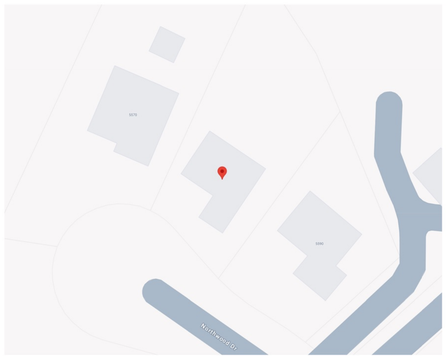
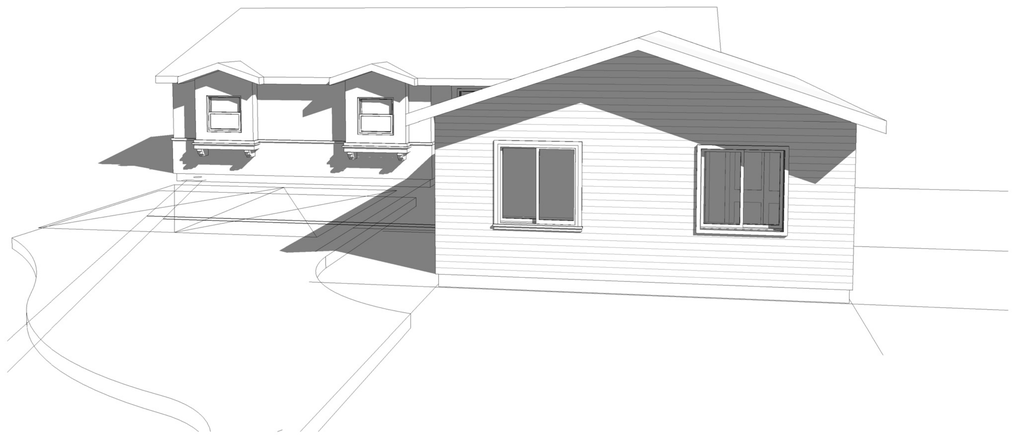
VICINITY MAP



NORTH



ADU ADDITION & RENOVATION

GENERAL NOTES

NPDES NOTES

NOTES MUST BE SHOWN AS WORDED, ON THE TITLE SHEET OF THE PLAN.

1. IN THE CASE OF EMERGENCY, CALL:
   - AT WORK PHONE #:
   - OR CELL PHONE #:
2. SEDIMENT FROM AREAS DISTURBED BY CONSTRUCTION SHALL BE RETAINED ON SITE USING STRUCTURAL CONTROLS TO THE MAXIMUM EXTENT PRACTICABLE.
3. STOCKPILES OF SOIL SHALL BE PROPERLY CONTAINED TO MINIMIZE SEDIMENT TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES OR ADJACENT PROPERTIES VIA RUNOFF, VEHICLE TACKING, OR WIND.
4. APPROPRIATE BMPS FOR CONSTRUCTION RELATED MATERIALS, WASTES, SPILLS SHALL BE IMPLEMENTED TO MINIMIZE TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES, OR ADJOINING PROPERTIES BY WIND OR RUNOFF.
5. RUNOFF FROM EQUIPMENT AND VEHICLE WASHING SHALL BE CONTAINED AT CONSTRUCTION SITE UNLESS TREATED TO REDUCE OR REMOVE SEDIMENT AND OTHER POLLUTANTS.
6. ALL CONSTRUCTION CONTRACTOR AND SUBCONTRACTOR PERSONNEL ARE TO BE MADE AWARE OR THE REQUIRED BEST MANAGEMENT PRACTICES AND GOOD HOUSEKEEPING MEASURES FOR THE PROJECT SITE AND ANY ASSOCIATED CONSTRUCTION STAGING AREAS.
7. AT THE END OF EACH DAY OF CONSTRUCTION ACTIVITY ALL CONSTRUCTION DEBRIS AND WASTE MATERIALS SHALL BE COLLECTED AND PROPERLY DISPOSED IN TRASH OR RECYCLE BINS.
8. CONSTRUCTION SITES SHALL BE MAINTAINED IN SUCH A CONDITION THAT AN ANTICIPATED STORM DOES NOT CARRY WASTES OR POLLUTANTS OFF THE SITE. DISCHARGES OF MATERIAL OTHER THAN STORM WATER ONLY WHEN NECESSARY FOR PERFORMANCE AND COMPLETION OF CONSTRUCTION PRACTICES AND WHERE THEY DO NOT: CAUSE OR CONTRIBUTE TO A VIOLATION OF ANY WATER QUALITY STANDARD; CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR NUISANCE; OR CONTAIN A HAZARDOUS SUBSTANCE IN A QUANTITY REPORTABLE UNDER FEDERAL REGULATIONS 40 CFR PARTS 117 AND 302.
9. POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: SOLID OR LIQUID CHEMICAL SPILLS; WASTES FROM PAINTS, STAINS, SEALANTS, GLUES, LIMES, PESTICIDES, HERBICIDES, WOOD PRESERVATIVES AND SOLVENTS; ASBESTOS FIBERS, PAINT FLAKES OR STUCCO FRAGMENTS; FUELS, OILS, LUBRICANTS, AND HYDRAULIC, RADIATOR OR BATTERY FLUIDS; FERTILIZERS, VEHICLE/EQUIPMENT WASH WATER AND CONCRETE WASH WATER; CONCRETE, DETERGENT OR FLOATABLE WASTES; WASTES FROM ANY ENGINE/EQUIPMENT STEAM CLEANING OR CHEMICAL DEGREASING AND SUPER CHLORINATED POTABLE WATER LINE FLUSHING. DURING CONSTRUCTION, PERMITTEE SHALL DISPOSE OF SUCH MATERIALS IN A SPECIFIED AND CONTROLLED TEMPORARY AREA ON SITE, PHYSICALLY SEPARATED FROM POTENTIAL STORM WATER RUNOFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.
10. DEWATERING OF CONTAMINATED GROUNDWATER, OR DISCHARGING CONTAMINATED SOILS VIA SURFACE EROSION IS PROHIBITED. DEWATERING OF NON CONTAMINATED GROUNDWATER REQUIRES A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT FROM THE RESPECTIVE STATE REGIONAL WATER QUALITY CONTROL BOARD.
11. GRADED AREAS ON THE PERMITTED AREA PERIMETER MUST DRAIN AWAY FROM THE FACE OF SLOPES AT THE CONCLUSION OF EACH WORKING DAY. DRAINAGE IS TO BE DIRECTED TOWARD DESILTING FACILITIES.
12. THE PERMITTEE AND CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS CONDITION.
13. THE PERMITTEE AND CONTRACTOR SHALL INSPECT THE EROSION CONTROL WORK AND INSURE THAT THE WORK IS IN ACCORDANCE WITH THE APPROVED PLANS.
14. THE PERMITTEE SHALL NOTIFY ALL GENERAL CONTRACTORS, SUBCONTRACTORS, MATERIAL SUPPLIERS, LESSEES, AND PROPERTY OWNERS: THAT DUMPING OF CHEMICALS INTO THE STORM DRAIN SYSTEM OR THE WATERSHED IS PROHIBITED.
15. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. NECESSARY MATERIALS SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
16. ALL REMOVABLE EROSION PROTECTIVE DEVICES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE 5 DAY RAIN PROBABILITY FORECAST EXCEEDS 40%.
17. SEDIMENTS FROM AREAS DISTURBED BY CONSTRUCTION SHALL BE RETAINED ON SITE USING AN EFFECTIVE COMBINATION OF EROSION AND SEDIMENT CONTROLS TO THE MAXIMUM EXTENT PRACTICABLE, AND STOCKPILES OF SOIL SHALL BE PROPERLY CONTAINED TO MINIMIZE SEDIMENT TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES OR ADJACENT PROPERTIES VIA RUNOFF, VEHICLE TRACKING, OR WIND.
18. APPROPRIATE BMPS FOR CONSTRUCTION RELATED MATERIALS, WASTES, SPILLS OR RESIDUES SHALL BE IMPLEMENTED AND RETAINED ON SITE TO MINIMIZE TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES, OR ADJOINING PROPERTY BY WIND OR RUNOFF.

CALIFORNIA RESIDENTIAL CODE NOTES

1. EXTERIOR DOORS MUST OPEN OVER A LANDING NOT MORE THAN ½" BELOW THE THRESHOLD. EXCEPTION: PROVIDING THE DOOR DOES NOT SWING OVER THE LANDING THE LANDING SHALL NOT BE MORE THAN 8" BELOW THE THRESHOLD.
2. LANDINGS AT DOORS SHALL HAVE A LENGTH MEASURED IN DIRECTION OF TRAVEL OF NOT LESS THAN 36 INCHES. TYP. CRC R311.3
3. STORAGE/CLOSET UNDER STAIR, PROVIDE ONE LAYER OF 5/8 TYPE "X" GYP. BD. AT WALL AND UNDERSIDE OF STAIR TO ACHIEVE 1HR OF FIRE PROTECTION
4. GARAGE, PROVIDE 1 LAYER OF 5/8 TYPE "X" GYP. BD. AT GARAGE WALLS, CEILINGS, AND SUPPORTING STRUCTURAL MEMBERS SEPARATING THE GARAGE AND LIVING AREAS TO ACHIEVE 1HR OF FIRE PROTECTION

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO STARTING WORK, AND SHALL NOTIFY THE DESIGNER OF DISCREPANCIES OR INCONSISTENCIES.
2. THE STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT REPRESENT THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT LIMITED TO, BRACING AND SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, CONSTRUCTION LOADS OF MATERIALS, ETC. THE CONTRACTOR, AT NO EXPENSE TO THE OWNER, SHALL RETAIN QUALIFIED PROFESSIONALS TO DETERMINE FIELD LAYOUT OF THE BUILDING ELEMENTS, AND THE ADEQUACY OF ALL PROPOSED BRACING AND SHORING.
3. OBSERVATION VISITS TO THE SITE BY THE ENGINEER SHALL NOT INCLUDE OBSERVATION OF SAFETY METHODS, BRACING OR SUPPORT.
4. PLAN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON DRAWINGS.
5. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND STANDARD DETAILS.
6. CLARIFICATION SHALL BE REQUESTED FROM THE ENGINEER FOR ALL WORK INDICATED ON THE PLANS THAT IS NOT SPECIFICALLY DETAILED, AND IS NOT SIMILAR TO WORK THAT IS DETAILED.
7. SEE EXISTING AND / OR OTHER PLANS FOR SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS, SIZE AND LOCATION OF ALL NON-BEARING PARTITIONS, SIZE AND LOCATION OF ALL CURBS, DRAINS, DEPRESSED AREAS, SLOPES AND ELEVATION CHANGES, CHAMFERS, GROOVES, INSERTS, ALL FINISHES, AND SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS.
8. SEE OTHER PLANS FOR ALL WATERPROOFING REQUIREMENTS. THE ENGINEER IS NOT RESPONSIBLE FOR WATERPROOFING DETAILS AND SPECIFICATIONS.
9. MECHANICAL, PLUMBING, AND ELECTRICAL REPAIRS SHALL BE UNDER SEPARATE PERMIT AND SHALL BE PERFORMED BY A LICENSED CONTRACTOR LICENSED IN THE APPROPRIATE FIELD.
10. MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOFS. LOADS SHALL NOT EXCEED DESIGN LOADING FOR SUPPORTING MEMBERS.
11. UNLESS APPROVED BY THE LOCAL C.B.O. OR BUILDING DEPARTMENT (PER CPC SECTION 301.2.5.) PEX IS NOT AN APPROVED BUILDING MATERIAL

MISCELLANEOUS NOTES

1. ALL PLUMBING FIXTURES SHALL MEET LOCAL, STATE AND/OR FEDERAL CURRENT REGULATIONS.
2. WHEN TANK WATER HEATERS IS USED, IT SHALL BE STRAPPED PER (CPC 510.5) OR HAVE A RIGID CONNECTION TO AN ADJACENT WALL. (SEC 507.3, UPC)
3. ALL INSULATION MATERIALS SHALL BE CERTIFIED BY THE MANUFACTURER AS COMPLYING WITH THE REQUIRED QUALITY STANDARDS FOR INSULATION MATERIAL.
4. AS REQUIRED BY AGENCY, PROVIDE AN APPROVED SPARK ARRESTOR FOR STOVE DOWNDRAFT VENT.
5. AS REQUIRED BY AGENCY, AN APPROVED SEISMIC SHUTOFF VALVE SHALL BE INSTALLED ON THE FUEL GAS LINE ON THE DOWNSTREAM SIDE OF THE UTILITY METER AND BE RIGIDLY CONNECTED TO THE EXTERIOR OF THE BUILDING OR STRUCTURE CONTAINING THE FUEL GAS PIPING.
6. FOR TYPICAL MOUNTING HEIGHTS OF DOOR HARDWARE, ELECTRICAL DEVICES AND MECHANICAL CONTROLS SEE DETAIL.
7. PROVIDE R-12 EXTERIOR BLANKET INSULATION FOR HOT WATER HEATER. R-3 INSULATION SHALL BE PROVIDED FOR THE FIRST FIVE FEET OF THE WATER HEATER OUTLET PIPE. ALL WATER HEATING AND SPACE CONDITIONING EQUIPMENT, SHOWER HEADS, AND FAUCETS SHALL BE C.E.C. CERTIFIED. ALL STEAM AND STEAM CONDENSATE RETURN PIPING AND ALL CONTINUOUSLY RE-CIRCULATING DOMESTIC HEATING OR HOT WATER PIPING SHALL BE INSULATED PER PLUMBING DIVISION.
8. REFER TO TITLE 24 REPORT FOR INSULATION VALUES.
9. GRIPS ON RAILS SHALL HAVE A 1 ¼" MINIMUM AND 2" MAXIMUM DIAMETER OR OFFER EQUIVALENT GRIPPING SURFACE

APPLICABLE STANDARDS

ALL NEW WORK SHALL COMPLY WITH THE LISTED EDITIONS OF THESE MODEL CODES.

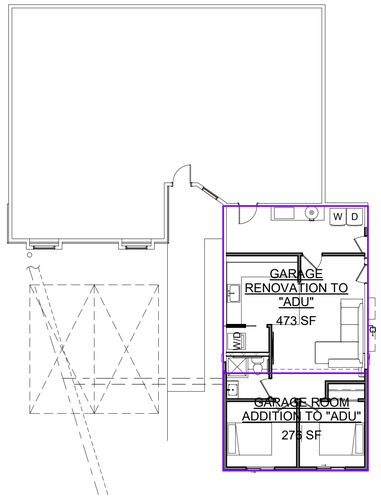
- 2022 CALIFORNIA RESIDENTIAL CODE (CRC)
- 2022 CALIFORNIA PLUMBING CODE (CPC)
- 2022 CALIFORNIA ELECTRICAL CODE (CEC)
- 2022 CALIFORNIA MECHANICAL CODE (CMC)
- 2022 CALIFORNIA GREEN BUILDING
- **2022 CALIFORNIA ENERGY CODE.**

CITY OF RIVERSIDE ADDRESS NOTES:

ADDRESSING SHALL BE ILLUMINATED AT NIGHT IN ALL NEW BUILDINGS. ADDRESS SIGNS SHALL BE INTERNALLY OR EXTERNALLY ILLUMINATED. WHEN THE LUMINANCE OR THE FACE OF A SIGN IS FROM AN EXTERNAL SOURCE, IT SHALL HAVE AN INTENSITY OF NOT LESS THAN FIVE FOOT-CANDLES. INTERNALLY ILLUMINATED SIGNS SHALL PROVIDE EQUIVALENT LUMINANCE.THE MINIMUM SIZE AND DIMENSION OF THE NUMBERS SHALL BE SIX INCHES IN HEIGHT WITH ONE-INCH STROKE WIDTH OR LARGER READILY VISIBLE AND LEGIBLE FROM THE ADJACENT STREET. SINGLE FAMILY DWELLING SHALL HAVE A MINIMUM SIZE OF FOUR INCHES IN HEIGHTS WITH ONE-INCH STROKE WIDTH OR LARGER.

VICINTY MAP

AREA PLAN (INCLUDING WALLS)



Area Schedule	
Name	Area
GARAGE RENOVATION TO "ADU"	473 SF
GARAGE ROOM ADDITION TO "ADU"	276 SF
	749 SF

DEFERRED SUBMITTALS:

- **TRUSS PLANS ARE A DEFERRED SUBMISSION**
- **SOLAR**
- **NO CHANGES TO THE MAIN SERVICE OR METER RELEASE UNDER THIS PERMIT. . CUSTOMER WILL NEED TO PULL A SEPARATE PERMIT TO UPGRADE MAIN DWELLING TO MULTI. METER PANEL SHOULD SEPARATE ELECTRICAL SERVICES BE REQUESTED. ADD (RELOCATION IF NEEDED TO PERMIT.)**

PROJECT DIRECTORY

- **OWNER**
  - NAME: Julio Aguilar
  - EMAIL: -
  - CONTACT NO: -
- **DESIGNER**
  - NAME: EVERETT SMITH DESIGNS
  - CONTACT NO: 951.323.2187
  - EMAIL: EVERETT@EVERETTSMITHDESIGNS.COM
- **STRUCTURAL** **RAHMAN ENGINEERING**
  - NAME: MOKSUD RAHMAN
  - CONTACT NO: 213.400.8078
  - EMAIL:

PROJECT INFORMATION

A. **SITE INFO**
- ADDRESS: **5580 NORTHWOOD DR RIVERSIDE CA 92509-7312**
- PARCEL # (APN): 166-401-004
- LEGAL DESCRIPTION: LOT 34 MB 109/074 TR 9283
- LOT AREA: 14,374 SF

B. **EXISTING RESIDENCE:** **SEE SQFT BELOW**
- USE TYPE: RESID. SINGLE FAMILY
- OCCUPANCY: **R-3**
- CONSTRUCT TYPE: V-B
- YEAR BUILT: 1984
- (E) BLDG/LIV AREA: 1,250 **SF**
- STORIES: 1
- BEDROOMS: 3
- BATHROOMS: 2
- PARK TYPE: DETACHED GARAGE
- OTHER INFO
  - A/C: CENTRAL
  - HEATING: CENTRAL
  - FIREPLACE: 1
  - SPRINKLERS: **NO**

C. **(E) GARAGE STRUCTURE W/ ADU CONVERSION**
- ADDRESS: **5580 NORTHWOOD DR RIVERSIDE CA 92509-7312**
- USE TYPE: RESID. ADU
- OCCUPANCY: R-3
- CONSTRUCT TYPE: V-B
- YEAR BUILT: 2025
- (E) BLDG/LIV AREA: 749 **SF**
- STORIES: 1
- BEDROOMS: 2
- BATHROOMS: 1

SCOPE OF WORK

A. **SCOPE OF WORK**
- **ADDITION & RENOVATION OF GARAGE FOR "ADU" @ (E) SINGLE FAMILY RESIDENCE**
  ADDITIONAL BEDROOM & FAMILY ROOM.
- THE SPACE WILL BE CONVERTED TO AN LIVING SPACE TO INCLUDE (2) BEDROOMS, 1 BATHROOM, LIVING ROOM.
- RENOVATION: **473 SF**
- GARAGE ADDITION: **276 SF**
- **TOTAL: 749 SF**

SQUARE FOOTAGE & LOT COVERAGE

LOT COVERAGE

LOT AREA: -
HOUSE & CONVERSION: -

LOT COVERAGE: -

COVERAGE, LOT OR SITE: THE PERCENTAGE OF A SITE COVERED BY SOLID OR OPEN FRAME ROOFS, SOFFITS, OR OVERHANGS AND BY DECKS MORE THAN 30 INCHES IN HEIGHT.

STRUCTURAL DESIGN AND DETAILS FULLY CONFORM TO ALL OF THE REQUIREMENTS OF THIS CODE, THE CALIFORNIA RESIDENTIAL CODE. SHOULD A PORTION OR ALL OF THE STRUCTURAL DESIGN CONFORM TO THE REQUIREMENTS OF THE CBC, AS ALLOWED IN THE CRC. THE STRUCTURAL DESIGN CONFORMS WITH CBC

SHEET INDEX

PREPARED BY:

EVERETT SMITH DESIGNS, INC
30141 ANTELOPE RD. D774
MENIFEE, CA 92584

Everett Smith
DIGITALLY SIGNED 6/26/2025 11:31:46 AM

Email: everett@everettsmithdesigns.com

PROJECT:

ADDITION & RENOVATION OF GARAGE FOR"ADU" @ (E) SINGLE FAMILY RESIDENCE

REVISIONS:

No.	Description	Date

PROJECT ADDRESS:

5580 NORTHWOOD DR
RIVERSIDE CA
92509-7312

CLIENT NAME:

Aguilar Residence

COVER SHEET

Project number	25-2522
Date	6/26/2025 11:31:46 AM
Drawn by	RS
Checked by	ES

A0

Scale 1" = 10'-0"

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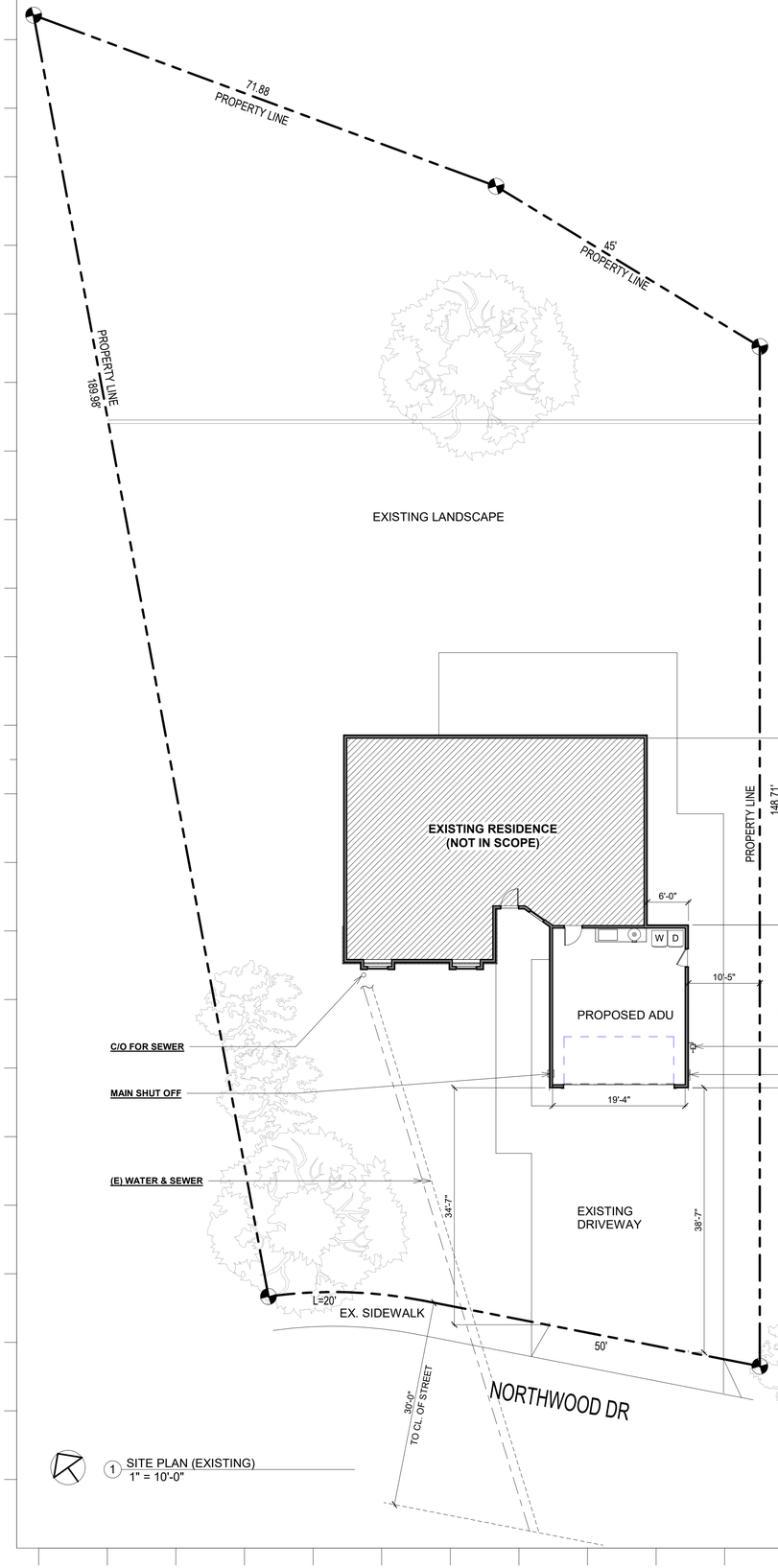
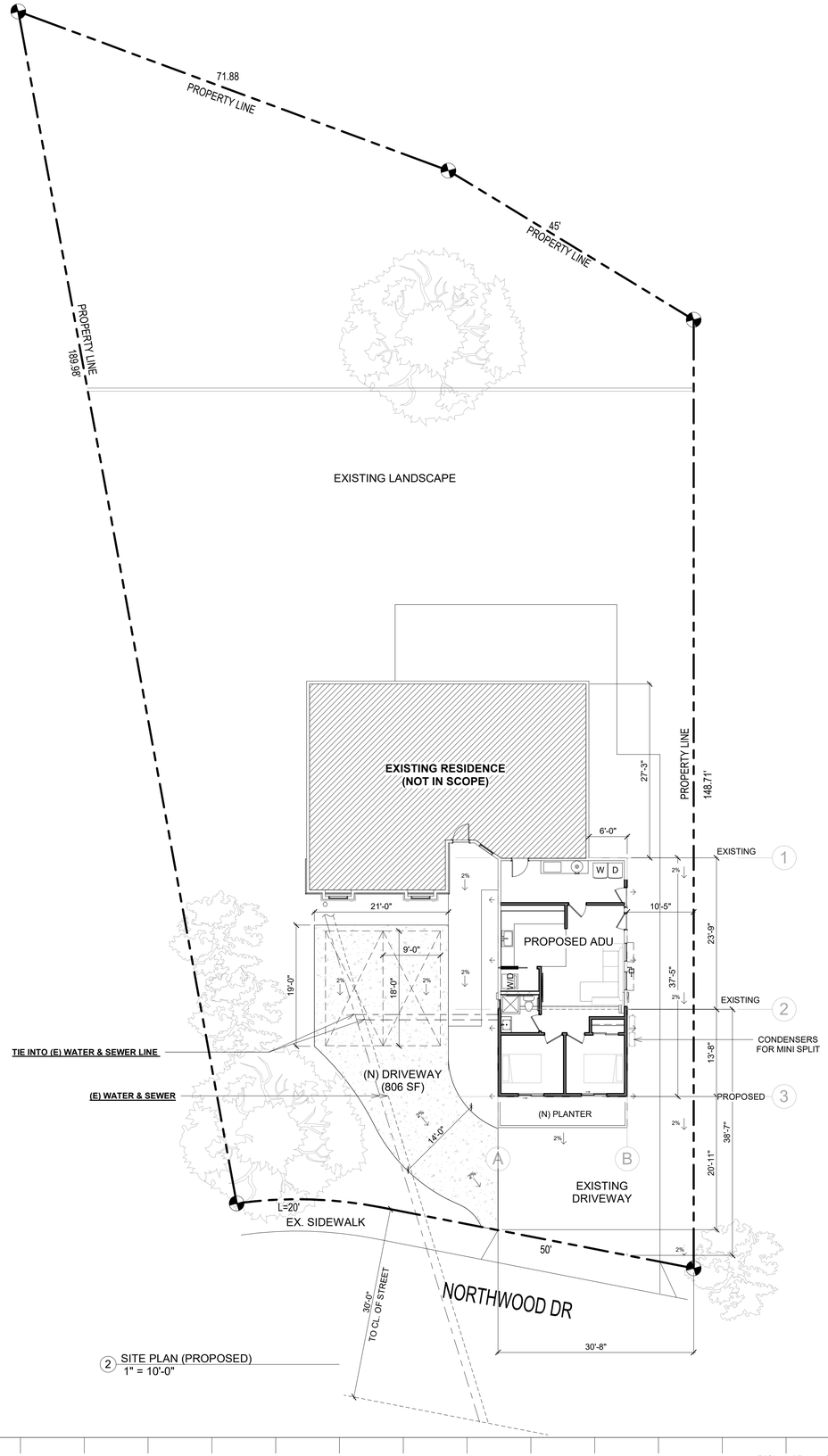


1 SITE PLAN (EXISTING)
1" = 10'-0"



2 SITE PLAN (PROPOSED)
1" = 10'-0"

SITE PLAN NOTES

1. THE CONTRACTOR OR THE OWNER/BUILDER SHALL BE RESPONSIBLE FOR SITE SURVEY
2. ALL SURFACE WATER SHALL SLOPE AWAY FROM BUILDING
3. ALL FINISH GRADES AROUND THE EXTERIOR OF THE HOUSE SHALL BE SLOPED TO DRAIN SURFACE WATER AWAY FROM THE FOUNDATION
4. ANY ARTIFICIAL LIGTING SHALL BE DIRECTED OR SHADED SO AS NOT TO FALL INTO ADJACENT PROPERTIES

STORM WATER POLLUTION CONTROL REQUIREMENTS

THE FOLLOWING REPRESENT THE MINIMUM STANDARDS OF GOOD HOUSEKEEPING THAT MUST BE IMPLEMENTED ON ALL CONSTRUCTION SITES.

1. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR WIND.
2. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
3. FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
4. NON-STORMWATER RUNOFF FROM EQUIPMENT AND VEHICLE WASHING AND ANY OTHER ACTIVITY SHALL BE CONTAINED AT THE PROJECT SITE.
5. EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
6. TRASH AND CONSTRUCTION RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
7. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
8. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
9. CONSTRUCTION SITE SHALL BE MAINTAINED BY IMPLEMENTATION OF BEST MANAGEMENT PRACTICES (BMPS) IN SUCH A MANNER THAT POLLUTANTS ARE NOT DISCHARGED FROM THE SITE TO THE MAXIMUM EXTENT PRACTICABLE. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW,SWALES, AREA DRAINS, NATURAL DRAINAGE OR WIND.

PERMANENT BMP'S:

SS-10 ENERGY DISSIPATOR

SS-11 DRAINAGE FROM ROOF AREAS AND OTHER IMERVIOUS SURFACES SHALL BE DIRECTED TO A FLAT VEGITATED AREAS

SS-20 SLOPE PAVEMENT TOWARDS FLAT VEGETATED AREAS OR POROUS PAVEMENT

WASTE MANAGEMENT CONTROL BMP'S:

WM-1 MATERIAL DELIVERY & STORAGE

WM-8 CONCRETE WASTE MANAGEMENT

WM-5 SOLID WASTE MANAGEMENT

WM-9 SANITARY WASTE MANAGEMENT

WM-6 HAZARDOUS WASTE MANAGEMENT

SITE DRAINAGE

SS-9 BROWN DITCH

SS-9 DIRECTION OF SITE DRAINAGE

TEMPORARY RUNOFF CONTROL BMP'S:

SC-1 SILT FENCE

SC-5 FIBER ROLLS (FR FR)

SC-6 GRAVEL BAGS

TC-1 STABILIZED CONSTRUCTION ENTRANCE

PREPARED BY:

EVERETT SMITH
DESIGNS, INC
30141 ANTELOPE RD. D774
MENIFEE, CA 92584

Everett Smith
DIGITALLY SIGNED
6/26/2025 11:31:47 AM

Email: everett@everettsmithdesigns.com

PROJECT:

ADDITION & RENOVATION OF GARAGE FOR"ADU" @ (E) SINGLE FAMILY RESIDENCE

REVISIONS:

No.	Description	Date

PROJECT ADDRESS:

5580 NORTHWOOD DR
RIVERSIDE CA
92509-7312

CLIENT NAME:

Aguilar Residence

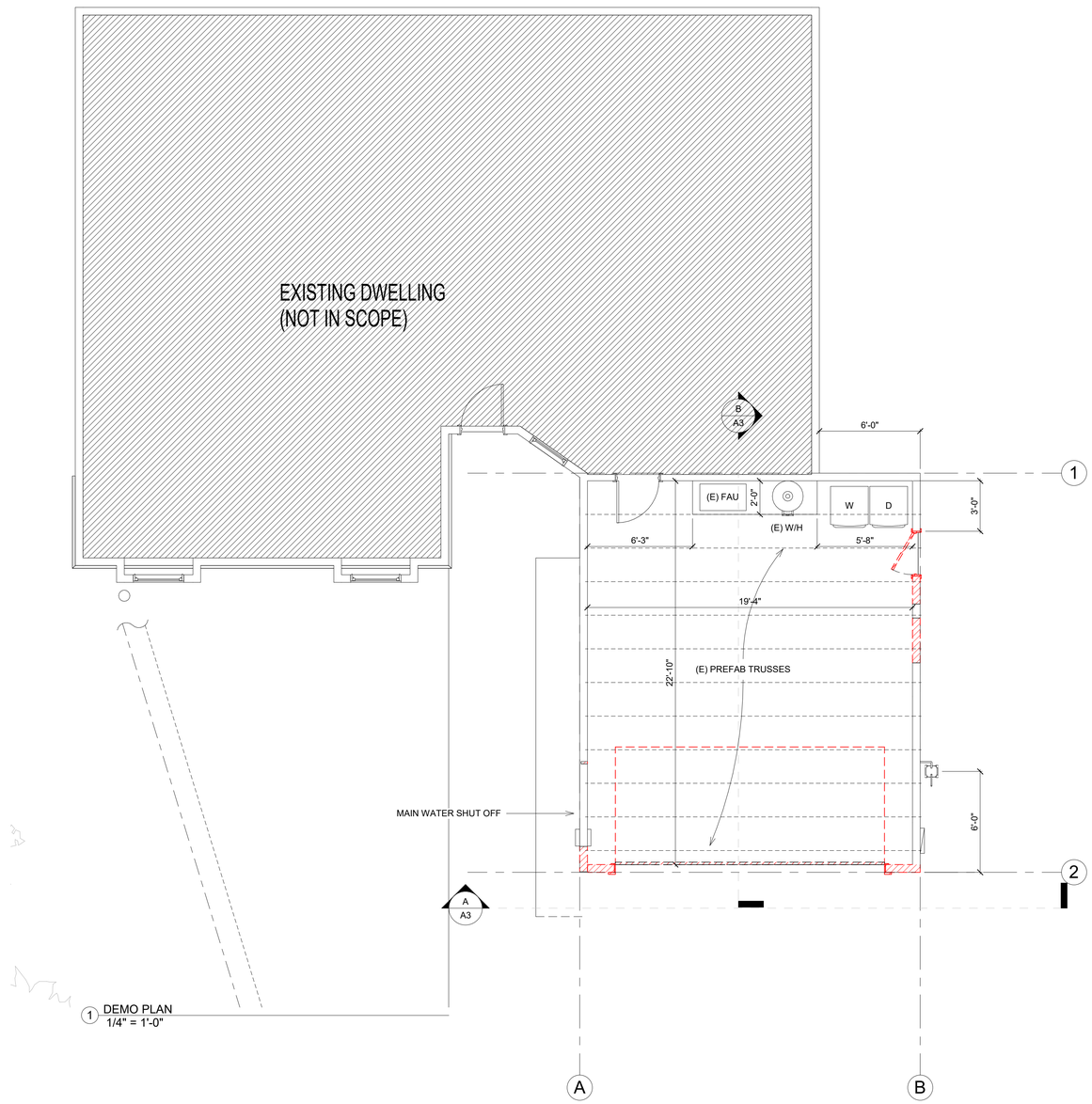
SITE PLAN

Project number	25-2522
Date	6/26/2025 11:31:47 AM
Drawn by	RS
Checked by	ES

A1

Scale: As indicated

6/26/2025 11:31:47 AM



1 DEMO PLAN
1/4" = 1'-0"

DEMO/EXISTING PLAN GENERAL NOTES

1. CONTRACTORS SHALL BE RESPONSIBLE FOR VISITING THE SITE TO BECOME FAMILIAR WITH AND VERIFY THE EXISTING CONDITIONS. THESE DEMOLITION DRAWINGS SHALL SERVE TO AID THE CONTRACTOR IN HIS EVALUATION OF THE EXTENT OF DEMOLITION; BUT SHALL NOT BE HELD TO BE ALL INCLUSIVE.
2. CONTRACTORS SHALL BE RESPONSIBLE FOR ALL DEMOLITION REQUIRED FOR THE INSTALLATION OF NEW CONSTRUCTION AS NECESSARY TO FUFILL THE PURPOSE AND INTENT OF THE FINISHED WORK, WHETHER OR NOT IT IS SPECIFICALLY SHOWN OR NOTED IN THESE DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ITEMS VALLED TO BE REMOVED.
3. CONTRACTOR SHALL FIELD INSPECT ALL DEMOLITION WORK PRIOR TO REMOVAL, TO INSURE SUCH REMOVAL DOES NOT IMPAIR STRUCTURAL INTEGRITY OF THE EXISTING BUILDING. IF THE INSPECTION INDICATES THAT THE STRUCTURAL INTEGRITY MAY BE IMPAIRED NOTIFY THE DESIGNER IMMEDIATLY.
4. REMOVE ALL DAMAGED OR EXISTING FINISH MATERIALS FROM REMAINING WALLS, PARTITIONS OR COMLUMS.
5. CONTRACTORS SHALL BE RESPONSIBLE FOR PROVIDING, INSTALLING, AND MAINTAINING DUST TIGHT TEMPORARY CONSTRUCTION BARRIERS TO ALL AREAS WITHIN THE CONSTRUCTION LIMIT LINES, DURING THE CONSTRUCTION PROCESS. LOCATIONS SHALL BE COORDINATED WITH THE OWNER AND DESIGNER.
6. ALL CONSTRUCTION AREAS, REMOVAL TRAFFIC PATTERN AREAS ASSOCIATED WORK AREAS SHALL BE KEPT CLEAN OF DEBRIS BY THE CONTRACTORS DAILY.
7. UNLESS NOTED OTHERWISE ALL DEMOLITION MATERIAL BECOMES THE PROPERTY OF THE CONTRACTORS AND IS TO BE REMOVED FROM THE PROPERTY, IN A LEGAL MANNER. THE OWNER RESERVES THE RIGHT AND SHALL BE GIVEN THE OPPURTUNITY TO CLAIM ITEMS WHETHER OT NOT THOSE ITEMS WERE SPECIFICALLY NOTED FOR REMOVAL, RELOCATION, OR AS A RETURNED TO OWNER AND SAME SHALL RETURN TO OWNER.
8. THE CONTRACTOR RESPONSIBLE FOR GENERAL DEMOLITION WORK SHALL COORDINATE ANY AND ALL ASBESTOS REMOVAL WITH THE OWNER. ALL ASBESTOS REMOVAL WILL BE PERFORMED BY A LICENSED ASBESTOS REMOVAL CONTRACTOR. THIS TYPICALLY INCLUDES FLOOR TILE, TILE MASTIC, AND PIPE INSTALLATION.
9. ITEMS SHOWN IN LIGHTER PEN WEIGHTS ARE EXISTING TO BE DEMO.
10. REMOVE NOTED DOORS AND WINDOWS INCLUDING FRAMES, TRIM AND ACCESSORIES.
11. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR MATERIALS, PLUMBING FIXTURES, ETC. THAT SHALL BE SALVAGED.
12. REMOVE ALL EXISTING PIPING AND ELECTRICAL CONDUIT THAT IS NOT TO BE REUSED.
13. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL OPENINGS AND OTHER PREPARATION REQUIRED FOR NEW EQUIPMENT AND FINISHES TO BE INSTALLED. ALL PREPARATION FOR NEW WORK IS NOT SPECIFICALLY CALLED OUT ON DEMOLITION PLANS.
14. MAKE SURE ALL OF UTILITES ARE DISCONNECTED.
15. CAP ALL ELECTRICAL, GAS, WATER, AND SEWAGE LINES.

DEMO/EXISTING PLAN LEGEND

(E)	EXISTING CONSTRUCTION
(N)	NEW CONSTRUCTION
DXX	DOOR TAG
WXX	WINDOW TAG
X	WALL TAG
	SPOT ELEVATION
	ELEVATION REFERENCE

WALL LEGEND

EXISTING WALL TO REMAIN	
EXISTING WALL TO BE REMOVED	
NEW INTERIOR WALL 2x4 @ 16" O.C.	
NEW EXTERIOR WALL 2x4 @ 16" O.C. W/ 7/8" STUCCO BACKED W/ MIN. 1/2" SOLID SHEATHING	

PREPARED BY:

EVERETT SMITH
DESIGNS, INC
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MENIFEE, CA 92584

Everett Smith
DIGITALLY SIGNED
6/26/2025 11:31:47 AM

Email: everett@everettsmithdesigns.com

PROJECT:

ADDITION & RENOVATION OF GARAGE FOR"ADU" @ (E) SINGLE FAMILY RESIDENCE

REVISIONS:

No.	Description	Date

PROJECT ADDRESS:

5580 NORTHWOOD DR
RIVERSIDE CA
92509-7312

CLIENT NAME:

Aguilar Residence

DEMO PLAN / EXISTING

Project number	25-2522
Date	6/26/2025 11:31:47 AM
Drawn by	RS
Checked by	ES

A1.1

Scale: As indicated

6/26/2025 11:31:47 AM

GENERAL
1. ALL INTERIOR AND EXTERIOR DOOR HEIGHT SHALL BE 6' 8" UNLESS NOTED OTHERWISE ON PLANS
2. INSULATION TO BE ENCLOSED ON ALL SIDES.
3. THE LANDING AT IN-SWING DOORS OTHER THAN THE REQUIRED EGRESS SHALL NOT BE MORE THAN 7 3/4" BELOW THE TOP OF THE THRESHOLD. (R311.3 CRC)
4. APPROVED WEATHER STRIPPED SHALL BE PROVIDED AROUND THE PERIMETER OF THE ATTIC ACCESS OPENING. (CEC 110.7)

APPLIANCES
1. VERIFY ALL CLEAR OPENING REQUIREMENTS
2. REFRIGERATOR: PROVIDE RECESSED COLD WATER BIBB FOR ICE MAKER
3. CLOTHES WASHER AND CLOTHES DRYER
   a. CLOTHES WASHER SHALL BE ON THE LEFT SIDE-PROVIDE HOT AND COLD WATER SUPPLY (RECESSED) AND WASTE CONNECTIONS - PROVIDE AN APPROVED "SMITTY" PAN WHEN WASHER IS LOCATED ON SECOND FLOOR
   b. MAXIMUM 14' LONG W/ (@) 90 DEG. ELBOWS UNLESS APPROVED OTHERWISE. DRYER EXHAUST VENTS TO BE MIN. 5' FROM A/C CONDENSER. 2' SHALL BE DEDUCTED FOR EACH 90 DEG. ELBOW IN EXCESS OF 2 (504.3.2.2. AND 504.3.2.2 CMC)
4. RANGE/ COOKTOP:- PROVIDE HOOD, LIGHT AND EXHAUST FAN ABOVE

PLUMBING
1. PLUMBING FIXTURES AND FITTINGS SHALL MEET THE REQUIREMENTS IN SECTION 4.303
2. FAUCETS IN KITCHENS, WET BARS, LAVATORIES, LAUNDRY SINKS, ETC. SHALL HAVE A WATER FLOW NOT TO EXCEED 1.3 GALLONS PER MINUTE. (C.G.B.C. 4.303)
3. WATER HEATER: **NEW TANKLESS**
4. TUB/SHOWER: PRE-FORMED FIBERGLASS MIN. 72" HIGH - PROVIDE CURTAIN ROD OR TEMPERED GLASS ENCLOSURE - POSITION SHOWER HEAD AT +76" A.F.F. TUB & SHOWER FLOORS & WALLS ABOVE TUB WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE. SUCH WALL SURFACE SHALL EXTEND TO 60" HEIGHT ABOVE DRAIN
5. ALL PLUMBING FIXTURES SHALL BE CONNECTED TO AND APPROVED WATER SUPPLY. LAVATORIES, BATHTUBS, SHOWERS, AND OTHERS SHALL BE PROVIDED WITH HOT AND COLD WATER. (R306.4.)
6. MAXIMUM FLOW RATES STANDARDS: **SEE SHEET A0.1**

MECHANICAL
1. A MINIMUM OPENING OF 100 SQ.IN. FOR MAKE-UP AIR SHALL BE PROVIDED IN THE LAUNDRY ROOM DOOR OR BY OTHER APPROVED MEANS PER C.M.C SECTION 504.3.1
2. FORCED AIR UNIT(S) IN ATTIC **(U.N.O.)** - MAINTAIN 30" VERTICAL CLEAR HEADROOM ALONG MIN. 24" WIDE PLYWOOD CATWALK TO ATTIC ACCESS - MAXIMUM LENGTH 20' - 0"
3. AIR CONDITIONING CONDENSER UNIT SECURELY FASTENED TO CONCRETE OR FIBERGLASS PAD
4. ALL NEW LOW-RISE RESIDENTIAL BUILDINGS MUST HAVE A WHOLE HOUSE VENTILATION SYSTEM THAT PROVIDES A CALCULATED MINIMUM AMOUNT OF OUTDOOR AIR BY USING EITHER A CONTINUOUSLY RUNNING BATHROOM FAN OR A SUPPLY RETURN AIR VENTILATION THRU A CENTRAL HVAC SYSTEM. THE MINIMUM VENTILATION VOLUME MUST BE A MINIMUM OF 1 C.F.M. FOR EACH 100 SQ.FT. OF RUNNING BATHROOM FAN OR A SUPPLY RETURN AIR VENTILATION THRU A CENTRAL HVAC SYSTEM. THE MINIMUM VENTILATION VOLUME MUST BE A MINIMUM OF 1 C.F.M. FOR EACH 100 SQ.FT. OF FLOOR AREA PLUS 7.5 C.F.M. FOR EACH OCCUPANT. THE NUMBER OF OCCUPANTS IS DETERMINED BY MULTIPLYING THE NUMBER OF BEDROOMS AND THEN ADDING ONE. (ASHRAE 62.2) TOTAL CFM RATING = 78.38

DOOR SCHEDULE

Mark	Type	Syle	Width	Height	Count
D1	2868	SINGLE PANEL	2' - 8"	6' - 8"	3
D2	4068	CLOSET SLIDING DOOR	4' - 0"	6' - 8"	1
D3	3068	POCKET DOOR	3' - 0"	6' - 8"	1
D4	2668	SINGLE PANEL	2' - 6"	6' - 8"	2
D5	3068	SINGLE PANEL EXTERIOR DOOR	3' - 0"	6' - 8"	1

WINDOW SCHEDULE

U-FACTOR 0.3 / SHGC 0.23 / STC 40 dB MIN

Mark	Type	Comments	Width	Height	Head Height	Tempered Glass	Egress	Count
W1	4040 SLIDER	LOW E ANNODIZED WINDOW	4' - 0"	4' - 0"	6' - 8"		Yes	1
W2	4040 SLIDER	LOW E ANNODIZED WINDOW	4' - 0"	4' - 0"	6' - 8"		Yes	1
W3	3020 AWNING	LOW E ANNODIZED WINDOW	3' - 0"	1' - 6"	7' - 6"			1
W4	3020 AWNING	LOW E ANNODIZED WINDOW	3' - 0"	1' - 6"	7' - 6"			1
W8	1620 SINGLE HUNG	LOW E ANNODIZED WINDOW	1' - 6"	2' - 0"	6' - 8"			1

WINDOW NOTES:

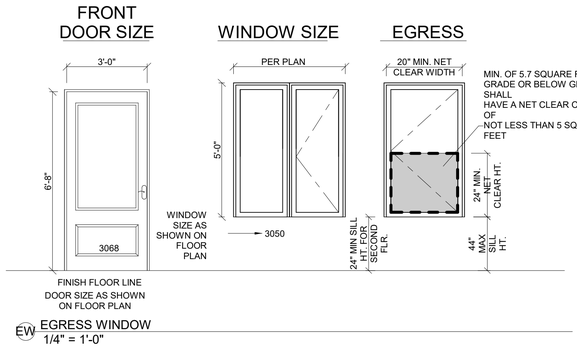
1. WINDOWS TO BE FIBERGLASS OR WOOD WINDOWS TO MATCH THE HISTORIC LOOK.
2. ANY GRIDS SHALL BE ON THE EXTERIOR OF THE GLASS AND NOT BETWEEN THE PANES.

R311.1 Means of egress. Dwellings shall be provided with a means of egress in accordance with this section. The means of egress shall provide a continuous and unobstructed path of vertical and horizontal egress travel from all portions of the dwelling to the required egress door without requiring travel through a garage. The required egress door shall open directly into a public way or to a yard or court that opens to a public way.

R310.2.1 Minimum opening area. Emergency and escape rescue openings shall have a net clear opening of not less than 5.7 square feet (0.530 m2). The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. The net clear height opening shall be not less than 24 inches (610 mm) and the net clear width shall be not less than 20 inches (508 mm).
Exception: Grade floor or below grade openings shall have a net clear opening of not less than 5 square feet (0.465 m2).
R310.2.2 Window sill height. Where a window is provided as the emergency escape and rescue opening, it shall have a sill height of not more than 44 inches (1118 mm) above the floor; where the sill height is below grade, it shall be provided with a window well in accordance with Section R310.2.3.
R310.2.3 Window wells. The horizontal area of the window well shall be not less than 9 square feet (0.9 m2), with a horizontal projection and width of not less than 36 inches (914 mm). The area of the window well shall allow the emergency escape and rescue opening to be fully opened.
Exception: The ladder or steps required by Section R310.2.3.1 shall be permitted to encroach not more than 6 inches (152 mm) into the required dimensions of the window well.

R310.2.3.1 Ladder and steps. Window wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with a permanently affixed ladder or steps usable with the window in the fully open position. Ladders or steps required by this section shall not be required to comply with Sections R311.7 and R311.8. Ladders or rungs shall have an inside width of not less than 12 inches (305 mm), shall project not less than 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center vertically for the full height of the window well.
R312.2 Window fall protection. Window fall protection shall be provided in accordance with Sections R312.2.1 and R312.2.2.
R312.2.1 Window sills. In dwelling units, where the top of the sill of an operable window opening is located less than 24 inches (610 mm) above the finished floor and greater than 72 inches (1829 mm) above the finished grade or other surface below on the exterior of the building, the operable window shall comply with one of the following:
1. Operable windows with openings that will not allow a 4-inch-diameter (102 mm) sphere to pass through the opening where the opening is in its largest opened position.
2. Operable windows that are provided with window fall prevention devices that comply with ASTM F 2090.
3. Operable windows that are provided with window opening control devices that comply with Section R312.2.2.

R312.2.2 Window opening control devices. Window opening control devices shall comply with ASTM F 2090. The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the net clear opening area of the window unit to less than the area required by Section R310.2.1.

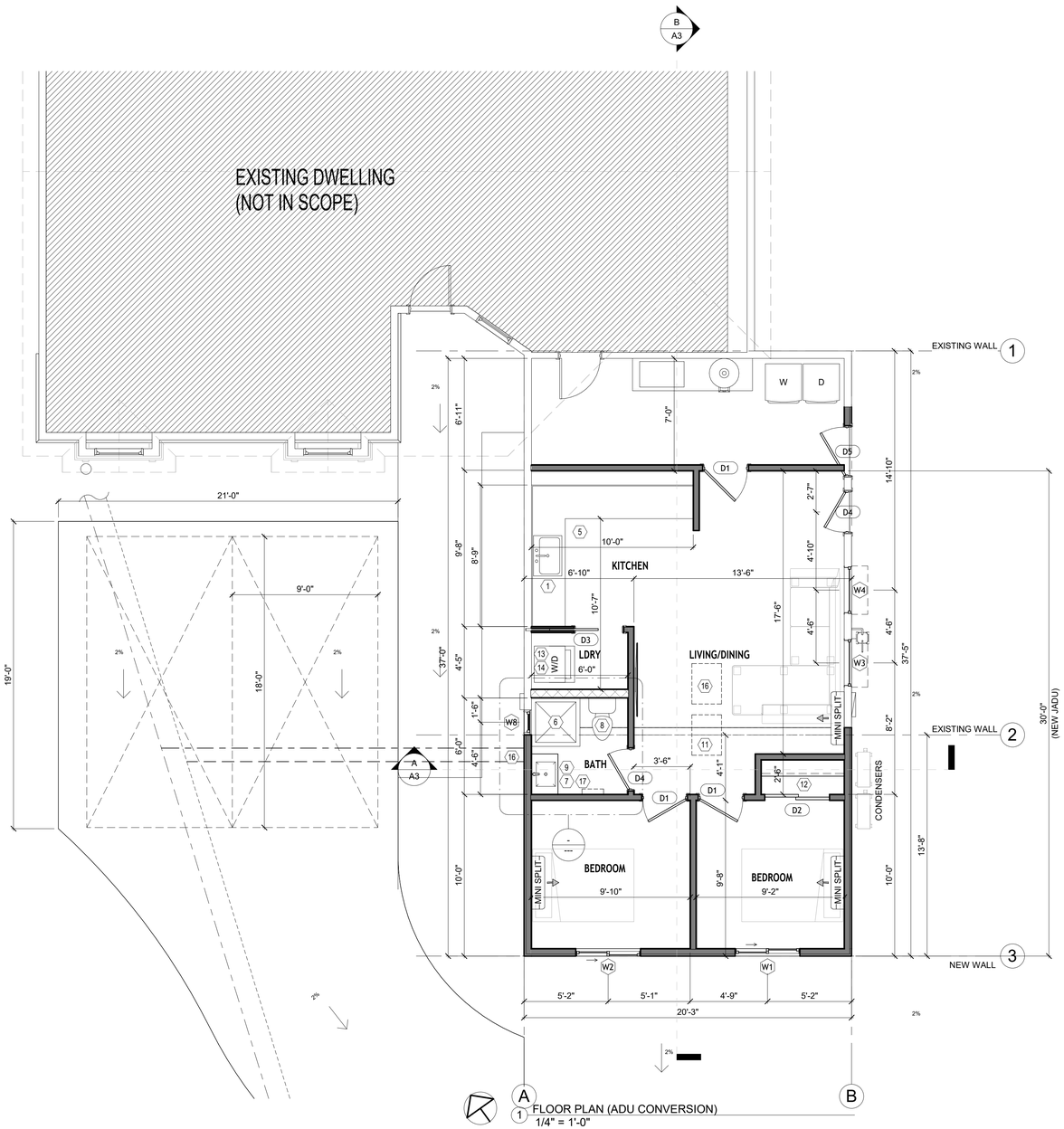


EW EGRESS WINDOW
1/4" = 1'-0"

NEW PLUMBING FIXTURES SHALL COMPLY WITH THE 2022 CALIFORNIA PLUMBING CODE AND THE 2022 CALIFORNIA GREEN CODE

SHOWERS: 1.8 GPM @ 80 PSI
KITCHEN FAUCETS: 1.8 GPM @ 80 PSI
WATER CLOSETS: 1.28 GALLONS/FLUSH
LAVATORY FAUCETS: 1.2 GPM @ 60 PSI

1. **GENERAL NOTES:**
2.
3. **FIREBLOCKING MUST BE PROVIDED IN ACCORDANCE WITH CRC SECTION R302.11 AT THE FOLLOWING LOCATIONS.**
   1. **IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AT THE CEILING AND FLOOR LEVELS.**
   2. **IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES, AT 10' INTERVALS ALONG THE LENGTH OF THE WALL.**
   3. **AT ALL THE INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS AND COVE CEILINGS.**
   4. **IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN AND BETWEEN STUDS ALONG AND IN LINE WITH THE RUN OF STAIRS IF THE WALL UNDER THE STAIRS IS UNFINISHED.**
4. **FNISH SCHEDULE: "WALL, FLOOR AND CEILING SHALL NOT EXCEED THE FLAME SPREAD CLASSIFICATIONS IN CRC SECTION R302.9".**
   II
5. **INTERIOR WALL COVERINGS SHALL COMPLY WITH THE REQUIREMENTS CITED IN CRC SECTION 702 AND TABLE R702.3.5 FOR THE APPROVED MATERIALS (FASTENERS, FASTENER SPACING, COATING THICKNESS, NUMBER OF COATS, ETC.). INCORPORATE INTO THE FINAL PLANS CRC TABLE R702.3.5. SHOW COMPLIANCE ON THE FINAL PLANS.**
6. **"ALL NEW GLAZING WILL BE INSTALLED WITH LABELS TO REMAIN IN PLACE FORINSPECTION.**
7. **OUTDOOR LIGHTING THAT IS ATTACHED TO A BUILDING MUST BE HIGH EFFICACY; OR CONTROLLED BY A MOTION SENSOR WITH AN INTEGRAL PHOTO-CONTROL. LIGHTING AROUND SWIMMING POOLS, WATER FEATURES, OR OTHER LOCATIONS SUBJECT TO ARTICLE 680 OF THE CEC ARE EXEMPT.·**



FLOOR PLAN KEYNOTES

U.N.O. = UNLESS NOTED OTHERWISE.
(#) NOTES APPLY ONLY WHEN REFERENCED BY PLAN.

1. SINK W/ GARBAGE DISPOSAL. PROVIDE REQUIRED ELECTRIC AND WASTE.
2. DELETED.
3. DELETED.
4. DELETED.
5. CABINETS @ +36" A.F.F. W/ CABINETS ABOVE WHERE OCCURS. VERIFY W/ OWNER.
6. SHOWER/TUB - BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEAD AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE. SUCH WALL SURFACE SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6' ABOVE THE FLOOR. [CRC R307.2]
7. BUILT-IN VANITY W/ DRAWER.
8. LOW-FLOW TOILET. VERIFY WITH OWNER.
9. RECESSED MEDICINE CABINET W/ TOP TO ALIGN WITH MIRROR.
10. MIRROR FIXED TO WALL ABOVE SPLASH W/ TOP @ +72" A.F.F
11. 22" X 30" ATTIC ACCESS.
12. SHELF W/ POLE AND METAL BRACKETS.
13. DRYER SPACE, PROVIDE GAS, ELECTRICAL AND VENT TO OUTSIDE AIR. SEE MECH/ELEC PLAN FOR ADDITIONAL INFO.
14. WASHER SPACE. PROVIDE WATER AND DRAIN. SEE MECH/ELEC PLAN FOR ADDITIONAL INFO.
15. FRAMED COLUMN. SEE EXTERIOR ELEVATIONS.
16. FAU AT ATTIC
17. WALL MOUNTED WATER HEATER

GENERAL PLAN NOTES

1. ALL INTERIOR DOORS TO BE HOLLOW CORE 1 3/8" THK. U.N.O. (SEE PLAN FOR SIZE). AT DOUBLE INTERIOR DOOR CONDITIONS PROVIDE DEADBOLT AT TOP OF INACTIVE DOOR.
2. ALL GARAGE SERVICE DOORS TO BE HOLLOW CORE 1 3/8" THICK EXTERIOR GRADE. (SEE PLAN FOR SIZE).
3. ALL HOUSE TO GARAGE DOORS TO BE SOLID CORE 1 3/8" THK. SELF CLOSING AND TIGHT FITTING OR A SELF CLOSING , TIGHT-FITTING DOOR HAVING A FIRE-PROTECTION RATING OF NOT LESS THAN 20 MINUTES WHEN TESTED. (SEE PLAN FOR SIZE)
4. ALL ENTRY DOORS TO BE SOLID CORE 1 3/4" THICK. (SEE PLAN FOR SIZE). AT DOUBLE ENTRY DOOR PROVIDE DEADBOLT AT TOP AND BOTTOM OF INACTIVE DOOR.
5. ALL EXTERIOR FRENCH DOORS TO BE SOLID CORE 1 3/4" THICK (SEE PLAN FOR SIZE). AT DOUBLE FRENCH DOOR PROVIDE DEADBOLT AT TOP AND BOTTOM OF INACTIVE DOOR.
6. BUILDER SHALL VERIFY W/ WINDOW MANUFACTURER THAT ALL ESCAPE OR RESCUE WINDOWS SHALL HAVE A MINIMUM NET CLEAR OPENABLE AREA OF 5.7 SQUARE FEET. THE MINIMUM CLEAR OPENABLE HEIGHT DIMENSION SHALL BE 24 INCHES. THE MINIMUM NET CLEAR OPENABLE WIDTH DIMENSION SHALL BE 20 INCHES AND HAVE A FINISHED SILL HEIGHT NOT MORE THAN 44 INCHES ABOVE THE FLOOR. (PER I.R.C. R310.1.1, R310.1.2, AND R310.1.3) WINDOWS NOT MEETING THESE REQUIREMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT.
7. THE GARAGE SHALL BE SEPARATED FROM THE RESIDENCE BY NOT LESS THAN 5/8 INCH TYPE 'X' GYPSUM BOARD APPLIED TO THE GARAGE SIDE. WHERE GARAGE CEILINGS PROVIDE A PORTION OF THE OCCUPANCY SEPARATION, THE CEILING AND SUPPORTING MEMBERS SHALL BE COVERED WITH ONE LAYER OF 5/8 INCH TYPE 'X' GYPSUM BOARD FASTENEDTO TRUSSES OR CONVENTIONAL FRAMING SPACED A MAX. OF 24 INCHES ON CENTER. (I.R.C. SECTION R309.2)

WALL LEGEND

EXISTING WALL TO REMAIN	
EXISTING WALL TO BE REMOVED	
NEW INTERIOR WALL 2x4 @ 16" O.C.	
NEW EXTERIOR WALL 2x4 @ 16" O.C. W/ 7/8" STUCCO BACKED W/ MIN. 1/2" SOLID SHEATHING	

CALIFORNIA RESIDENTIAL CODE NOTES

1. EVERY SLEEPING ROOM MUST HAVE AT LEAST ONE WINDOW OR DOOR OPENING DIRECTLY TO THE EXTERIOR. IT MUST MEET THE FOLLOWING CRITERIA:
   - MIN. NET CLEAR OPENING WIDTH: 20"
   - MIN. NET CLEAR OPENING HEIGHT: 24"
   - MIN. NET CLEAR GRADE-FLR OPENING" 5.0 SQ.FT.(720.0 SQ.IN.)
   - MIN. NET CLEAR ABOVE GRADE-FLR OPENING: 5.57 SQ.FT.(820.8 SQ.IN.)
   - BOTTOM OF THE CLEAR OPENING SHALL BE: 44" MAX ABOVE FOOR
2. BAY WINDOWS MAY NOT PROJECT INTO SETBACKS.
3. ALL NEW AND REPLACEMENT WINDOWS AND DOORS WITH GLASS MUST BE DUAL GLAZED. (U & SHGC VALUES SHALL BE 0.40 MAXIMUM)
4. THE FOLLOWING LOCATIONS REQUIRE SAFETY GLAZING (TEMPERED OR LAMINATED). GLASS TO BE ETCH MARKED:
   - GLAZING IN SWINGING, SLIDING, FIXED, AND BI-FOLD DOORS.
   - GLAZING IN WINDOWS WITHIN 24" FROM DOORS AND LESS THAN 60" HIGH.
   - GLAZING WITHIN 5 FT FROM POOL OR SPA.
   - GLAZING IN WINDOWSA AT SHOWER OR BATHTUB AND STAIR LANDINGS LESS THAN 60" ABOVE FLOOR.
   - WHEN ALL OF THE FOLLOWING OCCUR: EXPOSED AREA OF INDIVIDUAL PANE GREATER THAN 9 SQ. FT; EXPOSED BOTTOM EDGE LESS THAN 18" ABOVE THE FLOOR; ONE OR MORE WALKING SURFACES WITHIN 36" HORIZONTALLY OF THE PLANE OF THE GLAZING AND THE TOP EDGE IS MORE THAN 36" ABOVE THE FLOOR
5. OUTSWING DOOR MUST OPEN OVER A LANDING NOT MORE THAN 1 1 /2" BELOW TOP OF THRESHOLD TO THE EXTERIOR LANDING' FINISH ELEVATION. THE LANDING'S WIDTH SHALL NOT BE LASS THAN THE DOOR SERVED WITH A MINIMUM DIMENSION OF 36" MEASURED IN THE DIRECTION OF TRAVEL AND A SLOPE NOT TO EXCEED 1/4" TO 12" (2%).
6. INSTALL OR VERIFY SMOKE AND CARBON MONOXIDE DETECTORS ARE EXISTING PER CRC R314.1 AND R315.2

PREPARED BY:
EVERETT SMITH DESIGNS, INC
30141 ANTELOPE RD. D774
MENIFEE, CA 92584
DIGITALLY SIGNED 6/26/2025 11:31:48 AM
Email: everett@everettsmithdesigns.com

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ADDITION & RENOVATION OF GARAGE FOR"ADU" @ (E) SINGLE FAMILY RESIDENCE

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No.	Description	Date

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5580 NORTHWOOD DR
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PROPOSED FLOOR PLAN

Project number	25-2522
Date	6/26/2025 11:31:48 AM
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A2

Scale: As indicated

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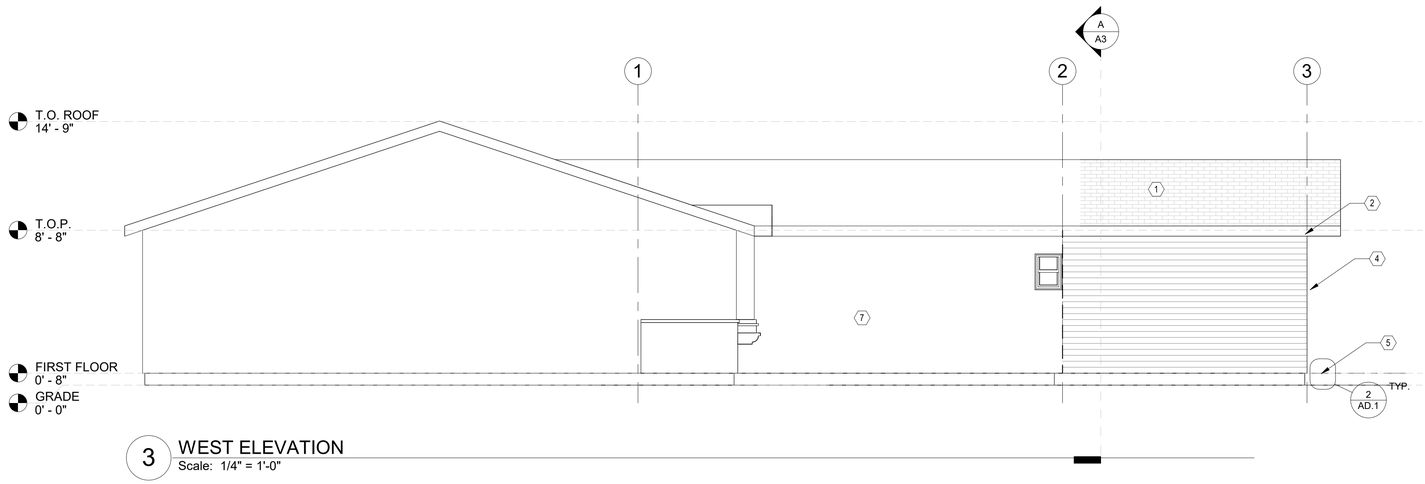
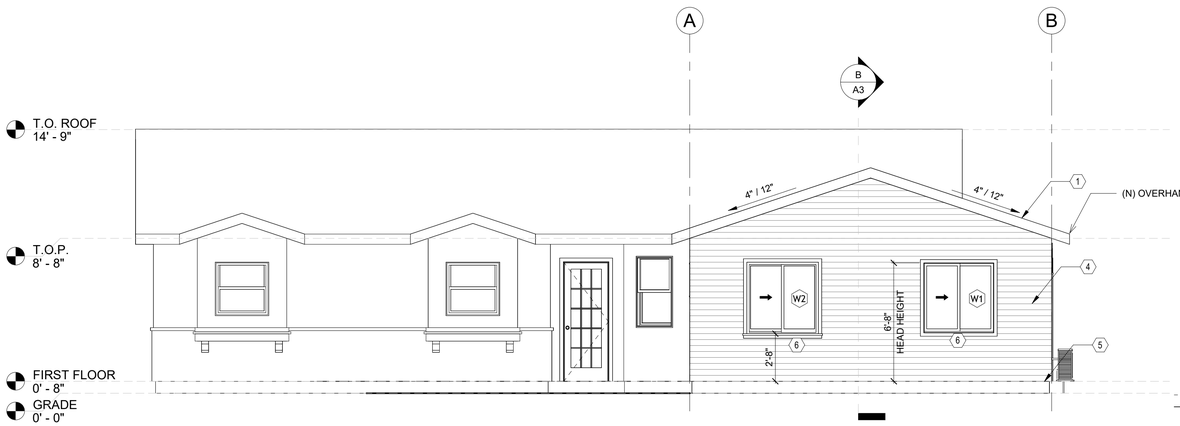
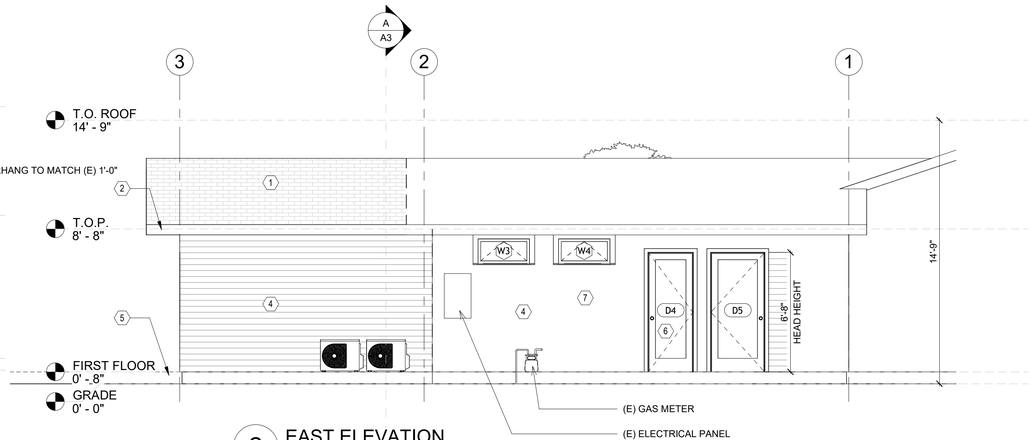


3 WEST ELEVATION
Scale: 1/4" = 1'-0"



1 SOUTH ELEVATION
Scale: 1/4" = 1'-0"

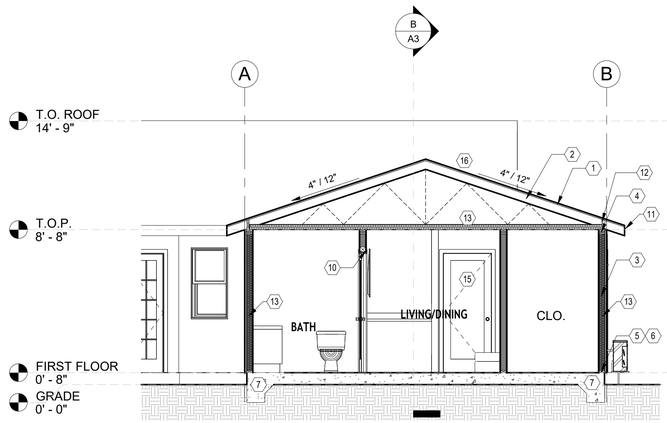


2 EAST ELEVATION
Scale: 1/4" = 1'-0"

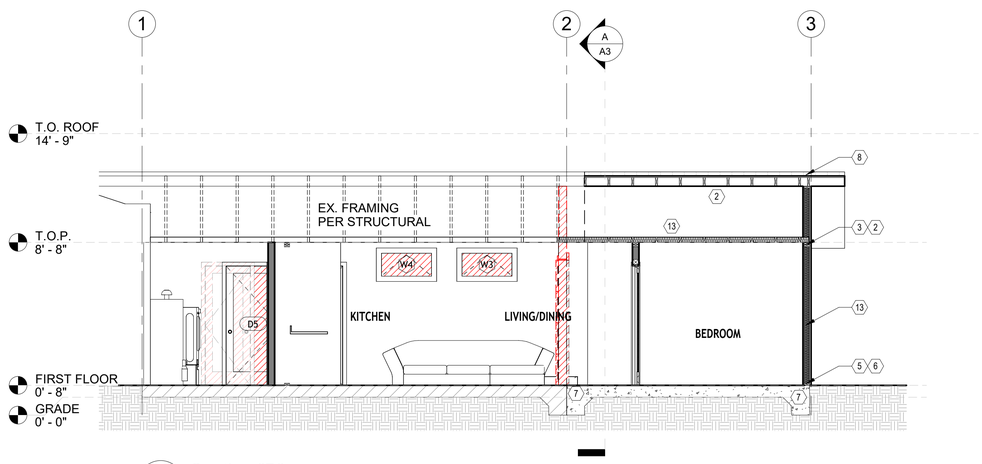
SECTION KEYNOTES

(#) (U.N.O. = UNLESS NOTED OTHERWISE)

1. SHINGLE ROOFING. 1/2" SOLID SHEATING & ROOFING. (MATCH ROOF TO EXISTING)
2. ROOF RAFTERS & CEILING JOISTS
3. 2x4 STUDS @ 16" O.C. (U.N.O.) END NAILED TO TOP PLATES, MUD SILLS & SOLE PLATES W/(2) 16d (U.N.O.)
4. (2) 2X TOP PLATES, SAME WIDTH AS STUDS, INSTALLED TO PROVIDE OVERLAPPING AT CORNERS & AT INTERSECTIONS OF OTHER PARTITIONS. END JOINTS OF DBL. TOP PLATES TO OFFSET 48" (MIN.) & NAILED W/(2) 16d NAILS (U.N.O. ON PLANS).
5. 2X MUD SILL, PRESSURE TREATED OR FOUNDATION GRADE REDWOOD.
6. 2X SOLE PLATE, SAME WIDTH AS STUDS
7. CONCRETE SLAB AND FOOTING.
8. PLYWOOD, SOLID ROOF SHEATHING TO BE RADIANT BARRIER TYPE PER ENERGY CALCS
9. INTERIOR WALL FINISH 5/8" MIN. GYP BOARD/ PLASTER
10. HEADER OR BEAM PER STRUCTURAL
11. FASCIA - SEE ELEVATIONS.
12. 2X SOLID BLOCKING.
13. FIBER BATT INSULATION PER AT24-1.
14. NEW WINDOW
15. NEW DOOR
16. VAPOR BARRIER COATING PRODUCT
    A. "OMEGA PRODUCTS INTERNATIONAL, INC. (ESR-3391)



A Section "A"
Scale: 1/4" = 1'-0"



B Section "B"
Scale: 1/4" = 1'-0"

ELEVATION KEYNOTES

(#) (U.N.O.) = UNLESS NOTED OTHERWISE.

1. SHINGLE ROOFING TO MATCH (E) ESR-2111 OR EQUAL
2. WOOD ROOF FASCIA
3. TANKLESS WATER
4. EXTERIOR FINISH - HORIZONTAL LAP SIDING
5. PROVIDE WEEP SCREED AT FOUNDATION (2/AD.1)
   A. A MIN. 26 GA CORROSION -RESISTANT PLASTUC WITH A MIN. VERTICAL FLANGE OF 3-1/2" SHALL BE PROVIDED AT OR BELOW FOUNDATION PLATE LINE ON EXTERIOR STUD WALLS. SCREED SHALL BE A MIN. OF 4" ABOVE EARTH OR 2" ABOVE PAVED AREAS.
6. DOOR – SEE SCHEDULE
7. WINDOW – SEE SCHEDULE

**** WINDOWS AND DOORS SHALL BE INSTALLED AN FLASHED PER MANUFACTURERS WRITTEN INSTALLTION INSTRUCTIONS.**

NOTE:

BUILDING SHALL HAVE ADDRESS NUMBERS PLACED IN A POSITION THAT IS PLAINLY LEGIBLE AND VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. NUMBERS SHALL CONTRAST WITH BACKGROUND, BE ARABIC OR ALPHABETICAL LETTERS AND BE A MIN. OF 4" HIGH WITH A MIN. STROKE OF 1/2". (R319.1)

PREPARED BY:

EVERETT SMITH DESIGNS, INC
30141 ANTELOPE RD. D774
MENIFEE, CA 92584

Everett Smith
DIGITALLY SIGNED
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ELEVATIONS, SECTIONS

Project number	25-2522
Date	6/26/2025 11:31:48 AM
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A3

Scale 1/4" = 1'-0"

6/26/2025 11:31:48 AM

CALIFORNIA CODE NOTES

PLUMBING NOTES:

WATER PIPING MATERIALS WITHIN A BUILDING SHALL BE IN ACCORDANCE WITH SEC. 604.1 OF THE CALIFORNIA PLUMBING CODE. PEX, CPVC AND OTHER PLASTIC WATER PIPING SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF SEC. 604 OF THE CPC, INSTALLATION STANDARDS OF APPENDIX I OF THE CPC AND MANUFACTURERS RECOMMENDED INSTALLATION STANDARDS. CPVC WATER PIPING REQUIRES A CERTIFICATION OF COMPLIANCE AS SPECIFIED IN SEC 604.1.1(D) OF THE CPC PRIOR TO PERMIT ISSUANCE. NOTE PIPE MATERIAL ON PLANS.

1. ALL HOSE BIBS MUST BE PROTECTED BY AN ANTI SIPHON DEVICE COMPLYING WITH CPC SECTION 603.
2. ANTI-SCALDING OR THERMOSTATIC MIXING VALVES ARE REQUIRED AT SHOWERS AND TUB/SHOWER COMBINATIONS.
3. WATER PIPING MATERIALS WITHIN A BUILDING SHALL BE IN ACCORDANCE WITH SEC. 604.1 OF THE CALIFORNIA PLUMBING CODE. PEX, CPVC AND OTHER PLASTIC WATER PIPING SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF SEC. 604 OF THE CPC, INSTALLATION STANDARDS OF APPENDIX I OF THE CPC AND MANUFACTURERS RECOMMENDED INSTALLATION STANDARDS. CPVC WATER PIPING REQUIRES A CERTIFICATION OF COMPLIANCE AS SPECIFIED IN SEC 604.1.1 OF THE CPC PRIOR TO PERMIT ISSUANCE.
4. WATER HEATERS SHALL HAVE A TEMPERATURE AND PRESSURE RELIEF VALVE COMPLYING WITH CPC SECTIONS 505.4 & 608.6. THE POINT OF DISCHARGE FOR RELIEF VALVE SHALL BE IN ACCORDANCE WITH CPC SECTION 608.7.
5. WHERE APPROVED, INSTANTANEOUS GAS WATER HEATERS (TANKLESS) SHALL HAVE A DEDICATED GAS LINE SIZED PER THE APPLIANCE SPECIFICATIONS (PROVIDE CUT SHEET WHEN TANKLESS IS PROPOSED).

MECHANICAL NOTES:

1. 1. A DOMESTIC CLOTHES DRYER DUCT SHALL BE OF METAL AND A MINIMUM OF 4" IN DIAMETER. THE EXHAUST DUCT SHALL NOT EXCEED A TOTAL COMBINED HORIZONTAL AND VERTICAL LENGTH OF 14', INCLUDING TWO 90-DEGREE ELBOWS. TWO FEET SHALL BE DEDUCTED FOR EACH 90-DEGREE ELBOW IN EXCESS OF TWO. THE DRYER SHALL BE VENTED TO THE OUTSIDE AIR. SEE CMC SECTIONS 504.3.2.2 & 504.3.2.2.
2. A DRYER COMPARTMENT/CLOSET SHALL BE PROVIDED WITH A MINIMUM OPENING OF 100 SQUARE INCHES FOR MAKEUP AIR IN THE DOOR OR BY OTHER APPROVED MEANS IN ACCORDANCE WITH CMC SECTION 504.3.1.
3. CONDENSATE LINES FROM MECHANICAL EQUIPMENT SHALL DISCHARGE TO A PLUMBING FIXTURE OR STORM DRAIN BY MEANS OF AN INDIRECT WASTE PIPE. CONDENSATE LINES SHALL NOT TERMINATE IN LANDSCAPE OR YARD AREAS. (309.1 CMC)
4. 120-VOLT RECEPTACLE SHALL BE LOCATED WITHIN 25' OF THE EQUIPMENT FOR SERVICE AND MAINTENANCE PURPOSES. CMC 309.
5. SPECIFY ON PLANS THAT AN APPROVED INDEPENDENT ELECTRICAL DISCONNECT IS REQUIRED FOR EACH PIECE OF EQUIPMENT WITHIN SIGHT OF THE EQUIPMENT, WHEN SUPPLY VOLTAGE IS GREATER THAN 50 VOLTS. CMC 309.
6. PROVIDE DETAILS ON THE FINAL PLANS FOR VENTING OF THE TANKLESS WATER HEATER. SHOW DUCTING SIZE, LENGTH, POINT OF TERMINATION, ETC.

ELECTRICAL NOTES:

:

A. A. FOR ALL 125-VOLT, SINGLE PHASE, 15- AND 20-AMP RECEPTACLES, GFCI OUTLETS ARE REQUIRED FOR ALL KITCHEN RECEPTACLES THAT ARE DESIGNED TO SERVE COUNTERTOP SURFACES, BATHROOMS, UNDERFLOOR SPACES OR BELOW GRADE LEVEL, IN EXTERIOR OUTLETS, LAUNDRY AREAS, WITHIN 6' OF UTILITY/WET BAR SINKS, DISHWASHERS AND IN ALL GARAGES, INCLUDING OUTLETS DEDICATED TO A SINGLE DEVICE OR GARAGE DOOR OPENER [CEC 210.8 (A)].

B. B. FOR ALL 120-VOLT, SINGLE PHASE, 15- AND 20-AMP RECEPTACLES, AFCI OUTLETS ARE REQUIRED FOR KITCHEN, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, ECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY ANY OF THE MEANS DESCRIBED IN [CEC 210.12 (A)].

C. C. ALL 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED OUTDOORS, GARAGES, ETC. SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL [CEC 210.8(A) (1)-(10)]. D. RECEPTACLES LOCATED OUTDOORS SHALL BE WEATHER RESISTANT, TAMPER RESISTANT, ENCLOSED IN AN APPROVED BUBBLE COVER [CEC 406.9, 406.12, 210.52(E)].

D. D. ELECTRICAL RECEPTACLE OUTLETS, SWITCHES AND CONTROLS (INCLUDING CONTROLS FOR HEATING, VENTILATION AND AIR CONDITIONING) INTENDED TO BE USED BY OCCUPANTS SHALL BE LOCATED NO MORE THAN 48 INCHES (1219.2 MM) MEASURED FROM THE TOP OF THE OUTLET BOX AND NOT LESS THAN 15 INCHES (381 MM) MEASURED FROM THE BOTTOM OF THE OUTLET BOX ABOVE THE FINISH FLOOR.

GENERAL NOTES:

1. EACH BATHROOM CONTAINING A BATHTUB, SHOWER, OR TUB/SHOWER COMBINATION SHALL BE MECHANICALLY VENTILATED FOR PURPOSES OF HUMIDITY CONTROL IN ACCORDANCE WITH CMC, CHAPTER 4 AND CGBSC, CHAPTER 4, DIVISION 4.5 (R303.3.1 CRC).
2. BATHROOMS, WATER CLOSET COMPARTMENTS AND OTHER SIMILAR ROOMS SHALL BE PROVIDED WITH GLAZED AREA IN WINDOWS OF NOT LESS THAN 3 S.F., ONE HALF OF SHALL BE OPENABLE. (R303.3 CRC)
   A. EXCEPTION: GLAZED AREA SHALL NOT BE REQUIRED WHERE ARTIFICIAL LIGHT AND MECHANICAL VENTILATION ARE PROVIED. MIN. VENTILATION RATES SHALL BE 50 CFM FOR INTERMITTENT VENTILATION AND 25 CFM OF CONTINUOUS VENTILATION AND VENTED DIRECTLY TO THE OUTSIDE.
3. BATHTUB & SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH SHOWERS AND SHOWER COMPARTMENTS SHALL BE FINISHED IN A NON ABSORBENT SURFACE TO A HEIGHT OF 6' ABOVE THE FLOOR. (R307.2 CRC).
4. CEMENT, FIBER-CEMENT, FIBER-MAT REINFORCED CEMENT, GLASS MAT GYPSUM OR FIBER-REINFORCED GYPSUM BACKERS SHALL BE USED AS A BASE FOR WALL TILE IN TUB AND SHOWER AREAS AND WALL AND CEILING PANELS IN SHOWER AREAS. (R702.4.2 CRC

UL217 RATED SMOKE ALARMS:

A. IN ALTERATIONS, REPAIRS AND ADDITIONS SMOKE ALARMS ARE REQUIRED IN EACH SLEEPING ROOM, OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS, AND AT EACH ADDITIONAL FLOOR OR BASEMENT LEVEL. SMOKE ALARMS MAY BE BATTERY OPERATEDAND NOT INTERCONNECTED. [CRC R314.3.1].

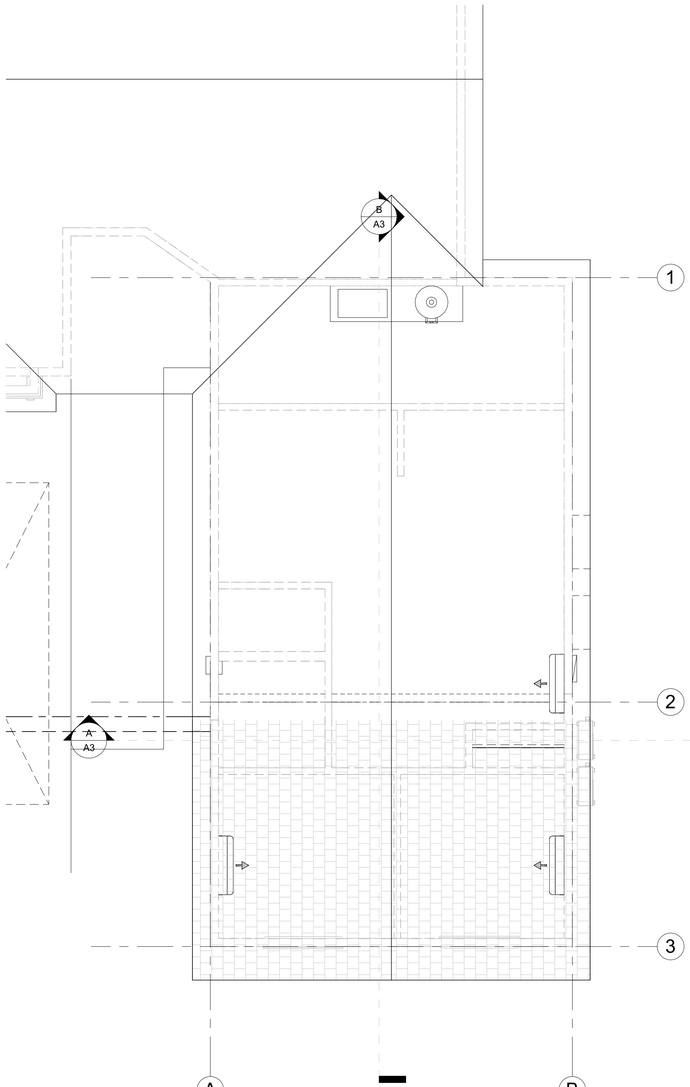
B. SMOKE ALARMS SHALL BE PROVIDED IN ALL NEW CONSTRUCTION LOCATED IN EACH SLEEPING ROOM, OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS, AND AT EACH ADDITIONAL FLOOR OR BASEMENT LEVEL. [CRC R314.3].

C. IN NEW BUILDINGS, SMOKE ALARMS SHALL BE INTERCONNECTED AND HARDWIRED. [CRC R314.4 R314.5].

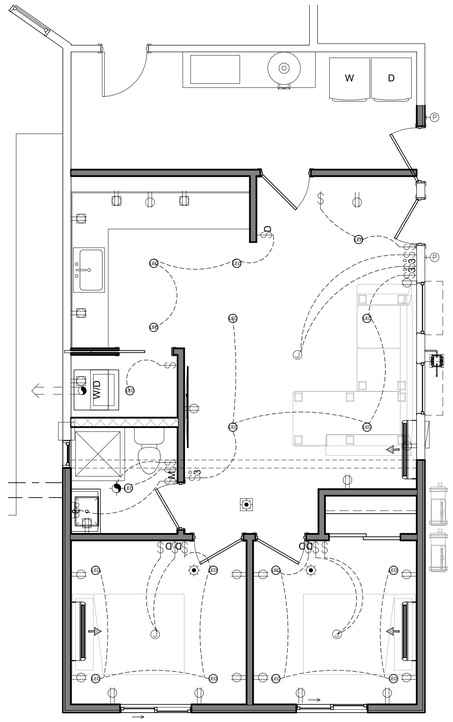
ALL SINGLE-FAMILY RESIDENCES THAT INCLUDE ONE OR TWO DWELLING UNITS SHALL MEET THE FOLLOWING. ALL ELECTRICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE:

1) AT LEAST ONE OF THE FOLLOWING SHALL BE PROVIDED:
A. ESS READY INTERCONNECTION EQUIPMENT WITH A MINIMUM BACKED-UP CAPACITY OF 60 AMPS AND A MINIMUM OF FOUR ESS-SUPPLIED BRANCH CIRCUITS, OR
B. A DEDICATED RACEWAY FROM THE MAIN SERVICE TO A PANELBOARD (SUBPANEL) THAT SUPPLIES THE BRANCH CIRCUITS IN SECTION 150.0(S)(2). ALL BRANCH CIRCUITS ARE PERMITTED TO BE SUPPLIED BY THE MAIN SERVICE PANEL PRIOR TO THE INSTALLATION OF AN ESS. THE TRADE SIZE OF THE RACEWAY SHALL BE NOT LESS THAN 1 INCH. THE PANELBOARD THAT SUPPLIES THE BRANCH CIRCUITS (SUBPANEL) MUST BE LABELED "SUBPANEL SHALL INCLUDE ALL BACKED-UP LOAD CIRCUITS."
2) A MINIMUM OF FOUR BRANCH CIRCUITS SHALL BE IDENTIFIED AND HAVE THEIR SOURCE OF SUPPLY COLLOCATED AT A SINGLE PANELBOARD SUITABLE TO BE SUPPLIED BY THE ESS. AT LEAST ONE CIRCUIT SHALL SUPPLY THE REFRIGERATOR, ONE LIGHTING CIRCUIT SHALL BE LOCATED NEAR THE PRIMARY EGRESS AND AT LEAST ONE CIRCUIT SHALL SUPPLY A SLEEPING ROOM RECEPTACLE OUTLET.
3) THE MAIN PANELBOARD SHALL HAVE A MINIMUM BUSBAR RATING OF 225 AMPS.
4) SUFFICIENT SPACE SHALL BE RESERVED TO ALLOW FUTURE INSTALLATION OF A SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH WITHIN 3 FEET OF THE MAIN PANELBOARD. RACEWAYS SHALL BE INSTALLED BETWEEN THE PANELBOARD AND THE SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH LOCATION TO ALLOW THE CONNECTION OF BACKUP POWER SOURCE.

- **INDOOR AIR QUALITY (IAQ) FAN CONTROL SWITCH SHALL HAVE A LABEL CLEARLY DISPLAYING THEFOLLOWING TEXT, OR EQUIVALENT TEXT: "THIS SWITCH CONTROLS THE INDOOR AIR QUALITY VENTILATION FOR THE HOME. LEAVE SWITCH IN THE 'ON' POSITION AT ALL TIMES UNLESS THE OUTDOOR AIR QUALITY ISVERY POOR." [CEES 150.0(O)J]**
- **INDOOR AIR QUALITY FAN SHALL BE RATED FOR A MAXIMUM SOUND RATING OF 1 SONE. [CEES 150.0(O)I]**



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



1 ELECTRICAL PLAN
Scale: 1/4" = 1'-0"

ATTIC VENTILATION CALCULATIONS:

ROOF AREA

703 S.F. / 150 = 4.68 S.F. X 144 = 674 SQ. INCHES OF FREE TOTAL VENTILATION AREA REQUIRED.

674 S.I. PROPOSED

(D) 126 x 3 = 378
(A) 98 x 4 = 392
TOTAL: 770 > 674

VENT# D x AMT. 3
VENT# A x AMT. 4
VENT# ___ x AMT. ___

NOTE:

0 GENERAL CONTRACTOR SHALL VERIFY THE NET FREE VENTILATION OF THE VENT PRODUCT SELECTED AGAINST THOSE NOTED ABOVE. THE REQUIRED VENTILATION SHALL BE MAINTAINED. PROVIDE INSULATION STOP SUCH THAT INSULATION DOES NOT OBSTRUCT FREE AIR MOVEMENT AS REQUIRED BY THE BUILDING OFFICIAL.

0 ATTIC, OVERHANGS AND OTHER CONCEALED ROOF SPACES FORMED OF COMBUSTIBLE MATERIALS SHALL BE PROVIDED WITH DRAFT STOPS OF APPROVED MATERIALS, AND SHALL COMPLY WITH SECTION C.B.C 1505.3.

0 VENTILATION OPENINGS SHALL BE 1/16 INCH MIN. AND 1/4 INCH MAX. AND OPEN DIRECTLY TO THE OUTSIDE AIR [CRC 806.1].

A O' HAGIN'S CONCEALED ROOF VENT =98 S.I.

B DORMER VENT 24"W =120 S.I.

C GABLE VENT 14x24 =168 S.I.

D GABLE VENT 14x18 =126 S.I.

Whole House Fan Sizing Calculator

Enter House Square Footage (ft) 703

Enter Ceiling Height (ft) 8

CALCULATE AIR FLOW

Your Whole House Fan Airflow CFM

Approximately 1406 CFM For **EFFECTIVE** Cooling

Approximately 1757 CFM For **RAPID** Cooling

For information on selecting a VentCool whole house fan, contact your local VentCool dealer or call Tech Support at 800-742-8368

ELECTRICAL LEGEND

PC/MS	SURFACE MOUNTED LIGHT FIXTURE ON PHOTOCELL AND MOTION SENSOR. TYP.
	RECESSED LIGHT-EMITTING DIODE FIXTURE
	SINGLE SWITCH
3	3-WAY SWITCH
M	SWITCH W/ MANUAL-ON/ AUTOMATIC-OFF OCCUPANT MOTION SENSOR 30"MIN. NO MANUAL OVERRIDE
D	DIMMER SWITCH
	110V CONV ARC FAULT CIRCUIT INTERRUPTED DUPLEX OUTLET
220	220V OUTLET
	GROUND FAULT INTERRUPTED DUPLEX OUTLET
WP	WEATHERPROOF GROUND FAULT INTERRUPTED DUPLEX OUTLET
J	JUNCTION BOX
	UL-217 SMOKE DETECTOR/ ALARM HARD WIRED IN A SERIES (ALARMS SHALL BE INTERCONNECTED SEC 907.2.10) & W/ BATTERY BACK-UP. (SEE SMOKE DETECTOR NOTES)
SD/CO	**UL-2034** SMOKE DETECTOR AND CARBON MONOXIDE ALARM COMBO HARD WIRED IN A SERIES (ALARMS SHALL BE INTERCONNECTED SEC 907.2.10) & W/ BATTERY BACK-UP
	TANKLESS WATER HEATER MOUNTED @ 18" MIN. A.F.F., PROVIDE GAS, WATER, AND POWER HOOK -UP
	ENERGY STAR EXHAUST FAN 50 CFM. MIN, CONTROL BY A HUMIDSTAT CAPABLE OF BEING ADJUSTED BETWEEN RELATIVE HUMIDITY RANGE OF 50%-80%, VENTED TO OUTSIDE AIR.
CM	CONTINUOUS "WHOLE BUILDING EXHAUST PER CEC SECTION 150. REF INDOOR VENTILATION CALC A2.1.
	OVER HEAD EXHAUST HOOD ABOVE COOK TOP VENTED DIRECTLY TO OUTSIDE AIR. PROVIDE 100 CFM. MIN.
	DRYER EXHAUST DUCT 4" DIA. MIN. VENTED TO OUTSIDE W/ BACKDRAFT DAMPER. EXHAUST DUCT LENGTH IS LIMITED TO 14' WITH 2 ELBOWS MAX.
	220V CIRCUIT BREAKER FOR A.C. COMPRESSOR-30" CLR IN FRONT, 15" CLR. E.A. SIDE

PREPARED BY:

EVERETT SMITH DESIGNS, INC
30141 ANTELOPE RD. D774
MENIFEE, CA 92584
DIGITALLY SIGNED 6/26/2025 11:31:49 AM
Email: everett@everettsmithdesigns.com

PROJECT:

ADDITION & RENOVATION OF GARAGE FOR"ADU" @ (E) SINGLE FAMILY RESIDENCE

REVISIONS:

No.	Description	Date

PROJECT ADDRESS:

5580 NORTHWOOD DR
RIVERSIDE CA
92509-7312

CLIENT NAME:

Aguilar Residence

ROOF PLAN & ELECTRICAL PLAN

Project number	25-2522
Date	6/26/2025 11:31:49 AM
Drawn by	RS
Checked by	ES

A4

Scale 1/4" = 1'-0"

6/26/2025 11:31:49 AM

ICC-ES Evaluation Report

ESR-1475

Reissued October 2023

This report also contains:

- **CBC Supplement**

Subject to renewal October 2025

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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION Section: 07 31 13—Asphalt Shingles	REPORT HOLDER: GAF	EVALUATION SUBJECT: GAF SHINGLE ROOF COVERING SYSTEMS	

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2021, 2018, 2015, 2012, 2009 and 2006 *International Building Code®* (IBC)
- 2021, 2018, 2015, 2012, 2009 and 2006 *International Residential Code®* (IRC)

Properties evaluated:

- Weather resistance
- Fire classification
- Wind resistance

2.0 USES

The GAF asphalt shingles described in this report comply with IBC Section 1507.2 and IRC Section R905.2 and are Class A roof coverings when installed as described in this report.

3.0 DESCRIPTION

3.1 Shingles:

3.1.1 General: The GAF asphalt shingles comply with ASTM D3462 and have been qualified for wind resistance as noted in Section 4.1.2 and Table 1. The shingles are available as three–tab, five–tab and laminated asphalt shingle roof coverings. See Table 1 and Figure 1 for recognized product names and classifications, shingle types, manufacturing locations, overall dimensions, maximum exposure to the weather and fastening details. The shingles are self-sealing by means of adhesive strips located on either the weather side or the underside. See Figure 1 for dimensions, nailing locations and adhesive strip location for field shingles.

3.1.2 Three-tab Shingles and Five-tab Shingles: Three-tab and five-tab shingles are composed of a single layer of fiberglass mat, impregnated and coated with asphalt on both sides, and surfaced with mineral roofing granules on the weather side and a mineral release agent on the underside.

3.1.3 Laminated Shingles: Laminated shingles are composed of multiple thicknesses of coated and surfaced fiberglass mat, cut and bonded together in different patterns. The weather side is surfaced with mineral roofing granules, and the underside is surfaced with a mineral release agent.

3.1.4 Hip and Ridge Cap Shingles: Hip and ridge cap shingles consist of fiberglass mat, impregnated and coated with asphalt on both sides and surfaced with mineral roofing granules on the weather side and a mineral release agent on the back side for use in covering hips and ridges. See Table 2 for product sizes, exposure to the weather and manufacturing locations. See also Figure 2.

3.1.4.1 Royal Sovereign® Ridge Cap Shingles: These ridge cap shingles are field-cut from Royal Sovereign® three-tab strip shingles. The field-cut ridge cap shingles are compatible with any of the GAF shingles recognized in this report.

3.1.4.2 Z®Ridge Distinctive Ridge Cap Shingles: These shingles are strips that are scored for separation into four ridge cap shingles. See Figure 2.

3.1.4.3 Seal-A-Ridge® Ridge Cap Shingles and Seal-A-Ridge® AS SBS-Modified IR Ridge Cap Shingles: These shingles are strips that are scored for separation into three ridge cap shingles.

3.1.4.4 Ridglass® Premium Ridge Cap Shingles: These shingles are individual, thick, ultra-high profile ridge cap shingles. See Figure 2.

3.1.4.5 TimberTex® Premium Ridge Cap Shingles: These shingles are double layer strips that are scored for separation into three ridge cap shingles.

3.1.4.6 TimberCrest® Premium SBS-Modified Ridge Cap Shingles: These shingles are individual, thick, ultra-high profile ridge cap shingles with a bullnose leading edge. See Figure 2.

3.1.5 Starter Shingles:

3.1.5.1 General: Starter Strip shingles are factory-made shingles used under the first course of shingles being installed or applied on the roof. See Table 2 for product sizes and manufacturing locations. See also Figure 3.

3.1.5.2 Pro-Start® Starter Strip Shingles: These shingles are strips that are scored for separation into two starter shingles. The mineral surfacing is on the weather side, with fine mineral granules on the underside. The self-sealing strip edge is applied facing up and along the roof eave or rake edge.

3.1.5.3 WeatherBlocker™ Premium Starter Strip Shingles: These starter shingles are strips with perforations to assist with alignment of various shingle sizes. The mineral surfacing is on the weather side, with fine mineral granules on the underside.

3.1.5.4 StarterMatch® Starter Strip Shingles and StarterMatch® Complementary Color Starter Strip Shingles: These starter shingles are color coordinated to match the GAF Grand Sequoia®, Grand Sequoia® AS, Grand Sequoia® ArmorShield® and Grand Canyon® II field shingles. The starter shingles must be installed as the second starter at the eaves on Grand Sequoia®, Grand Sequoia® AS, Grand Sequoia® ArmorShield® and Grand Canyon® applications.

3.2 Fasteners:

Fasteners must comply with ASTM F1667 and must be minimum No. 12 gage [0.105-inch-diameter (2.67 mm) shank], 3/8-inch-diameter-head (9.5 mm), galvanized, stainless steel, aluminum, or copper, barbed-, deformed, or smooth–shank roofing nails. Fasteners must be of sufficient length to penetrate 3/4 inch (19.1 mm) into the sheathing, or through the sheathing, whichever is less.

3.3 Underlayment:

Under the 2021 and 2018 IBC, the roof underlayment must be in accordance with Section 1507.1.1 and Table 1507.1.1(1). Under the 2015, 2012, 2009 and 2006 IBC, the roof underlayment must be in accordance with Section 1507.2.3. Under the 2021, 2018 and 2015 IRC, the roof underlayment must be in accordance with Section R905.1.1 and Table R905.1.1(1). Under the 2012, 2009 and 2006 IRC, the roof underlayment must be in accordance with Section R905.2.3. Underlayment must comply with ASTM D226 Type I or Type II; ASTM D4869 Type I, Type II, Type III, or Type IV; or ASTM D6757.

3.4 Asphalt Cement:

Asphalt roofing cement used for hand-sealing the shingles must comply with ASTM D4586, Type I, Class I, or Type II, Class I.

4.0 DESIGN AND INSTALLATION

4.1 New Construction:

4.1.1 General: When installed on new construction in accordance with this section, the shingles are a Class A roof covering. The shingles, underlayment and flashings must be installed in accordance with IBC Section 1507.2 or IRC Section R905.2 except as noted in this report. The shingles must be installed over roof decks of code-complying, minimum 7/16-inch-thick (9.5 mm) exterior-grade plywood; 7/16-inch-thick (11.1 mm) oriented strand board (OSB); or nominally 1-inch-by-6-inch lumber installed as solid sheathing conforming to 2021, 2018 and 2015 IBC Sections 2304.8.2 or 2308.7.10 (2012, 2009 and 2006 IBC Section 2304.7.2 or 2308.10.8) or IRC Sections R803, as applicable, and underlayment in accordance with

4.1.2 Sections 3.3 and 4.1.2.3, Minimum roof slope must be 2:12 (16.7 percent).

4.1.3 Application:

4.1.3.1 Fastening: Fasteners are as described in Section 3.2. Shingles must be fastened to the roof deck with a minimum of four fasteners or as shown in the Standard Nailing Pattern in Figure 1. Spacing of fasteners must be as shown in Figure 1, and each course of shingles must be offset from the preceding course as shown in the manufacturer's published installation instructions.

4.1.3.2 Shingle Sealing: In colder climates or valid regions where it is questionable whether the factory-applied adhesive will activate and seal the shingles, to ensure sealing, the shingles must be hand-sealed with a minimum of three 1-inch-diameter (25.4 mm) spots of asphalt roofing cement equally spaced on the unexposed surface across each shingle. For applications on slopes greater than 21:12, hand-sealing is required. Hand-sealing consists of applying a minimum of three 1-inch-diameter (25.4 mm) spots of asphalt roofing cement on the unexposed surface, equally spaced across each shingle. For three–tab and five–tab shingles, one spot of asphalt roofing cement is placed under each corner of each tab (two spots per tab); the tab must then be pressed into the cement. For laminated shingles, four equally spaced spots of asphalt roofing cement are placed under the exposed portion of the shingle; the shingle must then be pressed into the cement. See the manufacturer's published installation instructions for hand-sealing guidelines. The shingles must be hand-sealed to the satisfaction of the code official.

4.1.3.3 Underlayment: Under the 2021 and 2018 IBC, the roof underlayment must be installed in accordance with Section 1507.1.1 and Tables 1507.1.1(2) and 1507.1.1(3). Under the 2015, 2012, 2009 and 2006 IBC, the roof underlayment must be installed in accordance with Section 1507.2.8. Under the 2021, 2018 and 2015 IRC, the roof underlayment must be installed in accordance with Section R905.1.1 and Tables R905.1.1(2) and Table R905.1.1(3). Under the 2012, 2009 and 2006 IRC, the roof underlayment must be installed in accordance with Section R905.2.7. Minimum roof slope must be 2:12 (17-percent). For roof slopes greater than 4:12, the roof deck must be covered with a minimum of one layer of underlayment as described in Section 3.3 of this report. For slopes between 2:12 and 4:12, two layers of the underlayment described in Section 3.3 of this report are required. In areas where there has been a history of ice forming along the eaves, causing a backup of water, an ice barrier must be provided in accordance with IBC Section 1507.2.7 (2015, 2012, 2009 and 2006 IBC Section 1507.2.8.2) or 2021, 2018 and 2015 IRC Section R905.2.7 (2012, 2009 and 2006 IRC Section R905.2.7.1), as applicable.

4.2 Hip and Ridge Cap Shingles:

Hip and ridge cap shingles must be placed evenly over hips and ridges (or over shingle-over ridge vents), and fastened to the roof deck with two fasteners, described in Section 3.2 of this report, located on either side of the shingle, on the fastener line shown in Figure 1. Staples must not be used to fasten the ridge cap shingles.

4.3 Installation—Reroofing:

When installed over existing Class A or Class C asphalt shingle roofs in accordance with this section, the shingles described in this report are recognized as a Class A roof covering. The existing asphalt shingle roof covering must be inspected in accordance with the provisions and limitations 2021 IBC Section 1512 [2018 and 2015 IBC Section 1511 (2012, 2009 and 2006 IBC Section 1510)] or 2021, 2018 and 2015 IRC Section R908 (2012, 2009 and 2006 IRC Section R907). Prior to the reroofing, hip and ridge covering must be removed. Except as noted in this section, the shingles must be installed in accordance with Section 4.1 of this report. Fasteners must be of sufficient length to penetrate 3/4 inch (19.1 mm) into the sheathing, or through the sheathing, whichever is less. Flashing and edging must comply with the following, as applicable:

- IBC: 2021 IBC Section 1512.4 and 1512.5 [2018 and 2015 Sections 1511.5 and 1511.6 (2012, 2009 and 2006 Sections 1510.5 and 1510.6)].

- IRC: 2021, 2018 and 2015 Sections R908.5 and R908.6 (2012, 2009 and 2006 Sections R907.5 and R907.6).

4.4 Wind Resistance:

GAF asphalt shingles have been tested for wind resistance in accordance with ASTM D3161 or ASTM D7158. Shingles tested in accordance with ASTM D3161 are classified as Class F and qualify for use under 2021 IBC Section 1504.2 [2018 and 2015 IBC Section 1504.1.1 (2012 and 2009 IBC Section 1507.2.7.1 and 2006 IBC 1504.1.1)] or IRC Section R905.2.4.1, as applicable. Shingles tested in accordance with ASTM D7158 are classified as Class H and qualify for use in locations where the maximum basic wind speed is 150 mph (67 m/s) or less with an exposure category of B or C (ASCE 7) and a maximum building height of 60 feet (18.3 m). Installation must be in accordance with 2021 and 2018 IBC Section 1507.2.6 (2015, 2012, 2009 and 2006 IBC Section 1507.2.7) or IRC Section R905.2.6, as applicable.

5.0 CONDITIONS OF USE:

The GAF asphalt shingle roof covering systems described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 The shingles must be manufactured, identified, and installed in accordance with the applicable codes, this report, and the manufacturer's published installation instructions. In the event of a conflict between this report and the manufacturer's published installation instructions, this report governs.

5.2 Installation must be in accordance with Section 4.0 of this report.

5.3 The GAF shingle products are manufactured at the locations noted in Table 1, under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

6.1 Data in accordance with ASTM D3462.

6.2 Reports of wind resistance testing in accordance with ASTM D7158 and ASTM D3161.

6.3 Reports of testing in accordance with UL 790 (ASTM E108).

6.4 Quality documentation.

7.0 IDENTIFICATION

7.1 The ICC-ES mark of conformity, electronic labeling or the evaluation report number (ESR-1475) along with the shingle name, registered trademark, or registered logo of the report holder must be included in the product label.

7.2 In addition, the GAF asphalt shingles are identified by each bundle of shingles must bear a label with the name and address of the GAF manufacturing plant location; the product name; the roof classification (Class A); the installation instructions; the evaluation report number (ESR-1475); a reference indicating compliance with ASTM D3161 Class F or ASTM D7158, Class H, as applicable.

Additionally, in accordance with ASTM D3462, each bundle of shingles must be marked with the area of roof surface covered and the style, type and color of the product.

7.3 The report holder's contact information is the following:

GAF
1 CAMPUS DRIVE
PARSIPPANY, NEW JERSEY 07054
(877) 423-7663
www.gaf.com

TABLE 1—GAF SHINGLES – PRODUCT DESCRIPTIONS AND MANUFACTURING LOCATIONS

SHINGLE	SHINGLE TYPE	PLANT LOCATION	DIMENSIONS (height x width) (inches)	MAXIMUM EXPOSURE TO THE WEATHER (inches)	LOCATION OF NAIL LINE[1] (inches)	CLASS
Royal Sovereign®	Three–tab	Fontana, CA	13 1/4 x 39 3/8	5 5/8	6	ASTM D3161, Class F ASTM D7158, Class H
		Dallas, TX; Minneapolis, MN; Mt. Vernon, IN; Myerstown, PA; Savannah, GA; Tampa, FL; Tuscaloosa, AL	12 x 36	5	5 3/4	ASTM D3161, Class F ASTM D7158, Class H
Marquis WeatherMax®	Three–tab	Mt. Vernon, IN	12 x 36	5	5 3/4	ASTM D3161, Class F ASTM D7158, Class H
Slateline®	Five–tab	Mt. Vernon, IN	17 x 40	7 1/2	9	ASTM D3161, Class F ASTM D7158, Class H
Camelot® II	Laminated	Mt. Vernon, IN	17 x 34 1/2	7 1/2	8 1/2	ASTM D3161, Class F ASTM D7158, Class H
Grand Canyon®	Laminated	Fontana, CA; Mt. Vernon, IN	17 x 40	5	11	ASTM D3161, Class F ASTM D7158, Class H
Grand Sequoia®	Laminated	Fontana, CA; Mt. Vernon, IN	17 x 40	5	11	ASTM D3161, Class F ASTM D7158, Class H
Grand Sequoia® AS; Grand Sequoia® ArmorShield®	Laminated	Fontana, CA	17 x 40	5	11	ASTM D3161, Class F ASTM D7158, Class H
Timberline® ArmorShield® II;	Laminated	Ennis, TX; Shafter, CA; Fontana, CA	13 1/4 x 39 3/8	5 5/8	6	ASTM D3161, Class F ASTM D7158, Class H
Timberline® AS II	Laminated	Ennis, TX; Shafter, CA; Fontana, CA	13 1/4 x 39 3/8	5 5/8	5 1/2 – 7 7/8	ASTM D3161 Class F ASTM D7158 Class H

For **SI:** 1 inch = 25.4 mm, 1 lb/100 ft² = 0.0488 kg/m².

TABLE 1—GAF SHINGLES – PRODUCT DESCRIPTIONS AND MANUFACTURING LOCATIONS (Continued)

SHINGLE	SHINGLE TYPE	PLANT LOCATION	DIMENSIONS (height x width) (inches)	MAXIMUM EXPOSURE TO THE WEATHER (inches)	LOCATION OF NAIL LINE[1] (inches)	CLASS
Timberline® Natural Shadow®; Timberline® NS	Laminated	Baltimore, MD; Dallas, TX; Ennis, TX; Fontana, CA; Michigan City, IN; Minneapolis, MN; Myerstown, PA; Shafter, CA; Tampa, FL; Tuscaloosa, AL	13 1/4 x 39 3/8	5 5/8	6	ASTM D3161, Class F ASTM D7158, Class H
Timberline® HDZ™; Timberline® UHDZ™	Laminated	Baltimore, MD; Dallas, TX; Ennis, TX; Fontana, CA; Michigan City, IN; Minneapolis, MN; Myerstown, PA; Shafter, CA; Tampa, FL; Tuscaloosa, AL	13 1/4 x 39 3/8	5 5/8	5 1/2 – 7 7/8	ASTM D3161, Class F ASTM D7158, Class H
Timberline® Cool Series®	Laminated	Fontana, CA	13 1/4 x 39 3/8	5 5/8	6	ASTM D3161, Class F ASTM D7158, Class H
Timberline® CS	Laminated	Fontana, CA	13 1/4 x 39 3/8	5 5/8	5 1/2 – 7 7/8	ASTM D3161, Class F ASTM D7158, Class H
Timberline Ultra HD®; Timberline® UHD	Laminated	Baltimore, MD; Dallas, TX; Ennis, TX; Fontana, CA; Michigan City, IN; Minneapolis, MN; Myerstown, PA; Shafter, CA; Tampa, FL; Tuscaloosa, AL	13 1/4 x 39 3/8	5 5/8	6	ASTM D3161, Class F ASTM D7158, Class H
Timberline® American Harvest®	Laminated	Fontana, CA; Michigan City, IN; Myerstown, PA; Tuscaloosa, AL	13 1/4 x 39 3/8	5 5/8	6	ASTM D3161, Class F ASTM D7158, Class H
Timberline® AH	Laminated	Fontana, CA; Michigan City, IN; Myerstown, PA; Tuscaloosa, AL	13 1/4 x 39 3/8	5 5/8	5 1/2 – 7 7/8	ASTM D3161, Class F ASTM D7158, Class H
Fortitude®	Laminated	Myerstown, PA	13 1/4 x 39 3/8	5 5/8	5 1/2 – 7 7/8	ASTM D3161, Class F ASTM D7158, Class H
Woodland®	Laminated	Mt. Vernon, IN	17 x 40	6 1/2 – 7 1/2	8	ASTM D3161, Class F ASTM D7158, Class H
Timberline Solar HDZ™	Laminated	Mt. Vernon, IN	17 1/2 x 40	7 5/16	7 7/16 – 9 5/16	ASTM D3161, Class F ASTM D7158, Class H

For **SI:** 1 inch = 25.4 mm, 1 lb/100 ft² = 0.0488 kg/m².
[1]nail line = distance from lowermost edge of shingle to target nail location. See Figure 1

TABLE 2—ACCESSORY PRODUCTS – PRODUCT DESCRIPTIONS AND MANUFACTURING LOCATIONS

SHINGLE	SHINGLE TYPE	PLANT LOCATION	DIMENSIONS (height x width) (inches)	MAXIMUM EXPOSURE TO THE WEATHER (inches)
Ridglass® Premium Ridge Cap Shingles	Hip and Ridge	Fontana, CA	10 x 23 pieces	8
TimberCrest® Premium SBS-Modified Ridge Cap Shingles	Hip and Ridge	Fontana, CA	10 x 24 pieces	8
Royal Sovereign®	Hip and Ridge	Fontana, CA	13 1/4 x 39 3/8 strip 13 1/4 x 9 3/4 pieces	See Footnote[1]
		Dallas, TX; Minneapolis, MN; Mt. Vernon, IN; Myerstown, PA; Savannah, GA; Tampa, FL; Tuscaloosa, AL	12 x 36 strip 12 x 12 pieces	See Footnote[1]
Seal-A-Ridge® Ridge Cap Shingles	Hip and Ridge	Savannah, GA Mt. Vernon, IN	12 x 36 strip 12 x 12 pieces	6 1/2
Seal-A-Ridge® AS SBS-Modified IR Ridge Cap Shingles	Hip and Ridge	Savannah, GA	12 x 36 strip 12 x 12 pieces	5
TimberTex® Premium Ridge Cap Shingles	Hip and Ridge	Mt. Vernon, IN	12 x 36 strip 12 x 12 pieces	8
Z®Ridge® Distinctive Ridge Cap Shingles	Hip and Ridge	Shafter, CA	13 1/4 x 39 3/8 strip 13 1/4 x 9 3/4 pieces	5 1/2
Pro-Start® Starter Strip Shingles	Starter Strip	Mt. Vernon, IN Dallas, TX	13 x 38 strip 6 1/2 x 38 pieces	N/A
		Shafter, CA	13 1/4 x 38 strip 6 1/2 x 38 pieces	N/A
StarterMatch® Starter Strip Shingles StarterMatch® Complimentary Color Starter Strip Shingles	Starter Strip	Fontana, CA	13 1/4 x 40 strip	N/A
WeatherBlocker™ Premium Starter Strip Shingles	Starter Strip	Mt. Vernon, IN	17 x 40 strip 6 1/2 x 40 pieces	N/A

For **SI:** 1 inch = 25.4 mm, 1 lb/100 ft² = 0.0488 kg/m².
[1]Weather exposure must not exceed that permitted for the field of the roof

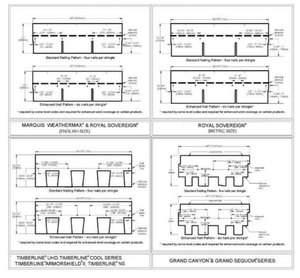


FIGURE 1—GAF SHINGLES

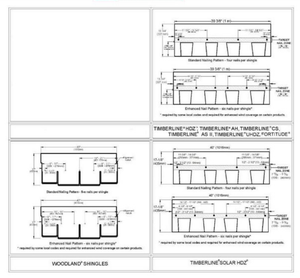


FIGURE 1—GAF SHINGLES (Continued)

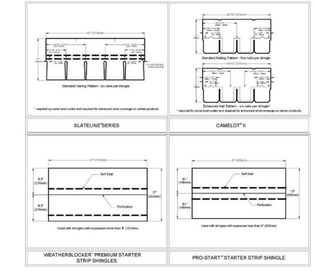


FIGURE 1—GAF SHINGLES (Continued)

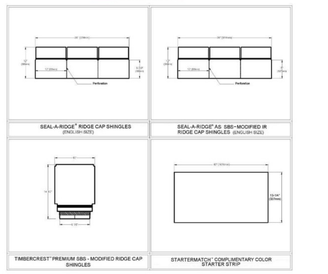


FIGURE 2—STARTER AND RIDGESHINGLES

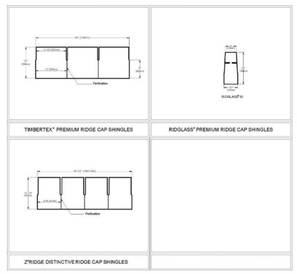


FIGURE 3—RIDGE AND STARTER SHINGLES

ICC-ES Evaluation Report

ESR-1475 CBC and CRC Supplement

Reissued October 2023

This report is subject to renewal October 2025.

www.icc-es.org | (800) 423-6587 | (562) 699-0543 *A Subsidiary of the International Code Council®*

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
Section: 07 31 13—Asphalt Shingles

REPORT HOLDER:

GAF

EVALUATION SUBJECT:

GAF SHINGLE ROOF COVERING SYSTEMS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that GAF shingle roof covering systems, described in ICC-ES evaluation report ESR-1475, has also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2022 *California Building Code®* (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA); see Sections 2.1.1 and 2.1.2 below.

- 2022 *California Residential Code®* (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The GAF shingle roof covering systems, described in Sections 2.0 through 7.0 of the evaluation report ESR-1475, comply with CBC Sections 1505.1 and 1507.2, and may be used where the CBC requires a Class A roof covering complying with CBC Section 1505.1.1, a Class B roof covering complying with CBC Section 1505.3, or a Class C roof covering complying with CBC Section 1505.1.2, provided the design and installation are in accordance with the 2021 *International Building Code®* (IBC) provisions respectively, noted in the evaluation report and the additional requirements of CBC Section 1512, as applicable.

The asphalt shingles may be used in the construction of new buildings located in any Fire Hazard Severity Zone within a State Responsibility Areas or any Wildland-Urban Interface Fire Area, provided installation is in accordance with the 2021 *International Building Code®* (IBC) provisions, as applicable, noted in the evaluation report and the additional requirements of Sections 701A.3 and 705A of the CBC.

2.1.1 OSHPD:

The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

2.2 CRC:

The GAF shingle roof covering systems, described in Sections 2.0 through 7.0 of the evaluation report ESR-1475, comply with CRC Sections R902.1 and R905.2, and may be used where the CRC requires a Class A roof cover complying with CRC Section R902.1.1, a Class B roof covering complying with CRC Section R902.3, or a Class C roof covering complying with CRC Section R902.1.2, provided the design and installation are in accordance with the 2021 *International Residential Code®* (IRC) provisions respectively, noted in the evaluation report and the additional requirements of CRC Section R908, as applicable.

The asphalt shingles may be used in the construction of new buildings located in any Fire Hazard Severity Zone within a State Responsibility Areas or Wildland–Urban Interface Fire Area, provided installation is in accordance with the 2021 *International Residential Code®* (IRC) provisions, as applicable, noted in the evaluation report and the additional requirements of Sections R337.1.3 and R337.5 of the CRC.

The products included in this supplement have not been evaluated for compliance with the *International Wildland—Urban Interface Code®*.

This supplement expires concurrently with the evaluation report, reissued October 2023.

ICC-ES Evaluation Report

ESR-1322

Reissued January 2024

Subject to renewal January 2026

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION Section: 07 30 05—Roofing Felt and Underlayment	REPORT HOLDER: GAF	EVALUATION SUBJECT: WEATHERWATCH® MINERAL SURFACED LEAK BARRIER, AND STORMGUARD® FILM SURFACED LEAK BARRIER	

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2018, 2015, 2012, 2009 and 2006 *International Building Code®* (IBC)
- 2018, 2015, 2012, 2009 and 2006 *International Residential Code®* (IRC)

Properties evaluated:

- Physical properties
- Water resistance

1.2 Evaluation to the following green standards:

- 2012 and 2008 ICC 700 *National Green Building Standard™* (ICC 700-2012 and ICC 700-2008)

Attributes verified:

- See Section 2.0

2.0 USES

WeatherWatch®, and StormGuard® are self-adhering membranes used as alternates to the ice dam membrane specified in Chapter 15 of the IBC and Chapter 9 of the IRC.

The attributes of the WeatherWatch®, and StormGuard® underlayments have been verified as conforming to the requirements of (i) ICC 700-2012 Sections 602.1.3, 11.602.1.3 and 12.5.602.1.14; and (ii) ICC 700-2008 Section 602.10 for ice barriers. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

3.0 DESCRIPTION

3.1 WeatherWatch®:

A nominally 73-mil-thick [0.073 inch (1.85 mm)], fiberglass mat–reinforced, SBS-modified bitumen membrane with mineral fines on the top surface. The membrane is backed with a release film to protect the membrane adhesive. The membrane is black in color and is produced in rolls of varying size.

3.2 StormGuard®:

A nominally 55-mil-thick [0.055 inch (1.39 mm)], fiberglass mat–reinforced, SBS-modified bitumen membrane with a polymeric film on the top surface. The membrane is backed with a release film to protect the membrane adhesive. The membrane is black in color and is produced in rolls of varying size.

4.0 INSTALLATION

Installation of the WeatherWatch®, and StormGuard® membranes must comply with this report and the manufacturer's published instructions. The installation instructions must be available at the jobsite at all times during installation. In the event of a conflict, this report governs.

Prior to application, the deck surface must be free of frost, dust and dirt, loose nails, and other protrusions. Installation is limited to plywood substrates. The membrane is to be applied only when the ambient air and surface temperatures are above 45°F (7.2°C) and below 120°F (48.9°C).

The release paper is peeled back approximately 2 to 3 feet (610 to 916 mm) and the membrane is aligned with the lower edge of the roof and set in place. The remainder of the membrane is applied directly to the roof deck by removing the film and firmly pressing the membrane into place. The end seams must be overlapped a minimum of 6 inches (152 mm). Edge seams must be overlapped 3 inches (76 mm). The subsequent courses of membrane are applied parallel to the eave, from the lower edge of the roof upwards in a shingle-lap manner. The membrane must be installed in sufficient courses so that it extends up the roof a minimum of 24 inches (610 mm) beyond the interior line of the exterior wall.

Installation of the roof covering can proceed immediately following application of the membrane. The membrane should be covered by an approved asphalt shingle roof covering within the period established by the membrane manufacturer. For reroofing applications, the same procedures apply after removal of the existing roof covering and roofing felts to expose the roof deck.

5.0 CONDITIONS OF USE:

The GAF WeatherWatch®, and StormGuard® membranes described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Installation must comply with this report and the manufacturer's published installation instructions. In the event of a conflict, this report governs.

5.2 Installation is limited to use on plywood substrates on structures where nonclassified roof coverings are permitted.

5.3 Installation is limited to roofs with a slope of 2:12 (16.67%) or greater.

5.4 Installation is limited to use with roof coverings that do not involve hot asphalt or coal-tar pitch.

5.5 Installation is limited to use with roof coverings that are mechanically fastened through the underlayment to the sheathing or rafters.

5.6 Installation is limited to roofs with attics or rafter spaces that are ventilated in accordance with the requirements of the applicable code.

5.7 The membranes are manufactured at the GAF plants located in Mount Vernon, Indiana; Savannah, Georgia; and Arkadelphia, Arkansas under a quality control program with inspections provided by ICC-ES.

6.0 EVIDENCE SUBMITTED

6.1 Data in accordance with the ICC-ES Acceptance Criteria for Self-Adhered Roof Underlayments for Use as Ice Barriers (AC48), dated February 2012 (editorially revised May 2018).

6.2 Data in accordance with ASTM D1970.

7.0 IDENTIFICATION

7.1 The WeatherWatch® and StormGuard® membranes described in this report must be identified by a label, on the container of each roll of membrane, bearing the GAF name, the product name, the manufacturing location, and the evaluation report number (ESR-1322).

7.2 The report holder's contact information is the following:

GAF
1 CAMPUS DRIVE
PARSIPPANY, NEW JERSEY 07054
(800) 766-3411
www.gaf.com

PREPARED BY:

EVERETT SMITH DESIGNS, INC
30141 ANTELOPE RD. D774
MENIFEE, CA 92584
DIGITALLY SIGNED 6/26/2025 11:31:49 AM
Email: everett@everettsmithdesigns.com

PROJECT:

ADDITION & RENOVATION OF GARAGE FOR"ADU" @ (E) SINGLE FAMILY RESIDENCE

REVISIONS:

No.	Description	Date

PROJECT ADDRESS:

5580 NORTHWOOD DR
RIVERSIDE CA
92509-7312

CLIENT NAME:

Aguilar Residence

GAF SHINGLE ROOF INFO

Project number	25-2522
Date	6/26/2025 11:31:49 AM
Drawn by	Author
Checked by	Checker

A4.1

Scale

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2023)

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

Y | N/A | RESPON. PARTY

CHAPTER 3
GREEN BUILDING
SECTION 301 GENERAL

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

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

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

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

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

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

SECTION 302 MIXED OCCUPANCY BUILDINGS

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

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

DIVISION 4.1 PLANNING AND DESIGN

ABBREVIATION DEFINITIONS:

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

CHAPTER 4
RESIDENTIAL MANDATORY MEASURES

SECTION 4.102 DEFINITIONS

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

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

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

4.106 SITE DEVELOPMENT

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 (ADU) without additional parking facilities.

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

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

PREPARED BY:

EVERETT SMITH DESIGNS, INC
30141 ANTELOPE RD. D774
MENIFEE, CA 92584
DIGITALLY SIGNED 6/26/2025 11:31:50 AM
Email: everett@everettsmithdesigns.com

PROJECT:

ADDITION & RENOVATION OF GARAGE FOR"ADU" @ (E) SINGLE FAMILY RESIDENCE

REVISIONS:

No.	Description	Date

PROJECT ADDRESS:

5580 NORTHWOOD DR
RIVERSIDE CA
92509-7312

CLIENT NAME:

Aguilar Residence

GREEN MEASURES

Project number	25-2522
Date	6/26/2025 11:31:50 AM
Drawn by	RS
Checked by	ES

A-GRN-1

Scale

6/26/2025 11:31:50 AM

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?g ROC).
Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

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

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

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

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

4.503 FIREPLACES

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

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 trichloroethylene), except for aerosol products, as specified in Subsection 2 below.

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

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

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

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

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

TABLE 4.504.5 - FORMALDEHYDE LIMITS [1]

MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

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

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

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)

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

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

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

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

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

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

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

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

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

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

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

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

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

4.505 INTERIOR MOISTURE CONTROL

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

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.

PREPARED BY:

EVERETT SMITH DESIGNS, INC
30141 ANTELOPE RD. D774
MENIFEE, CA 92584
DIGITALLY SIGNED 6/26/2025 11:31:50 AM
Email: everett@everettsmithdesigns.com

PROJECT:

ADDITION & RENOVATION OF GARAGE FOR"ADU" @ (E) SINGLE FAMILY RESIDENCE

REVISIONS:

No.	Description	Date

PROJECT ADDRESS:

5580 NORTHWOOD DR
RIVERSIDE CA
92509-7312

CLIENT NAME:

Aguilar Residence

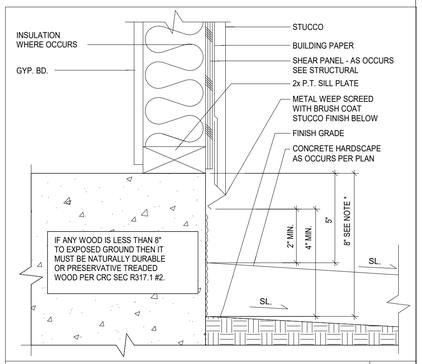
GREEN MEASURES

Project number	25-2522
Date	6/26/2025 11:31:50 AM
Drawn by	RS
Checked by	ES

A-GRN-2

Scale

6/26/2025 11:31:50 AM



STUCCO SCREED

3"=1'-0"

2

PREPARED BY:

EVERETT SMITH
DESIGNS, INC
30141 ANTELOPE RD. D774
MENIFEE, CA 92584

Everett Smith
DIGITALLY SIGNED
6/26/2025 11:31:51 AM

Email: everett@everettsmithdesigns.com

PROJECT:

ADDITION & RENOVATION OF GARAGE FOR"ADU" @ (E) SINGLE FAMILY RESIDENCE

REVISIONS:

No.	Description	Date

PROJECT ADDRESS:

5580 NORTHWOOD DR
RIVERSIDE CA
92509-7312

CLIENT NAME:

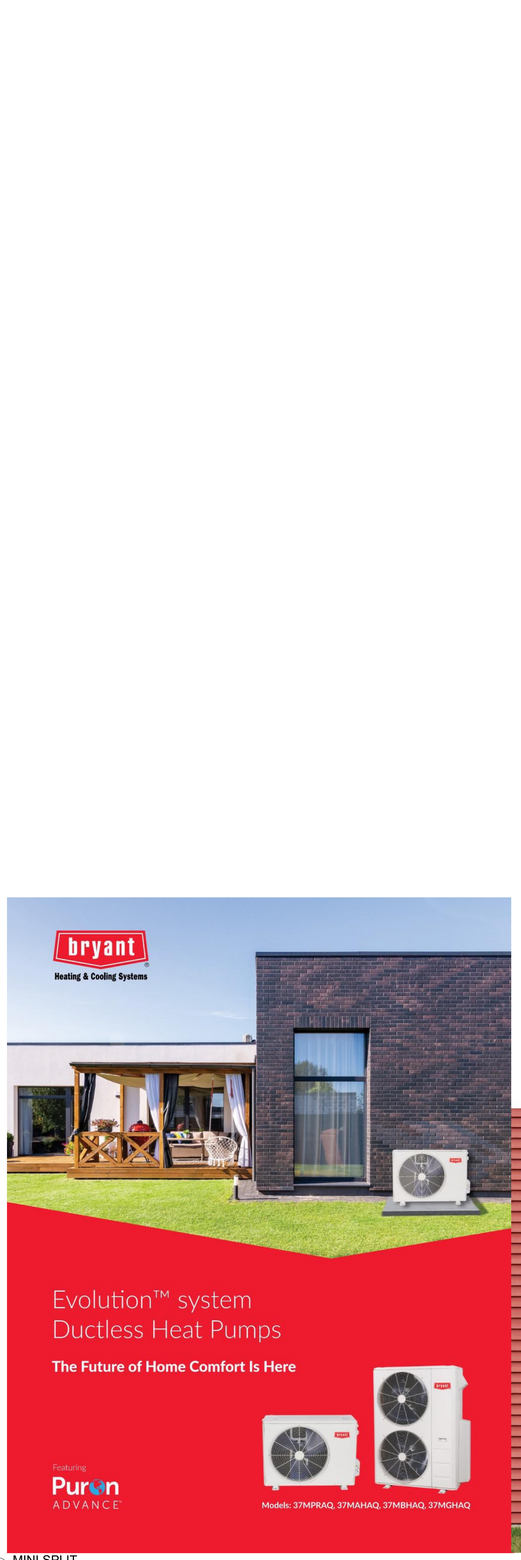
Aguilar Residence

ARCHITECTURAL
DETAILS & SPECS,
UL LISTING

Project number	25-2522
Date	6/26/2025 11:31:51 AM
Drawn by	RS
Checked by	ES

AD.1

Scale: As indicated



WHY ARE SO MANY HOMEOWNERS GOING DUCTLESS?

Whether you're adding an extra room or converting an attic into a living space, you want your home renovation to be as comfortable as possible. Ductless systems deliver ultra-quiet and efficient comfort for practically any space and style. They also help eliminate hot and cold spots, making them ideal for garages, sunrooms, attics, additions and more.

Environment

With Puron Advance™, Bryant® proudly continues our century-plus commitment to environmental stewardship. It's a refrigerant that delivers a 75% decrease in global warming potential while maintaining the non-ozone depleting properties of original Puron.

Inverter Comfort Technology

Bryant ductless systems continually adjust the compressor speed as conditions change—for consistent comfort with lower energy usage. Plus, enjoy year-round comfort with a system that offers dependable performance in temperatures from -22° F to 122° F.

Efficiency

With SEER2 ratings up to 35.1 and HSPF2 ratings up to 30.0, all our Evolution™ Systems are ENERGY STAR® certified. Take advantage of added energy-saving features like eco mode to cut energy costs up to 60%—without compromising on comfort.

Air Quality

Every Bryant ductless unit has built-in reusable, washable air filters to capture airborne pollutants and allergens right in the room. Plus, the Evolution System comes equipped with relative humidity sensors—for customized humidity control in 5% increments, so there's always the right amount of moisture in the air.

Personalized Comfort

Connect up to five indoor units to a single outdoor unit—to deliver individualized temperature control in every room of your home. Once you decide what temperature you'd like a specific zone (or room) to be, the system will quietly maintain that temperature.

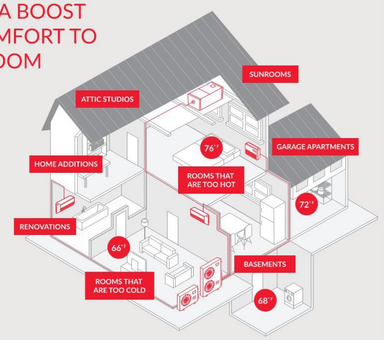
Convenient Controls and Features

Bryant Evolution System ductless units are the gold standard in home comfort, offering features like I-clean, active cleaning and Intelligent Eye, an occupancy sensor that can tell when you're in the room and direct fresh air your way.

Limited Warranty

To the original owner, our Evolution System heat pumps are covered by a 10-year parts limited warranty upon timely registration.*

BRING A BOOST OF COMFORT TO ANY ROOM



FIND THE PERFECT FIT FOR YOUR HOME

We have systems to fit spaces of all sizes. Let us help you select the ideal unit to meet your needs.

Evolution System High Wall (Sizes: 06 / 09 / 12 / 18)

- I-clean (Active Clean)
- Puron Advance leak detection sensor
- Relative humidity sensor
- Built-in Wi-Fi® smartphone control
- Intelligent Eye occupancy sensor
- Wireless remote control

Preferred™ Series Indoor Units

THE EVOLUTION ADVANTAGE

Bryant ductless has options for every space and budget. See how our Evolution System measures up with superior performance, cutting-edge capabilities and excellent energy efficiency.

		Evolution™ System	Preferred™ Series	Legacy™ Line
Outdoor Unit Features	SEER2	Up to 35.1	Up to 28.1	Up to 22.4
	HSPF2	Up to 30.0	Up to 13.6	Up to 9.4
	ENERGY STAR® Certified	All models	Select models	-
	Sound Levels	As low as 53.0 dBA	As low as 52.5 dBA	As low as 52.5 dBA
	Humidity Control	Yes	Yes[1]	-
	High Heat Capability	Yes	-	-
	Built-In Basepan Heater	Yes	Yes	Yes
Indoor Unit Features	24V Interface Compatibility[1]	Yes	Yes	Yes
	Built-In Wi-Fi® for Smartphone Control[1]	Yes	Optional	Optional
	Built-In Occupancy Sensor[1]	Yes	Yes	-

[1]Depending on indoor unit model selection

SEE WHAT DUCTLESS CAN DO FOR YOU

From garage workshops and attic studios to sunroom add-ons and more, the Evolution System delivers unparalleled performance and fuss-free installation—so you can transform any space with ease.

Scan to see rebates and incentives for eligible Bryant ductless solutions in your area.

FIND YOUR DUCTLESS SYSTEM TODAY

For more information, visit **bryantductless.com**

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Heating & Cooling Systems
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EVOLUTION™ SYSTEM

As an ENERGY STAR® partner, Carrier Corporation has determined that qualifying models meet ENERGY STAR guidelines for energy efficiency. Ask your dealer for details or visit www.energystar.gov.

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice or without incurring obligations.
Third-party trademarks and logos are the property of their respective owners.

*Timely registration required for 10-year parts limited warranty. Limited warranty period is five years for parts if not registered within 90 days of installation except in jurisdictions where warranty benefits cannot be conditioned upon registration. Please see warranty certificate for further details and restrictions.

Wi-Fi® is a registered trademark of Wi-Fi Alliance.
ENERGY STAR® is a registered trademark of the U.S. EPA.

01-0L5-034-BR-01 | 08/2024

1 MINI SPLIT
1/8" = 1'-0"

2022 Single-Family Residential Mandatory Requirements Summary

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

Building Envelope:

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

Fireplaces, Decorative Gas Appliances, and Gas Log:

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

Space Conditioning, Water Heating, and Plumbing System:

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

2022 Single-Family Residential Mandatory Requirements Summary

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

Ducts and Fans:

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

2022 Single-Family Residential Mandatory Requirements Summary

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

Ventilation and Indoor Air Quality:

§ 150.0(o)1:	**Requirements for Ventilation and Indoor Air Quality**. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. *
§ 150.0(o)1B:	**Central Fan Integrated (CFI) Ventilation Systems.** Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per §150.(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed andcontrolled per §150.(o)1Skiller. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o)1C.
§ 150.0(o)1C:	**Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses** . Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.(o)1Ciii.
§ 150.0(o)1G:	**Local Mechanical Exhaust.** Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled exhaust system meeting requirements of §150.(o)1'GiiLenclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.(o)1GiiI-iv. Airflow must be measured by the installer per §150.(o)1Gv, and rated for sound per §150.(o)1Gvi. *
§ 150.0(o)1H&I:	**Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems.** The airflow required per § 150.(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.(o)1C.
§ 150.0(o)2:	**Field Verification and Diagnostic Testing.** Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G

Pool and Spa Systems and Equipment:

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

Lighting:

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

2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(k)1G:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1H:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	**Light Sources in Drawers, Cabinets, and Linen Closets.** Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	**Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	**Accessible Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off.
§ 150.0(k)2B:	**Multiple Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	**Mandatory Requirements.** Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2D:	**Energy Management Control Systems.** An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A.
§ 150.0(k)2E:	**Automatic Shutoff Controls.** In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F:	**Dimmers.** Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)2K:	**Independent controls.** Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)3A:	**Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
§ 150.0(k)4:	**Internally Illuminated address signs.** Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	**Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.

Solar Readiness:

§ 110.10(a)1:	**Single-family Residences.** Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
§110.10(b)1A:	**Minimum Solar Zone Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. *
§ 110.10(b)2:	**Azimuth.** All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)3A:	**Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.
§ 110.10(b)3B:	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane. *
§ 110.10(b)4:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways.** The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.
§ 110.10(e)1:	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

Electric and Energy Storage Ready:

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

*Exceptions may apply.

PREPARED BY:

EVERETT SMITH
DESIGNS, INC
30141 ANTELOPE RD. D774
MENIFEE, CA 92584

Everett Smith
DIGITALLY SIGNED
6/26/2025 11:31:51 AM

Email: everett@everettsmithdesigns.com

PROJECT:

ADDITION & RENOVATION OF GARAGE FOR"ADU" @ (E) SINGLE FAMILY RESIDENCE

REVISIONS:

No.	Description	Date

PROJECT ADDRESS:

5580 NORTHWOOD DR
RIVERSIDE CA
92509-7312

CLIENT NAME:

Aguilar Residence

MANDATORY MEASURES

Project number	25-2522
Date	6/26/2025 11:31:51 AM
Drawn by	RS
Checked by	ES

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Scale

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GENERAL NOTES

1. ALL CONSTRUCTION, INCLUDING MATERIAL AND WORKMANSHIP, SHALL CONFORM TO THE PROVISIONS OF THE 2022 EDITION OF THE "CALIFORNIA BUILDING CODE" (CBC) WITH THE GOVERNING AGENCY AMENDMENTS, AND STANDARDS REFERENCED THEREIN. WHERE EVER CODE OR CALIFORNIA BUILDING CODE (CBC) IS REFERENCED IN THE FOLLOWING GENERAL NOTES OR OTHER NOTE SECTIONS, IT SHALL IMPLY THE CBC CODE WITH GOVERNING AGENCY AMMENDMENTS.

2. ALL ASTM STANDARDS LISTED HEREIN, SHALL BE CURRENT AND COMPLIANT TO 2016 CBC, CHAPTER 35.

3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE DESIGNER AND STRUCTURAL ENGINEER SHALL IMMEDIATELY BE NOTIFIED, IN WRITING, OF ANY DISCREPANCIES.

4. ALL OMISSIONS AND/OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE FIELD INSPECTOR, AND A SOLUTION GIVEN BY, THE DESIGNER AND STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH ANY WORK AFFECTED BY THE CONFLICT OR OMISSION.

5. IN CASE OF CONFLICT, NOTES AND DETAILS OF THESE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE "GENERAL NOTES" AND/OR "STANDARD DETAILS". TYPICAL DETAILS SHALL BE USED WHENEVER APPLICABLE.

6. IF A SPECIFIC DETAIL IS NOT SHOWN FOR ANY PART OF THE WORK, THE CONSTRUCTION SHALL BE THE SAME AS FOR SIMILAR WORK.

7. WORKING DIMENSIONS SHALL NOT BE SCALED FROM PLANS, SECTIONS OR DETAILS ON THESE STRUCTURAL DRAWINGS.

8. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ADEQUATE ERECTION SHORING AND BRACING AS REQUIRED FOR STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION.

9. PIPES, DUCTS, SLEEVES, OPENINGS, POCKETS, CHASES, BLOCK-OUTS, ETC., SHALL NOT BE PLACED IN SLABS, BEAMS, GIRDERS, COLUMNS, WALLS, FOUNDATIONS, ETC., NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR SUCH ITEMS, UNLESS SPECIFICALLY DETAILED ON THESE STRUCTURAL DRAWINGS. (IF ANY PIPES, DUCTS, ETC., DO OCCUR, THAT ARE NOT SHOWN ON THESE STRUCTURAL DRAWINGS, THE DESIGNER AND STRUCTURAL ENGINEER SHALL BE NOTIFIED.) SEE PARAGRAPH 4, ABOVE.

10. ANCHOR BOLTS OR INSERTS FOR EQUIPMENT ANCHORAGE OR INSTALLATION SHALL BE DESIGNED FOR SEISMIC CATEGORY D BY A CIVIL ENGINEER OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA AND SHALL BE SHOWN ON THE MECHANICAL OR ELECTRICAL SHOP DRAWINGS.

11. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE STRUCTURAL ENGINEER FREE AND HARMLESS FROM ALL CLAIMS, DEMANDS AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE STRUCTURAL ENGINEER.

12. IF ANY SUBSTITUTION IS PROPOSED BY THE CONTRACTOR, NEW CALCULATIONS MAY HAVE TO BE PREPARED, THE DETAILS MAY HAVE TO BE ALTERED, AND NEW DRAWINGS MAY HAVE TO BE SUBMITSED TO THE BUILDING DEPARTMENT. THE CONTRACTOR SHALL PAY THE STRUCTURAL ENGINEER'S FEES TO ALTER THE APPROVED PLANS. THE CONTRACTOR SHALL ALSO PROCESS THE REVISED PLANS REFLECTING ALL SUBSTITUTIONS THROUGH THE APPROPRIATE OFFICE OF ALL GOVERNING AGENCIES.

WOOD NOTES

1. SAWN WOOD MEMBERS SHALL BE DOUGLAS FIR–LARCH (U.N.O.), CONFORM TO THE "CALIFORNIA BUILDING CODE" (CBC) SEC. 2303, and NDS 2018 AND SHALL BE GRADE MARKED BY AN ACCREDITATION BODY THAT COMPLIES WITH DOC PS 20 OR EQUIVALENT.

2. WOOD GRADES, U.N.O., SHALL BE AS FOLLOWS:

MEMBERS	GRADE
WALLS 2 X 4 (8'–0")	CONSTRUCTION
WALLS 2 X 4 (8'–1" TO 12'–0")	# 1
WALLS 2 X 6 (12'–0" to 16'–0")	# 1
STRUCTURAL JOISTS AND PLANKS (2x)	# 1
BEAMS AND STRINGERS (4x8 & WIDER)	# 1
POSTS AND TIMBERS	# 1
TOP PLATE	MATCH WALL MEMBERS

3. ALL WOOD THAT REST ON EXTERIOR FOUNDATION WALLS AND ARE LESS THAN 8" FROM EXPOSED EARTH, ALL WOOD ATTACHED DIRECTLY TO INTERIOR OR EXTERIOR MASONRY OR CONCRETE WALLS BELOW GRADE, AND ALL WOOD SLEEPERS AND SILLS ON CONCRETE THAT IS IN DIRECT CONTACT WITH EARTH SHALL BE PRESERVATIVE–TREATED DOUGLAS FIR.

4. ALL SILLS OR PLATES BEARING ON CONCRETE OR MASONRY SHALL HAVE ANCHOR BOLTS:
   A. NOT LESS THAN ⅝" DIA
   B. EMBEDDED AT LEAST 7" INTO CONCRETE OR MASONRY.
   C. SPACED NOT MORE THAN 6' APART.
   D. PLACED A MIN. OF 4" AND A MAX. OF 12" FROM EACH END.
   E. A MINIMUM OF TWO BOLTS PER PIECE.
   F. SIZE AND SPACED AS SHOWN ON THE DRAWINGS.

5. WOOD STRUCTURAL PANELS SHALL CONFORM TO THE "CALIFORNIA BUILDING CODE" (CBC) SEC. 2303, AND SHALL CONFORM TO THE REQUIREMENTS FOR THEIR TYPE IN DOC PS 1 OR PS2. EACH PANEL SHALL BE IDENTIFIED FOR GRADE AND GLUE TYPE BY THE TRADEMARKS OF AN APPROVED TESTING AND GRADING AGENCY. WOOD STRUCTURAL PANELS THAT ARE PERMANENTLY EXPOSED IN OUTDOOR APPLICATIONS SAHLL BE OF EXTERIOR TYPE (U.N.O.). ALL WOOD STRUCTURAL PANELS SHALL BE OF THE FOLLOWING GRADES AND PANEL INDENTIFICATION INDEXES (U.N.O. ON DRAWINGS):

USE	GRADE	PANEL INDENTIFICATION INDEX
ROOF SHEATING	CDX	24/0
FLOOR SHEATHING	APA	48/24
SHEAR PANEL	CDX (U.N.O.)	24/0

6. GLUED–LAMINATED TIMBERS SHALL BE MANUFACTURED AND IDENTIFIED AS REQUIRED IN AITC A190.1 AND ASTM D 3737, USING DOUGLAS FIR INDUSTRIAL APPEARANCE GRADE WOOD AND EXTERIOR GLUE WITH INTENDED DRY USE CONDITION AND USE SHALL BE AS FOLLOWS:

COMBINATION NO.	USE
24F–V4	SIMPLE SPANS
24F–V8	CANTILEVERS

7. FRAMING ANCHORS, POST CAPS, COLUMN BASES, AND OTHER CONNECTORS SPECIFIED ON DRAWINGS SHALL BE AS MANUFACTURED BY "SIMPSON COMPANY" OR AN ENGINEER– APPROVED EQUAL.

8. BARS, PLATES, UNHEADED BOLTS, WASHERS AND DRIFT BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36.

9. BOLTS SHALL CONFORM TO ASTM A307. BOLTS IN PRESSURE TREATED WOOD SHALL BE HOT DIPPED ZINC–COATED GALVANIZED STEEL PER ASTM A 153 OR MECHANICALLY DEPOSITED ZINC COATING WITH WEIGHTS PER ASTM B 695, CLASS 55.

10. NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A563, GRADE A.

11. ALL BOLT HEADS, NUTS, AND LAG SCREWS BEARING ON WOOD SHALL HAVE CUT WASHERS UNLESS NOTED.

12. BOLT HOLES SHALL BE DRILLED A MAXIMUM OF 1/16" LARGER THAN THE NOMINAL BOLT DIAMETER. BOLT HOLES SHALL BE ACCURATELY ALIGNED AND NOT FORCIBLY DRIVEN.

13. SPECIAL CONNECTORS FOR CONNECTING WOOD OR GLUED LAMINATED TIMBER SHALL BE FABRICATED FROM STEEL CONFORMING TO ASTM A36. WELDS SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.1 – 15.

WOOD NOTES (cont.)

14. DIAPHRAGM NAILING SHALL CONFORM TO CBC TABLE 2306.4.1 (1) AND 2306.3.1 (2) WITH NOMENCLATURE DEFINED AS FOLLOWS:
   BN = NAILING AT DIAPHRAGM BOUNDARIES, CONTINUOUS PANEL EDGES, AND AT EDGES OF OPENING.
   EN = EDGE NAILING
   FN = FIELD NAILING

15. WHERE DIAPHRAGM BLOCKING IS SPECIFIED, USE 2 X 4 FLAT BLOCKING (WITH "Z" CLIPS). (U.N.O.)

16. SIMPLE SPAN WOOD MEMBERS, NOT SHOP CAMBERED, SHALL BE ERECTED WITH THE NATURAL CAMBER UP. FOR CANTILEVERED WOOD MEMBERS, CONSULT WITH ENGINEER.

17. LEAD HOLES FOR LAG SCREWS IN WOOD SHALL BE BORED AS FOLLOWS:

FOR SHANK:	SAME DIAMETER AND LENGTH AS UNTHREADED SHANK.
FOR THREADED PORTION:	60% TO 75% OF SHANK DIAMETER & LENGTH EQUAL TO THE THREADED PORTION.

18. SPECIAL PROVISIONS FOR SHEAR WALLS WITH PLYWOOD ON BOTH SIDES: WHERE SPECIFICALLY INDICATED ON PLANS
   A. SILL PLATE SHALL BE 3x6 P.T. D.F.
   B. ALL STUDS AND BLOCKING AT PANEL EDGES SHALL BE 4x6.
   C. ALL OTHER INTERMEDIATE STUDS SHALL BE 3x6 @ 16"o.c.
   D. END POSTS SHALL BE AS SPECIFIED ON THE DRAWINGS.
   E. BOTH VERTICAL AND HORIZONTAL INTERIOR PANEL JOINTS ON OPPOSITE SIDES OF THE WALL SHALL BE STAGGERED.
   F. THE PLYWOOD ON ONE SIDE MUST BE NAILED BEFORE THE FRAME INSPECTION. THE PLYWOOD ON THE OTHER SIDE MUST BE INSTALLED AND INSPECTED PRIOR TO INSTALLATION OF WALL SURFACE COVERING.
   G. NO PENETRATIONS OR NOTCHES ARE PERMITSED OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS.

19. PROVIDE DOUBLE STUD TO SUPPORT ALL BEAMS UNLESS POSTS ARE SPECIFIED.

20. DOUBLE BLOCK UNDER ALL POSTS.

21. DOUBLE JOIST UNDER ALL PARALLEL PARTITIONS U.N.O.

22. TOP PLATES OF ALL WOOD STUD WALLS SHALL BE 2–2 X (SAME WIDTH AS STUDS), LAP 48" (MIN.), WITH AT LEAST 36–16d NAILS AT EACH SIDE OF LAP AND NOT MORE THAN 12" BETWEEN.

23. CUTTING, NOTCHING, OR DRILLING OF BEAMS OR JOISTS SHALL BE PERMITSED ONLY AS DETAILED OR APPROVED BY THE ENGINEER.

24. MOISTURE CONTENT OF WOOD AT TIME OF PLACEMENT SHALL NOT EXCEED 19%.

25. PROVIDE 'MSTC28' STRAPS ACROSS ALL DISCONTINUOUS TOP PLATES.

26. THE NUMBER AND SIZE OF FASTENERS CONNECTING WOOD MEMBERS SHALL NOT BE LESS THAN THE FOLLOWING TABLE.

FASTENING SCHEDULE (TABLE 2304.10.1)

– COMMON OR BOX NAILS MAY BE USED EXCEPT WHERE OTHERWISE STATED

1. JOIST TO SILL OR GIRDER ------- 3– 8d COMMON TOE NAIL
2. BRIDGING TO JOIST ---------- 2– 8d TOE NAIL EA. END
3. SUBFLOOR 1x6 OR LESS TO EA. JOST – 2– 8d FACE NAIL
4. SOLE PLATE TO JOIST OR BLKG.–– 16d @ 16" O.C. TYP. FACE NAIL
5. SOLE PLATE TO JOIST OR BLKG. AT BRACED WALL PANEL ------ 3– 16d PER 16" BRACED WALL PANEL
6. TOP PLATE TO STUD ---------- 2– 16d COMMON END NAIL
7. STUD TO SOLE PLATE -------- 4– 8d COMMON OR 2– 16d COMMON E.N.
8. DOUBLE STUDS ------------ 16d @ 24" O.C. F.N.
9. DOUBLE TOP PLATES ---------- 16d @ 16" O.C. TYP. FACE NAIL
10. DOUBLE TOP PLATES LAP SPLICE–– 8– 16d
11. BLKG. BETWEEN JOISTS OR RAFTERS TO TOP PLATE ----------3– 8d COMMON TOE NAIL
12. RIM JOIST TO TOP PLATE ------- 8d @ 6" O.C. TOE NAIL
13. TOP PLATES, LAPS AND INTERSECTIONS ------------ 2– 16d COMMON F.N.
14. CONT. OR 2–PIECE HEADER ----- 16d @ 16" O.C. ALONG EA. EDGE
15. CEILING JOISTS TO PLATE ------ 3– 8d COMMON TOE NAIL
16. CONT. HEADER TO STUD -------- 4– 8d TOE NAIL
17. CEILING JOISTS LAP OVER PARTITIONS ---------- 3– 16d FACE NAIL
18. CEILING JOISTS TO PARALLEL RAFTERS – 3– 16d FACE NAIL
19. RAFTER TO PLATE ---------- 3– 8d TOE NAIL
20. 1" BRACE TO EA. STUD & PLATE–– 2– 8d FACE NAIL
21. 1"x8" SHT'G OR LESS TO EA. BEARING– 2– 8d FACE NAIL
22. WIDER 1"x8" SHT'G TO EA. BEARING–– 3– 8d FACE NAIL
23. BUILT–UP CORNER STUDS -------- 16d @ 24" O.C.
24. BUILT–UP GIRDER & BEAMS -------- 20d @ 32" TOP & BOTT. & STAGG. 2– 20d @ ENDS & @ EA. SPLINE
25. COLLAR TIE TO RAFTER ------- 3– 10d FACE NAIL
26. 2" PLANKS ---------- 2– 16d @ EA. BEARING
27. ROOF RAFTER TO 2x RIDGE BM.–– 2– 16d TOE NAIL
28. WOOD STRUCTURAL PANELS & PARTICLEBOARD
   SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING)
   1/2" AND LESS ----- 6d COMMON OR DEFORMED SHANK
   19/32"–3/4" ----- 8d COMMON OR 6d DEFORMED SHANK
   7/8"–1" --------- 8d COMMON OR DEFORMED SHANK
   1 1/8"–1 1/4" ---- 10d COMMON OR 8d DEFORMED SHANK
   COMBINATION SUBFLOOR–UNDERLAYMENT (TO FRAMING)
   3/4" AND LESS ----- 6d DEFORMED SHANK
   7/8"–1" --------- 8d DEFORMED SHANK
   1 1/8"–1 1/4" ---- 10d COMMON OR 8d DEFORMED SHANK
29. PANEL SIDING TO FRAMING
   1/2" OR LESS ----- 6d CORROSION RESISTANT SIDING OR CASING NAIL
   5/8" ---------- 8d CORROSION RESISTANT SIDING OR CASING NAIL
   NAILS SPACED @ 6" O.C. @ EDGES, 12" O.C. @ INTERMEDIATE SUPPORTS, EXCEPT 6" O.C. @ ALL SUPPORTS WHERE SPANS ARE 48" OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLE BOARD DIAPHRAGMS AND SHEARWALLS, REFER TO SECT. 2305 (2007 CBC) AND/OR DETAILS AND SCHEDULES HEREIN SHOWN. NAILS FOR WALL SHT'G MAY BE COMMON, BOX, OR CASING.
30. FIBERBOARD SHEATHING
   1/2" AND 25/32"–– No. 11 ga. CORROSION–RESISTANT ROOFING NAILS w/ 7/16"ø HEAD & 1 1/2" LENGTH FOR 1/2" SHT'G AND 1 3/4" LENGTH FOR 25/32" SHT'G.
   –– OR 6d COMMON NAILS.
   –– OR No. 16 ga. CORROSION–RESISTANT STAPLES w/ NOMINAL 7/16" CROWN & 1 1/2" LENGTH FOR 1/2" SHT'G AND 1 1/2" LENGTH FOR 25/32" SHT'G.
31. INTERIOR PANELING
   1/4" ---------- 4d –PANEL SUPPORTS @ 16" (20" IF STRONG AXIS IN THE LONG DIRECTION OF THE PANEL UNLESS OTHERWISE MARKED. CASING OR FINISH NAILS SPACED 6" ON PANEL EDGES, 12" @ INTERMEDIATE SUPPORTS
   3/8" ---------- 6d –PANEL SUPPORTS @ 24" CASING OR FINISH NAILS SPACED 6" ON PANEL EDGES, 12" @ INTERMEDIATE SUPPORTS

ABBREVIATIONS

AB	ANCHOR BOLT	JST	JOIST
BN	BOUNDARY NAILING	K.P.	KING POST
BRG	BEARING	(N)	NEW
CANT'L	CANTILEVER	NTS	NOT TO SCALE
CLG	CEILING	OC	ON CENTER
CJ	CEILING JOIST	PERP	PERPENDICULAR
CLR	CLEAR	PL (>)	PLATE
CVR	COVER	P–LAM	PARALLAM
d	PENNY (NAILS)	PSL	PARALLEL STRANDED LUMBER
DF	DOUGLAS FIR	PT	PRESSURE TREATED
DIA (~)	DIAMETER	RJ	ROOF JOIST
EA	EACH	R/R	ROOF RAFTER
EMB	EMBED(MENT)	SCH	SCHEDULE
EN	EDGE NAILING	SW	SHEARWALL
EW	EACH WAY	T & B	TOP AND BOTTOM
(E)	EXISTING	THR'D	THREADED
FN	FIELD NAILING	TN	TOE NAIL
FTG	FOOTING	TS	TUBE STRUCTURE
GLB	GLUE–LAM. BEAM	TYP	TYPICAL
HD	HOLD DOWN	UNO	UNLESS NOTED OTHERWISE
HDR	HEADER	VERT (V)	VERTICAL
HGR	HANGER	VIF	VERIFY IN FIELD
HOR(H)	HORIZONTAL		

STRUCTURAL STEEL NOTES

1. THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH AISC 360 (14TH EDITION).

2. ALL STRUCTURAL STEEL TO BE THE FOLLOWING:

W SHAPES:	ASTM A992, Fy= 50ksi
HSS SHAPES (RECTANGULAR)	ASTM A500 GRADE B, Fy= 46ksi
HSS SHAPES (ROUND):	ASTM A500, GRADE B, Fy= 42ksi
PIPE SHAPES:	ASTM A53, GRADE B, Fy= 35ksi
ALL OTHER STEEL:	ASTM A36, Fy = 36 ksi

3. ALL STRUCTURAL WELDS TO BE THE FOLLOWING:
   E70 SERIES–TYP.
   E90 SERIES FOR A615 GRADE 60 REINFORCING BARS

4. SHOP WELDING TO BE DONE IN AN APPROVED FABRICATOR'S SHOP.

5. FIELD WELDING TO HAVE CONTINUOUS SPECIAL INSPECTION.

REINFORCING STEEL NOTES

1. BAR REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615. THE FOLLOWING GRADES SHALL BE USED:
   GRADE 40 – # 4 AND SMALLER
   GRADE 60 – # 5 AND LARGER

2. DETAILS OF REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF ACI 318–14 CH. 7 AND OTHER SECTIONS ACCORDING TO APPLIC.

3. LAPS AT BAR SPLICES IN CONC. CONSTRUCTION SHALL BE AS FOLLOWS:

BAR SIZE	TOP BARS (CLASS B)		OTHER THAN TOP BARS (CLASS B)	
	f'c = 2500	f'c = 3000	f'c = 2500	f'c = 3000
# 5	30	27	24	21
# 6	35	33	28	25
# 7	40	38	32	29
# 8	45	43	36	33

LAPS AT BAR SPLICES IN MASONRY CONSTRUCTION SHALL BE 48

4. BAR DIAMETERS BUT NOT LESS THAN 2'–0".

5. VERTICAL REINFORCEMENT SHALL BE TIED OR OTHERWISE FIXED IN POSITION AT THE TOP AND BOTTOM AND AT INTERMEDIATE LOCATIONS, SPACED NOT GREATER THAN 192 BAR DIAMETERS.

6. WELDED STEEL WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A185. 12" LAPS OF WELDED STEEL WIRE FABRIC AT SPLICES ARE REQ'D.

7. WALLS, PILASTERS, AND COLUMNS SHALL BE DOWELED TO THE SUPPORTING FOOTINGS WITH REINFORCEMENT OF THE SAME SIZE, GRADE AND AT THE SAME SPACING AS THE VERTICAL REINFORCEMENT IN THE WALLS, PILASTERS, OR COLUMNS (U.N.O).

8. BAR SUPPORTS SHALL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF "BAR SUPPORT SPECIFICATIONS" AS CONTAINED IN THE LATEST EDITION OF THE "MANUAL OF STANDARD PRACTICE" BY THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).

9. REINFORCING STEEL DETAILING, BENDING AND PLACING SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE", LATEST EDITION.

10. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE BEFORE PLACING CONCRETE OR GROUT.

11. WELDING OF REINFORCING BARS SHALL CONFORM TO "STRUCTURAL WELDING CODE–REINFORCING STEEL," ANSI/AWS D1.4 OF THE A.W.S.

12. WELDING OF ALL REINFORCING STEEL TO STRUCTURAL STEEL SHALL BE LIMITED TO THOSE AREAS SPECIFICALLY SHOWN ON THE PLANS. ANY OTHER WELDING SHALL REQUIRE THE APPROVAL OF THE GOVERNING AGENCY, FIELD INSPECTOR, AND STRUCTURAL ENGINEER.

13. WELDING OF CROSSING BARS AND TACK WELDING OF REINFORCEMENT SHALL NOT BE PERMITSED.

14. ALL WELDS SHALL, IN ADDITION, TO ALL THE SPECIFICATIONS LISTED ABOVE, COMPLY WITH THE REQUIREMENTS OF THE 14th EDITION OF THE "STEEL CONSTRUCTION MANUAL" AS PUBLISHED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.

MASONRY NOTES

1. MASONRY UNITS SHALL CONFORM TO ASTM C90 HOLLOW CORE, NORMAL WEIGHT, f'm= 1500 psi (U.N.O.). ALL UNITS SHALL BE SAMPLED AND TESTED IN ACCORDANCE WITH ASTM C140.

2. MORTAR SHALL BE TYPE 'S' AND CONFORM TO ASTM C270 AND TABLE SC–1 AND SC–2 OF TMS 402–16 / ACI 530–15 / ASCE 5–15. THE MINIMUM STRENGTH SHALL BE 1,800 psi AT 28 DAYS. THE BED JOINTS SHALL NOT EXCEED ¾" THICK.

3. GROUT SHALL CONFORM WITH ARTICLE 2.2 OF TMS 402–16 / ACI 530–13 / ASCE 5–13. THE COMPRESSIVE STRENGTH OF GROUT SHALL BE DETERMINED IN ACCORDANCE WITH ASTM C1019. WHEN THE GROUT CONFORMS TO ASTM C476, THE GROUT SHALL BE SPECIFIED BY PROPORTION REQUIREMENTS OR PROPERTY REQUIREMENTS. THE MINUMUM STRENGTH SHALL BE 2,000 psi AT 28 DAYS.

4. PORTLAND CEMENT SHALL CONFORM TO THE REQUIREMENTS OF ASTM C150. BLENDED CEMENT SHALL CONFORM TO THE REQUIREMENTS OF ASTM C595. MASONRY CEMENT SHALL CONFORM TO THE REQUIREMENTS OF ASTM C91. MORTAR CEMENT SHALL CONFORM TO THE REQUIREMENTS OF ASTM C1329.

5. COARSE AGGREGATE SHALL CONFORM TO ASTM C404. COARSE AGGREGATE SHALL BE PEA GRAVEL.

6. FINE AGGREGATE SHALL CONFORM TO ASTM C144.

7. LIME SHALL BE HYDRATED LIME AND CONFORM TO ASTM C207, TYPE S.

8. ADMIXTURES SHALL BE USED IN ACCORDANCES WITH THE MANUFACTURER'S RECOMMENDATIONS AND APPROVED BY THE ENGINEER OF RECORD.

CONCRETE NOTES

1. CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 318–19 CHAPTER 5. THE MINIMUM 28–DAY CYLINDER STRENGTH SHALL BE AS FOLLOWS:

CONVENTIONAL FOUNDATIONS:	STRENGTH:
SLAB ON GRADE	2500 PSI
SLAB ON GRADE–GARAGE	2500 PSI
FOOTINGS	2500 PSI
GRADE BEAM / CAISSON	2500 PSI

2. WHERE CONCRETE STRENGTH IS GREATER THAN 3000 PSI, CYLINDER TESTS ARE REQUIRED PER ACI 318–14 5.6.3.3.

3. PORTLAND CEMENT SHALL CONFORM TO THE REQUIREMENTS OF ASTM C150, TYPE II.

4. AGGREGATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C33 FOR NORMAL WEIGHT CONCRETE AND ASTM C330 FOR LIGHTWEIGHT CONCRETE.

5. ADMIXTURES SHALL BE USED IN ACCORDANCES WITH THE MANUFACTURER'S RECOMMENDATIONS AND APPROVED BY THE ENGINEER OF RECORD.

6. READY–MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH THE REQUIREMENTS OF "STANDARD SPECIFICATION FOR READY–MIXED CONCRETE" ASTM C94.

7. MINIMUM CONCRETE COVER (IN INCHES) FOR REINFORCING STEEL IN NON–PRESTRESSED CAST–IN–PLACE CONCRETE SHALL BE AS FOLLOWS, U.N.O:

LOCATION:	MIN. CVR. (INCHES)
A. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
B. FORMED SURFACES EXPOSED TO EARTH OR WEATHER:	
# 6 AND LARGER BAR	2"
# 5 BARS, 5/8 INCH WIRE, AND SMALLER	1½"

8. ALL SLEEVES THROUGH BEAMS, GIRDERS AND FOUNDATION WALLS SHALL BE INSTALLED AND SECURED IN POSITION PRIOR TO PLACING CONCRETE. EXCEPT AS SHOWN ON STRUCTURAL DRAWINGS, SLEEVING SHALL NOT BE PERMITSED UNLESS APPROVED BY THE DESIGNER AND STRUCTURAL ENGINEER.

9. SLEEVES, PIPES, OR CONDUITS SHALL NOT BE PLACED THROUGH CONTINUOUS OR SPREAD FOOTINGS, GRADE BEAMS, PILE CAPS, OR TIE BEAMS, UNLESS SPECIFICALLY DETAILED BY THE ENGINEER.

10. CONDUIT SHALL NOT BE PLACED IN ANY CONCRETE SLAB LESS THAN 3–1/2 INCHES THICK. IF CONDUIT IS PLACED IN CONCRETE SLAB, ITS OUTSIDE DIAMETER SHALL NOT BE GREATER THAN 1/3 OF THE SLAB THICKNESS. THE MINIMUM CLEAR DISTANCE BETWEEN CONDUITS SHALL BE 3 INCHES.

11. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4 INCH, U.N.O.

12. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, CLIPS, OR GROUNDS REQUIRED TO BE CAST IN THE CONCRETE AND FOR EXTENT OF DEPRESSIONS, CURBS, AND RAMPS.

13. ALL VERTICAL SURFACES OF CONCRETE ABOVE FINISHED GRADE SHALL BE FORMED.

14. REFERENCE ARCH. DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS DUE TO ARCHITECTURAL C.I.P. CONCRETE.

DESIGN CRITERIA

VERTICAL		(CBC 2022)	
ROOF DL =	20 PSF	FLOOR DL =	N/A
ROOF LL =	20 PSF	FLOOR LL =	N/A
		EXT. WALL DL =	14 PSF
		INT. WALL DL =	10 PSF

SEISMIC		(EQV. LATERAL FORCE PROCEDURE)	
SEISMIC DESIGN CAT. = "D"		SITE CLASSIFICATION = "D"	
LFRS TYPE = BEARING WALL		IMPORTANCE FACTOR = 1.00 RISK CATEGORY: II	
R = 6.5(WOOD SHEAR WALL)	C(s) = 0.123	OMEGA = 2.50	
S(s) = 1.40	F(a) = 1.20	S(ds) = 1.12	
S(1) = 0.52	F(v) = 1.50	S(d1) = 0.58	

WIND	(ASCE 7–16, SECTION 28; ENVELOPE PROCEDURE)	
ULT. WIND SPEED = 96 MPH NOMINAL WIND VELOCITY = 85 MPH		IMPORTANCE FACTOR = 1.00
WIND EXPOSURE = C		INT. PRESSURE COEFF. = 0.18
K_{zt} = 1.0 TOPOGRAPHIC FACTOR		K d = 0.85 DIRECTIONALITY FACTOR
C&C PRESSURE = XX		RISK CATEGORY: II

SOIL	
ACTIVE PRESSURE (LEVEL) = N/A	PASSIVE PRESSURE = XX
ACTIVE PRESSURE (SLOPE) = N/A	COEFF. OF FRICTION = XX
ACTIVE PRESSURE (REST.) = N/A	SOIL BEARING PRESSURE = 1,500 psf

SPECIAL INSPECTION LIST

IN ADDITION TO THE REGULAR INSPECTIONS, THE FOLLOWING CHECKED ITEMS WILL ALSO REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH 2022 CBC SEC. 1704

CERTIFICATION FROM SOILS ENGINEER	___ YES	_X_ NO
CONCRETE:		
CONCRETE BEAMS, GRADE BEAMS TIE BEAMS STEEL REINFORCEMENT	___ YES	_X_ NO
CASSION STEEL REINFORCEMENT	___ YES	_X_ NO
REINFORCING STEEL AND PLACEMENT IN FOOTINGS	___ YES	_X_ NO
REINFORCING STEEL AND PLACEMENT IN WALLS AND RETAINING WALLS	___ YES	_X_ NO
MASONRY:		
RETAINING WALLS	___ YES	_X_ NO
PILASTER	___ YES	_X_ NO
REINFORCEMENT STEEL AND PLACEMENT	___ YES	_X_ NO
WOOD:		
CONNECTIONS INCLUDING NAILING, BOLTING, TIE DOWNS, BEAMS HANGERS, FRAMING HANGERS	___ YES	_X_ NO
LOAD PATH CONNECTIONS, DRAG STRUTS, COLLECTORS, A34/A35, BLOCKING, ETC.	___ YES	_X_ NO
THICKNESS AND NAIL SPACING OF DIAPHRAGMS	_X_ YES	___ NO
SHEAR WALL TYPE, LENGTH, NAILING, 3X MEMBERS AND HOWLDOWNS	_X_ YES	___ NO
GUARDRAIL/HANDRAIL SUPPORT POST ATTACHMENT DETAILS	___ YES	_X_ NO
STRUCTURAL STEEL:		
FIELD WELDING	___ YES	___ NO
HIGH STRENGTH BOLTS	___ YES	_X_ NO
EPOXY	_X_ YES	___ NO

-NOTE: WHERE CONCRETE IS SPECIFIED AS 4500 PSI TYPE V FOR HIGH SULFATE SOILS CONDITION IN STANDARD FOOTINGS, SPECIAL INSPECTION SHALL NOT BE REQUIRED. CONTRACTOR TO PROVIDE BATCH TICKET FROM CONCRETE MANUFACTURE FOR VERIFICATION.

SHEAR WALL SCHEDULE NOTES

1. SHEAR PANELS SHALL BE APPLIED DIRECTLY TO STUD FRAMING.
2. PLYWOOD MAY BE INSTALLED EITHER HORIZONTALLY OR VERTICALLY.
3. ALL PLYWOOD PANEL EDGES SHALL BE BLOCKED W/ 2x BLOCKING MIN.
4. SHEAR WALLS MORE THAN ONE VERTICAL PANEL IN HEIGHT SHALL HAVE EITHER VERTICAL OR HORIZONTAL STAGGERED SPLICED JOINTS.
5. PROVIDE 1⅝" MIN. EDGE DISTANCE FOR ALL PLYWOOD EDGE NAILING.
6. ONLY COMMON NAILS ARE TO BE USED FOR ALL PLYWOOD SHEATHING ATTACHMENT.
7. NAIL GUNS USING "CLIPPED HEAD" OR "SINKER" NAILS ARE NOT ACCEPTABLE.
8. ALL BOLT HOLES TO BE DRILLED 1/32" MIN. TO 1/16" MAX. OVERSIZED.
9. USE DOUGLAS FIR # 2 PRESSURE TREATED SILL PLATES. ALL NAILS & ANCHOR BOLTS IN PRESSURE TREATED SILL PLATES SHALL BE HOT DIPPED ZINC–COATED GALVANIZED STEEL PER ASTM A 153. ANCHOR BOLTS MAY HAVE A MECHANICALLY DEPOSITED ZINC COATING WITH WEIGHTS PER ASTM B 696, CLASS 55.
10. ANCHOR BOLTS MUST BE EM

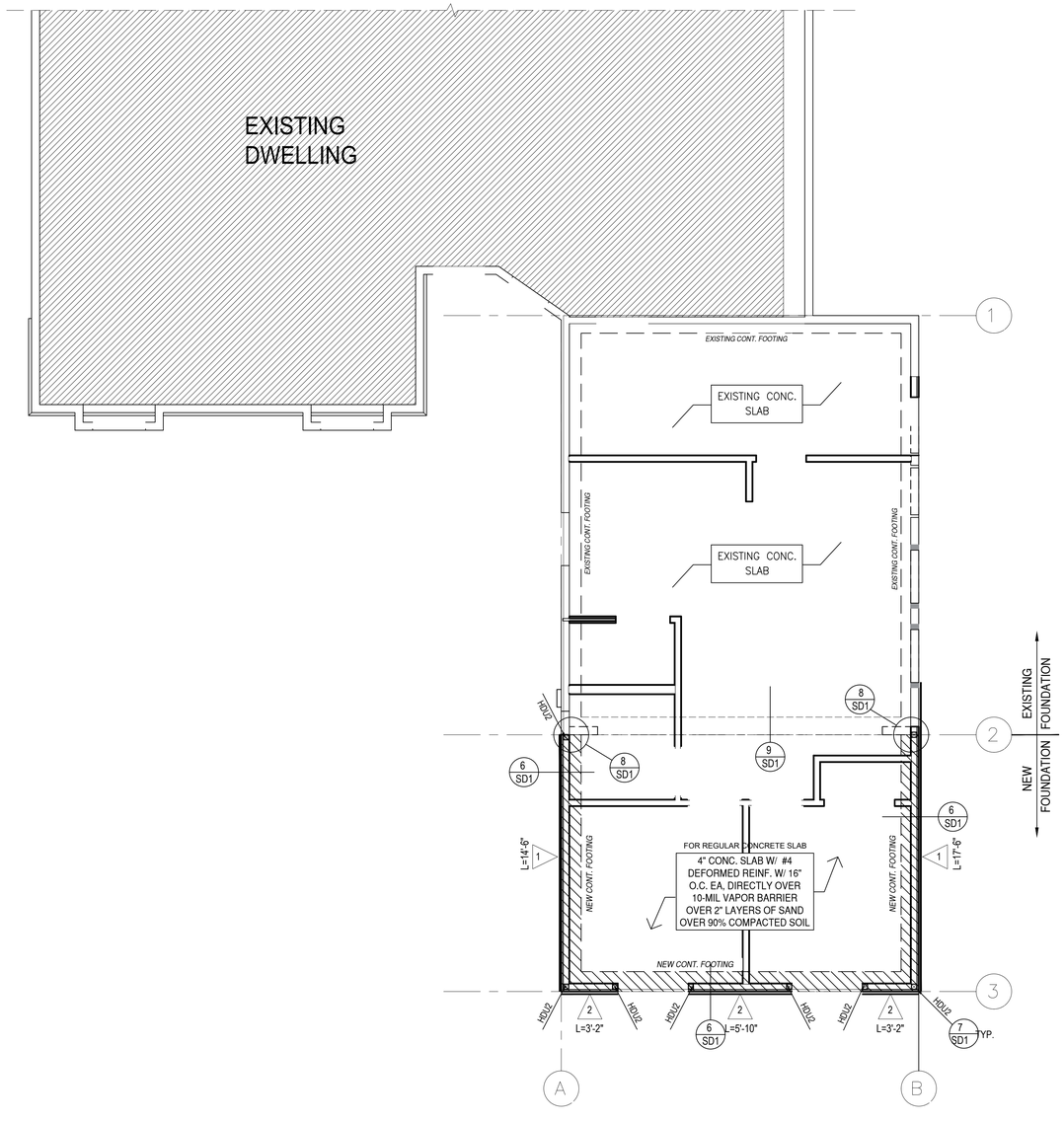
FOUNDATION NOTES

1. CONTRACTOR SHALL VERIFY FOUNDATION DIMENSIONS WITH FLOOR PLAN DIMENSIONS AND REPORT ANY DISCREPANCIES TO ARCHITECT PRIOR TO START OF CONSTRUCTION.
2. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES ALL REQUIREMENTS FOR THEIR MATERIALS TO BE INSTALLED UNDER/IN SLAB.
3. VERIFY LOCATIONS OF ALL HOLDDOWNS WITH FRAMING PLANS & FRAMING CONTRACTOR PRIOR TO INSTALLATION.
4. MATERIAL SUBSTITUTION NOTE
NO MATERIALS SHALL BE SUBSTITUTED WITHOUT THE ARCHITECTS WRITTEN APPROVAL
5. CONTRACTOR TO HAVE A COPY OF THE APPROVED SOILS REPORT AT JOB SITE AT ALL TIMES. CONTRACTOR IS RESPONSIBLE FOR THE CONTENTS OF THE REPORT AND IS TO REVIEW THE RECOMENDATIONS AND IS TO INCORPORATE THOSE RECOMENDATIONS INTO THE PROJECT. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO START OF CONSTRUCTION. VERIFY BUT NOT LIMITED TO, TYPE OF CONCRETE, FOOTING DEPTH AND PENETRATION, STEEL RECOMENDATIONS AND PRESATURIZATION REQUIREMENTS.
6. ELECTRICAL GROUND NOTE:
NOTE: PROVIDE UFER OR OTHER APPROVED ELECTRICAL GROUND SYSTEM PER NEC, ARTICLE 250-81
7. A CONCRETE ENCASED GROUND ELECTRODE (UFER) IS REQUIRED. THE ELECTRODE SHALL BE EITHER 20' MAXIMUM OF NO. 4 REBAR, NO. 4 BARE SOLID COPPER WIRE, OR 3/4" RIGID GALVANIZED CONDUIT INSTALLED THREE (3") INCHES OFF THE BOTTOM OF THE FOOTING AND ENCASED IN THREE INCHES (3") MINIMUM OF CONCRETE. ALTERNATE METHODS MUST BE APPROVED BY THE LOCAL BUILDING DEPARTMENT.
8. IT IS RECOMMENDED BY THE ARCHITECT
TO RUN ALL WATER LINES ABOVE SLAB
(BOTH HOT AND COLD LINES). SEE DETAIL.
9. PLUMBING AND ELECTRICAL TRENCHES UNDER THE SLAB SHALL BE BACKFILLED WITH SAND AND COMPACTED BY MECHANINICAL TAMPING.
10. N/A
11. N/A
12. N/A
13. N/A
14. SOIL PRESATURATION NOTE:
PRIOR TO PLACING CONCRETE, SUBGRADE SOILS BELOW ALL CONCRETE FLOOR SLABS SHALL BE PRESOAKED TO ACHIEVE A MOISTURE CONTENT THAT IS 110% TO 120% OF OPTIMUM MOISTURE CONTENT CONDITION TO A DEPTH OF 18" IMMEDIATELY PRIOR TO PLACEMENT OF THE MOISTURE BARRIER OR POURING OF CONCRETE.
15. SOIL BEARING VALUE AT 1500 PSF CODE MIN.
16. FOUNDATION CONSTRUCTION NOTE
FOUNDATION CONSTRUCTION MAY BE OF TWO-POUR CONFIGURATION, HOWEVER, IF CONTRACTOR OPTS TO UTILIZE A TWO-POUR FIGURATION THE FOUNDATION SHALL BE FORMED SO AS TO CREATE A "CURB" CONDITION @ ALL PERIMETER AND STEP BREAK LOCATIONS THEREBY ASSURING A MONOLITHIC CONDITION FOR HOLDOWNS, STRAPS AND ANCHOR BOLTS.
15. ALL BAR REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 (fy=60ksi) U.O.N. BENDING AND PLACING SHALL BE IN ACCORDANCE WITH CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE" LATEST EDITION.
16. ALL HARDWARE (ANCHOR BOLTS, HOLDOWNS, STRAPS, ETC.) SHALL BE TIED IN PLACE PRIOR TO FOUNDATION INSPECTION. ARCHITECT SHALL BE NOTIFIED AND MUST INSPECT PLACEMENT PRIOR TO POURING FOUNDATION OR SLAB.
17. FOUNDATION PLATE BOLTING: PROVIDE 5/8" x 14" A307 ANCHOR BOLTS, EMBEDDED 9" MINIMUM INTO CONCRETE. THERE SHALL BE A MINIMUM OF TWO (2) BOLTS PER PLATE, WITH ONE (1) BOLT LOCATED WITHIN 12" OF END, AND SPACED 6'-0" O.C. UNLESS OTHERWISE NOTED.
18. ANCHOR BOLT NOTE:
PROVIDE 3"x3"x1/4" THICK WASHER PLATES AT ALL ANCHOR BOLTS
19. VAPOR BARRIER MATERIAL SHALL BE POLYETHYLENE FILM (VISQUEEN OR EQUIVALENT) AND SHALL BE PLACED UNDER ALL HOUSE SLABS AND UNDER GARAGE SLABS WHERE NOTED ON PLANS WITH SIX INCH (6") MINIMUM SEALED LAP SPLICES.
20. ALL SLABS, STEPS, ETC. SHALL BE STEEL TROWELED AND PROTECTED FROM HARM DURING CONSTRUCTION. SLAB FINISH SHALL HAVE A MAXIMUM FINISHED TOLERANCE OF ONE-EIGHT INCH IN TEN FEET (1/8" IN 10'-0").
21. POSTS ON CONCRETE FLOORS EXPOSED TO WEATHER OR IN BASEMENTS SHALL BE SUPPORTED BY CONCRETE PIERS OR METAL PEDESTALS AT LEAST 6" ABOVE GROUND OR 1" ABOVE FLOOR
22. WHERE FRAMING LUMBER IS IN CONTACT WITH, OR LESS THAN 1 1/2" FROM CONCRETE, USE FOUNDATION GRADE REDWOOD OR PRESSURE TREADED DOUGLAS FIR.
23. PROVIDE 1/16" THICK (MINIMUM) METAL CORROSIVE-RESISTANT BASE PLATE FOR UNTREATED WOOD POSTS IN CONTACT WITH ALL CONCRETE.
24. ALL ANCHOR BOLTS & NAILS INN PRESSURE TREATED SILL PLATES SHALL BE HOT DIPPED ZINC-COATED GALVANIZED STEEL OR STAINLESS STEEL PER ASTAM A 153. ANCHOR BOLTS MAY HAVE A MECHANICALLY DEPOSITED ZINC COATING WITH WEIGHTS PER ASTM B 695, CLASS 55.
25. PROVIDE STUCCO BASE SCREED (SEC. 4706E.)

SW SCH - CBC 22

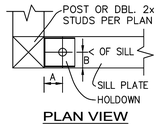
(REFER TO SHEET GN FOR COMPLETE SHEARWALL SCHEDULE & NOTES)

SYMBOL	ANCHOR BOLT SCHED. & SILL PLATE SIZE
1	2x SILL PLATE W/ 1/2" A.B. @ 36"o.c.
2	3x SILL PLATE W/ 1/2" A.B. @ 24"o.c.
3	3x SILL PLATE W/ 5/8" A.B. @ 24"o.c.
4	3x SILL PLATE W/ 5/8" A.B. @ 20"o.c.
5	3x SILL PLATE W/ 5/8" A.B. @ 18"o.c.
6	3x SILL PLATE W/ 5/8" A.B. @ 16"o.c.
7	3x SILL PLATE W/ 5/8" A.B. @ 12"o.c.
P	2x SILL PLATE W/ 1/2" ANCHOR BOLTS @ 36"o.c. (NOT USED AS SHEARWALL)



HOLDOWN SCHEDULE

	HOLDOWN	ASTM F 1554 G36 (U.N.O.) ANCHOR	EDGE (MIN.)	LOADS
1	DBL. 2x STUDS W/ HDU2	SSTB16 (12 5/8" EMB.)	2 1/2"	3075#
2	DBL. 2x STUDS W/ HDU4	SSTB20 (16 5/8" EMB.)	2 1/2"	4565#
3	4x6 POST W/ HDU5	SSTB24 (20 5/8" EMB.)	2 1/2"	5645#
4	4x6 POST W/ HDU8	SSTB28 (24 5/8" EMB.)	2 1/2"	7870#
5	6x6 POST W/ HDQ8	SSTB28 (24 5/8" EMB.)	2 1/2"	9230#
6	6x6 POST W/ HDU14	SB1x30 (24 5/8" EMB.)	2 1/2"	17080#
7	PREFAB. SHEARWALL	PER PLAN		



PLAN VIEW

RAHMAN ENGINEERING
13611 12TH ST. SUITE-B,
CHINO, CA 91710
Tel: (213)-400-8078

Project:

GARAGE ADDITON & RENOVATION OF GARAGE FOR LIVING SPACE

5580 NORTHWOOD DR RIVERSIDE CA

Stamp:

REGISTERED PROFESSIONAL ENGINEER
MIZANUDDUR RAHMAN
C69263
Exp. 06/30/26
CIVIL
STATE OF CALIFORNIA

REVISIONS:

MARK	DATE	DES./BY:

DRAWN BY: MR

DS. BY: MR

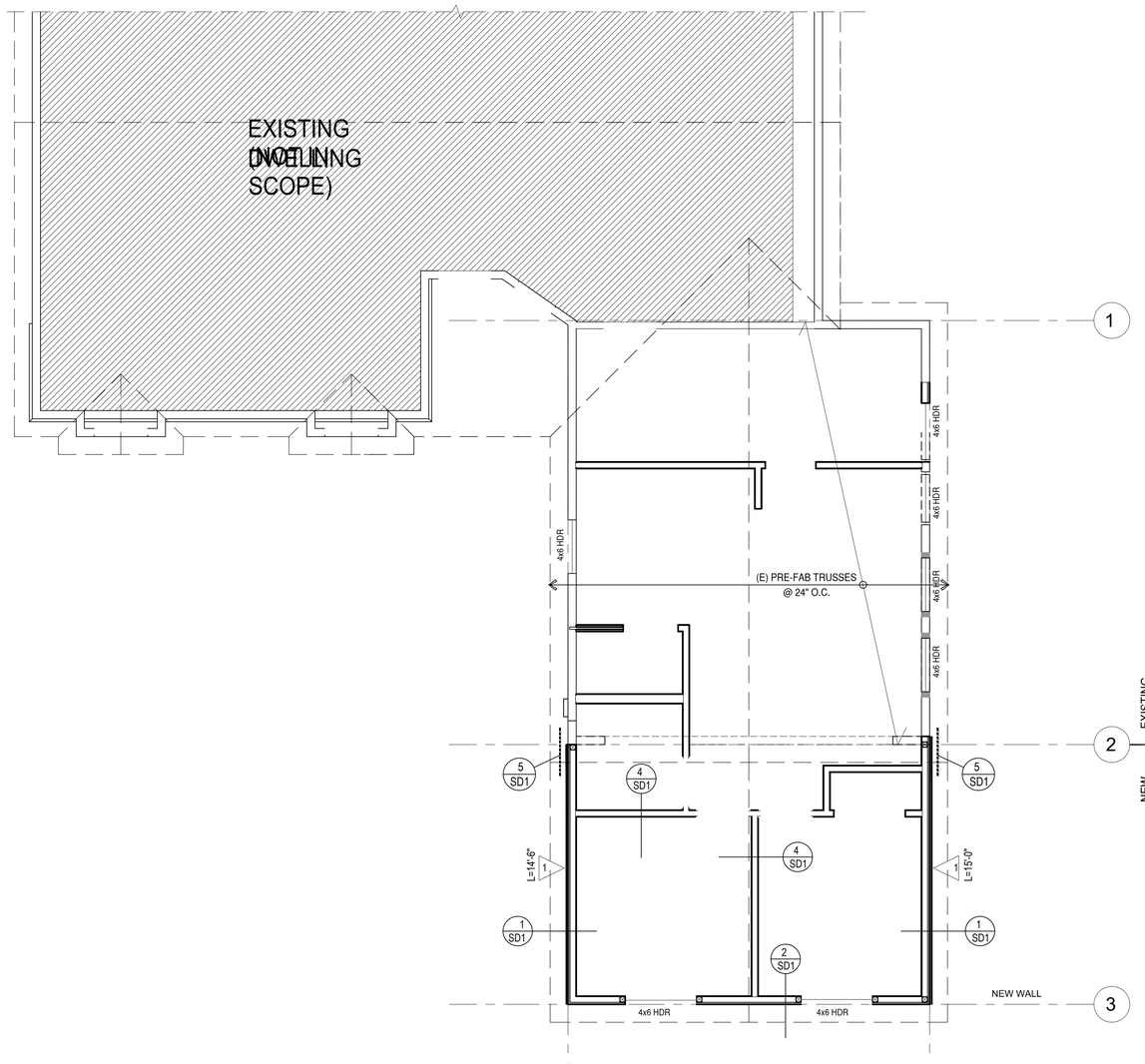
CHK BY: M.R.

DATE: 05.15.25

TITLE: FOUNDATION PLAN

PAGE NO:

S1



- "1/8-INCH GAP AT ALL PLYWOOD PANEL EDGES REQUIRED."
- FASTENERS FOR PRESERVATIVE-TREATED OR FIRE-RETARDANT-TREATED WOOD SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL IN ACCORDANCE WITH ASTM A 153. PER CRC R317.3.

FRAMING NOTES

1 ROOF SHEATHING SHALL BE:
7/16" APA PLYWOOD OR ORIENTED STRAND BOARDS WITH 24"/16" SPAN RATING.
UNBLOCKED = 8d COMMON NAILS @ 6" o.c. AT ALL EDGES,/12" OC FIELD
MINIMUM PENETRATION IS 1 1/2" INTO FRAMING
B.N. APPLIES TO ALL SUPPORTED PLYWOOD EDGES AT:
PLYWOOD EDGES, PERIMETER WALLS, & SHEARWALLS

2 N/A

3 10d COMMON NAILS @ 6" o.c. B.N.,
10d COMMON NAILS @ 12" o.c. F.N.
B.N. APPLIES TO ALL SUPPORTED PLYWOOD EDGES AT:
PLYWOOD EDGES, PERIMETER WALLS, & SHEARWALLS

4 N/A

5 TJI JOISTS (ESR-1153), TIMBERSTRANDS, AND PARALLAMS (ESR-1387) MANUFACTURER SHALL BE 'TRUSS JOIST MACMILLAN' OR EQUIVALENT.

6 A CERTIFICATE OF CONFORMANCE IS REQUIRED PRIOR TO FRAMING INSPECTION FOR ALL PARALLEL STRANDED LUMBER.

7 DO NOT CUT, NOTCH, DRILL, BORE, SHAVE, TAPER OR FOR ANY REASONS MODIFY PRE-ENGINEERED / MANUFACTURED STRUCTURAL ELEMENTS SUCH AS GLUED-LAMINATED MEMBERS, PARALLAMS, MICROLLAMS, I-JOISTS, LIGHT GAUGE METAL MEMBERS AND OTHER SIMILAR TIMBER OR STEEL PRODUCTS UNLESS SUCH MODIFICATIONS ARE WITHIN THE WRITTEN PARAMETERS SET FORTH BY THE MANUFACTURER OF THAT PRODUCT OR A LETTER OF CERTIFICATION FROM THE MANUFACTURER'S ENGINEER WITH DETAIL SIGNED AND STAMPED IS ISSUED AND AUTHORIZED BY THE PROJECT ENGINEER OF RECORD AND APPROVED BY THE CITY OF GOVERNING BUILDING OFFICIAL.

8

9 USE SIMPSON 'IUS' HANGERS WHERE TJI FLOOR JOIST ARE UTILZED, U.N.O.

10 BEAMS BEARING ON TOP PLATES SHALL HAVE A SIMPSON 'A34' EACH SIDE (U.N.O.). ALIGN DBL 2x STUDS (U.N.O.) BELOW. NAIL TOGETHER WITH 16d @ 16"o.c.

11 ALL POSTS TO TOP PLATE AND SILL PLATE CONNECTIONS SHALL BE SIMPSON 'A34' U.N.O.

12 PROVIDE 'MSTC28' STRAP ACROSS ALL DISCONTINUOUS DBL. TOP PLATES.

13 PROVIDE DOUBLE JOISTS @ SIDES & ENDS OF ALL OPENINGS. (U.N.O.) NAIL TOGETHER WITH 16d @ 12"o.c. (TYP.)

14 PROVIDE DBL. JOISTS BELOW ALL INTERIOR WALLS 8'-0" OR GREATER IN LENGTH. PROVIDE BLOCKING @ 1/3 SPANS.

15 ALL SHEAR PANEL SHALL BE APPLIED DIRECTLY TO STUDS PRIOR TO INSTALLATION OF DECORATIVE POP-OUTS AND TRIM.

16 FRAMING MEMBERS OR BLOCKING SHALL BE PROVIDED AT THE EDGES OF ALL SHEETS IN PLYWOOD SHEARWALLS.

17 ALL PLYWOOD EDGES OF FLOOR/DECK DIAPHRAGMS SHALL BE SUPPORTED BY 2x OR WIDER FRAMING ELEMENTS.

17 PROVIDE MULTIPLE STUDS UNDER BEAMS OR TRUSSES TO MATCH WIDTH OF SUPPORTED MEMBER, TYP. STUDS SHALL BE CONTINUED IN LOWER FLOORS AND/OR CRAWL SPACE TO FOOTING, TYP.

19 PROVIDE SOLID BLOCKING UNDER POSTS AND MULTIPLE STUDS TO TRANSFER LOADS TO POSTS/STUDS BELOW.

20 SHADED AREA INDICATES OVER FRAMING, PER 15/SD.
a) CONTRACTOR PROVIDED STICK FRAMING AS FOLLOWS:
2x6 RAFTERS SUPPORTED BY 2X6 @ 24" O.C. CRIPPLE WALL WITH DOUBLE BOTTM PLATES. THE RAFTER AND THE CRIPPLE WALL SHALL BE REPEATED @ 24" O.C.
b) ROOF STRUCTURAL SHEATHING SHALL BE CONTINUOUS OVER THE MAIN FRAMING MEMBERS. A SECOND LAYER OF STRUCTURAL SHEATHING SHALL BE APPLIED OVER THE ROOF OVERBUILD AREAS UNLESS DETAILED OTHERWISE ON PLANS.

21 NOTE:
ANY PLUMBING DRAINPIPE OR VENT PIPE CUT THROUGH A STUD WALL SHALL BE 2x6 STUD WALL OR TWO 2x4 WALLS WITH PLYWOOD SHEAR PANEL ON NON-PLUMBING WALL.

RAHMAN ENGINEERING
13611 12TH ST. SUITE-B,
CHINO, CA 91710
Tel: (213)-400-8078

Project:

GARAGE ADDITON & RENOVATION OF GARAGE FOR LIVING SPACE

5580 NORTHWOOD DR RIVERSIDE CA

Stamp:

REGISTERED PROFESSIONAL ENGINEER MUQSUDUR RAHMAN
C69263
Exp. 06/30/26
CIVIL
STATE OF CALIFORNIA

REVISIONS:

MARK	DATE	DES./BY:

DRAWN BY: MR

DS. BY: MR

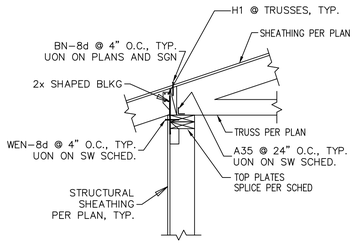
CHK BY: M.R.

DATE: 05.15.25

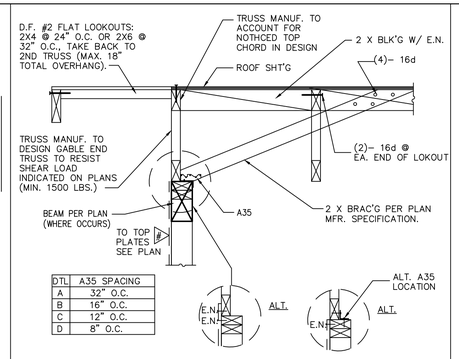
TITLE:
FRAMING PLAN

PAGE NO:

S2

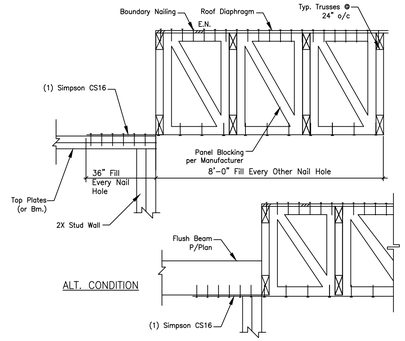


ROOF TRUSS CONNECTION AT WALL | 1

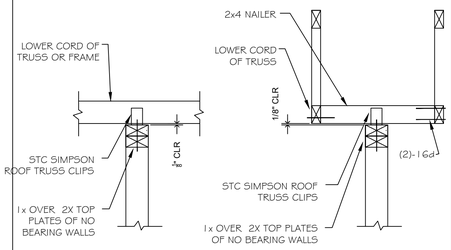


DTL	A35 SPACING
A	32" O.C.
B	16" O.C.
C	12" O.C.
D	8" O.C.

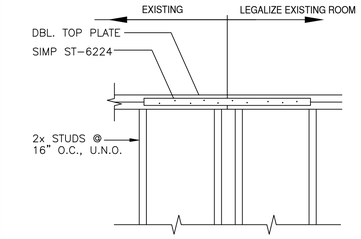
ROOF TRUSS AT GABLE END | 2



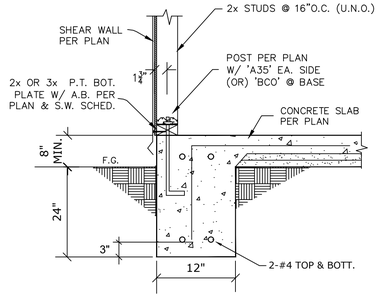
ROOF DRAG AT WALL | 3



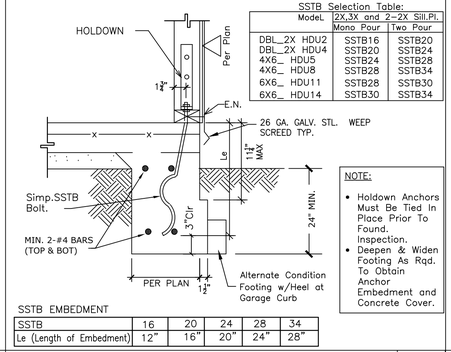
NON-LOAD BEARING WALL CONNECTION | 4



STRAP @ (E) WALL DETAIL | 5



CONTINUOUS FOOTING AT INTERNAL WALL | 6



SSTB Selection Table:

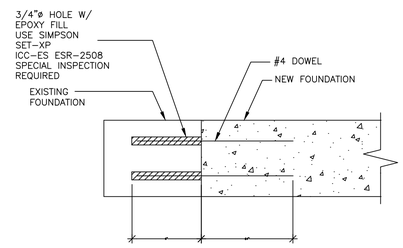
Model	2X,3X and 2-2X Sill Pl.	
	Mono Pour	Two Pour
DBL_2X HDU2	SSTB16	SSTB20
DBL_2X HDU4	SSTB20	SSTB24
4X6_ HDU5	SSTB24	SSTB28
4X6_ HDU8	SSTB28	SSTB34
6X6_ HDU11	SSTB28	SSTB30
6X6_ HDU14	SSTB30	SSTB34

NOTE:
- Holdown Anchors Must Be Tied In Place Prior To Found. Inspection.
- Deepen & Widen Footing As Rqd. To Obtain Anchor Embedment and Concrete Cover.

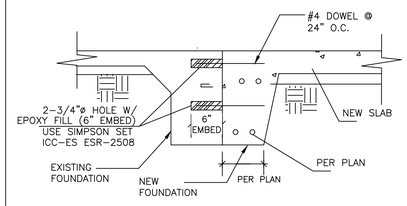
SSTB EMBEDMENT

SSTB	16	20	24	28	34
Le (Length of Embedment)	12"	16"	20"	24"	28"

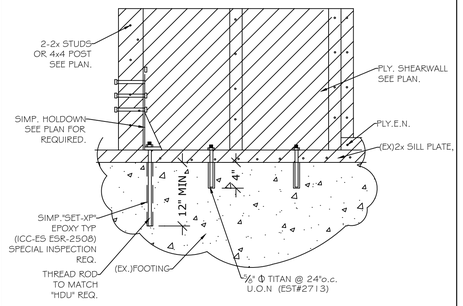
HOLDOWN @ EXTERNAL CONT. FOOTING | 7



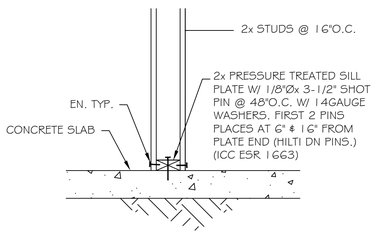
NEW TO EXIST. FOOTING DETAIL | 8



NEW TO EXISTING FOOTING | 9



MISSING AB & HOLDDOWN RETROFITS | 10



11 | 12 | 13 | 14 | 15

16 | 17 | 18 | 19 | 20

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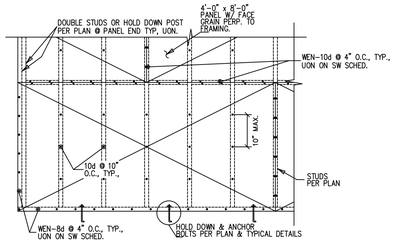
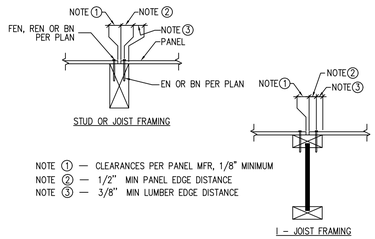
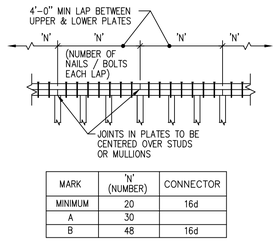


TYPICAL SHEAR WALL ELEVATION, UON | 1

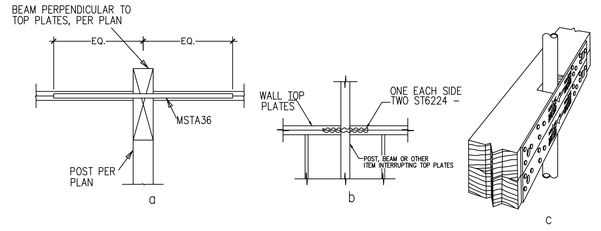


PANEL NAILING FOR WALL, FLOOR AND ROOF | 2

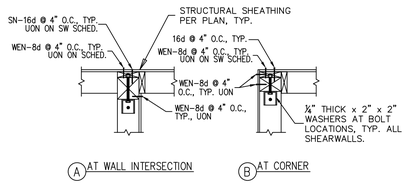


MARK	'N' (NUMBER)	CONNECTOR
MINIMUM	20	16d
A	30	
B	48	16d

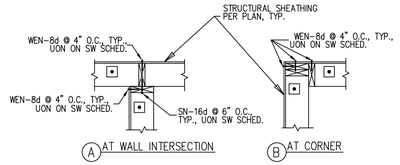
TYPICAL TOP PLATE SPLICE DETAILS, UON | 3



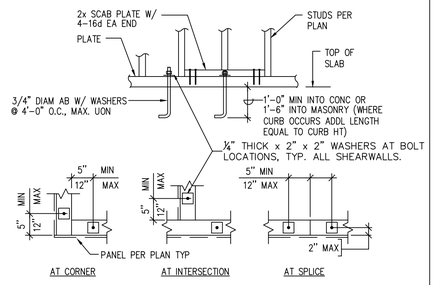
TOP PLATE REINFORCEMENT AT DISCONTINUITIES | 5



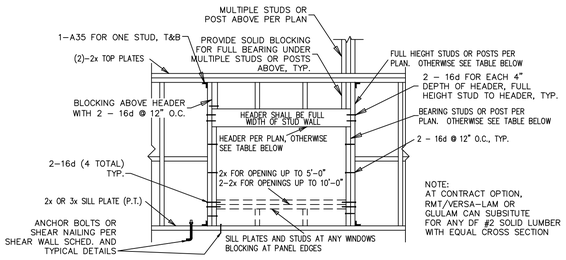
TYP. SHEARWALL INTERSECTIONS W/ HOLDDOWNS | 6



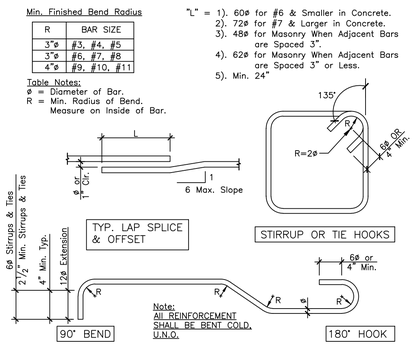
TYP. SHEARWALL INTERSECTIONS, NO HOLDDOWN | 7



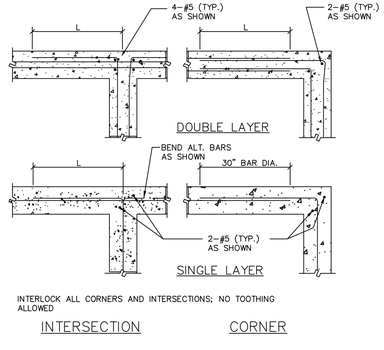
TYP. PLATE ANCHOR BOLTS | 8



TYP. HEADER DETAILS, UON | 10



BAR BENDING | 11



FOOTING DETAIL AT CORNER | 12

13 | 14 | 15

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