ACOUSTICAL NOTES:

1. All new windows and glass doors shall have a minimum Sound Transmission Class (STC) of 30

2. Ventilation shall be provided per the requirements of the California Mechanical Code (CMC), Chapter 4 . The ventilation system shall consist of air-conditioning, furnace with summer switch, or other independent fan system . Operation of the ventilation system shall not result in interior noise levels greater than 45 dB CNEL.

HERS NOTE:

An electronically signed and registered Installation Certificate(s) (CF2R) posted by the installing contractor shall be submitted to the field inspector during construction at the building site. A registered CF2R will have a unique 21-digit registration number followed by four zeros located at the bottom of each page. The first 12 digits of the number will match the registration number of the associated CF1R . Certificate of Occupancy will not be issued until forms CF2R is reviewed and approved.
- An electronically signed and registered Certificate(s) o f Field Verification and Diagnstic Testing (CF3R) shall be posted at the building site by a certified HERS rater. A registered CF3R will have a unique 25-digit registration number located at the bottom of each page. The first 20 digits of the number will match the registration number o f the associated CF2R . Certificate of Occupancy will not be issued until CF3R is reviewed and approved.""

FAA NOTIFICATION:

THE PROJECT IS LOCATED IN THE AIRPORT ZONE, AIRPORT INFLUENCE AREA (REVIEW AREA 2), AND THE FEDERAL AVIATION ADMINISTRATION (FAA) PART 77 NOTIFICATION AREA

WINDOW NOTE:

PROVIDE AN EMERGENCY ESCAPE AND RESCUE OPENING THAT COMPLIES WITH ALL OF THE FOLLOWING:
- MINIMUM NET CLEAR OF 5.7 SQ.FT.
(5 FEETMINIMUM AT GRADE FLOOR OPENING)
- MINIMUM 20 INCH NET CLEAR OPENING WIDTH
- MINIMUM 24 INCHET CLEAR OPENING HEIGHT
- BOTTOM OF THE CLEAR OPENING NOT GREATER THAN 44 INCHES MEASURED FROM THE FLOOR (CRC R310.1)

SHOWERS NOTE:

SHOWER COMPARTMENTS AND BATHTUBS WITH AN INSTALLED SHOWER HEADS SHALL BE FINIHES WITH NON ABSORBENT SURFACE THAT EXTENDS TO HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR. (CRC R307.2)

CONSTRUCTION OR ALTERATION NOT REQUIRING NOTICE:

"I FERNANDO GONZALEZ do hereby certify that the structure(s) or modification to existing structure(s) shown on these plans do not require Federal Aviation Administration notification because per Section 77.15 (a) of Title 14 of Code of Federal Regulations CFR Part 77, Notification is not required."

"NOTICE TO THE APPLICANT/OWNER'S AGENT/ARCHITECT ORENGINEER OF RECORD:

By using this permitted construction drawings for construction/installation of the work specified herein, you agree to comply with the reuirements of the City of San Diego for special inspections, structural observations, construction material testing and off-site frabrication of building components, contained in the statement of special inspections and, as required by the California construction codes."

"NOTICE TO THE CONTRACTOR/BUILDER/INSTALLER/SUB-CONTRACTOR/OWNER-BUILDER:

By using this permitted construction drawings for construction/installation of the work specified herein, you acknowledge and are aware of the requirements contained in the statement of special inspections, you area agree to comply with the requirements of the City of San Diego for special inspections, structural observations, construction material testing and off-site frabrication of building components, contained in the statement of special inspections and, as required by the California construction codes."

Building permit applications submitted shall comply with the following codes:

2022 Edition of the California Building Code
2022 Edition of the California Residential Code
2022 Edition of the California Mechanical Code
2022 Edition of the California Plumbing Code
2022 Edition of the California Electrical Code
2022 Edition of the California Fire Code
2022 Edition of the California Green Building Standards

2022 Edition of the California Energy Code,

GENERAL NOTES

1. DO NOT SCALE DRAWINGS. NOTIFY OWNER / DESIGNER IMMEDIATELY OF ANY DISCREPANCIES.
2. ALL INDICATED DIMENSIONS ARE APPROXIMATE AND ARE GIVEN FOR ESTIMATE PURPOSES ONLY. BEFORE PROCEEDING WITH THE WORK, CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL DIMENSIONS, SIZES, REQUIRED CLEARANCES AND SHALL ASSUME FULL RESPONSIBILITY FOR THE FITTING OF ALL EQUIPMENT AND MATERIALS HEREIN REQUIRED TO OTHER PARTS OF THE WORK AND TO THE WORK OF OTHER TRADES.
3. IT IS THE INTENT OF PROJECT DOCUMENTS INCLUDING DRAWINGS AND SPECIFICATIONS, THAT A COMPLETE AND WORKABLE INSTALLATION BE PROVIDED. TO THIS END, THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, SUPERVISION, TRANSPORTATION, WAREHOUSING, AND OTHER SERVICES REQUIRED TO COMPLETE THE WORK IN AN EFFICIENT AND TIMELY MANNER.
5. ALL WORK SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER. DURING THIS PERIOD, ANY DEFECT FOUND IN MATERIAL OR WORKMANSHIP SHALL BE REPAIRED OR REPLACED TO OWNER'S SATISFACTION, AT THE CONTRACTOR'S EXPENSE.
6. THESE DRAWINGS AND SPECIFICATIONS ARE DIVIDED INTO SECTIONS FOR CONVENIENCE ONLY. CONTRACTORS, SUB, AND MATERIAL SUPPLIERS SHALL REFER TO ALL RELEVANT SECTIONS IN BIDDING AND PERFORMING THEIR WORK AND SHALL BE RESPONSIBLE FOR ALL ASPECTS OF THE WORK REGARDLESS OF WHERE THE INFORMATION OCCURS.
7. THE GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL VISIT THE SITE OF VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS PRIOR TO STARTING CONSTRUCTION.
8. ALL DIMENSIONS SHALL TAKE PRECENDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS. DIMENSIONS ARE FACE TO FACE OF STUDS OR SLAB UNLESS NOTED OTHERWISE ON DRAWINGS.
9. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR ANY MATERIAL FAILURE NOR ANY DEVIATIONS MADE FROM THE CONSTRUCTION DOCUMENTS DURING OR AFTER CONSTRUCTION OF THE DESCRIBED RESIDENCE.
10. ST. ADDRES SHALL BE LOCATED ON BLDG EXTERIOR, VISIBLE FROM STREET NUMBERS HALL BE MINIMUN OF 4" HIGH WITH A MINIMUN STROKE WIDTH OF 1/2"
11. 5% MIN. SLOPE REQUIRED FOR DRAINAGE AWAY FROM BLDG, AND SITE NATURAL/DRAINAGE SHALL NOT BE DIVERTED ONTO ADJACENT PROPERTY
12. ALL SPOTS ELEVATIONS ARE FOR REFERENCE ONLY, BUILDER SHALL FIELD VERIFY EXISTING ELEVATIONS AND JUST T.O.S. (TOP OF SLAB) ACCORDONLY.

Very High Fire Hazard Severity Zone Note:

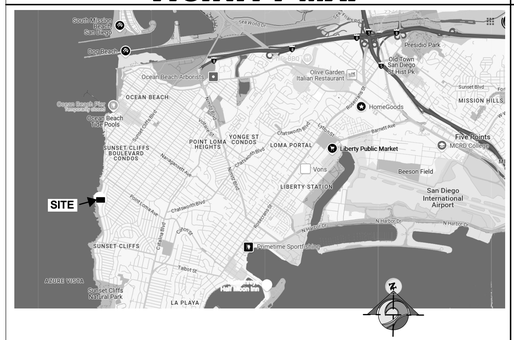
This building shall conform to the provisions of CRC Section R327 and SDMC Sec. 145.0706 for structures located in very High Fire Severity Hazard Zone.

Accesory structures such as solarium, patio covers, decks and similar structures shall comply wuth the CRC Sec. R327 as adopted and amended by City of San Diego (SDMC Sec. 145.0702)

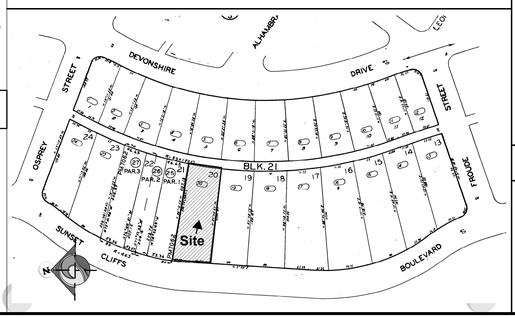
This Building is located in a Very High Fire Severity Hazard Zone. The structures located in VHFSHZ shall conform to the provisions of CRC Section R327 and SDMC Sec. 145.0706
Exceptions: Additions to and Remodels of buildings originally constructed prior to the applicable application Date (July 1, 2008)

HEALY'S RESIDENCE

VICINITY MAP



LOCATION MAP



PROJECT DATA

PROJECT ADDRESS:	**MAIN HOUSE:** 1161 SUNSET CLIFF BLVD, SAN DIEGO CA. 92107 **ADU:** T.B.D.
A. P. N. #:	530-020-20-00
LEGAL DESCRIPTION:	TR 1889, BLK 21* LOT 20
OCCUPANCY TYPE:	R-3
CONSTRUCTION TYPE:	TYPE V -NON RATED,
YEAR BUILDED EXISTING STRUCTURE:	1970
SPRINKLERED:	NO
ZONING INFORMATION:	
BASE ZONE:	R-1-7
COMUNITY PLAN AREA:	OCEAN BEACH
SENSITIVE OVERLAY ZONE:	PARKING IMPACT, TANDEM PARKING, CITY COASTAL, COASTAL HIGH LIMIT AIRPORT APPROACH, ALUCP Airport Influence Area San Diego International Airport - Review Area 1 & NAS North Island - Review Area 2, ALUCP Noise Contours San Diego International Airport 6 0 - 6 5 CNEL, and FAAP art 77 Noticing Area
NUMBER OF STORIES:	1 STORY EXISTING UNIT ADDING A 2ND STORY
REQUIRED SETBACKS:	Front 15'-0"/ 20' MIN., Sides - 4' Rear 5'-0" W/ALLEY
BUILDING HEIGHT LIMIT:	30'-24' ON SETBACK / 30' MAX
ALLOWABLE F.A.R.:	49%
LOT AREA:	15,500 SQ.FT.
LOT COVERAGE:	50%
ALLOWABLE FLOOR AREA RATIO:	49% = 7,595.00 SQ.FT. / Proposed 42.23 % = 6,546.26 SQ.FT.

SCOPE OF WORK

EXISTING SINGLE FAMILY RESIDENCE #1161 ONE STORY TO BE REMODEL AND ADDING A NEW SECOND FLOOR W/ NEW 3 BEDROOMS 3 FULL BATHS AND A BALCONY.
KEEPING ORIGINAL TOP AND BOTTOM PLATE WALLS.
BUILD A DETACHED GARAGE WITH AN ACCESORY UNIT (ADU) TWO BEDROOMS, TWO FULL BATHS.
NEW ELECTRICAL PANEL 200 AMPS.

PROJECT SUMMARY

BUILDING AREAS:

FOR ZONING F.A.R.
Gross floor areas:

Existing Unit 1161 :	1,743.81 S.F.
1st Floor Addition Unit 1161:	221.31 S.F.
2nd Floor Addition Unit 1161:	1,774.47 S.F.
Existing detached garage	505.48 S.F.
New 3 car garage	1,170.06 S.F.
New Accesory Unit TBD :	1,131.13 S.F.
TOTAL GFA:	**6,546.26 S.Q.FT.**
	49% = 7,595.00 S.F. ALLOWED
	Proposed = 6,546.26 S.F. = 42.23%

BUILDING AREAS: SQ.FT.

	EXISTING	ADDITION	TOTAL
Unit 4758 1st level :	1,743.81	221.31	1,965.12
Unit 4758 2nd level :	0	1,774.47	1,774.47
NEW ADU	0	1,131.13	1,131.13
NEW Garage	0	1,170.06	1,170.06
TOTAL:	**1,743.81**	**4,296.97**	**6,040.78**

Total Habitable Areas: 6,040.78 SQ. FT

INTERIOR REMODEL AREA 1ST LEVEL = 1,743.00 S.F.

Non-Residential Areas:

New Balconys:	284.96 S.F.
Covered Patios	304.00 S.F.
Deck	184.00 S.F.

Parking Garage: Required:2 Provided:5

SHEET INDEX

CONTACTS

OWNER
& FINANCIALLY RESPONSABLE
Don and July Healy
1161 Sunset Cliff Blvd.
San Diego CA, 92107

STRUCTURAL
GAMA Engineering
1911 San Diego Ave.
San Diego CA, 92110
Phone: 619-254-8548
jgarcia@gama-inc.com

DESIGNER
Fernando Gonzalez-Pacheco
2022 Azure Cove #6
Chula Vista, CA
Phone:619-739-1492
e-mail: arkheindesignstudio@gmail.com

Title 24
ESTUDIO 75
4275 Executive square. ste. 200
La Jolla, CA 92037
Phone:619-274-2838
e-mail: t24.e75@gmail.com

Revisions:

REMODEL, ADDITION AND ADU
HEALY'S RESIDENCE
1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez-P. DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 619.739.1492

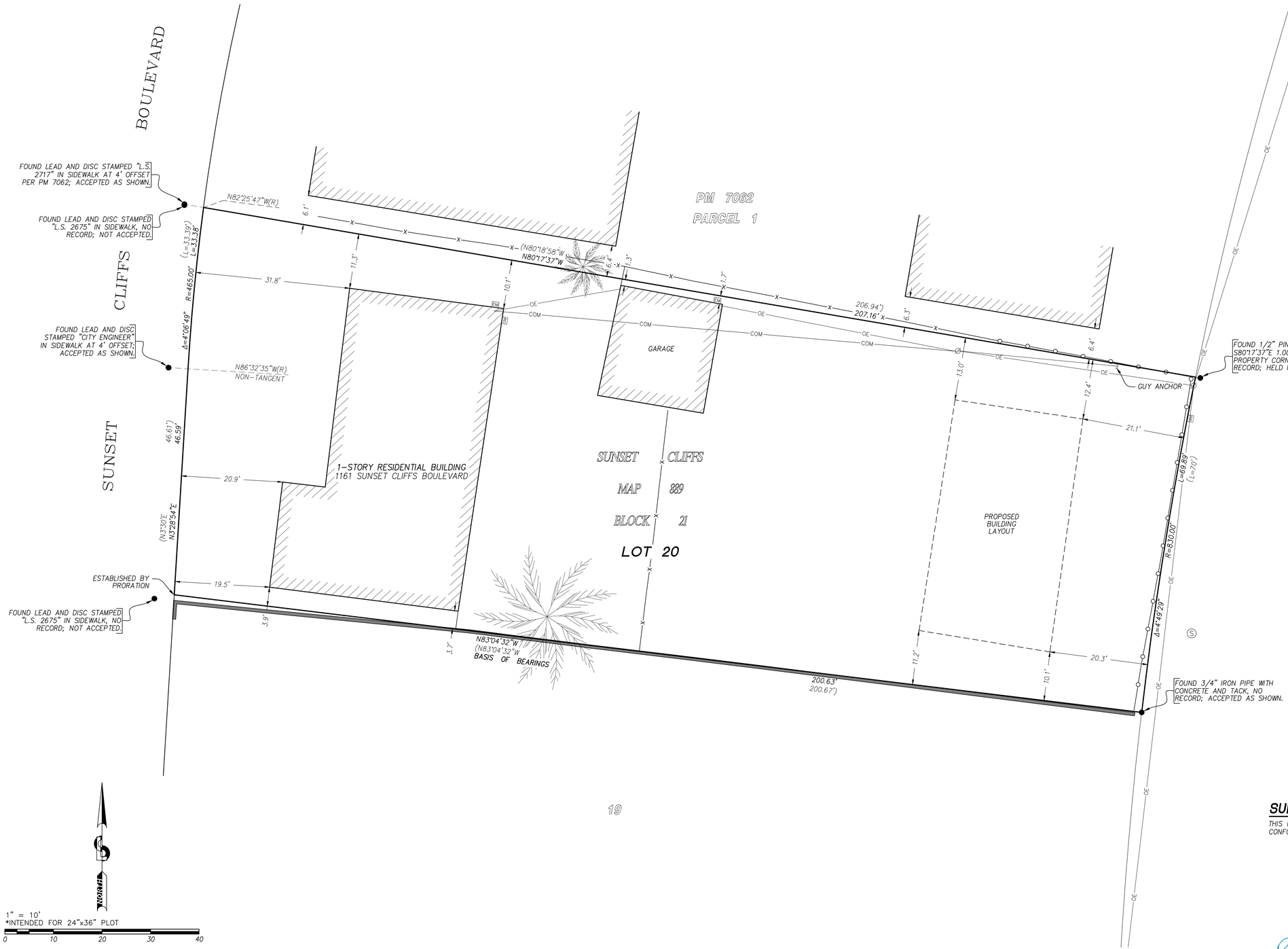
TITLE PAGE

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **T1**
Total sheet count:

BOUNDARY & LIMITED TOPOGRAPHY SURVEY

1161 SUNSET CLIFFS BOULEVARD, SAN DIEGO, CA 92107

APN: 530-020-20



LEGEND

- INDICATES PROPERTY LINE
- INDICATES RIGHT OF WAY LINE
- INDICATES STREET CENTERLINE
- INDICATES SURVEY REFERENCE LINE
- INDICATES FOUND MONUMENT AS NOTED
- (...) INDICATES RECORD DATA PER MAP NO. 1889
- EM INDICATES EXISTING ELECTRIC METER
- GM INDICATES EXISTING GAS METER
- INDICATES EXISTING GUY ANCHOR
- INDICATES EXISTING POWER POLE
- S INDICATES EXISTING SEWER MANHOLE
- WM INDICATES EXISTING WATER METER
- INDICATES EXISTING CHAIN LINK FENCE
- INDICATES EXISTING WOODEN FENCE
- COM INDICATES EXISTING OVERHEAD COMMUNICATION LINE
- OE INDICATES EXISTING OVERHEAD ELECTRICAL LINE
- INDICATES EXISTING WALL
- INDICATES EXISTING BUILDING FOOTPRINT AT GROUND LEVEL
- INDICATES EXISTING PALM TREE

LEGAL DESCRIPTION

THE REAL PROPERTY IN THE CITY OF SAN DIEGO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, DESCRIBED AS:

LOT 20 IN BLOCK 21 OF SUNSET CLIFFS, IN THE CITY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING MAP THEREOF NO. 1889, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, MARCH 1, 1926.

UTILITY NOTE

THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON VISIBLE ABOVE GROUND STRUCTURES AND RECORD DRAWINGS PROVIDED TO THE SURVEYOR. THE DEPICTED LOCATIONS, SIZES AND TYPES OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM THE RECORD DRAWINGS AND/OR ACTUAL AS-BUILT LOCATIONS. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES.

COFFMAN LAND CONSULTING AND THE UNDERSIGNED LAND SURVEYOR MAKE NO CLAIM AS TO THE ACCURACY OF UNDERGROUND UTILITIES SHOWN HEREON. THE USER OF THIS SURVEY IS RECOMMENDED TO CONDUCT INDEPENDENT PHYSICAL INSPECTION OF EACH UNDERGROUND UTILITY PRIOR TO EXCAVATION OR CONSTRUCTION.

SURVEYOR'S NOTES

FOR FULL BOUNDARY PROCEDURE OF SURVEY, SEE CORNER RECORD THAT IS CURRENTLY PENDING WITH THE COUNTY OF SAN DIEGO.

DATE OF SURVEY

TOPOGRAPHIC DATA AND PLANIMETRICS SHOWN HEREIN WAS OBTAINED BY TRADITIONAL GROUND SURVEY FIELD DATA COLLECTION METHODS.

DATE OF FIELD SURVEY: SEPTEMBER 3, 2024

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE SOUTH LINE OF LOT 20 AS SHOWN ON MAP NO. 1889.

I.E. N 83°04'32" W

1" = 10'
*INTENDED FOR 24"x36" PLOT
0 10 20 30 40

COFFMAN LAND

JN: 24169 COFFMAN LAND CONSULTING, INC. (760) 520-4340
9666 BUSINESSPARK AVE. SUITE 106, SAN DIEGO, CA 92131

SURVEYOR'S CERTIFICATION

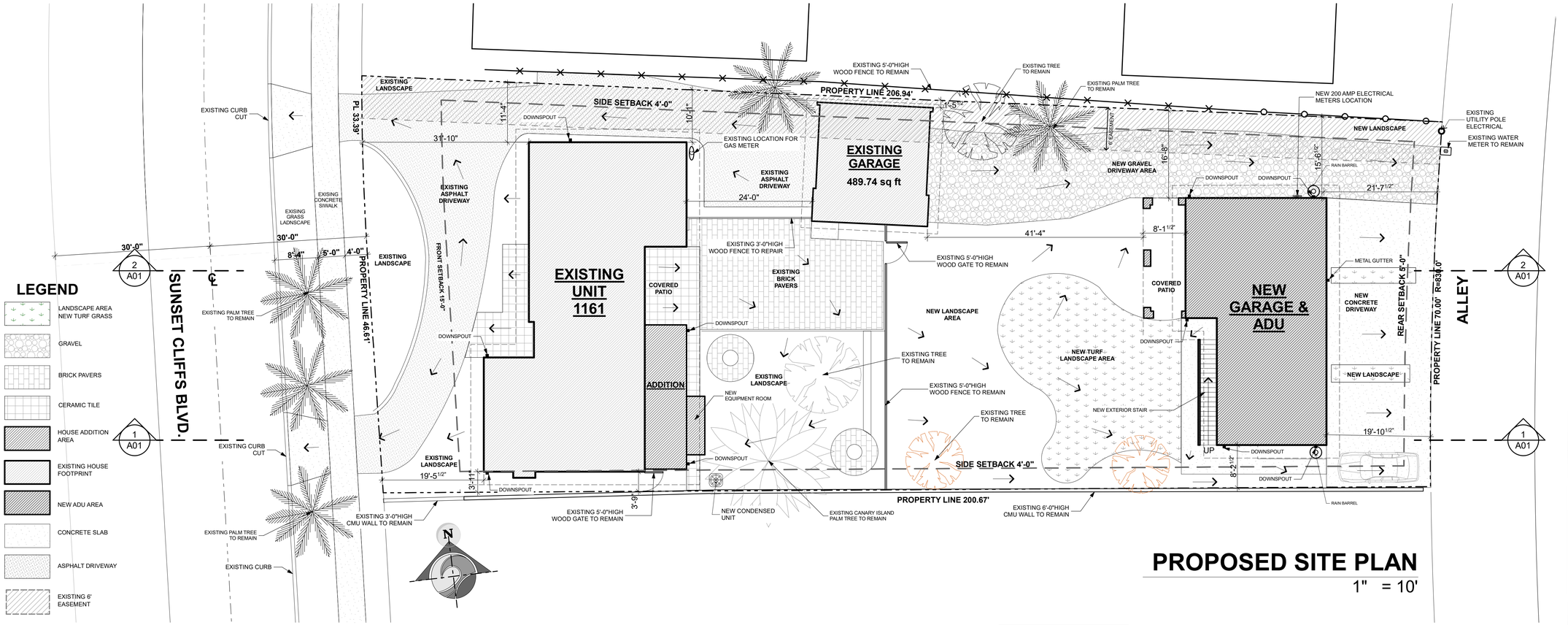
THIS PLAT WAS PREPARED BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE PROFESSIONAL LAND SURVEYORS ACT.

PROFESSIONAL LAND SURVEYOR
RICHARD J. COFFMAN
PLS NO. 9312
STATE OF CALIFORNIA

SEPTEMBER 18, 2024
RICHARD J. COFFMAN DATE
PROFESSIONAL LAND SURVEYOR NO. 9312, EXP. 9/30/2026

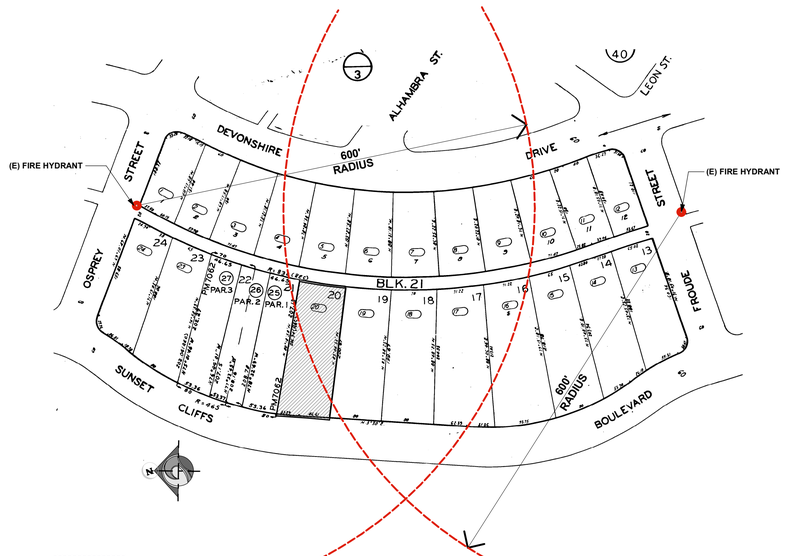
TOPO SURVEY

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **C1**
Total sheet count: -



PROPOSED SITE PLAN

1" = 10'



PARCEL MAP & FIRE HYDRANTS

1
-

LANDSCAPE GENERAL NOTES

"All landscape and irrigation shall conform to the standards of the City-Wide Landscape Regulations and the City of San Diego Land Develo pm ent Manual Landscape Standards and all other
landscape related City and Regional Standards ."

MINIMUM TREE SEPARATION DISTANCE

Traffic signals / stop signs - 20 feet
Underground utility lines - 5 feet (10 ' for sewer)
Above ground utility structures - 10 feet
Driveway (entries) - 10 feet
Inters ections (intersecting curb lines of two streets)
- 25 feet

"Maintenance: All required landscape areas shall be maintained by OWNER. Landscape and irrigation areas in the public right-of-way shall be maintained by OWNER. The lands cape areas s hall be m aintained free of debris and litter, and all plant material shall be maintained in a healthy growing condition. Diseased or dead plant material shall be satis factorily treated or replaced per the conditions of the permit."

"Tree root barriers shall be installed where
trees are placed within 5 feet of public improvements including walks, curbs, or street pavements or where new public

improvements are placed adjacent to existing trees . The root barrier will not wrap around the root ball." Please clearly identify the installation of root barriers in the locations subject to these conditions per 14 2.0 4 0 3(b).

"If any required landscape indicated on the approved construction document plans is dam aged or removed during demolition or construction, it shall be repaired and/or replaced in kind and equivalent size per the approved documents to the satis faction of the Development Services Department within 30 days of damage."

GRADING QUANTITIES

TOTAL LOT SIZE:	**15,500.00 S.F.**
A. TOTAL DISTURBANCE AREA:	**2,400.00 S.F.**
B. EXISTING AMOUNT IMPERVIOUS AREA:	**4,527.49 S.F.**
C. PROPOSED AMOUNT IMPERVIOUS AREA	**2,926.80 S.F.**
D. PROPOSED AMOUNT IMPERVIOUS AREA: (REPLACED)	**0 S.F.**
E. TOTAL IMPERVIOUS AREA:	**10,381.00 S.F.**
F. AMOUNT OF CUT/FILL, EXPORT/IMPORT IN VOLUME:	**.9 YD³**
G. MAX CUT/FILL DEPTH:	**18"**

IMPERVIOUS AREA INCLUDE:ROOFTOP, CONCRETE PAVEMENT, DECK, SOLAR PANELS, ETC.

NOTE: All storm water runoff from proposed and/or replaced impervious areas shall be routed to pervious surfaces or landscaping prior to reaching the public drain system .

Per City of San Diego Municipal Code Sections 12.0104, 43.0310 ,129 .0104 (a)(4), and 142.0220, permits are required to be inspected by City Inspection staff to ensure compliance with issued construction permit. This includes , but is not limited to , Storm Water Compliance Inspection Requirements associated with each permit.

HEIGHT INSPECTION

A pre-cosntruction inspection is required due to the height of the proposed structure being within one foot of the maximum height allowed in the Coastal Height Limit Overlay Zone (Proposition D). The pre-construction inspection must be schedule and cleared by the field inspector before any subsequent inspections can be schedule. Call (858)581-7111 to schedule the pre-construction inspection. Contact the Inspection Services office at (858) 492-5070, if you have any questions pertaining to the pre-construction.

SITE PLAN GENERAL NOTES

1. The Architect is responsible for plotting only. The Civil engineer / Contractors responsible for horizontal control if a problem occurs the civil engineer / Contractor notify the Architect prior to start of construction.

2. the Contractor shall verify all site dimensions prior to start of construction and notify the Architect is any problem or discrepancies occur.

3. The Contractor shall verify finish floor elevations prior to start of construction.

4. Water meters shall note be located within driveways.

5. All building addresses shall be clearly seen form the street. See exterior elevations

6. No footing shall be located within 8'-0" of top of a slope. If such a condition occurs and is not indicated on these plans, notify the Architect.

7. See Sheet "A-2 & A-3" for additional information.

8. Verify all exterior flatwork with landscape plans. (N.I.C.)

9. Typical Driveways per Plan x 4" Thk. concrete over 4" clean sand. (verify and install per soils report recomendations) provide control joints at max. 12'-0" o.c. coordinate with soils report and landscape plans.

10. Typical flat work, per plan X 4" Thk concrete over 4" clean sand (verify and install per soils report recommendations) provide control joints at max 12'-0" o.c. coordinate with soils report & landscape plans

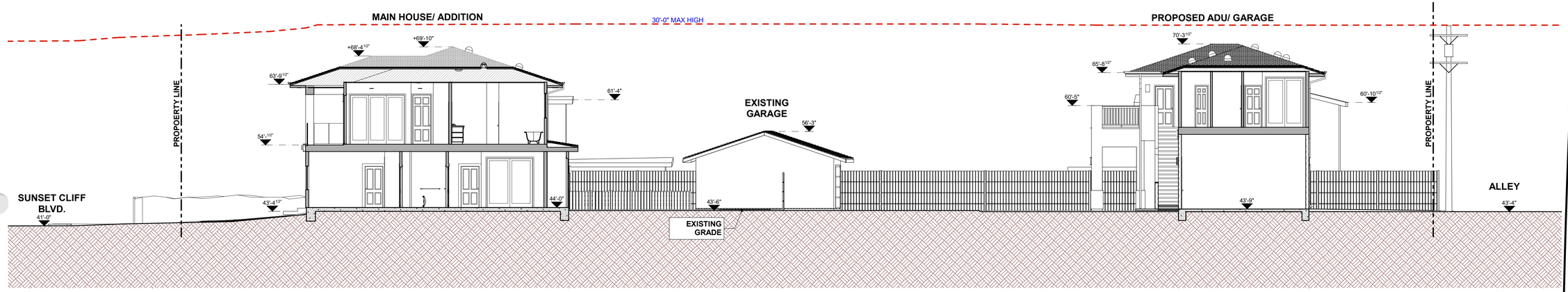
Revisions:

REMODEL, ADDITION AND ADU
HEALY'S RESIDENCE
1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez P.
DESIGN
2022 Azure Cove, Chula Vista, CA 91915
Phone: 619.735.1492

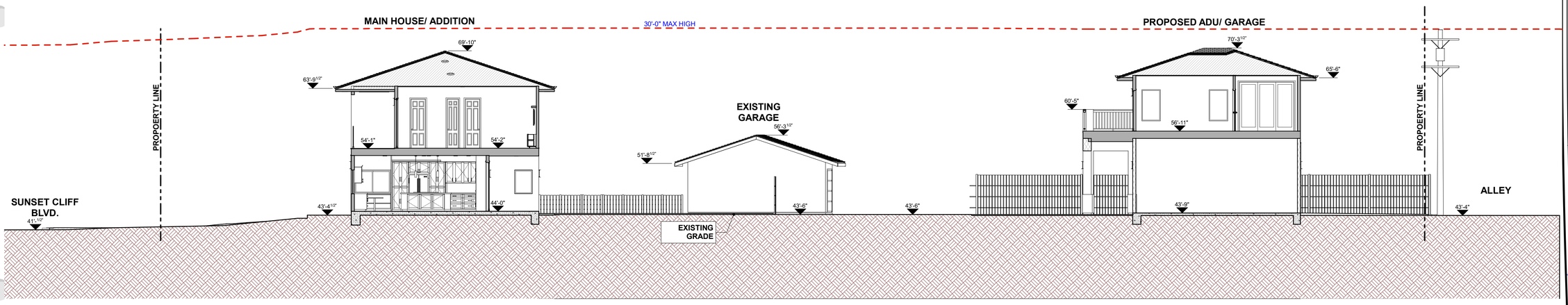
SITE PLAN

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **A0**
Total sheet count: -



SITE SECTION 1

1/8" = 1'-0"



SITE SECTION 2

1/8" = 1'-0"

Revisions:

REMODEL, ADDITION AND ADU

HEALY'S RESIDENCE

1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez P.
DESIGN
2022 Azure Cove, Chula Vista, CA 91915
Phone: 619.735.1492

Site Sections

Date: 01-25-25

Scale:

Drawn: Fer

Job: 00000

Sheet Number:

A01

Total sheet count: -

A. General

Applicable codes. All projects shall comply with the *2022 California Building Code* (CBC) *and/or California Residential Code* (CRC), *2022 California Green Building Standards Code* (CalGreen), *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), and all City of San Diego amendments .

A. Electrical, Plumbing, and Mechanical

1. **Exterior lighting.** All projects shall comply with the City of San Diego lighting ordinance.
2. **GFCI outlets.** Ground Fault Circuit Interrupter (GFCI) outlets are required in bathrooms, at kitchen countertops, at laundry and wet bar sinks, in garages, in crawlspaces, in unfinished basements, and outdoors. (CEC 210.8)
3. **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 210.12)
4. **Luminaire requirements.** Installed luminaires shall meet the efficacy and fixture requirements of CBEES 150.0(k).
5. **Smoke detectors in building remodels**. Smoke detectors are required in each existing sleeping room, outside each separate sleeping area in the immediate vicinity of sleeping rooms, and on each story of a dwelling including basements. Battery-operated detectors are acceptable in existing areas with no construction taking place and in alterations not resulting in removal of interior wall or ceiling finishes and without access via an attic, crawl space, or basement. (CRC R314.3)
6. **Carbon monoxide detectors in building remodels**. Carbon monoxide detectors are required outside each separate sleeping area in the immediate vicinity of sleeping rooms and on each story of a dwelling including basements. Battery-operated detectors are acceptable in existing areas with no construction taking place and in alterations not resulting in removal of interior wall or ceiling finishes and without access via an attic, crawl space, or basement. (CRC R315.3)
7. **Water heater seismic strapping.** Minimum two 3/4-inch-by-24-gauge straps required around water heaters, with 1/4-inch-by-3-inch lag bolts attached directly to framing. Straps shall be at points within upper third and lower third of water heater vertical dimension. Lower connection shall occur minimum 4 inches above controls. (CPC 507.2)
8. **Gas appliances in garages.** Water heaters and heating/cooling equipment capable of igniting flammable vapors shall be placed on minimum 18-inch-high platform unless listing report number provided showing ignition-resistant appliance. (CPC 507.13 and CMC 305.1)
9. **Impact protection of appliances.** Water heaters and heating/cooling equipment subject to vehicular impact shall be protected by bollards or an equivalent measure. (CPC 507.13.1 and CMC 305.11)
10. **Water closet clearance.** Minimum 30-inch-wide by 24-inch-deep clearance required at front of water closets. (CPC 402.5)
11. **Shower size.** Shower compartments shall have minimum area of 1024 square inches and be able to encompass a 30-inch-diameter circle. Shower doors shall have a minimum 22-inch unobstructed width. (CPC 408.5 and CPC 408.6)
12. **Fireplace appliances.** Fireplaces with gas appliances are required to have the flue damper permanently fixed in the open position and fireplaces with LPG appliances are to have no 'pit' or 'sump' configurations. (CMC 303.7.1)
13. **Chimney clearance.** Minimum 2-foot chimney clearance required above building within 10-foot horizontally of chimney. The chimney shall extend minimum 3 feet above highest point where chimney passes through roof. (CRC R1003.9)

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(o))
2. **Instructions and labeling.** Ventilation system controls shall be labeled and the home owner shall be provided with instructions on how to operate the system. (CBEES 150.0(o))
3. **Combustion and solid-fuel burning appliances.** Combustion appliances shall be properly vented and air systems shall be designed to prevent back drafting. (CBEES 150.0(o))
4. **Garages.** 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 air leakage of no more than 6% of total fan flow when measured at 0.1 in. w.c. using California Title 24 or equivalents. (CBEES 150.0(o))
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(o))
6. **Air inlets.** Air inlets (not exhaust) shall be located away from known contaminants. (CBEES 150.0(o))
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(o))
   - a. All continuously operating fans shall be rated at a maximum of 1.0 sone.
   - b. Intermittently operated whole-building ventilation fans shall be rated at a maximum of 1.0 sone.
   - c. Intermittently operated local exhaust fans shall be rated at maximum of 3.0 sone.
   - d. Remotely located air-moving equipment (mounted outside of habitable spaces) need not meet sound requirements if at least 4 feet of ductwork between fan and intake grill.

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 R403.1.3.3)
2. **Shear wall foundation support.** Shear walls shall be supported by continuous foundations. (CRC 403.1.2)
3. **Concrete slabs-on-grade.** Slabs-on-grade shall be minimum 3-1/2-inches thick. (CRC R506.1)
4. **Vapor retarder.** A 6-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 506.2.3)
5. **Anchor bolts and sills.** Foundation plates or sills shall be bolted or anchored to the foundation or foundation wall per the following (CRC R403.1.6 and CRC R602.11.1):
   - a. Minimum 1/2-inch-diameter steel bolts
   - b. Bolts embedded at least 7 inches into concrete or masonry
   - c. Bolts spaced maximum 6 feet on center
   - d. Minimum two bolts per plate/sill piece with one bolt located maximum 12 inches and minimum 7 bolt diameters from each end of each sill plate/piece
   - e. Minimum 3-inch by 3-inch by 0.299-inch steel plate washer between sill and nut on each bolt
6. **Hold-downs.** All hold-downs must be tied in place prior to foundation inspection.
7. **Protection of wood against decay**. Naturally durable or preservative-treated wood shall be provided in the following locations (CRC R317.1):
   - a. All wood in contact with ground, embedded in concrete in direct contact with ground, or embedded in concrete exposed to weather
   - b. Wood joists within 18 inches and wood girders within 12 inches of the exposed ground in crawl spaces shall be of naturally durable or preservative-treated wood
   - c. Wood framing members that rest on concrete or masonry exterior foundation walls and are less than 8 inches from exposed earth shall be of naturally durable or preservative-treated wood
   - d. Wood framing, sheathing, and siding on the exterior of the building and having clearance less than 6 inches from the exposed ground or less than 2 inches vertically from concrete steps, porch slabs, patio slabs, and similar horizontal surface exposed to weather
   - e. Sills and sleepers on concrete or masonry slab in direct contact with ground unless separated from such slab by impervious moisture barrier

D. Foundation and Underfloor (Continued)

   - f. Ends of wood girders entering masonry or concrete walls with clearances less than 1/2 inch on tops, sides, and ends
   - g. Wood structural members supporting moisture-permeable floors or roofs exposed to weather, such as concrete or masonry slabs, unless separated from such floors or roofs by an impervious moisture barrier
   - h. Wood furring strips or other wood framing members attached directly to interior of exterior concrete or masonry walls below grade except where vapor retarder applied between wall and furring strips or framing members
8. **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 ventilating opening shall be within 3 feet of each corner of the building. (CRC R408.1)
9. **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/elements shall not be less than that set forth in CRC Table R602.3(1). (CRC R502.9, CRC R602.3, and CRC R802.2)
2. **Stud size, height, and spacing.** The size, height, and spacing of studs shall be in accordance with CRC Table R602.3(5). (CRC R602.3.1)
3. **Sill plate.** Studs shall have full bearing on nominal 2-inch thick or larger sill plate with width at least equal to stud width. (CRC R602.3.4)
4. **Bearing studs.** Where joists, trusses, or rafters are spaced more than 16 inches on center and the bearing studs below are spaced 24 inches on center, such members shall bear within 5 inches of the studs beneath. (CRC R602.3.3)
5. **Drilling and notching of studs.** Any stud in an exterior wall or bearing partition may be cut or notched to a depth not exceeding 25% of its width. Studs in nonbearing partitions may be notched to a depth not to exceed 40% of a single stud width. Any stud may be bored or drilled, provided the diameter of the resulting hole is no more than 60% of the stud width, the edge of the hole is no more than 5/8 inch to the edge of the stud, and the hole is not located in the same section as a cut or notch. Studs located in exterior wall or bearing partitions drilled over 40% and up to 60% shall also be doubled with no more than two successive studs bored. (CRC R602.6)
6. **Top plate.** Wood stud walls shall be capped with a double top plate installed to provide overlapping at corners and at intersections with other partitions. End joints in double top plates shall be offset at least 24 inches. Joints in plates need not occur over studs. Plates shall be minimum nominal 2 inches thick and have width at least equal to width of studs. (CRC R602.3.2)
7. **Top plate splices.** Top plate lap splices shall be face-nailed with minimum 8 16d nails on each side of splice. (CRC R602.10.8.1)
8. **Drilling and notching of top plate.** When piping or ductwork is placed in or partly in an exterior wall or interior load-bearing wall, necessitating cutting, drilling, or notching of the top plate by more than 50% of its width, a galvanized metal tie not less than 0.054-inch thick and 1-1/2-inches wide shall be fastened across and to the plate at each side of the opening with not less than 8 10d nails having a minimum length of 1-1/2 inches at each side or equivalent. The metal tie must extend minimum 6 inches past the opening. (CRC R602.6.1)
9. **Cripple walls.** Foundation cripple walls shall be framed of studs not less in size than the studding above. Cripple walls more than 4 feet in height shall have studs sized as required for 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 R602.9)
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 spacing.** Spacing between braced wall lines shall not exceed 20 feet or alternate provisions of CRC R602.10.1.3.
12. **Shear wall cumulative length.** The cumulative length of shear walls within 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-plan 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 the alternate provisions of CRC R602.10.2.2.
16. **Individual shear wall length.** Shear walls shall meet minimum length requirements of CRC R602.10.6.5.1.
17. **Cripple wall bracing.** Cripple walls shall be braced per CRC R602.10.11.
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, minimum 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. (CBC 2304.3.2)
21. **Joists under bearing partitions.** Joists under parallel bearing partitions shall be of adequate size to support the load. Double joists, sized 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 R502.4)
22. **Joists above or below shear walls.** Where joists are perpendicular to a shear wall above or below, a rim joist, band joist, or blocking shall be provided along the entire length of the shear wall. Where joists are parallel to a shear wall above or below, a rim joist, end joist, or other parallel framing shall be provided directly above and/or below the shear wall. Where a parallel framing member cannot be located directly above and/or below the shear wall, full-depth blocking at 16-inch spacing shall be provided between the parallel framing members to each side of the shear wall. (CRC R602.10.8)
23. **Floor member bearing.** The ends of each floor joist, beam, or girder shall have minimum 1-1/2 inches of bearing on wood or metal and minimum 3 inches of bearing on masonry or concrete except where supported on a 1-inch-by-4-inch ribbon strip and nailed to the adjoining stud or by the use of approved joist hangers. (CRC R502.6)
24. **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 10d face nails. A wood or metal splice with strength equal to or greater than that provided by the lap is permitted. (CRC R502.6.1)
25. **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 R502.6.2)
26. **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, to an adjoining stud, or shall be otherwise provided with lateral support to prevent rotation. (CRC R502.7)
27. **Floor joist bridging.** Floor joists exceeding nominal 2 inches by 12 inches shall be supported laterally by solid blocking, diagonal bridging (wood or metal), or a continuous 1-inch-by-3-inch strip nailed across the bottom of joists perpendicular to joists at maximum 8-foot intervals. (CRC R502.7.1)
28. **Framing of floor openings.** Openings in floor framing shall be framed with a header and trimmer joists. When the header joist span does not exceed 4 feet, the header joist may be a single member the same size as the floor joist. Single trimmer joists may be used to carry a single header joist located within 3 feet of the trimmer joist bearing. When the header joist span exceeds 4 feet, the trimmer joists and header joist shall be doubled and of sufficient cross section to support the floor joists framing into the header. Approved hangers shall be used for the header-joist-to-trimmer-joist connections when the header joist span exceeds 6 feet. Tail joists over 12 feet long shall be supported at the header by framing anchors or on ledger strips minimum 2 inches by 2 inches. (CRC R502.10)

E. Wood Framing (Continued)

29. **Girders.** Girders for single-story construction or girders supporting loads from a single floor shall not be less than 4 inches by 6 inches for spans 6 feet or less, provided that girders are spaced not more than 8 feet on center. Other girders shall be designed to support the loads specified in the CBC. Girder end joints shall occur over supports. When a girder is spliced over a support, an adequate tie shall be provided. The ends of beams or girders supported on masonry or concrete shall not have less than 3 inches of bearing. (CBC 2308.7)
30. **Ridges, hips, and valleys**. Rafters shall be framed to a ridge board or to each other with a gusset plate as a tie. Ridge boards shall be minimum 1-inch nominal thickness and not less in depth than the cut end of the rafter. At all valley and hips, there shall be a valley or hip rafter not less than 2-inch nominal thickness and not less in depth than the cut end of the rafter. Hip and valley rafters shall be supported at the ridge by a brace to a bearing partition or be designed to carry and distribute the specific load at that point. Where the roof pitch is less than 3:12 slope (25% gradient), structural members that support rafters and ceilings joists, such as ridges, hips, and valleys, shall be designed as beams. (CRC R802.3)
31. **Ceiling joist and rafter connections.** Ceiling joists and rafters shall be nailed to each other per CRC Table R802.5.1(9), and the rafter shall be nailed to the wall top plate per CRC Table R602.3(1). Ceiling joists shall be continuous or securely joined per CRC Table R802.5.1(9) where they meet over interior partitions and are nailed to adjacent rafters to provide a continuous tie across the building when such joists are parallel to rafters. Where ceiling joists are not connected to the rafters at the wall top plate, joists connected higher in the attic shall be installed as rafter ties, or rafter ties shall be installed to provide a continuous tie. Where ceiling joists are not parallel to rafters, rafter ties shall be installed. Rafter ties shall be minimum 2 inches by 4 inches nominal, installed per CRC Table R802.5.1(9), or connections of equivalent capacities shall be provided. Where ceilings joists or rafter ties are not provided, the ridge formed by these rafters shall be supported by a wall or engineer-designed girder. (CRC R802.3.1)
32. **Ceiling joists lapped.** Ends of ceiling joists shall be lapped minimum 3 inches or butted over bearing partitions or beams and toenailed to the bearing element. Where ceiling joists provide resistance to rafter thrust, lapped joists shall be nailed together per CRC Table R602.3(1) and butted joists shall be tied together in a manner to resist such thrust. (CRC R802.3.2)
33. **Collar ties.** Collar ties or ridge straps to resist wind uplift shall be connected in the upper third of the attic space. Collar ties shall be a minimum 1 inch by 4 inches nominal and spaced at maximum 4 feet on center. (CRC R802.3.1)
34. **Purlins.** Purlins installed to reduce the span of rafters shall be sized not less than the required size of the rafters they support. Purlins shall be continuous and shall be supported by 2-inch-by-4-inch nominal braces installed to bearing walls at a minimum 45-degree slope from horizontal. The braces shall be spaced maximum 4 feet on center with a maximum 8-foot unbraced length. (CRC R802.5.1)
35. **Roof/ceiling member bearing.** The ends of each rafter or ceiling joist shall have not less than 1-1/2 inches of bearing on wood or metal and not less than 3 inches of bearing on masonry or concrete. (CRC R802.6)
36. **Roof/ceiling member lateral support.** Roof framing members and ceiling joists with a nominal depth-to-thickness ratio exceeding 5:1 shall be provided with lateral support at points of bearing to prevent rotation. (CRC R802.8)
37. **Roof/ceiling bridging.** Rafters and ceiling joists with a nominal depth-to-thickness ratio exceeding 6:1 shall be supported laterally by solid blocking, diagonal bridging (wood or metal), or a continuous 1-inch-by-3-inch wood strip nailed across the rafters or ceiling joists at maximum 8-foot intervals. (CRC R802.8.1)
38. **Framing of roof/ceiling openings.** Openings in roof and ceiling framing shall be framed with a header and trimmer joists. When the header joist span does not exceed 4 feet, the header joist may be a single member the same size as the ceiling joist or rafter. Single trimmer joists may be used to carry a single header joist located within 3 feet of the trimmer joist bearing. When the header joist span exceeds 4 feet, the trimmer joists and header joist shall be doubled and of sufficient cross section to support the ceiling joists or rafters framing into the header. Approved hangers shall be used for the header-joist-to-trimmer-joist connections when the header joist span exceeds 6 feet. Tail joists over 12 feet long shall be supported at the header by framing anchors or on ledger strips minimum 2 inches by 2 inches. (CRC R502.10)
39. **Roof framing above shear walls.** Rafters or roof trusses shall be connected to top plates of shear walls with blocking between the rafters or trusses. (CRC R602.10.8)
40. **Roof diaphragm under fill framing.** Roof plywood shall be continuous under California fill framing.
41. **Roof diaphragm at ridges.** Minimum 2-inch nominal blocking required for roof diaphragm nailing at ridges.
42. **Blocking of roof trusses.** Minimum 2-inch nominal blocking required between trusses at ridge lines and at points of bearing at exterior walls.
43. **Truss clearance**. Minimum 1/2-inch clearance required between top plates of interior non-bearing partitions and bottom chords of trusses.
44. **Drilling, cutting, and notching of roof/floor framing.** Notches in solid lumber joists, rafters, blocking, and beams shall not exceed one-sixth the member depth, shall be not longer than one-third the member depth, and shall not be located in the middle one-third of the span. Notches at member ends shall not exceed one-fourth the member depth. The tension side of members 4 inches or greater in nominal thickness shall not be notched except at member ends. The diameter of holes bored or cut into members shall not exceed one-third the member depth. Holes shall not be closer than 2 inches to the top or bottom of the member or to any other hole located in the member. Where the member is also notched, the hole shall not be closer than 2 inches to the notch. (CRC R502.8.1)
45. **Exterior landings, decks, balconies, and stairs.** Such elements shall be positively anchored to the primary structure to resist both vertical and lateral forces or shall be designed to be self-supporting. Attachment shall not be accomplished by use of toenails or nails subject to withdrawal. (CRC R311.3)
46. **Fireblocking.** Fireblocking shall be provided in the following locations (CRC R302.11 and CRC R1003.19):
   - a. In concealed spaces of stud walls and partitions, including furred spaces, and parallel rows of studs or staggered studs, as follows:
     - i. Vertically at the ceiling and floor levels
     - ii. Horizontally at intervals not exceeding 10 feet
   - b. At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings, and cove ceilings
   - c. In concealed spaces between stair stringers at the top and bottom of the run
   - d. At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with an approved material to resist the free passage of flame and products of combustion
   - e. At chimneys and fireplaces per item E.49
   - f. Cornices of a two-family dwelling at the line of dwelling-unit separation
47. **Fireblocking materials.** Except as otherwise specified in items E.48 and E.49, fireblocking shall consist of the following materials with the integrity maintained (CRC R302.11.1):
   - a. Two-inch nominal lumber
   - b. Two thicknesses of one-inch nominal lumber with broken lap joints
   - c. One thickness of 23/32-inch wood structural panel with joints backed by 23/32-inch wood structural panel
   - d. One thickness of 3/4-inch particleboard with joints backed by 3/4-inch particleboard
   - e. 1/2-inch gypsum board
   - f. 1/4-inch cement-based millboard
   - g. Batts or blankets of mineral or glass fiber of other approved materials installed in such a manner as to be securely retained in place. Batts or blankets of mineral or glass fiber or other approved non-rigid materials shall be permitted for compliance with the 10-foot horizontal fireblocking in walls constructed using parallel rows of studs or staggered studs. Unfaced fiberglass batt insulation used as fireblocking shall fill the entire cross-section of the wall cavity to a minimum height of 16 inches measured vertically. When piping, conduit, or similar obstructions are encountered, the insulation shall be packed tightly around the obstruction. Loose-fill insulation material shall not be used as a fireblock unless specifically tested in the form and manner intended for use to demonstrate its ability to remain in place and to retard the spread of fire and hot gases.
48. **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 flame and products of combustion. (CRC R302.11)

E. Wood Framing (Continued)

49. **Fireblocking of chimneys and fireplaces.** All spaces between chimneys and floors and ceilings through which chimneys pass shall be fireblocked with noncombustible material securely fastened in place. The fireblocking of spaces between chimneys and wood joists, beams, or headers shall be self-supporting or be placed on strips of metal or metal lath laid across the spaces between combustible material and the chimney. (CRC R1003.19)
50. **Draftstopping.** In combustible construction where there is usable space both above and below the concealed space of a floor/ceiling assembly, draftstops shall be installed so that the area of the concealed space does not exceed 1000 square feet. Draftstopping shall divide the concealed space into approximately equal areas. 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 suspended under the floor framing
   - b. Floor framing is constructed of truss-type open-web or perforated members
51. **Draftstopping materials.** Draftstopping shall not be less than 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 draftstops shall be maintained. (CRC R302.12.1)
52. **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. Studs not more than 8 feet long shall be stud-grade Douglas Fir-Larch or better when supporting not more than one floor, roof, and ceiling. Studs 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 R402.2)
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. (CBC 2103.2)
4. **Grout.** Grout shall conform to ASTM C 476 and shall consist of 1 part portland cement, 1/10 part hydrated lime, 2-1/4 to 3 parts sand, and 1 to 2 parts gravel. Grout shall attain a minimum compressive strength of 2,000 psi at 28 days. (CBC 2103.3)
5. **Masonry.** Masonry units shall comply with ASTM C 90 for load-bearing concrete masonry units. (CBC 2103.1)
6. **Reinforcing steel.** Reinforcing steel used in construction of reinforced masonry or concrete structures shall be deformed and comply with ASTM A 615. (CBC 2103.4)
7. **Structural steel.** Steel used as structural shapes such as wide-flange sections, channels, plates, and angles shall comply with ASTM A36. Pipe columns shall comply with ASTM A53. Structural tubes shall comply with ASTM A500, Grade B.
8. **Fasteners for preservative-treated wood.** Fasteners for preservative-treated and fire-retardant-treated wood - including nuts and washers -- shall be of hot dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper. (CRC R317.3.1)

   Exception: 1/2-inch diameter or greater steel bolts

   Exception: Fasteners other than nails and timber rivets may be of mechanically deposited zinc-coated steel with coating weights in accordance with ASTM B 695, Class 55 minimum

   Exception: Plain carbon steel fasteners acceptable in SBX/DOT and zinc borate preservative-treated wood in an interior, dry environment
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 R317.3.3)

G. Roofing and Weatherproofing

1. **Roof covering.** All roof covering shall be installed per applicable requirements of CBC 1507. Roof coverings shall be at least Class A rated in accordance with ASTM E 108 or UL 790. (County Building Code 92.1.1505.1)
2. **Roof flashing.** Flashing shall be installed at wall and roof intersections, at gutters, wherever there is a change in roof slope or direction, and around roof openings. Where flashing is of metal, the metal shall be corrosion-resistant with a thickness of not less than 0.019 inch (No. 26 galvanized sheet). (CRC R903.2.1)
3. **Crickets and saddles.** A cricket or saddle shall be installed on the ridge side of any chimney or penetration more than 30 inches wide as measured perpendicular to the slope. Cricket or saddle covering shall be sheet metal or the same material as the roof covering. (CRC R903.2.2)
4. **Water-resistive barrier.** A minimum of one layer of No. 15 asphalt felt shall be attached to studs or sheathing of all exterior walls. Such felt or material shall be applied horizontally, with the upper layer lapped over the lower layer minimum 2 inches. Where joints occur, felt shall be lapped minimum 6 inches. The felt shall be continuous to the top of walls and terminated at penetrations and building appendages in a manner to maintain a weather-resistant exterior wall envelope. (CRC R703.2)
5. **Wall flashing.** Approved corrosion-resistant flashing shall be applied shingle fashion at the following locations to prevent entry of water into the wall cavity or penetration of water to the building structural framing components (CRC R703.8):
   - a. Exterior door and window openings, extending to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage
   - b. At the intersection of chimneys or other masonry construction with frame or stucco walls, with projecting lips on both sides under stucco copings
   - c. Under and at the ends of masonry, wood, or metal copings and sills
   - d. Continuously above all projecting wood trim
   - e. Where exterior porches, decks, or stairs attach to a wall or floor assembly of wood-frame construction
   - f. At wall and roof intersections
   - g. At built-in gutters
6. **Dampproofing.** Dampproofing materials for foundation walls enclosing usable space below grade shall be installed on the exterior surface of the wall, and shall extend from the top of the footing to finished grade. (CRC R406.1)
7. **Weep screed.** A minimum 0.019-inch (No. 26 galvanized sheet gage), corrosion-resistant weep screed or plastic weep screed with a minimum vertical attachment flange of 3-1/2 inches shall be provided at or below the foundation plate line on exterior stud walls in accordance with ASTM C 92. The weep screed shall be placed a minimum 4 inches above the earth or 2 inches above paved areas and shall be of a type allowing trapped water to drain to the exterior of the building. (CRC R703.7.2.1)

H. Grading and soils

1. **Grading permit**. Grading permit required if volume of earth moved exceeds 200 cubic yards or if any cuts or fills exceed 8 feet in height/depth. (County Grading Ordinance 202)
2. **Compaction report.** Compaction report required for fill material 12 inches or more in depth. (CBC 1803.5.8)

I. Green Building Standards Code (CALGreen) Requirements

1. **Applicability**. CalGreen residential mandatory measures shall apply to every newly constructed building or structure and within any addition or alteration increasing a building's conditioned area, volume, or size. (CalGreen 101.3, CalGreen 301.1.1)

   Exception: All residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures per CalGreen 301.1.1 and CalGreen 4.303.1

I. (CALGreen) Requirements (Continued)

2. **Water conserving plumbing fixtures and fittings.** Plumbing fixtures and fittings shall comply with the following per CalGreen 4.303.1:
   - a. Water closets: Maximum 1.28 gallons per flush
   - b. Urinals: Maximum 0.5 gallons per flush
   - c. Single showerheads: Maximum flow rate of 1.8 gallons per minute at 80 psi
   - d. Multiple showerheads serving one shower: Maximum combined flow rate of 2.0 gallons per minute at 80 psi
   - e. Lavatory faucets: Maximum flow rate of 1.2 gallons per minute at 60 psi, minimum flow rate of 0.8 gallons per minute at 20 psi
   - f. Kitchen faucets: Maximum flow rate of 1.5 gallons per minute at 60 psi (County Green Building Code 97.1.4.303.1.4.4)

     Exception: Temporary increase allowed to maximum 2.2 gallons per minute at 60 psi if faucet defaults back to maximum 1.5 gallons per minute at 60 psi
   - g. Appliances: At least one qualified ENERGY STAR dishwasher or clothes washer shall be installed in each dwelling unit. (County Green Building Code 97.1.4.303.3)
3. **Outdoor potable water use in landscape areas.** Residential developments shall comply with local water efficient landscape ordinance or the current California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent. (CalGreen 4.304.1)
4. **Joints and openings.** Openings in the building envelope separating conditioned space from unconditioned space needed to accommodate utility and other penetrations must be sealed in compliance with the *California Energy Code*. (CALGreen 4.406.1)

   Exception: Annular spaces around pipes, electric cables, conduits or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such opening with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.
5. **Construction waste reduction, disposal, and recycling.** Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3, or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance. (CalGreen 4.408.1)

   Exception: Excavated soil and land-clearing debris.

   Exception: Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite The County of San Diego, Department of Public Works, Construction & Demolition (C&D) Facilities Guide is online at: https://www.sandiegocounty.gov/content/dam/sdc/dpw/SOLID_WASTE_PLANNING_and_RECYCLING/UpdatedCDResources/CDFacility_QuickGuide.pdf

   Exception: The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.
6. **Construction waste management plan.** A construction waste management plan in conformance with Items 1-5 shall be completed and available on the job site. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency. (CalGreen 4.408.2)
   1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
   2. Specify if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream).
   3. Identify diversion facilities where the construction and demolition waste materials will be taken.
   4. Identify construction methods employed to reduce the amount of construction and demolition waste generated.
   5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.
7. **Waste management company.** Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1. (CalGreen 4.408.3)

   Note: The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste company.
8. **Waste stream reduction alternative [LR].** Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 pounds per square foot of the building area shall meet the 65 percent construction waste reduction requirement in Section 4.408.1. (CalGreen 4.408.4)

   4.408.4.1 Waste stream reduction alternative. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area shall meet the 65 percent construction waste reduction requirement in Section 4.408.1.
9. **Documentation.** Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, Items 1-5, Section 4.408.3, or Section 4.408.4.
10. **Operation and maintenance manual.** Prior to final inspection, a manual, compact disc, web-based reference, or other acceptable media which includes all of the following shall be placed in the building (CALGreen 4.410.1):
    - a. Directions to owner or occupant that manual shall remain with the building throughout the life cycle of the structure.
    - b. Operation and maintenance instructions for the following:
      - i. Equipment and appliances, including water-saving devices and systems, HVAC system, photovoltaic systems, water-heating systems and other major appliances and equipment.
      - ii. Roof and yard drainage, including gutters and downspouts.
      - iii. Space conditioning systems, including condensers and air filters.
      - iv. Landscape irrigation systems.
      - v. Water reuse systems.
    - c. Information from local utility, water, and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
    - d. Public transportation and/or carpool options available in the area.
    - e. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range.
    - f. Information about water-conserving landscape and irrigation design and controllers which conserve water.
    - g. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
    - h. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
    - i. Information about state solar energy and incentive programs available.
    - j. A copy of all special inspection verifications required by the enforcing agency or code.
11. **Covering of duct openings and protection of mechanical equipment during construction.** At the time of rough installation or during storage on the construction site and until final startup of the heating and cooling equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust or debris which may collect in the system. (CALGreen 4.504.1)
12. **Adhesives, sealants, caulks, paints, and coatings pollutant control.** Adhesives (including carpet adhesives), sealants, caulks, paints, and coatings shall comply with VOC limits per CALGreen 4.504.2. Verification of compliance shall be provided at the request of the enforcing agency. (CALGreen 4.504.2.1)
13. **Carpet systems.** All carpet installed in the building interior shall meet the testing and product requirements of one of the following (CALGreen 4.504.3):
    - a. Carpet and Rug Institute's Green Label Plus Program (all carpet cushion must meet the requirements of this program).
    - b. California Department of Public Health Standard Practice for the testing of VOCs (Specification 01350).
    - c. NSF/ANSI 140 at the Gold level.
    - d. Scientific Certifications Systems Indoor Advantage™ Gold.
14. **Resilient flooring systems.** At least 80 percent of the floor area receiving resilient flooring shall comply with one of or more of the following (CALGreen 4.504.4):
    - a. VOC emission limits defined in the Collaborative for High Performance Schools (CHPS) High Performance Products Database
    - b. Products compliant with CHPS criteria certified under the Greenguard Children & Schools program
    - c. Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program
    - d. Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350)
15. **Composite wood products.** Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.) by or before the dates specified in those sections, as shown in CalGreen Table 4.504.5. The following limits are in parts per million (CALGreen 4.504.5):
    - a. Hardwood plywood veneer core 0.05
    - b. Hardwood plywood composite core 0.05
    - c. Particle board 0.09
    - d. Medium-density fiberboard (MDF) 0.11
    - e. Thin MDF (5/16 inch or less) 0.13

BUILDING RECORD ID:

OWNER OR CONTRACTOR SIGNATURE:

I. (CALGreen) Requirements (Continued)

16. **Moisture content of building materials.** Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following (CALGreen 4.505.3):
    - a. Moisture content shall be determined with either a probe-type or contact-type moisture meter.
    - b. Moisture readings shall be taken at a point 2 feet to 4 feet from the grade stamped end of each piece to be verified.
    - c. At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing.

    Insulation products which are visibly wet or have high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure.
17. Bathrooms with a bathtub and/or shower shall be mechanically ventilated per the following (CalGreen 4.506.1):
    - a. Fans shall be ENERGY STAR compliant and ducted to terminate outside building
    - b. Unless functioning as a component of a whole-house ventilation system, fans shall have humidity controls capable of adjustment - manually or automatically -- between a relative humidity range of 50% to 80%.
18. **Heating and air-conditioning system design.** Heating and air-conditioning systems shall be sized, designed, and have their equipment selected using the following methods (CALGreen 4.507.2):
    - a. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J, ASHRAE handbooks, or other equivalent design software or methods.
    - b. Duct systems are sized according to ANSI/ACCA 1 Manual D 2009, ASHRAE handbooks, or other equivalent design software or methods.
    - c. Select heating and cooling equipment according to ACCA 36-S Manual S or other equivalent design software or methods

TABLE R602.3(1)
FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

TABLE R602.3(1)
FASTENING SCHEDULE

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER[a, b, c]	SPACING AND LOCATION
	Roof		
1	Blocking between ceiling joists or rafters to top plate	4-8d box (2½" × 0.113") or 3-8d common (2½" × 0.131"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	Toe nail
2	Ceiling joists to top plate	4-8d box (2½" × 0.113"); or 3-8d common (2½" × 0.131"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	Per joist, toe nail
3	Ceiling joist not attached to parallel rafter, laps over partitions [see Sections R802.3.1, R802.3.2 and Table R802.5.1(9)]	4-10d box (3" × 0.128"); or 3-16d common (3½" × 0.162"); or 4-3" × 0.131" nails	Face nail
4	Ceiling joist attached to parallel rafter (heel joint) [see Sections R802.3.1 and R802.3.2 and Table R802.5.1(9)]	Table R802.5.1(9)	Face nail
5	Collar tie to rafter, face nail or 1¼" × 20 ga. ridge strap to rafter	4-10d box (3" × 0.128"); or 3-10d common (3" × 0.148"); or 4-3" × 0.131" nails	Face nail each rafter
6	Rafter or roof truss to plate	3-16d box nails (3½" × 0.135"); or 3-10d common nails (3" × 0.148"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss[i]
7	Roof rafters to ridge, valley or hip rafters or roof rafter to minimum 2" ridge beam	4-16d (3½" × 0.135"); or 3-10d common (3½" × 0.148"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails	Toe nail
		3-16d box 3½" × 0.135"); or 2-16d common (3½" × 0.162"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	End nail
	Wall		
8	Stud to stud (not at braced wall panels)	16d common (3½" × 0.162")	24" o.c. face nail
		10d box (3" × 0.128"); or 3" × 0.131" nails	16" o.c. face nail
9	Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d box (3½" × 0.135"); or 3" × 0.131" nails	12" o.c. face nail
		16d common (3½" × 0.162")	16" o.c. face nail
10	Built-up header (2" to 2" header with ½" spacer)	16d common (3½" × 0.162")	16" o.c. each edge face nail
		16d box (3½" × 0.135")	12" o.c. each edge face nail
11	Continuous header to stud	5-8d box (2½" × 0.113"); or 4-8d common (2½" × 0.131"); or 4-10d box (3" × 0.128")	Toe nail
12	Top plate to top plate	16d common (3½" × 0.162")	16" o.c. face nail
		10d box (3" × 0.128"); or 3" × 0.131" nails	12" o.c. face nail
13	Double top plate splice for SDCs A-D2 with seismic braced wall line spacing < 25'	8-16d common (3½" × 0.162"); or 12-16d box (3½" × 0.135"); or 12-10d box (3" × 0.128"); or 12-3" × 0.131" nails	Face nail on each side of end joint (minimum 24" lap splice length each side of end joint)
	Double top plate splice SDCs D0, D1, or D2; and braced wall line spacing ≥ 25'	12-16d (3½" × 0.135")	
14	Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d common (3½" × 0.162")	16" o.c. face nail
		16d box (3½" × 0.135"); or 3" × 0.131" nails	12" o.c. face nail
15	Bottom plate to joist, rim joist, band joist or blocking (at braced wall panel)	3-16d box (3½" × 0.135"); or 2-16d common (3½" × 0.162"); or 4-3" × 0.131" nails	3 each 16" o.c. face nail 2 each 16" o.c. face nail 4 each 16" o.c. face nail
16	Top or bottom plate to stud	4-8d box (2½" × 0.113"); or 3-16d box (3½" × 0.135"); or 4-8d common (2½" × 0.131"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails	Toe nail
		3-16d box (3½" × 0.135"); or 2-16d common (3½" × 0.162"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	End nail
17	Top plates, laps at corners and intersections	3-10d box (3" × 0.128"); or 2-16d common (3½" × 0.162"); or 3-3" × 0.131" nails	Face nail
18	1" brace to each stud and plate	3-8d box (2½" × 0.113"); or 2-8d common (2½" × 0.131"); or 2-10d box (3" × 0.128"); or 2 staples 1¾"	Face nail
19	1" × 6" sheathing to each bearing	3-8d box (2½" × 0.113"); or 2-8d common (2½" × 0.131"); or 2-10d box (3" × 0.128"); or 2 staples, 1" crown, 16 ga., 1¾" long	Face nail
20	1" × 8" and wider sheathing to each bearing	3-8d box (2½" × 0.113"); or 3-8d common (2½" × 0.131"); or 3-10d box (3" × 0.128"); or 3 staples, 1" crown, 16 ga., 1¾" long	Face nail
		Wider than 1" × 8" 4-8d box (2½" × 0.113"); or 3-8d common (2½" × 0.131"); or 3-10d box (3" × 0.128"); or 4 staples, 1" crown, 16 ga., 1¾" long	
	Floor		
21	Joist to sill, top plate or girder	4-8d box (2½" × 0.113"); or 3-8d common (2½" × 0.131"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	Toe nail
22	Rim joist, band joist or blocking to sill or top plate (roof applications also)	8d box (2½" × 0.113")	4" o.c. toe nail
		8d common (2½" × 0.131"); or 10d box (3" × 0.128"); or 3" × 0.131" nails	6" o.c. toe nail
23	1" × 6" subfloor or less to each joist	3-8d box (2½" × 0.113"); or 2-8d common (2½" × 0.131"); or 3-10d box (3" × 0.128"); or 2 staples, 1" crown, 16 ga., 1¾" long	Face nail
24	2" subfloor to joist or girder	3-16d box (3½" × 0.135"); or 2-16d common (3½" × 0.162")	Blind and face nail
25	2" planks (plank & beam—floor & roof)	3-16d box (3½" × 0.135"); or 2-16d common (3½" × 0.162")	At each bearing, face nail
26	Band or rim joist to joist	3-16d common (3½" × 0.162"); 4-10 box (3" × 0.128"), or 4-3" × 0.131" nails; or 4-3" × 14 ga. staples, 7/16" crown	End nail
27	Built-up girders and beams, 2-inch lumber layers	20d common (4" × 0.192"); or	Nail each layer as follows: 32" o.c. at top and bottom and staggered.
		10d box (3" × 0.128"); or 3" × 0.131" nails	24" o.c. face nail at top and bottom staggered on opposite sides
		And: 2-20d common (4" × 0.192"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails	Face nail at ends and at each splice
28	Ledger strip supporting joists or rafters	4-16d box (3½" × 0.135"); or 3-16d common (3½" × 0.162"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails	At each joist or rafter, face nail
29	Bridging to joist	2-10d (3" × 0.128")	Each end, toe nail

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER[a, b, c]	SPACING OF FASTENERS: Edges (inches)[h]	SPACING OF FASTENERS: Intermediate supports[c, e] (inches)
	Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing [see Table R602.3(3) for wood structural panel exterior wall sheathing to wall framing]			
30	3/8" – 1/2"	6d common (2" × 0.113") nail (subfloor, wall)[i] 8d common (2½" × 0.131") nail (roof)	6	12[f]
31	19/32" – 1"	8d common nail (2½" × 0.131")	6	12[f]
32	1⅛" – 1¼"	10d common (3" × 0.148") nail; or 8d (2½" × 0.131") deformed nail	6	12
	Other wall sheathing[g]			
33	½" structural cellulosic fiberboard sheathing	1½" galvanized roofing nail, 7/16" head diameter, or 1" crown staple 16 ga., 1¼" long	3	6
34	25/32" structural cellulosic fiberboard sheathing	1¾" galvanized roofing nail, 7/16" head diameter, or 1" crown staple 16 ga., 1¼" long	3	6
35	½" gypsum sheathing[d]	1½" galvanized roofing nail; staple galvanized, 1½" long; 1¼" screws, Type W or S	7	7
36	5/8" gypsum sheathing[d]	1¾" galvanized roofing nail; staple galvanized, 1⅝" long; 1⅝" screws, Type W or S	7	7
	Wood structural panels, combination subfloor underlayment to framing			
37	¾" and less	6d deformed (2" × 0.120") nail; or 8d common (2½" × 0.131") nail	6	12
38	7/8" – 1"	8d common (2½" × 0.131") nail; or 8d deformed (2½" × 0.120") nail	6	12
39	1⅛" – 1¼"	10d common (3" × 0.148") nail; or 8d deformed (2½" × 0.120") nail	6	12

TABLE R602.3(1)—continued
FASTENING SCHEDULE

a. Nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.
b. Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width.
c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.
d. Four-foot by 8-foot or 4-foot by 9-foot panels shall be applied vertically.
e. Spacing of fasteners not included in this table shall be based on Table R602.3(2).
f. Where the ultimate design wind speed is 130 mph or less, nails for attaching wood structural panel roof sheathing to gable end wall framing shall be spaced 6 inches on center. Where the ultimate design wind speed is greater than 130 mph, nails for attaching panel roof sheathing to intermediate supports shall be spaced 6 inches on center for minimum 48-inch distance from ridges, eaves and gable end walls; and 4 inches on center to gable end wall framing.
g. Gypsum sheathing shall conform to ASTM C1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C208.
h. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking.
i. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this schedule. The toe nail on the opposite side of the rafter shall not be required.

THESE ARE MINIMUM REQUIREMENTS AND SHALL NOT SUPERSEDE MORE RESTRICTIVE SPECIFICATIONS ON THE PLANS OR AS REQUIRED BY APPLICABLE CODE.

Revisions:

REMODEL, ADDITION AND ADU
HEALY'S RESIDENCE
1161 SUNSET CLIFFS BLVD, SAN DIEGO, CA 92107

Fernando Gonzalez-P.
DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 619.739.1492

General Notes

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **GN1**
Total sheet count: -

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2023)

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

CHAPTER 3
GREEN BUILDING
SECTION 301 GENERAL

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

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

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

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

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

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

SECTION 302 MIXED OCCUPANCY BUILDINGS

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

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

DIVISION 4.1 PLANNING AND DESIGN

ABBREVIATION DEFINITIONS:

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

CHAPTER 4
RESIDENTIAL MANDATORY MEASURES

SECTION 4.102 DEFINITIONS

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

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

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

4.106 SITE DEVELOPMENT

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

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

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

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

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

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

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

Exception: Additions and alterations not altering the drainage path.

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

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

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

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

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

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

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

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

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

Exceptions:

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

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

Notes:

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

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

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

Exception: Areas of parking facilities served by parking lifts.

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

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

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

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

Notes:

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

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

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

Exception: Areas of parking facilities served by parking lifts.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Notes:

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

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

DIVISION 4.2 ENERGY EFFICIENCY

4.201 GENERAL

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

DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION

4.303 INDOOR WATER USE

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

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

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

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

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

4.303.1.3 Showerheads.

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

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

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

4.303.1.4 Faucets.

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

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

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

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

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

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

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

TABLE H-2

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

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

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

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

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

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

TABLE - MAXIMUM FIXTURE WATER USE

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

4.304 OUTDOOR WATER USE

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

NOTES:

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

DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE

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

4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

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

Exceptions:

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

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

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

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

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

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

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

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

Notes:

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

4.410 BUILDING MAINTENANCE AND OPERATION

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

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

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

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

DIVISION 4.5 ENVIRONMENTAL QUALITY

SECTION 4.501 GENERAL

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

SECTION 4.502 DEFINITIONS

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

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

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

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

Revisions:

REMODEL, ADDITION AND ADU

HEALY'S RESIDENCE

1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez-P. DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 619.738.1492

GREEN NOTES

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **GN2**
Total sheet count: -

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES, SHEET 2 (January 2023)

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

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

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

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

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

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

4.503 FIREPLACES

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

4.504 POLLUTANT CONTROL

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

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

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

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichoroethylene), except for aerosol products, as specified in Subsection 2 below.

2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with section 94507.

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

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

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

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

TABLE 4.504.1 - ADHESIVE VOC LIMIT[1,2]

(Less Water and Less Exempt Compounds in Grams per Liter)

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

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

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

TABLE 4.504.2 - SEALANT VOC LIMIT

(Less Water and Less Exempt Compounds in Grams per Liter)

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

TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[2,3]

GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS

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

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

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

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

TABLE 4.504.5 - FORMALDEHYDE LIMITS[1]

MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

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

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

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

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)

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

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

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

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

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

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

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

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

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

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

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

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

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

4.505 INTERIOR MOISTURE CONTROL

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

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

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

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

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

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

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

4.506 INDOOR AIR QUALITY AND EXHAUST

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

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

Notes:

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

4.507 ENVIRONMENTAL COMFORT

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

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

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

CHAPTER 7
INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS

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

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

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

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

Notes:

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

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

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

703 VERIFICATIONS

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

Revisions:

REMODEL, ADDITION AND ADU

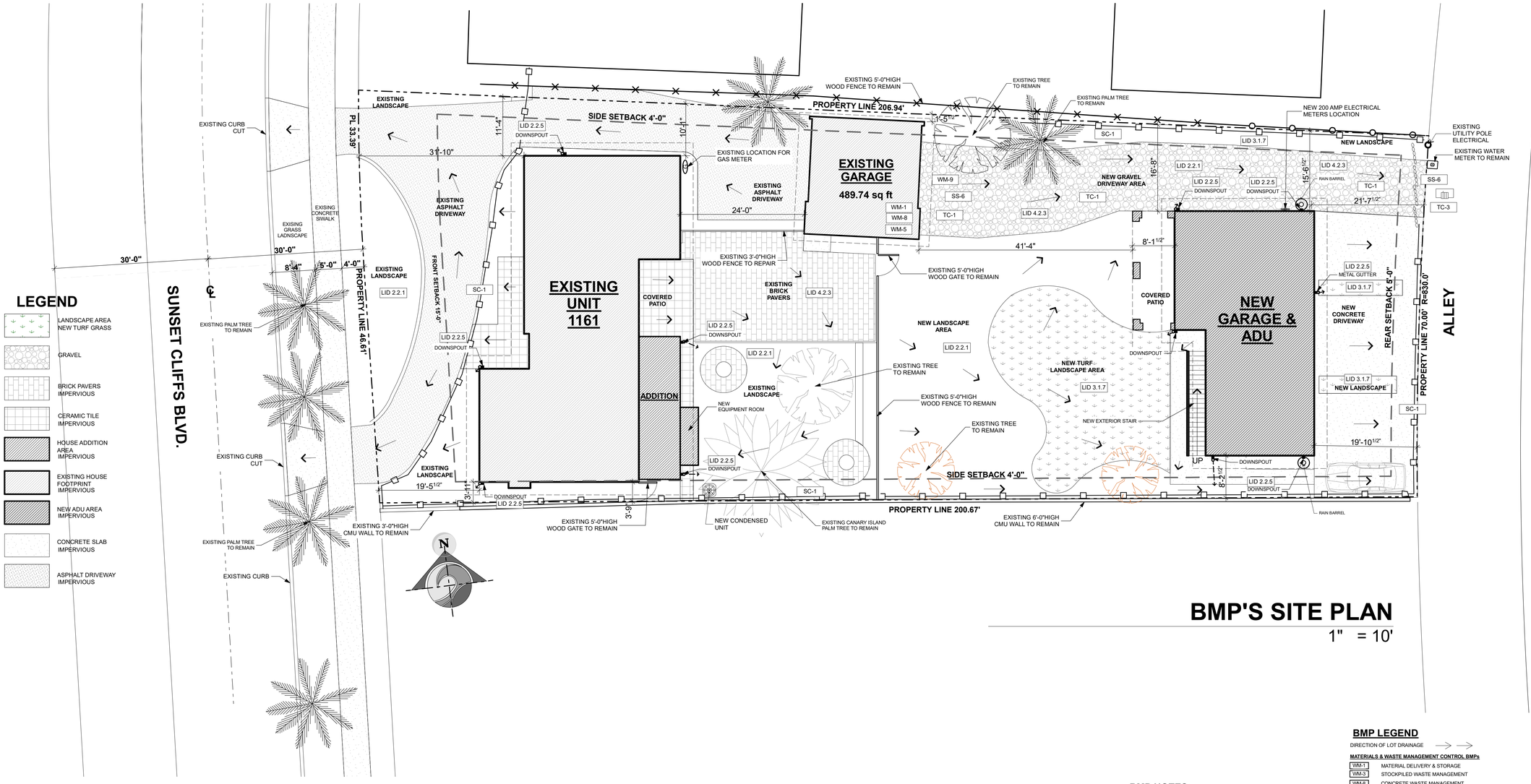
HEALY'S RESIDENCE

1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez-P. DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 619.738.1482

GREEN NOTES

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **GN3**
Total sheet count:



BMP'S SITE PLAN

1" = 10'

BMP NOTES:

1. All storm water runoff from proposed and/or replaced impervious areas shall be routed to pervious surfaces or landscaping prior to reaching the public drain system.
2. No work will be performed in the Right-of-Way
3. Per City of San Diego Municipal Code Sections 12.0104 , 43.0310 ,129.010 4 (a)(4), and 142.0220 , permits are required to be inspected by City Inspection staff to ensure compliance with issued construction permit. This includes , but is not limited to , Storm Water Compliance Inspection Requirements associated with each permit.

BMP LEGEND

DIRECTION OF LOT DRAINAGE

MATERIALS & WASTE MANAGEMENT CONTROL BMPs

- WM-1 MATERIAL DELIVERY & STORAGE
- WM-3 STOCKPILED WASTE MANAGEMENT
- WM-6 CONCRETE WASTE MANAGEMENT
- WM-5 SOLID WASTE MANAGEMENT
- WM-9 SANITARY WASTE MANAGEMENT

TEMPORARY RUNOFF CONTROL BMPs

- SS-6 / SS-8 STRAW OR WOOD MULCH S/W
- SS-7 PHYSICAL STABILIZATION (WINTER) EBM
- SC-1 SILT FENCE
- SC-6 / SC-8 GRAVEL OR SAND BAGS

- TC-1 STABILIZED CONSTRUCTION ENTRANCE
- TC-3 ENTRANCE / EXIT TIRE WASH

LOW IMPACT DEVELOPMENT BMPs

- LID 2.2.1 CONSERVATION OF NATURAL DRAINAGES, WELL DRAINED SOILS AND SIGNIFICANT VEGETATION
- LID 2.2.2 MINIMIZE DISTURBANCES TO NATURAL DRAINAGES
- LID 2.2.4 MINIMIZE SOIL COMPACTION
- LID 2.2.5 DRAIN RUNOFF FROM IMPERVIOUS SURFACES TO PERVIOUS AREAS
- LID 4.2.3 PERMEABLE PAVEMENT DESIGN
- LID 3.1.7 LANDSCAPING DESIGN

D.S. DOWNSPOUT LOCATION TO DRAIN ON LANDSCAPE

DOWNSPOUT LOCATION BELOW SIDEWALK TO DRAIN ON LANDSCAPE

Revisions:

REMODEL, ADDITION AND ADU

HEALY'S RESIDENCE

1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez P.
DESIGN
2022 Azure Cove, Chula Vista, CA 91915
Phone: 619.735.1492

BMP'S PLAN

Date: 01-25-25

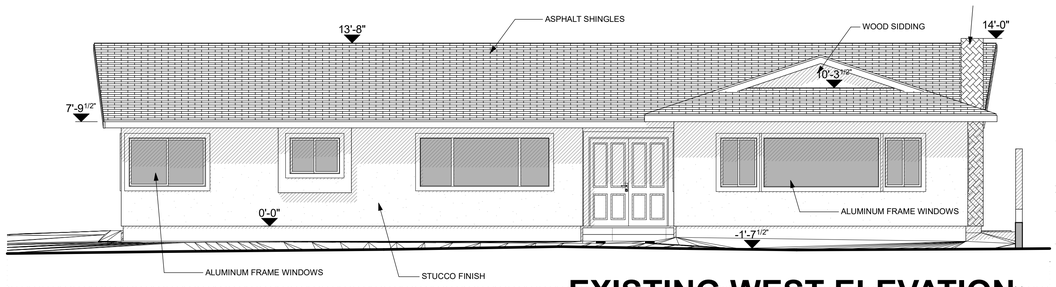
Scale:

Drawn: Fer

Job: 00000

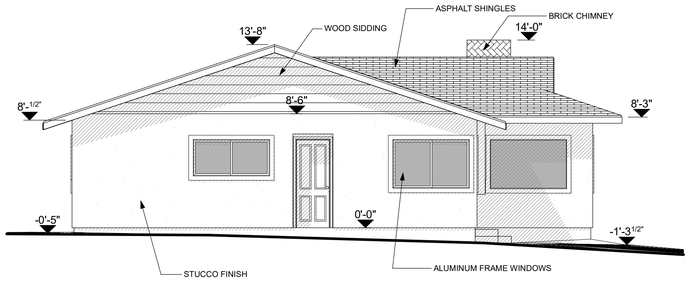
Sheet Number: **GN4**

Total sheet count: -



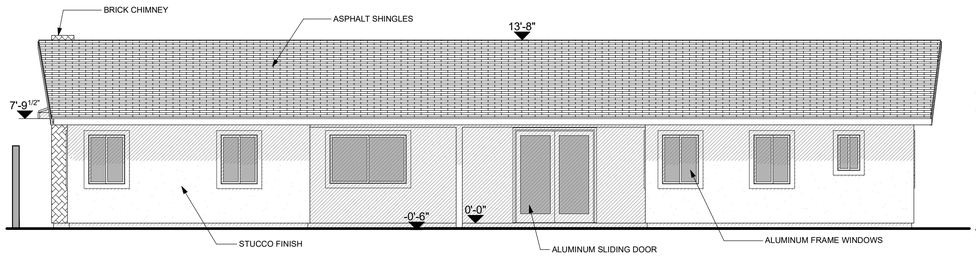
EXISTING WEST ELEVATION

3/16" = 1'-0"



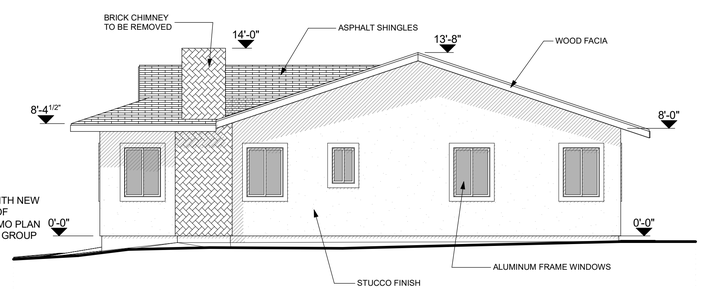
EXISTING NORTH ELEVATION

3/16" = 1'-0"



EXISTING EAST ELEVATION

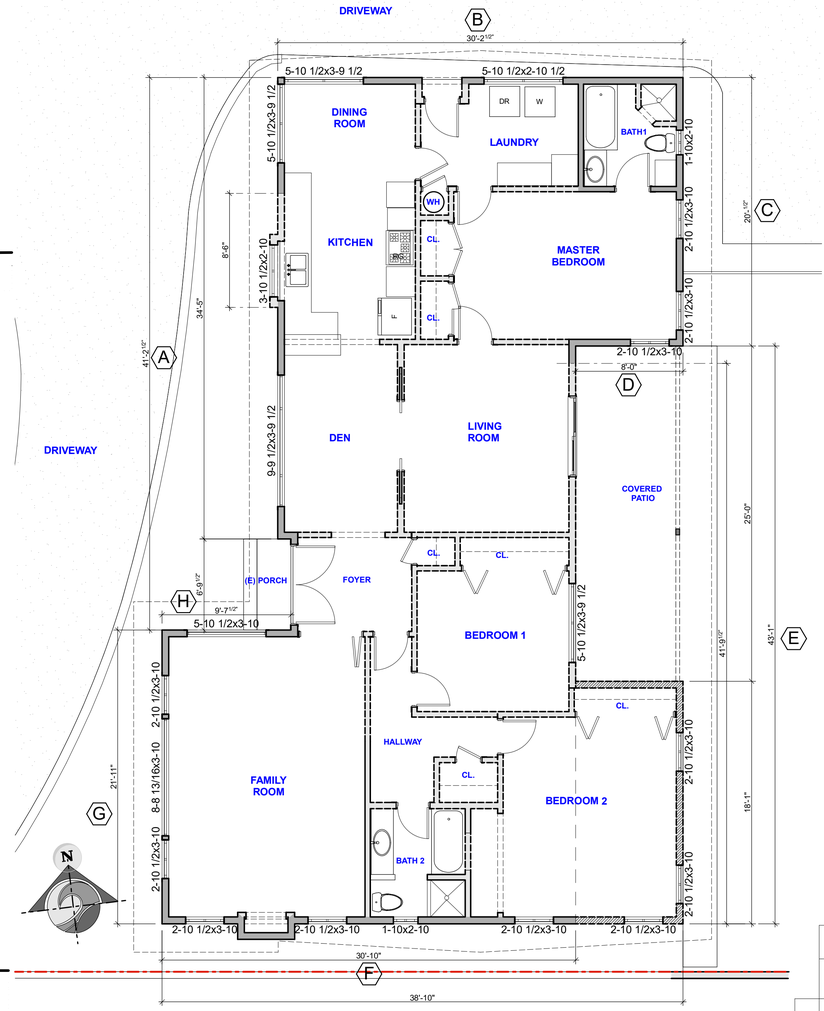
3/16" = 1'-0"



EXISTING SOUTH ELEVATION

3/16" = 1'-0"

NOTE:
GENERAL CONTRACTOR TO FIELD VERIFY EXISTING FRAMING CONDITIONS WITH NEW WALL AND FOUNDATION REINFORCEMENT PER STRUCTURAL DESIGN PRIOR OF STARTING DEMOLITION. THE WALLS SHOULD REMAIN PER WALL MATRIX & DEMO PLAN AND NOT TO BE REMOVED FOR ANY CIRCUMSTANCES, CONTACT THE DESIGN GROUP



EXISTING FLOOR PLAN

3/16" = 1'-0"

Floor Plan Legend

- Existing 2x Wall to remain
- Existing walls to be demolished
- Existing wall not permited to be removed

WALL MATRIX

	WALL#	(E) WALL LENGHT	REMOVED WALL LENGHT	REMAINING WALL LENGHT
MAIN LEVEL	A	41.2'	8.5'	32.7'
	B	30.20'	3'	27.20'
	C	20.04'	0'	20.04'
	D	8.0'	0'	8.0'
	E	43.08'	41.79'	1.29'
	F	30.83'	0'	30.83'
	G	21.91'	0'	21.91'
	H	9.62'	0'	9.62'

	(E) WALL LENGHT	REMOVED WALL LENGHT	REMAINING WALL LENGHT
TOTAL	184.84'	53.29	131.55'
		28.80%	71.11%

LESS THAN 50%
MAX ALLOWED

AND STRUCTURAL ENGINEER FOR VERIFICATION PRIOR OF DEMOLITION.

Revisions:

REMODEL, ADDITION AND ADU

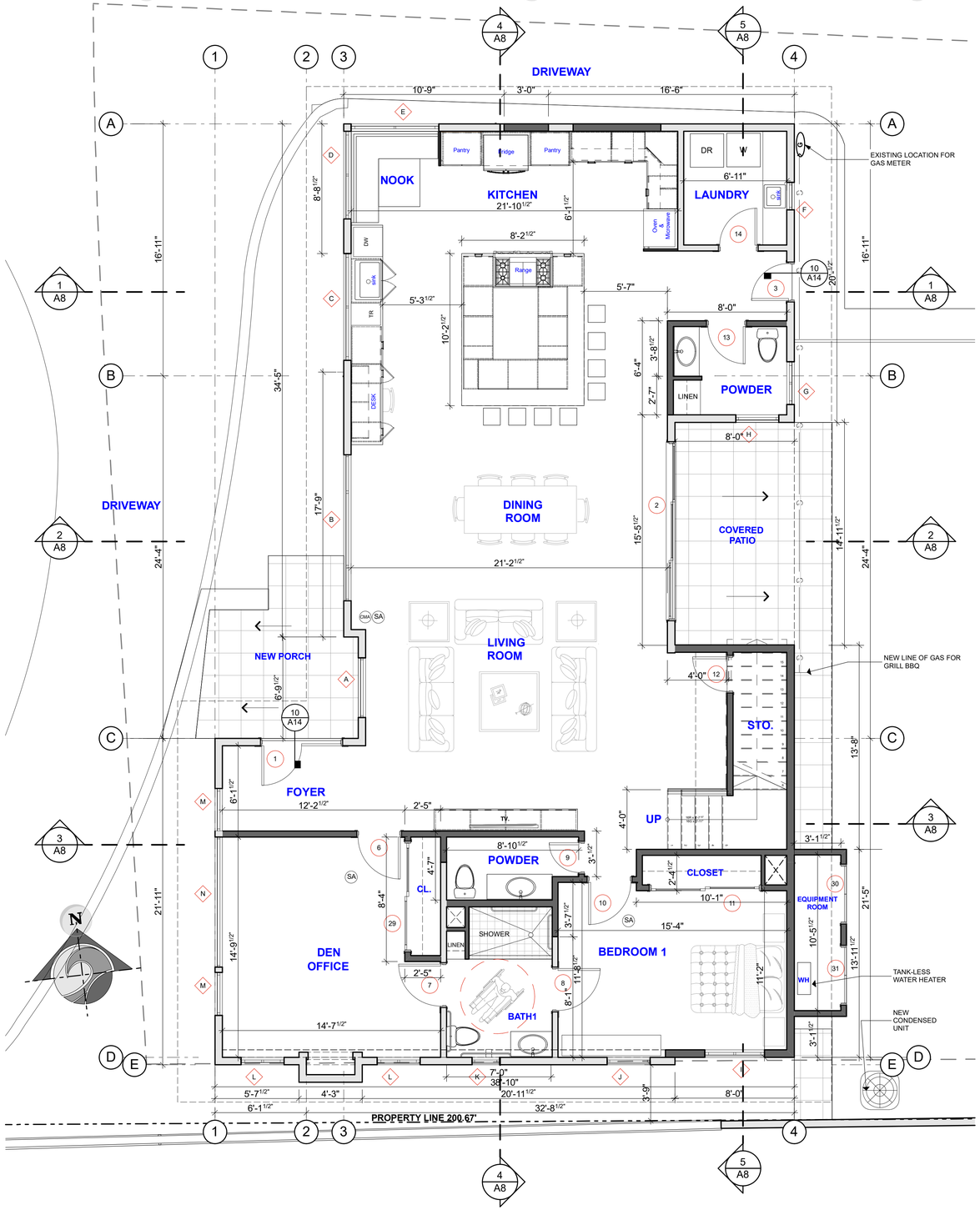
HEALY'S RESIDENCE

1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez P.
DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 619.739.1402

Existing & Demo Plan

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: A1
Total sheet count:



PROPOSED MAIN FLOOR PLAN

1/4" = 1'-0"

GENERAL NOTES:

1. ALL PLUMBING FIXTURES AND FITTINGS ILL BE WATER CONSERVING AND WILL COMPLY WITH THE 2022 CBC
2. ALL WATER CLOSETS SHALL BE "ULTRA LOW FLUSH"
3. PROVIDE LAVATORY FAUCETS WITH A MAXIMUM FLOW OF 1.2 GALLONS PER MINUTE (GPM).
4. PROVIDE KITCHEN FAUCETS WITH A MAXIMUM FLOW OF 1.8 GALLONS PER MINUTE (GPM).
5. PROVIDE SHOWER HEADS WITH A MAXIMUM FLOW OF 2.0 GALLONS PER MINUTE (GPM).
6. PROVIDE WATER CLOSET A MAXIMUM FLOW OF 1.28 GALLONS FLUSH PER MINUTE (GPF).
7. PROVIDE MIXING VALVES AT SHOWER
8. MECHANICAL EXHAUST FANS WHICH EXHAUST DIRECTLY FROM BATHROOMS SHALL COMPLY WITY THE FOLLOWING:
   1. FANS SHALL BE **ENERGY STAR** COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING.
   2. UNLESS FUNCTIONING AS A COMPONENT OF WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDIDTAT WHICH SHALL BE READILY ACCESIBLE. HUMIDISTAT CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50 TO 80 PERCENT
9. NO CPVC STATE HEALTH & SAFETY CODE 10d @ 12" O.C. F.N.
10. MINIMUN CLEARANCES OF 15" FROM THE CENTER LINE OF WATER CLOSET & 24" IN FRONT OF WATER CLOSETS.
11. PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE (CPC).
12. BATHROOMS REQUIRE EXHAUST FANS (MINIMUM 50 CFM) CFM AND NOISE RATING ("SONE") (GENERALLY 3 SONE MAX- AS USED INTERMITTENTLY). ALL INSTALLED EXHAUST FANS MUST BE SPECIFIED AT A NOISE RATING OF A MXIMUM 1 "SONE" FOR THE CONTINIOUS USE OR MAXIMUM 3 "SONE" FOR THE INTERMITTENT USE.
13. ANY INSTALLED GAS FIREPLACE SHALL BE DIRECT-VENT SEALED-COMBUSTION TYPE. ANY INSTALLED WOODSTOVE OR PELLET STOVE SHALL COMPLY WITH U.S. EPA PHASE II EMISSION LIMITS WHERE APPLICABLE. WOODSTOVES, PELLET STOVES AND FIREPLACES SHALL ALSO COMPLY WITH APPLICABLE LOCAL ORDINANCES.
14. "STATE HEALTH $ SAFETY CODE BANS THE USE OF CHLORINATED POLYVINYL CHLORIDE (CPVC) FOR INTERIOR WATER-SUPPLY PIPING.
15. TUB/SHOWERS WALLS: COVER WALLS AND CEILINGS IN TUB & SHOWER COMPARTMENTS W/ 15# FELT. MATERIALS USED ON SUCH WALLS SHALL BE OF A TYPE NOT ADVERSELY AFFECTED BY MOISTURE.
16. ALL ABS AND PVC PIPING AND FITTINGS SHALL BE ENCLOSED WITHIN WALLS AND FLOORS COVERED WITH "TYPE X GYPSUM BOARD" OR SIMILAR ASSAMBLIES THAT PROVIDE THE SAME LEVEL OF FIRE PROTECTION. PROTECTION OF MEMBRANE PENETRATIONS IS NOT REQUIRED.
17. ALL EXTERIOR AND INTERIOR WALLS ARE 2x4 @ 16" O.C. U.N.O. PER PLAN
18. PERMANENT VACUUM BREAKERS SHALL BE INCLUDED WITH ALL NEW HOSE BIBBS".
19. SMOKE ALARMS SHALL BE PROVIDED EVERY EXISTING AND NEW BEDROOM.(HARD WIRED W/ BATTERY BACK-UP) " SEE ELECTRICAL PLANS WITH ALL RELATED NOTES"
20. CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN DWELLING UNITS AND IN SLEPPING UNITS WICH FUEL-BURNING APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGES. "SEE ELECTRICAL PLANS WITH ALL RELATED NOTES"
21. EGRESS WINDOWS SHALL HAVE A MAX. OF 44"
22. OUTDOOR SHOWER DRAINS AND SINKS ARE NOT PERMITED TO CONNECT TO THE PUBLIC SEWER SYSTEM UNLESS EQUIPED WITH AN APPROVED COVER. HOT AND COLD WATER CONNECTIONS ALLOWED.
22. ALL LUMINAIRES MOUNTED TO HE BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL BE HIGH EFFICACY BOARD" OR SIMILAR ASSAMBLIES THAT PROVIDE THE SAME LUMINAIRES OR MUST BE CONTROLLED BY A MOTION SENSOR AND CONTROLLED BY ONE OF THESE: PHOTOCONTROL OR ASTRONOMICAL TIME CLOCK OR ENERGY MANAGMENT CONTROL SYSTEM (EMCS)
23. SHOWER COMPARTMENTS AND BATHTUBS WITH INSTALLED SHOWER HEADS SHALL BE FISINHED WITH A NON ABSORBENT SURFACE THAT EXTENDS TO A HEIGH NOT LESS THAN 6 FEET ABOVE THE FLOOR.
24. SMOKE ALARMS AND CARBON MONOXIDE ALARMS SHALL BE INSTALLED BATTERY-POWERED ALARMS ACCEPTABLE - IN EXIST CONSTRUCCTION IN LOCATIONS SPECIFIED F.1 AND F.2 (CRC R314.2.2 CRC R135.2.2)
25. WATER HEATER:
    A.0. SMITH PROMAX DIRECT VENT MODEL GDV50L
    50 GALLON CAPACITY, 40,000 BTUH, 91 GPH @60° F
    ENERGY FACTOR 0.62, 200 LBS.
26. 4 " diam eter do m es tic dryer m o is ture exhaus t ducts s hall no t exceed a to tal co m bined ho rizo ntal and vertical length o f 14 feet 4 26 7 m m), including two 9 0 degree 1.57 rad) elbo ws . 5" inch diam eter dryer ducts can run up to 25 feet. Exhaus t ducts and dryer vents s hall be equipped with back-draft dam pers .

Floor Plan Legend

- EXISTING WALLS TO REMAIN.
- NEW 2X stud wall @16" O.C. w/ plywood sheathing per structural. Finish interior with 5/8" drywall. Exterior w/ stucco finish. Use greenboard in restrooms. use cement, or glass mat gypsum.
- RETURN AIR GRILL (R.A.G.)
- SA Smoke Detector
- CMA CARBON MONIXIDE ALARM REQUIRED PER SECTION R315.2

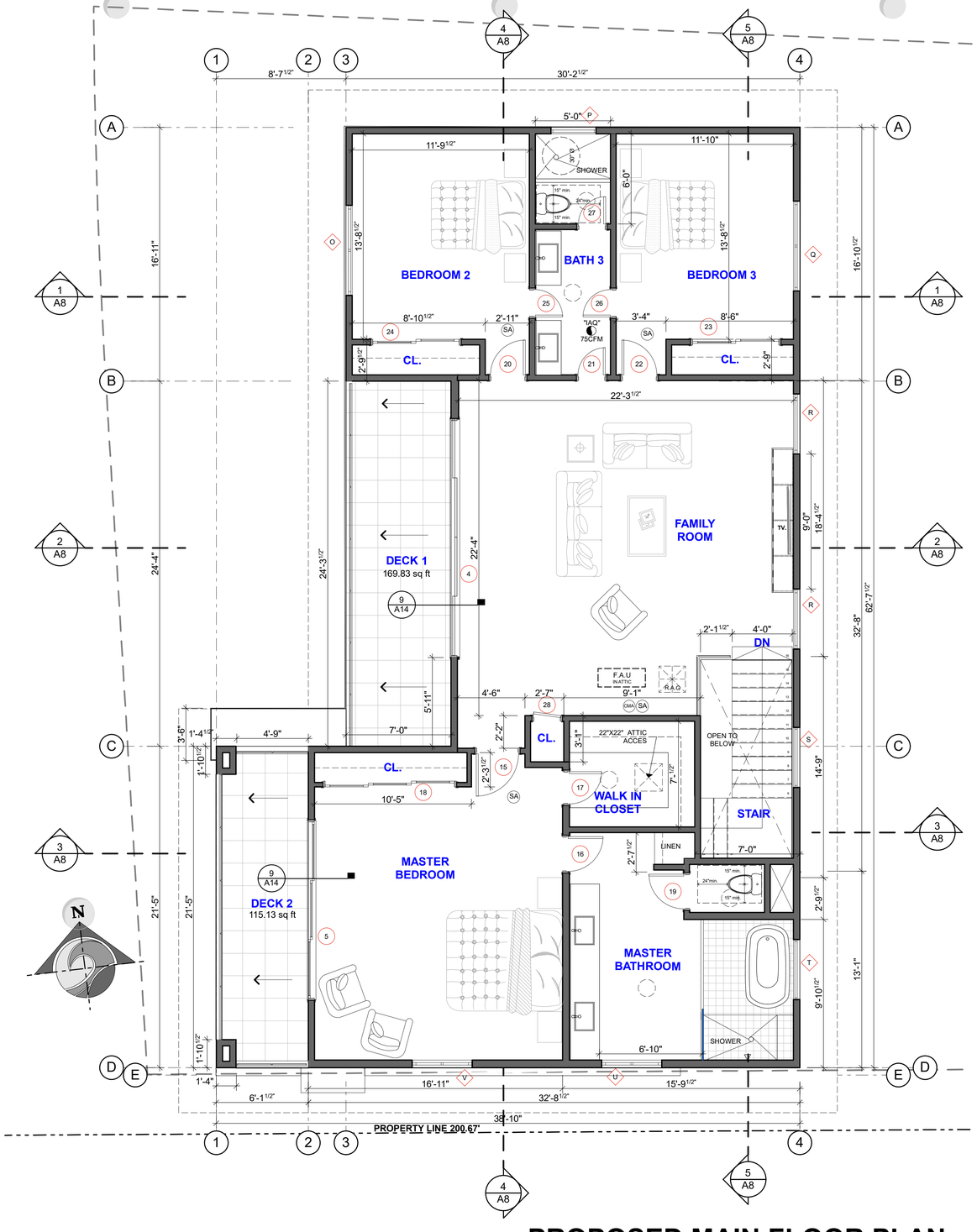
Revisions:

REMODEL, ADDITION AND ADU
HEALY'S RESIDENCE
1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez P.
DESIGN
2022 Azure Cove, Chula Vista, CA 91915
Phone: 619 735 1692

Proposed House Main
Floor plan

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **A2**
Total sheet count: -



PROPOSED MAIN FLOOR PLAN

1/4" = 1'-0"

GENERAL NOTES:

1. ALL PLUMBING FIXTURES AND FITTINGS ILL BE WATER CONSERVING AND WILL COMPLY WITH THE 2022 CBC
2. ALL WATER CLOSETS SHALL BE "ULTRA LOW FLUSH"
3. PROVIDE LAVATORY FAUCETS WITH A MAXIMUM FLOW OF 1.2 GALLONS PER MINUTE (GPM).
4. PROVIDE KITCHEN FAUCETS WITH A MAXIMUM FLOW OF 1.8 GALLONS PER MINUTE (GPM).
5. PROVIDE SHOWER HEADS WITH A MAXIMUM FLOW OF 2.0 GALLONS PER MINUTE (GPM).
6. PROVIDE WATER CLOSET A MAXIMUM FLOW OF 1.28 GALLONS FLUSH PER MINUTE (GPF).
7. PROVIDE MIXING VALVES AT SHOWER
8. MECHANICAL EXHAUST FANS WHICH EXHAUST DIRECTLY FROM BATHROOMS SHALL COMPLY WITY THE FOLLOWING:
   1. FANS SHALL BE **ENERGY STAR** COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING.
   2. UNLESS FUNCTIONING AS A COMPONENT OF WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDIDTAT WHICH SHALL BE READILY ACCESIBLE. HUMIDISTAT CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50 TO 80 PERCENT
9. NO CPVC STATE HEALTH & SAFETY CODE 10d @ 12" O.C. F.N.
10. MINIMUM CLEARANCES OF 15" FROM THE CENTER LINE OF WATER CLOSET & 24" IN FRONT OF WATER CLOSETS.
11. PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE (CPC).
12. BATHROOMS REQUIRE EXHAUST FANS (MINIMUM 50 CFM) CFM AND NOISE RATING ("SONE") (GENERALLY 3 SONE MAX- AS USED INTERMITTENTLY). ALL INSTALLED EXHAUST FANS MUST BE SPECIFIED AT A NOISE RATING OF A MXIMUM 1 "SONE" FOR THE CONTINIOUS USE OR MAXIMUM 3 "SONE" FOR THE INTERMITTENT USE.
13. ANY INSTALLED GAS FIREPLACE SHALL BE DIRECT-VENT SEALED-COMBUSTION TYPE. ANY INSTALLED WOODSTOVE OR PELLET STOVE SHALL COMPLY WITH U.S. EPA PHASE II EMISSION LIMITS WHERE APPLICABLE. WOODSTOVES, PELLET STOVES AND FIREPLACES SHALL ALSO COMPLY WITH APPLICABLE LOCAL ORDINANCES.
14. "STATE HEALTH $ SAFETY CODE BANS THE USE OF CHLORINATED POLYVINYL CHLORIDE (CPVC) FOR INTERIOR WATER-SUPPLY PIPING.
15. TUB/SHOWERS WALLS: COVER WALLS AND CEILINGS IN TUB & SHOWER COMPARTMENTS W/ 15# FELT. MATERIALS USED ON SUCH WALLS SHALL BE OF A TYPE NOT ADVERSELY AFFECTED BY MOISTURE.
16. ALL ABS AND PVC PIPING AND FITTINGS SHALL BE ENCLOSED WITHIN WALLS AND FLOORS COVERED WITH "TYPE X GYPSUM BOARD" OR SIMILAR ASSAMBLIES THAT PROVIDE THE SAME LEVEL OF FIRE PROTECTION. PROTECTION OF MEMBRANE PENETRATIONS IS NOT REQUIRED.
17. ALL EXTERIOR AND INTERIOR WALLS ARE 2x4 @ 16" O.C. U.N.O. PER PLAN
18. PERMANENT VACUUM BREAKERS SHALL BE INCLUDED WITH ALL NEW HOSE BIBBS".
19. SMOKE ALARMS SHALL BE PROVIDED EVERY EXISTING AND NEW BEDROOM.(HARD WIRED W/ BATTERY BACK-UP) " SEE ELECTRICAL PLANS WITH ALL RELATED NOTES"
20. CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN DWELLING UNITS AND IN SLEPPING UNITS WICH FUEL-BURNING APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGES. "SEE ELECTRICAL PLANS WITH ALL RELATED NOTES"
21. EGRESS WINDOWS SHALL HAVE A MAX. OF 44"
22. OUTDOOR SHOWER DRAINS AND SINKS ARE NOT PERMITED TO CONNECT TO THE PUBLIC SEWER SYSTEM UNLESS EQUIPED WITH AN APPROVED COVER. HOT AND COLD WATER CONNECTIONS ALLOWED.
22. ALL LUMINAIRES MOUNTED TO HE BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL BE HIGH EFFICACY BOARD" OR SIMILAR ASSAMBLIES THAT PROVIDE THE SAME LUMINAIRES OR MUST BE CONTROLLED BY A MOTION SENSOR AND CONTROLLED BY ONE OF THESE: PHOTOCONTROL OR ASTRONOMICAL TIME CLOCK OR ENERGY MANAGMENT CONTROL SYSTEM (EMCS)
23. SHOWER COMPARTMENTS AND BATHTUBS WITH INSTALLED SHOWER HEADS SHALL BE FISINHED WITH A NON ABSORBENT SURFACE THAT EXTENDS TO A HEIGH NOT LESS THAN 6 FEET ABOVE THE FLOOR.
24. SMOKE ALARMS AND CARBON MONOXIDE ALARMS SHALL BE INSTALLED BATTERY-POWERED ALARMS ACCEPTABLE - IN EXIST CONSTRUCCTION IN LOCATIONS SPECIFIED F.1 AND F.2 (CRC R314.2.2 CRC R135.2.2)

Floor Plan Legend

- EXISTING WALLS TO REMAIN.
- NEW 2X stud wall @16" O.C. w/ plywood sheathing per structural. Finish interior with 5/8" drywall. Exterior w/ stucco finish. Use greenboard in restrooms. use cement, or glass mat gypsum.
- RETURN AIR GRILL
- (SA) Smoke Detector
- (CMA) CARBON MONIXIDE ALARM REQUIRED PER SECTION R315.2

Revisions:

REMODEL, ADDITION AND ADU

HEALY'S RESIDENCE

1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez P. DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 619.738.1492

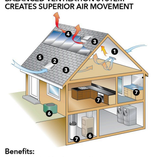
Proposed House Upper level Floor plan

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **A3**
Total sheet count: -

Total Vents: 32

VENT PLACEMENT RECOMMENDATIONS	
High / Exhaust Vents Needed: (Within 3' of Ridge Assembly)	**16**
Low / Intake Vents: (Within Lower 1/3 of Attic)	**16**

INSTALLING A CODE-REQUIRED BALANCED VENTILATION SYSTEM CREATES SUPERIOR AIR MOVEMENT



Benefits:

1. Extends the life of your roof by lowering temps in warmer months and removing moisture in cooler months.
2. Enhances curb appeal with shingle-over installation.
3. Secures maximum efficiency through a balanced design. (50% High-Exhaust and 50% Low-Intake)
4. Patented design installs below solar panels.
5. Shingle manufacturers warranties require compliance with attic ventilation codes such as the IRC & IBC.
6. Promotes a healthy home, reduces moisture and trapped gases to improve indoor air quality.
7. Conserves energy by naturally introducting ambient air into the attic while exhausting stagnet air.

VENTILATION SOLUTIONS FOR ALL ROOFS AND CLIMATIC CONDITIONS

TRADITIONAL
26 Gauge G90 Galvanized Steel; 4" Flange with 1/4" noncombustible corrosion resistant wire mesh.

FIRE & ICE
26 Gauge G90 Galvanized Steel; 4" Flange with 1/8" noncombustible corrosion-resistant wire mesh AND patented stainless steel fine/flexible wire filament.

WEATHER MASTER
26 Gauge G90 Galvanized Steel; 2" Flange with 1/4" noncombustible corrosion-resistant wire mesh AND patented stainless steel fine/flexible wire filament.

*Brands and Trademarks may vary by region.

QUESTIONS?

www.ohagin.com
210 Classic Court, Suite 100
Rohnert Park, CA 94928
Toll Free 877-324-0444 • Fax 707-588-9187

Address:
1161 SUNSET CLIFFS BLVD. RESIDENCE

TOTAL SQUARE FEET OF ATTIC SPACE TO BE VENTILATED

Total Square Feet of Attic Space to be Ventilated: 2,076.71

Code Required Method: 1/150 (EXCEPTION)

Calculation:
2,076.71 ÷ 150 = 13.84 sq. ft. of Code Required Ventilation

CONVERT SQUARE FEET OF CODE-REQUIRED VENTILATION TO SQUARE INCHES

Square Feet of Code Required Ventilation: 13.84

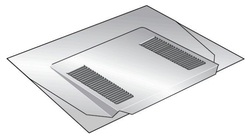
Calculation:
13.84 x 144 = 1,992.96 sq. in. of Code Required Ventilation

Square Inches Provided: (32 x 64.80) = 2,073.60 sq. in.

O'HAGIN — THE TECHNOLOGICAL LEADER IN ATTIC VENTILATION
COMPOSITION SHINGLE
LOW PROFILE (TAPERED)

NET FREE VENTILATION AREA	
1/8" Noncombustible, Corrosion-Resistant Wire Mesh	64.80 sq. in.

Figures based on independent evaluation reports.



VENTILATION SOLUTIONS FOR ALL ROOFS AND CLIMATIC CONDITIONS

TRADITIONAL
26 Gauge G90 Galvanized Steel; 2" Flange subflashing with 1/4" noncombustible corrosion resistant wire mesh.

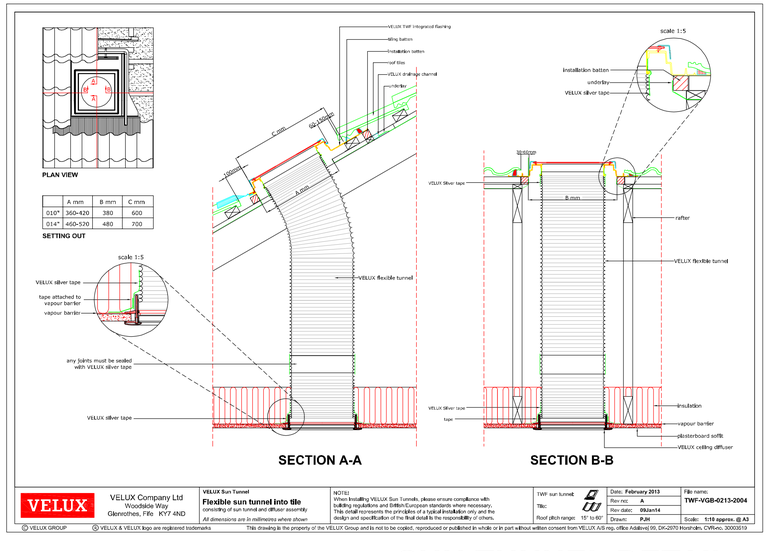
FIRE & ICE
26 Gauge G90 Galvanized Steel; 2" Flange subflashing with 1/8" noncombustible corrosion-resistant wire mesh AND patented stainless steel fine/flexible wire filament.

WEATHER MASTER
26 Gauge G90 Galvanized Steel; 2" Flange subflashing with 1/4" noncombustible corrosion-resistant wire mesh AND patented stainless steel fine/flexible wire filament.

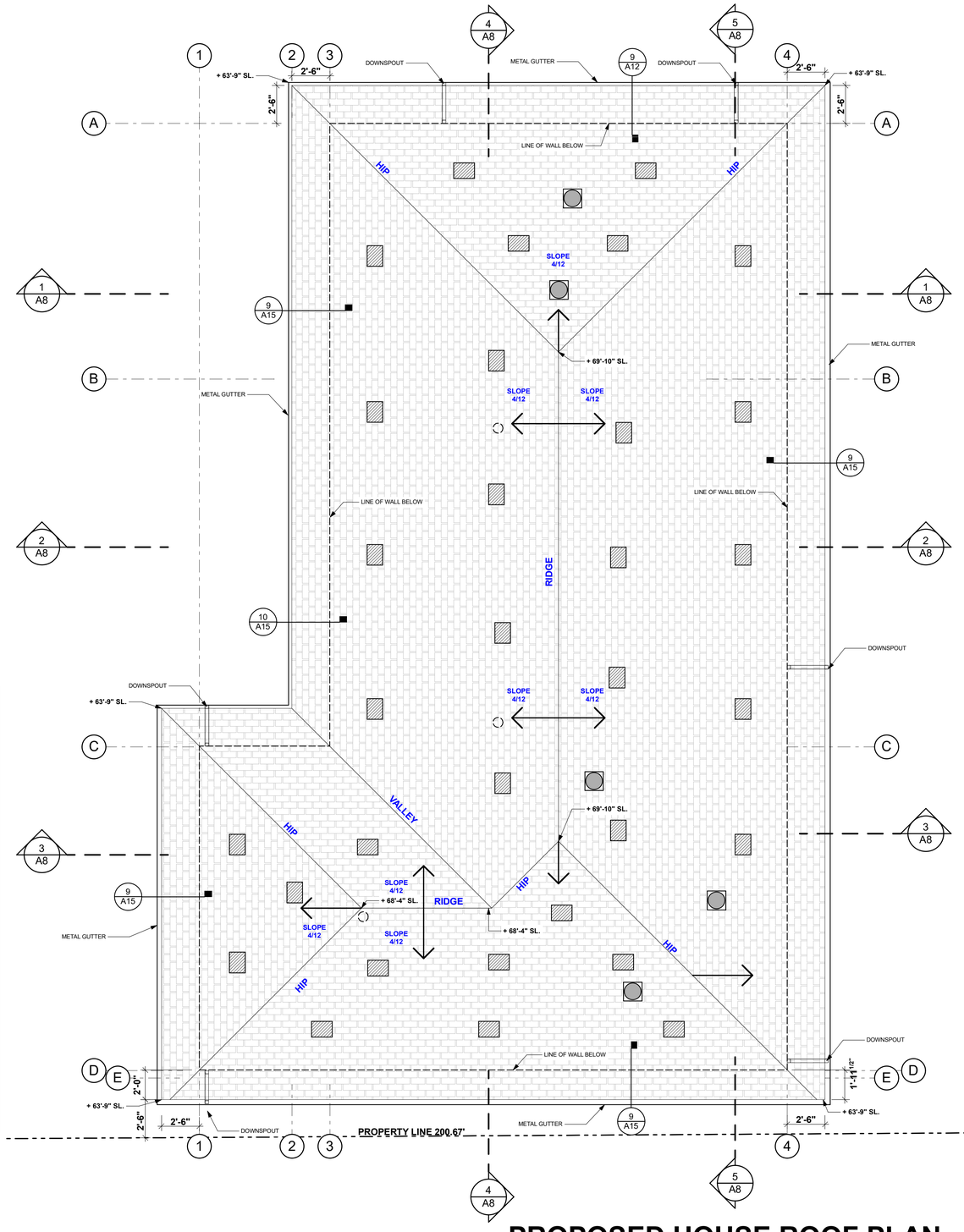
*Brands and Trademarks may vary by region.

DO I LIVE IN A HIGH FIRE ZONE?

WILDFIRE RISK TO COMMUNITIES



SUN TUNNEL DETAIL
1:1.54



PROPOSED HOUSE ROOF PLAN
1/4" = 1'-0"

ROOF PLAN GENERAL NOTES

1. NEW " ROOFING ASSEMBLY. CLASS "A" CERTAINEED ASPHALT ROOF SHINGLE ICC ESR 3537 ROOFING MATERIAL TO BE INSTALLED OVER TWO LAYERS OF 40# BUILDING PAPER.
2. REFER TO STRUCTURAL DRAWINGS FOR SHEATHING AND NAILING REQUIREMENTS
3. THE HIGHEST POINT OF THE ROOF, EQUIPMENT, OR ANY VENT PIPE, ANTENNA, OR OTHER PROJECTION SHALL NOT EXCEED 30' ABOVE GRADE.
4. ALL BALCONIES AND DECKS EXPOSED TO THE WEATHER AND SEALED UNDERNEATH SHALL BE SLOPED A MINIMUM OF 2% FOR DRAINAGE. WATERPROOFING TO BE ACHIEVED WITH **WESTCOAT ALX ICC ESR-2201 MUST BE WATER PROOFING & CLASS "A"**
5. ATTIC VENTILATION OPENINGS SHALL BE COVERED WITH CORROSION RESISTANT METAL MESH WITH OPENINGS OF 1/4" DIMENSION.
6. ALL EAVES TO HAVE VENT BLOCKING THROUGHOUT TO PROVIDE A MINIMUM VENT AREA OF 1:150 OF ATTIC AREA.
7. PROVIDE A MINIMUM OF 1" AIR SPACE BETWEEN THE INSULATION AND THE ROOF SHEATHING.
8. ALL ROOF JACKS, PIPES, PANS, & CHIMNEY COVERS TO HAVE TWO COATS OF PRIMER AND ONE COAT OF INDUSTRIAL GRADE ENAMEL.
9. ALL HORIZONTAL STORM DRAIN PIPING SHALL HAVE A SLOPE OF 1/4" PER FT.

Roof Plan Legend

Roof vent, O'Hagin attic vent. 1.8" Noncombustible, corrosion resistant Wire Mesh. 26 gauge G90

ROOF VENTILATION
1/150

VELUX
SUN TUNNEL SKYLIGHT
ICC-ES : ESR-4108

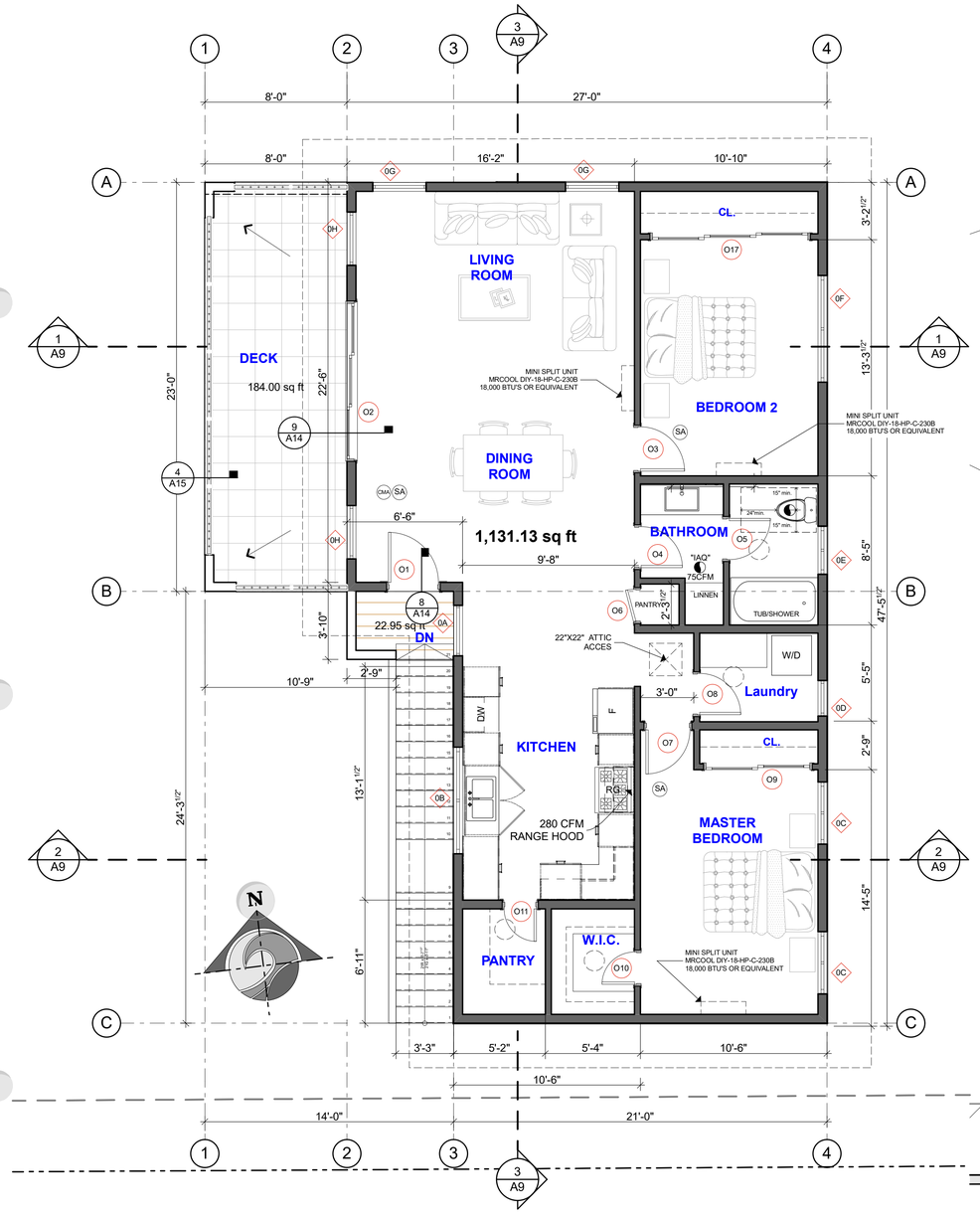
Revisions:

REMODEL, ADDITION AND ADU
HEALY'S RESIDENCE
1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez-P. DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 619.735.1492

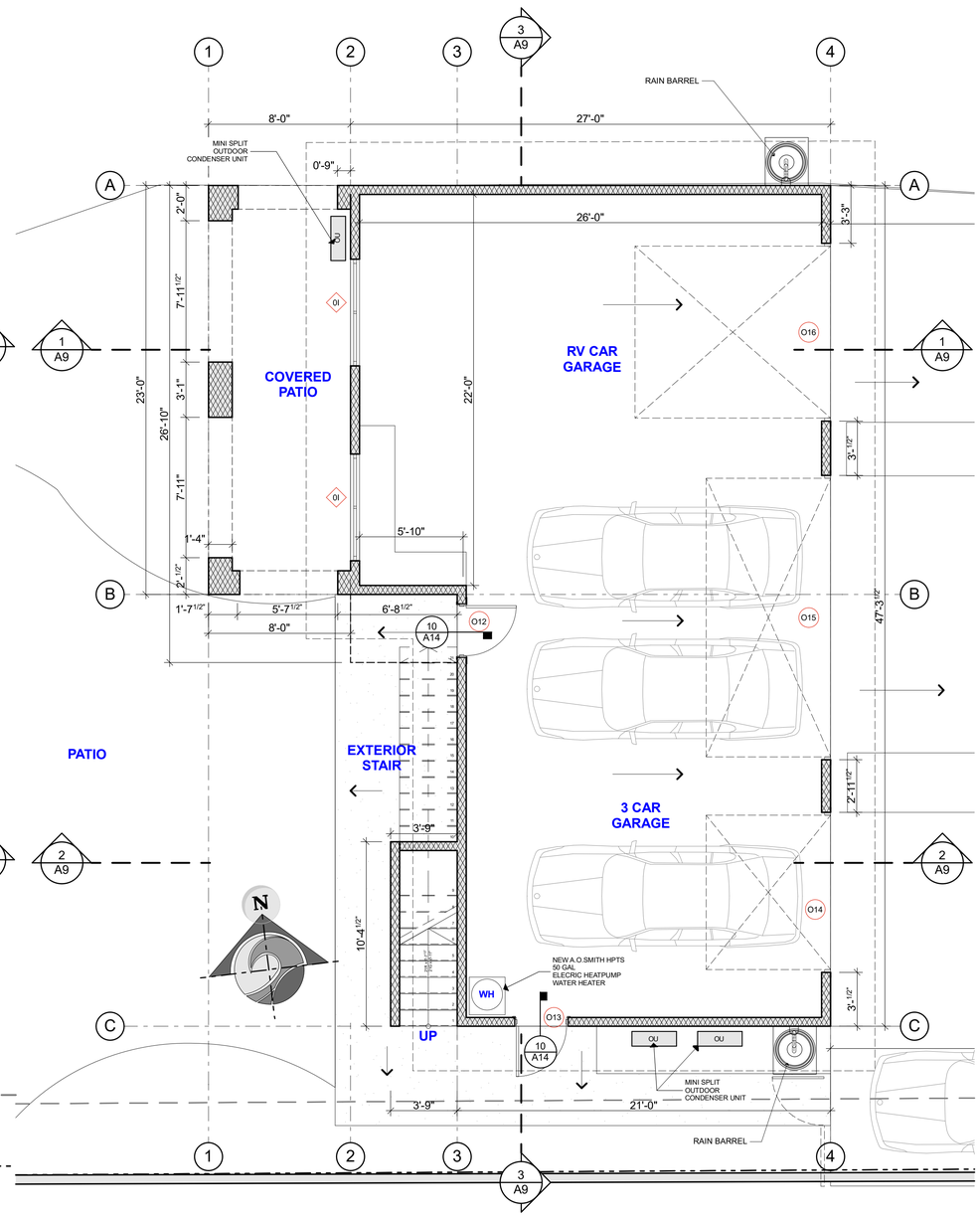
Proposed House Roof Plan

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **A4**
Total sheet count: -



PROPOSED ADU FLOOR PLAN

1/4" = 1'-0"



PROPOSED GARAGE FLOOR

1/4" = 1'-0"

GENERAL NOTES:

1. ALL PLUMBING FIXTURES AND FITTINGS ILL BE WATER CONSERVING AND WILL COMPLY WITH THE 2022 CBC
2. ALL WATER CLOSETS SHALL BE "ULTRA LOW FLUSH"
3. PROVIDE LAVATORY FAUCETS WITH A MAXIMUM FLOW OF 1.2 GALLONS PER MINUTE (GPM).
4. PROVIDE KITCHEN FAUCETS WITH A MAXIMUM FLOW OF 1.8 GALLONS PER MINUTE (GPM).
5. PROVIDE SHOWER HEADS WITH A MAXIMUM FLOW OF 2.0 GALLONS PER MINUTE (GPM).
6. PROVIDE WATER CLOSET A MAXIMUM FLOW OF 1.28 GALLONS FLUSH PER MINUTE (GPF).
7. PROVIDE MIXING VALVES AT SHOWER
8. MECHANICAL EXHAUST FANS WHICH EXHAUST DIRECTLY FROM BATHROOMS SHALL COMPLY WITY THE FOLLOWING:
   1. FANS SHALL BE **ENERGY STAR** COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING.
   2. UNLESS FUNCTIONING AS A COMPONENT OF WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDIDTAT WHICH SHALL BE READILY ACCESIBLE. HUMIDISTAT CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50 TO 80 PERCENT
9. NO CPVC STATE HEALTH & SAFETY CODE 10d @ 12" O.C. F.N.
10. MINIMUM CLEARANCES OF 15" FROM THE CENTER LINE OF WATER CLOSET & 24" IN FRONT OF WATER CLOSETS.
11. PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE (CPC).
12. BATHROOMS REQUIRE EXHAUST FANS (MINIMUM 50 CFM) CFM AND NOISE RATING ("SONE") (GENERALLY 3 SONE MAX- AS USED INTERMITTENTLY). ALL INSTALLED EXHAUST FANS MUST BE SPECIFIED AT A NOISE RATING OF A MAXIMUM 1 "SONE" FOR THE CONTINIOUS USE OR MAXIMUM 3 "SONE" FOR THE INTERMITTENT USE.
13. ANY INSTALLED GAS FIREPLACE SHALL BE DIRECT-VENT SEALED-COMBUSTION TYPE. ANY INSTALLED WOODSTOVE OR PELLET STOVE SHALL COMPLY WITH U.S. EPA PHASE II EMISSION LIMITS WHERE APPLICABLE. WOODSTOVES, PELLET STOVES AND FIREPLACES SHALL ALSO COMPLY WITH APPLICABLE LOCAL ORDINANCES.
14. "STATE HEALTH $ SAFETY CODE BANS THE USE OF CHLORINATED POLYVINYL CHLORIDE (CPVC) FOR INTERIOR WATER-SUPPLY PIPING.
15. TUB/SHOWERS WALLS: COVER WALLS AND CEILINGS IN TUB & SHOWER COMPARTMENTS W/ 15# FELT. MATERIALS USED ON SUCH WALLS SHALL BE OF A TYPE NOT ADVERSELY AFFECTED BY MOISTURE.
16. ALL ABS AND PVC PIPING AND FITTINGS SHALL BE ENCLOSED WITHIN WALLS AND FLOORS COVERED WITH "TYPE X GYPSUM BOARD" OR SIMILAR ASSAMBLIES THAT PROVIDE THE SAME LEVEL OF FIRE PROTECTION. PROTECTION OF MEMBRANE PENETRATIONS IS NOT REQUIRED.
17. ALL EXTERIOR AND INTERIOR WALLS ARE 2x4 @ 16" O.C. U.N.O. PER PLAN
18. PERMANENT VACUUM BREAKERS SHALL BE INCLUDED WITH ALL NEW HOSE BIBBS".
19. SMOKE ALARMS SHALL BE PROVIDED EVERY EXISTING AND NEW BEDROOM.(HARD WIRED W/ BATTERY BACK-UP) " SEE ELECTRICAL PLANS WITH ALL RELATED NOTES"
20. CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN DWELLING UNITS AND IN SLEPPING UNITS WICH FUEL-BURNING APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGES. "SEE ELECTRICAL PLANS WITH ALL RELATED NOTES"
21. EGRESS WINDOWS SHALL HAVE A MAX. OF 44"
22. OUTDOOR SHOWER DRAINS AND SINKS ARE NOT PERMITED TO CONNECT TO THE PUBLIC SEWER SYSTEM UNLESS EQUIPED WITH AN APPROVED COVER. HOT AND COLD WATER CONNECTIONS ALLOWED.
22. ALL LUMINAIRES MOUNTED TO HE BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL BE HIGH EFFICACY BOARD" OR SIMILAR ASSAMBLIES THAT PROVIDE THE SAME LUMINAIRES OR MUST BE CONTROLLED BY A MOTION SENSOR AND CONTROLLED BY ONE OF THESE: PHOTOCONTROL OR ASTRONOMICAL TIME CLOCK OR ENERGY MANAGMENT CONTROL SYSTEM (EMCS)
23. SHOWER COMPARTMENTS AND BATHTUBS WITH INSTALLED SHOWER HEADS SHALL BE FISINHED WITH A NON ABSORBENT SURFACE THAT EXTENDS TO A HEIGH NOT LESS THAN 6 FEET ABOVE THE FLOOR.
24. SMOKE ALARMS AND CARBON MONOXIDE ALARMS SHALL BE INSTALLED BATTERY-POWERED ALARMS ACCEPTABLE - IN EXIST CONSTRUCCTION IN LOCATIONS SPECIFIED F.1 AND F.2 (CRC R314.2.2 CRC R135.2.2)

Floor Plan Legend

- EXISTING WALLS TO REMAIN.
- NEW 2X stud wall @16" O.C. w/ plywood sheathing per structural. Finish interior with 5/8" drywall. Exterior w/ stucco finish. Use greenboard in restrooms. use cement, or glass mat gypsum.
- EXISTING WALLS to remian adding interior with 5/8" Type "x" drywall. Exterior w/ stucco finish. to be 1 hr fire rated.See Det.11/A7.2
- RETURN AIR GRILL (R.A.G.)
- (SA) Smoke Detector
- (CMA) CARBON MONIXIDE ALARM REQUIRED PER SECTION R315.2

Revisions:

REMODEL, ADDITION AND ADU
HEALY'S RESIDENCE
1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez-P. DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 619.735.1492

Proposed Garage/ADU Floor Plan

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **A5**
Total sheet count: -

AGING-IN-PLACE DESIGN AND FALL PREVENTION NOTES:

Application: Newly constructed dwellings /ADUs /JADUs subject to the requirem ents of CRC shall be designed and constructed in accordance with CRC Sections R327.1.1 through R 327.1.4 .

A. Reinforcement for grab bars (CR C R 327.1.1): At least one bathroom on the entry-level shall be provided with reinforcement installed in accordance with CRC R327.1.1. Where there is no bathroom on the entry-level, at least one bathroom on the second or third floor of the dwelling shall comply.

1. Reinforcement shall be solid lumber or other approved construction materials .

2. Reinforcement for grabbars shall not be less than 2 by 8 inch nominal lumber [1.5 inch by 7.25 inch actual dimension] or other approved cons truction material providing equal height and load capacity. Reinforcement shall be located between 32 inches and 39 1/4 inches above the finished floor flush with the wall framing.

3. Water closet reinforcement shall be installed on both side walls of the fixture, or one side wall and the back wall.

4 . Shower reinforcement shall be continuo us where wall framing is provided.

5. Bathtub and combination bathtub/shower reinforcements hall 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 inches above the bathtub rim.

B. Electrical receptacle outlet, switch and control heights (CR C R 327.1.2):
"Electrical receptacle outlets , switches and contro ls (including contro ls for heating, ventilation and air conditioning) intended to be used by occupants shall be located no more than 48 inches measured from the top of the outlet box and not less than 15 inches measured from the bottom of the outlet box above the finish floor.

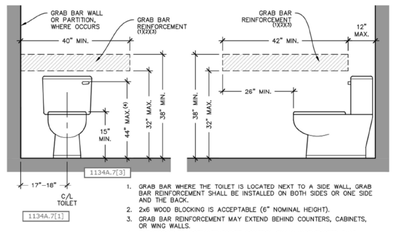
Exceptions :
1. Dedicated receptacle outlets ; floor receptacle outlets ; contro ls mounted on ceiling fans and ceiling lights ; and contro ls located on appliances .

2. Receptacle outlets required by the California Electrical Code on a wall space where the distance between the finished floor and a built-in feature above the finish floor, such as a window, is less than 15 inches ".

C. Doorbell buttons (CR C R 327.1.4):
"Doorbell buttons or controls shall not exceed 4 8 inches above exterior floor or landing, measured from the top of the doorbell button assembly. Where doorbell buttons integrated with other features are required to be installed above 48 inches measured from the exterior floor or landing, a standard doorbell button or control shall also be provided at a height not exceeding 48 inches above exterior floor or landing, measured from the top of the doorbell button or control".

d) Water closet reinforcement shall be installed on both side walls of the fixture, or one side wall and the back wall.

Toilets
within Covered Dwelling Units

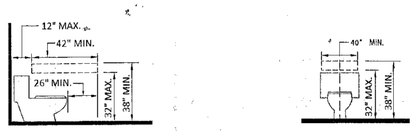


1. GRAB BAR WHERE THE TOILET IS LOCATED NEXT TO A SIDE WALL, GRAB BAR REINFORCEMENT SHALL BE INSTALLED ON BOTH SIDES OR ONE SIDE AND THE BACK.
2. 2x6 WOOD BLOCKING IS ACCEPTABLE (6" NOMINAL HEIGHT).
3. GRAB BAR REINFORCEMENT MAY EXTEND BEHIND COUNTERS, CABINETS, OR WING WALLS.
4. THE FORCE TO ACTIVATE TOILET CONTROL SHALL NOT EXCEED 5 LB.

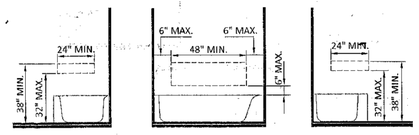
1134A.7[4]

TOILET WITH SIDE WALL
WITHIN COVERED DWELLING

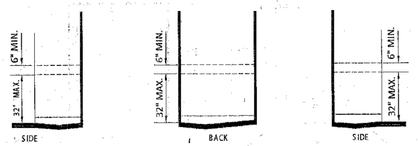
1134A.7[2]



(a) GRAB BAR REINFORCEMENT FOR ADAPTABLE WATER CLOSETS



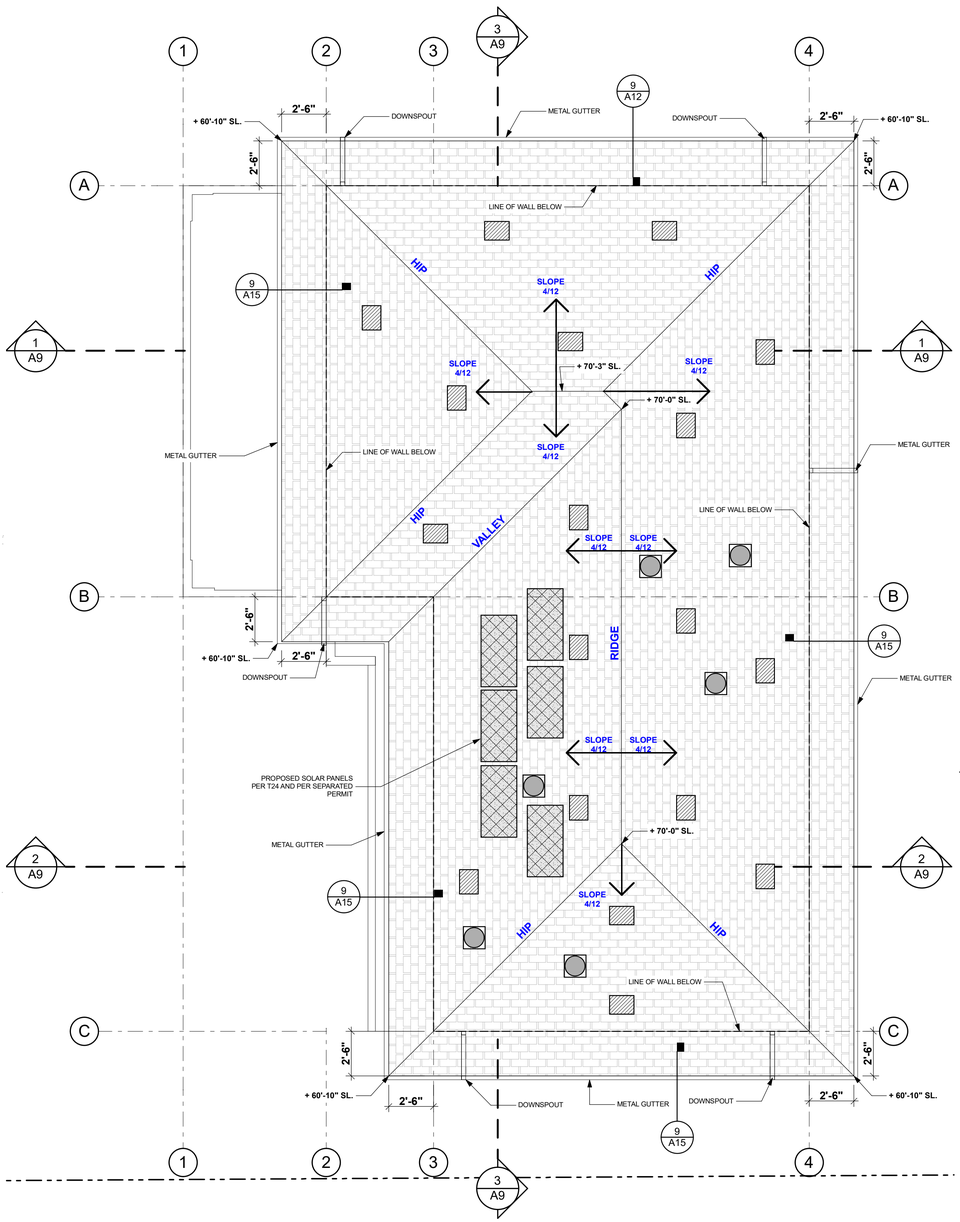
(b) GRAB BAR REINFORCEMENT FOR ADAPTABLE BATHTUBS



(c) GRAB BAR REINFORCEMENT FOR ADAPTABLE SHOWERS

AREAS OUTLINED IN DASHED LINES REPRESENT LOCATION FOR FUTURE INSTALLATION OF GRAB BARS

FIGURE 11A-9G
REINFORCEMENT FOR GRAB BARS



PROPOSED ADU ROOF PLAN
1/4" = 1'-0"

ROOF PLAN GENERAL NOTES

1. NEW " ROOFING ASSEMBLY. CLASS "A" CERTAINEED ASPHALT ROOF SHINGLE ICC ESR 3537 ROOFING MATERIAL TO BE INSTALLED OVER TWO LAYERS OF 40# BUILDING PAPER.
2. REFER TO STRUCTURAL DRAWINGS FOR SHEATHING AND NAILING REQUIREMENTS
3. THE HIGHEST POINT OF THE ROOF, EQUIPMENT, OR ANY VENT PIPE, ANTENNA, OR OTHER PROJECTION SHALL NOT EXCEED 30' ABOVE GRADE.
4. ALL BALCONIES AND DECKS EXPOSED TO THE WEATHER AND SEALED UNDERNEATH SHALL BE SLOPED A MINIMUM OF 2% FOR DRAINAGE. WATERPROOFING TO BE ACHIEVED WITH **WESTCOAT ALX ICC ESR-2201 MUST BE WATER PROOFING & CLASS "A"**
5. ATTIC VENTILATION OPENINGS SHALL BE COVERED WITH CORROSION RESISTANT METAL MESH WITH OPENINGS OF 1/4" DIMENSION.
6. ALL EAVES TO HAVE VENT BLOCKING THROUGHOUT TO PROVIDE A MINIMUM VENT AREA OF 1:150 OF ATTIC AREA.
7. PROVIDE A MINIMUM OF 1" AIR SPACE BETWEEN THE INSULATION AND THE ROOF SHEATHING.
8. ALL ROOF JACKS, PIPES, PANS, & CHIMNEY COVERS TO HAVE TWO COATS OF PRIMER AND ONE COAT OF INDUSTRIAL GRADE ENAMEL.
9. ALL HORIZONTAL STORM DRAIN PIPING SHALL HAVE A SLOPE OF 1/4" PER FT.

Roof Plan Legend

Roof vent, O'Hagin attic vent. 1.8" Noncombustible, corrosion resistant Wire Mesh. 26 gauge G90

ROOF VENTILATION
1/150

VELUX
SUN TUNNEL SKYLIGHT
ICC-ES : ESR-4108

Total Vents: 18

VENT PLACEMENT RECOMMENDATIONS	
High / Exhaust Vents Needed: (Within 3' of Ridge Assembly)	9
Low / Intake Vents: (Within Lower 1/3 of Attic)	9

INSTALLING A CODE-REQUIRED BALANCED VENTILATION SYSTEM CREATES SUPERIOR AIR MOVEMENT

Benefits:
1. Extends the life of your roof by lowering temps in warmer months and removing moisture in cooler months.
2. Enhances curb appeal with shingle-over installation.
3. Secures maximum efficiency through a balanced design. (50% High/Exhaust and 50% Low/Intake)
4. Patented design installs below solar panels.
5. Shingle manufacturers warranties require compliance with attic ventilation codes such as the IRC & IBC.
6. Promotes a healthy home, reduces moisture and trapped gases to improve indoor air quality.
7. Conserves energy by naturally introducting ambient air into the attic while exhausting stagnet air.

VENTILATION SOLUTIONS FOR ALL ROOFS AND CLIMATIC CONDITIONS

TRADITIONAL	FIRE ✕ ICE	WEATHER ✕ MASTER
26 Gauge G90 Galvanized Steel; 2" Flange subflashing with 1/4" noncombustible corrosion-resistant wire mesh.	26 Gauge G90 Galvanized Steel; 2" Flange subflashing with 1/8" noncombustible corrosion-resistant wire mesh AND patented stainless steel fine/flexible wire filament.	26 Gauge G90 Galvanized Steel; 2" Flange subflashing with 1/4" noncombustible corrosion-resistant wire mesh AND patented stainless steel fine/flexible wire filament.

*Brands and Trademarks may vary by region.

www.ohagin.com
210 Classic Court, Suite 100
Rohnert Park, CA 94928
Toll Free 877-324-0444 • Fax 707-588-9187

Address:
1161 SUNSET CLIFFS BLVD. ADU

TOTAL SQUARE FEET OF ATTIC SPACE TO BE VENTILATED

Total Square Feet of Attic Space to be Ventilated: 1,131.12

Code Required Method: 1/150 (EXCEPTION)

Calculation:
1,131.12 ÷ 150 = 7.54 sq. ft. of Code Required Ventilation

CONVERT SQUARE FEET OF CODE-REQUIRED VENTILATION TO SQUARE INCHES

Square Feet of Code Required Ventilation: 7.54

Calculation:
7.54 x 144 = 1,085.76 sq. in. of Code Required Ventilation

Square Inches Provided: (18 x 64.80) = 1,166.40 sq. in.

O'HAGIN — THE TECHNOLOGICAL LEADER IN ATTIC VENTILATION
COMPOSITION SHINGLE
LOW PROFILE (TAPERED)

NET FREE VENTILATION AREA	
1/8" Noncombustible, Corrosion-Resistant Wire Mesh	64.80 sq. in.

Figures based on independent evaluation reports.

VENTILATION SOLUTIONS FOR ALL ROOFS AND CLIMATIC CONDITIONS

TRADITIONAL	FIRE ✕ ICE	WEATHER ✕ MASTER
26 Gauge G90 Galvanized Steel; 2" Flange subflashing with 1/4" noncombustible corrosion-resistant wire mesh.	26 Gauge G90 Galvanized Steel; 2" Flange subflashing with 1/8" noncombustible corrosion-resistant wire mesh AND patented stainless steel fine/flexible wire filament.	26 Gauge G90 Galvanized Steel; 2" Flange subflashing with 1/4" noncombustible corrosion-resistant wire mesh AND patented stainless steel fine/flexible wire filament.

*Brands and Trademarks may vary by region.

WILDFIRE RISK TO COMMUNITIES

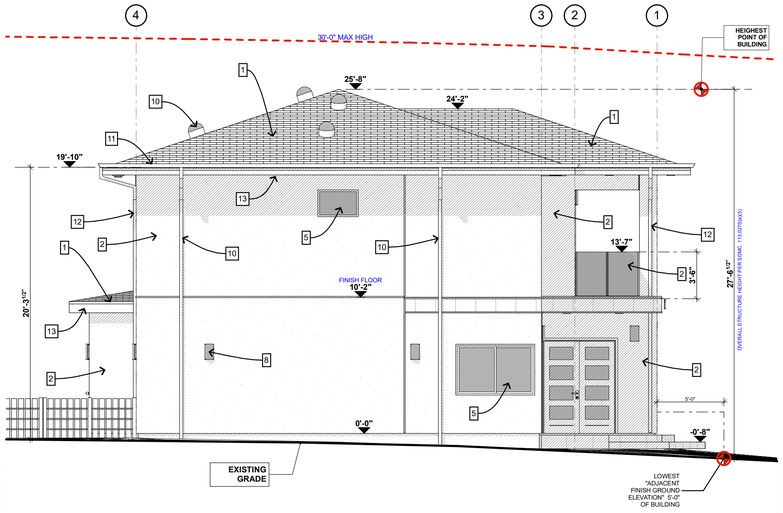
Revisions:

REMODEL, ADDITION AND ADU
HEALY'S RESIDENCE
1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez-P. DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 619.735.1492

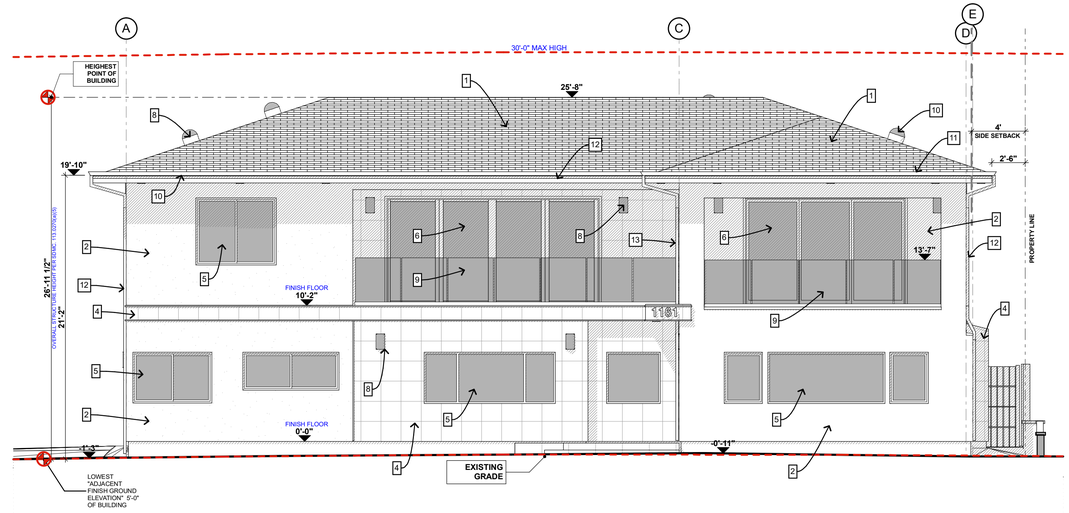
Proposed Garage/ADU
Roof plan

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **A6**
Total sheet count:



NORTH ELEVATION

3/16" = 1'-0"

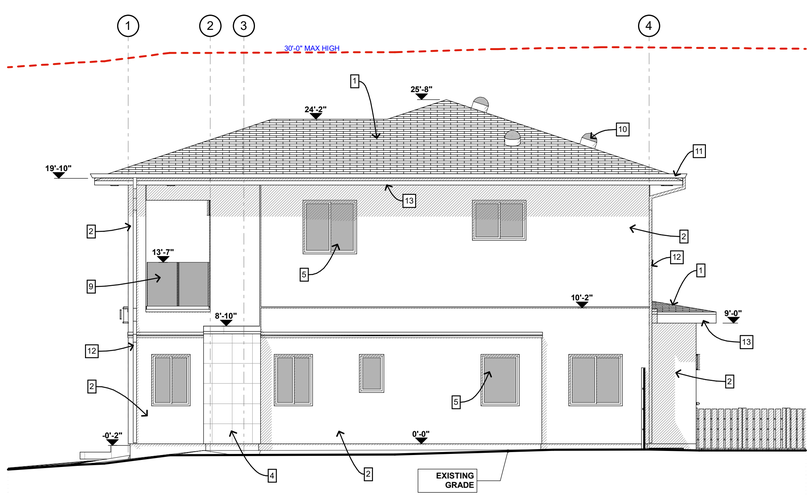


WEST ELEVATION

3/16" = 1'-0"

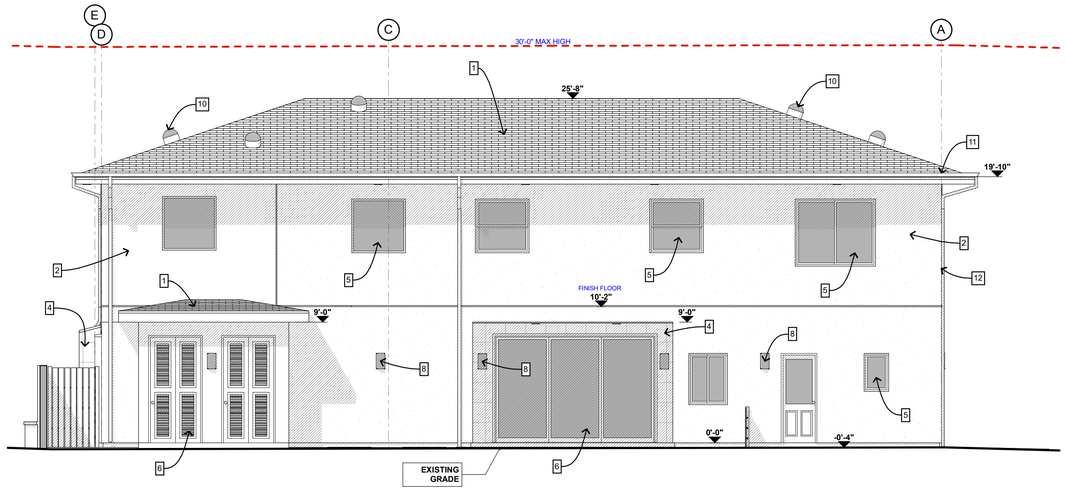
ELEVATION & SECTIONS KEY NOTES

1. ROOFING ASSEMBLY. CLASS "A" CERTAINEED ASPHALT ROOF SHINGLE ICC ESR 3537
   ROOFING MATERIAL TO BE INSTALLED OVER TWO LAYERS OF 40# BUILDING PAPER.
2. NEW STUCCO FINISH:
   7/8" EXTERIOR PLASTER (SCRATCH, BROWN & FINISH COAT) OVER METAL LATH, OVER PLYWOOD SHEATING PER STRUCTURAL.
3. NEW STUCCO FINSH ACCENT COLOR
   7/8" EXTERIOR PLASTER (SCRATCH, BROWN & FINISH COAT) OVER METAL LATH, OVER PLYWOOD SHEATING PER STRUCTURAL.
4. NEW STONE TILE CLADDING
5. WINDOW PER SCHEDULE
6. DOOR PER SCHEDULE
7. STUCCO COLUMN PER DETAIL
8. HIGH EFFICACY EXTERIOR LIGHT
9. CRL LAURANCE GLASS GUARDRAIL
9A. WOOD GUARDRAL PER DETAIL
10. SUN TUNNEL TUBE SKYLIGHT
11. COPPER GUTTER
12. COPPER DOWNSPOUT
13. 2X PAINTED WOOD FASCIA



SOUTH ELEVATION

3/16" = 1'-0"



EAST ELEVATION

3/16" = 1'-0"

Revisions:

△
△
△
△
△

REMODEL, ADDITION AND ADU

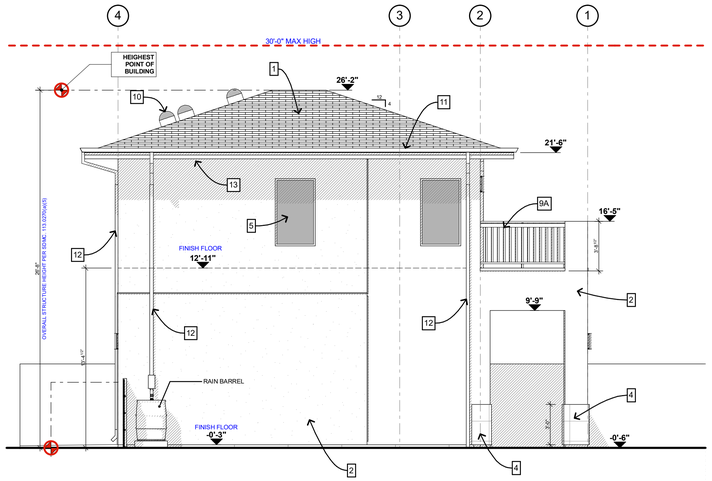
HEALY'S RESIDENCE

1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando González P.
DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 619.733.1492

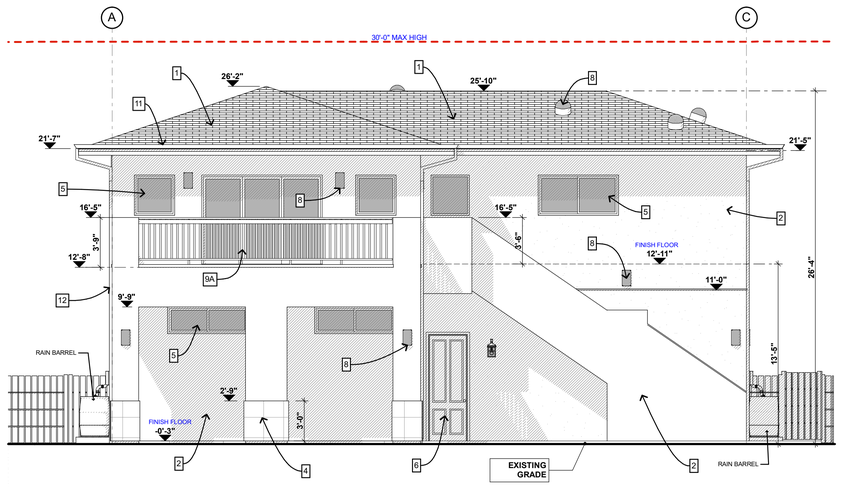
House Elevations

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **A7**
Total sheet count: -



GARAGE / ADU NORTH ELEVATION

3/16" = 1'-0"

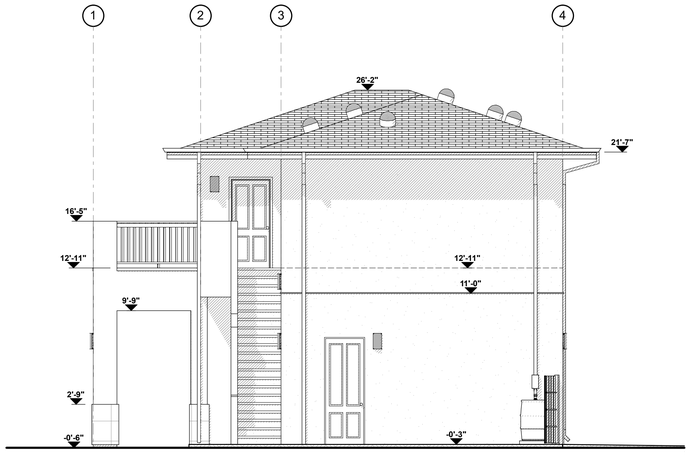


GARAGE / ADU WEST ELEVATION

3/16" = 1'-0"

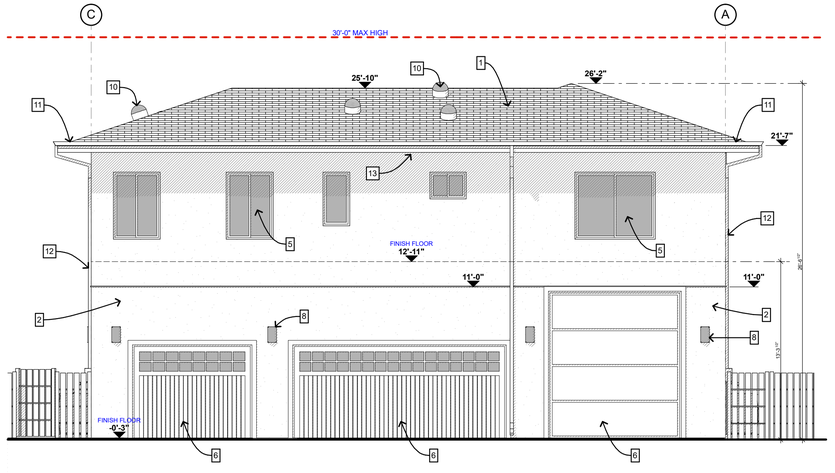
ELEVATION & SECTIONS KEY NOTES

1. ROOFING ASSEMBLY. CLASS "A" CERTAINEED ASPHALT ROOF SHINGLE ICC ESR 3537
   ROOFING MATERIAL TO BE INSTALLED OVER TWO LAYERS OF 40# BUILDING PAPER.
2. NEW STUCCO FINISH:
   7/8" EXTERIOR PLASTER (SCRATCH, BROWN & FINISH COAT) OVER METAL LATH, OVER PLYWOOD SHEATING PER STRUCTURAL.
3. NEW STUCCO FINSH ACCENT COLOR
   7/8" EXTERIOR PLASTER (SCRATCH, BROWN & FINISH COAT) OVER METAL LATH, OVER PLYWOOD SHEATING PER STRUCTURAL.
4. NEW STONE TILE CLADDING
5. WINDOW PER SCHEDULE
6. DOOR PER SCHEDULE
7. STUCCO COLUMN PER DETAIL
8. HIGH EFFICACY EXTERIOR LIGHT
9. CRL LAURANCE GLASS GUARDRAIL
9A. WOOD GUARDRAL PER DETAIL
10. SUN TUNNEL TUBE SKYLIGHT
11. COPPER GUTTER
12. COPPER DOWNSPOUT
13. 2X PAINTED WOOD FASCIA



GARAGE / ADU SOUTH ELEVATION

3/16" = 1'-0"



GARAGE /ADU EAST ELEVATION

3/16" = 1'-0"

Revisions:

REMODEL, ADDITION AND ADU

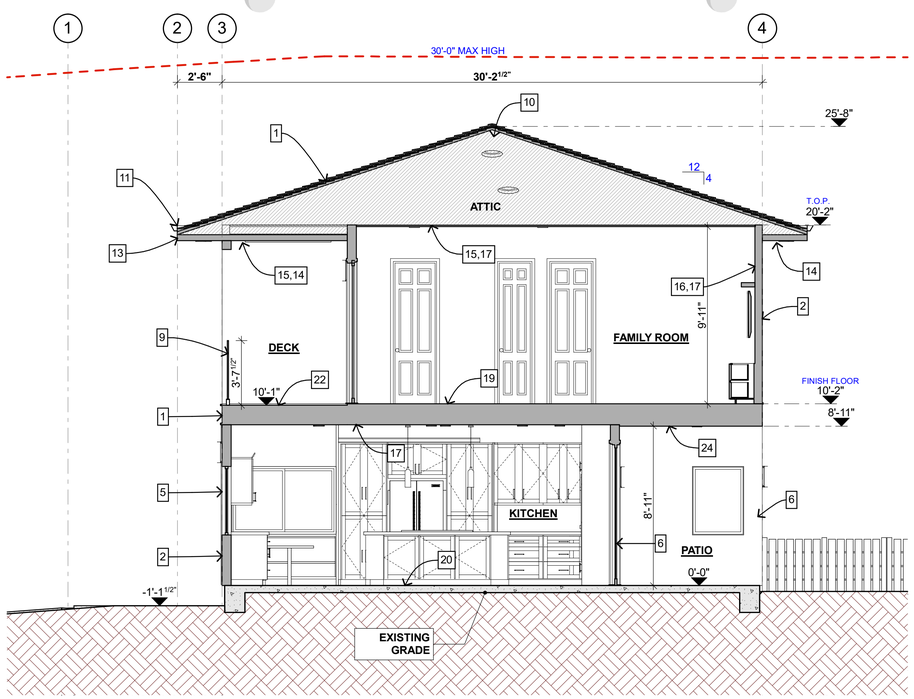
HEALY'S RESIDENCE

1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez P. DESIGN
2022 Azure Cove, Chula Vista, CA 91915
Phone: 619.733.1492

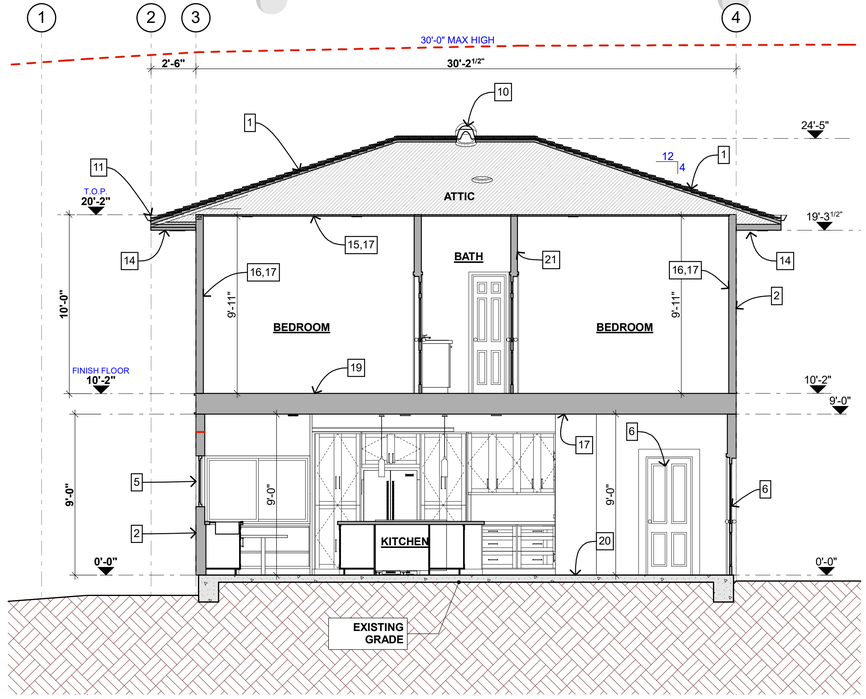
Garage / ADU Elevations

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **A8**
Total sheet count: -



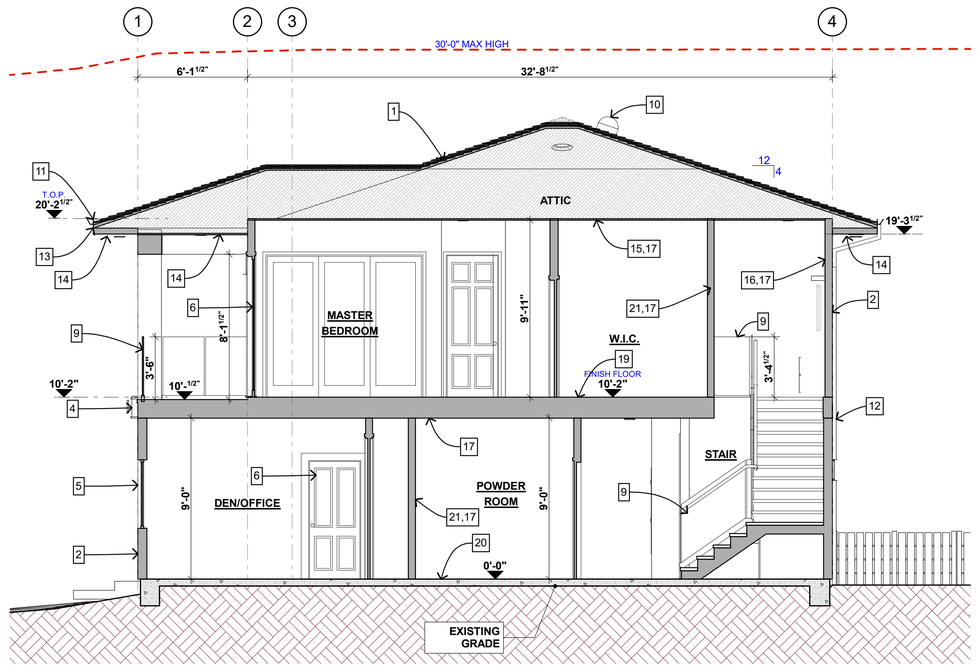
HOUSE SECTION 2

1/4" = 1'-0"



HOUSE SECTION 1

1/4" = 1'-0"



HOUSE SECTION 3

1/4" = 1'-0"

ELEVATION & SECTIONS KEY NOTES

1. ROOFING ASSEMBLY. CLASS "A" CERTAINEED ASPHALT ROOF SHINGLE ICC ESR 3537 ROOFING MATERIAL TO BE INSTALLED OVER TWO LAYERS OF 40# BUILDING PAPER.
2. NEW STUCCO FINISH: 7/8" EXTERIOR PLASTER (SCRATCH, BROWN & FINISH COAT) OVER METAL LATH, OVER PLYWOOD SHEATING PER STRUCTURAL.
3. NEW STUCCO FINSH ACCENT COLOR 7/8" EXTERIOR PLASTER (SCRATCH, BROWN & FINISH COAT) OVER METAL LATH, OVER PLYWOOD SHEATING PER STRUCTURAL.
4. NEW STONE TILE CLADDING
5. WINDOW PER SCHEDULE
6. DOOR PER SCHEDULE
7. STUCCO COLUMN PER DETAIL
8. HIGH EFFICACY EXTERIOR LIGHT
9. CRL LAURANCE GLASS GUARDRAIL
9A. WOOD GUARDRAL PER DETAIL
10. SUN TUNNEL TUBE SKYLIGHT
11. COPPER GUTTER
12. COPPER DOWNSPOUT
13. 2X PAINTED WOOD FASCIA
14. COMPOSITE PLANK EXTERIOR CLADDING
15. R-30 AND R13 ROOF INSULATION
16. R-15 INSULATION ON WALLS
17. 5/8" GYP.BOARD.
18. 5/8" TYPE "X" GYP BOARD
19. CONCRETE SLAB ON GRADE PER STRUCTURAL
20. FLOOR FRAMING PER STRUCTURAL (R-19 ON CRAWL SPACE FLOOR)
21. 2x STUD FRAME WALLS
22. WATERPROOFING TO BE ACHIEVED WITH **WESTCOAT ALX** **ICC ESR-2201 MUST BE WATER PROOFING & CLASS "A"**
23. TRUSSES PER PLAN
24. COMPOSITE PLANK EXTERIOR CLADDING

Revisions:

△
△
△
△
△

REMODEL, ADDITION AND ADU

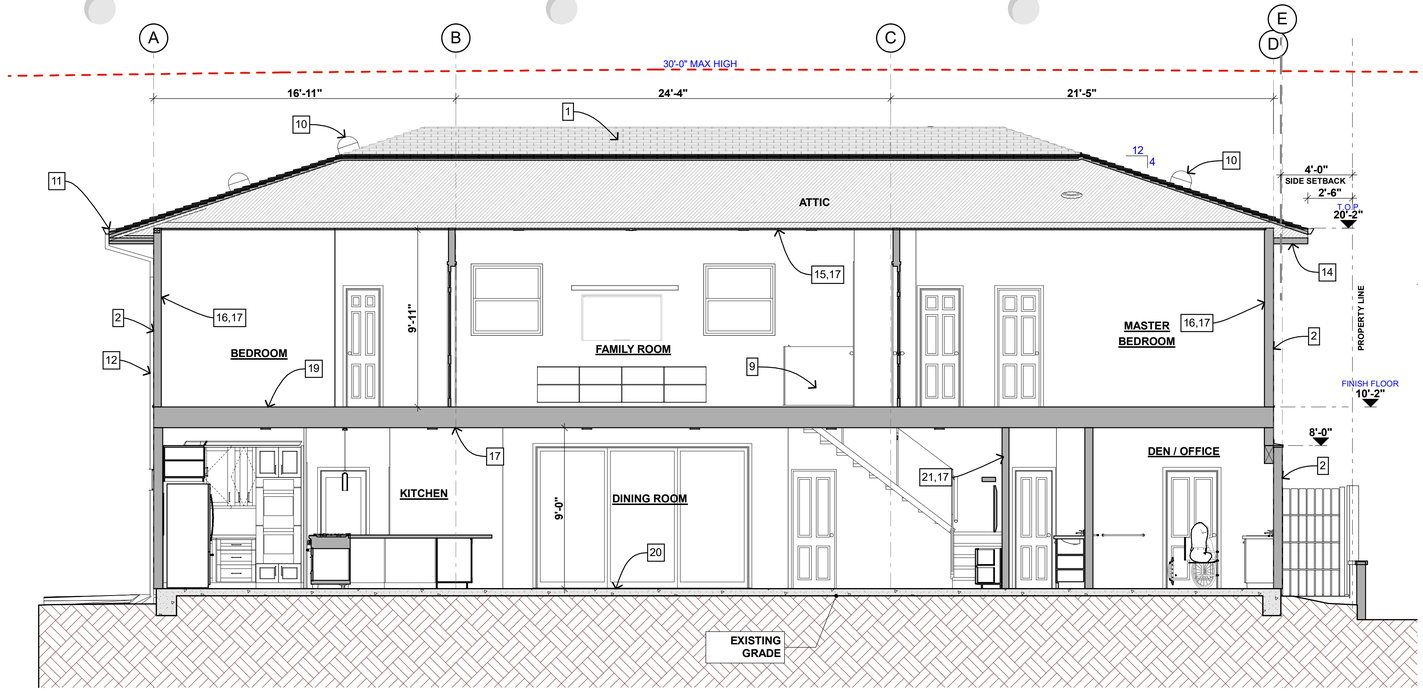
HEALY'S RESIDENCE

1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez P.
DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 619.735.1492

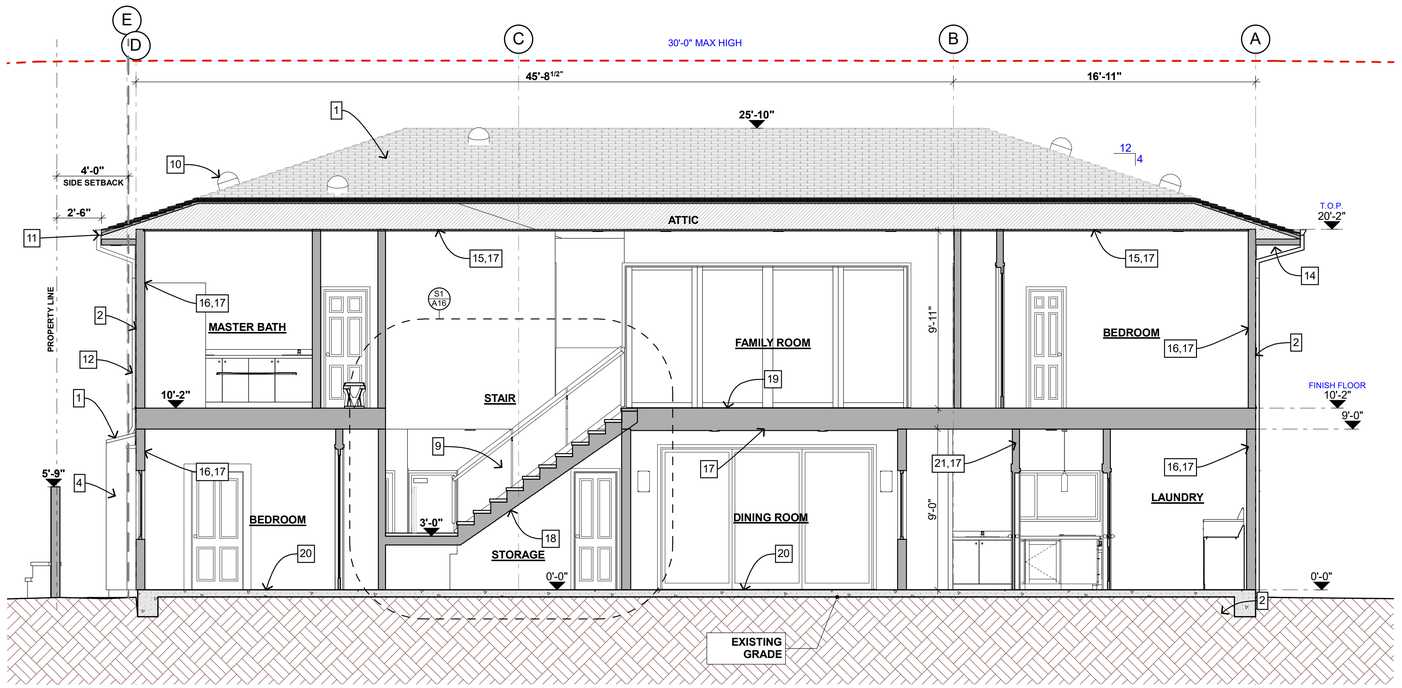
House Sections

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **A9**
Total sheet count: -



HOUSE SECTION 4

1/4" = 1'-0"



HOUSE SECTION 5

1/4" = 1'-0"

ELEVATION & SECTIONS KEY NOTES

1. ROOFING ASSEMBLY. CLASS "A" CERTAINEED ASPHALT ROOF SHINGLE ICC ESR 3537
   ROOFING MATERIAL TO BE INSTALLED OVER TWO LAYERS OF 40# BUILDING PAPER.
2. NEW STUCCO FINISH:
   7/8" EXTERIOR PLASTER (SCRATCH, BROWN & FINISH COAT) OVER METAL LATH, OVER PLYWOOD SHEATING PER STRUCTURAL.
3. NEW STUCCO FINSH ACCENT COLOR
   7/8" EXTERIOR PLASTER (SCRATCH, BROWN & FINISH COAT) OVER METAL LATH, OVER PLYWOOD SHEATING PER STRUCTURAL.
4. NEW STONE TILE CLADDING
5. WINDOW PER SCHEDULE
6. DOOR PER SCHEDULE
7. STUCCO COLUMN PER DETAIL
8. HIGH EFFICACY EXTERIOR LIGHT
9. CRL LAURANCE GLASS GUARDRAIL
9A. WOOD GUARDRAL PER DETAIL
10. SUN TUNNEL TUBE SKYLIGHT
11. COPPER GUTTER
12. COPPER DOWNSPOUT
13. 2X PAINTED WOOD FASCIA
14. COMPOSITE PLANK EXTERIOR CLADDING
15. R-30 AND R13 ROOF INSULATION
16. R-15 INSULATION ON WALLS
17. 5/8" GYP.BOARD.
18. 5/8" TYPE "X" GYP BOARD
19. CONCRETE SLAB ON GRADE PER STRUCTURAL
20. FLOOR FRAMING PER STRUCTURAL (R-19 ON CRAWL SPACE FLOOR)
21. 2x STUD FRAME WALLS
22. WATERPROOFING TO BE ACHIEVED WITH **WESTCOAT ALX**
    ICC ESR-2201 MUST BE WATER PROOFING & CLASS "A"
23. TRUSSES PER PLAN
24. COMPOSITE PLANK EXTERIOR CLADDING

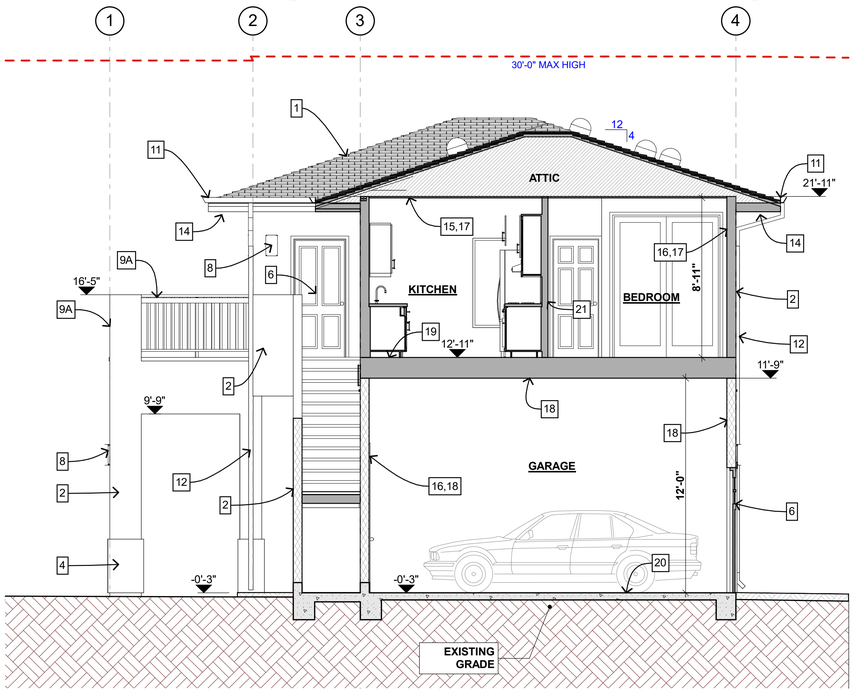
Revisions:

REMODEL, ADDITION AND ADU
HEALY'S RESIDENCE
1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez-P. DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 619.738.1492

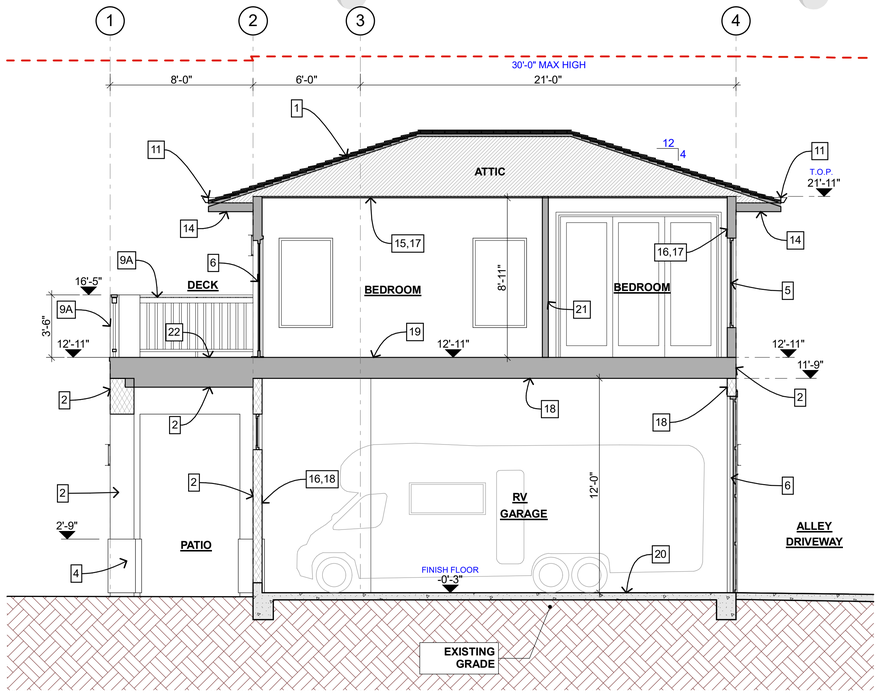
House Sections

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **A10**
Total sheet count: -



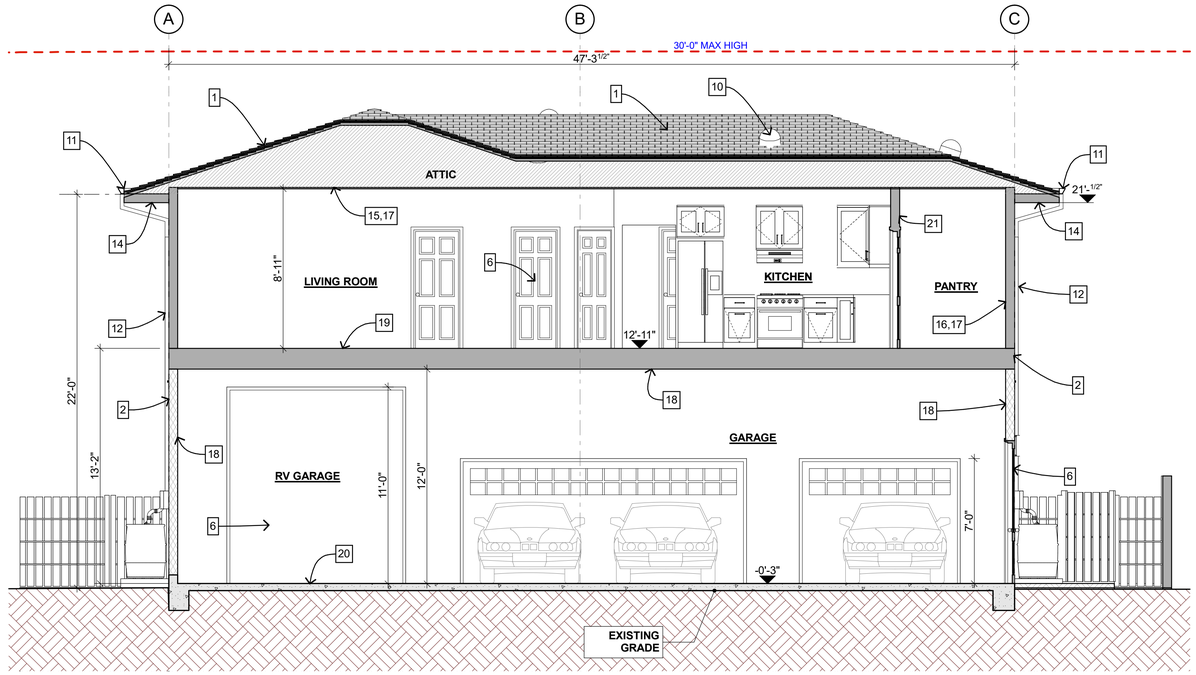
GARAGE / ADU SECTION 2

1/4" = 1'-0"



GARAGE / ADU SECTION 1

1/4" = 1'-0"



GARAGE / ADU SECTION 3

1/4" = 1'-0"

ELEVATION & SECTIONS KEY NOTES

1. ROOFING ASSEMBLY. CLASS "A" CERTAINEED ASPHALT ROOF SHINGLE ICC ESR 3537
   ROOFING MATERIAL TO BE INSTALLED OVER TWO LAYERS OF 40# BUILDING PAPER.
2. NEW STUCCO FINISH:
   7/8" EXTERIOR PLASTER (SCRATCH, BROWN & FINISH COAT) OVER METAL LATH, OVER PLYWOOD SHEATING PER STRUCTURAL.
3. NEW STUCCO FINSH ACCENT COLOR
   7/8" EXTERIOR PLASTER (SCRATCH, BROWN & FINISH COAT) OVER METAL LATH, OVER PLYWOOD SHEATING PER STRUCTURAL.
4. NEW STONE TILE CLADDING
5. WINDOW PER SCHEDULE
6. DOOR PER SCHEDULE
7. STUCCO COLUMN PER DETAIL
8. HIGH EFFICACY EXTERIOR LIGHT
9. CRL LAURANCE GLASS GUARDRAIL
9A. WOOD GUARDRAL PER DETAIL
10. SUN TUNNEL TUBE SKYLIGHT
11. COPPER GUTTER
12. COPPER DOWNSPOUT
13. 2X PAINTED WOOD FASCIA
14. HARDIESOFFIT PANELS
    JAMES HARDIE ICC-NER-405
15. R-30 AND R13 ROOF INSULATION
16. R-15 INSULATION ON WALLS
17. 5/8" GYP.BOARD.
18. 5/8" TYPE "X" GYP BOARD
19. CONCRETE SLAB ON GRADE PER STRUCTURAL
20. FLOOR FRAMING PER STRUCTURAL (R-19 ON CRAWL SPACE FLOOR)
21. 2x STUD FRAME WALLS
22. WATERPROOFING TO BE ACHIEVED WITH **WESTCOAT ALX**
    ICC ESR-2201 MUST BE WATER PROOFING & CLASS "A"
23. TRUSSES PER PLAN

Revisions:

REMODEL, ADDITION AND ADU
HEALY'S RESIDENCE
1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez P.
DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 619.735.1492

Garage / ADU Sections

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **A11**
Total sheet count:

MAIN RESIDENCE

WINDOW SCHEDULE

ID	Qty	USE	Type	SIZE		W/D AREA	Sill height	Frame Material	Glass type	U Factor	SHGC	STC	NOTES
				WIDTH	HEIGHT								
A	1	NEW	FIXED	4'	3'-10"	15.33	2'-10"	VINYL	DOUBLE PANE	0.30	0.23		
B	1	REPLACE/NEW	COMBINE	9'-9 1/2"	3'-10"	37.53	2'-10"	VINYL	DOUBLE PANE	0.30	0.23		
C	1	NEW	COMBINE	7'-2"	2'-10"	20.29	3'-10"	VINYL	DOUBLE PANE	0.30	0.23		
D	1	REPLACE/NEW	SLIDE	5'-10 1/2"	3'-9 1/2"	22.28	2'-10 1/2"	VINYL	DOUBLE PANE	0.30	0.23		
E	1	REPLACE/NEW	SLIDE	5'-10 1/2"	3'-9 1/2"	22.28	2'-10 1/2"	VINYL	DOUBLE PANE	0.30	0.23		
F	1	REPLACE/NEW	CASEMENT	1'-10"	2'-10"	5.19	3'-10"	VINYL	DOUBLE PANE	0.30	0.23		
G	1	REPLACE/NEW	SLIDE	2'-10 1/2"	3'-10"	11.02	2'-10"	VINYL	DOUBLE PANE	0.30	0.23		
H	1	REPLACE/NEW	FIXED	2'-10 1/2"	3'-10"	11.02	2'-10"	VINYL	DOUBLE PANE	0.30	0.23		
I	1	NEW	SILDE	4'	3'-10"	15.33	2'-10"	VINYL	DOUBLE PANE	0.30	0.23		
J	1	REPLACE/NEW	CASEMENT	2'-10 1/2"	3'-10"	11.02	2'-10"	VINYL	DOUBLE PANE	0.30	0.23		
K	1	REPLACE/NEW	CASEMENT	1'-10"	2'-10"	5.19	3'-10"	VINYL	DOUBLE PANE	0.30	0.23		
L	2	REPLACE/NEW	SLIDE	2'-10 1/2"	3'-10"	11.02	2'-10"	VINYL	DOUBLE PANE	0.30	0.23		
M	2	REPLACE/NEW	FIXED	2'-10 1/2"	3'-10"	11.02	2'-10"	VINYL	DOUBLE PANE	0.30	0.23		
N	1	REPLACE/NEW	CASEMENT	8'-9"	3'-10"	33.48	2'-10"	VINYL	DOUBLE PANE	0.30	0.23		
O	1	NEW	SLIDE	6'	5'	30.00	3'	VINYL	DOUBLE PANE	0.30	0.23		
P	1	NEW	SLIDE	3'	2'	6.00	6'	VINYL	DOUBLE PANE	0.30	0.23		TEMPERED GLASS
Q	1	NEW	SLIDE	6'	5'	30.00	3'	VINYL	DOUBLE PANE	0.30	0.23		
R	2	NEW	HUNG	4'	4'	16.00	4'	VINYL	DOUBLE PANE	0.30	0.23		TEMPERED GLASS
S	1	NEW	FIXED	4'	4'	16.00	4'	VINYL	DOUBLE PANE	0.30	0.23		TEMPERED GLASS
T	1	NEW	FIXED	4'	4'	16.00	4'-2 1/2"	VINYL	DOUBLE PANE	0.30	0.23		TEMPERED GLASS
U	1	NEW	SLIDE	4'	3'	12.00	5'	VINYL	DOUBLE PANE	0.30	0.23		
V	1	NEW	SLIDE	4'	4'	16.00	4'	VINYL	DOUBLE PANE	0.30	0.23		

MAIN RESIDENCE

DOOR AND FRAME SCHEDULE

ID	Qty	USE	TYPE	Width	Height	W/D AREA	Construction	FRAME/DOOR	Treshold	Fire Rtg	U Factor	SHGC	NOTES
1	1	NEW	A	5'-6"	7'	38.50	SOLID	WOOD/ GLASS	FULL				TEMPERED GLASS
2	1	NEW	E	12'	8'	96.00	SOLID	VINYL	FULL		0.30	0.23	TEMPERED GLASS
3	1	NEW	A	2'-8"	6'-8"	17.78	SOLID	WOOD/ GLASS	FULL				TEMPERED GLASS
4	1	NEW	E	15'-11"	8'	127.30	SOLID	VINYL/GLASS	FULL		0.30	0.23	TEMPERED GLASS
5	1	NEW	E	12'	8'	96.00	SOLID	VINYL/GLASS	FULL		0.30	0.23	TEMPERED GLASS
6	1	NEW	A	3'	6'-8"	20.00	SOLID	WOOD					
7	1	NEW	A	3'	6'-8"	20.00	SOLID	WOOD					
8	1	NEW	A	3'	6'-8"	20.00	SOLID	WOOD					
9	1	NEW	A	2'-2"	6'-8"	14.44	SOLID	WOOD					
10	1	NEW	A	3'	6'-8"	20.00	SOLID	WOOD					
11	1	NEW	A	7'-6"	8'	60.00	SOLID	ALUMINUM					TEMPERED MIRROR
12	1	NEW	A	2'-6"	6'-8"	16.67	SOLID	WOOD					
13	1	NEW	A	2'-8"	6'-8"	17.78	SOLID	WOOD					
14	1	NEW	A	2'-8"	6'-8"	17.78	SOLID	WOOD					
15	1	NEW	A	3'	8'	24.00	SOLID	WOOD					
16	1	NEW	A	2'-6"	6'-8"	16.67	SOLID	WOOD					
17	1	NEW	A	2'-4"	6'-8"	15.56	SOLID	WOOD					
18	1	NEW	A	8'-10 1/2"	8'	70.95	SOLID	ALUMINUM					TEMPERED MIRROR
19	1	NEW	A	2'-6"	6'-8"	16.67	SOLID	WOOD					
20	1	NEW	A	2'-6"	8'	20.00	SOLID	WOOD					
21	1	NEW	A	2'	8'	16.00	SOLID	WOOD					
22	1	NEW	A	2'-6"	8'	20.00	SOLID	WOOD					
23	1	NEW	A	6'	8'	48.00	SOLID	ALUMINUM					TEMPERED MIRROR
24	1	NEW	A	6'	8'	48.00	SOLID	ALUMINUM					TEMPERED MIRROR
25	1	NEW	A	2'	6'-8"	13.33	SOLID	WOOD					
26	1	NEW	A	2'	6'-8"	13.33	SOLID	WOOD					
27	1	NEW	A	2'	6'-8"	13.33	SOLID	WOOD					
28	1	NEW	A	2'	8'	16.00	SOLID	WOOD					
29	1	NEW	E	7'-5"	8'	59.26	SOLID	ALUMINUM					TEMPERED MIRROR
30	1	NEW	A	4'	8'	32.00	SOLID	WOOD					LOUVERED DOOR
31	1	NEW	A	4'	8'	32.00	SOLID	WOOD					LOUVERED DOOR

MAIN RESIDENCE

ID	1	2	3	4	5	6	7	8	9	10	11	12
Quantity	1	1	1	1	1	1	1	1	1	1	1	1
W x H Size	5'-6"×7'	12'×8'	2'-8"×6'-8"	15'-11"×8'	12'×8'	3'×6'-8"	3'×6'-8"	3'×6'-8"	2'-2"×6'-8"	3'×6'-8"	7'-6"×8'	2'-6"×6'-8"
2D Symbol												
3D Front View												

ID	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Quantity	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W x H Size	2'-8"×6'-8"	2'-8"×6'-8"	3'×8'	2'-6"×6'-8"	2'-4"×6'-8"	8'-10 1/2"×8'	2'-6"×6'-8"	2'-6"×8'	2'×8'	2'-6"×8'	6'×8'	6'×8'	2'×6'-8"	2'×6'-8"	2'×6'-8"	2'×8'	7'-5"×8'	4'×8'	4'×8'
2D Symbol																			
3D Front View																			

ACOUSTICAL NOTES:

1. All new windows and glass doors shall have a minimum Sound Transmission Class (STC) of 30

2. Ventilation shall be provided per the requirements of the California Mechanical Code (CMC), Chapter 4 . The ventilation system shall consist of air-conditioning, furnace with summer switch, or other independent fan system . Operation of the ventilation system shall not result in interior noise levels greater than 45 dB CNEL.

DOOR TYPE LEGEND

A.- SWINGING DOOR
B.- POCKET DOOR
C.- DOUBLE SWINGING DOOR
D.- GARAGE DOOR
E.- SLIDING DOOR
F.- BIFOLD DOOR
G.- ARCH TOP DOOR
H.- FENCE DOOR

MAIN RESIDENCE

ID	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
Quantity	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	2	1	1	1	1
W x H Size	4'×3'-10"	9'-9 1/2"×3'-10"	7'-2"×2'-10"	5'-10 1/2"×3'-9 1/2"	5'-10 1/2"×3'-9 1/2"	1'-10"×2'-10"	2'-10 1/2"×3'-10"	2'-10 1/2"×3'-10"	4'×3'-10"	2'-10 1/2"×3'-10"	1'-10"×2'-10"	2'-10 1/2"×3'-10"	2'-10 1/2"×3'-10"	8'-9"×3'-10"	6'×5'	3'×2'	6'×5'	4'×4'	4'×4'	4'×4'	4'×3'	4'×4'
3D Front View																						

Revisions:

REMODEL, ADDITION AND ADU
HEALY'S RESIDENCE
1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez P.
DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 619.735.1492

Window & Door Schedule

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **A12**
Total sheet count:

ADU

ACOUSTICAL NOTES:

1. All new windows and glass doors shall have a minimum Sound Transmission Class (STC) of 30

2. Ventilation shall be provided per the requirements of the California Mechanical Code (CMC), Chapter 4 . The ventilation system shall consist of air-conditioning, furnace with summer switch, or other independent fan system . Operation of the ventilation system shall not result in interior noise levels greater than 45 dB CNEL.

DOOR AND FRAME SCHEDULE

ID	Qty	USE	TYPE	Width	Height	W/D AREA	Construction	FRAME/DOOR	Treshold	Fire Rtg	U Factor	SHGC	NOTES
O1	1	NEW	A	3'	6'-8"	20.00	SOLID	WOOD					
O2	1	NEW	E	9'	6'-8"	60.00	SOLID	VINYL / GLASS			0.30	0.23	TEMPERED GLASS
O3	1	NEW	A	2'-8"	6'-8"	17.78	SOLID	WOOD					
O4	1	NEW	A	2'-6"	6'-8"	16.67	SOLID	WOOD					
O5	1	NEW	A	2'-6"	6'-8"	16.67	SOLID	WOOD					
O6	1	NEW	A	2'	6'-8"	13.33	SOLID	WOOD					
O7	1	NEW	A	2'-8"	6'-8"	17.78	SOLID	WOOD					
O8	1	NEW	A	2'-6"	6'-8"	16.67	SOLID	WOOD					
O9	1	NEW	A	6'-1"	8'	48.70	SOLID	ALUMINUM					TEMPERED MIRROR
O10	1	NEW	A	2'	6'-8"	13.33	SOLID	WOOD					
O11	1	NEW	A	2'	6'-8"	13.33	SOLID	WOOD					
O12	1	NEW	A	3'	8'	24.00	SOLID	WOOD					
O13	1	NEW	A	3'	8'	24.00	SOLID	WOOD					
O14	1	NEW	A	9'	7'	63.00	SOLID	WOOD					
O15	1	NEW	A	16'	7'	112.00	SOLID	WOOD					
O16	1	NEW	A	10'	11'	110.00	SOLID	WOOD					
O17	1	NEW	A	9'	8'	72.00	SOLID	ALUMINUM					TEMPERED MIRROR

DOOR TYPE LEGEND

A.- SWINGING DOOR
B.- POCKET DOOR
C.- DOUBLE SWINGING DOOR
D.- GARAGE DOOR
E.- SLIDING DOOR
F.- BIFOLD DOOR
G.- ARCH TOP DOOR
H.- FENCE DOOR

ADU

WINDOW SCHEDULE

ID	Qty	USE	Type	SIZE		W/D AREA	Sill height	Frame Material	Glass type	U Factor	SHGC	STC	NOTES
				WIDTH	HEIGHT								
0A	1	NEW	FIXED	2'-10"	3'	8.52	3'-8"	VINYL	DOUBLE PANE	0.30	0.23		
0B	1	NEW	SLIDE	6'	3'	18.00	3'-8"	VINYL	DOUBLE PANE	0.30	0.23		
0C	2	NEW	SLIDE	3'-6"	5'	17.50	1'-8"	VINYL	DOUBLE PANE	0.30	0.23		
0D	1	NEW	CASEMENT	2'	4'	8.00	2'-8"	VINYL	DOUBLE PANE	0.30	0.23		
0E	1	NEW	SLIDE	2'-8 1/2"	2'	5.39	4'-8"	VINYL	DOUBLE PANE	0.30	0.23		TEMPERED GLASS
0F	1	NEW	SLIDE	6'	5'	30.00	1'-8"	VINYL	DOUBLE PANE	0.30	0.23		
0G	2	NEW	FIXED	3'	5'	15.00	1'-8"	VINYL	DOUBLE PANE	0.30	0.23		
0H	2	NEW	CASEMENT	3'	3'	9.00	3'-8"	VINYL	DOUBLE PANE	0.30	0.23		

ADU

Door Legend

ID	O1	O2	O3	O4	O5	O6	O6	O7	O8	O9	O10	O11	O12	O13	O14	O15	O16
Quantity	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
W x H Size	3'×6'-8"	9'×6'-8"	2'-8"×6'-8"	2'-6"×6'-8"	2'-6"×6'-8"	2'×6'-8"	9'×8'	2'-8"×6'-8"	2'-6"×6'-8"	6'-1"×8'	2'×6'-8"	2'×6'-8"	3'×8'	3'×8'	9'×7'	16'×7'	10'×11'
2D Symbol																	
3D Front View																	

ADU

ID	0A	0B	0C	0D	0E	0F	0G	0H	0I
Quantity	1	1	2	1	1	1	2	2	2
W x H Size	2'-10"×3'	6'×3'	3'-6"×5'	2'×4'	2'-8 1/2"×2'	6'×5'	3'×5'	3'×3'	6'×2'
3D Front View									

Revisions:

REMODEL, ADDITION AND ADU

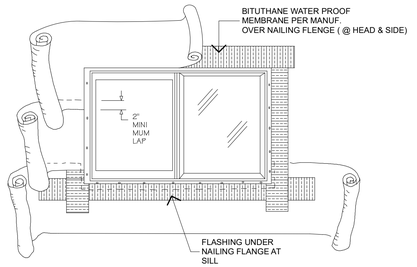
HEALY'S RESIDENCE

1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

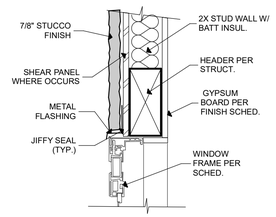
Fernando Gonzalez-P. DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 619.738.1492

Window & Door Schedule

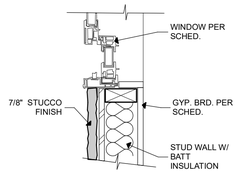
Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: A13
Total sheet count:



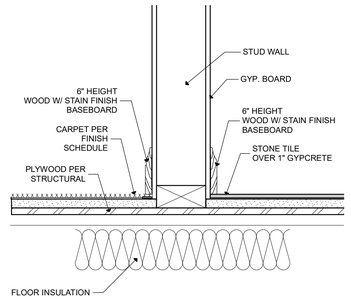
1 **Window moisture barrier**
1 1/2"= 1'-0"



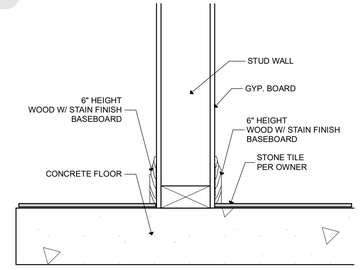
2 **Window header detail**
1 1/2"= 1'-0"



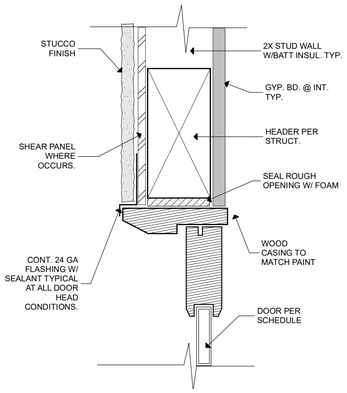
3 **Windows sill detail**
1 1/2"= 1'-0"



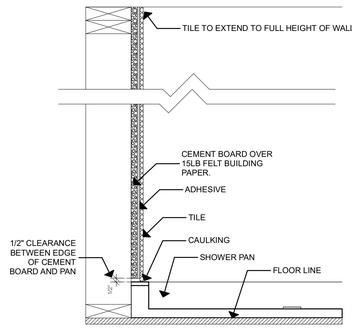
4 **Baseboard Typ. Detail**
1 1/2"= 1'-0"



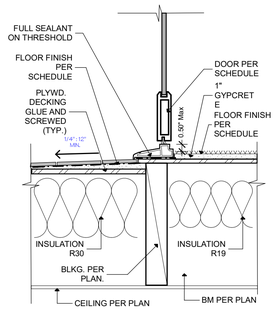
5 **Baseboard Typ. Detail**
1 1/2"= 1'-0"



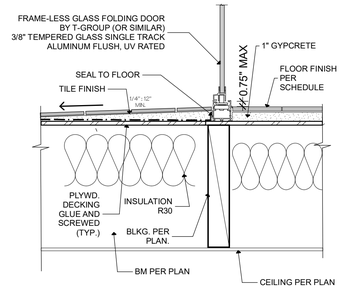
6 **Door Header Det.**
3" = 1'-0"



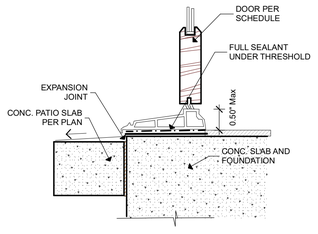
7 **Shower enclosure cement brd.**
1 1/2"= 1'-0"



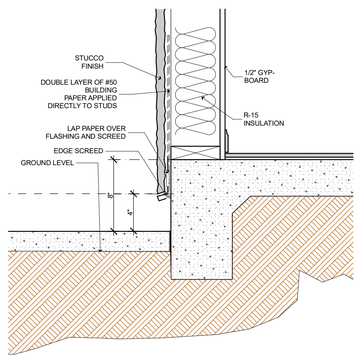
8 **Deck & Door Detail**
1 1/2"= 1'-0"



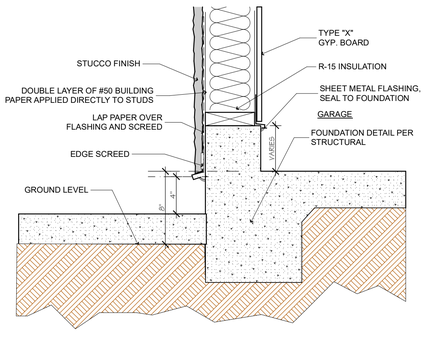
9 **Deck & Door Detail**
1 1/2"= 1'-0"



10 **Door Detail**
1 1/2"= 1'-0"

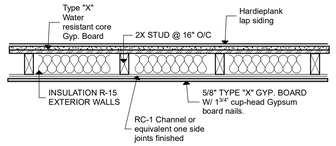


7 **Wall Detail at sidewal**
1 1/2"= 1'-0"



8 **Garage Wall Detail**
1 1/2"= 1'-0"

1HR EXTERIOR WALL ASSEMBLY
JAMES HARDIE BUILDING PRODUCTS, INC
ICC-ES NER-405 (3.5.4 assembly 4)
SOUND RATING =STC-50 MIN.



- Hardieplank
–1/2" type "x" water resistant Gyp. Board
– 2 x 4 wood studs 16" o.c.
– 3" Thermafiber SAFB / R15 insulation
- RC-1 Channel
• 5/8" Type "X" Gyp board.

8 **1hr Fire Rating Exterior**
1" = 1'-0"

Revisions:

REMODEL, ADDITION AND ADU

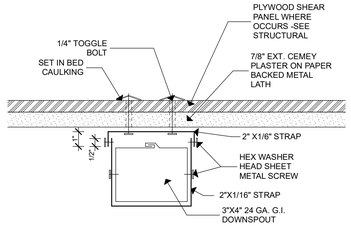
HEALY'S RESIDENCE

1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez P.
DESIGN
2022 Azure Cove, Chula Vista, CA 91915
Phone: 619.735.1492

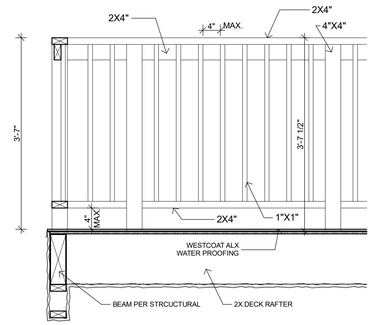
Typical Details

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **A14**
Total sheet count: -



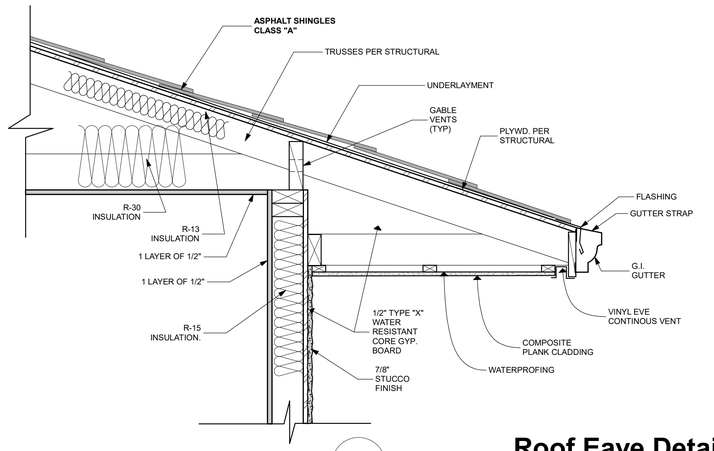
3 **Typical Downspout**

3" = 1'-0"



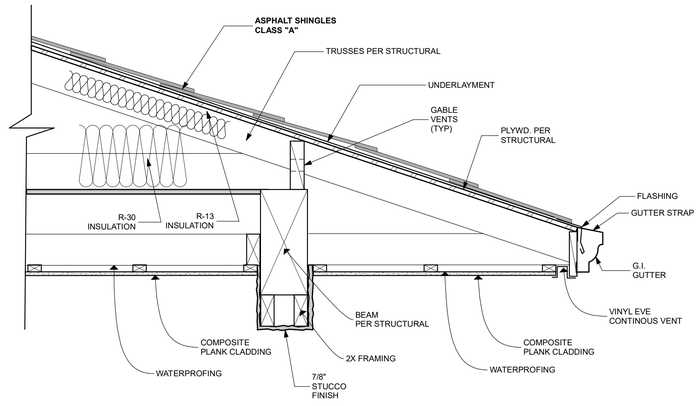
4 **Balcony Guardrail Detail**

SCALE: 3/4" = 1'-0"



9 **Roof Eave Detail**

1 1/2"= 1'-0"



10 **Roof Eave Detail**

1 1/2"= 1'-0"

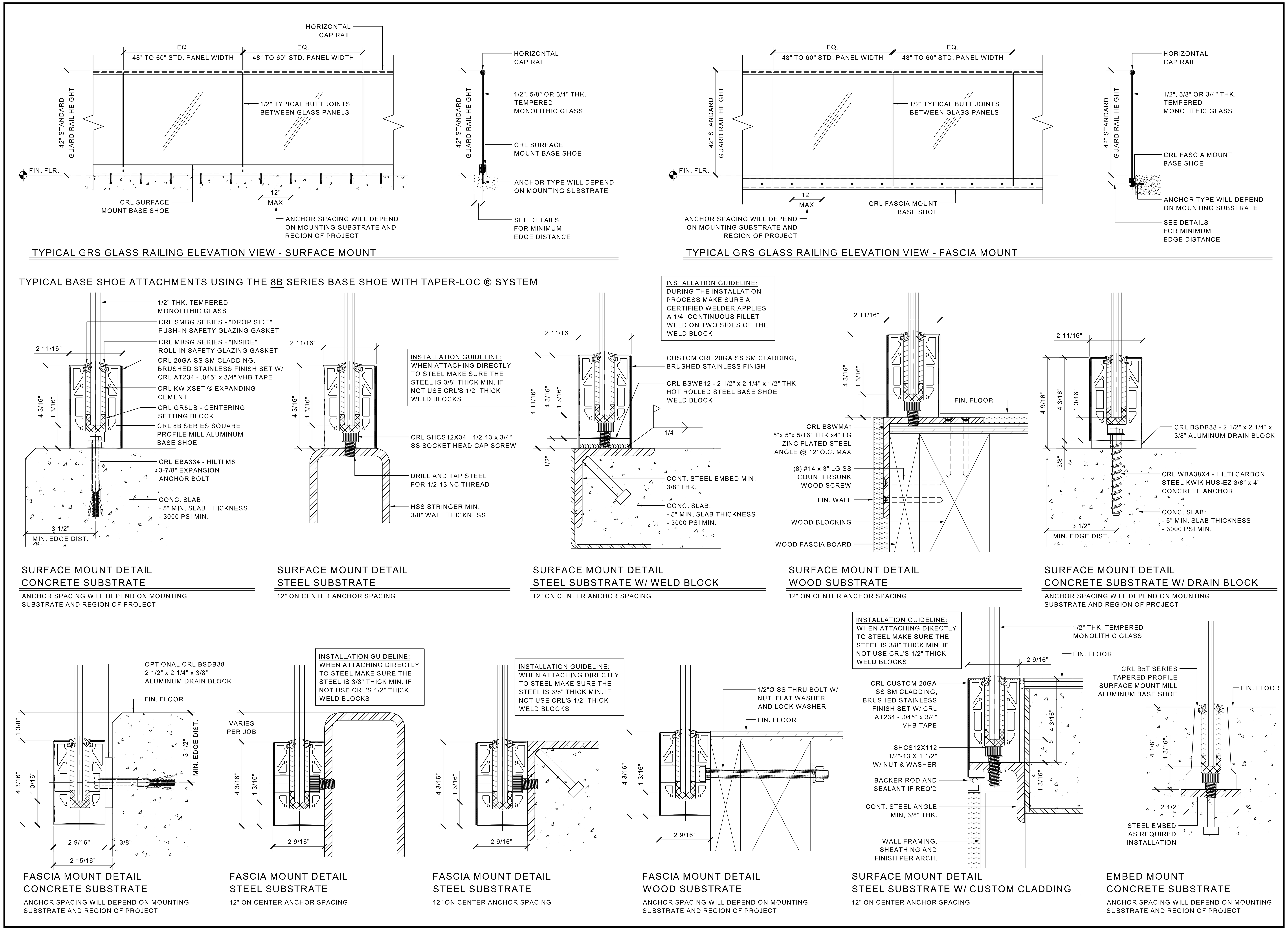
Revisions:

REMODEL, ADDITION AND ADU
HEALY'S RESIDENCE
1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez P.
DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 619.735.1492

Typical Details

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **A15**
Total sheet count: -


HORIZONTAL CAP RAIL
EQ.
48" TO 60" STD. PANEL WIDTH
1/2" TYPICAL BUTT JOINTS BETWEEN GLASS PANELS
42" STANDARD GUARD RAIL HEIGHT
FIN. FLR.
CRL SURFACE MOUNT BASE SHOE
12" MAX
ANCHOR SPACING WILL DEPEND ON MOUNTING SUBSTRATE AND REGION OF PROJECT
1/2", 5/8" OR 3/4" THK. TEMPERED MONOLITHIC GLASS
ANCHOR TYPE WILL DEPEND ON MOUNTING SUBSTRATE
SEE DETAILS FOR MINIMUM EDGE DISTANCE
TYPICAL GRS GLASS RAILING ELEVATION VIEW - SURFACE MOUNT
CRL FASCIA MOUNT BASE SHOE
TYPICAL GRS GLASS RAILING ELEVATION VIEW - FASCIA MOUNT
TYPICAL BASE SHOE ATTACHMENTS USING THE 8B SERIES BASE SHOE WITH TAPER-LOC ® SYSTEM
1/2" THK. TEMPERED MONOLITHIC GLASS
CRL SMBG SERIES - "DROP SIDE" PUSH-IN SAFETY GLAZING GASKET
CRL MBSG SERIES - "INSIDE" ROLL-IN SAFETY GLAZING GASKET
CRL 20GA SS SM CLADDING, BRUSHED STAINLESS FINISH SET W/ CRL AT234 - .045" x 3/4" VHB TAPE
CRL KWIXSET ® EXPANDING CEMENT
CRL GR5UB - CENTERING SETTING BLOCK
CRL 8B SERIES SQUARE PROFILE MILL ALUMINUM BASE SHOE
CRL EBA334 - HILTI M8 3-7/8" EXPANSION ANCHOR BOLT
CONC. SLAB: - 5" MIN. SLAB THICKNESS - 3000 PSI MIN.
MIN. EDGE DIST.
SURFACE MOUNT DETAIL CONCRETE SUBSTRATE
ANCHOR SPACING WILL DEPEND ON MOUNTING SUBSTRATE AND REGION OF PROJECT
INSTALLATION GUIDELINE: WHEN ATTACHING DIRECTLY TO STEEL MAKE SURE THE STEEL IS 3/8" THICK MIN. IF NOT USE CRL'S 1/2" THICK WELD BLOCKS
CRL SHCS12X34 - 1/2-13 x 3/4" SS SOCKET HEAD CAP SCREW
DRILL AND TAP STEEL FOR 1/2-13 NC THREAD
HSS STRINGER MIN. 3/8" WALL THICKNESS
SURFACE MOUNT DETAIL STEEL SUBSTRATE
12" ON CENTER ANCHOR SPACING
INSTALLATION GUIDELINE: DURING THE INSTALLATION PROCESS MAKE SURE A CERTIFIED WELDER APPLIES A 1/4" CONTINUOUS FILLET WELD ON TWO SIDES OF THE WELD BLOCK
CUSTOM CRL 20GA SS SM CLADDING, BRUSHED STAINLESS FINISH
CRL BSWB12 - 2 1/2" x 2 1/4" x 1/2" THK HOT ROLLED STEEL BASE SHOE WELD BLOCK
CONT. STEEL EMBED MIN. 3/8" THK.
SURFACE MOUNT DETAIL STEEL SUBSTRATE W/ WELD BLOCK
FIN. FLOOR
CRL BSWMA1 5"x 5"x 5/16" THK x4" LG ZINC PLATED STEEL ANGLE @ 12' O.C. MAX
(8) #14 x 3" LG SS COUNTERSUNK WOOD SCREW
FIN. WALL
WOOD BLOCKING
WOOD FASCIA BOARD
SURFACE MOUNT DETAIL WOOD SUBSTRATE
CRL BSDB38 - 2 1/2" x 2 1/4" x 3/8" ALUMINUM DRAIN BLOCK
CRL WBA38X4 - HILTI CARBON STEEL KWIK HUS-EZ 3/8" x 4" CONCRETE ANCHOR
SURFACE MOUNT DETAIL CONCRETE SUBSTRATE W/ DRAIN BLOCK
OPTIONAL CRL BSDB38 2 1/2" x 2 1/4" x 3/8" ALUMINUM DRAIN BLOCK
FASCIA MOUNT DETAIL CONCRETE SUBSTRATE
VARIES PER JOB
FASCIA MOUNT DETAIL STEEL SUBSTRATE
1/2"Ø SS THRU BOLT W/ NUT, FLAT WASHER AND LOCK WASHER
FASCIA MOUNT DETAIL WOOD SUBSTRATE
CRL CUSTOM 20GA SS SM CLADDING, BRUSHED STAINLESS FINISH SET W/ CRL AT234 - .045" x 3/4" VHB TAPE
SHCS12X112 1/2"-13 X 1 1/2" W/ NUT & WASHER
BACKER ROD AND SEALANT IF REQ'D
CONT. STEEL ANGLE MIN. 3/8" THK.
WALL FRAMING, SHEATHING AND FINISH PER ARCH.
SURFACE MOUNT DETAIL STEEL SUBSTRATE W/ CUSTOM CLADDING
CRL B5T SERIES TAPERED PROFILE SURFACE MOUNT MILL ALUMINUM BASE SHOE
STEEL EMBED AS REQUIRED INSTALLATION
EMBED MOUNT CONCRETE SUBSTRATE

Revisions By:

5	-	-
4	06/28/21	AB
3	06/05/18	VM
2	08/12/16	JG
1	02/08/16	JG

CRL®

2503 E. Vernon Avenue, Los Angeles, CA 90058-1897
PH (800) 421-6144 FX (800) 587-7501 www.crlaurence.com

ICC ES™ ESR-3269

Description: GRS GLASS RAILING SYSTEM WET GLAZED FOR TEMPERED MONOLITHIC 1/2", 5/8" & 3/4" THK. GLASS

ELEVATIONS AND DETAILS
SURFACE MOUNT AND FASCIA MOUNT OPTIONS

Drawn By: JG
Date: 12/15/2015
Scale: AS NOTED
File Name: CRL GRS Monolithic Glass Railing System.dwg
Sheet
1

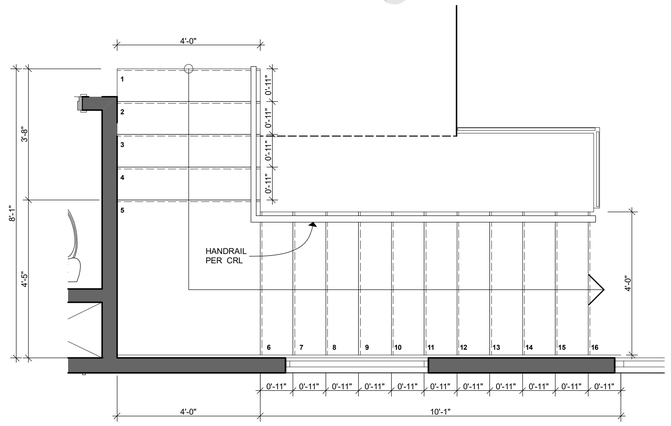
Revisions:

REMODEL, ADDITION AND ADU
HEALY'S RESIDENCE
1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez-P. DESIGN

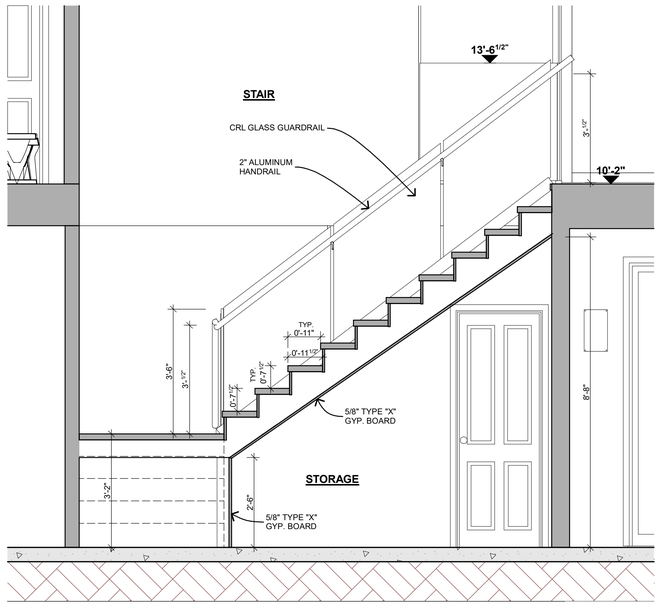
GLASS GUARDRAIL

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: A16
Total sheet count: -



HOUSE STAIR FLOOR PLAN

1/2" = 1'-0"



HOUSE STAIR SECTION

1/2" = 1'-0"

1011.7 Stairway construction
Stairways shall be built of materials consistent with the types permitted for the type of construction of the building, except that wood handrails shall be permitted for all types of construction.
1011.7.1 Stairway walking surface
The walking surface of treads and landings of a stairway shall not be sloped steeper than one unit vertical in 48 units horizontal (2-percent slope) in any direction. Stairway treads and landings shall have a solid surface. Finish floor surfaces shall be securely attached.
Exceptions: Openings in stair walking surfaces shall be a size that does not permit the passage of 1/2-inch-diameter (12.7 mm) sphere. Elongated openings shall be placed so that the long dimension is perpendicular to the direction of travel.
In Group F, H and S occupancies, other than areas of parking structures accessible to the public, openings in treads and landings shall not be prohibited provided a sphere with a diameter of 11/8 inches (29 mm) cannot pass through the opening.
1011.7.2 Outdoor conditions
Outdoor stairways and outdoor approaches to stairways shall be designed so that water will not accumulate on walking surfaces.
1011.7.3 Enclosures under interior stairways
The walls and soffits within enclosed usable spaces under enclosed and unenclosed stairways shall be protected by 1-hour fire-resistance-rated construction or the fire-resistance rating of the stairway enclosure, whichever is greater. Access to the enclosed space shall not be directly from within the stairway enclosure.
Exception: Spaces under stairways serving and contained within a single residential dwelling unit in Group R-2 or R-3 shall be permitted to be protected on the enclosed side with 1/2-inch (12.7 mm) gypsum board.
1011.7.4 Enclosures under exterior stairways
There shall not be enclosed usable space under exterior exit stairways unless the space is completely enclosed in 1-hour fire-resistance-rated construction. The open space under exterior stairways shall not be used for any purpose.
1011.8 Vertical rise
A flight of stairs shall not have a vertical rise greater than 12 feet (3658 mm) between floor levels or landings. Exception: Spiral stairways used as a means of egress from technical production areas.
1011.9 Curved stairways
Curved stairways with winder treads shall have treads and risers in accordance with Section 1011.5 and the smallest radius shall be not less than twice the minimum width or required capacity of the stairway. Exception: The radius restriction shall not apply to curved stairways in Group R-3 and within individual dwelling units in Group R-2.
1011.10 Spiral stairways
Spiral stairways are permitted to be used as a component in the means of egress only within dwelling units or from a space not more than 250 square feet (23 m2) in area and serving not more than five occupants, or from technical production areas in accordance with Section 410.6.
A spiral stairway shall have a 71/2-inch (191 mm) minimum clear tread depth at a point 12 inches (305 mm) from the narrow edge. The risers shall be sufficient to provide a headroom of 78 inches (1981 mm) minimum, but riser height shall not be more than 91/2 inches (241 mm). The minimum stairway clear width at and below the handrail shall be 26 inches (660 mm).
1011.11 Handrails
Stairways shall have handrails on each side and shall comply with Section 1014. Where glass is used to provide the handrail, the handrail shall comply with Section 2407.
[DSA-AC] For applications listed in Section 1.9.1 regulated by the Division of the State Architect-Access Compliance, see Chapter 11B, Sections 11B-504.6 and 11B-505.
Exceptions: Stairways within dwelling units and spiral stairways are permitted to have a handrail on one side only.Decks, patios and walkways that have a single change in elevation where the landing depth on each side of the change of elevation is greater than what is required for a landing do not require handrails.[SFM] In Group R-3 occupancies, a continuous run of treads or flight of stairs with less than four risers does not require handrails.
Changes in room elevations of three or fewer risers within dwelling units and sleeping units in Group R-2 and R-3 do not require handrails.
1011.12 Stairway to roof
In buildings four or more stories above grade plane, one stairway shall extend to the roof surface unless the roof has a slope steeper than four units vertical in 12 units horizontal (33-percent slope).Exception: Other than where required by Section 1011.12.1, in buildings without an occupied roof access to the roof from the top story shall be permitted to be by an alternating tread device, a ships ladder or a permanent ladder.
1011.12.1 Stairway to elevator equipment
Roofs and penthouses containing elevator equipment that must be accessed for maintenance are required to be accessed by a stairway.
1011.12.2 Roof access
Where a stairway is provided to a roof, access to the roof shall be provided through a penthouse complying with Section 1510.2.
Exception: In buildings without an occupied roof, access to the roof shall be permitted to be a roof hatch or trap door not less than 16 square feet (1.5 m2) in area and having a minimum dimension of 2 feet (610 mm).
1011.13 Guards
Guards shall be provided along stairways and landings where required by Section 1015 and shall be constructed in accordance with Section 1015. Where the roof hatch opening providing the required access is located within 10 feet (3049 mm) of the roof edge, such roof access or roof edge shall be protected by guards installed in accordance with Section 1015.
1011.14 Alternating tread devices
Alternating tread devices are limited to an element of a means of egress in buildings of Groups F, H and S from a mezzanine not more than 250 square feet (23 m2) in area and that serves not more than five occupants; in buildings of Group I-3 from a guard tower, observation station or control room not more than 250 square feet (23 m2) in area and for access to unoccupied roofs. Alternating tread devices used as a means of egress shall not have a rise greater than 20 feet (6096 mm) between floor levels or landings.
1011.14.1 Handrails of alternating tread devices
Hand-rails shall be provided on both sides of alternating tread devices and shall comply with Section n class="uc_ca_amended">1014.
1011.14.2 Treads of alternating tread devices
Alternating tread devices shall have a minimum tread depth of 5 inches (127 mm), a minimum projected tread depth of 81/2 inches (216 mm), a minimum tread width of 7 inches (178 mm) and a maximum riser height of 91/2 inches (241 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projections of adjacent treads. The riser height shall be measured vertically between the leading edges of adjacent treads. The riser height and tread depth provided shall result in an angle of ascent from the horizontal of between 50 and 70 degrees (0.87 and 1.22 rad). The initial tread of the device shall begin at the same elevation as the platform, landing or floor surface.
Exception: Alternating tread devices used as an element of a means of egress in buildings from a mezzanine area not more than 250 square feet (23 m2) in area that serves not more than five occupants shall have a minimum tread depth of 3 inches (76 mm) with a minimum projected tread depth of 101/2 inches (267 mm). The rise to the next alternating tread surface shall not exceed 8 inches (203 mm).

1011 STAIRWAYS
DSA-AC] In addition to the requirements of this section, means of egress, which provide access to, or egress from, buildings or facilities where accessibility is required for applications listed in Section 1.9.1 regulated by the Division of the State Architect-Access Compliance, shall also comply with Chapter 11A or Chapter 11B, Sections 11B-210 and 11B-504, as applicable.
1011.1 General
Stairways serving occupied portions of a building shall comply with the requirements of Sections 1011.2 through 1011.13. Alternating tread devices shall comply with
Section 1011.14. Ships ladders shall comply with Section 1011.15. Ladders shall comply with Section 1011.16.
Exception: Within rooms or spaces used for assembly purposes, stepped aisles shall comply with Section 1029.
1011.2 Width and capacity
The required capacity of stairways shall be determined as specified in Section 1005.1, but the minimum width shall be not less than 44 inches (1118 mm). See Section
1009.3 for accessible means of egress stairways.
Exceptions:Stairways serving an occupant load of less than 50 shall have a width of not less than 36 inches (914 mm).Spiral stairways as provided for in Section 1011.10.
Where an incline platform lift or stairway chairlift is installed on stairways serving occupancies in Group R-3, or within dwelling units in occupancies in Group R-2, a clear passage width not less than 20 inches (508 mm) shall be provided. Where the seat and platform can be folded when not in use, the distance shall be measured from the folded position.
Means of egress stairs in a Group I-2 or I-2.1 occupancy used for the movement of beds and stretcher patients shall provide a clear width not less than 44 inches (1118 mm).
1011.3 Headroom
Stairways shall have a headroom clearance of not less than 80 inches (2032 mm) measured vertically from a line connecting the edge of the nosings. Such headroom shall be continuous above the stairway to the point where the line intersects the landing below, one tread depth beyond the bottom riser. The minimum clearance shall be maintained the full width of the stairway and landing.
Exceptions: Spiral stairways complying with Section 1011.10 are permitted a 78-inch (1981 mm) headroom clearance.
In Group R-3 occupancies; within dwelling units in Group R-2 occupancies; and in Group U occupancies that are accessory to a Group R-3 occupancy or accessory to individual dwelling units in Group R-2 occupancies; where the nosings of treads at the side of a flight extend under the edge of a floor opening through which the stair passes, the floor opening shall be allowed to project horizontally into the required headroom not more than 43/4 inches (121 mm).
1011.4 Walkline
The walkline across winder treads shall be concentric to the direction of travel through the turn and located 12 inches (305 mm) from the side where the winders are narrower. The 12-inch (305 mm) dimension shall be measured from the widest point of the clear stair width at the walking surface of the winder. Where winders are adjacent within the flight, the point of the widest clear stair width of the adjacent winders shall be used.
1011.5 Stair treads and risers
Stair treads and risers shall comply with Sections 1011.5.1 through 1011.5.5.3.
1011.5.1 Dimension reference surfaces
For the purpose of this section, all dimensions are exclusive of carpets, rugs or runners.
1011.5.2 Riser height and tread depth
Stair riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum. The riser height shall be measured vertically between the nosings of adjacent treads. Rectangular tread depths shall be 11 inches (279 mm) minimum measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's nosing. Winder treads shall have a minimum tread depth of 11 inches (279 mm) between the vertical planes of the foremost projection of adjacent treads at the intersections with the walkline and a minimum tread depth of 10 inches (254 mm) within the clear width of the stair.
Exceptions: Spiral stairways in accordance with Section 1011.10.
Stairways connecting stepped aisles to cross aisles or concourses shall be permitted to use the riser/tread dimension in Section 1029.13.2.
In Group R-3 occupancies; within dwelling units in Group R-2 occupancies; and in Group U occupancies that are accessory to a Group R-3 occupancy or accessory to individual dwelling units in Group R-2 occupancies; the maximum riser height shall be 73/4 inches (197 mm); the minimum tread depth shall be 10 inches (254 mm); the minimum winder tread depth at the walkline shall be 10 inches (254 mm); and the minimum winder tread depth shall be 6 inches (152 mm). A nosing projection not less than 3/4 inch (19.1 mm) but not more than 11/4 inches (32 mm) shall be provided on stairways with solid risers where the tread depth is less than 11 inches (279 mm).
See California Fire Code Chapter 11 and California Existing Building Code for the replacement of existing stairways. [DSA-AC] For applications listed in Section 1.9.1 regulated by the Division of the State Architect-Access Compliance, see Chapter 11B, Section 11B-202.
In Group I-3 facilities, stairways providing access to guard towers, observation stations and control rooms, not more than 250 square feet (23 m2) in area, shall be permitted to have a maximum riser height of 8 inches (203 mm) and a minimum tread depth of 9 inches (229 mm).
[SFM] Stairways providing access to lifeguard towers not open to the public, not more than 250 square feet (23 m2) in area, shall be permitted to have a maximum riser height of 8 inches (203 mm) and a minimum tread depth of 9 inches (229 mm).
1011.5.3 Winder treads
Winder treads are not permitted in means of egress stairways except within a dwelling unit.
Exceptions: Curved stairways in accordance with Section 1011.9. Spiral stairways in accordance with Section 1011.10.
1011.5.4 Dimensional uniformity
Stair treads and risers shall be of uniform size and shape. The tolerance between the largest and smallest riser height or between the largest and smallest tread depth shall not exceed 3/8 inch (9.5 mm) in any flight of stairs. The greatest winder tread depth at the walkline within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm).
Exceptions: Stairways connecting stepped aisles to cross aisles or concourses shall be permitted to comply with the dimensional nonuniformity in Section 1029.13.2.
Consistently shaped winders, complying with Section 1011.5, differing from rectangular treads in the same flight of stairs. Nonuniform riser dimension complying with Section 1011.5.4.1.
1011.5.4.1 Nonuniform height risers
Where the bottom or top riser adjoins a sloping public way, walkway or driveway having an established grade and serving as a landing, the bottom or top riser is permitted to be reduced along the slope to less than 4 inches (102 mm) in height, with the variation in height of the bottom or top riser not to exceed one unit vertical in 12 units horizontal (8-percent slope) of stair width. The nosings or leading edges of treads at such nonuniform height risers shall have a distinctive marking stripe, different from any other nosing marking provided on the stair flight. The distinctive marking stripe shall be visible in descent of the stair and shall have a slip-resistant surface. Marking stripes shall have a width of not less than 1 inch (25 mm) but not more than 2 inches (51 mm).
1011.5.5 Nosing and riser profile
Nosings shall have a curvature or bevel of not less than 1/16 inch (1.6 mm) but not more than 9/16 inch (14.3 mm) from the foremost projection of the tread. Risers shall be solid and vertical or sloped under the tread above from the underside of the nosing above at an angle not more than 30 degrees (0.52 rad) from the vertical.
1011.5.5.1 Nosing projection size
The leading edge (nosings) of treads shall project not more than 11/4 inches (32 mm) beyond the tread below.
1011.5.5.2 Nosing projection uniformity
Nosing projections of the leading edges shall be of uniform size, including the projections of the nosing's leading edge of the floor at the top of a flight.
1011.5.5.3 Solid risers
Risers shall be solid. Exceptions: Solid risers are not required for stairways that are not required to comply with Section 1009.3, provided that the opening between treads does not permit the passage of a sphere with a diameter of 4 inches (102 mm).
Solid risers are not required for occupancies in Group I-3 or in Group F, H and S occupancies other than areas accessible to the public. There are no restrictions on the size of the opening in the riser. Solid risers are not required for spiral stairways constructed in accordance with Section 1011.10.
1011.6 Stairway landings
There shall be a floor or landing at the top and bottom of each stairway. The width of landings shall be not less than the width of stairways served. Every landing shall have a minimum width measured perpendicular to the direction of travel equal to the width of the stairway. Where the stairway has a straight run the depth need not exceed 48 inches (1219 mm). Doors opening onto a landing shall not reduce the landing to less than one-half the required width. When fully open, the door shall not project more than 7 inches (178 mm) into a landing. Where wheelchair spaces are required on the stairway landing in accordance with Section 1009.6.3, the wheelchair space shall not be located in the required width of the landing and doors shall not swing over the wheelchair spaces.
Exception: Where stairways connect stepped aisles to cross aisles or concourses, stairway landings are not required at the transition between stairways and stepped aisles constructed in accordance with Section 1029.

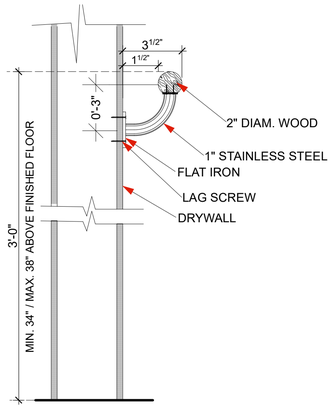
Revisions:

REMODEL, ADDITION AND ADU
HEALY'S RESIDENCE
1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez P.E.
DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 6197351492

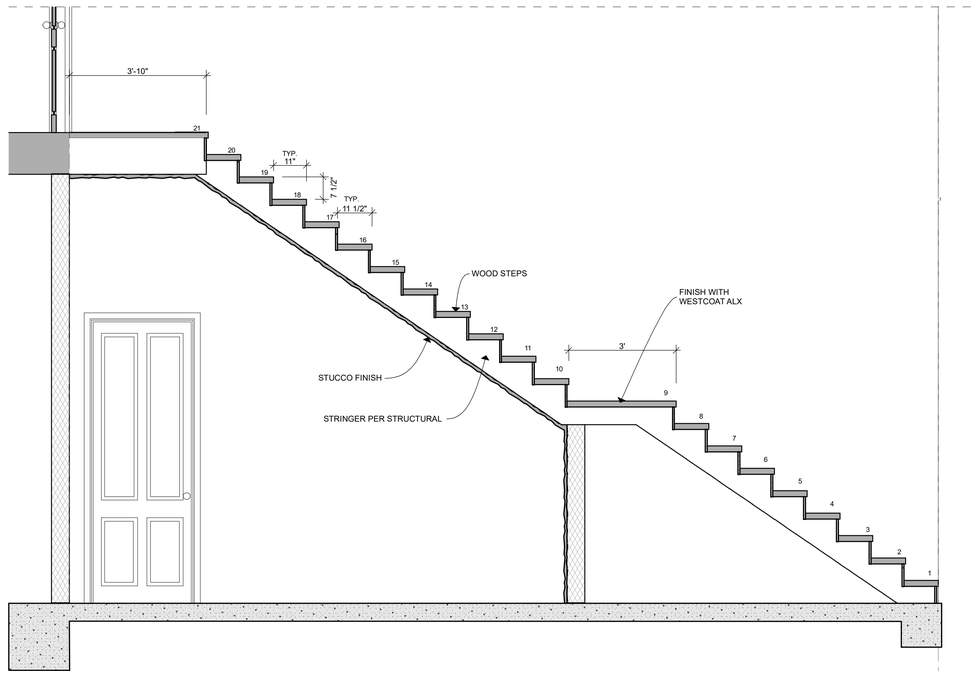
HOUSE STAIR

Date: 01-25-25
Scale:
Drawn: Fer
Job: 00000
Sheet Number: **A17**
Total sheet count: -



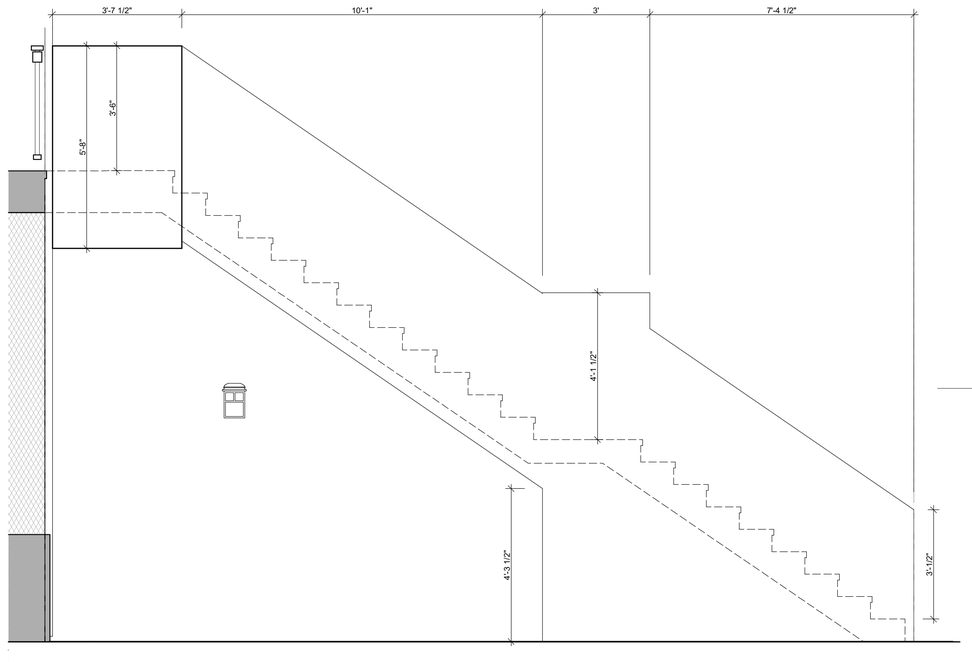
4 **TYP. HANDRAIL DETAIL**

1/2" = 1'-0"



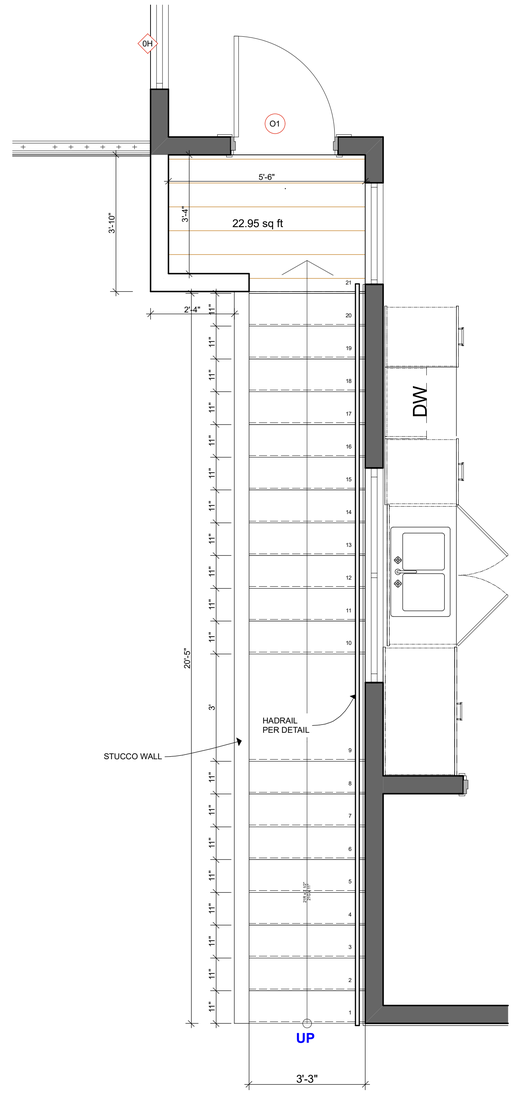
HOUSE STAIR FLOOR PLAN

1/2" = 1'-0"



HOUSE STAIR FLOOR PLAN

1/2" = 1'-0"



ADU STAIR FLOOR PLAN

1/2" = 1'-0"

Revisions:

REMODEL, ADDITION AND ADU

HEALY'S RESIDENCE

1161 SUNSET CLIFFS BLDV, SAN DIEGO, CA 92107

Fernando Gonzalez-P. DESIGN
2022 Azure Cove, Chula Vista, CA. 91915
Phone: 619.738.1492

ADU STAIR

Date: 01-25-25

Scale:

Drawn: Fer

Job: 00000

Sheet Number: **A18**

Total sheet count: -