

	CITY OF OCEANSIDE	I.B. 133
	Building Division	
	300 N Coast Highway Oceanside, CA 92054 760-435-3950 www.ci.oceanside.ca.us	
	2022 California Residential Code	
	1/1/2023 - 12/31/2025	
	Effective Date	

Deferred Submittal Agreement

Project Name: HOOPER RESIDENCE Permit Number: _____

Project Address: 230 HOOPER ST

Owner Name: RICHARD MATELOS

2022 CBC 107.3.4.1 Deferred Submittals – For the purpose of this section, deferred submittals are defined as those portions of the design that are not submitted at the time of the building permit application and that are to be submitted to the building official within a specified period.

- Deferral of any submittal items shall have the prior approval of the building official before being accepted as part of an approved plan or installed. The design professional in responsible charge shall list the deferred submittals on the first sheet of the construction documents for review by the Building Official.
- It is critical that the design professional provide deferred plans and documents in a timely fashion to allow for review and approval. Delays in deferred submittals will delay the close-in inspection and/or occupancy approval.
- If work is initiated prior to the Building Official's approval of the deferred submittal items, the project will be placed under a Stop Work Notice in accordance with Section 115 of the 2022 CBC.

As the owner of the property I agree to the following.

At my own risk, I request a deferred submittal for the following items:

- PHOTOVOLTAIC SYSTEM
- FIRE SPRINKLER SYSTEM
-
-

I understand, the deferred submittal items will not be installed until the deferred submittal documents have been approved by the Building Official.

I understand that if work is initiated prior to the Building Official's approval of the deferred submittal items, the project will be placed under a Stop Work Notice in accordance with Section 115 of the 2022 CBC.

I understand that approval for occupancy will not be given prior to approval of deferred items.

I, the property owner, have read and agree to comply with the terms and conditions of this agreement.

Owner Signature: [Signature] Date: 10/29/24

G:\2023 Website Update\Informational Bulletins - Final\133 Deferred Submittals.docx

HOOVER RESIDENCE

FOR

EG CREATIVE DESIGN BUILD INC.

SCOPE OF WORK

- PROJECT CONSISTS OF A NEW 1405 SQ FT 1-STORY SINGLE FAMILY RESIDENCE & 591 SQ FT 2 CAR GARAGE. BUILDING TYPE: VB, R-3 & U- OCCUPANCY FULLY SPRINKLERED PER NFPA 13D
- OWNER SHALL OBTAIN A GRADING PERMIT PER GRADING PLAN BY OTHERS. *(FOR REFERENCE ONLY)*
- FILL SOILS SHALL BE COMPACTED TO 90% AND BE TESTED BY A LICENSED SOILS ENGINEER.
- PHOTOVOLTAIC SYSTEM REQUIRES A SEPARATE PERMIT PER INSTALLER'S DRAWINGS *(TO BE FINISHED PRIOR TO FINAL INSPECTION)*
- FIRE SPRINKLER PLANS, BY INSTALLER, SHALL BE APPROVED PRIOR TO FRAMING INSPECTION. *FOR REFERENCE ONLY*

- OWNER SHALL PROVIDE A WASTE MANAGEMENT PLAN IN ACCORDANCE WITH CALGREEN SEC. 4.408.1 PRIOR TO ISSUANCE OF PERMIT

San Diego Gas and Electrical work order indicates that trenching will be required for the main service panel upgrade. Furthermore, this trenching will take place within or near the City of Oceanside right-of-way this requiring a right-of-way permit to be obtained prior to the issuance of the building permit. Please contact the transportation division of public works or the development services technicians with any questions relating to obtaining a right-of-way permit.

SHEET INDEX

TITLE

- PLOT PLAN
- FOUNDATION PLAN
- FLOOR PLAN
- WINDOW AND DOOR SCHEDULES & ROOF LAYOUT
- ELECTRICAL PLAN
- ROOF FRAMING PLAN
- SECTIONS
- ELEVATIONS
- TITLE 24
- TITLE 24

SN GENERAL NOTES & SPECS
SD1 STRUCTURAL DETAILS
SD2 STRUCTURAL DETAILS
CS-1 MINIMUM CONSTRUCTION SPECIFICATIONS
G-1 CALIFORNIA GREEN STANDARDS
G-2 CALIFORNIA GREEN STANDARDS

APPLICABLE CODES

PLANS FOR THIS PROJECT SHALL COMPLY WITH THE 2022 EDITION OF THE CALIFORNIA BUILDING CODE (CBC), 2022 CALIFORNIA RESIDENTIAL CODE (CRC), 2022 CALIFORNIA MECHANICAL CODE (CMC), 2022 CALIFORNIA PLUMBING CODE (CPC), 2022 CALIFORNIA ELECTRICAL CODE (CEC), 2022 CALIFORNIA FIRE CODE (CFC), 2022 CALIFORNIA GREEN STANDARDS, 2022 CALIFORNIA ENERGY CODE (CEC), & CURRENT EDITION OF THE URBAN WILDLIFE INTERFACE CODE FOR HIGH SEVERITY FIRE ZONES.

PLANS AND CONSTRUCTION SHALL COMPLY WITH THE CITY OF OCEANSIDE CHAPTER 6 BUILDING CONSTRUCTION REGULATIONS, MUNICIPAL CODE CITY OF OCEANSIDE 2022 BUILDING CODES & REGULATIONS HANDOUT

- The discharge of pollutants to any storm drainage system is prohibited. No solid waste, petroleum byproducts, soil particulates, construction waste materials, or wastewater generated on construction sites or by construction activities shall be placed, conveyed, or discharged into the street, gutter or storm drain system.
- Buildings shall be provided with approved address identification in accordance with Section R319 of the 2022 California Residential Code.
- The finish grade and impervious surfaces shall drain away from the foundation walls at a minimum slope of 2% or shall fall 6 inches within the first ten feet where possible.
- A Foundation Forms Certification that is certified by a licensed land surveyor will be required to be provided to the building inspector at the first footing inspection.
- Provide a letter from the engineer of record stating that they have also reviewed the proposed truss plans and that they are acceptable with the engineered design.



Corrections

Arthur Cronin 08/21/2025 10:32:36 AM

TITLE 24 SPECIAL FEATURES

REQUIRED SPECIAL FEATURES

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

- Window overhangs and/or fins
- Exposed slab floor in conditioned zone
- Northwest Energy Efficiency Alliance (NEEA) rated heat pump water heater; specific brand/model, or equivalent, must be installed

HERS FEATURE SUMMARY

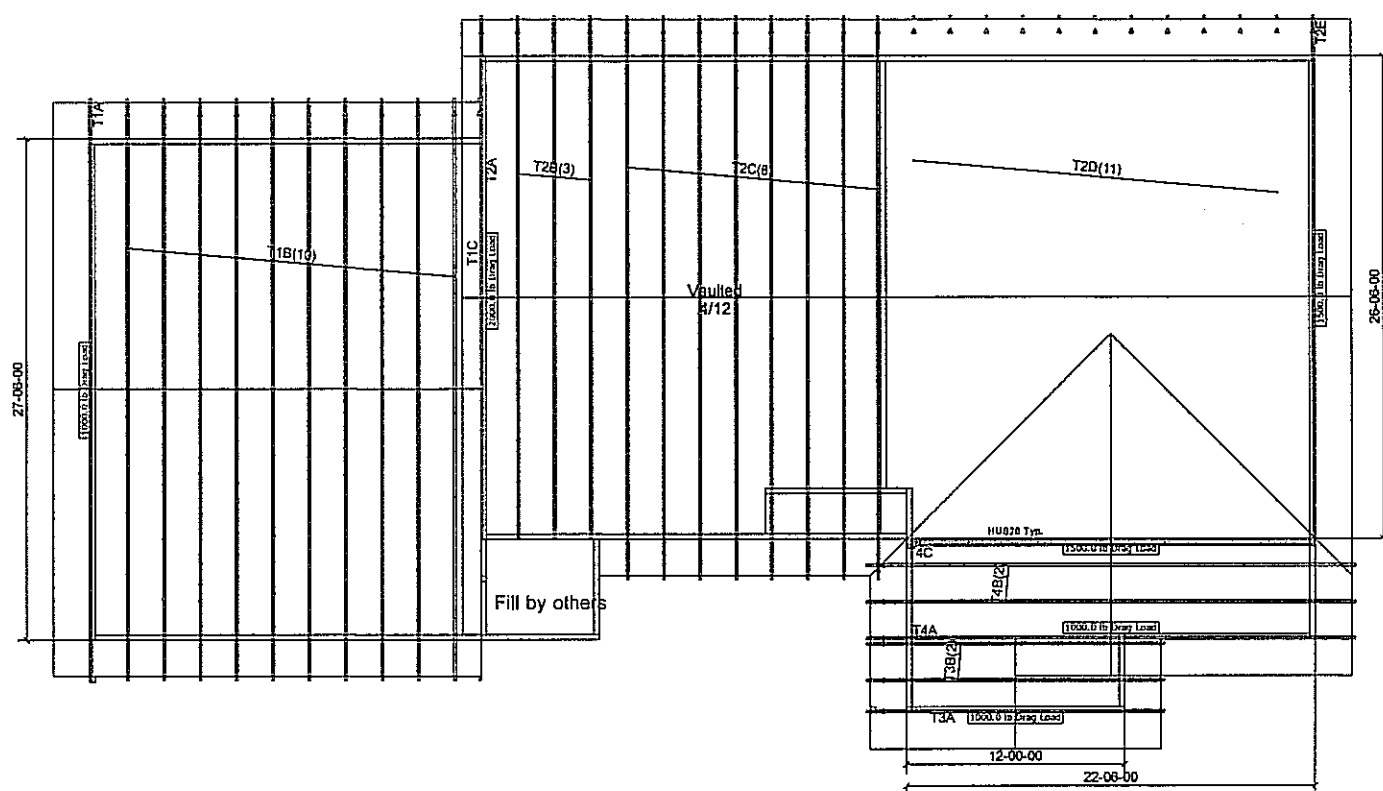
The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in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

- Quality insulation installation (QII)
- Indoor air quality ventilation
- Kitchen range hood
- Minimum Airflow
- Verified EER/EER2
- Verified SEER/SEER2
- Fan Efficiency Watts/CFM
- Verified HSPF
- Verified heat pump rated heating capacity
- Duct leakage testing

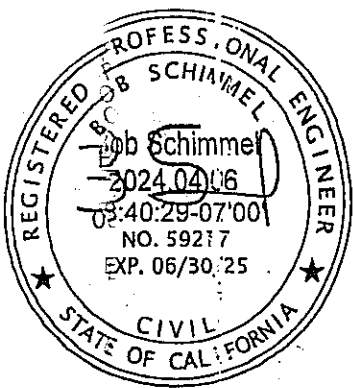
"Properly completed and signed Certificates of Installation (CF2R forms) shall be provided to the Inspector in the field. For projects requiring HERS verification, the CF2R forms shall be registered with a California-approved HERS provider data registry."

"Properly completed Certificates of Verification (CF3R forms) shall be provided to the Inspector in the field for items requiring HERS verification. CF3R forms shall be registered with a California-approved HERS provider data registry."

- ALL SITE PREPARATION, OVEREXCAVATION, COMPACTION, AND FOUNDATION INSTALLATION SHALL BE IN ACCORDANCE WITH SOILS REPORT # W.O.8733-A-SC PREPARED BY GEOSOILS, INC. ALLOWABLE BEARING VALUE: 2000 PSF.



	
Job Name: 230 Hoover	Permit Number:
Customer: Robin Franklin	Designer:
Site Address: 230 Hoover St	
City, State: Oceanside, CA	



REVISIONS	BY
10/28/24	R



Robin J. Franklin
Professional Building Designer
rfrankindesign@aatt.net
25255 OAKANA ROAD
RAMONA, CA. 92065
(619) 857-1064

HOOVER STREET RESIDENCE

230 HOOVER STREET
OCEANSIDE, CA. 92054

DRAWN	CHECK	DATE	SCALE	JOB	SHEET
	3				
TITLE					
OF SHEETS					

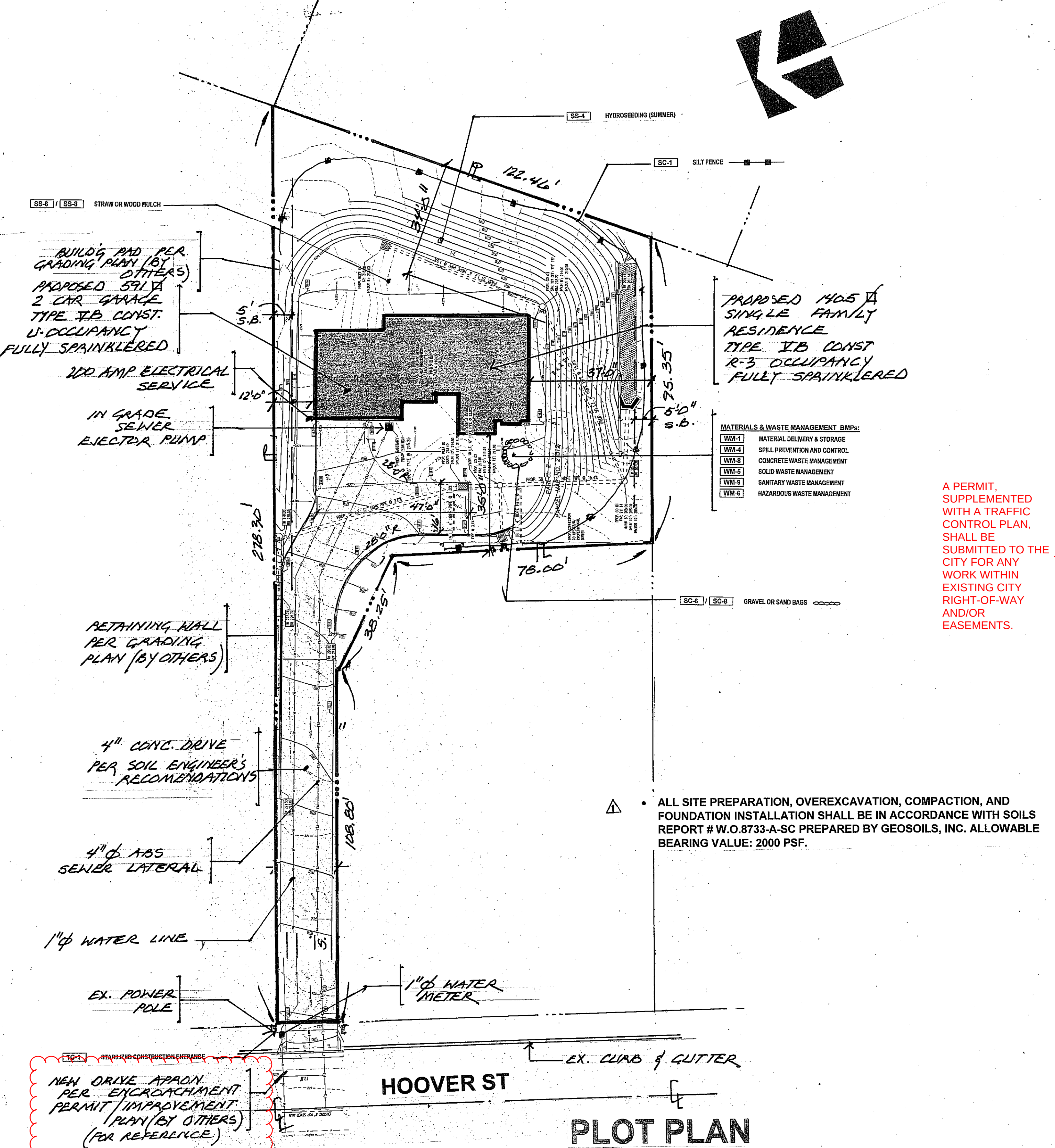
IMPERVIOUS SURFACES

- EXISTING STRUCTURES: 00 SQ FT
- EXISTING PAVEMENT: 00 SQ FT
- PROPOSED STRUCTURES: 1996 SQ FT
- PROPOSED PAVEMENT: 3360 SQ FT
- TOTAL IMPERVIOUS SURFACES: 5356 SQ FT
- ALL ROOFING TO BE GUTTERED WITH DOWNSPOUTS TERMINATING INTO LANDSCAPING.
- NEW LANDSCAPED AREA: 485 SQ FT

LOT COVERAGE / F.A.R.

- LOT SIZE: 14,505 SQ FT NET
- EXISTING COVERAGE: 00 SQ FT
- PROPOSED COVERAGE: 1996 SQ FT (13.7%)

BMP LEGEND	
PDS 655	BROW DITCH
PDS 659	BERM
DIRECTION OF LOT DRAINAGE	
MATERIALS & WASTE MANAGEMENT BMPs:	
WM-1	MATERIAL DELIVERY & STORAGE
WM-4	SPILL PREVENTION AND CONTROL
WM-8	CONCRETE WASTE MANAGEMENT
WM-9	SOLID WASTE MANAGEMENT
WM-5	SANITARY WASTE MANAGEMENT
WM-6	HAZARDOUS WASTE MANAGEMENT
TEMPORARY RUNOFF CONTROL BMPs:	
SS-2	PRESERVATION OF EXISTING VEGETATION
SS-3	BONDED OR STABILIZED FIBER MATRIX (WINTER)
SS-4	HYDROSEEDING (SUMMER)
SS-8	STRAW OR WOOD MULCH
SS-7	PHYSICAL STABILIZATION (WINTER)
SS-10	ENERGY DISSIPATOR
SC-1	SILT FENCE
SC-2	SEDIMENT / DESILTING BASIN
SC-5	FIBER ROLLS
SC-8	GRAVEL OR SAND BAGS
SC-7	STREET SWEEPING AND VACUUMING
SC-10	STORM DRAIN INLET PROTECTION
NS-2	DEWATERING FILTRATION
TC-1	STABILIZED CONSTRUCTION ENTRANCE
TC-2	CONSTRUCTION ROAD STABILIZATION
TC-3	ENTRANCE / EXIT TIRE WASH
BASELINE BMPs FOR EXISTING AND PROPOSED SITE FEATURE	
SD-B	DIRECT RUNOFF TO PERVIOUS AREAS
SD-C	INSTALL GREEN ROOF
SD-E	INSTALL RAIN BARRELS
SD-G	CONSERVE NATURAL FEATURES
SD-H	PROVIDE BUFFERS AROUND WATER BODIES
SD-I	CONSTRUCT SURFACES FROM PERMEABLE MATERIALS
SD-N	SUSTAINABLE LANDSCAPING



PLOT PLAN

LEGAL DESCRIPTION

- PARCEL 2 OF PARCEL MAP 21512 CITY OF OCEANSIDE, COUNTY OF SAN DIEGO.
- A.P.N. 149-064-32

SITE NOTES

- PLANS FOR THIS PROJECT SHALL COMPLY WITH THE 2022 EDITION OF THE CALIFORNIA BUILDING CODE (CBC), 2022 CALIFORNIA RESIDENTIAL CODE (CRC), 2022 CALIFORNIA MECHANICAL CODE (CMC), 2022 CALIFORNIA PLUMBING CODE (CPC), 2022 CALIFORNIA ELECTRICAL CODE (CEC), 2022 CALIFORNIA FIRE CODE (CFC), 2022 CALIFORNIA GREEN STANDARDS, 2022 CALIFORNIA ENERGY CODE (CEC), & CURRENT EDITION OF THE URBAN WILDLIFE INTERFACE CODE FOR HIGH SEVERITY FIRE ZONES.
- ALL UTILITIES SHALL BE UNDERGROUND (UNLESS OTHERWISE NOTED).
- OWNER AND CONTRACTOR SHALL CONSULT WITH APPROPRIATE UTILITY PROVIDERS TO VERIFY EXACT UTILITY SERVICE LOCATIONS PRIOR TO COMMENCING CONSTRUCTION.
- PROJECT IS LOCATED IN CLIMATE ZONE DT AND IS IN COMPLIANCE WITH ENERGY CONSERVATION METHODS AS INDICATED ON CF1-R FORMS WHICH ARE AN INTEGRAL PART OF THE CONSTRUCTION PLANS. ALL WORK MUST COMPLY WITH CF1-R FORMS.
- SITE DRAINAGE SHALL BE AWAY FROM STRUCTURES, MINIMUM 1%.
- PLUMBING FIXTURES BELOW ELEVATION OF UPSTREAM MANHOLE SHALL DRAIN BY GRAVITY AND BE PROTECTED BY AN APPROVED BACKWATER PREVENTION DEVICE.
- ALL PLUMBING SIZING AND MATERIALS SHALL BE IN ACCORDANCE WITH 2022 CPC.
- ALL HOSE BIBS AND LAWN HYDRANTS SHALL BE PROTECTED BY AN APPROVED NON-REMOVABLE BACKWATER PREVENTION DEVICE.
- ALL NEW ELECTRICAL SERVICES SHALL BE GROUNDED TO AN EXTERIOR HOSE BIB AND TO AN APPROVED UFER GROUND IN ACCORDANCE WITH 2022 CEC.
- ADDRESSES SHALL BE EASILY VISIBLE FROM STREET OR ALLEY. NUMBERS SHALL BE MIN. 4" TALL WITH 1/2" STROKES ON CONTRASTING COLORED BACKGROUND.
- A SEPARATE PERMIT IS REQUIRED FOR ALL WOTK IN THE PUBLIC RIGHT-OF-WAY.
- ALL KNOWN PROPERTY LINES, EASEMENTS, AND STRUCTURES (BOTHE EXISTING AND PROPOSED) ARE SHOWN ON THIS PLOT PLAN.
- UNLESS OTHERWISE NOTED THE PROPOSED STRUCTURE(S) SHALL BE LOCATED ON NATIVE UNDESTRUCTED SOIL (OWNER OR PROJECT ENGINEER). SEE CONNECTION REPORT
- IF THE BUILDING INSPECTOR SUSPECTS UNCOMPACTED FILL, EXPANSIVE SOIL, OR ANY OTHER GEOLOGIC INSTABILITY BASED UPON OBSERVATION OF THE FOUNDATION EXCAVATION, A SOILS REPORT OR GEOLOGICAL REPORT SHALL BE PREPARED BY A LICENSED SOILS ENGINEER WHICH SHALL BE SUBMITTED WITH PLANS AND SOIL ENGINEER SHALL ALSO VERIFY THAT RECOMMENDATIONS FROM SAID REPORT HAVE BEEN INCORPORATED INTO THE FOUNDATION DESIGN PRIOR TO INSTALLATION OF FOUNDATION.
- THESE PLANS AND ALL WORK SHALL COMPLY WITH THE CALIFORNIA BUILDING STANDARDS CODE FOUND IN THE STATE OF CALIFORNIA TITLE 24 CCR AS AMENDED AND ADOPTED BY THE CITY OF OCEANSIDE.

STORM WATER QUALITY NOTES

CONSTRUCTION BMP'S

This project shall comply with all current requirements of the State Permit; California Regional Water Quality Control Board (SDRWQCB), Municipal Storm Water Permit, The City of Oceanside, and the Storm Water Standards Manual.

PRIOR TO ANY SOIL DISTURBANCE, TEMPORARY SEDIMENT CONTROLS SHALL BE INSTALLED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

- ALL REQUIREMENTS OF THE CITY OF OCEANSIDE, CALIFORNIA, AND THE STORM WATER STANDARDS MANUAL MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING AND DRAINAGE SYSTEMS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND REVIEWING THE CITY OF OCEANSIDE, CALIFORNIA, POLLUTION CONTROL PLAN (PCCP) FOR CONSTRUCTION, AND IF APPLICABLE, THE STORM WATER QUALITY MANAGEMENT PLAN (SWQMP) FOR POST-CONSTRUCTION BMPs.
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL STORM DRAIN INLET PROTECTION, INLET PROTECTION IN THE PUBLIC RIGHT-OF-WAY MUST BE TEMPORARILY REMOVED PRIOR TO A RAIN EVENT TO ENSURE NO FLOODING OCCURS AND REINSTALLED AFTER RAIN CEASES.
- ALL CONSTRUCTION BMPs SHALL BE INSTALLED AND PROPERLY MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION.
- THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEANING AND GRUBBING, AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED CONTACT PERSON CAN PROVIDE EROSION AND SEDIMENT CONTROL MEASURES.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SUB-CONTRACTORS AND SUPPLIERS ARE AWARE OF ALL STORM WATER BMPs AND IMPLEMENT SUCH MEASURES. FAILURE TO COMPLY WITH THE APPROVED SWQMP WILL RESULT IN THE ISSUANCE OF CORRECTION NOTICES, STOP WORK, AND/OR STOP WORK NOTICES.
- THE CONTRACTOR OR QUALIFIED CONTACT PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF ALL SILT, DEBRIS, AND MUD ON AFFECTED AND ADJACENT STREETS AND WITHIN STORM DRAIN SYSTEMS DUE TO CONSTRUCTION VEHICLE EQUIPMENT AND CONSTRUCTION ACTIVITY AT THE END OF EACH WORK DAY.
- THE CONTRACTOR SHALL PROTECT NEW AND EXISTING STORM WATER CONVEYANCE SYSTEMS FROM SEDIMENTATION, CONCRETE RINGS, OR OTHER CONSTRUCTION-RELATED DEBRIS AND DISCHARGES WITH THE APPROPRIATE BMPs THAT ARE ACCEPTABLE TO THE CITY RESIDENT ENGINEER AND AS INDICATED IN THE SWQMP/PCCP.
- THE CONTRACTOR OR QUALIFIED CONTACT PERSON SHALL CLEAR DEBRIS, SILT, AND MUD FROM ALL DITCHES AND SWALES PRIOR TO AND WITHIN 1 BUSINESS DAY AFTER EACH RAIN EVENT OR PRIOR TO THE NEXT RAIN EVENT, WHICHEVER IS SOONER.
- IF A NON-STORM WATER DISCHARGE LEAVES THE SITE, THE CONTRACTOR SHALL IMMEDIATELY STOP THE ACTIVITY AND REPAIR THE DAMAGES. THE CONTRACTOR SHALL NOTIFY THE CITY RESIDENT ENGINEER OF THE DISCHARGE, PRIOR TO RESUMING CONSTRUCTION ACTIVITY. ANY AND ALL WASTE MATERIAL, SEDIMENT, AND DEBRIS FROM EACH NON-STORM WATER DISCHARGE SHALL BE REMOVED FROM THE STORM DRAIN CONVEYANCE SYSTEM AND PROPERLY DISPOSED BY THE CONTRACTOR.
- EQUIPMENT AND WORKERS FOR DITCHING WORK SHALL BE MADE AVAILABLE AT ALL TIMES. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON-SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID DEPLOYMENT OF CONSTRUCTION BMPs WHEN RAIN IS IMMINENT.
- THE CONTRACTOR SHALL RESTORE AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL BMPs TO WORKING ORDER YEAR-ROUND.
- THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SUITE TO UNUSUAL CIRCUMSTANCES TO PREVENT EROSION AND SEDIMENT-LOADED DISCHARGES.
- THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPROVED WATERS CREEPS A HAZARDOUS CONDITION.
- ALL EROSION AND SEDIMENT CONTROL MEASURES PROVIDED FOR THE APPROVED SWQMP/PCCP SHALL BE INSTALLED AND MAINTAINED. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROPERLY DOCUMENTED AND INSTALLED TO THE SATISFACTION OF THE CITY RESIDENT ENGINEER.

Attachment A

Summary of Special Inspection

1. Concrete	13.1. Verify soil conditions are substantially in conformance with the soil investigation report.
2. Rebar installed in concrete	13.2. Verify the foundation excavations extend to proper depth and bearing strata.
3. Special moment-resisting concrete frame	13.3. Provide soil compaction test results, depth of fill, relative density, bearing values.
4. Reinforcing steel and prestressing steel tendons	13.4. Provide soil expansion test results, expansion index, recommendations for foundations, on-grade floor slab design for each building.
5.1. All structural welding	14. Smoke-control system.
5.2. Special moment-resisting steel frame	15. Special cases (specified by the Building Official).
5.3. Welding reinforcing steel	16. Oil-spill fabrication of building components.
6. High-strength bolting	17. Other special cases (specified by designer of record).
7. Structural masonry	
8. Reinforced gypsum concrete	
9. Insulating concrete masonry	
10. Spray-applied fire-retardant materials	
11. Piling, drilled piers and caissons	
12. Shoring	

(Use additional sheets as needed to provide a comprehensive list)

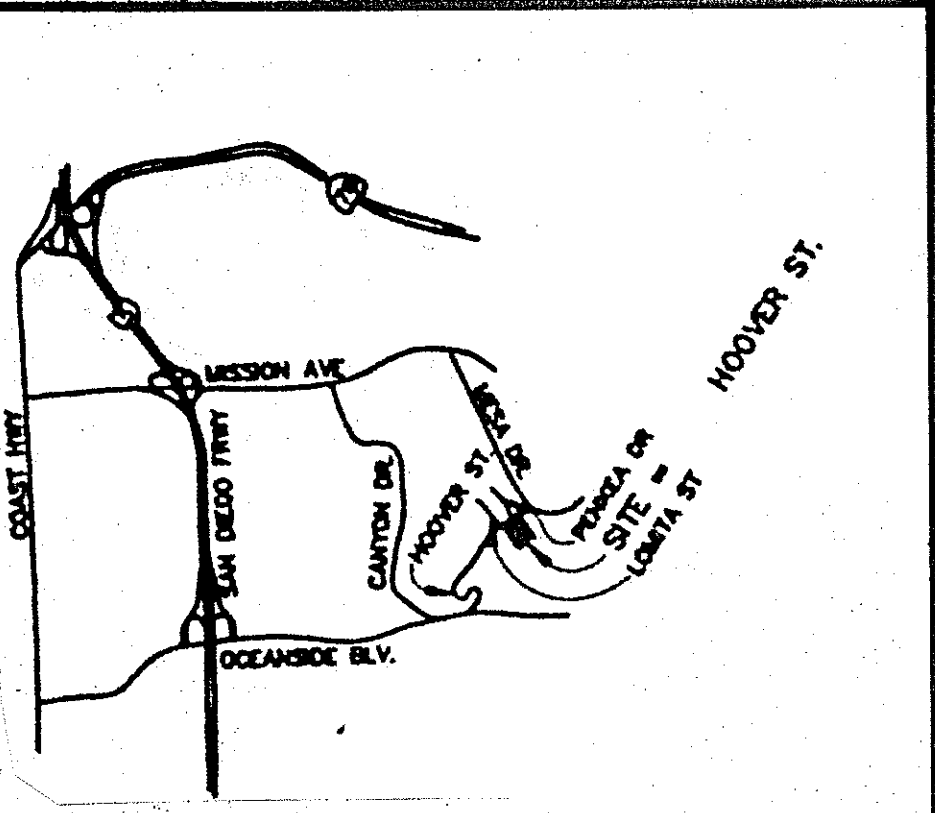
No.	Description of Type of Inspection Required, Location, Remarks, etc.	Design Strength
13.3.	FILL SOILS TO BE COMPACTED & TESTED	90%

REVISIONS	BY
1	10/28/24 R

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HOOVER STREET RESIDENCE
230 HOOVER STREET
OCEANSIDE, CA. 92054

DRAWN
CHECKED
DATE
SCALE
JOB NO.
SHEET
1
OF 1 SHEETS



VICINITY

REQUIRED NOTES FOR WATER SYSTEM DESIGN PLANS

- All work shall be in accordance with the most recent editions of the City of Oceanside Water Utilities Department Water, Sewer, and Recycled Water Design & Construction Manual (Oceanside Water Utilities Manual); City of Oceanside Engineers Design and Processing Manual (Oceanside Engineers Manual); San Diego Area Regional Standard Drawings (SDRSD); and, Standard Specifications for Public Works Construction (SSPWC or Greenbook) and Supplemental Amendments.
- A "W" shall be inscribed on the curb directly above all water services. Services shall be shown on As-Built Plans and shall be located by waterline or centerline stationing.
- Pressure test, disinfect, sample test(s), and flush the water system in accordance with the guideline titled, "Construction Guidelines and Requirements", included as Section F of the City of Oceanside's Water, Sewer, and Recycled Water Design & Construction Manual's.
- No disruption to the existing water distribution mains will be allowed on Mondays or Fridays. All shutdowns for system tie-ins will be scheduled between Tuesday, and Thursday, and will be confined to normal working hours. Refer to the guideline titled, "Administrative Procedures for Water Line Shutdowns" in the Construction Guidelines and Requirements Appendix of the City of Oceanside's Water, Sewer, and Recycled Water Design & Construction Manual.
- No connections for the purpose of obtaining water supply during construction shall be made to any fire hydrant or blow-off structure without first obtaining a construction water permit from the City of Oceanside Water Utilities Department. A Reduced Pressure Principle Assembly (RP Assembly) shall protect the temporary construction meter.
- All water used on a construction project shall be metered. The cost of the water will be charged to the Contractor/Developer. This includes water for loading of new waterlines, flushing of lines, pressure testing, etc. Citations will be issued to parties taking water from non-metered facilities.
- The Contractor shall notify the Underground Service Alert two (2) working days prior to starting excavation so that existing water facilities shall be marked in the field prior to the start of construction. (UNDERGROUND SERVICE ALERT: 8-1-1).
- Location and elevation of existing water facilities shall be confirmed by field measurements and excavation exploration (potholing) by the Contractor, after USA mark-out has been completed and the Water Utilities Department has been given a two (2) working-day notice.
- The existence and location of existing water facilities as shown on the plans were obtained from available City records. To the best of our knowledge, the existing water facilities are as shown on the plans. The City of Oceanside shall not be held responsible for any error in the location and elevation of the existing water facilities.
- No revision shall be made to these plans without the approval of the Water Utilities Director.
- Nuts and bolts on all flange fittings shall be zinc-plated and coated Per Section 2.12.D of the City of Oceanside's Water, Sewer, and Recycled Water Design & Construction Manual, except for buried service, which shall be Type 316 stainless steel. All plated nut and bolt threads shall be coated with non-oxide grease prior to installation. Apply anti-seize to all stainless steel nut and bolt threads. Buried service valves, fittings, and appurtenances will be coated and wrapped per Section 2.12 of the Oceanside Water, Sewer, Recycled Water, Design and Construction Manual.
- Water services are not permitted in driveways.
- The Water Utilities Inspector shall be notified at least two (2) working days prior to any inspection. To arrange for inspection, call the Water Utilities Department at 760-435-5800.
- Pipe bedding and trench backfill shall conform to San Diego Regional Standard Drawing (SDRSD) WP-02, except that compaction in all zones shall be 95%. The pipe zone shall be defined as area 6-inches under the pipe and 12-inches over the pipe. The backfill material for the pipe zone shall be sand with a sand equivalent (SE) of 30 or more. The trench zone shall be defined as the area 12-inches over pipe to bottom of pavement section. Trench zone material shall be native materials, free from stones, clods, and other deleterious materials.
- All fittings and services shall be encased with a minimum of six (6) inches of approved or neutral sand, and Per Section 2.12 of the City of Oceanside's Water, Sewer, and Recycled Water Design & Construction Manual.
- Pipe deflections for short radius curves and angle points shall normally be accomplished by means of standard fittings, the locations of which shall be detailed on the plans.
- Deflections at pipe joints shall not be permitted for PVC pipe 4-inch through 12-inch. Curves and deflections shall be made only with the use of high deflection C900 PVC couplings or the approved ductile iron fittings. A maximum of 5 degrees per coupling shall be permitted.
- POLYETHYLENE ENCASEMENT: All underground installed valves, ductile iron pipe, and fittings shall be encased in 2 layers of 8-mil polyethylene encasement and installation shall be in accordance with ANSI/AWWA C105/A21.5.
- PIPE INSTALLATION: The inside and outside of the pipe shall be clean and free from foreign material of any kind before being installed.
- 3-inch minimum width color coded detector tape marked "WATER" in 1-1/2 inch black letters shall be placed on the compacted and graded sand bedding 12-inches above and centered over the water main prior to backfilling the trench.
- Water quality tests shall include bacteriological (BT) and General Physical (GP) testing. All testing will comply with the provisions of Section G) Water System Testing Requirements in the Construction Guidelines and Requirements Appendix of the City of Oceanside's Water, Sewer, and Recycled Water Design & Construction Manual. All testing requirements will be successfully completed before connection (tie-in) submittal and approval.
- All water discharge from flushing, testing, and dewatering shall comply with all requirements of the California Regional Water Quality Control Board - San Diego Region (SDRWQCB) regulations.
- Detailed plans for private fire underground lines must be submitted to the Fire Department for approval, prior to commencement of construction.

REQUIRED NOTES FOR SEWER SYSTEMS DESIGN PLANS

- All work shall be in accordance with the most recent editions of the City of Oceanside Water Utilities Department Water, Sewer, and Recycled Water Design & Construction Manual (Oceanside Water Utilities Manual); City of Oceanside Design and Processing Manual (Oceanside Engineers Manual); San Diego Area Regional Standard Drawings Manual (Oceanside Engineers Manual); San Diego Area Regional Standard Drawings (SDRSD); and, Standard Specifications for Public Works Construction (SSPWC or Greenbook) and Supplemental Amendments.
- Each lot shall be served by a minimum of 4-inch sewer lateral set at a minimum slope of 2% with a minimum drop of 0.3 feet and a minimum of five (5) feet of cover at property line per Oceanside Standard Drawing S-3.
- An "S" shall be inscribed on the curb directly above all sewer laterals. Laterals shall be shown on As-Built Plans and shall be located by sewer main or centerline stationing.
- A sewer cleanout shall be provided within two (2) feet behind the property line for all residential sewer laterals per San Diego Regional Standard Drawing (SDRSD) SC-01.
- An inspection manhole shall be provided immediately behind the property line for all commercial and industrial sewer laterals per Oceanside Standard Drawing S-7.
- The Contractor must secure approval from the City Inspector prior to backfill over any sewer line.
- No revisions shall be made to these plans without the approval of the City Engineer and the Water Utilities Director.
- An approved and licensed Contractor shall make all sewer lateral connections to the existing sewer mains.
- An approved Contractor may make sewer lateral connections to existing sewer mains that are located in easements where no paving is involved. This may be done with the approval of the Water Utilities Director and will be inspected by the Water Utilities Department. Contractor shall obtain a Right-of-Way Permit for this work.
- No disruption to existing sewer services will be allowed during connections to existing mains without the specific approval of the City of Oceanside Water Utilities Department.
- The Contractor shall notify the Underground Service Alert 48 hours prior to starting excavation so that existing sewer facilities may be marked in the field. (UNDERGROUND SERVICE ALERT: 8-1-1).
- Potholing location and elevation of existing sewer facilities shall be confirmed by field measurements and excavation exploration by the Contractor, in the presence of a City Inspector after a two (2) working day notice prior to the beginning of new work. This will allow time to permit revision of plans, as necessary, because of conflicts with other facilities.
- The existence and location of sewer facilities shown on these plans were obtained from available City records. To the best of our knowledge, the existing sewer facilities are as shown on the plans. The City of Oceanside shall not be held responsible for any error in the location and elevation of the existing sewer facilities.
- The City Inspector shall be notified at least two (2) working days prior to commencing work on the sewers. To arrange for inspection call the Water Utilities Department at (760) 435-5800.
- All sewer house connections shall be placed prior to surfacing of streets.
- All manholes are to be coated inside with Sauersisen SewerGard 210X, Quadex, or Raven 405.
- All manhole covers for private sewer systems shall be manufactured with "Private Sewer" stamped on top of the manhole cover.
- All manhole covers for public sewer systems shall be manufactured with "City of Oceanside" stamped on top of the manhole covers.
- All sewer mains shall be inspected by closed circuit television at the Contractor's expense prior to final acceptance. The video recording will take place after completion of trench backfill and finish grading but prior to the placement of pavement or permanent trench resurfacing to determine the existence and extent of any obstructions, structural deficiencies, sags, or foreign material. Both a verbal description and a written manuscript of the video will be submitted to the Water Utilities Department for review and approval prior to final acceptance. Video recording will meet the requirements of TELEVISIONING SEWER MAINS in the Appendix of the City of Oceanside's Water, Sewer, and Recycled Design & Construction Manual titled, "CONSTRUCTION GUIDELINES AND REQUIREMENTS."
- All sewer mains will pass a 95% mandrel test and air pressure test prior to street paving, but after all other utilities have been completed and testing certified compaction approved.
- Sewer pipe shall be bedded in strict accordance with City of Oceanside Standard Drawing S-2. Bedding shall remain undisturbed by subsequent construction.
- Each parcel or lot shall have a separate connection to the public sewer main.
- Saddle connections that cut into sewer mains shall not be accepted without approval of the Water Utilities Inspector. Sewer connections to existing sewer mains shall be cut-in wye fittings unless otherwise directed by the Water Utilities Inspector.
- Sewer pipe shall be stored on a flat surface so the barrel is evenly supported. Do not stack pipe higher than 4 feet. Gaskets shall be stored in a cool, dark place out of contact with oil or grease, and any other foreign material.
- New sewer mains will not be connected to the City's sewer system until the requirements for occupancy are met. Flows will be retained within the newly constructed system by means of plugging the new system with a sand trap or similar plugging system in a place that will not impair the function of the City's sewer system.
- All sewer lines shall meet all testing, cleaning, and videotaping requirements, prior to connection to the City's sewer system. No tie-in connections will be done until the city has accepted the new line.
- Prior to releasing sewage into the City's sewer system, the contractor shall: A) Perform an air pressure test per Section 306-7.8.2.4 of the Standard Specification for Public Works Construction; B) Wayneball or Hydro Jet all lines, and, C) Have a video inspection of all lines that has been approved by the Water Utilities Department.
- A water infiltration test shall be performed on all sewer lines laid in groundwater, per Section 306-7.8.2.3 of the Standard Specification for Public Works Construction.
- Existing sewer mains will not be used for discharge of storm waters, drainage, or other similar uses per City of Oceanside Code, Section 29.131.
- All sewer force mains shall be provided with air release and vacuum valves at the required locations. The air valve assembly shall be easily accessible to the Water Utilities Department for maintenance purposes.
- During any activity or work around, or in, an existing sewer line, the contractor at their expense, will protect the system by installing "traps" in the outlet side of the closest manhole. The "traps" and their location shall be submitted to the Water Utilities Department for approval. The "traps" will remain in place until all requirements (testing, cleaning, videotaping, etc.), have been completed and approved.
- Upon activation of a sewer line, the Contractor—at their expense—will protect the line from foreign material by installing plywood, or other Inspector approved material, over the manhole base until all grading, paving, and manhole raising is complete and accepted by the City.
- POLYETHYLENE ENCASEMENT: All underground installed valves, ductile iron pipe, and fittings shall be encased in 2 layers of 8-mil polyethylene at the time of installation. Polyethylene encasement and installation shall be in accordance with ANSI/AWWA C105/A21.5.
- PIPE INSTALLATION: The inside and outside of the pipe shall be clean and free from foreign material of any kind before being installed.
- 3 inch minimum width color coded detector tape marked "SEWER" in 1-1/2 inch black letters shall be placed on the compacted and graded bedding material one foot above and centered over the sewer main prior to backfilling the trench.
- All water discharge from cleaning, video, and other activities shall comply with all requirements of the California Regional Water Quality Control Board—San Diego Region (SDRWQCB) regulations.
- Connections to a public sewer main with a 6-inch or larger sewer lateral shall be made at an existing manhole, or require a new sewer manhole for connection per Section 3.3 of the City of Oceanside's Water, Sewer, and Recycled Water Design and Construction Manual.
- Connection to an existing sewer manhole will require rehabilitation of the manhole per City standards. Rehabilitation may include, but not be limited to, cleaning, re-channeling of the manhole base, surface preparation, coating the interior of the manhole, and replacing the manhole cone with a 36" opening and double ring manhole frame and lid.
- Manholes located in an easement shall be equipped with a 36-inch composite lid with a locking mechanism. Manhole lids shall be EJ 3800 composite manhole and frame with Titus Twistliff Lock or approved equal.

ROBIN J. FRANKLIN, BUILDING DESIGNER, HAS NOT BEEN RETAINED FOR ON-SITE SUPERVISION AND THEREFORE HAS NO CONTROL OVER QUALITY OF WORK AND ACTUAL MATERIALS USED ON THIS PROJECT AND ASSUMES NO RESPONSIBILITY FOR THE SAME.

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DATE
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JOB NO.
SHEET
1b
OF SHEETS



FOUNDATION NOTES

1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI. (CON)
2. ALL ANCHOR BOLTS, HOLDOWN ANCHORS, & DOWELS MUST BE TIED IN PLACE PRIOR TO CALLING FOR FOUNDATION INSPECTION.
3. ALL ANCHOR BOLTS SHALL BE ASTM F1554, GRADE 36, ANCHOR BOLTS & FASTENERS, INCLUDING NUTS AND WASHERS, IN PRESERVATIVE-TREATED WOOD (ALL APPLICATIONS) AND NON-FIRE-RETARDANT-TREATED WOOD (IN EXTERIOR APPLICATIONS). BE HOT DIPPED ZINC-COATED GALVANIZED STEEL PER ASTM A 153. ANCHOR BOLTS MAY HAVE MECHANICALLY DEPOSITED ZINC COATING WITH WEIGHTS PER ASTM B695, CLASS 55.
4. BEARING WALL SILLS ON CONCRETE OR MASONRY SHALL HAVE ANCHOR BOLTS:
 - A. $\frac{3}{4}$ " MIN. EMBEDDED AT LEAST 7 INCHES INTO CONCRETE OR MASONRY
 - B. PLACED 4" MIN. TO 12" MAX. FROM EACH END (OR FROM A NOTCH)
 - C. A MINIMUM OF TWO ANCHOR BOLTS PER SILL PLATE PIECE
 - D. SPACED @ 72"/c MAX.
 - E. AT SIZE AND SPACING PER SHEARWALL SCHEDULE.
5. WOOD BEARING ON CONCRETE IN CONTACT WITH SOIL SHALL BE PRESSURE TREATED DOUGLAS FIR (PTDF).
6. EXTERIOR WOOD STUDS/POSTS LESS THAN 8" FROM GRADE SHALL BE PTDF.
7. ALL NON-FIRE-RETARDANT WOODS SHALL BE 2x P.T. SILL W/ "HILT" SHOTPIN FASTENERS (ESR-1663) OR EQUIVALENT @ 32"/c., 6" FROM ENDS. PROVIDE A SHOVEL FTG. FOR EMBEDMENT.
8. ALL STRUCTURAL CONCRETE SLAB ON GRADE SHALL BE A MINIMUM OF 4" THICK WITH #3 REBAR @ 18"/c EACH WAY IN THE CENTER. UNDERLAY SLAB WITH A 2" THICK BASE OF CLEAN SAND UNDER AND OVER A 10 MIL VAPOR RETARDER (STEGOWAR OR EQUIVALENT). THE MOISTURE BARRIER SHOULD BE LAPPED 6" MIN. AND SEALED AT JOINTS AND AROUND ANY BREAKS SUCH AS OPENINGS FOR UTILITY CONDUITS.
9. ALL FLATWORK MUST BE INSTALLED IN ACCORDANCE WITH CITY STANDARDS.
10. BOTTOM OF ALL FOOTINGS SHALL MAINTAIN 7'-0" MIN. DISTANCE TO DAYLIGHT WHERE SLOPES OCCUR. HORIZONTAL DISTANCE SHALL BE MEASURED FROM THE BOTTOM LEADING EDGE OF FOOTING TO DAYLIGHT.
11. PRIOR TO THE CONTRACTOR REQUESTING A BUILDING DEPARTMENT FOUNDATION INSPECTION, THE CONTRACTOR SHALL ADVISE THE BUILDING OFFICIAL IN WRITING THAT:
 - a. THE BUILDING PAD WAS PREPARED IN ACCORDANCE WITH THE CITY STANDARDS
 - b. THE UTILITY TRENCHES HAVE BEEN PROPERLY BACKFILLED AND COMPACTED
 - c. THE FOUNDATION EXCAVATIONS COMPLY WITH THE INTENT OF THE CITY STANDARDS
12. THE ENGINEER OF RECORD IS NOT RESPONSIBLE FOR THE EXISTING CONDITIONS OR INTEGRITY OF THE EXISTING FOUNDATIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR VERIFY THE SIZE OF THE EXISTING FOOTINGS AND TO NOTIFY THE EOR OF ANY DISCREPANCIES OR PROBLEM AREAS PRIOR TO CONSTRUCTION.
13. ALL DIMENSIONS SHALL BE VERIFIED WITH THE ARCHITECTURAL DRAWINGS. ANY DISCREPANCIES SHALL BE RESOLVED WITH THE ARCHITECT/DESIGNER.

CONTINUOUS FOOTING SCHEDULE

ALL NEW CONTINUOUS EXTERIOR AND INTERIOR BEARING WALL FOOTINGS SHALL BE AS FOLLOWS
OR PER APPROVED SOILS REPORT (UON):

ONE STORY:
12" WIDE x 12" DEEP INTO COMPETENT SOIL OR 90% COMPACTED FILL
W/ (2) #4 REINFORCING BARS 3" FROM THE TOP & BOTTOM OF THE FOOTING.

ION PLAN

EVERYTHING REPRESENTED IN THIS DRAWING IS OWNED BY AND THE PROPERTY OF ARCESERVICES. ALL IDEAS, DESIGNS, AND/OR ARRANGEMENTS SHALL NOT BE REPRODUCED, COPIED, CHANGED, SUBMITTED, OR DISCLOSED IN ANY FORM WITHOUT THE EXPRESS WRITTEN CONSENT OF ARCESERVICES. ARCESERVICES EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THIS PLAN.

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DESIGNER:



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REVISIONS		
#	DATE	TYPE

STATUS:

- ☐ INFORMATION ONLY
- ☐ PRELIMINARY
- ☐ CHECK SET
- ☐ PROGRESS SET
- ☐ PLAN CHECK
- ☐ BID SET
- ☐ CONSTRUCTION SET
- ☐

PLOT DATE	PROJECT #
4/6/24	24.031.01

2

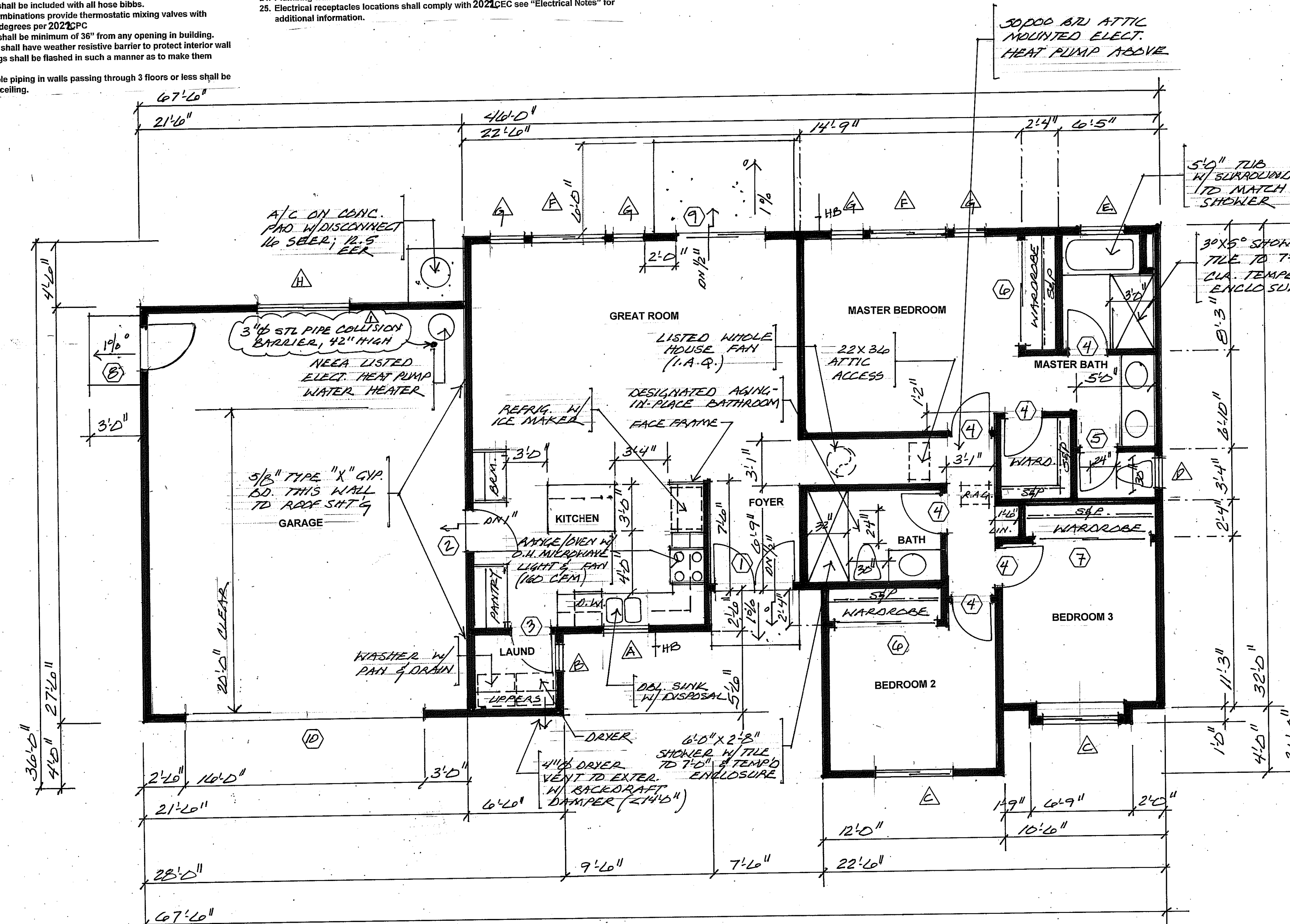
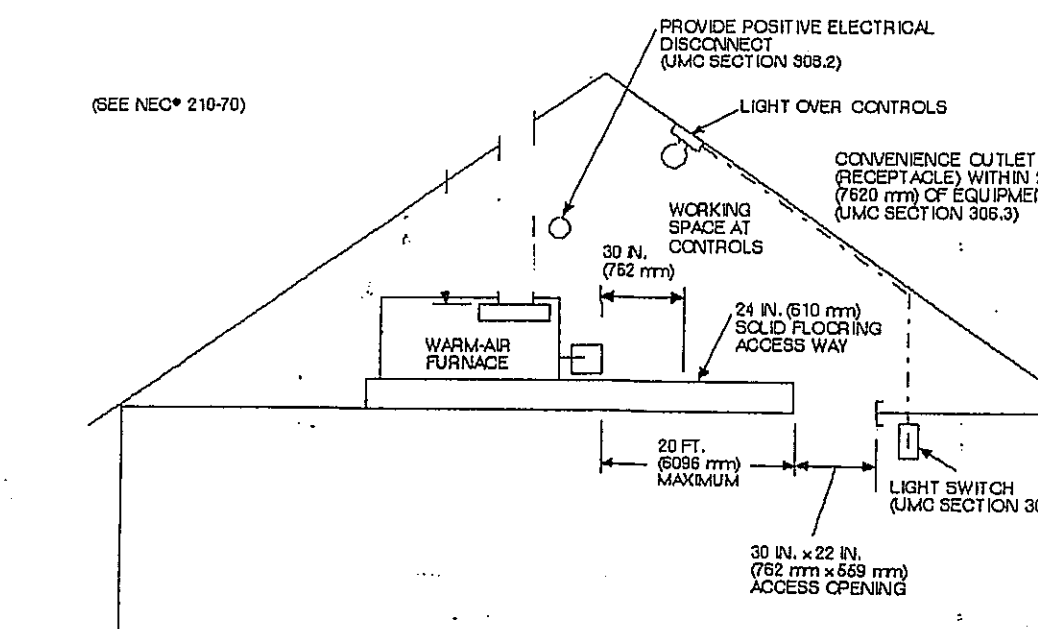
SCALE:	$\frac{1}{4}" = 1'-0"$
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ADDITIONAL NOTES

- All construction shall be in accordance with the 2021 CBC, CRC
- Circulating air from heating systems shall be installed per 2021 CMC
- Each dwelling unit shall have a heating system capable of maintaining room temperature of 70 degrees Fahrenheit at 3'-0" above finished floor of all habitable rooms. Dryers to be installed in accordance with 2021 CMC.
- Openable window area shall be minimum of 1/20 of floor area. Except in laundry rooms, baths, etc. where an exhaust fan is used.
- Light and ventilation shall be in accordance with 2021 CBC. 1/2 of all required window area shall be openable in habitable rooms. All egress windows in sleeping rooms shall not have more than 44" sill height and shall have a clear opening of min. 5.7 sq ft with minimum 24" height and 20" minimum width of opening and be openable from inside without the use of separate tools.
- Floor or landings at each side of doors shall not exceed 1/4" below threshold of door.
- Ranges and cook tops to have min. 30" clearance to combustible materials.
- Provide approved flashing at all exterior openings.
- Refer to water fixture use table from California Green standard sec 4.303.1 for maximum flow rates of all plumbing fixtures.
- Permanent vacuum breakers shall be included with all hose bibbs.
- In showers and tub/shower combinations provide thermostatic mixing valves with maximum temperature of 120 degrees per 2021 CMC
- Discharge point of exhaust air shall be minimum of 36" from any opening in building.
- All weather-exposed surfaces shall have weather resistive barrier to protect interior wall covering, and exterior openings shall be flashed in such a manner as to make them waterproof.
- Gas vents and non-combustible piping in walls passing through 3 floors or less shall be draft-stopped at each floor or ceiling.

- All new glazing shall be installed with certifying label attached stating U-value and SHGC.
- Attic vents and under floor vents shall be of non-corrosive material and be backed by non-corrosive metallic mesh with maximum 1/8" openings.
- Fireplaces with gas log lighters shall have flue dampers in permanently fixed open positions and fireplaces with LPG log lighters are to have no "sump" or "pit" configurations. All fireplaces to have approved spark arrestors on chimneys.
- Tempered glass shall be permanently identified and visible when the unit is glazed.
- Manufactured windows shall have a label attached certified by the National Federation Rating Council (NFRC) showing compliance with energy calculations.
- Return air plenum serving mechanical equipment must be fully ducted from the equipment to the conditioned space. Dropped ceilings, wall cavities, and equipment platforms may not be used as plenums.
- Tank style water heaters shall be anchored or strapped to resist horizontal displacement due to earthquake motion per sec 510.5 CPC. Water heater strapping shall be 1/4" x 24 gauge seismic straps bolted directly to studs top and bottom with 1/4" x 3" lags.
- A/C condensate lines shall be 3/8" copper. Condensate lines to be tied into nearest sink above trap. Maintain min. 1/4" drainage.
- Combustion air for fuel burning water heaters shall be provided per 2021 CMC.
- Combustion air for forced air heating systems shall be from exterior per 2021 CMC.
- Plumbing walls shall be 2x6 studs.
- Electrical receptacles locations shall comply with 2021 CEC see "Electrical Notes" for additional information.

FAU IN ATTIC DETAIL



AGING IN PLACE REQUIREMENTS

- Newly constructed dwelling units including detached ADUs are required to comply with Aging-in-Place requirements in accordance with CRC R327. Address the following comments:
- At least one bathroom on the entry level shall be provided with reinforcement installed in accordance with this section. Where there is no bathroom on the entry level, at least one bathroom on the floor above shall comply with this section.
 - Specify the reinforcement to be solid lumber and not less than 2x8.
 - The reinforcement shall be located between 32" and 39 1/4" above the finished floor.
 - Specify the water closet reinforcement to be installed on both side walls of the fixture, or one side wall and the back wall.
 - Where the water closet is not located adjacent to the side wall, grab bar reinforcement for a ground-mounted installation is acceptable.
 - Specify the shower reinforcement shall be continuous where wall framing is provided.
 - Bathtub and combination bathtub/shower reinforcement shall be continuous on each end of the bathtub and the back wall. Additionally, back wall reinforcement for a lower grab bar shall be provided with the bottom edge located no more than 6" above the bathtub rim.
 - Note on plans: Electrical receptacle outlets, switches and controls intended to be used by occupants shall be located no more than 48" measured from the top of the outlet box and not less than 15" measured from the bottom of the outlet box above the finish floor.
 - Specify doorbell controls to not exceed 48" above exterior floor, measured from the top of the doorbell button assembly.

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 @ 80 PSI MIN. 0.8 GPM @ 20 PSI
LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 80 PSI
KITCHEN FAUCETS	1.8 GPM @ 80 PSI
METERING FAUCETS	0.2 GAL/CYCLE
WATER CLOSET	1.28 GAL/FLUSH

FLOOR PLAN

- LIVING AREA: 1405 SQ FT
- GARAGE: 591 SQ FT

Proposed design shall comply with the following indoor air quality (IAQ) measures applicable to dwelling units:

- Mandatory (CBES 150.0(o), ASHRAE Standard 62.2):
 - Note on the plans for whole building mechanical ventilation: "A mechanical exhaust ventilation system, supply ventilation system, or combination thereof shall be installed for each dwelling unit to provide whole-building ventilation with outdoor air in compliance with ASHRAE Standard 62.2 as adopted by the California Energy Commission."
 - Note on the plans for local mechanical exhaust: "An intermittently or continuously operating local mechanical exhaust ventilation system shall be installed in each bathroom with a bathtub, shower, or similar moisture source and in each kitchen in compliance with ASHRAE Standard 62.2 as adopted by the California Energy Commission. Ventilation rates to be per Section 150.0 (o) G.iii.b and Tables 150.0-E, 150-F, 150.0-G, and 150.0-H"

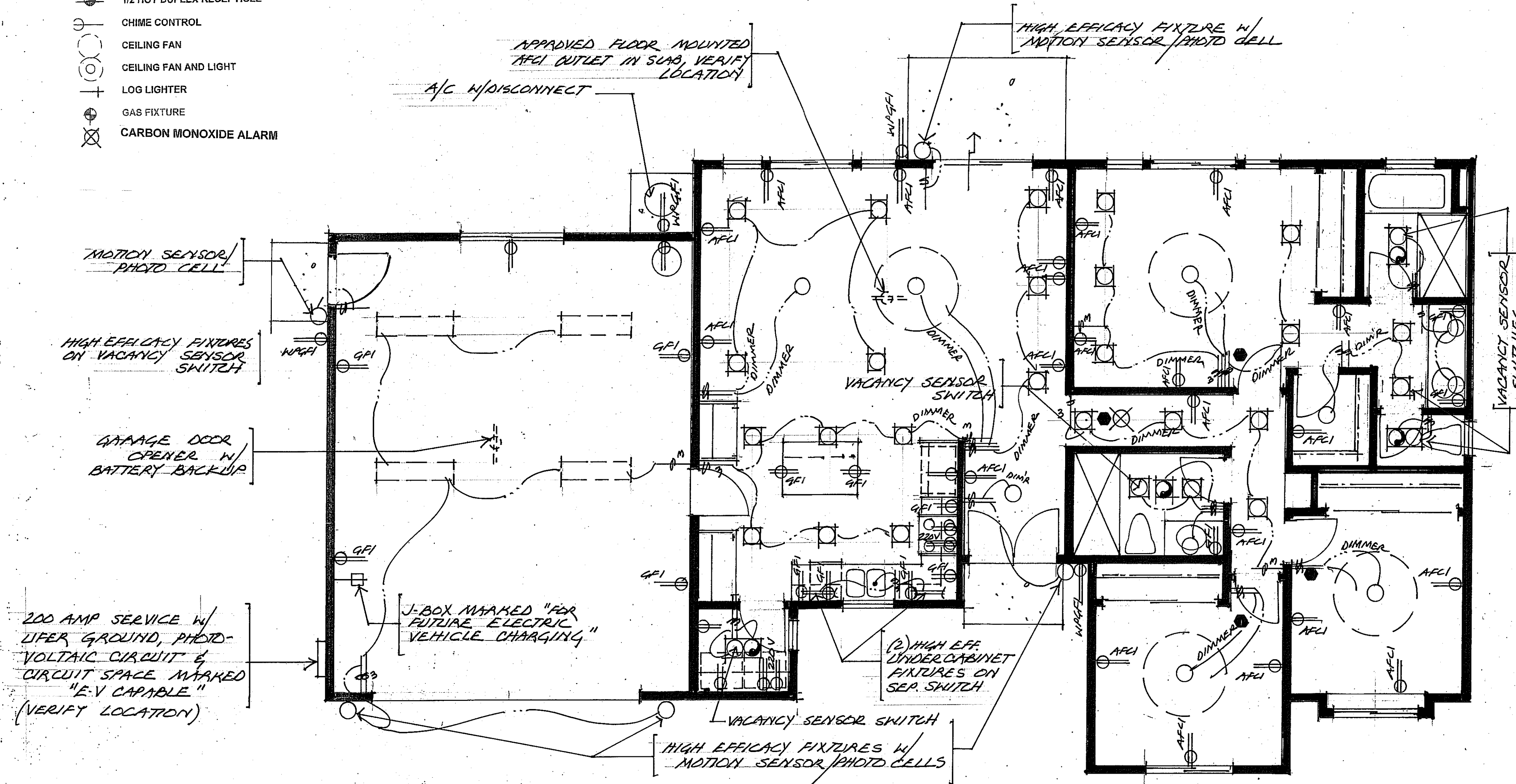
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OF 3 SHEETS

- 110 VOLT DUPLEX RECEPTACLE
220 VOLT RECEPTACLE
EXHAUST FAN
GROUND FAULT DUPLEX RECEPTACLE
TV JACK
PHONE JACK
SMOKE DETECTOR
RECESSED CAN LIGHT (HIGH EFFICACY)
FLOURESCENT CAN LIGHT (HIGH EFFICACY)
FLOURESCENT FIXTURE
SURFACE MOUNTED INCANDESCENT FIXTURE
LIGHT SWITCH
TWO-WAY LIGHT SWITCH
THREE-WAY LIGHT SWITCH
1/2 HOT DUPLEX RECEPTACLE
CHIME CONTROL
CEILING FAN
CEILING FAN AND LIGHT
LOG LIGHTER
GAS FIXTURE
CARBON MONOXIDE ALARM



Newly constructed garages with electrical service shall comply with the following electric vehicle capable measures
CalGreen 4.105.4.1:

- a. Mandatory (CBEES 110.10):
- o Note on floor plan or utility plan: "The main electrical service panel shall include reserved space allowing for installation of a circuit breaker for a future electric vehicle charging system. The reserved space shall be permanently and visibly marked as "EV Capable."
 - o Indicate on floor plan or utility plan all of the following to accommodate future installation of an electric vehicle charging system:
 - Approved minimum 4-inch-square electrical junction box located on the interior of the garage at minimum 30 inches and maximum 48 inches above the garage floor
 - Minimum 1-inch-diameter listed electrical metallic raceway originating at the main electrical service panel and terminating at the required electrical junction box.
 - Note on plans: "Electrical junction box shall be permanently and visibly marked as "For Future Electric Vehicle Charging."

ELECTRICAL NOTES

1. All clearances shall comply with manufacturer's listings.
2. New electrical services shall be on UFER grounds.
3. All conductors under #2 AWG copper only.
4. Liquid tight flexible metal conduit shall be used for exterior locations.
5. Use metal J-boxes for all ceiling fans and chandeliers.
6. Recessed lighting in kitchens shall be high 40 watt recessed lighting on dimmer controls, unless otherwise noted.
7. Under cabinet fluorescent fixtures to be 28 watt fixtures.
8. Pendants lights to be high efficacy 40 watt fixtures on dimmer controls.
9. All kitchen outlets to be GFCI
10. Provide at least (2) 20 amp small appliance branch circuits in each kitchen, pantry, breakfast nook, dining area all similar areas in new dwellings.
11. All bathroom outlets shall be supplied by a minimum of (1) 20 amp branch circuit and shall be GFCI. Such circuits shall have no other outlets. This circuit may serve more than one bathroom.
12. All Bedroom branch circuits shall arc fault circuit protected.
13. Fluorescent fixtures must be ballast type that can only accept fluorescent bulbs, with a minimum efficacy of 40 lumens per watt.
14. All luminaires in bathrooms, garages, laundry rooms, and utility rooms shall be high efficacy and controlled by an occupancy sensor switch.
15. Outdoor lighting shall be high efficacy luminaires or shall be controlled by photo control/motion sensor.
16. Recessed can light fixtures recessed into insulated ceilings must be rated for direct insulation contact, being certified as having an air-tight housing construction. (zero clearance insulation cover type IC by UL, or other approved laboratories must have a gasket or caulking between the housing and the ceiling per Art 410-55®).
17. No screw-in type fixtures meet high efficacy standards, use 4 pin bases.
18. Kitchens require ducted range hoods or complying exhaust fan, exhausting to exterior of structure. Such hood / fans shall have max. sone level of 1.0
19. All bathrooms and powder rooms require exhaust fans (min. 50 cfm) and shall be ducted to exterior.
20. Per California Green Standards sec. 4.306.1 bath fans shall comply with the following:
 1. Fans to be Energy Star compliant and be designed to terminate outside of the structure.
 2. Fans shall be controlled by a humidistat which shall be readily accessible. Humidistat controls shall be capable of adjustment between a relative humidity range of 30 to 80%.
21. In remodeled residences and additions install smoke detector/alarms in all bedrooms and adjacent hallways per 2021 CRC sec. R314, all floors, and approved carbon monoxide alarms per CRC sec R315
22. Smoke detector / alarms shall sound an alarm audible in all sleeping areas.
23. Smoke alarms shall receive primary power from building wiring. Wiring shall be permanent and without disconnecting switch. Smoke alarms shall have battery back-up and shall emit a signal when the batteries are low.
24. Where more than one smoke alarm is required to be installed, they shall be interconnected in such a manner that the activation of one alarm will activate all alarms in the individual dwelling unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.
25. Smoke alarms shall not be installed less than 3'-0" from a bathroom door when the bathroom contains a tub or shower per CFC 907.2.11.5
26. Smoke alarms and carbon monoxide alarms may not be installed within 20'-0" of cooking appliances per CFC 907.2.11.5
27. Smoke alarms and carbon monoxide alarms may not be installed within 36" of HVAC registers, and must be outside direct airflow from registers.
28. Smoke alarms and carbon monoxide alarms may not be installed within 36" horizontal Path from tips of ceiling fan blades.
29. All electrical receptacles other than those required to be GFCI shall be arc fault circuit protected (AFCI)
30. All new 125V, 15 amp and 20 amp receptacles shall be listed tamper-resistant receptacles with child-proof covers.

Proposed design shall comply with the following lighting measures:

- a. Mandatory (CBEES 150.0(k)).
- o All installed luminaires shall meet the requirements in Table 150.0-A
 - o Screw-based luminaires shall contain lamps that comply with Reference Joint Appendix JA8
 - o All recessed downlight and enclosed luminaires shall be marked "JA8-2022-E" and listed in the California Energy Commission database at <https://caceappliance.energy.ca.gov/Pages/ApplianceSearch.aspx>
 - o Recessed downlight luminaires in ceilings shall not be screw-based regardless of the lamp type
 - o Bathrooms, garages, laundry rooms, and utility rooms: At least one luminaire in each space shall be controlled by a vacancy sensor
 - o All luminaires requiring "JA8-2022" or "JA8-2022-E" marking shall be controlled by a dimmer or vacancy sensor
 - Exception: Closets less than 70 s.f.
 - Exception: Hallways
 - o Outdoor lighting permanently mounted to building shall be controlled by one of the following:
 - Photocontrol and motion sensor
 - Photocontrol and automatic time-switch control
 - Astronomical time clock

ELECTRICAL PLAN

1/4" = 1'-0"

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OF 5 SHEETS

SHEARWALL SCHEDULE (SEE NOTES 1, 2, 3, 4, & 5)

TYPE	SHEAR (PLF)	SHEAR PANEL TYPE & THICKNESS	SHEAR PANEL EDGE NAILING (E.N.) (SEE NOTES 6, 7, & 8)	SHEAR TRANSFER RIM JST/BLK'G TO TOP PLATES (SEE NOTE 11)	BOTTOM PLATE & NAILS/LAG SCREWS (SEE NOTE 12)
①	260	3/4" CDX PLYWOOD	8d @ 6" o/c E.N.	A35 OR LTP5 @ 24" o/c	2x SILL W/ 16d @ 8" o/c
②	350	3/4" CDX PLYWOOD	8d @ 4" o/c E.N.	A35 OR LTP5 @ 16" o/c	2x SILL W/ 16d @ 8" o/c
③	490	3/4" CDX PLYWOOD	8d @ 3" o/c E.N. (SEE NOTE 9)	A35 OR LTP5 @ 12" o/c	2x SILL W/ 16d @ 4" o/c
④	640	3/4" CDX PLYWOOD	8d @ 2" o/c E.N. (SEE NOTE 9)	A35 OR LTP5 @ 10" o/c	2x SILL W/ 16d @ 3" o/c
(X)	N/A	PRE-FABRICATED SHEARWALL (SEE NOTE 17)	N/A	LTP5 PER PLAN	N/A

(4) WHEN AN ASTERISK * ACCOMPANIES THE SHEAR WALL SYMBOL, THE SHEAR WALL IS TO BE CONTINUOUS THROUGH ADJACENT WALL FRAMING.

WOOD FRAMING NOTES

- ALL FRAMING MEMBERS SHALL BE DOUGLAS FIR-LARCH (UON).
- ALL WOOD SHALL BE THE FOLLOWING GRADE (UON):
STUDS (LESS THAN 8'-0"): STUD OR BETTER #2 OR BETTER
SILLS/PLATE AND LEDGERS: #2 OR BETTER
HEADERS: #2 OR BETTER
POSTS AND BEAMS: #1 OR BETTER
- ALL BEARING WALLS SHALL BE THE FOLLOW (UON):
STUDS (LESS THAN 8'-0"): 2x4 @ 16" o/c
STUDS (10'-0" OR LESS): 2x4 #2 @ 16" o/c
STUDS (12'-0" OR LESS): 2x4 #2 @ 12" o/c
STUDS (18'-0" OR LESS): 2x6 #2 @ 16" o/c
STUDS (22'-0" OR LESS): 2x6 #2 @ 12" o/c
- ALL NON-BEARING/RAKE WALLS SHALL BE THE FOLLOW (UON):
STUDS (LESS THAN 8'-0"): 2x4 @ 16" o/c
STUDS (14'-0" OR LESS): 2x4 #2 @ 16" o/c
STUDS (24'-0" OR LESS): 2x6 #2 @ 12" o/c
- ALL BEARING SLOPING RAKE WALLS SHALL BE CONTINUOUS BETWEEN FLOOR/FOUNDATION AND ROOF FRAMING.
- GLUED LAMINATED TIMBERS (GLULAM) SHALL BE DOUGLAS FIR INDUSTRIAL GRADE WOOD AND EXTERIOR GLUE WITH INTENDED DRY USE CONDITION AND SHALL BE 24DVS (UON). EACH GLULAM SHALL BE GRADE MARKED AND A CERTIFICATE OF CONFORMANCE MUST BE PROVIDED PRIOR TO FRAMING INSPECTION.
- MANUFACTURED LUMBER PRODUCTS (IE, L-JOIST, LVL, PSL, AND LSL WOOD PRODUCTS) SPECIFIED ON THE DRAWINGS SHALL BE MANUFACTURED BY "LEVEL" OR AN ENGINEER APPROVED FIRM. A CERTIFICATE OF CONFORMANCE IS REQUIRED PRIOR TO FRAMING INSPECTION FOR ALL PARALLEL STRANDED LUMBER.
- DO NOT CUT, NOTCH, DRILL, BORE, SHAPE, TAPER, OR MODIFY ANY WOOD OR MANUFACTURED LUMBER PRODUCTS UNLESS SUCH MODIFICATIONS ARE PER PLAN OR WITHIN THE PARAMETERS SET FORTH BY THE MANUFACTURER OF THAT PRODUCT. IN ADDITION, THE MANUFACTURER'S ENGINEER CAN PROVIDE A STAMPED LETTER ALLOWING THE MODIFICATIONS IF AUTHORIZED BY THE PROJECT ENGINEER OF RECORD AND APPROVED BY THE GOVERNING JURISDICTION.
- FRAMING CONNECTORS SPECIFIED ON DRAWINGS SHALL BE AS MANUFACTURED BY "SIMPSON STRONG-TIE" OR AN ENGINEER APPROVED EQUAL.
PROVIDE "US" HANGERS FOR SAWN LUMBER ROOF/FLOOR JOISTS (UON).
PROVIDE "US" HANGERS FOR MANUFACTURED ROOF/FLOOR JOISTS (UON).
*WHERE SIZE IS NOT SPECIFIED, MATCH DEPTH OF JOIST.
- ALL POSTS SHALL BE SUPPORTED ON DOUBLE TOP PLATES UNLESS A POST CAP IS SPECIFIED. WHERE NO DOUBLE TOP PLATES OCCUR, THE CAP SHALL BE "PC" (UON).
- ALL BEAM TO DOUBLE TOP PLATE CONNECTIONS SHALL BE "A34" EACH SIDE (UON).
- ALL POST TO SILL PLATE/DBL. TOP PLATES SHALL BE "BCO" OR "A34" EA. SIDE (UON). WHERE A POST BELOW IS NOT SPECIFIED, MATCH POST SIZE ABOVE.
- PROVIDE BUILT-UP STUDS TO SUPPORT ALL BEAMS UNLESS POSTS ARE SPECIFIED. BUILT-UP POST TO MATCH BEAM WIDTH. SISTER TOGETHER WITH 16d @ 16" o/c.
- PROVIDE DOUBLE JOISTS @ SIDES & ENDS OF ALL OPENINGS (UON). SISTER TOGETHER WITH 16d @ 12" o/c STAGGERED.
- PROVIDE DBL. JOISTS BELOW ALL INTERIOR WALLS 8'-0" OR GREATER IN LENGTH. PROVIDE BLOCKING @ ONE-THIRD OF THE SPAN.
- ALL DBL. 2x JOISTS SHALL BE SISTERED TOGETHER W/ 16d @ 12" o/c STAGGERED.
- PROVIDE DOUBLE 2x TRIMMER STUDS UNDER ALL HEADERS THAT ARE 4x14 AND LARGER. SISTER TOGETHER WITH 16d @ 16" o/c.
- EACH TRUSS SHALL BE LEGIBLY BRANDED, MARKED OR OTHERWISE HAVE PERMANENTLY AFFIXED THERETO THE FOLLOWING INFORMATION LOCATED WITHIN 2 FEET OF THE CENTER OF THE SPAN ON THE FACE OF THE BOTTOM CHORD:
A) IDENTITY OF THE COMPANY MANUFACTURING THE TRUSS.
B) THE DESIGN LOADS.
C) THE SPACING OF THE TRUSSES.
- BOLT HOLES IN WOOD SHALL BE DRILLED 1/8" LARGER THAN THE BOLT DIAMETER. BOLT HOLES SHALL BE ACCURATELY ALIGNED AND NOT FORBID DRIVEN.
- BOLT HEADS, NUTS, AND LAG SCREWS BEARING ON WOOD SHALL HAVE CUT WASHERS (UON).
- PROVIDE SIMPSON "ST6224" STRAP ACROSS ALL DISCONTINUOUS DBL. TOP PLATES (UON).
- ALL SHEAR PANEL SHALL BE APPLIED DIRECTLY TO STUDS PRIOR TO INSTALLATION OF DECORATIVE POP-OUTS AND TRIM.
- ALL SHEAR WALLS SHALL EXTEND TO THE ROOF SHEATHING.
- IF ANY EXISTING SHEARWALLS OR LET-IN BRACES ARE TO BE REMOVED, THE CONTRACTOR MUST NOTIFY THE ENGINEER OF RECORD PRIOR TO REMOVAL.
- THE CONTRACTOR SHALL VERIFY THE EXISTING FRAMING MEMBERS MARKED WITH VERIFY IN FIELD (V.I.F.) AND NOTIFY ENGINEER OF RECORD OF ANY DISCREPANCIES.

SHEATHING NOTES

ROOF SHEATHING	SPAN RATING	THICKNESS MIN. MAX.	MAX. JOIST SPACING	NAIL TYPE	B.N. SPACING	E.N. SPACING
	24/0	1/2" 3/8"	24" o/c	10d	6"	6"

PLYWOOD SHEATHING SCHEDULE NOTES:

- ALL PLYWOOD SHEATHING TO BE APA RATED, EXPOSURE 1 (UON).
- OSB CAN BE SUBSTITUTED FOR PLYWOOD.
- ALL ROOF SHEATHING SHALL EXTEND UNDER CALIFORNIA FILL AREAS.
- ALL FLOOR PLYWOOD SHALL BE T&G STURD-FLOOR.
- ALL FLOOR PLYWOOD SHALL BE GLUED AND NAILED.
- THE THICKNESS SPECIFIED IS THE MAXIMUM THICKNESS FOR THE NAIL SPECIFIED. THE SPAN RATING SHALL GOVERN.
- ALL PLYWOOD TO BE INSTALLED WITH LONG DIMENSION PERPENDICULAR TO FRAMING. THE MINIMUM HORIZONTAL DIAPHRAGM WIDTH IS 24" IN EACH DIRECTION.
- ALL NAILS TO BE COMMONS.
- BOUNDARY NAILING (B.N.) APPLIES TO ALL SUPPORTED PLYWOOD EDGES: DIAPHRAGM EDGES, PERIMETER WALLS, & SHEARWALLS OR MEMBERS EDGE NAILING (E.N.) APPLIES TO ALL OTHER SUPPORTED PLYWOOD EDGES.
- PROVIDE 3/4" MIN. EDGE DISTANCE FOR ALL PLYWOOD NAILING.
- SPACE NAILS AT 12" o/c ALONG INTERMEDIATE FRAMING MEMBERS.
- WHERE DIAPHRAGM BLOCKING IS SPECIFIED, USE 2x4 FLAT BLOCKING (WITH "Z" CLIPS). BOUNDARY NAIL BLOCKING.
- DIAPHRAGM SHEATHING NAILING SHALL BE DRIVEN SO THAT THEIR HEAD OR CROWN IS FLUSH WITH THE SURFACE OF THE SHEATHING.

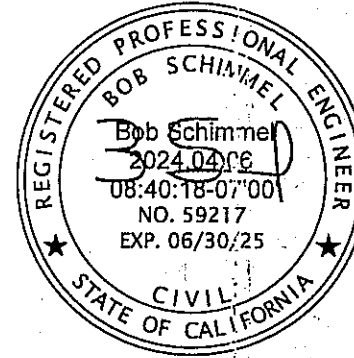
ROOF FRAMING PLAN

1/4" = 1'-0"

ARCE

Architectural Engineering Services
Structural Engineering with an emphasis on Architecture11336 Penano/ra Street
San Diego, CA 92129
858.215.425

BSchimmel@ARCEServices.com

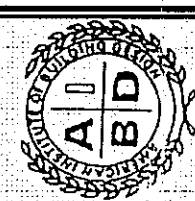


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ENGINEER:

BOB SCHIMMEL

DESIGNER:



Robin J. Franklin
PROFESSIONAL BUILDING DESIGNER
23255 OAKANA ROAD
RAMONA, CA 92065
(619) 857-1064

TITLE:

HOOPER STREET
RESIDENCE
230 Hooper Street
Oceanside, CA 92054

REVISIONS

#	DATE	TYPE

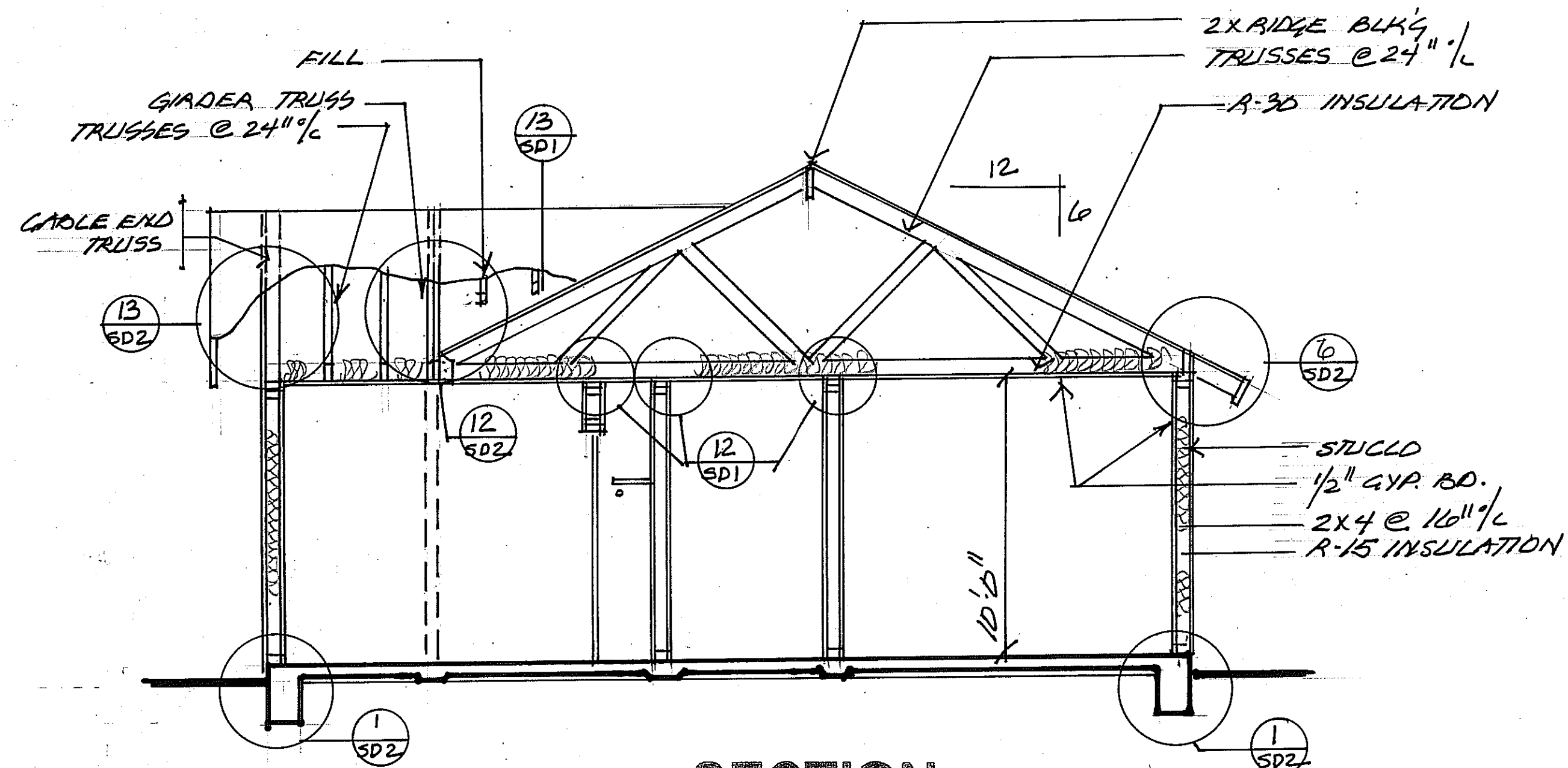
STATUS:

- ☐ INFORMATION ONLY
☐ PRELIMINARY
☐ CHECK SET
☐ PROGRESS SET
☐ PLAN CHECK
☐ BID SET
☐ CONSTRUCTION SET

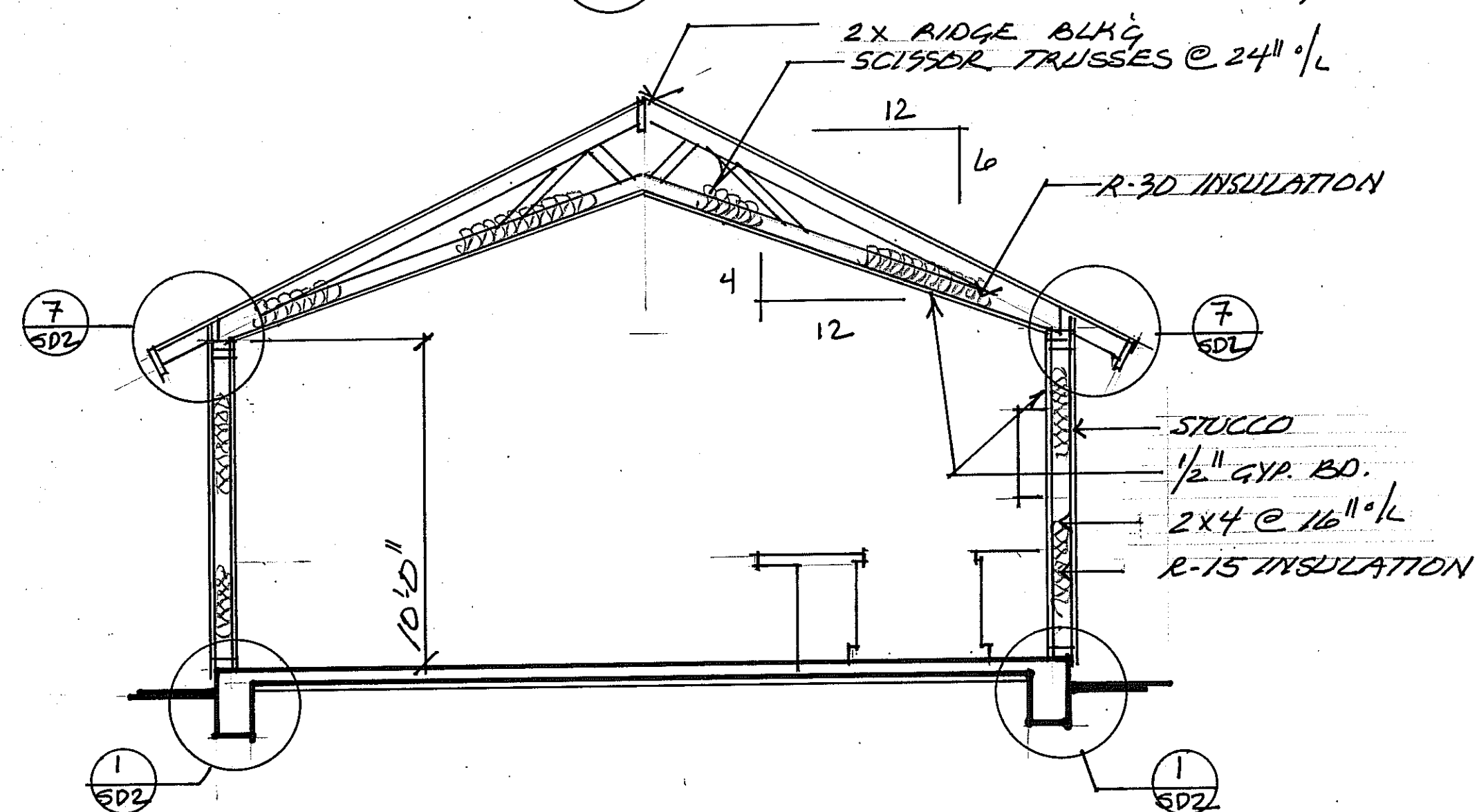
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4/6/24	24.031.01

6

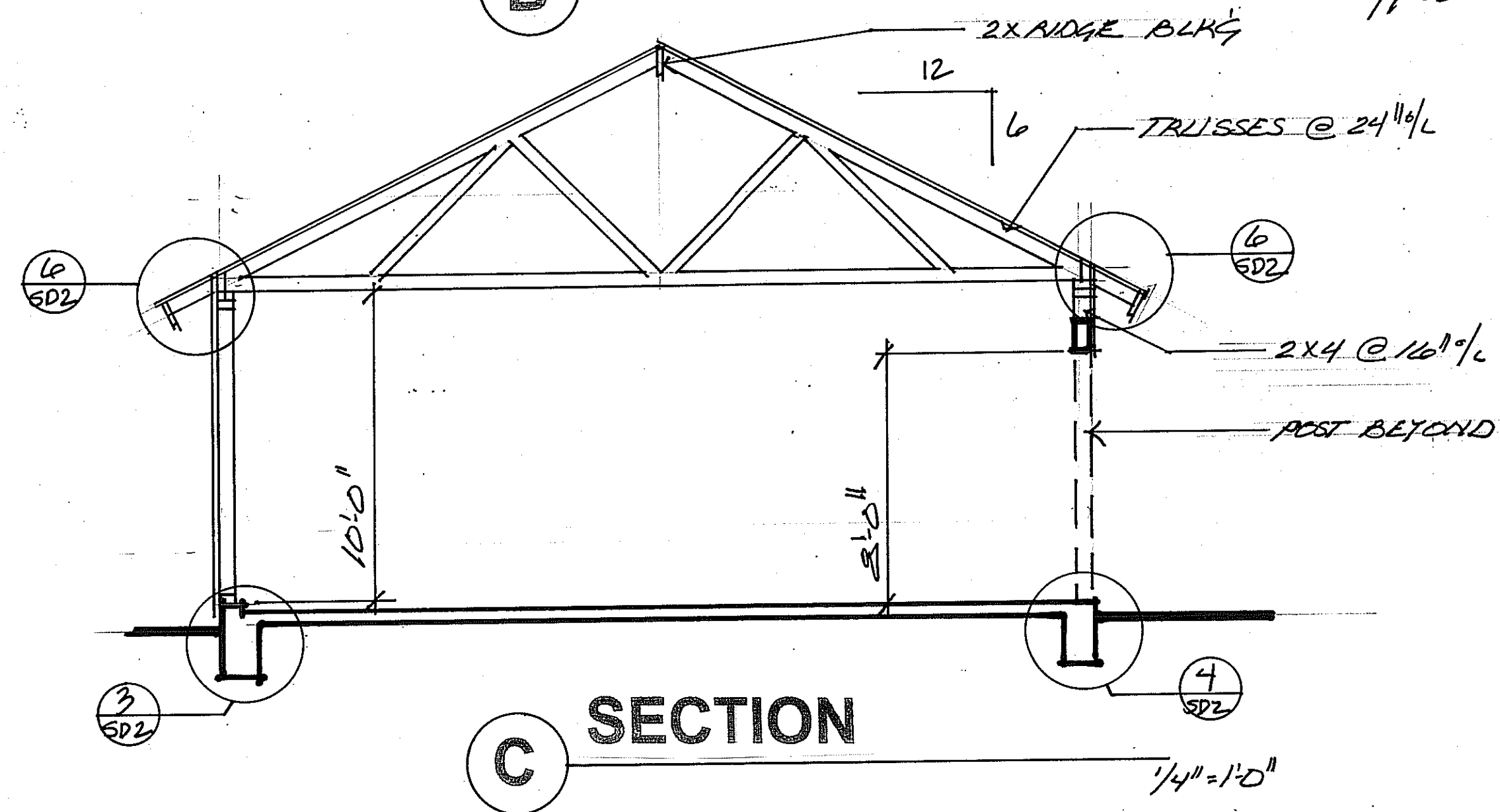
SCALE: 1/4" = 1'-0"



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



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



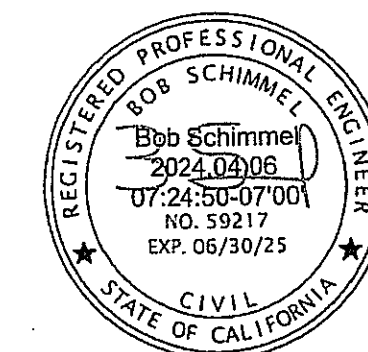
C SECTION
1/4" = 1'-0"

SECTION NOTES

- ROOFING TO BE CLASS 'A' COMPOSITION SHINGLES OVER 30# FELT OVER 1/2" PLY PER ICC #ESR-3267, GAF
- ATTIC TO BE INSULATED R-30
- EXTERIOR WALLS TO BE INSULATED R-15
- EXTERIOR WALL FINISH TO BE 7/8" STUCCO OVER 2 LAYERS GRADE 'D' PAPER.

ATTIC VENTILATION

- 1405 SQ FT ATTIC $\div$ 150 = 9.36 SQ FT MINIMUM REQUIRED.
- PROVIDE (4) 14" X 24" GABLE END VENTS AND (2) 24" DIA. DORMER VENTS

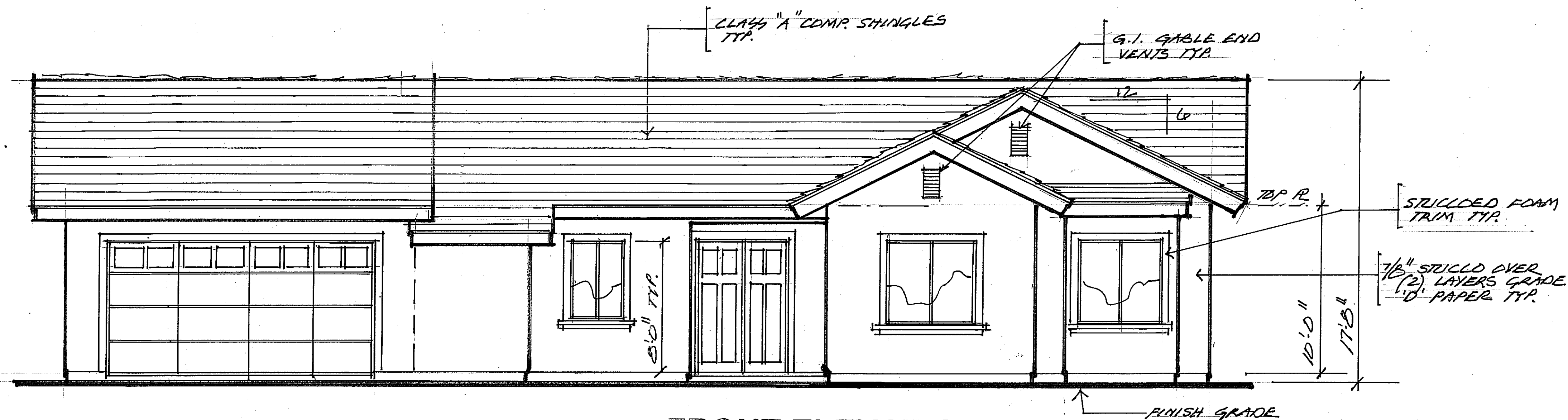


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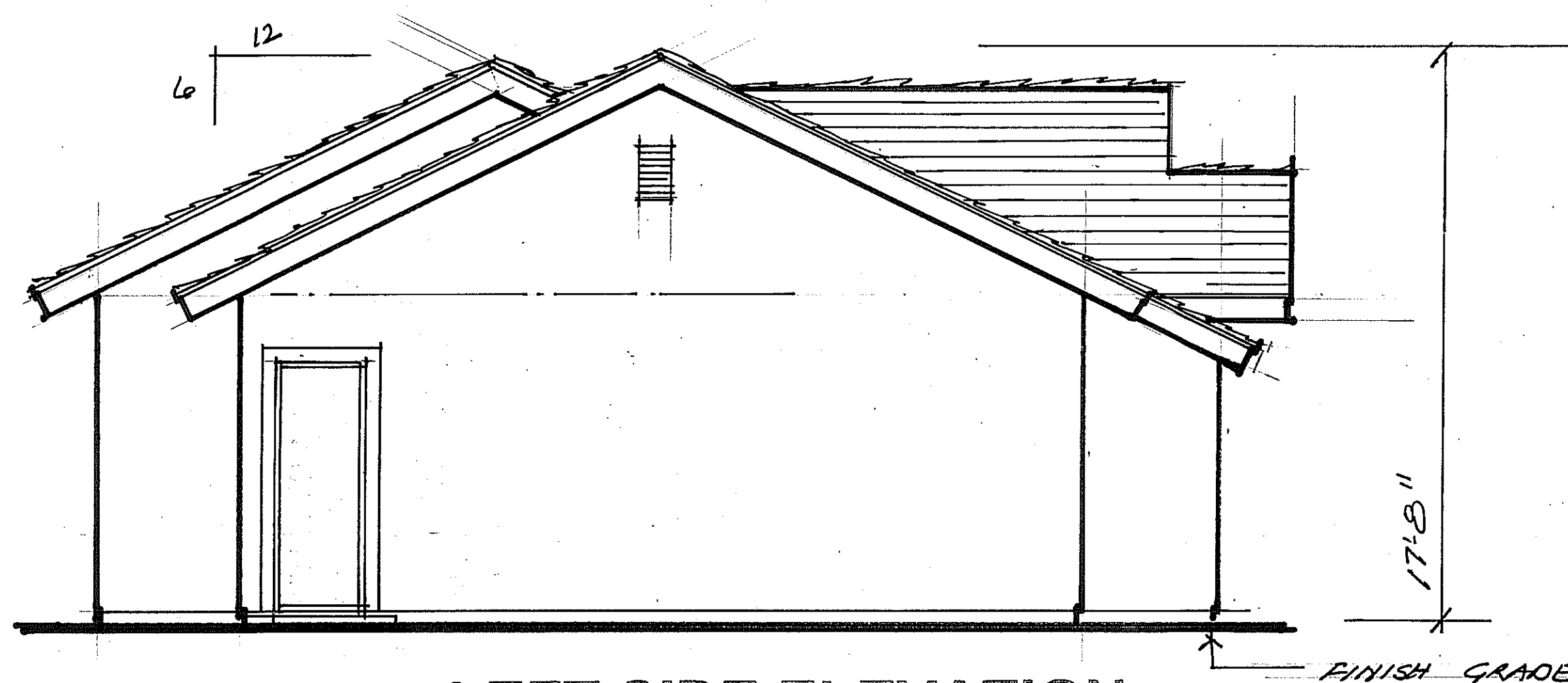
HOOVER STREET RESIDENCE
230 HOOVER STREET
OCEANSIDE, CA 92054

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7
OF SHEETS



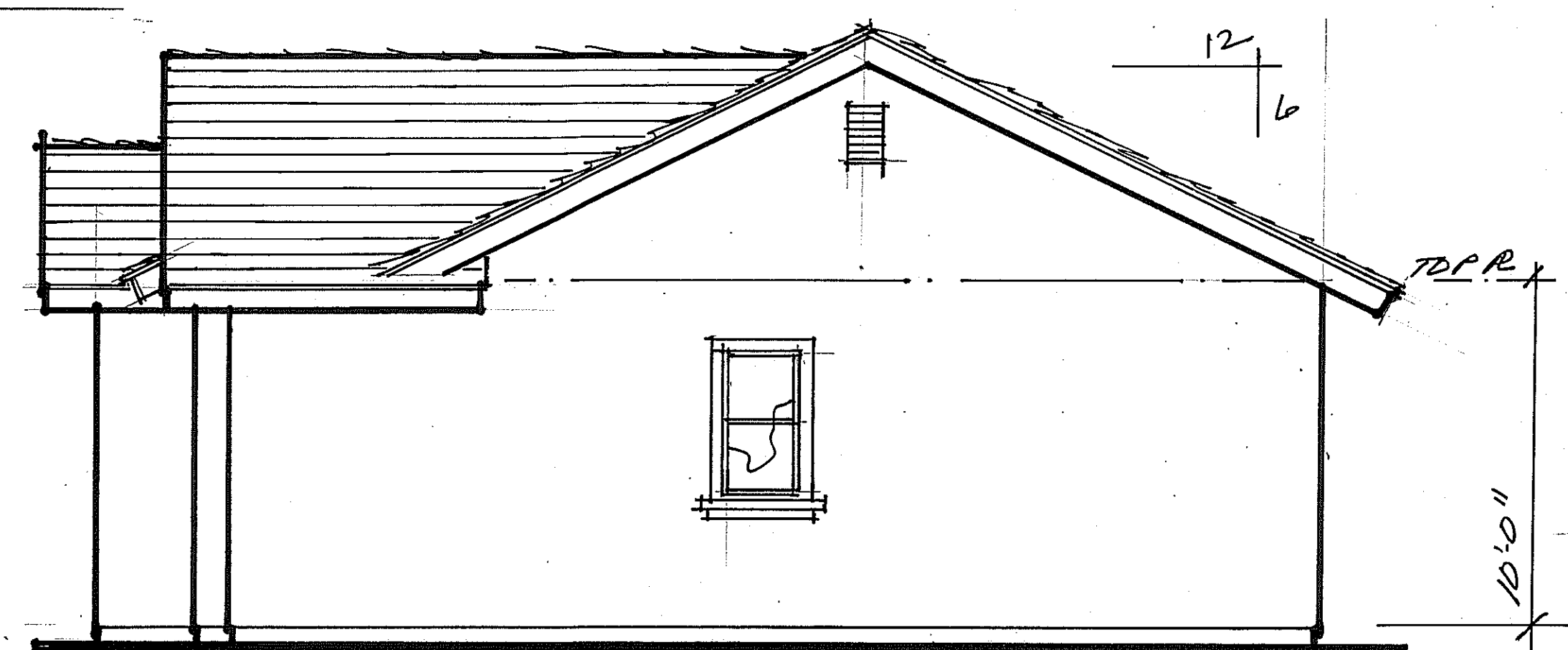
FRONT ELEVATION

1/4"=1'-0"



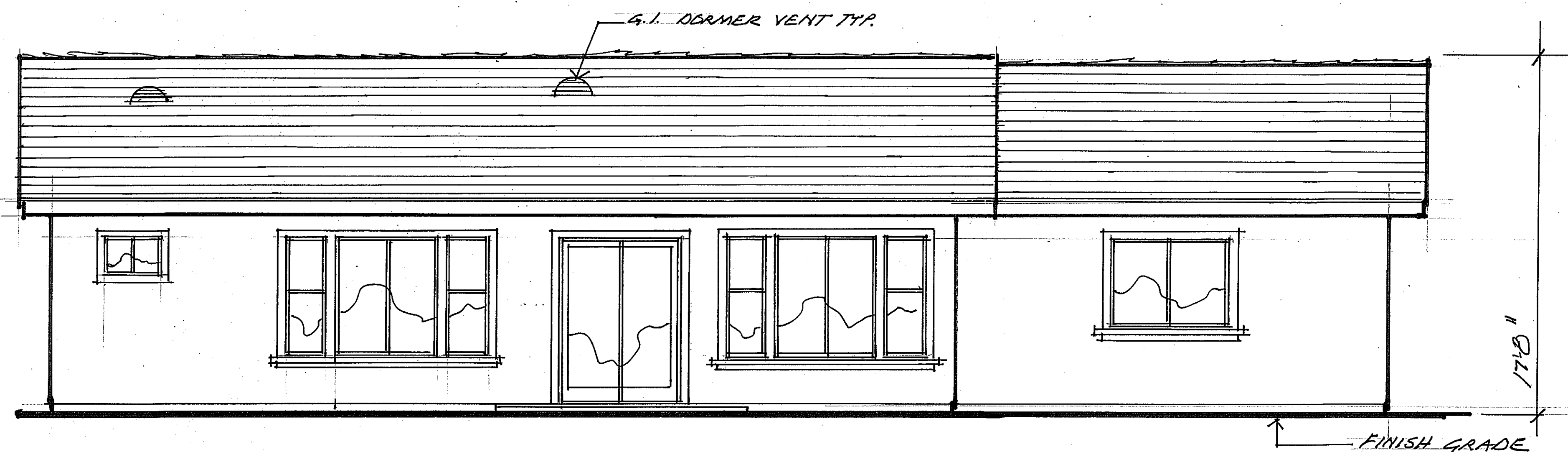
LEFT SIDE ELEVATION

1/4"=1'-0"



RIGHT SIDE ELEVATION

1/4"=1'-0"



REAR ELEVATION

1/4"=1'-0"

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HOOVER STREET RESIDENCE

230 HOOVER STREET
OCEANSIDE, CA. 92054

DRAWN
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DATE
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JOB NO.
SHEET
08
OF SHEETS

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD
Project Name: E G CREATIVE - HOOVER RESIDENCE
Calculation Date/Time: 2024-04-08T13:52:09-07:00
Input File Name: E G CREATIVE - HOOVER RESIDENCE T24.rbd22x

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD
Project Name: E G CREATIVE - HOOVER RESIDENCE
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Project Name: E G CREATIVE - HOOVER RESIDENCE
Calculation Date/Time: 2024-04-08T13:52:09-07:00
Input File Name: E G CREATIVE - HOOVER RESIDENCE T24.rbd22x

Registration Number: 224-P010043489A-000-000-000000-0000
Registration Date/Time: 2024-04-08 14:01:45
HERS Provider: CaCERTS Inc.

Registration Number: 224-P010043489A-000-000-000000-0000
Registration Date/Time: 2024-04-08 14:01:45
HERS Provider: CaCERTS Inc.

Registration Number: 224-P010043489A-000-000-000000-0000
Registration Date/Time: 2024-04-08 14:01:45
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Registration Number: 224-P010043489A-000-000-000000-0000
Registration Date/Time: 2024-04-08 14:01:45
HERS Provider: CaCERTS Inc.

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RESIDENTIAL MEASURES SUMMARY
Project Name: E G CREATIVE - HOOVER RESIDENCE
Building Type: Single Family
Project Address: 230 Hoover St, Oceanside, CA 92054

Registration Number: 224-P010043489A-000-000-000000-0000
Registration Date/Time: 2024-04-08 14:01:45
HERS Provider: CaCERTS Inc.

Registration Number: 224-P010043489A-000-000-000000-0000
Registration Date/Time: 2024-04-08 14:01:45
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Registration Number: 224-P010043489A-000-000-000000-0000
Registration Date/Time: 2024-04-08 14:01:45
HERS Provider: CaCERTS Inc.

REVISIONS
BY
DATE

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HOOVER STREET RESIDENCE
230 HOOVER STREET
OCEANSIDE, CA. 92054

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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 responsible code for more information. Building Envelope: § 110.6(a)(1): Air Leakage: Manufacturing buildings, 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, & AIAA/MINACUSA 1016.5.2014-2011. § 110.6(a)(2): Labeling: Penetration products and exterior doors must have a label meeting the requirements of § 10-111(a). § 110.6(a)(3): Field Laboratory exterior doors and fenestration products must meet U-factor and solar heat gain coefficient (SHGC) values from Tables 110.6.A, 110.6.B, & J4.5 for exterior doors. They must be certified under weather-tightness. § 110.7: Air Leakage: All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be sealed, gasketed, or weatherstripped. § 110.8(a): Insulation Certification for Manufacturers: Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS). § 110.8(b): Insulation Requirements for Heated Slab Floors: Heated slab floors must be insulated per the requirements of § 110.8(a). § 110.8(c): 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(a) and be labeled per § 10-113 when the installation of a roof meets or exceeds the requirements of § 110.8(a). § 110.8(d): Radiant Barriers: When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs. § 110.8(e): Wall, Ceiling, and Rafter Roof Insulation: Roof decks in newly constructed areas in climate zones 4 and 5-6 are required to have U-factor not exceeding 0.14. Ceiling and other roofs must have R-22 insulation in wood-frame ceilings or an equivalent average U-factor must not exceed 0.143. Rafter roof assemblies minimum R-19 or area-weighted average U-factor of 0.04 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. Insulation but not installed in place of insulation already above or below the roof deck or in a wall of a drywall ceiling. § 110.8(f): Loose-fill Insulation: Loose-fill insulation must meet the manufacturer's required density for the labeled R-value. § 110.8(g): Wall Insulation: Minimum R-13 insulation in 2x4 wood framing wall or U-factor of 0.102 or less, or R-20 in 2x6 wood framing wall or U-factor of 0.071 or less. Open-joint non-rigid assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Table 110.1.A or B. § 110.8(h): Raised-floor Insulation: Minimum R-19 insulation in raised wood framed floor of 0.037 maximum U-factor. § 110.8(i): Slab Edge Insulation: Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation installed alone without toppings, 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(a). § 110.8(j): Vapor Barrier: In climate zones 1 through 16, the earth floor or unventilated crawl space must be covered with 2 Class I or Class II vapor barrier. This requirement also applies to controlled ventilation crawl spaces for buildings complying with the exception to § 110.8(a). § 110.8(k): Apertures: In climate zones 14 and 16, a Class I or Class II vapor barrier must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation. § 110.8(l): Fenestration Products: Fenestration products, including skylights, covering conditioned space or 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. Floors, Ceilings, and Other Surfaces: § 110.9(a): Pilot Lights: Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces. § 110.9(b): Operable Doors: Heavy-duty factory-built fireplaces must have a double-paned glass door covering the entire opening of the firebox. § 110.9(c): Combustion Intake: Masonry or factory-built fireplaces must have a combustion intake air intake, which is at least six inches in area and is equipped with a readily accessible, operable, and light-filling damper or combustion-air control device. § 110.9(d): Flue Damper: Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. Space Conditioning, Water Heating, and Plumbing Systems: § 110.10.4 & 110.3: Certification, Heating, Ventilation, and Air Conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other required equipment must be certified by the manufacturer to the California Energy Commission. § 110.10.2: HVAC Efficiency: Equipment must meet the applicable efficiency requirements in Table 110.2.A through Table 110.2.F. § 110.10.2(a): Controls for Heat Pumps with Supplementary Electric Resistance Heating: Heat pumps with supplementary electric resistance heating must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the on- or off-temperature for compression heating is higher than the on- or off-temperature for supplementary heating; and the on- or off-temperature for compression heating is higher than the on- or off-temperature for supplementary heating. § 110.10.2(b): Thermostats: All heating or cooling systems not controlled by a central energy management control system (CEMS) must have a thermostat. § 110.10.2(c): Insulation: Utility service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating. § 110.10.2(d): Installation: Instantaneous water heaters with an input rating greater than 6.6 kWh 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.									

56/22

ROOM LOAD SUMMARY									
Project Name: E G CREATIVE - HOOVER RESIDENCE System Name: HVAC System Room Name: ROOM LOAD SUMMARY Zone Name: Room 1									
Zone Name	Room Name	Mult.	COOLING PEAK	COIL COOLING PEAK	COIL HTG. PEAK	COIL HTG. PEAK	COIL HTG. PEAK	COIL HTG. PEAK	COIL HTG. PEAK
CFM	Sensible	Latent	CFM	Sensible	Latent	CFM	Sensible	Latent	CFM
638	13,335	983	434	16,841					
638	13,335	983	434	16,841					
PAGE TOTAL: 638 13,335 983 434 16,841 TOTAL: 638 13,335 983 434 16,841									

* Total includes ventilation load for zone systems.

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 cooling 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(a)(1): Building Cooling and Heating Loads: Heating and cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Ventilation and Fundamentals Volume; the SMACNA Residential Control System Installation Standards Manual; or the ASHRAE Manual, Using energy conservation specified in § 150.0(a)(2). § 150.0(a)(2): Clearances: Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any other. § 150.0(a)(3): Liquid Line Drain: 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(a)(4): Water Piping: Solar Water-heating System Piping, and Space Conditioning System Line Installation: All domestic hot water piping must be insulated as specified in § 109.11 of the California Plumbing Code. § 150.0(a)(5): Insulation Protection: Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by § 150.0(a)(2). Insulation exposed to weather must be water resistant and protected from UV light (the 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 barrier. Pipe insulation below grade must be installed in a waterproof and non-absorbent casing of steel. § 150.0(a)(6): Gas or Propane Water Heating Systems: Systems using gas or propane water heaters to serve individual dwelling units must designate a space of at least 1.2 x 2.2 x 7' suitable for the future installation of a hot water pump water heater, and must electrical and plumbing requirements, based on the distance between the designated space and the water heater location; and a condensate drain no more than 12 feet higher than the base of the water heater. § 150.0(a)(7): 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: § 110.6(a)(1): Ducts: Insulation installed on an existing space-conditioning duct must comply with § 554.0 of the California Mechanical Code (CMC), if it is a contractor inside the insulation. The contractor must certify to the customer, in writing, that the insulation meets this requirement. § 110.6(a)(2): CMV Compliance: All air-distribution system ducts and plenums must meet CMV § 551.6-525.5 and ASHRAE/SMACNA-2008 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply air and return air ducts and plenums must be insulated to R-8 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (FAT) 14.3.3.3 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-sealing system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and other mastic tape must be used to seal openings greater than 1/2". 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 located in these spaces must not be compressed. § 150.0(a)(1): 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 tapes are used in combination with mastic and duct boards. § 150.0(a)(2): Factory-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(a)(3): Backdraft Damper: Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers. § 150.0(a)(4): Gravity Ventilation Dampers: Gravity ventilation systems serving conditioned space must have either automatic or manually accessible, manually operated dampers at openings to the outside. § 150.0(a)(5): Protection of Insulation: Insulation must be protected from damage due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water-resistant and solar radiation-resistant coating. § 150.0(a)(6): Porous Inner Core Floor Duct: Porous inner core floor ducts must have a non-porous layer or a barrier between the inner core and outer vapor barrier. § 150.0(a)(7): Duct Sealing and Leakage Test: Where space conditioning systems use forced air duct systems to supply conditioned air to an occupied space, the ducts must be sealed after duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix D4.1. § 150.0(a)(8): 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 deep per Equation 150.0.A. Clean-air filter pressure drop and labeling must meet the requirements in § 150.0(a)(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 and prevent air from bypassing the filter.									

56/22

ROOM HEATING PEAK LOADS									
Project Name: E G CREATIVE - HOOVER RESIDENCE System Name: HVAC System Room Name: ROOM HEATING PEAK LOADS Zone Name: Room 1									
Zone Name	Room Name	Mult.	COOLING PEAK	COIL COOLING PEAK	COIL HTG. PEAK	COIL HTG. PEAK	COIL HTG. PEAK	COIL HTG. PEAK	COIL HTG. PEAK
CFM	Sensible	Latent	CFM	Sensible	Latent	CFM	Sensible	Latent	CFM
638	13,335	983	434	16,841					
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PAGE TOTAL: 638 13,335 983 434 16,841 TOTAL: 638 13,335 983 434 16,841									

* Total includes ventilation load for zone systems.

2022 Single-Family Residential Mandatory Requirements Summary									
Space Conditioning System Airflow Rate and Fan Efficiency: Space conditioning systems that use ducts to supply cooling must have a total fan static pressure of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be at least 0.01 CFM per sq ft of nominal cooling capacity, and an air-handling unit fan efficiency of 0.45 volts per CFM for gas furnace air handlers and 0.58 volts per CFM for oil furnaces. Small duct high velocity systems must provide an airflow of 200 CFM per sq ft of nominal cooling capacity, and an air-handling unit fan efficiency of 0.52 volts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA.3. Ventilation and Indoor Air Quality: § 150.0(a)(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(a)(2). § 150.0(a)(2): 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(a)(1). A motorized damper(s) must be installed on the ventilation duct(s) that prevents air flow through the space conditioning duct system when the damper(s) is closed and controlled per § 150.0(a)(10)(b)(iv). CFI ventilation systems must have controls that track outdoor air ventilation on time, and either open or close the motorized damper(s) for compliance with § 150.0(a)(1). § 150.0(a)(3): 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(a)(10)(b)(iv). § 150.0(a)(4): Local Mechanical Exhaust: Kitchens and bathrooms must have local mechanical exhaust; nonexhausted kitchen exhausts must have duct-controlled exhaust system meeting requirements of § 150.0(a)(10)(b)(iv) and bathrooms must have duct-controlled exhaust or continuous exhaust meeting § 150.0(a)(10)(b)(iv). Airflow must be measured by its motor per § 150.0(a)(10)(b)(iv), and rated for sound per § 150.0(a)(10)(b)(iv). § 150.0(a)(5): Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems: The airflow required per § 150.0(a)(1) must be measured by using a flow hood, flow pit, or other airflow measuring device at the fan's inlet or outlet immediately prior to the Residential Appendix RA.3.7. Whole-dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 § 7.2 at or less than the minimum airflow rate required in § 150.0(a)(1). § 150.0(a)(6): Field Verification and Diagnostic Testing: Whole-Dwelling Unit Ventilation airflow, vented range hood airflow and sound ratings, and HRV and ERV fan efficiency must be verified in accordance with Reference Residential Appendix RA.3.7. Vented range hoods must be verified per Reference Residential Appendix RA.3.7.3 to confirm it is rated by IAPMO or ASHRAE to comply with the airflow rates and sound requirements per § 150.0(a)(10)(b)(iv). Pool and Spa Systems and Equipment: § 110.6(a): Certification by Manufacturer: Any pool or spa heating system or equipment must be certified to meet all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent waterproof plate or card with operating instructions; and must be labeled with the manufacturer's name and address. § 110.6(a)(1): Piping: Any pool or spa heating system or equipment must be installed with at least 3/8 inches of pipe between the filter and the heater, or dedicated suction and return lines, or ballcock or ballcock connectors to allow for future side heating. § 110.6(a)(2): Covers: Outdoor pools or spas that have a heat pump or gas heater must have a cover. § 110.6(a)(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 it to run for a period of time to be set for off-peak electricity demand periods. § 110.6(a)(4): Pilot Light: Natural gas pool and spa heaters must not have a continuously burning pilot light. § 150.0(a)(1): Pool Systems and Equipment Installation: Residential pool systems or equipment must meet the specified requirements for pump shaft, flow rate, piping, filter, and valves. Lighting: § 110.5: Lighting Controls and Components: All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.5. § 150.0(a)(1): Luminaires: Efficiency: All installed luminaires must meet the requirements in Table 150.0.A, except lighting integral to exhaust fans, kitchen range hoods, built-in vanity mirrors, and garage door opener navigation lighting less than 5 watts, and lighting integral to drawers, cabinets, and doors with an efficiency of at least 10 lumens per watt. § 150.0(a)(2): Screw-based Luminaires: Screw-based luminaires must contain lamps that comply with Reference Joint Appendix J4.5. § 150.0(a)(3): Recycled Downlight Luminaires in Ceilings: Luminaires recessed into ceilings must not contain screw-based incandescent, halogen, and must be sealed in gasket or gasket. Luminaires recessed into ceilings must not contain screw-based incandescent, halogen, and must be sealed in gasket or gasket. Luminaires recessed into ceilings must not contain screw-based incandescent, halogen, and must be sealed in gasket or gasket. Luminaires recessed into ceilings must not contain screw-based incandescent, halogen, and must be sealed in gasket or gasket. § 150.0(a)(4): Break Electrical Boxes: The number of electrical boxes that are more than five feet above the finished floor and do not contain a control, low voltage outlet, or fan speed control. § 150.0(a)(5): 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(a)(1).									

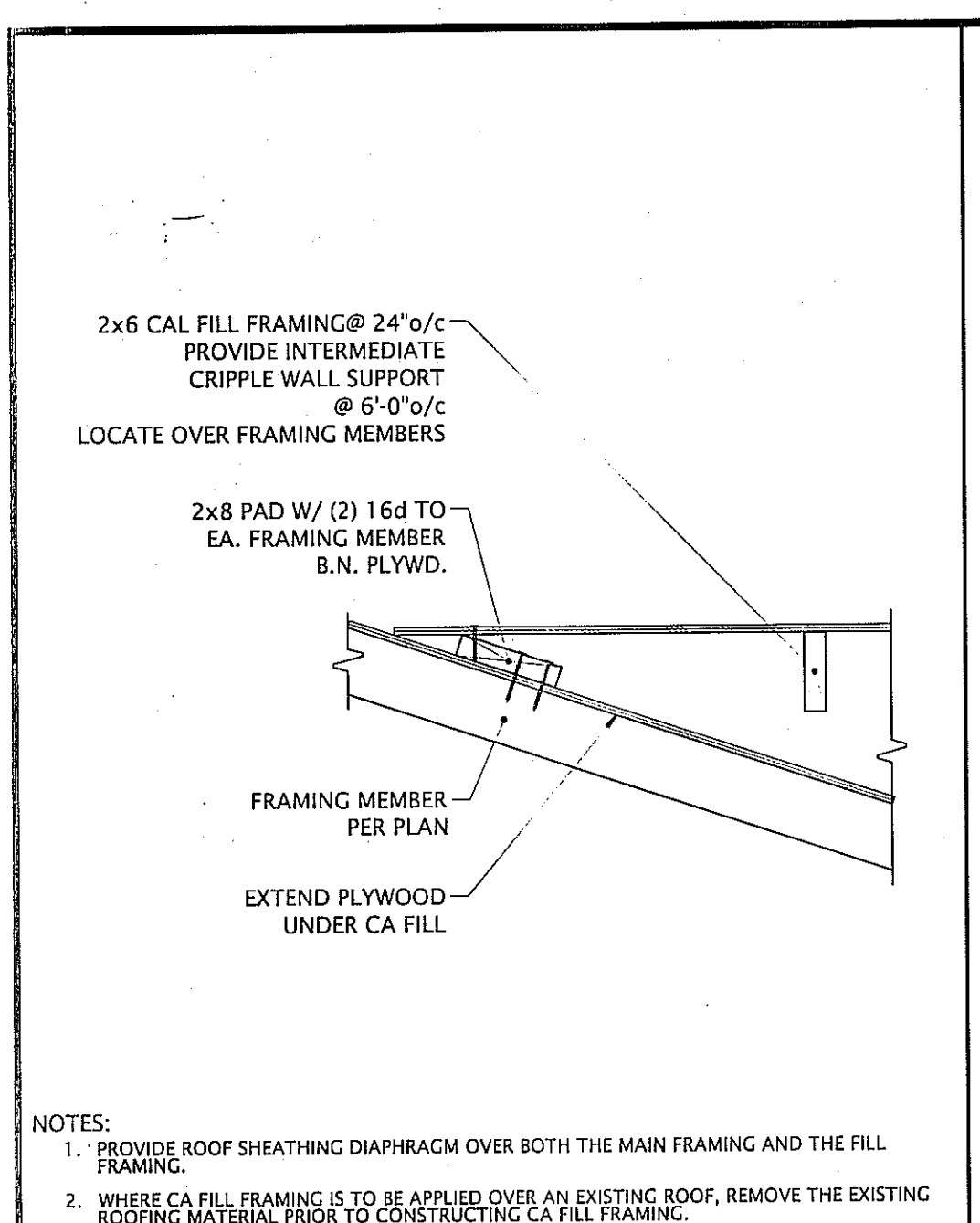
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RESIDENTIAL ROOM COOLING LOAD SUMMARY									
Project Name: E G CREATIVE - HOOVER RESIDENCE System Name: HVAC System Room Name: ROOM COOLING LOAD SUMMARY Zone Name: Room 1									
Zone Name	Room Name	Mult.	COOLING PEAK	COIL COOLING PEAK	COIL HTG. PEAK	COIL HTG. PEAK	COIL HTG. PEAK	COIL HTG. PEAK	COIL HTG. PEAK
CFM	Sensible	Latent	CFM	Sensible	Latent	CFM	Sensible	Latent	CFM
638	13,335	983	434	16,841					
638	13,335	983	434	16,841					
PAGE TOTAL: 638 13,335 983 434 16,841 TOTAL: 638 13,335 983 434 16,841									

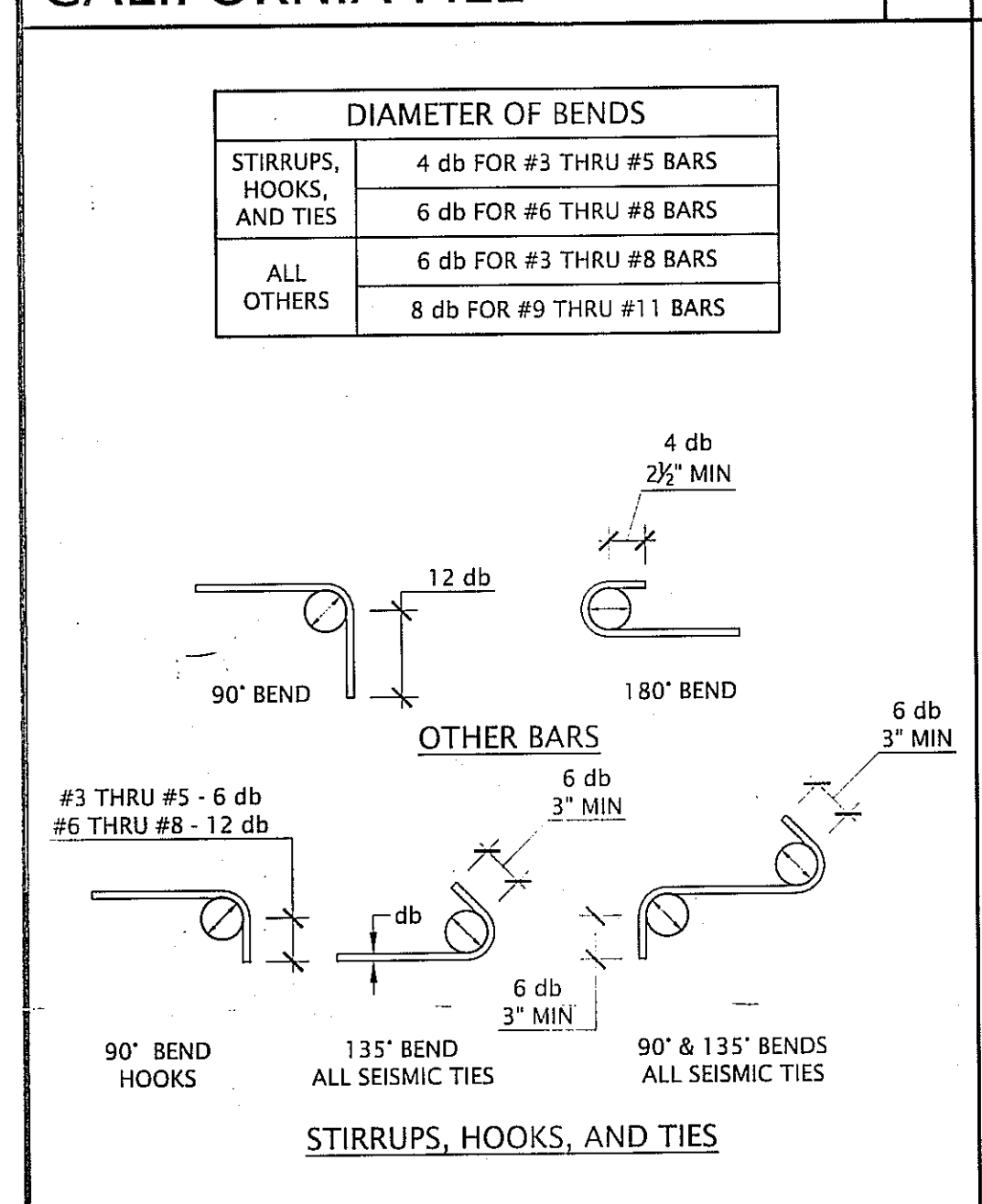
* Total includes ventilation load for zone systems.

2022 Single-Family Residential Mandatory Requirements Summary

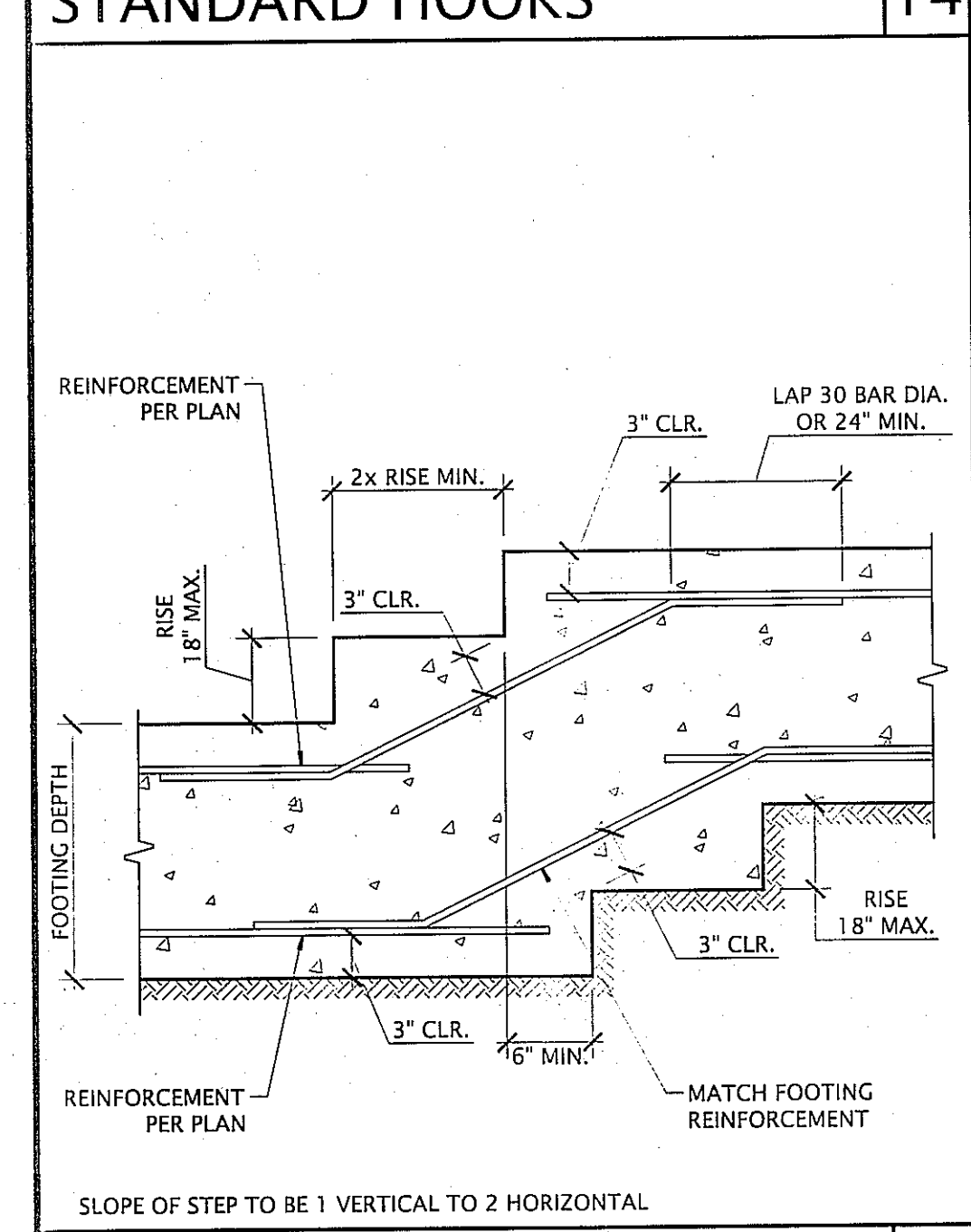
§ 150.0(a)(1):	Screw-based Luminaires: Screw-based luminaires must contain lamps that comply with Reference Joint Appendix J4.5.
§ 150.0(a)(2):	Light Sources in Enclosed or Recessed Luminaires: Lamps and other separable light sources that are not compliant with the J4.5 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(a)(3):	Light Sources in Drawers, Cabinets, and Linen Closets: Light sources internal to drawers, cabinets or linen closets are not required to comply with Table 150.0.A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 100 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet, or linen closet is closed.
§ 150.0(a)(4):	Interior Switches and Controls: All forward phase-out dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(a)(5):	Interior Switches and Controls: Exhaust fans must be controlled separately from lighting systems.
§ 150.0(a)(6):	Accessible Controls: Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off.
§ 150.0(a)(7):	Multiple Controls: Controls must not bypass a dimmer, occupancy sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(a).
§ 150.0(a)(8):	Mandatory Requirements: Lighting controls must comply with the applicable requirements of § 110.5.
§ 150.0(a)(9):	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 § 110.5 and the physical controls specified in § 150.0(a)(1).
§ 150.0(a)(10):	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 shutoff 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(a)(11):	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-out dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(a)(12):	Independent controls: Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and unshaded outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(a)(13):	Other buildings on the same lot: must have a manual on/off switch and either a physical and motion sensor or automatic time switch control or an automatic 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(a)(14):	Internally Illuminated Address Signs: Internally illuminated address signs must comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(a)(15):	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 § 110.5, 130.0, 130.1, 130.2, 130.3, 130.4, 130.5, 130.6, 130.7, 130.8, 130.9, 131.0, 131.1, 131.2, 131.3, 131.4, 131.5, 131.6, 131.7, 131.8, 131.9, 132.0, 132.1, 132.2, 132.3, 132.4, 132.5, 132.6, 132.7, 132.8, 132.9, 133.0, 133.1, 133.2, 133.3, 133.4, 133.5, 133.6, 133.7, 133.8, 133.9, 134.0, 134.1, 134.2, 134.3, 134.4, 134.5, 134.6, 134.7, 134.8, 134.9, 135.0, 135.1, 135.2, 135.3, 135.4, 135.5, 135.6, 135.7, 135.8, 135.9, 136.0, 136.1, 136.2, 136.3, 136.4, 136.5, 136.6, 136.7, 136.8, 136.9, 137.0, 137.1, 137.2, 137.3, 137.4, 137.5, 137.6, 137.7, 137.8, 137.9, 138.0, 138.1, 138.2, 138.3, 138.4, 138.5, 138.6, 138.7, 138.8, 138.9, 139.0, 139.1, 139.2, 139.3, 139.4, 139.5, 139.6, 139.7, 139.8, 139.9, 140.0, 140.1, 140.2, 140.3, 140.4, 140.5, 140.6, 140.7, 140.8, 140.9, 141.0, 141.1, 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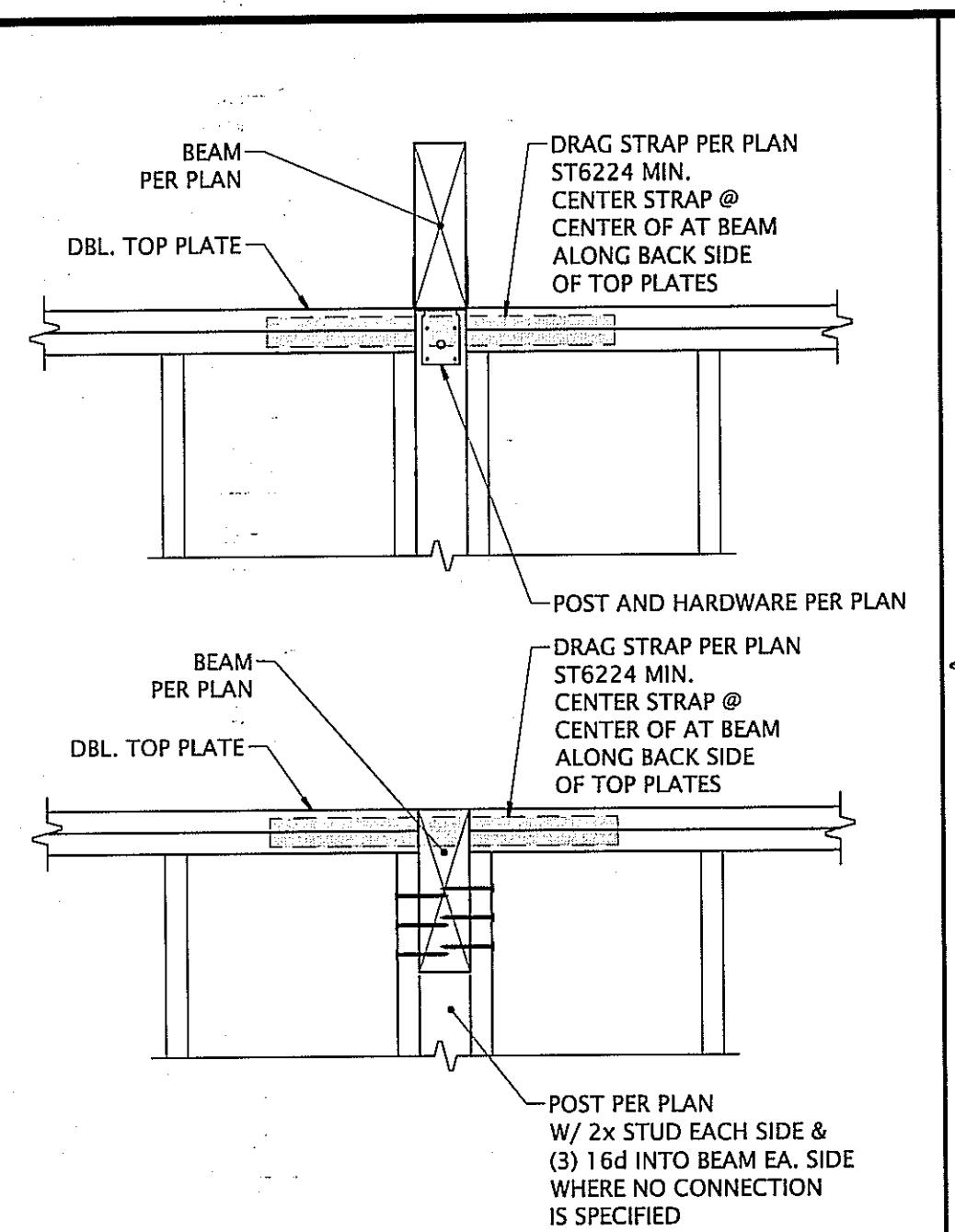
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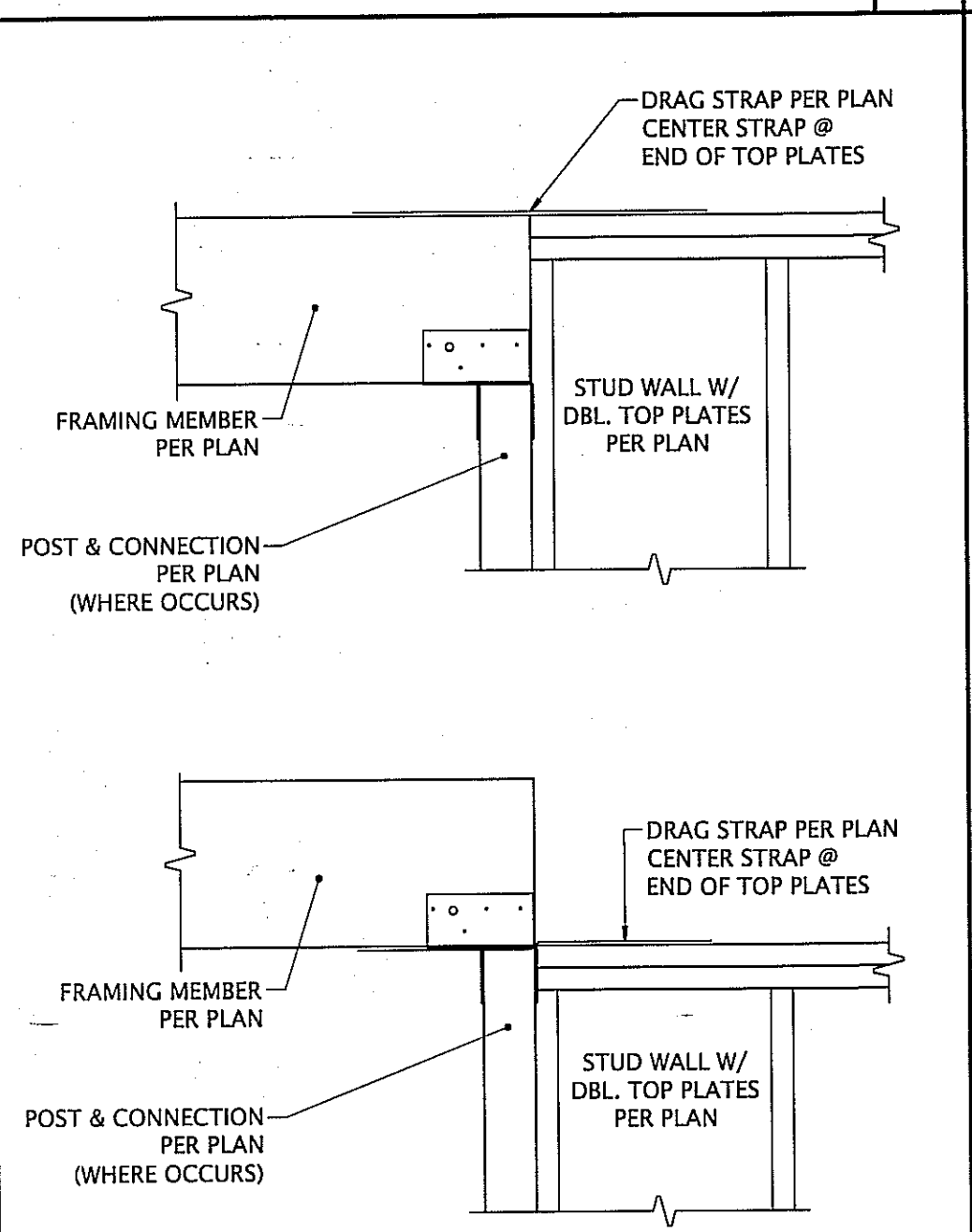
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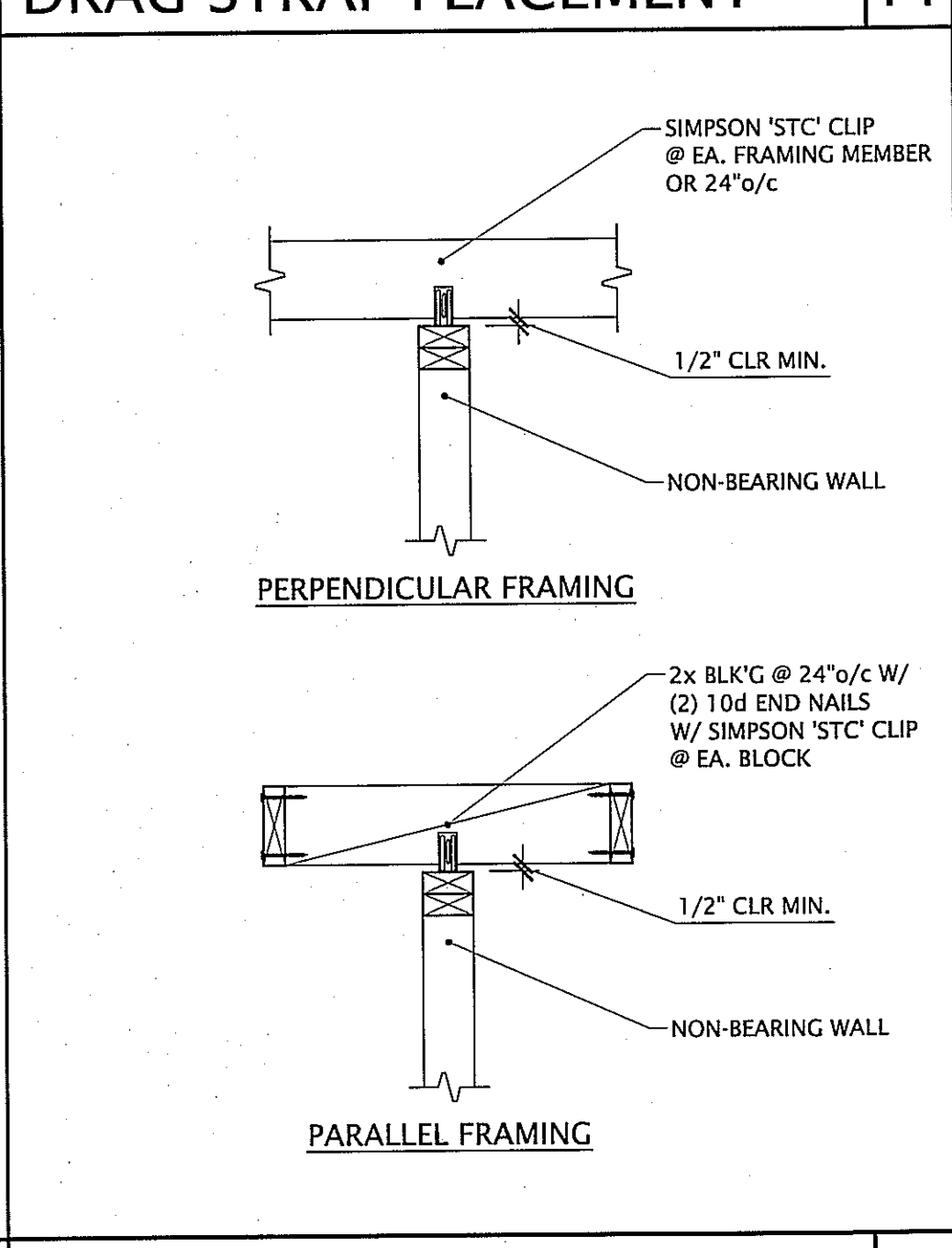
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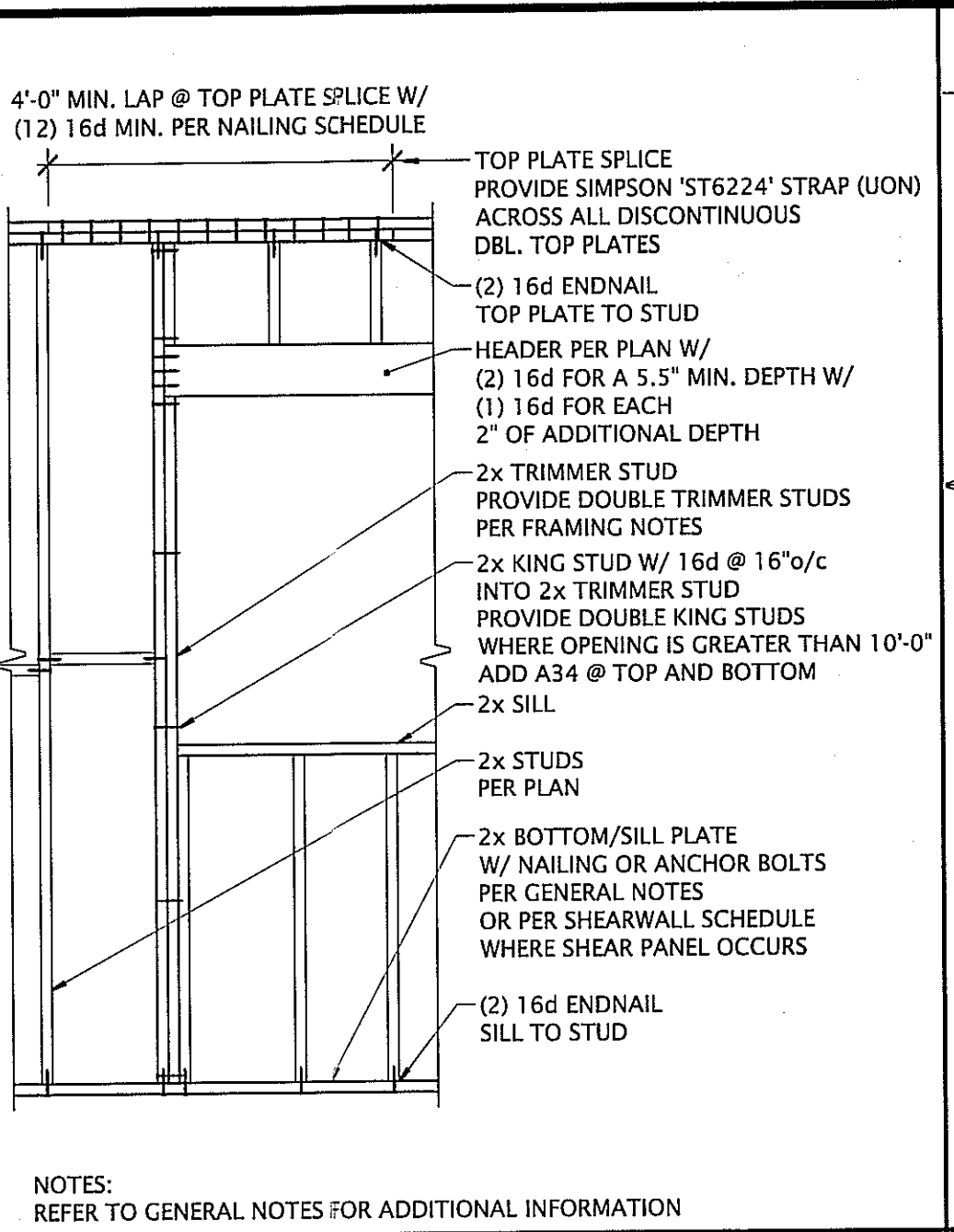
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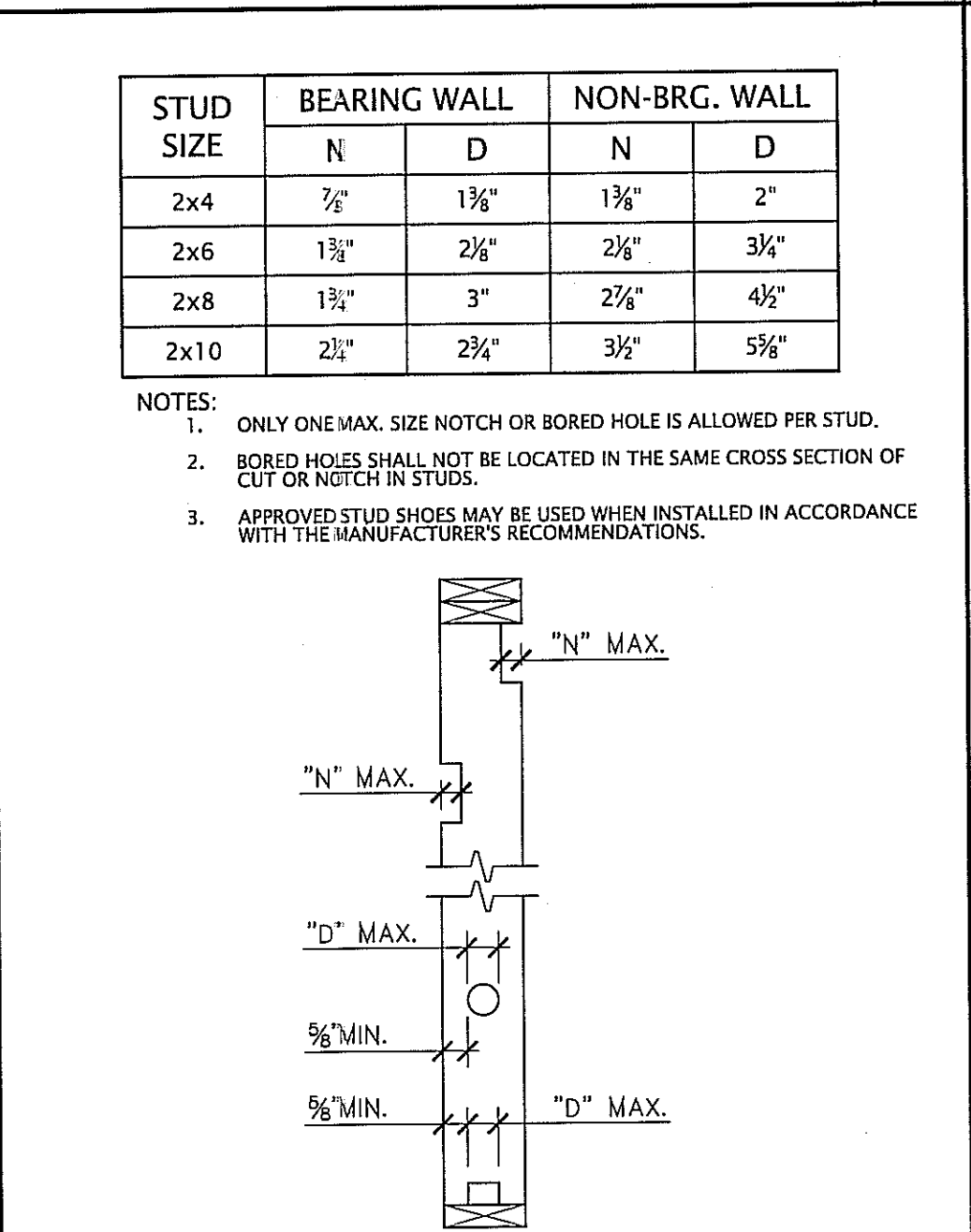
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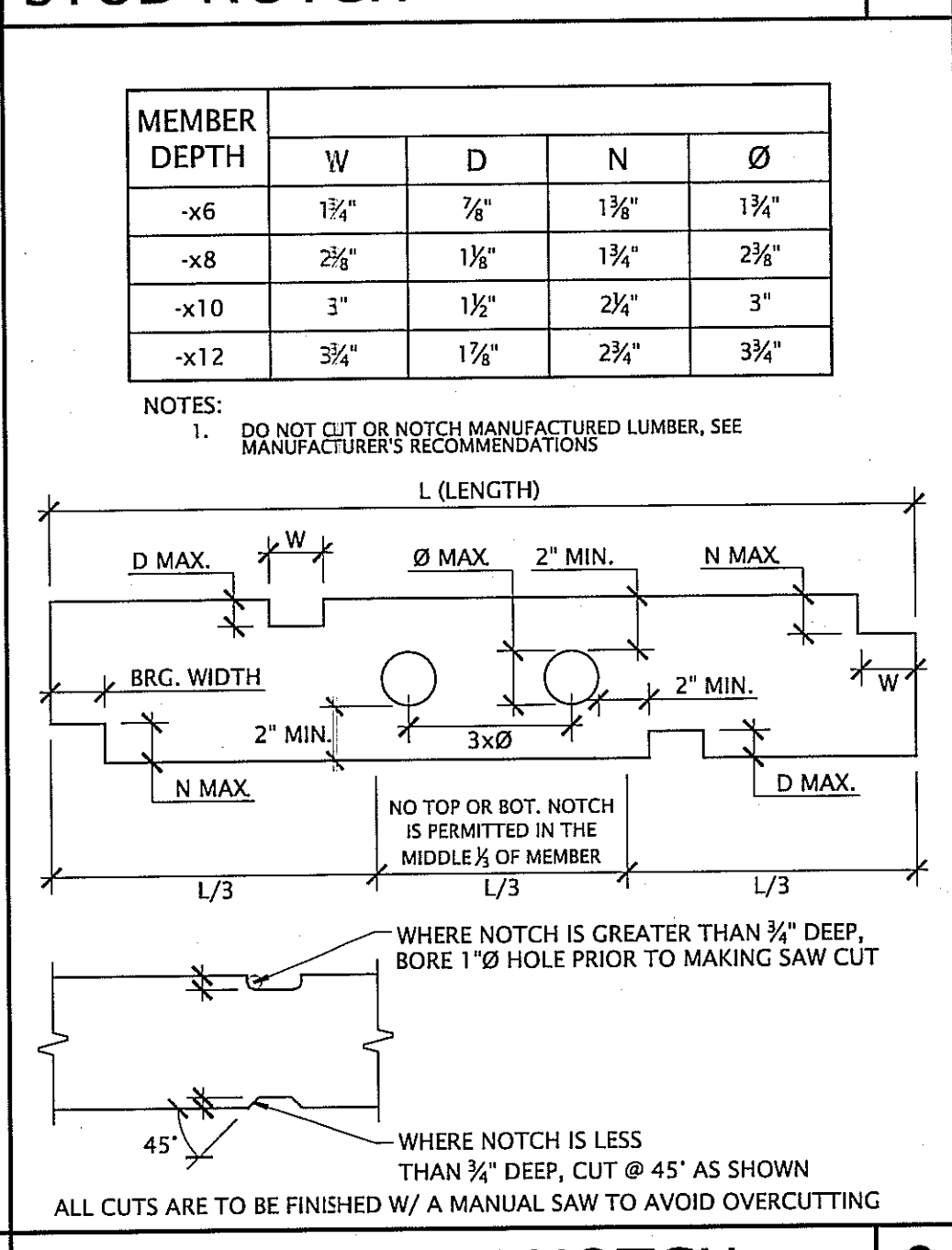
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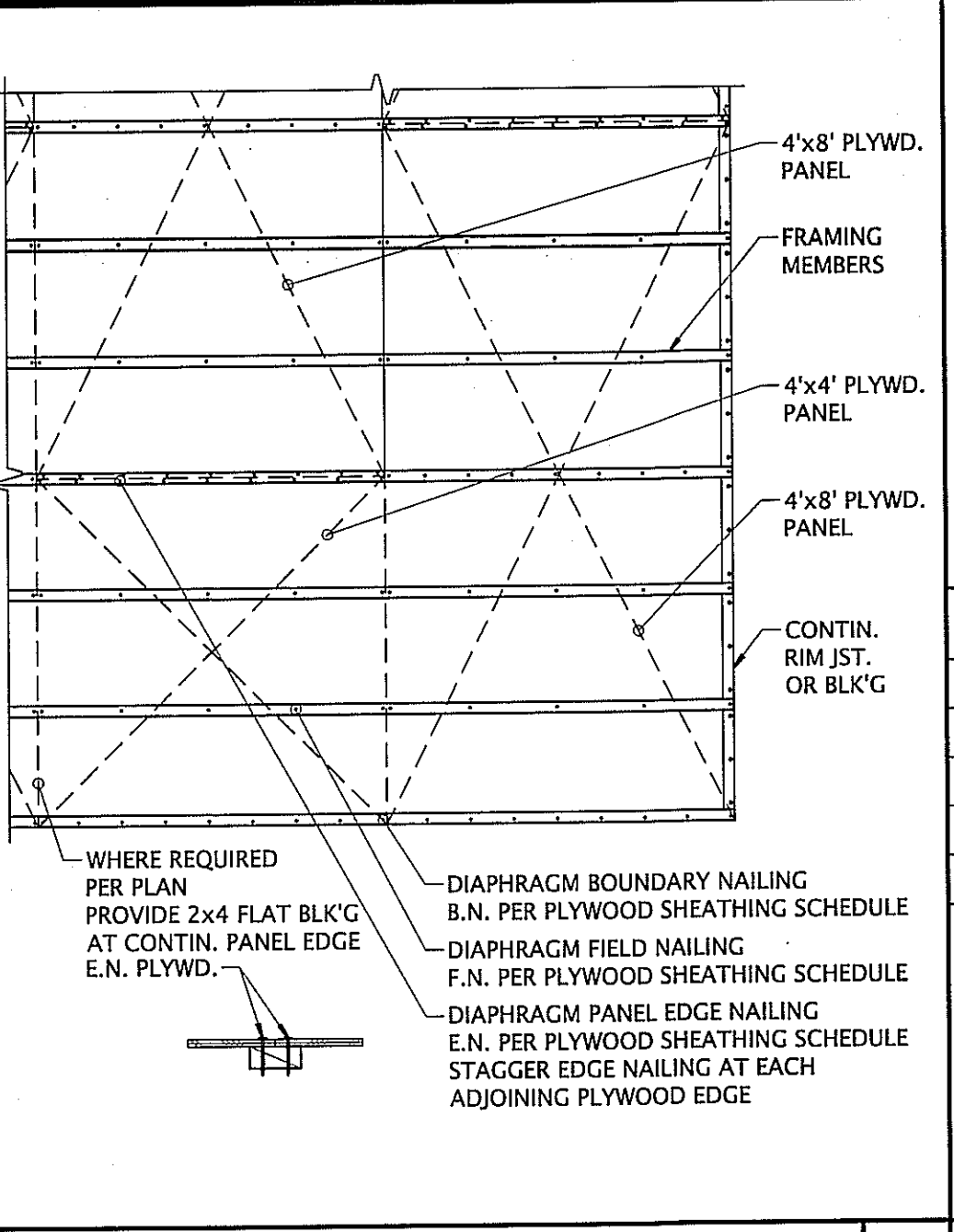
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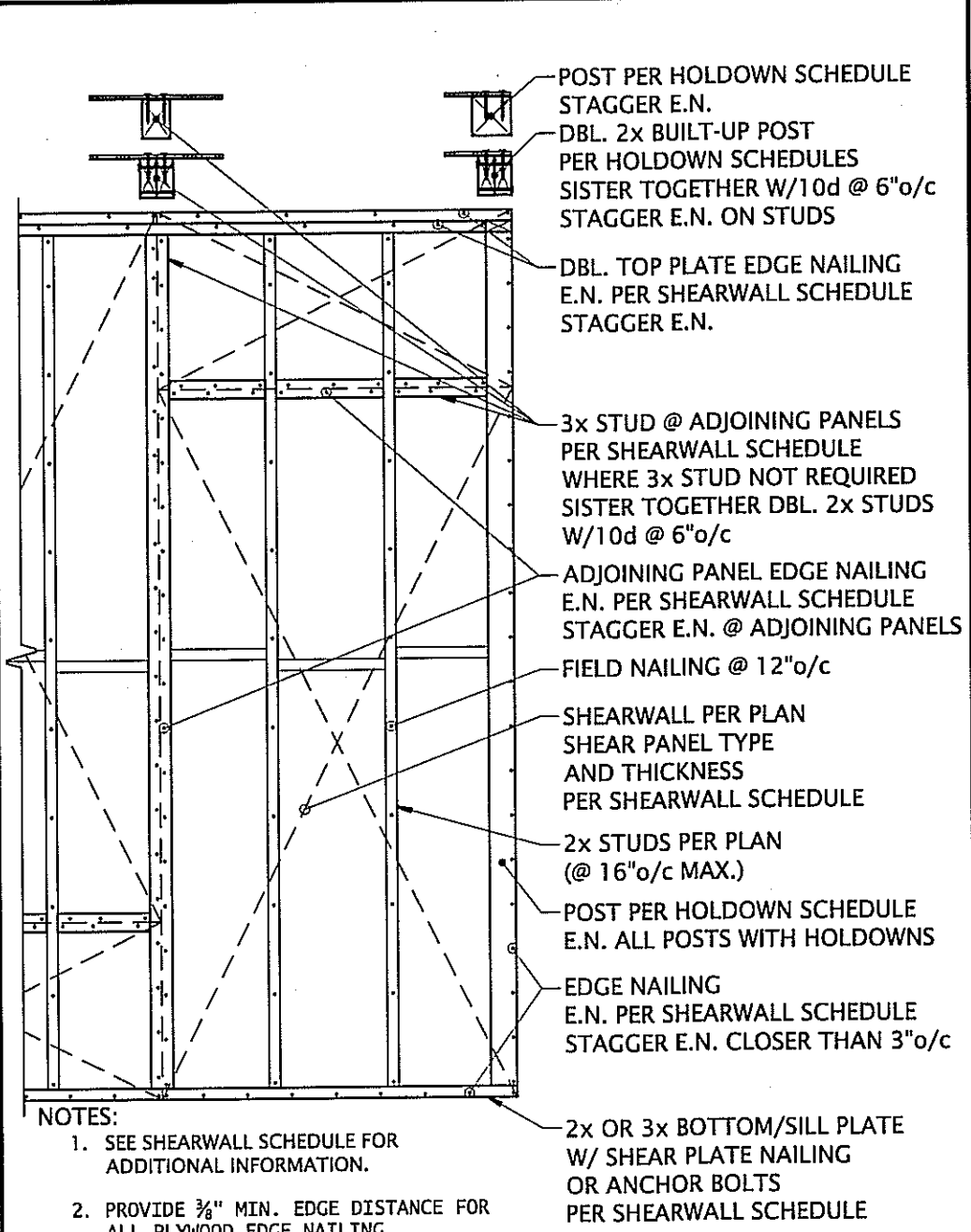
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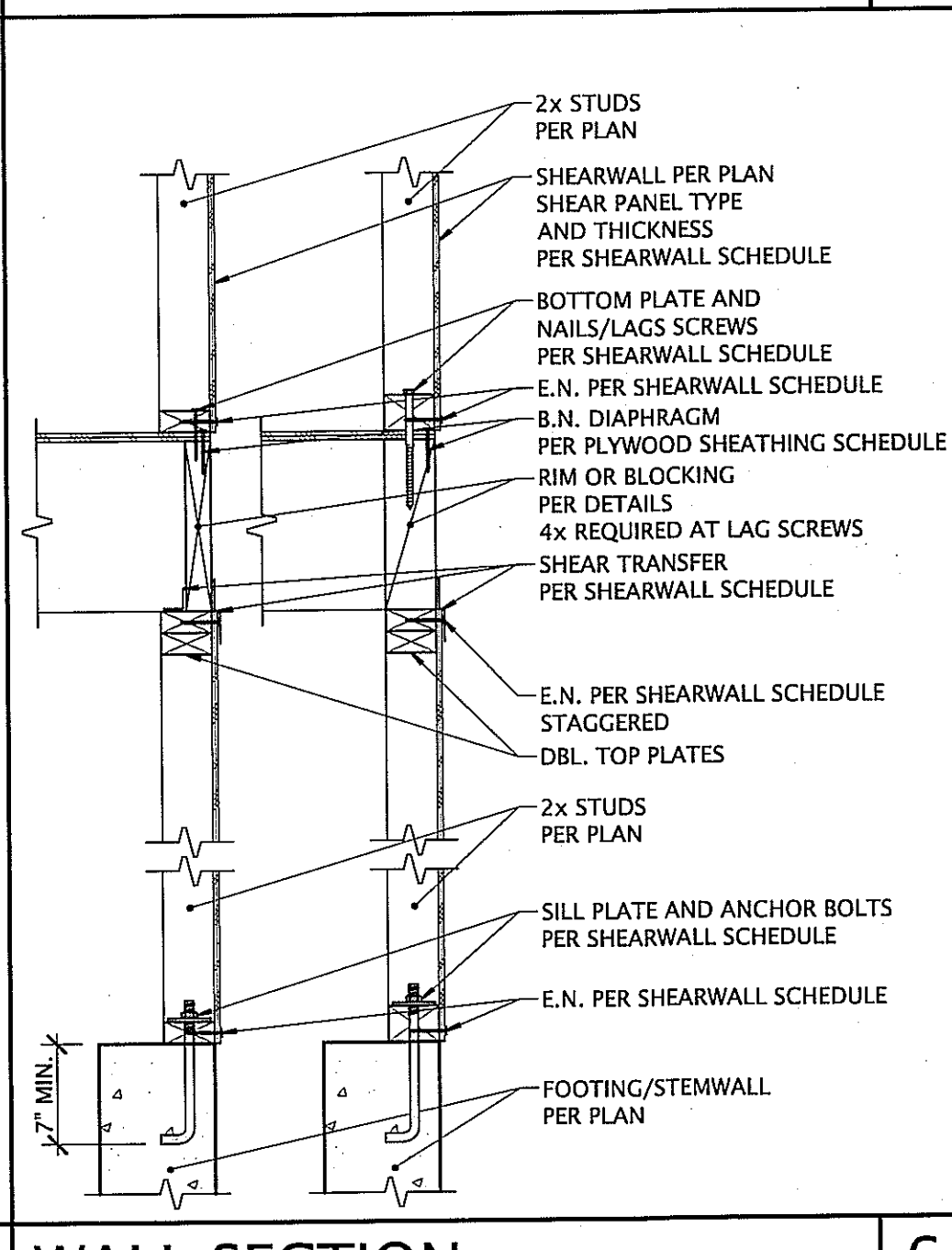
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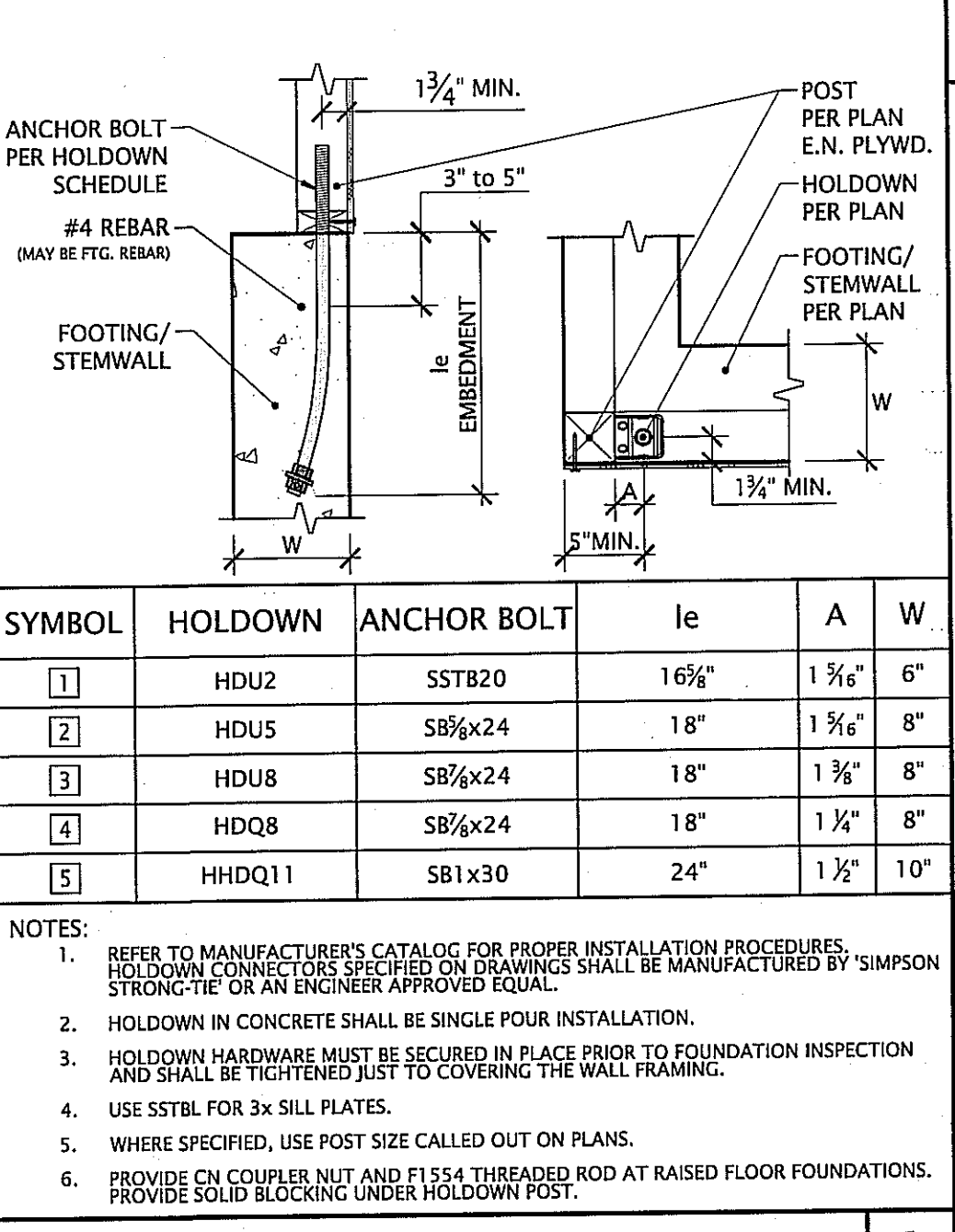
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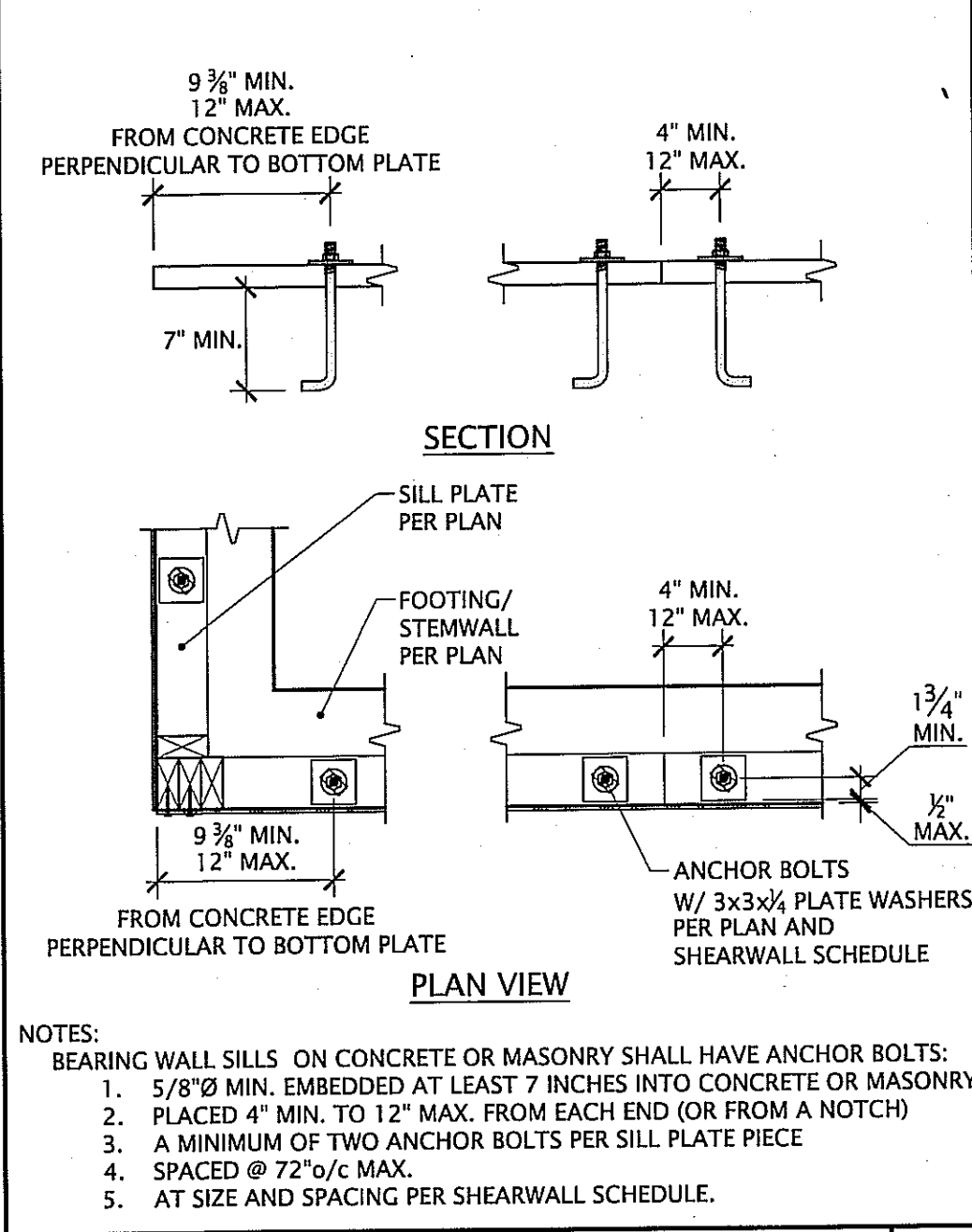
SHEARWALL NAILING



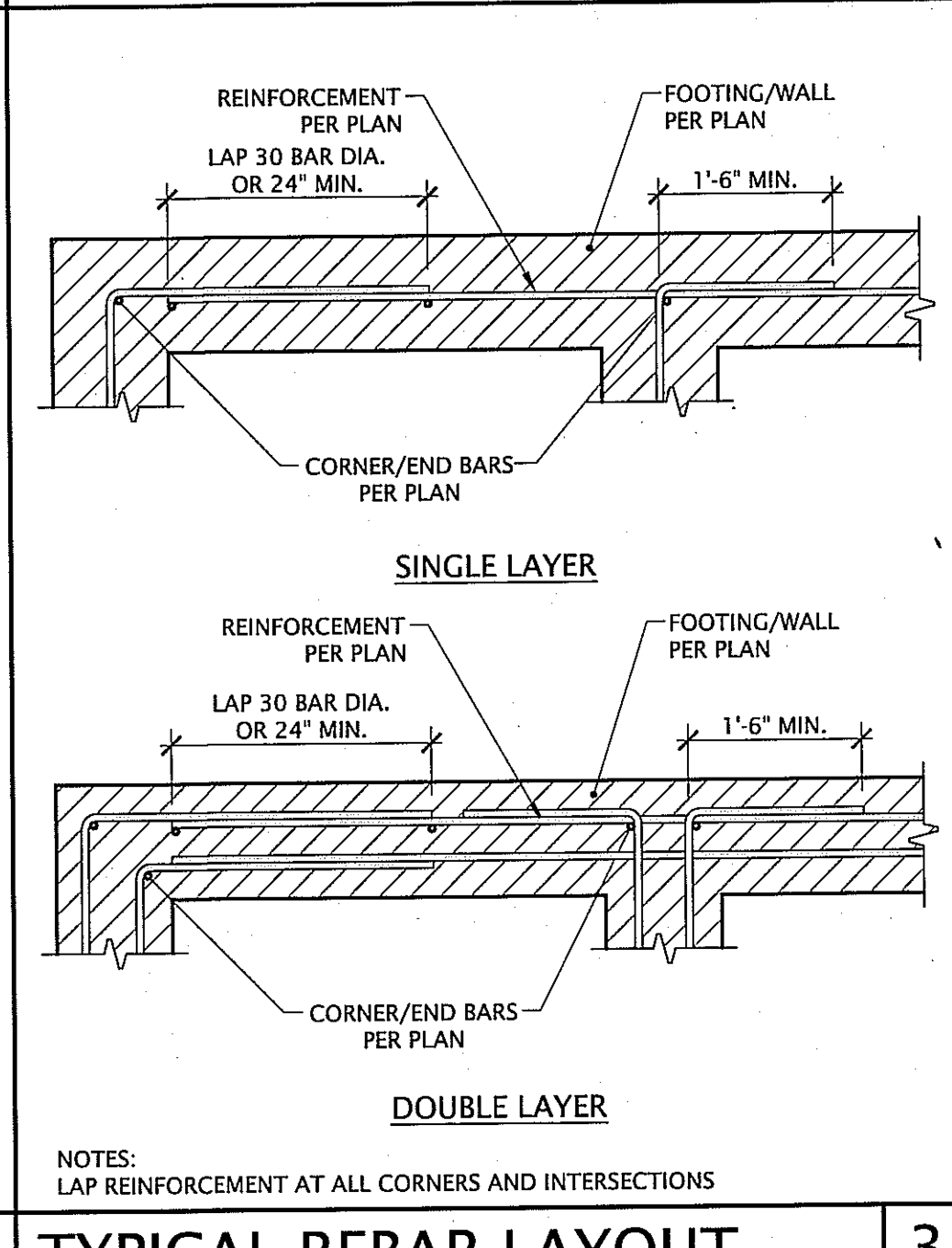
WALL SECTION



HOLDOWN BOLT PLACEMENT



ANCHOR BOLT PLACEMENT



TYPICAL REBAR LAYOUT

TYPICAL DETAIL NOTES

NOTES:
• REFER TO THE STRUCTURAL GENERAL NOTES SHEET, FOUNDATION NOTES, AND WOOD FRAMING NOTES FOR ADDITIONAL TYPICAL NOTES.
• REFER TO FOUNDATION PLAN FOR THE HOLDOWN ANCHOR BOLT LOCATIONS.
• REFER TO THE PLANS FOR THE HOLDOWN SCHEDULE.
• REFER TO WOOD FRAMING NOTES ON THE STRUCTURAL FRAMING PLANS FOR ADDITIONAL TYPICAL NOTES.
• REFER TO THE PLANS FOR THE PLYWOOD SHEATHING SCHEDULE.
• REFER TO THE SHEARWALL SCHEDULE FOR SHEARWALL FOR TYPICAL NOTES.
• REFER TO THE PLANS FOR THE SHEARWALL TYPES AND LOCATIONS.
• REFER TO MANUFACTURER'S INSTALLATION GUIDELINES FOR ALL HARDWARE AND PRE-FABRICATED SHEARWALLS.

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NO. 59217
EXP. 06/30/25
CIVIL
STATE OF CALIFORNIA

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RESIDENCE
230 Hoover Street
Oceanside, CA 92054

REVISIONS

#	DATE	TYPE

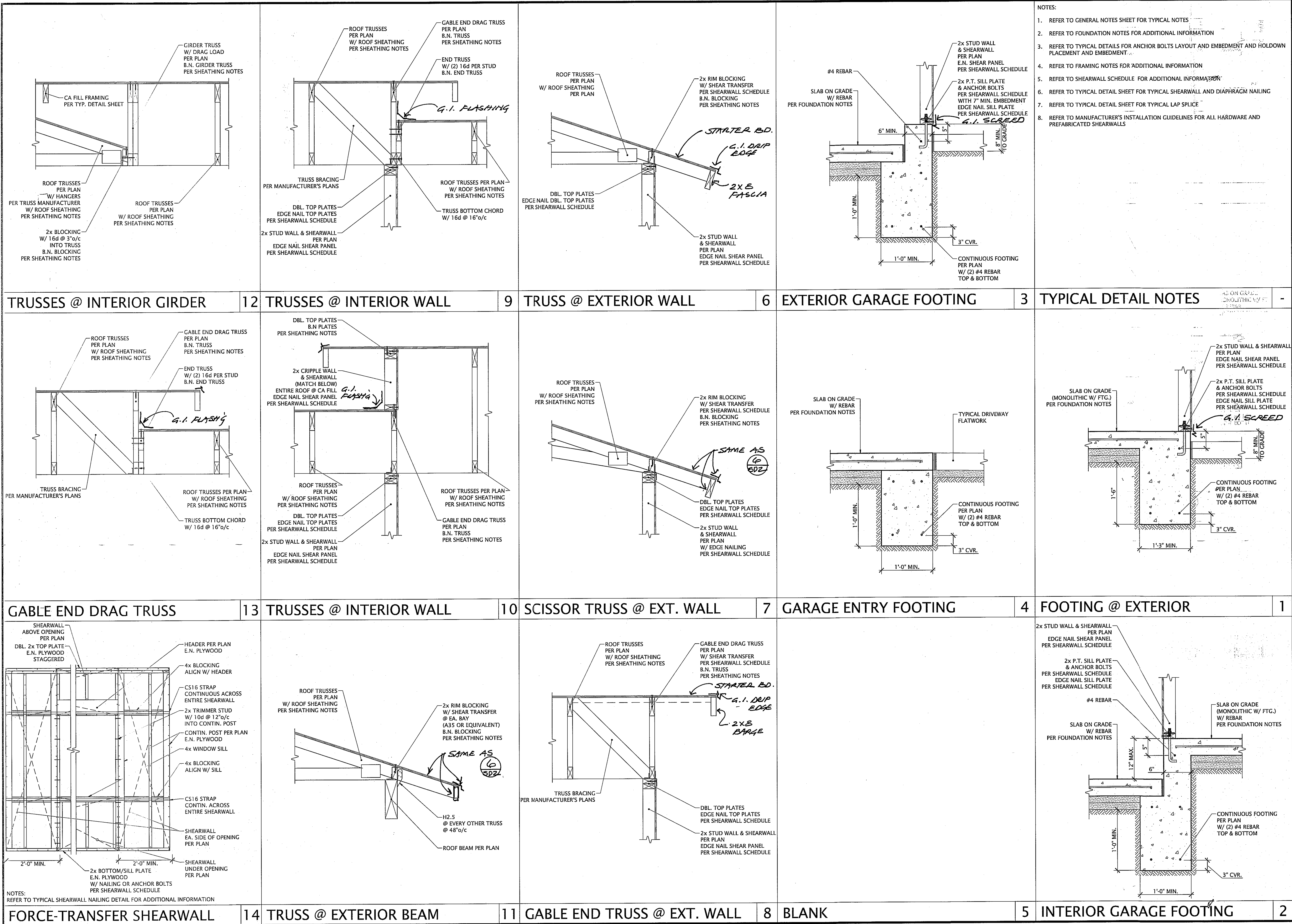
STATUS:
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☐ PRELIMINARY
☐ CHECK SET
☐ PROGRESS SET
☐ PLAN CHECK
☐ BID SET
☐ CONSTRUCTION SET

PLOT DATE: 4/6/24
PROJECT #: 24.031.01

SD1

SCALE: N/A

TYPICAL STRUCTURAL DETAILS



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☐ PLAN CHECK
☐ BID SET
☐ CONSTRUCTION SET

PLOT DATE
4/6/24

PROJECT #
23031.01

SD2

SCALE: N/A

- A. General**
- 1. Applicable codes. All projects will comply with the following building codes and associated amendments:
 - 2022 California Building Code (CBC)
 - 2022 California Building Standards Code (California Building Standards Code)
 - 2022 California Electrical Code (CEC)
 - 2022 California Mechanical Code (CMC)
 - 2022 California Plumbing Code (CPC)
 - 2022 California Fire Code (CFC)
 - 2022 California Building Energy Efficiency Standards (CBEES)

B. Electrical, Plumbing, and Mechanical

- 1. GFCI outlets. Ground Fault Circuit Interrupter (GFCI) outlets are required in bathrooms, at kitchen countertops, at laundry and wet bar sinks, in garages, in crawlspaces, in unfinished basements, and outdoors. (CBC 210.6)
- 2. AFCI outlets. Electrical circuits in bedrooms, living rooms, dining rooms, dens, closets, hallways, or similar rooms must be protected by Arc Fault Circuit Interrupters (AFCI). (CEC 110.2.2)
- 3. Luminaire replacements. Installed luminaires shall meet the efficacy and fixture requirements of CBEES 150.0(k).
- 4. Smoke detectors in building remodels. Smoke detectors are required in each existing sleeping room, outside each separate sleeping area in the immediate vicinity of sleeping rooms, on each story of a dwelling including basements. Battery-operated detectors are acceptable in existing areas with no construction taking place and in alterations not resulting in removal of interior walls or ceiling finishes and without access via an attic, crawl space, or basement. (CRC R314.3)
- 5. Carbon monoxide detectors in building remodels. Carbon monoxide detectors are required outside each separate sleeping area in the immediate vicinity of sleeping rooms, on each story of a dwelling including basements. Battery-operated detectors are acceptable in existing areas with no construction taking place and in alterations not resulting in removal of interior walls or ceiling finishes and without access via an attic, crawl space, or basement. (CRC R314.3)
- 6. Vapor barrier sheathing. Minimum 24-inch by 24-inch sheathing shall be required around perimeter walls, with 14-inch by 3-inch lag bolts attached directly to framing. Straps shall be required with upper third and lower third of water barrier vertical dimension. Lower connection shall occur minimum 4 inches above controls. (CFC 507.2)
- 7. Gas appliances in garages. Water heaters and heating/cooling equipment capable of igniting flammable vapors shall be placed on minimum 18-inch-high platform unless listing report number prohibits equipment installation. (CRC 507.2)
- 8. Impact protection of appliances. Water heaters and heating/cooling equipment subject to vehicular impact shall be protected by bollards or an equivalent measure. (CFC 507.2.1 and CMC 505.1.1)
- 9. Water closet clearance. Minimum 30-inch-wide by 24-inch-deep clearance required at front of water closets. (CFC 402.8)
- 10. Shower doors. Shower compartments shall have minimum area of 1024 square inches and be able to encompass a 30-inch-diameter circle. Shower doors shall have a minimum 22-inch unobstructed width. (CFC 406.8 and CFC 406.8)
- 11. Fireplace appliances. Fireplaces with gas appliances are required to have the flue damper automatically fixed in the open position and fireplaces with LPG appliances are to have no tip or turn configurations. (CMC 303.7.1)
- 12. Chimney clearance. Minimum 2-foot chimney clearance required above building within 10-foot lateral distance of chimney. The chimney shall extend minimum 3 feet above highest point where chimney passes through roof. (CRC R100.8)

C. Mechanical Ventilation and Indoor Air Quality (ASHRAE 62.2-2010)

- 1. Transfer air. Ventilation air shall be provided directly from the outdoors and not as transfer air from adjacent dwelling units or other spaces, such as garages, unconditioned crawlspaces, or unconditioned attics. (CBEES 150.0(c))
- 2. Infiltration and labeling. Ventilation system controls shall be labeled, and the homeowner shall be provided with instructions on how to operate the system. (CBEES 150.0(c))
- 3. Combustion and solid-fuel burning appliances. Combustion appliances shall be properly vented and shall be designed to prevent back-drafting. (CBEES 150.0(c))
- 4. Hazardous. The wall and openings between occupiable spaces and the garage shall be sealed. HVAC systems that include air handlers or return ducts located in garages shall have total leakage of no more than 0.5% of total fan flow when measured at 0.1 in. w.c. using California Title 24 of equivalents. (CBEES 150.0(c))
- 5. Minimum filtration. Mechanical systems supplying air to occupiable space through ductwork shall be provided with a filter having a minimum efficiency of MERV 6 or better. (CBEES 150.0(c))
- 6. Air intake. Air intake (not exhaust) shall be located away from known contaminants. (CBEES 150.0(c))
- 7. Air moving equipment. Air moving equipment used to meet either the whole-building ventilation requirement or the local ventilation exhaust requirement shall be rated in terms of airflow and sound. (CBEES 150.0(c))
- 8. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
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- 82. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 83. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 84. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 85. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 86. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 87. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 88. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 89. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 90. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 91. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 92. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 93. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 94. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 95. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 96. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 97. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 98. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 99. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
- 100. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.

D. Foundation and Underfloor

- 1. Foundation reinforcement. Continuous footings and stem walls shall be provided with a minimum two longitudinal No. 4 bars, one at the top and one at the bottom of the footing. (CRC R303.1.2)
- 2. Shear wall foundation support. Shear walls shall be supported by continuous foundations. (CRC R303.1.2)
- 3. Concrete slabs-on-grade. Slabs-on-grade shall be minimum 3/4-inch-thick. (CRC R303.1.2)
- 4. Vapor retarder. A 10-mil polyethylene or approved vapor retarder with joints lapped minimum 6 inches shall be placed between a concrete slab-on-grade and the base course or subgrade. (CRC R303.1.2)
- 5. Anchor bolts and ties. Foundation plates or sills shall be bolted or anchored to the foundation as follows:
 - a. Foundation plate per the following (CRC R303.1.2 and CRC R303.1.1):
 - b. Minimum 12-inch-diameter steel bolts
 - c. Bolts embedded at least 7 inches into concrete or masonry
 - d. Bolts spaced maximum 6 feet on center
 - e. Minimum two bolts per plate/sill with one bolt located maximum 12 inches and minimum 7 bolt diameters from each end of each sill plate
 - f. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - g. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - h. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - i. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - j. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - k. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - l. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - m. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - n. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - o. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - p. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - q. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - r. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - s. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - t. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - u. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - v. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - w. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - x. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - y. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
 - z. Minimum 3-inch by 3-inch by 282-MPa steel plate washer between sill and nut on each bolt
- 6. Wall. Wall in contact with ground, embedded in concrete in direct contact with ground, or embedded in concrete exposed to weather
- 7. Wood joists within 18 inches and wood girders within 12 inches of the exposed ground in crawl spaces shall be treated with preservative-treated wood
- 8. Wood framing members that rest on concrete or masonry exterior foundation walls and are less than 3 inches from exposed earth shall be of naturally durable or preservative-treated wood
- 9. Wood framing, sheathing, and siding on the exterior of the building and having clearance less than 5 inches from the exposed ground or less than 2 inches vertically from concrete steps, porch slabs, patio slabs, or other exterior concrete surfaces exposed to weather
- 10. Sills and sleepers on concrete or masonry shall be in direct contact with ground unless separated from such slab by impervious moisture barrier
- 11. Sill of wood girders resting on concrete or masonry shall have clearance less than 1/2 inch on tops, sides, and ends
- 12. Wood structural members supporting moisture-permeable floors or roofs exposed to weather, such as concrete or masonry sills, unless separated from such floors or roofs by an impervious moisture barrier
- 13. Floor joists and sleepers or other wood framing members attached directly to interior of exterior joists or sleepers shall be below grade except where vapor retarder applied between wall and floor joists or framing members
- 14. Underfloor ventilation. Underfloor areas shall have ventilation openings through foundation walls or exterior walls, with minimum net area of ventilation openings of 1 square foot for each 150 square feet of underfloor area. On such ventilation opening shall be within 3 feet of each corner of the building. (CRC R408.1)
- 15. Underfloor access. Underfloor areas shall be provided with a minimum 18-inch by 24-inch access opening. (CRC R408.4)

E. Wood Framing

- 1. Fastener requirements. The number, size, and spacing of fasteners connecting wood members shall be as follows:
 - a. Minimum 16d nails
 - b. Minimum 16d nails
 - c. Minimum 16d nails
 - d. Minimum 16d nails
 - e. Minimum 16d nails
 - f. Minimum 16d nails
 - g. Minimum 16d nails
 - h. Minimum 16d nails
 - i. Minimum 16d nails
 - j. Minimum 16d nails
 - k. Minimum 16d nails
 - l. Minimum 16d nails
 - m. Minimum 16d nails
 - n. Minimum 16d nails
 - o. Minimum 16d nails
 - p. Minimum 16d nails
 - q. Minimum 16d nails
 - r. Minimum 16d nails
 - s. Minimum 16d nails
 - t. Minimum 16d nails
 - u. Minimum 16d nails
 - v. Minimum 16d nails
 - w. Minimum 16d nails
 - x. Minimum 16d nails
 - y. Minimum 16d nails
 - z. Minimum 16d nails
- 2. Stud size, height, and spacing. The size, height, and spacing of studs shall be in accordance with CRC Table R602.3(5). (CRC R602.3.1)

F. Wood Framing (Continued)

- 3. Sill plate. Sill plate shall have full bearing on nominal 2-inch-thick or larger sill plate with width at least equal to stud width. (CRC R602.3.4)
- 4. Bearing studs. Where joists, trusses, or rafters are spaced more than 16 inches on center and the bearing studs below are spaced 24 inches on center, such members shall bear within 6 inches of the studs beneath. (CRC R602.3.3)
- 5. Drilling and notching of studs. Any stud in an exterior wall or bearing partition may be cut or notched to a depth not exceeding 25% of its width. Slits in nonbearing partitions may be cut to a depth not to exceed 40% of a single stud height. Any stud may be bored or drilled, provided the diameter of the resulting hole is no more than 80% of the stud width, the edges of the hole be no more than 5/8 inch from the end of the stud, and the hole be not located in the same section as a cut or notch. Studs located in exterior wall or bearing partitions drilled over 40% and up to 60% shall also be doubled with no more than two successive studs bored. (CRC R602.3.5)
- 6. Top plate. Wood stud walls shall be capped with a double top plate installed to provide overtopping at corners and at intersections with other partitions. End joints in double top plates shall be offset at least 24 inches. Joints in plates need not occur over studs. Plates shall be minimum nominal 2 inches thick and have width at least equal to width of studs. (CRC R602.3.2)
- 7. Top plate splice. Top plate lap splice shall be face-nailed with minimum 6 16d nails on each side of splice. (CRC R602.3.10.1)
- 8. Drilling and notching of top plate. When piping or ductwork is placed in or partly in an exterior wall or interior load-bearing wall, necessitating cutting, drilling, or notching of the top plate by inches wide shall be fastened across it not less than 10.05-inch-thick and 1-1/2 inches apart at each end of the opening. The hole shall be not less than 1/2 inch from the end of the opening. (CRC R602.3.1)
- 9. Cripple walls. Foundation cripple walls shall have framing of studs not less than 2 inches in an additional story. Cripple walls with stud height less than 14 inches shall be sheathed on at least one side with a wood structural panel fastened to both the top and bottom plates in accordance with Table R602.3(1), or the cripple walls shall be constructed of solid blocking. Cripple walls shall be supported on continuous foundations. (CRC R602.3)
- 10. Wall bracing. Buildings shall be braced in accordance with the methods allowed per CRC R602.10.2, CRC R602.10.4, and/or CRC R602.10.5.
- 11. Braced wall line assembly. Spacing between braced wall lines shall not exceed 20 feet or alternate provisions of CRC R602.10.3.1.
- 12. Shear wall cumulative length. The cumulative length of shear walls with each braced wall line shall meet the provisions of CRC Table R602.10.3(1) for wind loads and CRC Table R602.10.3(2) for seismic loads. (CRC R602.10.1.1)
- 13. Shear wall spacing. Shear walls shall be located not more than 25 feet on center. (CRC R602.10.2.2)
- 14. Shear wall offset. Shear walls may be offset out-of-plane not more than 4 feet from the designated braced wall line and not more than 8 feet from any other offset wall considered part of the same braced wall line. (CRC R602.10.1.2)
- 15. Shear wall location. Shear walls shall be located at the ends of each braced wall line or meet alternate provisions of CRC R602.10.2.2.
- 16. Individual shear wall length. Shear walls shall meet minimum length requirements of CRC R602.10.5.1.
- 17. Cripple wall bracing. Cripple walls shall be braced per CRC R602.10.1.1.
- 18. Shear wall and diaphragm nailing. All shear walls, roof diaphragms, and floor diaphragms shall be nailed to supporting construction per CRC Table R602.3(1). (CRC R604.3)
- 19. Shear wall joints. All vertical joints in shear wall sheathing shall occur over, and be fastened to, common studs. Horizontal joints in shear walls shall occur over, and be fastened to, 1-1/2-inch-thick blocking. (CRC R602.10.10)
- 20. Framing over openings. Headers, double joists, or trusses of adequate size to transfer loads to vertical members shall be provided over window and door openings in load-bearing walls and partitions. (CRC R203.2.2)
- 21. Joists under bearing partitions. Joists under parallel bearing partitions shall be of adequate size to support the load. Double joists, used to adequately support the load, that are separated to permit the installation of piping or vents shall be full-depth solid-blocked with minimum 2-inch nominal lumber spaced at maximum 4 feet on center. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls, or partitions more than the joist depth unless such joists are of sufficient size to carry the additional load. (CRC R602.4.2)
- 22. Joists above or below shear walls. Where joists are perpendicular to a shear wall above or below a rim joist, head joist, or ceiling joist, the joists shall be provided with a full-depth solid-blocked with minimum 2-inch nominal lumber spaced at maximum 4 feet on center. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls, or partitions more than the joist depth unless such joists are of sufficient size to carry the additional load. (CRC R602.4.2)
- 23. Joists under bearing partitions. Joists under parallel bearing partitions shall be of adequate size to support the load. Double joists, used to adequately support the load, that are separated to permit the installation of piping or vents shall be full-depth solid-blocked with minimum 2-inch nominal lumber spaced at maximum 4 feet on center. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls, or partitions more than the joist depth unless such joists are of sufficient size to carry the additional load. (CRC R602.4.2)
- 24. Joists above or below shear walls. Where joists are perpendicular to a shear wall above or below a rim joist, head joist, or ceiling joist, the joists shall be provided with a full-depth solid-blocked with minimum 2-inch nominal lumber spaced at maximum 4 feet on center. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls, or partitions more than the joist depth unless such joists are of sufficient size to carry the additional load. (CRC R602.4.2)
- 25. Joists under bearing partitions. Joists under parallel bearing partitions shall be of adequate size to support the load. Double joists, used to adequately support the load, that are separated to permit the installation of piping or vents shall be full-depth solid-blocked with minimum 2-inch nominal lumber spaced at maximum 4 feet on center. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls, or partitions more than the joist depth unless such joists are of sufficient size to carry the additional load. (CRC R602.4.2)
- 26. Joists above or below shear walls. Where joists are perpendicular to a shear wall above or below a rim joist, head joist, or ceiling joist, the joists shall be provided with a full-depth solid-blocked with minimum 2-inch nominal lumber spaced at maximum 4 feet on center. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls, or partitions more than the joist depth unless such joists are of sufficient size to carry the additional load. (CRC R602.4.2)
- 27. Floor joist lap. Floor joists framing opposite sides over a bearing support shall lap minimum 3 inches and shall be nailed together within minimum 3 feet of each other. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls, or partitions more than the joist depth unless such joists are of sufficient size to carry the additional load. (CRC R602.4.2)
- 28. Floor joist-to-girder support. Floor joists framing into the side of a wood girder shall be supported by approved framing anchors or on ledger strips minimum nominal 2 inches by 2 inches. (CRC R602.4.2)
- 29. Floor joist lateral restraint. Floor joists shall be supported laterally at ends and each intermediate support by minimum 2-inch full-depth blocking, by attachment to full-depth header, band joist, or rim joist, or to an adjoining stud, or shall be otherwise provided with lateral support to prevent rotation. (CRC R602.7)
- 30. Floor joist bridging. Floor joists exceeding nominal 2 inches by 2 inches shall be supported laterally by full-depth blocking, diagonal bridging (wood or metal), or a continuous 1-inch-by-3-inch joist nailed across the bottom of joists perpendicular to joists at maximum 8-foot intervals. (CRC R602.7.1)
- 31. Framing of floor openings. Openings in floor framing shall be framed with a header and trimmer joists. When the header joist span does not exceed 4 feet, the header joist may be a single member the same size as the floor joist. Single trimmer joists may be used to carry a single header joist located within 3 feet of the trimmer joist bearing. When the header joist span exceeds 4 feet, the trimmer joists and header joist shall be doubled and of sufficient cross-section to support the floor joists framing into the header. Approved hangers shall be used for the header joist-to-trimmer joist connections when the header joist span exceeds 6 feet. Tail joists on roof 12 feet long shall be supported at the header by framing anchors or on ledger strips minimum 2 inches by 2 inches. (CRC R602.10)
- 32. Girders. Girders for single-story applications or girders supporting loads from a single floor shall be not less than 6 inches by 6 inches for spans of 8 feet or less, provided that girders are spaced 16 inches on center. Other girders shall be designed to support the loads specified in the CBC. Girders and joists shall occur over supports. When a girder is spliced over a support, an adequate tie shall be provided. The ends of beams or girders supported on masonry or concrete shall not have less than 3 inches of bearing. (CRC R203.7)
- 33. Ridge, hips, and valleys. Rafter shall be framed to a ridge board or to each other with a gasket plate as a tie. Ridge boards shall be minimum 1-inch nominal thickness and not less in depth than the cut end of the rafter. At all valley and hips, there shall be a valley or hip rafter not less than 2-inch nominal thickness and not less in depth than the cut end of the rafter. Hip and valley rafters shall be supported at the ridge by a brace to a bearing partition or be designed to carry and distribute the loads at that point. Where the roof pitch is less than 3/12 (26% drainage), structural members that support rafters and ceiling joists, such as sills, hips, and valleys, shall be designed as beams. (CRC R602.8)
- 34. Ceiling joist and rafter connections. Ceiling joists and rafters shall be nailed to each other per CRC Table R602.5.1(9), and the rafter shall be nailed to the wall top plate per CRC Table R602.5.1(10). Ceiling joists shall be continuous or securely joined by CRC Table R602.5.1(9) where they meet over interior partitions and are nailed to adjacent rafters to provide a continuous tie across the building when such joists are parallel to rafters. Where ceiling joists are not parallel to rafters, rafter ties shall be installed to provide a continuous tie. Where ceiling joists are not parallel to rafters, rafter ties shall be installed. Rafter ties shall be minimum 2 inches by 4 inches nominal, installed per CRC Table R602.5.1(9), or connections of equivalent capacities shall be provided. Where ceiling joists or rafters are not provided, the ridge formed by these rafters shall be supported by a wall or engineer-designed girder. (CRC R602.4.1)
- 35. Ceiling joists lapped. Ends of ceiling joists shall be lapped minimum 3 inches or buttled overtopping partitions or beams and fastened to the bearing element. Where ceiling joists are not parallel to rafters, rafter ties shall be installed. Rafter ties shall be minimum 2 inches by 4 inches nominal, installed per CRC Table R602.5.1(9), or connections of equivalent capacities shall be provided. Where ceiling joists or rafters are not provided, the ridge formed by these rafters shall be supported by a wall or engineer-designed girder. (CRC R602.4.1)
- 36. Collar ties. Collar ties or ridge straps to resist wind uplift shall be connected in the upper third of the attic space. Collar ties shall be a minimum 1 inch by 4 inches nominal and spaced maximum 4 feet on center. (CRC R602.3.1)
- 37. Purlins. Purlins installed to reduce the span of rafters shall be sized not less than the required size of the rafters they support. Purlins shall be continuous and shall be supported by 2-inch-by-4-inch nominal lumber installed to bearing walls at a minimum 8-foot interval from horizontal. The braces shall be spaced maximum 4 feet on center with a maximum 8-foot unbraced length. (CRC R602.5.1)
- 38. Roofing member bearing. The ends of each rafter or ceiling joist shall have not less than 1-1/2 inches of bearing on wood or masonry and not less than 3 inches of bearing on masonry or concrete. (CRC R602.8)
- 39. Roofing member lateral support. Roof framing members and ceiling joists with a nominal depth-to-thickness ratio exceeding 6:1 shall be provided with lateral support at points of bearing to prevent rotation. (CRC R602.8)
- 40. Roofing member bridging. Rafter and ceiling joists with a nominal depth-to-thickness ratio exceeding 6:1 shall be supported laterally by solid blocking, diagonal bridging (wood or metal), or a continuous 1-inch-by-3-inch wood strip nailed across the rafters or ceiling joists at maximum 8-foot intervals. (CRC R602.8.1)

G. Roofing and Weatherproofing (Continued)

- 1. Framing of roof/ceiling openings. Openings in roof and ceiling framing shall be framed with a header and trimmer joists. When the header joist span does not exceed 4 feet, the header joist may be a single member the same size as the floor joist. Single trimmer joists may be used to carry a single header joist located within 3 feet of the trimmer joist bearing. When the header joist span exceeds 4 feet, the trimmer joists and header joist shall be doubled and of sufficient cross-section to support the floor joists framing into the header. Approved hangers shall be used for the header joist-to-trimmer joist connections when the header joist span exceeds 6 feet. Tail joists on roof 12 feet long shall be supported at the header by framing anchors or on ledger strips minimum 2 inches by 2 inches. (CRC R602.10)
- 2. Roof framing above shear walls. Rafter roof trusses shall be connected to top plates of shear walls with blocking between the rafters/trusses. (CRC R602.10.8)
- 3. Roof diaphragm under fill framing. Roof/wood shall be continuous under California fill framing.
- 4. Roof diaphragm at ridge. Minimum 2-inch nominal blocking required for roof diaphragm nailing at ridge.
- 5. Blocking of roof trusses. Minimum 2-inch nominal blocking required between trusses at ridge lines and at points of bearing at exterior walls.
- 6. Truss clearance. Minimum 12-inch clearance required between top plates of interior nonbearing partitions and bottom chords of trusses.
- 7. Drilling, cutting, and notching of roof/ceiling rafters. Notches in solid lumber joists, rafters, blocking, and beams shall not exceed one-sixth the member depth, shall be not longer than one-third the member depth, and shall not be located in the middle one-third of the span. Notches at member ends shall not exceed one-fourth the member depth. The tension side of members shall be not extended more than 1/2 inch beyond the member depth. The hole shall be not less than 1/2 inch to the notch. (CRC R602.8.1)
- 8. Exterior landings, decks, balconies, and stairs. Such elements shall be positively anchored to the primary structure to resist both vertical lateral forces or shall be designed to be self-supporting. Attachment shall not be accomplished by use of toenails or nails subject to withdrawal. (CRC R311.3)
- 9. Fireblocking. Fireblocking shall be provided at the following locations: CRC R302.1 and CRC R302.10.3.
- 10. In concealed spaces of stud walls and partitions, including furled spaces, and parallel rows of joists or studs, such as follows:
 - a. Vertically at the ceiling and floor levels
 - b. Horizontally at intervals not exceeding 10 feet
 - c. At all intersections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings, and cove ceilings
 - d. In concealed spaces between stair stringers at top and bottom of the run
 - e. At openings around vents, pipes, ducts, cables and wiring of ceiling and floor level, with an approved material to resist the free passage of flames and products of combustion
 - f. At chimneys and fireplaces per item 4.4.8
 - g. Cornices of a two-family dwelling at the line of dwelling-unit separation
- 11. Fireblocking materials. Except as otherwise specified in Items 4.4.8 and 4.4.9, fireblocking shall consist of the following materials with the integrity maintained (CRC R302.11.1):
 - a. Two-inch nominal lumber
 - b. Two-inch nominal lumber
 - c. One thickness of one-inch nominal lumber nailed broken lap joints
 - d. One thickness of 2x3/2-inch wood structural panel with joints backed by 2x3/2-inch wood structural panel
 - e. One thickness of 3/4-inch particleboard with joints backed by 3/4-inch particleboard
 - f. 1/4-inch cement-based mortar
 - g. Balts or blankets of mineral or glass fiber of approved materials installed in such a manner as to be securely retained in place. Balts or blankets of mineral or glass fiber or other approved material shall be installed to comply with the 10-foot horizontal fireblocking in concealed spaces between stair stringers at top and bottom of the run.
 - h. Insulation used as fireblocking shall fill the entire cross-section of the wall cavity to a minimum depth of 18 inches measured vertically. When piping, conduit, or similar obstructions are encountered, the insulation shall be provided equally above and below the obstruction. Insulation material shall not be used as a fireblock unless specifically tested in the form and manner intended to be used to demonstrate its ability to contain flame and to retard the spread of fire and hot gases.
- 12. Fireblocking at openings around vents, pipes, ducts, cables, and wires at ceiling and floor level. Such openings shall be fireblocked with an approved material to resist the free passage of flames and products of combustion. (CRC R302.11.1)
- 13. Fireblocking of chimneys and fireplaces. All spaces between chimneys and floors and between chimneys and walls shall be fireblocked with noncombustible material, securely fastened in place. The fireblocking of spaces between chimneys and wood joists, or between chimneys and walls, shall be supported or be placed on edge of metal lath laid flat across the spaces between combustible material and the chimney. (CRC R1003.10.1)
- 14. Draftstopping. In combustible construction where there is usable space both above and below the concealed space of a floor/ceiling assembly, draftstopping shall be installed so that the area of concealed space is not approximately equal area. Where the assembly is enclosed by a floor membrane above and a ceiling membrane below, draftstopping shall be provided in floor/ceiling assemblies under the following circumstances: CRC R302.12:
 - a. Ceiling is supported under the floor framing
 - b. Floor framing is constructed of truss-type girders or perforated members
- 15. Draftstopping materials. Draftstopping shall be at least 1/2-inch gypsum board, 3/8-inch wood structural panels, or other approved materials adequately supported. Draftstopping shall be installed parallel to the floor framing members unless otherwise approved by the building official. The integrity of draftstopping shall be maintained. (CRC R302.12.1)
- 16. Combustible insulation clearance. Combustible insulation shall be separated minimum 3 inches from recessed luminaires, fan motors, and other heat-producing devices. (CRC R302.14)

F. General Material Specifications

- 1. Lumber. All joists, rafters, beams, and posts 2-inches to 4-inches thick shall be No. 2 grade Douglas Fir-Larch or better. All posts and beams 5 inches and thicker shall be No. 1 grade Douglas Fir-Larch or better. All studs not more than 8 feet long shall be stud-grade Douglas Fir-Larch or better when supporting floor, roof, and ceiling. Slugs longer than 8 feet shall be No. 2 grade Douglas Fir-Larch or better.
- 2. Concrete. Concrete shall have a minimum compressive strength of 2,500 psi at 28 days and shall consist of 1 part cement, 3 parts sand, 4 parts 1-inch maximum size rock, and not more than 7-1/2 gallons of water per sack of cement. (CRC R203.2)
- 3. Mortar. Mortar used in construction of masonry walls, foundation walls, and retaining walls shall conform to ASTM C 270 and shall consist of 1 part portland cement, 2-1/4 to 3 parts sand, and 1/4 to 1/2 part hydrated lime. (CRC R203.2)
- 4. Grout. Grout shall conform to ASTM C 475 and shall consist of 1 part portland cement, 1/10 part water, and 2-1/4 to 3 parts sand, and 1/2 part portland cement. Grout shall attain a minimum compressive strength of 2,000 psi at 28 days. (CRC R203.3)
- 5. Masonry. Masonry units shall comply with ASTM C 90 for load-bearing concrete masonry units. (CRC R203.1)
- 6. Reinforcing steel. Reinforcing steel used in construction of reinforced masonry or concrete structures shall be formed and comply with ASTM A 616. (CRC R203.4)
- 7. Structural steel. Steel used as structural shapes such as wide-flange sections, channels, plates, and angles shall comply with ASTM A 36. Pipe columns shall comply with ASTM A 53. Structural steel shall comply with ASTM A 588.
- 8. Fasteners for preservative-treated wood. Fasteners for preservative-treated and fire-retardant-treated wood - including nails and washers - shall be of hot dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper. (CRC R317.1.1)
- 9. Fasteners for fire-retardant-treated wood. Fasteners for fire-retardant-treated wood used in exterior applications or wet or damp locations shall be of hot dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper. (CRC R317.2.3)

G. Roofing



RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2023)

G-1



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

G-2