONS/ASSEMBLIES (NAILING, STRAPPING, ETC.)

LATERAL-FORCE-RESISTING SYSTEM ELEMENTS

VERIFICATION OF ENGINEERED SHEAR WALL ELEMENTS:
☐ SHEAR WALL SHEATHING, FASTENER SPACING, BLOCKING, FRAMING MEMBERS
☐ HOLDOWN DEVICE LOCATIONS AND ASSEMBLY
☐ HOLDOWN ANCHOR BOLT LOCATION AND EMBEDMENT

VERIFICATION OF MANUFACTURED STRONG-WALL SHEAR WALL ELEMENTS
☐ PROPER CONNECTION OF STRONG WALL TO COLLECTOR ELEMENTS ABOVE
☐ PLACEMENT, TYPE, AND SIZE OF PANEL
☐ HOLDOWN ANCHOR BOLT TYPE, SIZE, AND EMBEDMENT

VERIFICATION OF STEEL SPECIAL CANTILEVER COLUMN SYSTEM ELEMENTS
☐ PROPER CONNECTION OF COLUMN TO COLLECTOR ELEMENTS ABOVE
☐ GENERAL ASSEMBLY (MATERIALS, MECHANICAL/WELDED CONNECTIONS, ETC.)
☐ PROPER CONNECTION OF COLUMN TO BASE PLATE ASSEMBLY AN ANCHORAGE

VERIFICATION OF TIMBER FRAMES
☐ PROPER FASTENER TYPE, SIZE, AND PLACEMENT
☐ GENERAL ASSEMBLY (MATERIALS, CONNECTIONS, ETC.)
☐ PROPER BASE CONNECTION AND ANCHORAGE

FOUNDATIONS & SOILS

VERIFICATION OF FOUNDATION ELEMENTS
☐ OBSERVATION OF REINFORCING, ANCHOR BOLT PLACEMENT & EMBEDMENT

VERIFICATION OF SOILS
☐ OBSERVATION OF EXCAVATION FOR ADEQUATE BEARING MATERIALS

GENERAL CONSTRUCTION INSPECTIONS

CONSTRUCTION OR WORK FOR WHICH A PERMIT IS REQUIRED SHALL BE SUBJECT TO INSPECTION BY A REPRESENTATIVE OF THE BUILDING OFFICIAL, AND SUCH CONSTRUCTION OR WORK SHALL REMAIN ACCESSIBLE AND EXPOSED FOR INSPECTION PURPOSES UNTIL APPROVED. THE INSPECTION PROCESS SHALL BE AT THE DISCRETION OF THE BUILDING OFFICIAL IN CONFORMANCE WITH THE APPLICABLE CODES AND ORDINANCES OF THE JURISDICTION, AND IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
IT SHALL BE THE DUTY OF THE OWNER [HOLDER OF THE BUILDING PERMIT], OR THEIR DULY AUTHORIZED AGENT TO NOTIFY THE BUILDING OFFICIAL WHEN WORK IS READY FOR INSPECTION. IT SHALL BE THE DUTY OF THE OWNER OR AGENT TO PROVIDE ACCESS TO AND MEANS FOR INSPECTIONS OF SUCH WORK.

APPROVAL AS A RESULT OF AN INSPECTION SHALL NOT BE CONSTRUED TO BE AN APPROVAL OF A VIOLATION OF THE PROVISIONS OF THE APPLICABLE CODES OR ANY OTHER ORDINANCES OF THE JURISDICTION. INSPECTIONS PRESUMING TO GIVE AUTHORITY TO VIOLATE OR CANCEL THE PROVISIONS OF THE APPLICABLE CODES OR ANY OTHER ORDINANCE OF THE JURISDICTION SHALL NOT BE VALID.
IT SHALL BE THE DUTY OF THE OWNER OR THE OWNER'S AUTHORIZED AGENT TO CAUSE THE WORK TO REMAIN ACCESSIBLE AND EXPOSED FOR INSPECTION PURPOSE. NEITHER THE BUILDING OFFICIAL, THE JURISDICTION, NOR THE PROJECT DESIGN PROFESSIONALS SHALL BE LIABLE FOR EXPENSE ENTAILED IN THE REMOVAL OR REPLACEMENT OF ANY MATERIAL REQUIRED TO ALLOW INSPECTION.
WORK SHALL NOT BE DONE BEYOND THE POINT INDICATED IN EACH SUCCESSIVE INSPECTION WITHOUT FIRST OBTAINING THE APPROVAL OF THE BUILDING OFFICIAL. THE BUILDING OFFICIAL, UPON NOTIFICATION, SHALL MAKE THE REQUESTED INSPECTIONS AND SHALL EITHER INDICATE THE PORTION OF THE CONSTRUCTION THAT IS SATISFACTORY AS COMPLETED, OR NOTIFY THE OWNER OR AGENT WHEREIN THE SAME FAILS TO COMPLY WITH THE APPLICABLE CODES, ORDINANCES OF THE JURISDICTION, OR THE APPROVED CONSTRUCTION DOCUMENTS. ANY PORTIONS THAT DO NOT COMPLY SHALL BE CORRECTED AND SUCH PORTION SHALL NOT BE COVERED OR CONCEALED UNTIL AUTHORIZED BY THE BUILDING OFFICIAL.

THE FINAL INSPECTION SHALL BE MADE AFTER ALL WORK REQUIRED BY THE BUILDING PERMIT IS COMPLETED. A FINAL LETTER MAY BE PREPARED BY THE ENGINEER OF RECORD, AND ANY DOCUMENTATION OF THE INSPECTIONS PERFORMED BY OTHERS MAY BE COMPILED AS PART OF A FINAL PACKAGE, AS FORMALLY REQUESTED BY THE BUILDING OFFICIAL. IT SHALL BE THE SOLE RESPONSIBILITY OF THE OWNER TO CONFIRM AND ADEQUATELY VERIFY TO THE SATISFACTION OF THE BUILDING OFFICIAL AND THE PROJECT DESIGN PROFESSIONALS, THAT ALL WORK WAS COMPLETED IN ACCORDANCE WITH THE APPLICABLE CODES, ORDINANCES OF THE JURISDICTION, AND THE APPROVED CONSTRUCTION DOCUMENTS.

CONSTRUCTION OBSERVATIONS

HOGAN LAND SERVICES, INC. HIGHLY RECOMMENDS THAT CONSTRUCTION OBSERVATIONS BE PERFORMED IN ORDER TO CHECK FOR GENERAL PLAN CONFORMANCE AND MITIGATE THE RISK OF PROBLEMS THROUGHOUT THE COURSE OF CONSTRUCTION. IN THE EVENT THAT OUR FIRM IS NOT RETAINED TO PROVIDE CONSTRUCTION OBSERVATIONS, IT IS UNDERSTOOD AND AGREED THAT THE WORK PERFORMED BY HOGAN LAND SERVICES, INC. IS LIMITED TO THE PREPARATION OF BASIC DESIGN CONCEPTS AND THAT HOGAN LAND SERVICES, INC. HAS NO CONTROL WHATSOEVER WITH REGARD TO PROPER AND COMPLETE CONSTRUCTION OF THE PROJECT IN CONFORMANCE WITH THE APPROVED DRAWINGS. THE OWNER AND CONTRACTOR, THEIR HEIRS AND ASSIGNS, SHALL INDEMNIFY, HOLD HARMLESS AND DEFEND HOGAN LAND SERVICES, INC. FROM ANY AND ALL CLAIMS OF ANY PERSON OR ENTITY ARISING OUT OF THE WORK PERFORMED WITHOUT OBSERVATION UNLESS ANY SUCH CLAIM WAS CAUSED BY THE SOLE NEGLIGENCE OF HOGAN LAND SERVICES, INC. PLEASE CONTACT OUR OFFICE IN WRITING IF CONSTRUCTION OBSERVATIONS ARE DESIRED, AND CONFIRM WITH LOCAL BUILDING INSPECTION AGENCY THAT SUCH CONSTRUCTION OBSERVATIONS ARE NOT REQUIRED FOR THE PROJECT.

STRUCTURAL SHEET INDEX

S-CS	STRUCTURAL COVER SHEET	1	OF	23
S0.0	GENERAL NOTES	2	OF	23
S0.1	STANDARD FOUNDATION DETAILS	3	OF	23
S0.2	STANDARD WOOD DETAILS	4	OF	23
S0.3	FLOOR-TO-FLOOR DETAILS	5	OF	23
S1.0	FOUNDATION PLAN	6	OF	23
S2.0	1ST LEVEL SHEAR WALL & FRAMING PLAN	7	OF	23
S3.0	2ND LEVEL FLOOR FRAMING PLAN	8	OF	23
S4.0	2ND LEVEL SHEAR WALL & FRAMING PLAN	9	OF	23
S5.0	3RD LEVEL FLOOR FRAMING PLAN	10	OF	23
S6.0	3RD LEVEL SHEAR WALL & FRAMING PLAN	11	OF	23
S7.0	ROOF FRAMING PLAN	12	OF	23
SD1	STRUCTURAL DETAILS	13	OF	23
SD2	STRUCTURAL DETAILS	14	OF	23
SD3	STRUCTURAL DETAILS	15	OF	23
SD4	STRUCTURAL DETAILS	16	OF	23
SD5	STRUCTURAL DETAILS	17	OF	23
SD6	STRUCTURAL DETAILS	18	OF	23
SD7	STRUCTURAL DETAILS	19	OF	23
SD8	STRUCTURAL DETAILS	20	OF	23
SD9	STRUCTURAL DETAILS	21	OF	23
WSWH2	STRONG-WALL WSWH: FRAMING DETAILS	22	OF	23
WSWH3	STRONG-WALL WSWH: FRAMING DETAIL...2-STORY	23	OF	23

DEFERRED SUBMITTALS

THIS PROJECT HAS THE FOLLOWING TRADES OR MATERIALS WHICH WILL BE ISSUED TO THE CITY OF SAUSALITO UNDER DEFERRED SUBMITTAL. THE GENERAL CONTRACTOR OR ASSOCIATED TRADE CONTRACTOR SHALL SUBMIT THE DESIGN(S) AND SUPPORTING CALCULATIONS/SPECIFICATIONS TO THE PROJECT ENGINEER AND THE CITY OF SAUSALITO FOR REVIEW AND APPROVAL:

1. NONE AT TIME OF PERMIT SUBMISSION/REVIEW.

HOGAN LAND SERVICES
A CALIFORNIA CORPORATION

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FOUNDATION NOTES

1. ALL SITE WORK, DRAINAGE SYSTEMS, GRADING (IF APPLICABLE), AND FOUNDATION EXCAVATIONS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROJECT SOIL REPORT, AND CHAPTER 4 OF THE 2022 CALIFORNIA RESIDENTIAL CODE. FOOTING EXCAVATIONS SHALL BE OBSERVED & APPROVED BY THE PROJECT ENGINEER AND/OR PROJECT GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF REINFORCING STEEL.
2. CONTRACTOR SHALL HAVE THE GEOTECHNICAL ENGINEER (IF ANY) REVIEW AND APPROVE THE SITE PLANS, FOUNDATION PLANS AND DETAILS FOR CONFORMANCE WITH THE DESIGN INTENT OF THE SOIL REPORT PRIOR TO ISSUANCE OF BUILDING AND/OR GRADING PERMIT.
3. GEOTECHNICAL ENGINEER (IF ANY) SHALL VERIFY PLACEMENT OF ALL FILLS ON PROJECT SITE. PAD FOUNDATIONS SHALL BEAR ON FIRM UNDISTURBED NATIVE SOILS OR ENGINEERED FILLS AT OR EXCEEDING DEPTHS SHOWN ON THE PLANS.
4. ALL FOOTING EXCAVATIONS SHALL BE DUG AS NEAT AND AS CLOSE TO FOOTING DIMENSIONS AS PRACTICAL. OVER EXCAVATIONS IN DEPTH AND WIDTH SHALL BE FILLED WITH CONCRETE U.O.N.
5. ALL DRILLED PIER AND GRADE BEAM FOUNDATIONS SHALL HAVE SPECIAL INSPECTION PER C.B.C. SECTION 1701, UNLESS PRIOR APPROVAL TO WAIVE THIS REQUIREMENT IS OBTAINED FROM THE BUILDING OFFICIAL.
6. THE FOLLOWING INSPECTIONS ARE REQUIRED FOR PIER AND GRADE BEAM CONSTRUCTION PER THE 2022 C.R.C., SECTION R109:
   - 6.1. PIER HOLES – DEPTH, DIAMETER AND CLEANLINESS.
   - 6.2. REINFORCING STEEL – PLACEMENT OF ALL REINFORCING STEEL IN CONCRETE PIER HOLES AND GRADE BEAM EXCAVATIONS.
   - 6.3. CONCRETE – DURING THE PLACING OF CONCRETE, TAKING OF TEST SPECIMENS.
7. GRADE BEAM WIDTHS SHALL BE STRICTLY MAINTAINED FROM TOP OF FORM TO PAD GRADE. ALL SLOUGH SHALL BE REMOVED BEFORE CONCRETE SETS.
8. TOP OF GRADE BEAMS SHALL BE LEVEL AND STEPPED WHERE SLOPE EXCEEDS 1 : 10, SEE DETAIL PROVIDED, U.O.N. OR APPROVED.
9. ANCHOR BOLTS SHALL HAVE 7–INCH MINIMUM EMBEDMENT INTO CONCRETE. BOLTS SHALL BE LOCATED 6–INCH MINIMUM AND 12–INCH MAXIMUM FROM END OF SILL PLATE. ALL SILL PLATES TO HAVE A MINIMUM OF 2 ANCHOR BOLTS. ANCHOR BOLTS AND INSERTS SHALL BE RIGIDLY HELD IN PLACE PRIOR TO PLACING CONCRETE.
10. WHERE HOLDOWN OR TIE DOWN ANCHORS ARE SPECIFIED ON THE PLAN, THE BOLTED OR SCREWED TIE DOWN SHALL BE LOCATED JUST ABOVE THE FIRST FLOOR FRAMING. IF CRIPPLE WALLS OCCUR BELOW THE FIRST FLOOR FRAMING, THEN EXTEND THE THREADED ROD USING APPROPRIATE COUPLERS AS NEEDED, FROM THE FOUNDATION ANCHOR UP THROUGH THE CRIPPLE WALL FRAMING TO THE BOLTED OR SCREWED TIE DOWN. SEE APPROPRIATE DETAILS PROVIDED HEREIN.
11. NOTCHES OR HOLES ARE ALLOWED PER DETAILS PROVIDED AND/OR REQUESTED. ALL PENETRATIONS ARE TO BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF CONCRETE OF DRILLING THROUGH SET CONCRETE.
12. CEMENT USE IN FOUNDATION MIX DESIGN IS REDUCED BY NOT LESS THAN 20 PERCENT (20%) BY INCORPORATING ADMIXTURE PRODUCTS COMMONLY USED TO REPLACE CEMENT SUCH AS; FLY ASH, SLAG, SILICA FUME, OR RICE HULL ASH.

CONCRETE NOTES

1. CONCRETE SHALL BE NORMAL WEIGHT (150–PCF) HARD ROCK CONCRETE AND SHALL DEVELOP A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS AND BE 6–SACK MIX, U.O.N. DESIGN IS BASED ON COMPRESSIVE STRENGTH OF 2500 PSI U.O.N. SEE DESIGN CRITERIA. CONCRETE QUALITY, MIXING AND PLACING SHALL CONFORM WITH CBC SECTION 1905.
2. CONCRETE SHALL BE THOROUGHLY CONSOLIDATED BY MECHANICAL VIBRATION. TWO MECHANICAL VIBRATORS ARE TO BE ON SITE DURING PLACING OF CONCRETE.
3. CONCRETE SHALL BE KEPT THOROUGHLY DAMP FOR 7 DAYS MINIMUM AFTER PLACEMENT BY COVERING WITH BURLAP OR CARPET KEPT CONTINUOUSLY WET, LEAVING FORMS TIGHTLY IN PLACE. OR, AT SLABS WHERE FINISHES WILL NOT BE AFFECTED BY APPLYING CURE COMPOUND, APPLY COMPOUND AT THE MANUFACTURERS' RECOMMENDED RATE OF APPLICATION WITH A MINIMUM OF 2 COATS APPLIED AT 90° TO EACH OTHER. CURE COMPOUND SHALL BE APPROVED BY THE PROJECT ARCHITECT OR OWNER'S REPRESENTATIVE. DIESEL FUEL IS NOT TO BE USED AS A SUBSTITUTE FOR A CURING COMPOUND COATING.
4. ALL ANCHORS, BOLTS, INSERTS, AND ANY OTHER HARDWARE TO BE SET IN CONCRETE SHALL BE FIRMLY SET IN POSITION BEFORE CONCRETE IS PLACED.
5. CONSTRUCTION JOINTS SHALL BE SANDBLASTED, OR OTHERWISE ROUGHENED, REMOVING ALL UNSOUND CONCRETE AND LAITANCE EXPOSING SOUND AGGREGATE TO 1/4" MINIMUM AMPLITUDE. DAMPEN PRIOR TO PLACING NEW CONCRETE.
6. CONCRETE AGGREGATES SHALL CONFORM TO ONE OF THE FOLLOWING SPECIFICATIONS:
   - 6.1. NORMAL WEIGHT CONCRETE ASTM C33
   - 6.2. LIGHTWEIGHT CONCRETE ASTM C330
7. NOMINAL MAXIMUM SIZE OF COURSE AGGREGATE SHALL BE NOT LARGER THAN:
   - 7.1. ⅕ THE NARROWEST DIMENSION BETWEEN FORMS, NOR
   - 7.2. ¼ THE DEPTH OF SLABS, NOR
   - 7.3. ¾ THE MINIMUM CLEAR SPACING BETWEEN INDIVIDUAL REINFORCING BARS.

REINFORCING STEEL NOTES

1. ALL REINFORCING STEEL SHALL CONFORM WITH ASTM A615 OR A70, AND BE A MINIMUM OF GRADE 60.
2. REINFORCING STEEL SHALL BE KEPT CLEAN AND FREE OF MUD, OIL OR OTHER NON–METALLIC COATINGS. ALL REINFORCING BARS SHALL BE AS LONG AS IS PRACTICAL AND ALL BENDS SHALL BE COLD BENT. SECURELY TIE ALL REINFORCING BARS AT EACH END OR AS NEAR THERETO AS POSSIBLE AND AT A MAXIMUM OF 48" ON CENTER PRIOR TO PLACEMENT OF GROUT.
3. AT CORNERS AND INTERSECTIONS, BARS SHALL RETURN A MINIMUM OF 24–INCHES. ALL REINFORCING BAR SPLICES SHALL BE LAPPED PER DETAIL PROVIDED HEREIN.
4. WELDED WIRE MESH SHALL CONFORM WITH ASTM A–185 AND SHALL BE LAPPED 12–INCHES MINIMUM AND BE PLACED AT THE CENTER DEPTH OF SLAB.

CONCRETE FLATWORK NOTES

1. PROVIDE CONTROL JOINTS (C.J.) AND /OR DOWEL JOINTS PER DETAILS PROVIDED AND WHERE SHOWN ON FOUNDATION DRAWINGS. (TO MINIMIZE RANDOM CONCRETE SHRINKAGE CRACKS). MAXIMUM SPACING AT (2) TIMES THE SLAB THICKNESS (IN INCHES) IN FEET, 12–FEET MAXIMUM, UNLESS OTHERWISE NOTED OR APPROVED.
2. ALL SLABS SHALL BE COMPLETELY SEPARATED FROM FOUNDATION STEM WALLS WITH FELT OR MASTIC AND SLABS SHALL HAVE 1/8" X 1" DEEP CONTROL JOINTS AT 12 FEET ON CENTER MAXIMUM IN EACH DIRECTION, U.O.N.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER CURING OF ALL CONCRETE.
4. CURING SLABS SHALL REMAIN UNDISTURBED A MINIMUM OF 3 FULL DAYS. NOT ALLOWING PEDESTRIAN OR VEHICLE TRAFFIC. WHERE PEDESTRIAN TRAFFIC IS NECESSARY, SLAB SURFACES SHALL BE PROTECTED USING PLYWOOD SHEETS. CURING COMPOUND (IF USED), SHALL BE COMPATIBLE WITH FINISH AS SPECIFIED BY THE PROJECT ARCHITECT.

STRUCTURAL STEEL NOTES

1. ALL STRUCTURAL STEEL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST INTERNATIONAL BUILDING CODE, THE 2022 CALIFORNIA BUILDING CODE AND 20122CALIFORNIA RESIDENTIAL CODE , AS IT APPLIES TO THIS GOVERNING JURISDICTION AND THE AISC "SPECIFICATIONS FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
2. ALL STRUCTURAL STEEL AND MISCELLANEOUS IRON SHALL CONFORM TO THE FOLLOWING GRADES U.O.N.:
   - 2.1. SHAPES & PLATES — ASTM A – 36
   - 2.2. TUBES — ASTM A – 500, GRADE B
   - 2.3. PIPE — ASTM A – 53, GRADE B
3. ALL BOLTS SHALL CONFORM TO THE FOLLOWING GRADES U.O.N.:
   - 3.1. MACHINE BOLTS (M.B.) — ASTM A – 307
   - 3.2. ANCHOR BOLTS (A.B.) — ASTM A – 307
   - 3.3. HIGH STRENGTH BOLTS (H.S.B.) — ASTM A – 325
4. WELDING ELECTRODES SHALL MEET AWS REQUIREMENTS AND ELECTRODES SHALL BE E70XX FOR SHIELDED METAL ARE, F7XX – EXXX FOR SUBMERGED ARE ARC; E70 – X FOR GAS METAL ARC U.O.N. PROVIDE SPECIAL INSPECTION FOR STRUCTURAL WELDING AND HIGH STRENGTH BOLTING AS REQUIRED BY THE 2022 CBC SECTION 1701.
5. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING DEPARTMENT AND TO THE ENGINEER OR ARCHITECT OF RECORD.
6. BOLT HOLES SHALL BE 1/16–INCH LARGER THAN THE BOLT DIAMETER. PAINT STEEL WITH ONE COAT OF SHOP PRIMER OR EQUAL. EXCEPT SURFACES TO RECEIVE WELDS, SHEAR BOLTS, OR PORTIONS TO BE ENCASED IN CONCRETE OR SPRAY FIREPROOFED.
7. GROUT UNDER COLUMN BASE PLATES SHALL BE MASTER BUILDERS EMBECO # 713 NON–SHRINK GROUT.

ALL FIELD–CUT ENDS, NOTCHES AND DRILLED HOLES OF PRESERVATIVE–TREATED WOOD SHALL BE TREATED IN THE FIELD IN ACCORDANCE WITH AWPA M4. [R317.1.1] (A)

CARPENTRY NOTES

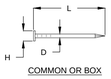
1. ALL WORK SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE, 2022 CALIFORNIA BUILDING CODE, 2022 CALIFORNIA RESIDENTIAL CODE, ADOPTED BY THE LOCAL GOVERNING AGENCY AND IN CONFORMANCE WITH ANY APPLICABLE LOCAL ORDINANCES.
2. ALL WORK SHALL CONFORM TO THE CONVENTIONAL CONSTRUCTION PROVISIONS OF THE APPLICABLE CODE.
3. LUMBER SHALL BE GRADE MARKED IN ACCORDANCE WITH "STANDARD GRADING AND DRESSING RULES" OF THE WEST COAST LUMBER INSPECTION BUREAU, W.C.L.I.B.
4. ALL LUMBER FRAMING MEMBERS SHALL BE DOUGLAS FIR (D.F.) OF THE FOLLOWING MINIMUM GRADES U.O.N. ON THE PLANS:
   - 4.1. JOISTS & RAFTERS — D.F. NO. 2,
   - 4.2. 4 X BEAMS & POSTS — D.F. NO. 2,
   - 4.3. 6 X BEAMS & POSTS — D.F. NO. 1,
   - 4.4. STUDS > 10 FEET — D.F. NO. 2,
   - 4.5. STUDS < 10. FEET — D.F. STD OR BETTER,
   - 4.6. PLATES & BLOCKING — D.F. STD OR BETTER.
5. ALL FRAMING LUMBER SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19%. GREEN LUMBER SHOULD BE BRACED AT MID–SPAN UNTIL DRIED TO HELP PREVENT SAGGING.
6. LUMBER IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED DOUGLAS FIR (P.T.D.F.) CONFORMING TO 2022 C.B.C. SECTION 2303.1.9 & AWPA STANDARD U1 AND M4.
7. LUMBER EMBEDDED IN CONCRETE OR EARTH SHALL BE PRESSURE TREATED DOUGLAS FIR (P.T.D.F.) CONFORMING TO AWPA STANDARD U1 AND M4.
8. FASTENERS SPECIFIED ON THE DRAWINGS ARE TO BE COLORED USING THE MANUFACTURER'S BRANDS THAT UTILIZE THE TRACKERS COLOR CODED SYSTEM. FOLLOW ALL MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS FOR INSTALLATION AND HANDLING OF THE PRODUCTS.
9. STRUCTURAL PLYWOOD SHEATHING SHALL BE C–D GRADE, EXPOSURE 1, CONFORMING TO PS – 1 – 95 OF THE AMERICAN PLYWOOD ASSOCIATION U.O.N. SUPPORTED EDGES OF PLYWOOD SHALL BUTT ALONG THE CENTER OF FRAMING MEMBERS.
10. NAILS USED IN EXTERIOR APPLICATIONS OR IN PRESSURE TREATED WOOD SHALL BE HOT – DIPPED ZINC COATED GALVANIZED BOX NAILS, U.O.N. WHERE NAILING CAUSES WOOD TO SPLIT, REPLACE SPLIT MEMBER AND PRE–DRILL HOLES FOR NAILING.
11. ALL NAILING NOT SPECIFICALLY CALLED OUT ON THESE PLANS SHALL BE PER TABLE 2304.10.1 OF THE 2022 C.B.C. AND DETAILED HEREIN. NAIL TYPES SHALL BE AS LISTED BELOW: (SEE ALSO "NAIL SCHEDULE" PROVIDED HEREIN)
    - 11.1. ROOF AND FLOOR SHEATHING — COMMON NAILS
    - 11.2. SHEAR WALL SHEATHING — COMMON OR HOT DIPPED GALVANIZED BOX. ELECTROPLATED BOX NAILS ARE NOT ACCEPTABLE
    - 11.3. FRAMING — COMMON, BOX OR COATED SINKER NAILS U.O.N.
    - 11.4. METAL CONNECTORS — NAILS PER MANUFACTURER'S SPECIFICATION, U.O.N.

STANDARD COMMON NAIL FASTENER WIRE DIAMETER [1]

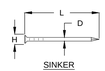
	PENNYWEIGHT	LENGTH, L	SHANK, D	HEAD, H
COMMON / BOX	6d	2"	0.113" /0.099"	0.266" /0.266"
	8d	2–1/2"	0.131" /0.113"	0.281" /0.297"
	10d	3"	0.148" /0.128"	0.312" /0.312"
	12d	3–1/4"	0.148" /0.128"	0.312" /0.312"
	16d	3–1/2"	0.162" /0.135"	0.344" /0.344"
	20d	4"	0.192" /0.148"	0.406" /0.375"
SINKER	6d	1–7/8"	0.092"	0.234"
	8d	2–3/8"	0.113"	0.266"
	10d	2–7/8"	0.12"	0.281"
	12d	3–1/8"	0.135"	0.312"
	16d	3–1/4"	0.148"	0.344"
	20d	3–3/4"	0.177"	0.375"

REF: 2018 NDS SDPWS TABLE A1 (PARTIAL)

[1] TOLERANCES AS SPECIFIED IN ASTM F 1667; REFER TO FOR OTHER NAIL TYPES.



COMMON OR BOX



SINKER

NAILING SCHEDULE

2022 C.R.C. TABLE R602.3(1) * ADDED NAILING STD07

JOIST TO SILL OR GIRDER, TOENAIL	3–8d
BRIDGING TO JOIST, TOENAIL EACH END	2–8d
1 X 6 SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2–8d
WIDER THAN 1 X 6 SUBFLOOR TO EACH JOIST, FACE NAIL	3–8d
2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2–16d
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	16d @ 16" o.c.
SOLE PLATE TO JOIST OR BLOCKING, @ BRACED WALL PANELS	3–16d per 16"
TOP PLATE TO STUD, END NAIL	2–16d
STUD TO SOLE PLATE	4–8d toenail or 2–16d end nail
DOUBLE STUDS, FACE NAIL	16d at 24" o.c.
DOUBLE TOP PLATES, FACE NAIL	16d at 16" o.c.
DOUBLE TOP PLATES, LAP SPLICE	12–16d*
BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3–8d
RIM JOIST TO TOP PLATE,TOENAIL	8d at 6" o.c.
TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2–16d
CONTINUOUS HEADER, TWO PIECES	16d at 16" o.c. along each edge
CEILING JOISTS TO PLATE, TOENAIL	3–8d
CONTINUOUS HEADER TO STUD, TOENAIL	4–8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3–16d
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3–16d
RAFTER TO PLATE, TOENAIL	3–8d
1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2–8d
1" X 8" SHEATHING TO LESS TO EACH BEARING, FACE NAIL	2–8d
WIDER THAN 1" X 8" SHEATHING TO EACH BEARING, FACE NAIL	3–8d
BUILT–UP CORNER STUDS	16d at 24" o.c.
BUILT UP GIRDER AND BEAMS	20d at 32" o.c. at T&B staggered. 2–20d at ends and at each splice.
2" PLANKS	2–16d at each bearing
COLLAR TIE TO RAFTER, FACE NAIL	3–10d
JACK RAFTER TO HIP	3–10d toenail or 2–16d facenail
ROOF RAFTER TO 2X RIDGE BEAM	2–16d toenail or facenail
JOIST TO BAND JOIST, FACENAIL	3–16d
LEDGER STRIP, FACENAIL	3–16d
WSP OR PARTICLEBOARD SHEATHING TO FRAMING	1/2" or less 6d; 19/32" to 3/4" 8d; 7/8" to 1" 8d; 1–1/8" to 1–1/4" 10d
PANEL SIDING (TO FRAMING)	1/2" or less 6d or 5/8" 8d
FIBERBOARD SHEATHING	1/2" 6d or 25/32" 8d
INTERIOR PANELING	3/4" 4d or 3/8" 6d

12. ALL METAL FRAMING HOLDOWNS, CONNECTORS, CLIPS, JOIST HANGERS, STRAPS, ETC. SHALL BE MANUFACTURED BY SIMPSON STRONG TIE COMPANY, INCLUDING THE FOLLOWING:
    - 12.1. FILL ALL NAIL HOLES IN CONNECTORS PER MANUFACTURER'S SPECIFICATIONS,
    - 12.2. USE ONLY SIMPSON "N" TYPE NAILS PER MANUFACTURER'S SPECIFICATION,
    - 12.3. INSTALL AND TIGHTEN CONNECTORS, HOLDOWNS, ETC JUST PRIOR TO COVERING.
13. BOLTS FOR CONNECTORS AND HOLDOWNS SHALL BE STANDARD MACHINE BOLTS (M.B.) CONFORMING TO ASTM 307 WITH SIZES AS SHOWN ON THE PLANS, DETAILS AND MANUFACTURER'S SPECIFICATIONS.
14. USE MALLEABLE IRON WASHERS UNDER HEAD AND NUT WHERE BEARING AGAINST WOOD. BOLT HOLES IN WOOD SHALL BE 1/16" LARGER THAN THE BOLT DIAMETER.
15. BOLTS, NUTS AND WASHERS EXPOSED TO WEATHER AND/OR PRESSURE TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED. ELECTROPLATED HARDWARE IS NOT ACCEPTABLE.
16. STRUCTURAL MEMBERS SHALL NOT BE NOTCHED, CUT OR OTHERWISE ALTERED FOR DUCTS, PIPES, ETC., U.O.N. OR APPROVED BY THE ENGINEER.
17. ALL GABLE END WALLS SHALL BE BALLOON FRAMED WITH CONTINUOUS STUDS, OR BRACED.

PRE-FABRICATED MANUFACTURED WOOD TRUSS SYSTEM

THE OWNER SHALL RETAIN THE SERVICES OF A LICENSED DESIGN PROFESSIONAL OF WHOM SHALL BE DESIGNATED AS THE TRUSS DESIGN ENGINEER THAT WILL BE RESPONSIBLE FOR THE PREPARATION OF THE TRUSS SUBMITTAL PACKAGE.

PRE–FABRICATED MANUFACTURED WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF THE APPLICABLE CODES AND ACCEPTED ENGINEERING PRACTICE. THE TRUSS DESIGNER OF RECORD SHALL BE THE REGISTERED DESIGN PROFESSIONAL ELECTED AS THE INDIVIDUAL OR ORGANIZATION IN RESPONSIBLE CHARGE FOR THE DESIGN OF THE ROOF TRUSS SYSTEM. TRUSS DESIGN DRAWINGS SHALL BE FURNISHED TO THE ENGINEER OF RECORD FOR APPROVAL, AND BE SUBMITTED TO THE BUILDING OFFICIAL AND APPROVED PRIOR TO INSTALLATION. ALTERATIONS TO THE APPROVED TRUSS DESIGN DRAWINGS OR MANUFACTURED TRUSSES ARE SUBJECT TO THE APPROVAL OF THE ENFORCEMENT AGENCY. TRUSS DESIGN DRAWINGS ARE THE GRAPHIC DEPICTION OF AN INDIVIDUAL TRUSS, THAT DESCRIBES THE DESIGN AND PHYSICAL CHARACTERISTICS OF THE TRUSS. THE DESIGN FOR THE TRANSFER OF LOADS AND ANCHORAGE OF EACH TRUSS TO THE SUPPORTING STRUCTURE IS THE RESPONSIBILITY OF THE REGISTERED DESIGN PROFESSIONAL. COORDINATION BETWEEN THE REGISTERED DESIGN PROFESSIONAL, THE TRUSS DESIGNER, AND THE CONTRACTOR FOR A PROJECT MAY BE REQUIRED.

THE TRUSS SUBMITTAL PACKAGE PROVIDED BY THE TRUSS MANUFACTURER SHALL CONSIST OF EACH INDIVIDUAL TRUSS DESIGN DRAWING, THE TRUSS PLACEMENT DIAGRAM, THE TEMPORARY AND PERMANENT INDIVIDUAL ROOF TRUSS RESTRAINT/BRACING METHODS AND DETAILS, AND ANY OTHER STRUCTURAL DETAILS GERMANE TO THE REQUIREMENTS OF THE ROOF TRUSS SYSTEM. THE WRITTEN, GRAPHICAL AND TOTORIAL DEPICTION OF EACH INDIVIDUAL TRUSS SHALL BE PROVIDED TO THE BUILDING OFFICIAL FOR APPROVAL PRIOR TO INSTALLATION. TRUSS DESIGN DRAWINGS SHALL ALSO BE PROVIDED WITH THE SHIPMENT OF TRUSSES DELIVERED TO THE JOB SITE. THE TRUSS DESIGN DRAWINGS SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING INFORMATION UNLESS OTHERWISE SPECIFIED BY THE BUILDING OFFICIAL:

1. THE SLOPE (OR DEPTH), SPAN, AND SPACING;
2. THE LOCATION OF ALL DESIGN LOADS AND DESIGNATED SUPPORTS;
3. THE NUMBER OF REQUIRED PLIES IF GREATER THAN ONE (1);
4. THE REQUIRED BEARING WIDTHS AT EACH DESIGNATED SUPPORT LOCATION;
5. THE APPLICABLE DESIGN LOADS, INCLUDING, BUT NOT LIMITED TO:
   - 5.1. TOP CHORD LIVE LOAD AND DEAD LOAD
   - 5.2. BOTTOM CHORD LIVE LOAD AND DEAD LOAD
   - 5.3. ADDITIONAL LOADS AND LOCATIONS PRESCRIBED PER CODES OR DESIGN DRAWINGS
   - 5.4. ENVIRONMENTAL DESIGN CRITERIA AND LOADS (WIND, RAIN, SNOW, SEISMIC, ETC.)
   - 5.5. OTHER LATERAL LOADS, INCLUDING DRAG STRUT LOADINGS
   - 5.6. CONTROLLING WIND AND EARTHQUAKES LOADS
   - 5.7. CONCENTRATED LOADS AND THEIR POINTS OF APPLICATION
   - 5.8. CONTROLLING LOADS AND THEIR POINTS OF APPLICATION
6. ADJUSTMENTS TO WOOD MEMBER AND METAL CONNECTOR PLATE DESIGN VALUES FOR CONDITIONS OF USE
7. MAXIMUM REACTION FORCE AND UPLIFT FORCE, INCLUDING MAXIMUM UPLIFT REACTION FORCES WHERE APPLICABLE
8. JOINT CONNECTOR PLATE TYPE, SIZE, THICKNESS (GAGE), AND THE DIMENSIONED LOCATION OF EACH METAL CONNECTOR PLATE, EXPECT WHERE SYMMETRICALLY LOCATED RELATIVE TO THE JOINT INTERFACE
9. THE SIZE, SPECIES, AND GRADE OF THE MATERIALS TO BE USED FOR EACH WOOD MEMBER
10. TRUSS–TO–TRUSS CONNECTIONS AND TRUSS FIELD ASSEMBLY REQUIREMENTS INCLUDING:
    - 10.1. TRUSS–TO–GIRDER TRUSS
    - 10.2. TRUSS PLY–TO–PLY
    - 10.3. FIELD SPLICES
11. CALCULATED SPAN–TO–DEFLECTION RATIO AND MAXIMUM VERTICAL AND HORIZONTAL DEFLECTION FOR LIVE AND TOTAL LOADS AS APPLICABLE
12. MAXIMUM AXIAL TENSION AND COMPRESSION FORCES IN TRUSS MEMBERS TO ENABLE THE BUILDING DESIGNER TO DESIGN THE SIZE, CONNECTIONS AND ANCHORAGE OF THE PERMANENT CONTINUOUS LATERAL BRACING. FORCES SHALL BE SHOWN ON THE TRUSS DRAWING OR ON SUPPLEMENTAL DOCUMENTS.
13. REQUIRED TEMPORARY AND PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT LOCATION AND THE METHOD AND DETAILS OF RESTRAINT/BRACING TO BE USED.

WHERE REQUIRED BY THE REGISTERED DESIGN PROFESSIONAL, THE BUILDING OFFICIAL OR THE STATUTES OF THE JURISDICTION IN WHICH THE PROJECT IS BEING CONSTRUCTED, EACH INDIVIDUAL TRUSS DESIGN SHALL BEAR THE SEAL AND SIGNATURE OF THE TRUSS DESIGNER.

EXCEPTIONS:
1. WHERE A COVER SHEET AND TRUSS INDEX SHEET ARE COMBINED INTO A SINGLE SHEET AND ATTACHED TO THE SET OF TRUSS DESIGN DRAWINGS, THE SINGLE COVER/TRUSS INDEX SHEET IS THE ONLY DOCUMENT REQUIRED TO BE SIGNED AND SEALED BY THE TRUSS DESIGNER.
2. WHEN A COVER SHEET AND A TRUSS INDEX SHEET ARE SEPARATELY PROVIDED AND ATTACHED TO THE SET OF TRUSS DESIGN DRAWINGS, THE COVER SHEET AND THE TRUSS INDEX SHEET ARE THE ONLY DOCUMENTS REQUIRED TO BE SIGNED AND SEALED BY THE TRUSS DESIGNER.

THE TRUSS MANUFACTURER SHALL PROVIDE A TRUSS PLACEMENT DIAGRAM THAT IDENTIFIED THE PROPOSED LOCATIONS FOR EACH INDIVIDUALLY DESIGNATED TRUSS AND REFERENCES THE CORRESPONDING TRUSS DESIGN DRAWING. THE TRUSS PLACEMENT DIAGRAM SHALL BE PROVIDED AS PART OF THE TRUSS SUBMITTAL PACKAGE, AND WITH THE SHIPMENT OF TRUSSES DELIVERED TO THE JOB SITE. TRUSS PLACEMENT DIAGRAMS THAT SERVE ONLY AS A GUIDE FOR INSTALLATION AND DO NOT DEVIATE FROM THE PERMIT SUBMITTAL DRAWINGS SHALL NOT BE REQUIRED TO BEAR THE SEAL OR SIGNATURE OF THE TRUSS DESIGNER.

TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, NOTCHED, DRILLED, SPLICED OR OTHERWISE ALTERED IN ANY WAY WITHOUT WRITTEN CONCURRENCE AND APPROVAL OF A REGISTERED DESIGN PROFESSIONAL. ALTERATIONS RESULTING IN THE ADDITION OF LOADS TO ANY MEMBER (E.G., HVAC EQUIPMENT, PIPING, ADDITIONAL ROOFING OR INSULATION, ETC.), SHALL NOT BE PERMITTED WITHOUT VERIFICATION THAT THE TRUSS IS CAPABLE OF SUPPORTING SUCH ADDITIONAL LOADING.

TRUSSES SHALL BE BRACED TO PREVENT ROTATION AND PROVIDE LATERAL STABILITY IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED IN THE CONSTRUCTION DOCUMENTS FOR THE BUILDING AND ON THE INDIVIDUAL TRUSS DESIGN DRAWINGS. IN THE ABSENCE OF SPECIFIC BRACING REQUIREMENTS, TRUSSES SHALL BE BRACED IN ACCORDANCE WITH ACCEPTED INDUSTRY PRACTICE SUCH AS THE SBCA BUILDING COMPONENT SAFETY INFORMATION (BCSI) GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES.

MANUFACTURED WOOD PRODUCTS

GLUED LAMINATED MEMBERS

1. GLUED LAMINATED TIMBER, BEAMS AND GIRDERS SHALL CONFORM TO ANSI/AITC 190.1 AND ASTM D3737.
2. GLUED LAMINATED MEMBERS SHALL BE COMBINATION 24F–V4 FOR SIMPLE SPAN CONDITIONS AND 24F–V8 FOR CONTINUOUS AND CANTILEVER CONDITIONS U.O.N., AND SHALL MEET THE FOLLOWING DESIGN PROPERTIES:
   - 2.1. E = 1,800,000 psi.
   - 2.2. Fb = 2,400 psi;
   - 2.3. Fv = 265 psi.
3. GLUED LAMINATED MEMBERS SHALL HAVE A STANDARD CAMBER (1600'+/–) U.O.N. AND BE INDUSTRIAL APPEARANCE GRADE U.N.O.
4. MANUFACTURER INSPECTION CERTIFICATES SHALL BE SUBMITTED TO THE FIELD INSPECTOR PRIOR TO COMPLETION OF FRAME INSPECTION.

MANUFACTURED I–JOISTS

1. MANUFACTURED I–JOISTS SHALL BE TJI'S AS MANUFACTURED BY TRUS JOIST MACMILLAN (WEYERHAEUSER), OR AN APPROVED EQUAL. APPROVED EQUIVALENT I–JOISTS SHALL BE ICBO APPROVED HAVE THE SAME MINIMUM DEPTH AND SPACING, AND MEET OR EXCEED THE DESIGN PROPERTIES (E, M & V) OF THE I–JOISTS SPECIFIED ON THESE PLANS.
2. JOIST INSTALLATION DETAILS SHALL BE PER MANUFACTURER'S SPECIFICATIONS U.O.N. HOLES IN I–JOIST WEBS SHALL BE LOCATED PER MANUFACTURER'S SPECIFICATIONS.
3. DO NOT CUT OR NOTCH TOP OR BOTTOM FLANGES OF I–JOISTS.
4. PROTECT MANUFACTURED JOISTS AND BEAMS FROM MOISTURE PER MANUFACTURER'S SPECIFICATIONS.
5. TIMBERSTRAND LSL RIM BOARD AS MANUFACTURED BY TRUS JOIST MACMILLAN MAY BE USED AS RIM BOARD MATERIAL U.O.N. ON PLANS. (TJI LVL RIM BEAM WHERE NOTED ON PLANS)

MANUFACTURED LAMINATED VENEER LUMBER (LVL)

1. LVL LUMBER SHALL BE MICRO.LAM LUMBER BEAMS AS MANUFACTURED BY TRUS JOIST MACMILLAN OR AN APPROVED EQUAL. APPROVED EQUIVALENT LVL MEMBERS SHALL BE ICBO APPROVED, HAVE THE SAME MINIMUM DIMENSIONS AND MEET OR EXCEED THE FOLLOWING DESIGN PROPERTIES:
   - 1.1. E = 1,900,000 psi.
   - 1.2. Fb = 2,600 psi.
   - 1.3. Fv = 285 psi.
2. NAIL MULTIPLE LVL BEAMS (GANG NAIL) WITH 3 ROWS OF 16D NAILS AT 12 INCHES O/C STAGGERED U.O.N.

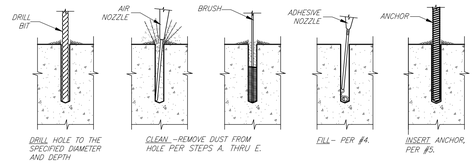
MANUFACTURED PARALLED STRAND LUMBER (PSL)

1. PSL SHALL BE PARALLAM LUMBER BEAMS AS MANUFACTURED BY TRUS JOIST MACMILLAN OR AN APPROVED EQUAL. APPROVED EQUIVALENT PSL SHALL BE ICBO APPROVED, HAVE THE SAME MINIMUM DIMENSIONS AND MEET OR EXCEED THE FOLLOWING DESIGN PROPERTIES:
   - 1.1. E = 2,000,000 psi.
   - 1.2. Fb = 2,900 psi.
   - 1.3. Fv = 290 psi.

MANUFACTURED LAMINATED STRAND LUMBER (LSL)

1. LSL SHALL BE TIMBERSTRAND LUMBER BEAMS AS MANUFACTURED BY TRUS JOIST MACMILLAN. LSL LUMBER SHALL MEET THE FOLLOWING DESIGN PROPERTIES:
   - 1.1. FOR DEPTHS OF 11–1/4" AND SMALLER:
     - 1.1.1. E = 1,300,000 psi

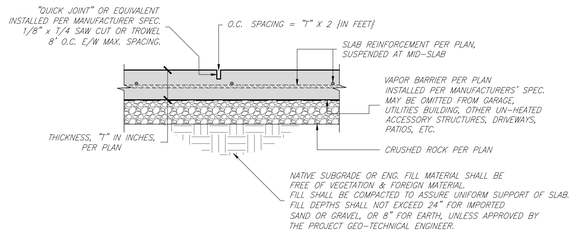
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1. EPOXY GROUT SYSTEM SHALL BE COMPLETED WITH SIMPSON "SET-3G" ADHESIVES OR EQUIVALENT ADHESIVE ANCHOR SYSTEM.
2. DRILLED HOLES SHALL BE 1/8" LARGER IN DIAMETER THAN THE DIAMETER OF THE ANCHOR TO BE INSTALLED.
3. THOROUGHLY CLEAN HOLES TO RECEIVE EPOXY GROUT USING THE FOLLOWING PROCEDURE: (SEE DETAIL ABOVE)
   - 3.1. BLOW OUT ALL DUST AND LOOSE MATERIAL WITH OIL-FREE COMPRESSED AIR. SEE MANUFACTURERS RECOMMENDATIONS FOR AIR HOSE NOZZLE.
   - 3.2. CLEAN HOLE SURFACES WITH A CLEAN, STIFF NYLON BRUSH. NOTE: DUST LEFT IN THE HOLE WILL REDUCE THE HOLDING CAPACITY OF THE EPOXY ADHESIVE.
   - 3.3. SWAB HOLE SIDES USING A DOWEL WRAPPED IN SLIGHTLY MOIST CLOTH TO REMOVE REMAINING DUST.
   - 3.4. BLOW COMPRESSED AIR INTO THE HOLE WITH THE EXTENDED NOZZLE TO REMOVE ALL REMAINING DUST.
   - 3.5. REPEAT PROCEDURE UNTIL NO DUST REMAINS IN THE HOLE OR ON THE DRILLED SURFACES.
4. INSTALL EPOXY ADHESIVE INTO THE BOTTOM OF THE HOLE WITH THE NOZZLE EQUIPPED GUN AS SPECIFIED BY THE MANUFACTURER SELECTED. FILL HOLE HALFWAY, WITHDRAWING THE NOZZLE AS HOLE FILLS.
5. ANCHORS MUST BE CLEAN AND OIL FREE. INSERT ANCHOR, TURNING SLOWLY UNTIL THE 5. ANCHORS HITS THE BOTTOM OF THE HOLE. DO NOT DISTURB DURING SET TIME.
6. EXERCISE EXTREME CARE TO AVOID DAMAGE TO EXISTING REINFORCING STEEL.
7. SPECIAL INSPECTIONS SHALL BE CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF C.B.C. CHAPTER 17 AND 18
8. THE SPECIAL INSPECTOR SHALL VERIFY THAT:
   - 8.1. A. HOLES ARE CORRECT DIAMETER AND DEPTH
   - 8.2. HOLES ARE CLEAN
   - 8.3. PROPER EPOXY ADHESIVE IS USED.
   - 8.4. EPOXY ADHESIVE IS MIXED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
   - 8.5. ANCHORS ARE CORRECT DIAMETER AND LENGTH.

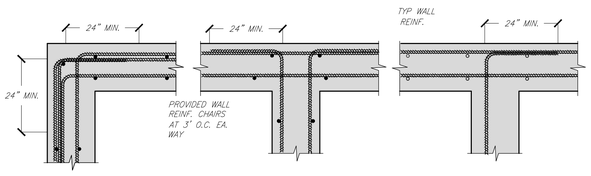
10 EPOXY GROUTED ANCHOR INSTALLATION

SCALE 1" = 1'-0"



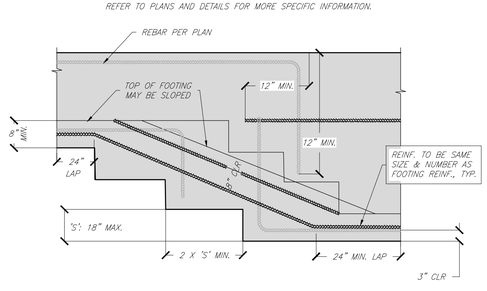
7 SLAB SECTION & CONTROL JOINT

SCALE 1"=1'-0"



6 PLAN VIEW FOOTINGS

SCALE 1" = 1'-0"



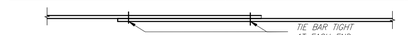
5 STEPPED FOOTING

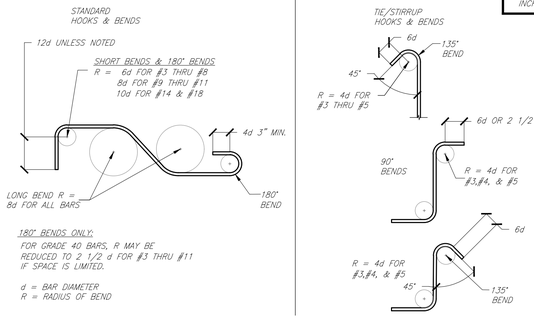
SCALE 1" = 1'-0"

SPLICE TABLE

TOP AND BOTTOM BARS FOR #11 BARS AND SMALLER (U.O.N.)

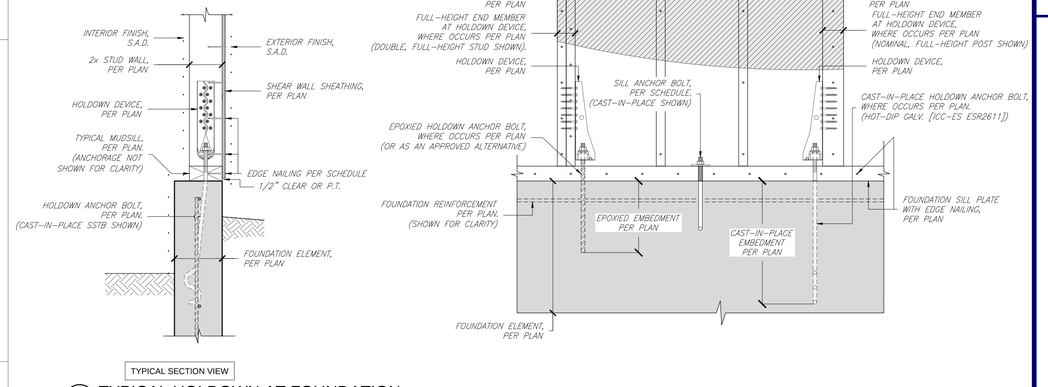
BAR SIZE		#3	#4	#5	#6	#7	#8	#9	#10	#11
MINIMUM LAP IN INCHES	TOP BARS	24"	30"	38"	46"	53"	89"	113"	143"	176"
	BOTTOM BARS	24"	24"	30"	36"	42"	63"	88"	111"	136"





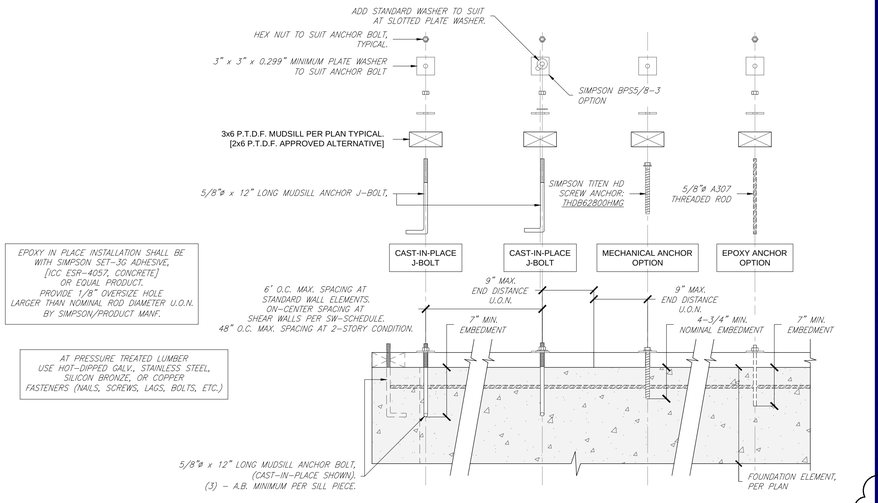
4 TYPICAL HOOKS & BENDS

SCALE 1" = 1'-0"



3 TYPICAL HOLDOWN AT FOUNDATION

SCALE NTS



1 SOLE PLATE ANCHORAGE DETAIL

SCALE 1" = 1'-0"

DATE
07-19-2024
A 08-13-2024

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STANDARD FOUNDATION DETAILS

APN: 065-054-11

426 PINE STREET
SAUSALITO, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
JAMES EDWARD REMPEL
No. 72009
CIVIL
STATE OF CALIFORNIA

DATE:	7/19/24
SCALE:	1/4"=1'-0" UON
PM:	MS
DRAWN BY:	MLB
CHK:	JER
JOB #:	6385.03

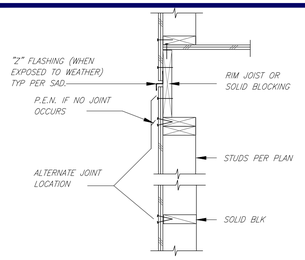
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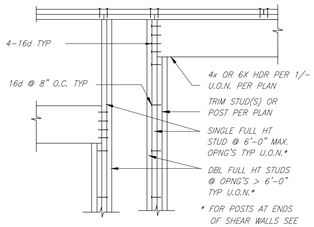
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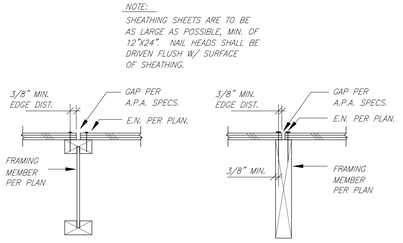
10 TYPICAL WALL SHEATHING JOINT

SCALE NTS



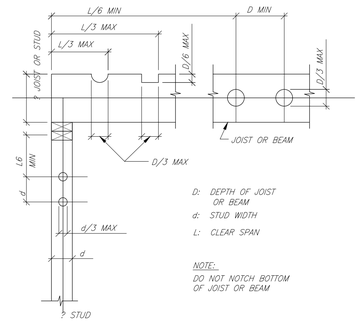
9 HEADER IN STUD WALL

SCALE NTS



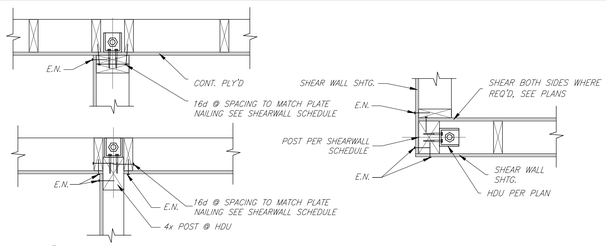
8 TYPICAL SHEATHING SPLICE

SCALE NTS



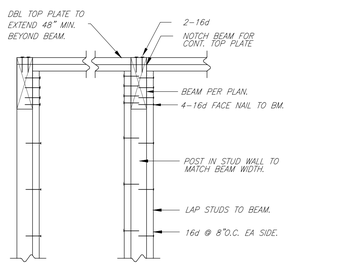
7 HOLES & NOTCHES IN WOOD

SEE MANUFACTURED SPECIFICATION FOR ENGINEERING WOOD SCALE NTS



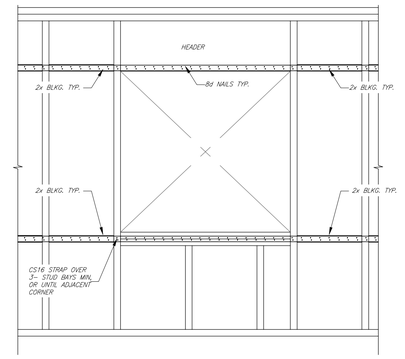
6 HOLDOWN AT CORNER

SCALE 1"=1'-0"



5 BEAM THRU STUD WALL

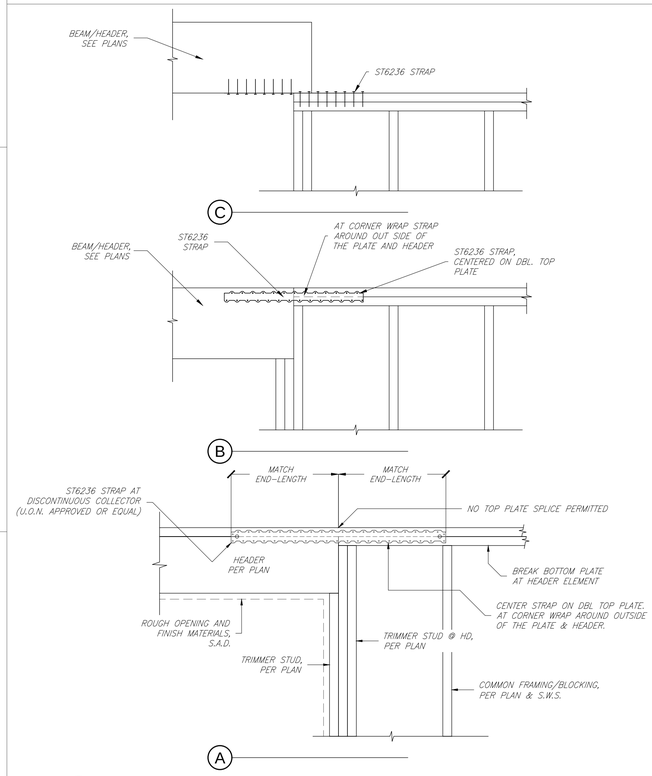
SCALE NTS



4 STRAP AT OPENING

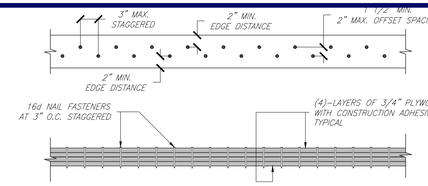
SCALE 1"=1'-0"

* WHERE SPECIFIED PER PLAN.

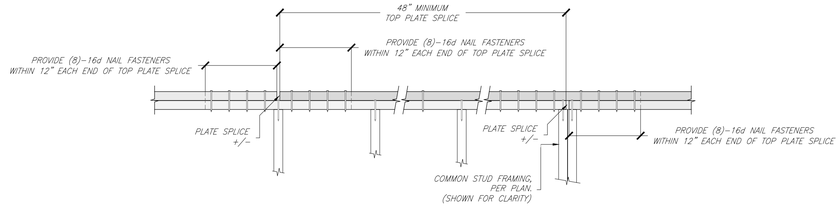


3 DISCONTINUOUS TOP PLATE

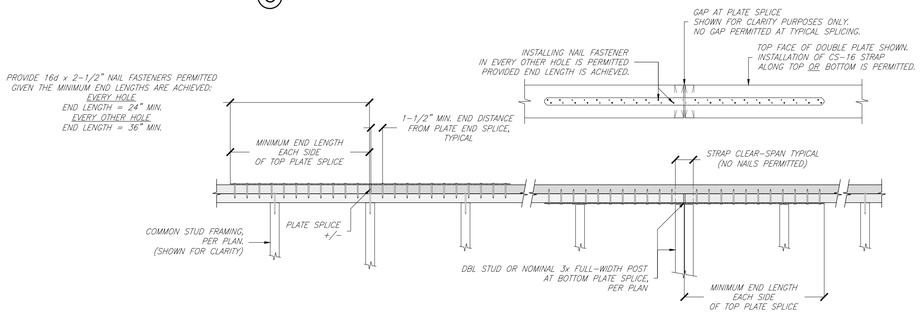
SCALE 1" = 1'-0"



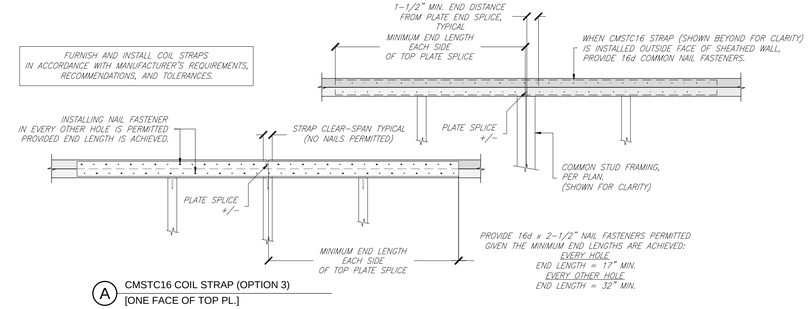
D CURVED TOP PLATE



C TYPICAL NAILING CONDITION



B CS-16 COIL STRAP
[ONE STRAP TOP OR BTM OF PL.]



A CMSTC16 COIL STRAP (OPTION 3)
[ONE FACE OF TOP PL.]

2 TOP PLATE SPLICES (STRAP AT COLLECTOR)

SCALE 1"=1'-0"

NOTE: A MINIMUM OF ONE, SINGLE STRAP IS REQUIRED AT COLLECTOR LOCATIONS U.O.N. PER PLAN. THE THREE OPTIONS SHOWN TO PROVIDED TO SUIT ALTERNATIVE CONDITIONS AS V.I.F.

	BEARING WALLS		NON-BEARING WALLS		ALL WALLS
MAXIMUM OPENING SIZE	MIN. HEADER	MIN. No. OF TRIMMER STUDS	MIN. HEADER	MIN. No. OF TRIMMER STUDS	MIN. No. OF KING STUDS
4'-0"	4x6 OR 6x6	1	4x4 OR 6x6 FLAT	1	1
5'-0"	4x8 OR 6x8	2	4x6 OR 6x6	1	2
6'-0"	4x10 OR 6x8	2	4x6 OR 6x6	1	2
8'-0"	4x12 OR 6x10	2	4x8 OR 6x8	2	3

1. THIS TABLE ASSUMES STUD WALLS ARE FRAMED AT 16" ON-CENTER MAXIMUM.
2. THE MAXIMUM OPENING REFERS TO THE ROUGH OPENING FOR A DOOR OR WINDOW FIXTURE.
3. ALL STUD FRAMING SHALL BE THE FULL WIDTH OF THE WALL, AND BE CONTINUOUS.
4. ALL FRAMING ELEMENTS ASSUMED TO BE SPECIES DOUGLAS FIR, No. 2 GRADE MINIMUM.

1 MINIMUM HEADER SCHEDULE

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APN: 065-054-11

REGISTERED PROFESSIONAL ENGINEER
JAMES EDWARD RICHARDS
No. 72009
CIVIL
STATE OF CALIFORNIA

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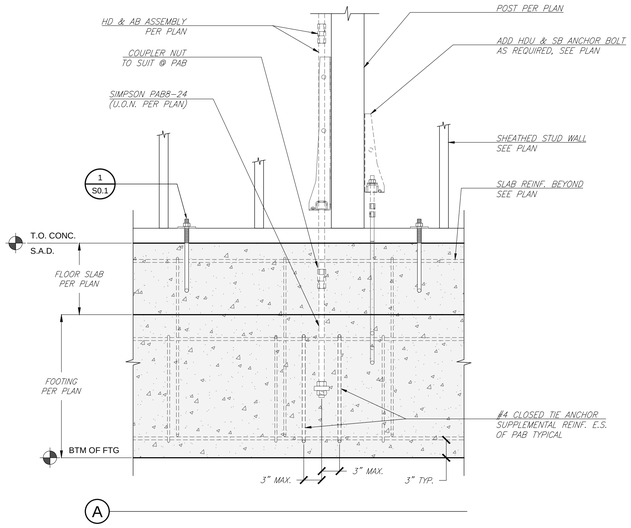
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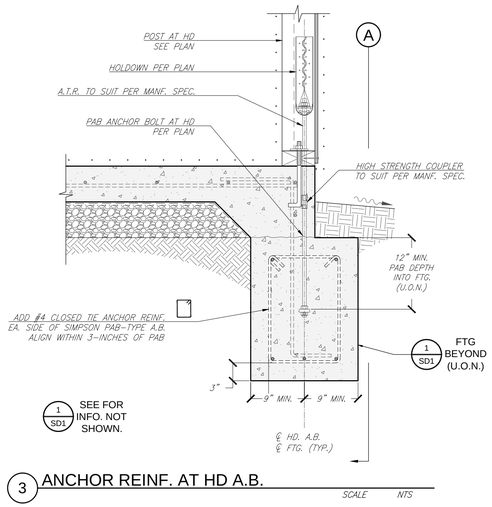
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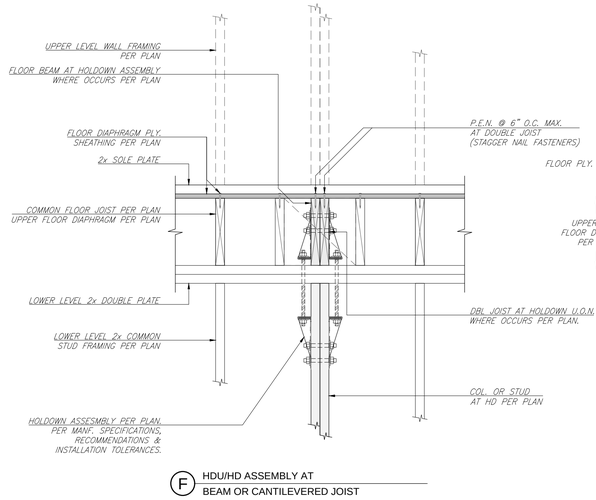
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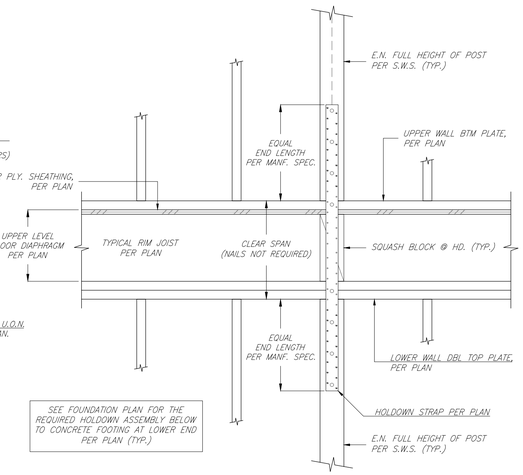


3 ANCHOR REINF. AT HD A.B.

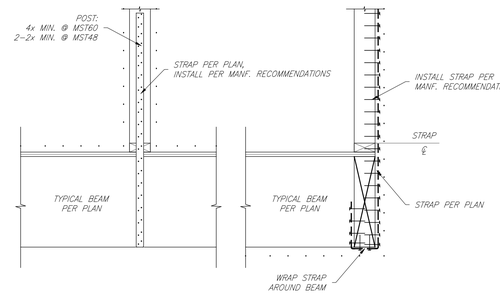
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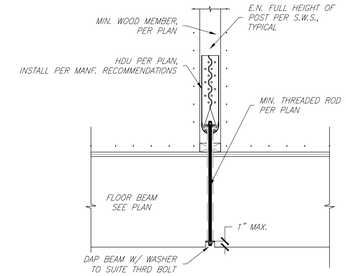
F HDU/HD ASSEMBLY AT BEAM OR CANTILEVERED JOIST



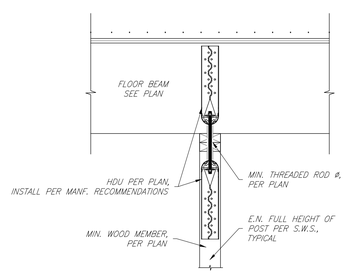
E FLOOR-TO-FLOOR TIE INTERFACE STRAP TYPE HD AT TYP. FLOOR FRAMING



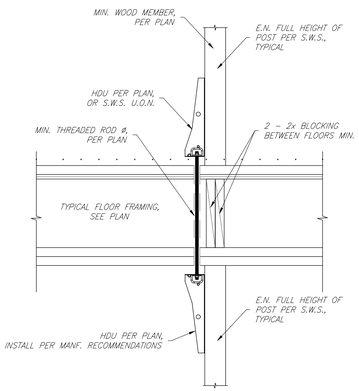
D HDU TIE BETWEEN FLOORS STRAP AT BEAM BELOW



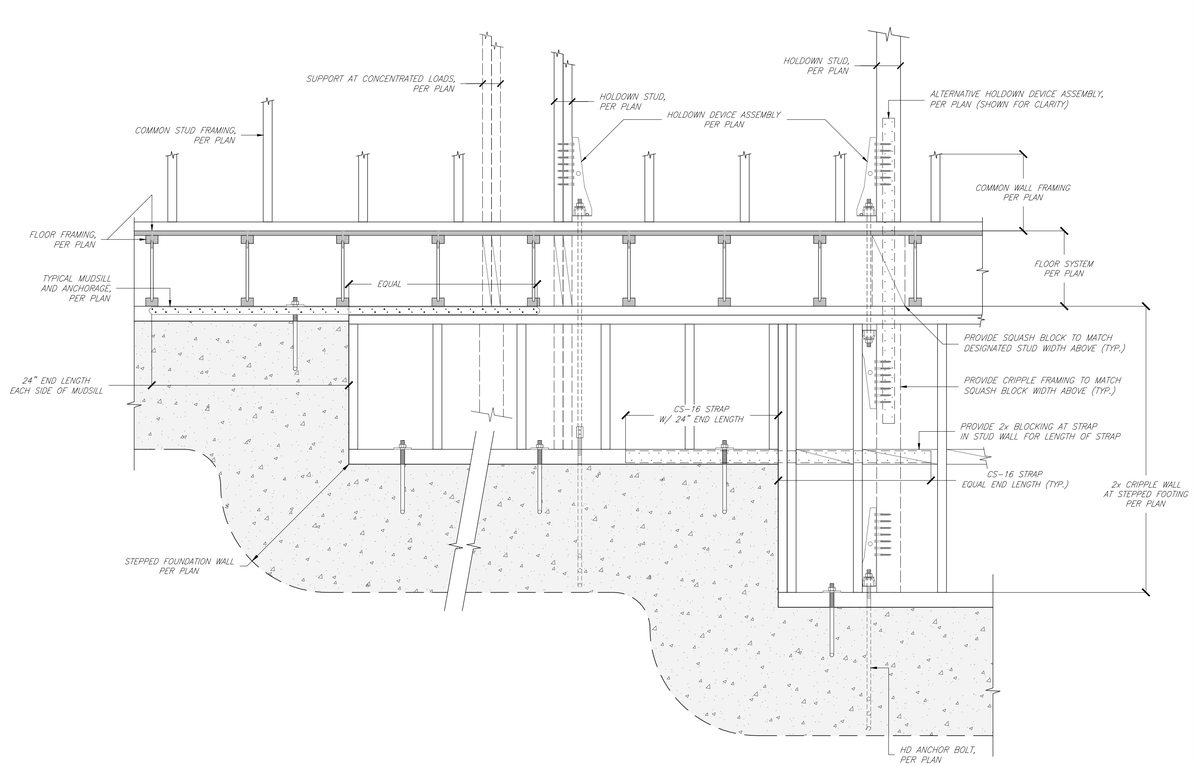
C HDU TIE BETWEEN FLOORS SW. TO BEAM BELOW



B HDU TIE BETWEEN FLOORS AT BEAM TO WALL BELOW



A HDU TIE BETWEEN FLOORS AT TYPICAL FLOOR FRAMING



2 TYPICAL STEPPED WALL INTERFACE (CONT. HD PATH TO FDN.)

SCALE NTS

1 2ND FLOOR HOLDOWNS

SCALE NTS

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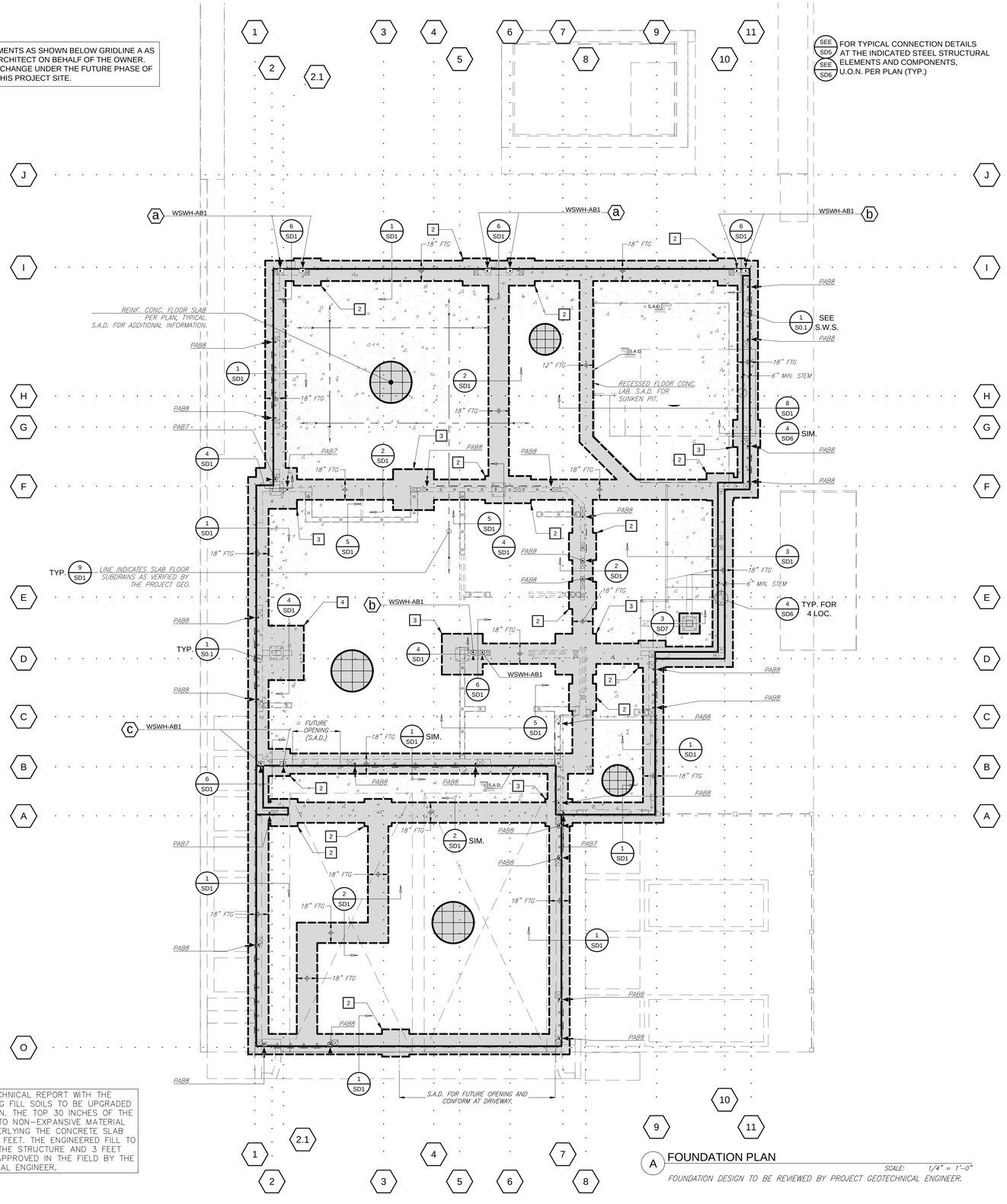
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S.A.D. FOR ANY AND ALL FUTURE IMPROVEMENTS AS SHOWN BELOW GRIDLINE A AS REQUESTED BY THE BUILDING DESIGN ARCHITECT ON BEHALF OF THE OWNER. FOUNDATION AS SHOWN ARE SUBJECT TO CHANGE UNDER THE FUTURE PHASE OF IMPROVEMENTS ON THIS PROJECT SITE.



IN ACCORDANCE WITH THE GEOTECHNICAL REPORT WITH THE EMPLOYMENT OF GRADING THE EXISTING FILL SOILS TO BE UPGRADED BY SUBEXCAVATION AND RECOMPACTION. THE TOP 30 INCHES OF THE MATERIAL SHOULD CONSIST OF LOW TO NON-EXPANSIVE MATERIAL WHERE THE THICKNESS OF THE UNDERLYING THE CONCRETE SLAB ELEMENTS NOT TO VARY MORE THAN 2 FEET. THE ENGINEERED FILL TO EXTEND AT LEAST 5 FEET BEYOND THE STRUCTURE AND 3 FEET BEYOND THE EXTERIOR FLATWORK AS APPROVED IN THE FIELD BY THE PROJECT GEOTECHNICAL ENGINEER.

A FOUNDATION PLAN

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

FOUNDATION DESIGN TO BE REVIEWED BY PROJECT GEOTECHNICAL ENGINEER.

FOUNDATION NOTES

1. SOILS ENGINEER TO DETERMINE FINAL DEPTH OF FOOTING AT TIME OF EXCAVATION.
   1.1. PER THE SOILS REPORT THE DEPTH OF FOOTINGS SHALL EXTEND AT LEAST 12 INCHES INTO COMPACTED ENGINEERED FILL AND SHALL BEAR ON AT LEAST 12" MIN. OF THE COMPACTED ENGINEERED FILL MATERIAL.
2. ALL HOLDOWN ANCHORS SHALL BE TIED IN PLACE PRIOR TO PRE-POUR FOUNDATION REINFORCEMENT INSPECTION. ALL ANCHOR BOLTS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
3. PRIOR TO CONTRACTOR REQUESTING A BUILDING DEPARTMENT FOUNDATION INSPECTION, THE SOILS ENGINEER, SHALL ADVISE THE BUILDING OFFICIAL IN WRITING THAT.
   3.1. THE BUILDING PAD WAS PREPARED AND COMPACTED IN ACCORDANCE WITH THE SOILS REPORT AND SPECIFICATIONS.
   3.2. THE UTILITY TRENCHES HAVE BEEN PROPERLY BACKFILLED AND COMPACTED.
   3.3. THE FOUNDATION EXCAVATION, DEPTH, AND MATERIAL COMPLY WITH THE SOILS REPORT AND APPROVED PLANS.
4. ALL MECHANICAL & EPOXY ANCHORS ARE SUBJECT TO SPECIAL INSPECTIONS. REFER TO THE APPROVED STATEMENT OF SPECIAL INSPECTIONS AND THE GENERAL NOTES ON SHEET S-CS.
5. ALL WATERPROOFING MEASURES AND FLASHING METHODS SHALL BE DETERMINED AND PROVIDED BY OTHERS.
6. ALL FASTENERS (i.e. NAILS, SCREWS, BOLTS, LAGS, ETC.), HARDWARE (i.e. HANGERS, CONNECTORS, CLIPS, ETC.), USED FOR EXTERIOR ASSEMBLIES EXPOSED TO WEATHER SHALL BE AT A MINIMUM PROVIDED HOT-DIP GALVANIZED, STAINLESS STEEL, SILICON BRONZE, OR COPPER, AND BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS, RECOMMENDATIONS, AND TOLERANCES. ALL EXPOSED WOOD FRAMING SHALL BE EXTERIOR GRADE LUMBER, PRESSURE TREATED, OR OF A NATURALLY DURABLE MATERIAL.
7. REFER TO THE ARCHITECTURAL DRAWINGS AND COMMUNICATE WITH THE PROJECT ENGINEER IN THE EVENT OF SIGNIFICANT DISCREPANCY.
8. ALL POINT LOAD LOCATIONS OF FRAMING ABOVE SHALL BE SOLID BLOCKED DOWN TO THE FOUNDATION ELEMENTS.
9. THE EXTERIOR CONCRETE FLATWORK INCLUDING SLABS SHOULD BE CAREFULLY SEPARATED FROM FOUNDATIONS WITH FELT PAPER OR OTHER POSITIVE AND LOW FRICTION MATERIALS.
10. THE CONTRACTOR SHALL TAKE GREAT CARE TO VERIFY THE LAYOUT, SETTING, DIMENSIONS, CONDITIONS, AND ELEVATIONS PRIOR TO THE ORDERING, FURNISHING, & INSTALLATION OF THE STRONG-WALL SHEARWALL WSWH ASSEMBLAGES AND ANCHORAGE SYSTEMS.
11. ALL POINT LOAD LOCATIONS OF FRAMING ABOVE SHALL BE SOLID BLOCKED DOWN TO THE FOUNDATION ELEMENTS.
12. ALL FINAL GRADES SHOULD BE PROVIDED WITH POSITIVE GRADIENTS AWAY FROM FOUNDATION TO PROVIDE RAPID REMOVAL OF SURFACE WATER RUNOFF TO AN ADEQUATE DISCHARGE POINT. NO PONDING OF WATER SHOULD BE ALLOWED IN STRUCTURAL AREAS OR ADJACENT TO FOUNDATION.
13. ALL GRADING, DRAINAGE AND CIVIL ACTIVITIES ONSITE ARE OUTSIDE THE SCOPE OF THIS STRUCTURAL IMPROVEMENT PLAN AS SPECIFIED HEREIN AND SHALL BE THE RESPONSIBILITY OF OTHERS.

TAG	TYPE	DIMENSION (U.O.N.)	MIN. REINFORCEMENT (U.O.N.)
1	P1.5	18"-SQUARE x 8" THICK MIN.	(3) #4 BARS E.W. @ BTM MIN. [EQUALLY SPACED]
2	P2.0	24"-SQUARE x 8" THICK MIN.	(3) #5 BARS E.W. @ BTM MIN. [EQUALLY SPACED]
3	P3.0	36"-SQUARE x 18" THICK	(4) #5 BARS E.W. T&B [EQUALLY SPACED]
4	P4.0	48"-SQUARE x 18" THICK	(5) #6 BARS E.W. T&B [EQUALLY SPACED]

3 PAD FOOTING SCHEDULE

SCALE NTS

HD DEVICE	HD STUD (U.O.N.)	ANCHOR BOLT DIAMETER	A.B. TYPE	BTM COVER MIN.
HDU5	(2) 2x FULL-WIDTH STUD	5/8"Ø	SB5/8x24	0'-3"
HDU8	(2) 2x FULL-WIDTH STUD OR BTR	7/8"Ø	PAB7	
HDU11	4x6 NOMINAL STUD OR BTR	1"-Ø	PAB8	
HDU14	6x6 NOMINAL STUD MIN.	1"-Ø	PAB8	

SCHEDULE NOTES:
1. ALL UNITS ARE IN INCHES, UNLESS OTHERWISE NOTE.
2. ALL HOLDOWN STUD MEMBERS ARE DOUGLAS FIR No. 2 OR BETTER, U.O.N. REFER TO THE MANUFACTURER'S GUIDELINES.
3. ALL HARDWARE, CONNECTORS, ANCHORS, AND THEIR RESPECTIVE FASTENERS SHALL BE INSTALLED PER THE MANUFACTURER.
4. INSTALL ALL HOLDOWN (HD) DEVICES WITH MAXIMUM FASTENERS WITH RESPECTIVE ANCHOR BOLT TO SUIT APPLICATION.
5. ALL-THREAD RODS USED AS RETROFIT HOLDOWN ANCHOR BOLTS SHALL BE HOT-DIP GALVANIZED AND GRADE A36 OR A307 MINIMUM. EPOXY INSTALLATION OF SUCH ANCHORS SHALL BE IN ACCORDANCE WITH THESE PLANS, AND IN COMPLIANCE WITH THE SPECIFICATIONS, RECOMMENDATIONS AND INSTALLATION TOLERANCES SET FORTH BY THE MANUFACTURER.
6. ALL ANCHOR BOLTS SHALL BE INSTALLED WITH 3" MINIMUM BOTTOM COVER U.O.N. BY THE MANUFACTURER.
7. ALL HARDWARE, CONNECTORS, ANCHORS, AND THEIR RESPECTIVE FASTENERS SHALL BE INSTALLED PER THE SPECIFICATIONS, RECOMMENDATIONS, AND TOLERANCES SET FORTH BY THE MANUFACTURER.

2 HOLDOWN/ANCHOR BOLT SCHEDULE

SCALE NTS

SIMPSON STRONG WALL PAD FOOTING SCHEDULE

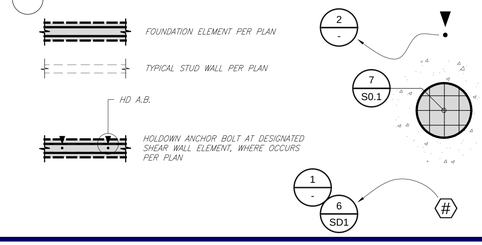
SYMBOL	MODEL	ANCHOR BOLT	STRENGTH	REF.
a	WSWH24x9 **	WSWH-AB1	STANDARD	6/SD1, SEE WSWH
	** TWO-STORY STACKED WSWH			
b	WSWH12x9	WSWH-AB1	STANDARD	SEE WSWH
c	WSWH24x9	WSWH-AB1	STANDARD	

1. THE UNITS OF THIS TABLE ARE IN INCHES (IN), UNLESS OTHERWISE NOTED.
2. REFER TO THE STANDARD SIMPSON STEEL STRONG WALL DETAIL SHEETS FOR THE MANUFACTURER'S SPECIFICATIONS, INSTALLATION REQUIREMENTS, TOLERANCES, AND RECOMMENDATIONS.
3. THE CONTRACTOR SHALL VERIFY THE STRONG WALL HEIGHT AND ANCHORAGE PRIOR TO THE PLACING OF CONCRETE.
4. SPECIAL INSPECTIONS OF THE WOOD STRONG WALL ANCHORAGE IS REQUIRED, AND RECOMMENDED BY THE MANUFACTURER.
5. PROVIDE SUPPLEMENTARY PAD REINFORCEMENT AT ALL STRONG WALL FOUNDATION ELEMENTS. THE REINFORCEMENT IN THE PAD FOOTINGS SHALL BE #5 @ 12" O.C. MAX. TOP AND BOTTOM, EACH WAY U.O.N.
6. REFER TO SHEETS WSWH1 & WSWH2 FOR ADDITIONAL DETAIL AND SPECIFICATIONS PROVIDED BY THE MANUFACTURER.
7. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, AND ELEVATIONS PRIOR TO THE INSTALLATION OF THE STRONG WALL SYSTEM. IF ANY DISCREPANCIES ARE FOUND, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER FOR CLARIFICATION PRIOR TO CONSTRUCTION.

1 WSWH ANCHORAGE/FTG SCHEDULE

SCALE NTS

SHEET LEGEND



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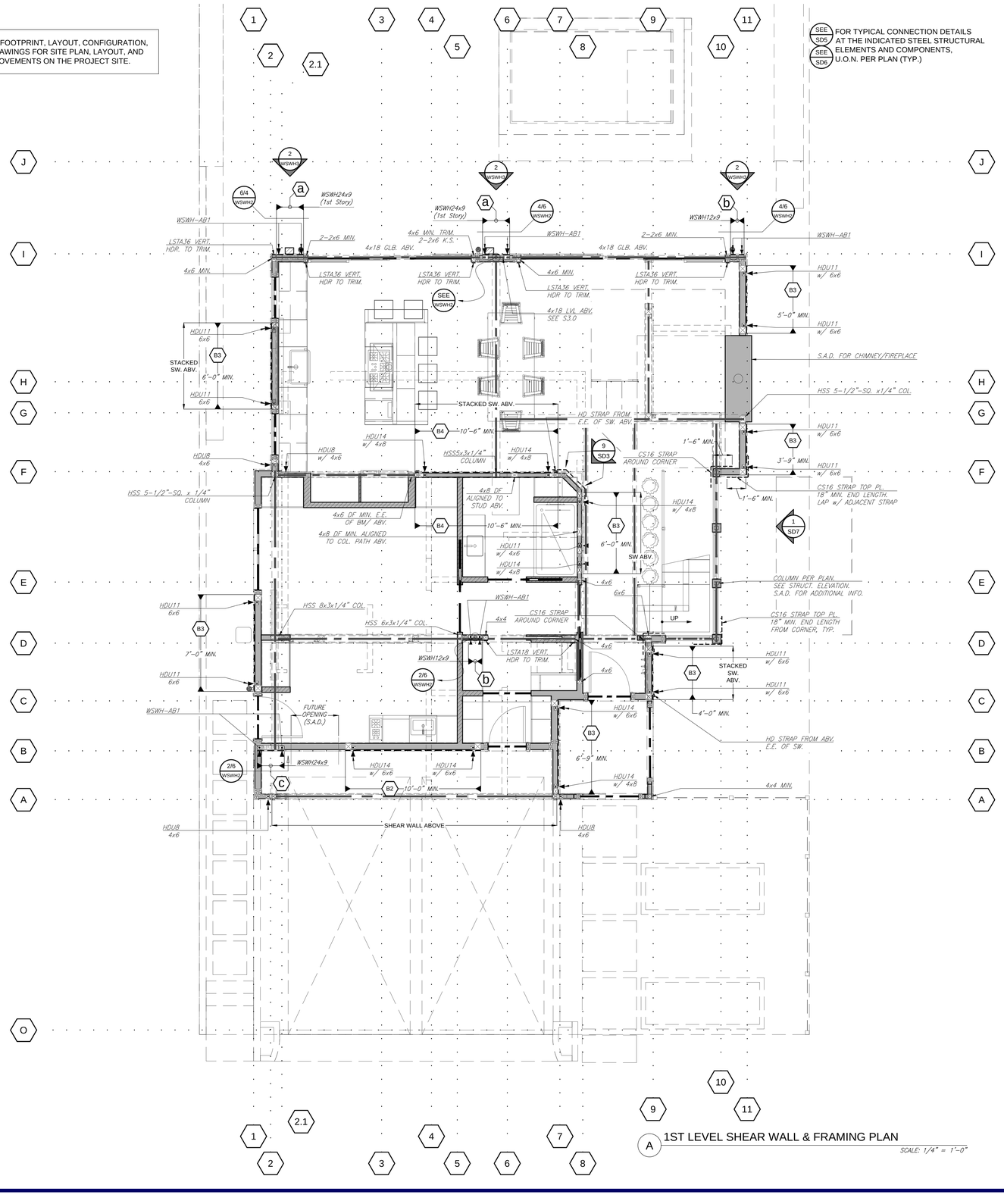
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S.A.D. FOR ALL DIMENSIONS OF BUILDING FOOTPRINT, LAYOUT, CONFIGURATION, ETC. REFER TO THE ARCHITECTURAL DRAWINGS FOR SITE PLAN, LAYOUT, AND COORDINATION FOR SCOPE OF IMPROVEMENTS ON THE PROJECT SITE.



A 1ST LEVEL SHEAR WALL & FRAMING PLAN

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

FRAMING NOTES

1. WALL SHEATHING :15/32" THICK; 32/16 PANEL INDEX A.P.A. RATED PLYWOOD MIN. OR BTR NAILING: EDGE = 8d @ 6" O.C. FIELD = 8d @ 12" O.C.
   (U.O.N. PER PLAN AT DESIGNATED SHEAR WALL ELEMENTS, SEE S.W.S. PER 3/SO.3)
2. PROVIDE STRAP AT ALL DISCONTINUOUS PLATES AND BEAM SPLICES PER DETAIL 2/SO.2.
3. PRESSURE TREAT WHERE FRAMING MEMBERS ARE IN DIRECT CONTACT WITH CONCRETE.
4. INSTALL ALL HARDWARE PER MANUFACTURER'S RECOMMENDATIONS.
5. HEADER SPECIFICATION PER PLAN, OR SEE HDR SCHEDULE 1/SO.2 IF NO SPECIFICATION IS PROVIDED ON PLAN.
6. REFER TO DETAIL 3/– FOR THE SHEAR WALL CONSTRUCTION SCHEDULE.
7. REFER TO DETAIL 2/– FOR THE HOLDOWN ANCHOR BOLT SCHEDULE.
8. STUD WALLS SHALL BE 2x6 DF No. 2 OR BTR MINIMUM STUDS @ 16" O.C. MAXIMUM, U.O.N. PER PLAN OR AS APPROVED. 15/32" WALL SHEATHING TO BE PROVIDED ALONG ALL EXTERIOR STUD WALLS AND INTERIOR LOAD–BEARING WALLS IN ADDITION TO DESIGNATED BRACED WALL LINES AND SHEAR WALL ELEMENTS PER PLAN.
9. ALL EXISTING STUD WALL ELEMENTS ASSUMED UNLESS OTHERWISE DISCOVERED BY THE OWNER/CONTRACTOR.
10. REFER TO ARCH. DWGS & COMMUNICATE WITH THE PROJECT EOR IN THE EVENT OF SIGNIFICANT DISCREPANCY.

SHEARWALL & BRACED PANEL SCHEDULE (S.W.S.)

TYPE	PLYWOOD OR OSB SHEATHING THICKNESS 1: PANEL INDEX	PLY. EDGE NAILING (P.E.N.)	FIELD NAILING	SOLE PLATE CONNECTION	TYPICAL REMARKS, SEE NOTES BELOW	FRAMING CLIPS	MUDSILL ANCHOR BOLTS, U.O.N.
WSP	3/8" MIN. : 32/16	8d @ 6" O.C.	8d @ 12" O.C.	16d AT 6" O.C.	NONE	A35 @ 24" O.C.	5/8"ø X 12" @ 72" O.C.
B6	15/32" : 32/16	10d @ 6" O.C.	10d @ 12" O.C.	16d AT 6" O.C.	NONE	A35 @ 16" O.C.	5/8"ø X 12" @ 48" O.C.
B4	15/32" : 32/16	10d @ 4" O.C.	10d @ 02" O.C.	16d AT 4" O.C.	SEE NOTE 10	A35 @ 12" O.C.	5/8"ø X 12" @ 32" O.C.
B3	15/32" : 32/16	10d @ 3" O.C.	10d @ 10" O.C.	16d AT 3" O.C.	SEE NOTE 10	A35 @ 12" O.C.	5/8"ø X 12" @ 24" O.C.
B2	15/32" : 32/16	10d @ 2" O.C.	10d @ 10" O.C.	16d AT 3" O.C.	SEE NOTE 10	A35 @ 12" O.C.	5/8"ø X 12" @ 24" O.C.
B4 / BX	15/32" CDX EACH SIDE	8d @ 4" O.C.	8d @ 10" O.C.	16d AT 3" O.C.	SEE NOTES 9 & 14	A35 @ 8" O.C.	5/8"ø X 12" @ 12" O.C.

TYPICAL SHEAR WALL CONSTRUCTION NOTES

1. ALL SHEATHING SHALL BE A.P.A RATED, EXPOSURE 1 OR EXTERIOR GRADE.
2. SHEAR WALLS SHALL BE SHEATHED WITH APPROVED MATERIALS ATTACHED DIRECTLY TO THE FRAMING MEMBERS AND/OR BLOCKING. PANELS SHALL NOT BE LESS THAN 4' x 8', EXCEPT AT BOUNDARIES AND CHANGES IN FRAMING. ALL EDGES OF ALL PANELS SHALL BE SUPPORTED BY AND FASTENED TO FRAMING MEMBERS OR BLOCKING.
3. SHEATHING SHALL BE ATTACHED TO FRAMING MEMBERS USING NAILS DRIVEN WITH THE HEAD OF THE NAIL FLUSH WITH THE SURFACE OF THE SHEATHING.
4. NAILS SHALL BE LOCATED AT LEAST 3/8" FROM THE PANEL EDGES. MAXIMUM NAIL SPACING AT STRUCTURAL PANEL EDGES SHALL BE 6" ON CENTER.
5. NAILS ALONG INTERMEDIATE FRAMING MEMBERS SHALL BE THE SAME SIZE AS NAILS SPECIFIED FOR PANEL EDGE NAILING. AT INTERMEDIATE FRAMING MEMBERS, THE MAXIMUM NAIL SPACING SHALL BE 12" ON CENTER.
6. ALL FRAMING MEMBERS AND BLOCKING USED FOR SHEAR WALL CONSTRUCTION SHALL BE 2" NOMINAL OR GREATER.
7. END POSTS (STUDS OR COLUMNS), SHALL BE FRAMED TO PROVIDE FULL END BEARING.
8. SHEAR WALL END MEMBERS SHALL PROVIDE A LOAD PATH TO THE FOUNDATION FOR UPLIFT, SHEAR, AND COMPRESSION FORCES.
9. THE WIDTH OF THE NAILED FACE OF ALL FRAMING MEMBERS AND BLOCKING SHALL BE 2" NOMINAL OR GREATER. SEE NOTE 9 BELOW.
10. WHERE INDICATED IN THE TABLE ABOVE, THE WIDTH OF THE NAILED FACE OF A COMMON FRAMING MEMBER OR BLOCKING AT ADJOINING PANEL EDGES SHALL BE EITHER DOUBLE 2x NOMINAL, 3X, OR GREATER, AND NAILING SHALL BE STAGGERED AT ALL PANEL EDGES, AT BUILT UP STUDS, STITCH NAIL WITH 16d AT 6" ON CENTER EACH SIDE VERTICALLY.
11. STAGGER NAILING AT ALL ADJOINING PANEL EDGES.
12. BLOCK AND EDGE NAIL ALL PANEL EDGES. PROVIDE FIELD NAILING WITH 10d AT 12" ON CENTER TYPICAL.
13. MUDSILL/SOLE PLATE ANCHOR BOLTS EMBEDDED DEPTH SHALL BE 7" MINIMUM, U.O.N.
14. ALL NAILS SHALL BE COMMON OR GALVANIZED BOX. GALVANIZED NAILS SHALL BE HOT DIPPED OR TUMBLED.
15. PANEL JOINTS AT DOUBLE–SIDED SHEAR WALLS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.

2 SHEAR WALL AND BRACED PANEL SCHEDULE

SCALE NTS

HD DEVICE	HD STUD (U.O.N.)	ANCHOR BOLT (Ø)
HDU5	(2) 2x FULL-WIDTH STUD	SB5/8x24 (5/8"-Ø)
HDU8	(2) 2x FULL-WIDTH STUD OR BTR	SB7/8x24 (7/8"-Ø)
HDU11	4x6 NOMINAL STUD OR BTR	SB1x30 (1"-Ø)
HDU14	6x6 NOMINAL STUD OR BTR	PAB8 (1"-Ø)

SCHEDULE NOTES:

1. ALL UNITS ARE IN INCHES, UNLESS OTHERWISE NOTE.
2. ALL HOLDOWN STUD MEMBERS ARE DOUGLAS FIR No. 2 OR BETTER, U.O.N. REFER TO THE MANUFACTURER'S GUIDELINES.
3. ALL HARDWARE, CONNECTORS, ANCHORS, AND THEIR RESPECTIVE FASTENERS SHALL BE INSTALLED PER THE MANUFACTURER.
4. INSTALL ALL HOLDOWN (HD) DEVICES WITH MAXIMUM FASTENERS WITH RESPECTIVE ANCHOR BOLT TO SUIT APPLICATION.
5. ALL–THREAD RODS USED AS RETROFIT HOLDOWN ANCHOR BOLTS SHALL BE HOT–DIP GALVANIZED AND GRADE A36 OR A307 MINIMUM. EPOXY INSTALLATION OF SUCH ANCHORS SHALL BE IN ACCORDANCE WITH THESE PLANS, AND IN COMPLIANCE WITH THE SPECIFICATIONS, RECOMMENDATIONS AND INSTALLATION TOLERANCES SET FORTH BY THE MANUFACTURER.
6. ALL ANCHOR BOLTS SHALL BE INSTALLED WITH 3" MINIMUM BOTTOM COVER U.O.N. BY THE MANUFACTURER.
7. ALL HARDWARE, CONNECTORS, ANCHORS, AND THEIR RESPECTIVE FASTENERS SHALL BE INSTALLED PER THE SPECIFICATIONS, RECOMMENDATIONS, AND TOLERANCES SET FORTH BY THE MANUFACTURER.

1 HOLDOWN (HD) SCHEDULE

SCALE NTS

SHEET LEGEND

TYPICAL STUD WALL

TYPICAL NON–BEARING STUD WALL

TYPICAL HEADER ELEMENT

TYPICAL CEILING BEAM

DESIGNATED SHEAR WALL ELEMENT: TYPE, MINIMUM LENGTH, NAILING, & HOLDOWN

TYPICAL UPPER LEVEL WALL PER PLAN

SYMBOL FOR DESIGNATED HOLDOWN ANCHOR BOLT PER PLAN: (SEE SCHEDULE)

SIMPSON STRONG–TIE STRONG–WALL® PER PLAN HIGH STRENGTH WOOD SHEARWALLS (WSWH) SEE DETAILS/SCHEDULES PER PLAN & MANF. SHEETS

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THE BEYER RESIDENCE
FAMILY HOME RENOVATION
1ST LEVEL SHEAR WALL & FRAMING PLAN

APN: 065-054-11

426 PINE STREET
SAUSALITO, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER JAMES EDWARD RICHARDS No. 72009 CIVIL STATE OF CALIFORNIA

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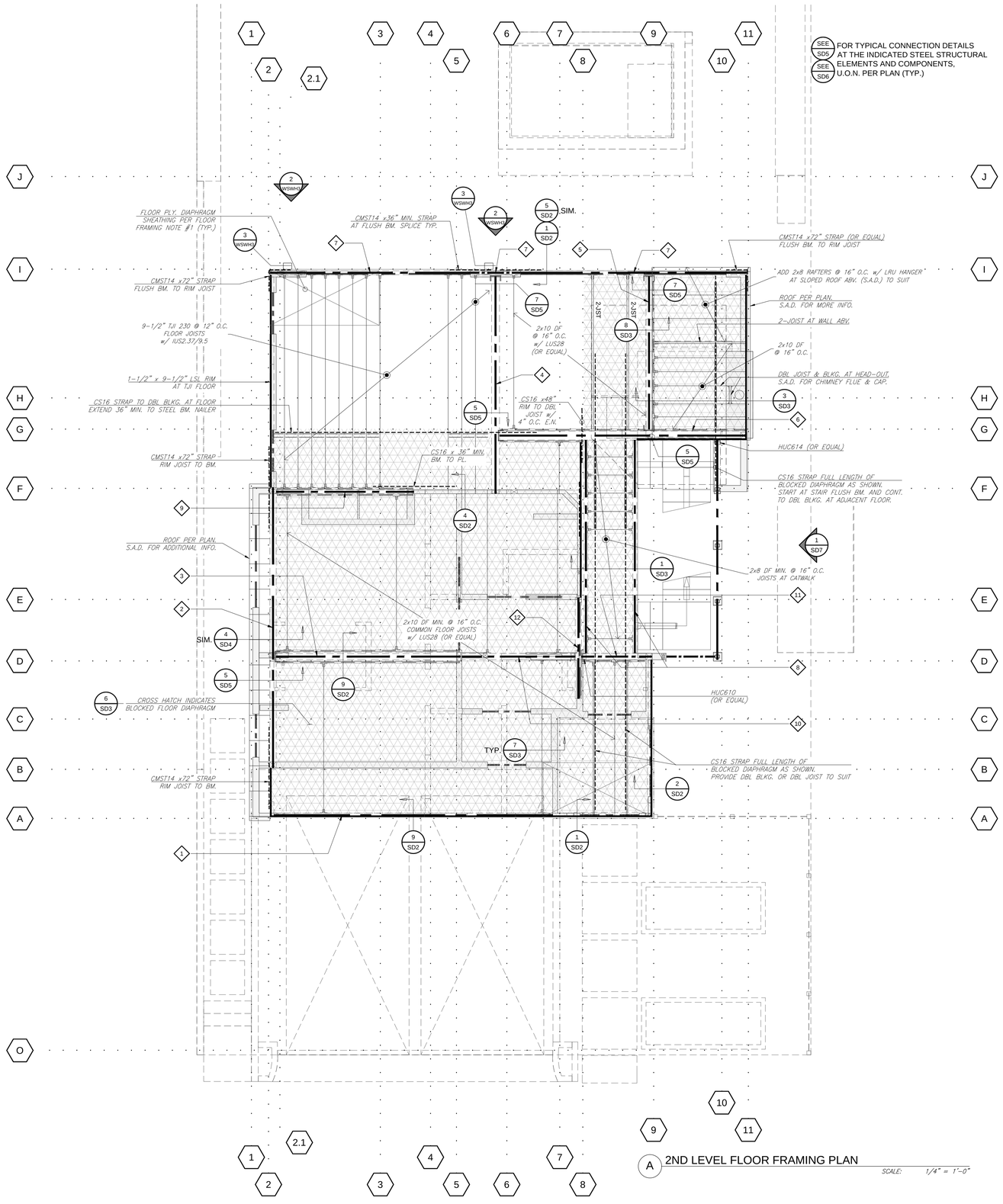
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A 2ND LEVEL FLOOR FRAMING PLAN

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

FLOOR FRAMING NOTES

1. FLOOR SHEATHING : 3/4: CDX T&G PLYWOOD
   NAILING: BOUNDARY = 10d @ 6" O.C.
   (GLUE & NAIL TO JOISTS, STAGGER PANEL JOINTS)
2. PROVIDE MID-SPAN BLOCKING AT SPANS GREATER THAN 10'-0".
3. PROVIDE DBL JOIST UNDER WALLS PARALLEL TO JOISTS.
4. PROVIDE SOLID BLKG. UNDER WALLS PERPENDICULAR TO JOISTS.
5. ENGINEERED DOUBLE JOISTS SHALL BE JOINED PER MANUFACTURER'S RECOMMENDATIONS.
6. ALL HEADERS SHALL BE 4x12 UNLESS OTHERWISE NOTED PER PLAN. SEE HEADER SCHEDULE 1/S0.2 IF NO HDR SPECIFICATION IS INDICATED ON THE PLAN LAYOUTS.
7. ALL BEAMS RESTING ON TOP PLATE SHALL BE ATTACHED WITH ONE A35 CLIP EA. SIDE.
8. ALL 2x JOISTS SHALL BE INSTALLED WITH REGARDS TO END BEARING, INTERMEDIATE BEARING, BLOCKING, WEB STIFFENING, & NAILING PER MANUFACTURER'S SPECIFICATIONS.
9. EDGE NAIL PLYWOOD TO ALL BEAMS AND TIE BEAMS.
10. ALL PSL AND GLU-LAM BEAMS THAT FALL BELOW TOP PLATE SHALL BE ATTACHED TO SUPPORTING POST WITH A 'CC' STYLE POST CAP.
11. ALL HARDWARE SHALL BE INSTALLED PER THE SPECIFICATIONS OF THE MANUFACTURER, AND IN ACCORDANCE WITH THEIR RECOMMENDATIONS.
12. HARDWARE SPECIFIED PER PLAN SHALL BE INSTALLED WITH MAXIMUM FASTENERS, UNLESS OTHERWISE NOTED, OR AS APPROVED BY THE PROJECT ENGINEER.
13. DROPPED FLOOR GIRDERS SHALL BE MECHANICALLY ANCHORED TO THE TYPICAL FOUNDATION ELEMENTS BY USE OF SIMPSON GH OR HU/HUC HANGER INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS FOR FASTENING TO CONCRETE.
14. FILLER/BACKER BLOCKS AND WEB STIFFENERS SHALL BE PROVIDED IN ACCORDANCE WITH AND PER THE MANUFACTURER'S REQUIREMENTS, SPECIFICATIONS, RECOMMENDATIONS, AND TOLERANCES; IN CONJUNCTION WITH THE CONFIGURATION SPECIFIED PER PLAN.
5. ALL WATERPROOFING MEASURES AND FLASHING METHODS SHALL BE DETERMINED AND PROVIDED BY OTHERS.
6. ALL FASTENERS (i.e. NAILS, SCREWS, BOLTS, LAGS, ETC.), HARDWARE (i.e. HANGERS, CONNECTORS, CLIPS, ETC.), USED FOR EXTERIOR ASSEMBLIES EXPOSED TO WEATHER SHALL BE AT A MINIMUM PROVIDED HOT-DIP GALVANIZED, STAINLESS STEEL, SILICON BRONZE, OR COPPER, AND BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS, RECOMMENDATIONS, AND TOLERANCES. ALL EXPOSED WOOD FRAMING SHALL BE EXTERIOR GRADE LUMBER, PRESSURE TREATED, OR OF A NATURALLY DURABLE MATERIAL.
7. THE CONTRACTOR SHALL TAKE GREAT CARE TO VERIFY THE LAYOUT, SETTING, DIMENSIONS, CONDITIONS, AND ELEVATIONS PRIOR TO THE ORDERING, FURNISHING, & INSTALLATION OF THE STRONG-WALL SHEARWALL WSWH ASSEMBLAGES AND ANCHORAGE SYSTEMS.

6 SD2 BLOCKED DIAPHRAGM NOTES (SEE CROSS HATCH PER PLAN)

1. WHERE DIAPHRAGMS ARE INDICATED AS BLOCKED, ALL JOINTS IN SHEATHING SHALL OCCUR OVER AND BE FASTENED TO COMMON FRAMING MEMBERS OR COMMON BLOCKING.
2. PROVIDE 8d P.E.N. FASTENERS 4" O.C. AT EDGE AND BOUNDARY CONDITIONS, AND AT 10" O.C. AT FIELD CONDITIONS.
3. PANELS SHALL NOT BE LESS THAN 4' x 8' NOMINAL, EXCEPT AT BOUNDARIES AND CHANGES IN FRAMING WHERE MINIMUM PANEL DIMENSION SHALL BE 24".
4. NAIL FASTENERS SHALL BE LOCATED AT LEAST 3/8" FROM THE EDGES OF THE SHEATHING PANELS. THE MAXIMUM NAIL FASTENER SPACING AT PANEL EDGES SHALL BE AS INDICATED PER PLAN.
5. NAILS ALONG INTERMEDIATE FRAMING MEMBERS AND BLOCKING FOR PANELS SHALL BE THE SAME SIZE AS INSTALLED AT THE PANEL EDGES.
6. THE WIDTH OF THE NAILED FACE OF FRAMING MEMBERS OR BLOCKING SHALL BE 2" NOMINAL OR GREATER AT ADJOINING PANEL EDGES.

N1 SCALE NTS

FLOOR BEAM SCHEDULE

1	3-1/2" x 24" 24F-V4 DF/DF GLB. w/ 1/4" MIN. CAMBER (2-FB-A) -- WOOD FLUSH BEAM
2	W10 x 15 (2-FB-2) -- WIDE FLANGE FLUSH BEAM
3	W8 x 48 (2-FB-D) -- WIDE FLANGE FLUSH BEAM
4	W8 x 67 (2-FB-6) -- WIDE FLANGE FLUSH BEAM
5	W8 x 67 (2-FB-9) -- WIDE FLANGE FLUSH BEAM
6	W12 x 106 (2-FB-G) -- WIDE FLANGE FLUSH STEEL BEAM
7	3-1/2" x 18" 24F-V4 DF/DF GLB. w/ 1/4" MIN. CAMBER (1-HDR-I) -- FLUSH WOOD BEAM
8	HSS 8 x 8 x 5/16 (STAIR-FB-8/9) -- FLUSH BM. AT CATWALK/STAIRS
9	3-1/2" x 9-1/4" 2.0E LVL (2-FB-F) -- FLUSH WOOD BEAM
10	7" x 9-1/4" 2.0E LVL (2-FB-D_5-7) -- FLUSH WOOD BEAM
11	5-1/4" x 9-1/4" 2.0E LVL (2-FB-D_8-9) -- FLUSH WOOD BEAM
12	5-1/4" x 9-1/4" 2.0E LVL (2-FB-8) -- FLUSH WOOD BEAM

SHEET LEGEND

- STUD WALL ABOVE, SEE PLAN
- STUD WALL BELOW, SEE PLAN
- FLOOR BEAM PER PLAN
- FLOOR FRAMING PER PLAN
- HEADER BELOW, PER PLAN

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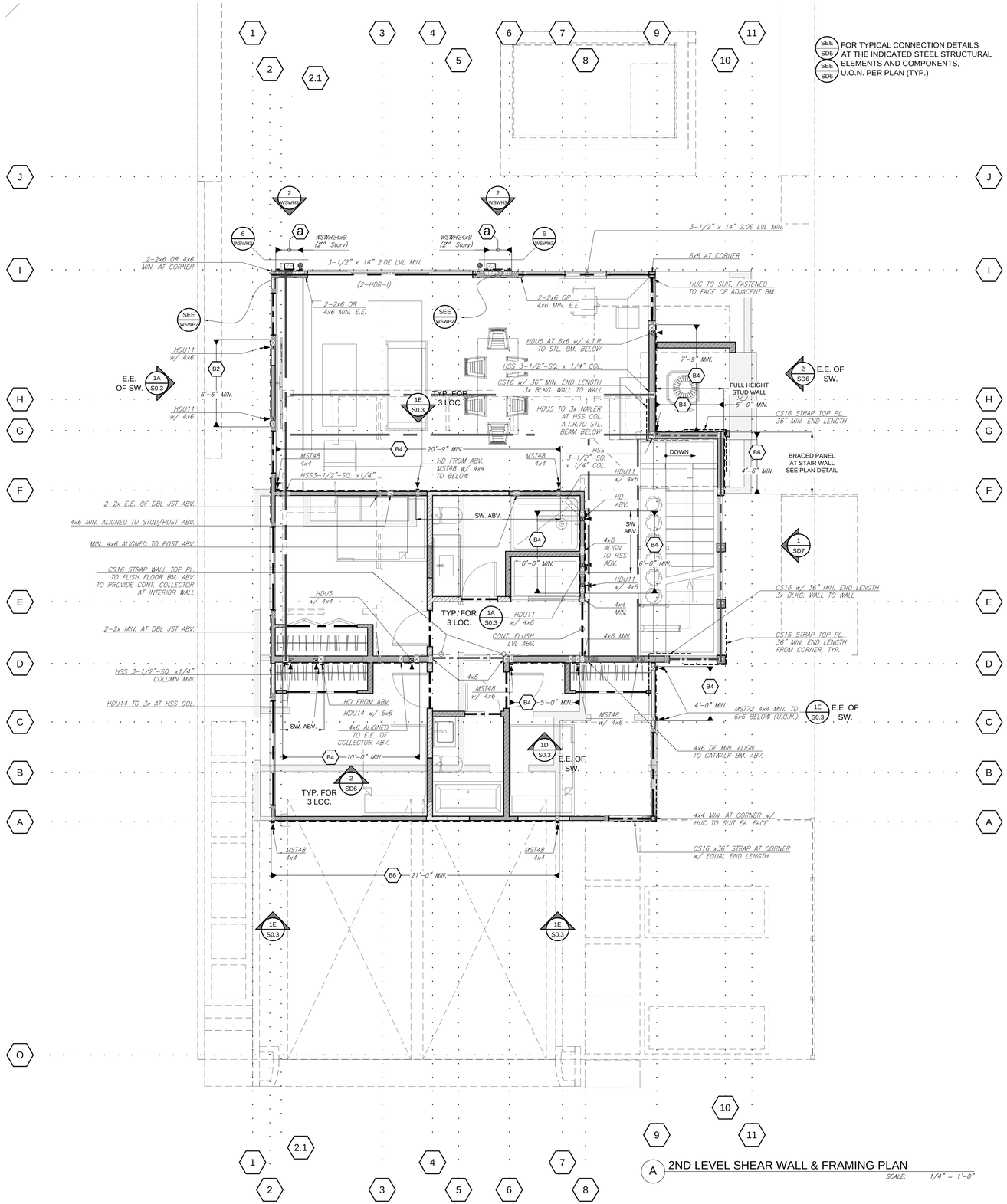
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A 2ND LEVEL SHEAR WALL & FRAMING PLAN
SCALE: 1/4" = 1'-0"

FRAMING NOTES

1. WALL SHEATHING : 15/32" THICK; 32/16 PANEL INDEX A.P.A. RATED PLYWOOD MIN. OR BTR
   NAILING: EDGE = 8d @ 6" O.C.
   FIELD = 8d @ 12" O.C.
   (U.O.N. PER PLAN AT DESIGNATED SHEAR WALL ELEMENTS, SEE S.W.S. PER 3/SO.3)
2. PROVIDE STRAP AT ALL DISCONTINUOUS PLATES AND BEAM SPLICES PER DETAIL 2/SO.2.
3. PRESSURE TREAT WHERE FRAMING MEMBERS ARE IN DIRECT CONTACT WITH CONCRETE.
4. INSTALL ALL HARDWARE PER MANUFACTURER'S RECOMMENDATIONS.
5. HEADER SPECIFICATION PER PLAN, OR SEE HDR SCHEDULE 1/SO.2 IF NO SPECIFICATION IS PROVIDED ON PLAN.
6. REFER TO DETAIL 3/– FOR THE SHEAR WALL CONSTRUCTION SCHEDULE.
7. REFER TO DETAIL 2/– FOR THE HOLDOWN ANCHOR BOLT SCHEDULE.
8. STUD WALLS SHALL BE 2x6 DF No. 2 OR BTR MINIMUM STUDS @ 16" O.C. MAXIMUM, U.O.N. PER PLAN OR AS APPROVED. 15/32" WALL SHEATHING TO BE PROVIDED ALONG ALL EXTERIOR STUD WALLS AND INTERIOR LOAD–BEARING WALLS IN ADDITION TO DESIGNATED BRACED WALL LINES AND SHEAR WALL ELEMENTS PER PLAN.
9. ALL EXISTING STUD WALL ELEMENTS ASSUMED UNLESS OTHERWISE DISCOVERED BY THE OWNER/CONTRACTOR.
10. REFER TO ARCH. DWGS & COMMUNICATE WITH THE PROJECT EOR IN THE EVENT OF SIGNIFICANT DISCREPANCY.

SHEARWALL & BRACED PANEL SCHEDULE (S.W.S.)

TYPE	PLYWOOD OR OSB SHEATHING THICKNESS [1]: PANEL INDEX	PLY. EDGE NAILING (P.E.N.)	FIELD NAILING	SOLE PLATE CONNECTION	TYPICAL REMARKS, SEE NOTES BELOW	FRAMING CLIPS	MUDSILL ANCHOR BOLTS, U.O.N.
WSP	3/8" MIN. : 32/16	8d @ 6" O.C.	8d @ 12" O.C.	16d AT 6" O.C.	NONE	A35 @ 24" O.C.	5/8"ø X 12" @ 72" O.C.
B6	15/32" : 32/16	10d @ 6" O.C.	10d @ 12" O.C.	16d AT 6" O.C.	NONE	A35 @ 16" O.C.	5/8"ø X 12" @ 48" O.C.
B4	15/32" : 32/16	10d @ 4" O.C.	10d @ 02" O.C.	16d AT 4" O.C.	SEE NOTE 10	A35 @ 12" O.C.	5/8"ø X 12" @ 32" O.C.
B3	15/32" : 32/16	10d @ 3" O.C.	10d @ 10" O.C.	16d AT 3" O.C.	SEE NOTE 10	A35 @ 12" O.C.	5/8"ø X 12" @ 24" O.C.
B2	15/32" : 32/16	10d @ 2" O.C.	10d @ 10" O.C.	16d AT 3" O.C.	SEE NOTE 10	A35 @ 12" O.C.	5/8"ø X 12" @ 24" O.C.
B4 / BX	15/32" CDX EACH SIDE	8d @ 4" O.C.	8d @ 10" O.C.	16d AT 3" O.C.	SEE NOTES 9 & 14	A35 @ 8" O.C.	5/8"ø X 12" @ 12" O.C.

TYPICAL SHEAR WALL CONSTRUCTION NOTES
1. ALL SHEATHING SHALL BE A.P.A RATED, EXPOSURE 1 OR EXTERIOR GRADE.
2. SHEAR WALLS SHALL BE SHEATHED WITH APPROVED MATERIALS ATTACHED DIRECTLY TO THE FRAMING MEMBERS AND/OR BLOCKING. PANELS SHALL NOT BE LESS THAN 4' x 8', EXCEPT AT BOUNDARIES AND CHANGES IN FRAMING. ALL EDGES OF ALL PANELS SHALL BE SUPPORTED BY AND FASTENED TO FRAMING MEMBERS OR BLOCKING.
3. SHEATHING SHALL BE ATTACHED TO FRAMING MEMBERS USING NAILS DRIVEN WITH THE HEAD OF THE NAIL FLUSH WITH THE SURFACE OF THE SHEATHING.
4. NAILS SHALL BE LOCATED AT LEAST 3/8" FROM THE PANEL EDGES. MAXIMUM NAIL SPACING AT STRUCTURAL PANEL EDGES SHALL BE 6" ON CENTER.
5. NAILS ALONG INTERMEDIATE FRAMING MEMBERS SHALL BE THE SAME SIZE AS NAILS SPECIFIED FOR PANEL EDGE NAILING. AT INTERMEDIATE FRAMING MEMBERS, THE MAXIMUM NAIL SPACING SHALL BE 12" ON CENTER.
6. ALL FRAMING MEMBERS AND BLOCKING USED FOR SHEAR WALL CONSTRUCTION SHALL BE 2" NOMINAL OR GREATER.
7. END POSTS (STUDS OR COLUMNS), SHALL BE FRAMED TO PROVIDE FULL END BEARING.
8. SHEAR WALL END MEMBERS SHALL PROVIDE A LOAD PATH TO THE FOUNDATION FOR UPLIFT, SHEAR, AND COMPRESSION FORCES.
9. THE WIDTH OF THE NAILED FACE OF ALL FRAMING MEMBERS AND BLOCKING SHALL BE 2" NOMINAL OR GREATER. SEE NOTE 9 BELOW.
10. WHERE INDICATED IN THE TABLE ABOVE, THE WIDTH OF THE NAILED FACE OF A COMMON FRAMING MEMBER OR BLOCKING AT ADJOINING PANEL EDGES SHALL BE EITHER DOUBLE 2x NOMINAL, 3X, OR GREATER, AND NAILING SHALL BE STAGGERED AT ALL PANEL EDGES. AT BUILT UP STUDS, STITCH NAIL WITH 16d AT 6" ON CENTER EACH SIDE VERTICALLY.
11. STAGGER NAILING AT ALL ADJOINING PANEL EDGES.
12. BLOCK AND EDGE NAIL ALL PANEL EDGES. PROVIDE FIELD NAILING WITH 10d AT 12" ON CENTER TYPICAL.
13. MUDSILL/SOLE PLATE ANCHOR BOLTS EMBEDDED DEPTH SHALL BE 7" MINIMUM, U.O.N.
14. ALL NAILS SHALL BE COMMON OR GALVANIZED BOX. GALVANIZED NAILS SHALL BE HOT DIPPED OR TUMBLED.
15. PANEL JOINTS AT DOUBLE–SIDED SHEAR WALLS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.

2 SHEAR WALL AND BRACED PANEL SCHEDULE

SCALE NTS

HD DEVICE	MAX. CLEAR SPAN	END LENGTH	HD STUD
(2) CS16x 13	24"-MAX.	13"-MIN.	(2) 2x FULL-WIDTH STUD
(2) CS16x 18		18"-MIN.	(2) 2x FULL-WIDTH STUD
(1) CS16x 24		24"-MIN.	(2) 2x FULL-WIDTH STUD
(2) CS16x 36		36"-MIN.	(2) 2x FULL-WIDTH STUD
MST48		12"-MIN.	2-2x OR 4x NOMINAL, U.O.N.
MST60		18"-MIN.	1-3x MIN. OR 4x NOMINAL, U.O.N.
MST72		24"-MIN.	4x NOMINAL MIN. OR BTR, U.O.N.

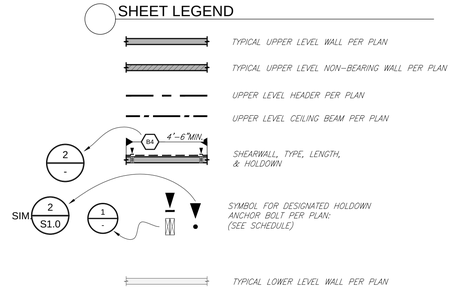
1 HOLDOWN & STRAP-TYPE HD SCHEDULE

SCALE NTS



SCHEDULE NOTES:
1. ALL UNITS ARE IN INCHES, UNLESS OTHERWISE NOTE.
2. ALL HOLDOWN STUD MEMBERS ARE DOUGLAS FIR No. 2 OR BETTER, U.O.N. REFER TO THE MANUFACTURER'S GUIDELINES.
3. ALL HARDWARE, CONNECTORS, ANCHORS, AND THEIR RESPECTIVE FASTENERS SHALL BE INSTALLED PER THE MANUFACTURER.
4. INSTALL ALL HOLDOWN (HD) DEVICES WITH MAXIMUM FASTENERS WITH RESPECTIVE ANCHOR BOLT TO SUIT APPLICATION.
5. SPLITTING MAY BE MITIGATED USING A NOMINAL 4x STUD IN LIEU OF THE 2–2x HD STUDS TYP.

SHEET LEGEND



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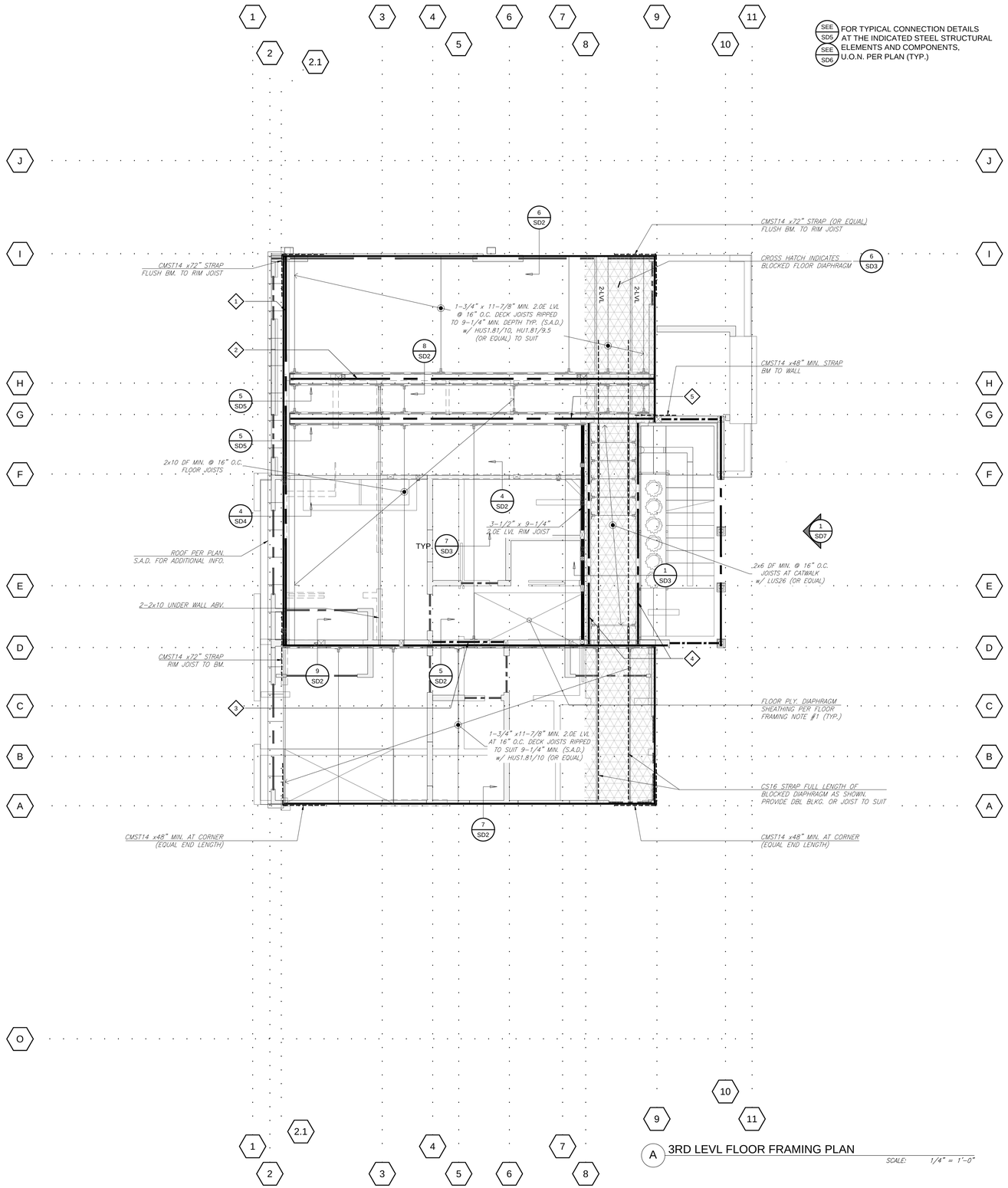
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A 3RD LEVL FLOOR FRAMING PLAN

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

FLOOR FRAMING NOTES

1. FLOOR SHEATHING : 3/4" CDX T&G PLYWOOD
   NAILING: BOUNDARY = 10d @ 6" O.C.
   (GLUE & NAIL TO JOISTS, STAGGER PANEL JOINTS)
2. PROVIDE MID-SPAN BLOCKING AT SPANS GREATER THAN 10'-0".
3. PROVIDE DBL JOIST UNDER WALLS PARALLEL TO JOISTS.
4. PROVIDE SOLID BLKG. UNDER WALLS PERPENDICULAR TO JOISTS.
5. ENGINEERED DOUBLE JOISTS SHALL BE JOINED PER MANUFACTURER'S RECOMMENDATIONS.
6. ALL HEADERS SHALL BE 4x12 UNLESS OTHERWISE NOTED. HEADER SPECIFICATION PER PLAN, OR SEE HEADER SCHEDULE 1/S0.2 IF NO SPECIFICATION IS PROVIDED ON PLAN.
7. ALL BEAMS RESTING ON TOP PLATE SHALL BE ATTACHED WITH ONE A35 CLIP EA. SIDE, U.O.N.
8. ALL 2x JOISTS SHALL BE INSTALLED WITH REGARDS TO END BEARING, INTERMEDIATE BEARING, BLOCKING, WEB STIFFENING, & NAILING PER MANUFACTURER'S SPECIFICATIONS.
9. EDGE NAIL PLYWOOD TO ALL BEAMS AND TIE BEAMS.
10. ALL PSL AND GLU-LAM BEAMS THAT FALL BELOW TOP PLATE SHALL BE ATTACHED TO SUPPORTING POST WITH A 'CC' STYLE POST CAP, U.O.N.
11. ALL HARDWARE SHALL BE INSTALLED PER THE SPECIFICATIONS OF THE MANUFACTURER, AND IN ACCORDANCE WITH THEIR RECOMMENDATIONS.
12. HARDWARE SPECIFIED PER PLAN SHALL BE INSTALLED WITH MAXIMUM FASTENERS, UNLESS OTHERWISE NOTED, OR AS APPROVED BY THE PROJECT ENGINEER.
13. DROPPED FLOOR GIRDERS SHALL BE MECHANICALLY ANCHORED TO THE TYPICAL FOUNDATION ELEMENTS BY USE OF SIMPSON GH OR HU/HUC HANGER INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS FOR FASTENING TO CONCRETE.
14. FILLER/BACKER BLOCKS AND WEB STIFFENERS SHALL BE PROVIDED IN ACCORDANCE WITH AND PER THE MANUFACTURER'S REQUIREMENTS, SPECIFICATIONS, RECOMMENDATIONS, AND TOLERANCES; IN CONJUNCTION WITH THE CONFIGURATION SPECIFIED PER PLAN.
5. ALL WATERPROOFING MEASURES AND FLASHING METHODS SHALL BE DETERMINED AND PROVIDED BY OTHERS.
6. ALL FASTENERS (i.e. NAILS, SCREWS, BOLTS, LAGS, ETC.), HARDWARE (i.e. HANGERS, CONNECTORS, CLIPS, ETC.), USED FOR EXTERIOR ASSEMBLIES EXPOSED TO WEATHER SHALL BE AT A MINIMUM PROVIDED HOT-DIP GALVANIZED, STAINLESS STEEL, SILICON BRONZE, OR COPPER, AND BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS, RECOMMENDATIONS, AND TOLERANCES. ALL EXPOSED WOOD FRAMING SHALL BE EXTERIOR GRADE LUMBER, PRESSURE TREATED, OR OF A NATURALLY DURABLE MATERIAL.
7. THE CONTRACTOR SHALL TAKE GREAT CARE TO VERIFY THE LAYOUT, SETTING, DIMENSIONS, CONDITIONS, AND ELEVATIONS PRIOR TO THE ORDERING, FURNISHING, & INSTALLATION OF THE STRONG-WALL SHEARWALL WSWH ASSEMBLAGES AND ANCHORAGE SYSTEMS.

6 SD3 BLOCKED DIAPHRAGM NOTES (SEE CROSS HATCH PER PLAN)

1. WHERE DIAPHRAGMS ARE INDICATED AS BLOCKED, ALL JOINTS IN SHEATHING SHALL OCCUR OVER AND BE FASTENED TO COMMON FRAMING MEMBERS OR COMMON BLOCKING.
2. PROVIDE 8d P.E.N. FASTENERS 4" O.C. AT EDGE AND BOUNDARY CONDITIONS, AND AT 10" O.C. AT FIELD CONDITIONS.
3. PANELS SHALL NOT BE LESS THAN 4' x 8' NOMINAL, EXCEPT AT BOUNDARIES AND CHANGES IN FRAMING WHERE MINIMUM PANEL DIMENSION SHALL BE 24".
4. NAIL FASTENERS SHALL BE LOCATED AT LEAST 3/8" FROM THE EDGES OF THE SHEATHING PANELS. THE MAXIMUM NAIL FASTENER SPACING AT PANEL EDGES SHALL BE AS INDICATED PER PLAN.
5. NAILS ALONG INTERMEDIATE FRAMING MEMBERS AND BLOCKING FOR PANELS SHALL BE THE SAME SIZE AS INSTALLED AT THE PANEL EDGES.
6. THE WIDTH OF THE NAILED FACE OF FRAMING MEMBERS OR BLOCKING SHALL BE 2" NOMINAL OR GREATER AT ADJOINING PANEL EDGES.

N1 SCALE NTS

FLOOR BEAM SCHEDULE	
1	HSS16 x 4 x 5/16 (3-FB-2.1) -- HOLLOW TUBE STEEL FLUSH BEAM
2	W12 x 152 (3-FB-H) -- WIDE FLANGE FLUSH BEAM
3	2-PLY. 1-3/4" x 9-1/4" 2.0E LVL (3-FB-D) -- FLUSH FLOOR RIM BEAM
4	HSS 8 x 8 x 5/16 (STAIR-FB-8/9) -- FLUSH BM. AT CATWALK/STAIRS
5	W12 x 72 (3-FB-G) -- WIDE FLANGE FLUSH BEAM

SHEET LEGEND

- 3RD LEVEL STUD WALL ABOVE, SEE PLAN
- 2ND LEVEL STUD WALL, SEE PLAN
- 1ST LEVEL STUD WALL BELOW, SEE PLAN
- FLOOR BEAM PER PLAN
- FLOOR FRAMING PER PLAN
- HEADER BELOW, PER PLAN

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3RD LEVEL FLOOR FRAMING PLAN

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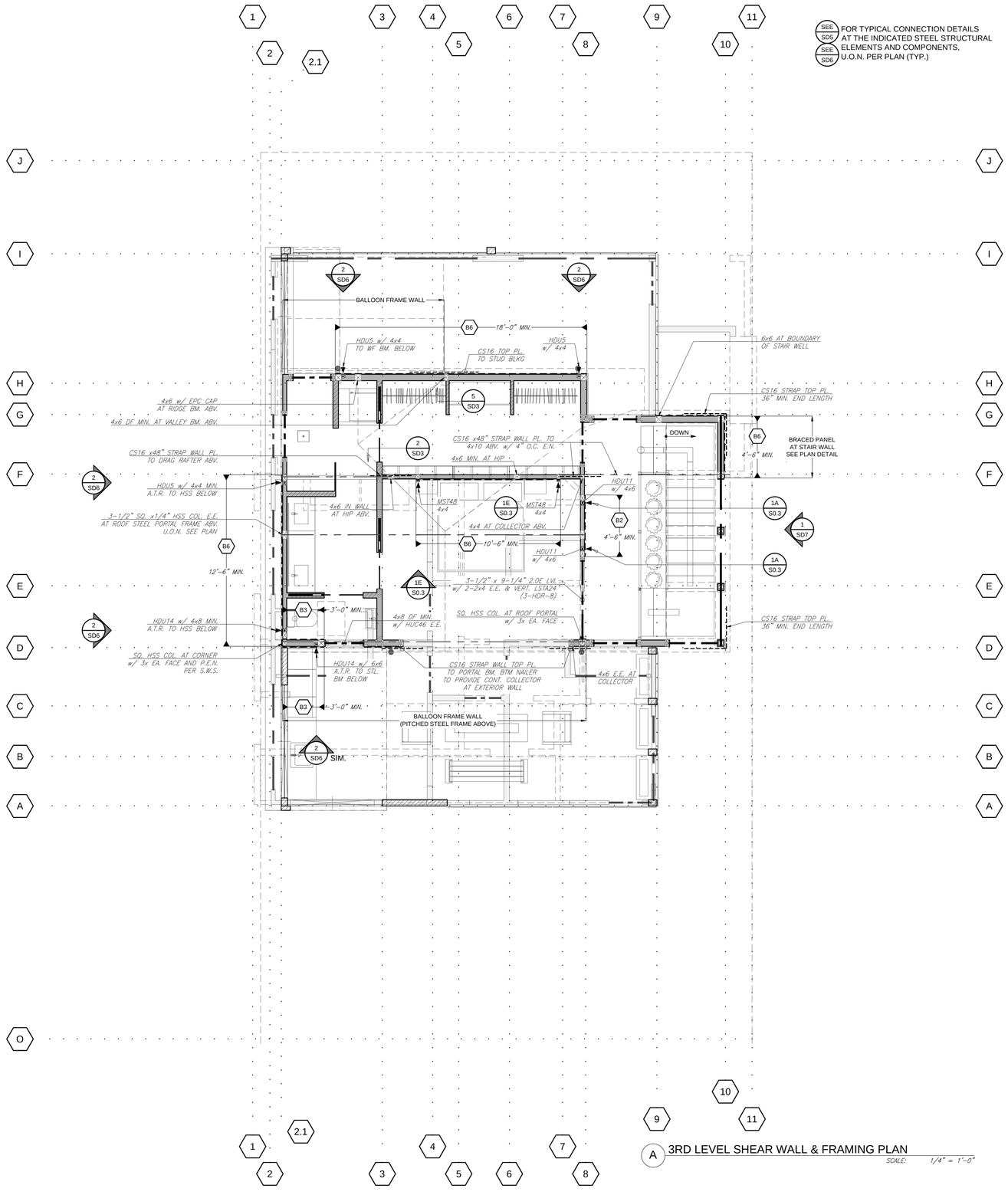
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A 3RD LEVEL SHEAR WALL & FRAMING PLAN

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

FRAMING NOTES

1. WALL SHEATHING : 15/32" THICK; 32/16 PANEL INDEX A.P.A. RATED PLYWOOD MIN. OR BTR
   NAILING: EDGE = 8d @ 6" O.C.
   FIELD = 8d @ 12" O.C.

(U.O.N. PER PLAN AT DESIGNATED SHEAR WALL ELEMENTS, SEE S.W.S. PER 3/S0.3)

2. PROVIDE STRAP AT ALL DISCONTINUOUS PLATES AND BEAM SPLICES PER DETAIL 2/S0.2.
3. PRESSURE TREAT WHERE FRAMING MEMBERS ARE IN DIRECT CONTACT WITH CONCRETE.
4. INSTALL ALL HARDWARE PER MANUFACTURER'S RECOMMENDATIONS.
5. HEADER SPECIFICATION PER PLAN, OR SEE HDR SCHEDULE 1/S0.2 IF NO SPECIFICATION IS PROVIDED ON PLAN.
6. REFER TO DETAIL 3/– FOR THE SHEAR WALL CONSTRUCTION SCHEDULE.
7. REFER TO DETAIL 2/– FOR THE HOLDOWN ANCHOR BOLT SCHEDULE.
8. STUD WALLS SHALL BE 2x6 DF No. 2 OR BTR MINIMUM STUDS @ 16" O.C. MAXIMUM, U.O.N. PER PLAN OR AS APPROVED. 15/32" WALL SHEATHING TO BE PROVIDED ALONG ALL EXTERIOR STUD WALLS AND INTERIOR LOAD–BEARING WALLS IN ADDITION TO DESIGNATED BRACED WALL LINES AND SHEAR WALL ELEMENTS PER PLAN.
9. ALL EXISTING STUD WALL ELEMENTS ASSUMED UNLESS OTHERWISE DISCOVERED BY THE OWNER/CONTRACTOR.
10. REFER TO ARCH. DWGS & COMMUNICATE WITH THE PROJECT EOR IN THE EVENT OF SIGNIFICANT DISCREPANCY.

SHEARWALL & BRACED PANEL SCHEDULE (S.W.S.)

TYPE	PLYWOOD OR OSB SHEATHING THICKNESS [1]; PANEL INDEX	PLY. EDGE NAILING (P.E.N.)	FIELD NAILING	SOLE PLATE CONNECTION	TYPICAL REMARKS, SEE NOTES BELOW	FRAMING CLIPS	MUDSILL ANCHOR BOLTS, U.O.N.
WSP	3/8" MIN. : 32/16	8d @ 6" O.C.	8d @ 12" O.C.	16d AT 6" O.C.	NONE	A35 @ 24" O.C.	5/8"ø X 12" @ 72" O.C.
B6	15/32" : 32/16	10d @ 6" O.C.	10d @ 12" O.C.	16d AT 6" O.C.	NONE	A35 @ 16" O.C.	5/8"ø X 12" @ 48" O.C.
B4	15/32" : 32/16	10d @ 4" O.C.	10d @ 02" O.C.	16d AT 4" O.C.	SEE NOTE 10	A35 @ 12" O.C.	5/8"ø X 12" @ 32" O.C.
B3	15/32" : 32/16	10d @ 3" O.C.	10d @ 10" O.C.	16d AT 3" O.C.	SEE NOTE 10	A35 @ 12" O.C.	5/8"ø X 12" @ 24" O.C.
B2	15/32" : 32/16	10d @ 2" O.C.	10d @ 10" O.C.	16d AT 3" O.C.	SEE NOTE 10	A35 @ 12" O.C.	5/8"ø X 12" @ 24" O.C.
B4 / BX	15/32" CDX EACH SIDE	8d @ 4" O.C.	8d @ 10" O.C.	16d AT 3" O.C.	SEE NOTES 9 & 14	A35 @ 8" O.C.	5/8"ø X 12" @ 12" O.C.

TYPICAL SHEAR WALL CONSTRUCTION NOTES

1. ALL SHEATHING SHALL BE A.P.A RATED, EXPOSURE 1 OR EXTERIOR GRADE.
2. SHEAR WALLS SHALL BE SHEATHED WITH APPROVED MATERIALS ATTACHED DIRECTLY TO THE FRAMING MEMBERS AND/OR BLOCKING. PANELS SHALL NOT BE LESS THAN 4' x 8', EXCEPT AT BOUNDARIES AND CHANGES IN FRAMING. ALL EDGES OF ALL PANELS SHALL BE SUPPORTED BY AND FASTENED TO FRAMING MEMBERS OR BLOCKING.
3. SHEATHING SHALL BE ATTACHED TO FRAMING MEMBERS USING NAILS DRIVEN WITH THE HEAD OF THE NAIL FLUSH WITH THE SURFACE OF THE SHEATHING.
4. NAILS SHALL BE LOCATED AT LEAST 3/8" FROM THE PANEL EDGES. MAXIMUM NAIL SPACING AT STRUCTURAL PANEL EDGES SHALL BE 6" ON CENTER.
5. NAILS ALONG INTERMEDIATE FRAMING MEMBERS SHALL BE THE SAME SIZE AS NAILS SPECIFIED FOR PANEL EDGE NAILING. AT INTERMEDIATE FRAMING MEMBERS, THE MAXIMUM NAIL SPACING SHALL BE 12" ON CENTER.
6. ALL FRAMING MEMBERS AND BLOCKING USED FOR SHEAR WALL CONSTRUCTION SHALL BE 2" NOMINAL OR GREATER.
7. END POSTS (STUDS OR COLUMNS), SHALL BE FRAMED TO PROVIDE FULL END BEARING.
8. SHEAR WALL END MEMBERS SHALL PROVIDE A LOAD PATH TO THE FOUNDATION FOR UPLIFT, SHEAR, AND COMPRESSION FORCES.
9. THE WIDTH OF THE NAILED FACE OF ALL FRAMING MEMBERS AND BLOCKING SHALL BE 2" NOMINAL OR GREATER. SEE NOTE 9 BELOW.
10. WHERE INDICATED IN THE TABLE ABOVE, THE WIDTH OF THE NAILED FACE OF A COMMON FRAMING MEMBER OR BLOCKING AT ADJOINING PANEL EDGES SHALL BE EITHER DOUBLE 2x NOMINAL, 3X, OR GREATER, AND NAILING SHALL BE STAGGERED AT ALL PANEL EDGES. AT BUILT UP STUDS, STITCH NAIL WITH 16d AT 6" ON CENTER EACH SIDE VERTICALLY.
11. STAGGER NAILING AT ALL ADJOINING PANEL EDGES.
12. BLOCK AND EDGE NAIL ALL PANEL EDGES. PROVIDE FIELD NAILING WITH 10d AT 12" ON CENTER TYPICAL.
13. MUDSILL/SOLE PLATE ANCHOR BOLTS EMBEDDED DEPTH SHALL BE 7" MINIMUM, U.O.N.
14. ALL NAILS SHALL BE COMMON OR GALVANIZED BOX. GALVANIZED NAILS SHALL BE HOT DIPPED OR TUMBLED.
15. PANEL JOINTS AT DOUBLE–SIDED SHEAR WALLS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.

2 SHEAR WALL AND BRACED PANEL SCHEDULE

SCALE NTS

HD DEVICE	MAX. CLEAR SPAN	END LENGTH	HD STUD
(2) CS16x 13	24"-MAX.	13"-MIN.	(2) 2x FULL-WIDTH STUD
(2) CS16x 18		18"-MIN.	(2) 2x FULL-WIDTH STUD
(1) CS16x 24		24"-MIN.	(2) 2x FULL-WIDTH STUD
(2) CS16x 36		36"-MIN.	(2) 2x FULL-WIDTH STUD
MST48		12"-MIN.	2-2x OR 4x NOMINAL, U.O.N.
MST60		18"-MIN.	1-3x MIN. OR 4x NOMINAL, U.O.N.
MST72		24"-MIN.	4x NOMINAL MIN. OR BTR, U.O.N.

1 HOLDOWN & STRAP-TYPE HD SCHEDULE

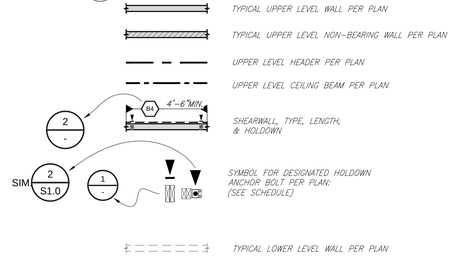
SCALE NTS



SCHEDULE NOTES:

1. ALL UNITS ARE IN INCHES, UNLESS OTHERWISE NOTE.
2. ALL HOLDOWN STUD MEMBERS ARE DOUGLAS FIR No. 2 OR BETTER, U.O.N. REFER TO THE MANUFACTURER'S GUIDELINES.
3. ALL HARDWARE, CONNECTORS, ANCHORS, AND THEIR RESPECTIVE FASTENERS SHALL BE INSTALLED PER THE MANUFACTURER.
4. INSTALL ALL HOLDOWN (HD) DEVICES WITH MAXIMUM FASTENERS WITH RESPECTIVE ANCHOR BOLT TO SUIT APPLICATION.
5. SPLITTING MAY BE MITIGATED USING A NOMINAL 4x STUD IN LIEU OF THE 2–2x HD STUDS TYP.

SHEET LEGEND



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SAUSALITO, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
JAMES EDWARD RICHARD
No. 72009
CIVIL
STATE OF CALIFORNIA

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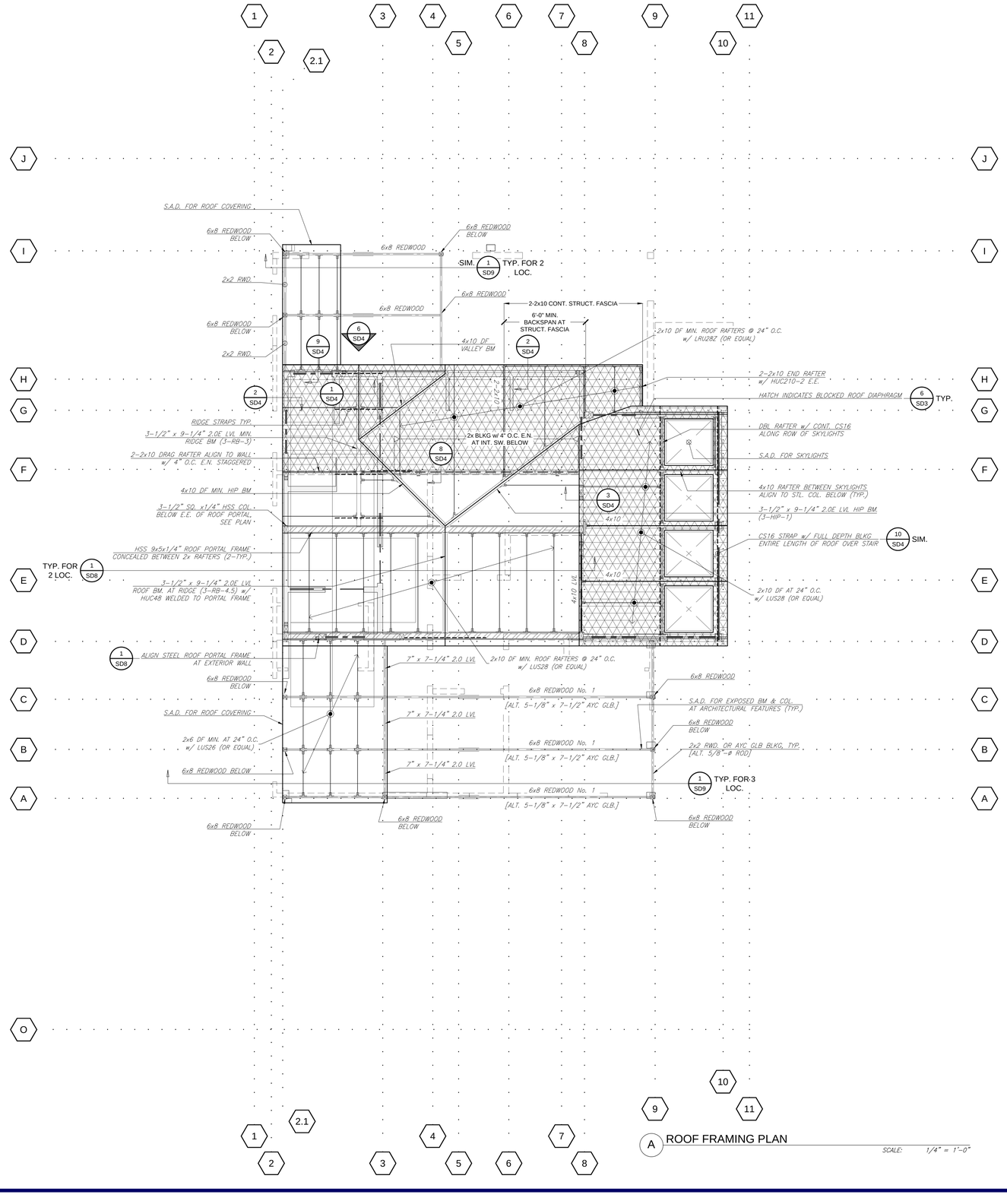
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A ROOF FRAMING PLAN SCALE: 1/4" = 1'-0"

ROOF FRAMING NOTES

1. ROOF SHEATHING : 15/32" THICKNESS : A.P.A. RATED PLYWOOD OR OSB **
   NAILING: BOUNDARY = 8d @ 6" O.C.
   FIELD = 8d @ 12" O.C.
   PANEL INDEX: 32/16 OR BETTER *

* 24/0 RATED PLY. SHEATHING (IF OCCURS) SHALL BE INSTALLED USING PSCL PANEL SHEATHING "H" CLIPS ARE REQUIRED AT UNSUPPORTED PANEL EDGES (U.O.N. AS REQUIRED BLKG)

** S.A.D. FOR WHEN RADIANT BARRIER IS REQUIRED TYP. AS V.I.F

2. ALL ROOF AND SUPPORT FRAMING SHALL BE 24" O.C. MAX. (U.O.N.).
3. S.A.D. AND APPROVED TITLE 24 ENERGY DOCUMENTS FOR WHERE RADIANT BARRIER SHEATHING MAY BE REQUIRED.
4. ALL HEADERS SHALL BE 4x12 UNLESS OTHERWISE NOTED PER PLAN OR HEADER SCHEDULE PER 1/S0.2.
5. USE ST6236 STRAP AT ALL BEAMS TO TOP PLATE CONNECTIONS WHERE THE TOP PLATE IS DISCONTINUOUS, U.O.N.
6. ALL BEAMS RESTING ON TOP PLATE SHALL BE ATTACHED WITH ONE A35 CLIP EA. SIDE, U.O.N..
7. PROVIDE STRAP AT ALL DISCONTINUOUS PLATES AND BEAM SPLICES PER DETAIL 2/S0.2, U.O.N.
8. EDGE NAIL PLYWOOD TO ALL TIE TRUSSES, AND GIRDER TRUSSES
9. USE LSU TYPE HANGERS ON RAFTER TO RIDGE CONNECTIONS, UNLESS OTHERWISE SPECIFIED.
10. USE LS70 CLIPS ON RAFTER TO HIP CONNECTIONS, UNLESS OTHERWISE SPECIFIED.
11. ALL POSTS SUPPORTED BY BEAMS SHALL HAVE A 'BC' TYPE BASE/CAP, AND ALL POSTS SUPPORTED BY GLU-LAM BEAMS SHALL HAVE AN INVERTED 'CC' TYPE BASE/CAP, U.O.N..
12. EDGE NAIL PLYWOOD TO ALL BEAMS, TIE BEAMS, AND TIE RAFTERS.
13. ALL PSL AND GLU-LAM BEAMS THAT FALL BELOW TOP PLATE SHALL BE ATTACHED TO SUPPORTING POST WITH A 'CC' STYLE POST CAP, U.O.N..
14. CALIFORNIA FRAMING OVER CONTINUOUS PLYWOOD SHEATHING, WITH 2x SLEEPERS LAID FLAT AT VALLEY LOCATIONS, 2x8 DF RIDGE BOARD, 2x6 DF RAFTERS @ 24" O.C. MAX., SUPPORTED TO LOWER ROOF STRUCTURE BELOW @ 48" O.C.
15. PROVIDE MULTIPLE COMMON STUDS OR BLOCKING AT ALL GIRDER & DRAG TRUSS BEARING LOCATIONS (MATCH GIRDER WIDTH MIN. U.O.N.).

6/SD3 BLOCKED DIAPHRAGM NOTES (SEE CROSS HATCH PER PLAN)

1. WHERE DIAPHRAGMS ARE INDICATED AS BLOCKED, ALL JOINTS IN SHEATHING SHALL OCCUR OVER AND BE FASTENED TO COMMON FRAMING MEMBERS OR COMMON BLOCKING.
2. PROVIDE 8d P.E.N. FASTENERS 4" O.C. AT EDGE AND BOUNDARY CONDITIONS, AND AT 10" O.C. AT FIELD CONDITIONS.
3. PANELS SHALL NOT BE LESS THAN 4' x 8' NOMINAL, EXCEPT AT BOUNDARIES AND CHANGES IN FRAMING WHERE MINIMUM PANEL DIMENSION SHALL BE 24".
4. NAIL FASTENERS SHALL BE LOCATED AT LEAST 3/8" FROM THE EDGES OF THE SHEATHING PANELS. THE MAXIMUM NAIL FASTENER SPACING AT PANEL EDGES SHALL BE AS INDICATED PER PLAN.
5. NAILS ALONG INTERMEDIATE FRAMING MEMBERS AND BLOCKING FOR PANELS SHALL BE THE SAME SIZE AS INSTALLED AT THE PANEL EDGES.
6. THE WIDTH OF THE NAILED FACE OF FRAMING MEMBERS OR BLOCKING SHALL BE 2" NOMINAL OR GREATER AT ADJOINING PANEL EDGES.

N1 SCALE NTS

SHEET LEGEND

- TYPICAL ROOF LINE
- TYPICAL ROOF BEAM PER PLAN
- CALIFORNIA FRAMING [SEE GENERAL SHEET NOTE #7]
- ROOF FRAMING
- TYPICAL WALL PER PLAN
- HEADER PER PLAN
- CEILING BEAM PER PLAN

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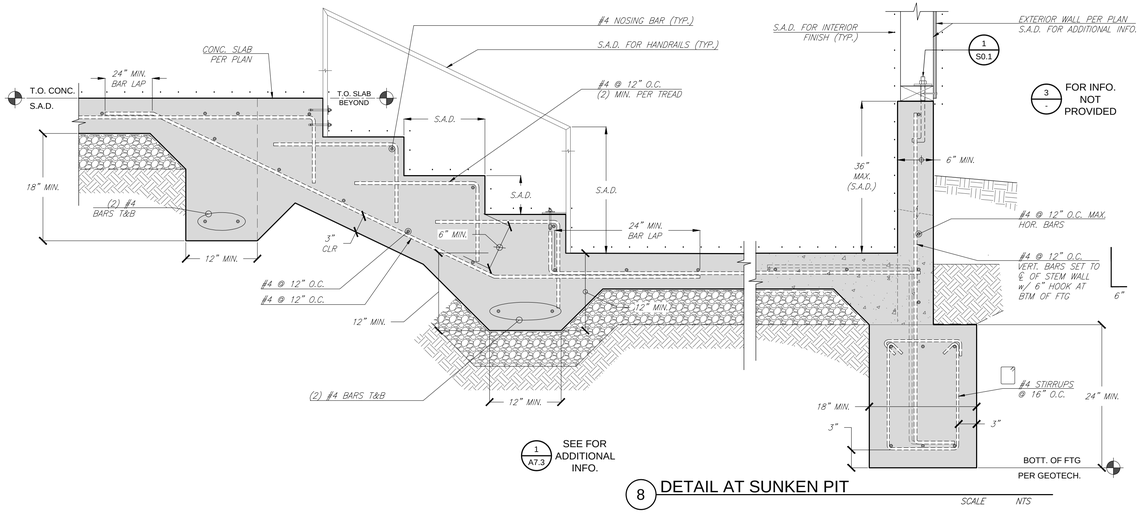
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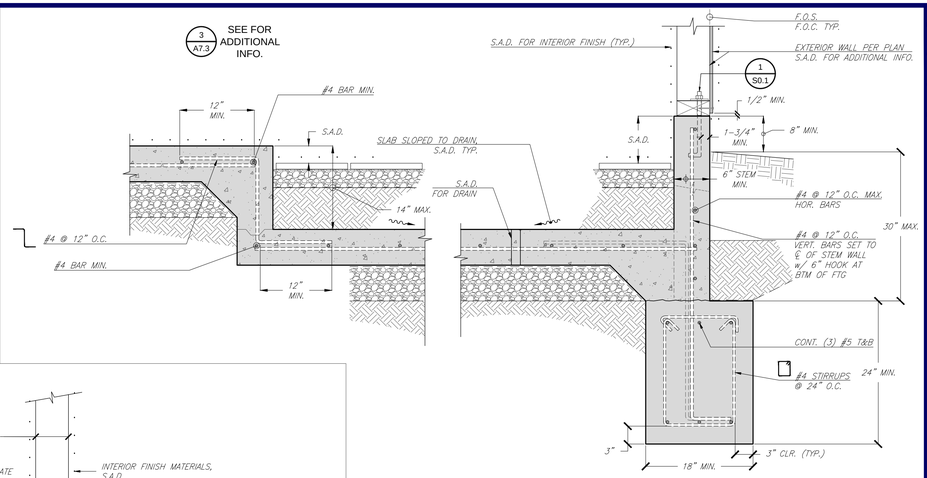
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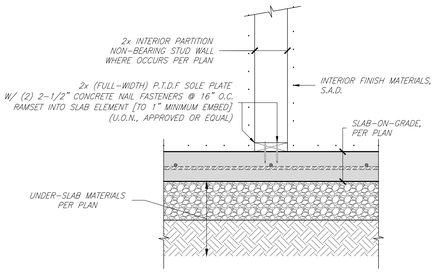


8 DETAIL AT SUNKEN PIT
SCALE NTS

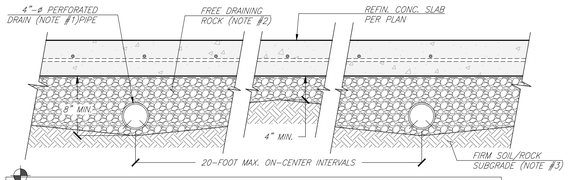
SEE SD5 REFER TO THESE DETAILS FOR THE CONNECTIONS AT THE STEEL SEE SD6 STRUCTURAL ELEMENTS AND COMPONENTS, U.O.N. PER PLAN.



3 FOUNDATION AT INDOOR PLANTER BOX
SCALE NTS



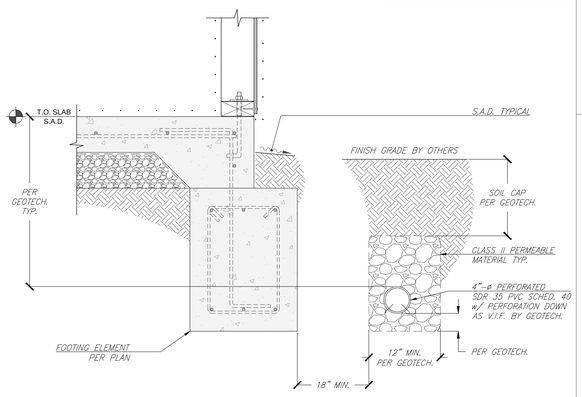
5 SLAB AT NON-BEARING PARTITION WALL
SCALE NTS



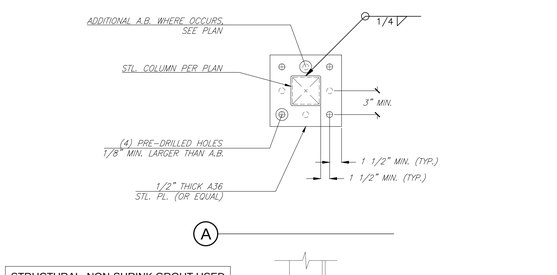
NOTES:
1. PERFORATED PIPE (PVC OR EQUIVALENT), SHOULD BE PLACED WITH PERFORATIONS DOWN. THE PIPE SHOULD BE SLOPED FOR GRAVITY FLOW AND OUTLET THROUGH SOLID PIPE TO APPROVED DAYLIGHT LOCATION.
2. DRAIN ROCK SHOULD BE AT LEAST 4" THICK AND A MINIMUM OF 8" WHERE PIPES ARE LOCATED. THE DRAIN ROCK SHOULD CONSIST OF CLASS II PERMEABLE MATERIAL.
3. REFER TO PLATE 1A PROVIDED PER THE REPORT, "GEOTECHNICAL INVESTIGATION," PREPARED BY PJC & ASSOCIATES, DATED MARCH 4, 2024 (JOB No. R1160.01).

9 SLAB UNDERDRAIN SYSTEM DETAIL
SEE GEOTECH. REPORT.
SCALE NTS

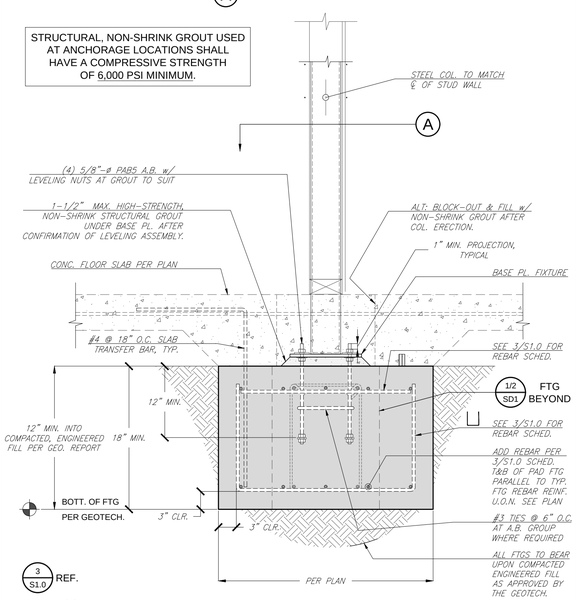
NOTE: CONTRACTOR TO CONFIRM WITH AND OBTAIN APPROVAL FROM THE PROJECT GEOTECHNICAL ENGINEER (GEO). ROOF DOWNSPOUTS SHALL BE MAINTAINED SEPARATE FROM FOUNDATION DRAINS.



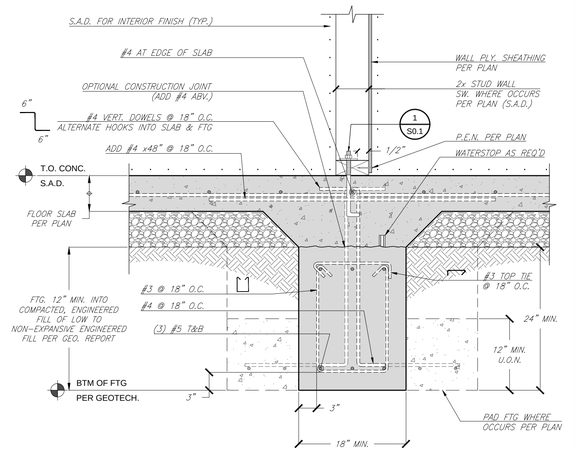
7 DRAIN ADJACENT TO FOOTING
SCALE NTS



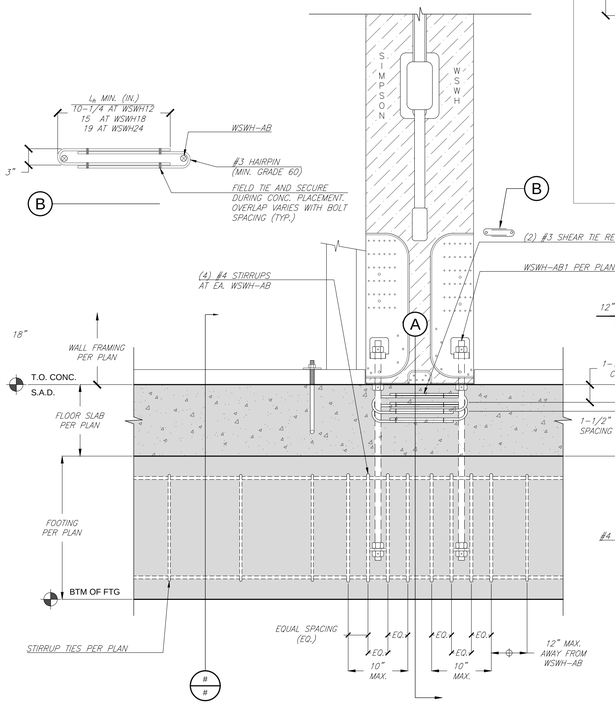
STRUCTURAL, NON-SHRINK GROUT USED AT ANCHORAGE LOCATIONS SHALL HAVE A COMPRESSIVE STRENGTH OF 6,000 PSI MINIMUM.

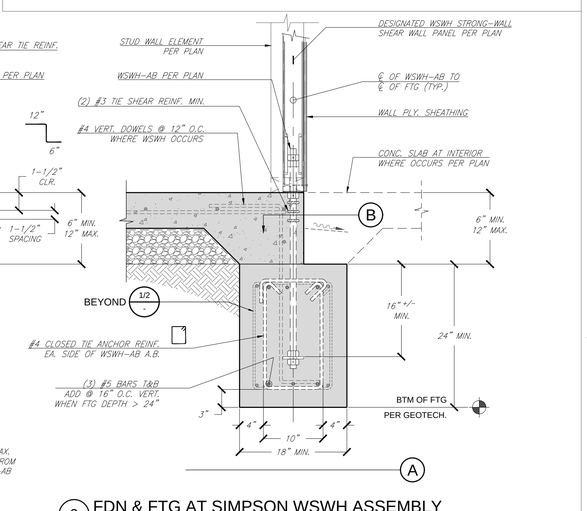


4 FOOTING AT HSS STEEL COLUMN
SCALE NTS

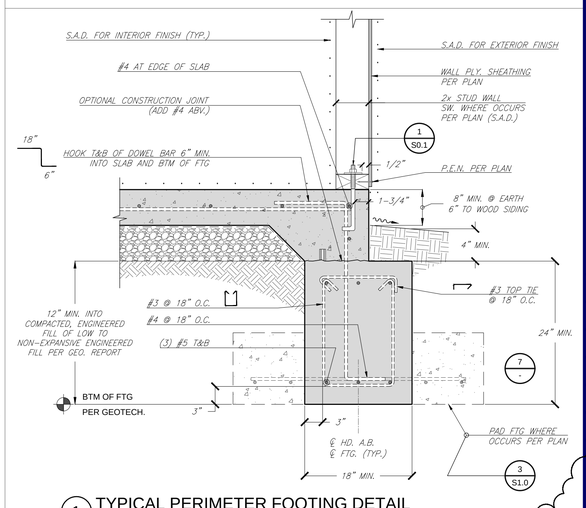


2 TYPICAL INTERIOR FOOTING DETAIL
SCALE NTS





6 FDN & FTG AT SIMPSON WSWH ASSEMBLY
SCALE NTS



1 TYPICAL PERIMETER FOOTING DETAIL
SCALE NTS

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APN: 065-054-11

THE BEYER RESIDENCE
FAMILY HOME RENOVATION
STRUCTURAL DETAILS

426 PINE STREET
SAUSALITO, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER JAMES EDWARD RICHARDS No. 72009 CIVIL STATE OF CALIFORNIA

DATE:	7/19/24
SCALE:	1/4"=1'-0" UON
PM:	MS
DRAWN BY:	MLB
CHK:	JER
JOB #:	6385.03

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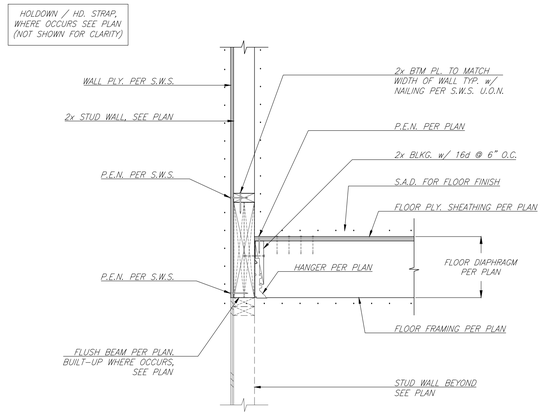
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13 OF 23

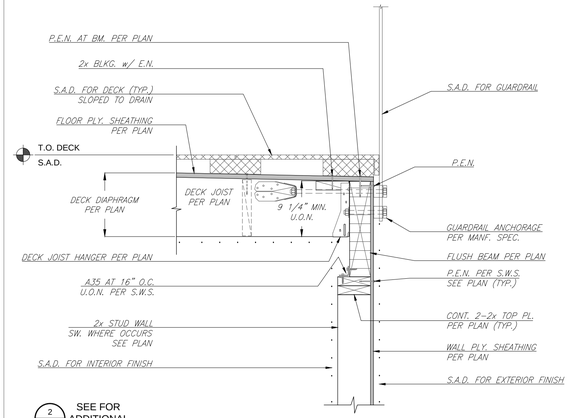
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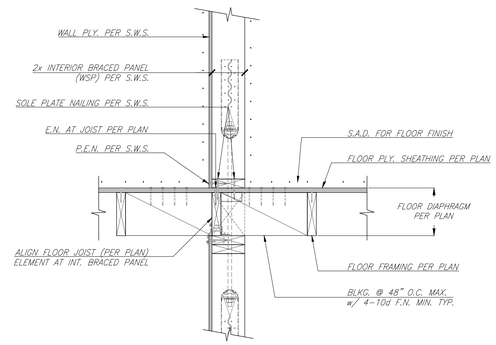
SEE SD5 / SEE SD6 REFER TO THESE DETAILS FOR THE CONNECTIONS AT THE STEEL STRUCTURAL ELEMENTS AND COMPONENTS, U.O.N. PER PLAN.



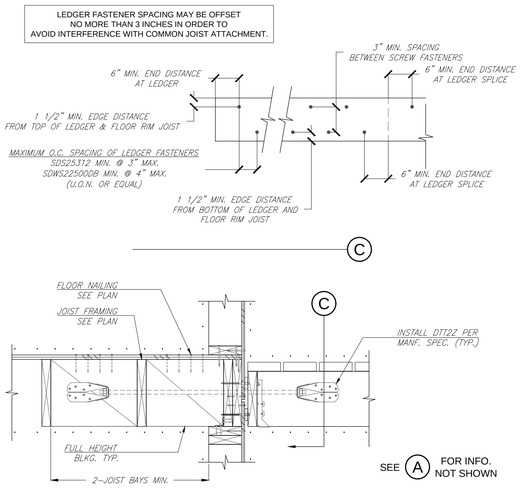
9 EDGE OF FLOOR AT FLUSH BEAM DETAIL
SCALE NTS

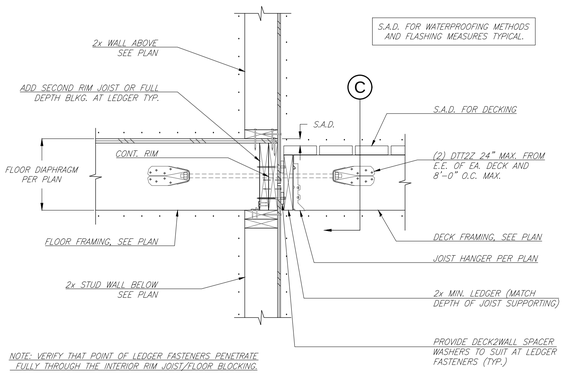


6 EDGE OF DECK AT FLUSH BEAM
SCALE NTS

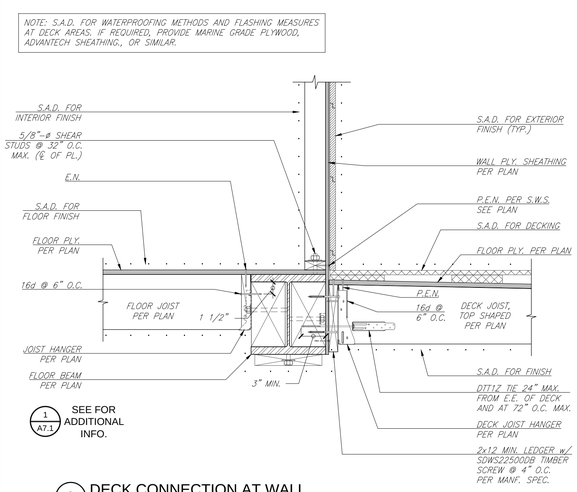


3 INTERIOR BRACED PANEL AT FLOOR
SCALE NTS

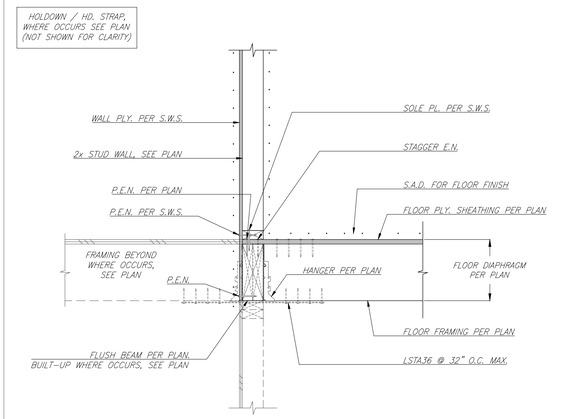




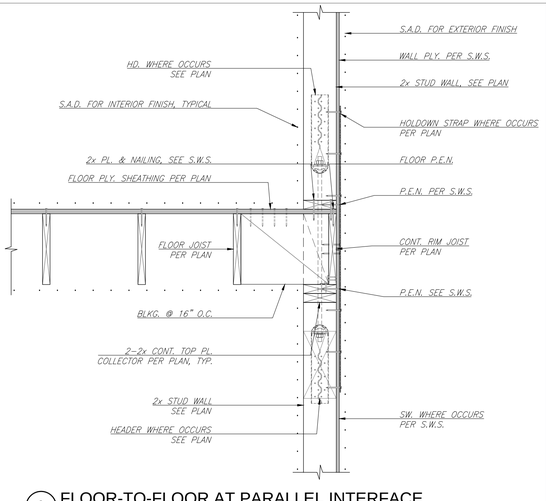
10 EXTERIOR LEDGER DETAIL
SCALE NTS



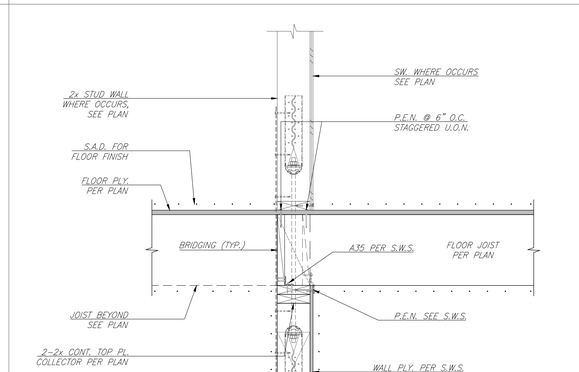
8 DECK CONNECTION AT WALL
SCALE NTS



5 PARTIAL BUILT-UP RIM DETAIL
SCALE NTS

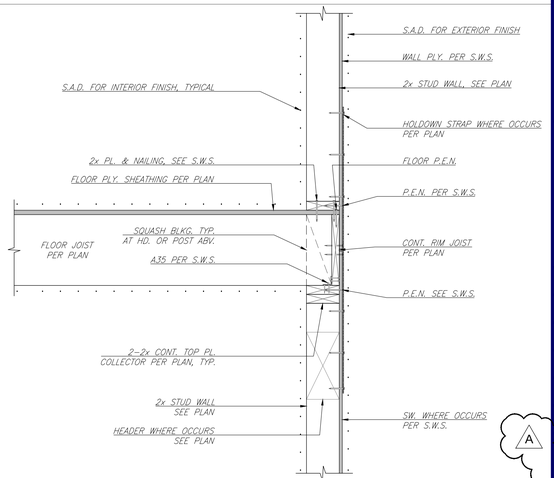


2 FLOOR-TO-FLOOR AT PARALLEL INTERFACE
SCALE NTS



7 EDGE OF DECK AT WALL
SCALE NTS

4 UPPER FLOOR AT INTERIOR WALL DETAIL
SCALE NTS



1 FLOOR-TO-FLOOR AT PERPENDICULAR INTERFACE
SCALE N.T.S.

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APN: 065-054-11

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CHK:	JER
JOB #:	6385.03

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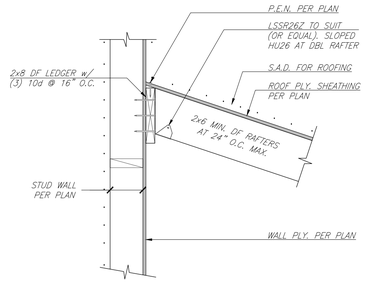
SD2

14 OF 23

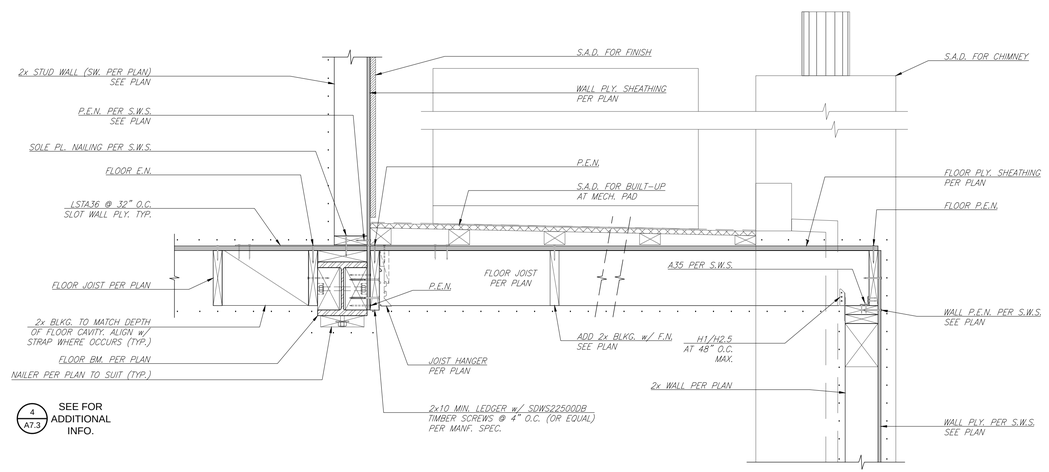
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SEE SD5 REFER TO THESE DETAILS FOR THE CONNECTIONS AT THE STEEL
SEE SD6 STRUCTURAL ELEMENTS AND COMPONENTS, U.O.N. PER PLAN.

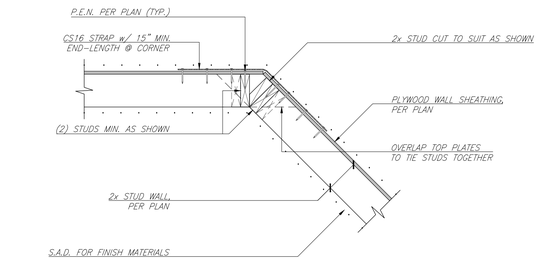


8 ROOF LEDGER DETAIL AT LOW ROOF
SCALE NTS

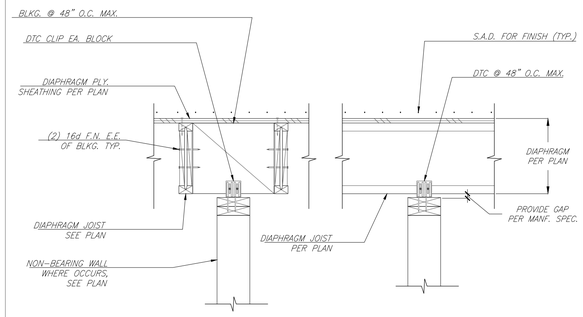


4 A7.3 SEE FOR ADDITIONAL INFO.

3 ROOF DECK AT MECHANICAL PLATFORM
SCALE NTS

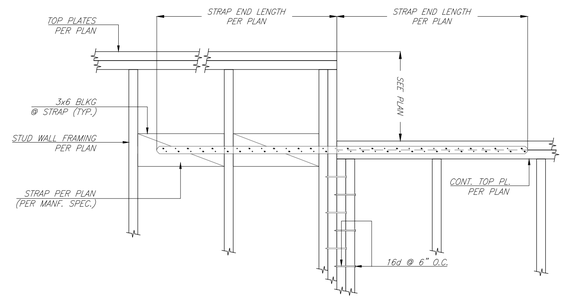


9 STRAP AT ANGLED WALL
SCALE NTS

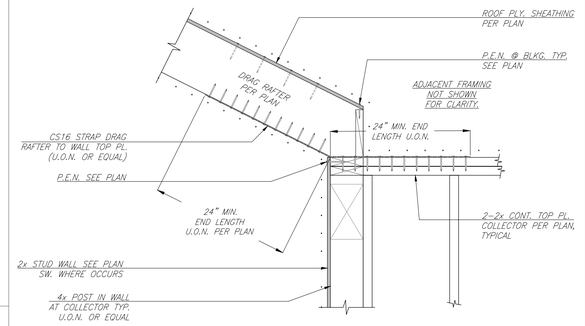


PARALLEL CONDITION PERPENDICULAR CONDITION

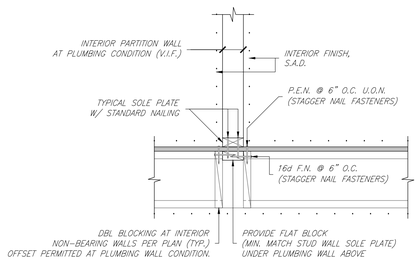
7 DIAPHRAGM AT NTERIOR NON-BEARING WALL
SCALE NTS



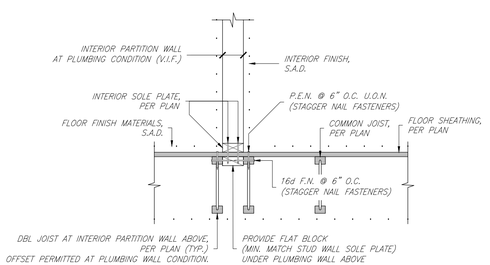
5 PARTIAL STRAP DETAIL AT STEPPED WALL
SCALE NTS



2 PARTIAL STRAP DETAIL AT DRAG RAFTER
SCALE NTS

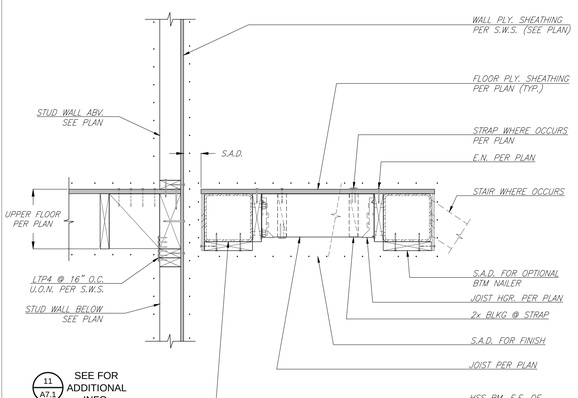


PERPENDICULAR FLOOR CONDITION



PARALLEL FLOOR CONDITION

4 PARTIAL INTERFACE AT INTERIOR PLUBMING WALL OPTION
SCALE NTS

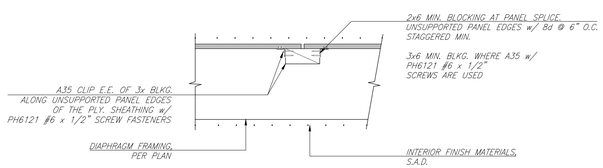


11 A7.3 SEE FOR ADDITIONAL INFO.

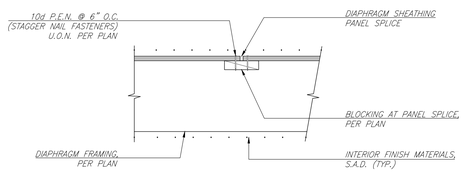
1 PARTIAL SECTION AT CATWALK
SCALE NTS

NOTE: WHERE BLOCKED DIAPHRAGMS ARE REQUIRED, INSTALL BLKG. w/ EITHER 8d F.N. THRU TOP OF (E) PLY. OR ADD A35 CLIPS AS NOTED PER THIS DETAIL.

BLOCKED DIAPHRAGMS WHERE NOTED PER PLAN.



B



A

SEE B FOR ALT.

6 PARTIAL BLOCKED DIAPHRAGM DETAIL
SCALE NTS

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THE BEYER RESIDENCE
FAMILY HOME RENOVATION
STRUCTURAL DETAILS

426 PINE STREET
SAUSALITO, CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER JAMES E. ROWARD No. 72009 CIVIL STATE OF CALIFORNIA

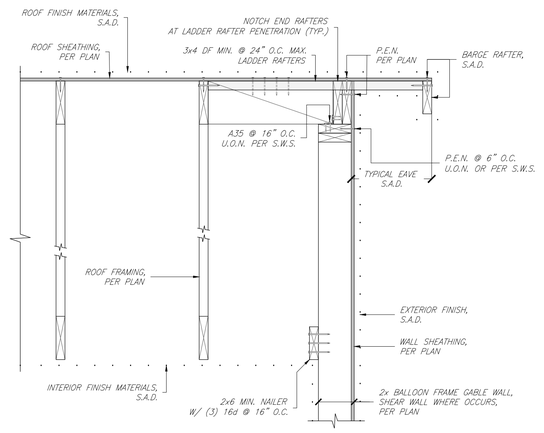
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CHK:	JER
JOB #:	6385.03

SD3
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15 OF 23

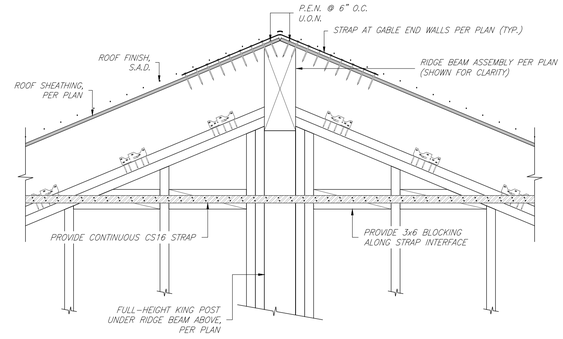
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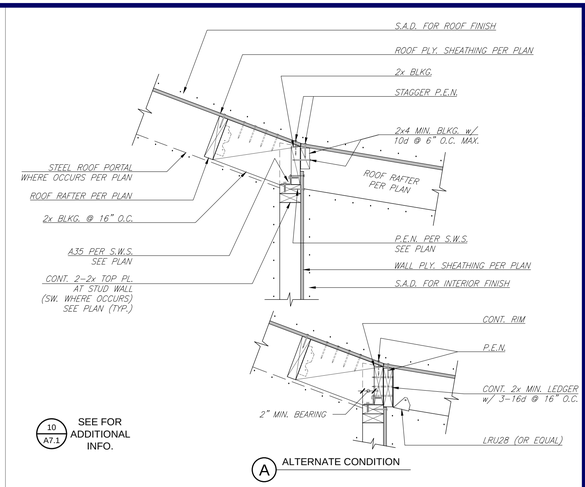
SEE SD5 REFER TO THESE DETAILS FOR THE CONNECTIONS AT THE STEEL
SEE SD6 STRUCTURAL ELEMENTS AND COMPONENTS, U.O.N. PER PLAN.



9 ROOF RAKE AT BALLOON FRAME WALL
SCALE NTS



6 RIDGE BEAM END WALL SUPPORT DETAIL
SCALE NTS



3 ROOF CONNECTION DETAILS
SCALE NTS

7/A7.2 SEE FOR ADDITIONAL INFO.

8 FAUX DROPPED CEILING AT WALK-IN CLOSET
SCALE NTS

4 FOR INFO. NOT SHOWN

5 ROOF AT FLUSH WOOD BEAM
SCALE NTS

4/5/A7.1 SEE FOR ADDITIONAL INFO.

2 ROOF EAVE DETAIL
SCALE NTS

10 TYPICAL OPENINGS IN ROOF DIAPHRAGMS
SCALE NTS

7 BEAM CONNECTIONS
SCALE 1"=1'-0"

5 FOR INFO. NOT SHOWN
6/A7.1 SEE FOR ADDITIONAL INFO.

4 ROOF AT GRIDLINE 2 (SFD)
SCALE NTS

9/A7.1 SEE FOR ADDITIONAL INFO.

1 TYPICAL RIDGE DETAIL
SCALE NTS

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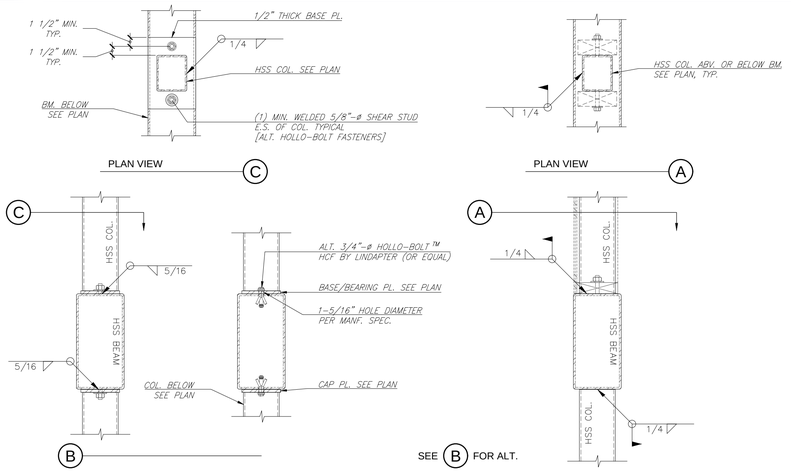
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SD4

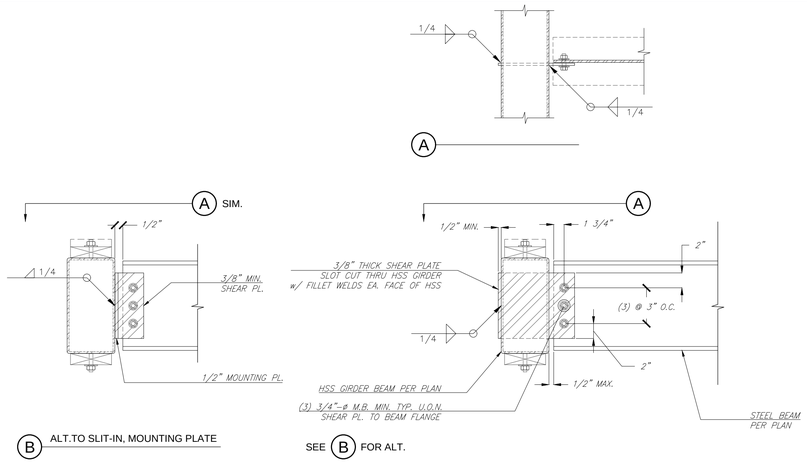
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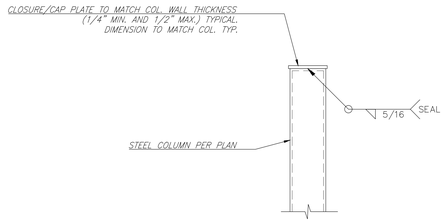
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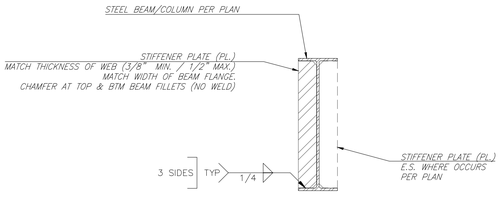
8 COLUMN HSS COL. TO HSS BEAM DETAIL
SCALE NTS



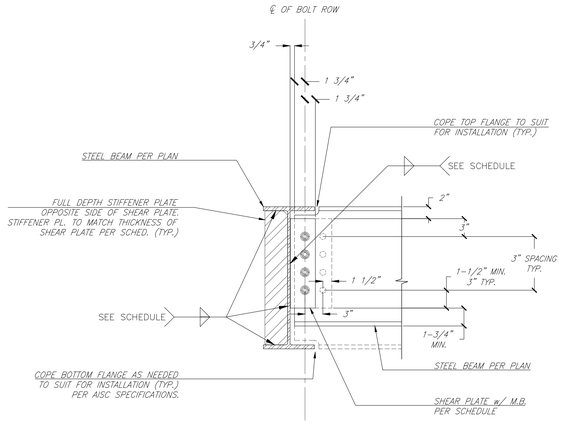
6 SHEAR PLATE CONNECTION AT HSS GIRDER/BEAM
SCALE NTS



3 CLOSURE/CAP PLATE AT HSS COLUMN DETAIL
SCALE NTS



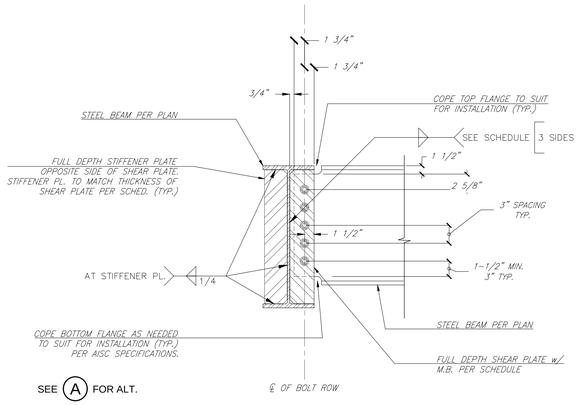
2 STEEL BEAM STIFFENER PLATE DETAIL
SCALE NTS



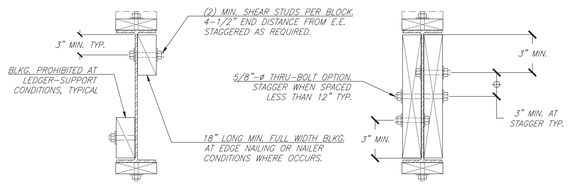
A NOTE: MAY ONLY BE USED AS SPECIFIED PER PLAN, WHERE INDICATED HEREIN.

SHEAR PLATE AT BEAM SCHEDULE			
BEAM DEPTH	NO. OF BOLTS	PLATE THICKNESS	WELD SIZE
W8	2	1/4"	3/16"
W10	2	5/16"	1/4"
W12, W14	3	5/16"	1/4"
W16	4	3/8"	5/16"
W18	5	3/8"	5/16"
W21	5	1/2"	3/8"

1. ALL MACHINE BOLT FASTENERS SHALL BE 3/4"-Ø A325-N.
2. ALL WELDS TO BE E70XX ELECTRODE.
3. ALL STIFFENER AND SHEAR PLATES SHALL BE ASTM A36 OR GR. 50.
4. HOLE SIZE + 1/16" LARGER FOR BOLTS LESS THAN 1"-Ø.

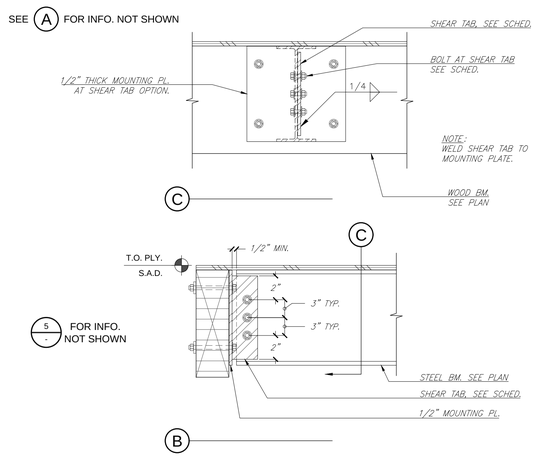


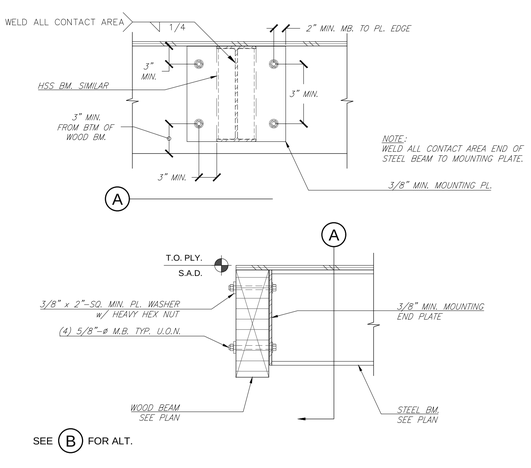
5 TYPICAL SHEAR PLATE CONNECTION AT BEAM DETAIL
SCALE NTS



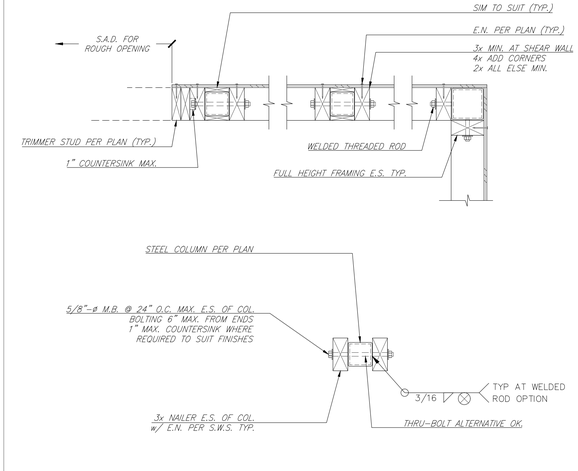
B OPTIONAL BLOCKING DETAIL (PROHIBITED AT SIDE-LOADED CONDITIONS)

A ALT: THRU-BOLT OPTION

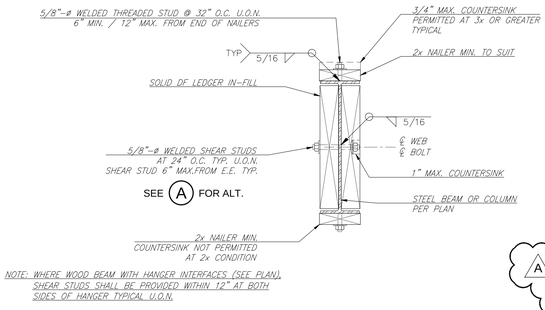




7 STEEL MOUNTING DETAIL AT WOOD BEAM
SCALE NTS



4 WOOD NAILER AT STEEL COLUMN
SCALE NTS



1 WOOD NAILER & FILLER AT STEEL BEAM DETAIL
SCALE NTS

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SAUSALITO, CALIFORNIA
APN: 065-054-11

REGISTERED PROFESSIONAL ENGINEER
JAMES EDWARD RICHARDS
No. 72009
CIVIL
STATE OF CALIFORNIA

DATE:	7/19/24
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JOB #:	6385.03

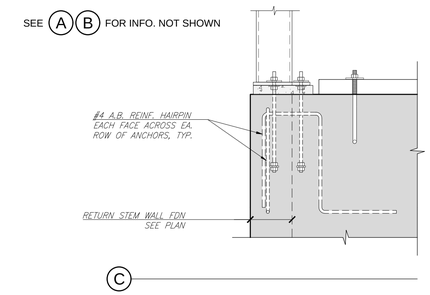
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SD5

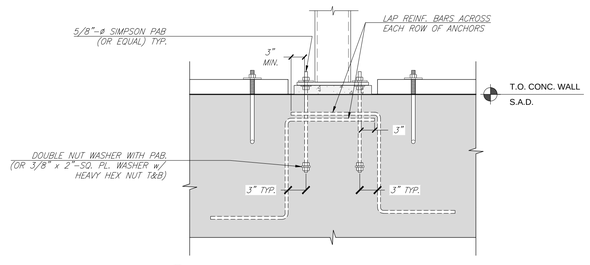
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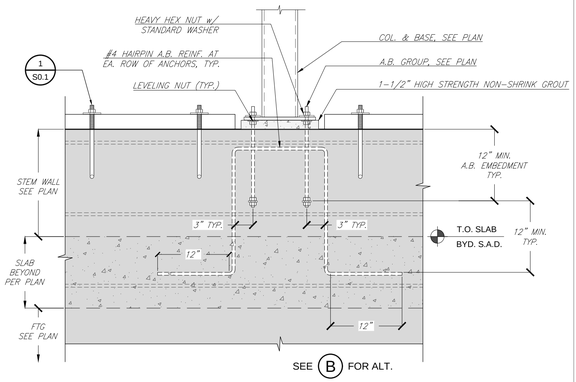
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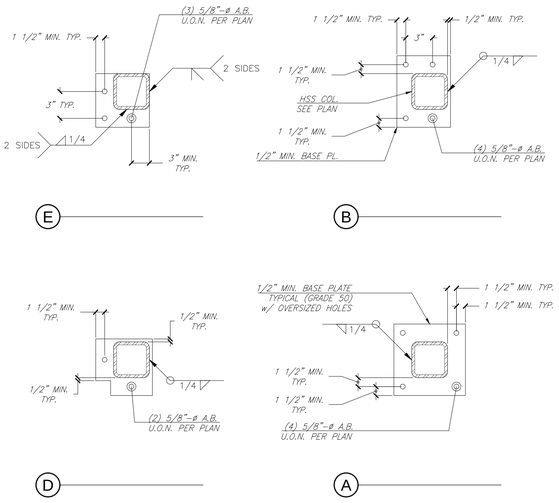
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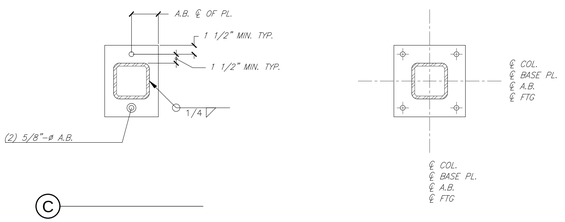


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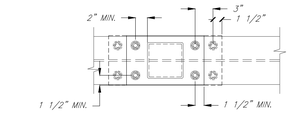


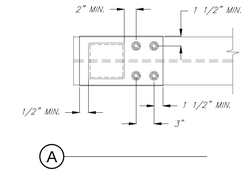
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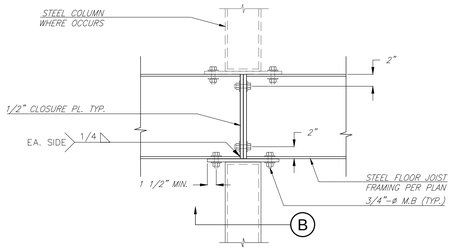


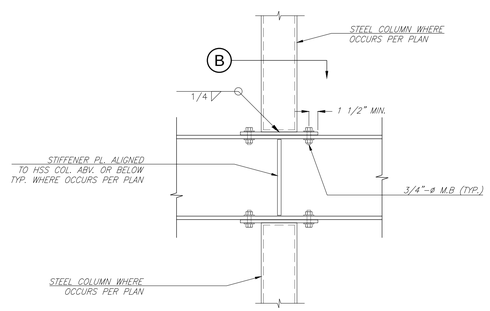


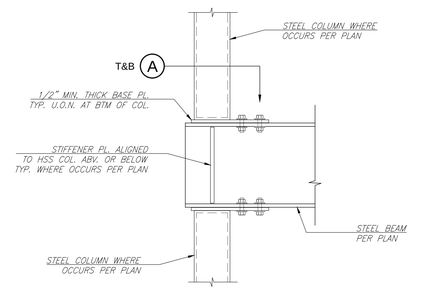
3 STEEL COLUMN BASE PLATE DETAIL SCALE NTS



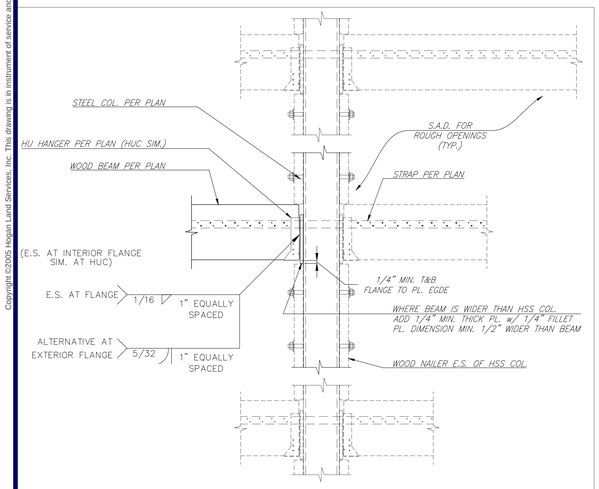




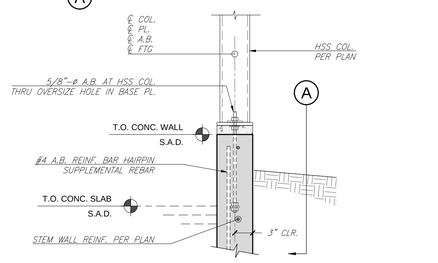




1 HSS COLUMN AT STEEL BEAM DETAIL SCALE NTS



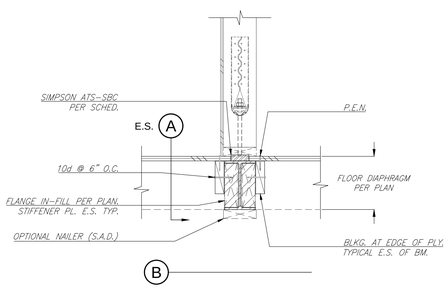
5 SIMPSON HANGER AT HSS COLUMN SCALE NTS

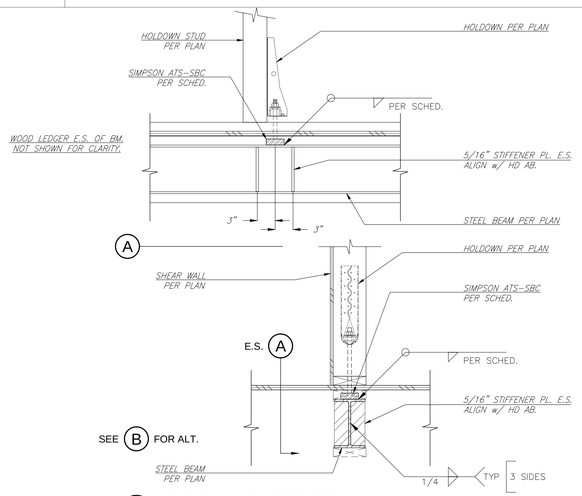


4 BOTTOM OF STEEL COLUMN DETAIL SCALE NTS

SIMPSON ATS-SBC SCHEDULE AT HOLDOWN (HD)				
HOLDOWN (A.T.R. Ø)	ATS-SBC MODEL No.	ATS-SBC ROD DIAMETER (IN.)	FILLET WELD SIZE (IN.)	NOTES
DTT2Z (1/2")	ATS-SBC5H	5/8	3/16	CNW5/8-1/2 TRANSITION COUPLER WILL BE NEEDED TO REDUCE THE ROD DIAMETER TO HD-A.T.R.
HDU2 (5/8")	ATS-SBC5H	5/8	1/4	
HDU4 (5/8")	ATS-SBC5H	5/8	1/4	
HDU5 (5/8")	ATS-SBC5H	5/8	1/4	
HDU8 (7/8")	ATS-SBC7	7/8	5/16	
HDU8 (7/8")	ATS-SBC8H	1	5/16	CNW1-7/8 TRANSITION COUPLER WILL BE NEEDED TO REDUCE THE ROD DIAMETER TO HD-A.T.R.
HDU11 (1")	ATS-SBC8H	1	5/16	
HDU14 (1")	ATS-SBC8H	1	5/16	

1. ALL STRUCTURAL COMPONENTS AS SHOWN ABOVE U.O.N. PER PLAN.
2. WELD LENGTH ON EACH SIDE TO BE PLATE DIMENSION LESS A 1/4" SETBACK FROM EACH CORNER.
3. STRUCTURAL BEAM FLANGE THICKNESS MUST BE A MINIMUM OF 0.258-INCHES.





2 HOLDOWN AT STEEL BEAM SCALE NTS

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JOB #:	6385.03

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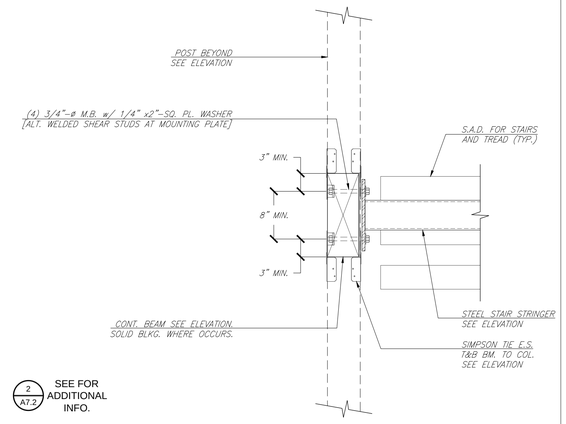
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18 OF 23

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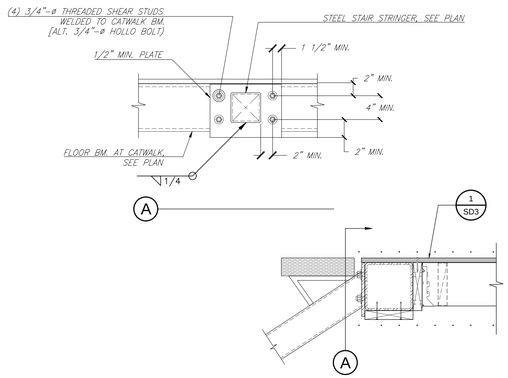
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SEE SD5 REFER TO THESE DETAILS FOR THE CONNECTIONS AT THE STEEL
SEE SD6 STRUCTURAL ELEMENTS AND COMPONENTS, U.O.N. PER PLAN.



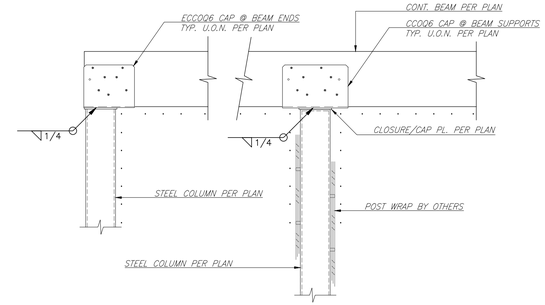
2 SEE A7.2 FOR ADDITIONAL INFO.

5 STAIR STRINGER LANDING TO BEAM
SCALE NTS

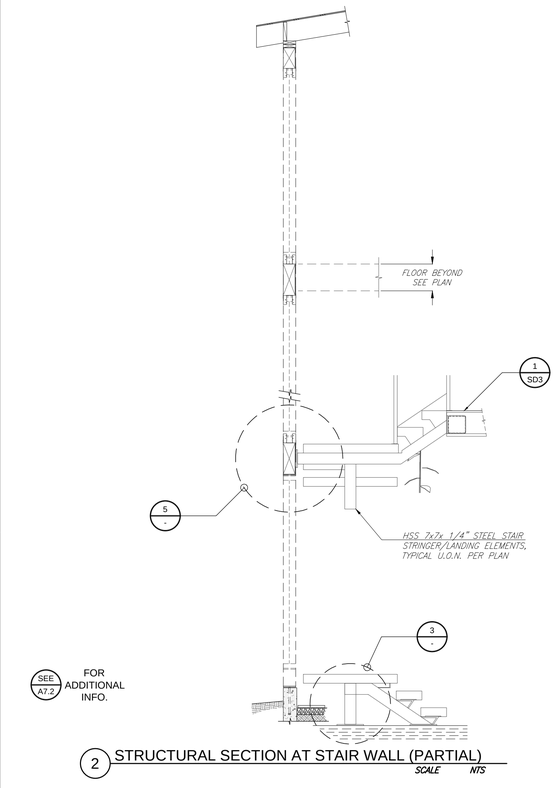


SEE A7.2 FOR ADDITIONAL INFO.

6 PARTIAL SECTION AT CATWALK
SCALE NTS



4 COLUMN CAP AT HSS COL.
SCALE NTS



SEE A7.2 FOR ADDITIONAL INFO.

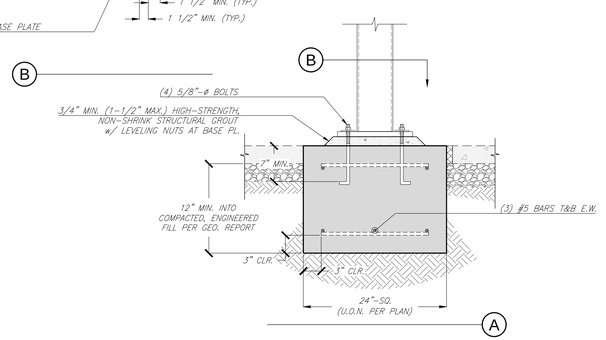
2 STRUCTURAL SECTION AT STAIR WALL (PARTIAL)
SCALE NTS

SEE A7.2 FOR ADDITIONAL INFO.

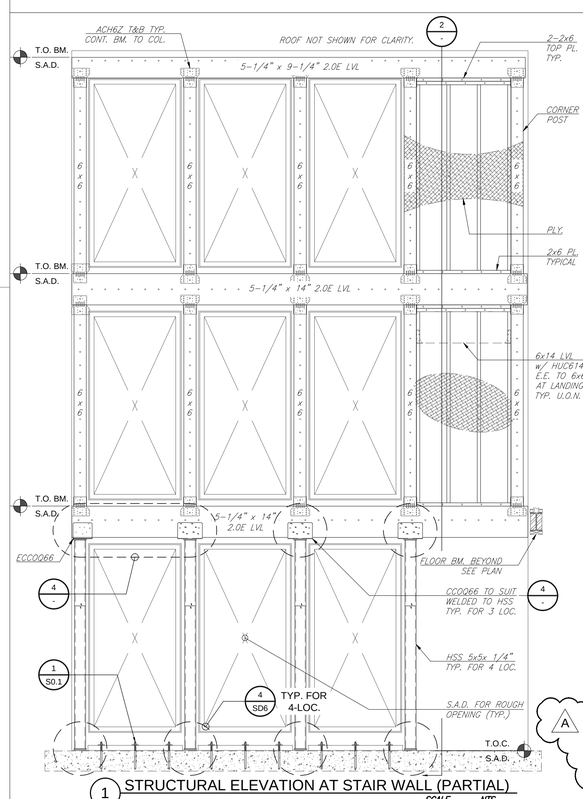
6 PARTIAL SECTION AT CATWALK
SCALE NTS



SEE (A) (B) FOR INFO. NOT SHOWN



3 FOOTING AT BOTTOM OF STAIR STRINGER
SCALE NTS



1 STRUCTURAL ELEVATION AT STAIR WALL (PARTIAL)
SCALE NTS

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STRUCTURAL DETAILS

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REGISTERED PROFESSIONAL ENGINEER
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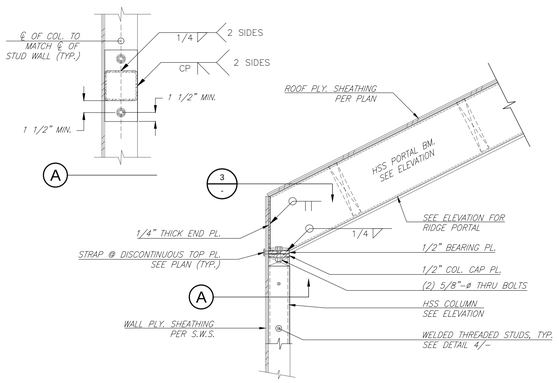
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SD7

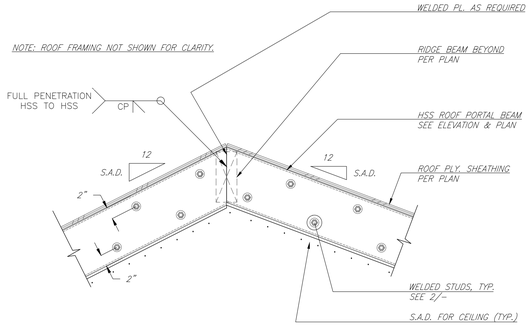
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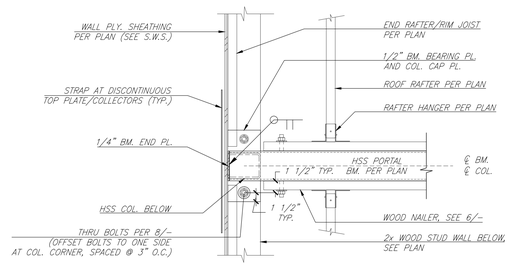
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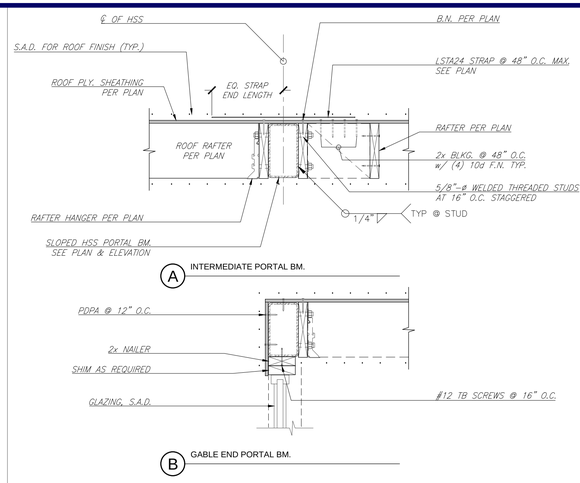
8 HSS BM. TO COL. SECTION
SCALE NTS



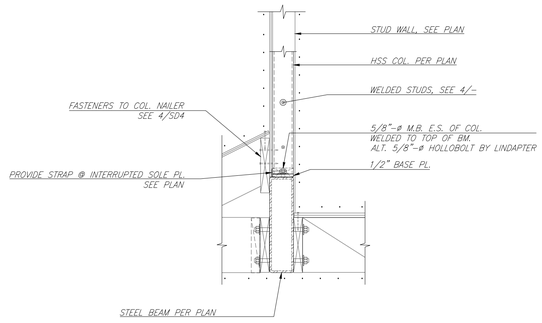
6 HSS PORTAL RIDGE SECTION
SCALE NTS



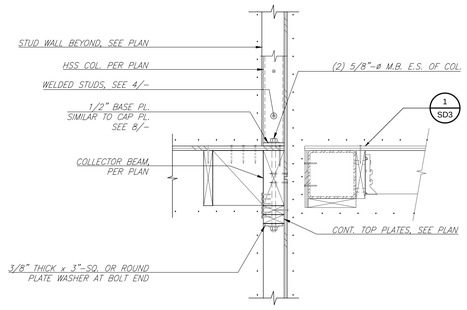
3 HSS PORTAL BM. TO HSS COL. PLAN
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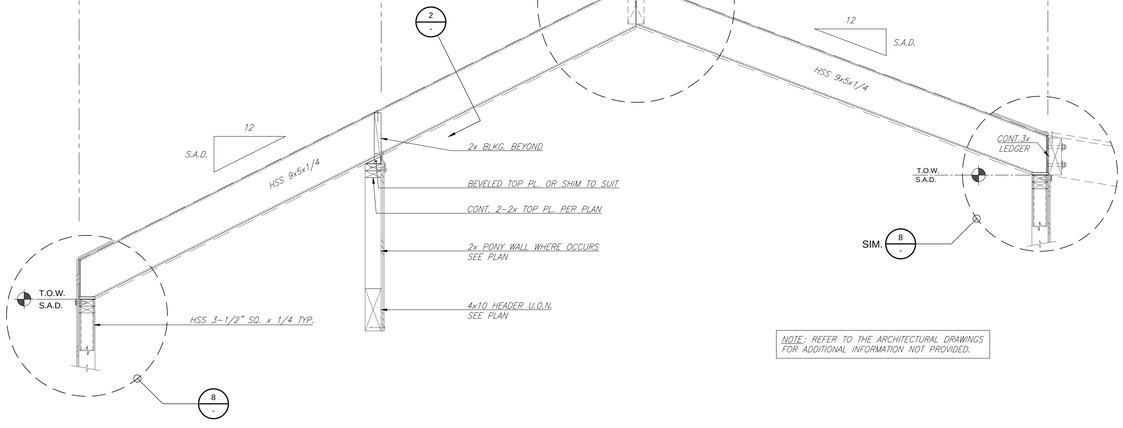
2 HSS BEAM CROSS SECTION
SCALE NTS



7 STEEL COLUMN OVER STEEL BEAM
SCALE NTS



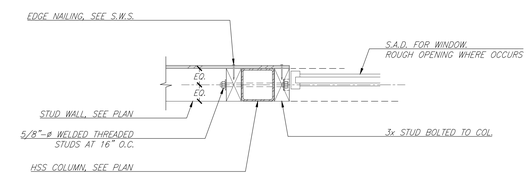
5 STEEL COLUMN OVER WOOD BEAM
SCALE NTS



NOTE: REFER TO THE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION NOT PROVIDED.

1 ROOF STEEL PORTAL ELEVATION
SCALE NTS

SEE SD5 REFER TO THESE DETAILS FOR THE CONNECTIONS AT THE STEEL
SEE SD6 STRUCTURAL ELEMENTS AND COMPONENTS, U.O.N. PER PLAN.



4 HSS COLUMN NAILER
SCALE NTS

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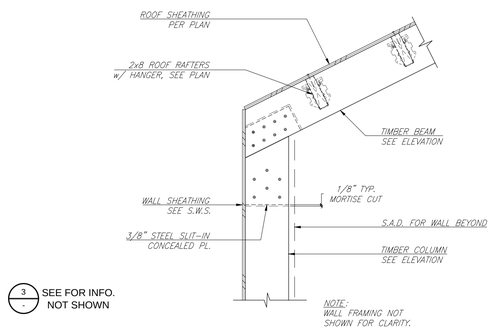
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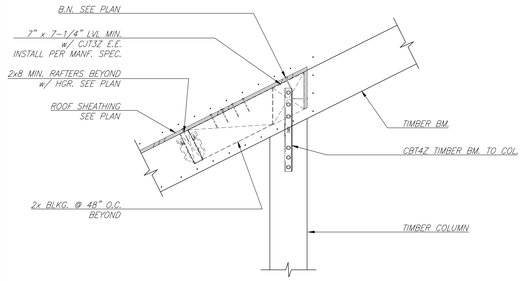
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SD8
20 OF 23

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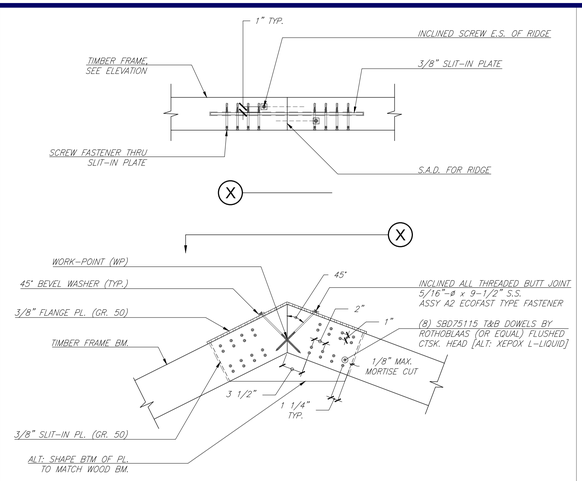
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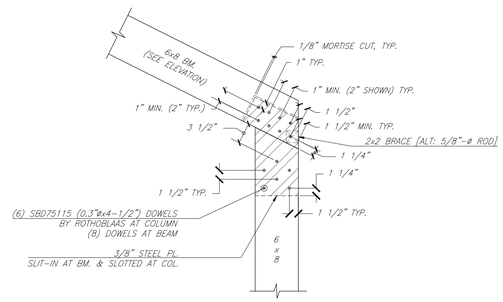
8 BEAM TO COLUMN AT CLADDING WALL
SCALE NTS



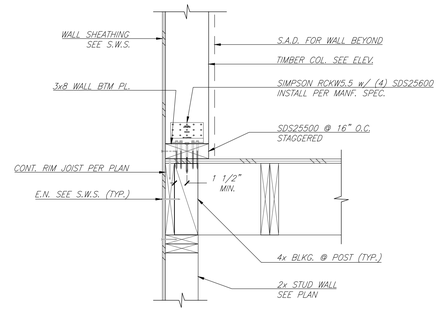
6 GUARD. POST TO TIMBER FRAME BM TOP CONNECTION
SCALE NTS



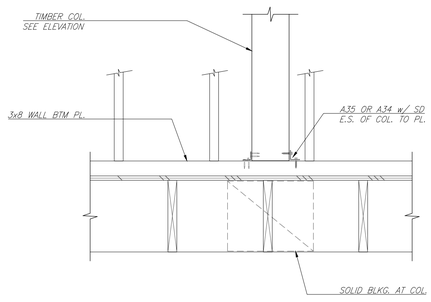
4 TIMBER FRAME RIDGE
SCALE NTS



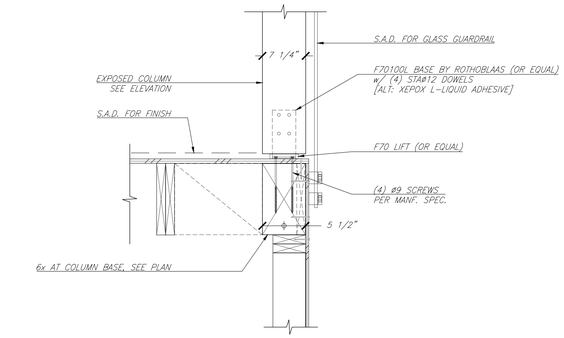
3 BEAM TO COLUMN CONNECTION
SCALE NTS



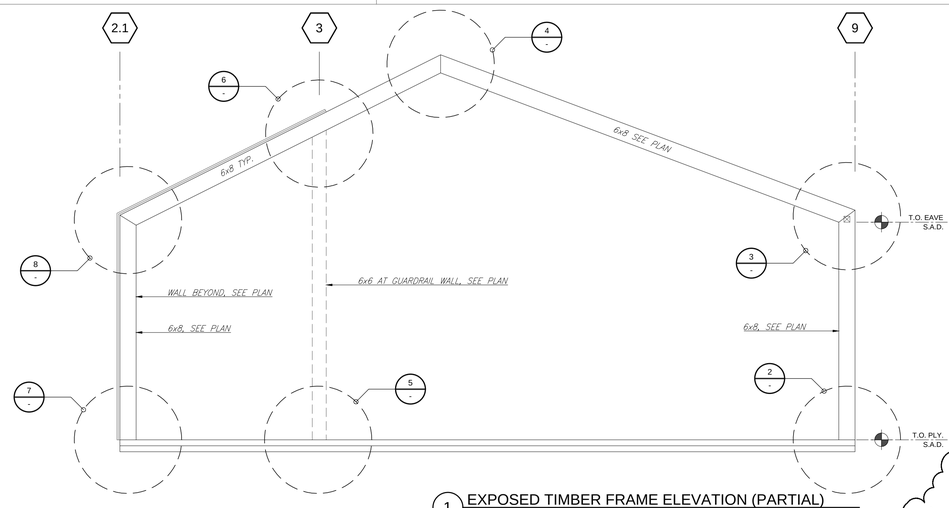
7 TIMBER POST BASE CONNECTION AT WALL
SCALE NTS



5 POST BOTTOM CONNECTION AT WALL
SCALE NTS



2 TIMBER POST EXPOSED BASE CONNECTION
SCALE NTS



1 EXPOSED TIMBER FRAME ELEVATION (PARTIAL)
SCALE NTS

DATE
07-19-2024
A 08-13-2024

HOGAN LAND SERVICES
A CALIFORNIA CORPORATION
TEL (707) 544-2104
FAX (707) 522-2105
www.hoganls.com
4780 SONOMA HWY 12
SANTA ROSA, CA 95409

THE BEYER RESIDENCE
FAMILY HOME RENOVATION
STRUCTURAL DETAILS

426 PINE STREET
SAUSALITO, CALIFORNIA

APN: 065-054-11

REGISTERED PROFESSIONAL ENGINEER
JAMES EDWARD RICHARDS
No. 72009
CIVIL
STATE OF CALIFORNIA

DATE:	7/19/24
SCALE:	1/4"=1'-0" UON
PM:	MS
DRAWN BY:	MLB
CHK:	JER
JOB #:	6385.03

SD9

A

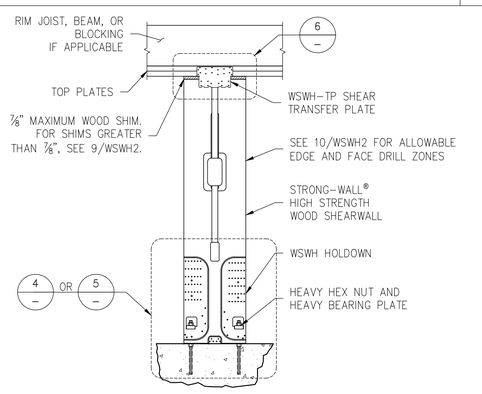
Z:\My projects\6385 G Design LLC-Pine St\CAD\STRUCTURAL\6385-03 STRUCT DESIGN - CDs.dwg, 1/19/2025 7:27:07 PM, _DWG To PDF.pc3

STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MODELS

MODEL NO.	W (in.)	H (in.)	ANCHOR BOLTS		TOTAL WALL WEIGHT (lb.)
			QUANTITY	DIA. (in.)	
WSWH12x7	12	84	2	1	105
WSWH18x7	18	84	2	1	155
WSWH12x8	12	96	2	1	120
WSWH18x8	18	96	2	1	175
WSWH24x8	24	96	2	1	225
WSWH12x9	12	108	2	1	130
WSWH18x9	18	108	2	1	195
WSWH24x9	24	108	2	1	250
WSWH12x10	12	120	2	1	145
WSWH18x10	18	120	2	1	210
WSWH24x10	24	120	2	1	275
WSWH12x12	12	144	2	1	165
WSWH18x12	18	144	2	1	245
WSWH24x12	24	144	2	1	325
WSWH18x14	18	168	2	1	285
WSWH24x14	24	168	2	1	370
WSWH24x16	24	192	2	1	420
WSWH18x20	18	240	2	1	390
WSWH24x20	24	240	2	1	520

NOTES :
1. FOR HEIGHTS NOT LISTED, ORDER THE NEXT TALLEST PANEL AND TRIM TO FIT. MINIMUM TRIMMED HEIGHT FOR ALL PANELS IS 74½".
2. ALL PANELS COME WITH PRE-ATTACHED HOLDOWNS, TWO HEAVY HEX NUTS, TWO HEAVY BEARING PLATES, ONE WSWH-TP TOP CONNECTION PLATE WITH REQUIRED FASTENERS AND INSTALLATION INSTRUCTIONS.
3. ALL PANELS ARE 3½" THICK.

STRONG-WALL® WSWH MODELS | 1



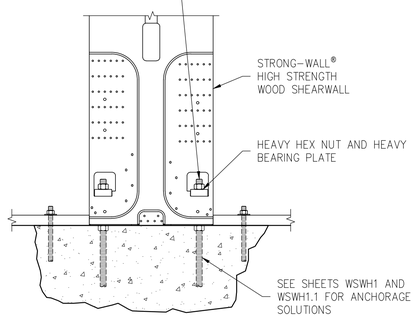
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

ENSURE CONCRETE IS LEVEL AND SMOOTH BENEATH PANEL. GRIND OR FILL AS NECESSARY.

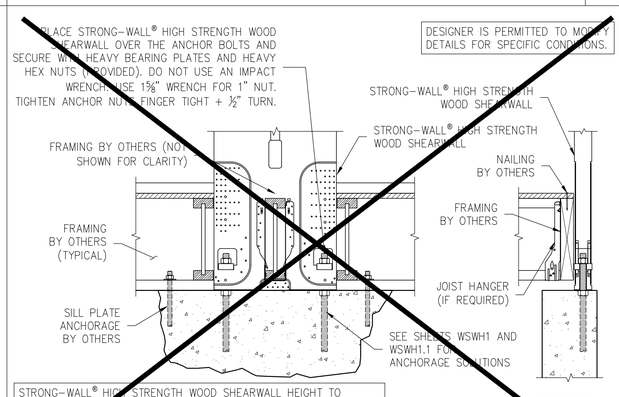
SINGLE STORY WSWH ON CONCRETE | 2

PLACE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL OVER THE ANCHOR BOLTS AND SECURE WITH HEAVY BEARING PLATES AND HEAVY HEX NUTS (PROVIDED). DO NOT USE AN IMPACT WRENCH. USE 1⅛" WRENCH FOR 1" NUT. TIGHTEN ANCHOR NUTS FINGER TIGHT + ½" TURN.

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



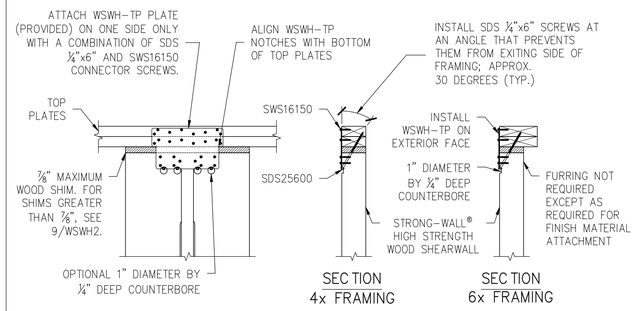
STANDARD INSTALLATION BASE CONNECTION | 4



WOOD FLOOR SYSTEM BASE CONNECTION | 5

MODEL NO.	FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	14	2
WSWH-TP18	26	4
WSWH-TP24	46	8

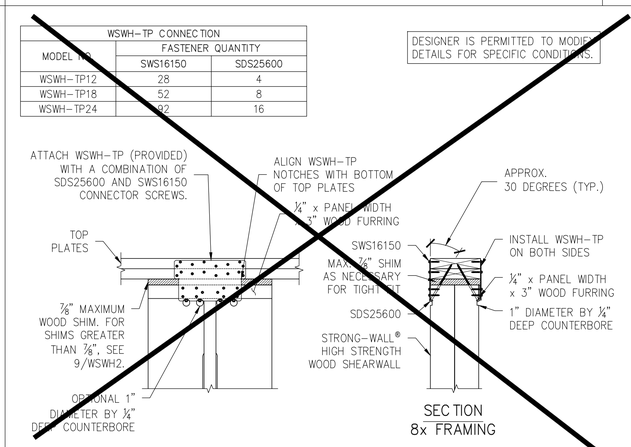
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



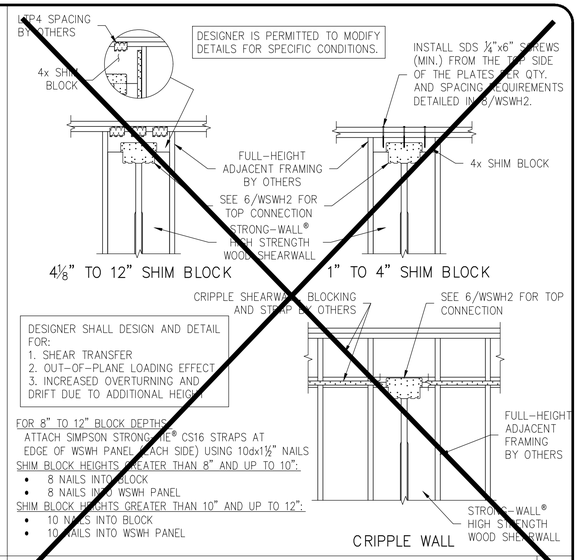
TOP CONNECTION | 6

MODEL NO.	FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	28	4
WSWH-TP18	52	8
WSWH-TP24	92	16

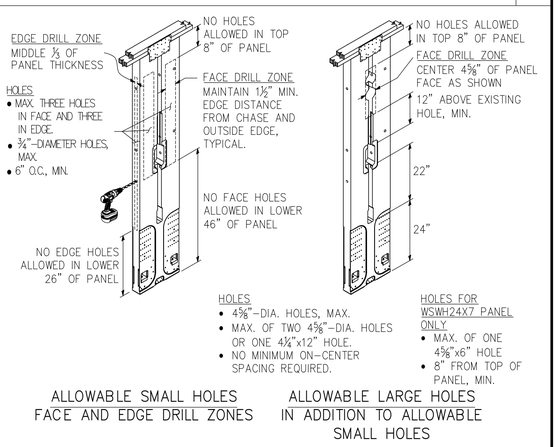
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



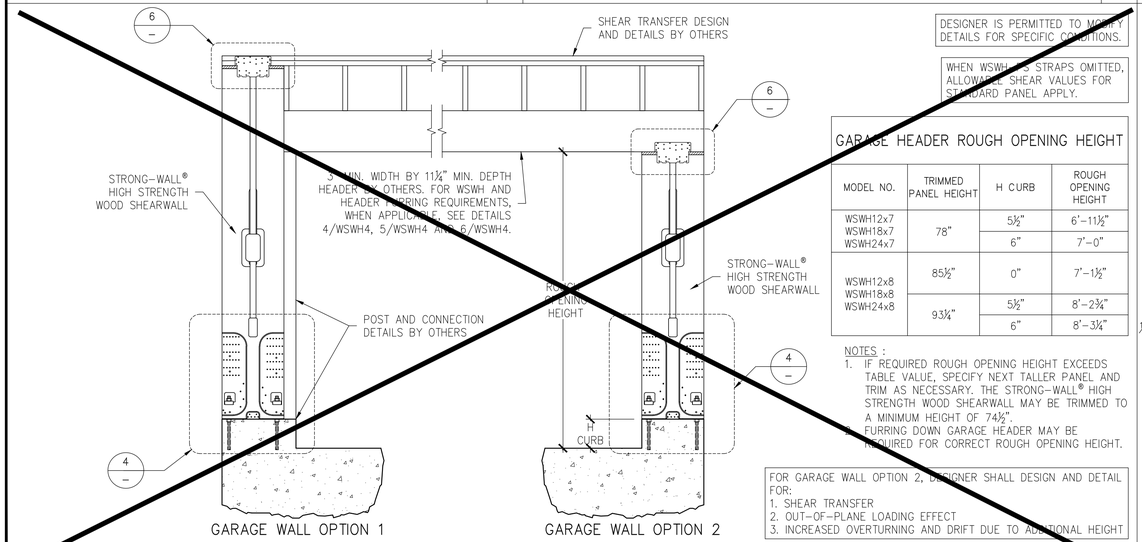
BACK-TO-BACK TOP CONNECTION | 7



TOP OF WALL HEIGHT ADJUSTMENTS | 9



TRIM ZONE AND ALLOWABLE HOLES | 10



GARAGE HEADER ROUGH OPENING HEIGHT

MODEL NO.	TRIMMED PANEL HEIGHT	H CURB	ROUGH OPENING HEIGHT
WSWH12x7 WSWH18x7 WSWH24x7	78"	5½"	6'-11½"
		6"	7'-0"
WSWH12x8 WSWH18x8 WSWH24x8	85½"	0"	7'-1½"
	93¼"	5½"	8'-2¾"
		6"	8'-3¼"

NOTES :
1. IF REQUIRED ROUGH OPENING HEIGHT EXCEEDS TABLE VALUE, SPECIFY NEXT TALLER PANEL AND TRIM AS NECESSARY. THE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MAY BE TRIMMED TO A MINIMUM HEIGHT OF 74½". FURRING DOWN GARAGE HEADER MAY BE REQUIRED FOR CORRECT ROUGH OPENING HEIGHT.

FOR GARAGE WALL OPTION 2, DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

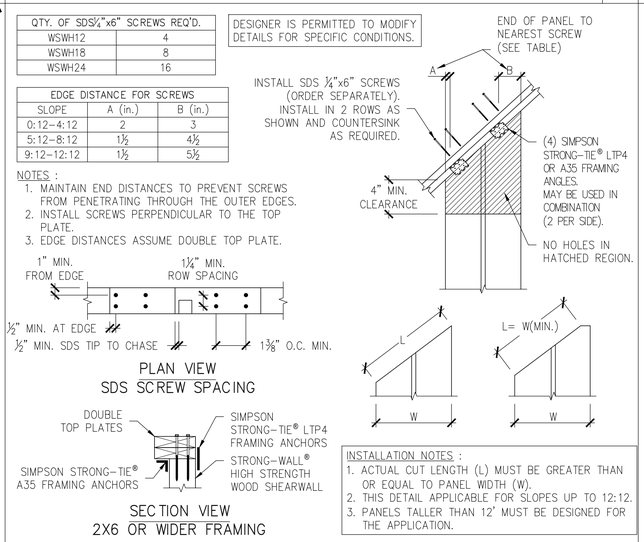
ALTERNATE WSWH GARAGE FRONT OPTIONS | 3

QTY. OF SDS¼"x6" SCREWS REQ'D.	
WSWH12	4
WSWH18	8
WSWH24	16

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

EDGE DISTANCE FOR SCREWS		
SLOPE	A (in.)	B (in.)
0:12-4:12	2	3
5:12-8:12	1½	4½
9:12-12:12	1½	5½

NOTES :
1. MAINTAIN END DISTANCES TO PREVENT SCREWS FROM PENETRATING THROUGH THE OUTER EDGES.
2. INSTALL SCREWS PERPENDICULAR TO THE TOP PLATE.
3. EDGE DISTANCES ASSUME DOUBLE TOP PLATE.



INSTALLATION NOTES :
1. ACTUAL CUT LENGTH (L) MUST BE GREATER THAN OR EQUAL TO PANEL WIDTH (W).
2. THIS DETAIL APPLICABLE FOR SLOPES UP TO 12:12.
3. PANELS TALLER THAN 12' MUST BE DESIGNED FOR THE APPLICATION.

RAKE WALL | 8

NOTES | 11

1. STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL IS MANUFACTURED AND TRADEMARKED BY "SIMPSON STRONG-TIE COMPANY INC." HOME OFFICE: 5956 W. LAS POSITAS BLVD., PLEASANTON, CA 94588 TEL: (800) 999-5099, FAX: (925) 847-1597. "SIMPSON STRONG-TIE COMPANY INC." IS AN ISO 9001-2008 REGISTERED COMPANY.
2. USE OF THIS PRODUCT IS SUBJECT TO THE APPROVAL OF THE LOCAL BUILDING DEPARTMENT.
3. THIS PRODUCT IS PART OF THE OVERALL LATERAL FORCE RESISTING SYSTEM OF THE STRUCTURE. DESIGN OF THE BUILDING'S LATERAL FORCE RESISTING SYSTEM, INCLUDING THE LOAD PATH TO TRANSFER LATERAL FORCES FROM THE STRUCTURE TO THE GROUND, IS THE RESPONSIBILITY OF THE DESIGNER.
4. ENGINEER OF RECORD IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, ELEVATIONS, ETC. PRIOR TO INSTALLATION OF ANY COMPONENTS FOR THE STRONG-WALL SB SYSTEM. IF ANY DISCREPANCIES ARE FOUND, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
6. INSTALLATION OF PRODUCT SHALL BE DONE IN CONFORMANCE TO THESE DRAWINGS. THE PERFORMANCE OF MODIFIED PRODUCTS OR ALTERED INSTALLATION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE DESIGNER.
7. SIMPSON STRONG-TIE COMPANY INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS, DESIGNS, AND MODELS WITHOUT NOTICE OR LIABILITY FOR SUCH CHANGES.
8. ALL HARDWARE CALLED OUT IS SIMPSON STRONG-TIE.
9. SEE ICC-ES ESR-2652 OR CITY OF LOS ANGELES RR25730 AS APPLICABLE FOR ADDITIONAL INFORMATION.

NO.	DATE	REVISIONS
0	11-20-2020	FIRST RELEASE - 2018 IBC
1	03-16-2021	2021 IBC REVISIONS

SIMPSON Strong-Tie, Co. Inc.
• 5956 W. Las Positas Blvd.
• Pleasanton, CA 94588
• Tel: (800) 999-5099
• Website: www.strongtie.com

SIMPSON Strong-Tie THERE IS NO EQUAL

STRONG-WALL® WSWH
FRAMING DETAILS
ENGINEERED DESIGNS

NAME
DATE 03-16-2021
SCALE N.T.S.
CHECKED
SHEET WSWH2
22 OF 23 SHEETS
JOB NO. 6385.03

TABLE 1:
STRONG-WALL® WSWH SECOND-STORY WALLS STACKED APPLICATION

MODEL NO.	W (in.)	H (in.)	TOTAL WALL WEIGHT (lb.)
WSWH12x7	12	84	105
WSWH18x7	18	84	155
WSWH12x8	12	96	120
WSWH18x8	18	96	175
WSWH24x8	24	96	225
WSWH12x9	12	108	130
WSWH18x9	18	108	195
WSWH24x9	24	108	250
WSWH12x10	12	120	145
WSWH18x10	18	120	210
WSWH24x10	24	120	275
WSWH12x12	12	144	165
WSWH18x12	18	144	245
WSWH24x12	24	144	325
WSWH18x14	18	168	285
WSWH24x14	24	168	370

NOTES:
1. ALL PANELS COME WITH PRE-ATTACHED HOLDOWNS, TWO HEAVY HEX NUTS, TWO HEAVY BEARING PLATES, ONE WSWH-TP TOP CONNECTION PLATE WITH REQUIRED FASTENERS AND INSTALLATION INSTRUCTIONS.
2. ORDER TWO-STORY STACKED WALL CONNECTOR KIT SEPARATELY FOR TWO-STORY STACKED APPLICATIONS. KIT INCLUDES TWO MULTI-STORY KIT HOLDOWNS, TWO THREADED RODS, SHEAR TRANSFER PLATE, TWO HEAVY HEX NUTS, AND INSTALLATION INSTRUCTIONS.
3. ALL PANELS ARE 3½" THICK.

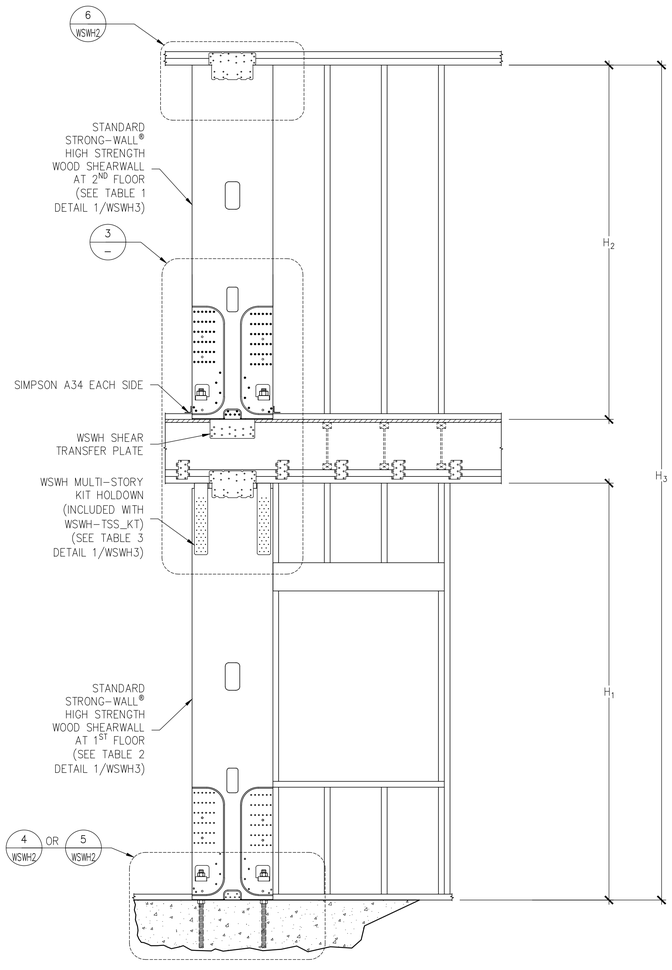
TABLE 2:
STRONG-WALL® WSWH FIRST-STORY WALLS STACKED APPLICATION

MODEL NO.	W (in.)	H (in.)	ANCHOR BOLTS		TOTAL WALL WEIGHT (lb.)
			QUANTITY	DIA. (in.)	
WSWH12x8	12	96	2	1	120
WSWH18x8	18	96	2	1	175
WSWH24x8	24	96	2	1	225
WSWH12x9	12	108	2	1	130
WSWH18x9	18	108	2	1	195
WSWH24x9	24	108	2	1	250
WSWH12x10	12	120	2	1	145
WSWH18x10	18	120	2	1	210
WSWH24x10	24	120	2	1	275
WSWH12x12	12	144	2	1	165
WSWH18x12	18	144	2	1	245
WSWH24x12	24	144	2	1	325
WSWH18x14	18	168	2	1	285
WSWH24x14	24	168	2	1	370

TABLE 3:
TWO-STORY STACKED WALL CONNECTION KIT

WALL WIDTH (in.)	MODEL NO.	CONTENTS
12	WSWH-TSS12KT	EACH KIT CONTAINS: (1) SHEAR TRANSFER PLATE (2) MULTI-STORY KIT HOLDOWNS (2) 1" x 30" THREADED RODS (ASTM A193 B7) (2) HEAVY HEX NUTS INSTALLATION INSTRUCTIONS
18	WSWH-TSS18KT	
24	WSWH-TSS24KT	

TWO-STORY STACKED WSWH MODELS | 1

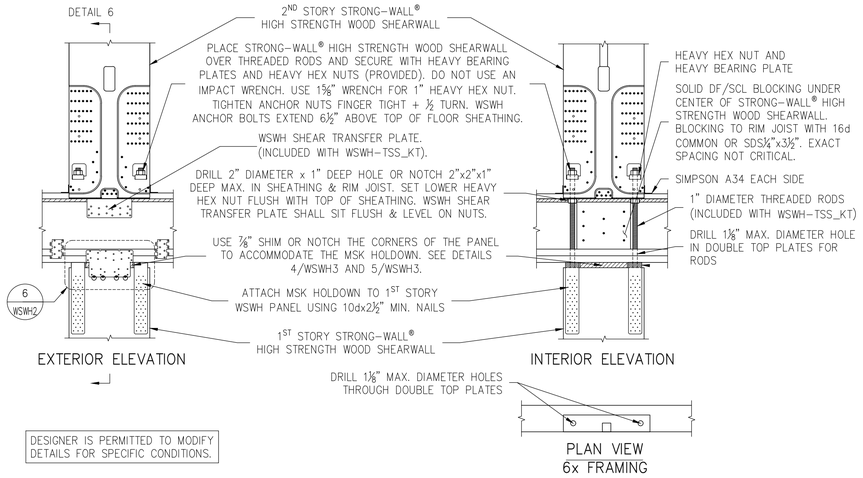


NOTE:
1. 1ST STORY WSWH MUST BE THE SAME WIDTH AS THE 2ND STORY WSWH.

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

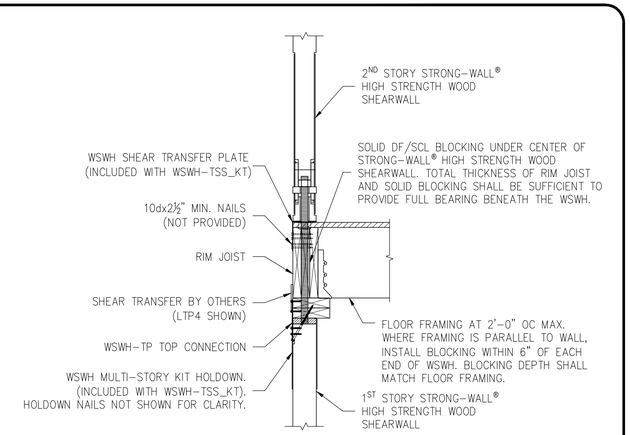
LEGEND :
- H_1 = 1ST STORY WSWH HEIGHT; TOP OF CONCRETE TO UNDERSIDE OF 1ST STORY TOP PLATES (IN.)
- H_2 = 2ND STORY WSWH HEIGHT; TOP OF FLOOR SHEATHING TO UNDERSIDE OF 2ND STORY TOP PLATES (IN.)
- H_3 = TOTAL ASSEMBLY HEIGHT; TOP OF CONCRETE TO UNDERSIDE OF 2ND STORY TOP PLATES (IN.)

TWO-STORY STACKED | 2



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

TWO-STORY STACKED FLOOR FRAMING | 3

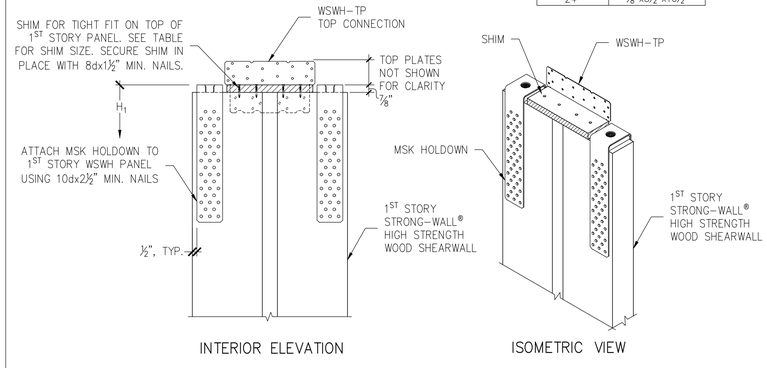


DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

TWO-STORY STACKED FLOOR SECTION | 6

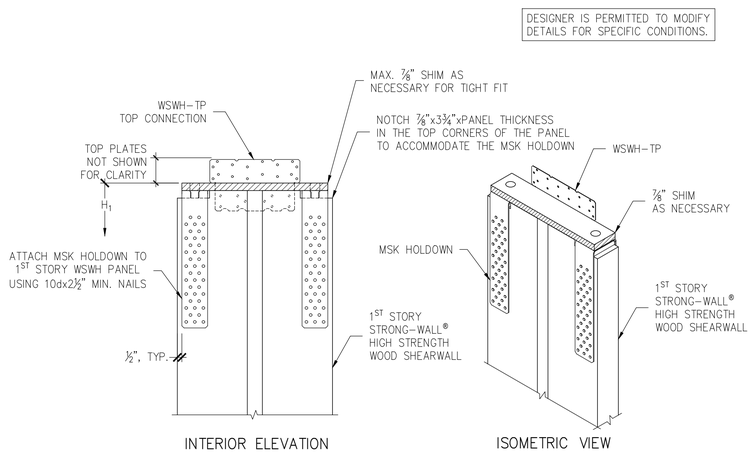
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

WALL WIDTH	SHIM SIZE
12"	⅞"x3½"x4½"
18"	⅞"x3½"x10½"
24"	⅞"x3½"x16½"

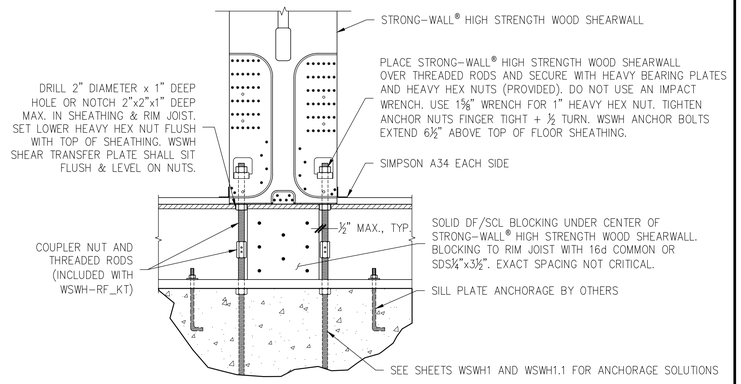


TOP OF 1ST STORY PANEL CONNECTION | 4

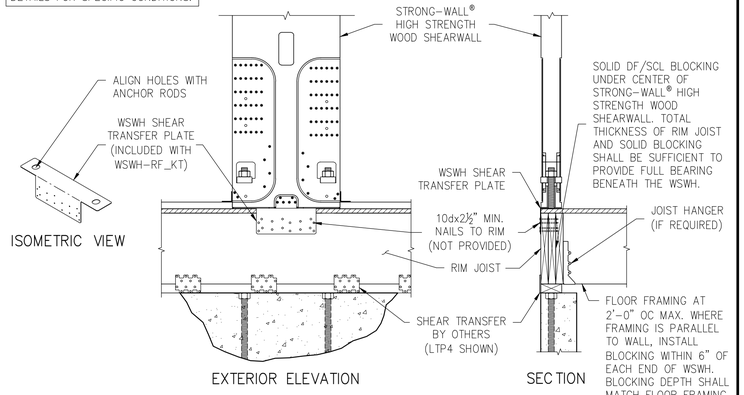
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



ALTERNATIVE TOP OF 1ST STORY PANEL CONNECTION | 5



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



WOOD FIRST-FLOOR WALL CONNECTION KIT

WALL WIDTH (in.)	MODEL NO.	CONTENTS
12	WSWH-RF12KT	EACH KIT CONTAINS: (1) SHEAR TRANSFER PLATE (2) 1" x 18" THREADED RODS (ASTM A193 B7) (2) COUPLER NUTS (2) HEAVY HEX NUTS INSTALLATION INSTRUCTIONS
18	WSWH-RF18KT	
24	WSWH-RF24KT	

ORDER FIRST FLOOR CONNECTION KIT SEPARATELY.
MODEL WSWH-RF_KT. EXAMPLE WSWH-RF18KT

FIRST FLOOR AT WOOD FRAMING NOTES :
1. USE WOOD FIRST-FLOOR ALLOWABLE LOAD TABLES FROM THE STRONG-WALL CATALOG FOR THIS INSTALLATION.
2. USE ALTERNATE DETAIL 5/WSWH2 TO ACHIEVE MAXIMUM ON-CONCRETE ALLOWABLE LOADS.
3. FOR TWO-STORY STACKED STRONG-WALL HIGH STRENGTH WOOD SHEARWALLS WITH WOOD FIRST FLOOR, USE ALTERNATE DETAIL 5/WSWH2.
4. DESIGNER SHALL DESIGN FOR SHEAR TRANSFER FROM RIM JOIST TO SILL PLATE AND SILL PLATE TO FOUNDATION.

FIRST FLOOR AT WOOD FRAMING | 7

NO.	DATE	REVISIONS
1	06-14-2021	FIRST RELEASE - 2021 IBC

SIMPSON Strong-Tie, Co. Inc.
• 5956 W. Las Positas Blvd.
• Pleasanton, CA 94588
• Tel: (800) 999-5099
• Website: www.strongtie.com

SIMPSON Strong-Tie THERE IS NO EQUAL

STRONG-WALL® WSWH
FRAMING DETAILS
FIRST FLOOR WALL AND TWO-STORY STACKED
ENGINEERED DESIGNS

SIMPSON Strong-Tie THERE IS NO EQUAL

NAME	
DATE	06-14-2021
SCALE	N.T.S.
CHECKED	
SHEET	WSWH3
	23 OF 23 SHEETS
JOB NO.	6385.03

SHEET SIZE: Arch D (24"x36")

LEGEND

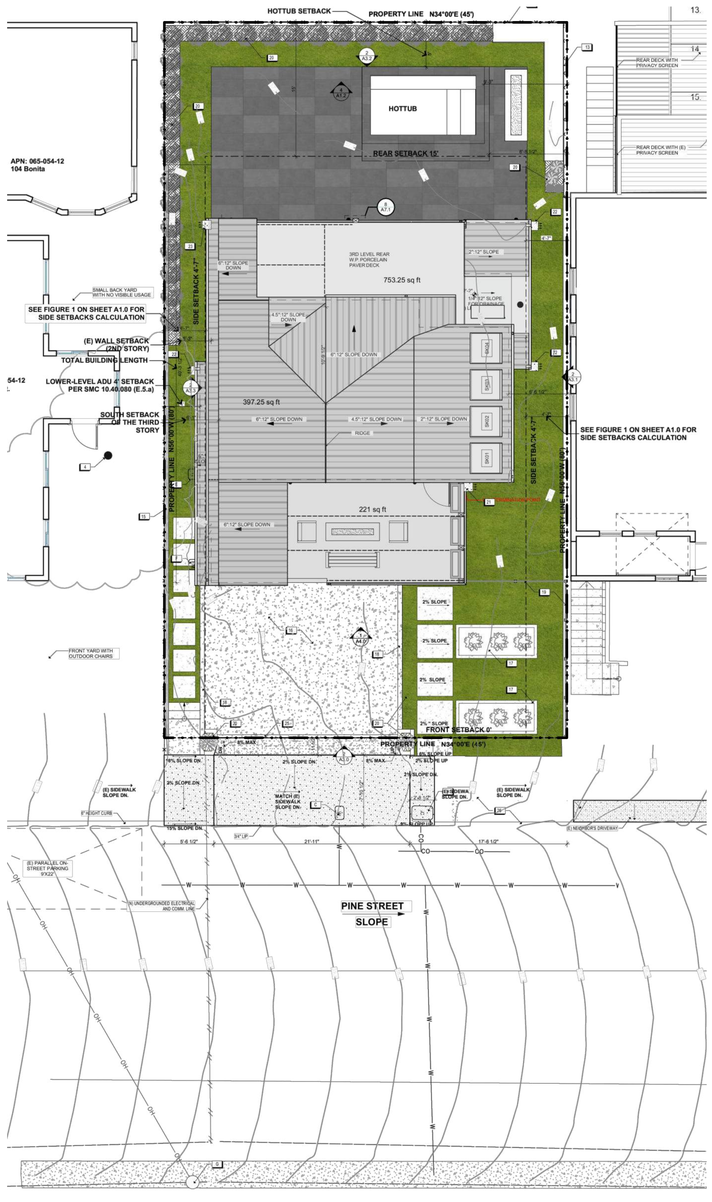
EXISTING	PROPOSED
	PROPERTY LINE

CIVIL DESIGN

426 PINE ST, SAUSALITO, CA 94965

LAT / LONG 37.85790035321462, −122.4862845005957

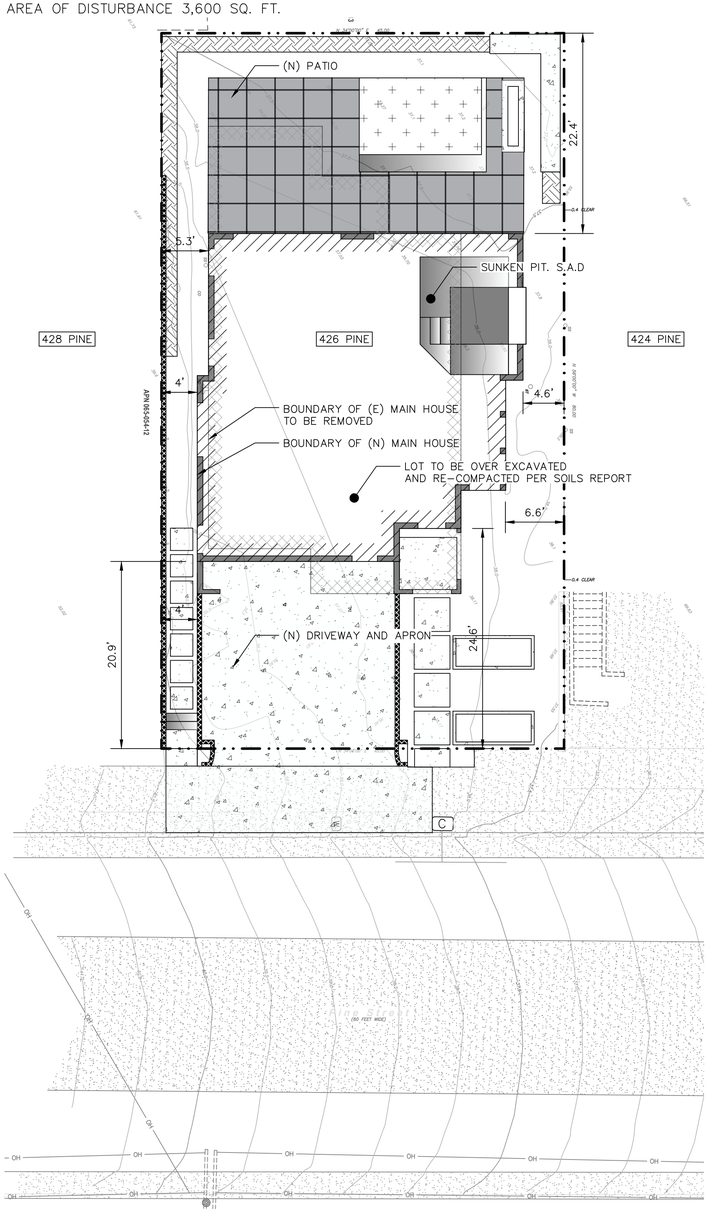
THE DESIGN ENGINEER SHALL INSPECT AND CERTIFY IN WRITING TO DPW THAT THE GRADING AND DRAINAGE WERE CONSTRUCTED PER APPROVED PLAN AND FIELD DIRECTION. CERTIFICATION LETTERS SHALL REFERENCE BUILDING PERMIT NUMBER OR NUMBERS FOR SPECIFIC WORK BEING CERTIFIED, THE ADDRESS AND THE ASSESSOR'S PARCEL NUMBER (APN) FOR THE PROJECT, AND SHALL BE SIGNED AND STAMPED BY THE CERTIFYING PROFESSIONAL.



1 ARCH. SITE PLAN

SCALE: 1"=8'

AREA OF DISTURBANCE 3,600 SQ. FT.

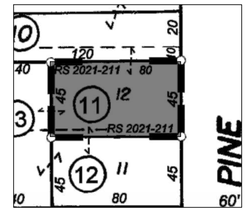


2 CIVIL SITE PLAN

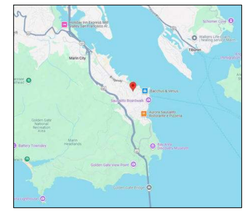
SCALE: 1"=8'

GRAPHIC SCALE
(IN FEET)
8 0 4 8 16 32
1 INCH = 8 FEET

CONTRACTOR TO CONTACT AC ENGINEERING INC. AT LEAST 48 HOURS BEFORE THE START OF CONSTRUCTION
415−295−2152 OR ADMIN@AGNEWCIVIL.COM



PARCEL LOCATION MAP
N.T.S.



VICINITY MAP
N.T.S.



MARIN MAPS PARCEL DETAIL
N.T.S.

SHEET INDEX

C−1.0	SITE OVERVIEW PLAN
C−1.1	PROJECT NOTES
C−2.0	GRADING & DRAINAGE PLANS
C−2.1	UTILITY PLAN
C−2.2	UTILITY PLAN − DETAILS
C−3.0	DETAILS
C−3.1	DETAILS (CONT')
C−3.2	DETAILS (CONT')
C−3.3	DETAILS (CONT')
C−4.0	IMPERVIOUS DATA
C−4.1	EROSION AND SEDIMENTATION CONTROL PLAN
C−5.0	BMPS
TP1	ORIGINAL TOPOPGRAPHIC SURVEY

DEVELOPER / APPLICANT

JAKE AND GEORGIA BEYER
426 PINE ST
SAUSALITO, CA 94965

SITE INFORMATION

426 PINE ST, SAUSALITO, CA 94965
APN: 065−054−11
LOT AREA: 3,600 SQ. FT.

SCOPE OF WORK

DEMOLITION OF AN EXISTING SFR. OVER EXCAVATION AND RECOMPACTION OF LOT DUE TO POOR SUBSURFACE CONDITIONS. NEW SFR TO BE BUILT IN PLACE.

DESIGN

STANDARD CIVIL PRACTICES. CONTROL OF SURFACE AND SUBSURFACE WATER TO ONSITE SUMP DISSIPATING TO THE P.R.O.W.

REFERENCES

THIS PLAN IS SUPPLEMENTAL TO:

ARCH. PLANS : "THE BEYER RESIDENCE", BY: G DESIGN, LLC., DATED: 10/16/24

TOPOGRAPHY & BOUNDARY : "TOPOGRAPHIC MAP" BY: 1031SURVEY, INC., DATED: 07/08/2021

SOILS REPORT : "GEOTECHNICAL INVESTIGATION" BY: PJC & ASSOCIATES, INC., DATED: 3/4/2024

X _____

BENCHMARK

VERTICAL DATUM: ELEVATION IS BASED ON CITY BENCHMARK BM25 BEING A CHISELED X ON RIM OF MANHOLE AT INTERSECTION OF BONITA & PINE STREETS, ELEVATION 45.18 CITY DATUM

BASIS OF BEARINGS

TOPOGRAPHIC INFORMATION SHOWN HERE IS BASED UPON A FIELD SURVEY PERFORMED BY 1031SURVEY, INC. IN MAY 2021 TERRESTIAL LIDAR

STRUCTURAL OBSERVATION IS REQUIRED BY CHAPTER 17 OF THE CALIFORNIA BUILDING CODE. TYPES OF WORK LISTED BELOW SHALL BE OBSERVED DURING PERIODIC SITE VISITS BY AC ENGINEERING INC. OR THEIR DESIGNATED REPRESENTATIVE. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING AC ENGINEERING INC. 48 HOURS BEFORE THE WORK IS READY FOR OBSERVATION. STRUCTURAL INSPECTION DOES NOT CONSTITUTE SPECIAL INSPECTIONS.

OBSERVED DEFICIENCIES SHALL BE REPORTED IN WRITING TO THE OWNER'S REPRESENTATIVE, SPECIAL INSPECTOR, CONTRACTOR, AND BUILDING OFFICIAL. STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFYING ANY REPORTED DEFICIENCIES THAT TO THE BEST OF THE CIVIL/GEOTECHNICAL STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED

	CIVIL	
	☒ DRAINAGE − OPEN TRENCH ☒ DRIVEWAY GRADING ☒ ROUGH GRADING ☒ FINE GRADING ☒ FINAL CIVIL	

ISSUES

ISSUE	DATE	DESCRIPTION
0	12/5/24	PERMIT

AC ENGINEERING, INC.
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STAMP

REGISTERED PROFESSIONAL ENGINEER
ORION W. AGNEW
C 87252
CIVIL
STATE OF CALIFORNIA

SITE OVERVIEW PLAN

BEYER RESIDENCE − NEW SFR
426 PINE ST, SAUSALITO, CA 94965
APN: 065−054−11

385−1

C−1.0

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SHEET SIZE: Arch D (36"x24")

GENERAL NOTES

ALL GENERAL NOTES, SHEET NOTES, AND LEGEND NOTES FOUND IN THESE DOCUMENTS SHALL APPLY TYPICALLY THROUGHOUT. IF INCONSISTENCIES ARE FOUND IN THE VARIOUS NOTATIONS, NOTIFY THE ENGINEER IMMEDIATELY IN WRITING REQUESTING CLARIFICATION.

THESE DRAWINGS AND THEIR CONTENT ARE AND SHALL REMAIN THE PROPERTY OF AGNEW CIVIL ENGINEERING WHETHER THE PROJECT FOR WHICH THEY ARE PREPARED IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY ANY PERSONS ON OTHER PROJECTS OR EXTENSIONS OF THE PROJECT EXCEPT BY AGREEMENT IN WRITING AND WITH APPROPRIATE COMPENSATION TO THE ENGINEER.

ALL WORK SHALL COMPLY WITH APPLICABLE CODES AND TRADE STANDARDS WHICH GOVERN EACH PHASE OF WORK INCLUDING, BUT NOT LIMITED TO, CALIFORNIA MECHANICAL CODE, CALIFORNIA PLUMBING CODE, CALIFORNIA ELECTRICAL CODE, CALIFORNIA FIRE CODE, CALTRANS STANDARDS AND SPECIFICATIONS, AND ALL APPLICABLE STATE AND/OR LOCAL CODES AND/OR LEGISLATION.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND ALL SUBCONTRACTORS TO CHECK AND VERIFY ALL CONDITIONS, DIMENSIONS, LINES AND LEVELS INDICATED. PROPER AT AND ATTACHMENT OF ALL PARTS IS REQUIRED. SHOULD THERE BE ANY DISCREPANCIES, IMMEDIATELY NOTIFY THE ENGINEER FOR CORRECTION OR ADJUSTMENT THE EVENT OF FAILURE TO DO SO, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTION OF ANY ERROR.

ALL DIMENSIONS AND CONDITIONS SHALL BE CHECKED AND VERIFIED ON THE JOB BY EACH SUBCONTRACTOR BEFORE HE/SHE BEGINS HIS/HER WORK. ANY ERRORS, OMISSION, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER/CONTRACTOR BEFORE CONSTRUCTION BEGINS. COMMENCEMENT OF WORK BY THE CONTRACTOR AND/OR ANY SUBCONTRACTOR SHALL INDICATE KNOWLEDGE AND ACCEPTANCE OF ALL CONDITIONS DESCRIBED IN THESE CONSTRUCTION DOCUMENTS, OR EXISTING ON SITE, WHICH COULD AFFECT THEIR WORK.

1. WORK SEQUENCE

IN THE EVENT ANY SPECIAL SEQUENCING OF THE WORK IS REQUIRED BY THE OWNER OR THE CONTRACTOR, THE CONTRACTOR SHALL ARRANGE A CONFERENCE BEFORE ANY SUCH WORK IS BEGUN.

SITE EXAMINATION: THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL THOROUGHLY EXAMINE THE SITE AND FAMILIARIZE HIM/HERSELF WITH THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THE CONTRACTOR SHALL VERIFY AT THE SITE ALL MEASUREMENTS AFFECTING HIS/HER WORK AND SHALL BE RESPONSIBLE FOR THE CORRECTIONS OF THE SAME. NO EXTRA COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR EXPENSES DUE TO HIS/HER NEGLECT TO EXAMINE, OR FAILURE TO DISCOVER, CONDITIONS WHICH AFFECT HIS/HER WORK.

AGNEW CIVIL ENGINEERING EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF AGNEW CIVIL ENGINEERING IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD HARMLESS AGNEW CIVIL ENGINEERING

CONSTRUCTION IS ALWAYS LESS THAN PERFECT SINCE PROJECTS REQUIRE THE COORDINATION AND INSTALLATION OF MANY INDIVIDUAL COMPONENTS BY VARIOUS CONSTRUCTION INDUSTRY TRADES. THESE DOCUMENTS CANNOT PORTRAY ALL COMPONENTS OR ASSEMBLIES EXACTLY. IT IS THE INTENTION OF THESE ENGINEERING DOCUMENTS THAT THEY REPRESENT A REASONABLE STANDARD OF CARE IN THEIR CONTENT. IT IS ALSO PRESUMED BY THESE DOCUMENTS THAT CONSTRUCTION REVIEW SERVICES WILL BE PROVIDED BY THE ENGINEER. SHOULD THE OWNER NOT RETAIN THE ENGINEER TO PROVIDE SUCH SERVICES, OR SHOULD HE/SHE RETAIN THE ENGINEER TO PROVIDE ONLY PARTIAL OR LIMITED SERVICES, THEN IT SHALL BE THE OWNER'S AND CONTRACTOR'S RESPONSIBILITY TO FULLY RECOGNIZE AND PROVIDE THAT STANDARD OF CARE.

IF THE OWNER OR CONTRACTOR OBSERVES OR OTHERWISE BECOMES AWARE OF ANY FAULT OR DEFECT IN THE PROJECT OR NONCONFORMANCE WITH THE CONTRACT DOCUMENTS, PROMPT WRITTEN NOTICE THEREOF SHALL BE GIVEN BY THE OWNER AND/OR CONTRACTOR TO THE ENGINEER.

THE ENGINEER SHALL NOT HAVE CONTROL OF OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

2. SITE PROTECTION

PROTECT ALL LANDSCAPING THAT IS TO REMAIN. ANY DAMAGE OR LOSS RESULTING FROM EXCAVATION, GRADING, OR CONSTRUCTION WORK SHALL BE CORRECTED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING SITE UTILITIES AND SHALL COORDINATE THEIR REMOVAL OR MODIFICATIONS (IF ANY) TO AVOID ANY INTERRUPTION OF SERVICE TO ADJACENT AREAS. THE GENERAL CONTRACTOR SHALL INFORM HIM/HERSELF OF MUNICIPAL REGULATIONS AND CARRY OUT HIS/HER WORK IN COMPLIANCE WITH ALL FEDERAL AND STATE REQUIREMENTS TO REDUCE FIRE HAZARDS AND INJURIES TO THE PUBLIC.

GENERAL GRADING NOTES

CONTRACTOR SHALL OBTAIN THE PROPER PERMITS PRIOR TO ANY GRADING.

A SEPARATE PERMIT IS REQUIRED FOR ANY AND ALL WORK WITHIN THE CITY RIGHT-OF-WAY. THE CONTRACTOR(S) SHALL OBTAIN AN APPROVED STREET WORK (ENCROACHMENT PERMIT) PERMIT FROM THE PUBLIC WORKS DEPARTMENT PRIOR TO THE COMMENCEMENT OF THIS WORK WITHIN THE CITY RIGHT-OF-WAY.

CONTRACTOR SHALL PROVIDE AND MAINTAIN APPROVED EROSION AND SEDIMENTATION CONTROL MEASURES DURING RAINY SEASON PER CITY AND CALIFORNIA REGIONAL STANDARDS – REFER TO EROSION AND SEDIMENTATION CONTROL PLAN.

ALL GRADED SLOPES SHALL BE PLANTED WITH FAST GROWING, DEEP ROOTED GROUND COVER TO REDUCE THE EROSION DURING HEAVY RAINS.

SLOPE FINISHED GRADES A MINIMUM OF 5%, FOR AT LEAST THE 5 FEET TO 10 FEET FROM BUILDING PERIMETER WHERE EVER IT IS PHYSICALLY POSSIBLE. DIRECT SURFACE DRAINAGE RUNOFF TO DISPERSE ON-SITE.

PROVIDE 2% SLOPE ACROSS FLATWORK AND/OR PAVING AND SLOPE TO DAYLIGHT. REFER TO ARCHITECTS PLANS FOR PAVEMENT TYPE, LAYOUT, AND FINISH –TYP.

CONSTRUCT EARTHEN SWALES AT 2% – TYP. (1% MIN.) & BERMS AS REQUIRED TO DIRECT FLOWS TO DAYLIGHT. SLOPE FINISHED GRADES TO DAYLIGHT, TO ACCOMMODATE POSITIVE DRAINAGE AND AVOID PONDING. FOR FLOWLINES GREATER THAN 5%, PROVIDE LINED DITCH –TYP.

REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION, INCLUDING BUT NOT LIMITED TO: ADDITIONAL UTILITY SERVICES, DIMENSION CONTROL DEMOLITION, DETAILS, TREE PROTECTION MEASURES, AND LANDSCAPING.

PROVIDE TREE PROTECTION AS REQUIRED FOR TREES TO REMAIN.

THE CONTRACTOR SHALL OBTAIN THE PROPER TREE REMOVAL PERMIT AS REQUIRED.

CONTRACTOR SHALL NOTIFY THE OWNER AND/OR MAINTENANCE STAFF IN WRITING OF THE NEED OF PERIODIC MAINTENANCE OF THE DRAINAGE SYSTEM AND STRUCTURES.

DEMOLISH (E) STRUCTURE(S) AS REQUIRED. NO DEMOLITION SHALL COMMENCE WITHOUT REQUIRED CITY DEMOLITION PERMIT.

FINISHED GRADE ELEVATIONS NOTED AS [FG (MAX.)] ARE THE MAXIMUM ALLOWABLE GRADE AT THE BUILDING PERIMETER PER C.B.C. SECTION 2304.11.2.2 TO PROVIDE 8" MIN. CLEARANCE. THESE GRADES MAY BE LOWER PROVIDED THAT PROPER FLOW AWAY FROM THE FOUNDATION IS ACHIEVED. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR SPECIAL DETAILS AS REQUIRED.

DIRECT ROOF DOWNSPOUT (DS) LEADERS TO SPLASH BLOCKS, PROVIDE 2' LONG SPLASH BLOCKS TO BE USED BELOW RAIN WATER LEADERS IN PERVIOUS AREAS.

STORMWATER POLLUTION PREVENTION NOTES

1. STORE, HANDLE, AND DISPOSE OF CONSTRUCTION MATERIALS AND WASTES PROPERLY, SO AS TO PREVENT THEIR CONTACT WITH STORMWATER.

2. CONTROL AND PREVENT THE DISCHARGE OF ALL POTENTIAL POLLUTANTS, INCLUDING SOLID WASTES, PAINTS, CONCRETE, PETROLEUM PRODUCTS, CHEMICALS, WASH WATER OR SEDIMENT, AND NON-STORMWATER DISCHARGES TO STORM DRAINS AND WATER COURSES.

3. USE SEDIMENT CONTROL OR FILTRATION TO REMOVE SEDIMENT FROM DEWATERING EFFLUENT.

4. AVOID CLEANING, FUELING, OR MAINTAINING VEHICLES ON SITE, EXCEPT IN A DESIGNATED AREA IN WHICH RUNOFF IS CONTAINED AND TREATED.

5. DELINEATE CLEARING LIMITS, EASEMENTS, SETBACKS, SENSITIVE OR CRITICAL AREAS, BUFFER ZONES, TREES AND DISCHARGE COURSE WITH FIELD MARKERS.

6. PROTECT ADJACENT PROPERTIES AND UNDISTURBED AREAS FROM CONSTRUCTION IMPACTS USING VEGETATIVE BUFFER STRIPS, SEDIMENT BARRIERS OF FILTERS, DIKES, MULCHING, OR OTHER MEASURES AS APPROPRIATE.

7. PERFORM CLEARING AND EARTH MOVING ACTIVITIES DURING DRY WEATHER TO THE MAXIMUM EXTENT PRACTICAL

8. LIMIT AND TIME APPLICATIONS OF PESTICIDES AND FERTILIZERS TO PREVENT POLLUTED RUNOFF.

9. LIMIT CONSTRUCTION ACCESS ROUTES AND STABILIZE DESIGNATED ACCESS POINTS.

10. AVOID TRACKING DIRT OR MATERIALS OFF-SITE; CLEAN OFF-SITE PAVED AREAS AND SIDEWALKS USING DRY SWEEPING METHODS TO THE MAXIMUM EXTENT PRACTICAL.

SUPPLEMENTAL MEASURES

A. THE PHRASE 'NO DUMPING – DRAINS TO BAY' OR EQUALLY EFFECTIVE PHRASE MUST BE LABELED ON STORM DRAIN INLETS (BY STENCILING, BRANDING, OR PLAQUES) TO ALERT THE PUBLIC TO THE DESTINATION OF STORM WATER AND TO PREVENT DIRECT DISCHARGE OF POLLUTANTS INTO THE STORM DRAIN.

B. USING FILTRATION MATERIALS ON STORM DRAIN COVERS TO REMOVE SEDIMENT FROM DEWATERING EFFLUENT.

C. STABILIZING ALL DEMUDED AREAS AND MAINTAINING EROSION CONTROL MEASURES CONTINUOUSLY FROM OCTOBER 1 TO APRIL 30.

D. REMOVING SPOILS PROMPTLY, AND AVOID STOCKPILING OF ALL MATERIALS, WHEN RAIN IS FORECAST. IF RAIN THREATENS, STOCKPILED SOILS AND OTHER MATERIALS SHALL BE COVERED WITH A TARP OR OTHER WATERPROOF MATERIAL

E. STORING, HANDLING, AND DISPOSING OF CONSTRUCTION MATERIALS AND WASTES SO AS TO AVOID THEIR ENTRY TO THE STORM DRAIN SYSTEMS OR WATER BODY.

GRADING AND DRAINAGE NOTES

1. SCOPE OF WORK

A. THESE SPECIFICATIONS AND APPLICABLE PLANS PERTAIN TO AND INCLUDE ALL SITE GRADING AND EARTHWORK ASSOCIATED WITH THE PROJECT INCLUDING, BUT NOT LIMITED TO THE FURNISHING OF ALL LABOR, TOOLS AND EQUIPMENT NECESSARY FOR SITE CLEARING AND GRUBBING, SITE PREPARATION, DISPOSAL OF EXCESS OR UNSUITABLE MATERIAL STRIPPING, KEYING, EXCAVATION, OVER EXCAVATION, RECOMPACTION PREPARATION FOR SOIL RECEIVING FILL, PAVEMENT, FOUNDATION OF SLABS, EXCAVATION, IMPORTATION OF ANY REQUIRED FILL MATERIAL PROCESSING, PLACEMENT AND COMPACTION OF FILL AND SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING TO CONFORM TO THE LINES, GRADING AND SLOPE SHOWN ON THE PROJECT GRADING PLANS.

2. GENERAL

A. ALL SITE GRADING AND EARTHWORK SHALL CONFORM TO THE RECOMMENDATIONS OF THESE SPECIFICATIONS AND SOILS REPORT AND THE MARIN COUNTY GRADING ORDINANCE.

B. ALL FILL MATERIALS SHALL BE DENSIFIED SO AS TO PRODUCE A DENSITY NOT LESS THAN 90% RELATIVE COMPACTION BASED UPON ASTM)A TEST DESIGNATION D1557. FIELD DENSITY TEST WILL BE PERFORMED IN ACCORDANCE WITH ASTM TEST DESIGNATION 2922 AND 3017. THE LOCATION AND FREQUENCY OF THE FIELD DENSITY TEST WILL BE AS DETERMINED BY THE SOIL ENGINEER. THE RESULTS OF THESE TEST AND COMPLIANCE WITH THE SPECIFICATIONS WILL BE THE BASIS UPON WHICH SATISFACTORY COMPLETION OF THE WORK WILL BE JUDGED BY THE SOIL ENGINEER. ALL CUT AND ALL SLOPES SHALL BE CONSTRUCTED AS SHOWN ON PLANS, BUT NO STEEPER THAN TWO (2) HORIZONTAL TO ONE (1) VERTICAL

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SATISFACTORY COMPLETION OF ALL THE EARTHWORK IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. NO DEVIATION FROM THESE SPECIFICATIONS SHALL BE MADE EXCEPT UPON WRITTEN APPROVAL BY THE SOILS ENGINEER. BOTH CUT AND ALL AREAS SHALL BE SURFACE COMPLETED TO THE SATISFACTION OF THE SOILS ENGINEER AT THE CONCLUSION OF ALL GRADING OPERATIONS AND PRIOR TO FINAL ACCEPTANCE. THE CONTRACTOR SHALL NOTIFY THE SOILS ENGINEER AT LEAST TWO (2) WORKING DAYS PRIOR TO DOING ANY SITE GRADING AND EARTHWORK INCLUDING CLEARING.

3. CLEARING AND GRUBBING

A. THE CONTRACTOR SHALL ACCEPT THE SITE IN ITS PRESENT CONDITION. ALL EXISTING PUBLIC IMPROVEMENTS SHALL BE PROTECTED. ANY IMPROVEMENTS DAMAGED SHALL BE REPLACED BY THE CONTRACTOR AS DIRECTED BY THE COUNTY OF MARIN WITH NO EXTRA COMPENSATION.

B. ALL ABANDONED BUILDINGS AND FOUNDATIONS, TREE (EXCEPT THOSE SPECIFIED TO REMAIN FOR LANDSCAPING PURPOSES), FENCES, VEGETATION AND ANY SURFACE DEBRIS SHALL BE REMOVED AND DISPOSED OF OFF THE SITE BY THE CONTRACTOR.

C. ALL ABANDONED SEPTIC TANKS AND ANY OTHER SUBSURFACE STRUCTURES EXISTING IN PROPOSED DEVELOPMENT AREAS SHALL BE REMOVED PRIOR TO ANY GRADING OR FILL OPERATION. ALL APPURTENANT DRAIN FIELDS AND OTHER CONNECTING LINES MUST ALSO BE TOTALLY REMOVED.

D. ALL ABANDONED UNDERGROUND IRRIGATION OR UTILITY LINES SHALL BE REMOVED OR DEMOLISHED. THE APPROPRIATE FINAL DISPOSITION OF SUCH LINES DEPEND UPON THEIR DEPTH AND LOCATION AND THE METHOD OF REMOVAL OR DEMOLITION SHALL BE DETERMINED BY THE SOILS ENGINEER. ONE OF THE FOLLOWING METHODS WILL BE USED:

(1) EXCAVATE AND TOTALLY REMOVE THE UTILITY LINE FROM THE TRENCH.
(2) EXCAVATE AND CRUSH THE UTILITY LINE IN THE TRENCH.
(3) CAP THE ENDS OF THE UTILITY LINE WITH CONCRETE TO PREVENT THE ENTRANCE OF WATER. THE LOCATIONS AT WHICH THE UTILITY LINE WILL BE CAPPED WILL BE DETERMINED BY THE COUNTY OF MARIN ENGINEER. THE LENGTH OF THE CAP SHALL NOT BE LESS THAN FIVE FEET, AND THE CONCRETED MIX EMPLOYED SHALL HAVE MINIMUM SHRINKAGE.

4. SITE PREPARATION AND STRIPPING

A. ALL SURFACE ORGANICS SHALL BE STRIPPED AND REMOVED FROM BUILDING PADS, AREAS TO RECEIVE COMPACTED FILL AND PAVEMENT AREAS.

B. UPON THE COMPLETION OF THE ORGANIC STRIPPING OPERATION, THE GROUND SURFACE (NATIVE SOIL SUBGRADE) OVER THE ENTIRE AREA OF ALL BUILDING PADS, STREET AND PAVEMENT AREAS AND ALL AREAS TO RECEIVE COMPACTED FILL SHALL BE PLOWED OR SCARIFIED UNTIL THE SURFACE IS FREE OF RUTS, HUMMOCKS OR OTHER UNEVEN FEATURES WHICH MAY INHIBIT UNIFORM SOIL COMPACTION. THE GROUND SURFACE SHALL THEN BE DISCED OR BLADED TO A DEPTH OF AT LEAST 6 INCHES. UPON ENGINEER'S SATISFACTION, THE NEW SURFACE SHALL BE WATER CONDITIONED AND RECOMPACTED PER REQUIREMENTS FOR COMPACTING FILL MATERIAL

5. EXCAVATION

A. UPON COMPLETION OF THE CLEARING AND GRUBBING, SITE PREPARATION AND STRIPPING, THE CONTRACTOR SHALL MAKE EXCAVATIONS TO LINES AND GRADES NOTED ON THE PLAN, WHERE REQUIRED BY THE SOILS ENGINEER, UNACCEPTABLE NATIVE SOILS OR UNENGINEERED FILL SHALL BE OVER EXCAVATED BELOW THE DESIGN GRADE. CONTACT CITY ENGINEER FOR DISCUSSION OF OVER EXCAVATION OF THE UNACCEPTABLE MATERIAL RESULTING GROUND LINE SHALL BE SCARIFIED, MOISTURE-CONDITIONED AND RECOMPACTED AS SPECIFIED IN SECTION 4 OF THESE SPECIFICATIONS. COMPACTED FILL MATERIAL SHALL BE PLACED TO BRING GROUND LEVEL BACK TO DESIGN GRADE.

B. EXCAVATED MATERIALS SUITABLE FOR COMPACTED FILL MATERIAL SHALL BE UTILIZED IN MAKING THE REQUIRED COMPACTED FILLS. THOSE NATIVE MATERIALS CONSIDERED UNSUITABLE BY THE SOILS ENGINEER SHALL BE DISPOSED OF OFF THE SITE BY THE CONTRACTOR.

6. PLACING, SPREADING AND COMPACTING FILL MATERIAL

A. FILL MATERIALS
THE MATERIALS PROPOSED FOR USE AS COMPACTED FILL SHALL BE APPROVED BY THE SOILS ENGINEER BEFORE COMMENCEMENT OF GRADING OPERATIONS. THE NATIVE MATERIAL IS CONSIDERED SUITABLE FOR FILL; HOWEVER, ANY NATIVE MATERIAL DESIGNATED UNSUITABLE BY THE SOILS ENGINEER SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR. ANY IMPORTED MATERIAL SHALL BE APPROVED FOR USE BY THE SOILS ENGINEER, IN WRITING, BEFORE BEING IMPORTED TO THE SITE AND SHALL POSSESS SUFFICIENT FINES TO PROVIDE A COMPETENT SOIL MATRIX AND SHALL BE FREE OF VEGETATIVE AND ORGANIC MATTER AND OTHER DELETERIOUS MATERIALS. ALL FILL VOIDS SHALL BE RUED AND PROPERLY COMPACTED. NO ROCKS LARGER THAN THREE INCHES IN DIAMETER SHALL BE PERMITTED.

B. FILL CONSTRUCTION
THE SOILS ENGINEER SHALL APPROVE THE NATIVE SOIL SUBGRADE BEFORE PLACEMENT OF ANY COMPACTED ALL MATERIAL. UNACCEPTABLE NATIVE SOIL SHALL BE REMOVED AS DIRECTED BY THE SOILS ENGINEER. THE RESULTING GROUND LINE SHALL BE SCARIFIED MOISTURE CONDITIONED AND RECOMPACTED AS SPECIFIED IN SECTION 4 OF THESE SPECIFICATIONS. COMPACTED FILL MATERIAL SHALL BE PLACED TO BRING GROUND LEVEL BACK TO DESIGN GRADE. GROUND PREPARATION SHALL BE FOLLOWED CLOSELY BY FILL PLACEMENT TO PREVENT DRYING OUT OF THE SUBSOIL BEFORE PLACEMENT OF THE ALL.

THE APPROVED FILL MATERIALS SHALL BE PLACED IN UNIFORM HORIZONTAL LAYERS NO THICKER THAN 8" IN LOOSE THICKNESS. LAYERS SHALL BE SPREAD EVENLY AND SHALL BE THOROUGHLY BLADE MIXED DURING THE SPREADING TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER. THE SCARIFIED SUBGRADE AND FILL MATERIAL SHALL BE MOISTURE CONDITIONED TO AT LEAST OPTIMUM MOISTURE. WHEN THE MOISTURE CONTENT OF THE FILL IS BELOW THAT SPECIFIED, WATER SHALL BE ADDED UNTIL THE MOISTURE DURING THE COMPACTION PROCESS. WHEN THE MOISTURE CONTENT OF THE FILL IS ABOVE THAT SPECIFIED, THE ALL MATERIAL SHALL BE AERATED BY BLADING OR OTHER SATISFACTORY METHODS UNTIL THE MOISTURE CONTENT IS AS SPECIFIED.

AFTER EACH LAYER HAS BEEN PLACED, MIXED, SPREAD EVENLY AND MOISTURE CONDITIONED, IT SHALL BE COMPACTED TO AT LEAST THE SPECIFIED DENSITY.

THE FILL OPERATION SHALL BE CONTINUED IN COMPACTED LAYERS AS SPECIFIED ABOVE UNTIL THE FILL HAS BEEN BROUGHT TO THE FINISHED SLOPES AND GRADES AS SHOWN ON THE PLANS. NO LAYER SHALL BE ALLOWED TO DRY OUT BEFORE SUBSEQUENT LAYERS ARE PLACED.

COMPACTION EQUIPMENT SHALL BE OF SUCH DESIGN THAT IT WILL BE ABLE TO COMPACT THE FILL TO THE SPECIFIED MINIMUM COMPACTION WITHIN THE SPECIFIED MOISTURE CONTENT RANGE. COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER ITS ENTIRE AREA UNTIL THE REQUIRED MINIMUM DENSITY HAS BEEN OBTAINED.

7. CUT OR FILL SLOPES
ALL CONSTRUCTED SLOPES, BOTH CUT AND FILL, SHALL BE NO STEEPER THAN 2 TO 1 (HORIZONTAL TO VERTICAL). DURING THE GRADING OPERATION, COMPACTED ALL SLOPES SHALL BE OVERFILLED BY AT LEAST ONE FOOT HORIZONTALLY AT THE COMPLETION OF THE GRADING OPERATIONS, THE EXCESS ALL DOMING ON THE SLOPES SHALL BE BLADED OFF TO CREATE THE FINISHED SLOPE EMBANKMENT. ALL CUT AND FILL SLOPES SHALL BE TRACK WALKED AFTER BEING BROUGHT TO FINISH GRADE AND THEN BE PLANTED WITH EROSION CONTROL SLOPE PLANTING. THE SOILS ENGINEER SHALL REVIEW ALL CUT SLOPES TO DETERMINE IF ANY ADVERSE GEOLOGIC CONDITIONS ARE EXPOSED. IF SUCH CONDITIONS DO OCCUR, THE SOILS ENGINEER SHALL RECOMMEND THE APPROPRIATE MITIGATION MEASURES AT THE TIME OF THEIR DETECTION.

8. SEASONAL LIMITS AND DRAINAGE CONTROL
FILL MATERIALS SHALL NOT BE PLACED, SPREAD OR COMPACTED WHILE IT IS AT AN UNSUITABLY HIGH MOISTURE CONTENT OR DURING OTHERWISE UNFAVORABLE CONDITIONS. WHEN THE WORK IS INTERRUPTED FOR ANY REASON THE ALL OPERATIONS SHALL NOT BE RESUMED UNTIL FIELD TEST PERFORMED BY THE SOILS ENGINEER INDICATE THAT THE MOISTURE CONDITIONS IN AREAS TO BE FILLED ARE AS PREVIOUSLY SPECIFIED. ALL EARTH MOVING AND WORKING OPERATIONS SHALL BE CONTROLLED TO PREVENT WATER FROM RUNNING INTO EXCAVATED AREAS. ALL EXCESS WATER SHALL BE PROMPTLY REMOVED AND THE SITE KEPT DRY.

9. DUST CONTROL
THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY FOR THE ALLEVIATION OR PREVENTION OF ANY DUST NUISANCE ON OR ABOUT THE SITE CAUSED BY THE CONTRACTOR'S OPERATION EITHER DURING THE PERFORMANCE OF THE GRADING OR RESULTING FROM THE CONDITION IN WHICH THE CONTRACTOR LEAVES THE SITE. THE CONTRACTOR SHALL ASSUME ALL LIABILITY INCLUDING COURT COST OF CO-DEFENDANTS FOR ALL CLAIMS RELATED TO DUST OR WIND-BLOWN MATERIALS ATTRIBUTABLE TO HIS WORK. COST FOR THIS ITEM OF WORK IS TO BE INCLUDED IN THE EXCAVATION ITEM AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

10. INDEMNITY
THE CONTRACTOR WILL HOLD HARMLESS, INDEMNIFY AND DEFEND THE ENGINEER, THE OWNER AND HIS CONSULTANTS AND EACH OF THEIR OFFICERS AND EMPLOYEES AND AGENTS, FROM ANY AND ALL LIABILITY CLAIMS, LOSSES OR DAMAGE ARISING OR ALLEGED TO HEREIN, BUT NOT INCLUDING THE SOLE NEGLIGENCE OF THE OWNER, THE ARCHITECT, THE ENGINEER AND HIS CONSULTANTS AND EACH OF THEIR OFFICERS AND EMPLOYEES AND AGENTS.

11. SAFETY
IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE. INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE UNITED TO NORMAL WORKING HOURS.
THE DUTY OF THE ENGINEERS TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE

12. GUARANTEE
NEITHER THE FINAL PAYMENT, NOR THE PROVISIONS IN THE CONTRACT, NOR PARTIAL, NOR ENTIRE USE OR OCCUPANCY OF THE PREMISES BY THE OWNER SHALL CONSTITUTE AN ACCEPTANCE OF THE WORK NOT DONE IN ACCORDANCE WITH THE CONTRACT OR RELIEVES THE CONTRACTOR OF LIABILITY IN RESPECT TO ANY EXPRESS WARRANTIES OR RESPONSIBILITY FOR FAULTY MATERIAL OR WORKMANSHIP.
THE CONTRACTOR SHALL REMEDY ANY DEFECTS IN WORK AND PAY FOR ANY DAMAGE TO OTHER WORK RESULTING THERE FROM WHICH SHALL APPEAR WITHIN A PERIOD OF ONE (1) CALENDAR YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK.

13. TRENCH BACKFILL
EITHER THE ON-SITE INORGANIC SOIL OR APPROVED IMPORTED SOIL MAY BE USED AS TRENCH BACKFILL THE BACKFILL MATERIAL SHALL BE MOISTURE CONDITIONED PER THESE SPECIFICATIONS AND SHALL BE PLACED IN LIFTS OF NOT MORE THAN SIX INCHES IN HORIZONTAL UNCOMPACTED LAYERS AND BE COMPACTED BY MECHANICAL MEANS TO A MINIMUM OF 90% RELATIVE COMPACTION. IMPORTED SAND MAY BE USED FOR TRENCH BACKFILL MATERIAL PROVIDED IT IS COMPACTED TO AT LEAST 90% RELATIVE COMPACTION. WATER JETTING ASSOCIATED WITH COMPACTION USING VIBRATORY EQUIPMENT WILL BE PERMITTED ONLY WITH IMPORTED SAND BACKFILL WITH THE APPROVAL OF THE SOILS ENGINEER. ALL PIPES SHALL BE BEDDED WITH SAND EXTENDING FROM THE TRENCH BOTTOM TO TWELVE INCHES ABOVE THE PIPE. SAND BEDDING IS TO BE COMPACTED AS SPECIFIED ABOVE FOR SAND BACKFILL

14. EROSION CONTROL
A. ALL GRADING, EROSION AND SEDIMENT CONTROL AND RELATED WORK UNDERTAKEN ON THIS SITE IS SUBJECT TO ALL TERMS AND CONDITIONS OF THE COUNTY GRADING ORDINANCE AND MADE A PART HEREOF BY REFERENCE.

B. THE CONTRACTOR WILL BE LIABLE FOR ANY AND ALL DAMAGES TO ANY PUBLICLY OWNED AND MAINTAINED ROAD CAUSED BY THE AFORESAID CONTRACTOR'S GRADING ACTIVITIES, AND SHALL BE RESPONSIBLE FOR THE CLEANUP OF ANY MATERIAL SPILLED ON ANY PUBLIC ROAD ON ME HAUL ROUTE.
C. THE EROSION CONTROL MEASURES ARE TO BE OPERABLE DURING THE RAINY SEASON, OCTOBER FIRST TO APRIL THIRTIETH. EROSION CONTROL PLANTING IS TO BE COMPLETED BY OCTOBER FIRST. NO GRADING OR UTILITY TRENCHING SHALL OCCUR BETWEEN OCTOBER FIRST AND APRIL FIRST UNLESS AUTHORIZED BY THE COUNTY ENGINEER.

D. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED AND CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF THE SOILS ENGINEER.

E. DURING THE RAINY SEASON, ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT-LADEN RUNOFF TO ANY STORM DRAINAGE SYSTEM.

F. ALL EROSION CONTROL FACILITIES MUST BE INSPECTED AND REPAIRED AT THE END OF EACH WORKING DAY DURING THE RAINY SEASON.

G. WHEN NO LONGER NECESSARY AND PRIOR TO ANY ACCEPTANCE OF DEVELOPMENT, SEDIMENT BASINS SHALL BE REMOVED OR OTHERWISE DEACTIVATED AS REQUIRED BY THE COUNTY.

H. A CONSTRUCTION ENTRANCE SHALL BE PROVIDED AT ANY POINT OF EGRESS FROM THE SITE TO ROADWAY. A CONSTRUCTION ENTRANCE SHOULD BE COMPOSED OF COARSE DRAIN ROCK (2" TO 3") MINIMUM DIAMETER) AT LEAST EIGHT INCHES THICK BY FIFTY (50) FEET LONG BY TWENTY (20) FEET WIDE UNLESS SHOWN OTHERWISE ON PLAN AND SHALL BE MAINTAINED UNTIL THE SITE IS PAVED.

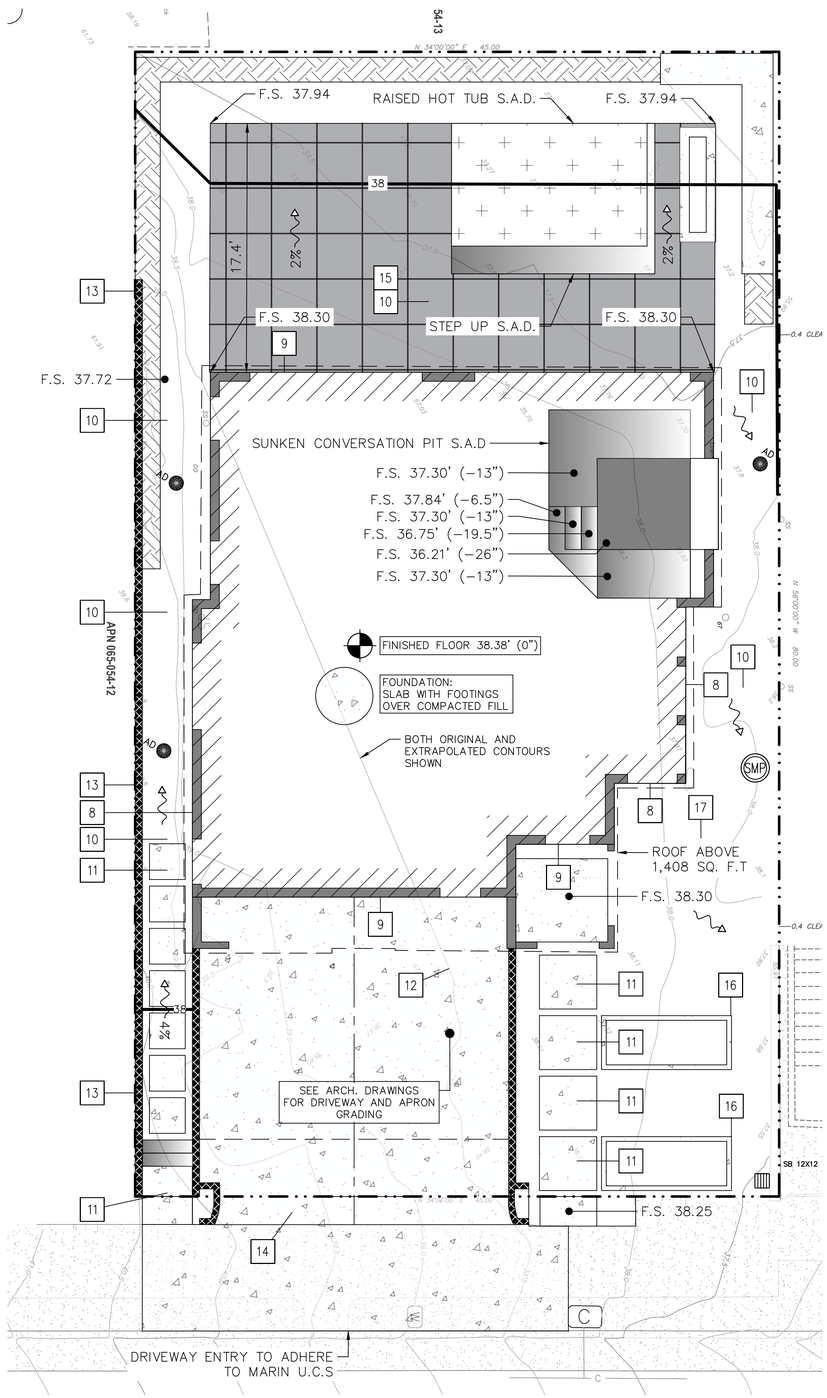
L. ALL AREAS SPECIFIED FOR HYDROSEEDING SHALL BE NOZZLE PLANTED WITH STABILIZATION MATERIAL CONSISTING OF FIBER, SEED, FERTILIZER AND WATER, MIXED AND APPLIED IN THE FOLLOWING PROPORTIONS:
FIBER, 2000 LBS/ACRE SEED, 200 LBS/ACRE (SEE NOTE J, BELOW) FERTILIZER (11-8-4), 500 LBS/ACRE WATER, AS REQUIRED FOR APPLICATION

J. SEED MIX SHALL BE PER CALTRANS STANDARDS.

K. WATER UTILIZED IN THE STABILIZATION MATERIAL SHALL BE OF SUCH QUALITY THAT IT WILL PROMOTE GERMINATION AND STIMULATE GROWTH OF PLANTS. IT SHALL BE FREE OF POLLUTANT MATERIALS AND WEED SEED.

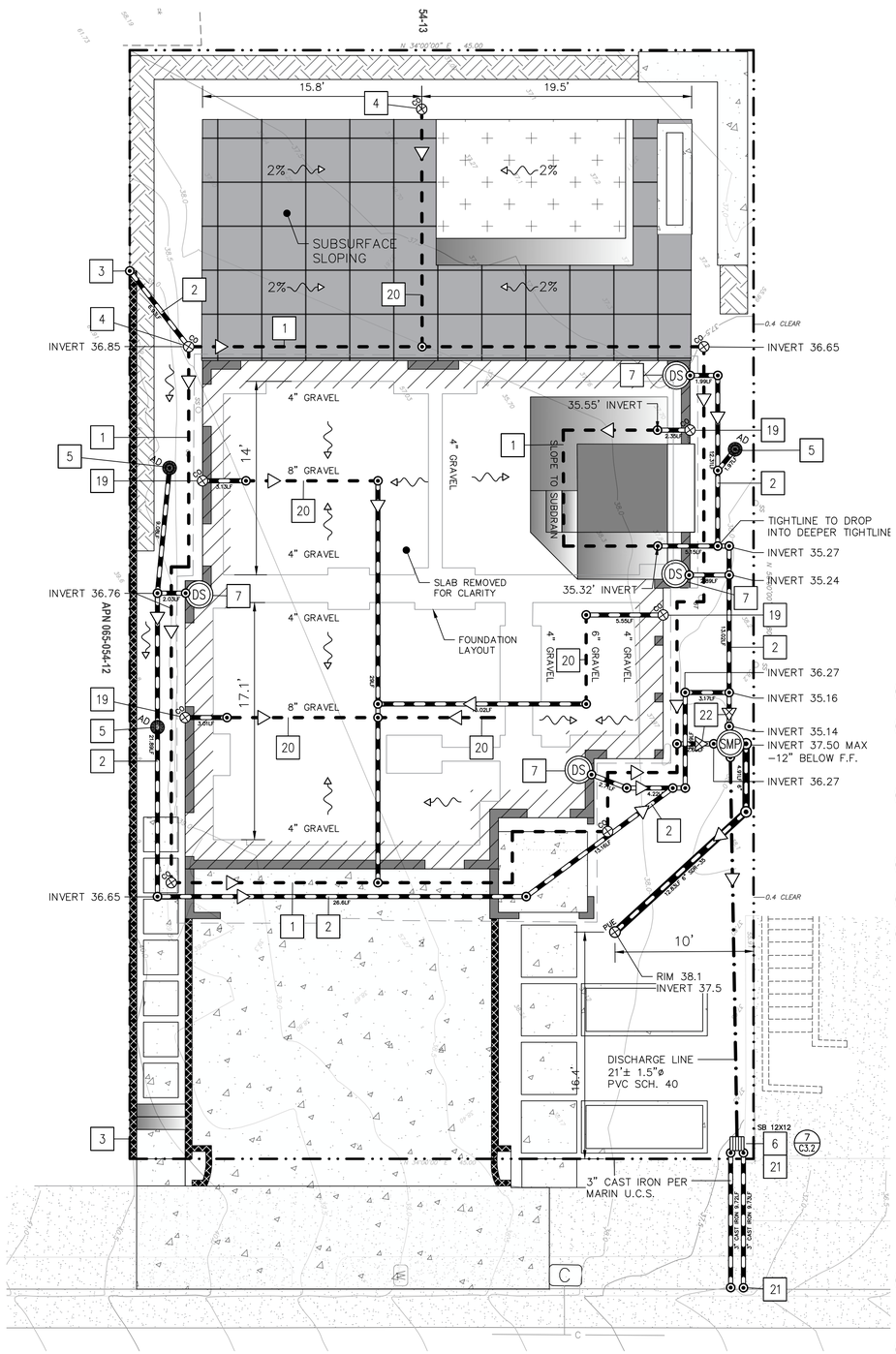
L HYDROSEEDING SHALL CONFORM TO THE PROVISIONS OF SECTION 20, EROSION CONTROL AND HIGHWAY PLANTING', OF THE STANDARD SPECIFICATIONS OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION, AS LAST REVISED.

M. A DISPERSING AGENT MAY BE ADDED TO THE HYDROSEEDING MATERIAL, PROVIDED THAT THE CONTRACTOR FURNISHES SUITABLE EVID



1 GRADING PLAN

SCALE: 1'=5'



2 DRAINAGE PLAN

SCALE: 1'=5'

GRAPHIC SCALE

5 0 2.5 5 10 20 (IN FEET)

1 INCH = 5 FEET

N

CUT/FILL		
	AMOUNT	NOTES
CUT	324	OVER EXCAVATION OF SITE FOR SUBGRADE PREP
FILL	374	NON EXPANSIVE IMPORT + VARIOUS FILL REQUIRED FOR SITE LEVELING
EXPORT	324	EXPANSIVE SOILS TO BE OFFHAULED AND DISPOSED PER SOILS REPORT

ALL OFF HAUL TO BE TAKEN TO A LEGAL DUMPSITE

CONTRACTOR TO CONTACT AC ENGINEERING INC. AT LEAST 48 HOURS BEFORE THE START OF CONSTRUCTION 415–295–2152 OR ADMIN@AGNEWCIVIL.COM

LEGEND

EXISTING	PROPOSED
	PROPERTY LINE
	SUBDRAIN LINE
	DISCHARGE LINE
	DRIVEWAY CENTER LINE
BLF 4" SDR-35	BLF 4" SDR-35 STORM DRAIN LINE 4"
BLF 6" SDR-35	BLF 6" SDR-35 STORM DRAIN LINE 6"
	RETAINING WALL
	DIRECTION OF FLOW
	BACKFLOW PREVENTOR (5 / C3.1)
AD	AREA DRAIN
	CLEANOUT
	CONNECTION POINT
SB	SUMP BOX (7 / C3.2)
SMP	SUMP (1 / C3.1)
DS	DOWNSPOUTS (1 / C3.1)
	SURFACE FLOW DIRECTION
	ELEVATION CALLOUT
	DETAIL NUMBER (1 / C-2) SHEET NUMBER
	DELTA w/COMMENT #
NAME XXX	SPOT ELEVATION
POP	POP UP EMITTER

GRADING AND DRAINAGE NOTES

1. (2/C3) INSTALL NEW PERFORATED SUBDRAIN LINE, 4" PERFORATED PVC SDR–35 GLUE ALL JOINTS. SLOPE 1% 1/8TH PER FOOT (0.5% MIN 1/16TH PER FOOT)
2. (1/C3) INSTALL NEW STORM DRAIN "TIGHT LINE". 4" SOLID PVC SDR–35 GLUE ALL JOINTS. SLOPE 1% 1/8TH PER FOOT (0.5% MIN 1/16TH PER FOOT)
3. INSTALL MIRADRAIN BEHIND (N) RETAINING WALL. OUTLET OF MIRADRAIN TO CONNECT TO (N) DRAINAGE SYSTEM. ALL FOOTINGS/DRAINS/ETC. NOT TO ENCROACH ON NEIGHBORING PROPERTY.
4. (3/C3) INSTALL CLEANOUT ON HIGH SIDE, EVERY 75', AND BEFORE 270° OF TURNS ON ALL PIPING. BOTH SOLID AND PERFORATED DRAIN LINES
5. INSTALL AREA DRAIN AND CONNECT TO DRAINAGE SYSTEM
6. (6/C3.2) INSTALL SUMP BOX. DETAILS TO COMPLY WITH MARIN U.C.S
7. (1/C3) CONNECT ROOF DOWNSPOUT (DS) LEADERS TO STORM DRAIN. CLEANOUTS TO BE PROVIDED AT EACH CONNECTION.
8. (2/C3) MAINTAIN 8" CLEARANCE BETWEEN FINISH EARTHEN GRADE AND BOTTOM OF MUD SILL AT ALL TIMES
9. MAINTAIN 2" CLEARANCE BETWEEN CONCRETE AND BOTTOM OF MUD SILL AT ALL TIMES
10. SLOPE 2% TO DAYLIGHT
11. SLOPE ALL FLATWORK 1% MINIMUM TO DAYLIGHT
12. INSTALL NEW CONCRETE DRIVEWAY. 709 SQ. FT. ± S.S.D.
13. INSTALL NEW LANDSCAPE RETAINING WALL. WALL HEIGHT NOT TO EXCEED 4'. S.A.D.
14. AN ENCROACHMENT PERMIT IS REQUIRED FOR ALL WORK IN THE PUBLIC RIGHT OF WAY.
15. SAND SET PAVERS S.A.D.
16. CONCRETE PLANTERS S.A.D.
17. FINISHED GRADES AT BUILDING PERIMETER SHALL BE SLOPED AT A MIN. OF 5% FOR THE FIRST 10 FT. AWAY FROM THE BUILDING AND THEN SHALL CONTINUE TO SLOPE TO TOWARDS POSITIVE OUTFALL. 6" OVER 10'
18. (1/C3.1) NEW SUMP WITH EMERGENCY OVERFLOW. DISCHARGE TO CATCH BASIN TO STREET
19. CLEANOUT TO BE INSTALL IN FOUNDATION FOR SLAB DRAINS. LABEL CAP AS "CLEANOUT" S.S.D.
20. (1/C3.3) INSTALL NEW PERFORATED SUBDRAIN LINE BENEATH SLAB/PAVERS 4" PERFORATED PVC SDR–35 GLUE ALL JOINTS SLOPE 1% 1/8TH PER FOOT (0.5% MIN 1/16TH PER FOOT). SEE SOILS REPORT FOR MORE INFORMATION
21. (2/C3.3) DISSIPATION TO P.R.O.W TO COMPLY WTH THE MARIN U.C.S.
22. (5/C3) MANDATORY BACKFLOW PREVENTION DEVICE. INSTALL ON INLET BEFORE SUMP.

ALL CONTRACTORS WILL BE RESPONSIBLE FOR THE VERIFICATION OF THE LOCATIONS OF ALL EXISTING UTILITIES IN THE FIELD. ALL CONTRACTORS SHALL CALL U.S.A AT (800–227–2600) 48 HOURS BEFORE DIGGING, AND OBTAIN AN IDENTIFICATION NUMBER (SECTION 4216.1 OF THE GOVERNMENT CODE).

NOTE: THESE NOTES ARE INTENDED TO BE USED AS A GENERAL GUIDELINE. THE REFERENCED SOILS REPORT FOR THE PROJECT AND GOVERNING AGENCY GRADING ORDINANCE SHALL SUPERSEDE THESE NOTES. THE SOILS ENGINEER MAY MAKE ON–SITE RECOMMENDATIONS DURING GRADING OPERATIONS.

ISSUES		
ISSUE	DATE	DESCRIPTION
0	12/5/24	PERMIT

AC ENGINEERING, INC.
CIVIL & GEOTECHNICAL CONSULTANTS
454 LAS GALLINAS AVE., SUITE 1047
SAN RAFAEL, CA 94903
P: 415–295–2152
F: 415–472–0603
admin@agnewcivil.com

STAMP: REGISTERED PROFESSIONAL ENGINEER ORION W. AGNEW C 87262 Civil STATE OF CALIFORNIA

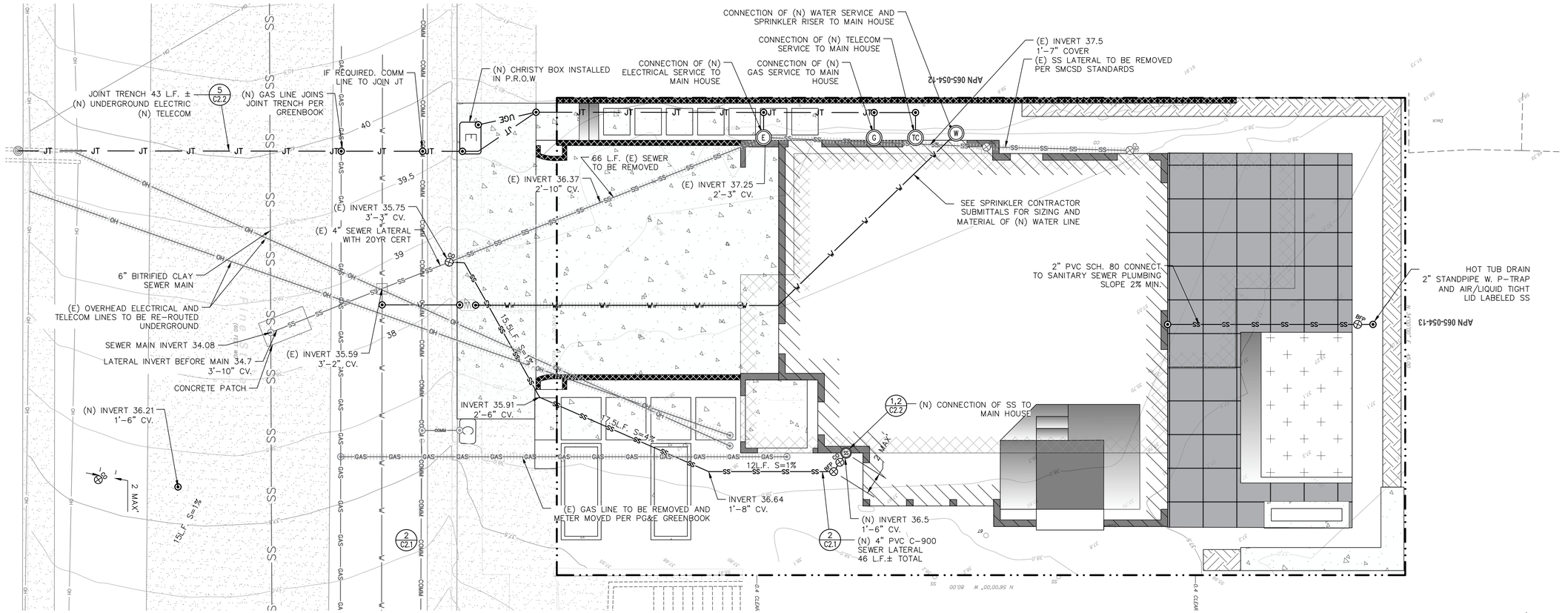
GRADING & DRAINAGE PLANS

BEYER RESIDENCE – NEW SFR
426 PINE ST, SAUSALITO, CA 94965
APN: 065–054–11

JOB # 385–1

C–2.0

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1 UTILITY PLAN

SCALE: 1'=5'

SMCSD – STANDARD NOTES

1. "ALL SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SAUSALITO–MARIN CITY SANITARY DISTRICT STANDARD SPECIFICATIONS AND DRAWINGS."
2. "THE CONTRACTOR SHALL NOTIFY THE DISTRICT 48 HOURS PRIOR TO STARTING ANY SEWER WORK."
3. "FOR ANY WORK IN A PUBLIC STREET, THE CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT FROM THE AGENCY HAVING JURISDICTION."
4. "THE LOCATIONS OF UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS AND DEPTHS WITH APPROPRIATE AGENCIES OR BY POTHOLING. THE CONTRACTOR SHALL CALL USA UNDERGROUND SERVICE ALERT AT LEAST 72 HOURS PRIOR TO COMMENCING WORK."
5. "THE CONTRACTOR SHALL POTHOLE ALL UNDERGROUND UTILITIES AND SEWERS PRIOR TO ANY TRENCHING OPERATION.
6. "THE CONTRACTOR SHALL NOTIFY THE DISTRICT IMMEDIATELY OF ANY CONFLICT BETWEEN SEWERS AND OTHER UNDERGROUND FACILITIES."
7. "THE CONTRACTOR SHALL SHORE ALL EXCAVATIONS IN ACCORDANCE WITH APPLICABLE SAFETY ORDERS."
8. "ALL SEWER LATERALS SHALL BE A MINIMUM 4 INCHES INSIDE DIAMETER AND SHALL HAVE A MINIMUM SLOPE OF 1.0% AND MINIMUM DEPTH OF COVER AT THE PROPERTY LINE OF 3.0 FEET (MEASURED FROM THE TOP OF CURB), UNLESS OTHERWISE NOTED ON THESE PLANS.

ALL CONTRACTORS WILL BE RESPONSIBLE FOR THE VERIFICATION OF THE LOCATIONS OF ALL EXISTING UTILITIES IN THE FIELD. ALL CONTRACTORS SHALL CALL U.S.A AT (800–227–2600) 48 HOURS BEFORE DIGGING, AND OBTAIN AN IDENTIFICATION NUMBER (SECTION 4210.1 OF THE GOVERNMENT CODE).

1-800-227-2600 CALL BEFORE YOU DIG USA UNDERGROUND SERVICE ALERT

PG&E BUILDING AND RENOVATION SERVICES
1–877–743–7782

SAUSALITO PUBLIC WORKS 415–339–2256

GRAPHIC SCALE
(IN FEET)
5 0 2.5 5 10 20
1 INCH = 5 FEET

PART D – TECHNICAL CONSTRUCTION REQUIREMENTS Page 81

SECTION 14 SEWER PIPELINES

14-01 Description. Sewer pipelines shall be installed as shown on the plans and in accordance with the following provisions, the Special Provisions, and as directed by the District.

14-02 Approved Sewer Pipe Materials. The approved pipe materials for laterals and for private side sewer/lateral construction are listed in Table 1 and approved pipe materials for public sewer mains and force mains are listed in Table 2. The specific use of pipe and pipe products is subject to approval by the District. Use of pipe other than those specified hereinbelow must be reviewed by the District and specifically authorized in writing. All pipe shall be of the size, materials, and strength classifications shown on the plans or specified herein.

TABLE 1
PRIVATE SIDE SEWER/LATERAL
(Specific Use Subject to District Approval)

Pipe Specifications	Can Be Used for Gravity Sewers	Can Be Used for Ejector Pump Discharge Pipelines
Ductile Iron Pipe w/Rubber Ring Joints, DIP	Yes [2]	No
PVC ASTM D-2241, SDR=26	Yes [1]	Yes [1]
PVC AWWA C-900, SDR=21	Yes [2]	Yes [2]
PVC Sch 40	Yes [1]	Yes [1]
PVC Sch 80	Yes [2]	Yes [2]
HDPE Pipe, min SDR=17	Yes [1]	Yes [1]

[1] Requires minimum 3-foot cover with imported bedding and pipe zone backfill.
[2] Requires minimum 18-inch cover on private property with imported bedding and pipe zone backfill or shaded with select native material containing rocks no larger than 1" sieve size.

2 ALLOWABLE PIPE MATERIAL

NTS

LEGEND

EXISTING	PROPOSED	
	REMOVE	
W W	W W	WATER LINE
GAS GAS GAS	GAS GAS GAS	GAS LINE
OH		OVERHEAD LINES
	UGE UGE	UNDERGROUND ELEC.
	JT JT	JOINT TRENCH
SS SS		SANITARY SEWER MAIN
	LENGTH & SLOPE SS SS SS	SANITARY SEWER LATERAL
		CONNECTION POINT
	CO	CLEANOUT
	BFP	BACKFLOW PREVENTION DEVICE
	TC	TELECOMMUNICATIONS
	G	GAS
	E	ELECTRIC
	W	WATER

ABBREVIATIONS

CV. = COVER

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ISSUES

ISSUE	DATE	DESCRIPTION
0	12/5/24	PERMIT

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STAMP

REGISTERED PROFESSIONAL ENGINEER ORION W. AGNEW C 87162 CIVIL STATE OF CALIFORNIA

UTILITY PLAN

BEYER RESIDENCE – NEW SFR
426 PINE ST, SAUSALITO, CA 94965
APN: 065–054–11

JOB #
385–1

C–2.1

SHEET SIZE: Arch D (36"x24")

TYPICAL
DISTRIBUTION TRENCH

Joint Trench – Franchise Area or P.U.E.

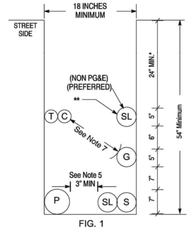
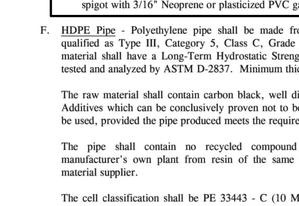


FIG. 1

Placement of the Distribution Trench within a P.U.E. is the preferred method. Trenching in the Franchise Area should only be used when a P.U.E. is unobtainable or otherwise infeasible.
* Increase cover to 30" in the street area (see Note 3).
** Separation must be 12" unless a reduction (6") is mutually agreed upon by affected utilities.

STANDARD TRENCH LOCATIONS



TYPICAL
SERVICE TRENCH

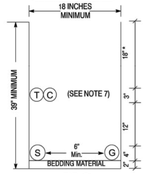


FIG. 2
(View facing Distribution Trench)

MINIMUM SEPARATION AND CLEARANCE REQUIREMENTS

		DUCT T	DB T	C	S	P
G	(GAS) SEE NOTES 4, 7 & 13	—	12"	12"	6"	12"
T	(TELEPHONE) DUCT	12"	—	1"	12"	12"
T	(TELEPHONE) DIRECT BURY	12"	1"	—	12"	12"
C	(CATV)	12"	1"	1"	—	12"
S	(ELECTRIC SECONDARY)	6"	12"	12"	—	3"
P	(ELECTRIC PRIMARY)	12"	12"	12"	3"	—
SL	(STREETLIGHT) SEE NOTE 5	6"	12"	12"	12"	3"

SEPARATION AND CLEARANCE DEFINITIONS

Cover: The term "cover" means the radial distance between the surface of an underground cable, conduit, pipe, or other substructure and the surface elevation (grade).

Backfill: The term "backfill" refers to the materials used to refill a cut or other excavation, or the act of such refilling after any needed shading is performed.

Shading: The term "shading" refers to the materials used to provide a measure of separation between facilities installed at different levels within an excavation or cut.

Lift: The term "lift" is a layer of fill as spread or as compacted or a measurement of material depth that is the rated effective soil depth a compactor can achieve.

Bedding: The term "bedding" refers to the materials installed beneath facilities at the bottom of a cut or other excavation and intended to provide support and/or protection for those facilities.

JOINT TRENCH CONFIGURATIONS & OCCUPANCY GUIDE 09-27-06

S5453, Exhibit B PACIFIC GAS AND ELECTRIC COMPANY Page 1 of 4

5 PG&E GREENBOOK STANDARD JOINT TRENCH

NTS

E. Polyvinyl Chloride Pipe, PVC - As designated on the plans, PVC pipe shall conform to one of the specifications below. PVC pipe with external ribbing is not allowed.

1. PVC, ASTM D-2241 (Pressure Pipe) - PVC, ASTM D-2241 pressure pipe shall conform to ASTM D-2241 with rubber ring joints and shall have a pressure rating of 160 psi unless otherwise indicated on the plans. Joints shall meet the requirements of ASTM D-3212.

2. PVC, C-900 or C-905 (Gravity Sewer and Pressure Pipe) - PVC, C-900 or C-905 gravity sewer and pressure pipe shall conform to AWWA C-900 for diameters 4" through 12" and AWWA C-905 of pipe diameters 14" thru 20" and shall have a SDR = 25, unless otherwise indicated on the plans. Joints shall be bell and spigot conforming to ASTM D-3139 with gaskets conforming to ASTM F-477.

   All fittings for PVC, C-900 pipe shall either be fabricated or manufactured in one piece of injection molded PVC compound meeting ASTM C-1784. Fittings shall be Class 150 and conform to requirements of SDR = 18. Fittings shall be designed to withstand a minimum of 755 psi quick burst pressure @ 76°F tested in accordance with ASTM D-1599.

3. PVC, Schedule 40 or Schedule 80 - Schedule 40 and Schedule 80 PVC pipe and fittings shall be Type I, normal impact, rigid polyvinyl chloride conforming to the Department of commerce Commercial Standard CS 207-60, or currently applicable revisions of that standard. The pipe shall be rigid, tough, lightweight, thermoplastic pipe, UV protected, furnished in iron pipe sizes. Fittings shall be molded of the same material as the pipe. Joints shall be solvent welded or bell-and-spigot with 3/16" Neoprene or plasticized PVC gaskets.

F. HDPE Pipe - Polyethylene pipe shall be made from polyethylene resin compound qualified as Type III, Category 5, Class C, Grade P34 in ASTM D-1248-78. This material shall have a Long-Term Hydrostatic Strength of 1450 psi or 1600 psi when tested and analyzed by ASTM D-2837. Minimum thickness shall be DR=17.

The raw material shall contain carbon black, well dispersed, with a minimum of 2%. Additives which can be conclusively proven not to be detrimental to the pipe may also be used, provided the pipe produced meets the requirements of this standard.

The pipe shall contain no recycled compound except that generated in the manufacturer's own plant from resin of the same specification from the same raw material supplier.

The cell classification shall be PE 33443 - C (10 MPa) for PE 3407 materials or PE 345534C for PE 3408 materials, per ASTM D-3350/F 714-81.

4 PVC PIPE SPECIFICATIONS

NTS

C. Maintenance of Interceptors - All grease, oil and sand interceptors shall be maintained by the Owner, at his expense, in continuously efficient operation at all times.

D. Swimming Pools - It shall be unlawful for any person to discharge the contents of a swimming pool into a sanitary sewer except in the manner specified herein. The size of pipe carrying discharge water shall not be larger than two (2) inches and shall not be under a head to exceed twenty (20) feet. If the water is discharged by pumping, the rate of flow shall not exceed 50 gallons per minute. Each swimming pool discharging to a sanitary sewer shall be equipped with an approved separator to preclude any possibility of a backflow of sewage into the swimming pool or piping system.

4-03 Sewer Pipes.

A. Pipe Materials - All main sewer and lateral sewer pipes shall be PVC plastic pipe, polyethylene pipe, ductile iron pipe, cast iron pipe, or reinforced concrete (large diameter - special situations), unless otherwise specifically required or approved by the District. Selection of the pipe type for a given project shall be made by the Job Engineer, subject to the approval of and final selection by the District. The type of pipe used for side sewer installations shall conform to the "Approved Side Sewer Pipe Materials List," on file in the District office. The type of pipe used for force mains shall be PVC plastic pipe, polyethylene pipe, cast iron pipe or concrete steel cylinder pipe, as specifically approved for the particular project by the District. Special pipe and/or design provisions may be required by the District.

B. Minimum Pipe Sizes - The minimum pipe size for main sewers shall be eight (8) inches in diameter unless otherwise specifically allowed by the District. The minimum pipe size for side sewers shall be four (4) inches or the same size as the building plumbing stub, whichever is greater. Where more than 150 fixture units are to be connected, the side sewer shall have a six (6) inch minimum diameter. When more than one building sewer is allowed to be connected to a single side sewer, the side sewer from the point of intersection of one or more building sewers to the main sewer shall be not less than six (6) inches in diameter.

C. Minimum Slope - Main Sewers - The slope of the sewer shall be such that the velocity of flow in the pipe when flowing full shall be equal to or greater than two (2) feet per second. The minimum acceptable slopes for various main sewer sizes are tabulated below. For construction in filled marshland or bay mud, or other areas subject to possible differential settlement, the District may specify acceptable minimum slopes greater than those shown.

Pipe Size In Inches	Minimum Slope Ratio in Feet per Foot
6	0.006
8	0.004
10	0.0028

12	0.0022
15	0.0015

Pipe Size In Inches	Minimum Slope Ratio in Feet per Foot
18	0.0012
21	0.0010
24	0.0008

D. Minimum Slope - Side Sewers - The minimum slope for four (4) inch diameter side sewers shall be 1.0 feet per 100 feet (1.0%). The minimum slope for side sewers greater than four (4) inches shall be 0.7 feet per 100 feet (0.7%).

E. Steep Slopes - For sewers installed in areas with steep ground slopes, special design features may be required. Depending upon conditions of the specific installation, such items as check dams, rip-rap, trench dams, special anchorage or special pipe materials may be required by the District.

F. Minimum Pipe Cover - The following minimum pipe covers shall be attained in design and construction of sanitary sewers. If certain conditions exist which make it impractical to meet the minimum cover and clearance requirements, special pipe, bedding, encasement, rip-rap, and/or backfill will be required as directed by the District Engineer.

1. Main Sewers - The minimum pipe cover for main sewers within street rights-of-way shall be 3.0 feet. The minimum cover for mains within easements or other rights-of-way not expected to become streets shall be 3.5 feet. Lesser pipe cover may be approved by the District with use of special pipe materials or concrete slab protection.

2. Side Sewers - That portion of a side sewer within a street right-of-way (lateral sewer) shall have a minimum cover of 3.0 feet. The minimum cover for side sewers from the property line to the building drain (building sewer) shall be three (3) feet. However, when the cover over the side sewer is less than twenty-four (24) inches, special pipe, bedding and/or concrete encasement may be required by the District.

G. Pipe Strengths and Maximum Depths - The minimum pipe strengths and classes given as standard in these specifications (see Sections 14-02 and 14-03) and in the "Approved Side Sewer Pipe Materials List," are based upon the attainment of standard bedding conditions (see Section 13-02), maximum allowable trench widths (see Section 13-02B), and upon the assumption of average pipe depths (depths up to 12 feet). Where, for any reason, the standard bedding conditions cannot be attained, or the maximum allowable trench width is exceeded, or the pipe depth is greater than average, special pipe, bedding, backfill and/or encasement may be required as directed by the District. Where pipe depths or other known conditions required pipe strengths other than those specified as standard, the Job Engineer shall indicate the required pipe classes on the plans.

THESE ARE ONLY EXCERPTS FROM THE ENTIRE STANDARDS AND SPECIFICATIONS DOCUMENT.

3 SECTION 4-03 - SEWER PIPES

NTS

H. Pipe Clearance - All sewer pipes and structures shall be designed and contracted to have a minimum of ten (10) feet from domestic water lines and twenty-four (24) inches clearance from all other utilities and/or improvements, unless a special approval is received from the District.

I. Horizontal and Vertical Curves - Horizontal curves may be used on curved streets when the alignment can be kept concentric with street improvements and when pipe deflection requirements can be met. Vertical curves may be used in hilly terrain, when permitted by the District, in order to reduce the number of required manholes. The deflection in the joint between any two successive pipe sections shall not exceed 70% of the maximum deflection as recommended in writing by the pipe manufacturer. Shorter pipe joint lengths may be used for vertical or horizontal curves with approval by the District.

J. Sewer Connections to Existing System - Connection of new main sewers to the existing sewer system shall be made at existing manholes or by constructing a new manhole at the point of connection. The elevation of new sewer mains or laterals connecting to a manhole shall be set so that the pipe crowns match. Side sewer connections to existing main sewers shall be accomplished by connecting to wye or tee branches or laterals where they exist, by installing a spliced-in-wye, by installing a Tap-Tite drilled connection or by connecting to an existing manhole. Inserta tee lateral connection may not be used on sewer mains with a diameter less than 12 inches. Side sewers eight (8) inches and larger shall be connected with manholes only.

K. Individual Sewage Ejector Pumps - Special application must be made for installation of an individual sewage pump where gravity service is not feasible. All pumping systems shall be installed in accordance with all applicable codes. The District will inspect the pump station and pressure line from the sewage pump to the point of connection to the District sewer system.

The gravity discharge line from the building outlet to the sewage pump holding tank shall be gravity flow. When the distance between the building outlet and the sewage pump holding tank is greater than five (5) feet, the District shall have jurisdiction, and the gravity line shall be inspected by the District Inspector.

The holding tank, pumps and electrical work are under the jurisdiction of the District.

L. Sewer Alignment - Where sewer lines are to be installed within street rights-of-way, they shall, wherever practical, be designed and installed five (5) feet off the center line of the existing or future street (usually the side opposite the water line). In streets in hilly areas, the sewer shall be installed on the uphill side of the street where possible. Where practical, all sewer lines within easements shall be designed and installed with not less than five (5) feet between the center line of sewer and the edge of the easement. All sewer lines and structures shall be designed and installed well in the clear of all other improvements and utilities (see "Pipe Clearance" above).

M. Sampling Manhole - Dischargers of non-domestic wastes may be required to install a sampling manhole at the location where the lateral sewer connects to the sewer main as designated by the District.

N. Manhole Accessibility - Insofar as possible, all manholes shall be situated so that they are accessible to the District's cleaning vehicles.

O. Sewer Pipe Stubs - Sewer pipe stubs shall be designed and installed in all manholes from which future sewer line extensions are anticipated. Pipe stubs shall be minimum eight (8) inches in size or as directed by the District and shall be of an approved type of pipe. Stubs shall protrude a minimum of five (5) feet outside of the manhole base and shall be channeled as though a regular sewer line within the manhole. A rubber coupling on the outside of the pipe shall be encased in the manhole base to prevent leakage. The outboard end of stubs shall be a standard bell joint end and shall be plugged with a standard watertight plug and cap, as supplied by the pipe manufacturer.

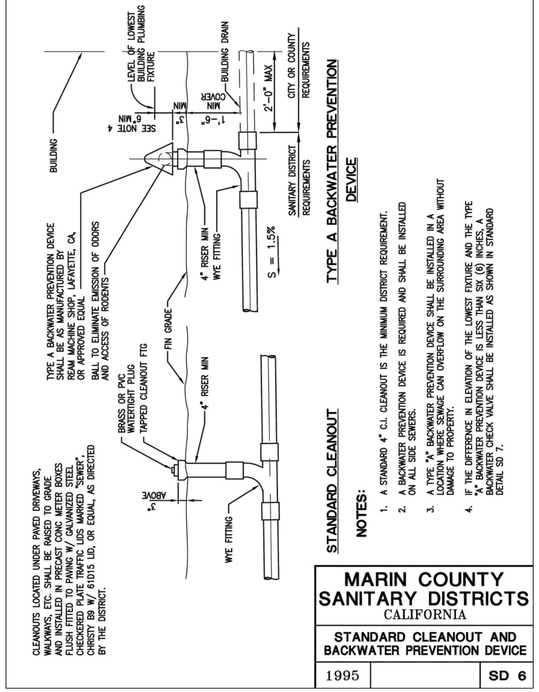
P. Sewer Line Extensions - In all new streets, where sewer lines are expected to be extended, the sewer line shall be designed and installed to the end of the proposed street improvements, prior to street construction. The sewer extension shall terminate with a manhole, at a location which will minimize the amount of pavement to be disturbed by future sewer extensions.

Q. Sewers to be Installed in Existing Improved Streets - Where sewers are being designed for installation in existing City and/or County streets, the Job Engineer shall submit the plans for the proposed work to the City and/or County Public Works Department for location and encroachment permit approval.

R. Sewers to be Installed in or Across Utility, Highway, Railroad Rights-of-Way or Creeks - Where sewers are to be constructed across or within utility, railroad rights-of-way, or creeks requiring tunnels, bores and/or special pipe, the special pipe or construction shall extend the full length of the sewer line within the particular right-of-way. The Permittee shall secure all necessary encroachment permits or joint use permits for utility, highway, railroad rights-of-way or creek crossings.

S. Separate Side Sewers Required - Each individual building site shall be connected to the main sewer with a separate side sewer. Combined side sewers for buildings under the same ownership will be permitted only on specific approval of the District when the property is not likely to be subdivided in the future. A common side sewer may be used for connected buildings (i.e., buildings with common walls or multi-story buildings) under different ownership where the Covenants, Conditions and Restrictions (CC&R's) provide that the homeowners' association maintains all common laterals.

T. Side Sewer Connections - Side sewers shall be installed into manholes where possible. Side sewers shall connect near the bottom of the manhole, matching pipe crowns, unless a formal external drop connection is provided.



STANDARD CLEANOUT
TYPE A BACKWATER PREVENTION DEVICE

NOTES:
1. A STANDARD 4" C.I. CLEANOUT IS THE MINIMUM DISTRICT REQUIREMENT.
2. A BACKWATER PREVENTION DEVICE IS REQUIRED AND SHALL BE INSTALLED ON ALL SIDE SEWERS.
3. A TYPE "A" BACKWATER PREVENTION DEVICE SHALL BE INSTALLED IN A CLEANOUT AND RISER WHERE SEWAGE CAN OVERFLOW ON THE SURROUNDING AREA WITHOUT DAMAGE TO PROPERTY.
4. IF THE DIFFERENCE IN ELEVATION OF THE LOWEST FIXTURE AND THE TYPE "A" BACKWATER PREVENTION DEVICE IS LESS THAN SIX (6) INCHES, A BACKWATER CHECK VALVE SHALL BE INSTALLED AS SHOWN IN STANDARD DETAIL SD 7.

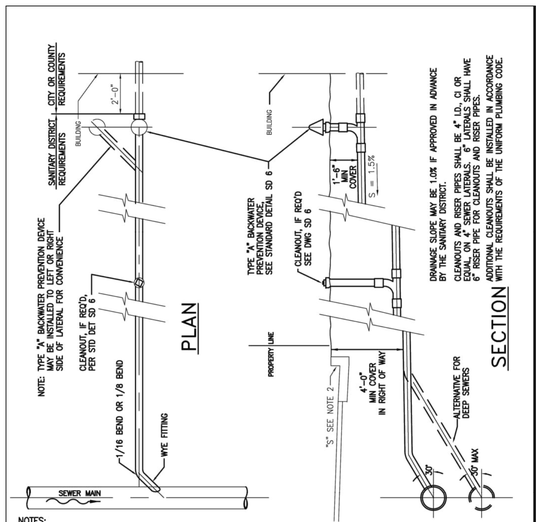
MARIN COUNTY SANITARY DISTRICTS
CALIFORNIA

STANDARD CLEANOUT AND BACKWATER PREVENTION DEVICE

1995 | SD 6

2 STD. CLEANOUT AND BACKWATER

NTS



NOTES:
1. WHEN A LATERAL SEWER IS INSTALLED IN ADVANCE OF THE BUILDING SEWER, IT SHALL BE TERMINATED AT OR NEAR THE PROPERTY LINE. THE END OF THE LATERAL SHALL BE MARKED WITH A 4" x 4" REDWOOD STAKE.
2. WHERE CONCRETE CURBS AND GUTTERS EXIST OR ARE TO BE A PART OF AN IMPROVEMENT, EACH SIDE SEWER SHALL BE PERMANENTLY LOCATED BY IMPRINTING OR CHISELING AN "S" (3" size) IN THE FACE OF THE CURB VERTICALLY ABOVE THE SEWER PIPE.
3. BACKFILL SHALL NOT BE PLACED UNTIL PIPE INSTALLATION HAS BEEN INSPECTED AND APPROVED BY THE DISTRICT.
4. LATERAL TRENCHES SHALL BE THE SAME AS TYPICAL TRENCH DETAIL SD4.
5. THE SIZE OF THE SEWER LATERAL OR MAIN MUST BE EQUAL TO OR LARGER THAN THE SIZE OF THE BUILDING DRAIN.

MARIN COUNTY SANITARY DISTRICTS
CALIFORNIA

TYPICAL SIDE SEWER DETAILS

1995 | SD 5

1 TYP. SIDE SEWER DETAILS

NTS

ISSUES

ISSUE	DATE	DESCRIPTION
0	12/5/24	PERMIT

AC ENGINEERING, INC.
CIVIL & GEOTECHNICAL CONSULTANTS
454 LAS GALLINAS AVE., SUITE 1047
SAN RAFAEL, CA 94903
P: 415-295-2152
F: 415-472-0603
admin@agnewcivil.com

STAMP

REGISTERED PROFESSIONAL ENGINEER ORION W. AGNEW C 87262 Civil STATE OF CALIFORNIA

UTILITY PLAN – DETAILS

BEYER RESIDENCE – NEW SFR
426 PINE ST, SAUSALITO, CA 94965
APN: 065-054-11

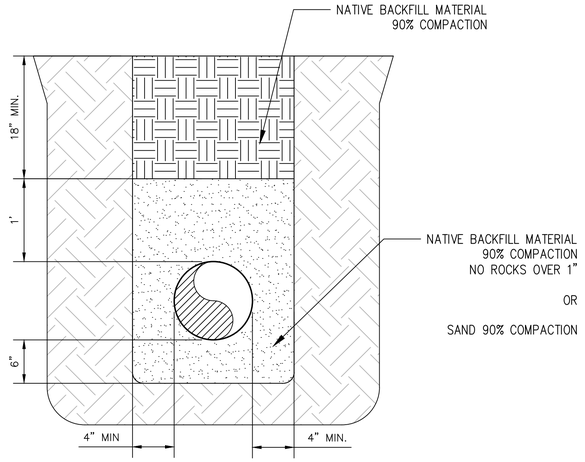
JOB #

385-1

C-2.2

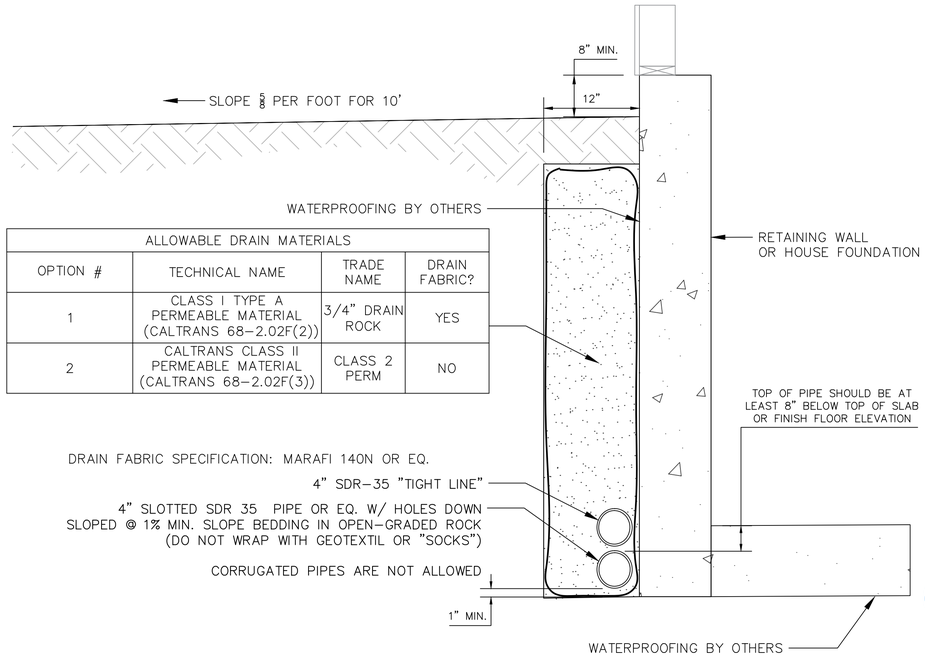
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SHEET SIZE: Arch D (36"x24")



4 TRENCHES

NTS



ALLOWABLE DRAIN MATERIALS			
OPTION #	TECHNICAL NAME	TRADE NAME	DRAIN FABRIC?
1	CLASS I TYPE A PERMEABLE MATERIAL (CALTRANS 68-2.02F(2))	3/4" DRAIN ROCK	YES
2	CALTRANS CLASS II PERMEABLE MATERIAL (CALTRANS 68-2.02F(3))	CLASS 2 PERM	NO

2 SUBDRAINS BEHIND RETAINING WALLS AND HOUSE FOUNDATIONS

NTS

Oatey® 4700 W. 160th St. Cleveland, OH 44135 PH:800-321-9532 FX:800-321-9535 www.oatey.com

TECHNICAL SPECIFICATION

BACKWATER VALVES

Quality ISO 9001 System

TECHNICAL SPECIFICATION: Oatey Backwater Valves are designed as a sewage check valve to prevent pumped water from flowing back into the basin. Assembly includes threaded cover to allow for access and valve flapper which seals closed while not in use. Made of PVC or ABS plastic, backwater valve can be solvent welded to piping. Oatey Backwater Valves can accommodate access sleeves made of Schedule 40 pipe.



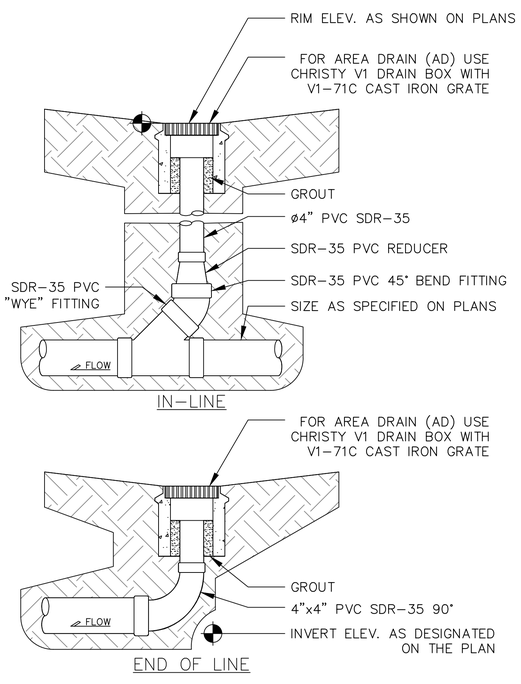
PHYSICAL/CHEMICAL PROPERTIES

Material/Color — ABS Plastic = Black; PVC Plastic = White

PRODUCT NUMBER	DESCRIPTION	PACK	CARTON WEIGHT
43900	3" PVC Backwater Valve	4	3 lbs.
43901	3" ABS Backwater Valve	4	3 lbs.
43902	3" PVC backwater valve w/ access sleeve	1	8 lbs.
43903	3" ABS backwater valve w/ access sleeve	1	8 lbs.
43904	4" PVC Backwater Valve	2	5 lbs.
43905	4" ABS Backwater Valve	2	5 lbs.
43906	4" PVC backwater valve w/ access sleeve	1	10 lbs.
43907	4" ABS backwater valve w/ access sleeve	1	10 lbs.
43908	6" PVC Backwater Valve	1	11 lbs.
43909	6" ABS Backwater Valve	1	11 lbs.
43915	3" PVC Threaded Cap	1	1 lb.
43916	3" ABS Threaded Cap	1	1 lb.
43918	4" PVC Threaded Cap	1	1 lb.
43919	4" ABS Threaded Cap	1	1 lb.
43921	6" PVC Threaded Cap	1	1 lb.
43922	6" ABS Threaded Cap	1	1 lb.
43924	3" PVC Flapper with O-Ring	1	1 lb.
43925	3" ABS Flapper with O-Ring	1	1 lb.
43927	4" PVC Flapper with O-Ring	1	1 lb.
43928	4" ABS Flapper with O-Ring	1	1 lb.
43929	6" PVC Flapper with O-Ring	1	1 lb.
43930	6" ABS Flapper with O-Ring	1	1 lb.

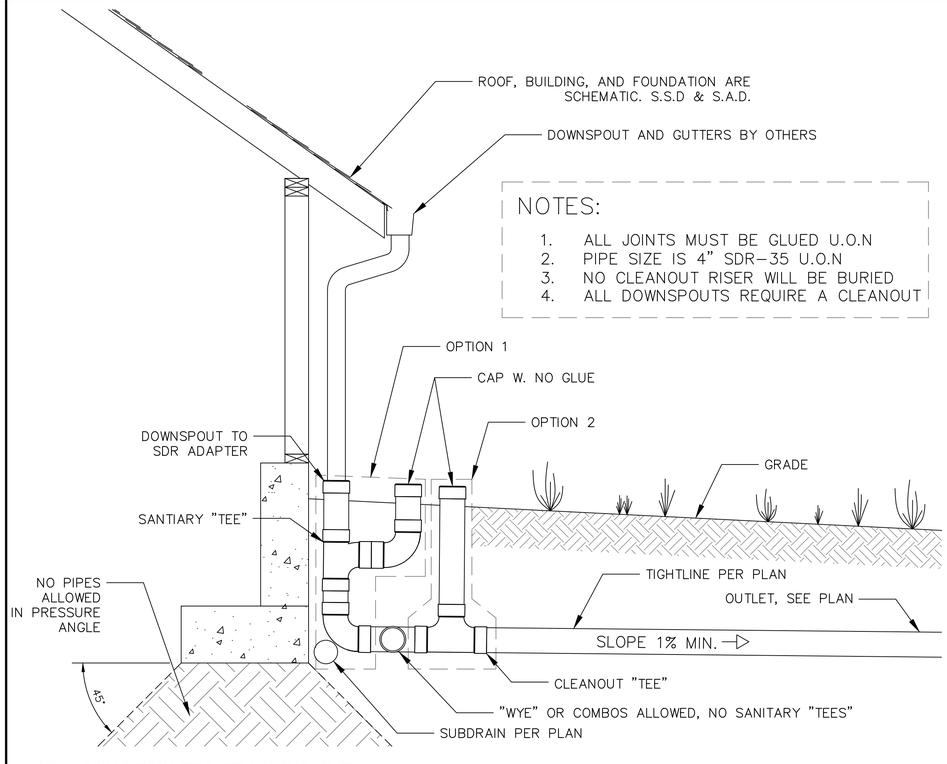
5 BACKFLOW PREVENTOR DEVICE

NTS



3 AREA DRAINS OR CLEANOUTS

NTS



1 DOWNSPOUTS WITH CLEANOUT

NTS

ISSUES

ISSUE	DATE	DESCRIPTION
0	12/5/24	PERMIT

AC ENGINEERING, INC.
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454 LAS GALLINAS AVE., SUITE 1047
SAN RAFAEL, CA 94903
P: 415-295-2152
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admin@agnewcivil.com

STAMP

REGISTERED PROFESSIONAL ENGINEER
ORION W. AGNEW
C 87262
CIVIL
STATE OF CALIFORNIA

DETAILS

BEYER RESIDENCE - NEW SFR
426 PINE ST, SAUSALITO, CA 94965
APN: 065-054-11

JOB #

385-1

C-3.0

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SHEET SIZE: Arch D (36"x24")

HIGH-TEMPERATURE "FULL-FLOW" UNICHECKS

30-0214 1-1/4" CAST IRON NPT
30-0215 1-1/2" CAST IRON NPT
30-0216 2" CAST IRON NPT

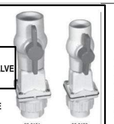

30-0214 Pictured

- Use with 2000 & 3000 series high-temperature pumps
- Vertical or horizontal installation
- Full-flow design, no restrictions
- Stops backflow of water
- Standard, 1-1/4", 1-1/2", 2" female NPT pipe
- EPDM strand-reinforced flapper, smooth-edge design, with cast iron and noncorrosive metal backing plates & stainless steel fastener.
- Corrosion-resistant powder coated epoxy finish
- Rated at 50 PSI (115 feet of head) at 200 °F
- Stainless steel bolts
- 1 per carton
- Weight: 30-0214, 7.5 lbs.; 30-0215, 7.5 lbs.; 30-0216, 10 lbs.

Tri-Check

30-0100
1-1/2" PVC CHECK VALVE / BALL VALVE UNION COMBINATION

30-0101
2" PVC CHECK VALVE / BALL VALVE UNION COMBINATION


30-0101 Pictured 30-0100 Pictured

- Full-flow check valve design
- Threaded union allows pump to be removed without disrupting discharge piping.
- Saves time and money - easy to install
- Neoprene gasket and flapper, weighted with stainless steel backing plates and rivet
- Can be installed on vertical or horizontal pipe
- Meets plumbing codes requiring a ball valve installed in conjunction with a check valve.*

The "Combo"

30-0102
1-1/2" PVC CHECK VALVE UNION COMBINATION

30-0103
2" PVC CHECK VALVE UNION COMBINATION


30-0103 Pictured 30-0102 Pictured

- All stainless steel screws
- Replaceable flapper in the check valve
- Extra wide hinge to reduce stress
- Rated for 25 psi, 58 ft. of head
- 6 Per carton (30-0100 & 30-0101)
- 9 Per carton (30-0102 & 30-0103)

Consult Factory or local representative for state approvals

INLINE CHECK VALVE

30-0238 1-1/2" INLINE CHECK VALVE

- Rubber coupling with stainless steel clamps
- Threads into pump discharge
- Pre-drilled weephole
- 4.3 PSI, 10 ft. of Head
- Vertical installation only


30-0238 Pictured

ZOELLER PUMP COMPANY
MAIL TO: P.O. BOX 16347 • Louisville, KY 40256-0347
SHIP TO: 3649 Cane Run Road • Louisville, KY 40211-1961
Tel: (502) 778-2731 • 1 (800) 928-PUMP
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4 TRI-CHECK 30-0100 NTS

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Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.

ZOELLER PUMP COMPANY

SECTION: 2.50.010
FM0732
0922
Supersedes
1116

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1 (800) 928-PUMP

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APAK® ALARM SYSTEMS

The compact and easy to install APak® Alarm system sounds a horn when a potentially threatening liquid level condition occurs. The horn can be silenced, but the alarm light remains on until the condition is remedied.

A green "POWER ON" light indicates 120 V primary power to the alarm. A low battery chirp feature indicates when the battery should be replaced. A red "INPUT" light and audible horn indicates a high-level condition. During the high water condition, the horn can be silenced by pressing the "SILENCE" button. Once the situation is remedied, the LED can be reset by holding the "SILENCE" button for 3 seconds.

NOTE: It is always recommended to power the alarm from a separate circuit than the pump to avoid losing power to both during a tripped breaker scenario.

Indoor Alarms

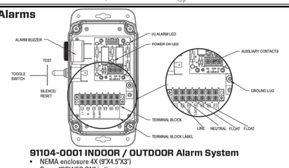
10-4012 APak® Alarm
- NEMA 1 enclosure (INDOOR USE ONLY)
- Automatic alarm reset
- Horn is rated 87 decibels at 10'
- 2 AA battery backup (batteries not included)
- 15' alarm (12 V) tethered switch
- 6' power cord
- cCSAus approved

10-4011 APak® Alarm
Same standard features of our 10-4012 with:
- 15' alarm (12 V) alarm reed sensor



Z Control® Models
- **10-4012 comes with reed sensor**
- **10-4014 comes with mechanical float switch**
- All the standard features plus:
- Second input for additional monitoring ability
- Dry contacts for connection to SCADA, automation, or security systems.
- Z Control® enabled
  - Wifi equipped
  - Simple setup with no additional monthly cost
  - Receive free text, email, and push alerts on:
    - Power outage
    - Low battery
    - Input 1 or 2 triggers
    - Loss of contact with Z Control®
  - Remotely silence, reset alarm.
  - Free Z Control® app and web interfaces
  - Free Z Control® account

Outdoor/Indoor Alarms



91104-0001 INDOOR / OUTDOOR Alarm System
- NEMA enclosure 4X (8"X 6"X3")
- Green "POWER ON" indicator
- Red perimeter LEDs indicate alarm
- Automatic alarm reset, horn silence switch and alarm test switch
- Horn is rated 85 decibels at 10'
- Terminal block provides junction box versatility for the pump and float switch
- 15' Alarm (12V) tethered float switch (for alarm ONLY with no float, please use 91104-0003)
- Auxiliary dry contacts (5A max)
- Power connections are field wired
- UL / CSA listed

Model 91104-0001

91104-0002 Alarm System includes same features of our 91104-0001 with:
- Pre-wired 20' alarm (12 V) tethered switch
- Pre-wired 6' 115 V power cord with water-tight cord connectors

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3 A-PAK ALARM 91104-0002 NTS

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ZOELLER PUMP COMPANY

SECTION: 2.15.050
FM2779
0724
Supersedes
0324

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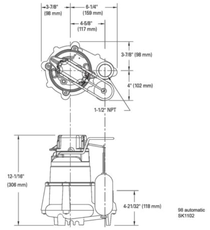
Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.

TECHNICAL DATA SHEET
FLOW-MATE SERIES
Model 98 Submersible Effluent/Dewatering Pump

PRODUCT SPECIFICATIONS

MOTOR	Horse Power	1/2
	Voltage	115 or 230
	Phase	1 Ph
	Hertz	60 Hz
	RPM	1725
	Type	Permanent split capacitor
	Insulation	Class B
	Amps	4.7 - 9.4
PUMP	Operation	Automatic or nonautomatic
	Auto On/Off Points	9-1/2" (24 cm) / 3" (7.6 cm)
	Discharge Size	1-1/2" NPT
	Solids Handling	1/2" (13 mm) spherical solids
	Cord Length	9' (3 m) automatic, 15' (5 m) nonautomatic
	Cord Type	UL listed
	Max. Head	23' (7 m)
	Max. Flow Rate	72 GPM (273 LPM)
	Max. Operating Temp.	130° F (54° C)
	Cooling	Oil filled
	Motor Protection	Auto reset thermal overload
MATERIALS	Cap	Cast iron
	Motor Housing	Cast iron
	Pump Housing	Cast iron
	Base	thermoplastic or cast iron
	Upper Bearing	Oil-fed cast iron
	Lower Bearing	Oil-fed cast iron
	Mechanical Seals	Carbon and ceramic
	Impeller Type	Non-clogging vortex
	Impeller	thermoplastic or cast iron
	Hardware	Stainless steel
	Motor Shaft	AISI 1215 cold rolled steel
	Gasket	Neoprene

NOTE: See model comparison chart for specific details.



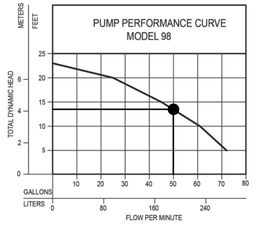
98-0001 pump includes contractor approved Zoeller LED Plug.

Tested to Standard UL778 and Certified to CSA Standard C22.2 No. 108

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TOTAL DYNAMIC HEAD FLOW PER MINUTE

MODEL		98	
Feet	Meters	Gal.	Liters
5	1.5	72	273
10	3.0	61	231
15	4.6	45	170
20	7.1	25	95
Shut-off Head:		23 ft.(7.0m)	



Model	MODEL COMPARISON										
	Seal	Mode	Volts	Ph	Amps	HP	Hz	Lbs	Kg	Simplex	Duplex
M98	Single	Auto	115	1	9.4	1/2	60	36	16	1	4
N98	Single	Non	115	1	9.4	1/2	60	36	16	2 or 3	4
D98	Single	Auto	230	1	4.7	1/2	60	36	16	1	4
E98	Single	Non	230	1	4.7	1/2	60	35	16	2 or 3	4
BN98	Single	Auto	115	1	9.4	1/2	60	37	17	*	--
BE98	Single	Auto	230	1	9.4	1/2	60	40	18	*	--

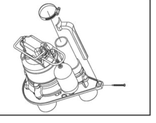
*BN and BE models include a 20' (6 m) piggyback variable level pump switch. Additional cord lengths are available in 25' (8 m) and 35' (11 m). 50' (15 m) cords are available for 230 V units only.

SELECTION GUIDE

1. Integral float-operated mechanical switch, no external control required.
2. For automatic, use single piggyback variable level float switch or double piggyback variable level float switch. Refer to FM0477.
3. See FM1228 for correct model of simplex control panel.
4. See FM0712 for correct model of duplex control panel or FM1663 for a residential alternator system.

OPTIONAL PUMP STAND P/N 10-2421
- Reduces potential clogging by debris
- Replaces rocks or bricks under the pump
- Made of durable, noncorrosive ABS
- Raises pump 2" (5 cm) off bottom of basin
- Provides the ability to raise intake by adding sections of 1½" or 2" (DN40 or DN50) PVC piping
- Attaches securely to pump
- Accommodates sump, dewatering and effluent applications

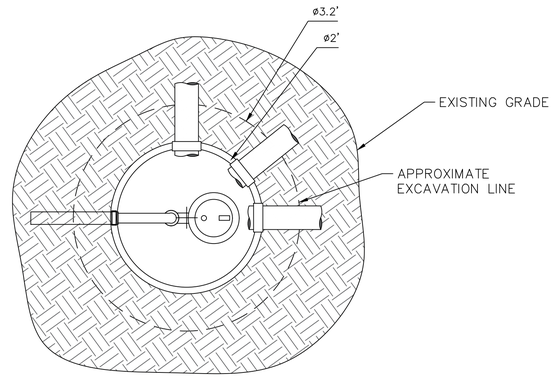
NOTE: Make sure float is free from obstruction.



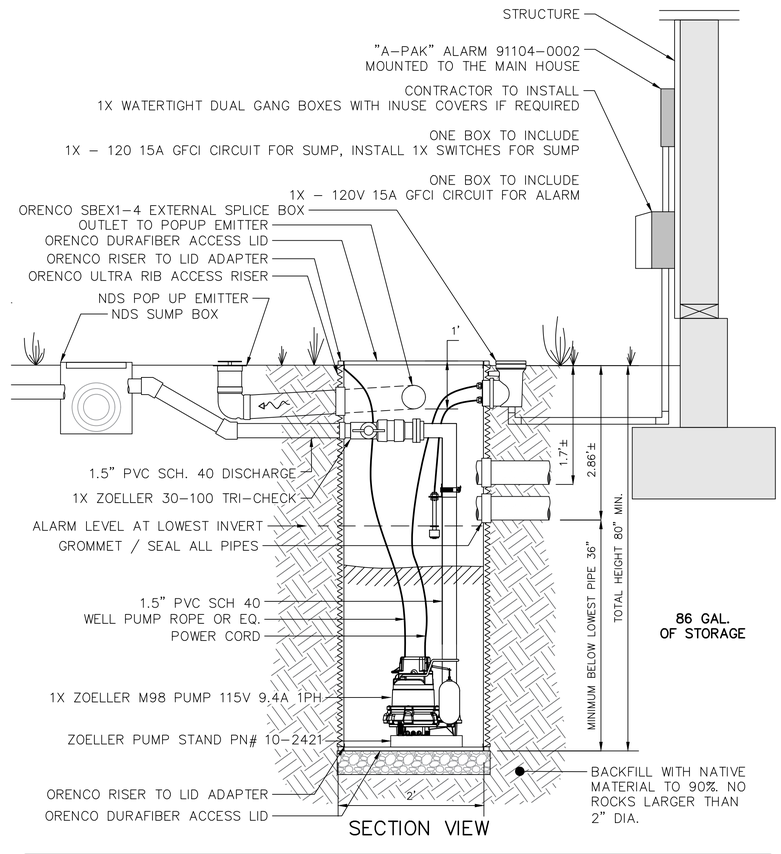
CAUTION All installation of controls, protection devices and wiring should be done by a qualified licensed electrician. All electrical and safety codes should be followed including the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).

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2 SUMP PUMP NTS



PLAN VIEW



SECTION VIEW

MAJOR COMPONENTS

NAME	BRAND	QTY	PN	DTL. NUMBER	NOTES
PUMP 1	ZOELLER	1	M98	2/C3.1	
ALARM	ZOELLER	1	91104-0002	3/C3.1	
CHECK VALVE/BALL VALVE/UNION	ZOELLER	1	30-100	4/C3.1	TRI-CHECK
POP UP EMITTER	NDS	1	620	5/C3.2	DRILL HOLE IN BOTTOM TO ALLOW WATER TO WEEP
NDS SUMP BOX	NDS	1	1225	6/3.2	SOLID LID
SUMP BASIN COMPONENTS AND LIDS	ORENCO		SEE DETAILS	1-4/C3.2	

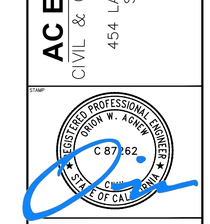
1 CUSTOM SUMP WITH SINGLE PUMP AND ALARM NTS

ISSUES

ISSUE	DATE	DESCRIPTION
0	12/5/24	PERMIT

AC ENGINEERING, INC.
CIVIL & GEOTECHNICAL CONSULTANTS
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admin@agnewcivil.com

STAMP



DETAILS

BEYER RESIDENCE - NEW SFR
426 PINE ST, SAUSALITO, CA 94965
APN: 065-054-11

385-1

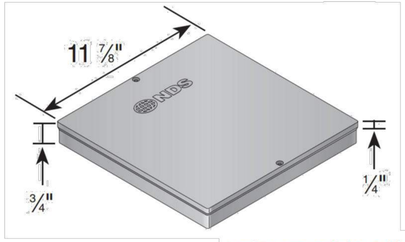
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SHEET SIZE: Arch D (36"x24")

NDS™ WE PUT WATER IN ITS PLACE — TECHNICAL SPECIFICATIONS

12" x 12" SUMP BOX COVER



Material: UV Protected High Density Polyethylene (HDPE)
Weight: 2.23 lbs
Colors: Black (1220)
Fits: Use with 12" catch basin series, NDS #1225 Sump box, and NDS #1219 Backwater Valve Box
Grate Openings: 0 in² open space

Load Recommendation Guide

Class A
- Loads of 1-60 psi.
- Recommended for pedestrians, bicycles and wheel chair traffic.

Note: Some installations may require a concrete collar to meet load rating. Loads are based on encasing product in concrete. Product must be installed using NDS instructions.

ADA Compliance

NDS provides a wide selection of grates that are compliant with the Americans with Disabilities Act. The ADA Accessibility Guidelines For Buildings and Facilities Section 4.5.4 specifies that ground and floor grates "shall have spaces no greater than 1/2-in (13 mm) wide in one direction."

We are pleased to provide grates that comply with these requirements, so that no individual need be limited from accessing the area safely and confidently.

To see if a grate is ADA compliant, please check the description of the product in our NDS Drainage Catalog; products that meet these requirements are marked "ADA compliant."

Like to find out more about ADA compliance and NDS? Send us your question and we'll be happy to help.

ADA Compliant/Heel-proof

6 12X12 SUMP BOX WITH LID — NOT TO SCALE

POP-UP DRAINAGE EMITTERS

3" & 4" Pop-up Drainage Emitter (continued)

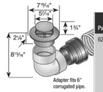


Part No.	Description	Color	Pkg. Qty.	Wt. Ea. (lbs.)	Product Class	Specifications
430	Pop-up Drainage Emitter with 3" Elbow and Universal Adapter Universal Adapter fits 3" and 4" corrugated pipe, 3" and 4" sewer and drain pipe, 4" Sch. 40 pipe, and 3" and 4" triple wall pipe. Ideal for discharging excess water from stormwater management system. Spring automatically retracts.	Green	20	1.00	10ND	NDS #420 polyolefin spring-loaded Pop-up Drainage Emitter with UV inhibitor, 3" styrene 90 degree elbow with 1/4" drain hole and universal pipe adapter. 53 GPM outflow capacity with 3" system head. 0.04 psi or 1" of head to raise top.
1241	3" & 4" Universal Adapter w/4" Spigot Connects 3" & 4" Sewer and Drain Fittings with 3" & 4" Corrugated Pipe, 3" & 4" Sewer and Drain Pipe, 4" Sch. 40 Pipe and 3" & 4" Triple Wall Pipe.	Black	20	0.70	10ND	3" & 4" Patented Universal Adapter, Styrene.

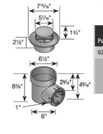
6" Pop-up Drainage Emitter



Part No.	Description	Color	Pkg. Qty.	Wt. Ea. (lbs.)	Product Class	Specifications
620	6" Pop-up Drainage Emitter Can be used with Flo-Well to relieve overflow.	Green	15	0.61	10ND	6" polyolefin spring-loaded Pop-up Drainage Emitter with UV inhibitor. 170 GPM outflow capacity with 3" system head. 0.04 psi or 1" of head to raise top.



Part No.	Description	Color	Pkg. Qty.	Wt. Ea. (lbs.)	Product Class	Specifications
624	6" Pop-up Emitter with Elbow and Corrugated Pipe Adapter	Green	10	3.45	10ND	NDS #620 polyolefin spring-loaded Pop-up Drainage Emitter with UV inhibitor, 6" styrene 90 degree elbow with 1/4" drain hole and corrugated pipe adapter.170 GPM outflow capacity with 3" system head. 0.04 psi or 1" of head to raise top.

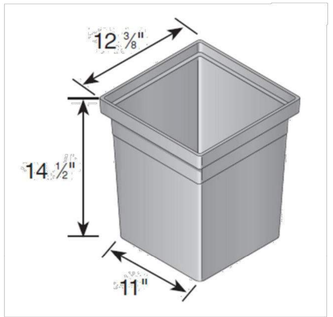


Part No.	Description	Color	Pkg. Qty.	Wt. Ea. (lbs.)	Product Class	Specifications
625	6" Pop-up Emitter with Spee-D® Basin 3" - 4" S & D, Corrugated, Single Wall, Dual Wall, Triple Wall.	Green	8	2.21	10ND	NDS #620 polyolefin spring-loaded Pop-up Drainage Emitter with UV inhibitor and Spee-D basin. 170 GPM outflow capacity with 3" system head. 0.04 psi or 1" of head to raise top.

5 6" NDS POPUP EMITTER — NOT TO SCALE

NDS™ WE PUT WATER IN ITS PLACE — TECHNICAL SPECIFICATIONS

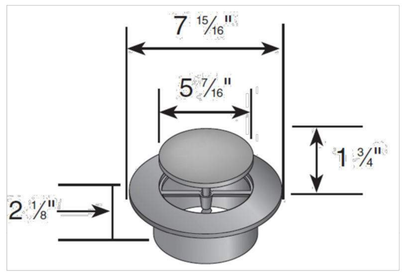
12" x 12" SUMP BOX



Material: Styrene
Colors: Black (1225)
Use with 12" X 12" Grate or Part # 1220 Valve Box Cover

NDS™ WE PUT WATER IN ITS PLACE — TECHNICAL SPECIFICATIONS

6" Pop-Up Drainage Emitter



Part #: 620
Material: High Density Polypropylene (HDPE)
Colors: Green
Fits: 6" sewer and drain fittings and NDS 6" Spee-D Basin
Spring: Stainless Steel Grade 302
Open Pressure: 1 PSI
Open Surface Area: 28.8 Sq. Inches
Flow Rate:
1" Head: 124.60 GPM
0.5" Head: 88.10 GPM
Weight Per Each: 0.64 lbs.
UV inhibitor

Load Recommendation Guide

Class A
- Loads of 1-60 psi.
- Recommended for pedestrians, bicycles and wheel chair traffic.

5 6" NDS POPUP EMITTER — NOT TO SCALE

Orenco SYSTEMS — Technical Data Sheet

External Splice Box

Applications

The Orenco® External Splice Box attaches outside the access riser of an underground tank. It's engineered specifically for water and wastewater treatment systems and is especially suited for use in locations prone to high groundwater and other wet conditions. Its separate conduit hubs, large volume, and optional dividers make it useful for maintaining isolation of high- and low-voltage wires, where needed. It has four cord grips, which accommodate power cords for floats and pumps of 0.170 - 0.470 inches (4.3 - 11.9 mm) in diameter. Unused cord grips can be plugged watertight with the supplied cord grip plugs. Each External Splice Box includes a riser adapter designed to provide a watertight connection between the splice box and riser.

General

To specify the Orenco External Splice Box for your installation, require the following:

- Watertightness for prolonged submergence per UL listing (Type 6P)
- Attachment external to access riser to allow inspection with no need to open the riser lid
- Volume of 126 in.³ (2065 cm³) for easy wiring access and multiple wiring configurations
- Bottom entry, so conduit or direct-bury cable always remains below minimum burial depth
- UV-resistant rating for outdoor use
- Optional divider plates for isolating high- and low-voltage wires from separate conduits or direct-bury cable
- Included riser adapter to eliminate the need for a grommet

Standard Models

SBEX1-4, SBEX1-4-P

Product Code Diagram

SBEX1-4 - ☐
- Blank = no divider plates
- P = divider plates

External splice box



The External Splice Box is molded PVC.
It has a UL Type 6P listing for prolonged submergence.

4 EXTERNAL SPLICE BOX — NOT TO SCALE

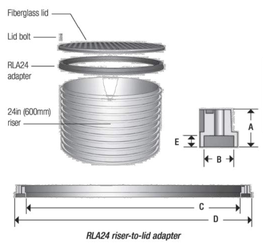
Orenco WATER — Technical Data Sheet

RLA Riser-to-Lid Adapters

Applications

Orenco riser-to-lid adapters (RLAs) provide a secure, watertight method of attaching an Orenco fiberglass lid to a 24in (600mm) FRP or ribbed PVC access riser.

RLAs are especially useful when the top of the riser is uneven or has a damaged edge.



RLA24 riser-to-lid adapter

General

RLA adapters can be attached to 24in (600mm) risers to simplify bolting a lid to the riser. Use a methacrylate adhesive to bond RLAs to risers. (See NTD-ADH-1, *Orenco Adhesives and Dispensers*, for adhesive recommendations.) The RLA24 has 12 pre-drilled bolt holes.

For a proper seal, RLA adapters must be used with gasketed access lids.

Standard Models

RLA24

Product Code Diagram

RLA 24
- 24 = Adapter diameter, in (mm): 24 = 24 (600)
- RLA = Riser-to-lid adapter

Materials of Construction

Adapter	ABS

Specifications

Dimensions, in (mm)	RLA24
A. Adapter height	1.25 (32)
B. Socket or lip width	1 (25)
C. Inside diameter	22.88 (581)
D. Outside diameter	25.5 (648)
E. Socket depth	0.375 (10)

All product and performance assertions are based on proper design, installation, operation, and maintenance according to Orenco's current published documentation.

3 RISER TO LID ADAPTER — NOT TO SCALE

Orenco WATER — Technical Data Sheet

Orenco DuraFiber™ FLD Access Lids

Applications

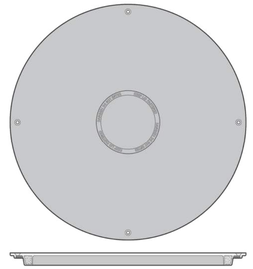
Orenco DuraFiber FLD Access Lids provide secure, durable, watertight coverings for ribbed PVC, HDPE, and Orenco FRP risers, pump basins, and access ports. They are capable of supporting a 2500lb (1134kg) load; however, they are not recommended for vehicular traffic.

FLD24 24in (600mm) lids require an RLA24 adapter to connect to Perma-Loc™ pipe. FLD30 30in (750mm) lids are not compatible with RLA30 Riser-Lid-Adapters or 30in (750mm) Perma-Loc pipe.

General

DuraFiber FLD lids are designed for extreme durability and damage resistance, with UV- and corrosion-resistant materials, optional EPDM gaskets for watertight lid-to-riser connections, and flat-style flanges for easy access with clean, flush-to-grade installations. They also have centering rings for easy alignment. FLD lids feature a non-skid surface and a molded-in caution statement, with room for a customer logo. All come with four 5/16in stainless steel socket cap screws and a hex key wrench.

FLD lids are available with optional insulation, installed at the factory or in kits that can be installed in the field.



DuraFiber FLD lid: top view and side-cutaway view

Standard Models

FLD18G, FLD24G, FLD24G–ATX, FLD24G–W, FLD30G, FLD30G–ATX, FLD30G–PRELOS, FLD30G–W

Product Code Diagram

FLD 24 G ☐ - B
- Lid diameter, in (mm): 18 = 18 (457) 24 = 24 (600) 30 = 30 (750)
- Gasket options: Blank = no gasket G = gasket
- Vent and filter options: Blank = no vent or filter options V = vent CF = carbon filter
- Insulation:* Blank = no insulation I2 = 2in (50mm) insulation installed I4 = 4in (100mm) insulation installed
- Color and logo options: Blank = green lid B = brown lid C = custom logo ATX = AdvanTex® logo PRELOS = Prelos® logo W = warning label
- DuraFiber™ fiberglass lid

*Insulation has an R-value of 10 per 2in (RSI of 1.8 per 50mm) increment

Materials of Construction

Lid	Fiber-reinforced polymer (FRP)
Gasket (FLD18)	Urethane
Gasket (FLD24, FLD30)	EPDM
Centering ring core	Structural foam
Mounting hardware	Stainless steel
Insulation, optional	Closed-cell foam
Insulation mounting hardware	Stainless steel

2 DURAFIBER LIDS — NOT TO SCALE

Orenco SYSTEMS — Technical Data Sheet

Access Risers – Ultra-Rib™

Applications

Orenco's Access Risers provide access to septic tank openings and can be cast into the tops of concrete tanks, bonded in place, or bolted down using a riser-to-tank adapter. They can also be used as valve enclosures.



General

Orenco Ultra-Rib™ Access Risers are constructed of ribbed PVC pipe and are available in 12-in. (300-mm), 18-in. (450-mm), and 24-in. (600-mm) diameters. They can be ordered in 3-in. (76.2-mm) increments in lengths up to 13 ft (3.96 m) for 12-in. (300-mm) and 18-in. (450-mm) diameter risers, and up to 14-ft (4.27 m) for 24-in. (600-mm) diameter risers. Orenco Ultra-Rib riser pipe is also available in truckload quantities. A complete line of Orenco pipe-cutting tools makes it easy to fabricate risers in your shop or in the field.

Standard Models

RR12XX, RU18XX, RR24XX

Product Code Diagram

R R 24 80 + SX + 15
- Riser type code: R = 12-in. (300-mm) and 24-in. (600-mm) diameters U = 18-in. (450-mm) diameter PU = Bulk Ultra-Rib™ pipe, all diameters
- Riser diameter: 12 = 12-in. (300-mm)* 18 = 18-in. (450-mm)* 24 = 24-in. (600-mm)
- Riser height, 3-in. (76-mm) increments standard
- Connector/splice box option: Blank = No grommet or splice box CLK = Pre-drilled for ClickTight™ S = 1-in. (25-mm) grommet installed L = 1¼-in. (32-mm) grommet installed SX = Pre-drilled for Orenco® external splice box† S1 = SB1 attached S2 = SB2 attached S3 = SB3 attached S4 = SB4 attached L5 = SB5 attached L6 = SB6 attached SX = Pre-installed hub for external splice box* XS = Explosion-proof splice box for simplex pumps‡ XD = Explosion-proof splice box for duplex pumps‡ XT = Explosion-proof splice box for triplex pumps‡
- Discharge assembly or grommet option: Blank = No discharge grommet or Pre-drilled for HDA125 HD2 = Pre-drilled for HDA200 10 = 1-in. (25-mm) 12 = 1¼-in. (32-mm) 15 = 1½-in. (38-mm) 20 = 2-in. (51-mm)
- Riser, Ultra-Rib™

* Not intended for use over pump vaults
† Minimum riser height 18-in. (457-mm)
‡ For Class I Division 1 environments

Materials of Construction

Ultra-Rib™ PVC Pipe:	PVC

Specifications

Model	RR12XX	RU18XX	RR24XX
I.D., in. (mm)	11.74 (298)	17.65 (448)	23.50 (597)
Wall thickness – excluding ribs, in. (mm)	0.10 (3)	0.19 (5)	0.25 (6)
O.D. – including ribs, in. (mm)	13.13 (334)	19.44 (494)	25.63 (651)
Weight, lbs/ft (kg/m)	5 (7.4)	11 (16.4)	19 (28.3)

1 ULTRA-RIB — NOT TO SCALE

ISSUES

ISSUE	DATE	DESCRIPTION
0	12/5/24	PERMIT

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REGISTERED PROFESSIONAL ENGINEER — ORION W. AGNEW — C 87262 — CIVIL — STATE OF CALIFORNIA

DETAILS

BEYER RESIDENCE – NEW SFR
426 PINE ST, SAUSALITO, CA 94965
APN: 065-054-11

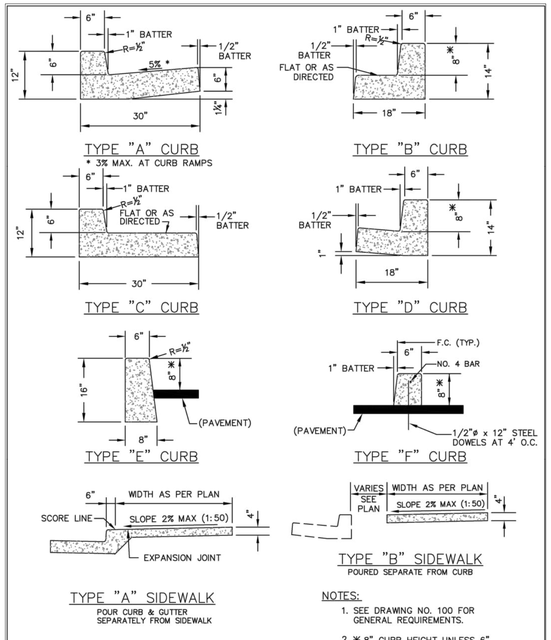
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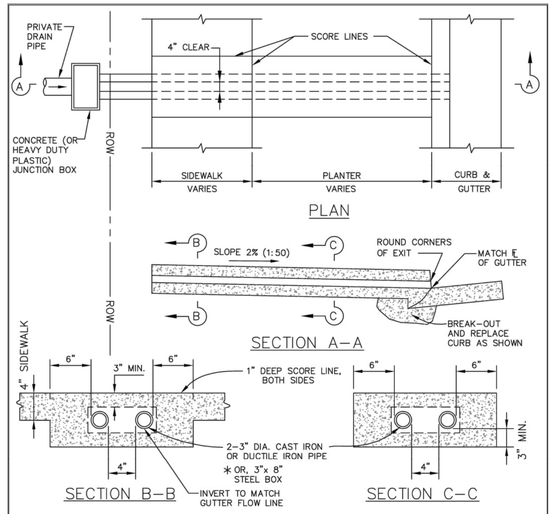
1. EXISTING CONCRETE SHALL BE REMOVED AT EXPANSION OR WEAKENED PLANE JOINTS OR AT SAWCUTS AS FIELD MARKED BY AGENCY ENGINEER. SAWCUTS MUST GO ENTIRELY THROUGH CONCRETE.
2. FOR NEW DEVELOPMENT, NO UTILITY BOXES OR POLES WILL BE PERMITTED IN THE SIDEWALK AREA WITHOUT THE PRIOR WRITTEN APPROVAL OF THE AGENCY ENGINEER.
3. WHERE UNDERCUT SUBGRADE OR UNSUITABLE SUBGRADE MATERIAL IS ENCOUNTERED, THE AGENCY ENGINEER MAY REQUIRE REMEDIAL WORK TO BE DONE, INCLUDING OVER EXCAVATION AND BACKFILLING WITH CRUSHED ROCK AND, WHEN DIRECTED BY THE ENGINEER, PLACING GEOTEXTILE FABRIC BENEATH THE NEW CONCRETE SECTION.
4. SUBGRADE SHALL BE COMPACTED TO AT LEAST 95% RELATIVE COMPACTION IN THE TOP SIX INCHES.
5. NEW WORK SHALL MATCH EXISTING AS CLOSELY AS POSSIBLE IN FINISH, SCORING AND COLOR. FOR NEW INSTALLATIONS PLACED ADJACENT TO EXISTING, 2LB. DAVIS BLACK #8084 (OR EQUIVALENT) PER CU. YD. CONCRETE SHALL BE ADDED TO MIX.
6. EXCEPT WHERE SPECIFIED OTHERWISE HEREIN, NO ADMIXTURES SHALL BE USED WITHOUT THE PERMISSION OF THE AGENCY ENGINEER.
7. FORMS SHALL MEET GRADE AND FORM FACES SHALL NOT VARY FROM THE DIMENSIONS SHOWN BY MORE THAN 1/2 INCH.
8. NO CONCRETE SHALL BE PLACED UNTIL THE AGENCY ENGINEER HAS INSPECTED AND APPROVED FORMS AND SUBGRADE/BASE.
9. SUBGRADE/BASE SHALL BE THOROUGHLY WETTED IMMEDIATELY PRIOR TO PLACING CONCRETE.
10. CONCRETE SHALL BE A MINIMUM CLASS B (5 SACK MIX) WITH 1 INCH MAXIMUM AGGREGATE FROM AN APPROVED MIXING PLANT. NO BAGGED MIX IS PERMITTED.
11. CONCRETE SHALL HAVE A SLUMP OF NOT MORE THAN FOUR INCHES.
12. FOR SIDEWALKS AND DRIVEWAY APPROACHES, 1/4 INCH DEEP SCORE LINES SHALL BE PLACED AT FOUR FEET ON CENTER OR AS DIRECTED BY THE AGENCY ENGINEER.
13. WEAKENED PLANE JOINTS AT LEAST 3/4" DEEP SHALL BE PLACED AT A MINIMUM 16 FEET ON CENTER EXCEPT FOR SIDEWALKS AND DRIVEWAY APPROACHES WHICH SHALL BE A MINIMUM 5 FEET ON CENTER.
14. 3/8 INCH THICK EXPANSION JOINTS SHALL BE PLACED ON BOTH SIDES OF DRIVEWAY APPROACHES, AT CURB AND SIDEWALK RETURN POINTS, DRAINAGE STRUCTURES AND OTHER LOCATIONS AS SHOWN ON THE PLANS.
15. ALL EXPOSED EDGES SHALL BE ROUNDED WITH 1/2 INCH RADIUS TOOL.
16. ALL FLAT SURFACES SHALL BE LIGHT BROOM FINISHED UNLESS OTHERWISE SPECIFIED BY AGENCY ENGINEER.
17. CURBS, SIDEWALKS AND DRIVEWAY APPROACHES SHALL HAVE FORMS REMOVED AND BE BACKFILLED WITHIN SEVEN DAYS AFTER POURING.
18. THE DESIGNATED DIMENSIONS AND SLOPES MAYBE MODIFIED TO ACCOMMODATE EXISTING ADJACENT FACILITIES SUBJECT TO THE APPROVAL OF THE AGENCY ENGINEER.

UNIFORM STANDARDS ALL CITIES AND COUNTY OF MARIN	REQUIREMENTS FOR CONCRETE CURB, GUTTER, SIDEWALK, DRIVEWAY AND OTHER "FLATWORK"	REV.	DATE	BY	MARCH 2018 DWG. NO. 100



NOTES:
1. SEE DRAWING NO. 100 FOR GENERAL REQUIREMENTS.
2. ✱ 8" CURB HEIGHT UNLESS 6" HEIGHT APPROVED BY AGENCY ENGINEER.

UNIFORM STANDARDS ALL CITIES AND COUNTY OF MARIN	CURB, GUTTER AND SIDEWALK DETAILS	REV.	DATE	BY	MARCH 2018 DWG. NO. 105

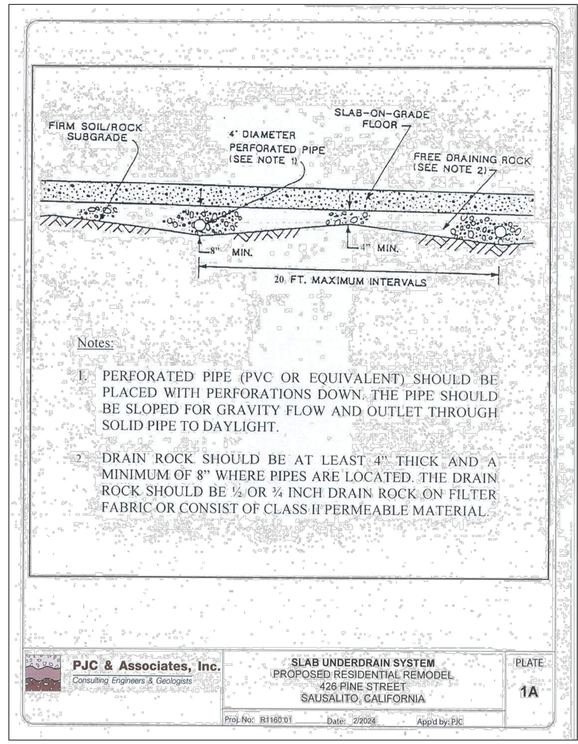


NOTE:
1. CONCRETE SHALL BE CLASS "B" (5 SACK MIX).
2. PLASTIC PIPE IS NOT ALLOWED.
3. WHERE UNDERDRAINS ARE INSTALLED AT LOCATIONS WHERE CURB, GUTTER AND SIDEWALK IS EXISTING, REMOVE 20" OF CURB AND 1 SQUARE OF SIDEWALK BETWEEN SAW-CUTS. REPLACE CURB AS SHOWN IN SECTION A–A ABOVE.
4. NO CONCRETE SHALL BE PLACED PRIOR TO FORM INSPECTION BY THE AGENCY ENGINEER.
5. ALL CONCRETE SHALL BE BROOM FINISHED.
✱6. IF REQUIRED BY AGENCY ENGINEER FOR HEAVY FLOWS.

UNIFORM STANDARDS ALL CITIES AND COUNTY OF MARIN	SIDEWALK UNDERDRAIN	REV.	DATE	BY	MARCH 2018 DWG. NO. 145

2 MARIN U.C.S DETAILS

NOT TO SCALE



Notes:

1. PERFORATED PIPE (PVC OR EQUIVALENT) SHOULD BE PLACED WITH PERFORATIONS DOWN. THE PIPE SHOULD BE SLOPED FOR GRAVITY FLOW AND OUTLET THROUGH SOLID PIPE TO DAYLIGHT.
2. DRAIN ROCK SHOULD BE AT LEAST 4" THICK AND A MINIMUM OF 8" WHERE PIPES ARE LOCATED. THE DRAIN ROCK SHOULD BE ½ OR ¾ INCH DRAIN ROCK ON FILTER FABRIC OR CONSIST OF CLASS II PERMEABLE MATERIAL.

PJC & Associates, Inc. Consulting Engineers & Geologists	SLAB UNDERDRAIN SYSTEM PROPOSED RESIDENTIAL REMODEL 426 PINE STREET SAUSALITO, CALIFORNIA	PLATE 1A
Proj.No: B1160'01	Date: 2/2024	Appd by: PJC

1 SUBSLAB DRAINS PER SOILS REPORT

NOT TO SCALE

ISSUES

ISSUE	DATE	DESCRIPTION
0	12/5/24	PERMIT

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REGISTERED PROFESSIONAL ENGINEER ORION W. AGNEW C 87262 Civil STATE OF CALIFORNIA

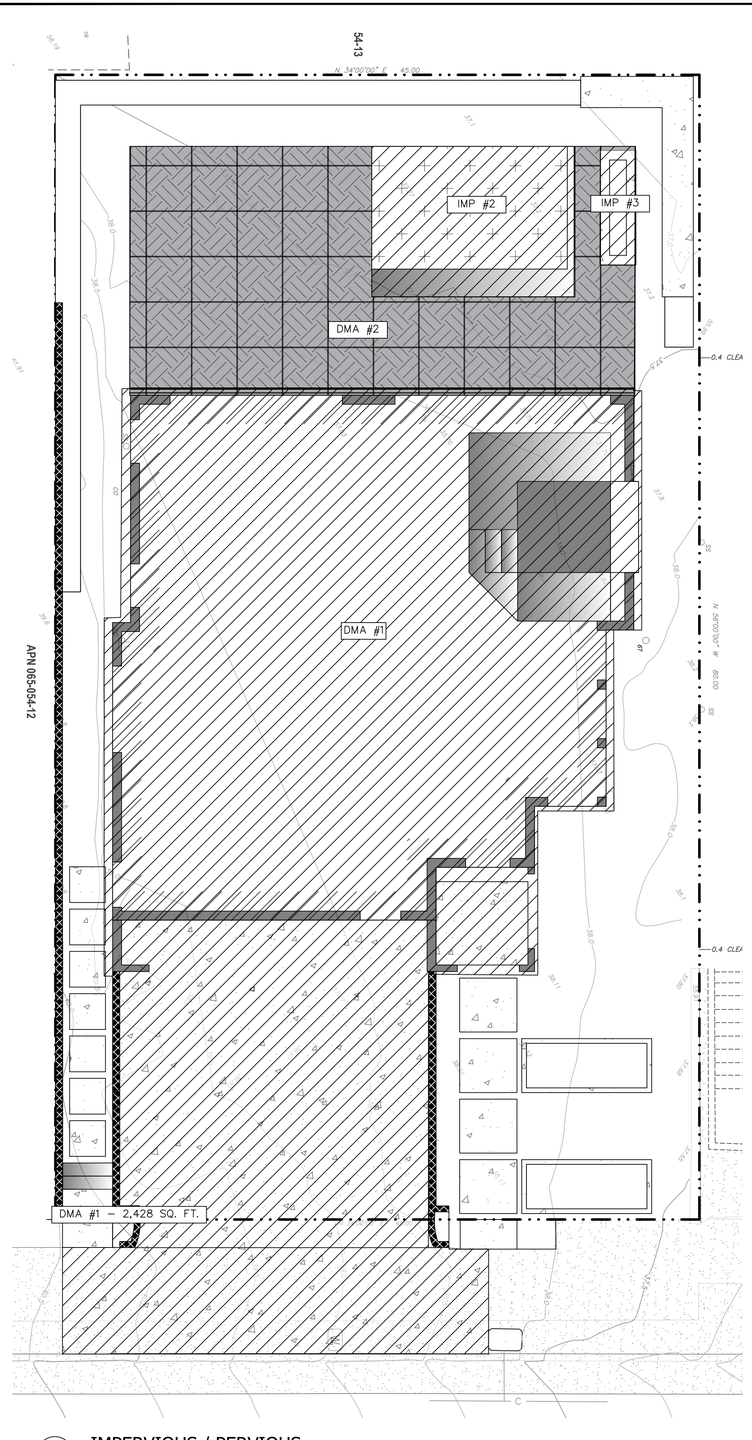
DETAILS

BEYER RESIDENCE – NEW SFR
426 PINE ST, SAUSALITO, CA 94965
APN: 065–054–11

385–1

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IMPERVIOUS

PERVIOUS

AREA TABLE

NAME / LOCATION	MATERIAL TYPE	TYPE	SQUARE FT.	IMPERVIOUS / PERVIOUS	BASMAA OPTION	CONTROL DEVICE	NOTES
DMA #1	ASSORTED	NEW / REPLACED	2,054	IMPREVIOUS	NA	NA	BASMAA NOT APPLICABLE. SQ. FT. < 2,500 SQ. FT.
IMP #2	CONC.	NEW / REPLACED	149	IMPREVIOUS	NA	NA	BASMAA NOT APPLICABLE. SQ. FT. < 2,500 SQ. FT.
IMP #3	CONC.	NEW / REPLACED	20	IMPREVIOUS	NA	NA	BASMAA NOT APPLICABLE. SQ. FT. < 2,500 SQ. FT.
IMPERVIOUS TOTALS			2,223				
DMA #2	PAVERS	NEW / REPLACED	429	PERVIOUS	NA	NA	
BALANCE OF LOT	ASSORTED	NEW / REPLACED	948	PERVIOUS	NA	NA	LOT SQ. FT. MINUS (DMA #2 + BALANCE OF LOT + IMPERVIOUS TOTALS)
PERVIOUS TOTALS			1,377				

1 IMPERVIOUS / PERVIOUS

SCALE: 1'=5'

GRAPHIC SCALE
(IN FEET)
5 0 2.5 5 10 20
1 INCH = 5 FEET

N

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ISSUES

ISSUE	DATE	DESCRIPTION
0	12/5/24	PERMIT

AC ENGINEERING, INC.
CIVIL & GEOTECHNICAL CONSULTANTS
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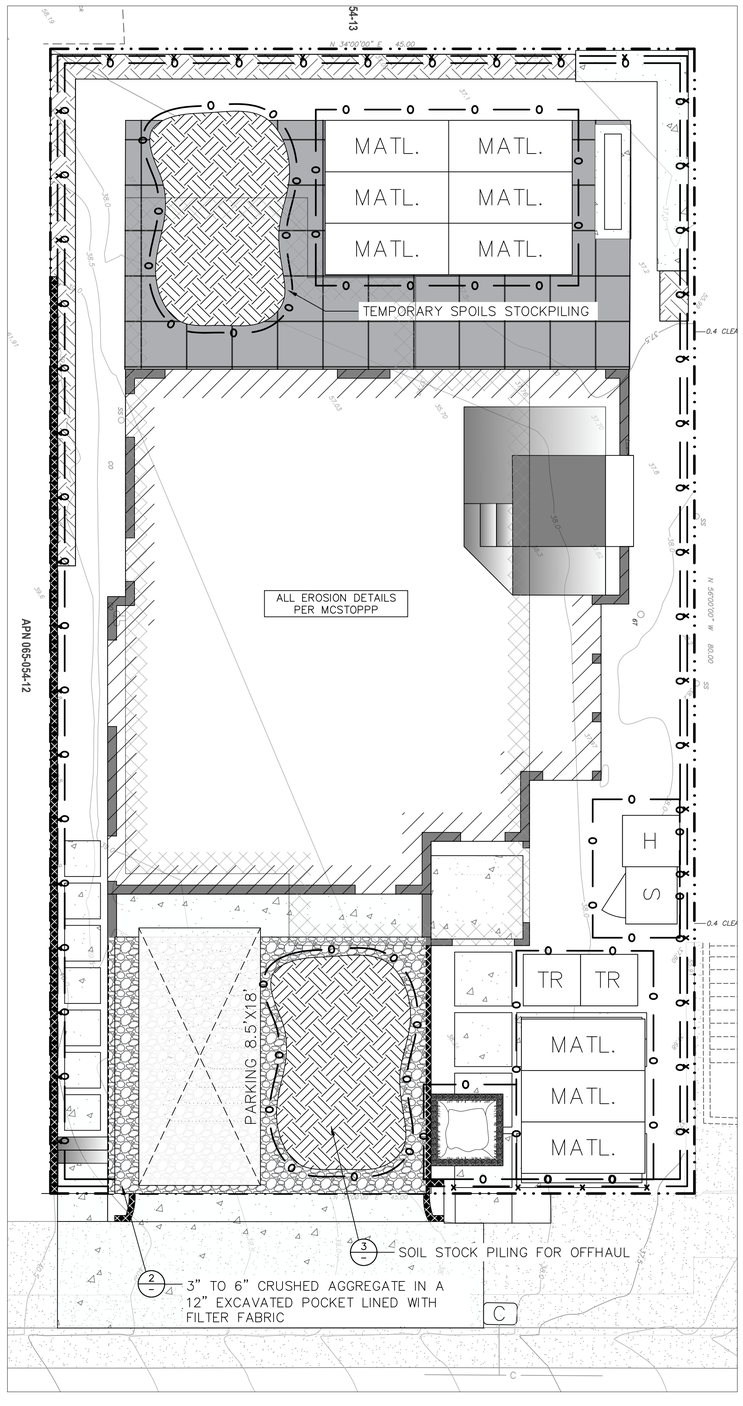
IMPERVIOUS DATA

BEYER RESIDENCE – NEW SFR
426 PINE ST, SAUSALITO, CA 94965
APN: 065-054-11

JOB #

385-1

C-4.0



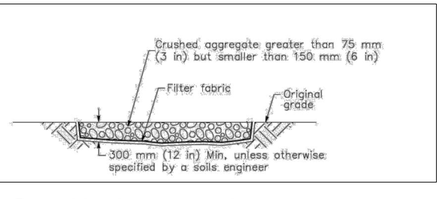
1 IMPERVIOUS / PERVIOUS

SCALE: 1'=5'

GRAPHIC SCALE
(IN FEET)
5 0 2.5 5 10 20
1 INCH = 5 FEET

LEGEND

- GRAVEL BAG
- INLET PROTECTION
- STRAW ROLL (WATTLE)
- SILT FENCE
- 3/- CONCRETE WASHOUT
- TREE PROTECTION
- HYDROSEEDING
- 3/- S — SANITARY SERVICES PORTABLE CHEMICAL TOILET AND HAND WASHING STATION
- 3/- H — HAZARDOUS MATERIAL MANAGEMENT
- 3/- MATL. — MATERIAL STORAGE
- 3/- TR — TRASH AND RECYCLING AREA
- STABILIZED ENTRANCE

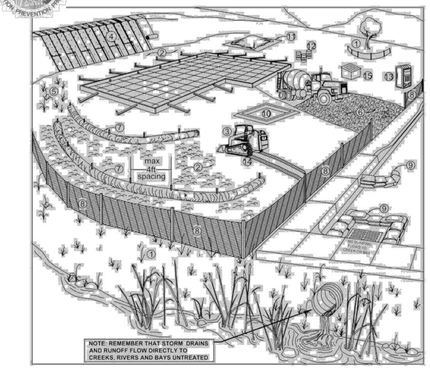


2 AGGREGATE PARKING

NTS

Marin County Stormwater Pollution Prevention Program

Minimum Control Measures
For Small Construction Projects



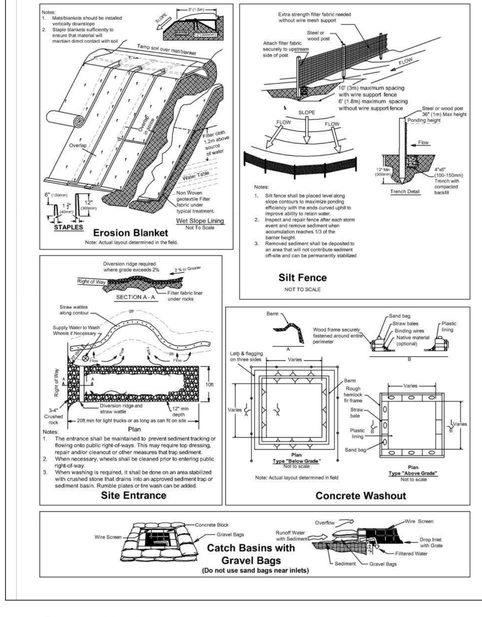
Erosion Controls	Sediment Controls	Good Housekeeping
NS Scheduling	6. Tracking Controls	10. Concrete Washout
1. Preserve Vegetation & Creek Set Backs	7. Fiber Rolls	11. Stockpile Management
2. Soil Cover	8. Silt Fence	12. Hazardous Material Management
3. Soil Preparation/ Roughening	9. Drain Inlet Protection	13. Sanitary Waste Management
4. Erosion Control Blankets	NS Trench Dewatering	14. Equipment and Vehicle Maintenance
5. Revegetation		15. Litter and Waste Management

NS=not shown on graphic

Note: Select an **effective combination of control measures from each category**, Erosion Control, Sediment Control, and Good Housekeeping. Control measures shall be **continually implemented and maintained throughout the project** until activities are complete, disturbed areas are stabilized with permanent erosion controls, and the local agency has signed off on permits that may have been required for the project. **Inspect and maintain the control measures** before and after rain events, and as required by the local agency or state permit.
More detailed information on the BMPs can be found in the related California Stormwater Quality Association (CASQA) and California Department of Transportation (Caltrans) BMP Factsheets. CASQA factsheets are available by subscription in the *California Best Management Practices Handbook Portal: Construction* at http://www.casqa.org. Caltrans factsheets are available in the *Construction Site BMP Manual March 2003* at http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm.
Visit www.mcstoppp.org for more information on construction site management and Erosion and Sediment Control Plans.

If you require materials in alternative formats, please contact:
415-473-4381 voice/TTY or disabilityaccess@co.marin.ca.us

Control Measure		General Description
Erosion Control Best Management Practices		
N/A	Scheduling	Plan the project and develop a schedule showing each phase of construction. Schedule construction activities to reduce erosion potential, such as scheduling ground disturbing activities during the summer and phasing projects to minimize the amount of area disturbed. *For more info see the following factsheets: CASQA: EC-1; or Caltrans: SS-1.*
1	Preserve Existing Vegetation and Creek Setbacks	Preserve existing vegetation to the extent possible, especially along creek buffers. Show creek buffers on maps and identify areas to be preserved in the field with temporary fencing. Check with the local Planning and Public Works Departments for specific creek set back requirements. *For more info see the following factsheets: CASQA: EC-2; or Caltrans: SS-2.*
2	Soil Cover	Cover exposed soil with straw mulch and tackifier (or equivalent); *For more info see the following factsheets: CASQA: EC-3, EC-5, EC-6, EC-7, EC-14, EC-16; or Caltrans: SS-2, SS-4, SS-5, SS-6, SS-7, SS-8.*
3	Soil Preparation/ Roughening	Soil preparation is essential to vegetation establishment and BMP installation. It includes soil testing and amendments to promote vegetation growth as well as roughening surface soils by mechanical methods (decompacting, scarifying, stair stepping, etc.). *For more info see the following factsheets: CASQA: EC-15.*
4	Erosion Control Blankets	Install erosion control blankets (or equivalent) on disturbed sites with 3:1 slopes or steeper. Use wildlife-friendly blankets made of biodegradable natural materials. Avoid using blankets made with plastic netting or fixed aperture netting. See: http://www.coastal.ca.gov/nps/Wildlife-Friendly_Products.pdf. *For more info see the following factsheets: CASQA: EC-7; or Caltrans: SS-7.*
5	Revegetation	Re-vegetate areas of disturbed soil or vegetation as soon as practical. *For more info see the following factsheets: CASQA: EC-4; or Caltrans: SS-4.*
Sediment Control Best Management Practices		
6	Tracking Controls	Stabilize site entrance to prevent tracking soil offsite. Inspect streets daily and sweep street as needed. Require vehicles and workers to use stabilized entrance. Place crushed rock 12-inches deep over a geotextile, using angular rock between 4 and 6-in. Make the entrance as long as can be accommodated on the site, ideally long enough for 2 revolutions of the maximum tire size (16-20 feet long for most light trucks). Make the entrance wide enough to accommodate the largest vehicle that will access the site, ideally 10 feet wide with sufficient radii for turning in and out of the site. Rumble pads or rumble racks can be used in lieu of or in conjunction with rock entrances. Wheel washes may be needed where space is limited or where the site entrance and sweeping is not effective. *For more info see the following factsheets: CASQA: TC-1; TC-3; or Caltrans: TC-1; TC-3.*
7	Fiber Rolls	Use fiber rolls as a perimeter control measure, along contours of slopes, and around soil stockpiles. On slopes space rolls 10 to 20 feet apart (using closer spacing on steeper slopes). Install parallel to contour. If more than one roll is used in a row overlap roll do not abut. J-hook end of roll upslope. Install rolls per either Type 1 (stake rolls into shallow trenches) or Type 2 (stake in front and behind roll and lash with rope). Use wildlife-friendly fiber rolls made of biodegradable natural materials. Avoid using fiber rolls made with plastic netting or fixed aperture netting. See: http://www.coastal.ca.gov/nps/Wildlife-Friendly_Products.pdf. Manufactured linear sediment control or compost socks can be used in lieu of fiber rolls. *For more info see the following factsheets: CASQA: SE-5 (Type 1); SE-12, SE-13; or Caltrans: SC-5 (Type 1 and Type 2).*
8	Silt Fence	Use silt fence as a perimeter control measure, and around soil stockpiles. Install silt fence along contours. Key silt fence into the soil and stake. Do not use silt fence for concentrated water flows. Install fence at least 3 feet back from the slope to allow for sediment storage. Wire backed fence can be used for extra strength. Avoid installing silt fence on slopes because they are hard to maintain. Manufactured linear sediment control can be used in lieu of silt fences. *For more info see the following factsheets: CASQA: SE-1; SE-12; or Caltrans: SC-1.*
9	Drain Inlet Protection	Use gravel bags, (or similar product) around drain inlets located both onsite and in gutter as a last line of defense. Bags should be made of a woven fabric resistant to photo-degradation filled with 0.5-1-in washed crushed rock. Do not use sand bags or silt fence fabric for drain inlet protection. *For more info see the following factsheets: CASQA: SE-10; or. Caltrans: SC-10.*
N/A	Trench Dewatering	Follow MCSTOPPP BMPs for trench dewatering. http://www.marincounty.org/depts/pw/divisions/mcstoppp/development/~/media/Files/Departments/PW/mcstoppp/development/Trenching/SWReqMCSTOPPPFinal8_08.pdf. *For more info see the following factsheets: CASQA: NS-2; or Caltrans: NS-2.*
Good Housekeeping Best Management Practices		
10	Concrete Washout	Construct a lined concrete washout site away from storm drains, waterbodies, or other drainages. Ideally, place adjacent to stabilized entrance. Clean as needed and remove at end of project. *For more info see the following factsheets: CASQA: WM-8; or .Caltrans: WM-8.*
11	Stockpile Management	Cover all stockpiles and landscape material and berm properly with fiber rolls or sand bags. Keep behind the site perimeter control and away from waterbodies. *For more info see the following factsheets: CASQA: WM-3 or Caltrans: WM-3.*
12	Hazardous Material Management	Hazardous materials must be kept in closed containers that are covered and within secondary containment; do not place containers directly on soil. *For more info see the following factsheets: CASQA: WM-6; or Caltrans: WM-6.*
13	Sanitary Waste Management	Place portable toilets near stabilized site entrance, behind the curb and away from gutters, storm drain inlets, and waterbodies. Tie or stake portable toilets to prevent tipping and equip units with overflow pan/tray (most vendors provide these). *For more info see the following factsheets: CASQA: WM-9; or Caltrans: WM-9.*
14	Equipment and Vehicle Maintenance	Prevent equipment fluid leaks onto ground by placing drip pans or plastic tarps under equipment. Immediately clean up any spills or drips. *For more info see the following factsheets: CASQA: NS-8, NS-9, and NS-10; or Caltrans: NS-8, NS-9, and NS-10.*
15	Litter and Waste Management	Designate waste collection areas on site. Use watertight dumpsters and trash cans; inspect for leaks. Cover at the end of each work day and when it is raining or windy. Arrange for regular waste collection. Pick up site litter daily. *For more info see the following factsheets: CASQA: WM-5; or Caltrans: WM-5.*



3 MCSTOPPP

NTS

Protect Creeks and the Bay: Keep Sediments and Contaminated Water out of the Storm Drain System

MARIN COUNTY STORMWATER POLLUTION PREVENTION PROGRAM
Best Management Practices for TRENCH DEWATERING

Requirements for Dewatering Discharges from Minor Street Excavations

- The Federal Clean Water Act, the California Water Code, and local ordinances **prohibit** non-stormwater discharges to the storm drain system.
- Non-stormwater discharges include water that is actually or potentially contaminated with any pollutant, including, but not limited to, sewage, grease, drilling mud and oil.
- Uncontaminated pumped groundwater or accumulated rainwater may be discharged to the storm drain system but must be managed to minimize sediment reaching storm drains and ensure downstream creeks, wetlands, and the Bay are not polluted.
- The storm drain system includes streets, gutters, storm drain inlets, ditches, creeks, and wetlands.

IF YOUR SITE OR PROJECT REQUIRES DEWATERING, CONTACT YOUR LOCAL STORMWATER COORDINATOR BEFORE DISCHARGING WATER TO THE STORM DRAIN SYSTEM. *CONTACT INFORMATION ON THE REVERSE PAGE.*

As necessary, local municipal staff will determine whether flows from dewatering a particular excavation may be discharged to the storm drain system and what measures must be taken to reduce sediment in the discharge.

Depending on circumstances, holders of encroachment or building permits may be directed to use one or more of the following measures:

- Avoid the discharge. Disperse pumped water to a level dirt or landscaped area to allow infiltration or use for dust control. Be sure to prevent damage to landscaping.
- Build a sediment trap (temporary basin formed by excavation or earthen embankment across a low drainage area to detain sediment-laden runoff and allow sediment to settle out before discharging).
- Use a mobile weir tank, dewatering tank, or sand filter (follow vendor instructions).
- At minimum, use a gravity bag filter (dewatering bag) or similar filtration device (follow vendor instructions).

Odors, discoloration, or an oily sheen can indicate contaminants in the water. Dewatering discharges containing contaminants may need to be captured and treated or hauled to a suitable disposal site.

Some dewatering discharges require a National Pollutant Discharge Elimination System (NPDES) permit from the San Francisco Bay Regional Water Quality Control Board (RWQCB). For more information, call the RWQCB or visit their website:
Phone: 510-622-2300
Web: http://www.waterboards.ca.gov/sanfranciscobay/npdes_gen_permit.shtml

ISSUES

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GRION W. AGNEW
No. C 87262
CIVIL
STATE OF CALIFORNIA

EROSION AND SEDIMENTATION CONTROL PLAN

BEYER RESIDENCE – NEW SFR
426 PINE ST, SAUSALITO, CA 94965
APN: 065-054-11

JOB #

385-1

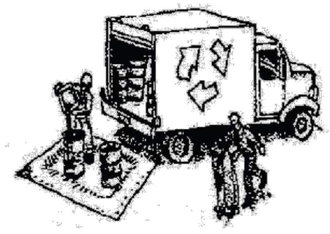
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Construction Best Management Practices (BMPs)

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



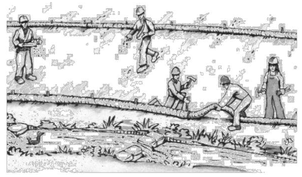
Maintenance and Parking

- ❑ 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



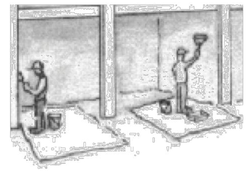
- ❑ Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind.
- ❑ Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that 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!

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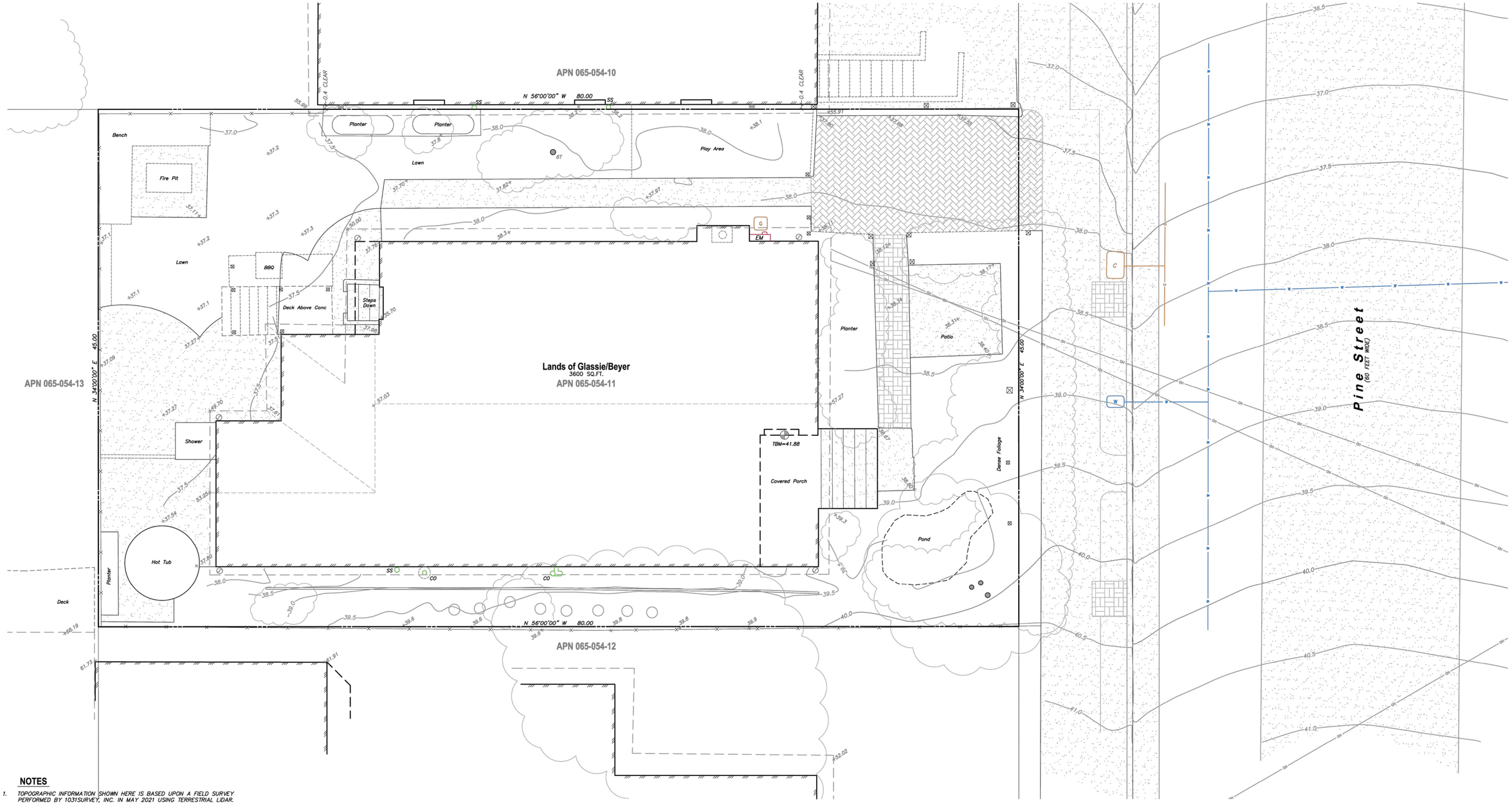
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BMPS

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426 PINE ST, SAUSALITO, CA 94965
APN: 065-054-11

JOB # 385-1

C-5.0



NOTES

1. TOPOGRAPHIC INFORMATION SHOWN HERE IS BASED UPON A FIELD SURVEY PERFORMED BY 1031SURVEY, INC. IN MAY 2021 USING TERRESTRIAL LIDAR.
2. VERTICAL DATUM: ELEVATION IS BASED ON CITY BENCHMARK BM25 BEING A CHISELED X ON RIM OF MANHOLE AT INTERSECTION OF BONITA & PINE STREETS, ELEVATION=45.18, CITY DATUM.
3. BOUNDARY IS BASED UPON A RECORD OF SURVEY THAT IS CURRENTLY IN THE MAP REVIEW PROCESS WITH THE COUNTY SURVEYOR'S OFFICE. FOR ALL BOUNDARY RELATED INFORMATION, REFER TO SAID SURVEY. BOUNDARY INFORMATION SHOWN HEREON IS CONSIDERED PRELIMINARY AND WILL BE UPDATED WITH APPROPRIATE INFORMATION AFTER THE FILING OF SAID RECORD OF SURVEY, IF NEEDED.
4. TREES WERE MEASURED AT BREAST HEIGHT ABOVE THE GROUND WHERE PRACTICAL. IT IS RECOMMENDED THAT AN ARBORIST REPORT BE OBTAINED TO DETERMINE TREE SPECIES, HEALTH AND HERITAGE STATUS.
5. UNDERGROUND UTILITIES WERE PLOTTED USING USA MARKINGS ON STREET SURFACE. UNDERGROUND UTILITIES MAY EXIST THAT ARE NOT SHOWN HEREON. UNDERGROUND UTILITIES MAY NOT BE LOCATED AS SHOWN HEREON. ONLY BY POTHOLING FOR EXISTING UTILITIES CAN THEIR LOCATION BE KNOWN.
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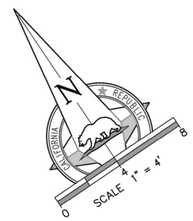
VICINITY MAP
NTS

LEGEND

- BUILDING
- FENCE, WOOD
- OVERHEAD UTILITIES
- SANITARY SEWER
- WATER SERVICE
- CONCRETE
- PAVERS
- DOWNSPOUT
- ELECTRIC MAIN
- GAS METER
- SANITARY SEWER CLEANOUT
- TEMPORARY BENCHMARK
- TREE, TO SCALE, WITH DRIPLINE, DIAMETER & TYPE
- WATER METER

ABBREVIATIONS

APN	ASSESSORS PARCEL NUMBER
C	COMMUNICATIONS
CO	SANITARY SEWER CLEAN OUT
CONC	CONCRETE
EM	ELECTRIC METER
G	GAS
JP	JOINT POLE
MCR	MARIN COUNTY RECORDS
OH	OVERHEAD UTILITY LINES
NTS	NOT TO SCALE
SS	SANITARY SEWER
T	TREE
TBM	TEMPORARY BENCHMARK
W	WATER





LANDS OF GLASSIE & BEYER
426 PINE STREET
APN 065-054-11
SAUSALITO, MARIN COUNTY, CALIFORNIA

Topographic Map

1031Survey, Inc.
HIGH DEFINITION SURVEYING
1857 Rainier Circle, Petaluma, California 94954
415-827-6370 www.1031survey.com

DATE: 2021.07.08
SCALE: 1" = 4'
FILE: 21319topo

SURVEY DATE: MAY2021
SHEET: 1 OF 1

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