RICH RESIDENCE

3 SPRINGDALE WAY
EMERALD HILLS, CA 94062

DERN
architecture + development

ARCHITECT
DERN ARCHITECTURE + DEVELOPMENT, PC
110 CASA GRANDE
LOS GATOS, CA 95032
MICHAEL DERN, AIA PRINCIPAL
(415) 307-1283

CLIENT
ZAC AND ASHLEY RICH
3 SPRINGDALE WAY
EMERALD HILLS, CA 94062

ABBREVIATIONS

A.B.	ANCHOR BOLT
ABV.	ABOVE
A/C	AIR CONDITIONING
ACOUS.	ACOUSTICAL
ADJ.	ADJACENT
ADJ.	ADJUSTABLE
AL.	ALUMINUM
ALT.	ALTERNATE
AMP.	AMPERAGE
AVG.	AVERAGE
BD.	BOARD
BLDG.	BUILDING
BLK'G.	BLOCKING
BLT-IN	BUILT-IN
BM.	BEAM
B.N.	BOUNDARY NAILING
BRG.	BEARING
B.S.	BAR SINK
CABT.	CABINET
CALC.	CALCULATION
CMBR.	CAMBER
C.H.C.	CEILING HEIGHT CHANGE
C.I.	CAST IRON
C.J.	CEILING JOIST
C.L.	CENTER LINE
CLG.	CEILING
CLR.	CLEAR
CNTR.	COUNTER
CNTRTP.	COUNTER TOP
C.O.	CASED OPENING
CONC.	CONCRETE
CONT.	CONTINUOUS
CPT.	CARPET
C.R.	CURTAIN ROD
CSMT.WDW.	CASEMENT WINDOW
C.T.	CERAMIC TILE
CULT.	CULTURED
D.	DRYER
DBL.	DOUBLE
D.F.	DOUGLAS FIR
DIA. OR Ø	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
DISP.	DISPOSAL
DP.	DEEP
DR.	DOOR
DRP.	DROP
D.S.	DOWNSPOUT
DTL.	DETAIL
D.W.	DISHWASHER
DWG.	DRAWING
DWR.	DRAWER
EA.	EACH
ELECT.	ELECTRICAL
ELEV.	ELEVATION
E.N.	EDGE NAILING
EQ.	EQUAL
EXH.	EXHAUST
EXT.	EXTERIOR
E.W.	EACH WAY
FAU	FORCED AIR UNIT
F.G.	FINISH GRADE
F.G.	FIXED GLASS
F.G.	FUEL GAS
FIN.	FINISH
FIN.FLR.	FINISH FLOOR
F.J.	FLOOR JOIST
FL.	FLUSH
FLUOR.	FLUORESCENT
F.M.C.	FLOOR MATERIAL CHANGE
F.N.	FIELD NAILING
FND.	FOUNDATION
F.O.C.	FACE OF CURB
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUDS
FR.DR.	FRENCH DOOR
FTG.	FOOTING
GA.	GAUGE
GALV.	GALVANIZED
G.B.	GYPSUM BOARD
G.D.	GARBAGE DISPOSAL
G.D.O.	GARAGE DOOR OPERATOR
G.F.I.	GROUND-FAULT CIRCUIT-INTERRUPTER
G.I.	GALVANIZED IRON
GL.	GLASS
GRD.	GRADE
GRND.	GROUND
GYP.	GYPSUM
G.L.B.	GLUED-LAMINATED BEAM
G.T.	GIRDER TRUSS
H.C.	HOLLOW CORE
H.D.	HOLD DOWN ANCHOR
HDR.	HEADER
HGT.	HEIGHT
HNGR.	HANGER
INSUL.	INSULATION
INT.	INTERIOR
LAV.	LAVATORY
LAM.	LAMINATED
L.F.	LINEAL FEET/FOOT
L.L.	LOG LIGHTER
LUM.	LUMINOUS
LVR.	LOUVER
MAR.	MARBLE
MAS.	MASONRY
MAX.	MAXIMUM
M.B.	MACHINE BOLT
M.C.	MEDICINE CABINET
MFR.	MANUFACTURER
MIN.	MINIMUM
MIR.	MIRROR
M=L	MICRO LAM
M.O.	MASONRY OPENING
MTD.	MOUNTED
MTL.	METAL
N.G.	NATURAL GRADE
N.I.C.	NOT IN CONTRACT
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
O/	OVER
O.A.	OVERALL
OBS.	OBSCURE
O.C.	OR O/C ON CENTER
O.H.	OVERHEAD
OPG.	OPENING
OSA	OUTSIDE AIR
O.S.B.	ORIENTED STRAND BOARD
P.B.	PUSH BUTTON
P.C.	PORTLAND CEMENT
P.C.	PULL CHAIN
PCE.	PIECE
PH.	PHONE
PLT.	PLATE
PLAS.	PLASTER
PLYWD.	PLYWOOD
PR.	PAIR
PSF	POUNDS/SQUARE FOOT
PSI	POUNDS/SQUARE INCH
P=L	PARALLAM
P.T.D.F.	PRESSURE TREATED DOUGLAS FIR
PVC	POLY VINYL CHLORIDE
R.	RISER
RAD.	RADIAL/RADIUS
R.A.G.	RETURN AIR GRILLE
RECPT.	RECEPTACLE
REF.	REFERENCE
REFER.	REFRIGERATOR
REINF.	REINFORCING
RE/S	RE-SAWN
REQ'D	REQUIRED
REV.	REVERSE
REV.	REVISION/REVISE
R.J.	ROOF JOIST
RO-IN	ROUGH-IN
R.O.	ROUGH OPENING
RO/S	ROUGH SAWN
R.R.	ROOF RAFTER
RWD.	REDWOOD
S.	SINK
S.C.	SOLID CORE
SCH.	SCHEDULE
SCRND.	SCREENED
SEC.	SECOND
SECT.	SECTION
SEL.	SELECT
SEL.STR.	SELECT STRUCTURAL
SER.	SERVICE
S.H.	SINGLE HUNG
SHT.	SHEET
SHTHG.	SHEATHING
SHWR.	SHOWER
SL.	SLIDING
SPL.	SPLASH
SPN.	SILL PLATE NAILING
S & P	SHELF & POLE
S.S.	SERVICE SINK
STD.	STANDARD
S.V.	SHEET VINYL
STRUCT.	STRUCTURAL
SW.	SWITCH
T.	TREAD
T & B	TOP & BOTTOM
T.C.	TRASH COMPACTOR
TEMP.GL.	TEMPERED GLASS
T & G	TONGUE & GROOVE
TJI	TRUSS JOIST
T.O.C.	TOP OF CURB
T.O.M.	TOP OF MASONRY
T.O.S.	TOP OF SLAB
T.O.W.	TOP OF WALL
T.V.	TELEVISION
UNFIN.	UNFINISHED
U.	URINAL
U.N.O.	UNLESS NOTED OTHERWISE
VAN.	VANITY
VEN.	VENEER
VERT.	VERTICAL
V.G.	VERTICAL GRAIN
V.B.	VAPOR BARRIER
V.P.	VAPORPROOF
W.	WASHER
W/	WITH
W.C.	WATER CLOSET
WD.	WOOD
WDW.	WINDOW
W.H.	WATER HEATER
W/O	WITHOUT
W.P.	WEATHER PROOF
W/R	WARDROBE
WT.	WEIGHT

JOB SITE CONDITIONS

SAFETY, THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL SAFETY PRECAUTIONS OR SAFETY PROGRAMS USED TO PROVIDE A SAFE WORKING ENVIRONMENT ON THE JOB SITE.

CONSTRUCTION EXECUTION, EACH CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, TOOLS, TRANSPORTATION, AND EQUIPMENT NECESSARY TO PERFORM ALL WORK UNDER HIS TRADE IN FULL ACCORDANCE WITH THE WORKING DRAWINGS, SPECIFICATIONS AND CONTRACTS.

JOB SITE CONDITIONS, EACH CONTRACTOR SHALL CLEAN UP AND REMOVE ALL DEBRIS RESULTING FROM HIS WORK PRIOR TO SUBMITTING REQUEST FOR PROGRESS PAYMENT. IN NO CASE WILL FINAL PAYMENT BE DISPERSED TO EITHER THE PRIME CONTRACTOR OR ANY SUB-CONTRACTOR UNTIL ALL DEBRIS AND EQUIPMENT OWNED BY SAID CONTRACTOR'S, HAS BEEN REMOVED FROM THIS PROJECT SITE OR UNTIL OWNER APPROVAL HAS BE GRANTED.

THE RESPONSIBLE PARTY, EITHER THE PROJECT OWNER OR THIS SIGNED DESIGNER, SHALL BE NOTIFIED OF ERRORS OR OMISSIONS FOR CORRECTIONS BEFORE PROCEEDING WITH THE WORK.

STORAGE, MATERIALS STORED ON SITE SHALL BE PROTECTED FROM DAMAGE BY MOISTURE, WIND, SUN, ABUSE OR ANY OTHER HARMFUL AFFECTS.

CHANGES, ANY MINOR OR REQUIRED CHANGES OR MODIFICATIONS TO THIS PLAN DO NOT REDUCE OR VOID THE COPYRIGHTS COVERING THIS SET OF PLANS IN ANY WAY. MODIFICATIONS TO THIS PLAN, FOR ANY REASON, SHOULD BE ATTEMPTED BY AND ARCHITECT OR ENGINEER ONLY. DESIGNER ACCEPTS NO RESPONSIBILITY FOR THE QUALITY AND COMPLETENESS OF ANY CHANGES ATTEMPTED.

MATERIALS, ALL MATERIALS, SUPPLIES AND EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND PER APPLICABLE CODES AND REQUIREMENTS. THE DESIGNER SHALL HAVE NO CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUB-CONTRACTOR, OR ANY OTHER PERSON PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

PROJECT GENERAL NOTES

REGULATORY REQUIREMENTS:
1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL REQUIREMENTS OF ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES, LAWS AND REGULATIONS GOVERNING CONSTRUCTION, BUILDING ACCESS, AND THE USE OF FACILITIES. THIS INCLUDES THE 2019 CALIFORNIA BUILDING CODE & ALL CODES, ORDINANCES AND LAWS ADOPTED BY THE COUNTY OF SAN MATEO.
2. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION" AIA DOCUMENT A201 2007 EDITION, GOVERNS THIS WORK U.O.N.
3. THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING ALL CONTRACT DOCUMENTS AND FIELD CONDITIONS AND SHALL BASE HIS BID ON EXISTING CONDITIONS. SUBMIT WRITTEN EXCEPTIONS OR OBJECTIONS, WITH ANALYSIS AND RECOMMENDATIONS TO THE OWNER PRIOR TO SUBMITTING BID COSTS.
4. ALL MECHANICAL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2019 CALIFORNIA MECHANICAL CODE OR OVERRIDING LOCAL MECHANICAL CODES.
5. ALL PLUMBING CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2019 CALIFORNIA PLUMBING CODE OR OVERRIDING LOCAL PLUMBING CODES.
6. ALL ELECTRICAL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2019 CALIFORNIA ELECTRICAL CODE OR OVERRIDING LOCAL ELECTRICAL CODES.
7. ALL SHEET METAL WORK AND FLASHING SHALL CONFORM TO S.M.A.C.N.A. STANDARDS.
8. COUNTY AMENDMENTS: COUNTY OF SAN MATEO CODE
9. ALL BUILDING STANDARD CONSTRUCTION, MATERIALS AND PRODUCTS SHALL CONFORM TO THE MOST CURRENT STANDARDS AND DETAILS AS OUTLINED IN THE SPECIFICATIONS, EXCEPT AS EXPLICITLY SUPERSEDED HEREIN.

SUBSTITUTIONS:
1. REQUEST FOR SUBSTITUTION WILL BE RECEIVED FROM THE GENERAL CONTRACTOR ONLY.
2. PRODUCTS IN THE CONSTRUCTION DOCUMENTS IDENTIFIED BY NAME, BRAND OR MODEL OF A MANUFACTURER'S ARTICLE SHALL BE PROVIDED UNLESS A WRITTEN REQUEST FOR SUBSTITUTION IS ACCEPTED BY THE ARCHITECT. IN THE EVENT THAT THE CONTRACTOR MAKES A SUBSTITUTION WITHOUT PRIOR APPROVAL FROM THE ARCHITECT, THE CONTRACTOR SHALL BE REQUIRED TO REMOVE THE SUBSTITUTION AND REPLACE IT PER SPECIFICATIONS WITHOUT ANY ADJUSTMENT TO THE CONTRACT AMOUNT OR TIME.
3. THE PRODUCTS DESCRIBED IN THE CONSTRUCTION DOCUMENTS ESTABLISH A STANDARD OF REQUIRED FUNCTION, DIMENSION, APPEARANCE AND QUALITY TO BE MET BY ANY PROPOSED SUBSTITUTION. THE BURDEN OF PROOF OF THE MERIT OF THE PROPOSED SUBSTITUTION IS UPON THE PROPOSER. THE OWNER'S DECISION OF THE APPROVAL OR DISAPPROVAL SHALL BE FINAL.
4. THE REQUEST SHALL INCLUDE ANY CHANGE REQUIRED IN OTHER ELEMENTS OF THE WORK DUE TO THE SUBSTITUTION.

SUBMITTALS:
1. SCHEDULE SUBMITTALS TO EXPEDITE PROJECT, AS TO CAUSE NO DELAY IN THE WORK OR IN THE WORK OF THE OWNER OR ANY SEPARATE CONTRACTOR. SUBMITTALS NOT SPECIFICALLY REQUESTED SHALL BE RETURNED WITHOUT REVIEW.
2. SHOP DRAWINGS SHALL BE DRAWN AT A SCALE SUFFICIENT FOR CLARITY AND COORDINATION AND SHALL SHOW NECESSARY WORKING AND ERECTION DIMENSIONS.
3. CIRCLE ALL DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS AND PROVIDE A BRIEF WRITTEN EXPLANATION TO CLARIFY AND SUPPORT REASONS FOR PROPOSED DEVIATION.
4. THE CONTRACTOR SHALL PROVIDE THE OWNER A PROJECT SCHEDULE OUTLINING THE WORK TO OCCUR, AND THE MATERIALS BEING ORDERED ON A WEEKLY BASIS PRIOR TO BEGINNING THE PROJECT.
5. CONTRACTOR SHALL ALLOW 5 DAYS FOR ARCHITECT AND OWNER TO REVIEW SUBMITTALS.
6. ALL SUBMITTALS SHALL HAVE CONTRACTORS STAMP INDICATING SUBMITTAL HAS BEEN REVIEWED AND APPROVED BY GENERAL CONTRACTOR PRIOR TO BEING SEND TO ARCHITECT AND OWNER FOR REVIEW.
7. SUBMITTALS SENT FOR ARCHITECT AND OWNER REVIEW THAT DO NOT HAVE THE STAMP OF THE GENERAL CONTRACTOR WILL BE RETURNED WITHOUT REVIEW.

PROTECTIONS:
1. BY ACCEPTING THESE DRAWINGS THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE SAFETY CONDITIONS FOR ALL PERSONS AND PROPERTY, CONTINUOUSLY DURING CONSTRUCTION OF THIS PROJECT, AND NOT LIMITED TO NORMAL WORKING HOURS.
2. THE CONTRACTOR SHALL PROTECT NEW AND EXISTING WORK, EQUIPMENT, MATERIALS AND FINISHES. DAMAGED ITEMS SHALL BE REPAIRED OR REPLACED AT THE EXPENSE OF THE GENERAL CONTRACTOR.
3. THE CONTRACTOR SHALL AT ALL TIMES DURING THE COURSE OF THE CONTRACT KEEP THE BUILDING, THE OWNER'S PREMISES AND THE ADJOINING PREMISES, INCLUDING STREETS AND OTHER AREAS ASSIGNED TO, OR USED BY THE CONTRACTOR, FROM ACCUMULATIONS OF WASTE MATERIALS AND RUBBISH CAUSED BY HIS EMPLOYEES, SUBCONTRACTORS OR THEIR WORK.
4. CONTRACTOR SHALL VERIFY LOCATION OF TRANSFORMERS AND UNDERGROUND UTILITIES WITH APPLICABLE UTILITY COMPANIES.
5. CONTRACTOR SHALL PROTECT FROM DAMAGE AND KEEP CLEAN ALL COMMON AREAS OF THE PROJECT.

PERFORMANCE REQUIREMENTS:
1. DO NOT SCALE DRAWINGS.
2. ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED AND CHECKED BY THE GENERAL CONTRACTOR AND THE SUBCONTRACTORS PRIOR TO BEGINNING WORK AND PRIOR TO ORDERING ANY MATERIALS. ANY ERRORS, OMISSIONS OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE GENERAL CONTRACTOR. SHOULD THERE BE ANY DISCREPANCIES, ERRORS OR OMISSIONS IN THESE DRAWINGS OR SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE OWNER AND WAIT TO RECEIVE WRITTEN INSTRUCTIONS BEFORE PROCEEDING WITH THAT PORTION OF THE WORK.
3. THESE DRAWINGS AND SPECIFICATIONS ARE DIVIDED INTO SECTIONS FOR CONVENIENCE ONLY. CONTRACTORS, SUBCONTRACTORS, AND MATERIAL SUPPLIERS SHALL REFER TO ALL RELEVANT SECTIONS IN BIDDING AND PERFORMING THEIR WORK, AND SHALL BE RESPONSIBLE FOR ALL ASPECTS OF THEIR WORK REGARDLESS OF WHERE THE INFORMATION OCCURS ON THE DRAWINGS.
4. SUBCONTRACTORS SHALL BE RESPONSIBLE FOR COORDINATION OF THEIR WORK WITH THE WORK OF OTHERS. SUBCONTRACTORS SHALL VERIFY THAT ANY WORK RELATED TO THEM, WHICH MUST BE PROVIDED BY OTHERS, HAS BEEN COMPLETED AND IS ADEQUATE PRIOR TO COMMENCING THEIR WORK.
5. PROVIDE STRUCTURAL BACKING FOR ALL WALL MOUNTED EQUIPMENT.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, COORDINATION, AND EXECUTION OF CONSTRUCTION MEANS, METHODS AND PROCEDURES.
7. PATCH AND REPAIR ALL DISTURBED AREAS TO MATCH ADJACENT SYSTEMS, MATERIALS, AND FINISHES, UNLESS OTHERWISE NOTED.
8. INSTALL ALL MATERIALS AND EQUIPMENT AS PER MANUFACTURERS WRITTEN RECOMMENDATIONS.
9. ALL INTERIOR DIMENSIONS SHOWN IN FLOOR PLANS ARE FACE OF FINISH, U.O.N.
10 ALL EXTERIOR DIMENSIONS ARE SHOW FACE OF FRAMING, U.O.N.
11. DETAILS SHOWN ARE TYPICAL. SIMILAR DETAILS APPLY IN SIMILAR CONDITIONS.
12. ALL GLAZING SUBJECT TO HUMAN IMPACT SHALL BE 1/4" TEMPERED GLASS UNLESS OTHERWISE NOTED.
13. CONTRACTOR SHALL FURNISH AND INSTALL ALL DOORS COMPLETE WITH ALL HARDWARE AS REQUIRED BY CODE AND/OR SPECIFIC INSTALLATION.
14. FIRE EXTINGUISHERS SHALL BE LOCATED ACCORDING TO CODE REQUIREMENTS AND MEET ALL APPLICABLE CODES.
15. WHERE NEW WALLS ALIGN WITH EXISTING WALLS, RESULTANT WALL SURFACES SHALL FORM A SMOOTH AND CONTINUOUS PLANE.
16. AT THE COMPLETION OF THE WORK THE CONTRACTOR SHALL REMOVE FROM THE BUILDING AND THE PREMISES ALL SURPLUS MATERIALS AND DEBRIS, AND CLEAN ALL NEW WORK TO THE OWNERS SATISFACTION. INCLUDING BUT NOT LIMITED TO CLEANING INTERIOR GLASS, CLEANING ALL MILLWORK, INSIDE AND OUTSIDE OF CABINETRY, AND CLEANING AND WAXING ALL FLOORING.
17. ALL BUILDING MATERIALS SHALL BE THE MOST NONTOXIC AND THE LOWEST POLLUTING AVAILABLE. THE BUILDING SHALL BE VENTILATED DURING CONSTRUCTION AND THOROUGHLY AIRED OUT BEFORE OCCUPANCY.
18. NAIL UP ALL J-BOXES FOR REVIEW PRIOR TO WIRING. VERIFY ALL LOCATIONS OF POWER OUTLETS, PHONE JACKS, TV, LIGHT FIXTURES AND SWITCHES W/ OWNER PRIOR TO WIRING.
19. CONTRACTOR SHALL PROVIDE SAMPLES OF ALL MATERIALS (INCLUDING BUT NOT LIMITED TO: TILE, TILE TRIM, PAINT, ROOFING, SIDING, WOOD TRIM, WOOD BASE, COUNTERTOPS AND HARDWARE.)TO THE OWNER FOR APPROVAL PRIOR TO ORDERING MATERIALS.
20. THE CONTRACTOR SHALL VERIFY WITH THE OWNER MINIMALLY THREE WEEKS PRIOR TO COVER-UP OF THE SPECIAL WIRING REQUIREMENTS SUCH AS ALARMS AND STEREO SYSTEMS.
22. ALL ELECTRICAL, HVAC, AND PLUMBING SHALL BE DESIGN BUILD BASED ON INFORMATION PROVIDED BY THE CONSTRUCTION DOCUMENTS.
22. A MINIMUM OF 60 PERCENT OF THE CONSTRUCTION WASTE GENERATED AT THE SITE IS DIVERTED TO RECYCLE OR SALVAGE.
23. AN OPERATION AND MAINTENANCE MANUAL SHALL BE PROVIDED TO THE BUILDING OCCUPANT OR OWNER. DEFINITIONS: "TYPICAL" MEANS IDENTICAL FOR ALL SIMILAR CONDITIONS, U.O.N. "SIMILAR" MEANS COMPARABLE CHARACTERISTICS FOR THE CONDITIONS NOTED. "ALIGN" MEANS TO ACCURATELY LOCATE FINISHES IN THE SAME PLANE.
24. BUILDING ADDRESS: TO BE POSTED IN A CONSPICUOUS PLACE AND LIGHTED EXTERNALLY. NUMBERS SHALL BE OF CONTRASTING COLOR TO BACKGROUND COLOR.

PROJECT DATA

LOCAL JURISDICTION: COUNTY OF SAN MATEO

ASSESSOR'S PARCEL NUMBER: 057-102-110

PROJECT ADDRESS: 3 SPRINGDALE WAY, EMERALD HILLS, CA 94062

ZONING: RH/DR RESIDENTIAL HILLSIDE

OCCUPANCY GROUP: SINGLE FAMILY RESIDENTIAL

CONSTRUCTION TYPE: V, NON-SPRINKLERED

NO. OF STORIES: EXISTING: ONE-STORY; PROPOSED: TWO-STORY

AREA: (revision 3)

	EXISTING:	PROPOSED:
CONDITIONED SPACE		
(E) FIRST FLOOR	1,551 SF	1,551 SF
FIRST FLOOR ADDED		25 SF
SECOND FLOOR ADDED	0 SF	662 SF
TOTAL	1,551 SF	2,670 SF
(E) GARAGE	457 SF	
GARAGE REMODELED		432 SF
	457 SF	432 SF

CODE REFERENCE

ALL CONSTRUCTION SHALL COMPLY WITH THE MINIMUM REQUIREMENTS OF THE FOLLOWING 2022 CALIFORNIA BUILDING STANDARDS CODE, CCR TITLE 24:

APPLICABLE BUILDING CODES:

2022 CALIFORNIA BUILDING CODE (CBC)
2022 CALIFORNIA MECHANICAL CODE (CMC)
2022 CALIFONRIA PLUMBING CODE (CPC)
2022 CALIFORNIA ELECTRICAL CODE (CEC)
2022 CALIFORNIA ENERGY CODE
2022 CALIFORNIA FIRE CODE
2022 CALIFORNIA GREEN BUILDING CODE
2022 CALIFORNIA STANDARDS CODE

COUNTY AMENDMENTS: COUNTY OF SAN MATEO CODE

SCOPE OF WORK

(revision 3)

FIRST FLOOR:
1. RECONFIGURATION APPROXIMATELY 708 SF OF THE EXISTING BONUS ROOM AND GARAGE TO INCORPORATE A NEW 1/2-BATH. 25 SF GARAGE CONVERTED TO CONDITIONED SPACE.
2. ADDITION OF A NEW PATIO, APPROXIMATELY 150 SF.

SECOND FLOOR:
1. CONSTRUCTION OF A NEW 662 SF SECOND STORY ADDITION.

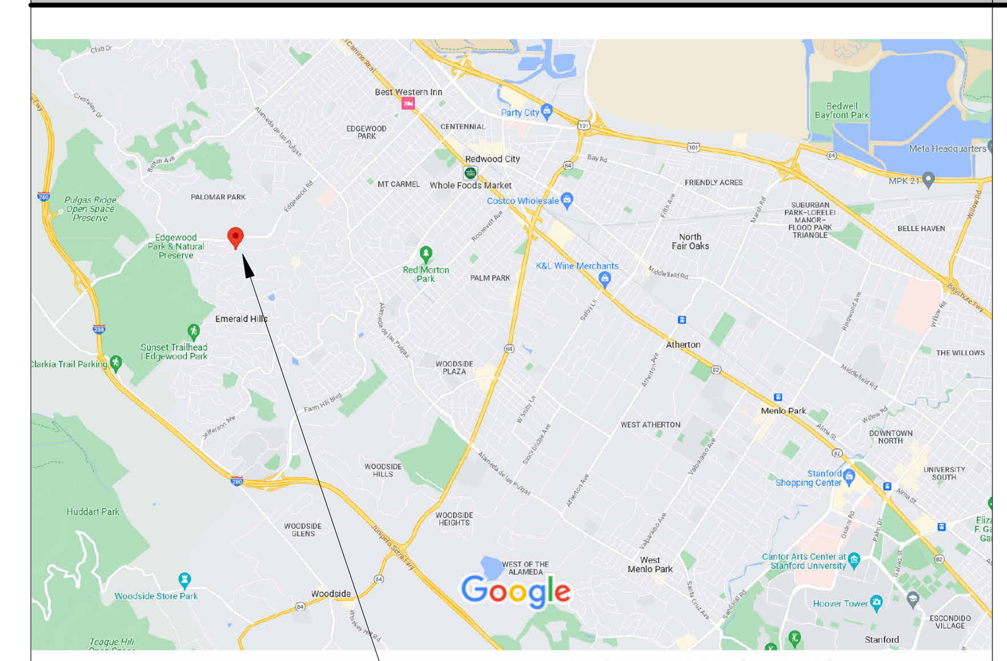
REROOFING OF EXISTING RESIDENCE AND A NEW SKYLIGHT.

FPA 13D SPRINKLER SYSTEM REQUIRED.
TO BE SUBMITTED UNDER SEPARATE PERMIT.

SHEET INDEX

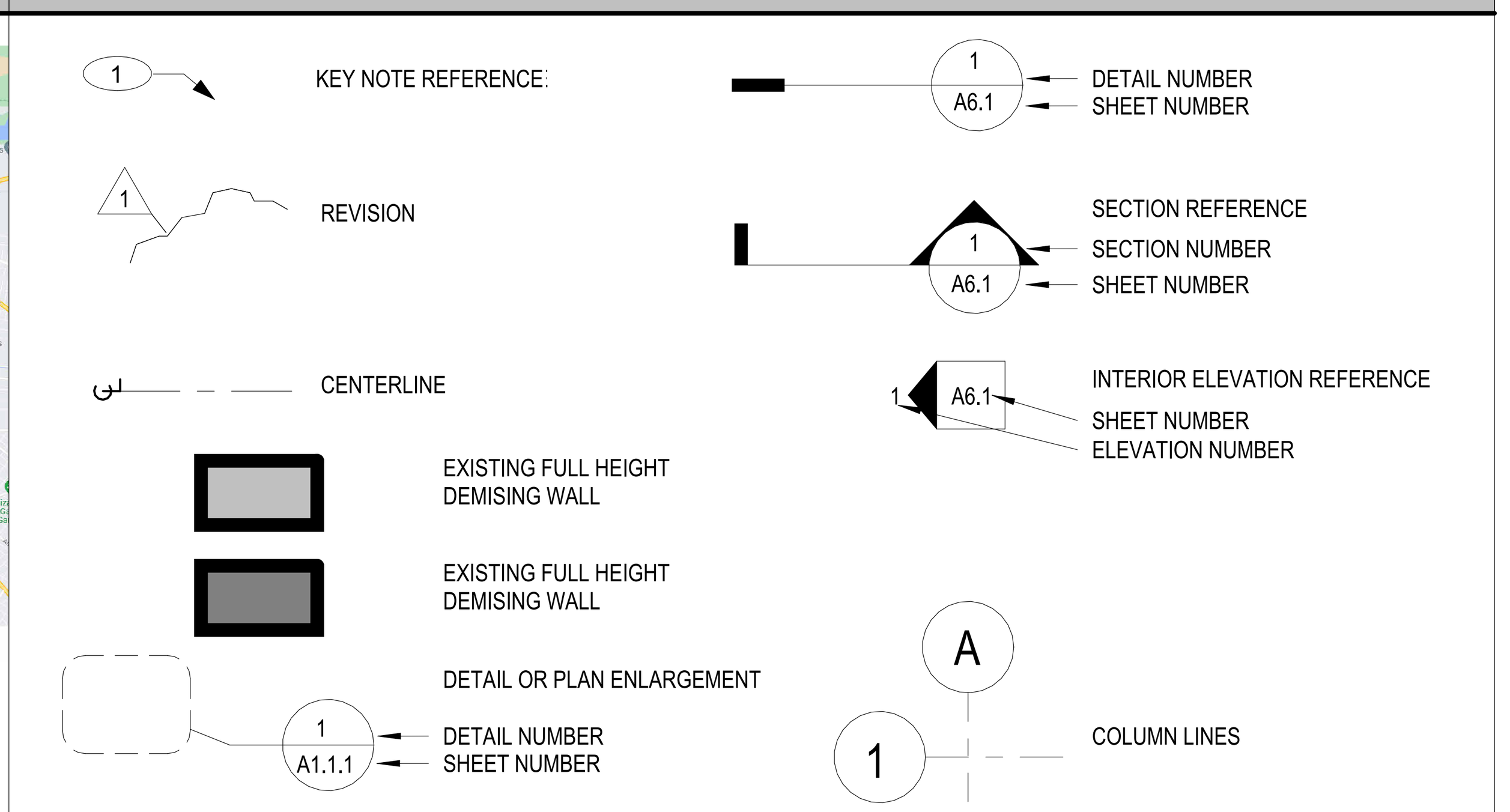
SHEET INDEX

REFERENCE MAP



PROJECT SITE
2 SPRINGDALE WAY
REDWOOD CITY, CA 94062

GENERAL NOTES LEGEND



RICH RESIDENCE

3 SPRINGDALE WAY
EMERALD HILLS, CA 94062

REVISION

No.	Description	Date
3	DESIGN REVIEW	4/02/24

DA+D PROJECT NUMBER
2304

DATE
7/11/2023

ISSUE
PERMIT

SHEET TITLE
PROJECT INFORMATION

SHEET NO.
A0.1

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

GC **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.

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)

GC **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.

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.

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".

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.

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.

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. 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.

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.

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.

4.106.4.2.4 Identification.
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.

4.106.4.2.5 Electric Vehicle Ready Space Signage.
Electric vehicle ready spaces shall be identified by signage or pavement markings, in compliance with Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).

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)]

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*.

GC **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

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

GC **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

GC **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.

GC **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.

GC **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.

GC **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

GC **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

GC **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.

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.

DERN
architecture + development

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LICENSED ARCHITECT
MICHAEL JOSEPH DERN
C-26179
3/31/2025
RENEWAL DATE
STATE OF CALIFORNIA

RICH RESIDENCE

3 SPRINGDALE WAY
EMERALD HILLS, CA 94062

REVISION

No.	Description	Date
1	PC RESPONSE 1	2/14/24

1

DERN PROJECT NUMBER
2304

DATE
7/11/2023

ISSUE
PERMIT

SHEET TITLE
CALIFORNIA GREEN BUILDING STANDARDS CODE

SHEET NO.
A0.2

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.)

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

GC

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

GC

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.

GC

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

GC

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.

GC

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.

GC

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.

GC

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)

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.

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.

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

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.

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

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

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

GC

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.

GC

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.

GC

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

GC

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

GC

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.

CHAPTER 7
INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS

GC

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.

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

GC

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.

DERN
architecture + development

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MICHAEL JOSEPH DERN
C-26179
3/31/2025
RENEWAL DATE
STATE OF CALIFORNIA

RICH RESIDENCE
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EMERALD HILLS, CA 94062

REVISION

No.	Description	Date
1	PC RESPONSE 1	2/14/24

1

DERN PROJECT NUMBER
2304

DATE
7/11/2023

ISSUE
PERMIT

SHEET TITLE
CALIFORNIA GREEN BUILDING STANDARDS CODE

SHEET NO.
A0.3

2022 Single-Family Residential Mandatory Requirements Summary

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

Building Envelope:

§ 110.6(a)1:	**Air Leakage.** Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 101/I.S.2/A440-2011. *
§ 110.6(a)5:	**Labeling**. Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.
§ 110.7:	**Air Leakage**. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	**Insulation Certification by Manufacturers**. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	**Insulation Requirements for Heated Slab Floors**. Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	**Roofing Products Solar Reflectance and Thermal Emittance**. The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	**Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	**Roof Deck, Ceiling and Rafter Roof Insulation**. Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling; or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling. *
§ 150.0(b):	**Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	**Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B. *
§ 150.0(d):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor. *
§ 150.0(f):	**Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	**Vapor Retarder**. In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to §150.0(d).
§ 150.0(g)2:	**Vapor Retarder**. In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	**Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45. *

Fireplaces, Decorative Gas Appliances, and Gas Log:

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

Space Conditioning, Water Heating, and Plumbing System:

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

5/6/22

2022 Single-Family Residential Mandatory Requirements Summary

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

Ducts and Fans:

§ 110.8(d)3:	**Ducts**. Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	**CMC Compliance.** All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than ¼". If mastic or tape is used. Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in these spaces must not be compressed. *
§ 150.0(m)2:	**Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	**Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	**Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage due tosunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
§ 150.0(m)10:	**Porous Inner Core Flex Duct.** Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier.
§ 150.0(m)11:	**Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)12:	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the filter. *

5/6/22

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)1Gv, and rated for sound per §150.0(o)1Gvi. *
§ 150.0(o)1H&I:	**Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems.** The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(o)1C.
§ 150.0(o)2:	**Field Verification and Diagnostic Testing.** Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G

Pool and Spa Systems and Equipment:

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

Lighting:

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

5/6/22

2022 Single-Family Residential Mandatory Requirements Summary

§ 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:

5/6/22

2022 Single-Family Residential Mandatory Requirements Summary

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

*Exceptions may apply.

5/6/22

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3/31/2025
RENEWAL DATE
STATE OF CALIFORNIA

RICH RESIDENCE

3 SPRINGDALE WAY
EMERALD HILLS, CA 94062

REVISION

No.	Description	Date
1	PC RESPONSE 1	2/14/24

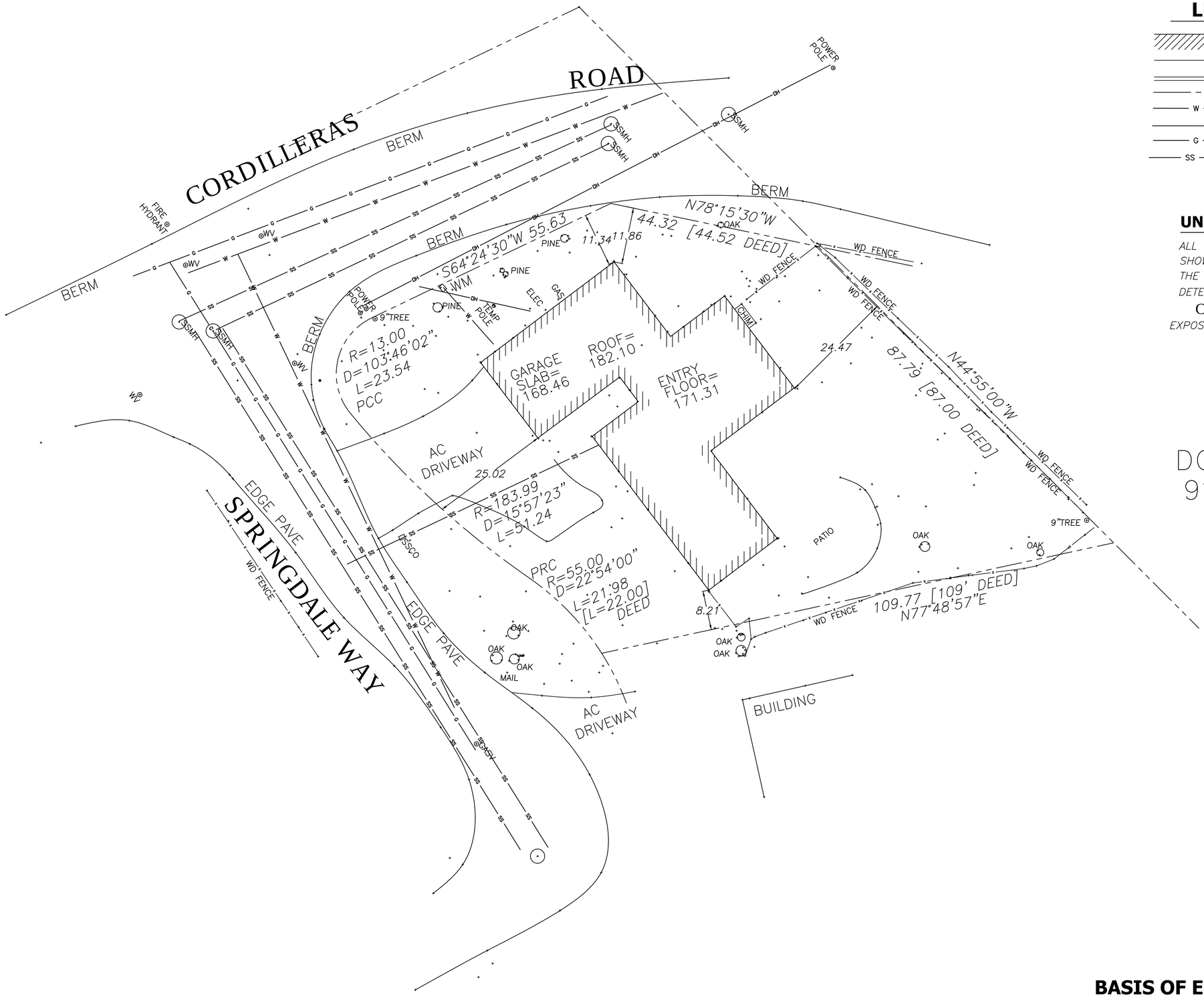
DERN PROJECT NUMBER
2304

DATE
7/11/2023

ISSUE
PERMIT

SHEET TITLE
RESIDENTIAL MANDATORY MEASURES

SHEET NO.
A0.4



LEGEND

- BUILDING
- FENCE LINE
- CURB LINE
- PROPERTY LINE
- WATER LINE
- OVERHEAD WIRES
- GAS LINE
- SANITARY SEWER LINE

North

10' 0 5' 10'
SCALE 1"=10'

UNDERGROUND UTILITY NOTE

ALL UNDERGROUND UTILITY LINES MAY NOT BE SHOWN HEREON, BUT MAY EXIST AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE SIZE, DEPTH, LOCATION THEREOF

CALL 811 BEFORE YOU DIG

EXPOSE AND VERIFY ALL UTILITY LINES BEFORE DIGGING

DEED
DOC. 2019-088940
9173 +/- SQ. FT.

BUILDING LOCATION PLAN

LOT AREA

9,173 SQ. FT +/-

BASIS OF BEARINGS

MONUMENT LINE OF CORDILLERAS RD PER 99 MAPS 89 SAN MATEO COUNTY RECORDS

BASIS OF ELEVATIONS

NAVD'88 PER LEICA SMARTNET RTK OBSERVATION

PROFESSIONAL LAND SURVEYOR KENNETH M. ADAMSON 4/30/24 No. 7523 STATE OF CALIFORNIA

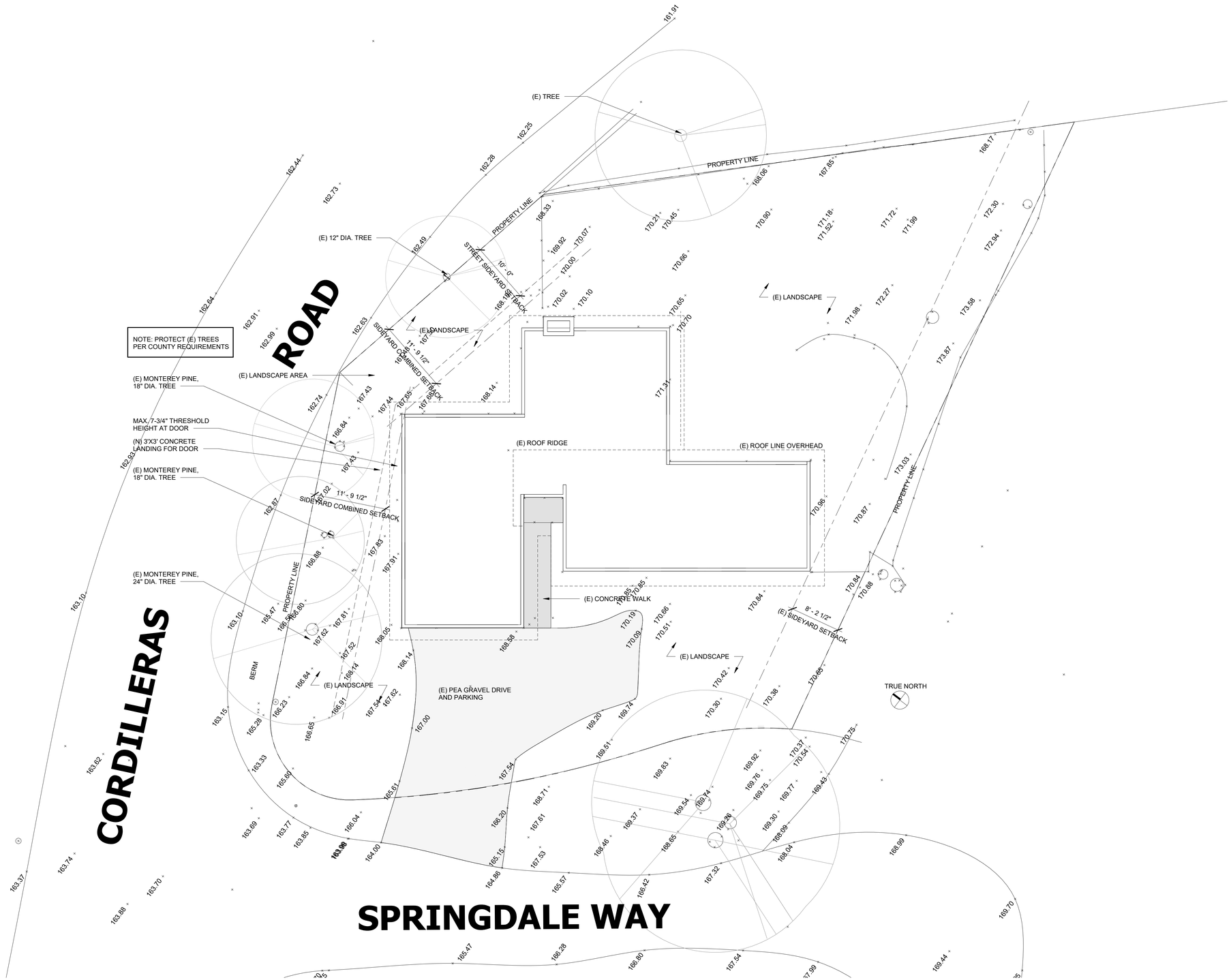
BOUNDARY-TOPOGRAPHIC SITE PLAN
3 SPRINGDALE WAY, EMERALD HILLS, CA 94062
APN 057-102-110
DOC. NO. 2019-088940
SAN MATEO COUNTY

PROJECT: SPRINGDALE 24-01
SCALE: 1"=10'
PROJECT MGR: KA
DATE: 4-30-24
SHEET A1.0

REVISIONS
DATE

BAYLAND CONSULTING
www.baylandconsulting.com

BAY LAND CONSULTING
LAND SURVEYORS/CIVIL ENGINEERS
P.O. BOX 299
SANTA CLARA, CA 95052
Ph: (408) 296-6000
MAPPING THE BAY AREA



1 EXISTING SITE PLAN
1/8" = 1'-0"

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3/31/2025
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REVISION

No.	Description	Date

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2304

DATE
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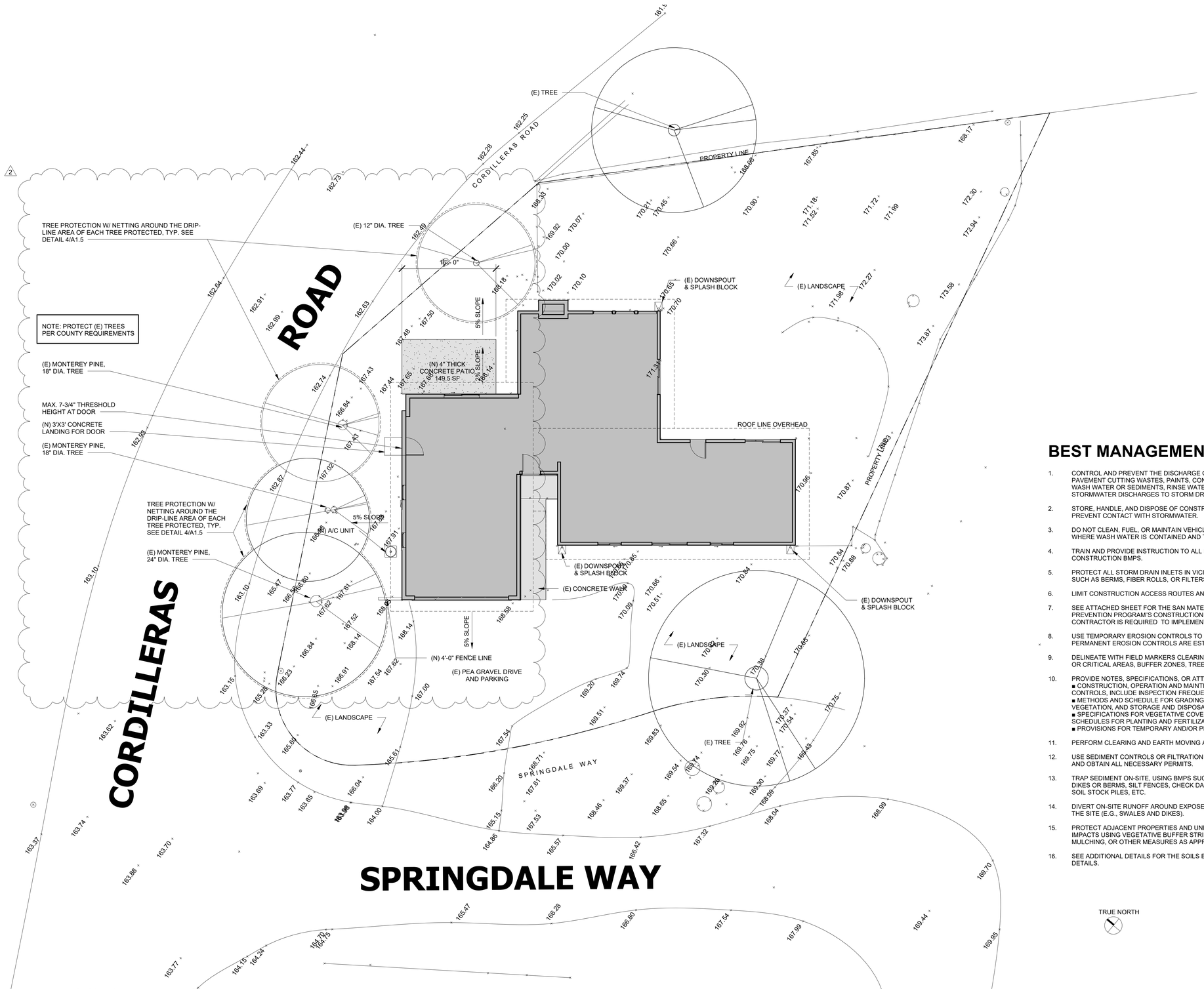
SHEET TITLE
EXISTING SITE PLAN

SHEET NO.
A1.1



1 PROPOSED SITE PLAN
1/8" = 1'-0"

BEST MANAGEMENT PRACTICE (BMP)

1. CONTROL AND PREVENT THE DISCHARGE OF ALL POTENTIAL POLLUTANTS, INCLUDING PAVEMENT CUTTING WASTES, PAINTS, CONCRETE, PETROLEUM PRODUCTS, CHEMICALS, WASH WATER OR SEDIMENTS, RINSE WATER FROM ARCHITECTURAL COPPER, AND NON-STORMWATER DISCHARGES TO STORM DRAINS AND WATERCOURSES.
2. STORE, HANDLE, AND DISPOSE OF CONSTRUCTION MATERIALS/WASTES PROPERLY TO PREVENT CONTACT WITH STORMWATER.
3. DO NOT CLEAN, FUEL, OR MAINTAIN VEHICLES ON-SITE, EXCEPT IN A DESIGNATED AREA WHERE WASH WATER IS CONTAINED AND TREATED.
4. TRAIN AND PROVIDE INSTRUCTION TO ALL EMPLOYEES/SUBCONTRACTORS RE: CONSTRUCTION BMPS.
5. PROTECT ALL STORM DRAIN INLETS IN VICINITY OF SITE USING SEDIMENT CONTROLS SUCH AS BERMS, FIBER ROLLS, OR FILTERS.
6. LIMIT CONSTRUCTION ACCESS ROUTES AND STABILIZE DESIGNATED ACCESS POINTS.
7. SEE ATTACHED SHEET FOR THE SAN MATEO COUNTYWIDE WATER POLLUTION PREVENTION PROGRAM'S CONSTRUCTION BMP TO PROJECT PLANS AND GENERAL CONTRACTOR IS REQUIRED TO IMPLEMENT THE APPLICABLE BMPS ON THE PLAN SHEET.
8. USE TEMPORARY EROSION CONTROLS TO STABILIZE ALL DENUDED AREAS UNTIL PERMANENT EROSION CONTROLS ARE ESTABLISHED .
9. DELINEATE WITH FIELD MARKERS CLEARING LIMITS, EASEMENTS, SETBACKS, SENSITIVE OR CRITICAL AREAS, BUFFER ZONES, TREES, AND DRAINAGE COURSES.
10. PROVIDE NOTES, SPECIFICATIONS, OR ATTACHMENTS DESCRIBING THE FOLLOWING:
    - CONSTRUCTION, OPERATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROLS, INCLUDE INSPECTION FREQUENCY;
    - METHODS AND SCHEDULE FOR GRADING, EXCAVATION, FILLING, CLEARING OF VEGETATION, AND STORAGE AND DISPOSAL OF EXCAVATED OR CLEARED MATERIAL;
    - SPECIFICATIONS FOR VEGETATIVE COVER & MULCH, INCLUDE METHODS AND SCHEDULES FOR PLANTING AND FERTILIZATION;
    - PROVISIONS FOR TEMPORARY AND/OR PERMANENT IRRIGATION.
11. PERFORM CLEARING AND EARTH MOVING ACTIVITIES ONLY DURING DRY WEATHER.
12. USE SEDIMENT CONTROLS OR FILTRATION TO REMOVE SEDIMENT WHEN DEWATERING AND OBTAIN ALL NECESSARY PERMITS.
13. TRAP SEDIMENT ON-SITE, USING BMPS SUCH AS SEDIMENT BASINS OR TRAPS, EARTHEN DIKES OR BERMS, SILT FENCES, CHECK DAMS, SOIL BLANKETS OR MATS, COVERS FOR SOIL STOCK PILES, ETC.
14. DIVERT ON-SITE RUNOFF AROUND EXPOSED AREAS; DIVERT OFF-SITE RUNOFF AROUND THE SITE (E.G., SWALES AND DIKES).
15. PROTECT ADJACENT PROPERTIES AND UNDISTURBED AREAS FROM CONSTRUCTION IMPACTS USING VEGETATIVE BUFFER STRIPS, SEDIMENT BARRIERS OR FILTERS, DIKES, MULCHING, OR OTHER MEASURES AS APPROPRIATE.
16. SEE ADDITIONAL DETAILS FOR THE SOILS EROSION AND PROTECTION CONTROL GENERAL DETAILS.

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REVISION

No.	Description	Date
2	PC RESPONSE 2	4/02/24

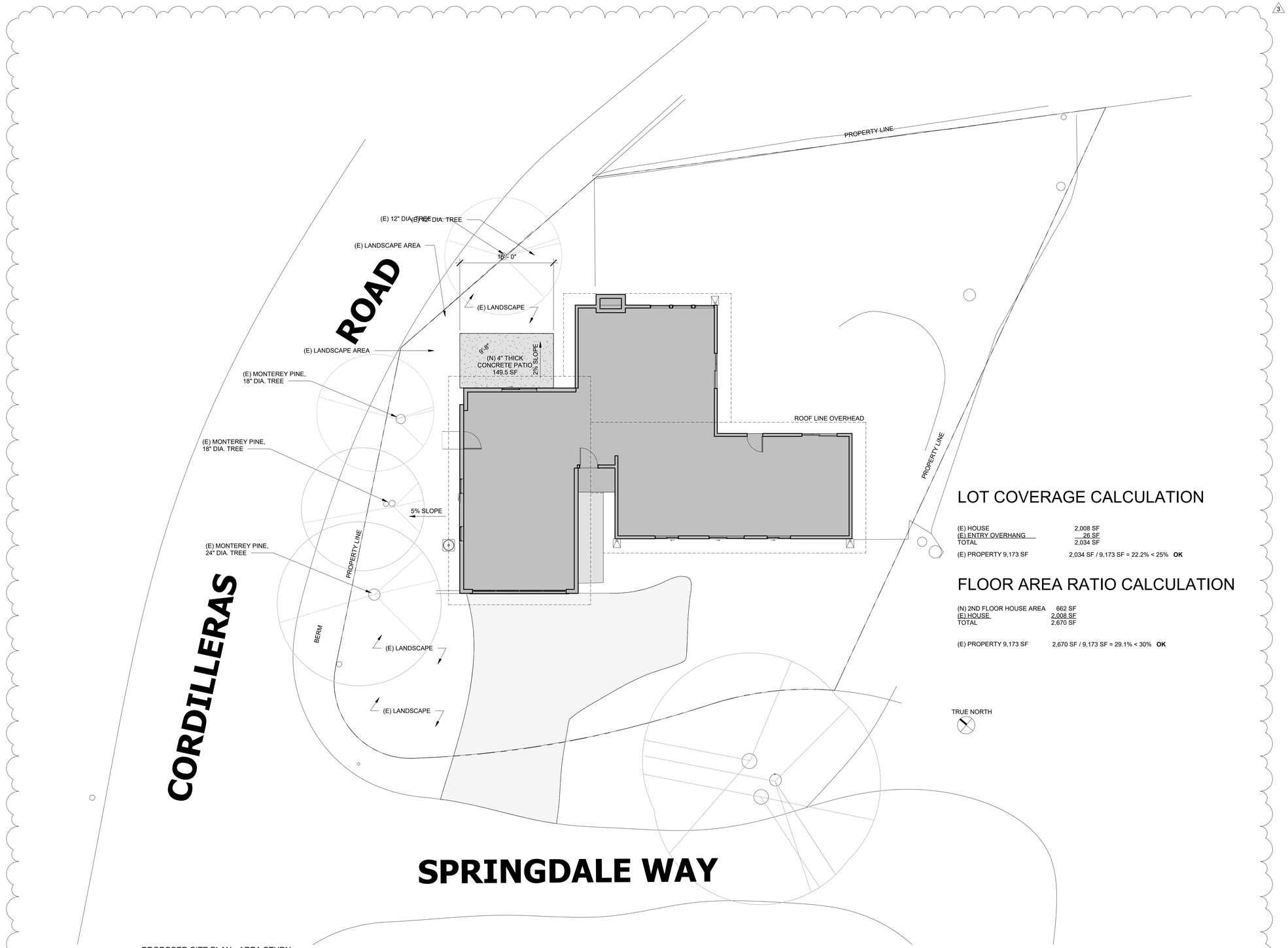
DERN PROJECT NUMBER
2304

DATE
7/11/2023

ISSUE
PERMIT

SHEET TITLE
PROPOSED SITE PLAN

SHEET NO.
A1.2



1 PROPOSED SITE PLAN - AREA STUDY
1/8" = 1'-0"

LOT COVERAGE CALCULATION

(E) HOUSE	2,008 SF
(E) ENTRY OVERHANG	26 SF
TOTAL	2,034 SF
(E) PROPERTY 9,173 SF	2,034 SF / 9,173 SF = 22.2% < 25% **OK**

FLOOR AREA RATIO CALCULATION

(N) 2ND FLOOR HOUSE AREA	662 SF
(E) HOUSE	2,008 SF
TOTAL	2,670 SF
(E) PROPERTY 9,173 SF	2,670 SF / 9,173 SF = 29.1% < 30% **OK**

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REVISION

No.	Description	Date
3	DESIGN REVIEW	4/02/24

DERN PROJECT NUMBER
2304

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ISSUE
PERMIT

SHEET TITLE
LOT COVERAGE AND FAR CALCULATIONS

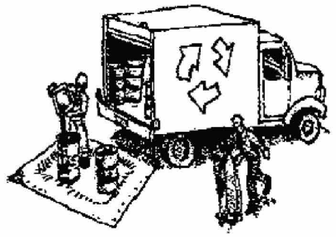
SHEET NO.
A1.3

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

Construction Best Management Practices (BMPs)

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

Materials & Waste Management



Non-Hazardous Materials

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

Hazardous Materials

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

Waste Management

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

Construction Entrances and Perimeter

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

Equipment Management & Spill Control

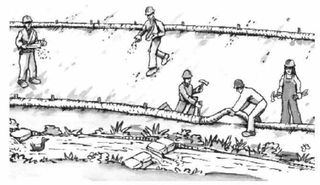
Maintenance and Parking

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

Spill Prevention and Control

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

Earthmoving



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

Contaminated Soils

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

Paving/Asphalt Work

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

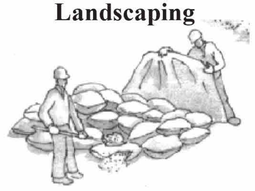
Sawcutting & Asphalt/Concrete Removal

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

Concrete, Grout & Mortar Application

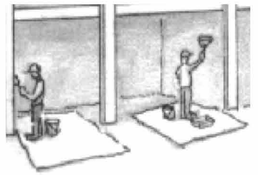
- ❑ Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind.
- ❑ Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that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

Landscaping



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

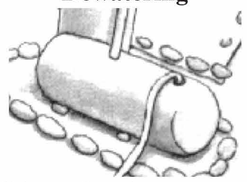
Painting & Paint Removal



Painting Cleanup and Removal

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

Dewatering



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

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

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No.	Description	Date

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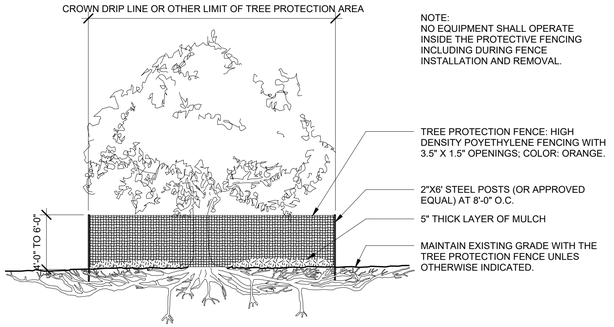
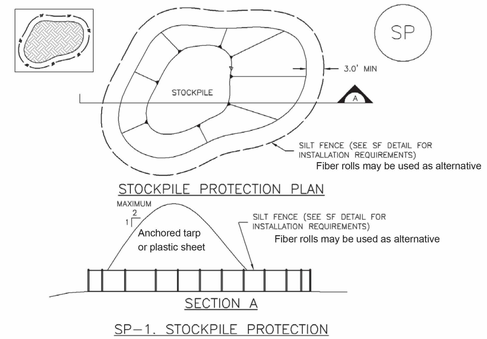
SHEET TITLE
SAN MATEO COUNTY BEST MANAGEMENT PRACTICE (BMP)

SHEET NO.
A1.4



4 TREE PROTECTION
1/8" = 1'-0"

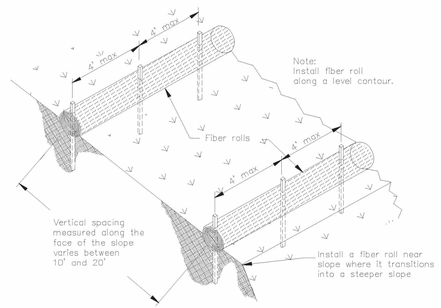
Stockpile Management (SP)



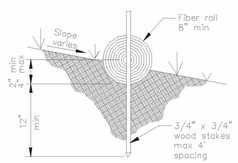
SP-1. STOCKPILE PROTECTION

3 STOCKPILE
12" = 1'-0"

Fiber Rolls SE-5



TYPICAL FIBER ROLL INSTALLATION
N.T.S.

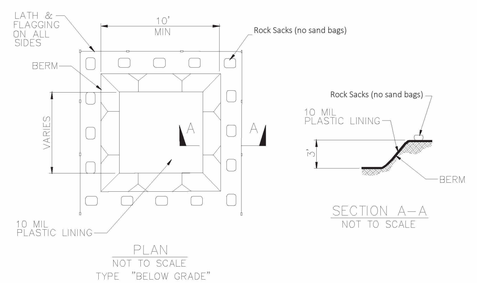


ENTRENCHMENT DETAIL
N.T.S.

NOTES:
If more than one fiber roll is placed in a row, the rolls must be overlapped, not abutted.
Turn the ends of the fiber roll up-slope to prevent runoff from going around the roll.

2 FIBER ROLLS
12" = 1'-0"

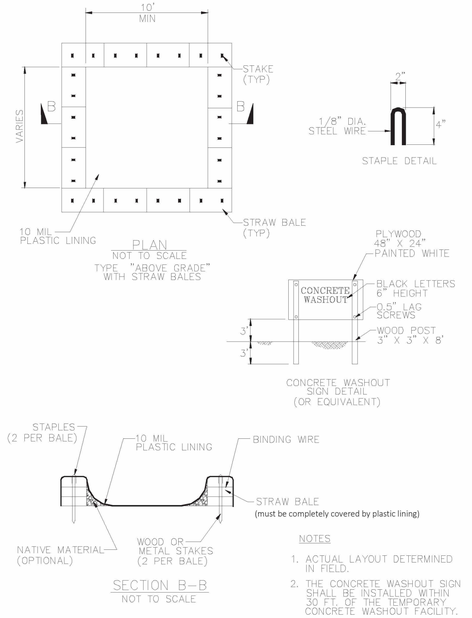
Concrete Waste Management WM-8



NOTES
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

1 CONCRETE WASHOUT
12" = 1'-0"

Concrete Waste Management WM-8



NOTES
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

2

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No.	Description	Date
2	PC RESPONSE 2	4/02/24

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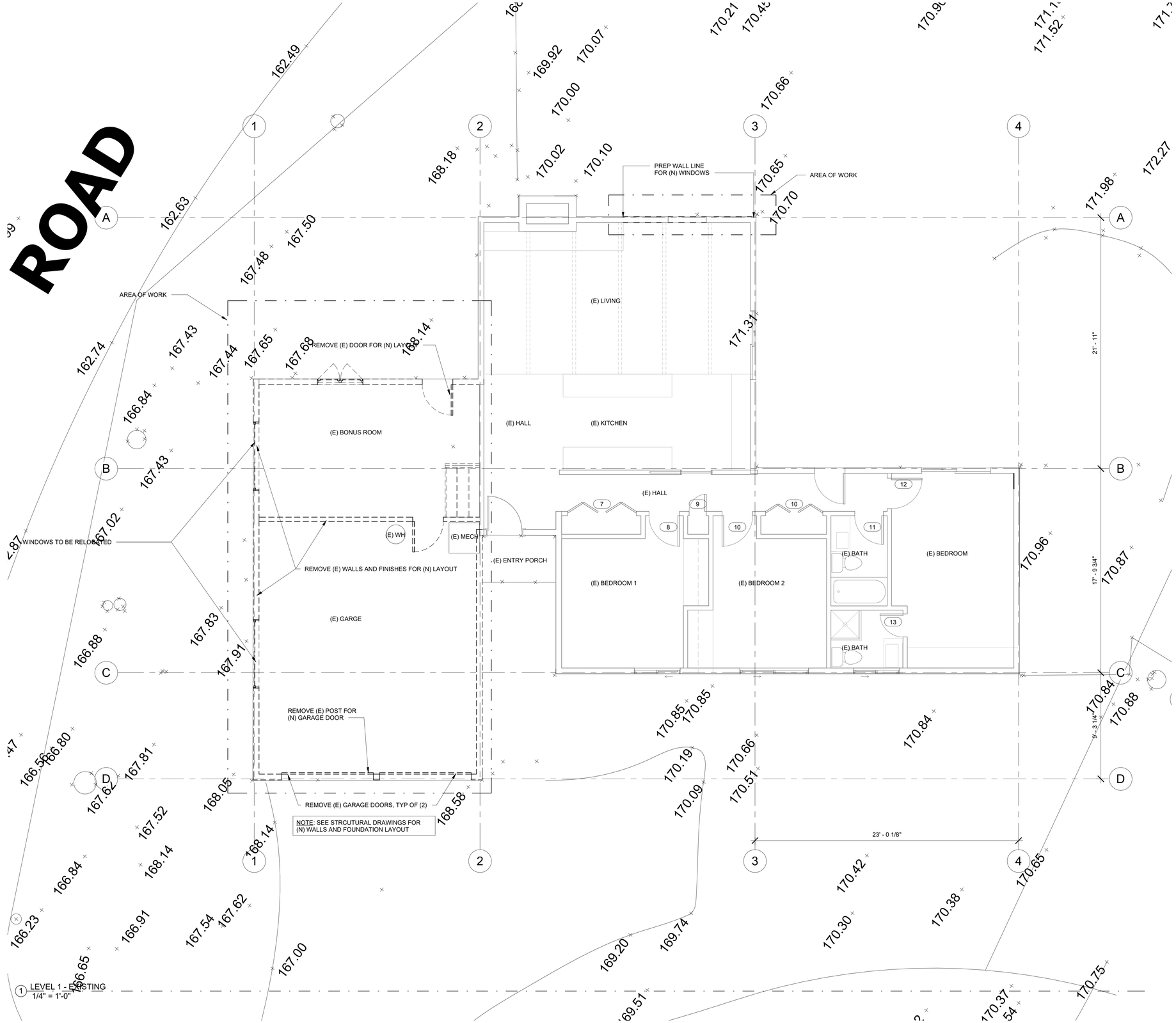
SHEET TITLE
SOILS EROSION AND PROTECTION CONTROL GENERAL DETAILS

SHEET NO.
A1.5



1 LEVEL 1 - EXISTING
1/4" = 1'-0"

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SHEET TITLE
EXISTING FLOOR PLAN

SHEET NO.
A2.1

LEVEL 1 - PROPOSED
1/4" = 1'-0"

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1	PC RESPONSE 1	2/14/24

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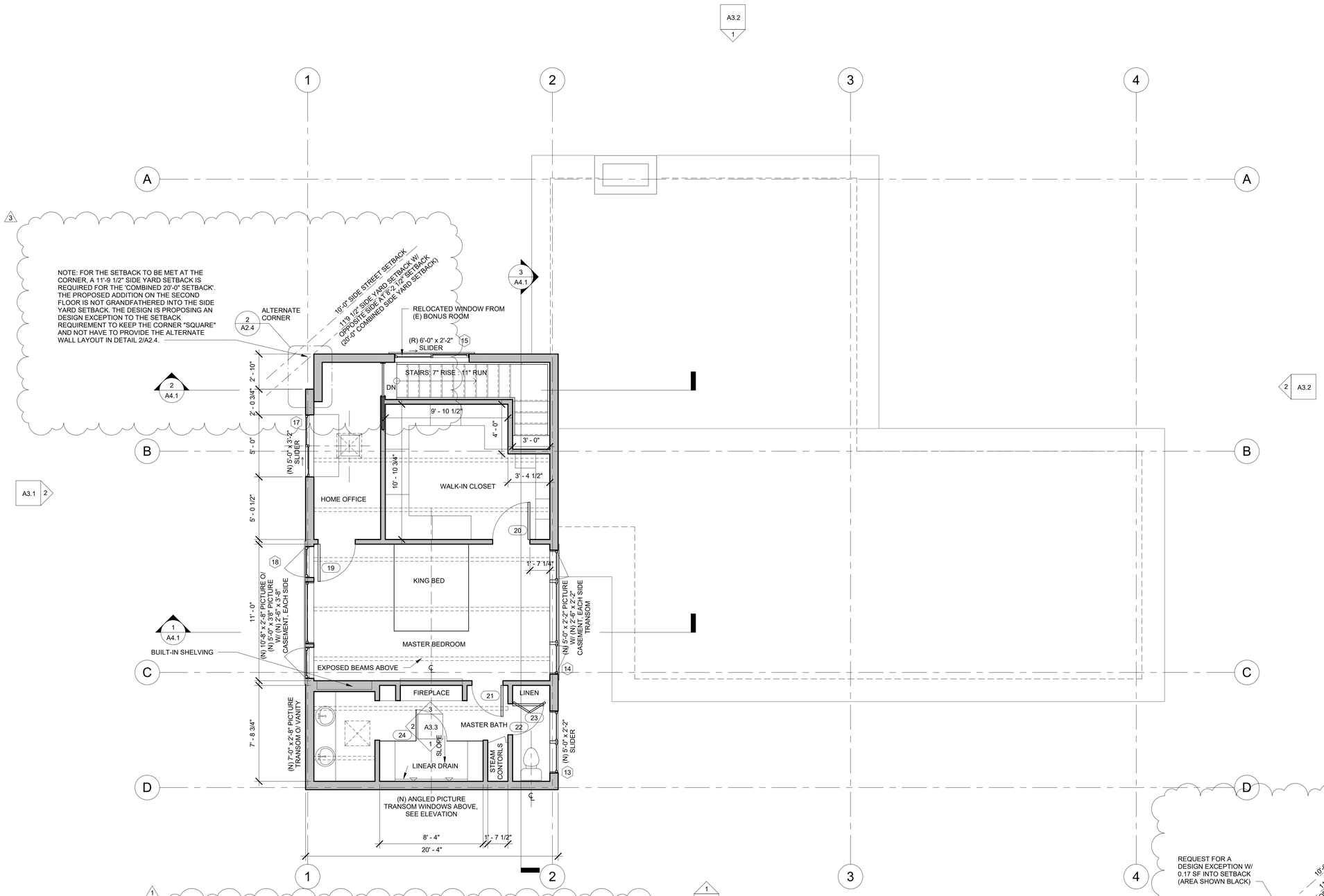
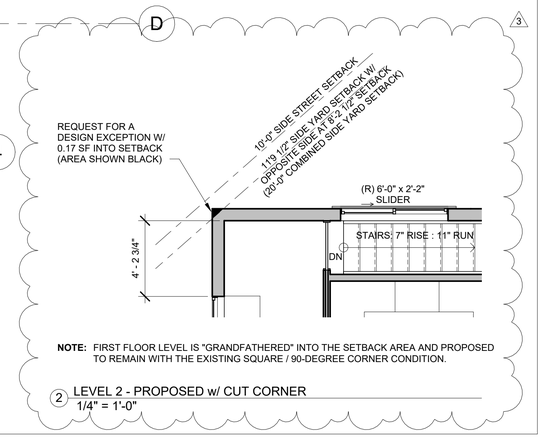
SHEET TITLE
PROPOSED FIRST FLOOR PLAN

SHEET NO.
A2.2



FIREPLACE:
MAJESTIC ECHELON II 48 INCH SEE THROUGH LINEAR DIRECT VENT NATURAL GAS FIREPLACE - ECHEL48STIN-C
LABORATORY: UNDERWRITERS LABORATORIES, INC. (UL) C FOR GAS FIRED.
TYPE: DIRECT VENT HEATER
STANDARD: ANSI Z21.88-2017 • CSA 2.33-2017 THIS PRODUCT IS LISTED TO ANSI STANDARDS FOR "VENTED GAS FIREPLACE HEATERS"
SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR GAS SUPPLY LINE AND VENT HEAT SHIELD SIDE WALL VENTING REQUIREMENTS.

1 LEVEL 2 - PROPOSED
1/4" = 1'-0"



NOTE: FIRST FLOOR LEVEL IS "GRANDFATHERED" INTO THE SETBACK AREA AND PROPOSED TO REMAIN WITH THE EXISTING SQUARE / 90-DEGREE CORNER CONDITION.

2 LEVEL 2 - PROPOSED w/ CUT CORNER
1/4" = 1'-0"

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No.	Description	Date
1	PC RESPONSE 1	2/14/24
3	DESIGN REVIEW	4/02/24

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SHEET TITLE
PROPOSED SECOND FLOOR PLAN

SHEET NO.
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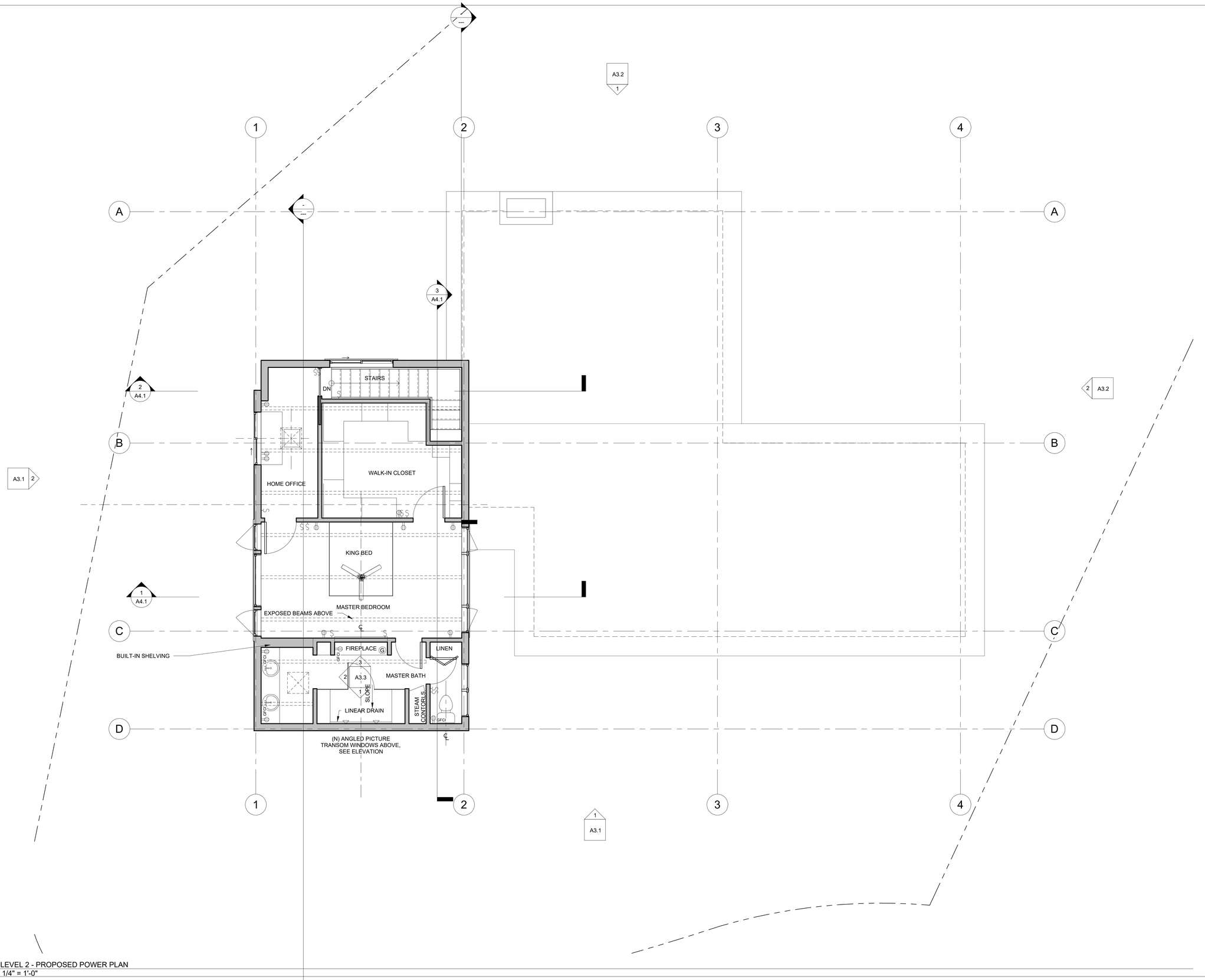
SHEET TITLE
PROPOSED FIRST FLOOR POWER PLAN

SHEET NO.
A2.5



1 LEVEL 2 - PROPOSED POWER PLAN
1/4" = 1'-0"

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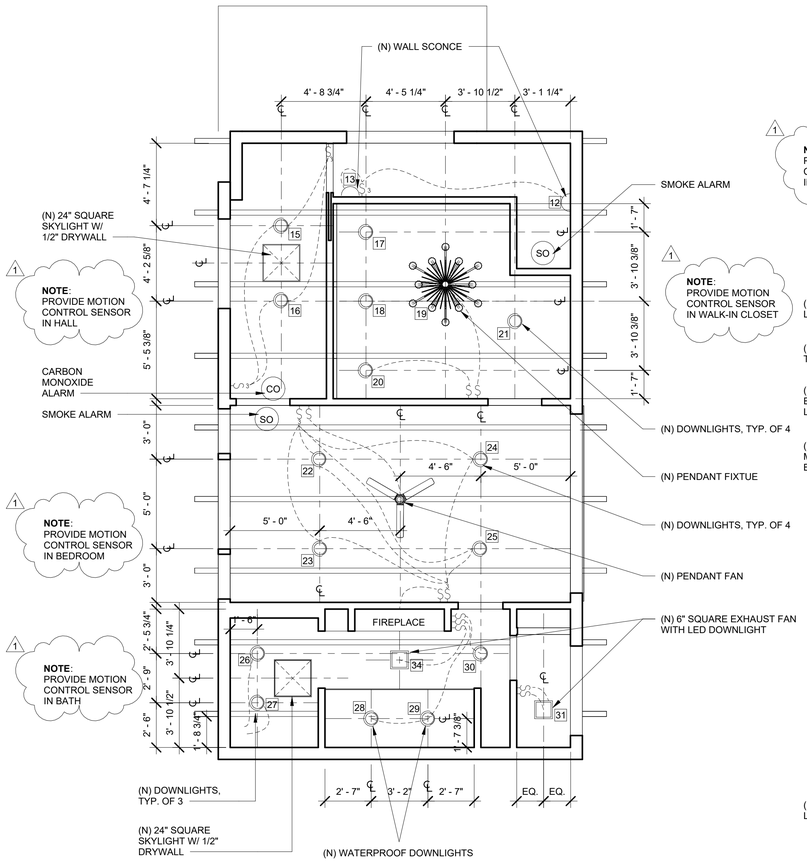
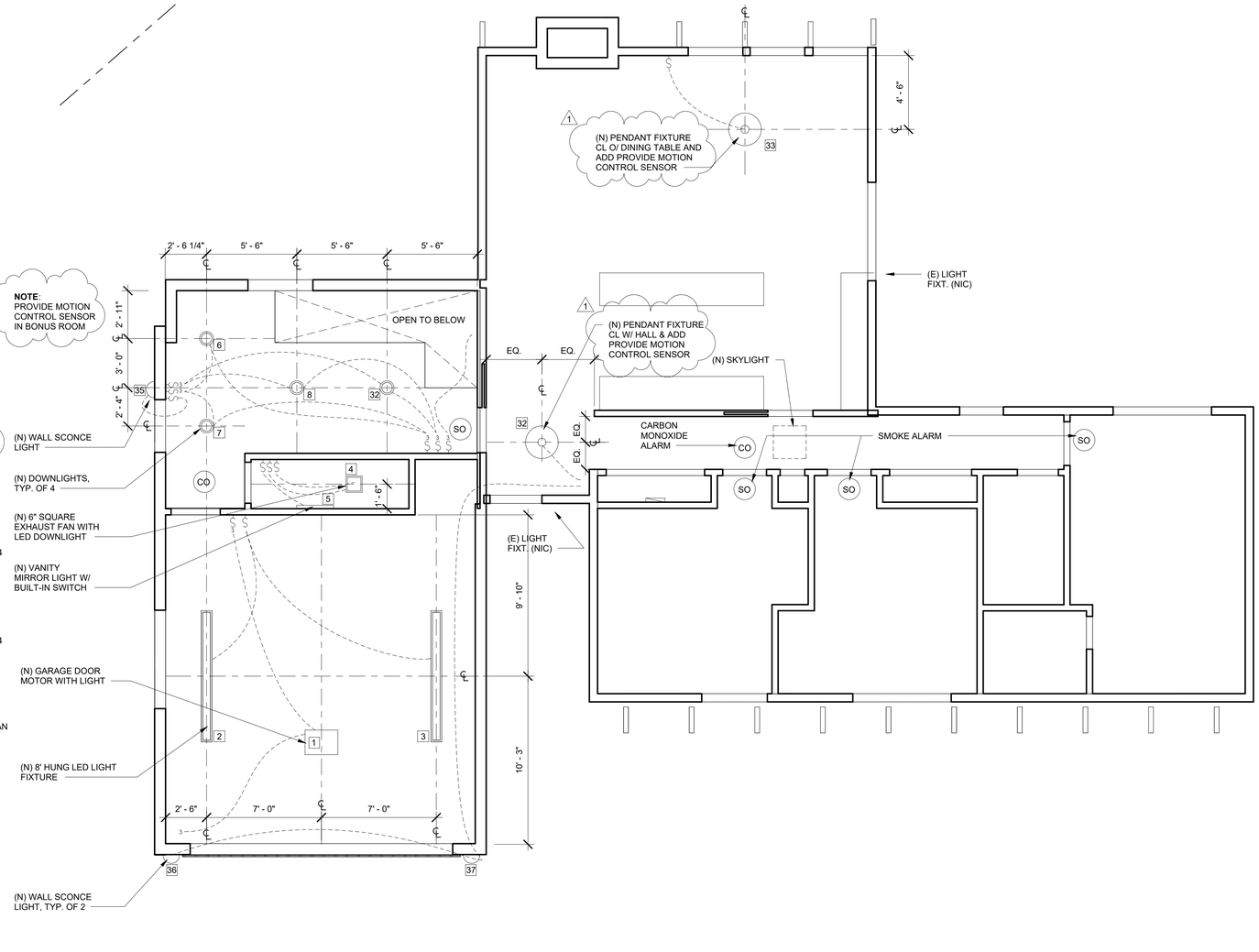
SHEET TITLE
PROPOSED SECOND FLOOR POWER PLAN

SHEET NO.
A2.6



2 REFLECTED CEILING PLAN - LEVEL 2
1/4" = 1'-0"



1 REFLECTED CEILING PLAN - LEVEL 1
1/4" = 1'-0"

LIGHTING FIXTURE SCHEDULE

NUMBER	FIXTURE TYPE	NOTES
1	L8	GARAGE DOOR MOTOR
2	L1	LED PENDANT LIGHT
3	L1	LED PENDANT LIGHT
4	L5	EXHAUST FAN/LIGHT
5	L4	VANITY MIRROR LIGHT
6	L2	RECESSED CAN DOWN LIGHT
7	L2	RECESSED CAN DOWN LIGHT
8	L2	RECESSED CAN DOWN LIGHT
9	L2	RECESSED CAN DOWN LIGHT
10	L6	WATER-PROOFED RECESSED CAN DOWN LIGHT
11	L6	WATER-PROOFED RECESSED CAN DOWN LIGHT
12	L3	WALL SCONCE
13	L3	WALL SCONCE
14	L3	WALL SCONCE
15	L2	RECESSED CAN DOWN LIGHT
16	L2	RECESSED CAN DOWN LIGHT
17	L2	RECESSED CAN DOWN LIGHT
18	L2	RECESSED CAN DOWN LIGHT
19	L2	RECESSED CAN DOWN LIGHT
20	L2	RECESSED CAN DOWN LIGHT
21	L2	RECESSED CAN DOWN LIGHT
22	L2	RECESSED CAN DOWN LIGHT
23	L2	RECESSED CAN DOWN LIGHT
24	L2	RECESSED CAN DOWN LIGHT
25	L2	RECESSED CAN DOWN LIGHT
26	L2	RECESSED CAN DOWN LIGHT
27	L2	RECESSED CAN DOWN LIGHT
28	L6	WATER-PROOFED RECESSED CAN DOWN LIGHT
29	L6	WATER-PROOFED RECESSED CAN DOWN LIGHT
30	L2	RECESSED CAN DOWN LIGHT
31	L7	RECESSED CAN DOWN LIGHT W/ EXHAUST FAN
32	TO BE SELECTED	PENDANT FIXTURE
33	TO BE SELECTED	PENDANT FIXTURE
34	L7	RECESSED CAN DOWN LIGHT W/ EXHAUST FAN

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SHEET TITLE
PROPOSED CEILING PLANS & FIXTURE SCHEDULE

SHEET NO.
A2.7

ROAD

PROPERTY LINE

(E) CHIMNEY

(E) 4" THICK CONCRETE PATIO

(E) 1-1/2 : 12 SLOPE

(E) CLASS "A" ROOFING, SHOWN SHADED TYP.

(N) 2'-0" X 2'-0" SKYLIGHT

(N) 2'-0" X 2'-0" SKYLIGHT

2 : 12 SLOPE

(E) 1-1/2 : 12 SLOPE

(N) ROOF, CLASS A

(N) 2' X 2' SKYLIGHT

PROPERTY LINE

1 ROOF
1/4" = 1'-0"

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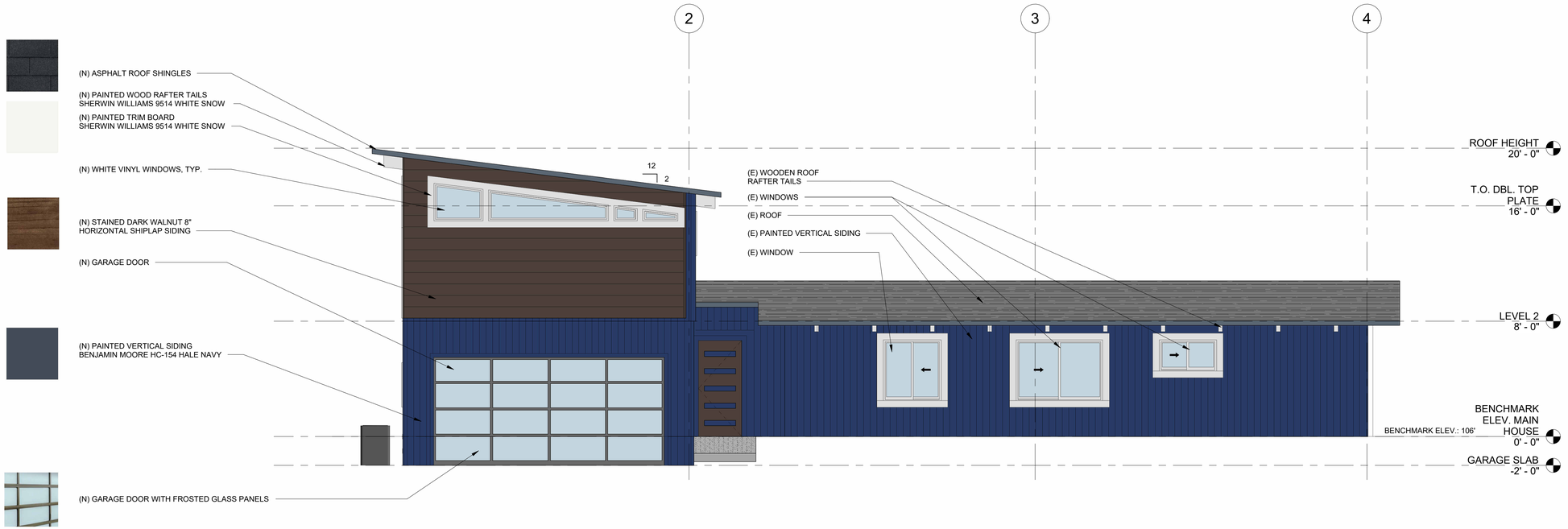
PROPOSED ROOF PLAN

SHEET NO.
A2.8

2 PROPOSED NORTH ELEVATION
1/4" = 1'-0"



1 PROPOSED WEST ELEVATION
1/4" = 1'-0"

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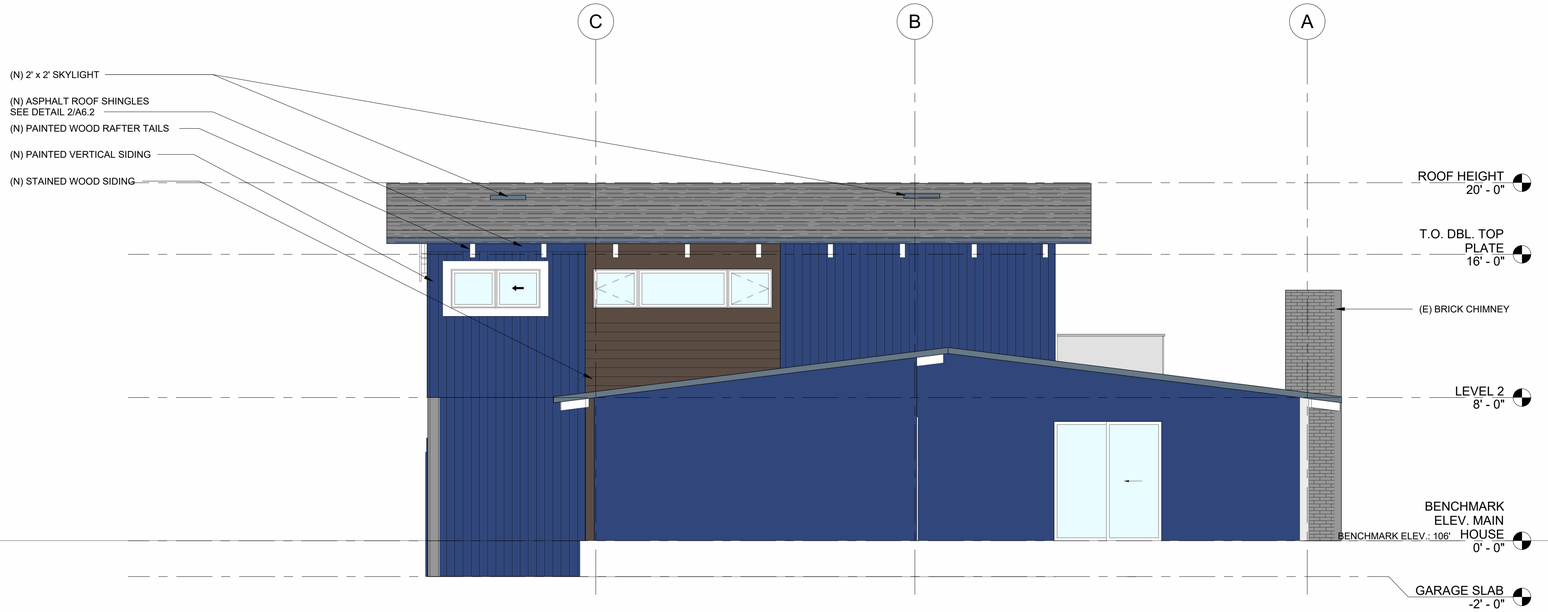
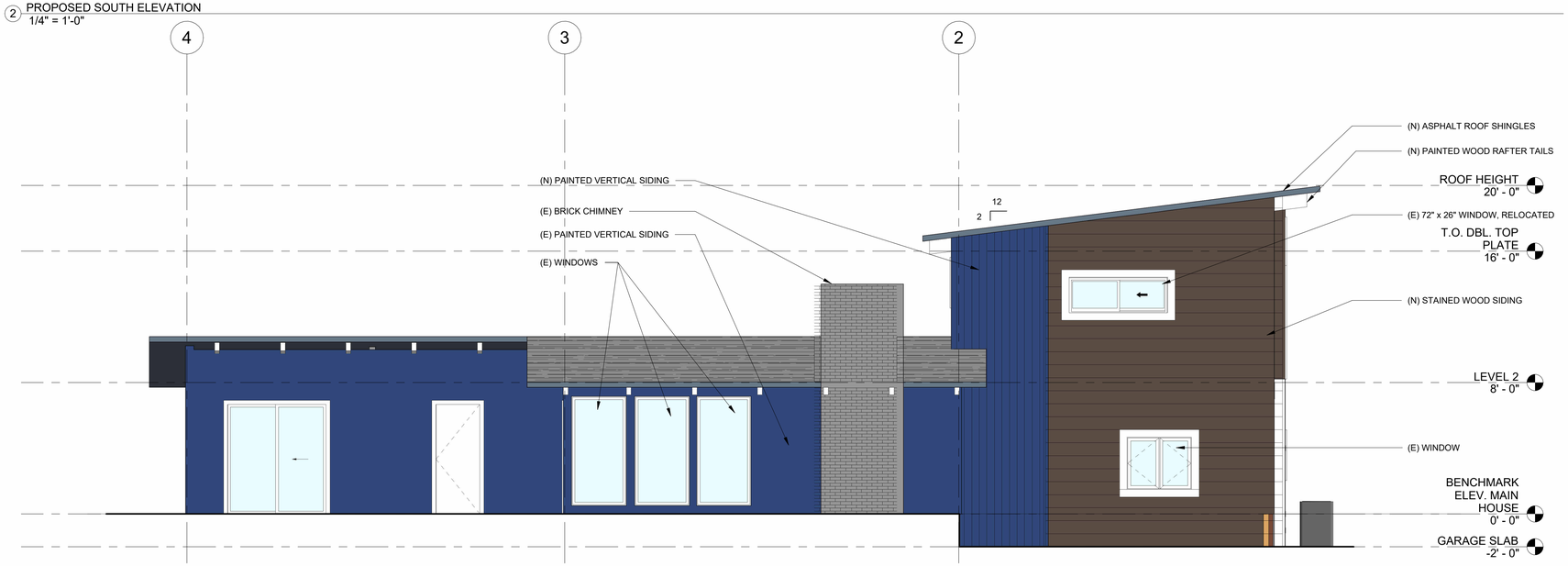
SHEET TITLE
PROPOSED EXTERIOR ELEVATIONS

SHEET NO.
A3.1



2 PROPOSED SOUTH ELEVATION
1/4" = 1'-0"



1 PROPOSED EAST ELEVATION
1/4" = 1'-0"

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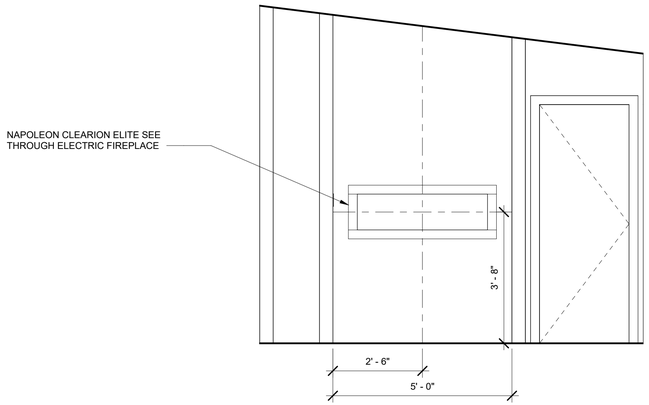
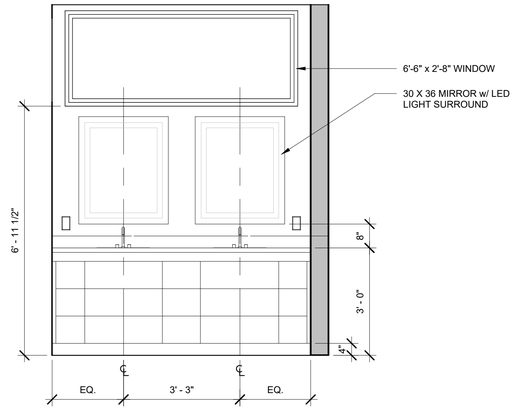
SHEET TITLE
PROPOSED EXTERIOR ELEVATIONS

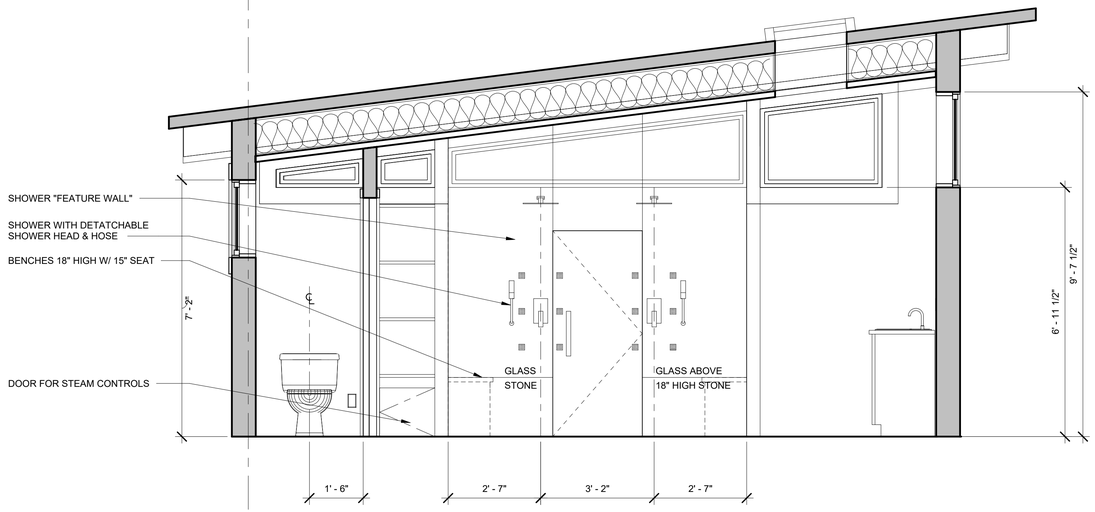
SHEET NO.
A3.2



3 MASTER BATHROOM FIREPLACE
1/2" = 1'-0"



2 MASTER VANITY ELEVATION
1/2" = 1'-0"



1 PLUMBING WALL
1/2" = 1'-0"

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3/31/2025
RENEWAL DATE
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RICH RESIDENCE

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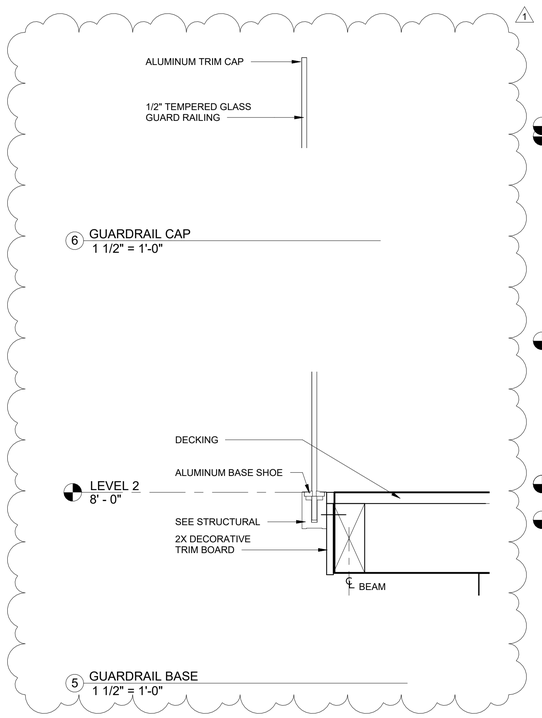
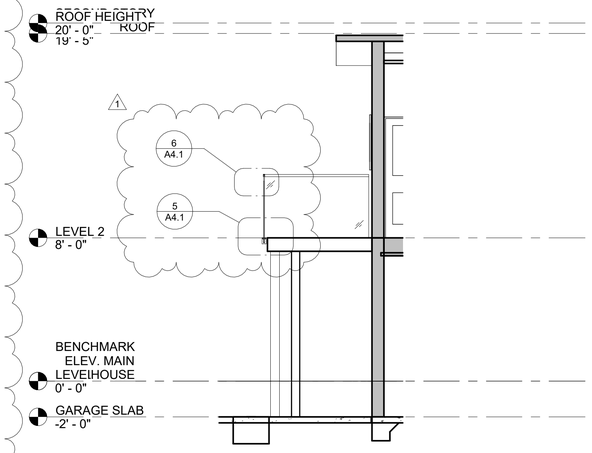
SHEET TITLE
PROPOSED INTERIOR ELEVATIONS

SHEET NO.
A3.3

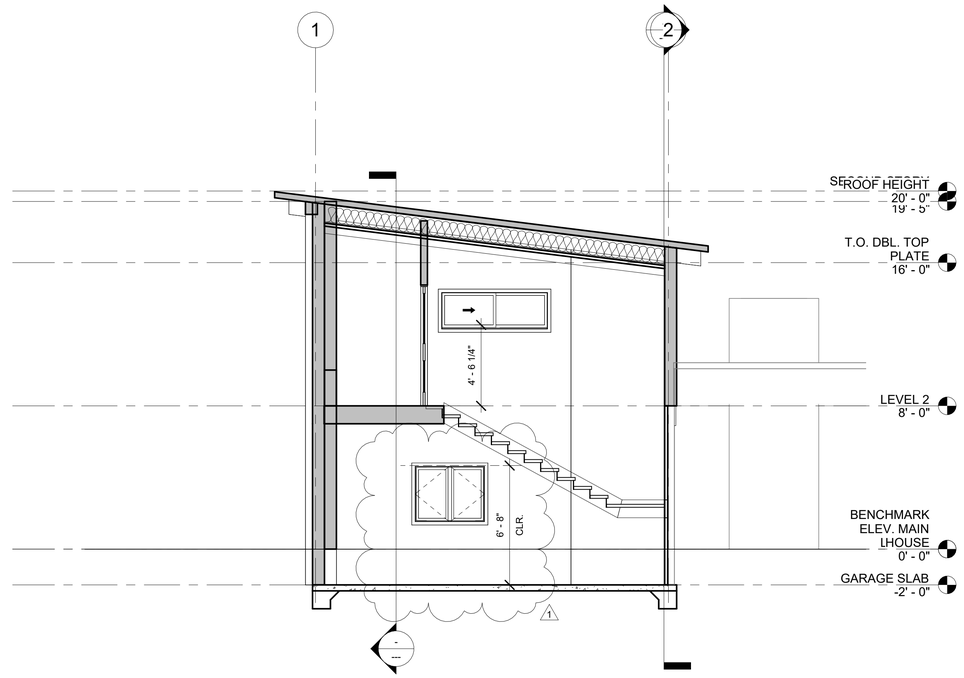


6 GUARDRAIL CAP
1 1/2" = 1'-0"

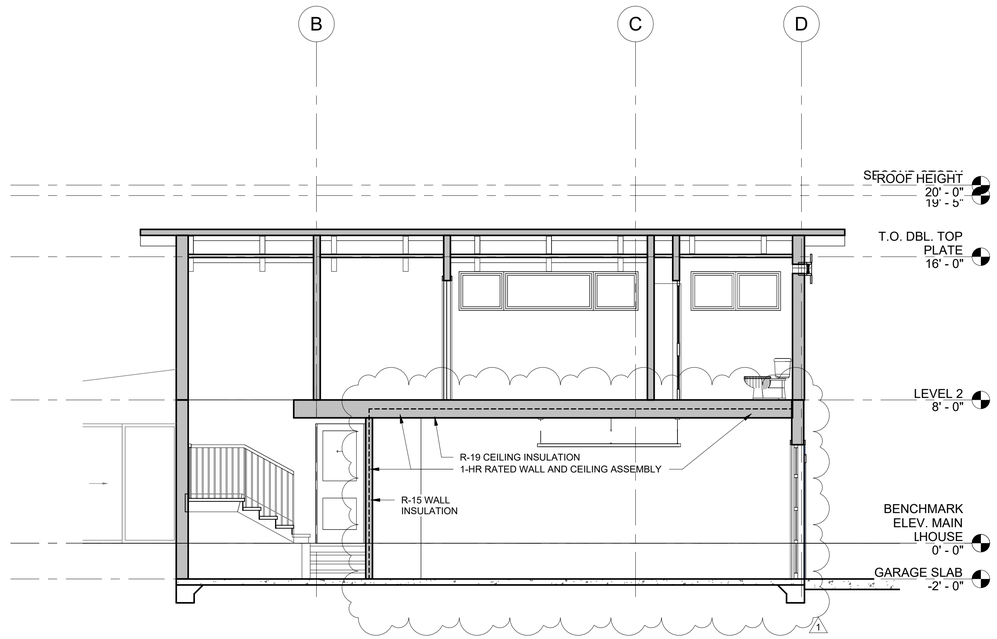
5 GUARDRAIL BASE
1 1/2" = 1'-0"



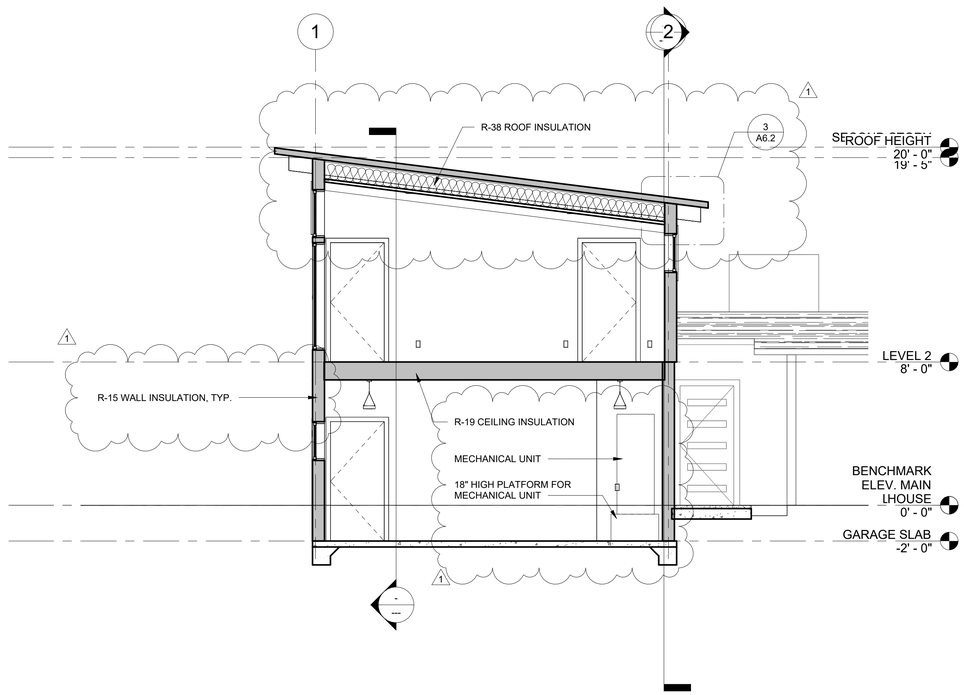
4 SECTION D
1/4" = 1'-0"



2 SECTION B
1/4" = 1'-0"



3 SECTION C
1/4" = 1'-0"



1 SECTION A
1/4" = 1'-0"

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No.	Description	Date
1	PC RESPONSE 1	2/14/24

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SHEET TITLE
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SHEET NO.
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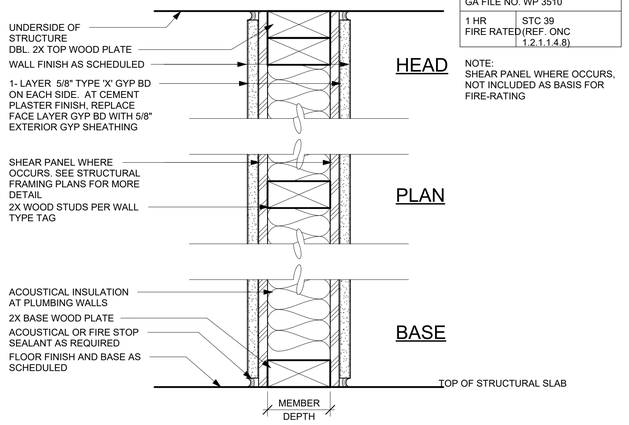


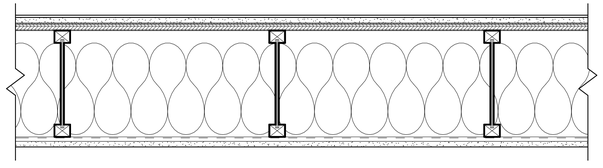
GA FILE NO. WP 3510	
1 HR FIRE RATED	STC 39 (REF. ONC 1.2.1.1.4.8)

NOTE:
SHEAR PANEL WHERE OCCURS, NOT INCLUDED AS BASIS FOR FIRE-RATING

2 1 HR FIRE RATED WOOD STUD WALL
3" = 1'-0"

DESIGN NO. **UL L570, UL M532**

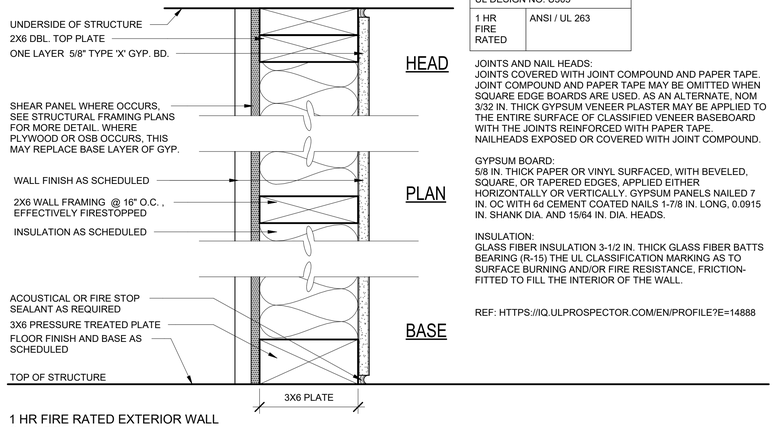
FIRE RATING	1 HOUR
CONSTRUCTION TYPE	11 7/8" WOOD ENGINEERED JOIST, SEE STRUCTURAL DRAWINGS
SOUND TRANSMISSION CLASS (STC)	59
IMPACT INSULATION CLASS (IIC)	57
SOUND TEST	H5048.04
SYSTEM THICKNESS (INCHES)	15.09 IN.
SYSTEM THICKNESS (MM)	383 MM



ASSEMBLY REQUIREMENTS:

FINISH FLOORING:	1/2" ENGINEERED HARDWOOD (BY OTHERS)
SUBFLOOR TOPPING MIXTURE:	3/4" USG LEVELROCK® BRAND 2500 SERIES FLOOR UNDERLAYMENTS
SOUND ATTENUATION MAT:	1/8" USG LEVELROCK® SAM-N12™ SOUND ATTENUATION MAT
SUBFLOOR:	23/32" WOOD STRUCTURAL PANEL
STRUCTURE:	11-7/8" WOOD I-JOISTS, AT 2' [610 MM] O.C.
INSULATION:	10-1/4" GLASS FIBER BATT INSULATION (R-38), SUPPORTED BY RESILIENT CHANNEL
RESILIENT CHANNEL:	1/2" RESILIENT CHANNEL, 25 GA. (0.018"), SPACED 24" [610 MM] O.C. MAX.
GYPSUM PANEL:	5/8" SHEETROCK® ECOSMART GYPSUM PANEL (UL TYPE ULIX™)

3 1-HOUR RATED CEILING ASSEMBLY
1 1/2" = 1'-0"



UL DESIGN NO. U305	
1 HR FIRE RATED	ANSI / UL 263

JOINTS AND NAIL HEADS:
JOINTS COVERED WITH JOINT COMPOUND AND PAPER TAPE. JOINT COMPOUND AND PAPER TAPE MAY BE OMITTED WHEN SQUARE EDGE BOARDS ARE USED. AS AN ALTERNATE, NOM 3/32 IN. THICK GYPSUM VENEER PLASTER MAY BE APPLIED TO THE ENTIRE SURFACE OF CLASSIFIED VENEER BASEBOARD WITH THE JOINTS REINFORCED WITH PAPER TAPE. NAILHEADS EXPOSED OR COVERED WITH JOINT COMPOUND.

GYPSUM BOARD:
5/8 IN. THICK PAPER OR VINYL SURFACED, WITH BEVELED, SQUARE, OR TAPERED EDGES, APPLIED EITHER HORIZONTALLY OR VERTICALLY. GYPSUM PANELS NAILED 7 IN. OC WITH 6d CEMENT COATED NAILS 1-7/8 IN. LONG, 0.0915 IN. SHANK DIA. AND 15/64 IN. DIA. HEADS.

INSULATION:
GLASS FIBER INSULATION 3-1/2 IN. THICK GLASS FIBER BATTS BEARING (R-15) THE UL CLASSIFICATION MARKING AS TO SURFACE BURNING AND/OR FIRE RESISTANCE, FRICTION-FITTED TO FILL THE INTERIOR OF THE WALL.

REF: HTTPS://IQ.ULPROSPECTOR.COM/EN/PROFILE?E=14888

1 HR FIRE RATED EXTERIOR WALL CONSTRUCTION
3" = 1'-0"

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SHEET TITLE
WALL DETAILS

SHEET NO.
A4.2

MATERIALS LEGEND

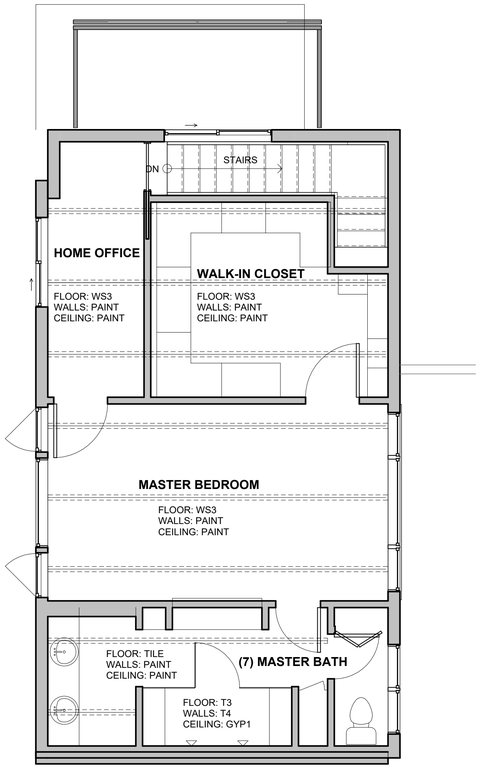
	MARK	DESCRIPTION
WOOD	WD1	ENGINEERED WOOD FLOOR 1/4" THICK BOARDS
	WD2	HARDWOOD PLANKS
TILE	T1	TILE, TO BE SELECTED BY OWNER
	T2	TILE, TO BE SELECTED BY OWNER
	T3	TILE, TO BE SELECTED BY OWNER
	T4	TILE, TO BE SELECTED BY OWNER
	T5	TILE, TO BE SELECTED BY OWNER
PAINT	P1	PAINT, TO BE SELECTED BY OWNER
	P2	PAINT, TO BE SELECTED BY OWNER
	P3	PAINT, TO BE SELECTED BY OWNER
	P4	PAINT, TO BE SELECTED BY OWNER
	P5	PAINT, TO BE SELECTED BY OWNER
	P6	PAINT, TO BE SELECTED BY OWNER
FINISH	WS1	WOOD STAIN
	WS2	WOOD STAIN
	S1	SILOXANE CLEAR CONCRETE SEALER

INTERIOR FINISH SCHEDULE

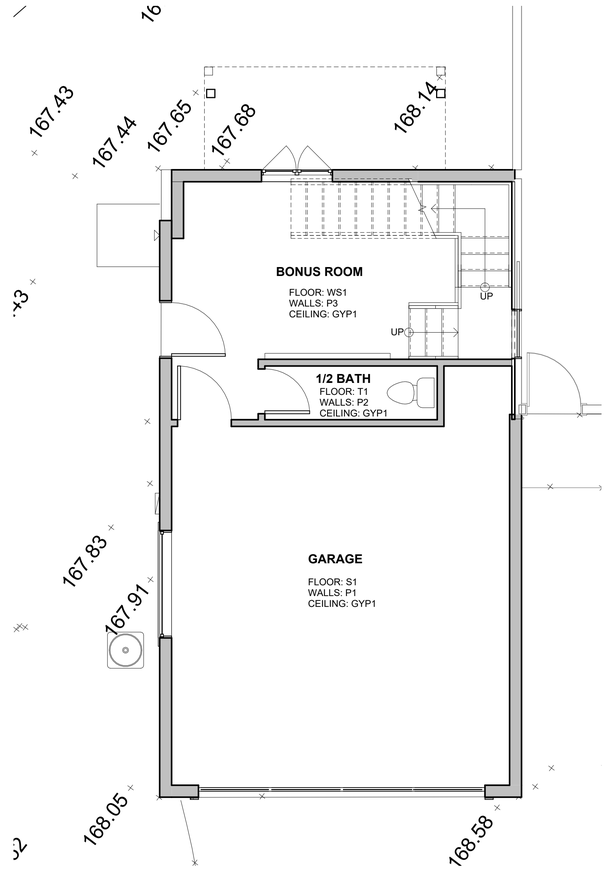
ROOM NAME	FLOOR	FINISH	BASEBOARD	WALLS	CEILING	NOTES
GARAGE	CONCRETE	S1	-	PAINT	PAINT	
1/2 BATH	WD1	TILE	TILE	PAINT	PAINT	
BONUS ROOM	WD2	WS1	WD	PAINT	PAINT	
HOME OFFICE	WD3	WS2	WD	PAINT	PAINT	EXPOSED WOOD BEAMS, WS2
WALK-IN CLOSET	WD3	WS2	WD	PAINT	PAINT	EXPOSED WOOD BEAMS, WS2
MASTER BEDROOM	TILE	TILE	WD	PAINT	PAINT	EXPOSED WOOD BEAMS, WS2
MASTER BATHROOM	TILE	TILE	TILE	PAINT	PAINT	HEATED FLOORS AT VANITY, IN FRONT OF SHOWER
TOILET ROOM	TILE	TILE	TILE	PAINT	PAINT	HEATED FLOOR, EXPOSED WOOD BEAMS, WS2
SHOWER	WD1	TILE	TILE	TILE	TILE	

GENERAL NOTES

1. SEE FINISH SCHEDULE ON SHEET A6.2 FOR DESIGN FINISH SELECTIONS.
2. TOILET ROOMS TO COMPLY WITH SECTION 1210.2.2 CBC FOR REQUIRED WATER RESISTANT BOARD OR BACKER BOARD PER TABLE 2509.2 CBC.
3. FLOORS IN THE RESTROOMS TO COMPLY WITH SECTION 1210.2.1 CBC, NON-ABSORBENT FLOOR BASE TO EXTEND A MINIMUM 4 " UP-TO THE WALL
4. ALL FLOORING MATERIALS COMPLY WITH SECTION 804.1 CBC.
5. ALL WALL AND CEILING FINISHES COMPLY WITH TABLE 803.13 CBC, FOR THE MAXIMUM FLAME SPREAD AND SMOKE DENSITY OF ALL FINISH MATERIALS.



2 LEVEL 2 - FINISHES
1/4" = 1'-0"



1 LEVEL 1 - FINISHES
1/4" = 1'-0"

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SHEET TITLE
DESIGN SELECTIONS AND FINISHES PLANS

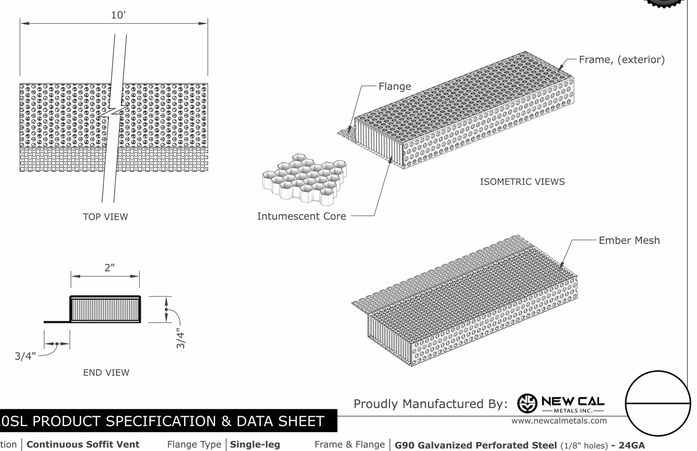
SHEET NO.
A6.1

VULCAN VENT®
FIRE & EMBER SAFE VENTS

Revision Date: October 4, 2021

Approved for use in the Wildland Urban Interface (W.U.I.)
Chapter 7A compliant: Tested and listed to ASTM E2886. **ICC-ESL** listing: 1300

WWW.VULCANVENTS.COM (916) 652-7424 info@newcalmetals.com P.O. Box 1126 Loomis, CA. 95650



Proudly Manufactured By: NEW CAL METALS INC.
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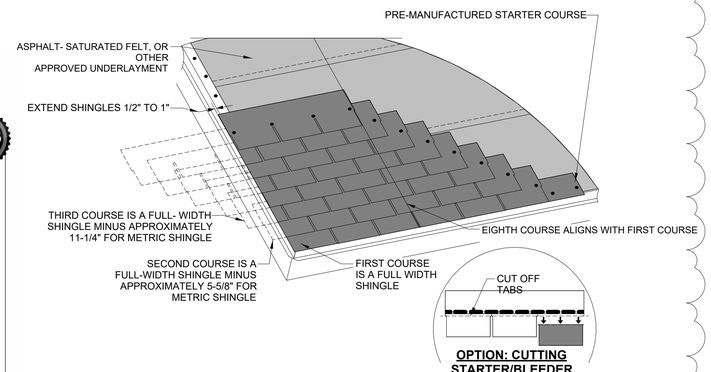
VSC2120SL PRODUCT SPECIFICATION & DATA SHEET

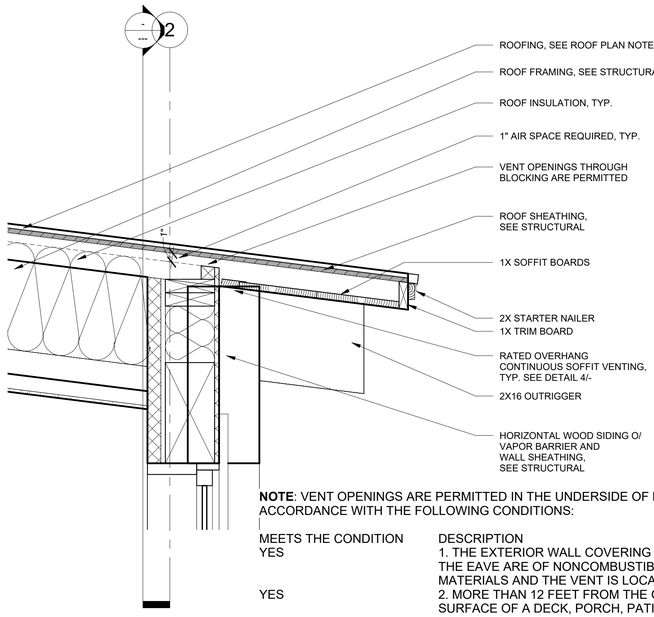
Model Description	**Continuous Soffit Vent**	Flange Type	**Single-leg**	Frame & Flange	**G90 Galvanized Perforated Steel** (1/8" holes) **- 24GA**
Model Number	**VSC2120SL**	NFVA	**96 sq. in.**	Intumescent Core	**5mm Hexagonal Matrix - Alum. with intumescent coating**
Model Size	**2" x 120"**			Ember Mesh	**14 Mesh - 304 Stainless Steel** (faces interior)



OPTION: CUTTING STARTER/BLEEDER STRIPS FROM 3-TAB SHINGLE

NOTES:
1. INSTALL SHINGLE NAILS APPROXIMATELY 1" IN FROM EACH EDGE AND SLIGHTLY ABOVE EACH CUT-OUT. CONSULT MANUFACTURERS' LITERATURE FOR "NAIL-ZONE" LOCATION AND FASTENING REQUIREMENTS.
2. INSTALL STARTER COURSE PER MANUFACTURERS' WRITTEN INSTRUCTIONS, IF NO GUIDELINES ARE PROVIDED, TRIM 5" TO 5-7/8" OFF END OF SHINGLE, CUT OFF TABS, AND INSTALL SO THAT SEAL STRIP IS DOWNSLOPE (I.E., ALONG LOWER EDGE). THE FIRST SHINGLE IN THE STARTER COURSE SHOULD BE A FULL-WIDTH SHINGLE MINUS 3". MAINTAIN STARTER AND FIRST COURSE OFFSET.
3. OPTIONAL "BLEEDER STRIPS" MAY BE INSTALLED ALONG RAKE EDGE PRIOR TO INSTALLING SHINGLE COURSES IN ADDITION TO PERIMETER EDGE METAL FLASHING. STRIPS MAY BE IDENTICAL TO STARTER COURSE MATERIAL, INSTALLED ALONG EAVE, OR STRIPS OF ROLLED ROOFING AND SHOULD BE INSTALLED WITH INTERMITTENT SEAL STRIPS OR TABBING CEMENT PLACED ALONG OUTSIDE EDGE.
4. EXTEND SHINGLES 1/2" TO 1" BEYOND FACE OF PERIMETER DRIP EDGE METAL AT RAKE AND EAVE ACCORDING TO MANUFACTURERS' RECOMMENDATIONS.
5. DIMENSIONS SHOWN ARE RECOMMENDED MINIMUMS AND ARE INTENDED TO BE APPROXIMATE TO ALLOW FOR REASONABLE TOLERANCES DUE TO FIELD CONDITIONS.

4 RATED SOFFIT VENT
12" = 1'-0"

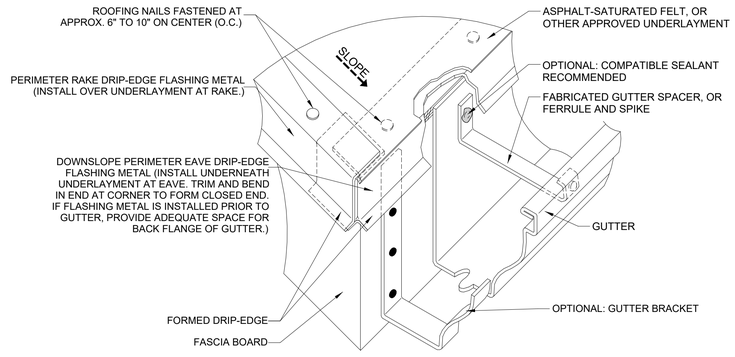


NOTE: VENT OPENINGS ARE PERMITTED IN THE UNDERSIDE OF ENCLOSED EAVES IN ACCORDANCE WITH THE FOLLOWING CONDITIONS:

MEETS THE CONDITION	DESCRIPTION
YES	1. THE EXTERIOR WALL COVERING AND EXPOSED UNDERSIDE OF THE EAVE ARE OF NONCOMBUSTIBLE OR IGNITION RESISTANT MATERIALS AND THE VENT IS LOCATED
YES	2. MORE THAN 12 FEET FROM THE GROUND OR WALKING SURFACE OF A DECK, PORCH, PATIO OR SIMILAR SURFACE.
YES	3. OPENINGS SHALL BE COVERED WITH A NONCOMBUSTIBLE, CORROSION RESISTANT MATERIAL HAVING 1/8" - 1/16" OPENINGS.

3 SOFFIT VENTING
1 1/2" = 1'-0"

2 COMPOSITION SHAKE ROOFING
1 1/2" = 1'-0"



NOTES:
1. PERIMETER SHEET METAL FLASHINGS WITH WATER-SHEDDING ROOF SYSTEMS. PERIMETER DRIP EDGE METAL FLASHING TO BE A MINIMUM OF 26-GAUGE PRE-FINISHED/PAINTED GALVANIZED STEEL, 16-OZ. COPPER, .032-INCH THICK PRE-FINISHED ALUMINUM, OR AN EQUIVALENT LONGEVITY CORROSION-RESISTANT METAL.
2. AT THE PERIMETER OF THE ROOF DECK PROVIDE A CONTINUOUS SOLID WOOD NAILING SURFACE OVER WHICH TO APPLY THE SHEET METAL DRIP-EDGE FLASHING.
3. THE VERTICAL-FACE FLANGE OF SHEET METAL DRIP-EDGE FLASHING TO PERMIT WATER TO DRIP OFF THE ROOF, AND INTO GUTTER, WITHOUT AFFECTING THE UNDERLYING CONSTRUCTION DURING TIMES OF NO WIND.
4. THE HORIZONTAL FLANGE OF SHEET METAL DRIP-EDGE FLASHING SHOULD EXTEND APPROXIMATELY 2" TO 3" MINIMUM ONTO THE ROOF.
5. DIMENSIONS SHOWN ARE RECOMMENDED MINIMUMS AND ARE INTENDED TO BE APPROXIMATE TO ALLOW FOR REASONABLE TOLERANCES DUE TO FIELD CONDITIONS.
6. THE PROFILE OF SPECIFIC COMPONENTS, THEIR CONFIGURATION OR SEQUENCING, CAN VARY WITH THE ROOF SYSTEM, WITH CLIMATIC DIFFERENCES, AND REGIONAL OR AREA PRACTICES.

1 ROOF GUTTER DETAIL
1 1/2" = 1'-0"

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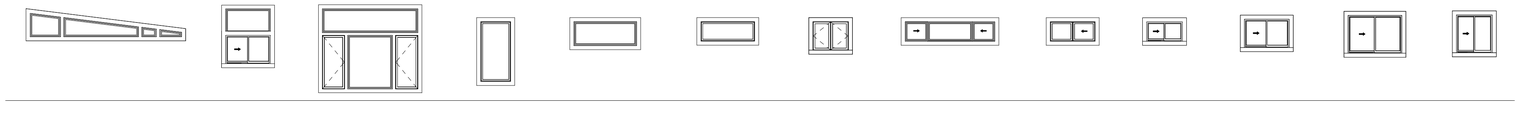
SHEET TITLE
ROOFING DETAILS

SHEET NO.
A6.2

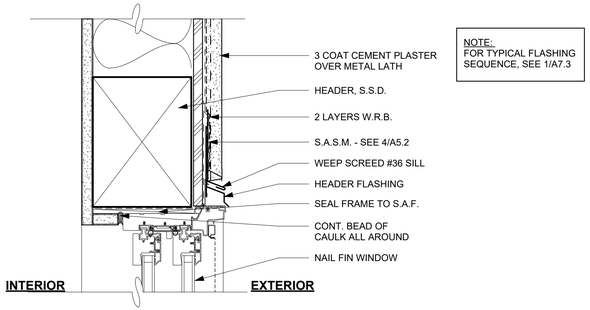
NOTES:

1. EGRESS WINDOW HAS 5.7 SF OF OPEN NET AREA.
2. OPENABLE EXTERIOR OPENING AREA MUST BE 4% OF THE FLOOR AREA.
2. MAXIMUM OPEN HEIGHT AT THE SILL IS +44" ABOVE THE FINISH FLOOR.
3. EXTERIOR GLAZED OPENING AREA (WINDOW) MUST BE AT LEAST 8% OF THE FLOOR AREA OF ALL HABITABLE ROOMS.
4.

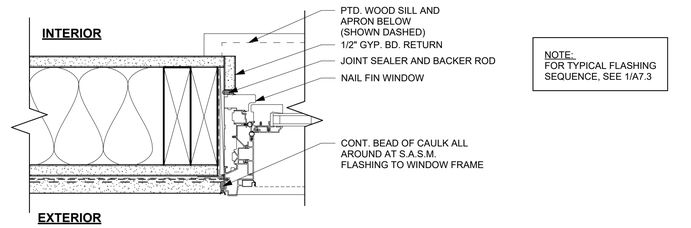


WINDOW SCHEDULE

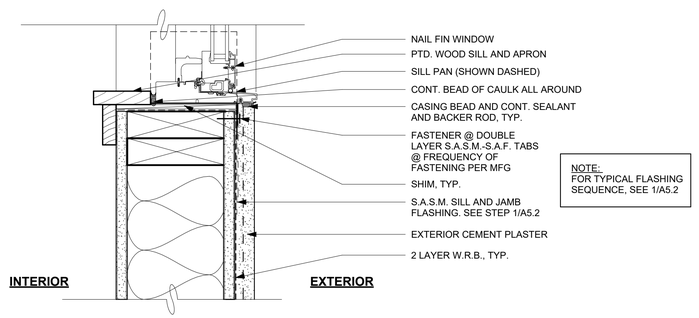
WINDOW NUMBER	TYPE	MATERIAL	WIDTH & HEIGHT	DETAILS SILL	JAMB	HEAD	NOTES
1	1	VINYL	4'-0" x 4'-2 5/8"	1 / A7.1	2 / A7.1	3 / A7.1	(E) SLIDER NAIL FIN WINDOW
2	2	VINYL	6'-0" x 4'-2 5/8"	1 / A7.1	2 / A7.1	3 / A7.1	(E) SLIDER NAIL FIN WINDOW
3	4	VINYL	4'-0" x 2'-2"	1 / A7.1	2 / A7.1	3 / A7.1	(E) SLIDER NAIL FIN BATHROOM WINDOW
4	10	VINYL	3'-4" x 6'-8"				(E) FIXED WINDOW
5	10	VINYL	3'-4" x 6'-8"				(E) FIXED WINDOW
6	10	VINYL	3'-4" x 6'-8"				(E) FIXED WINDOW
7	7	VINYL	4'-0" x 3'-2 5/8"				(E) DOUBLE CASEMENT WINDOW
8	8	VINYL	6'-0" x 2'-2"				(E) FIXED WINDOW TO BE RELOCATED (SEE A2.5)
9	13	VINYL	3'-2" x 4'-2 5/8"				(N) CUSTOM WINDOW IN SET
10	13	VINYL	8'-1 1/2" x 1'-11 3/32"				(N) CUSTOM WINDOW IN SET
11	13	VINYL	1'-4 3/4" x 10"				(N) CUSTOM WINDOW IN SET
12	13	VINYL	2'-2 5/8" x 7"				(N) CUSTOM WINDOW IN SET
13	5	VINYL	5'-0" x 2'-2"	1 / A7.1	2 / A7.1	3 / A7.1	(N) SLIDER NAIL FIN BATHROOM WINDOW
14	6	VINYL	10'-0" x 2'-2"	1 / A7.1	2 / A7.1	3 / A7.1	(N) XOX SLIDER WINDOW
15	8	VINYL	6'-0" x 2'-2"				(N) FIXED WINDOW
16	3	VINYL	5'-0" X 3'-2"	1 / A7.1	2 / A7.1	3 / A7.1	(N) SLIDER NAIL FIN WINDOW
17	9	VINYL	5'-0" x 2'-6"				(N) FIXED WINDOW
18	11	VINYL	10'-8" x 7'-0"				(N) FIXED W/ TEMPERED GLASS WINDOW CASEMENT W/ TEMPERED GLASS EACH SIDE AND TRANSOM ABOVE. PROVIDE GUARD / OPENING CONTROL DEVICE FOR WIDNOW WALL PROTECTION CRC312.2



3 SLIDER WINDOW HEADER
3" = 1'-0"



2 SLIDER WINDOW JAMB
3" = 1'-0"



1 SLIDER WINDOW SILL
3" = 1'-0"

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STATE OF CALIFORNIA

RICH RESIDENCE

3 SPRINGDALE WAY
EMERALD HILLS, CA 94062

REVISION

No.	Description	Date
1	PC RESPONSE 1	2/14/24

DERN PROJECT NUMBER
2304

DATE
7/11/2023

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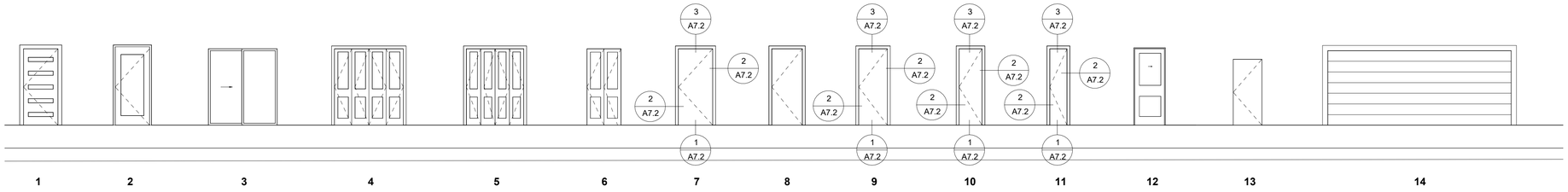
SHEET TITLE
WINDOW SCHEDULE AND DETAILS

SHEET NO.
A7.1



DOOR SCHEDULE AND HARDWARE

DOOR NUMBER	TYPE	MATERIAL	WIDTH & HEIGHT	THICKNESS	FINISH MATERIAL	FRAME MATERIAL	FINISH	HARDWARE GROUP	DETAILS SILL	JAMB	HEAD	NOTES
1	1	WOOD	3'-0" X 6'-8"	1-3/4"	(E)	WOOD	(E)	-	-/-	-/-	-/-	(E) ENTRY DOOR
2	3	FIBERGLASS/ TEMP GLASS	PR 3'-0" x 6'-8"	1-3/4"	(E)	FIBERGLASS	(E)	-	-/-	-/-	-/-	(E) SLIDING DOUBLE PATIO DOOR
3	8	WOOD	3'-0" X 6'-8"	1-3/4"	(E)	WOOD	(E)	-	-/-	-/-	-/-	(E) EXTERIOR PATIO DOOR
4	3	FIBERGLASS/ TEMP GLASS	PR3'-0" X 6'-8"	1-3/4"	PAINT	FIBERGLASS	PAINT	-	-/-	-/-	-/-	(E) SLIDING DOUBLE PATIO DOOR
5	2	FIBERGLASS/ TEMP GLASS	PR3'-0" X 6'-8"	1-3/4"	PAINT	FIBERGLASS	PAINT	-	-/-	-/-	-/-	(N) EXTERIOR PATIO DOOR
6	14	METAL/TEMP GLASS	16'-0" X 7'-6"	1-3/4"	PAINT	METAL	PAINT	-	-/-	-/-	-/-	(N) GARAGE DOOR
7	4	WOOD	6'-0" X 6'-8"	1-3/4"	(E)	WOOD	(E)	-	-/-	-/-	-/-	(E) BIFOLD 4-PANEL CLOSET DOOR
8	8	WOOD	2'-8" X 6'-8"	1-3/4"	(E)	WOOD	(E)	-	-/-	-/-	-/-	(E) INTERIOR DOOR
9	11	WOOD	1'-6" X 6'-8"	1-3/4"	(E)	WOOD	(E)	-	-/-	-/-	-/-	(E) CLOSET DOOR
10	8	WOOD	2'-8" X 6'-8"	1-3/4"	(E)	WOOD	(E)	-	-/-	-/-	-/-	(E) INTERIOR DOOR
11	9	WOOD	2'-6" X 6'-8"	1-3/4"	(E)	WOOD	(E)	-	-/-	-/-	-/-	(E) BATHROOM DOOR
12	8	WOOD	2'-8" X 6'-8"	1-3/4"	(E)	WOOD	(E)	-	-/-	-/-	-/-	(E) INTERIOR DOOR
13	9	WOOD	2'-6" X 6'-8"	1-3/4"	(E)	WOOD	(E)	-	-/-	-/-	-/-	(E) BATHROOM DOOR
14	12	WOOD	2'-8" X 6'-8"	1-3/4"	(E)	WOOD	(E)	-	-/-	-/-	-/-	(E) INTERIOR POCKET SLIDING DOOR
15	2	FIBERGLASS SOLID CORE	3'-0" X 6'-8"	1-3/4"	PAINT	FIBERGLASS	PAINT	1	-/A7.2	-/A7.2	-/A7.2	(N) 20-MIN RATED ENTRY/EXIT DOOR BETWEEN GARAGE & HOUSE. SEE NOTES, 8, 9, AND 10.
16	9	WOOD	2'-6" X 6'-8"	1-3/4"	PAINT	WOOD	(E)	-	-/-	-/-	-/-	(N) TOILET ROOM DOOR
17	2	FIBERGLASS/ TEMP GLASS	3'-0" X 6'-8"	1-3/4"	PAINT	FIBERGLASS	PAINT	1	-/A7.2	-/A7.2	-/A7.2	(N) EXTERIOR PATIO DOOR
18	12	WOOD/TEMP GLADS	3'-0" X 6'-8"	1-3/4"	PAINT	WOOD	PAINT	-	-/-	-/-	-/-	(N) POCKET DOOR W/ FRAME, TRIM AND HARDWARE
19	7	WOOD	3'-0" X 6'-8"	1-3/4"	PAINT	WOOD	PAINT	3	1/A7.2	2/A7.2	3/A7.2	(N) MASTER BEDROOM DOOR
20	7	WOOD	3'-0" X 6'-8"	1-3/4"	PAINT	WOOD	PAINT	3	1/A7.2	2/A7.2	3/A7.2	(N) WALK-IN CLOSET DOOR
21	9	WOOD	2'-6" X 6'-8"	1-3/4"	PAINT	WOOD	PAINT	5	1/A7.2	2/A7.2	3/A7.2	(N) BATHROOM DOOR
22	9	WOOD	2'-6" X 6'-8"	1-3/4"	PAINT	WOOD	PAINT	5	1/A7.2	2/A7.2	3/A7.2	(N) TOILET CLOSET DOOR
23	6	WOOD	3'-0" X 6'-8"	1-3/4"	PAINT	WOOD	PAINT	4	-/-	-/-	-/-	(N) LINEN CLOSET 2- PANEL BIFOLD DOOR
24	13	TEMPERED GLASS	2'-6" X 5'-9"	1/2"	N/A	GLASS	N/A	5	-/-	-/-	-/-	(N) SHOWER DOOR

HARDWARE GROUPS

GROUP 1 (ENTRY/EXIT DOOR)

HINGES	STANLEY	FBB179	619
LOCKSET	SCHLAGE	F40LAT	619
STRIKE	SCHLAGE		619

GROUP 2 (GARAGE DOOR)

LOCKSET
STRIKE

GROUP 3 (PASSAGE / PRIVACY BEDROOM DOOR)

HINGES	STANLEY	FBB179	619
LOCKSET	SCHLAGE	F40LAT	619
STRIKE	SCHLAGE		619

GROUP 4 (CLOSET DOOR)

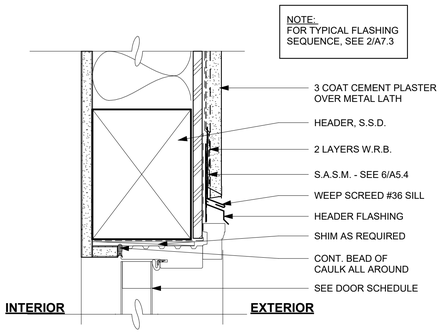
HINGES	STANLEY	FBB179	619
HANDLES	1" ROUND KNOBS		619
STRIKE	SCHLAGE		619

GROUP 5 (BATH DOOR)

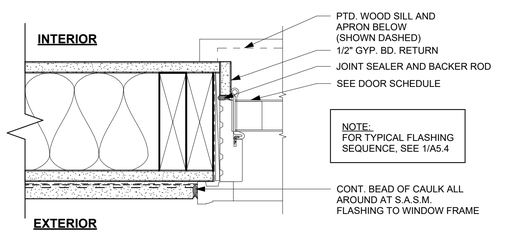
HINGES	STANLEY	FBB179	619
HANDLES	1" ROUND KNOBS		619
STRIKE	SCHLAGE		619

GENERAL NOTES

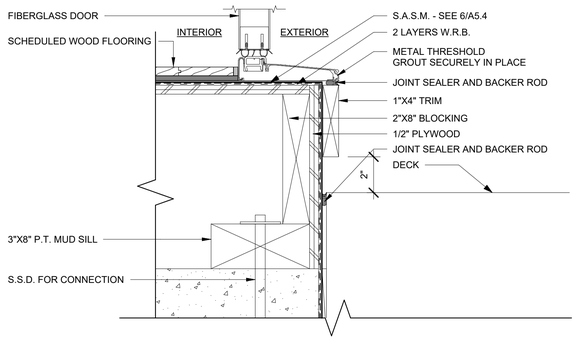
1. EXIT DOORS TO BE OPENABLE FROM THE INSIDE WITHOUT USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
2. DOORS WITHIN THE PATH OF TRAVEL FOR PERSON WITH DISABILITY TO BE OPERABLE WITH A SINGLE EFFORT BY LEVER.
3. DOOR CLOSERS TO BE ADJUSTED TO PROVIDE FOR A MAXIMUM EFFORT TO OPERATE OF A 5 LBS. AT FIRE DOOR USE LESS THAN 15# FORCE ACCEPTABLE BY FIRE MARSHAL
4. THRESHOLDS SHALL NOT EXCEED ½" IN HEIGHT.
5. DOORS TO HAVE 1-1/2 PAIR BUTTS PER LEAF.
6. BOTH SIDES OF DOORS SHALL BE FINISHED THE SAME, U.O.N.
7. SOLID WOOD DOORS TO BE 1-3/8" THICK, MINIMUM.
8. SOLID OR HONEYCOMB CORE STEEL DOORS TO BE 1-3/8", MINIMUM.
9. PROVIDE SELF CLOSING HINGES OR CLOSER.
10. PROVIDE GASKETING FOR FIRE / SMOKE PREVENTION.



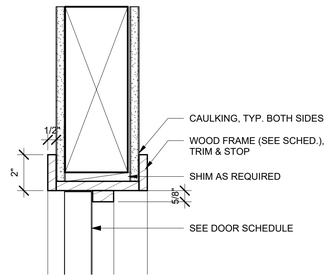
9 VENTED FIBERGLASS DOOR HEAD
3" = 1'-0"



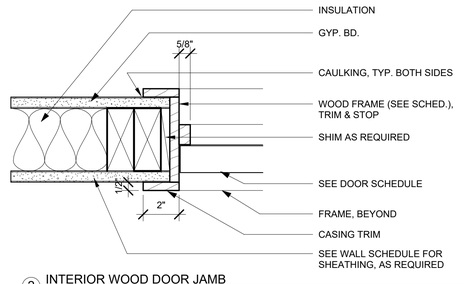
7 FIBERGLASS HINGE JAMB
3" = 1'-0"



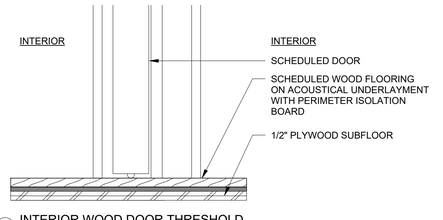
6 VENTED FIBERGLASS DOOR THRESHOLD
3" = 1'-0"



3 INTERIOR WOOD DOOR HEAD
3" = 1'-0"



2 INTERIOR WOOD DOOR JAMB
3" = 1'-0"



1 INTERIOR WOOD DOOR THRESHOLD
3" = 1'-0"

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STEP 1

0. ENSURE ROUGH OPENING CAPABLE OF ACCOMMODATING FLASHING AND ALL APPLICABLE WATERPROOFING ELEMENTS.

1. INSTALL G.S.M. BASE FLASHING

1a. SET FLASHING IN BED OF SEALANT

NOTE:
SEE DETAIL 2/- FOR DOOR SILL PAN AT PODIUM OR BALCONY CONDITION

STEP 1 & 2 TO BE 1 PIECE OR BOTH INSTALLED PRIOR TO WATERPROOFING.

STEPS 2 AND 3

2. INSTALL UNCURED NEOPRENE FLASHING OVER BASE FLASHING

2a. WRAP NEOPRENE INTO ROUGH OPENING

3. ATTACH MINIMUM 9" WIDE JAMB S.A.S.M. TO FACE

3a. EXTEND G.S.M. BASE FLASHING JAMB FLANGES

3b. WRAP 2" ONTO INSIDE OF ROUGH OPENING JAMBS

3c. EXTEND 4" ABOVE LOWER EDGE OF ROUGH OPENING HEAD. INSTALL WITHOUT WRINKLES & INSTALL WITH ROLLER

NOTE:
STEP 1 & 2 TO BE 1 PIECE OR BOTH INSTALLED PRIOR TO WATERPROOFING

STEP 4

4. ATTACH MINIMUM 9" WIDE HEAD STRIP

4a. WRAP BOTTOM EDGE 2" INTO ROUGH OPENING

4b. EXTEND BEYOND EDGE OF ROUGH OPENING HEAD MINIMUM 9"

4c. SECURE PER MFR. SPECIFICATIONS ACROSS CONT. SUBSTRATE

STEP 5 AND 6

5. INSTALL DOOR AND DRAME

6. ATTACH FINISH MATERIAL TERMINATION (J-MOLD OR ANGLE FLASHING, ETC.) OVER FIRST LAYER OF MEMBRANE FLASHING

6a. LEAVE 1/2" GAP FROM FRAME OVER FIRST LAYER OF FLASHING

6b. INSTALL ADDITIONAL 9" WIDE S.A.S.M. OVER FINISH MATERIAL TERMINATION FLANGE

6c. INSTALL STRIP OVER WEEP SCREED AT CEMENT PLASTER CONDITION

6d. EXTEND JAMB STRIPS FROM SILL TO 4" ABOVE BOTTOM OF HEADER

STEP 7

7. COMMENCING AT THE BOTTOM (SILL PLATE) OF THE WALL, LAY BUILDING PAPER (FIRST AND SECOND LAYERS)

7a. MINIMUM 4" VERTICAL LAP AND MINIMUM 6" HORIZONTAL LAP

7b. INTERWEAVE INDIVIDUAL BUILDING PAPER SHEETS

7c. INSTALL BACKER ROD AND SEALANT ALONG DOOR FRAME PERIMETER

STEPS 8 AND 9

8. INSTALL G.S.M. HEAD FLASHING, 24 GA. MIN.

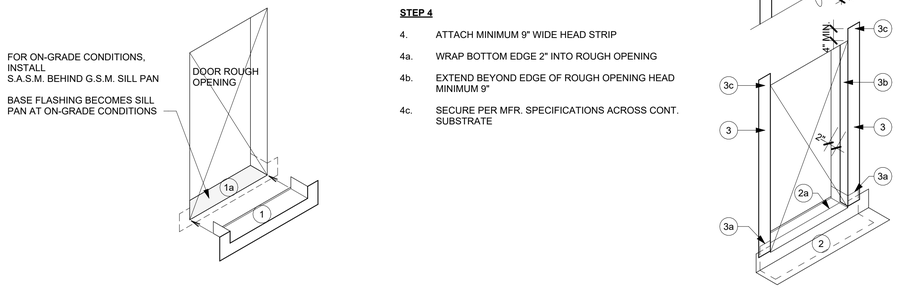
8a. SET HEAD FLASHING IN BEAD OF SEALANT AT DOOR FRAME TO PROVIDE AIR SEAL

8b. END CAPS AT HEAD FLASHING OVER PLASTER J-MOLD AND SEALANT JOINT AT JAMBS

8c. INSTALL HEAD DRIP SCREED OVER HEAD FLASHING AT CEMENT PLASTER CONDITIONS

8d. INSTALL ADDITIONAL 9" STRIP OF S.A.S.M. OVER DRIP SCREED AND HEAD FLASHING FLANGE

9. APPLY THIRD LAYER OF BUILDING PAPER OVER ENTIRE ASSEMBLY. CONTINUE INSTALL W.R.B. ABOVE HEAD



2 TYPICAL EXTERIOR DOOR FLASHING

STEP 1 - SILL, JAMB & HEAD FLASHING

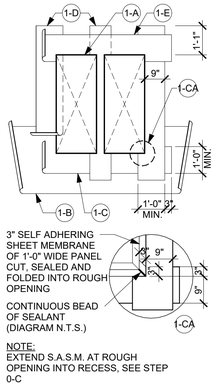
1-A
CONSTRUCT ROUGH OPENING PER WINDOW MANUFACTURER INSTRUCTIONS. VERIFY SHEATHING CUT FLUSH WITH ROUGH OPENING AT ALL EDGES.

1-B
INSTALL BUILDING PAPER AT SILL, CUT IT SUFFICIENTLY LONG TO PROJECT BEYOND THE VERTICAL SELF ADHESIVE SHEET MEMBRANE TO BE APPLIED AT STEP 1-D. NOTCH BUILDING PAPER TO ACCOMMODATE WINDOW.

1-C/1-CA
INSTALL SELF ADHERING SHEET MEMBRANE (S.A.S.M.) AT SILL WITH 9" BELOW AND 3" BEYOND INTO THE ROUGH OPENING. EXTEND SELF ADHERING SHEET MEMBRANE 3" BEYOND VERTICAL SELF ADHERING SHEET MEMBRANE TO BE APPLIED AT STEP 1-D. SEE DIAGRAM 1-CA FOR ADDITIONAL INFO.

1-D
APPLY SELF ADHERING SHEET MEMBRANE AT JAMBS SIMILAR TO STEP 1-C. CUT SUFFICIENTLY LONG TO PROJECT 4" BEYOND VERTICAL SELF ADHERING SHEET MEMBRANE TO BE APPLIED AT STEP 1-E.

1-E
APPLY SELF ADHERING SHEET MEMBRANE AY HEAD SIMILAR TO STEP 1-C.



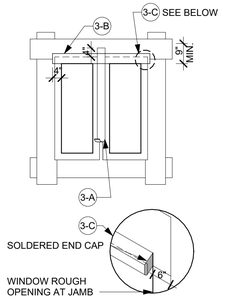
NOTE:
EXTEND S.A.S.M. AT ROUGH OPENING INTO RECESS, SEE STEP 0-C

STEP 3 - HEAD AND POST FLASHING

3-A
APPLY VERTICAL STRIP OF S.A.S.M. TO MULLIONS BETWEEN ADJACENT WINDOWS. OVERLAP JAMB FLANGES COMPLETELY. EXTEND 6" BEYOND TOP OF HEAD FLANGE AND 6" BEYOND BOTTOM OF SILL FLANGE.

3-B
WHERE HEAD TRIM OCCURS, INSTALL SHEET METAL HEAD FLASHING WITH SOLDERED END CAPS, TYP. SEE DIAGRAM 3-C. INSTALL SHEET METAL FLASHING ABOVE TRIM EXTENDING 1" BEYOND EDGE OF ROUGH OPENING. SHEET METAL FLASHING TO HAVE A 2" MIN. VERTICAL LEG, A HORIZONTAL LEG 1/8" DEEPER THAN HEAD TRIM, AND A VERTICAL 1/4" HEMMED BOTTOM EDGE. INSTALL SELF ADHERING SHEET MEMBRANE OVER VERTICAL LEG OF SHEET METAL FLASHING. EXTEND SHEET METAL FLASHING 6" BEYOND JAMB ROUGH OPENING.

3-C
SOLDERED END CAPS AT SHEET METAL HEAD FLASHING.

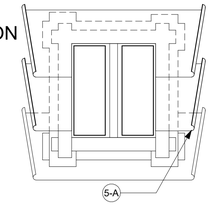


STEP 5 - BUILDING PAPER APPLICATION

4-A
INSTALL BUILDING PAPER. OVERLAP WEATHERBOARD FASHION FROM BOTTOM TO TOP OF WALL PER MANUFACTURER'S INSTRUCTIONS.

NOTES:
DO NOT PENETRATE THE WINDOW NAIL FINS WITH FASTENERS FOR SIDING OR TRIM.

WHERE JAMB AND SILL SECTIONS ARE EXPOSED AT THE BOTTOM OF THE WINDOW, COVER SASM WITH AN ADDITIONAL LAYER OF BUILDING PAPER.



STEP 0 - HEAD AND SILL CORNER FLASHING - AT RECESSED WINDOW ONLY

0
ENSURE ROUGH OPENING CAPABLE OF ACCOMMODATING FLASHING AND
ALL RELATED WATERPROOFING ELEMENTS.

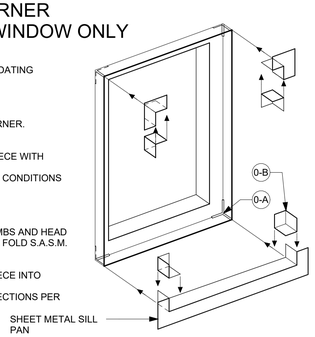
0-A
ADD 3 BEADS OF SEALANT IN EACH RECESSED CORNER.

0-B
APPLY PRE-FORMED CORNER SHIELD FLASHING PIECE WITH GALVANIZED
SHEET METAL OR MEMBRANE SILL PLAN PER FIELD CONDITIONS INTO
EACH CORNER, FASTEN WITH STAPLES.

0-C
INSTALL BUILDING PAPER AND S.A.S.M. AT SILL, JAMBS AND HEAD AS NOTED IN STEPS 1B, C, D AND E. CUT SEAL AND FOLD S.A.S.M. INTO RECESS.

INCREASE S.A.S.M. WIDTH BY 12" TO APPLY ONE PIECE INTO ROUGH
OPENING, FRAMING RECESS AND REQUIRED PROJECTIONS PER STEPS
1B, C, D AND E.

GENERAL NOTE:
WINDOW INSTALLATION TO MEET THE REQUIREMENTS OF AAMA 2400-02 (FORMERLY CAWM 400-95) "STANDARD PRACTICE FOR INSTALLATION OF WINDOWS WITH A MOUNTING FLANGE IN STUD FRAME CONSTRUCTION", METHOD B



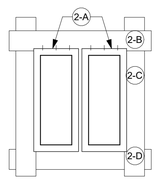
STEP 2 - WINDOW INSTALLATION

2-A
APPLY CONTINUOUS SEALANT BEAD TO INTERIOR SIDE OF WINDOW NAIL-FINS. APPLY ADDITIONAL SEALANT AT MITER CORNERS OF WINDOW FRAME (BACK SIDE). INSPECT WINDOW FINS FOR DAMAGE. INSTALL WINDOW PER MANUFACTURER'S INSTRUCTIONS. UNLESS OTHERWISE NOTED
BY MANUFACTURER, INSTALL AS FOLLOWS:

2-B
FASTEN AT HEAD FIN PER MANUFACTURER'S RECOMMENDATIONS.
ATTACH AS RECOMMENDED. ALLOW FOR MOVEMENT. TAP DOWN
SHARP EDGES AT NAIL HEAD TO AVOID DAMAGE TO FLASHING PAPER.

2-C
MIN. 3 FASTENERS EACH SIDE AT 16" O.C. MAX. TYP. OR MORE FREQUENTLY PER MANUFACTURE

2-D
NO FASTENERS TO BE WITH 3" OF OUTSIDE CORNER OF FINS.

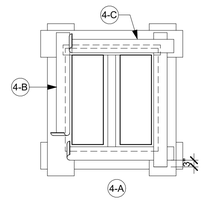


STEP 4 - SECOND SELF ADHERING SHEET MEMBRANE APPLICATION

4-A
CONTINUE INSTALLING 6" WIDE SELF ADHERING SHEET MEMBRANE AT JAMBS TO OVERLAP NAIL FIN AND EXTEND
3" BEYOND SILL SELF ADHERING SHEET MEMBRANE.

4-B
INSTALL FLUID APPLIED MEMBRANE OR 6" SELF ADHERING SHEET MEMBRANE AT JAMB TO OVERLAP HEAD AND SILL FLASHING. EXTEND 3" BEYOND EDGE OF SELF ADHERING SHEET MEMBRANE AT HEAD AND SILL.

4-C
INSTALL 6" SELF ADHERING SHEET MEMBRANE AT HEAD TO OVERLAP SHEET METAL HEAD FLASHING. EXTEND 3" BEYOND EDGE OF SELF ADHERING SHEET MEMBRANE AT JAMB.



1 TYPICAL WINDOW FLASHING

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