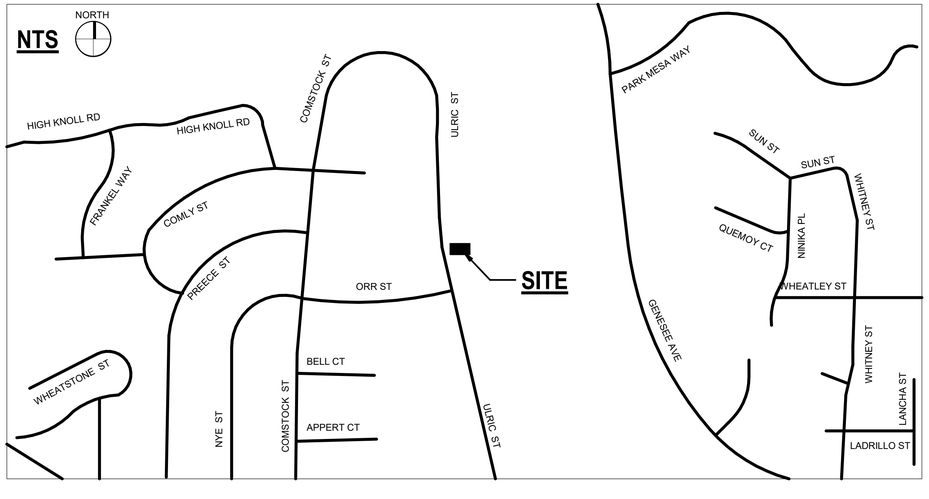
# GENERAL NOTES

1. PRIOR TO THE ISSUANCE OF A BUILDING PERMIT, THE APPLICANT SHALL HAVE EVIDENCE OF CURRENT WORKER'S COMPENSATION INSURANCE COVERAGE ON FILE WITH THE DEPARTMENT IN COMPLIANCE WITH THE LOCAL LABOR CODES.
2. AFTER OBTAINING BUILDING PERMIT AND BEFORE COMMENCING WITH THE WORK, THE GENERAL CONTRACTOR SHALL SHOW EVIDENCE OF ALL INSURANCE REQUIREMENTS.
3. ALL REQUIRED PERMITS MUST BE OBTAINED FROM THE REQUIRED GOVERNING AGENCIES BEFORE BUILDINGS ARE OCCUPIED.
4. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DRAWINGS.
5. GENERAL CONTRACTOR SHALL INSPECT SITE AND VERIFY FIELD DIMENSIONS BEFORE COMMENCING CONSTRUCTION. NOTIFY DESIGNER, OWNER AND LANDLORD IMMEDIATELY IF THERE ARE ANY DISCREPANCIES, CONTRACTOR TO TAKE DIGITAL PHOTOGRAPHS AND SEND TO DESIGNER.
6. DIMENSIONS SHOWN ON PLANS ARE TO FACE OF EXTERIOR MASONRY, CONCRETE COLUMN OR GRID LINES AND FACE OF GWB UNLESS NOTED OTHERWISE OR DETAILED.
7. FOR SIZE AND LOCATIONS OF ALL OPENINGS FOR MECHANICAL DUCT WORK, REFER TO MECHANICAL DRAWINGS.
8. WHERE FACTORY FINISHED OR FACTORY PRIMED ITEMS OCCUR, SUCH AS GRILLES, DIFFUSERS, METAL TRIM AND ACCESSORIES, ETC., THEY SHALL BE PAINTED TO MATCH THE ADJACENT SURFACE UNLESS OTHERWISE INDICATED.
9. CONTRACTOR SHALL, IN THE WORK OF ALL TRADES, PERFORM ANY AND ALL CUTTING, PATCHING, REPAIRING, RESTORING AND THE LIKE NECESSARY TO COMPLETE THE WORK AND TO RESTORE ANY DAMAGED OR AFFECTED SURFACES RESULTING FROM THE WORK OF THIS CONTRACT TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE OWNER. ALL ROOF PATCHING AND REPAIRS SHALL RETURN AREA TO "LIKE NEW" CONDITION.
10. GENERAL CONTRACTOR SHALL COORDINATE WORK PERFORMED BY OTHER CONTRACTORS AND OWNER'S VENDORS.
11. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.
12. SHOULD THE DRAWINGS OR SPECIFICATIONS DISAGREE WITH THEMSELVES OR EACH OTHER, THE BETTER QUALITY AND/OR GREATER QUANTITY OF WORK OR MATERIALS SHALL BE ESTIMATED UPON AND UNLESS OTHERWISE DIRECTED IN WRITING SHALL BE PROVIDED.
13. NO SUBSTITUTIONS ARE PERMITTED WITHOUT THE OWNER'S WRITTEN APPROVAL.
14. IF ANY ERROR OR OMISSION APPEARS IN CONTRACT DOCUMENTS, CONTRACTOR SHALL NOTIFY DESIGNER IN WRITING OF SUCH ERROR OR OMISSION IMMEDIATELY.
15. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE TIMELY ARRIVAL OF ALL SPECIFIED FINISH MATERIALS, EQUIPMENT, AND ANY OTHER SUCH MATERIAL(S) TO BE UTILIZED ON THIS PROJECT. THE GENERAL CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING WITHIN 10 DAYS OF DATE OF CONTRACT OF THOSE SPECIFIED ITEMS THAT MAY NOT BE READILY AVAILABLE. THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR THE PROPER ORDERING AND FOLLOW-UP OF SPECIFIED ITEMS AND WILL PURSUE WHATEVER MEANS NECESSARY AT NO ADDITIONAL COST TO THE OWNER. TO ASSURE AVAILABILITY OF ALL SPECIFIED ITEMS SO AS NOT TO CREATE A HARDSHIP ON THE OWNER AND NOT DELAY PROGRESS OF THE WORK. NO EXTENSION OF TIME TO THE CONTRACT WILL BE ALLOWED.
16. MECHANICAL CONTRACTOR SHALL VERIFY EXACT DIMENSIONS WITH EQUIPMENT MANUFACTURERS. MECHANICAL CONTRACTORS SHALL VERIFY ALL SIZES AND LOCATIONS OF DUCT OPENINGS BEFORE INSTALLATION AND VERIFY ALL DISCREPANCIES WITH THE DESIGNER.
17. ALL EXTERIOR WALL OPENINGS, FLASHINGS, COUNTER FLASHINGS, COPING AND EXPANSION JOINTS SHALL BE WATERPROOF.
18. CAULKING AND SEALANTS: ALL OPEN JOINTS, PENETRATIONS AND OTHER OPENINGS IN THE BUILDING ENVELOPE SHALL BE SEALED, CAULKED, GASKETED, OR WEATHER-STRIPPED TO LIMIT AIR LEAKAGE AND MEET CODE REQUIREMENTS.
19. USE ACOUSTICAL SEALANT AROUND ALL PIPES, DUCTS, CONDUITS, OUTLETS, SWITCHES, ETC. ON BOTH SIDES OF CROSSING/PENETRATING WALLS WITH THERMAL AND ACOUSTIC INSULATION.
20. EACH CONTRACTOR SHALL LEAVE THE SITE IN A NEAT, CLEAN AND ORDERLY CONDITION UPON THE CONCLUSION OF HIS WORK ON A DAILY BASIS. ALL WASTE, RUBBISH AND EXCESS MATERIALS SHALL BE REMOVED FROM THE SITE PROMPTLY.
21. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL TRASH, INCLUDING OWNER FURNISHED ITEMS AND TRASH GENERATED BY THE OWNER'S VENDORS FOR THE DURATION OF THE PROJECT.
22. SAFETY: ALL CONDUCT, WORK, EQUIPMENT AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST SAFETY RULES AND REGULATIONS OF ALL AUTHORITIES AND AGENCIES HAVING JURISDICTION.
23. CONSULT UTILITY PLANS AND STRUCTURAL DRAWINGS BEFORE SAW CUTTING CONCRETE SLAB OR CORE DRILLING CONCRETE SLAB.
24. MANUFACTURER'S STICKER MAY BE INSTALLED AND SHALL NOT BE VISIBLE.
25. ALL LABOR, MATERIALS, EQUIPMENT, AND FINAL FINISHED PROJECT AS OUTLINED AND REQUIRED BY THE CONTRACT DOCUMENTS SHALL BE COMPLETED BY GENERAL CONTRACTOR(S), LANDLORD, AND TENANT AS PER GOVERNING STATE AND LOCAL CODES AND ANY AND ALL OTHER REGULATIONS AND CODES HAVING LOCAL JURISDICTION.
26. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR(S) RECEIVING OWNER FURNISHED MATERIALS TO REPORT THE ACCEPTANCE OF DELIVERY AS WELL AS ANY SHORTAGES IMMEDIATELY TO THE OWNER'S CONSTRUCTION COORDINATOR.
27. ENSURE ADDRESS IS PROPERLY VISIBLE FROM ROADWAY AS REQUIRED.
28. PER CITY OF SAN DIEGO MUNICIPAL CODE SECTIONS 12.0104, 43.010, 129 .0104(A)(4), AND 142.0220, PERMITS ARE REQUIRED TO BE INSPECTED BY CITY INSPECTION STAFF TO ENSURE COMPLIANCE WITH ISSUED CONSTRUCTION PERMIT. THIS INCLUDES, BUT IS NOT LIMITED TO, STORMWATER COMPLIANCE INSPECTION REQUIREMENTS ASSOCIATED WITH EACH PERMIT.

# VICINITY MAP




GTC DESIGN STUDIO ©

# TITLE 24 NOTES

1. AN ELECTRONICALLY SIGNED AND REGISTERED INSTALLATION CERTIFICATE (S) (CF2R) POSTED BY THE INSTALLING CONTRACTOR SHALL BE SUBMITTED TO THE FIELD INSPECTOR DURING CONSTRUCTION AT THE BUILDING SITE. A REGISTERED CF2R WILL HAVE A UNIQUE 21 DIGIT REGISTRATION NUMBERED FOLLOWED BY FOUR ZEROS LOCATED AT THE BOTTOM OF EACH PAGE. THE FIRST 12 DIGITS OF THE NUMBER WILL MATCH THE REGISTRATION NUMBER OF THE ASSOCIATED CFIR CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL FORM CF2R IS REVIEWED AND APPROVED.
2. AN ELECTRONICALLY SIGNED AND REGISTERED CERTIFICATE(S) OF FIELD VERIFICATION AND DIAGNOSTIC TESTING (CF3R) SHALL BE POSTED AT THE BUILDING SITE BY A CERTIFIED HERS RATER. A REGISTERED CF3R WILL HAVE A UNIQUE 25 DIGIT REGISTRATION NUMBER LOCATED AT THE BOTTOM OF EACH PAGE. THE FIRS 20 DIGIT OF THE NUMBER WILL MATCH THE REGISTRATION NUMBER OF THE ASSOCIATED CF2R. CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL CF3R IS REVIEWED AND APPROVED.
HERS VERIFICATIONS FOR THE FOLLOWING:

# ENVIRONMENTAL REGULATIONS

## MHPA LAND USE ADJACECY GUIDELINES

1. DRAINAGE: ALL NEW AND PROPOSED PARKING LOTS AND DEVELOPED AREAS IN AND ADJACENT TO THE PRESERVE MUST NOT DRAIN DIRECTLY INTO THE MHPA. ALL DEVELOPED AND PAVED AREAS MUST PREVENT THE RELEASE OF TOXINS, CHEMICALS, PETROLEUM PRODUCTS, EXOTIC PLANT MATERIALS AND OTHER ELEMENTS THAT MAY ADVERSELY AFFECT THE ADJACENT MHPA. INSTEAD, RUNOFF SHOULD FLOW INTO SEDIMENTATION BASINS, GRASSY SWALES OR MECHANICAL TRAPPING DEVICES PRIOR TO DRAINING INTO THE MHPA. STORM WATER SYSTEMS SHOULD BE MAINTAINED APPROXIMATELY ONCE A YEAR, OR AS OFTEN AS NEEDED, TO ENSURE PROPER FUNCTIONING. MAINTENANCE SHOULD INCLUDE DREDGING OUT SEDIMENTS IF NEEDED, REMOVING EXOTIC PLANT MATERIALS, AND ADDING CHEMICAL- NEUTRALIZING COMPOUNDS (E.G., CLAY COMPOUNDS) WHEN NECESSARY AND APPROPRIATE. DEVELOPED AREA DOES NOT SLOPE/ DRAIN TO MHPA.
2. LIGHTING: LIGHTING OF ALL DEVELOPED AREAS ADJACENT TO THE MHPA SHOULD BE DIRECTED AWAY FROM THE MHPA. WHERE NECESSARY, DEVELOPMENT SHOULD PROVIDE ADEQUATE SHIELDING WITH NON-INVASIVE PLANT MATERIALS (PREFERABLY NATIVE), BERMING, AND/OR OTHER METHODS TO PROTECT THE MHPA AND SENSITIVE SPECIES FROM NIGHT LIGHTING. PLEASE SEE MUNICIPAL CODE §142.0 740 FOR FURTHER INFORMATION IF NEEDED. NO EXTERIOR LIGHTING ABUTTING MHPA AREA.
3. LANDSCAPING: NO INVASIVE NON-NATIVE PLANT SPECIES SHALL BE INTRODUCED INTO AREAS ADJACENT TO THE MHPA. NO PROPOSED LANDSCAPING.
4. GRADING/LAND DEVELOPMENT: MANUFACTURED SLOPES ASSOCIATED WITH SITE DEVELOPMENT SHALL BE INCLUDED WITHIN THE DEVELOPMENT FOOTPRINT FOR PROJECTS ADJACENT TO THE MHPA. NO MANUFACTURED SLOPES.
5. BARRIERS: DEVELOPMENT ADJACENT TO THE MHPA SHALL PROVIDE BARRIERS WHERE APPROPRIATE (E.G., NON-INVASIVE VEGETATION, ROCKS/BOULDERS, FENCES, WALLS, AND/OR SIGNAGE) ALONG THE MHPA BOUNDARIES TO DIRECT PUBLIC ACCESS TO APPROPRIATE LOCATIONS AND REDUCE DOMESTIC ANIMAL PREDATION. 6' CMU WALL IS PROPOSED TO PROVIDE BARRIER AT PROPERTY LINE.
6. BRUSH MANAGEMENT: ALL ZONE 1 BRUSH MANAGEMENT AREAS MUST BE INCLUDED WITHIN THE DEVELOPMENT FOOTPRINT AND OUTSIDE THE MHPA. BRUSH MANAGEMENT ZONE 2 MAY BE PERMITTED WITHIN THE MHPA (CONSIDERED IMPACT NEUTRAL) BUT CANNOT BE USED AS MITIGATION. THE AMOUNT OF WOODY VEGETATION CLEARING SHALL NOT EXCEED 50 PERCENT OF THE VEGETATION EXISTING WHEN THE INITIAL CLEARING IS DONE. VEGETATION CLEARING SHALL BE DONE CONSISTENT WITH MUNICIPAL CODE §142.0412 AND SHALL AVOID/MINIMIZE IMPACTS TO COVERED SPECIES TO THE MAXIMUM EXTENT POSSIBLE. FOR ALL NEW DEVELOPMENT, REGARDLESS OF THE OWNERSHIP, THE BRUSH MANAGEMENT IN THE ZONE 2 AREA WILL BE THE RESPONSIBILITY OF A HOMEOWNERS ASSOCIATION OR OTHER PRIVATE PARTY. NOTED, ALL ZONE 1 WILL BE MAINTAINED.
7. NOISE DUE TO THE SITE'S LOCATION ADJACENT TO THE MHPA, CONSTRUCTION NOISE WILL NEED TO BE AVOIDED, IF POSSIBLE, DURING THE BREEDING SEASON OF THE CALIFORNIA GNATCATCHER (3/1-8 /15). IF CONSTRUCTION IS PROPOSED DURING THE BREEDING SEASON FOR THE SPECIES, U.S. FISH AND WILDLIFE SERVICE PROTOCOL SURVEYS WILL BE REQUIRED IN ORDER TO DETERMINE SPECIES PRESENCE/ABSENCE. IF THE SPECIES ARE NOT IDENTIFIED WITHIN THE MHPA, NO ADDITIONAL MEASURES WILL BE REQUIRED. IF PRESENT, MEASURES TO MINIMIZE NOISE IMPACTS WILL BE REQUIRED AND SHOULD INCLUDE TEMPORARY NOISE WALLS/BERMS. IF A SURVEY IS NOT CONDUCTED AND CONSTRUCTION IS PROPOSED DURING THE SPECIES' BREEDING SEASON, PRESENCE WOULD BE ASSUMED AND A TEMPORARY WALL/BERM WOULD BE REQUIRED. NOISE LEVELS FROM CONSTRUCTION ACTIVITIES DURING THE BIRD BREEDING SEASON SHOULD NOT EXCEED 60 DBA HOURLY LEQ AT THE EDGE OF THE OCCUPIED MHPA, OR THE AMBIENT NOISE LEVEL IF NOISE LEVELS ALREADY EXCEED 60 DBA HOURLY LEQ. MEASURES TO MINIMIZE NOISE IMPACT AS NEEDED WILL BE PROVIDED.

# DEFERRED SUBMITTALS

1. PLANS FOR THE DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED IN A TIMELY MANNER BUT NOT LESS THAN 30 BUSINESS DAYS PRIOR TO INSTALLATION FOR CITY REVIEW AND APPROVAL.
2. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.
3. THE REGISTERED AND RESPONSIBLE DESIGN PROFESSIONAL SHALL REVIEW THE DEFERRED SUBMITTAL DOCUMENTS AND SUBMIT THEM TO THE BUILDING OFFICIAL, WITH ANNOTATION INIDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE TO DESIGN OF THE BUILDING.
4. DEFERRED SUBMITTAL ITEMS INCLUDE THE FOLLOWING

   A. SOLAR PANELS

# BUILDING DATA

**LEGAL INFORMATION:**

**APN:** 431-642-08-00

**ZONE:** RM-1-1

**MAP:** 003209

**LEGAL DESCRIPTION:** BLK 2* LOT 14*

**SUBDIVISION NAME:** LINDA VISTA UNIT#07

**SETBACKS:**
- FRONT: 15' - 0"
- SIDE: 4' - 5"
- REAR: 15' - 0"

**EXISTING MAIN HOUSE:**
EXISTING MAIN HOUSE AREA: 1,200 SF

**YEAR BUILT:** 1942

**PROPOSED STACKED ADUS:**
FIRST FLOOR (ADU 4) : 610 SF
SECOND FLOOR (ADU 3): 696 SF

**PROPOSED STACKED BONUS ADUS:**
FIRST FLOOR (ADU 1): 718 SF
SECOND FLOOR (ADU 2): 699 SF

PROPOSED TOTAL AREA: 2,723 SF

STRUCTURE TOTAL: 3,923 SF

BUILDING HEIGHT: 21' - 5" FT

**LOT SIZE:** 5,700 SF
F.A.R. ALLOWED: 75% - 4,275 SF
F.A.R. PROPOSED: 69% - 3,923 SF

**TYPE OF CONSTRUCTION:**
1 STORY EXISTING HOUSE: VB - NON SPRINKLERED
2 STORIES PROPOSED: VB - NON SPRINKLERED

NOTE: THE EXISTING RESIDENCE DOES NOT HAVE FIRE SPRINKLERS
NOTE: THE PROPOSED UNITS DO NOT NEED TO HAVE FIRE SPRINKLERS

**NUMBER OF STORIES:**
EXISTING HOUSE: 1 STORY (NO - CHANGE)
NEW ADUS: 2 STORIES(NEW STRUCTURE)

**OCCUPANCY CLASSIFICATION:**
EXISTING RESIDENTIAL
R-3

# CALIFORNIA RESIDENTIAL CODE

1. DUCTS IN THE GARAGE AND DUCTS PENETRATING WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE CONSTRUCTED OF MINIMUM NO. 26 GAUGE SHEET STEEL OR OTHER APPROVED MATERIAL AND SHALL HAVE NO OPENINGS INTO THE GARAGE. .

2. SHOWER COMPARTMENTS AND BATHTUBS WITH INSTALLED SHOWER HEADS SHALL BE FINISHED WITH A NONABSORBENT SURFACE THAT EXTENDS TO A HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR. .

3. SMOKE ALARMS AND SMOKE DETECTORS SHALL BE INSTALLED A MINIMUM OF 20 FEET HORIZONTAL DISTANCE FROM A PERMANENTLY INSTALLED COOKING APPLIANCE.

4. SMOKE ALARMS SHALL BE INSTALLED NOT LESS THAN A 3-FOOT HORIZONTAL DISTANCE FROM THE DOOR OR OPENING OF A BATHROOM THAT CONTAINS A BATHTUB OR SHOWER UNLESS THIS WOULD PREVENT PLACEMENT OF A SMOKE ALARM REQUIRED BY OTHER SECTIONS OF THE CBC.

5. SMOKE ALARMS AND SMOKE DETECTORS SHALL NOT BE INSTALLED WITHIN A 36-INCH HORIZONTAL PATH FROM THE SUPPLY REGISTERS OF A FORCED AIR HEATING OR COOLING SYSTEM AND SHALL BE INSTALLED OUTSIDE OF THE DIRECT AIRFLOW OF THOSE REGISTERS.

6. SMOKE ALARMS SHALL BE INTERCONNECTED SO THAT ACTUATION OF ONE ALARM WILL ACTIVATE ALL THE ALARMS WITHIN THE INDIVIDUAL DWELLING UNIT. IN NEW CONSTRUCTION SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER SOURCE FROM THE BUILDING WIRING AND SHALL BE EQUIPPED WITH BATTERY BACKUP AND LOW BATTERY SIGNAL.

7. SMOKE ALARMS SHALL COMPLY WITH NFPA 72 AND SHALL BE LISTED IN ACCORDANCE WITH UL 217. COMBINATION SMOKE AND CARBON MONOXIDE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 217 AND UL 2034.

8. SMOKE ALARM SYSTEMS AND COMPONENTS SHALL BE CALIFORNIA STATE FIRE MARSHAL LISTED AND APPROVED IN ACCORDANCE WITH CALIFORNIA CODE OF REGULATIONS, TITLE 19, DIVISION 1 FOR THE PURPOSE FOR WHICH THEY ARE INSTALLED.

9. WINDOW OPENING CONTROL DEVICES SERVING EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL COMPLY WITH ASTM F2090.

10. ADD NOTE ON PLANS: "WINDOW FALL CONTROL DEVICE SHALL COMPLY WITH ASTM F2090. AT THE EMERGENCY ESCAPE WINDOWS, THE DEVICE AFTER OPERATION SHOULD RELEASE THE CONTROL DEVICE ALLOWING THE WINDOWS TO FULLY OPEN PROVIDING THE CLEAR NET OPENING AREA REQUIRED FOR EMERGENCY ESCAPE WINDOW.

# PROJECT DATA

**PROJECT:**
2917/2919/2921/2923
ULRIC STREET DEVELOPMENT
2915 ULRIC STREET,
SAN DIEGO, CA 92111

**PROJECT OWNER/BUILDER:**
MANNY HERNANDEZ
2915 ULRIC STREET,
SAN DIEGO, CA 92111
THE OWNER IS FINANCIALLY RESPONSIBLE PARTY FOR THE WATER & SEWER FEES.

**PROJECT TEAM:**
GTC DESIGN
1205 J Street, Suite D
San Diego, CA 92101
WWW.GTCDESIGN.STUDIO
HELLO@GTCDESIGN.STUDIO
A619.693.3744

# SCOPE OF WORK

- PROPOSED STACKED **ADU 1** (2 BED /2 BATH) & BONUS **ADU 2** (2 BED/2 BATH), 2 STORIES
- PROPOSED STACKED **ADU 3** BY RIGHT (2 BED/2 BATH) & BONUS **ADU 4** (2 BED / 1 BATH), 2 STORIES
- EXISTING SFD - MINOR DEMOLITION OF:
  - DOOR, WINDOW, AND CLOSET. NEW EGRESS WINDOW FROM MASTER BEDROOM.

**PRIVATELY-FUNDED, PRIVATE HOUSING PROJECT MODERATE-INCOME LEVELS**

# BUILDING CODE DATA

**APPLICABLE CODES:**

| | |
|---|---|
| RESIDENTIAL: | 2019 CALIFORNIA RESIDENTIAL CODE |
| BUILDING: | 2019 CALIFORNIA BUILDING CODE |
| PLUMBING: | 2019 CALIFORNIA PLUMBING CODE |
| MECHANICAL: | 2019 CALIFORNIA MECHANICAL CODE |
| ELECTRICAL: | 2019 CALIFORNIA ELECTRICAL CODE |
| FIRE: | 2019 CALIFORNIA FIRE CODE |
| ENERGY: | 2019 CALIFORNIA ENERGY CODE |

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A003 CAL GREEN NOTES
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SD2 STANDARD STRUCTURAL DETAILS



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Hannan Al-Timimi

# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET,
SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |
| 6 | CITY RESUBMITTAL R6 | 07/31/2024 |

Sheet Name
COVER SHEET

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER
**A000**

STORM WATER QUALITY NOTES CONSTRUCTION BMP'S

THIS PROJECT SHALL COMPLY WITH ALL CURRENT REQUIREMENTS OF THE STATE PERMIT; CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD (SDRWQCB) SAN DIEGO MUNICIPAL STORM WATER PERMIT, THE CITY OF SAN DIEGO LAND DEVELOPMENT CODE, AND THE STORM WATER STANDARDS MANUAL.

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

1. ALL REQUIREMENTS OF THE CITY OF SAN DIEGO "STORM WATER STANDARDS MANUAL" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND/OR WATER POLLUTION CONTROL PLAN (WPCP) FOR CONSTRUCTION LEVEL BMPS AND, IF APPLICABLE, THE STORM WATER QUALITY MANAGEMENT PLAN (SWQMP) FOR POST-CONSTRUCTION BMPS
2. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL STORM DRAIN INLET PROTECTION. INLET PROTECTION IN THE PUBLIC RIGHT-OF-WAY MUST BE TEMPORARILY REMOVED PRIOR TO A RAIN EVENT TO ENSURE NO FLOODING OCCURS AND REINSTALLED AFTER RAIN IS OVER.
3. ALL CONSTRUCTION BMPS SHALL BE INSTALLED AND PROPERLY MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION.
4. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING, AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED CONTACT PERSON CAN PROVIDE EROSION AND SEDIMENT CONTROL MEASURES.
5. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SUB-CONTRACTORS AND SUPPLIERS ARE AWARE OF ALL STORM WATER BMPS AND IMPLEMENT SUCH MEASURES. FAILURE TO COMPLY WITH THE APPROVED SWPPP/WPCP WILL RESULT IN THE ISSUANCE OF CORRECTION NOTICES, CITATIONS, CIVIL PENALTIES, AND/OR STOP WORK NOTICES.
6. THE CONTRACTOR OR QUALIFIED CONTACT PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF ALL SILT, DEBRIS, AND MUD ON AFFECTED AND ADJACENT STREET(S) AND WITHIN STORM DRAIN SYSTEM DUE TO CONSTRUCTION VEHICLES/EQUIPMENT AND CONSTRUCTION ACTIVITY AT THE END OF EACH WORK DAY.
7. THE CONTRACTOR SHALL PROTECT NEW AND EXISTING STORM WATER CONVEYANCE SYSTEMS FROM SEDIMENTATION, CONCRETE RINSE, OR OTHER CONSTRUCTION-RELATED DEBRIS AND DISCHARGES WITH THE APPROPRIATE BMPS THAT ARE ACCEPTABLE TO THE CITY RESIDENT ENGINEER AND AS INDICATED IN THE SWPPP/WPCP
8. THE CONTRACTOR OR QUALIFIED CONTACT PERSON SHALL CLEAR DEBRIS, SILT, AND MUD FROM ALL DITCHES AND SWALES PRIOR TO AND WITHIN 3 BUSINESS DAYS AFTER EACH RAIN EVENT OR PRIOR TO THE NEXT RAIN EVENT, WHICHEVER IS SOONER.
9. IF A NON-STORM WATER DISCHARGE LEAVES THE SITE, THE CONTRACTOR SHALL IMMEDIATELY STOP THE ACTIVITY AND REPAIR THE DAMAGES. THE CONTRACTOR SHALL NOTIFY THE CITY RESIDENT ENGINEER OF THE DISCHARGE, PRIOR TO RESUMING Appendix E: Construction BMP General Notes E-2 The City of San Diego | Storm Water Standards | October 2018 Edition Part 2: Construction BMP Standards CONSTRUCTION ACTIVITY. ANY AND ALL WASTE MATERIAL, SEDIMENT, AND DEBRIS FROM EACH NON-STORM WATER DISCHARGE SHALL BE REMOVED FROM THE STORM DRAIN CONVEYANCE SYSTEM AND PROPERLY DISPOSED OF BY THE CONTRACTOR.
10. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ONSITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID DEPLOYMENT OF CONSTRUCTION BMPS WHEN RAIN IS IMMINENT.
11. THE CONTRACTOR SHALL RESTORE AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL BMPS TO WORKING ORDER YEAR ROUND.
12. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES DUE TO UNFORESEEN CIRCUMSTANCES TO PREVENT NON-STORM WATER AND SEDIMENT-LADEN DISCHARGES.
13. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
14. ALL EROSION AND SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED SWPPP/WPCP SHALL BE INSTALLED AND MAINTAINED. ALL EROSION AND SEDIMENT CONTROLS FOR INTERIM CONDITIONS SHALL BE PROPERLY DOCUMENTED AND INSTALLED TO THE SATISFACTION OF THE CITY RESIDENT ENGINEER.
15. AS NECESSARY, THE CITY RESIDENT ENGINEER SHALL SCHEDULE MEETINGS FOR THE PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED CONTACT PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER/DEVELOPER, AND THE CITY RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION AND SEDIMENT CONTROL MEASURES AND OTHER BMPS RELATIVE TO ANTICIPATED CONSTRUCTION ACTIVITIES.
16. THE CONTRACTOR OR QUALIFIED CONTACT PERSON SHALL CONDUCT VISUAL INSPECTIONS AND MAINTAIN ALL BMPS DAILY AND AS NEEDED. VISUAL INSPECTIONS AND MAINTENANCE OF ALL BMPS SHALL BE CONDUCTED BEFORE, DURING, AND AFTER EVERY RAIN EVENT AND EVERY 24 HOURS DURING ANY PROLONGED RAIN EVENT. THE CONTRACTOR SHALL MAINTAIN AND REPAIR ALL BMPS AS SOON AS POSSIBLE AS SAFETY ALLOWS.
17. CONSTRUCTION ENTRANCE AND EXIT AREA. TEMPORARY CONSTRUCTION ENTRANCE AND EXITS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CASQA FACT SHEET TC-1OR CALTRANS FACT SHEET TC-01 TO PREVENT TRACKING OF SEDIMENT AND OTHER POTENTIAL POLLUTANTS ONTO PAVED SURFACES AND TRAVELED WAYS. WIDTH SHALL BE 10' OR THE MINIMUM NECESSARY TO ACCOMMODATE VEHICLES AND EQUIPMENT WITHOUT BYPASSING THE ENTRANCE. (a) NON-STORM WATER DISCHARGES SHALL BE EFFECTIVELY MANAGED PER THE SAN DIEGO MUNICIPAL CODE CHAPTER 4, ARTICLE 3, DIVISION 3 "STORM WATER MANAGEMENT AND DISCHARGE CONTROL".

GTC DESIGN STUDIO ©

SD Development Services — THE CITY OF SAN DIEGO

FORM DS-560 September 2021

# Stormwater Requirements Applicability Checklist

**Project Address:** 2915 ULRIC STREET, SAN DIEGO, CA 92111 **Project Number:**

## SECTION 1: Construction Stormwater Best Management Practices (BMP) Requirements

All construction sites are required to implement construction BMPs per the performance standards in the Stormwater Standards Manual. Some sites are also required to obtain coverage under the State Construction General Permit (CGP)[1], administered by the California State Water Resources Control Board.

**For all projects, complete Part A - If the project is required to submit a Stormwater Pollution Prevention Plan (SWPPP) or Water Pollution Control Plan (WPCP), continue to Part B.**

**PART A –** Determine Construction Phase Stormwater Requirements

1. Is the project subject to California's statewide General National Pollutant Discharge Elimination System (NPDES) permit for Stormwater Discharges Associated with Construction Activities, also known as the State Construction General Permit (CGP)? (Typically projects with land disturbance greater than or equal to 1 acre.)
   - ○ Yes, SWPPP is required; skip questions 2-4. ◉ No; proceed to the next question.
2. Does the project propose construction or demolition activity, including but not limited to, clearing, grading, grubbing, excavation, or any other activity resulting in ground disturbance and/or contact with stormwater?
   - ◉ Yes, WPCP is required; skip questions 3-4. ○ No; proceed to the next question.
3. Does the project propose routine maintenance to maintain the original line and grade, hydraulic capacity, or original purpose of the facility? (Projects such as pipeline/utility replacement)
   - ○ Yes, WPCP is required; skip question 4. ◉ No; proceed to the next question.
4. Does the project only include the following Permit types listed below?
   - Electrical Permit, Fire Alarm Permit, Fire Sprinkler Permit, Plumbing Permit, Sign Permit, Mechanical Permit, Spa Permit.
   - Individual Right of Way Permits that exclusively include only ONE of the following activities: water service, sewer lateral, or utility service.
   - Right of Way Permits with a project footprint less than 150 linear feet that exclusively include only ONE of the following activities: curb ramp, sidewalk and driveway apron replacement, potholing, curb and gutter replacement, and retaining wall encroachments.

   ☐ Yes, no document is required.

**Check one of the boxes below and continue to Part B**

- ○ **If you checked "Yes" for question 1**, an SWPPP is REQUIRED – **continue to Part B**
- ◉ **If you checked "No" for question 1 and checked "Yes" for question 2 or 3**, a WPCP is REQUIRED. If the project proposes less than 5,000 square feet of ground disturbance AND has less than a 5-foot elevation change over the entire project area, a Minor WPCP may be required instead, **Continue to Part B**
- ○ **If you check "No" for all questions 1-3 and checked "Yes" for question 4,** Part B does not apply, and no document is required. **Continue to Section 2.**

[1] More information on the City's construction BMP requirements as well as CGP requirements can be found at http://www.sandiego.gov/stormwater/regulations/index.shtml

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**PART B –** Determine Construction Site Priority

This prioritization must be completed within this form, noted on the plans, and included in the SWPPP or WPCP. The city reserves the right to adjust the priority of projects both before and after construction. Construction projects are assigned an inspection frequency based on if the project has a "high threat to water quality." The City has aligned the local definition of "high threat to water quality" to the risk determination approach of the State Construction General Permit (CGP). The CGP determines risk level based on project specific sediment risk and receiving water risk. Additional inspection is required for projects within the Areas of Special Biological Significance (ASBS) watershed. **NOTE:** The construction priority does **NOT** change construction BMP requirements that apply to projects; rather, it determines the frequency of inspections that will be conducted by city staff.

**Complete Part B and continue to Section 2**

☐ **1. ASBS**
   A. Projects located in the ASBS watershed.

☐ **2. High Priority**
   A. Projects that qualify as Risk Level 2 or Risk Level 3 per the Construction General Permit (CGP) and are not located in the ASBS watershed.
   B. Projects that qualify as LUP Type 2 or LUP Type 3 per the CGP and are not located in the ASBS watershed.

☐ **3. Medium Priority**
   A. Projects that are not located in an ASBS watershed or designated as a High priority site.
   B. Projects that qualify as Risk Level 1 or LUP Type 1 per the CGP and are not located in an ASBS watershed.
   C. WPCP projects (>5,000 square feet of ground disturbance) located within the Los Peñasquitos watershed management area.

☑ **4. Low Priority**
   A. Projects not subject to a Medium or High site priority designation and are not located in an ASBS watershed.

## Section 2: Construction Stormwater BMP Requirements

Additional information for determining the requirements is found in the Stormwater Standards Manual.

**PART C –** Determine if Not Subject to Permanent Stormwater Requirements

Projects that are considered maintenance or otherwise not categorized as "new development projects" or "redevelopment projects" according to the Stormwater Standards Manual are not subject to Permanent Stormwater BMPs.

- **If "yes" is checked for any number in Part C**: Proceed to Part F and check "Not Subject to Permanent Stormwater BMP Requirements."
- **If "no" is checked for all the numbers in Part C:** Continue to Part D.

1. Does the project only include interior remodels and/or is the project entirely within an existing enclosed structure and does not have the potential to contact stormwater?
   - ○ Yes ◉ No
2. Does the project only include the construction of overhead or underground utilities without creating new impervious surfaces?
   - ○ Yes ◉ No
3. Does the project fall under routine maintenance? Examples include but are not limited to roof or exterior structure surface replacement, resurfacing or reconfiguring surface parking lots or existing roadways without expanding the impervious footprint, and routine replacement of damaged pavement (grinding, overlay and pothole repair).
   - ○ Yes ◉ No

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**PART D –** PDP Exempt Requirements

PDP Exempt projects are required to implement site design and source control BMPs.

- **If "yes" is checked for any questions in Part D**, continue to Part F and check the box labeled "PDP Exempt."
- **If "no" is checked for all questions in Part D**, continue to Part E.

1. Does the project ONLY include new or retrofit sidewalks, bicycle lanes, or trails that:
   - Are designed and constructed to direct stormwater runoff to adjacent vegetated areas, or other non-erodible permeable areas? Or;
   - Are designed and constructed to be hydraulically disconnected from paved streets and roads? Or;
   - Are designed and constructed with permeable pavements or surfaces in accordance with the Green Streets guidance in the City's Stormwater Standards manual?

   ○ Yes, PDP exempt requirements apply ◉ No, proceed to next question
2. Does the project ONLY include retrofitting or redeveloping existing paved alleys, streets or roads designed and constructed in accordance with the Green Streets guidance in the City's Stormwater Standards Manual?

   ○ Yes, PDP exempt requirements apply ◉ No, proceed to next question

**PART E –** Determine if Project is a Priority Development Project (PDP)

Projects that match one of the definitions below are subject to additional requirements, including preparation of a Stormwater Quality Management Plan (SWQMP).

- **If "yes" is checked for any number in Part E**, continue to Part F and check the box labeled "Priority Development Project."
- **If "no" is checked for every number in Part E**, continue to Part F and check the box labeled "Standard Development Project."

1. **New development that creates 10,000 square feet or more of impervious surfaces collectively over the project site.** This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land. ○ Yes ◉ No
2. **Redevelopment project that creates and/or replaces 5,000 square feet or more of impervious surfaces on an existing site of 10,000 square feet or more of impervious surfaces.** This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land. ○ Yes ◉ No
3. **New development or redevelopment of a restaurant.** Facilities that sell prepared foods and beverages for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (Standard Industrial Classification (SIC) 5812), and where the land development creates and/or replaces 5,000 square feet or more of impervious surface. ○ Yes ◉ No
4. **New development or redevelopment on a hillside.** The project creates and/or replaces 5,000 square feet or more of impervious surface (collectively over the project site) and where the development will grade on any natural slope that is twenty-five percent or greater. ○ Yes ◉ No
5. **New development or redevelopment of a parking lot that creates and/or replaces 5,000 square feet or more of impervious surface (collectively over the project site).** ○ Yes ◉ No
6. **New development or redevelopment of streets, roads, highways, freeways, and driveways.** The project creates and/or replaces 5,000 square feet or more of impervious surface (collectively over the project site). ○ Yes ◉ No

CLEAR FORM





7. **New development or redevelopment discharging directly to an environmentally sensitive area.** The project creates and/or replaces 2,500 square feet of impervious surface (collectively over the project site), and discharges directly to an Environmentally Sensitive Area (ESA). "Discharging directly to" includes flow that is conveyed overland a distance of 200 feet or less from the project to the ESA, or conveyed in a pipe or open channel any distance as an isolated flow from the project to the ESA (i.e. not commingled with flows from adjacent lands). ○ Yes ◉ No
8. **New development or redevelopment projects of retail gasoline outlet (RGO) that create and/or replaces 5,000 square feet of impervious surface.** The development project meets the following criteria: (a) 5,000 square feet or more or (b) has a projected Average Daily Traffic (ADT) of 100 or more vehicles per day. ○ Yes ◉ No
9. **New development or redevelopment projects of an automotive repair shop that creates and/or replaces 5,000 square feet or more of impervious surfaces.** Development projects categorized in any one of Standard Industrial Classification (SIC) codes 5013, 5014, 5541, 7532-7534 or 7536-7539. ○ Yes ◉ No
10. **Other Pollutant Generating Project.** These projects are not covered in any of the categories above but involve the disturbance of one or more acres of land and are expected to generate post-construction phase pollutants, including fertilizers and pesticides. This category does not include projects creating less than 5,000 square feet of impervious area and projects containing landscaping without a requirement for the regular use of fertilizers and pesticides (such as a slope stabilization project using native plants). Impervious area calculations need not include linear pathways for infrequent vehicle use, such as emergency maintenance access or bicycle and pedestrian paths if the linear pathways are built with pervious surfaces or if runoff from the pathway sheet flows to adjacent pervious areas. ○ Yes ◉ No

**PART F –** Select the appropriate category based on the outcomes of Part C through Part E

1. The project is **NOT SUBJECT TO PERMANENT STORMWATER REQUIREMENTS** ○ Yes ◉ No
2. The project is a **STANDARD DEVELOPMENT PROJECT**. Site design and source control BMP requirements apply. See the Stormwater Standards Manual for guidance. ◉ Yes ○ No
3. The Project is **PDP EXEMPT**. Site design and source control BMP requirements apply. Refer to the Stormwater Standards Manual for guidance. ○ Yes ◉ No
4. The project is a **PRIORITY DEVELOPMENT PROJECT**. Site design, source control and structural pollutant control BMP requirements apply. Refer to the Stormwater Standards Manual for guidance on determining if the project requires hydromodification plan management. ○ Yes ◉ No

GTC DESIGN, MICHAEL VILLARINA — **Name of Owner or Agent**

**Signature**

AGENT — **Title**

01/14/2022 — **Date**

CLEAR FORM



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Hannan Al-Timimi

# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET, SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |
| 6 | CITY RESUBMITTAL R6 | 07/31/2024 |

Sheet Name

STORM WATER NOTES

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER

**A001**

PROPOSED TWO-STORY TWO-UNIT ADUS

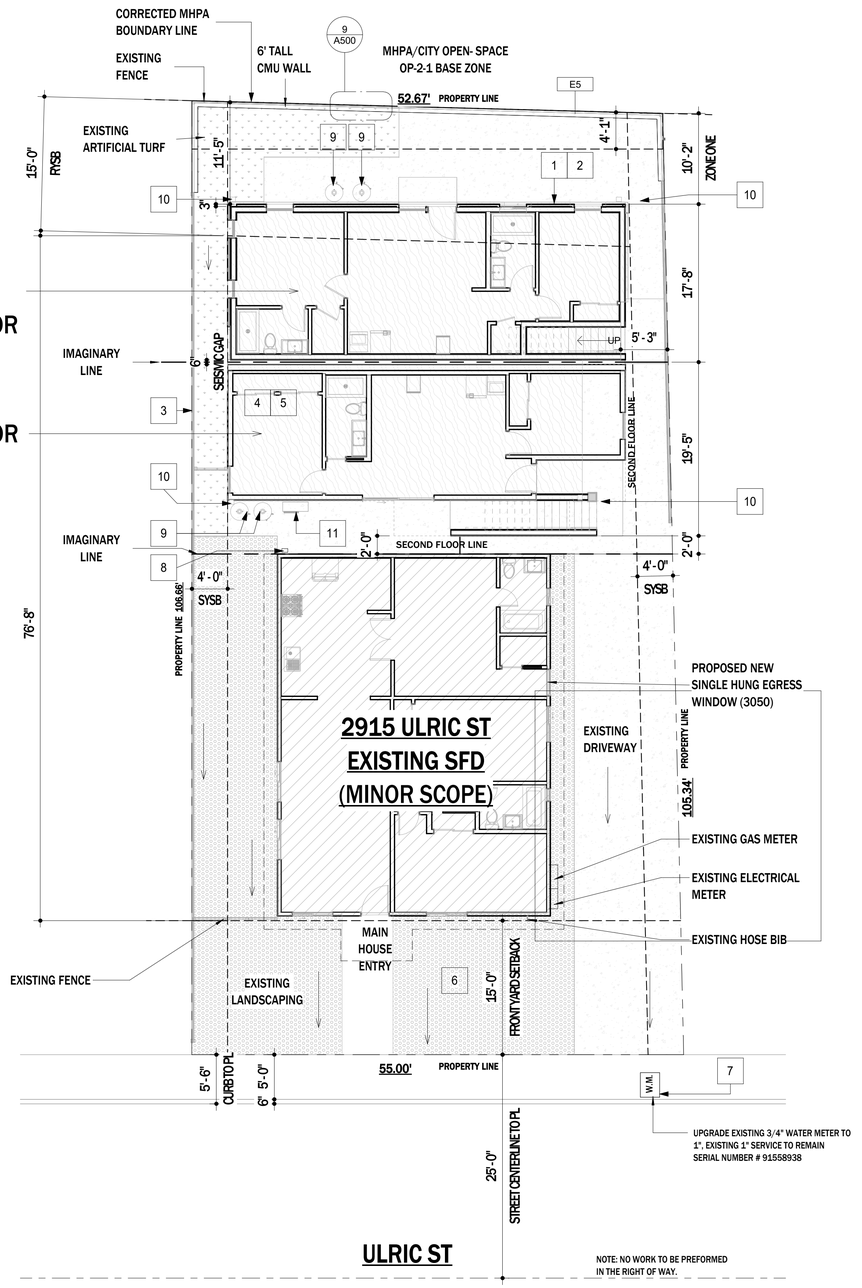
2921 ULRIC STREET - ADU 1 (718 SF) FIRST FLOOR

2923 ULRIC STREET - ADU 2 (699 SF) SECOND FLOOR

PROPOSED TWO-STORY TWO ADUS

2919 ULRIC STREET - ADU 3 (696 SF) SECOND FLOOR

2917 ULRIC STREET ADU 4 (610 SF) FIRST FLOOR




1 SITE PLAN
Scale: 1/8" = 1'-0"

NORTH

NOTE: BRUSH MANAGEMENT ON ADJACENT PROPERTIES SHALL BE THE RESPONSIBILITY OF THE ADJACENT PROPERTY OWNER. FOR MAINTENANCE ISSUES, CONTACT THE FIRE-RESCUE DEPARTMENT'S FIRE HAZARD ADVISOR - BRUSH/WEED COMPLAINT LINE AT: 619- 533-4444.
*NOTE: ALL REQUIRED ONSITE LANDSCAPE AND BRUSH MANAGEMENT AS SHOWN ON THESE PLANS SHALL BE MAINTAINED BY THE PROPERTY OWNER. OFFSITE BRUSH MANAGEMENT ON CITY OPEN SPACE SHALL BE CONDUCTED BY THE PARKS AND RECREATION DEPARTMENT, OPEN SPACE DIVISION BASED ON PRIORITY MAPS AND SCHEDULES DETERMINED BY THE FIRE-RESCUE DEPARTMENT. ALTERNATIVELY, OWNER MAY ELECT TO OBTAIN A RIGHT-OF-ENTRY PERMIT TO PERFORM SEASONAL BRUSH MANAGEMENT IN THIS AREA. CONTACT PARK AND RECREATION DEPARTMENT, OPEN SPACE DIVISION AT "619- 685-1313.*

*ALL STORM WATER RUNOFF FROM PROPOSED AND/OR REPLACED IMPERVIOUS AREAS (E.G. NEW ADU ROOF DRAINAGE) SHALL BE ROUTED TO PERVIOUS SURFACES (E.G. LANDSCAPING AREAS) PRIOR TO REACHING THE PUBLIC DRAIN SYSTEM (E.G. ADJACENT STREET CURB AND GUTTER STORM DRAIN SYSTEM) .*

TOTAL DISTURBANCE AREA: 1861 SQ FT.

EXISTING AMOUNT OF IMPERVIOUS AREA: 4,375 SF
AMOUNT OF CREATED IMPERVIOUS AREA: 900 SF
AMOUNT OF REPLACED IMPERVIOUS AREA: 0 SF
PROPOSED TOTAL OF IMPERVIOUS AREA: 5,275 SF
IMPERVIOUS INCREASE: 17%
EARTHWORK QUANTITIES:

CUT QUANTITIES: 5 CY'S
FILL QUANTITIES: 0 CY'S
IMPORT/EXPORT: 0 CY'S
MAX CUT DEPTH: 1.5 FT
MAX FILL DEPTH: 0 FT

## SITE PLAN LEGENDS

- AREA INDICATES THE AREA OF WORK
- AREA INDICATES EXISTING RESIDENCE
- AREA INDICATES EXISTING OUTDOOR PAVING
- AREA INDICATES NEW OUTDOOR PAVING
- AREA INDICATES EXISTING LANDSCAPE
- AREA INDICATES EXISTING/NEW ARTIFICAL TURF
- INDICATES PROPERTY LINE
- INDICATES SETBACKS
- IMAGINARY LINE

## SITE PLAN NOTES

1. THE PROJECT PROPOSES NO WORK WITHIN THE PUBLIC RIGHT-OF-WAY AND CITY OF SAN DIEGO EASEMENTS.
2. VALLEY FLASHINGS SHALL BE NOT LESS THAN 0.019-INCH (NO . 26 GALVANIZED SHEET GAGE) CORROSION-RESISTANT METAL INSTALLED OVER A MINIMUM 36-INCH-WIDE UNDERLAYMENT CONSISTING OF ONE LAYER OF NO . 72 ASTM CAP SHEET RUNNING THE FULL LENGTH OF THE VALLEY.
3. IF THE BUILDING INSPECTOR SUSPECTS FILL,EXPANSIVE SOILS OR ANY GEOLOGIC INSTABILITY BASED UPON OBSERVATION OF THE FOUNDATION EXCAVATION, A SOILS OR GEOLOGICAL REPORT, AND RESUBMITTAL OF PLANS TO PLAN CHECK TO VERIFY THAT REPORT RECOMMENDATIONS HAVE BEEN INCORPORATED, MAY BE REQUIRED.
4. THE STRUCTURE(S) WILL BE LOCATED ENTIRELY ON UNDISTURBED NATIVE SOIL. IF THE BUILDING INSPECTOR SUSPECTS FILL, EXPANSIVE SOILS O R ANY GEOLOGIC INSTABILITY BASED UPON OBSERVATION OF THE FOUNDATION EXCAVATION, A SOILS OR GEOLOGICAL REPORT, AND RESUBMITTAL OF PLANS TO PLAN CHECK TO VERIFY THAT THE REPORT RECOMMENDATIONS HAVE BEEN INCORPO RATED, MAY BE REQUIRED.
   SIGNATURE _____ OWNER/LICENSED ENGINEER OR ARCHITECT"
5. BRUSH MANAGEMENT ON ADJACENT PROPERTIES SHALL BE THE RESPONSIBILITY OF THE ADJACENT PROPERTY OWNER. FOR MAINTENANCE ISSUES, CONTACT THE FIRE-RESCUE DEPARTMENT'S FIRE HAZARD ADVISOR - BRUSH/WEED COMPLAINT LINE AT: (619) 533-4444."
6. ALL REQUIRED ONSITE LANDSCAPE AND BRUSH MANAGEMENT AS SHOWN ON THESE PLANS SHALL BE MAINTAINED BY THE PROPERTY OWNER. OFFSITE BRUSH MANAGEMENT ON CITY OPEN SPACE SHALL BE CONDUCTED BY THE PARKS AND RECREATION DEPARTMENT, OPEN SPACE DIVISION BASED ON PRIORITY MAPS AND SCHEDULES DETERMINED BY THE FIRE-RESCUE DEPARTMENT. ALTERNATIVELY, OWNER MAY ELECT TO OBTAIN A RIGHT-OF-ENTRY PERMIT TO PERFORM SEASONAL BRUSH MANAGEMENT IN THIS AREA. CONTACT PARK AND RECREATION DEPARTMENT, OPEN SPACE DIVISION AT (619 ) 685-1313.

## PROPERTY LINE CALCULATION

**PER 131-04D DEVELOPMENT REGULATIONS FOR RS ZONES**

FRONT SETBACK = 15' - 0"

SIDE SETBACK = LOT WIDTH X 8% (FOR PIE SHAPED LOTS FIRST 50' OF LOT DEPTH WIDTH X 8%)

SIDE SETBACK = 4' - 5"

REAR SETBACK = (1. IF PROPERTY IS LESS THAN 100' IN DEPTH, 10% OF DEPTH; 2. IF PROPERTY IS GREATER THAN 150' IN DEPTH, 10% OF DEPTH OR THE DIMENSION SHOWN IN TABLES 131-04C AND 131-04D, WHICHEVER IS GREATER)

REAR SETBACK = 15' - 0"

## KEYNOTES

| NO. | DESCRIPTION |
|---|---|
| 1 | A MINIMUM FIRE-RESISTANCE RATING OF ONE-HOUR IS REQUIRED FOR EXTERIOR WALLS WHERE THE FIRE SEPARATION DISTANCE IS LESS THAN 5 FEET, SEE A500 FOR DETAILS. |
| 2 | MINIMUM ONE-HOUR FIRE RESISTANCE RATING ON THE UNDERSIDE OF THE ROOF EAVES EXTENDING WITHIN 5 FEET OF THE LOT LINE. SEE A500 FOR DETAILS. |
| 3 | EXISTING FENCE @ 72" IN HEIGHT |
| 4 | AN ELECTRONICALLY SIGNED AND REGISTERED INSTALLATION CERTIFICATE(S) (CF2R) POSTED BY THE INSTALLING CONTRACTOR SHALL BE SUBMITTED TO THE FIEDL INSPECTOR DURING CONSTRUCTION AT THE BUILDING SITE. A REGISTERED CF2R WILL HAVE A UNIQUE 21-DIGIT REGISTRATION NUMBER FOLLOWED BY FOUR ZEROS LOCATED AT THE BOTTOM OF EACH PAGE. THE FIRST 12 DIGITS OF THE NUMBER WILL MATCH THE REGISTRATION NUMBER OF THE ASSOCIATED CF1R. CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL FORMS CF2R IS REVIEWED AND APPROVED. |
| 5 | NON-COMBUSTIBLE, ONE HOUR FIRE-RATED STRUCTURE AS DEFINED BY CALIFORNIA BUILDING CODE. STRUCTURE SHALL HAVE CLASS A ROOF AND ALL EXTERIOR WINDOWS AND EXTERIOR GLAZED DOOR ASSEMBLIES SHALL BE CONSTRUCTED OF DUAL GLAZED AND DUAL TEMPEREDS |
| 6 | ALL STORM WATER RUNOFF FROM PROPOSED AND/OR REPLACED IMPERVIOUS AREAS SHALL BE ROUTED TO SURFACES OR LANDSCAPING PRIOR TO REACHING THE PUBLIC DRAIN SYSTEM. |
| 7 | LOCATION OF EXISTING WATER METER, GENERAL CONTRACTOR TO VERIFY EXISTING CONDITIONS. |
| 8 | LOCATION OF EXISTING DOWNSPOUT. |
| 9 | LOCATION OF NEW EXTERIOR WATER HEATER, 50 GAL. RHEEM MODEL XE50T10H4, TO BE ENCLOSED G.C. TO PROVIDE GALVANIZED STEEL SHED TO PROTECT. REFER TO TITLE 24. |
| 10 | LOCATION OF NEW DOWNSPOUT. |
| 11 | NEW 24,000 BTU, 14 SEER/SEER2 12.2 EER AC CONDENSER PER TITLE 24 REPORT. |

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# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET,
SAN DIEGO, CA 92111

CITY NO.

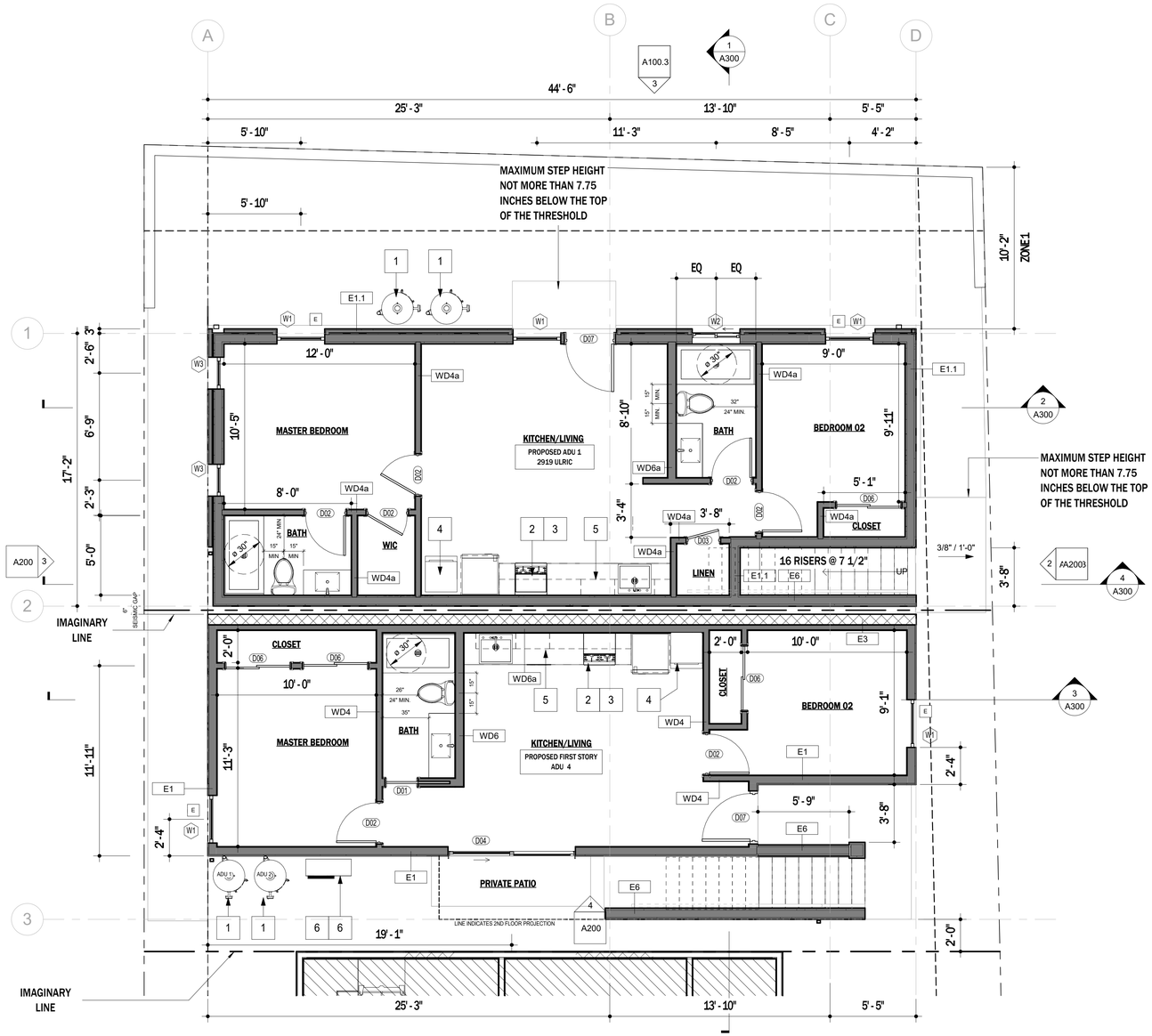
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| 1 | CITY DRAWINGS | 11/22/2022 |
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Sheet Name
SITE PLAN

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER
A100

GTC DESIGN STUDIO ©




1 PROPOSED 1ST FLOOR PLAN
Scale: 1/4" = 1'-0"

NORTH

## KEYNOTES

| NO. | DESCRIPTION |
|---|---|
| 1 | LOCATION OF NEW EXTERIOR WATER HEATER, 50 GAL. RHEEM MODEL XE50T10H4, TO BE ENCLOSED G.C. TO PROVIDE GALVANIZED STEEL SHED TO PROTECT. REFER TO TITLE 24. |
| 2 | NEW RANGE WITH 350 CFM EXHAUST HOOD, PROVIDE ADEQUATE VENTING TO EXTERIOR. |
| 3 | NEW 4" EXHAUST VENT THRU ROOF WITH MAX. 14' RUN, EXHAUST DUCTS AND VENTS SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS. |
| 4 | NEW WASHER/DRYER. NEW 4" VENT WALL* FLOOR WITH MAX 14' RUN. |
| 5 | NEW MELAMINE KITCHEN CABINETS UPPERS AND LOWERS WITH SOLID SURFACE OR SIMILAR COUNTERTOP. |
| 6 | NEW 24,000 BTU, 14 SEER/SEER2 12.2 EER AC CONDENSER PER TITLE 24 REPORT. |

## DOOR AND WINDOW NOTES

1. NEW WINDOWS TO HAVE U-FACTOR OF .30 AND SGHC OF .23
2. GLAZING FRAMES MADE OF VINYL MATERIALS SHALL HAVE WELDED CORNERS, METAL REINFORCEMENT IN THE INTERLOCK AREA, AND BE CERTIFIED TO THE MOST CURRENT EDITION OF ANSI/AAMA/NWWDA.
3. ALL EXTERIOR WINDOWS AND EXTERIOR GLAZED DOOR ASSEMBLIES SHALL BE CONSTRUCTED OF MULTIPANE GLAZING WITH A MINIMUM OF ONE TEMPERED PANE .
4. ALL EXTERIOR DOORS SHALL BE CONSTRUCTED OF SOLID CORE WOOD WITH STILES AND RAILS NOT LESS THAN 1-3/8" THICK AND RAISED PANELS NOT LESS THAN 1-1/4" THICK, THE EXTERIOR PERIMETER OF THE RAISED PANEL MAY TAPER TO A TONGUE NOT LESS THAN 3/8" THICK.
5. THE MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 8 ½ POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS, SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. CBC, SECTION 1132A.6.

E EGRESS OPENINGS FOR WINDOWS AND DOORS SHALL HAVE OPENINGS OF NOT LESS THAN 24" IN NET CLEAR OPENING HEIGHT, NOT LESS THAN 20" IN NET CLEAR OPENING WIDTH AND NOT LESS THAN 5.7 SQUARE FEET OF NET CLEAR OPENING AREA AT GRADE LEVEL AND NOT MORE THAN 44" IN HEIGHT FROM FINISH FLOOR FROM BOTTOM OF CLEAR OPENING.

## PLUMBING NOTES

1. PER 2019 CGBSC SEC 4.303.2, PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE (CPC) AND TABLE 1401.1. OF THE CPC.
2. ALL PLUMBING FIXTURES AND FITTINGS WILL BE WATER CONSERVING.
3. ALL ABS AND PVC PIPING AND FITTINGS SHALL BE ENCLOSED WITHIN WALLS AND FLOORS COVERED WITH TYPE X GYPSUM BOARD OR SIMILAR ASSEMBLIES THAT PROVIDE THE SAME LEVEL OF FIRE PROTECTION. PROTECTION OF MEMBRANE PENETRATIONS NOT REQUIRED.
4. STATE HEALTH AND SAFETY CODE SEC 17921.9 BANS THE USE OF CHLORINATED POLYVINYL (CPVC) AND CROSSLINKED POLYETHYLENE (PEX) FOR INTERIOR WATER SUPPLY PIPING.

A. LAVATORY FAUCETS WITH A MAXIMUM FLOW OF 1.2 GALLONS PER MINUTE (GPM).
B. KITCHEN FAUCETS WITH A MAXIMUM FLOW OF 1.8 GALLONS PER MINUTE (GPM).
C. SHOWER HEADS WITH A MAXIMUM FLOW OF 1.8 GALLONS PER MINUTE (GPM).
D. WATER CLOSETS WITH A MAXIMUM FLOW OF 1.28 GALLONS PER MINUTE (GPM).
E. PERMANENT VACUUM BREAKERS SHALL BE INCLUDED WITH ALL NEW HOSE BIBS.

## PLUMBING LEGEND

NEW KITCHEN SINK, FINAL SPEC TBD. FAUCETS WILL HAVE A MAXIMUM FLOW OF 1.8 GALLONS PER MINUTE (GPM)

NEW FLOOR MOUNT TOILET WITH MAXIMUM FLOW OF 1.28 GALLONS PER MINUTE (GPM)

NEW RESTROOM SINK WITH MAXIMUM FLOW OF 1.2 GALLONS PER MINUTE (GPM)

## FLOOR PLAN GENERAL NOTES

1. ALL WALLS TO BE 5/8" TYPE 'X' GWB W/ LEVEL 5 FINISH.
2. ALL ROOMS AND AREA DIMENSIONS ARE CRITICAL AND SHOULD NOT CHANGE. ALL ROOM AND AREA DIMENSIONS ARE TO BE VERIFIED PRIOR TO CONSTRUCTION. ANY DISCREPANCIES ARE TO BE REPORTED TO DESIGNER IMMEDIATELY.
3. ALL JOINTS MUST BE FIRE TAPED; AS REQUIRED EXPOSED WALLS WILL BE FINISHED WITH THREE (3) COATS OF JOINT COMPOUND AND SANDED SMOOTH, READY FOR PAINT.
4. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL DISCIPLINES AND THE REQUIREMENTS NOTED ON ALL PLANS.
5. ALL DIMENSIONS TAKEN FROM FINISH OR GWB, U.N.O.
6. THIS DRAWING IS DIAGRAMATIC AND SHOULD BE USED FOR REFERENCE ONLY.
7. ALL PARTITION SNAP LINES ARE TO BE APPROVED PRIOR TO STANDING ANY NEW PARTITIONS.
8. THE GENERAL CONTRACTOR IS TO RECEIVE APPROVAL FOR ALL FIELD CHANGES PRIOR TO IMPLEMENTATION FROM THE TENANT/OWNER.
REFER TO REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
9.ALL DIMENSIONS ARE MEASURED TO THE FINISH
10.DURING CONSTRUCTION, AT LEAST ONE EXTINGUISHER SHALL BE PROVIDED ON EACH FLOOR LEVEL AT EACH STAIRWAY, IN ALL STORAGE AND CONSTRUCTION SHEDS, IN LOCATIONS WHERE FLAMMABLE OR COMBUSTIBLE LIQUIDS ARE STORED OR USED, AND WHERE OTHER SPECIAL HAZARDS ARE PRESENT.
10.BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION, OR DEMOLITION SHALL CONFORM TO CFC CHAPTER 33 WELDING, CUTTING, AND OTHER HOT WORK SHALL BE IN CONFORMANCE WITH CFC CHAPTER 35.
11.PROVIDE LEVEL FLOOR LANDING AT ALL EXISTING AND PROPOSED EXTERIOR DOORS NOT MORE THAN 7 3/4" BELOW THE THRESHOLD LOCATED AT DOOR LOCATIONS.
12.PROVIDE A MINIMUM 1/2" GYPSUM BOARD INDIVIDUAL WRAP FOR STRUCTURE MEMBERS (BEAMS AND POSTS) SUPPORTING THE RATED WALL ABOVE AND FLOOR/CEILING ASSEMBLY.
13.DUCTS IN GARAGE AND DUCTS IN PENETRATING WALLS OR CEILING SEPARATING THE DWELLING UNIT FROM GARAGE SHALL BE CONSTRUCTED OF MINIMUM NO. 26 GUAGE SHEET STEEL OR OTHER APPROVED MATERIAL AND SHALL HAVE NO OPENINGS INTO THE GARAGE.

## FLOOR PLAN LEGEND

NEW 8" CMU WALL

NEW WALL, REFER TO ASSEMBLIES A005

WINDOW AND FRAME

EXTERIOR/INTERIOR DOOR

1t DOOR PER DOOR SCHEDULE

XX WINDOW PER WINDOW SCHEDULE

X# HR WALL TYPE PER SHEET A500

## ELECTRICAL NOTES

1. ARTIFICIAL LIGHT SOURCE SHALL HAVE AN ILLUMINATION CAPACITY OF NOT LESS THAN ONE FOOT-CANDLE WITH WALL SWITCH AT EACH LANDING.
2. PRIMARY LIGHTING IN KITCHEN SHALL BE FLUORESCENT 40 LUMENS PER WATT MIN. AND MUST BE ACTIVATED BY MAIN SWITCHING IN THE ROOM. FIXTURES MUST BE OF THE BALLAST TYPE THAT CAN ONLY ACCEPT FLUORESCENT BULBS.
3. IN KITCHEN ALL THE INSTALLED WATTAGE OF LUMINAIRES SHALL BE HIGH EFFICACY AND SHALL HAVE A MANUAL ON/OFF IN ADDITION TO A VACANCY SENSOR OR DIMMER. UNDER CABINET LIGHTING SHALL BE SWITCHED SEPARATELY.
4. LIGHTING IN BATHROOM SHALL HAVE ALL HIGH EFFICACY LUMINAIRE AND AT LEAST ONE LUMINAIRE MUST BE CONTROLLED BY VACANCY SENSOR.
5. GARAGES, LAUNDRY ROOMS AND UTILITY ROOMS: ALL LUMINARES SHALL BE HIGH EFFICACY AND AT LEASE ONE LUMINARE IN EACH SPACE SHALL BE CONTROLLED BY A VACANCY SENSOR.
6. OTHER ROOMS: ALL LUMINARES SHALL BE HIGH EFFICACY AND SHALL HAVE A MANUAL ON/OFF IN ADDITION TO A VACANCY SENSOR OR DIMMER.
7. ALL NEW RECEPTACLES IN THIS RESIDENCE SHALL BE ARC FAULTED.
8. ALL NEW RECEPTACLES IN THE BATHROOM, AND KITCHEN SHALL BE GFCI.
9. ALL RECEPTACLES ARE TO BE TAMPER RESISTANT.
10. AT LEAST ONE 20 AMPERE CIRCUIT SUPPLYING ONLY BATHROOM RECEPTACLE OUTLETS.
11. LIGHT SWITCH IN EACH ROOM IS TO RECEIVE INDEPENDANT SWITCH WITH COVER PLATE TYP. COLOR: WHITE.

## ELECTRICAL LEGEND

OUTLET DUPLEX 110V STND, 15 A, WALL MTD.

GFI OUTLET DUPLEX 110V STND, WALL MTD.
GROUND FAULT CIRCUIT INTERRUPTER

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PRJ-1077519
Hannan Al-Timimi

# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET, SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |
| 6 | CITY RESUBMITTAL R6 | 07/31/2024 |

Sheet Name

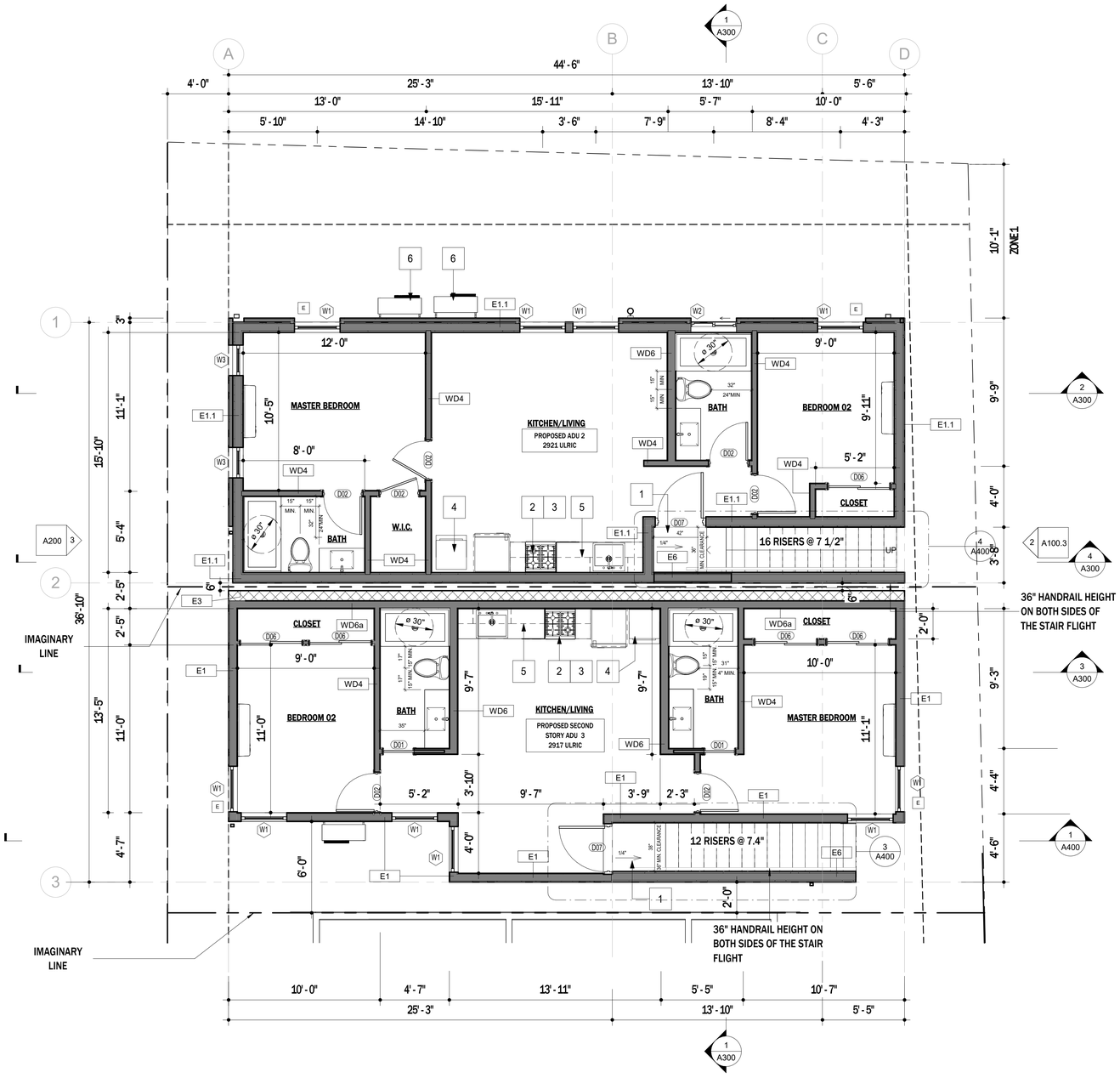
PROPOSED FIRST FLOOR PLAN

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SHEET NUMBER

**A101**

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1 PROPOSED 2ND FLOOR PLAN
Scale: 1/4" = 1'-0"

## KEYNOTES

| NO. | DESCRIPTION |
|---|---|
| 1 | EXTERIOR LANDING AT EGRESS DOORS, NO MORE THAN 1-1/2" BELOW THE TOP OF THE THRESHOLD (NOT MORE THAN 7.75 INCHES IF THE DOOR DOES NOT SWING OVER THE LANDING OR FLOOR). |
| 2 | NEW RANGE WITH 350 CFM EXHAUST HOOD, PROVIDE ADEQUATE VENTING TO EXTERIOR. |
| 3 | NEW 4" EXHAUST VENT THRU ROOF WITH MAX. 14' RUN, EXHAUST DUCTS AND VENTS SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS. |
| 4 | NEW WASHER/DRYER. NEW 4" VENT WALL* FLOOR WITH MAX 14' RUN. |
| 5 | NEW MELAMINE KITCHEN CABINETS UPPERS AND LOWERS WITH SOLID SURFACE OR SIMILAR COUNTERTOP. |
| 6 | NEW 24,000 BTU, 14 SEER/SEER2 12.2 EER AC CONDENSER PER TITLE 24 REPORT. |

## DOOR AND WINDOW NOTES

1. NEW WINDOWS TO HAVE U-FACTOR OF .30 AND SGHC OF .23
2. GLAZING FRAMES MADE OF VINYL MATERIALS SHALL HAVE WELDED CORNERS, METAL REINFORCEMENT IN THE INTERLOCK AREA, AND BE CERTIFIED TO THE MOST CURRENT EDITION OF ANSI/AAMA/NWWDA.
3. ALL EXTERIOR WINDOWS AND EXTERIOR GLAZED DOOR ASSEMBLIES SHALL BE CONSTRUCTED OF MULTIPANE GLAZING WITH A MINIMUM OF ONE TEMPERED PANE .
4. ALL EXTERIOR DOORS SHALL BE CONSTRUCTED OF SOLID CORE WOOD WITH STILES AND RAILS NOT LESS THAN 1-3/8" THICK AND RAISED PANELS NOT LESS THAN 1-1/4" THICK, THE EXTERIOR PERIMETER OF THE RAISED PANEL MAY TAPER TO A TONGUE NOT LESS THAN 3/8" THICK.
5. THE MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 8 ½ POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS, SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. CBC, SECTION 1132A.6.

E EGRESS OPENINGS FOR WINDOWS AND DOORS SHALL HAVE OPENINGS OF NOT LESS THAN 24" IN NET CLEAR OPENING HEIGHT, NOT LESS THAN 20" IN NET CLEAR OPENING WIDTH AND NOT LESS THAN 5.7 SQUARE FEET OF NET CLEAR OPENING AREA AT GRADE LEVEL AND NOT MORE THAN 44" IN HEIGHT FROM FINISH FLOOR FROM BOTTOM OF CLEAR OPENING.

## PLUMBING NOTES

1. PER 2019 CGBSC SEC 4.303.2, PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE (CPC) AND TABLE 1401.1. OF THE CPC.
2. ALL PLUMBING FIXTURES AND FITTINGS WILL BE WATER CONSERVING.
3. ALL ABS AND PVC PIPING AND FITTINGS SHALL BE ENCLOSED WITHIN WALLS AND FLOORS COVERED WITH TYPE X GYPSUM BOARD OR SIMILAR ASSEMBLIES THAT PROVIDE THE SAME LEVEL OF FIRE PROTECTION. PROTECTION OF MEMBRANE PENETRATIONS NOT REQUIRED.
4. STATE HEALTH AND SAFETY CODE SEC 17921.9 BANS THE USE OF CHLORINATED POLYVINYL (CPVC) AND CROSSLINKED POLYETHYLENE (PEX) FOR INTERIOR WATER SUPPLY PIPING.

A. LAVATORY FAUCETS WITH A MAXIMUM FLOW OF 1.2 GALLONS PER MINUTE (GPM).
B. KITCHEN FAUCETS WITH A MAXIMUM FLOW OF 1.8 GALLONS PER MINUTE (GPM).
C. SHOWER HEADS WITH A MAXIMUM FLOW OF 1.8 GALLONS PER MINUTE (GPM).
D. WATER CLOSETS WITH A MAXIMUM FLOW OF 1.28 GALLONS PER MINUTE (GPM).
E. PERMANENT VACUUM BREAKERS SHALL BE INCLUDED WITH ALL NEW HOSE BIBS.

## PLUMBING LEGEND

NEW KITCHEN SINK, FINAL SPEC TBD. FAUCETS WILL HAVE A MAXIMUM FLOW OF 1.8 GALLONS PER MINUTE (GPM)

NEW FLOOR MOUNT TOILET WITH MAXIMUM FLOW OF 1.28 GALLONS PER MINUTE (GPM)

NEW RESTROOM SINK WITH MAXIMUM FLOW OF 1.2 GALLONS PER MINUTE (GPM)

## FLOOR PLAN GENERAL NOTES

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5. ALL DIMENSIONS TAKEN FROM FINISH OR GWB, U.N.O.
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10.BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION, OR DEMOLITION SHALL CONFORM TO CFC CHAPTER 33 WELDING, CUTTING, AND OTHER HOT WORK SHALL BE IN CONFORMANCE WITH CFC CHAPTER 35.
11.PROVIDE LEVEL FLOOR LANDING AT ALL EXISTING AND PROPOSED EXTERIOR DOORS NOT MORE THAN 7 3/4" BELOW THE THRESHOLD LOCATED AT DOOR LOCATIONS.
12.PROVIDE A MINIMUM 1/2" GYPSUM BOARD INDIVIDUAL WRAP FOR STRUCTURE MEMBERS (BEAMS AND POSTS) SUPPORTING THE RATED WALL ABOVE AND FLOOR/CEILING ASSEMBLY.
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## FLOOR PLAN LEGEND

NEW 8" CMU WALL

NEW WALL, REFER TO ASSEMBLIES A005

WINDOW AND FRAME

EXTERIOR/INTERIOR DOOR

1t DOOR PER DOOR SCHEDULE

XX WINDOW PER WINDOW SCHEDULE

X# HR WALL TYPE PER SHEET A500

## ELECTRICAL NOTES

1. ARTIFICIAL LIGHT SOURCE SHALL HAVE AN ILLUMINATION CAPACITY OF NOT LESS THAN ONE FOOT-CANDLE WITH WALL SWITCH AT EACH LANDING.
2. PRIMARY LIGHTING IN KITCHEN SHALL BE FLUORESCENT 40 LUMENS PER WATT MIN. AND MUST BE ACTIVATED BY MAIN SWITCHING IN THE ROOM. FIXTURES MUST BE OF THE BALLAST TYPE THAT CAN ONLY ACCEPT FLUORESCENT BULBS.
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## ELECTRICAL LEGEND

OUTLET DUPLEX 110V STND, 15 A, WALL MTD.

GFI OUTLET DUPLEX 110V STND, WALL MTD.
GROUND FAULT CIRCUIT INTERRUPTER

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CITY NO.

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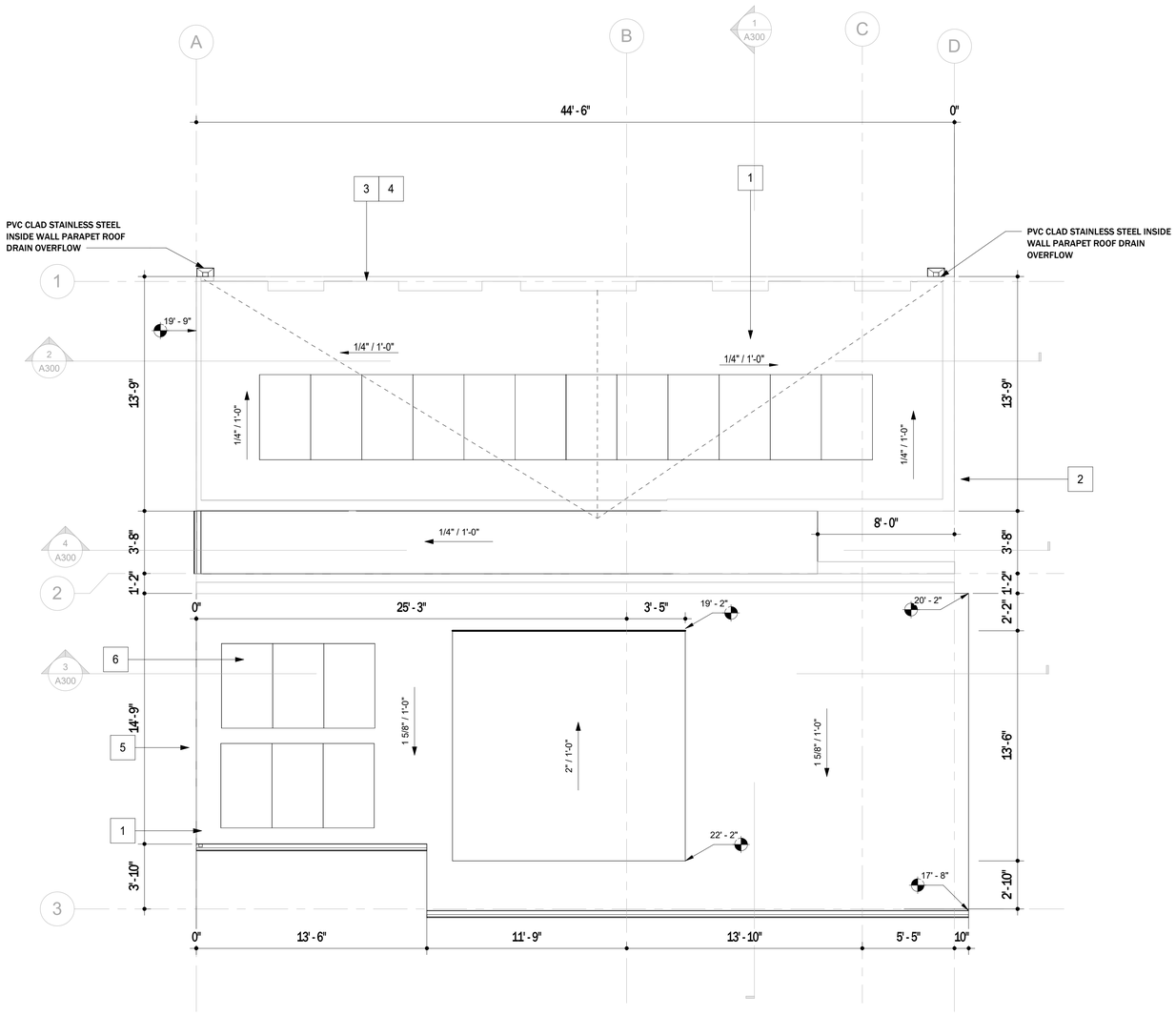
PROPOSED SECOND FLOOR PLAN

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| GTC NO. | 322 |
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1 ROOF PLAN
Scale: 1/4" = 1'-0"

NORTH

**NOTE:** ROOF GUTTERS SHALL BE PROVIDED WITH THE MEANS TO PREVENT THE ACCUMULATION OF LEAVES AND DEBRIS IN THE GUTTER. ALL ROOF GUTTERS AND DOWNSPOUTS SHALL BE CONSTRUCTED OF NON-COMBUSTIBLE MATERIALS." ☐CBC 705A.4; SDMC 145.0705(A)].
"VALLEY FLASHINGS SHALL BE NOT LESS THAN 0.019-INCH ☐NO. 26 GALVANIZED SHEET GAGE) CORROSION-RESISTANT METAL INSTALLED OVER A MINIMUM 36-INCH-WIDE UNDERLAYMENT CONSISTING OF ONE LAYER OF NO. 72 ASTM CAP SHEET RUNNING THE FULL LENGTH OF THE VALLEY.(CBC 705A.3).

## KEYNOTES

| NO. | DESCRIPTION |
|---|---|
| 1 | GAF TIMBERLINE SHINGLES, CLASS "A", FIRE UL 790 ICC-ESR-1475 OR EQUAL WITH RADIANT BARRIER AT ROOF |
| 2 | LINE OF EXTERIOR WALL BELOW. |
| 3 | PROVIDE A MINIMUM ONE-HOUR FIRE-RESISTANCE RATING ON THE UNDERSIDE OF THE ROOF PROJECTION. |
| 4 | DRIP EDGE FLASHING USED AT THE FREE EDGES OF ROOFING MATERIALS SHALL BE NON-COMBUSTIBLE. |
| 5 | EDGE OF ROOF EAVE. |
| 6 | SOLAR PANELS - (12) 5'X3' 400W PANELS FOR TOTAL 5.96 KW OF POWER FOR ALL UNITS. |

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2917, 2919, 2921 & 2923 ULRIC STREET, SAN DIEGO, CA 92111

CITY NO.

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| 6 | CITY RESUBMITTAL R6 | 07/31/2024 |

Sheet Name

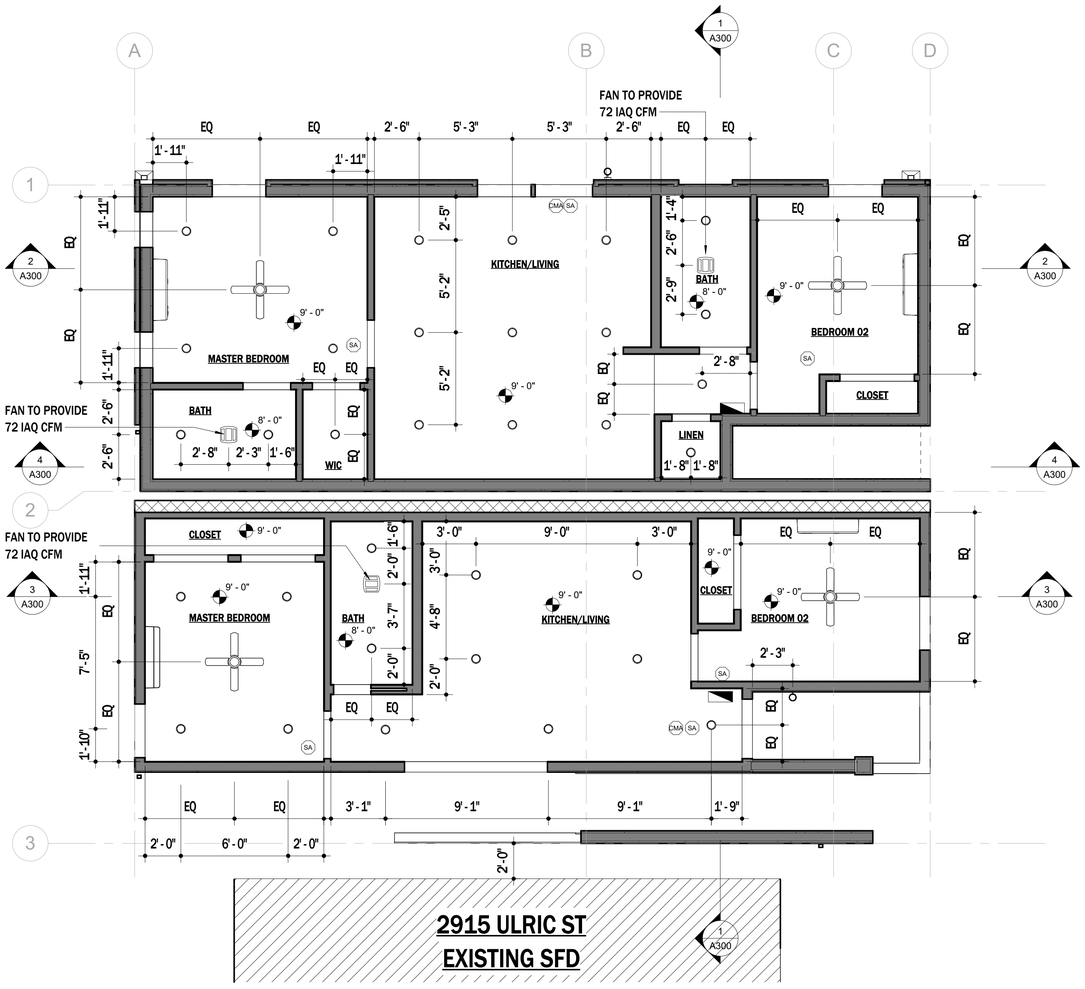
ROOF PLAN

| | |
|---|---|
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1 PROPOSED FIRST FLOOR REFLECTED CEILING PLAN
Scale: 1/4" = 1'-0"

## RCP GENERAL NOTES

1. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL DISCIPLINES AND THE REQUIREMENTS NOTED ON ALL PLANS.
2. THIS DRAWING IS DIAGRAMMATIC AND SHOULD BE USED FOR REFERENCE ONLY.
3. THESE DRAWINGS ARE FOR FIXTURE LOCATION AND REFERENCE ONLY.
4. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DRAWINGS.
5. V.I.F. & MAINTAIN FIRE-RATED PARTITION FROM FLOOR TO ROOF DECK AS REQUIRED.
6. NOTIFY DESIGNER IMMEDIATELY OF ANY DISCREPANCY DISCOVERED ON SITE
7. VERIFY AND SUBMIT ALL FINISHES TO INTERIOR DESIGNER AND/OR CLIENT PRIOR TO INSTALLATION.
8. SMOKE ALARMS SHALL BE INTERCONNECTED AND HARD-WIRED WITH BATTERY BACKUP IN THE DWELLING UNDERGOING AN ADDITION ALTERATION OR REPAIR. BATTERY OPERATED SMOKE ALARMS MAY BE USED IN EXISTING AREAS OF THE BUILDING WHERE INSTALLATION WOULD REQUIRE THE REMOVAL OF INTERIOR FINISHES.
9. CARBON MONOXIDE ALARM SHALL BE INTERCONNECTED AND HARD-WIRED WITH BATTERY BACKUP IN THE DWELLING UNDERGOING AN ADDITION ALTERATION OR REPAIR. BATTERY OPERATED CARBON MONOXIDE ALARM MAY BE USED IN EXIASTING AREAS OF THE BUILDING WHERE THE INSTALLATION WOULD REQUIRE THE REMOVAL OF INTERIOR FINISHES.
10. SINGLE AND MULTIPLE STATION CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH THE REQUIREMENTS OF UL 2034. CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH THE REQUIREMENTS OF 2016 CBC

## MECHANICAL NOTES

1. ENVIRONMENTAL AIR DUCTS AND EXHUAST TERMINATIONS SHALL TERMINATE NOT LESS THAN 3' FROM OPENINGS INTO THE BUILDING.
2. ATTIC/UNDERFLOOR INSTALLATION MUST COMPLY WITH SECTIONS 904. 908 & 909 OF THE CALIFORMIA MECHANICAL CODE (CMC).

## VENTING NOTES

1. THE ATTIC VENTILATION OPENINGS SHALL NOT BE LOCATED IN SOFFITS, EAVE OVERHANGS.
2. VENT OPENINGS SHALL BE PROTECTED BY NONCOMBUSTIBLE, CORROSION RESISTANT MESH AND MEETS ONE OF THE FOLLOWING REQUIREMENTS.

   A. INDIVIDUAL VENT OPENING SHALL NOT EXCEED 144 SQUARE INCHES.
   B. THE DIMENSION OF OPENINGS SHALL BE A MINIMUM OF 1/16 INCH AND SHALL NOT EXCEED 1/8 INCH.
   C. VENTS COMPLY WITH STM E2886.

3-EXHAUST DUCTS AND DRYER VENTS SHALL BE EQUIPPED WITH BACK-DRAFT TAMPERS.

## SMOKE/CARBON LEGEND

(SA) SMOKE DETECTOR LOCATION @ CEILING HARD WIRED WITH BATTERY BACK-UP .
SMOKE ALARMS SHALL BE INTERCONNECTED AND HARD-WIRED WITH BATTERY BACKUP IN THE DWELLING UNDERGOING AN ADDITION ALTERATION OR REPAIR. BATTERY OPERATED SMOKE ALARMS MAY BE USED IN EXISTING AREAS OF THE BUILDING WHERE INSTALLATION WOULD REQUIRE THE REMOVAL OF INTERIOR FINISHES.

(CMA) CARBON MONOXIDE DETECTOR LOCATION WITH WIRED BATTERY BACK UP INSTALLED
CARBON MONOXIDE ALARM SHALL BE INTERCONNECTED AND HARD-WIRED WITH BATTERY BACKUP IN THE DWELLING UNDERGOING AN ADDITION ALTERATION OR REPAIR. BATTERY OPERATED CARBON MONOXIDE ALARM MAY BE USED IN EXIASTING AREAS OF THE BUILDING WHERE THE INSTALLATION WOULD REQUIRE THE REMOVAL OF INTERIOR FINISHES.
SINGLE AND MULTIPLE STATION CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH THE REQUIREMENTS OF UL 2034. CARBON MONOXIDE ALARMS SHALL BE LISTED.

NOTE: CARBON MONOXIDE ALARMS (CMA) AND SMOKE ALARMS (SA) ARE REQUIRED FOR ALTERATIONS, REPAIRS OR ADDITIONS WHERE A PERMIT VALUATION EXCEEDS $1,000:

A. CARBON MONOXIDE ALARMS SHALL BE BE PROVIDED IN EXISTING DWELLINGS OR SLEEPING UNITS THAT HAVE ATTACHED GARAGES OR FUEL-BURNING APPLIANCE, LOCATE SUCH ALARMS OUTSIDE OF EACH SEPARATE DWELLING UNIT SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM(S). AND ONE AT EVERY LEVEL OF DWELLING INCLUDING THE BASEMENT (R315)
B. SMOKE ALARMS SHALL BE INSTALLED IN EACH SLEEPING ROOM AND OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM(S) (R314).

## RCP LEGEND

- CEILING HEIGHT
- NEW LED RECESSED CAN DOWNLIGHT
- ELECTRICAL SUB-PANEL
- NEW COMBINATION LED FIXTURE AND EXHAUST FAN TO OUTSIDE AIR WITH 5 ROOM AIR CHANGES PER HOUSE EQUIPPED WITH BACK-DRAFT DAMPER 70 CFM FOR BATHROOM 180 CFM FOR LAUNDRY.
- NEW LED WALL MOUNTED LIGHT

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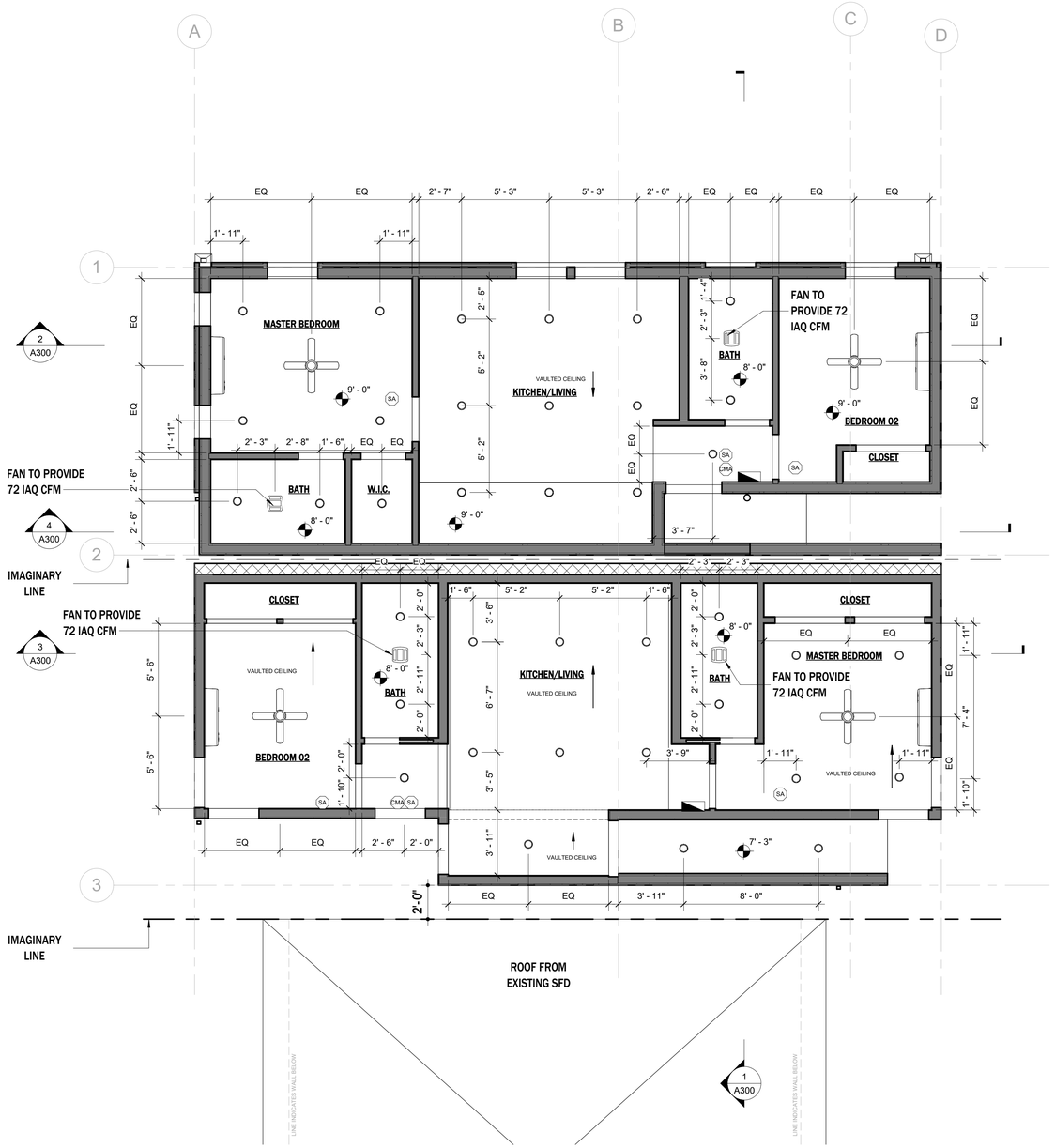
| NO. | DESCRIPTION | DATE |
|---|---|---|
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |

Sheet Name
REFLECTED CEILING PLANS

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|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER
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1 PROPOSED SECOND FLOOR REFLECTED CEILING PLAN
Scale: 1/4" = 1'-0"

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6. NOTIFY DESIGNER IMMEDIATELY OF ANY DISCREPANCY DISCOVERED ON SITE
7. VERIFY AND SUBMIT ALL FINISHES TO INTERIOR DESIGNER AND/OR CLIENT PRIOR TO INSTALLATION.
8. SMOKE ALARMS SHALL BE INTERCONNECTED AND HARD-WIRED WITH BATTERY BACKUP IN THE DWELLING UNDERGOING AN ADDITION ALTERATION OR REPAIR. BATTERY OPERATED SMOKE ALARMS MAY BE USED IN EXISTING AREAS OF THE BUILDING WHERE INSTALLATION WOULD REQUIRE THE REMOVAL OF INTERIOR FINISHES.
9. CARBON MONOXIDE ALARM SHALL BE INTERCONNECTED AND HARD-WIRED WITH BATTERY BACKUP IN THE DWELLING UNDERGOING AN ADDITION ALTERATION OR REPAIR. BATTERY OPERATED CARBON MONOXIDE ALARM MAY BE USED IN EXIASTING AREAS OF THE BUILDING WHERE THE INSTALLATION WOULD REQUIRE THE REMOVAL OF INTERIOR FINISHES.
10. SINGLE AND MULTIPLE STATION CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH THE REQUIREMENTS OF UL 2034. CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH THE REQUIREMENTS OF 2016 CBC

## MECHANICAL NOTES

1. ENVIRONMENTAL AIR DUCTS AND EXHUAST TERMINATIONS SHALL TERMINATE NOT LESS THAN 3' FROM OPENINGS INTO THE BUILDING.
2. ATTIC/UNDERFLOOR INSTALLATION MUST COMPLY WITH SECTIONS 904. 908 & 909 OF THE CALIFORMIA MECHANICAL CODE (CMC).

## VENTING NOTES

1. THE ATTIC VENTILATION OPENINGS SHALL NOT BE LOCATED IN SOFFITS, EAVE OVERHANGS.
2. VENT OPENINGS SHALL BE PROTECTED BY NONCOMBUSTIBLE, CORROSION RESISTANT MESH AND MEETS ONE OF THE FOLLOWING REQUIREMENTS.

   A. INDIVIDUAL VENT OPENING SHALL NOT EXCEED 144 SQUARE INCHES.
   B. THE DIMENSION OF OPENINGS SHALL BE A MINIMUM OF 1/16 INCH AND SHALL NOT EXCEED 1/8 INCH.
   C. VENTS COMPLY WITH STM E2886.

3-EXHAUST DUCTS AND DRYER VENTS SHALL BE EQUIPPED WITH BACK-DRAFT TAMPERS.

## SMOKE/CARBON LEGEND

(SA) SMOKE DETECTOR LOCATION @ CEILING HARD WIRED WITH BATTERY BACK-UP .
SMOKE ALARMS SHALL BE INTERCONNECTED AND HARD-WIRED WITH BATTERY BACKUP IN THE DWELLING UNDERGOING AN ADDITION ALTERATION OR REPAIR. BATTERY OPERATED SMOKE ALARMS MAY BE USED IN EXISTING AREAS OF THE BUILDING WHERE INSTALLATION WOULD REQUIRE THE REMOVAL OF INTERIOR FINISHES.

(CMA) CARBON MONOXIDE DETECTOR LOCATION WITH WIRED BATTERY BACK UP INSTALLED
CARBON MONOXIDE ALARM SHALL BE INTERCONNECTED AND HARD-WIRED WITH BATTERY BACKUP IN THE DWELLING UNDERGOING AN ADDITION ALTERATION OR REPAIR. BATTERY OPERATED CARBON MONOXIDE ALARM MAY BE USED IN EXIASTING AREAS OF THE BUILDING WHERE THE INSTALLATION WOULD REQUIRE THE REMOVAL OF INTERIOR FINISHES.
SINGLE AND MULTIPLE STATION CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH THE REQUIREMENTS OF UL 2034. CARBON MONOXIDE ALARMS SHALL BE LISTED.

NOTE: CARBON MONOXIDE ALARMS (CMA) AND SMOKE ALARMS (SA) ARE REQUIRED FOR ALTERATIONS, REPAIRS OR ADDITIONS WHERE A PERMIT VALUATION EXCEEDS $1,000:

A. CARBON MONOXIDE ALARMS SHALL BE BE PROVIDED IN EXISTING DWELLINGS OR SLEEPING UNITS THAT HAVE ATTACHED GARAGES OR FUEL-BURNING APPLIANCE, LOCATE SUCH ALARMS OUTSIDE OF EACH SEPARATE DWELLING UNIT SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM(S). AND ONE AT EVERY LEVEL OF DWELLING INCLUDING THE BASEMENT (R315)
B. SMOKE ALARMS SHALL BE INSTALLED IN EACH SLEEPING ROOM AND OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM(S) (R314).

## RCP LEGEND

- CEILING HEIGHT
- NEW LED RECESSED CAN DOWNLIGHT
- ELECTRICAL SUB-PANEL
- NEW COMBINATION LED FIXTURE AND EXHAUST FAN TO OUTSIDE AIR WITH 5 ROOM AIR CHANGES PER HOUSE EQUIPPED WITH BACK-DRAFT DAMPER 70 CFM FOR BATHROOM 180 CFM FOR LAUNDRY.
- NEW LED WALL MOUNTED LIGHT

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# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET, SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |

Sheet Name
REFLECTED CEILING PLANS

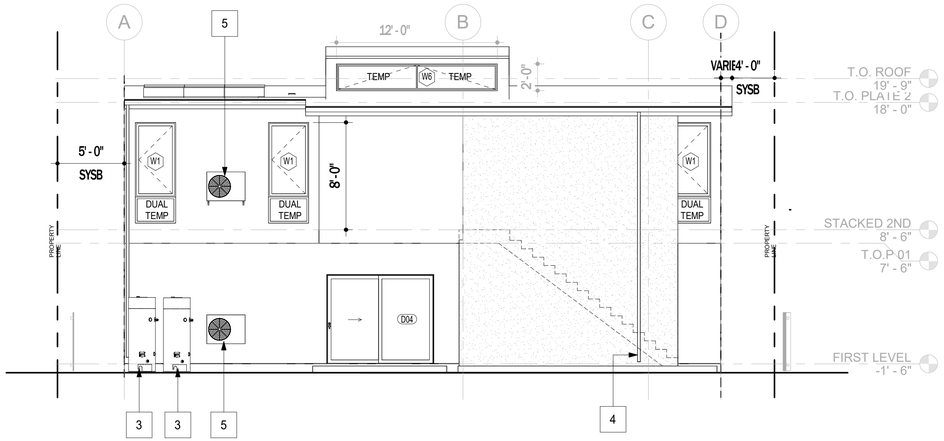
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| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER
**A105**

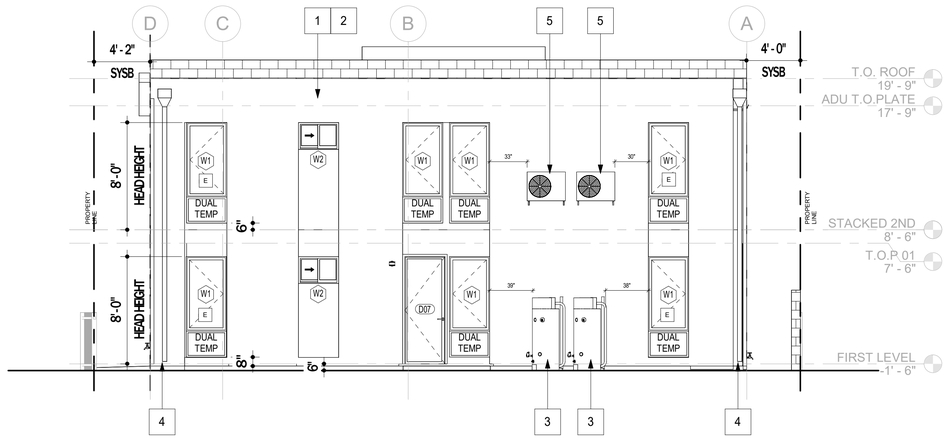
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## KEYNOTES

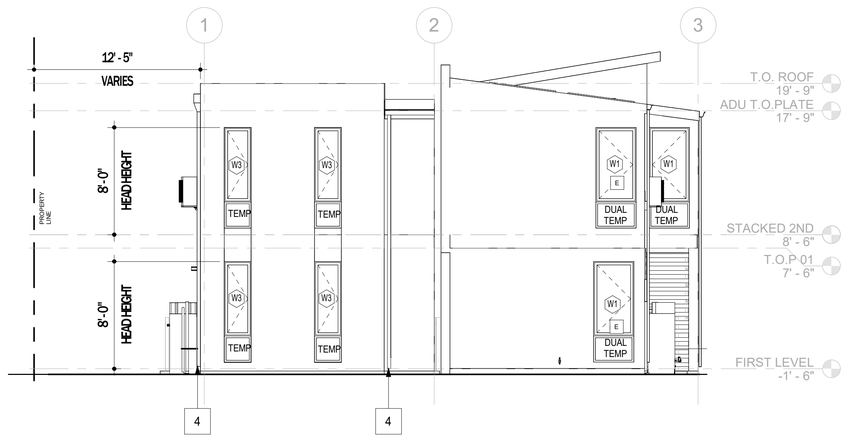
| NO. | DESCRIPTION |
|---|---|
| 1 | NEW STANDARD LOW-E WINDOWS, DARK ANNODIZED IN COLOR. |
| 2 | GLAZING FRAMES MADE OF VINYL MATERIALS SHALL HAVE WELDED CORNERS, METAL 101/I.S.2 STRUCTURAL REQUIREMENTS. |
| 3 | LOCATION OF NEW EXTERIOR WATER HEATER, 50 GAL. RHEEM MODEL XE50T10H4, TO BE ENCLOSED G.C. TO PROVIDE GALVANIZED STEEL SHED TO PROTECT. REFER TO TITLE 24. |
| 4 | LOCATION OF NEW DOWNSPOUT. |
| 5 | NEW 24,000 BTU, 14 SEER/SEER2 12.2 EER AC CONDENSER PER TITLE 24 REPORT. |



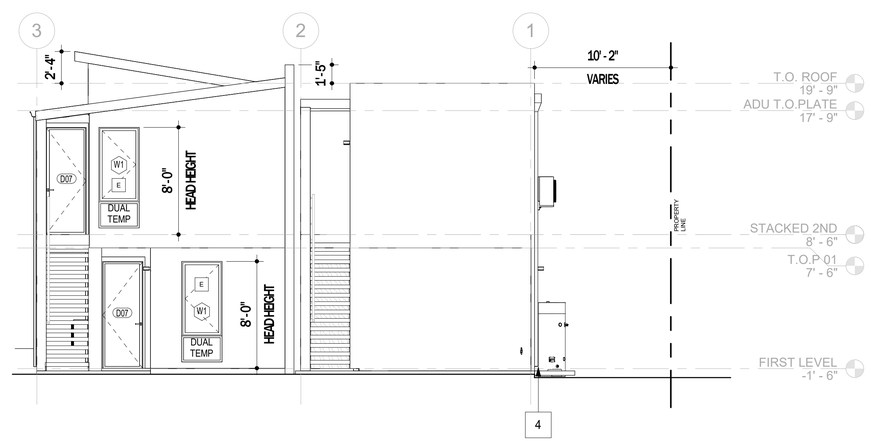

4 WEST ELEVATION
Scale: 3/16" = 1'-0"




1 EAST ELEVATION
Scale: 3/16" = 1'-0"




3 NORTH ELEVATION
Scale: 3/16" = 1'-0"




2 SOUTH ELEVATION
Scale: 3/16" = 1'-0"


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| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |
| 6 | CITY RESUBMITTAL R6 | 07/31/2024 |

Sheet Name

EXTERIOR ELEVATIONS

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

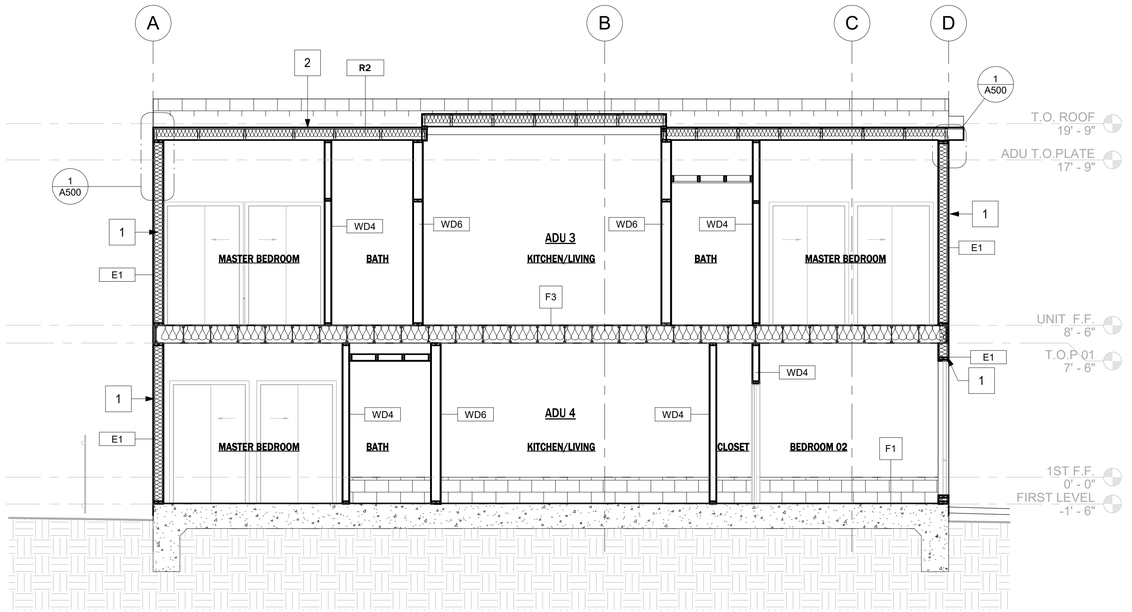
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**A200**

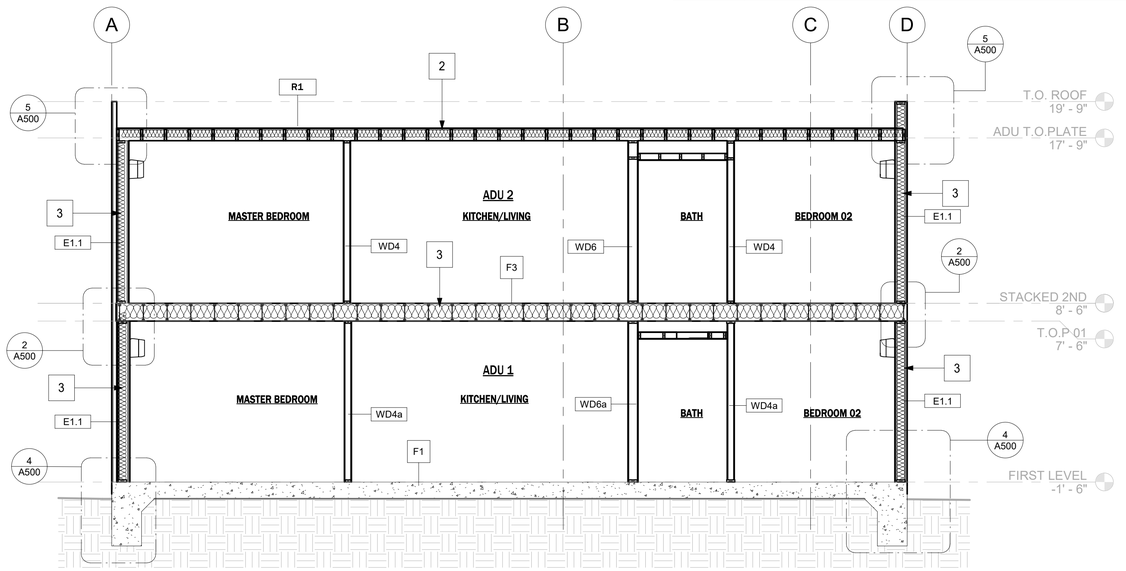
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## KEYNOTES

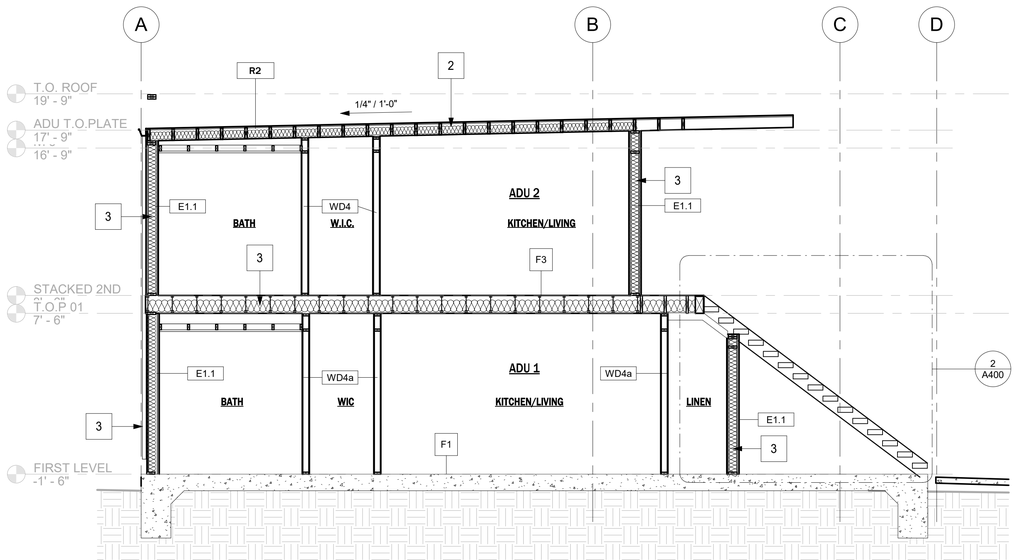
| NO. | DESCRIPTION |
|---|---|
| 1 | NEW R-21 INSULATION AT WALLS PER TITLE 24 COMPLIANCE. |
| 2 | NEW R-30 INSULATION AT CEILING PER TITLE 24 COMPLIANCE. |
| 3 | NEW R-19 INSULATION AT CEILING PER TITLE 24 COMPLIANCE. |



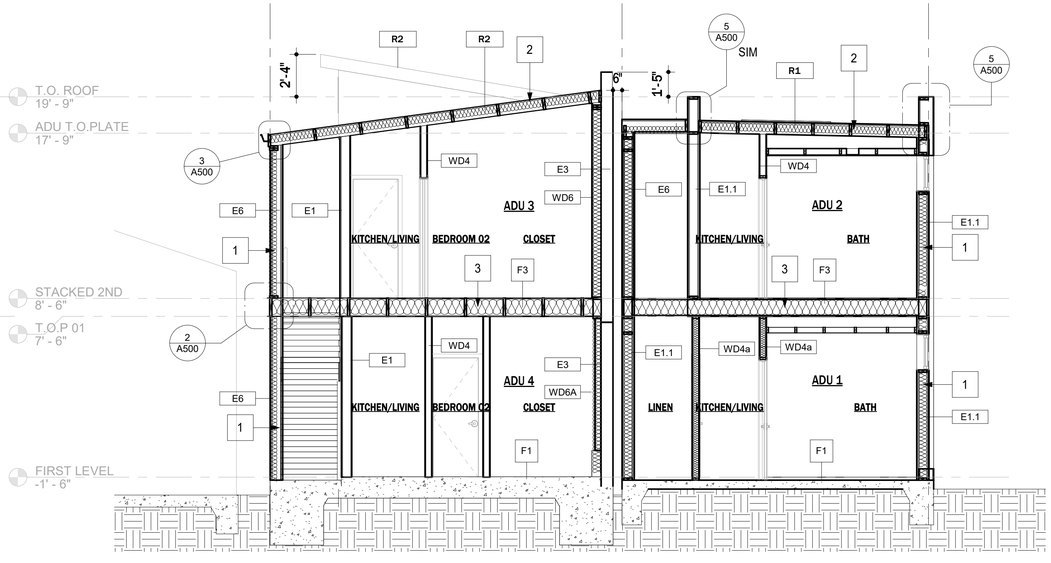

3 SECTION A
Scale: 1/4" = 1'-0"




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




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




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

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| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |

Sheet Name

SECTIONS

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER

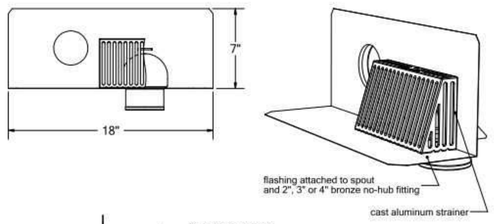
**A300**

THUNDERBIRD PRODUCTS
1895 Gillespie Way, El Cajon, CA 92020
tel: (619) 448-2507
fax: (619) 448-9072 tbirduss.com

# INSIDE-WALL PARAPET DRAIN WITH OVERFLOW

ICC ES PMG

16 oz copper, 316 grade stainless steel, or TPO/PVC-clad stainless steel flange. Includes aluminum dome strainer.
Available in 2", 3" and 4" outlet.

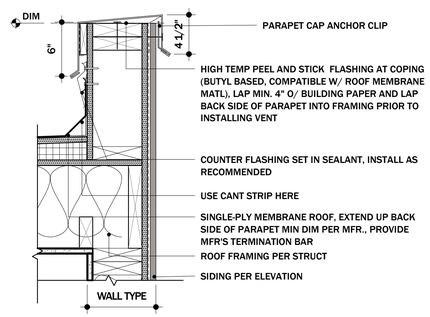



| PART # | |
|---|---|
| PDNDCB2NH | 2" no-hub |
| PDNDCB3TA | 3" male thread |
| PDNDCB3NH | 3" no-hub |
| PDNDCB4NH | 4" no-hub * |
| OPTIONS | |
| | 16 oz copper flange |
| S- | 316 stainless steel flange |
| TPO- | TPO-clad stainless flange |
| PVC- | PVC-clad stainless flange |

* excluded from ICC-ES listing

Data is subject to manufacturing tolerances.

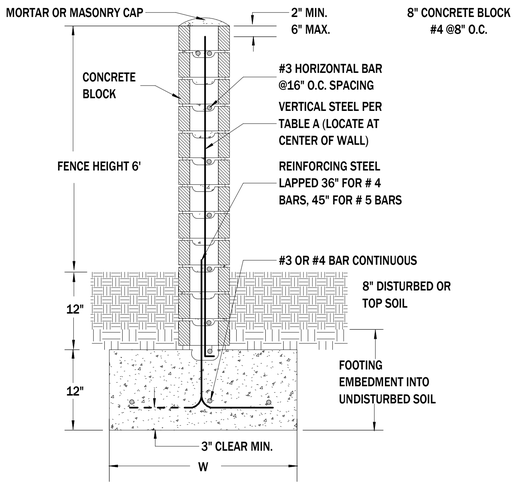
**8 INSIDE-WALL PARAPET DRAIN WITH OVERFLOW**
1 1/2" = 1'-0"



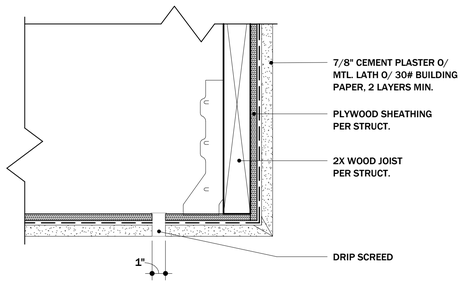

**5 TYP PARAPET COPING CAP**
1 1/2" = 1'-0"



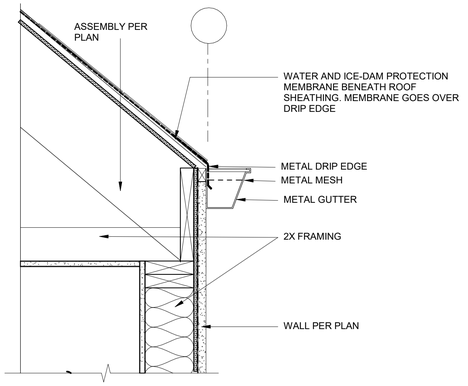

**6 GUARD RAIL**
3/4" = 1'-0"



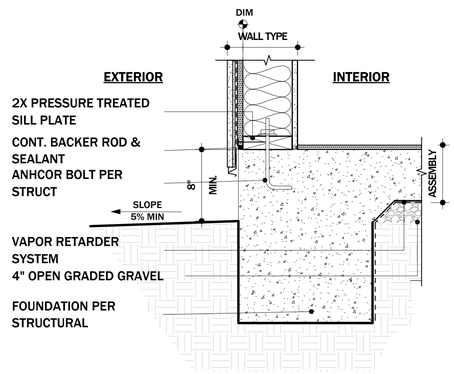

**9 SLAB ON GRADE - TYP FOUNDATION**
1 1/2" = 1'-0"



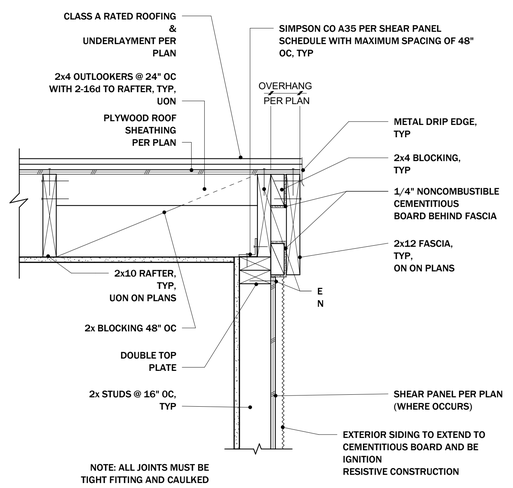

**7 TYP. SOFFIT DRIP EDGE DETAIL**
3" = 1'-0"




**3 FLUSH EAVE DETAIL**
1 1/2" = 1'-0"

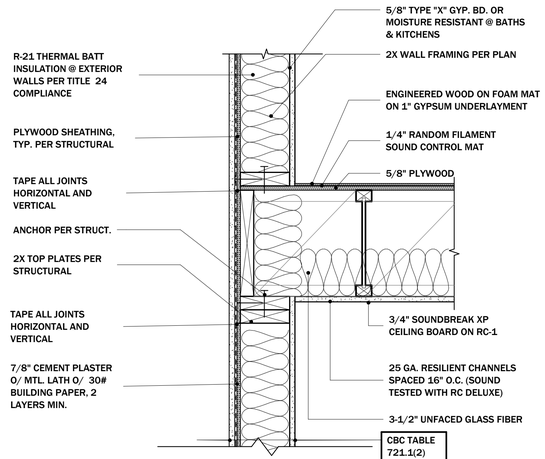



**4 SLAB ON GRADE - TYP FOUNDATION**
1 1/2" = 1'-0"




**1 IGNITION RESISTIVE RAKE WITH 2X FASCIA**
1 1/2" = 1'-0"

**NOTE:** ALL WALLS ARE PER CBC TABLE 721.1(2)15-1.3




**2 WALL SECTION @ AT SECOND FLOOR**
1 1/2" = 1'-0"


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# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET,
SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |
| 6 | CITY RESUBMITTAL R6 | 07/31/2024 |

Sheet Name
EXTERIOR DETAILS

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | MM |
| CHECKED BY: | NR |

SHEET NUMBER
**A500**

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**CERTIFICATE OF COMPLIANCE** CF1R-PRF-01E

**Project Name:** 2921 Ulric ADU 1 **Calculation Date/Time:** 2024-07-30T10:08:12-07:00 **(Page 1 of 8)**

**Calculation Description:** Title 24 Analysis **Input File Name:** 2921 Ulric ADU 1.ribd19x

**GENERAL INFORMATION**

| | | | | | |
|---|---|---|---|---|---|
| 01 | Project Name | 2921 Ulric ADU 1 | | | |
| 02 | Run Title | Title 24 Analysis | | | |
| 03 | Project Location | 2921 Ulric St | | | |
| 04 | City | San Diego | 05 | Standards Version | 2019 |
| 06 | Zip code | 92111 | 07 | Software Version | EnergyPro 8.3 |
| 08 | Climate Zone | 7 | 09 | Front Orientation (deg/ Cardinal) | 90 |
| 10 | Building Type | Single family | 11 | Number of Dwelling Units | 1 |
| 12 | Project Scope | NewConstruction | 13 | Number of Bedrooms | 2 |
| 14 | Addition Cond. Floor Area (ft²) | 0 | 15 | Number of Stories | 1 |
| 16 | Existing Cond. Floor Area (ft²) | n/a | 17 | Fenestration Average U-factor | 0.3 |
| 18 | Total Cond. Floor Area (ft²) | 718 | 19 | Glazing Percentage (%) | 17.76% |
| 20 | ADU Bedroom Count | n/a | 21 | ADU Conditioned Floor Area | n/a |
| 22 | Is Natural Gas Available? | Yes | | | |

**COMPLIANCE RESULTS**

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



**CERTIFICATE OF COMPLIANCE** CF1R-PRF-01E

**Project Name:** 2921 Ulric ADU 1 **Calculation Date/Time:** 2024-07-30T10:08:12-07:00 **(Page 2 of 8)**

**Calculation Description:** Title 24 Analysis **Input File Name:** 2921 Ulric ADU 1.ribd19x

**ENERGY DESIGN RATING**

| | Energy Design Ratings | | Compliance Margins | |
|---|---|---|---|---|
| | Efficiency[1] (EDR) | Total[2] (EDR) | Efficiency[3] (EDR) | Total[2] (EDR) |
| Standard Design | 64.9 | 32.8 | | |
| Proposed Design | 62.4 | 30.4 | 2.5 | 2.4 |

**RESULT: [3] COMPLIES**

1: Efficiency EDR includes improvements to the building envelope and more efficient equipment
2: Total EDR includes efficiency and demand response measures such as photovoltaic (PV) systems and batteries
3: Building complies when efficiency and total compliance margins are greater than or equal to zero

- Standard Design PV Capacity: 1.83 kWdc
- PV System relized to 1.83 kWdc (a factor of 1.828) to achieve Standard Design PV PV scaling

**ENERGY USE SUMMARY**

| Energy Use (kTDV/ft²-yr) | Standard Design | Proposed Design | Compliance Margin | Percent Improvement |
|---|---|---|---|---|
| Space Heating | 1.5 | 2.55 | -1.05 | -70 |
| Space Cooling | 3.3 | 2.9 | 0.4 | 12.1 |
| IAQ Ventilation | 5.13 | 5.13 | 0 | 0 |
| Water Heating | 32.01 | 24.32 | 7.69 | 24 |
| Self Utilization/Flexibility Credit | n/a | 0 | 0 | n/a |
| **Compliance Energy Total** | **41.94** | **34.9** | **7.04** | **16.8** |

**REQUIRED PV SYSTEMS - SIMPLIFIED**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DC System Size (kWdc) | Exception | Module Type | Array Type | Power Electronics | CFI | Azimuth (deg) | Tilt Input | Array Angle (deg) | Tilt (x in 12) | Inverter Eff. (%) | Annual Solar Access (%) |
| 1.83 | NA | Standard | Fixed | none | true | 150-270 | n/a | n/a | <=7:12 | 96 | 98 |



**CERTIFICATE OF COMPLIANCE** CF1R-PRF-01E

**Project Name:** 2921 Ulric ADU 1 **Calculation Date/Time:** 2024-07-30T10:08:12-07:00 **(Page 3 of 8)**

**Calculation Description:** Title 24 Analysis **Input File Name:** 2921 Ulric ADU 1.ribd19x

**REQUIRED SPECIAL FEATURES**

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

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

**HERS FEATURE SUMMARY**

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

Building-level Verifications:
- Indoor air quality ventilation
- Kitchen range hood

Cooling System Verifications:
- -- None --

Heating System Verifications:
- Verified heat pump rated heating capacity

HVAC Distribution System Verifications:
- -- None --

Domestic Hot Water System Verifications:
- -- None --

**BUILDING - FEATURES INFORMATION**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|---|---|---|---|---|---|---|
| Project Name | Conditioned Floor Area (ft²) | Number of Dwelling Units | Number of Bedrooms | Number of Zones | Number of Ventilation Cooling Systems | Number of Water Heating Systems |
| 2921 Ulric ADU 1 | 718 | 1 | 2 | 1 | 0 | 1 |

**ZONE INFORMATION**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|---|---|---|---|---|---|---|
| Zone Name | Zone Type | HVAC System Name | Zone Floor Area (ft²) | Avg. Ceiling Height | Water Heating System 1 | Water Heating System 2 |
| ADU 1 | Conditioned | Heat Pump1 | 718 | 9 | DHW Sys 1 | N/A |



**CERTIFICATE OF COMPLIANCE** CF1R-PRF-01E

**Project Name:** 2921 Ulric ADU 1 **Calculation Date/Time:** 2024-07-30T10:08:12-07:00 **(Page 4 of 8)**

**Calculation Description:** Title 24 Analysis **Input File Name:** 2921 Ulric ADU 1.ribd19x

**OPAQUE SURFACES**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|
| Name | Zone | Construction | Azimuth | Orientation | Gross Area (ft²) | Window and Door Area (ft2) | Tilt (deg) |
| Front Wall | ADU 1 | R-21 Wall | 90 | Front | 445 | 97.5 | 90 |
| Left Wall | ADU 1 | R-21 Wall | 180 | Left | 171 | 0 | 90 |
| Rear Wall | ADU 1 | R-21 Wall | 270 | Back | 445 | 0 | 90 |
| Right Wall | ADU 1 | R-21 Wall | 0 | Right | 171 | 30 | 90 |
| Interior Surface | ADU 1 | R-19 Roof No Attic | n/a | n/a | 699 | n/a | n/a |

**OPAQUE SURFACES - CATHEDRAL CEILINGS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|
| Name | Zone | Construction | Azimuth | Orientation | Area (ft²) | Skylight Area (ft²) | Roof Rise (x in 12) | Roof Reflectance | Roof Emittance | Cool Roof |
| Roof | ADU 1 | R-19 Roof No Attic1 | 0 | Right | 19 | 0 | 0 | 0.1 | 0.85 | No |

**FENESTRATION / GLAZING**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Type | Surface | Orientation | Azimuth | Width (ft) | Height (ft) | Mult. | Area (ft²) | U-factor | U-factor Source | SHGC | SHGC Source | Exterior Shading |
| Window W1 | Window | Front Wall | Front | 90 | | | 1 | 22.5 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W1 2 | Window | Front Wall | Front | 90 | | | 1 | 22.5 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Door D07 | Window | Front Wall | Front | 90 | | | 1 | 24 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W2 | Window | Front Wall | Front | 90 | | | 1 | 6 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W1 3 | Window | Front Wall | Front | 90 | | | 1 | 22.5 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W3 | Window | Right Wall | Right | 0 | | | 1 | 15 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W3 2 | Window | Right Wall | Right | 0 | | | 1 | 15 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |



**CERTIFICATE OF COMPLIANCE** CF1R-PRF-01E

**Project Name:** 2921 Ulric ADU 1 **Calculation Date/Time:** 2024-07-30T10:08:12-07:00 **(Page 5 of 8)**

**Calculation Description:** Title 24 Analysis **Input File Name:** 2921 Ulric ADU 1.ribd19x

**SLAB FLOORS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|
| Name | Zone | Area (ft²) | Perimeter (ft) | Edge Insul. R-value and Depth | Edge Insul. R-value and Depth | Carpeted Fraction | Heated |
| Slab-on-Grade | ADU 1 | 718 | 129 | none | 0 | 80% | No |

**OPAQUE SURFACE CONSTRUCTIONS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|
| Construction Name | Surface Type | Construction Type | Framing | Total Cavity R-value | Exterior / Exterior Continuous R-value | U-factor | Assembly Layers |
| R-21 Wall | Exterior Walls | Wood Framed Wall | 2x6 @ 16 in. O. C. | R-21 | None / None | 0.069 | Inside Finish: Gypsum Board<br>Cavity / Frame: R-21 / 2x6<br>Exterior Finish: 3 Coat Stucco |
| R-19 Roof No Attic1 | Cathedral Ceilings | Wood Framed Ceiling | 2x8 @ 16 in. O. C. | R-19 | None / None | 0.054 | Roofing: Light Roof (Asphalt Shingle)<br>Roof Deck: Wood<br>Siding/sheathing/decking<br>Cavity / Frame: R-19 / 2x8<br>Inside Finish: Gypsum Board |
| R-19 Roof No Attic | Interior Ceiling | Wood Framed Ceiling | 2x8 @ 16 in. O. C. | R-19 | None / None | 0.046 | Floor Surface: Carpeted<br>Floor Deck: Wood<br>Siding/sheathing/decking<br>Cavity / Frame: R-19 / 2x8<br>Ceiling Below Finish: Gypsum Board |

**BUILDING ENVELOPE - HERS VERIFICATION**

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



**CERTIFICATE OF COMPLIANCE** CF1R-PRF-01E

**Project Name:** 2921 Ulric ADU 1 **Calculation Date/Time:** 2024-07-30T10:08:12-07:00 **(Page 6 of 8)**

**Calculation Description:** Title 24 Analysis **Input File Name:** 2921 Ulric ADU 1.ribd19x

**WATER HEATING SYSTEMS**

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

**WATER HEATERS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Heating Element Type | Tank Type | # of Units | Tank Vol. (gal) | Energy Factor or Efficiency | Input Rating or Pilot | Tank Insulation R-value (hr/Btu) | Standby Loss or Recovery Eff | 1st Hr. Rating or Flow Rate | NEEA Heat Pump Brand or Model | Tank Location or Ambient Condition |
| DHW Heater 1 | Heat Pump | n/a | 1 | 50 | NEEA Rated | <= 12 kW | n/a | n/a | n/a | Rheem(XE50T10H45U0 (50 gal) | Outside |

**WATER HEATING - HERS VERIFICATION**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|
| Name | Pipe Insulation | Parallel Piping | Compact Distribution | Compact Distribution Type | Recirculation Control | Central DHW Distribution | Shower Drain Water Heat Recovery |
| DHW Sys 1 - 1/1 | Not Required | Not Required | Not Required | None | Not Required | Not Required | Not Required |

**SPACE CONDITIONING SYSTEMS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|
| Name | System Type | Heating Unit Name | Cooling Unit Name | Fan Name | Distribution Name | Required Thermostat Type | Status | Verified Existing Condition | Heating Equipment Count | Cooling Equipment Count |
| Heat Pump1 | Heat pump heating cooling | Heat Pump System 1 | Heat Pump System 1 | n/a | n/a | Setback | New | NA | 1 | 1 |



**CERTIFICATE OF COMPLIANCE** CF1R-PRF-01E

**Project Name:** 2921 Ulric ADU 1 **Calculation Date/Time:** 2024-07-30T10:08:12-07:00 **(Page 7 of 8)**

**Calculation Description:** Title 24 Analysis **Input File Name:** 2921 Ulric ADU 1.ribd19x

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|

**HVAC - HEAT PUMPS**

| Name | System Type | Number of Units | Heating | | | Cooling | | Zonally Controlled | Compressor Type | HERS Verification |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | HSPF/HSPF2 /COP | Cap 47 | Cap 17 | SEER/SEER2 | EER/EER2/CEER | | | |
| Heat Pump System 1 | Ductless MiniSplit HP | 1 | 8.2 | 24000 | 18000 | 14 | 12.2 | Not Zonal | Single Speed | Heat Pump System 1-hers-hrpump |

**HVAC HEAT PUMPS - HERS VERIFICATION**

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

**IAQ (INDOOR AIR QUALITY) FANS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|---|---|---|---|---|---|---|
| Dwelling Unit | IAQ CFM | IAQ Watts/CFM | IAQ Fan Type | IAQ Recovery Effectiveness - SRE | IAQ Recovery Effectiveness - ASRE | HERS Verification |
| SFam IAQVentRpt | 44 | 0.35 | Exhaust | n/a | n/a | Yes |



**CERTIFICATE OF COMPLIANCE** CF1R-PRF-01E

**Project Name:** 2921 Ulric ADU 1 **Calculation Date/Time:** 2024-07-30T10:08:12-07:00 **(Page 8 of 8)**

**Calculation Description:** Title 24 Analysis **Input File Name:** 2921 Ulric ADU 1.ribd19x

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

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

| | |
|---|---|
| Documentation Author Name: Jen Gagne | Documentation Author Signature: Jen Gagne |
| Company: Title 24 and More | Signature Date: 07/30/2024 |
| Address: 4727 Mt St Helens Wy | CEA/ HERS Certification Identification (if applicable): |
| City/State/Zip: San Diego, CA 92117 | Phone: (858) 291-9156 |

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:

1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

| | |
|---|---|
| Responsible Designer Name: Nuwan Ranasinghe | Responsible Designer Signature: |
| Company: GTC Design | Date Signed: 07/30/2024 |
| Address: 1205 J St suite d | License: |
| City/State/Zip: San Diego, CA 92101 | Phone: 6194855546 |

Digitally signed by: California Home Energy Efficiency Rating Services (CHEERS). The digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.



GTC DESIGN
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SAN DIEGO, CA 92101
HELLO@GTCDESIG N.COM
619.485.5546

8/9/2024, 3:08:59 PM
PRJ-1077519
Hannan Al-Timimi

# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET,
SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |

Sheet Name

TITLE 24
CALCS - ADU 1

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER

**A701**

GTC DESIGN STUDIO ©

## RESIDENTIAL MEASURES SUMMARY — RMS-1

| | | | |
|---|---|---|---|
| Project Name: 2921 Ulric ADU 1 | Building Type: ☑ Single Family ☐ Multi Family ☐ Addition Alone ☐ Existing+ Addition/Alteration | | Date: 7/30/2024 |
| Project Address: 2921 Ulric St San Diego | California Energy Climate Zone: CA Climate Zone 07 | Total Cond. Floor Area: 718 | Addition: n/a |
| | | | # of Units: 1 |

**INSULATION**

| Construction | Type | Cavity | Area ($ft^2$) | Special Features | Status |
|---|---|---|---|---|---|
| Slab | Unheated Slab-on-Grade | - no insulation | 718 | Perim = 129' | New |
| Demising | Wood Framed Rafter | R 19 | 718 | | New |
| Wall | Wood Framed | R 20 | 1,105 | | New |

**FENESTRATION** — Total Area: 128 | Glazing Percentage: 17.8% | New/Altered Average U-Factor: 0.30

| Orientation | Area($ft^2$) | U-Fac | SHGC | Overhang | Sidefins | Exterior Shades | Status |
|---|---|---|---|---|---|---|---|
| Front (E) | 97.5 | 0.300 | 0.23 | none | none | N/A | New |
| Right (N) | 30.0 | 0.300 | 0.23 | none | none | N/A | New |

**HVAC SYSTEMS**

| Qty. | Heating | Min. Eff | Cooling | Min. Eff | Thermostat | Status |
|---|---|---|---|---|---|---|
| 1 | Split Heat Pump | 8.20 HSPF | Split Heat Pump | 14.0 SEER | Setback | New |

**HVAC DISTRIBUTION**

| Location | Heating | Cooling | Duct Location | Duct R-Value | Status |
|---|---|---|---|---|---|
| Heat Pump | Ductless / with Fan | Ductless | n/a | n/a | New |

**WATER HEATING**

| Qty. | Type | Gallons | Min. Eff | Distribution | Status |
|---|---|---|---|---|---|
| 1 | Heat Pump | 50 | 3.75 | Standard | New |



## HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

| | |
|---|---|
| Project Name: 2921 Ulric ADU 1 | Date: 7/30/2024 |
| System Name: Heat Pump | Floor Area: 718 |

**ENGINEERING CHECKS**

| | |
|---|---|
| Number of Systems | 1 |
| **Heating System** | |
| Output per System | 24,000 |
| Total Output (Btuh) | 24,000 |
| Output (Btuh/sqft) | 33.4 |
| **Cooling System** | |
| Output per System | 24,000 |
| Total Output (Btuh) | 24,000 |
| Total Output (Tons) | 2.0 |
| Total Output (Btuh/sqft) | 33.4 |
| Total Output (sqft/Ton) | 359.0 |
| **Air System** | |
| CFM per System | 800 |
| Airflow (cfm) | 800 |
| Airflow (cfm/sqft) | 1.11 |
| Airflow (cfm/Ton) | 400.0 |
| Outside Air (%) | 0.0% |
| Outside Air (cfm/sqft) | 0.00 |
| Note: values above given at ARI conditions | |

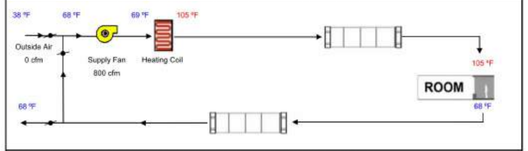
**SYSTEM LOAD**

| | COIL COOLING PEAK CFM | Sensible | Latent | COIL HTG. PEAK CFM | Sensible |
|---|---|---|---|---|---|
| Total Room Loads | 268 | 5,776 | 564 | 180 | 7,198 |
| Return Vented Lighting | | 0 | | | |
| Return Air Ducts | | 0 | | | 0 |
| Return Fan | | 0 | | | 0 |
| Ventilation | 0 | 0 | 0 | 0 | 0 |
| Supply Fan | | 997 | | | -997 |
| Supply Air Ducts | | 0 | | | 0 |
| TOTAL SYSTEM LOAD | | 6,772 | 564 | | 6,202 |

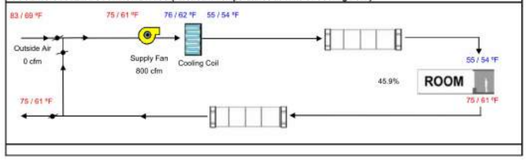
**HVAC EQUIPMENT SELECTION**

| | | | | |
|---|---|---|---|---|
| Standard Heat Pump | | 20,115 | 3,277 | 20,091 |
| Total Adjusted System Output (Adjusted for Peak Design conditions) | | 20,115 | 3,277 | 20,091 |
| TIME OF SYSTEM PEAK | | Aug 3 PM | | Jan 1 AM |

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




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




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## 2019 Low-Rise Residential Mandatory Measures Summary

*NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. "Exceptions may apply.* (01/2020)

| | |
|---|---|
| **Building Envelope Measures:** | |
| § 110.6(a)1: | **Air Leakage.** Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283 or AAMA/WDMA/CSA 101/I.S.2/A440-2011.* |
| § 110.6(a)5: | **Labelling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a). |
| § 110.6(b): | **Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.* |
| § 110.7: | **Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped. |
| § 110.8(a): | **Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS). |
| § 110.8(g): | **Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g). |
| § 110.8(i): | **Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R. |
| § 110.8(j): | **Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs. |
| § 150.0(a): | **Ceiling and Rafter Roof Insulation.** Minimum R-22 insulation in wood-frame ceiling; or the weighted average U-factor must not exceed 0.043. Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alteration. 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 continuous 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 0.162. Masonry walls must meet Tables 150.1-A or B.* |
| § 150.0(d): | **Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.* |
| § 150.0(f): | **Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g). |
| § 150.0(g)1: | **Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d). |
| § 150.0(g)2: | **Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation. |
| § 150.0(q): | **Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration must not exceed 0.58.* |
| **Fireplaces, Decorative Gas Appliances, and Gas Log Measures:** | |
| § 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 Measures:** | |
| § 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-K.* |
| § 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)4: | **Water Heating Recirculation Loops Serving Multiple Dwelling Units.** Water heating recirculation loops serving multiple dwelling units must meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c)4. |
| § 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. |
| § 110.5: | **Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour []; and pool and spa heaters.* |
| § 150.0(h)1: | **Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2. |

## 2019 Low-Rise Residential Mandatory Measures Summary

| | |
|---|---|
| **Requirements for 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)1C: | **Single Family Detached Dwelling Units.** 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 provided at rates determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(o)1C. |
| § 150.0(o)1E: | **Multifamily Attached Dwelling Units.** Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced system is not used, all units in the building must use the same system type and the dwelling-unit envelope leakage must be ≤ 0.3 CFM at 50 Pa (0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8. |
| § 150.0(o)1F: | **Multifamily Building Central Ventilation Systems.** Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B. All unit airflows must be within 20 percent of the unit with the lowest airflow rate as it relates to the individual unit's minimum required airflow rate needed for compliance. |
| § 150.0(o)1G: | **Kitchen Range Hoods.** Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2. |
| § 150.0(o)2: | **Field Verification and Diagnostic Testing.** Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is rated by HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2. |
| **Pool and Spa Systems and Equipment Measures:** | |
| § 110.4(a): | **Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Appliance Efficiency Regulations; 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 Measures:** | |
| § 110.9: | **Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.* |
| § 150.0(k)1A: | **Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A. |
| § 150.0(k)1B: | **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 must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or fan speed control. |
| § 150.0(k)1C: | **Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must meet all of the requirements for: insulation contact (IC) labeling; air leakage; sealing; maintenance; and socket and light source as described in § 150.(k)1C. |
| § 150.0(k)1D: | **Electronic Ballasts for Fluorescent Lamps.** Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz. |
| § 150.0(k)1E: | **Night Lights, Step Lights, and Path Lights.** Night lights, step lights and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens. |
| § 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).* |
| § 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)2C: | **Interior Switches and Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.* |
| § 150.0(k)2D: | **Interior Switches and Controls.** Controls and equipment must be installed in accordance with manufacturer's instructions. |
| § 150.0(k)2E: | **Interior Switches and Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to comply with § 150.0(k). |
| § 150.0(k)2F: | **Interior Switches and Controls.** Lighting controls must comply with the applicable requirements of § 110.9. |

## 2019 Low-Rise Residential Mandatory Measures Summary

| | |
|---|---|
| § 150.0(n)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(n)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: | **Storage Tank Insulation.** Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank. |
| § 150.0(j)2A: | **Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation wall thickness of one inch or a minimum insulation R-value of 7.7: the first five feet of cold water pipes from the storage tank; all hot water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch; all hot water piping with a nominal diameter less than 3/4 inch that is; associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, buried below grade, and from the heating source to kitchen fixtures.* |
| § 150.0(j)3: | **Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 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 include all of the following: A dedicated 125 volt, 20 amp electrical receptacle connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within three feet of the water heater without obstruction. Both ends of the unused conductor must be labeled with the word "spare" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words "Future 240V Use"; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than two inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hour. |
| § 150.0(n)2: | **Recirculating Loops.** Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5. |
| § 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 Measures:** | |
| § 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 the requirements of the CMC §§ 601.0, 602.0, 603.0, 604.0, 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 a minimum installed level of R-6.0 or a minimum installed level of R-4.2 when ducts are entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Portions of the duct system completely exposed and surrounded by directly conditioned space are not required to be insulated. Connections of metal ducts and inner cons of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ¼ inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, 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 cavities and support platforms must not be compressed to cause reductions in the cross-sectional area.* |
| § 150.0(m)2: | **Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures: joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands. |
| § 150.0(m)3: | **Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction. |
| § 150.0(m)7: | **Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers. |
| § 150.0(m)8: | **Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents. |
| § 150.0(m)9: | **Protection of Insulation.** Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation. |
| § 150.0(m)10: | **Porous Inner Core Flex Duct.** Porous inner core flex ducts must have a non-porous layer 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 § 150.0(m)11 and Reference Residential Appendix RA3. |
| § 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. Pressure drops and labeling must meet the requirements in § 150.0(m)12. Filters must be accessible for regular service.* |
| § 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.* |

## 2019 Low-Rise Residential Mandatory Measures Summary

| | |
|---|---|
| § 150.0(k)2G: | **Interior Switches and Controls.** An energy management control system (EMCS) may be used to comply with control requirements if it: provides functionality of the specified control according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.0(e); and meets all other requirements in § 150.0(k)2. |
| § 150.0(k)2H: | **Interior Switches and Controls.** A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2. |
| § 150.0(k)2I: | **Interior Switches and Controls.** In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by an occupant sensor or a vacancy sensor providing automatic-off functionality. If an occupant sensor is installed, it must be initially configured to manual-on operation using the manual control required under Section 150.0(k)2C. |
| § 150.0(k)2J: | **Interior Switches and Controls.** Luminaires that are or contain light sources that meet Reference Joint Appendix JA8 requirements for dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls.* |
| § 150.0(k)2K: | **Interior Switches and Controls.** Under cabinet lighting must be controlled separately from ceiling-installed lighting systems. |
| § 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 meet the requirement in item § 150.0(k)3A) (ON and OFF switch) and the requirements in either § 150.0(k)3Ai) (photocell and either a motion sensor or automatic time switch control) or § 150.0(k)3Aii) (astronomical time clock), or an EMCS. |
| § 150.0(k)3B: | **Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, outdoor lighting for private patios, entrances, balconies, and porches; and residential parking lots and carports with less than one parking space per site must comply with either § 150.0(k)3A or with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0. |
| § 150.0(k)3C: | **Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, any outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site and any outdoor lighting not regulated by § 150.0(k)3B or § 150.0(k)3D must comply with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0. |
| § 150.0(k)4: | **Internally illuminated address signs.** Internally illuminated address signs must comply with § 140.8; or must consume no more than 5 watts of power as determined according to § 130.0(c). |
| § 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 Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0. |
| § 150.0(k)8A: | **Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be comply with Table 150.0-A and be controlled by an occupant sensor. |
| § 150.0(k)8B: | **Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common areas in that building must:<br>i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and<br>ii. Lighting installed in corridors and stairwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress. |
| **Solar Ready Buildings:** | |
| § 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) through § 110.10(e). |
| § 110.10(a)2: | **Low-rise Multifamily Buildings.** Low-rise multi-family buildings that do not have a photovoltaic system installed must comply with the requirements of § 110.10(b) through § 110.10(d). |
| § 110.10(b)1: | **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. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.* |
| § 110.10(b)2: | **Azimuth.** All sections of the solar zone located on sloped roofs must be oriented between 90 degrees and 300 degrees 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 distance, measured in the horizontal plane, 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) through § 110.10(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". |

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# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET,
SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |

Sheet Name

TITLE 24
CALCS - ADU 1

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER

**A702**

**CERTIFICATE OF COMPLIANCE** — CF1R-PRF-01E

**Project Name:** 2923 Ulric ADU 2 — **Calculation Date/Time:** 2024-07-30T13:46:29-07:00 — **(Page 1 of 8)**

**Calculation Description:** Title 24 Analysis — **Input File Name:** 2923 Ulric ADU 2.ribd19x

**GENERAL INFORMATION**

| | | | | | |
|---|---|---|---|---|---|
| 01 | Project Name | 2923 Ulric ADU 2 | | | |
| 02 | Run Title | Title 24 Analysis | | | |
| 03 | Project Location | 2923 Ulric St | | | |
| 04 | City | San Diego | 05 | Standards Version | 2019 |
| 06 | Zip code | 92111 | 07 | Software Version | EnergyPro 8.3 |
| 08 | Climate Zone | 7 | 09 | Front Orientation (deg/ Cardinal) | 270 |
| 10 | Building Type | Single family | 11 | Number of Dwelling Units | 1 |
| 12 | Project Scope | NewConstruction | 13 | Number of Bedrooms | 2 |
| 14 | Addition Cond. Floor Area (ft²) | 0 | 15 | Number of Stories | 1 |
| 16 | Existing Cond. Floor Area (ft²) | n/a | 17 | Fenestration Average U-factor | 0.3 |
| 18 | Total Cond. Floor Area (ft²) | 699 | 19 | Glazing Percentage (%) | 21.46% |
| 20 | ADU Bedroom Count | n/a | 21 | ADU Conditioned Floor Area | n/a |
| 22 | Is Natural Gas Available? | Yes | | | |

**COMPLIANCE RESULTS**

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



**CERTIFICATE OF COMPLIANCE** — CF1R-PRF-01E

**Project Name:** 2923 Ulric ADU 2 — **Calculation Date/Time:** 2024-07-30T13:46:29-07:00 — **(Page 2 of 8)**

**Calculation Description:** Title 24 Analysis — **Input File Name:** 2923 Ulric ADU 2.ribd19x

**ENERGY DESIGN RATING**

| | Energy Design Ratings | | Compliance Margins | |
|---|---|---|---|---|
| | Efficiency[1] (EDR) | Total[2] (EDR) | Efficiency[3] (EDR) | Total[2] (EDR) |
| Standard Design | 68 | 36 | | |
| Proposed Design | 65.2 | 33.2 | 2.8 | 2.8 |

**RESULT: [4] COMPLIES**

1: Efficiency EDR includes improvements to the building envelope and more efficient equipment
2: Total EDR includes efficiency and demand response measures such as photovoltaic (PV) systems and batteries
3: Building complies when efficiency and total compliance margins are greater than or equal to zero

- Standard Design PV Capacity: 1.91 kWdc
- PV System resized to 1.91 kWdc (a factor of 1.913) to achieve 'Standard Design PV' PV scaling

**ENERGY USE SUMMARY**

| Energy Use (kTDv/ft²-yr) | Standard Design | Proposed Design | Compliance Margin | Percent Improvement |
|---|---|---|---|---|
| Space Heating | 0.4 | 1.36 | -0.96 | -240 |
| Space Cooling | 22.96 | 21.32 | 1.64 | 7.1 |
| IAQ Ventilation | 5.2 | 5.2 | 0 | 0 |
| Water Heating | 32.83 | 24.95 | 7.88 | 24 |
| Self Utilization/Flexibility Credit | n/a | 0 | 0 | n/a |
| **Compliance Energy Total** | **61.39** | **52.83** | **8.56** | **13.9** |

**REQUIRED PV SYSTEMS - SIMPLIFIED**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DC System Size (kWdc) | Exception | Module Type | Array Type | Power Electronics | CFI | Azimuth (deg) | Tilt Input | Array Angle (deg) | Tilt: (x in 12) | Inverter Eff. (%) | Annual Solar Access (%) |
| 1.91 | NA | Standard | Fixed | none | true | 150-270 | n/a | n/a | <=7:12 | 96 | 98 |



**CERTIFICATE OF COMPLIANCE** — CF1R-PRF-01E

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**Calculation Description:** Title 24 Analysis — **Input File Name:** 2923 Ulric ADU 2.ribd19x

**REQUIRED SPECIAL FEATURES**

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

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

**HERS FEATURE SUMMARY**

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

Building-level Verifications:
- Indoor air quality ventilation
- Kitchen range hood

Cooling System Verifications:
- -- None --

Heating System Verifications:
- Verified heat pump rated heating capacity

HVAC Distribution System Verifications:
- -- None --

Domestic Hot Water System Verifications:
- -- None --

**BUILDING - FEATURES INFORMATION**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|---|---|---|---|---|---|---|
| Project Name | Conditioned Floor Area (ft²) | Number of Dwelling Units | Number of Bedrooms | Number of Zones | Number of Ventilation Cooling Systems | Number of Water Heating Systems |
| 2923 Ulric ADU 2 | 699 | 1 | 2 | 1 | 0 | 1 |

**ZONE INFORMATION**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|---|---|---|---|---|---|---|
| Zone Name | Zone Type | HVAC System Name | Zone Floor Area (ft²) | Avg. Ceiling Height | Water Heating System 1 | Water Heating System 2 |
| ADU 2 | Conditioned | Heat Pump1 | 699 | 9 | DHW Sys 1 | N/A |



**CERTIFICATE OF COMPLIANCE** — CF1R-PRF-01E

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**OPAQUE SURFACES**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|
| Name | Zone | Construction | Azimuth | Orientation | Gross Area (ft²) | Window and Door Area (ft2) | Tilt (deg) |
| Front Wall | ADU 2 | R-21 Wall | 270 | Front | 455 | 24 | 90 |
| Left Wall | ADU 2 | R-21 Wall | 0 | Left | 171 | 30 | 90 |
| Rear Wall | ADU 2 | R-21 Wall | 90 | Back | 445 | 96 | 90 |
| Right Wall | ADU 2 | R-21 Wall | 180 | Right | 171 | 0 | 90 |
| Interior Surface | ADU 2 | R-19 Floor No Crawlspace | n/a | n/a | 699 | n/a | n/a |

**OPAQUE SURFACES - CATHEDRAL CEILINGS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|
| Name | Zone | Construction | Azimuth | Orientation | Area (ft²) | Skylight Area (ft²) | Roof Wise (x in 12) | Roof Reflectance | Roof Emittance | Cool Roof |
| Roof | ADU 2 | R-30 Roof No Attic | 180 | Right | 699 | 0 | 0 | 0.1 | 0.85 | No |

**FENESTRATION / GLAZING**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Type | Surface | Orientation | Azimuth | Width (ft) | Height (ft) | Mult. | Area (ft²) | U-factor | U-factor Source | SHGC | SHGC Source | Exterior Shading |
| Door 007 | Window | Front Wall | Front | 270 | | | 1 | 24 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W3 | Window | Left Wall | Left | 0 | | | 1 | 35 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W3 2 | Window | Left Wall | Left | 0 | | | 1 | 15 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W1 | Window | Rear Wall | Back | 90 | | | 1 | 22.5 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W1 2 | Window | Rear Wall | Back | 90 | | | 1 | 22.5 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W1 3 | Window | Rear Wall | Back | 90 | | | 1 | 22.5 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W2 | Window | Rear Wall | Back | 90 | | | 1 | 6 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W1 4 | Window | Rear Wall | Back | 90 | | | 1 | 22.5 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |



**CERTIFICATE OF COMPLIANCE** — CF1R-PRF-01E

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**Calculation Description:** Title 24 Analysis — **Input File Name:** 2923 Ulric ADU 2.ribd19x

**OPAQUE SURFACE CONSTRUCTIONS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|
| Construction Name | Surface Type | Construction Type | Framing | Total Cavity R-value | Interior / Exterior Continuous R-value | U-factor | Assembly Layers |
| R-21 Wall | Exterior Walls | Wood Framed Wall | 2x6 @ 16 in. O.C. | R-21 | None / None | 0.069 | Inside Finish: Gypsum Board<br>Cavity / Frame: R-21 / 2x6<br>Exterior Finish: 3 Coat Stucco |
| R-30 Roof No Attic | Cathedral Ceilings | Wood Framed Ceiling | 2x10 @ 16 in. O.C. | R-30 | None / None | 0.037 | Roofing: Light Roof (Asphalt Shingle)<br>Roof Deck: Wood<br>Siding/sheathing/decking<br>Cavity / Frame: R-30 / 2x10<br>Inside Finish: Gypsum Board |
| R-19 Floor No Crawlspace | Interior Floors | Wood Framed Floor | 2x10 @ 16 in. O.C. | R-19 | None / None | 0.045 | Floor Surface: Carpeted<br>Floor Deck: Wood<br>Siding/sheathing/decking<br>Cavity / Frame: R-19 / 2x10<br>Ceiling Below Finish: Gypsum Board |

**BUILDING ENVELOPE - HERS VERIFICATION**

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

**WATER HEATING SYSTEMS**

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



**CERTIFICATE OF COMPLIANCE** — CF1R-PRF-01E

**Project Name:** 2923 Ulric ADU 2 — **Calculation Date/Time:** 2024-07-30T13:46:29-07:00 — **(Page 6 of 8)**

**Calculation Description:** Title 24 Analysis — **Input File Name:** 2923 Ulric ADU 2.ribd19x

**WATER HEATERS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Heating Element Type | Tank Type | # of Units | Tank Vol. (gal) | Energy Factor or Efficiency | Input Rating or Pilot | Tank Insulation R-value (int/Ext) | Standby Loss or Recovery Eff | 1st Hr Rating or Flow Rate | NEEA Heat Pump Brand or Model | Tank Location or Ambient Condition |
| DHW Heater 1 | Heat Pump | n/a | 1 | 50 | NEEA Rated | <= 12 kW | n/a | n/a | n/a | Rheem/XE50T10H4 5U0 (50 gal) | Outside |

**WATER HEATING - HERS VERIFICATION**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|
| Name | Pipe Insulation | Parallel Piping | Compact Distribution | Compact Distribution Type | Recirculation Control | Central DHW Distribution | Shower Drain Water Heat Recovery |
| DHW Sys 1 - 1/1 | Not Required | Not Required | Not Required | None | Not Required | Not Required | Not Required |

**SPACE CONDITIONING SYSTEMS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|
| Name | System Type | Heating Unit Name | Cooling Unit Name | Fan Name | Distribution Name | Required Thermostat Type | Status | Verified Existing Condition | Heating Equipment Count | Cooling Equipment Count |
| Heat Pump1 | Heat pump heating cooling | Heat Pump System 1 | Heat Pump System 1 | n/a | n/a | Setback | New | NA | 1 | 1 |

**HVAC - HEAT PUMPS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|
| Name | System Type | Number of Units | Heating | | | Cooling | | Zonally Controlled | Compressor Type | HERS Verification |
| | | | HSPF/NISPF2 /COP | Cap 47 | Cap 17 | SEER/SEER2 | EER/IEER2/CEER | | | |
| Heat Pump System 1 | Ductless MiniSplit HP | 1 | 8.2 | 24000 | 18000 | 14 | 12.2 | Not Zonal | Single Speed | Heat Pump System 1-Hers-Hpump |



**CERTIFICATE OF COMPLIANCE** — CF1R-PRF-01E

**Project Name:** 2923 Ulric ADU 2 — **Calculation Date/Time:** 2024-07-30T13:46:29-07:00 — **(Page 7 of 8)**

**Calculation Description:** Title 24 Analysis — **Input File Name:** 2923 Ulric ADU 2.ribd19x

**HVAC HEAT PUMPS - HERS VERIFICATION**

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

**IAQ (INDOOR AIR QUALITY) FANS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|---|---|---|---|---|---|---|
| Dwelling Unit | IAQ CFM | IAQ Watts/CFM | IAQ Fan Type | IAQ Recovery Effectiveness - SRE | IAQ Recovery Effectiveness - ASRE | HERS Verification |
| Sfam IAQVentRpt | 43 | 0.35 | Exhaust | n/a | n/a | Yes |



**CERTIFICATE OF COMPLIANCE** — CF1R-PRF-01E

**Project Name:** 2923 Ulric ADU 2 — **Calculation Date/Time:** 2024-07-30T13:46:29-07:00 — **(Page 8 of 8)**

**Calculation Description:** Title 24 Analysis — **Input File Name:** 2923 Ulric ADU 2.ribd19x

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

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

| | |
|---|---|
| Documentation Author Name: Jim Gagne | Documentation Author Signature: Jim Gagne |
| Company: Title 24 and More | Signature Date: 07/30/2024 |
| Address: 4727 Mt St Helens Wy | CEA/ HERS Certification Identification (If applicable): |
| City/State/Zip: San Diego, CA 92117 | Phone: (858) 291-9156 |

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:

1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

| | |
|---|---|
| Responsible Designer Name: Nuwan Ranasinghe | Responsible Designer Signature: Nuwan Ranasinghe |
| Company: GTC Design | Date Signed: 07/30/2024 |
| Address: 1205 J St suite d | License: |
| City/State/Zip: San Diego, CA 92101 | Phone: 6194855546 |

*Digitally signed by California Home Energy Efficiency Rating Services (CHEERS). This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.*



GTC DESIGN
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619.485.5546

8/9/2024, 3:08:59 PM
PRJ-1077519
Hannan Al-Timimi

# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET,
SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| ~~2~~ | ~~CITY RESUBMITTAL R2~~ | ~~08/09/2023~~ |
| ~~5~~ | ~~CITY RESUBMITTAL R5~~ | ~~07/09/2024~~ |

Sheet Name

TITLE 24
CALCS - ADU 2

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 04/17/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER

**A703**

GTC DESIGN STUDIO ©

## RESIDENTIAL MEASURES SUMMARY — RMS-1

| | | | |
|---|---|---|---|
| Project Name: 2923 Ulric ADU 2 | Building Type: ☑ Single Family ☐ Multi Family ☐ Addition Alone ☐ Existing+ Addition/Alteration | | Date: 7/30/2024 |
| Project Address: 2923 Ulric St San Diego | California Energy Climate Zone: CA Climate Zone 07 | Total Cond. Floor Area: 699 | Addition: n/a / # of Units: 1 |

**INSULATION**

| Construction | Type | Cavity | Area ($ft^2$) | Special Features | Status |
|---|---|---|---|---|---|
| Demising | Wood Framed w/o Crawl Space | R 19 | 699 | | New |
| Roof | Wood Framed Rafter | R 30 | 699 | | New |
| Wall | Wood Framed | R 20 | 1,092 | | New |

**FENESTRATION** — Total Area: 150 | Glazing Percentage: 21.5% | New/Altered Average U-Factor: 0.30

| Orientation | Area ($ft^2$) | U-Fac | SHGC | Overhang | Sidefins | Exterior Shades | Status |
|---|---|---|---|---|---|---|---|
| Front (W) | 24.0 | 0.300 | 0.23 | none | none | N/A | New |
| Left (N) | 30.0 | 0.300 | 0.23 | none | none | N/A | New |
| Rear (E) | 96.0 | 0.300 | 0.23 | none | none | N/A | New |

**HVAC SYSTEMS**

| Qty. | Heating | Min. Eff | Cooling | Min. Eff | Thermostat | Status |
|---|---|---|---|---|---|---|
| 1 | Split Heat Pump | 8.20 HSPF | Split Heat Pump | 14.0 SEER | Setback | New |

**HVAC DISTRIBUTION**

| Location | Heating | Cooling | Duct Location | Duct R-Value | Status |
|---|---|---|---|---|---|
| Heat Pump | Ductless / with Fan | Ductless | n/a | n/a | New |

**WATER HEATING**

| Qty. | Type | Gallons | Min. Eff | Distribution | Status |
|---|---|---|---|---|---|
| 1 | Heat Pump | 50 | 3.75 | Standard | New |



## HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

| | |
|---|---|
| Project Name: 2923 Ulric ADU 2 | Date: 7/30/2024 |
| System Name: Heat Pump | Floor Area: 699 |

**ENGINEERING CHECKS**

| | |
|---|---|
| Number of Systems | 1 |
| **Heating System** | |
| Output per System | 24,000 |
| Total Output (Btuh) | 24,000 |
| Output (Btuh/sqft) | 34.3 |
| **Cooling System** | |
| Output per System | 24,000 |
| Total Output (Btuh) | 24,000 |
| Total Output (Tons) | 2.0 |
| Total Output (Btuh/sqft) | 34.3 |
| Total Output (sqft/Ton) | 349.5 |
| **Air System** | |
| CFM per System | 800 |
| Airflow (cfm) | 800 |
| Airflow (cfm/sqft) | 1.14 |
| Airflow (cfm/Ton) | 400.0 |
| Outside Air (%) | 0.0% |
| Outside Air (cfm/sqft) | 0.00 |

Note: values above given at ARI conditions

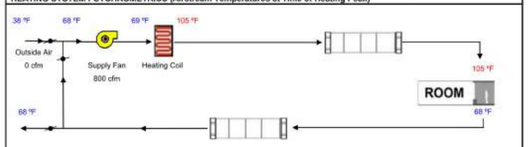
**SYSTEM LOAD**

| | COIL COOLING PEAK CFM | COIL COOLING PEAK Sensible | COIL COOLING PEAK Latent | COIL HTG. PEAK CFM | COIL HTG. PEAK Sensible |
|---|---|---|---|---|---|
| Total Room Loads | 336 | 7,201 | 549 | 132 | 5,259 |
| Return Vented Lighting | | 0 | | | 0 |
| Return Air Ducts | | 0 | | | 0 |
| Return Fan | | 0 | | | 0 |
| Ventilation | 0 | 0 | 0 | 0 | 0 |
| Supply Fan | | 997 | | | -997 |
| Supply Air Ducts | | 0 | | | 0 |
| TOTAL SYSTEM LOAD | | 8,258 | 549 | | 4,263 |

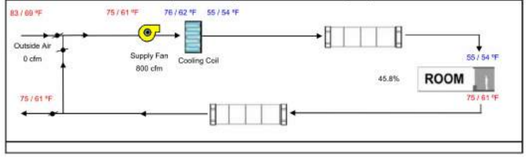
**HVAC EQUIPMENT SELECTION**

| | | | | |
|---|---|---|---|---|
| Standard Heat Pump | 20,121 | 3,269 | | 20,091 |
| | | | | |
| Total Adjusted System Output (Adjusted for Peak Design conditions) | 20,121 | 3,269 | | 20,091 |
| TIME OF SYSTEM PEAK | Aug 3 PM | | | Jan 1 AM |

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




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




## 2019 Low-Rise Residential Mandatory Measures Summary

*NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. *Exceptions may apply.* (01/2020)

| | |
|---|---|
| **Building Envelope Measures:** | |
| § 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): | **Ceiling and Rafter Roof Insulation.** Minimum R-22 insulation in wood-frame ceiling; or the weighted average U-factor must not exceed 0.043. Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alternation. 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 continuous roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.* |
| § 150.0(b): | **Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value. |
| § 150.0(c): | **Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B.* |
| § 150.0(d): | **Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.* |
| § 150.0(f): | **Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g). |
| § 150.0(g)1: | **Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d). |
| § 150.0(g)2: | **Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation. |
| § 150.0(q): | **Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration must not exceed 0.58.* |
| **Fireplaces, Decorative Gas Appliances, and Gas Log Measures:** | |
| § 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 Measures:** | |
| § 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-K.* |
| § 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)4: | **Water Heating Recirculation Loops Serving Multiple Dwelling Units.** Water heating recirculation loops serving multiple dwelling units must meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c)4. |
| § 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. |
| § 110.5: | **Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour []; and pool and spa heaters.* |
| § 150.0(h)1: | **Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2. |

## 2019 Low-Rise Residential Mandatory Measures Summary

| | |
|---|---|
| **Requirements for 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)1C: | **Single Family Detached Dwelling Units.** 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 provided at rates determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(o)1C. |
| § 150.0(o)1E: | **Multifamily Attached Dwelling Units.** Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced system is not used, all units in the building must use the same system type and the dwelling-unit envelope leakage must be ≤ 0.3 CFM at 50 Pa (0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8. |
| § 150.0(o)1F: | **Multifamily Building Central Ventilation Systems.** Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B. All unit airflows must be within 20 percent of the unit with the lowest airflow rate as it relates to the individual unit's minimum required airflow rate needed for compliance. |
| § 150.0(o)1G: | **Kitchen Range Hoods.** Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2. |
| § 150.0(o)2: | **Field Verification and Diagnostic Testing.** Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is rated by HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2. |
| **Pool and Spa Systems and Equipment Measures:** | |
| § 110.4(a): | **Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Appliance Efficiency Regulations; 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 Measures:** | |
| § 110.9: | **Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.* |
| § 150.0(k)1A: | **Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A. |
| § 150.0(k)1B: | **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 must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or ton speed control. |
| § 150.0(k)1C: | **Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must meet all of the requirements for: insulation contact (IC) labeling; air leakage; sealing; maintenance; and socket and light source as described in § 150.0(k)1C. |
| § 150.0(k)1D: | **Electronic Ballasts for Fluorescent Lamps.** Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz. |
| § 150.0(k)1E: | **Night Lights, Step Lights, and Path Lights.** Night lights, step lights and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens. |
| § 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).* |
| § 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)2C: | **Interior Switches and Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.* |
| § 150.0(k)2D: | **Interior Switches and Controls.** Controls and equipment must be installed in accordance with manufacturer's instructions. |
| § 150.0(k)2E: | **Interior Switches and Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to comply with § 150.0(k). |
| § 150.0(k)2F: | **Interior Switches and Controls.** Lighting controls must comply with the applicable requirements of § 110.9. |

## 2019 Low-Rise Residential Mandatory Measures Summary

| | |
|---|---|
| § 150.0(n)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(n)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: | **Storage Tank Insulation.** Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank. |
| § 150.0(j)2A: | **Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation wall thickness of one inch or a minimum insulation R-value of 7.7: the first five feet of cold water pipes from the storage tank; all hot water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch; all hot water piping with a nominal diameter less than 3/4 inch that is: associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, buried below grade, and from the heating source to kitchen fixtures.* |
| § 150.0(j)3: | **Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 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 include all of the following: A dedicated 125 volt, 20 amp electrical receptacle connected to the electric panel with a 120/240 volt 3 conductor; 10 AWG copper branch circuit, within three feet of the water heater without obstruction. Both ends of the unused conductor must be labeled with the word "spare" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words "Future 240V Use"; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than two inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hour. |
| § 150.0(n)2: | **Recirculating Loops.** Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5. |
| § 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 Measures:** | |
| § 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 the requirements of the CMC §§ 601.0, 602.0, 603.0, 604.0, 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 a minimum installed level of R-6.0 or a minimum installed level of R-4.2 when ducts are entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.6). Portions of the duct system completely exposed and surrounded by directly conditioned space are not required to be insulated. 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 requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ¼ inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, 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 cavities and support platforms must not be compressed to cause reductions in the cross-sectional area.* |
| § 150.0(m)2: | **Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands. |
| § 150.0(m)3: | **Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction. |
| § 150.0(m)7: | **Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers. |
| § 150.0(m)8: | **Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents. |
| § 150.0(m)9: | **Protection of Insulation.** Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation. |
| § 150.0(m)10: | **Porous Inner Core Flex Duct.** Porous inner core flex ducts must have a non-porous layer 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 § 150.0(m)11 and Reference Residential Appendix RA3. |
| § 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. Pressure drops and labeling must meet the requirements in § 150.0(m)12. Filters must be accessible for regular service.* |
| § 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.* |

## 2019 Low-Rise Residential Mandatory Measures Summary

| | |
|---|---|
| § 150.0(k)2G: | **Interior Switches and Controls.** An energy management control system (EMCS) may be used to comply with control requirements if it: provides functionality of the specified control according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.0(e); and meets all other requirements in § 150.0(k)2. |
| § 150.0(k)2H: | **Interior Switches and Controls.** A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2. |
| § 150.0(k)2I: | **Interior Switches and Controls.** In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by an occupant sensor or a vacancy sensor providing automatic-off functionality. If an occupant sensor is installed, it must be initially configured to manual-on operation using the manual control required under Section 150.0(k)2C. |
| § 150.0(k)2J: | **Interior Switches and Controls.** Luminaires that are or contain light sources that meet Reference Joint Appendix JA8 requirements for dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls.* |
| § 150.0(k)2K: | **Interior Switches and Controls.** Under cabinet lighting must be controlled separately from ceiling-installed lighting systems. |
| § 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 meet the requirement in item § 150.0(k)3A) (ON and OFF switch) and the requirements in either § 150.0(k)3Ai (photocell and either a motion sensor or automatic time switch control) or § 150.0(k)3Aii (astronomical time clock), or an EMCS. |
| § 150.0(k)3B: | **Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, outdoor lighting for private patios, entrances, balconies, and porches; and residential parking lots and carports with less than eight vehicles per site must comply with either § 150.0(k)3A or with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0. |
| § 150.0(k)3C: | **Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, any outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site and any outdoor lighting not regulated by § 150.0(k)3B or § 150.0(k)3D must comply with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0. |
| § 150.0(k)4: | **Internally illuminated address signs.** Internally illuminated address signs must comply with § 140.8; or must consume no more than 5 watts of power as determined according to § 130.0(c). |
| § 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 Sections 110.9, 130.0, 130.1, 130.4, 140.8, and 141.0. |
| § 150.0(k)6A: | **Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be comply with Table 150.0-A and be controlled by an occupant sensor. |
| § 150.0(k)6B: | **Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common areas in that building must:<br>i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and<br>ii. Lighting installed in corridors and stairwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress. |
| **Solar Ready Buildings:** | |
| § 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) through § 110.10(e). |
| § 110.10(a)2: | **Low-rise Multifamily Buildings.** Low-rise multi-family buildings that do not have a photovoltaic system installed must comply with the requirements of § 110.10(b) through § 110.10(d). |
| § 110.10(b)1: | **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. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.* |
| § 110.10(b)2: | **Azimuth.** All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees 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 distance, measured in the horizontal plane, 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) through § 110.10(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". |

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# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET,
SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |

Sheet Name

TITLE 24
CALCS - ADU 2

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER

**A704**

**GENERAL INFORMATION**

| | | | | | |
|---|---|---|---|---|---|
| 01 | Project Name | 2919 Ulric ADU 3 | | | |
| 02 | Run Title | Title 24 Analysis | | | |
| 03 | Project Location | 2919 Ulric St | | | |
| 04 | City | San Diego | 05 | Standards Version | 2019 |
| 06 | Zip code | 92111 | 07 | Software Version | EnergyPro 8.3 |
| 08 | Climate Zone | 7 | 09 | Front Orientation (deg/ Cardinal) | 180 |
| 10 | Building Type | Single family | 11 | Number of Dwelling Units | 1 |
| 12 | Project Scope | NewConstruction | 13 | Number of Bedrooms | 2 |
| 14 | Addition Cond. Floor Area (ft²) | 0 | 15 | Number of Stories | 1 |
| 16 | Existing Cond. Floor Area (ft²) | n/a | 17 | Fenestration Average U-factor | 0.3 |
| 18 | Total Cond. Floor Area (ft²) | 696 | 19 | Glazing Percentage (%) | 26.29% |
| 20 | ADU Bedroom Count | n/a | 21 | ADU Conditioned Floor Area | n/a |
| 22 | Is Natural Gas Available? | Yes | | | |

**COMPLIANCE RESULTS**

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





**ENERGY DESIGN RATING**

| | Energy Design Ratings | | Compliance Margins | |
|---|---|---|---|---|
| | Efficiency[1] (EDR) | Total[2] (EDR) | Efficiency[3] (EDR) | Total[3] (EDR) |
| Standard Design | 67.9 | 36 | | |
| Proposed Design | 65.5 | 33.7 | 2.4 | 2.3 |

**RESULT: [3] COMPLIES**

1: Efficiency EDR includes improvements to the building envelope and more efficient equipment
2: Total EDR includes efficiency and demand response measures such as photovoltaic (PV) systems and batteries
3: Building complies when efficiency and total compliance margins are greater than or equal to zero

- Standard Design PV Capacity: 1.91 kWdc
- PV System resized to 1.91 kWdc (a factor of 1.907) to achieve Standard Design PV' PV scaling

**ENERGY USE SUMMARY**

| Energy Use (kTDV/ft²-yr) | Standard Design | Proposed Design | Compliance Margin | Percent Improvement |
|---|---|---|---|---|
| Space Heating | 0.56 | 1.5 | -0.94 | -167.9 |
| Space Cooling | 22.58 | 22.44 | 0.14 | 0.6 |
| IAQ Ventilation | 5.19 | 5.19 | 0 | 0 |
| Water Heating | 32.98 | 25.05 | 7.93 | 24 |
| Self Utilization/Flexibility Credit | n/a | 0 | 0 | n/a |
| **Compliance Energy Total** | **61.31** | **54.18** | **7.13** | **11.6** |

**REQUIRED PV SYSTEMS - SIMPLIFIED**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DC System Size (kWdc) | Exception | Module Type | Array Type | Power Electronics | CFI | Azimuth (deg) | Tilt Input | Array Angle (deg) | Tilt: (x in 12) | Inverter Eff. (%) | Annual Solar Access (%) |
| 1.91 | NA | Standard | Fixed | none | true | 150-270 | n/a | n/a | <=7:12 | 96 | 98 |





**REQUIRED SPECIAL FEATURES**

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

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

**HERS FEATURE SUMMARY**

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

Building-level Verifications:
- Indoor air quality ventilation
- Kitchen range hood

Cooling System Verifications:
- --None--

Heating System Verifications:
- Verified heat pump rated heating capacity

HVAC Distribution System Verifications:
- --None--

Domestic Hot Water System Verifications:
- --None--

**BUILDING - FEATURES INFORMATION**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|---|---|---|---|---|---|---|
| Project Name | Conditioned Floor Area (ft²) | Number of Dwelling Units | Number of Bedrooms | Number of Zones | Number of Ventilation Cooling Systems | Number of Water Heating Systems |
| 2919 Ulric ADU 3 | 696 | 1 | 2 | 1 | 0 | 1 |

**ZONE INFORMATION**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|---|---|---|---|---|---|---|
| Zone Name | Zone Type | HVAC System Name | Zone Floor Area (ft²) | Avg. Ceiling Height | Water Heating System 1 | Water Heating System 2 |
| Unit By Right | Conditioned | Heat Pump1 | 696 | 10 | DHW Sys 1 | N/A |





**OPAQUE SURFACES**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|
| Name | Zone | Construction | Azimuth | Orientation | Gross Area (ft²) | Window and Door Area (ft2) | Tilt (deg) |
| Front Wall | Unit By Right | R-21 Wall | 180 | Front | 200 | 46.5 | 90 |
| Left Wall | Unit By Right | R-21 Wall | 270 | Left | 400 | 91.5 | 90 |
| Rear Wall | Unit By Right | R-21 Wall | 0 | Back | 200 | 45 | 90 |
| Right Wall | Unit By Right | R-21 Wall | 90 | Right | 534 | 0 | 90 |
| Raised Floor | Unit By Right | R-19 Floor No Crawlspace | n/a | n/a | 96 | n/a | n/a |
| Interior Surface | Unit By Right | R-19 Floor No Crawlspace1 | n/a | n/a | 810 | n/a | n/a |

**OPAQUE SURFACES - CATHEDRAL CEILINGS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|
| Name | Zone | Construction | Azimuth | Orientation | Area (ft²) | Skylight Area (ft²) | Roof Rise (x in 12) | Roof Reflectance | Roof Emittance | Cool Roof |
| Roof | Unit By Right | R-30 Roof No Attic | 90 | Right | 696 | 0 | 0 | 0.1 | 0.85 | No |

**FENESTRATION / GLAZING**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Type | Surface | Orientation | Azimuth | Width (ft) | Height (ft) | Mult. | Area (ft²) | U-factor | U-factor Source | SHGC | SHGC Source # | Exterior Shading |
| Window W1 | Window | Front Wall | Front | 180 | | | 1 | 22.5 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Door D07 | Window | Front Wall | Front | 180 | | | 1 | 24 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W12 | Window | Left Wall | Left | 270 | | | 1 | 22.5 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W13 | Window | Left Wall | Left | 270 | | | 1 | 22.5 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W14 | Window | Left Wall | Left | 270 | | | 1 | 22.5 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W6 | Window | Left Wall | Left | 270 | | | 1 | 24 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W15 | Window | Rear Wall | Back | 0 | | | 1 | 22.5 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |





**FENESTRATION / GLAZING**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Type | Surface | Orientation | Azimuth | Width (ft) | Height (ft) | Mult. | Area (ft²) | U-factor | U-factor Source | SHGC | SHGC Source # | Exterior Shading |
| Window W1 6 | Window | Rear Wall | Back | 0 | | | 1 | 22.5 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |

**OPAQUE SURFACE CONSTRUCTIONS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|
| Construction Name | Surface Type | Construction Type | Framing | Total Cavity R-value | Interior / Exterior Continuous R-value | U-factor | Assembly Layers |
| R-21 Wall | Exterior Walls | Wood Framed Wall | 2x6 @ 16 in. O. C. | R-21 | None / None | 0.069 | Inside Finish: Gypsum Board/ Cavity / Frame: R-21 / 2x6 Exterior Finish: 1 Coat Stucco |
| R-30 Roof No Attic | Cathedral Ceilings | Wood Framed Ceiling | 2x10 @ 16 in. O. C. | R-30 | None / None | 0.037 | Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-30 / 2x10 Inside Finish: Gypsum Board |
| R-19 Floor No Crawlspace | Exterior Floors | Wood Framed Floor | 2x10 @ 16 in. O. C. | R-19 | None / None | 0.047 | Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x10 |
| R-19 Floor No Crawlspace1 | Interior Floors | Wood Framed Floor | 2x10 @ 16 in. O. C. | R-19 | None / None | 0.045 | Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x10 Ceiling Below Finish: Gypsum Board |





**BUILDING ENVELOPE - HERS VERIFICATION**

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

**WATER HEATING SYSTEMS**

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

**WATER HEATERS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Heating Element Type | Tank Type | # of Units | Tank Vol. (gal) | Energy Factor or Efficiency | Input Rating or Pilot | Tank Insulation R-value (hr.ft2.F/Btu) | Standby Loss or Recovery Eff | 1st Hr. Rating or Flow Rate | NEEA Heat Pump Brand or Model | Tank Location or Ambient Condition |
| DHW Heater 1 | Heat Pump | n/a | 1 | 50 | NEEA Rated | <= 12 kW | n/a | n/a | n/a | Rheem(XE50T10H45 5U0 (50 gal) | Outside |

**WATER HEATING - HERS VERIFICATION**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|
| Name | Pipe Insulation | Parallel Piping | Compact Distribution | Compact Distribution Type | Recirculation Control | Central DHW Distribution | Shower Drain Water Heat Recovery |
| DHW Sys 1 - 1/1 | Not Required | Not Required | Not Required | None | Not Required | Not Required | Not Required |





**SPACE CONDITIONING SYSTEMS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|
| Name | System Type | Heating Unit Name | Cooling Unit Name | Fan Name | Distribution Name | Required Thermostat Type | Status | Verified Existing Condition | Heating Equipment Count | Cooling Equipment Count |
| Heat Pump1 | Heat pump heating cooling | Heat Pump System 1 | Heat Pump System 1 | n/a | n/a | Setback | New | NA | 1 | 1 |

**HVAC - HEAT PUMPS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|
| Name | System Type | Number of Units | Heating | | Cooling | | EER/EER2/CEER | Zonally Controlled | Compressor Type | HERS Verification |
| | | | HSPF/HSPF2 /COP | Cap 47 | Cap 17 | SEER/SEER2 | | | | |
| Heat Pump System 1 | Ductless MiniSplit HP | 1 | 8.2 | 24000 | 18000 | 14 | 12.2 | Not Zonal | Single Speed | Heat Pump System 1-hers-hpump |

**HVAC HEAT PUMPS - HERS VERIFICATION**

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

**IAQ (INDOOR AIR QUALITY) FANS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|---|---|---|---|---|---|---|
| Dwelling Unit | IAQ CFM | IAQ Watts/CFM | IAQ Fan Type | IAQ Recovery Effectiveness - SRE | IAQ Recovery Effectiveness - ASRE | HERS Verification |
| 1fan IAQVentRpt | 43 | 0.35 | Exhaust | n/a | n/a | Yes |





**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

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

| | |
|---|---|
| Documentation Author Name: Jeri Gagne | Documentation Author Signature: Jeri Gagne |
| Company: Title 24 and More | Signature Date: 07/30/2024 |
| Address: 4727 Mt St Helens Wy | CEA/ HERS Certification Identification (if applicable): |
| City/State/Zip: San Diego, CA 92117 | Phone: (858) 291-9156 |

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:
1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

| | |
|---|---|
| Responsible Designer Name: Nuwan Ranasinghe | Responsible Designer Signature: Nuwan Ranasinghe |
| Company: GTC Design | Date Signed: 07/30/2024 |
| Address: 1205 J St suite d | License: |
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# 2915 ULRIC STREET DEVELOPMENT
2917, 2919, 2921 & 2923 ULRIC STREET, SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |

Sheet Name

TITLE 24 CALCS - ADU 3

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER

**A705**

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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. WHEREVER 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 AMENDMENTS.
2. ALL ASTM STANDARDS LISTED HEREIN, SHALL BE AS REFERENCED IN THE LATEST ISSUE OF THE ANNUAL BOOK OF STANDARDS OF THE AMERICAN SOCIETY FOR TESTING AND MATERIALS.
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 SUBMITTED 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 *"2022 CALIFORNIA BUILDING CODE" (CBC)* SEC. 2303, 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 (9'-1" TO 12'-0") | #2 |
| WALLS 2 X 6 (12'-0" TO 16'-0") | #2 |
| STRUCTURAL JOISTS AND PLANKS (2x) | #1 |
| BEAMS AND STRINGERS (4x8 & WIDER) | #1 |
| POSTS AND TIMBERS | #1 |
| TOP PLATE & BOTTOM 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 ½" Ø.
   B. EMBEDDED AT LEAST 7" INTO CONCRETE OR MASONRY.
   C. SPACED NOT MORE THAN 6' APART.
   D. PLACED A MIN. OF 5" 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 *"2022 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 SHALL BE OF EXTERIOR TYPE (U.N.O.).

   ALL WOOD STRUCTURAL PANELS SHALL BE OF THE FOLLOWING GRADES AND PANEL IDENTIFICATION INDEXES (U.N.O. ON DRAWINGS):

| USE | GRADE | PANEL IDENTIFICATION INDEX |
|---|---|---|
| ROOF SHEATHING | CDX | 24/0 |
| FLOOR SHEATHING | APA | 48/24 |
| SHEAR PANELS | CDX (U.N.O.) | 24/0 |

6. GLU 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 SPAN |
| 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 HEIGHTS 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 D1.1-85.
14. DIAPHRAGM NAILING SHALL CONFORM TO *CBC* TABLE 2306.2.1 AND 2306.2.2, AND TABLE 2306.3.1 AND 2306.3.2 WITH NOMENCLATURE DEFINED AS FOLLOWS:

    BN = NAILING AT DIAPHRAGM BOUNDARIES, CONTINUOUS PANEL EDGES, AND AT EDGES OF OPENINGS.
    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
    G. NO PENETRATIONS OR NOTCHES ARE PERMITTED 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 UNLESS OTHERWISE SPECIFIED.
22. TOP PLATES OF ALL WOOD STUD WALLS SHALL BE 2-2 X (SAME WIDTH AS STUDS), LAP 48" (MIN.) WITH AT LEAST 12-16d NAILS AT EACH SIDE OF LAP AND NOT MORE THAN 12" BETWEEN.
23. CUTTING, NOTCHING, OR DRILLING OF BEAMS OR JOISTS SHALL BE PERMITTED 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.

* ALL NAILS TO BE COMMONS (U.N.O.). ALL NAILS IN PRESSURE TREATED WOOD SHALL BE HOT DIPPED ZINC-COATED GALVANIZED STEEL PER ASTM A 153.

* WHENEVER POSSIBLE NAILS DRIVEN PERPENDICULAR TO THE GRAIN SHALL BE USED INSTEAD OF TOENAILS.

* DIAPHRAGM SHEATHING NAILS OR OTHER APPROVED SHEATHING CONNECTORS SHALL BE DRIVEN SO THAT THEIR HEAD OR CROWN IS FLUSH WITH THE SURFACE OF THE SHEATHING.

# CONCRETE NOTES

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

| FOUNDATIONS: | STRENGTH: |
|---|---|
| SLAB ON GRADE & RAISED WOOD FLOOR | 2500 PSI |
| CAISSONS / GRADE BEAMS | 3000 PSI |
| ALL OTHER CONC. (U.N.O.) | 2500 PSI |

2. WHERE CONCRETE STRENGTH IS 3000 PSI OR GREATER, CYLINDER TESTS ARE REQUIRED PER ACI 318-19 26.12.3.
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 ACCORDANCE 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 NONPRESTRESSED CAST-IN-PLACE CONCRETE SHALL BE AS FOLLOWS, U.N.O:

| LOCATION | MIN. COVER (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 | 1 1/2" |

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 PERMITTED 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.

# NAILING SCHEDULE

*2022 CBC TBL. 2304.10.2*

1. BLK'G BTWN. CEILING JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW, EACH END-TOENAIL — 3-8d
   BLK'G, BTWN. RAFTERS OR TRUSS NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS, EACH END-TOENAIL — 2-8d
   FLAT BLK'G TO TRUSS AND WEB FILLER, FACE NAIL — 16d @ 6" O.C.
2. CEILING JOISTS TO TOP PLATE, TOENAIL — 3-8d
3. CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS (NO THRUST), FACE NAIL — 3-16d
4. CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT), FACE NAIL — PER TABLE 2308.7.3.1
5. COLLAR TIE TO RAFTER, FACE NAIL — 3-10d
6. RAFTER OR ROOF TRUSS TO TOP PLATE, TOENAIL — 3-10d
7. ROOF RAFTERS TO RIDGE, VALLEY OR HIP RAFTERS OR ROOF RAFTER TO 2-INCH RIDGE BEAM, TOENAIL — 3-10d
8. STUD TO STUD (NOT AT BRACED WALL PANELS), FACE NAIL — 16d @ 24"O.C.
9. STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANELS), FACE NAIL — 16d @ 16" O.C.
10. BUILT-UP HEADER (2" TO 2" HEADER), FACE NAIL — 16d @ 16"O.C.
11. CONTINUOUS HEADER TO STUD, TOE NAIL — 4-8d
12. TOP PLATE TO TOP PLATE, FACE NAIL — 16d @ 16" O.C.
13. TOP PLATE TO TOP PLATE, AT END JOINTS, EACH SIDE OF END JOINT, FACE NAIL (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT) — 8-16d
14. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS), FACE NAIL — 16d @ 16" O.C.
15. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING AT BRACED WALL PANELS, FACE NAIL — 2-16d @ 16" O.C.
16. STUD TO TOP OR BOTTOM PLATE, TOENAIL — 4-8d
17. TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS, FACE NAIL — 2-16d
18. 1" BRACE TO EACH STUD AND PLATE, FACE NAIL — 2-8d
19. 1" x 6" SHEATHING TO EACH BEARING, FACE NAIL — 2-8d
20. 1" x 8" AND WIDER SHEATHING TO EACH BEARING, FACE NAIL — 3-8d
21. JOIST TO SILL, TOP PLATE, OR GIRDER, TOENAIL — 3-8d
22. RIM JOIST, BAND JOIST, OR BLOCKING TO TOP PLATE, SILL OR OTHER FRAMING BELOW, TOENAIL — 8d @ 6" O.C.
23. 1" x 6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL — 2-8d
24. 2" SUBFLOOR TO JOIST OR GIRDER, FACE NAIL — 2-16d
25. 2" PLANKS (PLANK & BEAM - FLOOR & ROOF), EACH BEARING, FACE NAIL — 2-16d
26. BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS, FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES — 20d @ 32" O.C.
27. LEDGER STRIP SUPPORTING JOISTS OR RAFTERS, FACE NAIL AT EACH JOIST OR RAFTER — 3-16d
28. JOIST TO BAND JOIST OR RIM JOIST, END NAIL — 3-16d
29. BRIDGING OR BLOCKING TO JOIST, RAFTER OR TRUSS, TOENAIL AT EACH END — 2-8d

WOOD STRUCTURAL PANELS, SUBFLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLEBOARD WALL SHEATHING TO FRAMING

30. 3/8"-1/2", 6" SPACING AT EDGES, 12" AT INTERMEDIATE SUPPORTS — 6d
31. 15/32"-3/4", 6" SPACING AT EDGES, 12" AT INTERMEDIATE SUPPORTS — 8d
32. 7/8"-1 1/4", 6" SPACING AT EDGES, 12" AT INTERMEDIATE SUPPORTS — 10d

OTHER EXTERIOR WALL SHEATHING

33. ½" FIBERBOARD SHEATHING, 3" SPACING AT EDGES, 6" SPACING AT INTERMEDIATE SUPPORTS — 1 ½" x 0.120" GALV. ROOFING NAIL
34. 25/32" FIBERBOARD SHEATHING, 3" SPACING AT EDGES, 6" SPACING AT INTERMEDIATE SUPPORTS — 1 ¾" x 0.120" GALV. ROOFING NAIL

WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING

35. ¾" AND LESS, 6" SPACING AT EDGES, 12" SPACING AT INTERMEDIATE SUPPORTS — 8d
36. 7/8"-1", 6" SPACING AT EDGES, 12" SPACING AT INTERMEDIATE SUPPORTS — 8d
37. 1 1/8"-1 1/4", 6" SPACING AT EDGES, 12" SPACING AT INTERMEDIATE SUPPORTS — 10d

PANEL SIDING TO FRAMING

38. ½" OR LESS, 6" SPACING AT EDGES, 12" SPACING AT INTERMEDIATE SUPPORTS — 6d
39. 5/8", 6" SPACING AT EDGES, 12" SPACING AT INTERMEDIATE SUPPORTS — 8d
40. ¼", 6" SPACING AT EDGES, 12" SPACING AT INTERMEDIATE SUPPORTS — 4d (FINISH)
41. 3/8", 6" SPACING AT EDGES, 12" SPACING AT INTERMEDIATE SUPPORTS — 6d (FINISH)

# 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 318-19 CHAPTER 25 AND OTHER SECTIONS ACCORDING TO APPLICATION.
3. LAPS AT BAR SPLICES IN CONCRETE CONSTRUCTION SHALL BE AS FOLLOWS:

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

4. LAPS AT BAR SPLICES IN MASONRY CONSTRUCTION SHALL BE 48 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. LAPS OF WELDED STEEL WIRE FABRIC AT SPLICES SHALL BE NOT LESS THAN 12 INCHES.
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 AMERICAN WELDING SOCIETY.
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 PERMITTED.
14. ALL WELDS SHALL, IN ADDITION, TO ALL THE SPECIFICATIONS LISTED ABOVE, COMPLY WITH THE REQUIREMENTS OF THE 15TH EDITION OF THE "MANUAL OF STEEL CONSTRUCTION - ALLOWABLE STRESS DESIGN" AS PUBLISHED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.

# SHEARWALL SCHEDULE - 2022 CBC (SEE NOTES 1-13)

| SYMBOL | SHEAR (PLF) | MATERIAL AND NAILING DESCRIPTION | ANCHOR BOLT SCHED. & SILL PLATE SIZE (SEE NOTES 9-12) | BOTTOM PLATE SIZE & NAILING | SHEAR TRANSFER @ RIM JOIST/BLK'G (SEE NOTE 15) |
|---|---|---|---|---|---|
| 1 | 260 | 3/8" CDX PLYWOOD W/ 8d @ 6"o.c. E.N. / 12"o.c. F.N. | 2x P.T. SILL ₣. W/ ½"Ø A.B. @ 36" O/C OR 5/8"Ø A.B. @ 48" O/C | 2x PLATE W/ 16d @ 6" O/C (SEE NOTE 16) | A35 OR LTP4 @ 24" O/C |
| 2 | 350 | 3/8" CDX PLYWOOD W/ 8d @ 4"o.c. E.N. / 12"o.c. F.N. | 2x P.T. SILL ₣. W/ ½"Ø A.B. @ 24" O/C OR 5/8"Ø A.B. @ 32" O/C | 2x PLATE W/ 16d @ 4" O/C (SEE NOTE 16) | A35 OR LTP4 @ 16" O/C |
| 3 | 490 | 3/8" CDX PLYWOOD W/ 8d @ 3"o.c. E.N. / 12"o.c. F.N. (SEE NOTE 14) | 2x P.T. SILL ₣. W/ ½"Ø A.B. @ 16" O/C OR 5/8"Ø A.B. @ 24" O/C | 2x PLATE W/ 16d @ 3" O/C (SEE NOTE 16) | A35 OR LTP4 @ 12" O/C |
| 4 | 640 | 3/8" CDX PLYWOOD W/ 8d @ 2"o.c. E.N. / 12"o.c. F.N. (SEE NOTE 14) | 2x P.T. SILL ₣. W/ ½"Ø A.B. @ 12" O/C OR 5/8"Ø A.B. @ 20" O/C | 2x ₣. W/ ½"Ø x 8" LONG LAG SCREWS @ 10" O/C INTO 4x RIM JOIST/BLK'G | A35 OR LTP4 @ 10" O/C |
| 5 | 730 | 3/8" STRUCT I PLYWOOD W/ 8d @ 2"o.c. E.N. / 12"o.c. F.N. (SEE NOTE 14) | 2x P.T. SILL ₣. W/ ½"Ø x 8" LONG LAG SCREWS @ 8" O/C OR 5/8"Ø A.B. @ 16" O/C | 2x ₣. W/ ½"Ø x 8" LONG LAG SCREWS @ 8" O/C INTO 4x RIM JOIST/BLK'G | A35 OR LTP4 @ 9" O/C |
| 6 | 860 | 15/32" STRUCT I PLYWOOD W/ 10d @ 2"o.c. E.N. / 12"o.c. F.N. (SEE NOTE 14) | 3x P.T. SILL ₣. W/ ½"Ø A.B. @ 12" O/C OR 5/8"Ø A.B. @ 20" O/C | 3x ₣. W/ ½"Ø x 8" LONG LAG SCREWS @ 6" O/C INTO 4x RIM JOIST/BLK'G | A35 OR LTP4 @ 8" O/C |
| 7 | 1100 | 3/8" STRUCT I PLYWOOD (BOTH SIDES) W/ 10d @ 3"o.c. E.N. / 12"o.c. F.N. (SEE NOTE 11 AND DETAIL 9/S01) | 3x P.T. SILL ₣. W/ ½"Ø A.B. @ 8" O/C OR 5/8"Ø A.B. @ 12" O/C | 3x ₣. W/ ½"Ø x 8" LONG LAG SCREWS @ 5" O/C INTO 4x RIM JOIST/BLK'G | A35 OR LTP4 @ 6" O/C |
| 8 | 1460 | 3/8" STRUCT I PLYWOOD (BOTH SIDES) W/ 10d @ 2"o.c. E.N. / 12"o.c. F.N. (SEE NOTE 11 AND DETAIL 9/S01) | 3x P.T. SILL ₣. W/ ½"Ø A.B. @ 6" O/C OR 5/8"Ø A.B. @ 9" O/C | 3x ₣. W/ ½"Ø x 8" LONG LAG SCREWS @ 4" O/C INTO 4x RIM JOIST/BLK'G | A35 OR LTP4 @ 5" O/C |
| M | --- | SPECIAL REINFORCED MASONRY SHEAR WALL | (SEE PLANS AND DETAILS) | (SEE PLANS AND DETAILS) | (SEE PLANS AND DETAILS) |

⟨1⟩* WHEN AN ASTERISK * ACCOMPANIES THE SHEARWALL SYMBOL, SHEATHING IS TO BE CONTINUOUS THROUGH ADJACENT WALL FRAMING.

## SHEARWALL 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. SHEARWALLS MORE THAN ONE VERTICAL PANEL IN HEIGHT SHALL HAVE EITHER VERTICAL OR HORIZONTAL STAGGERED SPLICED JOINTS.
5. PROVIDE ½" 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 FASTENERS AND CONNECTORS 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 695, CLASS 55.
10. NORMAL UNPROTECTED CARBON STEEL FASTENERS ARE **ONLY ACCEPTABLE** WHEN INSTALLED IN WOOD PRESERVED WITH BORATE BASED PRESERVATIVE AND WHEN THE TREATED WOOD IS LOCATED IN A DRY AND ENCLOSED ENVIRONMENT SUCH AS IN A WALL CAVITY.
11. ANCHOR BOLTS MUST BE EMBEDDED 7" MIN. INTO NEW CONCRETE. WHERE SHEARWALLS ARE TO BE INSTALLED TO EXISTING FOOTINGS, EPOXY 5/8" Ø THREADED ROD ANCHORS WITH 5" MIN. EMBEDMENT USING SIMPSON 'SET-XP' HIGH STRENGTH ADHESIVE (ESR-2508) WITH SPECIAL INSPECTION (**OR**) 5/8"Ø x6" LONG SIMPSON 'TITEN HD' ANCHORS (ESR-2713) WITH SPECIAL INSPECTION INSTALLED AT THE SPACING INDICATED IN THE SHEARWALL SCHEDULE ABOVE.
12. FOUNDATION ANCHOR BOLTS IN ALL SHEAR WALLS SHALL HAVE A MINIMUM 3" x 3" x ¼" THICK PLATE WASHERS BETWEEN THE SILL PLATE AND NUT, LOCATED NO MORE THAN ½" FROM EDGE OF BOT. PLATE ON THE SIDE(S) WITH SHEATHING. THE NUTS SHALL BE TIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING.
13. STUCCO AND/OR EXTERIOR VENEER OVER A PLYWOOD SHEARWALL SHALL BE WATERPROOFED W/ A MIN. OF (2) LAYERS OF #15LB. FELT PAPER.
14. ALL FRAMING MEMBERS RECEIVING EDGE NAILING FROM ABUTTING PANELS SHALL BE **3-INCH NOMINAL** OR THICKER. ALL EDGE NAILING SHALL BE STAGGERED.
15. WHEN 'LTP4' IS INSTALLED OVER PLYWOOD, USE USE 8d COMMON NAILS.
16. WHERE BOTTOM PLATE NAILING GOES THROUGH FLOOR SHEATHING THICKER THAN ¾", USE **20d NAILS** AT SAME SPACING AS INDICATED OR SIMPSON **SDS25412** SCREWS AT TWICE THE SPACING AS INDICATED.
17. WHERE PLYWOOD PANELS ARE APPLIED ON BOTH FACES OF A WALL, USE A **3x6** BOT./SILL PLATE, **3x6 STUDS** @ 16"o.c. AND **3x6 df. # 2** DOUBLE TOP PLATES. ALL FRAMING MEMBERS RECEIVING EDGE NAILING FROM ABUTTING PANELS SHALL BE **4-INCH NOMINAL** OR THICKER. ALL EDGE NAILING SHALL BE STAGGERED AND BOTH

# HOLDOWN SCHEDULE

| | | MIN. POST SIZE | | HOLDOWN | HOLDOWN ANCHOR BOLT | |
|---|---|---|---|---|---|---|
| | | 2x4 STUD WALL | 2x6 STUD WALL | | NEW FOUNDATION | EXISTING FOUNDATION (SEE NOTE J) |
| POST TO FOUNDATION | 1 | DBL. STUDS | DBL. STUDS | HDU2 | SSTB20 (16⅝" MIN. EMB.) | ⅝"Φ THRD. ROD W/ 10" EMBED. |
| | 2 | DBL. STUDS | DBL. STUDS | HDU4 | SB⅝x24 (18" MIN. EMB.) | ⅝"Φ THRD. ROD W/ 10" EMBED. |
| | 3 | 4x4 | 4x6 | HDU5 | SB⅝x24 (18" MIN. EMB.) | ⅝"Φ THRD. ROD W/ 12" EMBED. |
| | 4 | 4x6 | 4x6 | HDU8 | SB⅞x24 (18" MIN. EMB.) | N/A |
| | 5 | 4x6 (MAX. 10' HT.) 4x8 (GREATER THAN 10' HT.) | 6x6 | HDQ8 | SB⅞x24 (18" MIN. EMB.) | N/A |
| | 6 | 4x8 (MAX. 8' HT.) 6x6 (GREATER THAN 8' HT.) | 6x6 | HDU14 | SB1x30 (24" MIN. EMB.) | N/A |
| | 7 | 4x8 | 6x6 | HD19 | PAB10 (14 ½" MIN. EMB.) | N/A |

| | | |
|---|---|---|
| POST TO POST / BEAM | 8 | DBL. 2x STUDS W/ MSTC40 (V) TO DBL. STUDS/ DROPPED BEAM / HEADER BELOW (14-16d SINKER NAILS INTO STUDS) |
| | 9 | DBL. 2x STUDS W/ MSTC52 (V) TO DBL. STUDS BELOW (22-16d SINKER NAILS INTO STUDS) |
| | 10 | 4x POST W/ MST72 (V) TO 4x POST BELOW (32-16d SINKER NAILS MIN. INTO POST) |
| | 11 | 6x POST W/ (2) MST72 (V) TO 6x POST BELOW (32-16d SINKER NAILS MIN. INTO POST) (EACH STRAP) |
| | 12 | 4x POST W/ MSTC48B3 (V) TO BEAM BELOW (38-10d NAILS MIN. INTO POST) |
| | 13 | 6x8 POST (2x6 WALL) W/ (2) MSTC66B3 (V) TO BEAM BELOW (38-10d NAILS MIN. INTO POST) (EACH STRAP) |
| | 14 | DBL. 2x STUDS W/ MSTC66B3 (V) TO DROPPED BEAM / HEADER BELOW (38-10d NAILS MIN. INTO STUDS) |

NOTES:

A. REFER TO SIMPSON CATALOG FOR PROPER INSTALLATION PROCEDURES.

B. HOLDOWN CONNECTORS INTO WOOD FRAMING REQUIRE APPROVED PLATE WASHER, AND HOLDOWNS SHALL BE TIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING.

C. HOLDOWN HARDWARE MUST BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION.

D. USE APPROPRIATE SIMPSON 'CNW' COUPLER & THREADED ROD AS REQUIRED FOR RAISED WOOD FLOOR FOUNDATION.

E. INCREASE FOUNDATION DEPTH FOR ENTIRE SHEARWALL LENGTH & EXTEND 12" BEYOND HOLDOWN ANCHOR BOLT AS NECESSARY TO ACCOMMODATE THE REQUIRED CONCRETE EMBEDMENT PLUS 3" (MIN.) COVER.

F. REINFORCEMENT SHALL HAVE 3" COVER FROM SOIL

G. USE 10d NAILS @ 8"o.c. STAGGERED ALONG ENTIRE LENGTH OF DBL. STUDS (U.N.O.)

H. WHERE SPECIFIED, USE POST SIZE CALLED OUT ON PLANS.

I. INSTALL SHEARWALLS PRIOR TO INSTALLING POP-OUTS.

J. RETROFIT ANCHOR BOLTS SHALL USE SIMPSON 'SET-XP' EPOXY (ESR-2508) SPECIAL INSPECTION IS REQUIRED

## PAD FOOTING SCHEDULE

| | |
|---|---|
| A | 24" SQR. x 18" DEEP W/ # 4 @ 8" ⅝ EA. WAY |
| B | 30" SQR. x 18" DEEP W/ # 4 @ 8" ⅝ EA. WAY |
| C | 36" SQR. x 18" DEEP W/ # 4 @ 8" ⅝ EA. WAY |
| D | 42" SQR. x 18" DEEP W/ # 4 @ 8" ⅝ EA. WAY |
| E | 48" SQR. x 18" DEEP W/ # 4 @ 8" ⅝ EA. WAY |

NOTES:

A. REINFORCEMENT SHALL BE 3" CLEAR FROM SOIL.

B. WHERE SPECIFIED, USE DEPTH OF FOOTING CALLED OUT ON PLANS.

THE STRUCTURE WILL BE LOCATED ENTIRELY ON UNDISTURBED NATIVE SOIL. IF THE BUILDING INSPECTOR SUSPECTS FILL, EXPANSIVE SOILS OR ANY GEOLOGIC INSTABILITY BASED UPON OBSERVATION OF THE FOUNDATION EXCAVATION, A SOILS OR GEOLOGICAL REPORT, AND RESUBMITTAL OF PLANS TO PLAN CHECK TO VERIFY THAT THE REPORT RECOMMENDATIONS HAVE BEEN INCORPORATED, MAY BE REQUIRED.

SIGNATURE OF OWNER,
LICENSED ENGINEER OR ARCHITECT

## CEILING JOIST SCHEDULE

| CEILING JOIST SIZE & SPACING | MAX. SPAN |
|---|---|
| 2 x 4 C-J @ 24"o.c. | 7'-0" |
| 2 x 6 C-J @ 24"o.c. | 12'-0" |
| 2 x 8 C-J @ 24"o.c. | 16'-0" |
| 2 x 10 C-J @ 24"o.c. | 20'-0" |
| 2 x 12 C-J @ 24"o.c. | 24'-0" |
| 2 x 12 C-J @ 12"o.c. | 30'-0" |

# FRAMING NOTES

1. ROOF SHEATHING SHALL BE:
15/32" PERFORMANCE CATEGORY APA RATED PLYWOOD 32/16 EXPOSURE 1.
8d COMMON NAILS @ 6" o.c. B.N. & E.N.
8d COMMON NAILS @ 12" o.c. F.N.
B.N. APPLIES TO ALL SUPPORTED PLYWOOD EDGES AT:
DIAPHRAGM EDGES, PERIMETER WALLS, & SHEARWALLS

2. FLOOR SHEATHING SHALL BE:
23/32" PERFORMANCE CATEGORY APA RATED STURD-I-FLOOR 24" O.C. EXPOSURE 1 T&G.
10d COMMON NAILS @ 6" o.c. B.N. & E.N.
10d COMMON NAILS @ 12" o.c. F.N.
B.N. APPLIES TO ALL SUPPORTED PLYWOOD EDGES AT:
DIAPHRAGM EDGES, PERIMETER WALLS, & SHEARWALLS

3. @ BLOCKED DIAPHRAGM PER PLAN, ROOF SHEATHING SHALL BE:
15/32" PERFORMANCE CATEGORY APA RATED PLYWOOD 32/16 EXPOSURE 1.
PROVIDE 2x (MIN.) BLOCKING @ ALL PLYWOOD EDGES.
10d COMMON NAILS @ 2" o.c. B.N.
10d COMMON NAILS @ 3" o.c. E.N.
10d COMMON NAILS @ 12" o.c. F.N.
B.N. APPLIES TO ALL SUPPORTED PLYWOOD EDGES AT:
CONTINUOUS PANEL JOINTS, DIAPHRAGM EDGES, PERIMETER WALLS, & SHEARWALLS

4. @ BLOCKED DIAPHRAGM PER PLAN, FLOOR SHEATHING SHALL BE:
23/32" PERFORMANCE CATEGORY APA RATED STURD-I-FLOOR 24" O.C. EXPOSURE 1 T&G. PROVIDE 3x (MIN.) BLOCKING @ ALL PLYWOOD EDGES.
2 ROWS OF 10d COMMON NAILS @ 2 ½" o.c. B.N.
2 ROWS OF 10d COMMON NAILS @ 4" o.c. E.N.
10d COMMON NAILS @ 12" o.c. F.N.
B.N. APPLIES TO ALL SUPPORTED PLYWOOD EDGES AT:
CONTINUOUS PANEL JOINTS, DIAPHRAGM EDGES, PERIMETER WALLS, & SHEARWALLS

5. ALL FASTENERS IN PRESSURE TREATED WOOD SHALL BE HOT DIPPED ZINC-COATED GALVANIZED STEEL PER ASTM A 153.

6. ALL RAFTERS, JOISTS & HEADERS SHALL BE DOUGLAS FIR LARCH #2 GRADE.

7. ALL BEAMS SHALL BE DOUGLAS FIR LARCH #1 GRADE (U.N.O.).

8. ALL POSTS SHALL BE DOUGLAS FIR LARCH #1 (U.N.O.).

9. ALL ROOF HEADERS SHALL BE 4x4 (U.N.O.).

10. PROVIDE DOUBLE JOISTS @ SIDES & ENDS OF ALL OPENINGS (U.N.O.). SISTER TOGETHER WITH 16d @ 12"O.C. STAGGERED TYPICAL.

11. ALL POSTS TO TOP PLATE & SILL PLATE CONNECTIONS SHALL HAVE SIMPSON 'A34' EACH SIDE (U.N.O.).

12. ALL BEAM TO TOP PLATE CONNECTIONS SHALL HAVE SIMPSON 'A34' EACH SIDE (U.N.O.).

13. USE 2x4 D.F. # 2 STUDS @ 16"O.C. FOR ALL BEARING WALLS 10'-0" OR LESS IN HEIGHT. (14'-0" MAX. FOR NON-BEARING). FOR BEARING STUD WALL HEIGHTS IN EXCESS OF 10'-0", USE 2x6 D.F. # 2 STUDS @ 16"O.C. (16'-0" MAX. HEIGHT) (20'-0" MAX. FOR NON-BEARING). ALL BEARING SLOPING RAKE WALLS SHALL BE CONTINUOUS BETWEEN FLOOR / FOUNDATION AND ROOF FRAMING.

14. TJI JOISTS, MICROLLAMS (LVL), TIMBERSTRANDS (LSL), AND PARALLAMS (PSL) MANUFACTURER SHALL BE WEYERHAEUSER (ESR-1153, -1387), OR EQUIVALENT. BCI JOISTS, VERSALAMS (VSL) MANUFACTURER SHALL BE 'BOISE CASCADE' (ESR-1336), OR EQUIVALENT. EQUIVALENT BEAMS INCLUDE ANY MANUFACTURER WITH A CURRENT (IBC 2015) APPROVED ICC-ES EVALUATION REPORT WITH THE FOLLOWING PROPERTIES:

PSL: Fb = 2400 PSI (MIN.), Fv = 285 (MIN.), E = 2.0 x $10^6$ PSI (MIN.)
LVL: Fb = 2600 PSI (MIN.), Fv = 285 (MIN.), E = 1.9 x $10^6$ PSI (MIN.)
LSL: Fb = 2325 PSI (MIN.), Fv = 310 (MIN.), E = 1.55 x $10^6$ PSI (MIN.)
VSL: Fb = 3100 PSI (MIN.), Fv = 285 (MIN.), E = 2.0 x $10^6$ PSI (MIN.)

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

16. PROVIDE MSTC28 STRAP ACROSS ALL DISCONTINUOUS DBL. TOP PLATES (U.N.O.).

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

18. EACH TRUSS SHALL BE LEGIBLY BRANDED, MARKED OR OTHERWISE HAVE PERMANENTLY AFFIXED THERETO THE FOLLOWING INFORMATION LOCATED WITHIN 2 FEET OF THE CENTER OF THE SPAN ON THE FACE OF THE BOTTOM CHORD.

A) IDENTITY OF THE COMPANY MANUFACTURING THE TRUSS.
B) THE DESIGN LOADS
C) THE SPACING OF THE TRUSSES.

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

20. BEAMS BEARING ON TOP PLATE SHALL BE SUPPORTED BY DBL 2x STUDS SISTER TOGETHER W/ 16d @ 16"O.C. (U.N.O.).

21. ALL SHEARWALLS SHALL EXTEND TO THE ROOF SHEATHING (U.N.O.).

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

23. 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.

# FOUNDATION NOTES

1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI (U.N.O.).

2. CONTINUOUS EXTERIOR PERIMETER AND CONTINUOUS INTERIOR BEARING WALL FOOTINGS SHALL BE AS FOLLOWS (U.N.O.):

ONE STORY:
12" WIDE x 12" DEEP INTO NATIVE SOIL OR 90% COMPACTED FILL
W/ (2) #4 REINFORCING BAR 3" FROM THE TOP & BOT. OF FOOTING
TWO STORY:
15" WIDE x 18" DEEP INTO NATIVE SOIL OR 90% COMPACTED FILL
W/ (2) #4 REINFORCING BAR 3" FROM THE TOP & BOT. OF FOOTING.

3. BOTTOM OF ALL FOOTINGS SHALL MAINTAIN 1'-0" MIN. TO DAYLIGHT WHERE SLOPES OCCUR. HORIZONTAL DISTANCE SHALL BE MEASURED FROM THE BOTTOM LEADING EDGE OF FOOTING TO DAYLIGHT.

4. CONCRETE SLABS SHALL BE A MINIMUM OF 4" THICK WITH #3 REBAR @ 18" O.C. EACH WAY IN THE CENTER. UNDERLAY WITH 2" CLEAN SAND OVERLYING 10 MIL. VISQUEEN MOISTURE BARRIER OVERLAYING ADDITIONAL 2" CLEAN SAND.

5. THE VISQUEEN MOISTURE BARRIER SHOULD BE PROPERLY LAPPED AND SEALED AT JOINTS AND AROUND ANY BREAKS SUCH AS OPENINGS FOR UTILITY CONDUITS.

6. ANCHOR BOLTS SHALL BE ⅝"Φ WITH 7" MIN. EMBEDMENT @ 72" O.C. MAX. REFER TO SHEARWALL SCHEDULE FOR ANCHOR BOLT SIZE AND SPACING.

7. THERE SHALL BE A MINIMUM OF TWO ANCHOR BOLTS PER SILL PLATE PIECE WITH ONE BOLT LOCATED NOT MORE THAN 12" OR LESS THAN 5" FROM EACH END OF THE SILL PLATE PIECE.

8. ALL ANCHOR BOLTS SHALL HAVE A MINIMUM OF 3" x 3" x 3 GUAGE (¼" THICK) PLATE WASHER.

9. ALL ANCHOR BOLTS & NAILS 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 695, CLASS 55.

10. ALL ANCHOR BOLTS, HOLDOWN ANCHORS & DOWELS MUST BE TIED IN PLACE PRIOR TO CALLING FOR FOUNDATION INSPECTION.

11. SILL PLATES SHALL BE DOUGLAS FIR #2 PRESSURE TREATED.

12. ALL NON-BEARING WALLS SHALL USE 2x P.T. SILL W/ "HILTI" SHOTPIN FASTENERS @ 32" O.C., 6" FROM ENDS (ESR-1663). PROVIDE A SHOVEL FTG. FOR RAMSET EMBEDMENT.

13. ALL DIMENSIONS SHALL BE VERIFIED WITH THE ARCHITECTURAL DRAWINGS. ANY DISCREPANCIES SHALL BE RESOLVED WITH THE ARCHITECT/DESIGNER.

## ABBREVIATIONS

| | | | |
|---|---|---|---|
| AB | ANCHOR BOLT | HOR (H) | HORIZONTAL |
| CLR | CLEAR | (N) | NEW |
| CVR | COVER | NTS | NOT TO SCALE |
| d | PENNY (NAILS) | OC | ON CENTER |
| DF | DOUGLAS FIR | PERP | PERPENDICULAR |
| DIA (Φ) | DIAMETER | PL (PL.) | PLATE |
| EA | EACH | PT | PRESSURE TREATED |
| EMB | EMBED(MENT) | SCH | SCHEDULE |
| EN | EDGE NAILING | SW | SHEARWALL |
| ES | EACH SIDE | T & B | TOP AND BOTTOM |
| EW | EACH WAY | THR'D | THREADED |
| (E) | EXISTING | TN | TOE NAIL |
| FN | FIELD NAILING | TYP | TYPICAL |
| FTG | FOOTING | UNO | UNLESS NOTED OTHERWISE |
| HD | HOLD DOWN | VIF | VERIFY IN FIELD |
| HHS | HOLLOW STRUCTURAL SHAPE | | |

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REVISIONS:

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2915 ULRIC STREET
SAN DIEGO, CA 92111

Designer:

GTC DESIGN

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SAN DIEGO, CA 92101

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|---|---|
| Job No. | J23365 |
| Cad Ref. No: | - |
| Date Drawn: | 7/29/23 |
| Date Issued: | - |
| Proj. Engineer: | A.S. |
| Drawn By: | - |
| Checked By: | M.T.L. |
| Scale: | N/A |

Drawing Status:

- ☐ INFORMATION DWGS. (NOT FOR CONSTRUCTION)
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- ☐ BID SET DRAWINGS
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- ☐ OTHER

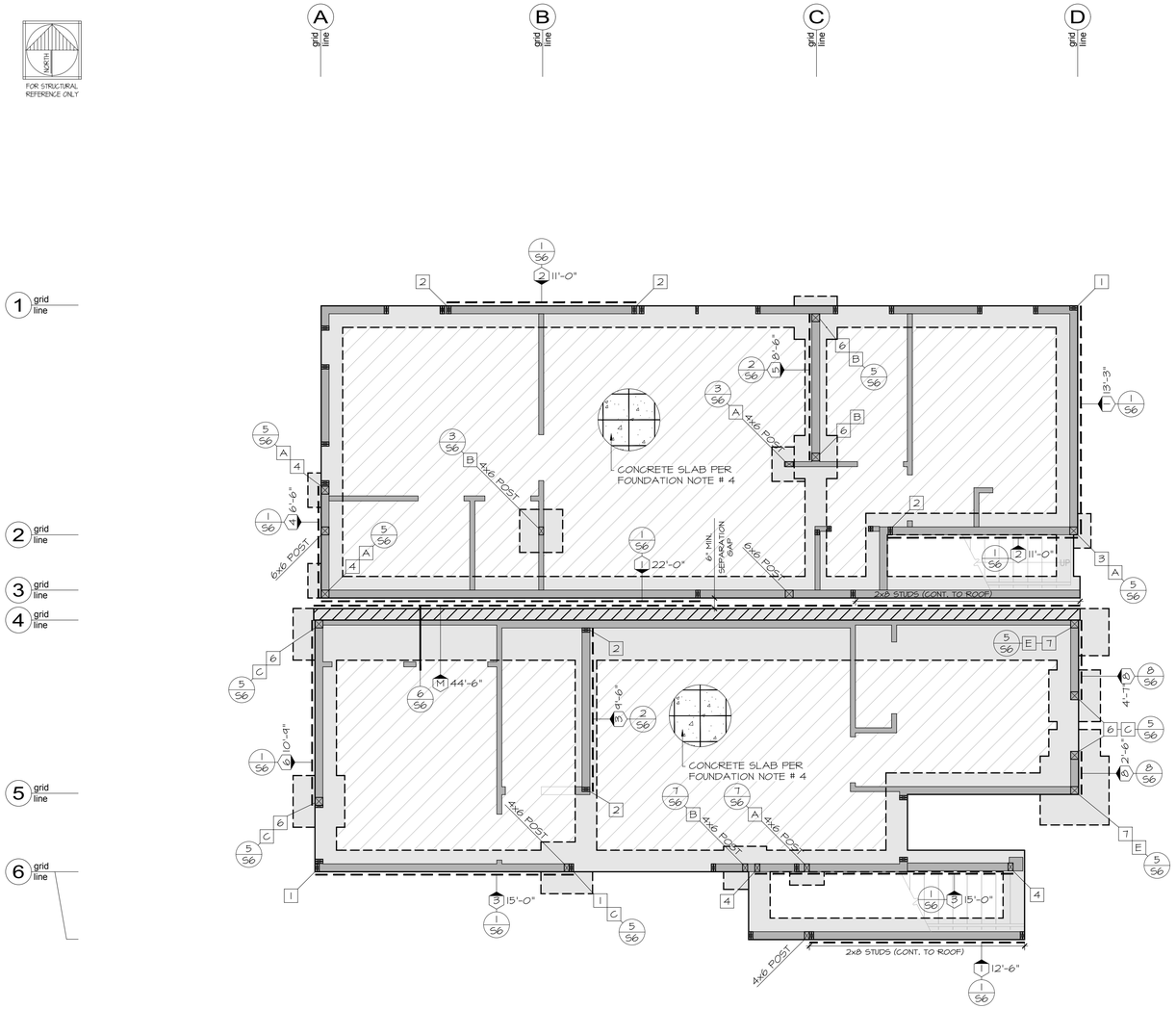

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SHEET TITLE :

STRUCTURAL GENERAL NOTES

S2

FOR STRUCTURAL REFERENCE ONLY




## FRAMING LEGEND

- MIN. — SHEAR WALL PER PLAN
- NEW WALL PER PLAN
- HOLD-DOWN / PAD FOOTING PER PLAN
- DOUBLE 2x STUD OR KING STUD W/ TRIMMER
- NEW FOOTING PER PLAN
- MASONRY WALL PER PLAN

# FOUNDATION PLAN

ALL DIMENSIONS TO BE VERIFIED WITH ARCHITECTURAL PLANS
SEE SHEET S-1 & S-2 FOR COMPLETE SHEARWALL & HOLD-DOWN SCHEDULES SCALE: ¼" = 1'

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| Job No. | J23365 |
| Cad Ref. No: | - |
| Date Drawn: | 7/29/23 |
| Date Issued: | - |
| Proj. Engineer: | A.S. |
| Drawn By: | - |
| Checked By: | M.T.L. |
| Scale: | ¼" = 1'-0" |

Drawing Status:

- ☐ INFORMATION DWGS. (NOT FOR CONSTRUCTION)
- ☐ PRELIMINARY DWGS. (NOT FOR CONSTRUCTION)
- ☐ DESIGN DEVELOPMENT DWGS. (NOT FOR CONSTRUCTION)
- ☐ CHECK SET (NOT FOR CONSTRUCTION)
- ☐ PROGRESS DRAWINGS (NOT FOR CONSTRUCTION)
- ☐ PLAN CHECK DRAWINGS
- ☐ BID SET DRAWINGS
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- ☐ OTHER


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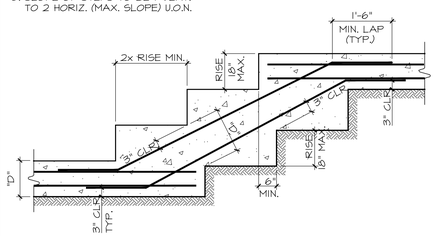

SHEET TITLE :

FOUNDATION PLAN

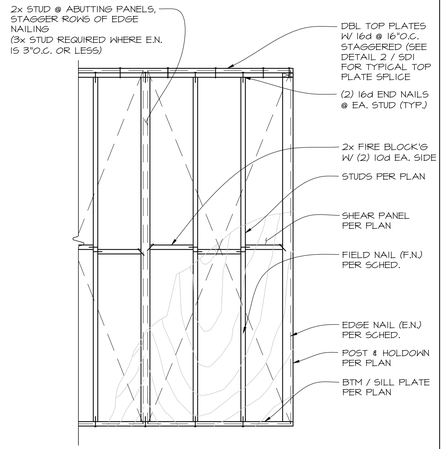
S3

NOTES:

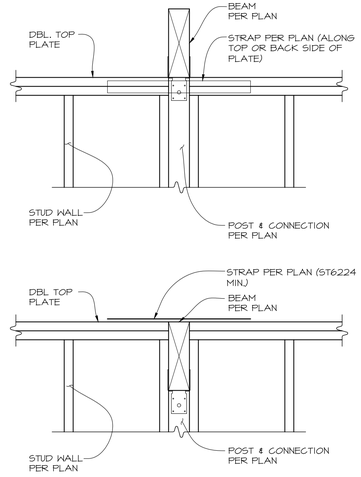
1. "D" EQUALS DEPTH OF FOOTINGS PER PLANS & DETAILS.
2. REINFORCING TO MATCH SIZE & SPACING OF FOOTING REINF.
3. SLOPE OF STEPS TO BE 1 VERT. TO 2 HORIZ. (MAX. SLOPE) U.O.N.




## TYPICAL STEPPED FOOTING 13

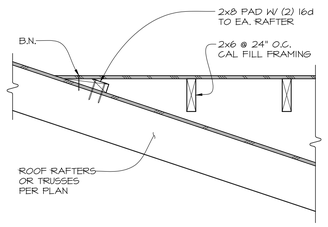



## TYPICAL SHEARWALL DETAIL 10

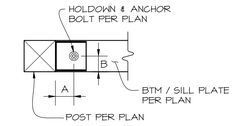



## TYPICAL BEAM CONN. 7

NOTE:
INTERMEDIATE SUPPORT FOR 2x6 CAL FILL TO BE PROVIDED @ 6'-0" O.C. MAX.




## TYPICAL CAL FILL FRAMING 4




TOP VIEW

| HOLDOWN | A | B | ANCHOR BOLT (U.N.O.) |
|---|---|---|---|
| HDU2 | 1¼" | 13¾" | SSTB20 (16⅞" MIN. EMB.) |
| HDU4 | 1¼" | 13¾" | SB7⅛x24 (18" MIN. EMB.) |
| HDU5 | 1¼" | 13¾" | SB7⅛x24 (18" MIN. EMB.) |
| HDU8 | 1¼" | 13¾" | SB7⅛x24 (18" MIN. EMB.) |
| HDQ8 | 1¼" | 13¾" | SB7⅛x24 (18" MIN. EMB.) |
| HDU14 | 1 ⅜" | 13¾" | SB1x30 (24" MIN. EMB.) |

NOTES:

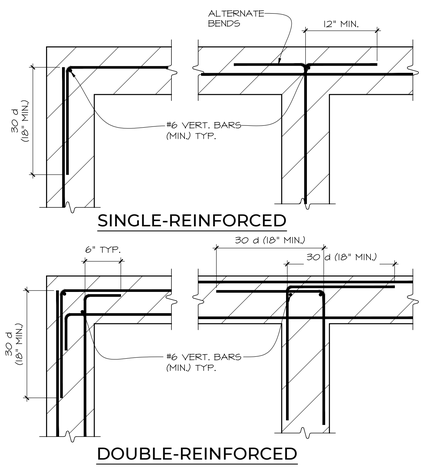
A. HOLDOWN CONNECTORS INTO WOOD FRAMING REQUIRE APPROVED PLATE WASHER, AND HOLDOWNS SHALL BE TIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING.

B. INCREASE FOUNDATION DEPTH FOR ENTIRE SHEAR WALL LENGTH WHERE NECESSARY TO ACCOMMODATE THE REQUIRED ANCHOR BOLT EMBEDMENT & CLEARANCE. ANCHOR BOLTS SHALL BE 3" CLEAR FROM SOIL

C. USE SIMPSON 'CNA' COUPLER NUT & THRD'D ROD FOR RAISED WOOD FLOOR APPLICATIONS, PROVIDE 4x BLK'G UNDER POST.

D. REFER TO SIMPSON CATALOG FOR PROPER INSTALLATION REQUIREMENTS.

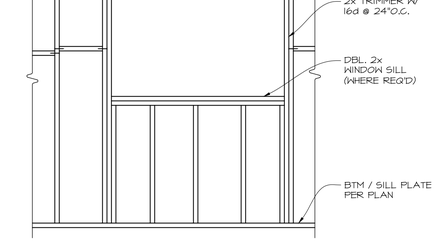
## TYP. HOLDOWN PLACEMENT 1



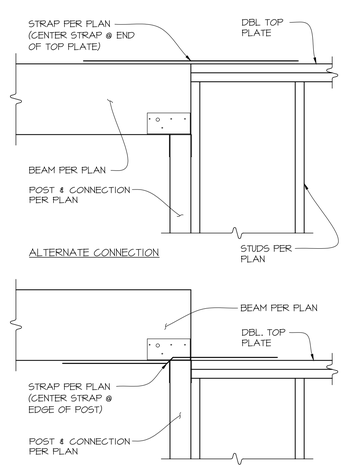

SINGLE-REINFORCED

DOUBLE-REINFORCED

## TYP. REBAR LAPS @ WALLS 14




## TYPICAL OPENING IN WALL 11




## TYPICAL BEAM CONN. 8

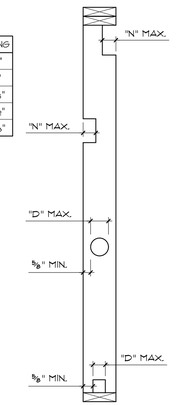
| STUD | BEARING & EXT. WALL | | NON-BEARING | |
|---|---|---|---|---|
| | "N" | "D" | "N" | "D" |
| 2x4 | ⅞" | 1⅜" | 1⅜" | 2" |
| 2x6 | 1⅜" | 2⅛" | 2⅛" | 3¼" |
| 2x8 | 1⅞" | 3" | 3" | 4½" |
| 2x10 | 2⅜" | 3¾" | 3¾" | 5⅝" |

NOTES:

1. ONLY ONE MAX. SIZE NOTCH OR BORED HOLE IS ALLOWED PER STUD

2. BORED HOLES SHALL NOT BE LOCATED IN THE SAME SECTION OF STUD AS A CUT OR NOTCH.

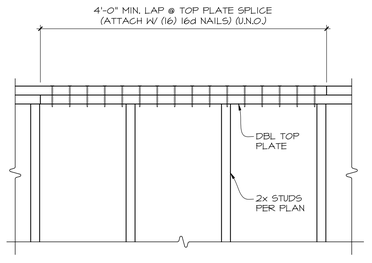
3. NON-BEARING WALL IS DEFINED AS A WALL SUPPORTING NO LOAD OTHER THAN ITS OWN WEIGHT.




## TYPICAL STUD NOTCH 5

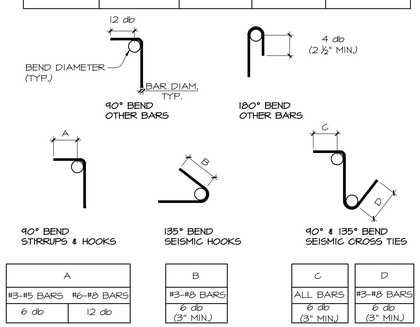
8/9/2024, 3:08:59 PM
PRJ-1077519
Hannan Al-Timimi

NOTE:
PROVIDE MSTC28 OR 2-CS16x26" STRAPS ACROSS ALL DISCONTINUOUS TOP PLATES. (U.N.O.)



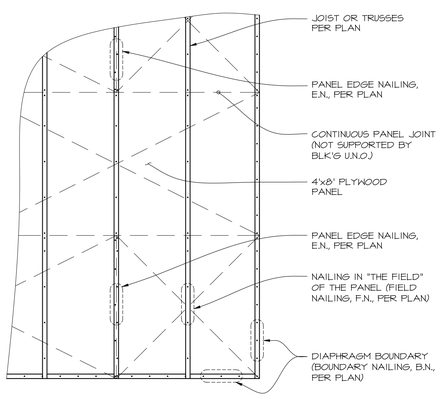

## TYP. TOP PLATE SPLICE 2

| BEND DIAMETERS | | | | |
|---|---|---|---|---|
| STIRRUPS AND TIES | | ALL OTHERS | | |
| #3-#5 BARS | #6-#8 BARS | #3-#8 BARS | #9-#11 BARS | #14-#18 BARS |
| 4 db | 6 db | 6 db | 8 db | 10 db |

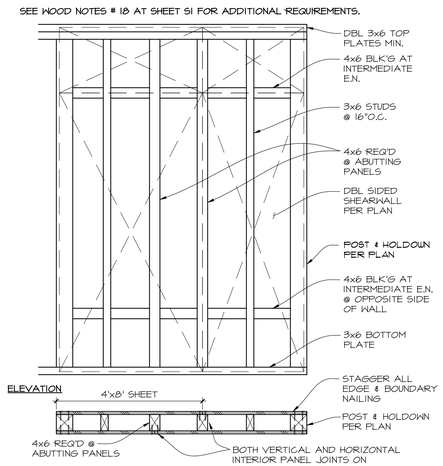



| A | | B | C | D |
|---|---|---|---|---|
| #3-#5 BARS | #6-#8 BARS | #3-#8 BARS | ALL BARS | #3-#8 BARS |
| 6 db | 12 db | 6 db (3" MIN.) | 6 db (3" MIN.) | 6 db (3" MIN.) |

## STANDARD HOOKS & BENDS 15



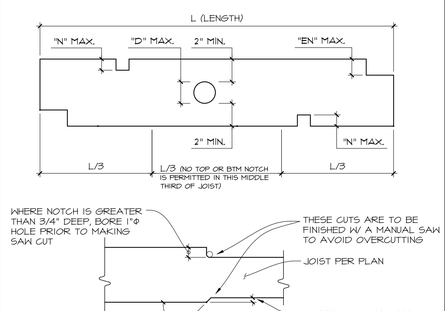

## TYP. PLYWOOD DIAPHRAGM 12



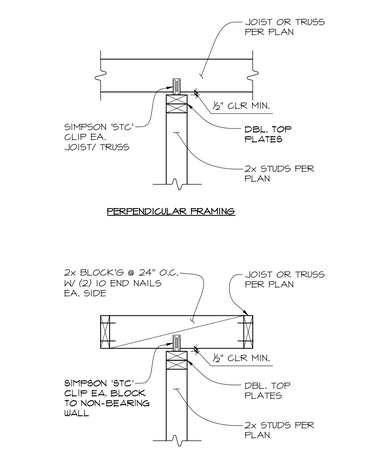

## DBL SIDED SHEARWALL 9

| JOIST | NOTCH & BORED HOLE (MAX.) | | |
|---|---|---|---|
| | "EN" | "N" | "D" |
| 2x6 | 1⅜" | ⅞" | 1¾" DIA. |
| 2x8 | 1⅞" | 1¼" | 2½" DIA. |
| 2x10 | 2⅜" | 1½" | 3⅛" DIA. |
| 2x12 | 2⅞" | 1⅞" | 3¾" DIA. |
| 2x14 | 3⅜" | 2¼" | 4½" DIA. |

NOTE: FOR COMPOSITE LUMBER, SEE MANUFACTURER'S RECOMMENDATIONS.




## TYPICAL JOIST NOTCH 6




## NON-BEARING WALL CONN. 3

REVISIONS:

| | |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |

REGISTERED PROFESSIONAL ENGINEER MILES T. LOVELACE No. C 39734 Exp. 12/31/23 STATE OF CALIFORNIA

Digitally signed by Miles Lovelace on July 8, 2024


LOVELACE ENGINEERING
STRUCTURAL ENGINEERING SERVICES
10509 Vista Sorrento Pkwy, Ste. 102
San Diego, CA 92121
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www.lovelaceeng.com


Project Name:
2915 ULRIC DEVELOPMENT

2915 ULRIC STREET
SAN DIEGO, CA 92111

Designer:
GTC DESIGN

1205 J STREET, SUITE D
SAN DIEGO, CA 92101

| | |
|---|---|
| Job No. | J23365 |
| Cad Ref. No: | - |
| Date Drawn: | 7/29/23 |
| Date Issued: | - |
| Proj. Engineer: | A.S. |
| Drawn By: | - |
| Checked By: | M.T.L. |
| Scale: | N.T.S. |

Drawing Status:

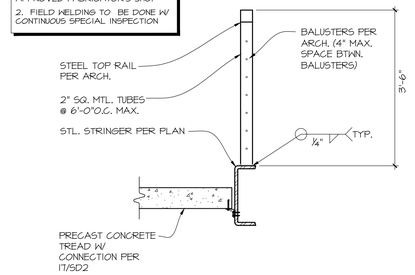
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- ☐ PRELIMINARY DWGS. (NOT FOR CONSTRUCTION)
- ☐ DESIGN DEVELOPMENT DWGS. (NOT FOR CONSTRUCTION)
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SHEET TITLE :
STANDARD STRUCTURAL DETAILS

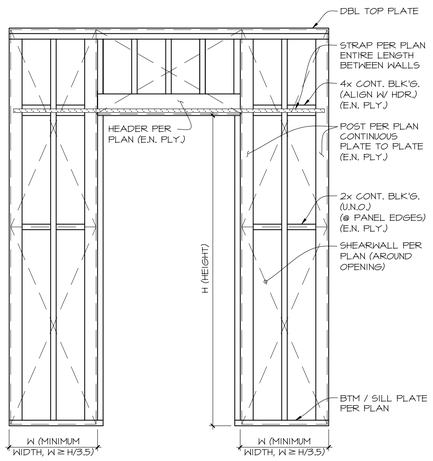
SD1

NOTES:
1. SHOP WELDING TO BE DONE IN AN APPROVED FABRICATOR'S SHOP.
2. FIELD WELDING TO BE DONE W/ CONTINUOUS SPECIAL INSPECTION



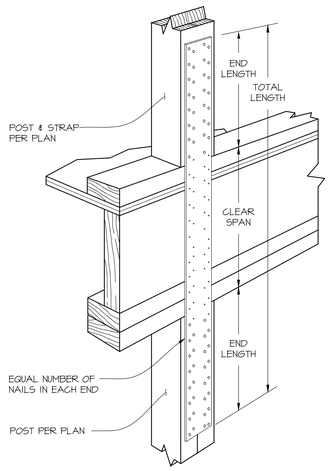

NOTE: OPEN GUARDS SHALL HAVE BALUSTERS OR ORNAMENTAL PATTERNS SUCH THAT A 4"~ SPHERE CAN NOT PASS THROUGH ANY OPENING.

## STEEL GUARDRAIL DETAIL 24



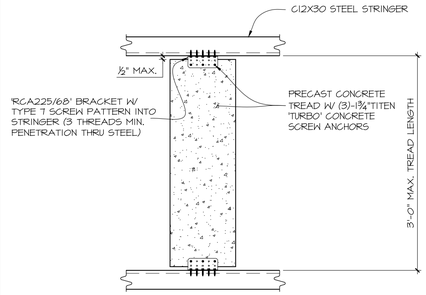

## SHEARWALL STRAP DETAIL 21

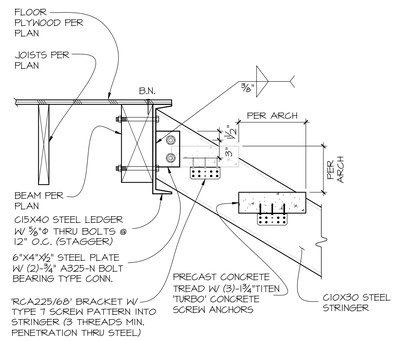
N WD WL DR

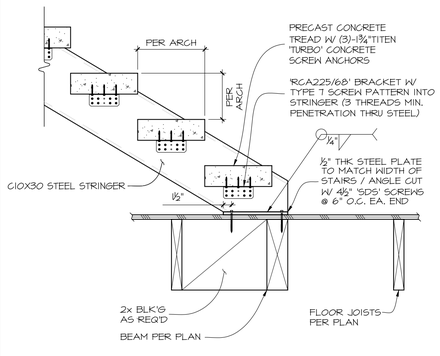


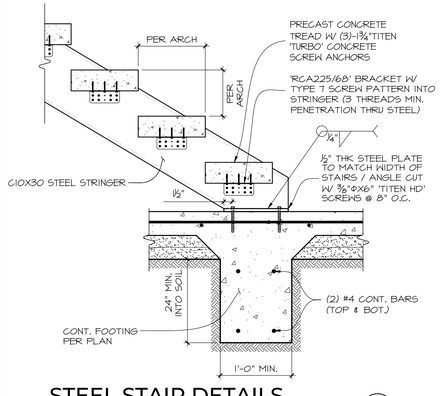

## VERTICAL STRAP DETAIL 18

NOTICE:
USE PRECAST CONCRETE TREAD "OPEN OR CLOSED" RISER PER ARCHITECTURAL. DETAILS SHOW OPEN RISER FOR SIMPLICITY.

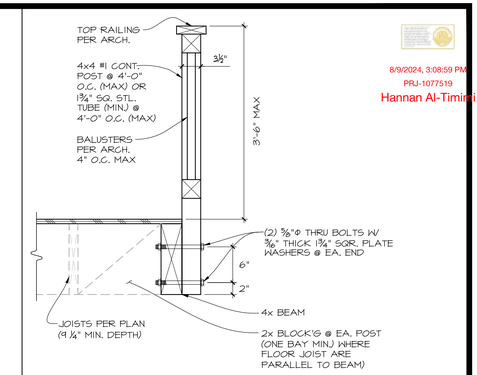


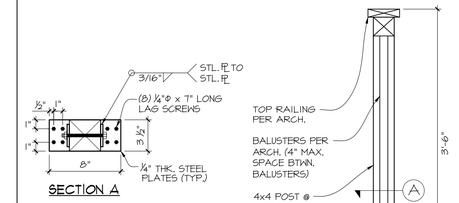



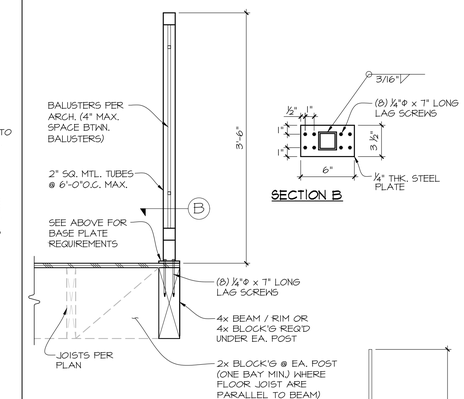



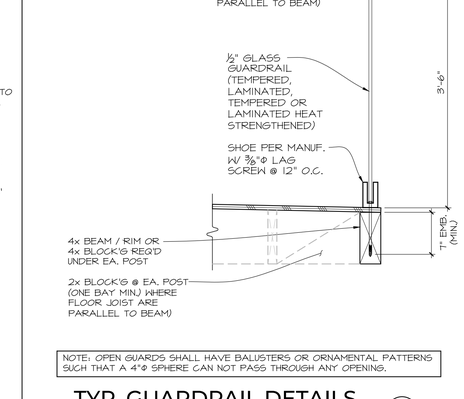




## STEEL STAIR DETAILS 17



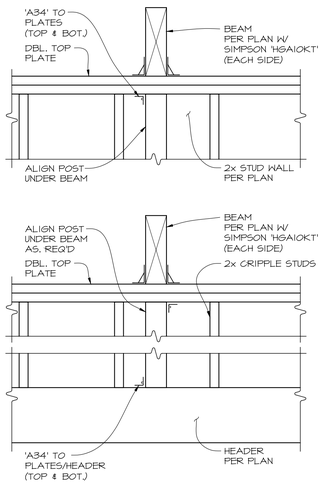




NOTE: OPEN GUARDS SHALL HAVE BALUSTERS OR ORNAMENTAL PATTERNS SUCH THAT A 4"Φ SPHERE CAN NOT PASS THROUGH ANY OPENING.

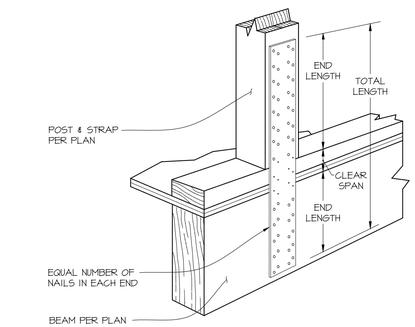
## TYP. GUARDRAIL DETAILS 16

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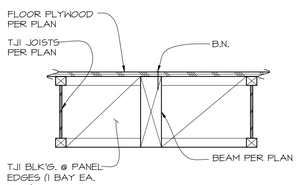

## TYP. BEAM CONNECTION 22

N WD FL 2x EX PE 1



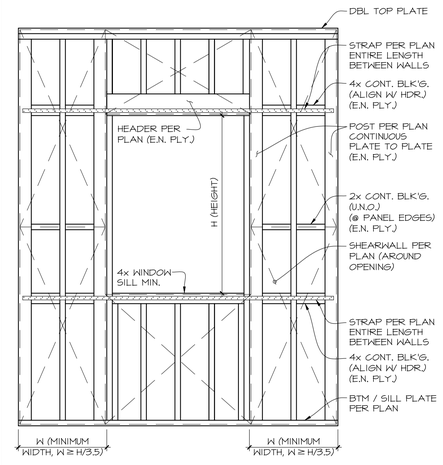

## VERTICAL STRAP DETAIL 19

BLANK




## SHEAR TRANSFER DETAIL 23

N WD FL TJI IN PA




## SHEARWALL STRAP DETAIL 20

N WD WL DR


8/9/2024, 3:08:59 PM
PRJ-1077519
Hannan Al-Timimi


REVISIONS:

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| 2 | |
| 3 | |
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| 6 | |

REGISTERED PROFESSIONAL ENGINEER MILES T. LOVELACE No. C 39734 Exp. 12/31/23 STATE OF CALIFORNIA

Digitally signed by Miles Lovelace on July 8, 2024


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Project Name:

2915 ULRIC DEVELOPMENT

2915 ULRIC STREET
SAN DIEGO, CA 92111

Designer:

GTC DESIGN

1205 J STREET, SUITE D
SAN DIEGO, CA 92101

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SHEET TITLE :

STANDARD STRUCTURAL DETAILS

SD2

NOTES

1. FOR EXTERIOR WALL CONDITIONS, USE EXTERIOR SHEATHING BOARD (TYPE 'X' WHERE APPLICABLE) SHALL BE USED ON EXTERIOR SIDE OF STUD FRAMED WALLS. WHERE THERMAL BATT INSULATION IS REQUIRED, PROVIDE A VAPOUR BARRIER ON THE WARM SIDE.

2. INSTALL FIRE RATED GWB-X FINISH CONTINUOUS PAST PARTITION FRAMING WHERE INTERNAL PARTITIONS ABUT INTO FIRE RATED WALLS.

3. ALL WALLS AND FURRING TO BE BUILT FULL HEIGHT BETWEEN FLOOR SLABS.

4. UNLESS NOTED OTHERWISE ALL WALLS CONTAINING PLUMBING LINES SHALL HAVE ACOUSTIC BATT INSULATION TO MAXIMUM THICKNESS PERMITTED BY WALL TYPE.

5. FIRESTOP ALL PIPES AND CONDUITS WHERE THEY PENETRATE ALL FLOORS, SHAFT WALLS, AND ANY OTHER FIRE-RATED AND CONCRETE WALLS.

6. INSTALL "DENS-SHIELD" MOISTURE RESISTANT GWB FULL HEIGHT AT BATHTUB AND SHOWER ENCLOSURES TO 4" MIN. BEYOND TUB.

7. WHERE FIRE-RATED WALL TYPES FORM SHOWER ENCLOSURES, "DENS-SHIELD" SHALL BE APPLIED OVER AND IN ADDITION TO THE TOTAL DESIGNATED FIRE-RATED WALL ASSEMBLY, & CONTINUE TO NEAREST CHANGE IN WALL DIRECTION.

8. ALL WALL STEEL STUDS ARE SHOWN MINIMUM WIDTH. CONTRACTOR TO ALLOW FOR INCREASING WIDTH AND/OR GAUGE IF REQUIRED DUE TO JOVER HEIGHT OR OVER SPAN CONDITIONS. WIDTH AND HEIGHT TO BE INCREASED IN ACCORDANCE WITH THE MANUFACTURER'S SPAN TABLES.

9. ALL CONCRETE BLOCK TO BE ULC LABELED FOR 6" & 8" THICKNESS.

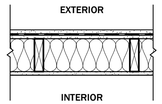
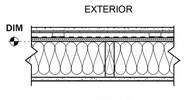
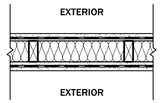
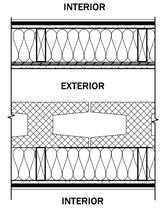
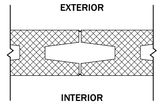
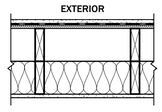
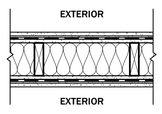
10. SEE ALSO WARNOCK HERSEY CERTIFICATION LISTINGS AND UNDERWRITERS LABORATORIES OF CANADA-VOLUME 11 - BUILDING CONSTRUCTION, WHEN REFERRING TO AFOREMENTIONED DETAILS REPRODUCED ON THIS SHEET.

11. NON-LOAD BEARING SINGLE STUDS, FRAMING AND FURRING TO BE 25 ga. SEE SPECIFICATIONS.

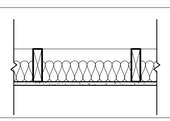
12. FOR TILE WALLS - WHERE SHOWN, THE OVERALL ASSEMBLY R-VALUES ARE PROVIDED FOR WALL TYPES USED FOR EXTERIOR APPLICATIONS PER CALCULATIONS BY THE BUILDING ENVELOPE CONSULTANT

13. PROVIDE BATT INSULATION AT ALL PLUMBING WALL LOCATIONS

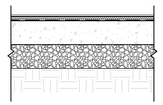
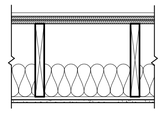
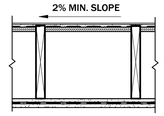
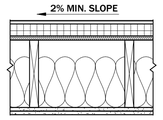
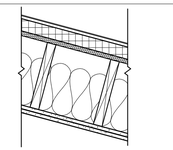
# EXTERIOR WALL ASSEMBLIES

| TYPE | FIRE RATING (MIN.) | F.R.R NO. | S.T.C NO. | ASSEMBLY DIAGRAM | DESCRIPTION |
|---|---|---|---|---|---|
| E1 | 1HR | CBC TABLE 721.1(2) 15-1.12 | STC RATING: 50-54 |  | **STUCCO WALL ON 2X6 WD FRMG**<br>R-VALUE: **R-21**<br>• 7/8" CEMENT PLASTER O/ SELF-FURRING MTL. LATH<br>• VAPROMAT 3MM DRAINAGE MATRIX W/ INTEGRATED FILTER FABRIC<br>• WRAPSHIELD SA SELF-ADHERED<br>• 5/8" TYPE 'X' GWB<br>• 2X6 FRAMING @ 16" O.C. MAX<br>• C/W: THERMAL BATT INSULATION PER TITLE 24<br>• 5/8" TYPE 'X' GWB OR 5/8" MOISTURE RESISTANT GWB @ BATHS & KITCHENS |
| E1.1 | 1HR | UL DESIGN U356 | |  | **EXTERIOR WALL - GENERIC SIDING**<br>R-VALUE: **R-21**<br>• SIDING PER ELEVATIONS<br>• -3/4" MIN. FURRING STRIPS<br>• GREEN GUARD RAINDROP 20 MIL BUILDING WRAP OR EQ<br>• PLYWOOD SHEATHING PER STRUCT<br>• 2X6 FRAMING @ 16" O.C. MAX PER T24<br>• C/W: THERMAL BATT INSULATION PER T24<br>• 5/8" TYPE 'X' GYP. BD. |
| E2 | 1HR | CBC TABLE 721.1(2) 16-1.1 | N/A |  | **STUCCO LOW WALL/PARAPET ON 2X4 WD FRMG**<br>• 7/8" CEMENT PLASTER O/ SELF-FURRING MTL. LATH<br>• VAPROMAT 3MM DRAINAGE MATRIX W/ INTEGRATED FILTER FABRIC<br>• WRAPSHIELD SA SELF-ADHERED<br>• PLYWOOD SHEATHING PER STRUCT.<br>• 2X4 FRAMING @ 16" O.C. MAX<br>• C/W: THERMAL BATT INSULATION PER TITLE 24<br>• 5/8" TYPE 'X' GWB<br>• WRAPSHIELD SA SELF-ADHERED<br>• VAPROMAT 3MM DRAINAGE MATRIX W/ INTEGRATED FILTER FABRIC<br>• 7/8" CEMENT PLASTER O/ SELF-FURRING MTL. LATH |
| E3 | 1HR | | STC RATING: 55 |  | **UNIT SEPARATION WALL**<br>R-VALUE: **R-19**<br>• THINSET TILE O/DENS-SHIELD, WHERE OCCURS<br>• 5/8" TYPE GWB OR 5/8" MOISTURE RESISTANT GWB @ BATHS & KITCHENS REPORT FOR LOCATION<br>• 2x STUDS @ 16" O.C., S.S.D.<br>• CMU WALL PER STRUCTURAL<br>• AIR-GAP PER STRUCTURAL<br>• 7/8 STUCCO<br>• 5/8" PLYWOOD<br>• 2X STUDS AT 16" O.C., S.S.D. 5/8" TYPE GWB OR 5/8" MOISTURE RESISTANT GWB @ BATHS & KITCHENS<br>• THINSET TILE O/DENS-SHIELD, WHERE OCCURS |
| E4 | 1HR | CBC TABLE 721.1(2) 4-1.1 | 38 |  | **6" CMU WALL**<br>• 6" THK CMU WALL<br><br>NOTE:<br>STC 38 SEE PLAN FOR FIRE RATING GENERIC<br>1 HR RATED UL #U906 |
| E5 | 1HR | CBC TABLE 721.1(2) 15-1.3 | STC RATING: 50 - 54 |  | **STUCCO / GYPSUM WALL ON (DOUBLE) 2 x 6 WOOD FRMG**<br>• 7/8" CEMENT PLASTER O/ SELF-FURRING MTL. LATH<br>• VAPROMAT 3MM DRAINAGE MATRIX W/ INTEGRATED FILTER FABRIC<br>• WRAPSHIELD SA SELF-ADHERED<br>• 5/8" PLYWOOD SHEATHING<br>• 2 x 6 FRAMING @ 16" O.C. MAX<br>• 2 x 6 FRAMING @ 16" O.C. MAX<br>• C/W: THERMAL BATT INSULATION PER TITLE 24<br>• 5/8" TYPE 'X' GWB OR 5/8" MOISTURE - RESISTANT GWB @ BATHS & KITCHENS |
| E6 | 1HR | CBC TABLE 721.1(2) 15-1.12 | STC RATING: 50-54 |  | **STUCCO WALL ON 2X6 WD FRMG**<br>R-VALUE: **R-21**<br>• 7/8" CEMENT PLASTER O/ SELF-FURRING MTL. LATH<br>• VAPROMAT 3MM DRAINAGE MATRIX W/ INTEGRATED FILTER FABRIC<br>• WRAPSHIELD SA SELF-ADHERED<br>• 5/8" TYPE 'X' GWB<br>• 2X6 FRAMING @ 16" O.C. MAX<br>• 5/8" TYPE 'X' GWB<br>• WRAPSHIELD SA SELF-ADHERED<br>• VAPROMAT 3MM DRAINAGE MATRIX W/ INTEGRATED FILTER FABRIC<br>• 7/8" CEMENT PLASTER O/ SELF-FURRING MTL. LATH |

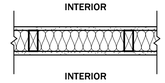
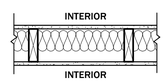
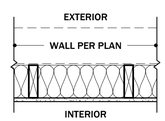
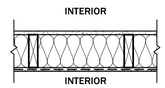
# CEILING ASSEMBLIES

| TYPE | FIRE RATING (MIN.) | F.R.R NO. | S.T.C NO. | ASSEMBLY DIAGRAM | DESCRIPTION |
|---|---|---|---|---|---|
| C1 | N/A | N/A | STC RATING: 50-54 |  | **TYPICAL GWB CEILING**<br>• WOOD FRAMING 2X8<br>• C/W: INSULATION PER TITLE 24<br>• 5/8" TYPE 'X' GWB OR 5/8" MOISTURE RESISTANT GWB @ BATHS |

# ROOF/FLOOR ASSEMBLIES

| TYPE | FIRE RATING (MIN.) | F.R.R NO. | S.T.C NO. | ASSEMBLY DIAGRAM | DESCRIPTION |
|---|---|---|---|---|---|
| F1 | N/A | N/A | N/A |  | **CONCRETE SLAB ON GRADE**<br>• FINISH FLOOR, REFER TO FINISH SCHED.<br>• 3/4" PLYWOOD NAILED TO CONCRETE<br>• 6-MIL WATERPROOFING MEMBRANE OR VAPOR BARRIER (ICC ESR-1413), ICC ESR #2417, ICC ESR #2786, OR ICC ESR # 3474<br>• EXISTING CONCRETE SLAB<br>• EXISTING ENGINEERED COMPACTED FILL<br>• EXISTING GRADED SUB BASE COURSE |
| F3 | 1HR | LABC 1207 & LARC DOC #P/BC 2023-069 | STC RATING: 50<br><br>IIC RATING: 50 |  | **TYPICAL FLOOR/CEILING ASSEMBLY**<br>• 13 OZ. FACE WT. CARPET (31 OZ. TOT) AND 40 OZ., JUTTED PAD, OR 48 OZ FOAM RUBBER, OR 3/8" REBONDED URETHANCE FOAM (4 PCF), OR 1/2" URETHANE FOAM (2.4 PCF).<br>• SHEET VINYL AND LINOLEUM FLOOR COVERINGS WITH 1/8" MIN. THK. RESILIENT BACKING MAY BE SUBSTITUTED FOR CARPET AND PADDING IN KITCHEN AND BATHROOM AREAS, IF CEILINGS ARE ON RESILIENT CHANNELS.<br>• DOUBLE 5/8" MIN. FRT PLYWOOD SHEATHING PER STRUCT.<br>• WOOD FRAMING 2X8<br>• THE MINERAL FIBER INSULATION SHALL HAVE A THERMAL RESISTANCE R VALUE OF 11 OR GREATER AS DETERMINED BY FEDERAL SPECIFICATION HH-I-52IE.<br>• 1 HR. RATED LATH AND PLASTER OR 1/2" TYPE 'X' GYPSUM BOARD |
| F4 | N/A | ESR-2201 | STC RATING: 50-54<br><br>IIC RATING: 58 |  | **TYPICAL BALCONY ASSEMBLY**<br>• DECKING COATING SYSTEM TC-1 BASECOAT CEMENT, WESTCOAT<br>• 5/8" MIN. FRT PLYWOOD SHEATHING PER STRUCT.<br>• WOOD FRAMING 2X8<br>• 5/8" EXTERIOR GRADE SOFFIT BOARD TYPE 'X'<br>• WRAPSHIELD SA SELF-ADHERED<br>• 7/8" CEMENT PLASTER O/ SELF-FURRING MTL. LATH<br><br>@ STORAGE AREA PROVIDE 7/8" STUCCO O/ SELF–FURRING MTL LATH |
| R1 | 1HR | GA FILE NO. RC2601 | STC RATING: 50-54 |  | **TYPICAL LOW-SLOPED ROOF ASSEMBLY**<br>CLASS "A" ROOF<br>• 60 MIL. TPO MEMBRANE (ASTM D6878, ICC ESR-4676, ICC ESR-1463) OVER 1/2" PROTECTION BOARD, INSTALL PER ROOFING MFR. WARRANTIED INSTRUCTIONS<br>• TAPERED RIGID INSULATION<br>• SLOPESHIELD PLUS SA (SELF-ADHERED) W.R.B.<br>• PLYWOOD SHEATHING PER STRUCT.<br>• WOOD FRAMING 2X4<br>• C/W: THERMAL BATT INSULATION PER TITLE 24<br>• (2) LAYERS OF 5/8" TYPE "X" GWB |
| R2 | 1HR | ESR-1475 | STC RATING: 56 |  | **TYPICAL LOW-SLOPED ROOF ASSEMBLY**<br>CLASS "A" ROOF<br>• 60 MIL. TPO MEMBRANE (ASTM D6878, ICC ESR-4676, ICC ESR-1463) OVER 1/2" PROTECTION BOARD, INSTALL PER ROOFING MFR. WARRANTIED INSTRUCTIONS<br>• TAPERED RIGID INSULATION<br>• SLOPESHIELD PLUS SA (SELF-ADHERED) W.R.B.<br>• PLYWOOD SHEATHING PER STRUCT.<br>• WOOD FRAMING 2X4<br>• C/W: THERMAL BATT INSULATION PER TITLE 24<br>• (2) LAYERS OF 5/8" TYPE "X" GWB |

# INTERIOR WALL ASSEMBLIES

| TYPE | FIRE RATING (MIN.) | F.R.R. NO. | S.T.C. NO. | ASSEMBLY DIAGRAM | DESCRIPTION |
|---|---|---|---|---|---|
| WD4 | N/A | N/A | STC RATING: 50-54 |  | **2X4 STUD WALL**<br>• 1 LAYER 5/8" GWB OR 5/8" MOISTURE RESISTANT GWB @ BATHS & KITCHENS<br>• 2X4 FRAMING @ 16" O.C. MAX<br>• C/W: SOUND INSULATION<br>• 1 LAYER 5/8" GWB OR 5/8" MOISTURE RESISTANT GWB @ BATHS & KITCHENS |
| WD6 | N/A | N/A | STC RATING: 50-54 |  | **2X6 STUD WALL**<br>• 1 LAYER 5/8" GWB OR 5/8" MOISTURE RESISTANT GWB @ BATHS & KITCHENS<br>• 2X6 FRAMING @ 16" O.C. MAX<br>• C/W: SOUND INSULATION<br>• 1 LAYER 5/8" GWB OR 5/8" MOISTURE RESISTANT GWB @ BATHS & KITCHENS |
| WD6a | 1HR | CBC TABLE 721.1(2) 16-1.3 | STC RATING: 50-54 |  | **2X6 STUD WALL (EXT. FURRED WALL)**<br>R-VALUE: **R-21**<br>• 2X6 FRAMING @ 16" O.C. MAX<br>• C/W: THERMAL BATT INSULATION R-21<br>• 1 LAYER 5/8" TYPE "X" GWB OR 5/8" MOISTURE RESISTANT GWB @ BATHS & KITCHENS |
| WD4a<br>WD6b | 1HR | GA FILE NO. WP 3243 | STC RATING: 50-54 |  | **2X(X) STUD PARTITION**<br>• 1 LAYER 5/8" TYPE 'X' GWB OR 5/8" MOISTURE RESISTANT GWB BATHS & KITCHENS<br>• 2/6 FRAMING @ 16" O.C. MAX<br>• C/W: THERMAL BATT INSULATION R-21<br>• 1 LAYER 5/8" TYPE "X" GWB OR 5/8" MOISTURE RESISTANT GWB @ BATHS & KITCHENS<br>NOTE:<br>PW4a - 2X4 STUD<br>PW6b - 2X6 STUD |

GTC DESIGN
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619.485.5546

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PRJ-1077519
Hannan Al-Timimi

# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET, SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 6 | CITY RESUBMITTAL R6 | 07/31/2024 |

Sheet Name

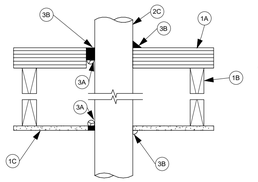
ASSEMBLIES

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER

A005

GTC DESIGN STUDIO ©




SECTION A-A

1. FLOOR/ CEILING ASSEMBLY:
   - A. FLOORING SYSTEM: 1" GYPCRETE ON 1/2" PLYWOOD SUBFLOOR
   - B. WOOD JOIST: NOM. TJI
   - C. CEILING SYSTEM; 1 LAYER OF 5/8" GYPSUM WALLBOARD, PER UL DESIGN.
2. METALLIC PIPE:
   - A. STEEL PIPE
   - B. IRON PIPE: 8" DIAMETER (OR SMALLER) CAST OR DUCTILE IRON PIPE.
   - C. CONDUIT: 4" DIAMETER (OR SMALLER) ELECTRICAL METALLIC TUBING (EMT) OR STEEL CONDUIT
   - D. COPPER TUBING: 4" DIAMETER (OR SMALLER) REGULAR (OR HEAVIER) COPPER TUBING.
   - E. COPPER PIPE: 4" DIAMETER ( OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE. ANNULAR SPACE FROM MINIMUM 0" TO MAXIMUM 7/8".
3. FORMING AND FIRESTOP MATERIALS:
   - A. FORMING MATERIAL OPTIONAL): FOAM BACKER ROD PACKED INTO OPENING AS A PERMANENT FORM.
   - B. TYPE IA: MINIMUM 1/2" THICK SEALANT APPLIED WITHIN THE ANNULUS, FLUSH WITH THE TOP OF THE FLOOR AND BOTTOM OF THE CEILING ASSEMBLIES. ADDITIONAL SEALANT TO BE APPLIED SUCH THAT A MINIMUM 1/2" CROWN IS FORMED AROUND THE PENETRATING AREA.

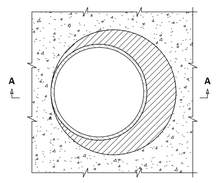
## 1 CONDUIT PENETRATION THRU TYP. WOOD - FLOOR/CEILING ASSEMBLY

1 1/2" = 1'-0"

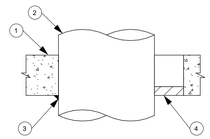
ASTM G21, ASTM E 90, CAN/ULC-S115, UL 1479, ASTM E 814 , ASTM E84

F RATING = 3-HR
T RATING = 0-HR

TOP VIEW



SECTION A-A



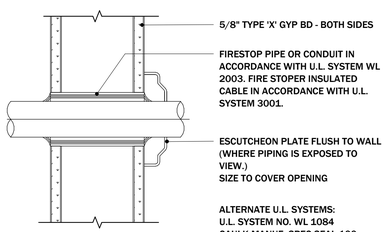

1. FLOOR OR WALL ASSEMBLY :
   - A.) LIGHTWEIGHT OR NORMAL-WEIGHT CONCRETE FLOOR OR WALL (MIN. 4-1/2" THICK),
   - B. PRECAST CONCRETE FLOOR OR WALL
   - C. ANY U.L. CLASSIFIED CONCRETE BLOCK WALL.
2. THROUGH PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
   - A. MAXIMUM 10" DIAMETER STEEL PIPE (SCHEDULE 20 OR HEAVIER)..
   - B. MAXIMUM 4" DIAMETER COPPER PIPE (TYPE L OR HEAVIER).
   - C. MAXIMUM 4" DIAMETER EMT OR STEEL CONDUIT.
3. MIN. 1/2" CROWN HILTI FS-ONE HIGH-PERFORMANCE INTUMESCENT FIRESTOP SEALANT AT POINT OF CONTACT.
4. MIN. 1" DEPTH HILTI FS-ONE HIGH-PERFORMANCE INTUMESCENT FIRESTOP SEALANT FLUSH WITH TOP OR BOTTOM OF FLOOR. (SEE NOTE NO. 4 BELOW)

NOTES:
1. MAXIMUM DIAMETER OF OPENING = 14".
2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 3-1/4".
3. PIPE MAY BE CENTERED OR OFFSET IN HOLE.
4 IF PENETRATING CONCRETE OR CONCRETE BLOCK WALL ASSEMBLY, 1" DEPTH HILTI FS-ONE FIRESTOP SEALANT IS REQUIRED TO BE FLUSH WITH BOTH SIDES, MINERAL WOOL MAY BE USED AS A BACKER FOR PROPER INSTALLATION OF FIRESTOP SEALANT.

## 3 METALLIC PIPE THRU CONC FLOOR/WALL/BLOCK WALL

1 1/2" = 1'-0"

ASTM G21, ASTM E 90, CAN/ULC-S115, UL 1479, ASTM E 814 , ASTM E84




INSTALL FIRE STOPPING IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS. MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE AVAILABLE ON SITE FOR REVIEW BY INSPECTING AUTHORITIES.

DETAIL SHOWN FOR REFERENCE ONLY PENETRATIONS OF PIPE CONDUITS, ETC., IN WALLS REQUIRING PROTECTED OPENINGS SHALL BE FIRE STOPPED. FIRE STOP MATERIAL SHALL BE A TESTED ASSEMBLY APPROVED BY THE STATE FIRE MARSHALL.

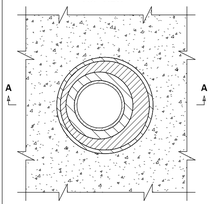
## 10 09-PIPE PENETRATION @ 1 HR. RATED WALL

1 1/2" = 1'-0"

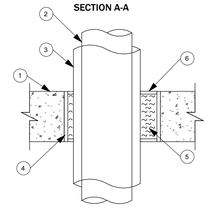
D9PIPEX

F RATING = 3-HR
T RATING = 0-HR
L RATING AT AMBIENT = 4 CFM/SQ. FT
L RATING AT 400$^0$F = LESS THAN 1 CFM/SQ. FT.

TOP VIEW



SECTION A-A




1. CONCRETE FLOOR/WALL ASSEMBLY (MINIMUM 4-1/2" THICK).
2. PENETRATING METALLIC PIPE TO BE ONE OF THE FOLLOWING:
   - A. MAXIMUM 4" NOMINAL DIAMETER STEEL PIPE.
   - B. MAXIMUM 4" NOMINAL DIAMETER COPPER PIPE.
   - C. MAXIMUM 4" NOMINAL DIAMETER STEEL CONDUIT.
   - D. MAXIMUM 4" NOMINAL DIAMETER EMT.
3. MAXIMUM 3/4" THICK AB/PVC PIPE INSULATION.
4. OPTIONAL: MAX. 8" NOMINAL DIA. STEEL PIPE SLEEVE (SCHEDULE) 20 OR HEAVIER).
5. MINIMUM 4" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED.
6. MIN. 1/4" DEPTH HILTI FS-ONE HIGH-PERFORMANCE INTUMESCENT FIRESTOP SEALANT.

NOTES:
1. MAXIMUM DIAMETER OF OPENING = 8-5/8".
2. ANNULAR SPACE = MINIMUM 1/2", MAXIMUM 1-1/2".
3. FIRESTOP SEALANT IS REQUIRED ON EACH SIDE OF A WALL ASSEMBLY.

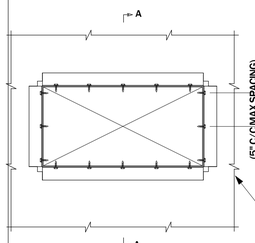
## 2 INSULATED MTL PIPE THRU CONCRETE FLOOR/WALL

1 1/2" = 1'-0"

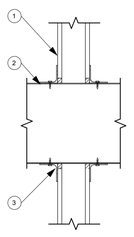
ASTM G21, ASTM E 90, CAN/ULC-S115, UL 1479, ASTM E 814 , ASTM E84

F RATING = 1-HR
T RATING = 0-HR

FRONT VIEW




SECTION A-A



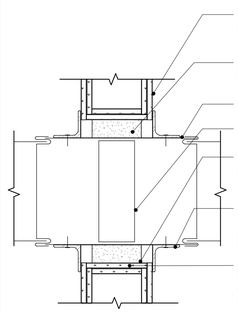

1. GYPSUM WALL ASSEMBLY (1-HR. FREE RATING).
2. MINIMUM 24 GA. RECTANGULAR STEEL DUCT (MAXIMUM SIZE: 24"X12").
(NOTE: NOT FOR USE IN DUCT SYSTEMS CONTAINING A DAMPER).
3. MINIMUM 5/8" DEPTH HILTI FS 601 ELASTOMERIC FIRESTOP SEALANT IN ANNULAR SPACE.
4. SEE NOTE NO. 3 BELOW.

NOTES:
1. MAXIMUM AREA OF OPENING = 325 SQUARE INCHES WITH MAXIMUM DIMENSION OF 25 INCHES.
2. ANNULAR SPACE = MINIMUM 1/4", MAXIMUM 3/4".
3. AFTER SEALING SPACE BETWEEN DUCT AND GYPSUM WALL WITH HILTI FS 601 ELASTOMERIC FIRESTOP SEALANT, FASTEN STEEL ANGLE (L2 X 2 X 1/8") TO DUCT WITH NO. 8 (OR LARGER) STEEL SHEET METAL SCREWS. ANGLE DOES NOT HAVE TO BE FASTENED TO THE WALL.

## 4 MTL DUCT (W/O DAMPER) THRU 1-HR GYP BD

1 1/2" = 1'-0"

UL 1479, C-AJ-2110




## 11 DUCT THRU 1 HR. FRAME WALL

1 1/2" = 1'-0"

D2DUCT

# THROUGH PENETRATION FIRESTOP SYSTEM

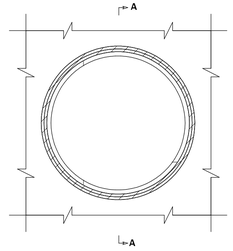
TAKEN FROM SECTION (XHEZ) OF 2004 UL FIRE RESISTANCE DIRECTORY (VOLUME 2B)

| PENETRATION TYPE (UL DESIGNATION) | DESCRIPTION | DESIGN NO. U309 WALL ASSEMBLY | DESIGN NO. U311 WALL ASSEMBLY | DESIGN NO. L528 FLOOR ASSEMBLY | DESIGN NO. U301 WALL ASSEMBLY | DESIGN NO. U340 WALL ASSEMBLY | DESIGN NO. L501 FLOOR ASSEMBLY |
|---|---|---|---|---|---|---|---|
| 1000-1999 | METALLIC PIPE, CONDUIT, OR TUBING | WL1001, WL1003 | WL1002, WL1003 | FC1006 | WL1002, WL1003 | FC1006 | WL1002, WL1003 |
| 2000-2999 | NON-METALLIC PIPE, CONDUIT, OR TUBING | WL2002, WL2003 | WL2002, WL2003 | FD2007, FD2008 | WL2002, WL2003 | FD2007, FD2008 | WL2002, WL2003 |
| 3000-3999 | ELECTRICAL CABLE | WL3001, WL3018 | WL3001, WL3018 | FD2007, FD2008 | WL3001, WL3018 | FD2007, FD2008 | WL3001, WL3018 |
| 4000-4999 | CABLE TRAYS W/ ELECTRICAL CABLES | WL4001 | WL4001 | N/A | WL4001 | N/A | WL4001 |
| 5000-5999 | INSULATED PIPES | WL5001 | WL5001 | WL5001 | WL5001 | WL5001 | WL5001 |
| 6000-6999 | MISC. ELECTRICAL PENETRATIONS | WL6002 | WL6002 | N/A | WL6002 | N/A | WL6002 |
| 7000-7999 | MISCELLANEOUS MECH. PENETRATIONS | WL7001, WL7003 | WL7001, WL7003 | N/A | WL7001, WL7003 | N/A | WL7001, WL7003 |
| 8000-8999 | MISC. PENETRATION GROUPINGS | WL8001 | WL8001 | N/A | WL8001 | N/A | WL8001 |

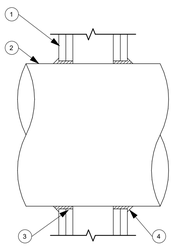
NOTES:
1. ENCLOSE IN HOUR RATED WALL ASSEMBLY, UL #499
2. IN MATRIX ABOVE, CELLS WITH UPPER AND LOWER NUMBERS INDICATE THE FOLLOWING: TOP SYSTEM NUMBER APPLIES TO PIPES LESS THAN OR EQUAL TO 4" NOMINAL DIMENSION BOTTOM SYSTEM NUMBER APPLIES TO PIPES LARGER THAN 4" NOMINAL DIMENSION.
3. SEE DETAIL 6 A- 8.2 FOR FOR TYPICAL PIPE PENETRATIONS THROUGH FIRE-RATED WALLS.

F RATING = 1-HR. AND 2-HR.
T RATING = 0-HR
L RATING AT AMBIENT = LESS THAN 1 CFM/ SQ. FT.
L RATING AT 400$^0$F = 4 CFM/SQ. FT.

FRONT VIEW



SECTION A-A




1. GYPSUM WALL ASSEMBLY (1-HR. OR 2-HR. FIRE-RATING)(2-HR. SHOWN).
2. PENETRATING TIME TO BE ONE OF THE FOLLOWING:
   - A. MAXIMUM 12" DIAMETER STEEL PIPE (SCHEDULE 20 OR HEAVIER).
   - B. MAXIMUM 12" DIAMETER CAST IRON PIPE.
   - C. MAXIMUM 6" DIAMETER COPPER PIPE.
   - D. MAXIMUM 6" DIAMETER EMT.
   - E. MAXIMUM 6" DIAMETER STEEL CONDUIT.
3. HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT FORCED INTO ANNULAR SPACE TO MAXIMUM EXTENT.
4. MINIMUM 1/2" BEAD HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT AT PIPE/GYPSUM WALLBOARD INTERFACE.

NOTE: ANNULAR SPACE = MINIMUM 0", MAXIMUM 1/4".

## 5 METAL PIPE THROUGH 1-HR. OR 2-HR. GYPSUM WALL

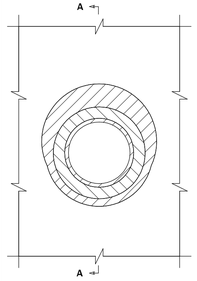
1 1/2" = 1'-0"

ASTM G21, ASTM E 90, CAN/ULC-S115, UL 1479, ASTM E 814 , ASTM E84

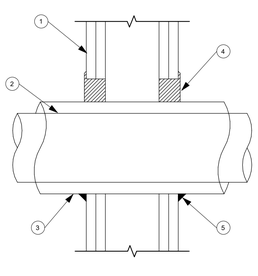
T RATING = 1/2-HR.
F RATING = 1 HR. AND 2-HR

L RATING AT 400$^0$F = LESS THAN 1 CFM/SQ. FT.
L RATING AT AMBIENT = 4 CFM/SQ. FT.

FRONT VIEW



SECTION A-A




1. GYPSUM WALL ASSEMBLY (1-HR. OR 2-HR. FIRE RATING)(2-HR. SHOWN).
2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
   - A. MAXIMUM 4" NOMINAL DIAMETER STEEL PIPE.
   - B. MAXIMUM 2" NOMINAL DIAMETER COPPER PIPE.
   - C. MAXIMUM 4" NOMINAL DIAMETER STEEL CONDUIT.
   - D. MAXIMUM 4" NOMINAL DIAMETER EMT.
3. MAXIMUM 3/4" THICK (AB/PVC) FLEXIBLE FOAM-TYPE PIPE INSULATION.
4. HILTI FS-ONE HIGH-PERFORMANCE INTUMESCENT FIRESTOP SEALANT:
   - A. MINMUM 5/8" DEPTH OF SEALANT FOR A 1-HR FIRE RATING.
   - B. MINIMUM 1-1/4" DEPTH OF SEALANT FOR A 2-HR. FIRE RATING
5. MINIMUM 1/2" CROWN HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT AT PIPE INSULATION/WALL INTERFACE.

NOTES:
1. MAXIMUM DIAMETER OF OPENING = 7-1/2"
2. ANNULAR SPACE = MINMUM 0", MAXIMUM 1-1/2".

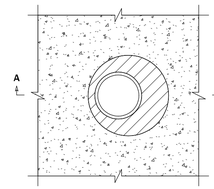
## 8 NSULATED MTL PIPE THRU 1-HR OR 2-HR GYP BD

1 1/2" = 1'-0"

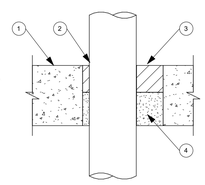
ASTM G21, ASTM E 90, CAN/ULC-S115, UL 1479, ASTM E 814 , ASTM E84

F RATING = 3-HR
T RATING = 0-HR
L RATING AT AMBIENT = LESS THAN 1 CFM/SQ. FT.
L RATING A 400$^0$F = 4 CFM/SQ. FT.

TOP VIEW



SECTION A-A




1. CONCRETE FLOOR OR WALL ASSEMBLY (MINIMUM 4-1/2" THICK).
2. MAXIMUM 3" NOMINAL DIAMETER PVC OR CPVC PLASTIC PIPE (CLOSED PIPING SYSTEM).
3. MIN. 2" DEPTH HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT.
4. HILTI CF 128 FILLER FOAM, MINERAL WOOL, OR BACKER ROD, MAY BE USED AS BACKER FOR HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT.

NOTES:
1. MAXIMUM DIAMETER OF OPENING = 6".
2. ANNULAR SPACE = MINIMUM 1/2", MAXIMUM 2".
3. FIRESTOP SEALANT IS REQUIRED ON EACH SIDE OF A WALL ASSEMBLY.

## 6 PLASTIC PIPE THRU CONC FLOOR/WALL

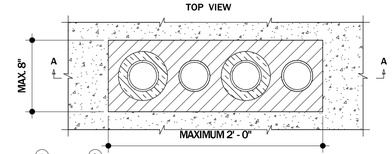
1 1/2" = 1'-0"

F-A 5015, F-A 5017, CAJ-5090, CAJ-5091, CAJ-5048

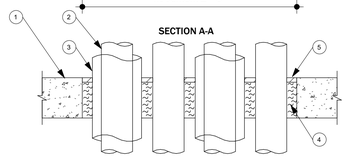
T RATING = 0-HR.
F RATING = 3-HR

L RATING AT 400$^0$F = 6 CFM/SQ. FT.
L RATING AT AMBIENT = 10 CFM/SQ. FT.

TOP VIEW




SECTION A-A




1. CONCRETE FLOOR OR WALL ASSEMBLY:
   - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR OR WALL (MIN. 4-1/2" THICK).
   - B. ANY U.L.-CLASSIFIED CONCRETE BLOCK WALL.
2. PENETRATING ITEMS TO BE ANY COMBINATION OF THE FOLLOWING:
   - A. MAXIMUM 3" NOMINAL DIAMETER STEEL PIPE.
   - B. MAXIMUM 3" NOMINAL DIAMETER COPPER PIPE.
   - C. MAXIMUM 3" NOMINAL DIAMETER STEEL CONDUIT.
   - D. MAXIMUM 3" NOMINAL DIAMETER EMT.
3. OPTIONAL: MAXIMUM 1" THICK GLASS FIBER PIPE INSULATION ON ANY OR ALL PIPES.
4. MAXIMUM 4" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED.
5. MIN. 1/2" DEPTH HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT.

NOTES:
1. MAXIMUM DIAMETER OF OPENING = 192 SQUARE INCHES, WITH A MAXIMUM DESIGN DIMENSION OF 24 INCHES.
2. ANNULAR SPACE = MINIMUM 1-5/8", MAXIMUM 2 -1/2".
3. FIRESTOP SEALANT IS REQUIRED ON EACH SIDE OF A WALL ASSEMBLY.

## 9 MULTIPLE MTL PIPE THRU CONC. FLOOR/WALL/BLOCK

1 1/2" = 1'-0"

ASTM G21, ASTM E 90, CAN/ULC-S115, UL 1479, ASTM E 814 , ASTM E84

# BUILDING ELEMENTS

| STRUCTURAL ELEMENTS | FIRE RESISTANCE ELEMENTS | DESIGN NUMBER(S) |
|---|---|---|
| INTERIOR BEARING WALLS | ONE HOUR | UL-#305 |
| INTERIOR BEARING WALLS | TWO HOUR | FM-WP#360 |
| STEEL COLUMNS | ONE HOUR | UL-#X528 |
| BEAMS | ONE HOUR | UL-#L524 |
| FLOOR/ CEILING ASSEMBLY | ONE HOUR | UL-#L502 |
| ROOF/ CEILING ASSEMBLY | ONE HOUR | FM-FC#172 |
| FLOOR/ CEILING ASSEMBLY | TWO HOUR | UL-#L556 |
| ROOF/ CEILING ASSEMBLY | TWO HOUR | UL-#L556 |
| EXTERIOR BEARING WALLS | ONE HOUR | UL-#U326 |
| EXTERIOR NON-BEARING WALLS | ONE HOUR | UL-#U326 |
| INTERIOR NON-BEARING WALLS | ONE HOUR | UL-#U305 |
| VERTICAL SHAFTS, ELEVATOR HOISTWAY | ONE HOUR | UL-#U305 |
| CORRIDOR ENCLOSURE | ONE HOUR | UL-#U305 |
| EXIST ACCESS OPENINGS | 20 MINUTES | UL-LABEL SCW/HM DOORS |
| GUESTROOM SEPARATION | ONE HOUR | UL-#U311 (ACOUSTICAL) GA-#WP 5510 (CHASE WALL) |
| EXIT STAIRWAY ENCLOSURE | ONE HOUR | UL-#U305 UL-#U311 (ACOUSTICAL) |
| ELEVATOR MACHINE ROOM DOOR | ONE HOUR | UL-#U305, "B" LABEL |
| GUEST LAUNDRY ROOM | ONE HOUR | UL-#U305 |
| ELECTRICAL & MECHANICAL ROOMS | ONE HOUR | UL-#U305 |
| LINECHUTE ACCESS ROOMS | ONE HOUR | UL-#U305 |

NOTES:

1. ALL INTERIOR NON-LOAD BEARING PARTITIONS WITHIN ROOMS SHALL BE 1-HOUR RATED.

2. THE BUILDINGS SHALL BE EQUIPPED THROUGHOUT WITH A SUPERVISED AUTOMATIC FIRE SPRINKLER SYSTEM DESIGNED AND INSTALLED PER THE REQUIREMENTS OF NFPS 13. PLANS AND SPECIFICATIONS OF THE SPRINKLER SYSTEM SHALL BE SUBMITTED FOR LOCAL JURIDICTIONAL REVIEW AND THEY MUST BE APPROVED PRIOR TO CONSTRUCTION. THIS SYSTEM SHALL BE FULLY AUTOMATIC AND MONITORED.

3. FIRE DAMPERS SHALL HAVE THE MIN. FIRE PROTECTION RATING SPECIFIED IN C.B.C. T-716.3.2.1 FOR THE TYPE OF PENETRATION. (C.BC. 716.3.1)

4. FIRE DAMPERS, SMOKE DAMPERS, COMBINATION FIRE/SMOKE DAMPERS AND CEILING RADIATION DAMPERS SHALL BE PROVIDED AS DESCRIBED IN C.B.C. 716.5.7 AND C.B.C. 716.6.

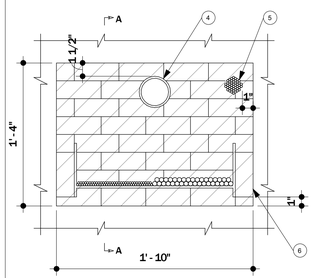
5. DRAFT STOP FLOOR-CEILING ASSEMBLIES PER C.B.C. 717.3.2 FOR R-OCCUPANCIES AND 717.3.3 FOR ALL OTHERS.

6. THERMAL AND ACOUSTICAL INSULATION SHALL COMPLY WITH C.B.C. 719 (C.B.C. 803.8)

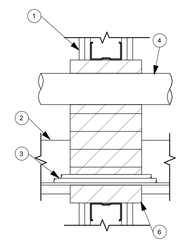
T RATING = 0-HR.
F RATING = 1 HR. OR 2-HR

L RATING AT 400$^0$F = 2 CFM/SQ. FT.
L RATING AT AMBIENT = 5 CFM/SQ. FT.

FRONT VIEW




SECTION A-A




1. GYPSUM BD. WALL ASSEMBLY (1-HR. OR 2-HR. FIRE RATING)(2-HR. SHOWN).
2. STEEL OR ALUMINUM CABLE TRAY (MAXIMUM SIZE: 18" X 6").
3. ANY OF THE FOLLOWING TYPES OF CABLE MAY BE USED WITH MAX 30% FILL ON CABLE TRAY:
   - A. 500 KCMIL SINGLE CONDUCTOR CABLE.
   - B. 7/C NO. 12 AWG COPPER CONDUCTOR CABLE.
   - C. 300 PAIR NO. 24 AWG TELEPHONE CABLE.
4. MAXIMUM 3" DIAMETER PVC PLASTIC PIPE (SCHEDULE 40)(CLOSED OR VENTED PIPING SYTEM).
5. CABLE BUNDLE (MAX 2" DIA.) TO CONSIST OF ANY OF THE FOLLOWING:
   - A. FIBER-OPTIC CABLE.
   - B. RG 59 COAXIAL CABLE.
   - C. 25 PAIR NO. 24 AWG TELEPHONE CABLE.
   - D. 7/C NO. 12 AWG COPPER CONDUCTOR.
6. HILTI FS 657 FIRESTOP BLOCKS (2"X5"X8" DEEP, REF: FRONT VIEW)

NOTES:
1. NOT SHOWN: PENETRATING ITEMS MAY ALSO INCLUDE A MAX. 4" DIA STEEL OR COPPER PIPE, EMT, OR STEEL CONDUIT WITH A MAX. 1-1/2" GLASS-FIBER PIPE INSULATION OR NON-INSULATED MAX. 4" STEEL PIPE, EMT, OR CONDUIT.
2. ANNULAR SPACE = MINIMUM 1".
3. INSTALL HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT IN ANY VOID THAT MAY EXIST (AROUND PENETRATING ITEMS, OR BETWEEN BLOCKS).

## 7 MULTIPLE PENETRATORS THRU 1-HR. OR 2-HR. GYP BD

1 1/2" = 1'-0"

CAJ 8099, CAJ 8056, W-J 8007, CAJ 8143

GTC DESIGN STUDIO ©

GTC DESIGN
1205 J STREET, STE D
SAN DIEGO, CA 92101
HELLO@GTCDESIG N.COM
619.485.5546

8/9/2024, 3:08:59 PM
PRJ-1077519
Hannan Al-Timimi

# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET,
SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |
| 6 | CITY RESUBMITTAL R6 | 07/31/2024 |

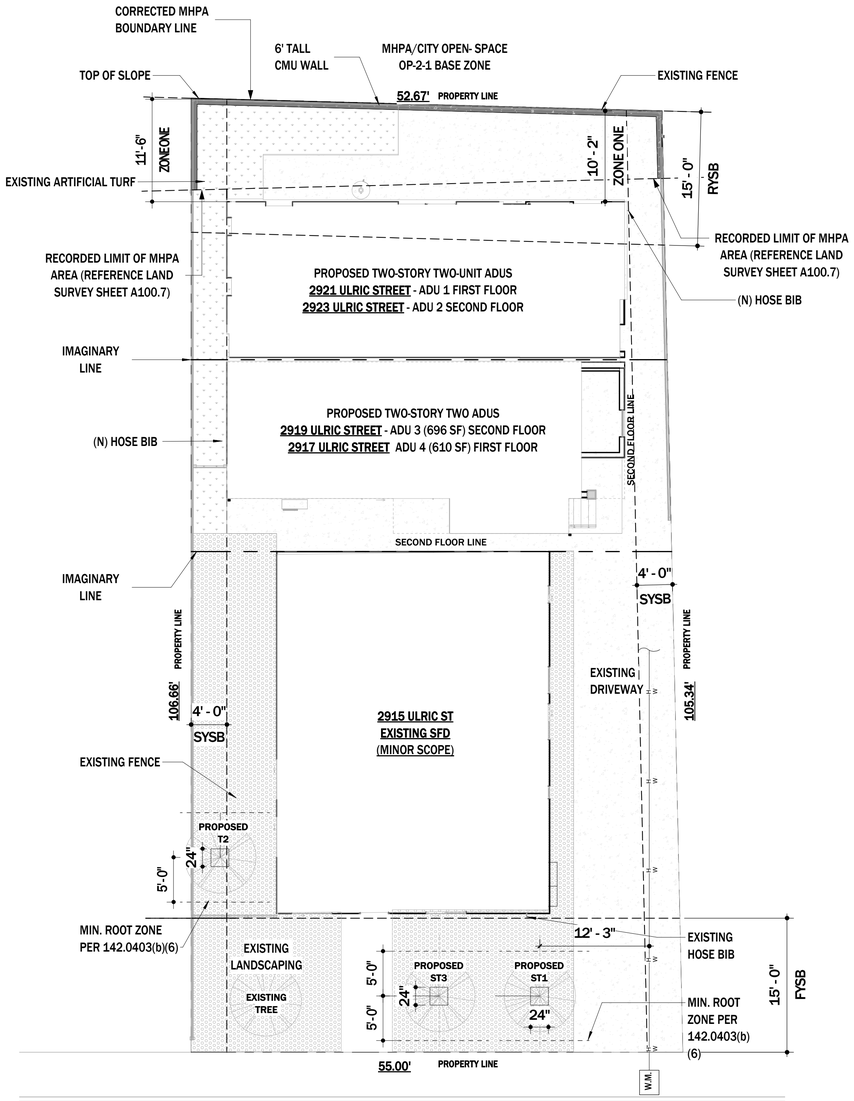
Sheet Name

FIRE PENETRATION DETAILS

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | MM |
| CHECKED BY: | NR |

SHEET NUMBER

A006

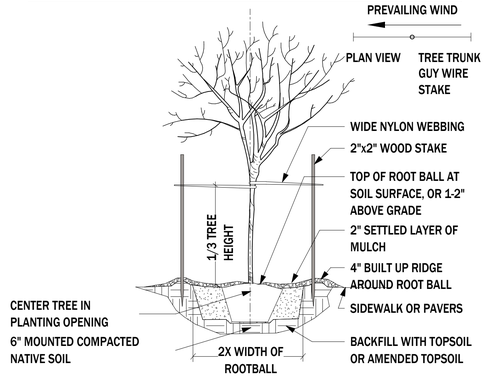



## ULRIC ST

1 LANDSCAPE PLAN
Scale: 1/8" = 1'-0"

NORTH

## TREE PLANTING DETAIL




## CLIMATE ACTION PLAN

**REQUIREMENTS**

| | |
|---|---|
| LOT SIZE: | 5,695 SQFT |
| TREE REQUIREMENT: | 2 TREE PER 5,000 SQFT |
| CALCULATION: | 5,695/5,000=1.139 |
| TREES REQUIRED: | 2 SHADE TREES |

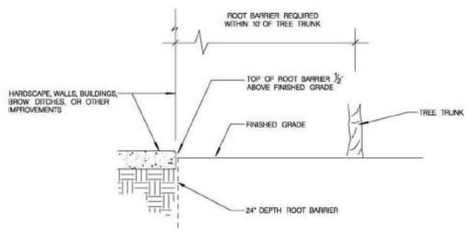
**SELECTION**

| | |
|---|---|
| TREE 1 (T2) | HETEROMELES ARBUTIFOLIA - TOYON 24" BOX |
| TREE 2 (T4) | HETEROMELES ARBUTIFOLIA - TOYON 24" BOX |

**STREE TREE REQUIREMENTS**

| | |
|---|---|
| THROUGHWAY ZONE: | 50% OF 260 SQFT= 130 SQFT OF SHADE |
| SHADED AREA (TREE CANOPY): | |
| PERCENTAGE ACHIEVED: | |
| TREES REQUIRED: | 2 SHADE TREES |
| SELECTION | |
| STREET TREE 1 (ST1) | LOPHOSTEMON CONFERTUS BRISBANE 24" BOX |
| STREET TREE 2 (ST3) | LOPHOSTEMON CONFERTUS BRISBANE 24" BOX |

## ROOT BARRIER DETAIL




SECTION

## EXISTING TREE NOTES

"EXISTING TREES TO REAMAIN ON SITE WITHIN THE AREA OF WORK WILL BE PROTECTED IN PLACE. THE FOLLOWING PROTECTION MEASURES WILL BE PROVIDED:
1. A BRIGHT YELLOW OR ORANGE TEMPORARY FENCE WILL BE PLACED AROUND EXISTING TREES AT THE DRIP LINE.
2. STOCKPILING, TOPSOIL DISTURBANCE, VEHICLE USE, AND MATERIAL STORAGE OF ANY KIND IS PROHIBITED WITHIN THE DRIP LINE.
3. ROOT SYSTEMS OF EXISTING TREES WILL BE PROTECTED FROM FLOODING, EROSION, CHECMICAL SPILLS AND EXCESSIVE WETTING AND SRYING DURING DEWATERING.
4. THE EXISTING GRADE WILL BE MAINTAINED WITHING THE DRIP LINE OF THE EXSISTING TREES.
5. ROOTS OF EXISTING TREES WILL BE CUT APPROXIMATELY 6 INCHES BACK FROM NEW CONSTRUCTION AND ALL CUTS WILL BE SEALED WITH WOOD PAINT AS MANUFACTURED BY FLINTKOTE OR APPROVED EQUAL.
6. A CERTIFIED CONSULTING ARBORIST SHALL OVERSEE PRUNING OF ANY ROOTS 6 INCHES OR GREATER IN DIAMETER.
7. MAINTAIN AND DOCUMENT A TREE WATERING SCHEDULE DURING CONSTRUCTION.
8. ALL DAMAGED TREES WILL BE REPLACED WITH ONE OF EQUAL OR GREATER SIZE.

## LANDSCAPE LEGEND

EXISTING TREE

PROPOSED TREE

## TREE PLANTING NOTES

1. ALL PLANT MATERIALS SHALL BE IN ACCORDANCE WITH THE AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60.1-2004). PLANT ACCORDING TO ANSI A300 PART 6.
2. DIG THE PLANTING HOLE A MINIMUM OF 2x WIDTH OF ROOTBALL FOR AT LEAST THEFIRST 12 INCHES OF DEPTH. BELOW 12 INCHES, DIG HOLE WIDE ENOUGH TO PERMIT ADJUSTING. DO NOT DIG THE HOLE DEEPER THAN ROOT BALL DEPTH.
3. SCARIFY THE SUBGRADE AND SIDES OF THE PLANTING HOLE WHEN PLANTING INCLAY SOILS (MORE THAN 15% CLAY).
4. LIFT AND SET THE TREE BY ROOT BALL ONLY. DO NOT LIFT USING THE TREE TRUNK AND DO NOT USE TREE TRUNK AS A LEVER.
5. SET THE TOP OF THE ROOT BALL LEVEL WITH THE SOIL SURFACE OR SLIGHTLY HIGHER IF THE SOIL IS PRONE TO SETTLING.
6. AFTER THE TREE IS SET IN PLACE, REMOVE BURLAP, WIRE AND STRAPS FROM AT LEAST THE UPPER 1/3 OF THE ROOTBALL.
7. BACKFILL WITH EXISTING SOIL THAT HAS BEEN WELL-TILLED OR BROKEN UP. DO NOT ADD AMENDMENTS TO THE BACKFILL SOIL. AMEND THE SURFACE WITH MULCH.
8. USE TWO 2" X 2" WOOD STAKES 1/3 TREE HEIGHT IN LENGTH DRIVEN INTO UNDISTURBED SOIL A MINIMUM OF 16 INCHES. STAKES SHOULD BE SPACED EQUALLY ACROSS FROM AND IN LINE WITH THE TRUNK PARALLEL TO THE PREVAILING WIND.
9. ATTACH 3/4" NYLON WEBBING TO CONNECT THE TREE TO STAKES. ATTACH WEBBING AT 1/3 THE TREE HEIGHT.
10. APPLY A 2-3" (SETTLED) DEPTH OF PINE STRAW OR BARK MULCH TO THE PLANTING SURFACE. LEAVE A 2" SPACE AROUND THE TRUNK FOR AIR CIRCULATION.
11. PRUNING SHALL BE LIMITED TO DEAD, DISEASED, OR BROKEN LIMBS ONLY AND SHALL BE IN ACCORDANCE WITH ANSI A300 SPECIFICATIONS.
12. REMOVE ANY TRUNK WRAP REMAINING AT TIME OF PLANTING. NO WRAPS SHALL BE PLACED ON TRUNK.
13. IF ANY REQUIRED LANDSCAPE INDICATED ON THE APPROVED CONSTRUCTION DOCUMENT PLANS IS DAMAGED OR REMOVED DURING DEMOLITION OR CONSTRUCTION, IT SHALL BE REPAIRED AND/OR REPLACED IN KIND AND EQUIVALENT SIZE PER THE APPROVED DOCUMENTS TO THE SATISFACTION OF THE DEVELOPMENT SERVICES DEPARTMENT WITHIN 30 DAYS OF DAMAGE.
14. MAINTENANCE: ALL REQUIRED LANDSCAPE AREAS SHALL BE MAINTAINED BY OWNER. LANDSCAPE AND IRRIGATION AREAS IN THE PUBLIC RIGHT-OF-WAY SHALL BE MAINTAINED BY OWNER. THE LANDSCAPE AREAS SHALL BE MAINTAINED FREE OF DEBRIS AND LITTER, AND ALLPLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION. DISEASED OR DEAD PLANT MATERIAL SHALL BE SATISFACTORILY TREATED OR REPLACED PER THE CONDITIONS OF THE PERMIT
15. TREE ROOT BARRIERS SHALL BE INSTALLED WHERE TREES ARE PLACED WITHIN 5 FEET OF PUBLIC IMPROVEMENTS INCLUDING WALKS, CURBS, OR STREET PAVEMENTS OR WHERE NEW PUBLIC IMPROVEMENTS ARE PLACED ADJACENT TO EXISTING TREES. THE ROOT BARRIER WILL NOT WRAP AROUND THE ROOT BALL

## WATERING SCHEDULE

1. TO PROPERLY NURTURE YOUR TREE, OWNER SHALL FOLLOW THE RECOMMENDED WATERING SCHEDULE:
2. FIRST YEAR: WATER TREE 2 TIMES/WEEK, USING 5-10 GALLONS EACH WATERING.
3. SECOND YEAR: WATER TREE 2 TIMES/MONTH, USING 10-15 GALLONS EACH WATERING.
4. THIRD YEAR: WATER TREE AT LEAST 1 TIME/MONTH, USING 10-15 GALLONS EACH WATERING.
5. YEARS AFTER: CONTINUE TO WATER THE TREE AT LEAST ONCE A MONTH, AND MORE FREQUENTLY DURING PERIODS OF HIGH TEMPERATURES OR SCARCE RAINFALL.
6. THE COST OF WATERING YOUR TREE(S) WILL VARY DEPENDING ON THE SPECIES AND SIZE OF TREE AND THE COST IS ASSUMED BY THE RESIDENT/PROPERTY OWNER.

## LANDSCAPING GENERAL NOTES

**REQUIREMENTS**
CONTRACTOR SHALL INSTALL ALL LANDSCAPING, SHRUBS, AND GROUND COVERS TO BE SELECTED FROM:
- CALIFORNIA NATIVE PLAN SOCIETY "BUTTERFLY LARVAL FOOR PLANT SAN DIEGO" LIST HTTPS://WWW.CNPSSD.ORG/GARDENING-AND-LANDSCAPING-WITH-CALIFORNIA-NATIVE-PLANTS
- CALIFORNIA NATIVE PLANT SOCIETY SAN DIEGO COASTAL PLANT LIST HTTPS://CALSCAPE.ORG/PLANTLIST/650/VW-LIST
- ALL LANDSCAPE AND IRRIGATION SHALL CONFORM TO THE STANDARDS OF THE CITY-WIDE LANDSCAPE REGULATIONS AND THE CITY OF SAN DIEGO LAND DEVELOPMENT MANUAL LANDSCAPE STANDARDS AND ALL OTHER LANDSCAPE RELATED CITY AND REGIONAL STANDARDS.
- NO INVASIVE SPECIES WILL BE PLANTED ADJACENT TO THE MHPA.

## MIN. TREE SEPARATION DISTANCE

TRAFFIC SIGNALS / STOP SIGNS - 20 FEET
UNDERGROUND UTILITY LINES - 5 FEET (10' FOR SEWER)
ABOVE GROUND UTILITY STRUCTURES - 10 FEET
DRIVEWAY (ENTRIES) - 10 FEET (5 FEET ON RESIDENTIAL STREETS RATED AT 25MPH OR LOWER)
INTERSECTIONS (INTERSECTING CURB LINES OF TWO STREETS) - 25 FEET

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SAN DIEGO, CA 92101
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PRJ-1077519
Hannan Al-Timimi

# 2915 ULRIC STREET DEVELOPMENT
2917, 2919, 2921 & 2923 ULRIC STREET, SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |
| 6 | CITY RESUBMITTAL R6 | 07/31/2024 |

Sheet Name
LANDSCAPE PLAN

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER
**A100.1**

GTC DESIGN STUDIO ©



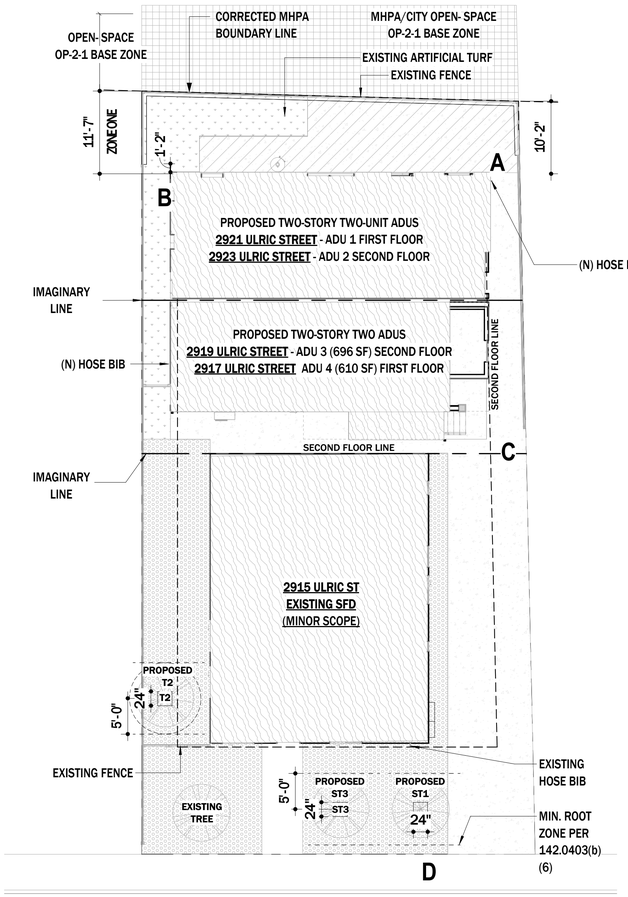













1 BRUSH MANAGEMENT PLAN
Scale: 1" = 10'-0"

## SDMC-142-04H BRUSH MANAGEMENT ZONE WIDTH

F. THE ZONE TWO WIDTH MAY BE DECREASED BY 1 ½ FEET FOR EACH 1 FOOT OF INCREASE IN ZONE ONE WIDTH, HOWEVER, WITHIN THE COASTAL OVERLAY ZONE, A MAXIMUM REDUCTION OF 30 FEET OF ZONE TWO WIDTH IS PERMITTED.

G. ZONE ONE REQUIREMENTS

1. THE REQUIRED ZONE ONE WIDTH SHALL BE PROVIDED BETWEEN NATIVE OR NATURALIZED VEGETATION AND ANY STRUCTURE AND SHALL BE MEASURED FROM THE EXTERIOR OF THE STRUCTURE TO THE VEGETATION.
2. ZONE ONE SHALL CONTAIN NO HABITABLE STRUCTURES, STRUCTURES THAT ARE DIRECTLY ATTACHED TO HABITABLE STRUCTURES, OR OTHER COMBUSTIBLE CONSTRUCTION THAT PROVIDES A MEANS FOR TRANSMITTING FIRE TO THE HABITABLE STRUCTURES. STRUCTURES SUCH AS FENCES, WALLS, PALAPAS, PLAY STRUCTURES, AND NON-HABITABLE GAZEBOS THAT ARE LOCATED WITHIN BRUSH MANAGEMENT ZONE ONE SHALL BE OF NONCOMBUSTIBLE, ONE HOUR FIRE-RATED TYPE IV OR HEAVY TIMBER CONSTRUCTION AS DEFINED IN THE CALIFORNIA BUILDING CODE.
3. PLANTS WITHIN ZONE ONE SHALL BE PRIMARILY LOW-GROWING AND LESS THAN 4 FEET IN HEIGHT WITH THE EXCEPTION OF TREES. PLANTS SHALL BE LOW-FUEL AND FIRE-RESISTIVE.
4. TREES WITHIN ZONE ONE SHALL BE LOCATED AWAY FROM STRUCTURES TO A MINIMUM DISTANCE OF 10 FEET AS MEASURED FROM THE STRUCTURES TO THE DRIP LINE OF THE TREE AT MATURITY IN ACCORDANCE WITH THE LANDSCAPE STANDARDS OF THE LAND DEVELOPMENT MANUAL.
5. PERMANENT IRRIGATION IS REQUIRED FOR ALL PLANTING AREAS WITHIN ZONE ONE EXCEPT AS FOLLOWS:
   A. WHEN PLANTING AREAS CONTAIN ONLY SPECIES THAT DO NOT GROW TALLER THAN 24 INCHES IN HEIGHT, OR
   B. WHEN PLANTING AREAS CONTAIN ONLY NATIVE OR NATURALIZED SPECIES THAT ARE NOT SUMMER-DORMANT AND HAVE A MAXIMUM HEIGHT AT PLANT MATURITY OF LESS THAN 24 INCHES. CH. ART. DIV. 14 2 4 30 SAN DIEGO MUNICIPAL CODE CHAPTER 14: GENERAL REGULATIONS (2-2020)
6. ZONE ONE IRRIGATION OVERSPRAY AND RUNOFF SHALL NOT BE ALLOWED INTO ADJACENT AREAS OF NATIVE OR NATURALIZED VEGETATION.
7. ZONE ONE SHALL BE MAINTAINED ON A REGULAR BASIS BY PRUNING AND THINNING PLANTS, CONTROLLING WEEDS, AND MAINTAINING IRRIGATION SYSTEMS.

H. ZONE TWO REQUIREMENTS

1. THE REQUIRED ZONE TWO WIDTH SHALL BE PROVIDED BETWEEN ZONE ONE AND THE UNDISTURBED, NATIVE OR NATURALIZED VEGETATION, AND SHALL BE MEASURED FROM THE EDGE OF ZONE ONE THAT IS FARTHEST FROM THE HABITABLE STRUCTURE, TO THE EDGE OF UNDISTURBED VEGETATION.
2. NO STRUCTURES SHALL BE CONSTRUCTED IN ZONE TWO.
3. WITHIN ZONE TWO, 50 PERCENT OF THE PLANTS OVER 24 INCHES IN HEIGHT SHALL BE CUT AND CLEARED TO A HEIGHT OF 6 INCHES.
4. WITHIN ZONE TWO, ALL PLANTS REMAINING AFTER 50 PERCENT ARE REDUCED IN HEIGHT, SHALL BE PRUNED TO REDUCE FUEL LOADING IN ACCORDANCE WITH THE LANDSCAPE STANDARDS IN THE LAND DEVELOPMENT MANUAL. NON-NATIVE PLANTS SHALL BE PRUNED BEFORE NATIVE PLANTS ARE PRUNED.
5. THE FOLLOWING STANDARDS SHALL BE USED WHERE ZONE TWO IS IN AN AREA PREVIOUSLY GRADED AS PART OF LEGAL DEVELOPMENT ACTIVITY AND IS PROPOSED TO BE PLANTED WITH NEW PLANT MATERIAL INSTEAD OF CLEARING EXISTING NATIVE OR NATURALIZED VEGETATION:
   A. ALL NEW PLANT MATERIAL FOR ZONE TWO SHALL BE NATIVE, LOW-FUEL, AND FIRE-RESISTIVE. NO NON-NATIVE PLANT MATERIAL MAY BE PLANTED IN ZONE TWO EITHER INSIDE THE MHPA OR IN THE COASTAL OVERLAY ZONE, ADJACENT TO AREAS CONTAINING SENSITIVE BIOLOGICAL RESOURCES.
   B. NEW PLANTS SHALL BE LOW-GROWING WITH A MAXIMUM HEIGHT AT MATURITY OF 24 INCHES. SINGLE SPECIMENS OF FIRE RESISTIVE NATIVE TREES AND TREE FORM SHRUBS MAY EXCEED THIS LIMITATION IF THEY ARE LOCATED TO REDUCE THE CHANCE OF TRANSMITTING FIRE FROM NATIVE OR NATURALIZED VEGETATION TO HABITABLE STRUCTURES AND IF THE VERTICAL DISTANCE BETWEEN THE LOWEST BRANCHES OF THE TREES AND THE TOP OF ADJACENT PLANTS ARE THREE TIMES THE HEIGHT OF THE ADJACENT PLANTS TO REDUCE THE SPREAD OF FIRE THROUGH LADDER FUELING. SAN DIEGO MUNICIPAL CODE CHAPTER 14: GENERAL REGULATIONS (2-2020)
   C. ALL NEW ZONE TWO PLANTINGS SHALL IRRIGATED TEMPORARILY UNTIL ESTABLISHED TO THE SATISFACTION OF THE CITY MANAGER. ONLY LOW-FLOW, LOW-GALLONAGE SPRAY HEADS MAY BE USED IN ZONE TWO. OVERSPRAY AND RUNOFF FROM THE IRRIGATION SHALL NOT DRIFT OR FLOW INTO ADJACENT AREAS OF NATIVE OR NATURALIZED VEGETATION. TEMPORARY IRRIGATION SYSTEMS SHALL BE REMOVED UPON APPROVED ESTABLISHMENT OF THE PLANTINGS. PERMANENT IRRIGATION IS NOT ALLOWED IN ZONE TWO.
   D. WHERE ZONE TWO IS BEING REVEGETATED AS A REQUIREMENT OF SECTION 142.0411(A), REVEGETATION SHALL COMPLY WITH THE SPACING STANDARDS IN THE LAND DEVELOPMENT MANUAL. FIFTY PERCENT OF THE PLANTING AREA SHALL BE PLANTED WITH MATERIAL THAT DOES NOT GROW TALLER THAN 24 INCHES. THE REMAINING PLANTING AREA MAY BE PLANTED WITH TALLER MATERIAL, BUT THIS MATERIAL SHALL BE MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS FOR EXISTING PLANT MATERIAL IN ZONE TWO.
6. ZONE TWO SHALL BE MAINTAINED ON A REGULAR BASIS BY PRUNING AND THINNING PLANTS, REMOVING INVASIVE SPECIES, AND CONTROLLING WEEDS.
7. EXCEPT AS PROVIDED IN SECTION 142.0412(I), WHERE THE REQUIRED ZONE ONE WIDTH SHOWN IN TABLE 142-04H CANNOT BE PROVIDED ON PREMISES WITH EXISTING STRUCTURES, THE REQUIRED ZONE TWO WIDTH SHALL BE INCREASED BY ONE FOOT FOR EACH FOOT OF REQUIRED ZONE ONE WIDTH THAT CANNOT BE PROVIDED.

I. AN APPLICANT MAY REQUEST APPROVAL OF ALTERNATIVE COMPLIANCE FOR BRUSH MANAGEMENT IN ACCORDANCE WITH PROCESS ONE IF ALL OF THE FOLLOWING CONDITIONS EXIST:

1. THE PROPOSED ALTERNATIVE COMPLIANCE PROVIDES SUFFICIENT DEFENSIBLE SPACE BETWEEN ALL STRUCTURES ON THE PREMISES AND CONTIGUOUS AREAS OF NATIVE OR NATURALIZED VEGETATION AS DEMONSTRATED TO THE SATISFACTION OF THE FIRE CHIEF BASED ON DOCUMENTATION THAT ADDRESSES THE TOPOGRAPHY OF THE SITE, EXISTING AND POTENTIAL FUEL LOAD, AND OTHER CHARACTERISTICS RELATED TO FIRE PROTECTION AND THE CONTEXT OF THE PROPOSED DEVELOPMENT .
2. THE PROPOSED ALTERNATIVE COMPLIANCE MINIMIZES IMPACTS TO UNDISTURBED NATIVE OR NATURALIZED VEGETATION WHERE POSSIBLE WHILE STILL MEETING THE PURPOSE AND INTENT OF SECTION 142.0412 TO REDUCE FIRE HAZARDS AROUND STRUCTURES AND PROVIDE AN EFFECTIVE FIRE BREAK. CH. ART. DIV. 14 2 4 32 SAN DIEGO MUNICIPAL CODE CHAPTER 14: GENERAL REGULATIONS (2-2020)
3. THE PROPOSED ALTERNATIVE COMPLIANCE IS NOT DETRIMENTAL TO THE PUBLIC HEALTH, SAFETY, AND WELFARE OF PERSONS RESIDING OR WORKING IN THE AREA.

J. IF THE FIRE CHIEF APPROVES ALTERNATIVE COMPLIANCE IN ACCORDANCE WITH THIS SECTION, THE MODIFICATIONS SHALL BE RECORDED WITH THE APPROVED PERMIT CONDITIONS IF APPROVED AS PART OF A DEVELOPMENT PERMIT, OR NOTED IN THE PERMIT FILE IF APPROVED AS PART OF A CONSTRUCTION PERMIT.

K. FOR EXISTING STRUCTURES, THE FIRE CHIEF MAY REQUIRE BRUSH MANAGEMENT IN COMPLIANCE WITH THIS SECTION FOR ANY AREA, INDEPENDENT OF SIZE, LOCATION, OR CONDITION IF IT IS DETERMINED THAT AN IMMINENT FIRE HAZARD EXISTS.

L. BRUSH MANAGEMENT FOR EXISTING STRUCTURES SHALL BE PERFORMED BY THE OWNER OF THE PROPERTY THAT CONTAINS THE NATIVE AND NATURALIZED VEGETATION. THIS REQUIREMENT IS INDEPENDENT OF WHETHER THE STRUCTURE BEING PROTECTED BY BRUSH MANAGEMENT IS OWNED BY THE PROPERTY OWNER SUBJECT TO THESE REQUIREMENTS OR IS ON NEIGHBORING PROPERTY.

## LANSCAPING STANDARDS BRUSH MANAGEMENT

**3-1** BRUSH MANAGEMENT – DESCRIPTION
FIRE SAFETY IN THE LANDSCAPE IS ACHIEVED BY REDUCING THE READILY FLAMMABLE FUEL ADJACENT TO STRUCTURES. THIS CAN BE ACCOMPLISHED BY PRUNING AND THINNING OF NATIVE AND NATURALIZED VEGETATION, REVEGETATION WITH LOW FUEL VOLUME PLANTINGS OR A COMBINATION OF THE TWO. IMPLEMENTING BRUSH MANAGEMENT IN AN ENVIRONMENTALLY APPROPRIATE MANNER REQUIRES A REDUCTION IN THE AMOUNT AND CONTINUITY OF HIGHLY FLAMMABLE FUEL WHILE MAINTAINING PLANT COVERAGE FOR SOIL PROTECTION. SUCH A TRANSITION WILL MINIMIZE THE VISUAL, BIOLOGICAL AND EROSION IMPACTS WHILE REDUCING THE RISKS OF WILDLAND FIRES.

**3-2** BRUSH MANAGEMENT- REQUIREMENTS

**3.2-1** BASIC REQUIREMENTS – ALL ZONES

**3.2-1.01** FOR ZONE TWO, PLANTS SHALL NOT BE CUT BELOW SIX INCHES.

**3.2-1.02** DEBRIS AND TRIMMINGS PRODUCED BY THINNING AND PRUNING SHALL BE REMOVED FROM THE SITE OR IF LEFT, SHALL BE CONVERTED INTO MULCH BY A CHIPPING MACHINE AND EVENLY DISPERSED, NON-IRRIGATED, TO A MAXIMUM DEPTH OF 6 INCHES.

**3.2-1.03** TREES AND LARGE TREE FORM SHRUBS (E.G., OAKS, SUMAC, TOYON) WHICH ARE BEING RETAINED SHALL BE PRUNED TO PROVIDE CLEARANCE OF THREE TIMES THE HEIGHT OF THE UNDER STORY PLANT MATERIAL OR SIX FEET WHICHEVER IS HIGHER (FIGURE 3-1). DEAD AND EXCESSIVELY TWIGGY GROWTH SHALL ALSO BE REMOVED.

3.2-1.04 ALL PLANTS OR PLANT GROUPINGS EXCEPT CACTI, SUCCULENTS, TREES AND TREE-FORM SHRUBS SHALL BE SEPARATED BY A DISTANCE THREE TIMES THE HEIGHT OF THE TALLEST ADJACENT PLANTS (FIGURE 3-1).

3.2-1.05 MAXIMUM COVERAGE AND AREA LIMITATIONS AS STATED HEREIN SHALL NOT APPLY TO INDIGENOUS NATIVE TREE SPECIES (I.E., PINUS, QUERCUS, PLATANUS, SALIX AND POPULUS).

3.2-2 ZONE 1 REQUIREMENTS - ALL STRUCTURES

3.2-2.01 DO NOT USE, AND REMOVE IF NECESSARY, HIGHLY FLAMMABLE PLANT MATERIALS (SEE APPENDIX "B").

3.2-2.02 TREES SHOULD NOT BE LOCATED ANY CLOSER TO A STRUCTURE THAN A DISTANCE EQUAL TO THE TREE'S MATURE SPREAD.

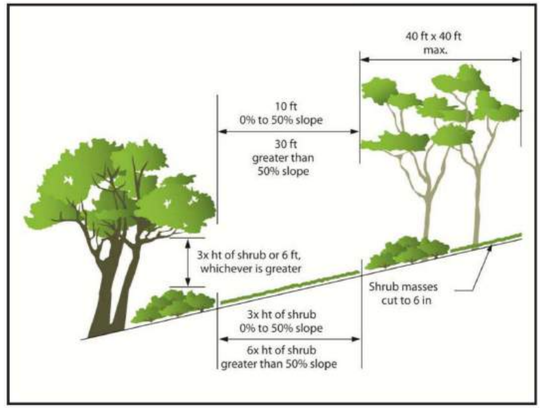
3.2-2.03 MAINTAIN ALL PLANTINGS IN A SUCCULENT CONDITION.

3.2-2.04 NON-IRRIGATED PLANT GROUPINGS OVER SIX INCHES IN HEIGHT MAY BE RETAINED PROVIDED THEY DO NOT EXCEED 100 SQUARE FEET IN AREA AND THEIR COMBINED COVERAGE DOES NOT EXCEED 10 PERCENT OF THE TOTAL ZONE 1 AREA.

3.2-3 ZONE 2 REQUIREMENTS – ALL STRUCTURES

3.2-3.01 INDIVIDUAL NON-IRRIGATED PLANT GROUPINGS OVER 24 INCHES IN HEIGHT MAY BE RETAINED PROVIDED THEY DO NOT EXCEED 400 SQUARE FEET IN AREA AND THEIR COMBINED COVERAGE DOES NOT EXCEED 30 PERCENT OF THE TOTAL ZONE 2 AREA

DIRECTION



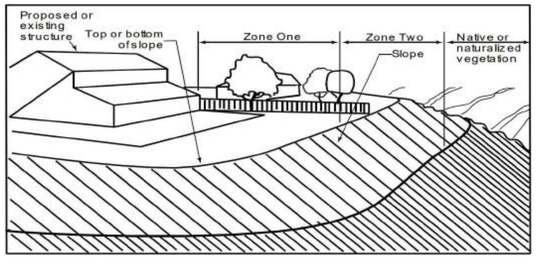




DIAGRAM 124-04E
TYPICAL BRUSH
MANAGMENT ZONES

**NOTE:** DUE TO ENVIRONMENTALLY SENSITIVE LANDS BUSH MANAGEMENT ZONES WILL VARY FROM TYPICAL LAYOUT AND FOLLOW ACCORDING TO CITY REVIEWERS.

**ZONE 1** WILL START AT THE REAR FACE OF THE PROPOSED RESIDENTIAL STRUCTURE AND EXTEND TOWARDS THE ORIGINS OF ESLS (SEE COMMENT BELOW) OR ALLOWABLE FOOTPRINT OF DEVELOPMENT. **ZONE 2** WILL EXTEND BEYOND ZONE 1 FOR A DISTANCE OF 100' FROM THE STRUCTURE. ZONE DIMENSIONS SHOULD BE SHOWN DIRECTLY ON THE PLAN

## LANDSCAPING NOTES

1. PROJECT SITE SHALL BE MAINTAINED IN A BRUSH MANAGENENT ZONE ONE CONDITION.
2. ALL REQUIRED ONSITE LANDSCAPE ANO BRUSH MANAGEMENT AS SHOWN ON THESE PLANS SHALL BE MAINTAINED BY THE PROPERTY OWNER
3. THE OWNERIPERMITTEE SHALL SCHEDULE A PRE-CONSTRUCTION MEETING AND FINAL CONSTRUCTION MEETING ON SITE WITH THE CONTRACTOR AND THE DEVELOPMENT SERVICES DEPARTMENT TO DISCUSS AND OUTLINE THE IMPLEMENTATION AND MAINTENANCE OF THE BRUSH NANAGEMENT PROGRAM.
4. OFFSITE BRUSH MANAGEMENT SHALL BE THE RESPONSIBILITY OF ADJACENT PROPERTY OWNERS. FOR FUEL-LOAD MAINTENANCE ISSUES, CONTACT THE FIRE-RESCUE DEPARTMENT'S FIRE HAZARD ADVISOR - BRUSHAWEED COMPLAINT LINE AT: (619) 533-4444
5. ALL IMPERVIOUS SURFACES WILL SLOPE TOWARDS PERVIOUS SURFACE OR LANDSCAPING PRIOR TO REACHING PUBLIC DRAINAGE SYSTEM.
6. NO INVASIVE SPECIES WILL BE PLANTED ADJACENT TO THE MHPA.

## SITE PLAN NOTES

HATCH INDICATES ZONE 1 SDMC-142.04
EXTENDS FROM BACK OF NEW CONSTRUCTION TO BEGINNING OF ESL (10'-0" MIN.)

HATCH INDICATES OP-2-1 BASE ZONE

HATCH INDICATES EXISTING ARTIFICIAL TURF

HATCH INDICATED EXISTING RESIDENCE AND NEW BUILDING

INDICATES PROPERTY LINE

INDICATES SETBACKS

## BRUSH MANAGEMENT MAINTENANCE NOTES

1. GENERAL MAINTENANCE ~ REGULAR INSPECTIONS AND LANDSCAPE MAINTENANCE ARE NECESSARY TO MINIMIZE THE POTENTIAL DAMAGE OR LOSS OF PROPERTY FROM BRUSH FIRES AND OTHER NATURAL HAZARDS SUCH AS EROSION AND SLOPE FAILURES. BECAUSE EACH PROPERTY IS UNIQUE ESTABLISHING A PRECISE MAINTENANCE SCHEDULE IS NOT FEASIBLE. FOR EFFECTIVE FIRE AND WATERSHED MANAGEMENT, HOWEVER, PROPERTY OWNERS SHOULD EXPECT TO PROVIDE MAINTENANCE ACCORDING TO EACH BRUSH MANAGEMENT ZONE: ZONE 1: YEAR-ROUND MAINTENANCE, ZONE 2: SEASONAL MAINTENANCE. BRUSH MANAGEMENT ACTIVITIES ARE PROHIBITED WITHIN COASTAL SAGE SCRUB, MARITIME SUCCULENT SCRUB, AND COASTAL SAGE-CHAPARRAL HABITATS FROM MARCH 1 THROUGH AUGUST 15, EXCEPT WHERE DOCUMENTED TO THE SATISFACTION OF THE CITY MANAGER THAT THE THINNING WOULD BE CONSISTENT WITH CONDITIONS OF SPECIES COVERAGE DESCRIBED IN THE CITY OF SAN DIEGO'S MSCP SUBAREA PLAN.
2. BRUSH MANAGEMENT ZONE 1 ~ THIS IS THE MOST CRITICAL AREA FOR FIRE AND WATERSHED SAFETY. ALL ORNAMENTAL PLANTINGS SHOULD BE KEPT WELL WATERED AND ANY IRRIGATION RUN-OFF SHOULD DRAIN TOWARD THE STREET. RAIN GUTTERS AND DRAINAGE PIPES SHOULD BE CLEANED REGULARLY AND ALL LEAVES REMOVED FROM THE ROOF BEFORE THE FIRE SEASON BEGINS. ALL PLANTING, PARTICULARLY NON-IRRIGATED NATIVES AND LARGE TREES SHOULD BE REGULARLY PRUNED TO ELIMINATE DEAD FUELS, TO REDUCE EXCESSIVE FUEL AND TO PROVIDE ADEQUATE SPACE BETWEEN PLANTS AND STRUCTURES.
3. BRUSH MANAGEMENT ZONE 2 ~ SEASONAL MAINTENANCE IN THIS ZONE SHOULD INCLUDE REMOVAL OF DEAD WOODY PLANTS, ERADICATION OF WEEDY SPECIES AND PERIODIC PRUNING AND THINNING OF TREES AND SHRUBS. REMOVAL OF WEEDS SHOULD NOT BE DONE WITH HAND TOOLS SUCH AS HOES, AS THIS DISTURBS VALUABLE SOIL. THE USE OF WEED TRIMMERS OR OTHER TOOLS WHICH RETAIN SHORT STUBBLE THAT PROTECTS THE SOIL IS RECOMMENDED. NATIVE SHRUBS SHOULD BE PRUNED IN THE SUMMER AFTER THE MAJOR PLANT GROWTH OCCURS. WELL PRUNED HEALTHY SHRUBS SHOULD TYPICALLY REQUIRE SEVERAL YEARS TO BUILD UP EXCESSIVE LIVE AND DEAD FUEL. ON SLOPES ALL DRAINAGE DEVICES MUST BE KEPT CLEAR. RE-INSPECT AFTER EACH MAJOR STORM SINCE MINOR SOIL SLIPS CAN BLOCK DRAINS. VARIOUS GROUNDCOVERS SHOULD BE PERIODICALLY SHEARED AND THATCH REMOVED. DISEASED AND DEAD WOOD SHOULD BE PRUNED FROM TREES. FERTILIZING TREES AND SHRUBS IS NOT TYPICALLY RECOMMENDED AS THIS MAY STIMULATE EXCESSIVE GROWTH.
4. LONG-TERM MAINTENANCE RESPONSIBILITY ~ ALL LANDSCAPING / BRUSH MANAGEMENT WITHIN THE BRUSH MANAGEMENT ZONE(S) AS SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF OWNER. THE BRUSH MANAGEMENT ZONE AREAS SHALL BE MAINTAINED FREE OF DEBRIS AND LITTER AND ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION

## BRUSH MANAGEMENT PLAN NOTES

1. THE OWNER/PERMITTEE SHALL SCHEDULE A PRE-CONSTRUCTION MEETING ON SITE WITH THE CONTRACTOR AND THE DEVELOPMENT SERVICES DEPARTMENT TO DISCUSS AND OUTLINE THE IMPLEMENTATION OF THE BRUSH MANAGEMENT PROGRAM
2. BRUSH MANAGEMENT ACTIVITIES ARE PROHIBITED WITHIN COASTAL SAGE SCRUB, MARITIME SUCCULENT SCRUB, AND CHAPARRAL HABITATS DURING THE BREEDING SEASON OF FEDERALLY PROTECTED SPECIES, FROM MARCH 1 TO AUGUST 15, EXCEPT WHERE DOCUMENTED TO THE SATISFACTION OF THE CITY OF SAN DIEGO THAT THE THINNING WOULD BE CONSISTENT WITH THE CONDITIONS OF SPECIES COVERAGE DESCRIBED IN THE CITY OF SAN DIEGO'S MSCP SUBAREA PLAN
3. ALL LANDSCAPING/BRUSH MANAGEMENT WITHIN THE BRUSH MANAGEMENT ZONES AS SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE OWNER. THE BRUSH MANAGEMENT ZONE AREAS SHALL BE MAINTAINED FREE OF DEBRIS AND LITTER AND ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION.

## ALTERNATIVE COMPLIANCE

DUAL PANE & DUAL TEMPERED WINDOWS PROPOSED ALONG EAST ELEVATION, SEE 1/A200.

GTC DESIGN
1205 J STREET, STE D
SAN DIEGO, CA 92101
HELLO@GTCDESIG N.COM
619.485.5546

8/9/2024, 3:08:59 PM
PRJ-1077519
Hannan Al-Timimi

# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET,
SAN DIEGO, CA 92111

CITY NO.

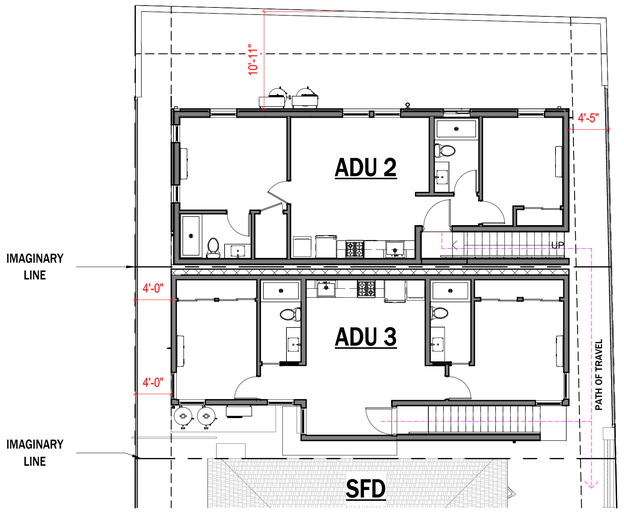
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| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |
| 6 | CITY RESUBMITTAL R6 | 07/31/2024 |

Sheet Name
BMZ SITE PLAN

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| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

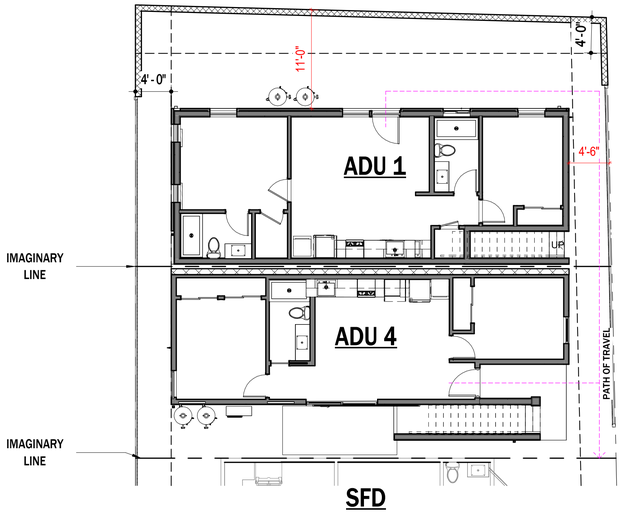
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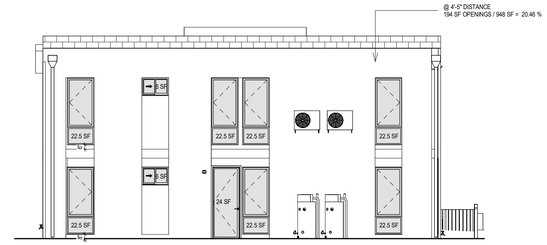

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Scale: 1/8" = 1'-0"

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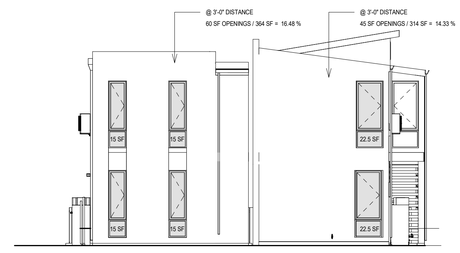



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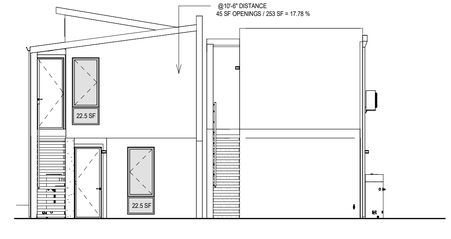
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3 CODE ANALYSIS - EAST ELEVATION
Scale: 1/8" = 1'-0"




4 CODE ANALYSIS - NORTH ELEVATION
Scale: 1/8" = 1'-0"




5 CODE ANALYSIS - SOUTH ELEVATION
Scale: 1/8" = 1'-0"

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| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |
| 6 | CITY RESUBMITTAL R6 | 07/31/2024 |

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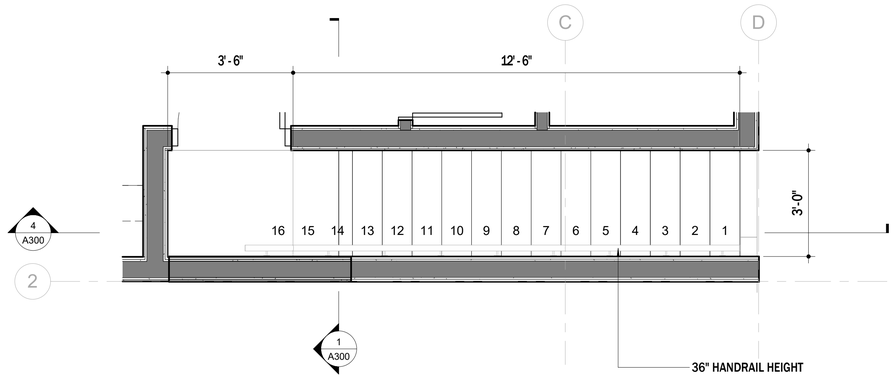
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| DATE: | 07/01/2024 |
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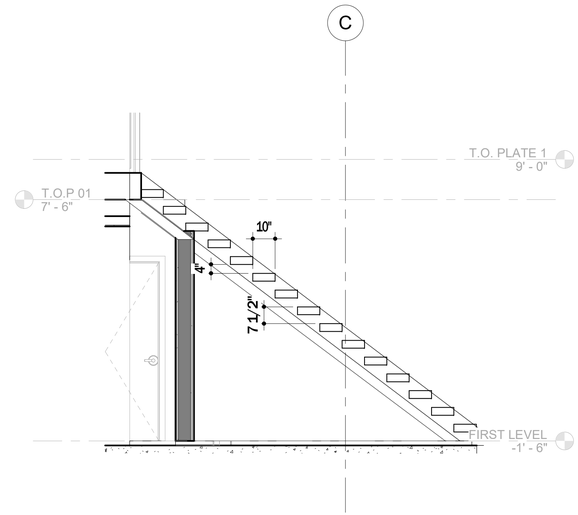
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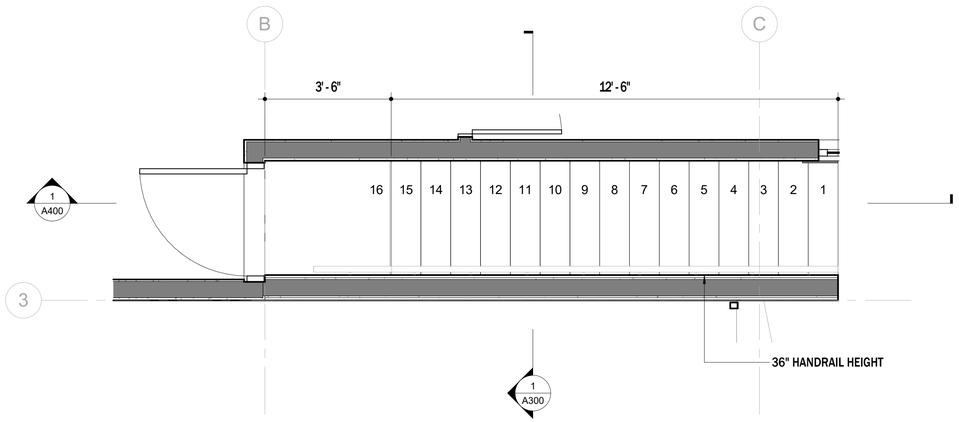
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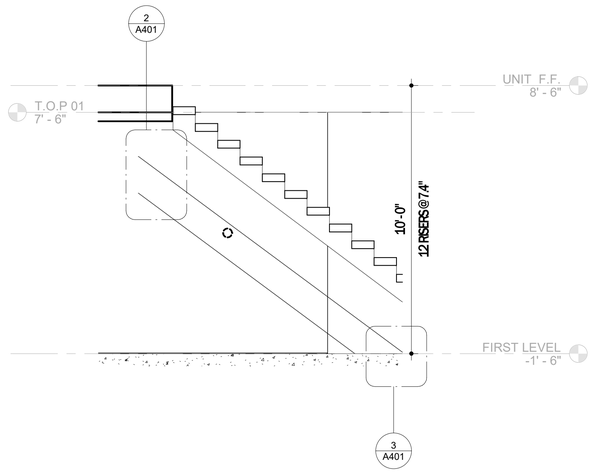

4 STAIR PLAN - ADU 1 & 2
Scale: 1/2" = 1'-0"




2 EXTERIOR STAIR SECTION TO ADU
Scale: 3/8" = 1'-0"




3 STAIR PLAN - ADU 3 & 4
Scale: 1/2" = 1'-0"




1 EXTERIOR STAIR SECTION TO UNIT
Scale: 3/8" = 1'-0"

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# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET, SAN DIEGO, CA 92111

CITY NO.

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| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |

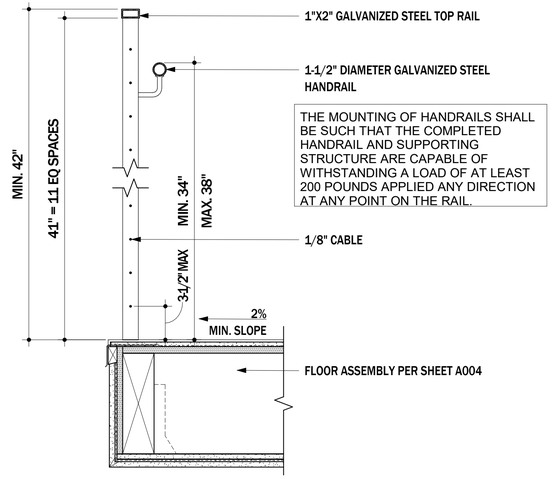
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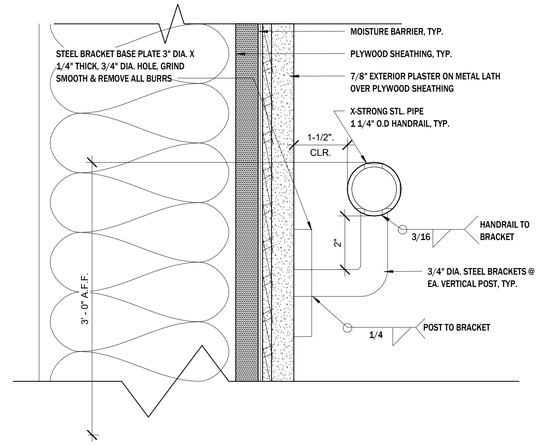
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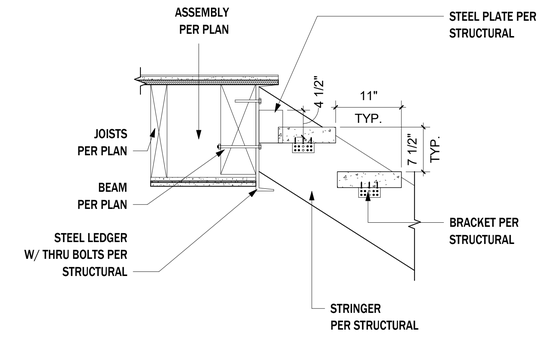
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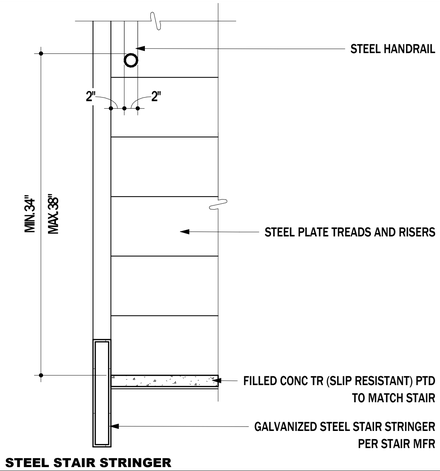

**7** **CABLE GUARDRAIL- SECTION**
1 1/2" = 1'-0"



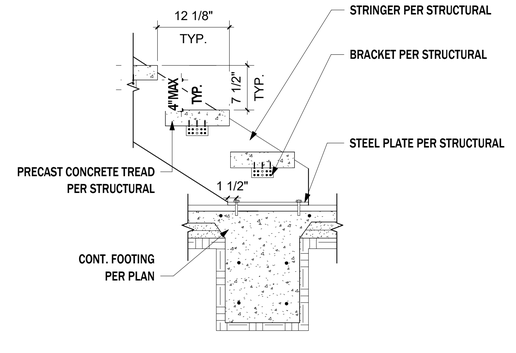

**1** **HANDRAIL @ EXTERIOR WALL1**
6" = 1'-0"




**2** **STEEL STAIR - WOOD TOP**
1" = 1'-0"




**5** **STEEL STAIR STRINGER**
1 1/2" = 1'-0"




**3** **STEEL STAIR - CONCRETE SLAB**
1" = 1'-0"

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2917, 2919, 2921 & 2923 ULRIC STREET, SAN DIEGO, CA 92111

CITY NO.

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| 6 | CITY RESUBMITTAL R6 | 07/31/2024 |

Sheet Name

STAIR DETAILS

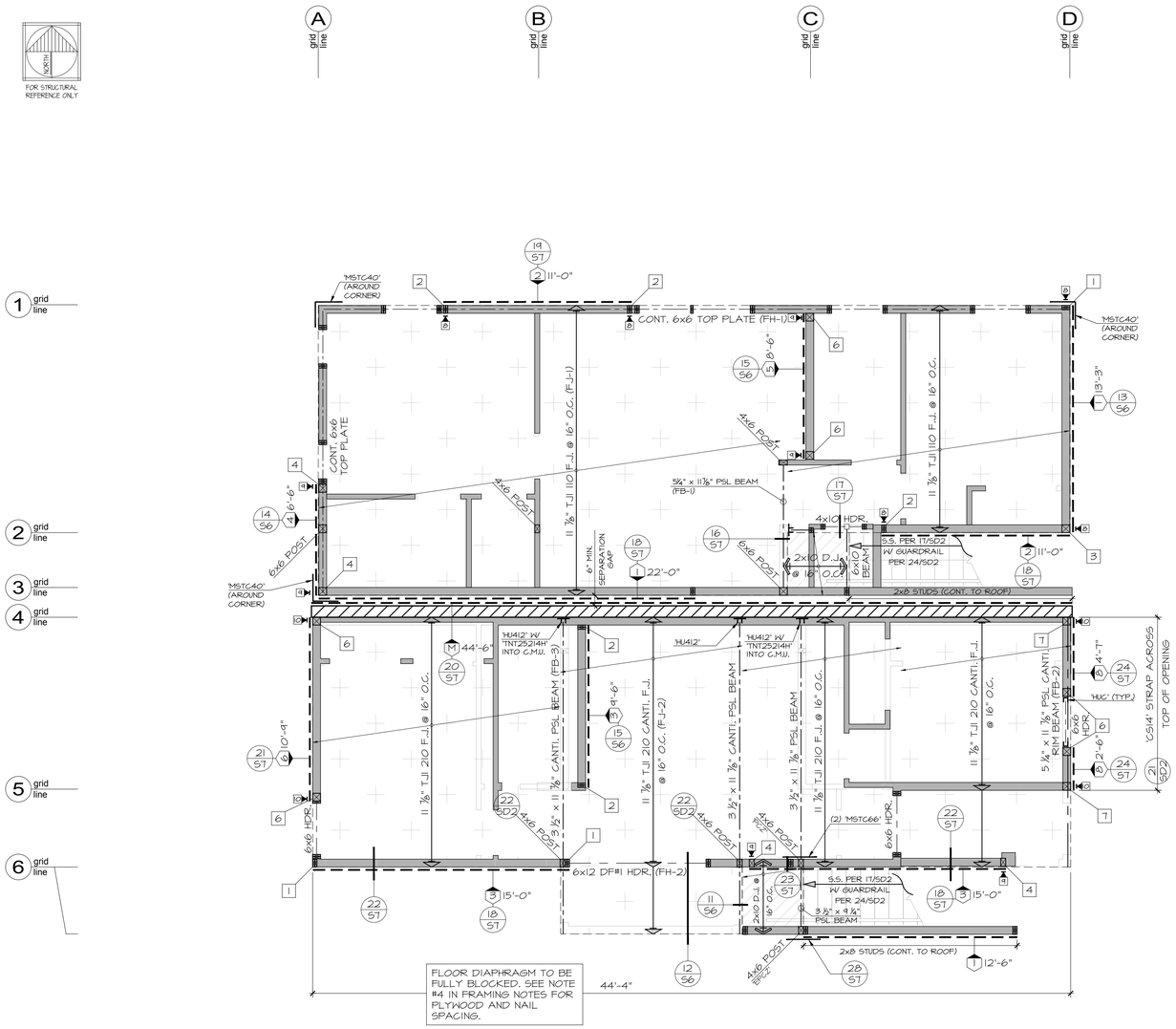
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| CHECKED BY: | GTC |

SHEET NUMBER

**A401**

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## FLOOR FRAMING PLAN

ALL DIMENSIONS TO BE VERIFIED WITH ARCHITECTURAL PLANS
SEE SHEET S-1 & S-2 FOR COMPLETE SHEARWALL & HOLD-DOWN SCHEDULES SCALE: ¼" = 1'

## FRAMING LEGEND

- MIN. SHEAR WALL PER PLAN
- NEW WALL PER PLAN
- BEAM PER PLAN
- HEADER PER PLAN
- ALIGN MEMBER PER PLAN W/ B.N.
- ALIGN BLOCKING PER PLAN W/ B.N.
- 'HU' HANGER (U.N.O.)
- 'HUC' HANGER (U.N.O.)
- HOLD-DOWN PER PLAN
- ALIGN POST W/ B.N. & HOLD-DOWN ABOVE
- DOUBLE 2x STUD OR KING STUD W/ TRIMMER
- POST ABOVE

## NOTE

PROVIDE MSTC40 STRAPS ACROSS ALL DISCONTINUOUS TOP PLATES. (U.N.O.)

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REVISIONS:

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REGISTERED PROFESSIONAL ENGINEER MILES T. LOVELACE No. C 39734 Exp. 12/31/23 STATE OF CALIFORNIA

Digitally signed by Miles Lovelace on July 8, 2024


LOVELACE ENGINEERING
STRUCTURAL ENGINEERING SERVICES
10509 Vista Sorrento Pkwy, Ste. 102
San Diego, CA 92121
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www.lovelaceeng.com


Project Name:

2915 ULRIC DEVELOPMENT

2915 ULRIC STREET
SAN DIEGO, CA 92111

Designer:

GTC DESIGN

1205 J STREET, SUITE D
SAN DIEGO, CA 92101

| | |
|---|---|
| Job No. | J23365 |
| Cad Ref. No: | - |
| Date Drawn: | 7/29/23 |
| Date Issued: | - |
| Proj. Engineer: | A.S. |
| Drawn By: | - |
| Checked By: | M.T.L. |
| Scale: | ¼" = 1'-0" |

Drawing Status:

- ☐ INFORMATION DWGS. (NOT FOR CONSTRUCTION)
- ☐ PRELIMINARY DWGS. (NOT FOR CONSTRUCTION)
- ☐ DESIGN DEVELOPMENT DWGS. (NOT FOR CONSTRUCTION)
- ☐ CHECK SET (NOT FOR CONSTRUCTION)
- ☐ PROGRESS DRAWINGS (NOT FOR CONSTRUCTION)
- ☐ PLAN CHECK DRAWINGS
- ☐ BID SET DRAWINGS
- ☐ CONSTRUCTION DOCUMENTS
- ☐ OTHER

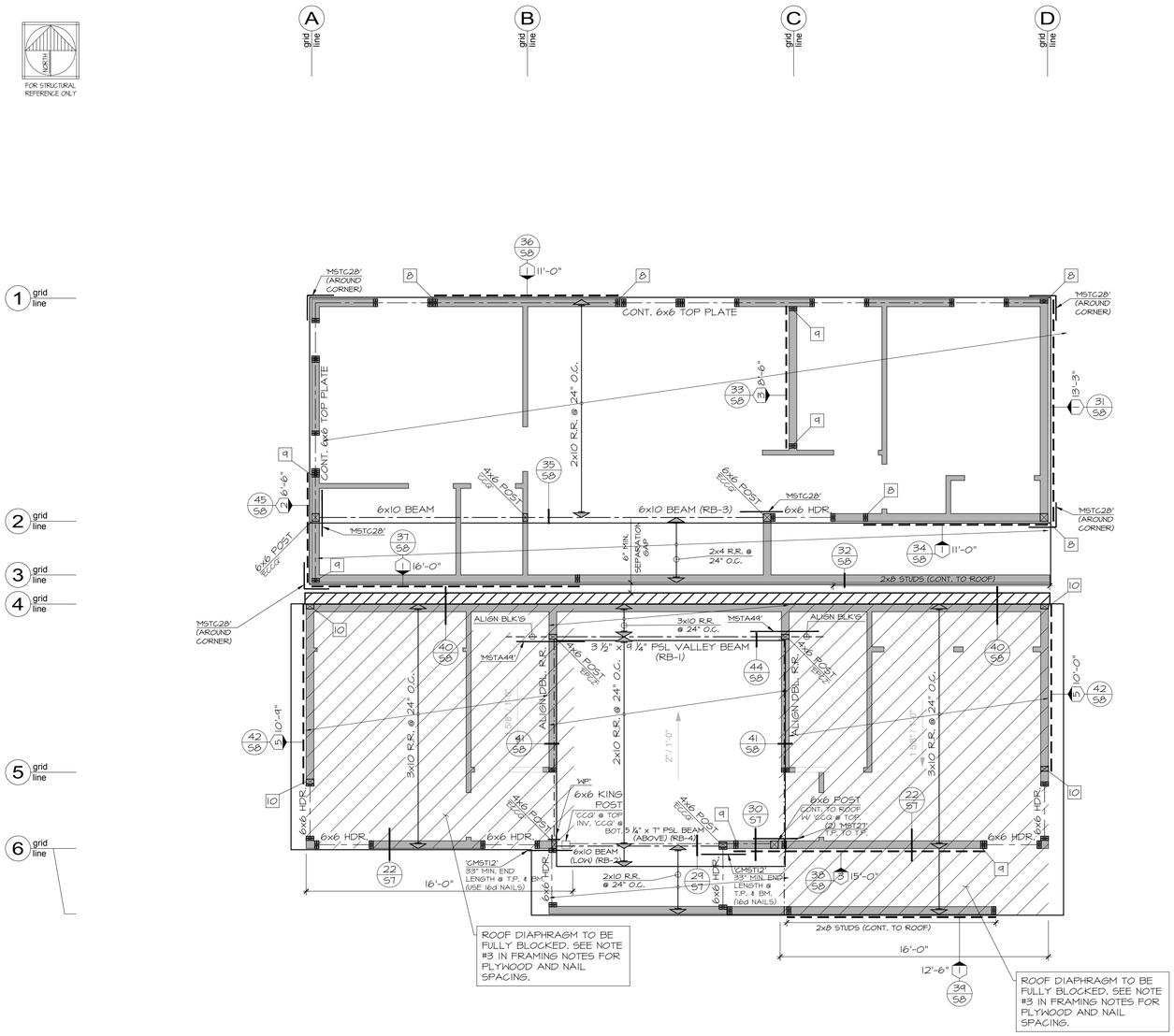

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SHEET TITLE :

FLOOR FRAMING PLAN

S4

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## ROOF FRAMING PLAN

ALL DIMENSIONS TO BE VERIFIED WITH ARCHITECTURAL PLANS
SEE SHEET S-1 & S-2 FOR COMPLETE SHEARWALL & HOLD-DOWN SCHEDULES SCALE: 1/4" = 1'

## FRAMING LEGEND

- MIN. — SHEAR WALL PER PLAN
- NEW WALL PER PLAN
- HOLD-DOWN PER PLAN
- DOUBLE 2x STUD OR KING STUD W/ TRIMMER
- 'HU' HANGER (U.N.O.)
- 'HUC' HANGER (U.N.O.)

## NOTE

PROVIDE MSTC28 STRAPS ACROSS ALL DISCONTINUOUS TOP PLATES. (U.N.O.)

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|---|---|
| 1 | |
| 2 | |
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Project Name:

2915 ULRIC DEVELOPMENT

2915 ULRIC STREET
SAN DIEGO, CA 92111

Designer:

GTC DESIGN

1205 J STREET, SUITE D
SAN DIEGO, CA 92101

| | |
|---|---|
| Job No. | J23365 |
| Cad Ref. No: | - |
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| Date Issued: | - |
| Proj. Engineer: | A.S. |
| Drawn By: | - |
| Checked By: | M.T.L. |
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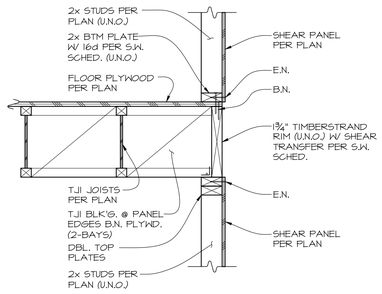
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- ☐ CHECK SET (NOT FOR CONSTRUCTION)
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SHEET TITLE :

ROOF FRAMING PLAN

S5

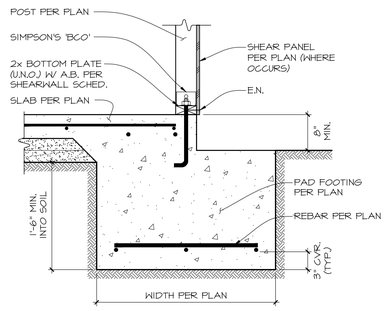



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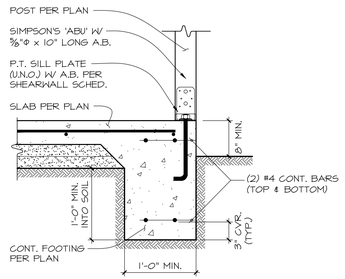
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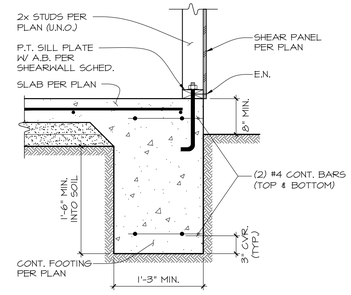
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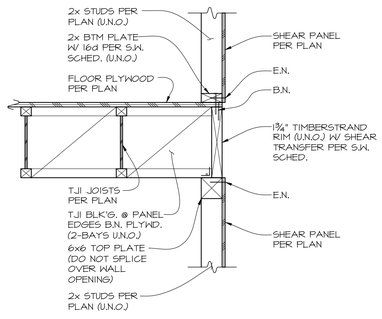
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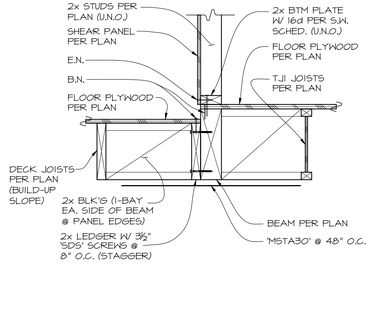

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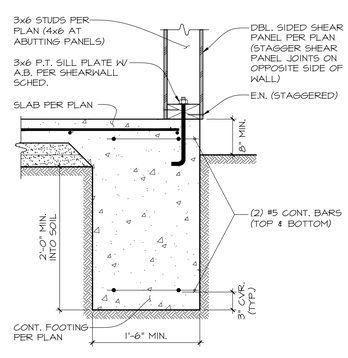

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N WD FL TJI EX PA



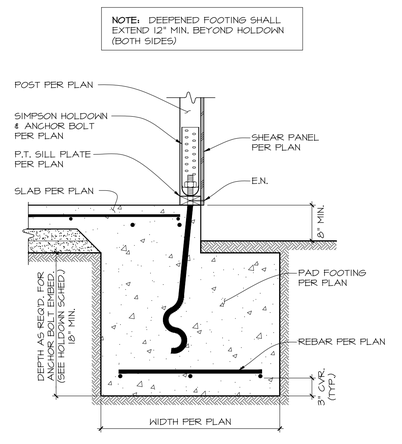

## SHEAR TRANSFER DETAIL 11

N WD FL TJI IN PE



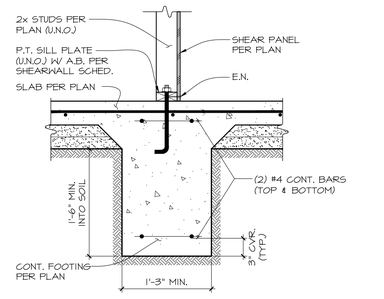

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N FN SL 2ST GO EX



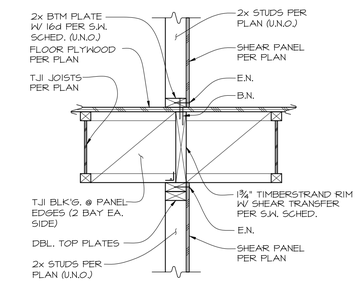

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FN N SL 2ST PD EX 3



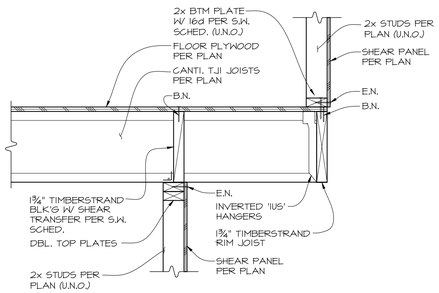

## CONT. INT. FOOTING 2

FN N SL 2ST GO IN




## SHEAR TRANSFER DETAIL 15

N WD FL TJI IN PA

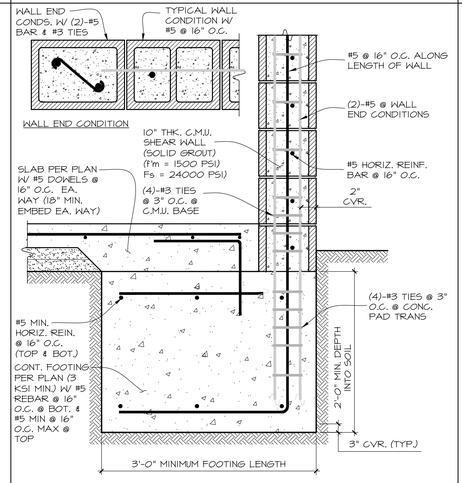



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N WD FL TJI EX PE

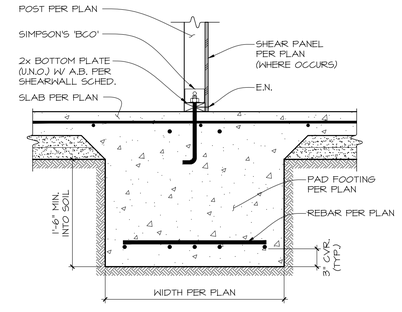
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## C.M.U. FOOTING DETAIL 6

N FN SL 2ST GO EX




## PAD FOOTING 3

FN N SL 2ST PD IN 1

REVISIONS:

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REGISTERED PROFESSIONAL ENGINEER MILES T. LOVELACE No. C 39734 Exp. 12/31/23 STATE OF CALIFORNIA

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LOVELACE ENGINEERING
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www.lovelaceeng.com

Project Name:

2915 ULRIC DEVELOPMENT

2915 ULRIC STREET
SAN DIEGO, CA 92111

Designer:

GTC DESIGN

1205 J STREET, SUITE D
SAN DIEGO, CA 92101

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|---|---|
| Job No. | J23365 |
| Cad Ref. No: | - |
| Date Drawn: | 7/29/23 |
| Date Issued: | - |
| Proj. Engineer: | A.S. |
| Drawn By: | - |
| Checked By: | M.T.L. |
| Scale: | N.T.S. |

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- ☐ BID SET DRAWINGS
- ☐ CONSTRUCTION DOCUMENTS
- ☐ OTHER_____

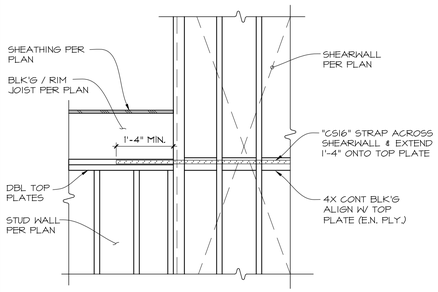
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STRUCTURAL DETAILS

S6



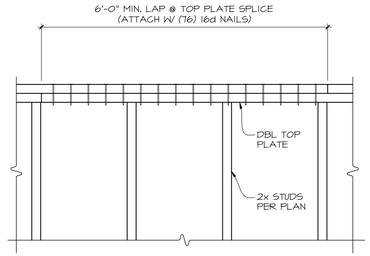

## SHEARWALL STRAP DETAIL 28

N WD WL DR

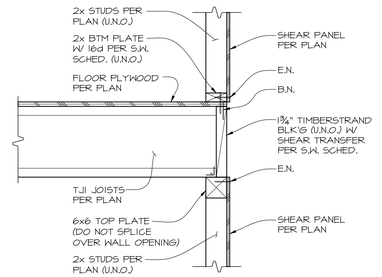
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NOTE:
PROVIDE (2) MSTC66 STRAPS ACROSS ALL DISCONTINUOUS TOP PLATES.

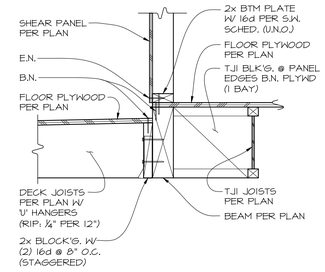



## ALT. TOP PLATE SPLICE 22




## SHEAR TRANSFER DETAIL 19

N WD FL TJI EX PE

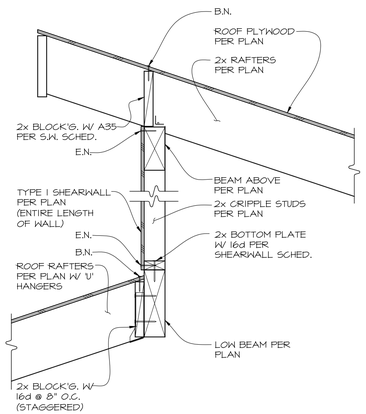



## SHEAR TRANSFER DETAIL 16

N WD FL TJI IN PP

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PRJ-1077519
Hannan Al-Timimi

NOTE:
THIS DETAIL IS FOR SHEAR TRANSFER ONLY. FOR EAVE DETAIL, SEE ARCHITECTURAL PLANS.

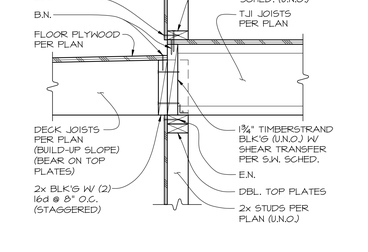



## SHEAR TRANSFER DETAIL 29

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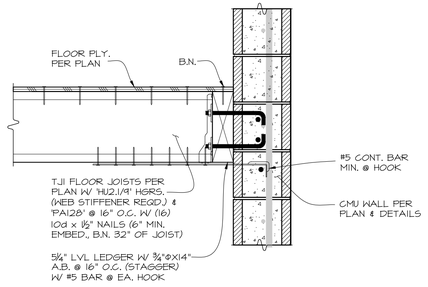
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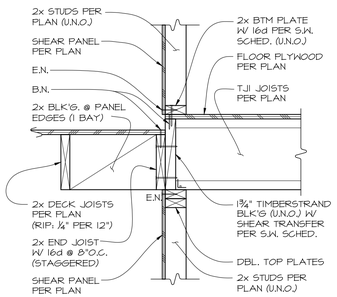

## SHEAR TRANSFER DETAIL 23

N WD FL TJI IN PE




## SHEAR TRANSFER DETAIL 20

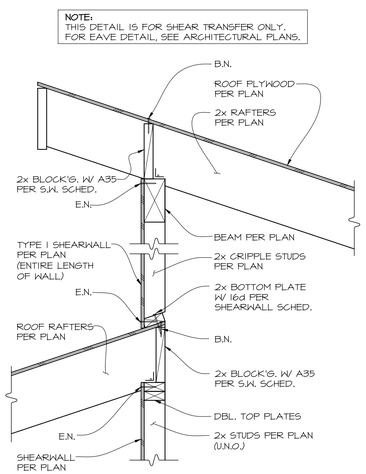
RE FN SL CO EX




## SHEAR TRANSFER DETAIL 17

N WD FL TJI IN PP

NOTE:
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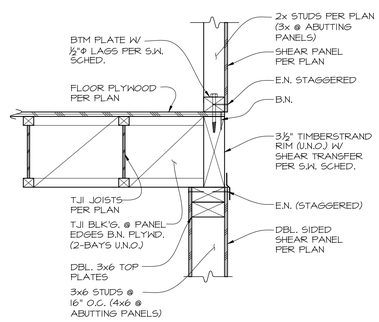



## SHEAR TRANSFER DETAIL 30

N WD RF 2x IN PE

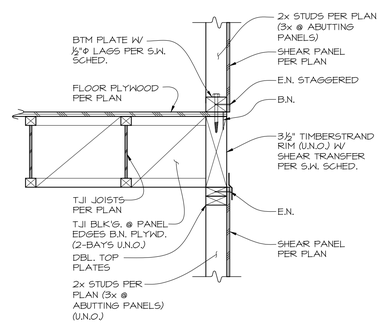
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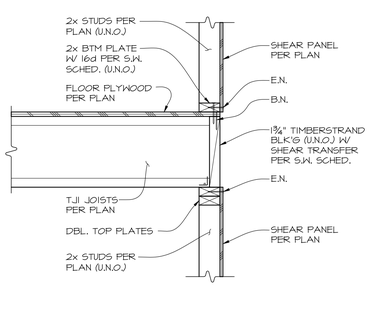

## SHEAR TRANSFER DETAIL 24

N WD FL TJI EX PA




## SHEAR TRANSFER DETAIL 21

N WD FL TJI EX PA




## SHEAR TRANSFER DETAIL 18

N WD FL TJI EX PE

REVISIONS:

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Project Name:

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2915 ULRIC STREET
SAN DIEGO, CA 92111

Designer:

GTC DESIGN

1205 J STREET, SUITE D
SAN DIEGO, CA 92101

| | |
|---|---|
| Job No. | J23365 |
| Cad Ref. No: | - |
| Date Drawn: | 7/29/23 |
| Date Issued: | - |
| Proj. Engineer: | A.S. |
| Drawn By: | - |
| Checked By: | M.T.L. |
| Scale: | N.T.S. |

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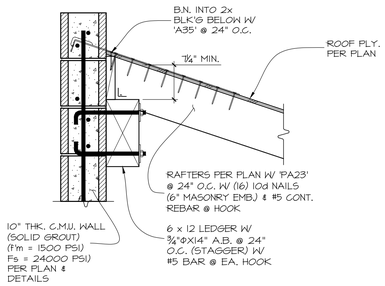
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S7

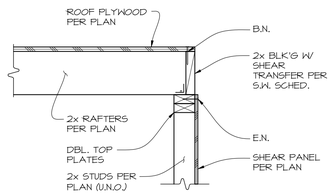
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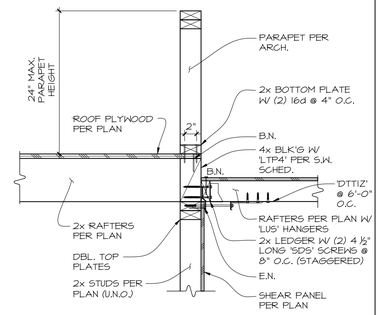

SHEAR TRANSFER DETAIL 40

N WD RF 2x EX PE



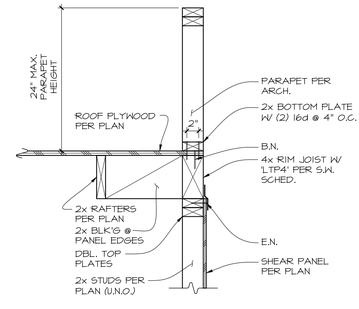

SHEAR TRANSFER DETAIL 37

N WD RF 2x FL EX PE



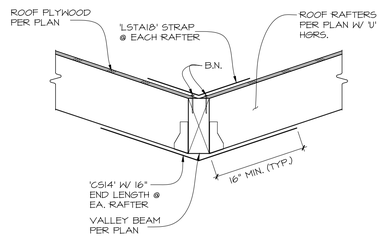

SHEAR TRANSFER DETAIL 34

N WD RF 2x FL EX PE




SHEAR TRANSFER DETAIL 31

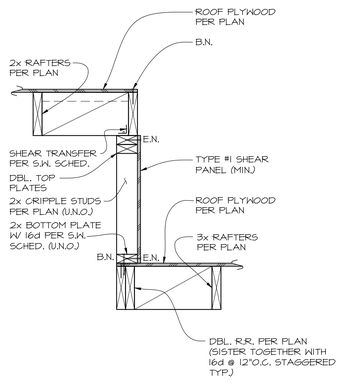
N WD RF 2x FL EX PE




VALLEY CONNECTION 44

N WD RF 2x IN PE

NOTE:
THIS DETAIL IS FOR SHEAR TRANSFER ONLY.
FOR EAVE DETAIL, SEE ARCHITECTURAL PLANS.



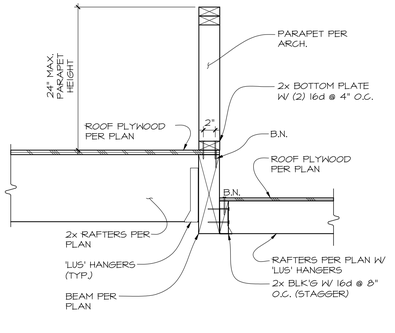

SHEAR TRANSFER DETAIL 41

N WD RF 2x IN PA



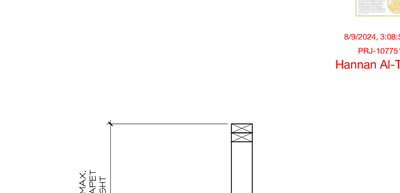

SHEAR TRANSFER DETAIL 38

N WD RF 2x IN PE



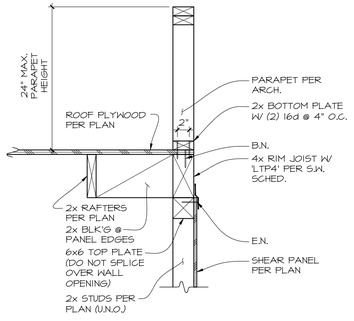

SHEAR TRANSFER DETAIL 35

N WD RF 2x FL PP




SHEAR TRANSFER DETAIL 32

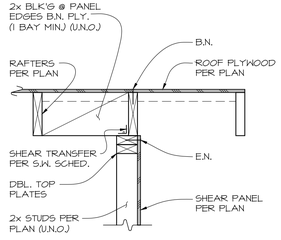
N WD RF 2x FL EX PE




SHEAR TRANSFER DETAIL 45

N WD RF 2x FL EX PE

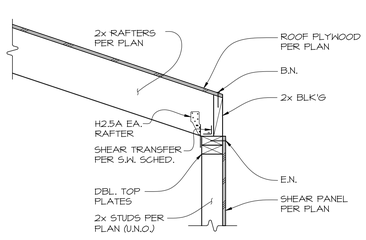
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SHEAR TRANSFER DETAIL 42

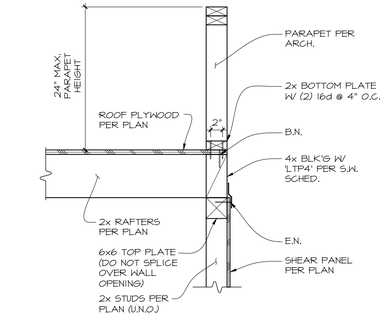
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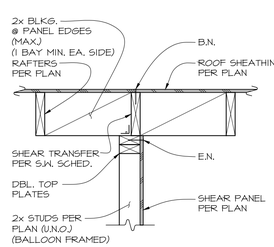

SHEAR TRANSFER DETAIL 39

N WD RF 2x EX PE




SHEAR TRANSFER DETAIL 36

N WD RF 2x FL EX PE




SHEAR TRANSFER DETAIL 33

N WD RF 2x IN PA

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PRJ-1077519
Hannan Al-Timimi

REVISIONS:

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Designer:

GTC DESIGN

1205 J STREET, SUITE D
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STRUCTURAL DETAILS

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Hannan Al-Timimi

GTC DESIGN
1205 J STREET, STE D
SAN DIEGO, CA 92101
HELLO@GTCDESIG N.COM
619.485.5546

AIA California

# 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

## RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2020, Includes August 2019 Supplement)

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

## CHAPTER 3
## GREEN BUILDING
### SECTION 301 GENERAL

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

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

**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.

**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
### DIVISION 4.1 PLANNING AND DESIGN
### 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, 4.106.4.2, or 4.106.4.3 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 commercial power supply.
   1.2 Where there is evidence substantiating that meeting the requirements will alter the local utility infrastructure design requirements on the utility side of the meter so as to increase the utility side cost to the homeowner or the developer by more than $400.00 per dwelling unit.
2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities.

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

**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.** If residential parking is available, 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 EVSE. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.

**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.

**4.106.4.2.1 Electric vehicle charging space (EV space) locations.** Construction documents shall indicate the location of proposed EV spaces. Where common use parking is provided at least one EV space shall be located in the common use parking area and shall be available for use by all residents.

**4.106.4.2.1.1 Electric Vehicle Charging Stations (EVCS)** When EV chargers are installed, EV spaces required by Section 4.106.2.2, Item 3, shall comply with at least one of the following options:

1. The EV 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 EV 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 4.106.4.2.1.1 and Section 4.106.4.2.2, Item 3.

**Note:** Electric Vehicle charging stations serving public housing are required to comply with the *California Building Code*, Chapter 11B.

**4.106.4.2.2 Electric vehicle charging space (EV space) dimensions.** The EV space 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 EV spaces, but not less than one EV space, shall 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.

**4.106.4.2.3 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 proposed location of the EV space. Construction documents shall identify the raceway termination point. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

**4.106.4.2.4 Multiple EV spaces required.** Construction documents shall indicate the raceway termination point and proposed location of future EV spaces and EV chargers. Construction documents shall also provide information on amperage of future EVSE, raceway method(s), wiring schematics and electrical load calculations to verify 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 the full rated amperage of the EVSE. 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.

**4.106.4.2.5 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*.

**4.106.4.3 New hotels and motels.** All newly constructed hotels and motels shall provide EV spaces capable of supporting future installation of EVSE. The construction documents shall identify the location of the EV spaces.

**Notes:**
1. Construction documents are intended to demonstrate the project's capability and capacity or facilitating future EV charging.
2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

**4.106.4.3.1 Number of required EV spaces.** The number of required EV spaces shall be based on the total number of parking spaces provided for all types of parking facilities in accordance with Table 4.106.4.3.1. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.

TABLE 4.106.4.3.1

| TOTAL NUMBER OF PARKING SPACES | NUMBER OF REQUIRED EV SPACES |
|---|---|
| 0-9 | 0 |
| 10-25 | 1 |
| 26-50 | 2 |
| 51-75 | 4 |
| 76-100 | 5 |
| 101-150 | 7 |
| 151-200 | 10 |
| 201 and over | 6 percent of total |

**4.106.4.3.2 Electric vehicle charging space (EV space) dimensions.** The EV spaces shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet (5486mm).
2. The minimum width of each EV space shall be 9 feet (2743mm)

**4.106.4.3.3 Single EV space required.** When a single EV space is required, the EV space shall be designed in accordance with Section 4.106.4.2.3.

**4.106.4.3.4 Multiple EV spaces required.** When multiple EV spaces are required, the EV spaces shall be designed in accordance with Section 4.106.4.2.4.

**4.106.4.3.5 Identification.** The service panels or sub-panels shall be identified in accordance with Section 4.106.4.2.5.

**4.106.4.3.6 Accessible EV spaces.** In addition to the requirements in Section 4.106.4.3, EV spaces for hotels/motels and all EVSE, when installed, shall comply with the accessibility provisions for the EV charging stations in the *California Building Code*, Chapter 11B.

### 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.

**4.303.2 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.

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

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

### DIVISION 4.5 ENVIRONMENTAL QUALITY
### SECTION 4.501 GENERAL

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

### SECTION 4.502 DEFINITIONS

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

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

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

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

**DISCLAIMER:** THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE 2016 CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.

GTC DESIGN STUDIO ©

**2915 ULRIC STREET DEVELOPMENT**
2917, 2919, 2921 & 2923 ULRIC STREET, SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |
| 6 | CITY RESUBMITTAL R6 | 07/31/2024 |

Sheet Name

CAL GREEN NOTES

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER

**A002**

AIA California

# 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

## RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2020, Includes August 2019 Supplement)

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 O³/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[1,2,3]
GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS

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

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS
2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.
3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

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

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

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIF. CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.
2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16" (8 MM).

## DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)

**4.504.3 CARPET SYSTEMS.** All carpet installed in the building interior shall meet the testing and product requirements of at least one of the following:

1. Carpet and Rug Institute's Green Label Plus Program.
2. California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers" Version 1.1, February 2010 (also known as Specification 01350).
3. NSF/ANSI 140 at the Gold level.
4. Scientific Certifications Systems Indoor Advantage™ Gold.

**4.504.3.1 Carpet cushion.** All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.

**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 comply with one or more of the following:

1. Products compliant with the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350), certified as a CHPS Low-Emitting Material in the Collaborative for High Performance Schools (CHPS) High Performance Products Database.
2. Products certified under UL GREENGUARD Gold (formerly the Greenguard Children & Schools program).
3. Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program.
4. Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers", Version 1.1, February 2010 (also known as Specification 01350).

**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.

©TGC DESIGN STUDIOS

**DISCLAIMER:** THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE 2016 CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.

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Hannan Al-Timimi

**2915 ULRIC STREET DEVELOPMENT**
2917, 2919, 2921 & 2923 ULRIC STREET, SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |
| 6 | CITY RESUBMITTAL R6 | 07/31/2024 |

Sheet Name
CAL GREEN NOTES

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER
**A003**

# GRAPHIC SYMBOLS

## ELEVATION INDICATIONS

- BRICK / MASONRY WALL
- GLASS / GLAZED PANEL
- PLASTER / STUCCO
- WOOD SHAKE / SHINGLE
- SIDING / WOOD PANEL

## SECTION INDICATIONS

- ACOUSTICAL CEILING TILE
- ALUMINUM
- BRICK
- CONCRETE
- CONCRETE MASONRY UNIT
- EARTH OR GROUND
- GLASS / GLAZING
- GRAVEL
- GRAVEL DRAINAGE
- GYPSUM BOARD
- INSULATION (LOOSE OR BATT)
- INSULATION (RIGID)
- PLASTER / STUCCO
- PLYWOOD
- PLYWOOD SHEATHING
- SAND OR GROUT
- SAND OR GROUT
- WOOD (FINISHED)
- WOOD (CONTINUOUS MEMBER)
- WOOD (DISCONTINUOUS / BLOCKING MEMBER)

## REFLECTED CEILING

- ACOUSTICAL CEILING AND GRID
- +X'-XX" SPOT ELEVATION AND CEILING HEIGHT
- XX CEILING FINISH TAG
- SA CEILING MOUNTED SMOKE DETECTOR
- CMA CEILING MOUNTED CARBON MONOXIDE DETECTOR
- EXIT SIGN
- E DENOTES EXISTING TO REMAIN
- R DENOTES EXISTING TO BE RELOCATED

## REFLECTED CEILING, CONT.

LIGHTING FIXTURES

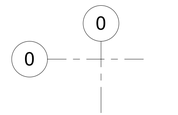
- EXIT SIGN
- FLUORESCENT LIGHT FIXTURE
- FLUORESCENT LIGHT FIXTURE TO BE REMOVED
- LED STRIP FIXTURE
- UNDER-CABINET FLUORESCENT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED DOWNLIGHT
- TRACK LIGHTING
- WALL-MOUNTED LIGHT FIXTURE (SCONCE)
- CEILING FAN WITH LIGHT FIXTURE
- EXHAUST FAN WITH LIGHT FIXTURE
- S LIGHT SWITCH
- $S_D$ DIMMER SWITCH

## POWER AND COMMUNICATION

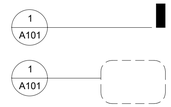
SURFACE-MOUNTED DEVICES

- XX EQUIPMENT TAG (REFER TO EQUIPMENT SCHEDULE)
- CEILING-MOUNTED FIRE ALARM WITH SPRINKLER
- CEILING-MOUNTED EVACUATION SPEAKER
- WALL-MOUNTED FIRE FIGHTER HANDSET
- WALL-MOUNTED SINGLE RECEPTACLE
- WALL-MOUNTED DUPLEX RECEPTACLE
- GFI WALL-MOUNTED GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE
- WP WALL-MOUNTED DUPLEX WATERPROOF RECEPTACLE
- USB WALL-MOUNTED DUPLEX RECEPTACLE WITH USB PORTS
- WALL-MOUNTED TELEPHONE JACK
- WALL-MOUNTED DATA (CAT6 ETHERNET) PORT

## CONSTRUCTION




GRID LINE



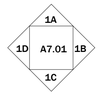

DETAIL
Upper mark denotes drawing number
Lower mark denotes sheet




PARTIAL BUILDING SECTION



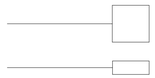

BUILDING SECTION




INTERIOR ELEVATION
Elevation number denoted in arrow
Sheet number denoted in box




EXTERIOR ELEVATION
Elevation number denoted in arrow
Sheet number denoted in circle



KEYNOTE

WALL TYPE, FLOOR TYPE
ROOF TYPE, CELING TYPE

DASHED LINE
Used to denote items hidden, overhead, not in contract (NIC), or to be removed

BREAK LINE
Material to continue

CENTER LINE, GRID LINES

PROPERTY LINE

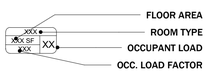
ROOM NAME
150 SF

ROOM IDENTIFICATION

1i

WINDOW IDENTIFICATION

DOOR IDENTIFICATION




ROOM TAG FOR EGRESS PLAN

## FINISH

XX-X FINISH TAG
WALL, CEILING, FLOOR

# ABBREVIATIONS

### #

### A

| | |
|---|---|
| AB | Anchor Bolt |
| ABV | Above |
| AC | Acoustic(al) |
| A/C | Air Conditioning |
| ACCS | Accessible/Accessibility |
| ACT | Acoustical Ceiling Tile |
| AD | Area Drain |
| ADH | Adhesive |
| ADJ | Adjacent |
| ADJT | Adjustable |
| ADU | Accessory Dwelling Unit |
| AFF | Above Finish Floor |
| AGG | Aggregate |
| ALT | Alternate |
| ALUM | Aluminum |
| ANOD | Anodized |
| AP | Access Panel |
| APPROX | Approximate |
| ARCH | Architect |
| ARCHL | Architectural |
| ASPH | Asphalt(ic) |
| A/V | Audio/Visual |
| AUTO | Automatic |

### B

| | |
|---|---|
| BA | Bathroom |
| BD | Board |
| BEL | Below |
| BLDG | Building |
| BLKG | Blocking |
| BM | Beam, Benchmark |
| B.O. | Bottom Of |
| BOT | Bottom |
| BRG | Bearing |
| BSMT | Basement |
| BUR | Built-Up Roof(ing) |

### C

| | |
|---|---|
| CAB | Cabinet |
| CEC | California Energy Commission |
| CEM | Cement(itious) |
| C.H. | Ceiling Height |
| CHAM | Chamfer |
| CG | Corner Guard |
| CGBSC | California Green Building Standards Code |
| C.I. | Cast Iron |
| CISCA | Ceilings & Interior Systems Construction Association |
| CIP | Cast in Place |
| CJT | Control Joint |
| CLG | Ceiling |
| CLO | Closet |
| CLR | Clear/Clearance |
| CMU | Concrete Masonry Unit |
| C.O. | Clean Out, Cased Opening |
| COL | Column |
| COMP | Composite, Composition |
| CONC | Concrete |
| CONST | Construction |
| CONT | Continuous |
| COORD | Coordinate |
| CPT | Carpet |
| CORR | Corrugated |
| CS | Countersink |
| CSMT | Casement |
| CSTM | Custom |
| CT | Ceramic Tile |

### D

| | |
|---|---|
| DBL | Double |
| DEMO | Demolish |
| DES | Design(ed) |
| DET | Detail |
| DF | Drinking Fountain |
| DH | Double-Hung |
| DIA | Diameter |
| DIAG | Diagonal |
| DIM | Dimension |
| DISP | Dispenser |
| DIV | Division |
| DN | Down |
| D.O. | Door Opening |
| DR | Door |
| DS | Downspout |
| DTL | Detail |
| DW | Dishwasher, Dumbwaiter |
| DWG | Drawing |
| DWR | Drawer |

### E

| | |
|---|---|
| (E) | Existing |
| EA | Each |
| EB | Expansion Bolt |
| EL | Elevation |
| ELEC | Electric(al) |
| ELEV | Elevator |
| EMBED. | Embedd(ed)(ing) |
| EMER | Emergency |
| EMT | Electrical Metallic Tubing |
| ENCL | Enclosure |
| ENGR | Engineer(ed) |
| ENTR | Entrance |
| EQ | Equal |
| EQUIP | Equipment |
| EST | Estimate |
| EWC | Electric Water Cooler |
| EXCA | Excavate |
| EXH | Exhaust |
| EXG | Existing |
| EXP | Exposed |
| EXT | Exterior |

### F

| | |
|---|---|
| F.A. | Fire Alarm |
| FAB | Fabricate, Fabrication |
| FAR | Floor Area Ratio |
| FAS | Fasten, Fastener |
| F.C. | Fixture Contractor |
| FD | Floor Drain |
| FE | Fire Extinguisher |
| FEC | Fire Extinguisher Cabinet |
| FFE | Finish Floor Elevation |
| FHC | Fire Hose Cabinet |
| FIN | Finish |
| FIXT | Fixture |
| FLUR | Fluorescent |
| FLR | Floor(ing) |
| FLX | Flexible |
| FND | Foundation |
| FOF | Face of Finish |
| FOS | Face of Studs |
| FP | Fireproof |
| FPL | Fireplace |
| FR | Fire Rat(ed)(ing) |
| FRC | Fire-Retardant Coating |
| FRP | Fiberglass-Reinforced Polymer |
| FRT | Fire-Retardant Treated |
| FT | Foot/Feet |
| FTG | Footing |
| FUR | Furr(ing) |
| FURN | Furniture |
| FUT | Future |

### G

| | |
|---|---|
| GA | Gage, Gauge |
| GALV | Galvanized |
| GB | Grab Bar |
| GF | Ground Face |
| GI | Galvanized Iron |
| GC | General Contractor |
| GL | Glass, Glazing |
| GLB | Glass Block |
| GR | Grad(e)(ing) |
| GT | Grout |
| GWB | Gypsum Wall Board |
| GVL | Gravel |
| GYP | Gypsum |

### H

| | |
|---|---|
| HB | Hose Bibb |
| HBD | Hardboard |
| HC | Hollow Core |
| HD | Head, Heavy Duty |
| HDR | Header |
| HDW | Hardware |
| HEX | Hexagonal |
| HH | Handhole |
| HM | Hollow Metal |
| HOR | Horizontal |
| HT | Height |
| HTG | Heating |
| HVAC | Heating Ventilating & Air Conditioning |
| HW | Hot Water |
| HWD | Hardwood |
| HOR | Horizontal |
| HX | Heat Exchanger |

### I

| | |
|---|---|
| ID | Inside Diameter |
| IN | Inch |
| INCL | Include(d), (s), (ing) |
| INFILTR | Infiltration |
| INFO | Information |
| INSUL | Insulation |
| INT | Interior |
| INTM | Intermediate |
| INV | Invert |

### J

| | |
|---|---|
| JAN | Janitor |
| JF | Joint Filler |
| JST | Joist |
| JNT | Joint |

### K

| | |
|---|---|
| KD | Kiln Dried, Knockdown |
| KIT | Kitchen |
| KN | Knot |
| KO | Knockout |
| KPL | Kickplate |
| KV | Kilovolt |
| KW | Kilowatt |

### L

| | |
|---|---|
| L | Length |
| LAD | Ladder |
| LAM | Laminate(d) |
| LAV | Lavatory |
| LB | Lag Bolt |
| LBL | Label |
| LF | Lineal/Linear Feet |
| LH | Left Hand |
| LL | Landlord, Live Load |
| LM | Lumen |
| LP | Light Proof |
| LR | Living Room |
| LT | Light |
| L.T. | Light Track |
| LT GA | Light Gauge |
| LV | Low Voltage |
| LVL | Level |
| LVR | Louver |
| LVT | Luxury Vinyl Tile |
| LW | Lightweight |
| LWC | Lightweight Concrete |

### M

| | |
|---|---|
| M | Meter |
| MAN | Manual |
| MAS | Masonry |
| MATL | Material |
| MAX | Maximum |
| MB | Machine Bolt |
| MBR | Member |
| MC | Medicine Cabinet |
| MEAS | Measure |
| MECH | Mechanical |
| MED | Medium |
| MER | Mechanical Equipment Room |
| MEZZ | Mezzanine |
| MF | Mill Finish |
| MFD | Multifamily Dwelling |
| MFR | Manufacturer |
| MFRD | Manufactured |
| MH | Manhole |
| MID | Middle |
| MIN | Minimum |
| MIR | Mirror |
| MISC | Miscellaneous |
| MLD | Molding |
| MM | Millimeter |
| MMB | Membrane |
| MO | Masonry Opening |
| MOD | Module, Modular |
| MOIST | Moisture |
| MOV | Movable |
| MRB | Marble |
| MSL | Mean Sea Level |
| MT | Mount |
| MTD | Mounted |
| MTL | Metal |
| MUL | Mullion |
| MWK | Millwork |

### N

| | |
|---|---|
| N | North |
| NAT | Natural |
| NEMA | National Electrical Manufacturers Association |
| NIC | Not In Contract |
| NMT | Nonmetallic |
| NO. | Number |
| NOM | Nominal |
| NR | Noise Reduction |
| NRC | Noise-Reduction Coefficient |
| NTS | Not To Scale |

### O

| | |
|---|---|
| OA | Overall |
| OAI | Outside Air Intake |
| OBS | Obscure |
| OC | On Center |
| OD | Outside Diameter |
| OFF. | Office |
| OH | Overhead |
| OWJ | Open-Web Joist |
| OPG | Opening(s) |
| OPP | Opposite |
| OPR | Operable |
| OPS | Opposite Surface |
| OPT | Optional |
| ORIG | Original |
| ORN | Ornamental |
| O.T.B | Open To Below |
| OVFL | Overflow |

### P

| | |
|---|---|
| PAR | Parallel |
| PAT | Pattern |
| PBD | Particle Board |
| PC | Portland Cement |
| PCC | Precast Concrete |
| PCF | Pounds per Cubic Foot |
| PCS | Pieces |
| PE | Porcelain Enamel |
| PED | Pedestal |
| PEDTR | Pedestrian |
| PERF | Perforated |
| PERI | Perimeter |
| PERP | Perpendicular |
| PH | Phillips Head |
| PKG | Parking |
| PL | Plate |
| P.L. | Property Line |
| PLAM | Plastic Laminate |
| PLAS | Plaster |
| PLSTC | Plastic |
| PLUMB | Plumbing |
| PWD | Plywood |
| PNL | Panel |
| PNT | Paint(ed) |
| POL | Polish(ed) |
| POLYST | Polystyrene |
| PORC | Porcelain |
| PORT | Portable |
| PR | Pair |
| PREFAB | Prefabricated |
| PREFIN | Prefinished |
| PRELIM | Preliminary |
| PRF | Preformed |
| PROJ | Project(ion) |
| PROTEC | Protection |
| PSF | Pounds per Square Foot |
| PSI | Pounds per Square Inch |
| PT | Point |
| PTFE | Polytetrafluorethylene |
| PTC | Post-Tensioned Concrete |
| PTN | Partition |
| PVC | Polyvinyl Chloride |
| PVG | Paving |
| PVMT | Pavement |
| PWDR | Powder Room |
| PWR | Power |

### Q

| | |
|---|---|
| QR | Quarter-Round |
| QS | Quarter-Sawn |
| QT | Quarry Tile |
| QTR | Quarter |
| QUAD | Fourplex |

### R

| | |
|---|---|
| R | Riser |
| RA | Return Air |
| RAD | Radius |
| RB | Rubber Base |
| RD | Roof Drain |
| REC | Recessed |
| REFR | Refrigerator |
| RECP | Receptacle |
| REF | Refer(ence) |
| REQD | Required |
| REINF | Reinforce(d)(ing)(ment) |
| REQD | Required |
| RQMT(S) | Requirement(s) |
| RES | Resilient |
| RET | Return |
| REV | Revision, Revised |
| RFG | Roofing |
| RH | Right Hand |
| RM | Room |
| RO | Rough Opening |
| ROW | Right Of Way |
| RWL | Rain Water Leader |

### S

| | |
|---|---|
| SC | Solid Core |
| SCH(D) | Schedule(d) |
| SD | Storm Drain |
| SEC | Security, Section |
| SF | Square Foot/Feet |
| SFD | Single Family Dwelling |
| SFGL | Safety Glazing |
| SHT | Sheet |
| SIM | Similar |
| SL | Sleeve |
| SPEC | Specification |
| SPK | Loudspeaker |
| SQ | Square |
| S.S. | Stainless Steel |
| SSK | Service Sink |
| STD | Standard |
| STG | Seating |
| STL | Steel |
| STOR | Storage |
| STRUC | Structural |
| SURF | Surface |
| SUSP | Suspended |
| SYM | Symmetrical, Symmetry |
| SYST | System(s) |

### T

| | |
|---|---|
| T | Tread |
| TB | Towel Bar |
| TEL | Telephone |
| T&G | Tongue and Groove |
| THK | Thick(ness) |
| THR | Threshold |
| TKBD | Tackboard |
| T.O. | Top Of |
| TOL | Tolerance |
| TPD | Toilet Paper Dispenser |
| TR | Transom |
| TRTD | Treated |
| TYP | Typical |

### U

| | |
|---|---|
| UC | Undercut |
| UNF | Unfinished |
| U.O. | Underside Of |
| U.N.O. | Unless Noted Otherwise |
| UR | Urinal |
| UTIL | Utility |

### V

| | |
|---|---|
| VB | Vapor Barrier |
| VCT | Vinyl Composition Tile |
| VERT | Vertical |
| VG | Vertical Grain |
| VNR | Veneer |
| V.H.I.F. | Verify Height In Field |
| V.I.F. | Verify In Field |

### W

| | |
|---|---|
| W | Wide, Width |
| W/ | With |
| W/D | Washer/Dryer |
| W/O | Without |
| WC | Water Closet |
| WD | Wood |
| WDW | Window |
| WH | Water Heater |
| WP | Waterproof(ing) |
| WRB | Weather-Resistant Barrier |
| WSCT | Wainscot |
| WT | Weight |
| WWF | Welded Wire Fabric |

### X

| | |
|---|---|
| XBAR | Crossbar |
| XH | Extra Heavy |
| XL | Extra Large |
| XR | X-ray |

### Y

| | |
|---|---|
| YD | Yard |
| YS | Yield Strength |


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**2915 ULRIC STREET DEVELOPMENT**
2917, 2919, 2921 & 2923 ULRIC STREET,
SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
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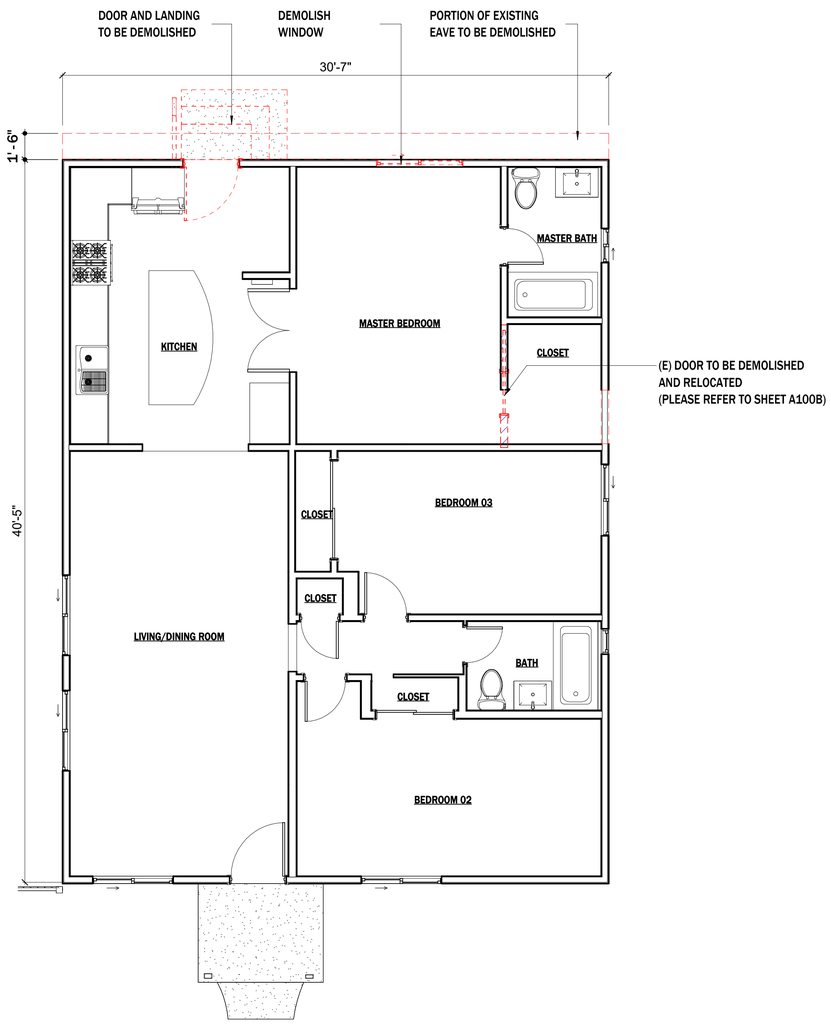
GRAPHIC SYMBOLS & ABBREVIATIONS

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1 EXISTING MAIN HOUSE - DEMOLITION PLAN
Scale: 1/4" = 1'-0"

NORTH

## DEMO PLAN GENERAL NOTES

1. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL DISCIPLINES AND THE REQUIREMENTS NOTED ON ALL PLANS.
2. NO PERSON SHALL DEMOLISH ANY BUILDING OR STRUCTURE UNLESS THEY HAVE OBTAINED APPROVAL FROM THE REQUIRED REGULATORY AGENCIES.
3. REMAINING ELECTRICAL SYSTEMS, FIXTURES, DEVICES, ETC. SHALL BE OPERATIONAL U.N.O.
4. THIS DRAWING IS DIAGRAMMATIC AND FOR REFERENCE ONLY.
5. CONTRACTOR SHALL VISIT THE SITE, VERIFY EXISTING CONDITIONS, AND COORDINATE EXTENT OF DEMOLITION WITH OWNER PRIOR TO BID AND CONSTRUCTION.
6. PROVIDE A CLEAN, SMOOTH AND LEVEL SUBFLOOR. PREPARE FOR INSTALLATION OF NEW FLOOR FINISH.
7. PROTECT ALL EXISTING, AND REPLACE ANY DAMAGED OR MISSING, FIREPROOFING.
8. NO STRUCTURAL MEMBER IN ANY STORY SHALL BE DEMOLISHED OR REMOVED UNTIL THE STORY ABOVE IS COMPLETELY REMOVED. EXCEPTIONS: (A) TWO-STORY TYPE V BUILDINGS OF WOOD-FRAME CONSTRUCTION; (B) TWO-STORY BUILDINGS OF ANY TYPE, PROVIDED NO FIRST STORY STRUCTURAL MEMBER IS REMOVED BEFORE ALL OF ITS SUPPORTED LOAD IS REMOVED.
9. THE STORAGE AND HANDLING OF MATERIAL AND THE PREVENTION OF DUST SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE REGULATORY AGENCIES.
10. PROTECTION DEVICES: WHEN APPLICABLE, BARRICADES, PROTECTION FENCES, AND PROTECTION CANOPIES SHALL BE PROVIDED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF REGULATORY AGENCIES. EXCEPTIONS: (A) FOR SINGLE-FAMILY DWELLINGS, ONLY A BARRIER WILL BE REQUIRED. (B) A PROTECTION CANOPY OR PROTECTION FENCE WILL NOT BE REQUIRED WHERE THE ADJOINING PUBLIC WAY IS PARTIALLY CLOSED AND PROPERLY BARRICADED SO AS TO PROHIBIT ALL PEDESTRIAN AND VEHICULAR TRAFFIC WITHIN THE REQUIRED CLEARANCE DURING THE ENTIRE DEMOLITION OPERATION.
11. HAND WRECKING: HAND-WRECKING METHODS MAY BE USED ON ANY TYPE OF BUILDING,PROVIDED THE REQUIRED PROTECTION DEVICES ARE INSTALLED AND APPROVED. HAND WRECKING MAY INCLUDE THE USE OF ANY TYPE OF HAND-HELD TOOLS. THE USE OF SMALL WHEEL-MOUNTED PNEUMATIC TOOLS WILL BE PERMITTED IF FIRST APPROVED BY THE BUILDING INSPECTOR.
12. APPLICATION FOR MODIFICATION: DEVIATIONS FROM THE REQUIREMENTS SPECIFIED ABOVE FOR THE DEMOLITION OF BUILDINGS OR STRUCTURES MAY BE REQUESTED WHERE CONDITIONS WARRANT AND PROVIDED EQUIVALENT PROTECTION IS FURNISHED. THIS MODIFICATION OF REQUIREMENTS MUST BE WELL DETAILED AND REQUIRES AN APPROVAL IN WRITING FROM THE REGULATORY AGENCY PRIOR TO COMMENCING ANY DEMOLITION WORK. BEFORE ANY REQUEST FOR DEVIATIONS CAN BE ACTED UPON, AN APPLICATION FOR MODIFICATION SHALL BE FILED WITH THE REGULATORY AGENCY. THE APPLICATION MUST BE ACCOMPANIED BY AN ADEQUATELY DETAILED DEMOLITION PLAN AND PROCEDURE OF DEMOLITION.
13. DANGEROUS CONDITIONS: SHOULD A DANGEROUS CONDITION DEVELOP DURING THE DEMOLITION OF A STRUCTURE, THE DEMOLITION CONTRACTOR SHALL IMMEDIATELY BARRICADE THE DANGEROUS AREA, NOTIFY THE REGULATORY AGENCY, AND TAKE IMMEDIATE STEPS TO MINIMIZE THE HAZARD. NO FURTHER DEMOLITION WORK SHALL BE DONE UNTIL APPROVAL TO PROCEED IS GIVEN BY THE REGULATORY AGENCY.
14. DEBRIS SHALL NOT BE DISPOSED OF IN ANY REFUSE CONTAINERS OR TRASH RECEPTACLES ANYWHERE ON THE PREMISES.
15. THE GENERAL CONTRACTOR SHALL BE CAREFUL TO PROTECT AND NOT DAMAGE ANY PORTION OR EXISTING INSTALLATION NOT BEING REMODELED.
16. ANY PROJECTING OR SURFACE-MOUNTED ITEMS BEING ABANDONED SHALL BE REMOVED, CAPPED, AND CONCEALED BEHIND FINISHED SURFACES, U.N.O.
17. ALL EXISTING AREAS TO REMAIN THAT ARE DAMAGED BY DEMOLITION OR NEW CONSTRUCTION SHALL BE PATCHED AS REQUIRED TO MATCH EXISTING ADJACENT AREA IN MATERIAL, FINISH AND COLOR, U.N.O.
18. ALL EQUIPMENT AND MATERIAL WHICH IS IN OPERATING CONDITION WHEN REMOVED SHALL BE MAINTAINED AS SUCH AND RETURNED TO OWNER PER THEIR REQUIREMENTS.
19. IDENTIFY ALL ELEMENTS DESIGNATED TO REMAIN OR BE RELOCATED. INFORM OWNER AND RECEIVE CLARIFICATION OF REUSE BEFORE PROCEEDING WITH DEMOLITION WORK.

## DEMO PLAN LEGEND

EXISTING WALL TO BE REMOVED

EXISTING WALL TO REMAIN

INTERIOR/EXTERIOR DOOR TO BE REMOVED

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# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET,
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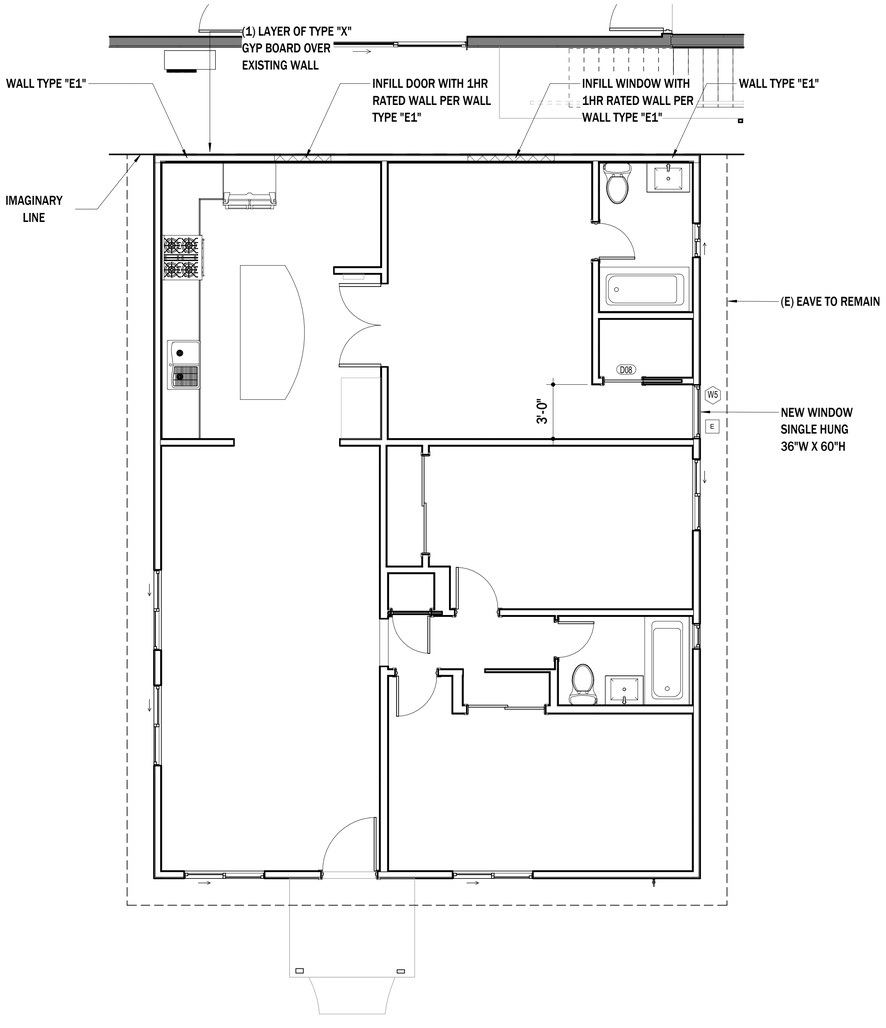
EXISTING SFD DEMO PLAN

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1 EXISTING MAIN HOUSE - FLOOR PLAN
Scale: 1/4" = 1'-0"

NORTH

## DOOR AND WINDOW NOTES

1. NEW WINDOWS TO HAVE U-FACTOR OF .30 AND SGHC OF .23
2. GLAZING FRAMES MADE OF VINYL MATERIALS SHALL HAVE WELDED CORNERS, METAL REINFORCEMENT IN THE INTERLOCK AREA, AND BE CERTIFIED TO THE MOST CURRENT EDITION OF ANSI/AAMA/NWWDA.
3. ALL EXTERIOR WINDOWS AND EXTERIOR GLAZED DOOR ASSEMBLIES SHALL BE CONSTRUCTED OF MULTIPANE GLAZING WITH A MINIMUM OF ONE TEMPERED PANE .
4. ALL EXTERIOR DOORS SHALL BE CONSTRUCTED OF SOLID CORE WOOD WITH STILES AND RAILS NOT LESS THAN 1-3/8" THICK AND RAISED PANELS NOT LESS THAN 1-1/4" THICK, THE EXTERIOR PERIMETER OF THE RAISED PANEL MAY TAPER TO A TONGUE NOT LESS THAN 3/8" THICK.
5. THE MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 8 ½ POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS, SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. CBC, SECTION 1132A.6.

E EGRESS OPENINGS FOR WINDOWS AND DOORS SHALL HAVE OPENINGS OF NOT LESS THAN 24" IN NET CLEAR OPENING HEIGHT, NOT LESS THAN 20" IN NET CLEAR OPENING WIDTH AND NOT LESS THAN 5.7 SQUARE FEET OF NET CLEAR OPENING AREA AT GRADE LEVEL AND NOT MORE THAN 44" IN HEIGHT FROM FINISH FLOOR FROM BOTTOM OF CLEAR OPENING.

## PLUMBING NOTES

1. PER 2019 CGBSC SEC 4.303.2, PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE (CPC) AND TABLE 1401.1. OF THE CPC.
2. ALL PLUMBING FIXTURES AND FITTINGS WILL BE WATER CONSERVING.
3. ALL ABS AND PVC PIPING AND FITTINGS SHALL BE ENCLOSED WITHIN WALLS AND FLOORS COVERED WITH TYPE X GYPSUM BOARD OR SIMILAR ASSEMBLIES THAT PROVIDE THE SAME LEVEL OF FIRE PROTECTION. PROTECTION OF MEMBRANE PENETRATIONS NOT REQUIRED.
4. STATE HEALTH AND SAFETY CODE SEC 17921.9 BANS THE USE OF CHLORINATED POLYVINYL (CPVC) AND CROSSLINKED POLYETHYLENE (PEX) FOR INTERIOR WATER SUPPLY PIPING.

A. LAVATORY FAUCETS WITH A MAXIMUM FLOW OF 1.2 GALLONS PER MINUTE (GPM).
B. KITCHEN FAUCETS WITH A MAXIMUM FLOW OF 1.8 GALLONS PER MINUTE (GPM).
C. SHOWER HEADS WITH A MAXIMUM FLOW OF 1.8 GALLONS PER MINUTE (GPM).
D. WATER CLOSETS WITH A MAXIMUM FLOW OF 1.28 GALLONS PER MINUTE (GPM).
E. PERMANENT VACUUM BREAKERS SHALL BE INCLUDED WITH ALL NEW HOSE BIBS.

## PLUMBING LEGEND

NEW KITCHEN SINK, FINAL SPEC TBD. FAUCETS WILL HAVE A MAXIMUM FLOW OF 1.8 GALLONS PER MINUTE (GPM)

NEW FLOOR MOUNT TOILET WITH MAXIMUM FLOW OF 1.28 GALLONS PER MINUTE (GPM)

NEW RESTROOM SINK WITH MAXIMUM FLOW OF 1.2 GALLONS PER MINUTE (GPM)

## FLOOR PLAN GENERAL NOTES

1. ALL WALLS TO BE 5/8" TYPE 'X' GWB W/ LEVEL 5 FINISH.
2. ALL ROOMS AND AREA DIMENSIONS ARE CRITICAL AND SHOULD NOT CHANGE. ALL ROOM AND AREA DIMENSIONS ARE TO BE VERIFIED PRIOR TO CONSTRUCTION. ANY DISCREPANCIES ARE TO BE REPORTED TO DESIGNER IMMEDIATELY.
3. ALL JOINTS MUST BE FIRE TAPED; AS REQUIRED EXPOSED WALLS WILL BE FINISHED WITH THREE (3) COATS OF JOINT COMPOUND AND SANDED SMOOTH, READY FOR PAINT.
4. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL DISCIPLINES AND THE REQUIREMENTS NOTED ON ALL PLANS.
5. ALL DIMENSIONS TAKEN FROM FINISH OR GWB, U.N.O.
6. THIS DRAWING IS DIAGRAMATIC AND SHOULD BE USED FOR REFERENCE ONLY.
7. ALL PARTITION SNAP LINES ARE TO BE APPROVED PRIOR TO STANDING ANY NEW PARTITIONS.
8. THE GENERAL CONTRACTOR IS TO RECEIVE APPROVAL FOR ALL FIELD CHANGES PRIOR TO IMPLEMENTATION FROM THE TENANT/OWNER.
REFER TO REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
9.ALL DIMENSIONS ARE MEASURED TO THE FINISH
10.DURING CONSTRUCTION, AT LEAST ONE EXTINGUISHER SHALL BE PROVIDED ON EACH FLOOR LEVEL AT EACH STAIRWAY, IN ALL STORAGE AND CONSTRUCTION SHEDS, IN LOCATIONS WHERE FLAMMABLE OR COMBUSTIBLE LIQUIDS ARE STORED OR USED, AND WHERE OTHER SPECIAL HAZARDS ARE PRESENT.
10.BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION, OR DEMOLITION SHALL CONFORM TO CFC CHAPTER 33 WELDING, CUTTING, AND OTHER HOT WORK SHALL BE IN CONFORMANCE WITH CFC CHAPTER 35.
11.PROVIDE LEVEL FLOOR LANDING AT ALL EXISTING AND PROPOSED EXTERIOR DOORS NOT MORE THAN 7 3/4" BELOW THE THRESHOLD LOCATED AT DOOR LOCATIONS.
12.PROVIDE A MINIMUM 1/2" GYPSUM BOARD INDIVIDUAL WRAP FOR STRUCTURE MEMBERS (BEAMS AND POSTS) SUPPORTING THE RATED WALL ABOVE AND FLOOR/CEILING ASSEMBLY.
13.DUCTS IN GARAGE AND DUCTS IN PENETRATING WALLS OR CEILING SEPARATING THE DWELLING UNIT FROM GARAGE SHALL BE CONSTRUCTED OF MINIMUM NO. 26 GUAGE SHEET STEEL OR OTHER APPROVED MATERIAL AND SHALL HAVE NO OPENINGS INTO THE GARAGE.

## FLOOR PLAN LEGEND

NEW 8" CMU WALL

NEW WALL, REFER TO ASSEMBLIES A005

WINDOW AND FRAME

EXTERIOR/INTERIOR DOOR

1t DOOR PER DOOR SCHEDULE

XX WINDOW PER WINDOW SCHEDULE

X# HR WALL TYPE PER SHEET A500

## ELECTRICAL NOTES

1. ARTIFICIAL LIGHT SOURCE SHALL HAVE AN ILLUMINATION CAPACITY OF NOT LESS THAN ONE FOOT-CANDLE WITH WALL SWITCH AT EACH LANDING.
2. PRIMARY LIGHTING IN KITCHEN SHALL BE FLUORESCENT 40 LUMENS PER WATT MIN. AND MUST BE ACTIVATED BY MAIN SWITCHING IN THE ROOM. FIXTURES MUST BE OF THE BALLAST TYPE THAT CAN ONLY ACCEPT FLUORESCENT BULBS.
3. IN KITCHEN ALL THE INSTALLED WATTAGE OF LUMINAIRES SHALL BE HIGH EFFICACY AND SHALL HAVE A MANUAL ON/OFF IN ADDITION TO A VACANCY SENSOR OR DIMMER. UNDER CABINET LIGHTING SHALL BE SWITCHED SEPARATELY.
4. LIGHTING IN BATHROOM SHALL HAVE ALL HIGH EFFICACY LUMINAIRE AND AT LEAST ONE LUMINAIRE MUST BE CONTROLLED BY VACANCY SENSOR.
5. GARAGES, LAUNDRY ROOMS AND UTILITY ROOMS: ALL LUMINARES SHALL BE HIGH EFFICACY AND AT LEASE ONE LUMINARE IN EACH SPACE SHALL BE CONTROLLED BY A VACANCY SENSOR.
6. OTHER ROOMS: ALL LUMINARES SHALL BE HIGH EFFICACY AND SHALL HAVE A MANUAL ON/OFF IN ADDITION TO A VACANCY SENSOR OR DIMMER.
7. ALL NEW RECEPTACLES IN THIS RESIDENCE SHALL BE ARC FAULTED.
8. ALL NEW RECEPTACLES IN THE BATHROOM, AND KITCHEN SHALL BE GFCI.
9. ALL RECEPTACLES ARE TO BE TAMPER RESISTANT.
10. AT LEAST ONE 20 AMPERE CIRCUIT SUPPLYING ONLY BATHROOM RECEPTACLE OUTLETS.
11. LIGHT SWITCH IN EACH ROOM IS TO RECEIVE INDEPENDANT SWITCH WITH COVER PLATE TYP. COLOR: WHITE.

## ELECTRICAL LEGEND

OUTLET DUPLEX 110V STND, 15 A, WALL MTD.

GFI OUTLET DUPLEX 110V STND, WALL MTD. GROUND FAULT CIRCUIT INTERRUPTER

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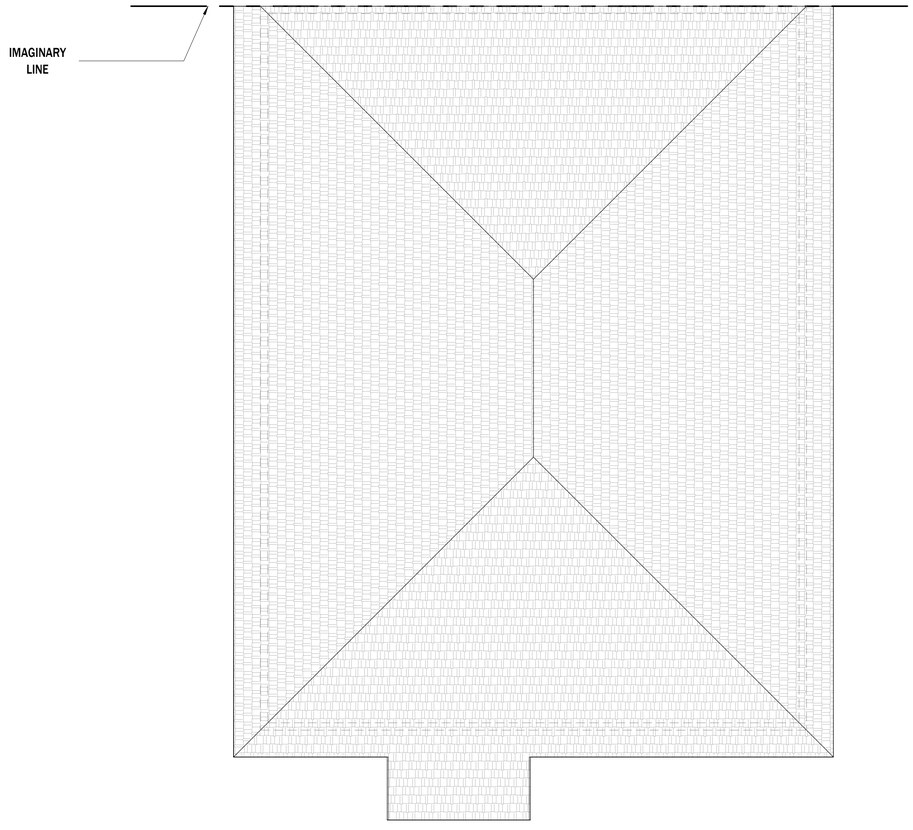
EXISTING SFD FLOOR PLAN

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1 EXISTING MAIN HOUSE - ROOF PLAN
Scale: 1/4" = 1'-0"

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EXISTING SFD
ROOF PLAN

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## EXISTING SFD DOOR SCHEDULE

| MARK | TYPE | DESCRIPTION | WIDTH | HEIGHT | QTY | SHGC | FIRE RATING | DOOR MATERIAL | DOOR FINISH | DOOR GLAZING | TEMP. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| D08 | D | INTERIOR HOLLOW CORE SLIDING DOOR | 2'-2" | 6'-8" | 1 | | | | | | |

## ADU 1 DOOR SCHEDULE

| TYPE | TYPE | DESCRIPTION | WIDTH | HEIGHT | QTY | U- FACTIOR | SHGC. | FIRE RATING | DOOR MATERIAL | DOOR FINISH | DOOR GLAZING | TEMP. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D02 | B | INTERIOR HOLLOW CORE DOOR | 2'-6" | 6'-8" | 5 | | | | | | | |
| D03 | B | INTERIOR HOLLOW CORE DOOR | 2'-0" | 6'-8" | 1 | | | | | | | |
| D06 | C | INTERIOR DOUBLE HOLLOW CLOSET DOOR | 4'-0" | 6'-8" | 1 | | | | | | | |
| D07 | A | EXTERIOR GLASS ENTRY DOOR W/LOW E GLASS | 3'-0" | 8'-0" | 1 | 0.3 | 0.23 | | | | | |

## ADU 2 DOOR SCHEDULE

| TYPE | DESCRIPTION | WIDTH | HEIGHT | QTY | U- FACTOR | SHGC. | FIRE RATING | DOOR MATERIAL | DOOR FINISH | DOOR GLAZING | TEMP. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| D02 | INTERIOR HOLLOW CORE DOOR | 2'-6" | 6'-8" | 5 | | | | | | | |
| D06 | INTERIOR DOUBLE HOLLOW CLOSET DOOR | 4'-0" | 6'-8" | 1 | | | | | | | |
| D07 | EXTERIOR GLASS ENTRY DOOR W/LOW E GLASS | 3'-0" | 8'-0" | 1 | 0.3 | 0.23 | | | | | YES |

## ADU 3 DOOR SCHEDULE

| TYPE | DESCRIPTION | WIDTH | HEIGHT | QTY | U- FACTOR | SHGC. | FIRE RATING | DOOR MATERIAL | DOOR FINISH | DOOR GLAZING | TEMP. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| D01 | INTERIOR HOLLOW CORE SINGLE POCKET DOOR | 2'-0" | 6'-8" | 2 | | | | | | | |
| D02 | INTERIOR HOLLOW CORE DOOR | 2'-6" | 6'-8" | 2 | | | | | | | |
| D06 | INTERIOR DOUBLE HOLLOW CLOSET DOOR | 4'-0" | 6'-8" | 4 | | | | | | | |
| D07 | EXTERIOR GLASS ENTRY DOOR W/LOW E GLASS | 3'-0" | 8'-0" | 1 | 0.3 | 0.23 | | | | | |

## ADU 4 DOOR SCHEDULE

| TYPE | DESCRIPTION | WIDTH | HEIGHT | QTY | U- FACTOR | SHGC. | FIRE RATING | DOOR MATERIAL | DOOR FINISH | DOOR GLAZING | TEMP. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| D01 | INTERIOR HOLLOW CORE SINGLE POCKET DOOR | 2'-0" | 6'-8" | 1 | | | | | | | |
| D02 | INTERIOR HOLLOW CORE DOOR | 2'-6" | 6'-8" | 2 | | | | | | | |
| D04 | EXTERIOR SLIDING PATIO DOOR W/ LOW-E GLASS | 8'-0" | 6'-8" | 1 | 0.3 | 0.23 | | | | | |
| D06 | INTERIOR DOUBLE HOLLOW CLOSET DOOR | 4'-0" | 6'-8" | 3 | | | | | | | |
| D07 | EXTERIOR GLASS ENTRY DOOR W/LOW E GLASS | 3'-0" | 8'-0" | 1 | 0.3 | 0.23 | | | | | |

## EXISTING SFD WINDOW SCHEDULE

| MARK | TYPE | Description | COUNT | Width | Height | Sill Height | U-Value | SHGC | FIRE RATING | GLAZING | TEMP | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W5 | A | STANDARD LOW E SINGLE HUNG WINDOW | 1 | 3'-0" | 5'-0" | 2' - 0" | 0.30 | 0.23 | | | NO | |

## ADU 1 WINDOW SCHEDULE

| MARK | TYPE | Description | COUNT | Width | Height | Sill Height | U-Value | SHGC | FIRE RATING | GLAZING | TEMP | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W1 | B | STANDARD LOW E CASEMENT & FIXED WINDOW | 3 | 3'-0" | 7'-6" | 0' - 6" | 0.30 | 0.23 | | | YES | DUAL PANE/DUAL TEMP |
| W2 | C | STANDARD LOW E DOUBLE SLIDING GLASS WINDOW | 1 | 3'-0" | 2'-0" | 6' - 0" | 0.30 | .023 | | | | |
| W3 | B | STANDARD LOW E CASEMENT & FIXED WINDOW | 2 | 2'-0" | 7'-6" | 0' - 6" | 0.30 | 0.23 | | | YES | |

## ADU 2 WINDOW SCHEDULE

| MARK | TYPE | Description | COUNT | Width | Height | Sill Height | U-Value | SHGC | FIRE RATING | GLAZING | TEMP | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W1 | B | STANDARD LOW E CASEMENT & FIXED WINDOW | 4 | 3'-0" | 7'-6" | 0' - 6" | 0.30 | 0.23 | | | YES | DUAL PANE/DUAL TEMP |
| W2 | C | STANDARD LOW E DOUBLE SLIDING GLASS WINDOW | 1 | 3'-0" | 2'-0" | 6' - 0" | 0.30 | .023 | | | | |
| W3 | B | STANDARD LOW E CASEMENT & FIXED WINDOW | 2 | 2'-0" | 7'-6" | 0' - 6" | 0.30 | 0.23 | | | YES | |

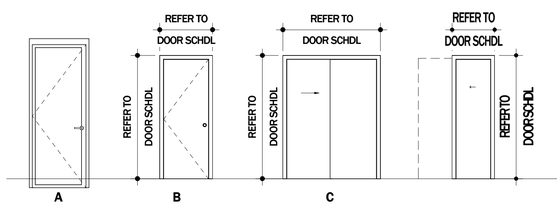
## ADU 3 WINDOW SCHEDULE

| MARK | TYPE | Description | COUNT | Width | Height | Sill Height | U-Value | SHGC | FIRE RATING | GLAZING | TEMP | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W1 | B | STANDARD LOW E CASEMENT & FIXED WINDOW | 2 | 3'-0" | 7'-6" | 0' - 6" | 0.30 | 0.23 | | | YES | DUAL PANE/DUAL TEMP |
| W6 | D | STANDARD LOW E CLERESTORY WINDOW | 1 | 12'-0" | 2'-0" | 3' - 6" | 0.30 | 0.23 | | | YES | |

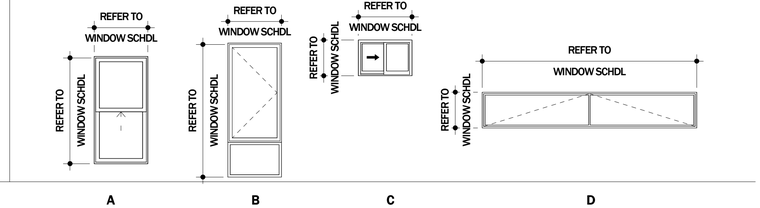
## ADU 4 WINDOW SCHEDULE

| MARK | TYPE | Description | COUNT | Width | Height | Sill Height | U-Value | SHGC | FIRE RATING | GLAZING | TEMP | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W1 | B | STANDARD LOW E CASEMENT & FIXED WINDOW | 2 | 3'-0" | 7'-6" | 0' - 6" | 0.30 | 0.23 | | | YES | DUAL PANE/DUAL TEMP |

## DOOR TYPES




## WINDOW TYPES




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**MATERIAL**

| | |
|---|---|
| AL | ALMINUM - CLEAR ANODIZED FINISH |
| GL | GLAZING |
| HM | HOLLOW METAL |
| KD | KNOCK-DOWN STEEL FRAME |
| SS | STAINLESS STEEL |
| STL | STEEL |
| WD | WOOD |
| O.F.C.I. | OWNER FURNISHED CONTRACTOR INSTALLED |

**FINISHES**

| | |
|---|---|
| FF | FACTORY FINISH |
| FP | FACTORY PRIME - FIELD FINISH |
| PC | POWDER COAT |
| P-1 | SEMI-GLOSS INTERIOR WD |
| P-2 | SEMI-GLOSS INTERIOR METAL |
| ST | STAIN |

**GLAZING**

| | |
|---|---|
| GL-1 | 5/8" LAMINATED BY DOOR MANUF. AT UNIT |
| GL-2 | 1/4" LAMINATED BY DOOR MANUF AT UNIT |
| GL-3 | 5/8" LAMINATED BY DOOR MANUF AT UNIT |

**CORE**

| | |
|---|---|
| HC | HOLLOW CORE |
| SC | SOLID CORE |

**OTHER**

| | |
|---|---|
| H | HEIGHT |
| HDWR | HARDWARE |
| NO. | NUMBER |
| MAT'L | MATERIAL |
| TBD | TO BE DETERMINED |
| TH | THICKNESS |
| THRES. | THRESHOLD |
| W | WIDTH |

## GENERAL NOTES

A. ALL FRAMES, DOORS AND HARDWARE TO BE INSTALLED PER ALL APPLICABLE BUILDING CODES AND PER MANUFACTURER'S SPECIFICATIONS
B. SUBMIT ALL DOOR, FRAMES AND HARDWARE SUBMITTAL TO ARCHITECT FOR REVIEW
C. ALL DOOR HARDWARE AND THRESHOLDS TO BE ICC-ANSI COMPLIANT. ALL HANDSETS TO BE ICC-ANSI APPROVED LEVER STYLE HANDLES
D. 'SC' OR 'HC' DOORS TO BE PAINT GRADE, VERIFY PANEL STYLE WITH ARCHITECT
E. WOOD FRAMES TO BE PAINT GRADE FINISH. FRAME TO BE SOLID STOCK WOOD OR COMPOSITE MATERIAL WITH PAINTABLE SURFACE
F. FIRE DOOR ASSEMBLIES SHALL ALSO MEET THE REQUIREMENTS FOR A SMOKE AND DRAFT CONTROL ASSEMBLY TESTED IN ACCORDANCE WITH UL 1784. THE AIR LEAKAGE RATE SHALL NOT EXCEED 3.0 CUBIC FEET PER MINUTE PER SQUARE FOOT OF DOOR OPENING AT .10 INCH OF WATER FOR BOTH TEH AMBIENT TEMP. AND ELEVATED TEMP. TESTS. LOUVERS SHALL BE PROHIBITED. INSTALLATION OF SMOKE DOORS SHALL BE IN ACCORDANCE WITH NFPA 105
G. SLIDING DOOR TO PROVIDE MIN. 2'-8" CLEAR OPENINGS PER ICC-ANSI REQUIREMENTS
H. AT ALL EXTERIOR DOORS PROVIDE ALL REQUIRED FLASHING AND CAULKING TO COMPLETE A WEATER TIGHT SYSTEM
I. GLAZING MATERIAL IN DOOR SHALL HAVE A MINIMUM FIRE-PROTECTION RATED GLAZING OF 20 MINUTES AND SHALL BE EXEMPT FROM THE HOSE STREAM TEST. GLAZING IN ANY OTHER PART OF DOOR ASSEMBLY, INCLUDING TRANSOM LIGHTS AND SIDELIGHTS, SHALL BE TESTED IN ACCORDANCE NFPA 257 OR UL 9, INCLUDING THE HOSE STREAM TEST, IN ACCORDANCE WITH CBC 715.5
J. PROVIDE SAFETY GLAZING AT ALL HAZARDOUS LOCATIONS AS REQUIRED BY 2019 CBC
K. FOR TYPICAL GLAZED EXTERIOR DOORS PROVIDE U=.03 MINIMUM. FOR TYPICAL INSULATED HOLLOW METAL DOORS PROVIDE U = .3
L. HANDLES, PULLS, LATCHES, LOCAKS AND OTHER OPERABLE PARTS ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOE SNOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST TO OPERATE, OPERABLE PARTS OF SUCH HARDWARE SHALL BE MOUNTED 34" MIN. AND 48" MAX. A.F.F. PER ANSI A117.1 SECTION 404.2.6. THE FORCE REQUIRED TO ACTIVE OPERABLE PARTS SHALL BE 5LBS. MAX. OR LESS, PER ANSI A117.1 SECTION 309.4
M. INFORMATION SHOWN IN DOOR SCHEDULES IS FOR REFERENCE ONLY. CONTRACTOR TO VERIFY ALL INFORMATION AND TO CONTACT ARCHITECT IF THERE ARE ANY DISCREPENCIES BETWEEN SCHEDULES AND DRAWING SET

## DOOR SCHEDULE REMARKS

1. STANDARD RESIDENTIAL UNIT ENTRY DOOR. PROVIDE PEEP HOLE. PROVIDE UNIT NUMBER ON DOOR. COORDINATE SIGN WITH SIGN CONTRACTOR AND ARCHITECT. VERIFY SIGN TYPE/STYLE WITH OWNER/ARCHITECT
2. PROVIDE ADDITIONAL PEEP HOLE AT - 42" A.F.F @ TYPE "B" ADAPTABLE UNITS
3. SLIDING DOOR TO PROVIDE 2'-8" MIN CLEAR OPENING PER ICC/ANSI REQUIREMENTS. THRESHOLD TO BE MAX OF 34" HIGH WITH A BEVELED TRANSITION STRIP WITH A SLOPE OF 1:2 MAX. DOOR TO HAVE 10LB OPERATING FORCE
4. PROVIDE CLEAR INSULATED (DOUBLE GLAZED) TEMPERED GLASS. U-VALUE PER T24 REPORT. SEE MECHANICAL
5. STANDARD RESIDENTIAL UNIT INTERIOR DOOR
6. "DUMMY" LEVERS ONLY, NO HOLE REQUIRED FOR HANDSET
7. AT LAUNDRY CLOSET PROVIDE LOUVER AT TOP AND BOTTOM OF DOOR
8. PROVIDE COMPLETE WEATHER SEAL. PROVIDE ALL REQUIRED FLASHING AND CAULKING TO COMPLETE A WEATHER TIGHT SYSTEM.
9. PROVIDE ICC-ANSI/ADA COMPLIANT THRESHOLD
10. PROVIDE INSULATED GLASS
11. PROVIDE TEMPERED CLEAR SAFETY GLASS PER 2019 CBC 2406
12. PROVIDE TACTILE EXIT SIGNS STATING "EXIT" ADJACENT TO DOORS AT EGRESS STAIRWAYS AND THE EXIT DISCHARGE AS REQUIRED
13. STANDARD INTERIOR "COMMON AREA" PAINTED PANELED DOOR. PROVIDE FIRE RATING PER SCHEDULE
14. PROVIDE SAFETY GLAZING WITHIN 2'-0" OF ADJACENT DOOR JAMB
15. PROVIDE FIRE RATED GLAZING
16. GLAZING MATERIAL IN DOOR SHALL HAVE A MIN FIRE-PROTECTION RATED GLAZING OF 20MINS AND SHALL BE EXEMPT FROM THE HOSE STREAM TEST. GLAZING IN ANY OTHER PART OF DOOR ASSEMBLY, INCLUDING TRANSOM LIGHTS AND SIDELIGHTS, SHALL BE TEST IN ACCORDANCE WITH NFPA 257 OR UL 9, INCLUDING THE HOSE STREAM TEST, IN ACCORDANCE WITH 716.6
17. INSTALL HINGES TO ALL DOOR TO OPEN FULL 180 DEGREES
18. INSTALLED DOOR AND FRAME
19. PROVIDE FOB ACCESS CONTROL


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619.485.5546


8/9/2024, 3:12:04 PM
PRJ-1077519
Hannan Al-Timimi

# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET,
SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |
| 6 | CITY RESUBMITTAL R6 | 07/31/2024 |

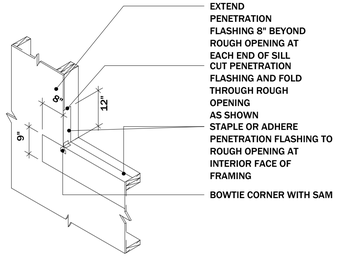
Sheet Name

DOOR & WINDOW SCHEDULE

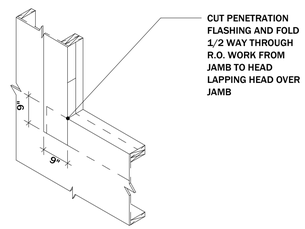
| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | MM |
| CHECKED BY: | NR |

SHEET NUMBER

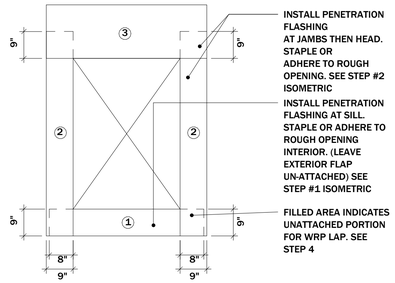
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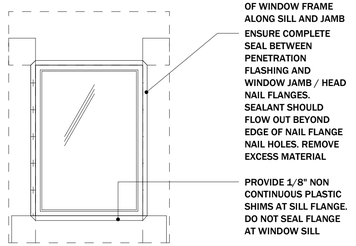

SILL WRAP ISOMETRIC - STEP #1



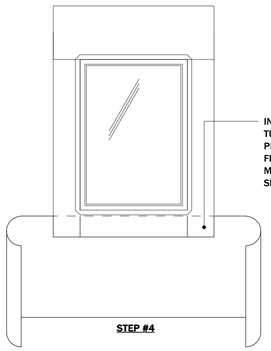

JAMB WRAP ISOMETRIC - STEP #2



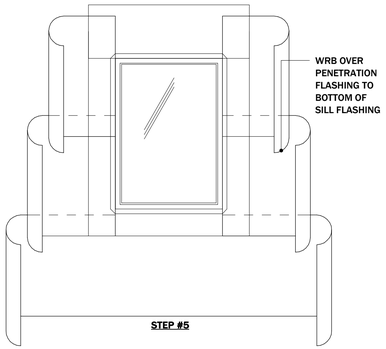

ELEVATION - STEP #1 + #2



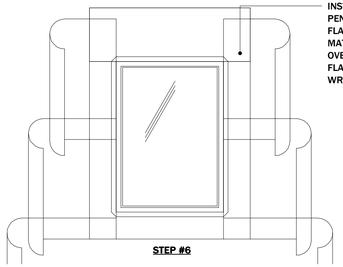

STEP #3



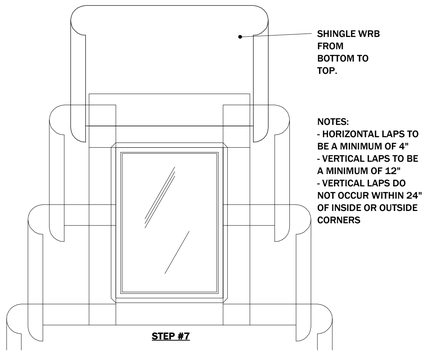

STEP #4




STEP #5

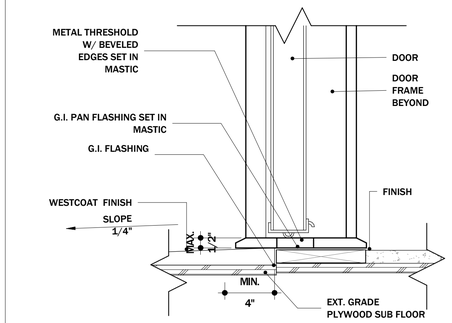



STEP #6

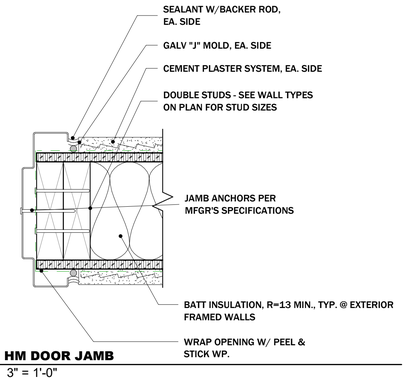



STEP #7

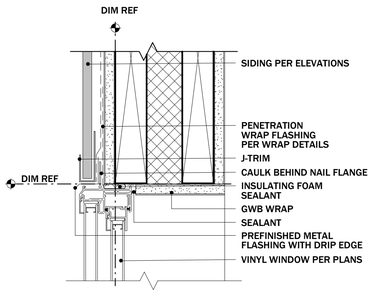
## 11 WINDOW WRAP PROCESS
3" = 1'-0"



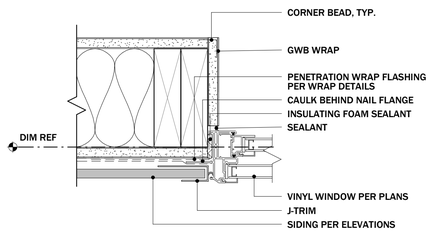

## 4 DOOR @BALCONY
3" = 1'-0"



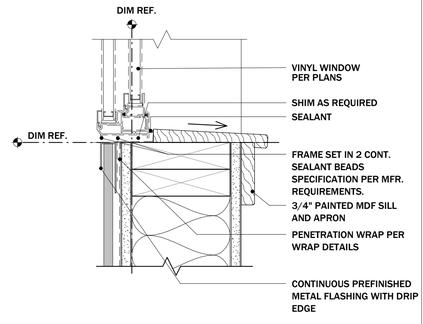

## 3 HM DOOR JAMB
3" = 1'-0"



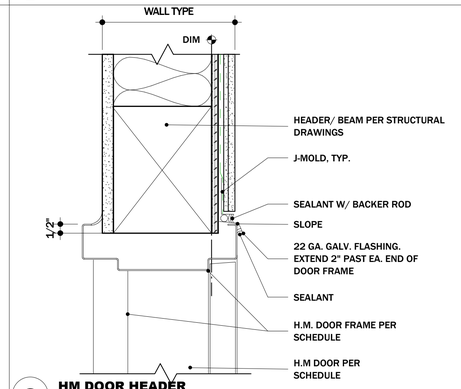

## 10 VINYL WINDOW HEAD @ WD WALL
3" = 1'-0"



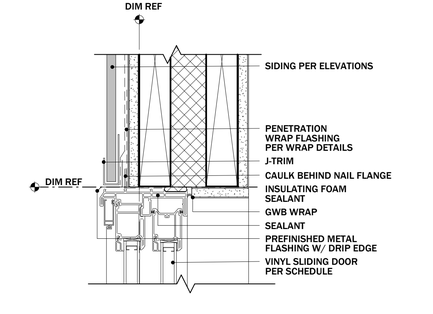

## 9 VINYL WINDOW JAMB @ WD WALL
3" = 1'-0"



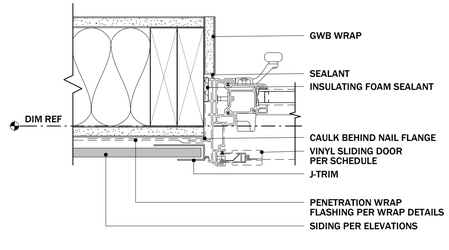

## 7 VINYL WINDOW SILL @ WD WALL
3" = 1'-0"



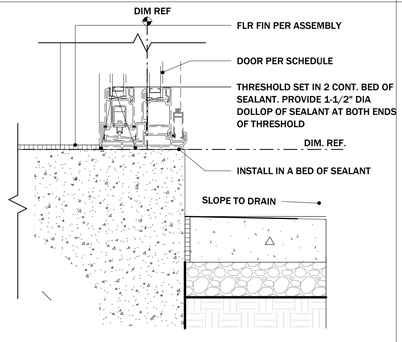

## 2 HM DOOR HEADER
3" = 1'-0"



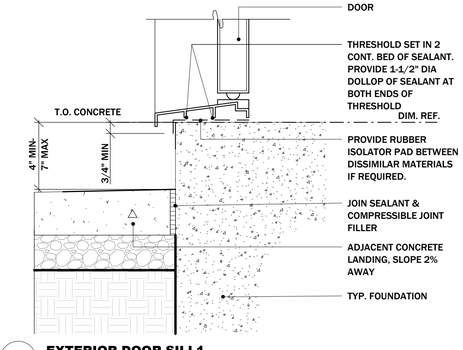

## 8 SLIDING DR HEAD @ WOOD WALL
3" = 1'-0"




## 6 SLIDING DOOR JAMB
3" = 1'-0"




## 5 SLIDING DR THRESH. @ HARDSCAPE
3" = 1'-0"




## 1 EXTERIOR DOOR SILL1
3" = 1'-0"

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HELLO@GTCDESIG N.COM
619.485.5546

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PRJ-1077519
Hannan Al-Timimi

# 2915 ULRIC STREET DEVELOPMENT
2917, 2919, 2921 & 2923 ULRIC STREET, SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |
| 6 | CITY RESUBMITTAL R6 | 07/31/2024 |

Sheet Name

DOOR & WINDOW DETAILS

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | MM |
| CHECKED BY: | NR |

SHEET NUMBER

A601

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## RESIDENTIAL MEASURES SUMMARY — RMS-1

| Project Name | Building Type | | Date |
|---|---|---|---|
| 2919 Ulric ADU 3 | ☑ Single Family ☐ Multi Family | ☐ Addition Alone ☐ Existing+ Addition/Alteration | 7/30/2024 |
| **Project Address** | **California Energy Climate Zone** | **Total Cond. Floor Area / Addition** | **# of Units** |
| 2919 Ulric St San Diego | CA Climate Zone 07 | 696 / n/a | 1 |

**INSULATION**

| Construction | Type | Cavity | Area ($ft^2$) | Special Features | Status |
|---|---|---|---|---|---|
| Floor | Wood Framed w/o Crawl Space | R 19 | 696 | | New |
| Roof | Wood Framed Rafter | R 30 | 696 | | New |
| Wall | Wood Framed | R 20 | 1,151 | | New |

**FENESTRATION** — Total Area: 193 | Glazing Percentage: 26.3% | New/Altered Average U-Factor: 0.30

| Orientation | Area($ft^2$) | U-Fac | SHGC | Overhang | Sidefins | Exterior Shades | Status |
|---|---|---|---|---|---|---|---|
| Front (S) | 46.5 | 0.300 | 0.23 | none | none | N/A | New |
| Left (W) | 91.5 | 0.300 | 0.23 | none | none | N/A | New |
| Rear (N) | 45.0 | 0.300 | 0.23 | none | none | N/A | New |

**HVAC SYSTEMS**

| Qty. | Heating | Min. Eff | Cooling | Min. Eff | Thermostat | Status |
|---|---|---|---|---|---|---|
| 1 | Split Heat Pump | 8.20 HSPF | Split Heat Pump | 14.0 SEER | Setback | New |

**HVAC DISTRIBUTION**

| Location | Heating | Cooling | Duct Location | Duct R-Value | Status |
|---|---|---|---|---|---|
| Heat Pump | Ductless / with Fan | Ductless | n/a | n/a | New |

**WATER HEATING**

| Qty. | Type | Gallons | Min. Eff | Distribution | Status |
|---|---|---|---|---|---|
| 1 | Heat Pump | 50 | 3.75 | Standard | New |



## HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

| Project Name | Date |
|---|---|
| 2919 Ulric ADU 3 | 7/30/2024 |
| **System Name** | **Floor Area** |
| Heat Pump | 696 |

**ENGINEERING CHECKS**

| | |
|---|---|
| Number of Systems | 1 |
| **Heating System** | |
| Output per System | 24,000 |
| Total Output (Btuh) | 24,000 |
| Output (Btuh/sqft) | 34.5 |
| **Cooling System** | |
| Output per System | 24,000 |
| Total Output (Btuh) | 24,000 |
| Total Output (Tons) | 2.0 |
| Total Output (Btuh/sqft) | 34.5 |
| Total Output (sqft/Ton) | 348.0 |
| **Air System** | |
| CFM per System | 800 |
| Airflow (cfm) | 800 |
| Airflow (cfm/sqft) | 1.15 |
| Airflow (cfm/Ton) | 400.0 |
| Outside Air (%) | 0.0% |
| Outside Air (cfm/sqft) | 0.00 |

Note: values above given at ARI conditions

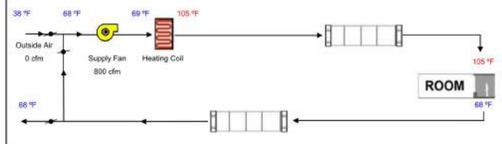
**SYSTEM LOAD**

| | COIL COOLING PEAK CFM | COIL COOLING PEAK Sensible | COIL COOLING PEAK Latent | COIL HTG. PEAK CFM | COIL HTG. PEAK Sensible |
|---|---|---|---|---|---|
| Total Room Loads | 339 | 7,327 | 571 | 148 | 5,897 |
| Return Vented Lighting | | 0 | | | 0 |
| Return Air Ducts | | 0 | | | 0 |
| Return Fan | | 0 | | | 0 |
| Ventilation | 0 | 0 | 0 | 0 | 0 |
| Supply Fan | | 997 | | | -997 |
| Supply Air Ducts | | 0 | | | 0 |
| TOTAL SYSTEM LOAD | | 8,324 | 571 | | 4,901 |

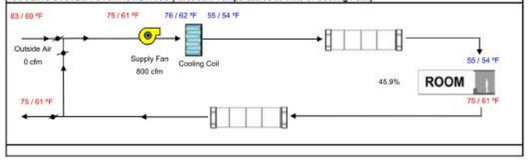
**HVAC EQUIPMENT SELECTION**

| | | | | |
|---|---|---|---|---|
| Standard Heat Pump | 20,112 | 3,281 | | 20,091 |
| Total Adjusted System Output (Adjusted for Peak Design conditions) | 20,112 | 3,281 | | 20,091 |
| TIME OF SYSTEM PEAK | | Aug 3 PM | | Jan 1 AM |

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




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




## 2019 Low-Rise Residential Mandatory Measures Summary

*NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. "Exceptions may apply.* (01/2020)

| | |
|---|---|
| **Building Envelope Measures:** | |
| § 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)2: | **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): | **Ceiling and Rafter Roof Insulation.** Minimum R-22 insulation in wood-frame ceiling; or the weighted average U-factor must not exceed 0.043. Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alteration. 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 continuous roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.' |
| § 150.0(b): | **Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value. |
| § 150.0(c): | **Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B.' |
| § 150.0(d): | **Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.' |
| § 150.0(f): | **Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g). |
| § 150.0(g)1: | **Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d). |
| § 150.0(g)2: | **Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation. |
| § 150.0(o): | **Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration must not exceed 0.58.' |
| **Fireplaces, Decorative Gas Appliances, and Gas Log Measures:** | |
| § 110.5(a) | **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 Measures:** | |
| § 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-K.' |
| § 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)4: | **Water Heating Recirculation Loops Serving Multiple Dwelling Units.** Water heating recirculation loops serving multiple dwelling units must meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c)4. |
| § 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. |
| § 110.5: | **Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour ); and pool and spa heaters.' |
| § 150.0(h)1: | **Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2. |

## 2019 Low-Rise Residential Mandatory Measures Summary

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| **Requirements for 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)1C. | **Single Family Detached Dwelling Units.** 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 provided at rates determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(o)1C. |
| § 150.0(o)1E: | **Multifamily Attached Dwelling Units.** Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced system is not used, all units in the building must use the same system type and the dwelling-unit envelope leakage must be ≤ 0.3 CFM at 50 Pa (0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8. |
| § 150.0(o)1F: | **Multifamily Building Central Ventilation Systems.** Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B. All unit airflows must be within 20 percent of the unit with the lowest airflow rate as it relates to the individual unit's minimum required airflow rate needed for compliance. |
| § 150.0(o)1G: | **Kitchen Range Hoods.** Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2. |
| § 150.0(o)2: | **Field Verification and Diagnostic Testing.** Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is rated by HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2. |
| **Pool and Spa Systems and Equipment Measures:** | |
| § 110.4(a): | **Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Appliance Efficiency Regulations; 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 Measures:** | |
| § 110.9: | **Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.' |
| § 150.0(k)1A. | **Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A. |
| § 150.0(k)1B. | **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 must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or fan speed control. |
| § 150.0(k)1C: | **Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must meet all of the requirements for: insulation contact (IC) labeling; air leakage; sealing; maintenance; and socket and light source as described in § 150.0(k)1C. |
| § 150.0(k)1D: | **Electronic Ballasts for Fluorescent Lamps.** Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz. |
| § 150.0(k)1E: | **Night Lights, Step Lights, and Path Lights.** Night lights, step lights and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens. |
| § 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).' |
| § 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)2C: | **Interior Switches and Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.* |
| § 150.0(k)2D: | **Interior Switches and Controls.** Controls and equipment must be installed in accordance with manufacturer's instructions. |
| § 150.0(k)2E: | **Interior Switches and Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to comply with § 150.0(k). |
| § 150.0(k)2F: | **Interior Switches and Controls.** Lighting controls must comply with the applicable requirements of § 119.9. |

## 2019 Low-Rise Residential Mandatory Measures Summary

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| § 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: | **Storage Tank Insulation.** Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank. |
| § 150.0(j)2A: | **Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation wall thickness of one inch or a minimum insulation R-value of 7.7: the first five feet of cold water pipes from the storage tank, all hot water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch; all hot water piping with a nominal diameter less than 3/4 inch that is, associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, buried below grade, and from the heating source to kitchen fixtures.* |
| § 150.0(j)3: | **Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 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 include all of the following: A dedicated 125 volt, 20 amp electrical receptacle connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within three feet of the water heater without obstruction. Both ends of the unused conductor must be labeled with the word "spare" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words "Future 240V Use"; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than two inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hour. |
| § 150.0(n)2: | **Recirculating Loops.** Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5. |
| § 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 Measures:** | |
| § 110.8(i)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 the requirements of the CMC §§ 601.0, 602.0, 603.0, 604.0, 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 a minimum installed level of R-4.0 or a minimum installed level of R-4.2 when ducts are entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Portions of the duct system completely exposed and surrounded by directly conditioned space are not required to be insulated. 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 requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ¼ inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, 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 cavities and support platforms must not be compressed to cause reductions in the cross-sectional area.' |
| § 150.0(m)2: | **Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands. |
| § 150.0(m)3: | **Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction. |
| § 150.0(m)7: | **Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers. |
| § 150.0(m)8: | **Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents. |
| § 150.0(m)9: | **Protection of Insulation.** Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation. |
| § 150.0(m)10: | **Porous Inner Core Flex Duct.** Porous inner core flex ducts must have a non-porous layer 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 § 150.0(m)11 and Reference Residential Appendix RA3. |
| § 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. Pressure drops and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service.* |
| § 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 ≤ 0.56 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.* |

## 2019 Low-Rise Residential Mandatory Measures Summary

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|---|---|
| § 150.0(k)2G: | **Interior Switches and Controls.** An energy management control system (EMCS) may be used to comply with control requirements if it: provides functionality of the specified control according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.0(e), and meets all other requirements in § 150.0(k)2. |
| § 150.0(k)2H: | **Interior Switches and Controls.** A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2. |
| § 150.0(k)2I: | **Interior Switches and Controls.** In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by an occupant sensor or a vacancy sensor providing automatic-off functionality. If an occupant sensor is installed, it must be initially configured to manual-on operation using the manual control required under Section 150.0(k)2C. |
| § 150.0(k)2J: | **Interior Switches and Controls.** Luminaires that are or contain light sources that meet Reference Joint Appendix JA8 requirements for dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls.' |
| § 150.0(k)2K: | **Interior Switches and Controls.** Under cabinet lighting must be controlled separately from ceiling-installed lighting systems. |
| § 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 meet the requirement in item § 150.0(k)3Ai (ON and OFF switch) and the requirements in either § 150.0(k)3Aii (photocell and either a motion sensor or automatic time switch control) or § 150.0(k)3Aiii (astronomical time clock), or an EMCS. |
| § 150.0(k)3B: | **Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, outdoor lighting for private patios, entrances, balconies, and porches; and residential parking lots and carports with less than eight vehicles per site must comply with either § 150.0(k)3A or with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0. |
| § 150.0(k)3C: | **Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, any outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site and any outdoor lighting not regulated by § 150.0(k)3B or § 150.0(k)3D must comply with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0. |
| § 150.0(k)4: | **Internally Illuminated address signs.** Internally illuminated address signs must comply with § 140.8; or must consume no more than 5 watts of power as determined according to § 130.0(c). |
| § 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 Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0. |
| § 150.0(k)6A | **Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be comply with Table 150.0-A and be controlled by an occupant sensor. |
| § 150.0(k)6B | **Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common areas in that building must:<br>i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and<br>ii. Lighting installed in corridors and stairwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress. |
| **Solar Ready Buildings:** | |
| § 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) through § 110.10(e). |
| § 110.10(a)2: | **Low-rise Multifamily Buildings.** Low-rise multi-family buildings that do not have a photovoltaic system installed must comply with the requirements of § 110.10(b) through § 110.10(d). |
| § 110.10(b)1: | **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. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.' |
| § 110.10(b)2: | **Azimuth.** All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees 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 distance, measured in the horizontal plane, 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) through § 110.10(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". |

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PRJ-1077519
Hannan Al-Timimi

# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET, SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |

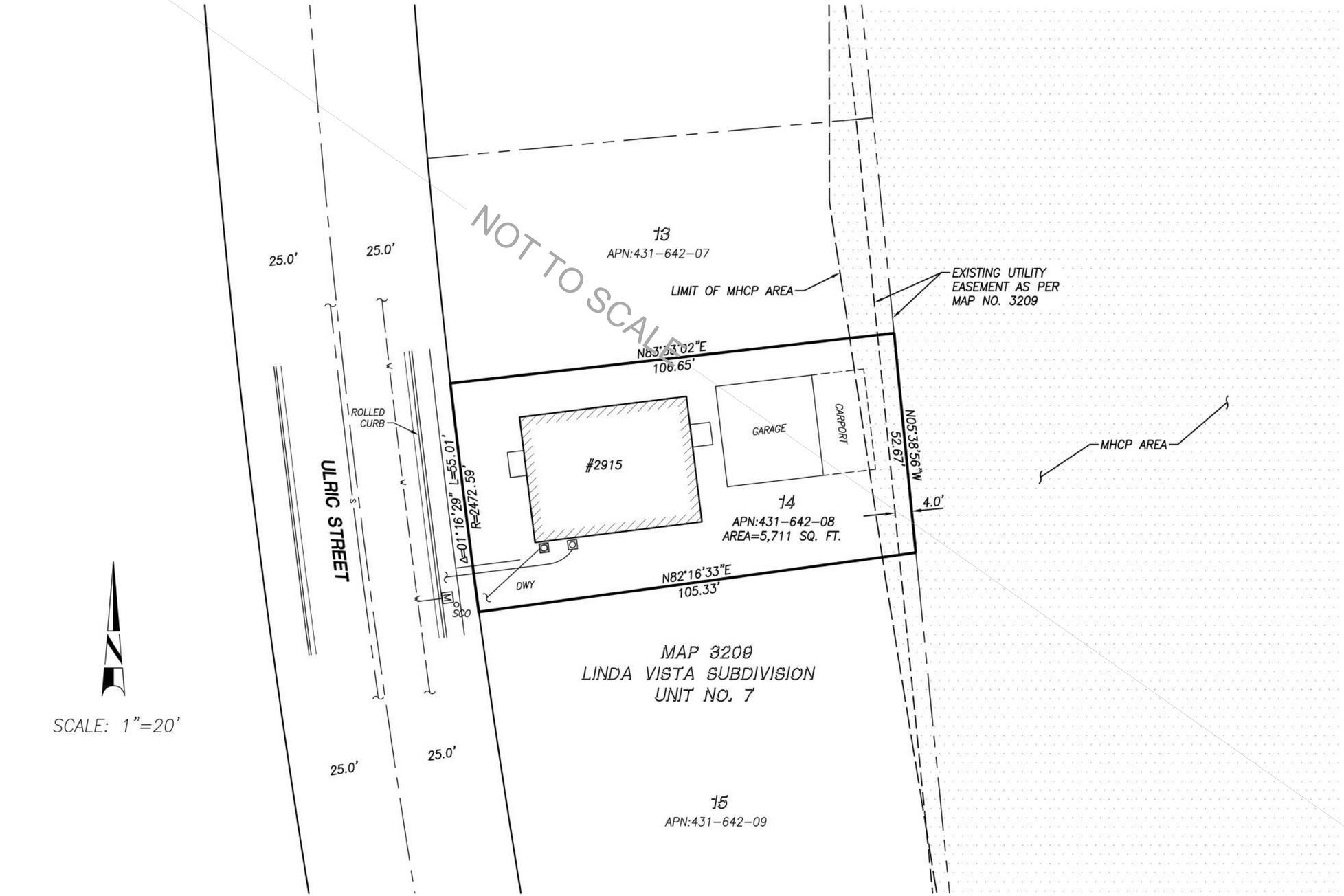
Sheet Name

TITLE 24 CALCS - ADU 3

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER

**A706**




SCALE: 1"=20'

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| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |
| 6 | CITY RESUBMITTAL R6 | 07/31/2024 |

Sheet Name

LAND SURVEY

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER

**A100.7**

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**CERTIFICATE OF COMPLIANCE** — CF1R-PRF-01E (Page 1 of 8)

**Project Name:** 2917 Ulric ADU 4 — **Calculation Date/Time:** 2024-07-30T13:49:44-07:00
**Calculation Description:** Title 24 Analysis — **Input File Name:** 2917 Ulric ADU 4.ribd19x

| GENERAL INFORMATION | | | | | |
|---|---|---|---|---|---|
| 01 | Project Name | 2917 Ulric ADU 4 | | | |
| 02 | Run Title | Title 24 Analysis | | | |
| 03 | Project Location | 2917 Ulric St | | | |
| 04 | City | San Diego | 05 | Standards Version | 2019 |
| 06 | Zip code | 92111 | 07 | Software Version | EnergyPro 8.3 |
| 08 | Climate Zone | 7 | 09 | Front Orientation (deg/ Cardinal) | 180 |
| 10 | Building Type | Single family | 11 | Number of Dwelling Units | 1 |
| 12 | Project Scope | NewConstruction | 13 | Number of Bedrooms | 2 |
| 14 | Addition Cond. Floor Area (ft²) | 0 | 15 | Number of Stories | 1 |
| 16 | Existing Cond. Floor Area (ft²) | n/a | 17 | Fenestration Average U-factor | 0.3 |
| 18 | Total Cond. Floor Area (ft²) | 610 | 19 | Glazing Percentage (%) | 20.07% |
| 20 | ADU Bedroom Count | n/a | 21 | ADU Conditioned Floor Area | n/a |
| 22 | Is Natural Gas Available? | Yes | | | |

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



**CERTIFICATE OF COMPLIANCE** — CF1R-PRF-01E (Page 2 of 8)

**Project Name:** 2917 Ulric ADU 4 — **Calculation Date/Time:** 2024-07-30T13:49:44-07:00
**Calculation Description:** Title 24 Analysis — **Input File Name:** 2917 Ulric ADU 4.ribd19x

**ENERGY DESIGN RATING**

| | Energy Design Ratings | | Compliance Margins | |
|---|---|---|---|---|
| | Efficiency[1] (EDR) | Total[2] (EDR) | Efficiency[3] (EDR) | Total[3] (EDR) |
| Standard Design | 66.6 | 31.9 | | |
| Proposed Design | 64.6 | 31.9 | 2 | 2 |

**RESULT: * COMPLIES**

1: Efficiency EDR includes improvements to the building envelope and more efficient equipment
2: Total EDR includes efficiency and demand response measures such as photovoltaic (PV) systems and batteries
3: Building complies when efficiency and total compliance margins are greater than or equal to zero

- Standard Design PV Capacity: 1.81 kWdc
- PV System resized to 1.81 kWdc (a factor of 1.811) to achieve 'Standard Design PV' PV scaling

**ENERGY USE SUMMARY**

| Energy Use (kTDV/ft²-yr) | Standard Design | Proposed Design | Compliance Margin | Percent Improvement |
|---|---|---|---|---|
| Space Heating | 1.14 | 1.65 | -0.51 | -44.7 |
| Space Cooling | 5.42 | 7.63 | -2.01 | -35.8 |
| IAQ Ventilation | 5.6 | 5.6 | 0 | 0 |
| Water Heating | 37.53 | 28.4 | 9.13 | 24.3 |
| Self Utilization/Flexibility Credit | n/a | 0 | 0 | n/a |
| **Compliance Energy Total** | **49.89** | **43.28** | **6.61** | **13.2** |

**REQUIRED PV SYSTEMS - SIMPLIFIED**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DC System Size (kWdc) | Exception | Module Type | Array Type | Power Electronics | CFI | Azimuth (deg) | Tilt Input | Array Angle (deg) | Tilt: (x in 12) | Inverter Eff (%) | Annual Solar Access (%) |
| 1.81 | NA | Standard | Fixed | none | true | 150-270 | n/a | n/a | <=7:12 | 96 | 98 |



**CERTIFICATE OF COMPLIANCE** — CF1R-PRF-01E (Page 3 of 8)

**Project Name:** 2917 Ulric ADU 4 — **Calculation Date/Time:** 2024-07-30T13:49:44-07:00
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**REQUIRED SPECIAL FEATURES**

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

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

**HERS FEATURE SUMMARY**

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

Building-level Verifications:
- Indoor air quality ventilation
- Kitchen range hood

Cooling System Verifications:
- -- None --

Heating System Verifications:
- Verified heat pump rated heating capacity

HVAC Distribution System Verifications:
- -- None --

Domestic Hot Water System Verifications:
- -- None --

**BUILDING - FEATURES INFORMATION**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|---|---|---|---|---|---|---|
| Project Name | Conditioned Floor Area (ft²) | Number of Dwelling Units | Number of Bedrooms | Number of Zones | Number of Ventilation Cooling Systems | Number of Water Heating Systems |
| 2917 Ulric ADU 4 | 610 | 1 | 2 | 1 | 0 | 1 |

**ZONE INFORMATION**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|---|---|---|---|---|---|---|
| Zone Name | Zone Type | HVAC System Name | Zone Floor Area (ft²) | Avg. Ceiling Height | Water Heating System 1 | Water Heating System 2 |
| ADU 4 | Conditioned | Heat Pump1 | 610 | 9 | DHW Sys 1 | N/A |



**CERTIFICATE OF COMPLIANCE** — CF1R-PRF-01E (Page 4 of 8)

**Project Name:** 2917 Ulric ADU 4 — **Calculation Date/Time:** 2024-07-30T13:49:44-07:00
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**OPAQUE SURFACES**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|
| Name | Zone | Construction | Azimuth | Orientation | Gross Area (ft²) | Window and Door Area (ft2) | Tilt (deg) |
| Front Wall | ADU 4 | R-21 Wall | 180 | Front | 191 | 46.5 | 90 |
| Left Wall | ADU 4 | R-21 Wall | 270 | Left | 388 | 53.4 | 90 |
| Rear Wall | ADU 4 | R-21 Wall | 0 | Back | 191 | 22.5 | 90 |
| Right Wall | ADU 4 | R-21 Wall | 90 | Right | 458 | 0 | 90 |
| Interior Surface | ADU 4 | R-19 Roof No Attic | n/a | n/a | 610 | n/a | n/a |

**FENESTRATION / GLAZING**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Type | Surface | Orientation | Azimuth | Width (ft) | Height (ft) | Mult. | Area (ft²) | U-factor | U-factor Source | SHGC | SHGC Source | Exterior Shading |
| Window W1 | Window | Front Wall | Front | 180 | | | 1 | 22.5 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Door D07 | Window | Front Wall | Front | 180 | | | 1 | 24 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Door D04 | Window | Left Wall | Left | 270 | | | 1 | 53.4 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |
| Window W1 2 | Window | Rear Wall | Back | 0 | | | 1 | 22.5 | 0.3 | NFRC | 0.23 | NFRC | Bug Screen |

**SLAB FLOORS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|
| Name | Zone | Area (ft²) | Perimeter (ft) | Edge Insul. R-value and Depth | Edge Insul. R-value and Depth | Carpeted Fraction | Heated |
| Slab-on-Grade | ADU 4 | 610 | 129 | none | 0 | 80% | No |



**CERTIFICATE OF COMPLIANCE** — CF1R-PRF-01E (Page 5 of 8)

**Project Name:** 2917 Ulric ADU 4 — **Calculation Date/Time:** 2024-07-30T13:49:44-07:00
**Calculation Description:** Title 24 Analysis — **Input File Name:** 2917 Ulric ADU 4.ribd19x

**OPAQUE SURFACE CONSTRUCTIONS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|
| Construction Name | Surface Type | Construction Type | Framing | Total Cavity R-value | Interior / Exterior Continuous R-value | U-factor | Assembly Layers |
| R-21 Wall | Exterior Walls | Wood Framed Wall | 2x6 @ 16 in. O. C. | R-21 | None / None | 0.069 | Inside Finish: Gypsum Board<br>Cavity / Frame: R-21 / 2x6<br>Exterior Finish: 3 Coat Stucco |
| R-19 Roof No Attic | Interior Ceiling | Wood Framed Ceiling | 2x8 @ 16 in. O. C. | R-19 | None / None | 0.086 | Floor Surface: Carpeted<br>Floor Deck: Wood<br>Siding/sheathing/decking<br>Cavity / Frame: R-19 / 2x8<br>Ceiling Below Finish: Gypsum Board |

**BUILDING ENVELOPE - HERS VERIFICATION**

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

**WATER HEATING SYSTEMS**

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



**CERTIFICATE OF COMPLIANCE** — CF1R-PRF-01E (Page 6 of 8)

**Project Name:** 2917 Ulric ADU 4 — **Calculation Date/Time:** 2024-07-30T13:49:44-07:00
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**WATER HEATERS**

| 01 | 03 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | Heating Element Type | Tank Type | # of Units | Tank Vol. (gal) | Energy Factor or Efficiency | Input Rating or Pilot | Tank Insulation R-value (hr/f/sf) | Standby Loss or Recovery Eff | 1st Hr. Rating or Flow Rate | NEEA Heat Pump Brand or Model | Tank Location or Ambient Condition |
| DHW Heater 1 | Heat Pump | n/a | 1 | 50 | NEEA Rated | <= 12 kW | n/a | n/a | n/a | RheemXE50T10H450U (50 gal) | Outside |

**WATER HEATING - HERS VERIFICATION**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|
| Name | Pipe Insulation | Parallel Piping | Compact Distribution | Compact Distribution Type | Recirculation Control | Central DHW Distribution | Shower Drain Water Heat Recovery |
| DHW Sys 1 - 1/1 | Not Required | Not Required | Not Required | None | Not Required | Not Required | Not Required |

**SPACE CONDITIONING SYSTEMS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|
| Name | System Type | Heating Unit Name | Cooling Unit Name | Fan Name | Distribution Name | Required Thermostat Type | Status | Verified Existing Condition | Heating Equipment Count | Cooling Equipment Count |
| Heat Pump1 | Heat pump heating cooling | Heat Pump System 1 | Heat Pump System 1 | n/a | n/a | Setback | New | NA | 1 | 1 |

**HVAC - HEAT PUMPS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|
| Name | System Type | Number of Units | Heating | | | Cooling | | Zonally Controlled | Compressor Type | HERS Verification |
| | | | HSPF/HSPF2 /COP | Cap 47 | Cap 17 | SEER/SEER2 | EER/EER2/C EER | | | |
| Heat Pump System 1 | Ductless MiniSplit HP | 1 | 8.2 | 24000 | 18000 | 14 | 12.2 | Not Zonal | Single Speed | Heat Pump System 1-hers-Hpump |



**CERTIFICATE OF COMPLIANCE** — CF1R-PRF-01E (Page 7 of 8)

**Project Name:** 2917 Ulric ADU 4 — **Calculation Date/Time:** 2024-07-30T13:49:44-07:00
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**HVAC HEAT PUMPS - HERS VERIFICATION**

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

**IAQ (INDOOR AIR QUALITY) FANS**

| 01 | 02 | 03 | 04 | 05 | 06 | 07 |
|---|---|---|---|---|---|---|
| Dwelling Unit | IAQ CFM | IAQ Watts/CFM | IAQ Fan Type | IAQ Recovery Effectiveness - SRE | IAQ Recovery Effectiveness - ASRE | HERS Verification |
| SFam IAQVentKit | 40 | 0.35 | Exhaust | n/a | n/a | Yes |



**CERTIFICATE OF COMPLIANCE** — CF1R-PRF-01E (Page 8 of 8)

**Project Name:** 2917 Ulric ADU 4 — **Calculation Date/Time:** 2024-07-30T13:49:44-07:00
**Calculation Description:** Title 24 Analysis — **Input File Name:** 2917 Ulric ADU 4.ribd19x

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

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

| Documentation Author Name: | Documentation Author Signature: |
|---|---|
| Jen Gagne | Jen Gagne |
| Company: Title 24 and More | Signature Date: 07/30/2024 |
| Address: 4727 Mt St Helens Wy | CEA/ HERS Certification Identification (if applicable): |
| City/State/Zip: San Diego, CA 92117 | Phone: (858) 291-9156 |

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:
1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

| Responsible Designer Name: | Responsible Designer Signature: |
|---|---|
| Nuwan Ranasinghe | |
| Company: GTC Design | Date Signed: 07/30/2024 |
| Address: 1205 J St suite d | License: |
| City/State/Zip: San Diego, CA 92101 | Phone: 6194855546 |



Digitally signed by California Home Energy Efficiency Rating Services (CHEERS). This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

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CITY NO.

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Sheet Name

TITLE 24 CALCS - ADU 4

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER

**A707**

GTC DESIGN STUDIO ©

## RESIDENTIAL MEASURES SUMMARY — RMS-1

| Project Name | Building Type | | | Date |
|---|---|---|---|---|
| 2917 Ulric ADU 4 | ☑ Single Family ☐ Multi Family | ☐ Addition Alone ☐ Existing+ Addition/Alteration | | 7/30/2024 |
| **Project Address** | **California Energy Climate Zone** | **Total Cond. Floor Area** | **Addition** | **# of Units** |
| 2917 Ulric St San Diego | CA Climate Zone 07 | 610 | n/a | 1 |

**INSULATION**

| Construction Type | | Cavity | Area ($ft^2$) | Special Features | Status |
|---|---|---|---|---|---|
| Slab | Unheated Slab-on-Grade | - no insulation | 610 | Perim = 129' | New |
| Demising | Wood Framed Rafter | R 19 | 610 | | New |
| Wall | Wood Framed | R 20 | 1,106 | | New |

**FENESTRATION** — Total Area: 122 | Glazing Percentage: 20.1% | New/Altered Average U-Factor: 0.30

| Orientation | Area($ft^2$) | U-Fac | SHGC | Overhang | Sidefins | Exterior Shades | Status |
|---|---|---|---|---|---|---|---|
| Front (S) | 46.5 | 0.300 | 0.23 | none | none | N/A | New |
| Left (W) | 53.4 | 0.300 | 0.23 | none | none | N/A | New |
| Rear (N) | 22.5 | 0.300 | 0.23 | none | none | N/A | New |

**HVAC SYSTEMS**

| Qty. | Heating | Min. Eff | Cooling | Min. Eff | Thermostat | Status |
|---|---|---|---|---|---|---|
| 1 | Split Heat Pump | 8.20 HSPF | Split Heat Pump | 14.0 SEER | Setback | New |

**HVAC DISTRIBUTION**

| Location | Heating | Cooling | Duct Location | Duct R-Value | Status |
|---|---|---|---|---|---|
| Heat Pump | Ductless / with Fan | Ductless | n/a | n/a | New |

**WATER HEATING**

| Qty. | Type | Gallons | Min. Eff | Distribution | Status |
|---|---|---|---|---|---|
| 1 | Heat Pump | 50 | 3.75 | Standard | New |

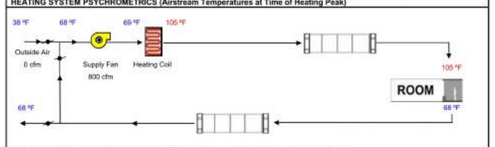


## HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

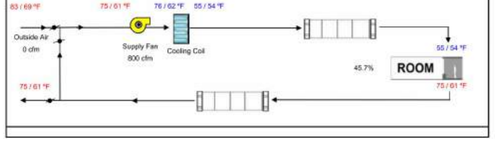
| Project Name | | | Date |
|---|---|---|---|
| 2917 Ulric ADU 4 | | | 7/30/2024 |
| System Name | | | Floor Area |
| Heat Pump | | | 610 |

| ENGINEERING CHECKS | | SYSTEM LOAD | COIL COOLING PEAK CFM | Sensible | Latent | COIL HTG. PEAK CFM | Sensible |
|---|---|---|---|---|---|---|---|
| Number of Systems | 1 | | | | | | |
| Heating System | | | | | | | |
| Output per System | 24,000 | Total Room Loads | 223 | 4,811 | 479 | 175 | 7,006 |
| Total Output (Btuh) | 24,000 | Return Vented Lighting | | 0 | | | 0 |
| Output (Btuh/sqft) | 39.3 | Return Air Ducts | | 0 | | | 0 |
| Cooling System | | Return Fan | | 0 | | | 0 |
| Output per System | 24,000 | Ventilation | 0 | 0 | 0 | 0 | 0 |
| Total Output (Btuh) | 24,000 | Supply Fan | | 997 | | | -997 |
| Total Output (Tons) | 2.0 | Supply Air Ducts | | 0 | | | 0 |
| Total Output (Btuh/sqft) | 39.3 | | | | | | |
| Total Output (sqft/Ton) | 305.0 | TOTAL SYSTEM LOAD | | 5,808 | 479 | | 6,009 |
| Air System | | | | | | | |
| CFM per System | 800 | HVAC EQUIPMENT SELECTION | | | | | |
| Airflow (cfm) | 800 | Standard Heat Pump | | 20,147 | 3,231 | | 20,091 |
| Airflow (cfm/sqft) | 1.31 | | | | | | |
| Airflow (cfm/Ton) | 400.0 | | | | | | |
| Outside Air (%) | 0.0% | Total Adjusted System Output (Adjusted for Peak Design conditions) | | 20,147 | 3,231 | | 20,091 |
| Outside Air (cfm/sqft) | 0.00 | | | | | | |
| Note: values above given at ARI conditions | | TIME OF SYSTEM PEAK | | Aug 3 PM | | | Jan 1 AM |

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




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




## 2019 Low-Rise Residential Mandatory Measures Summary

*NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. "Exceptions may apply.*
(01/2020)

| | |
|---|---|
| **Building Envelope Measures:** | |
| § 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): | **Ceiling and Rafter Roof Insulation.** Minimum R-22 insulation in wood-frame ceiling; or the weighted average U-factor must not exceed 0.043. Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alteration. 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 continuous roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.' |
| § 150.0(b): | **Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value. |
| § 150.0(c): | **Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B.' |
| § 150.0(d): | **Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.' |
| § 150.0(f): | **Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g). |
| § 150.0(g)1: | **Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d). |
| § 150.0(g)2: | **Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation. |
| § 150.0(o): | **Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration must not exceed 0.58.' |
| **Fireplaces, Decorative Gas Appliances, and Gas Log Measures:** | |
| § 110.5(a) | **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 Measures:** | |
| § 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-K.' |
| § 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)4: | **Water Heating Recirculation Loops Serving Multiple Dwelling Units.** Water heating recirculation loops serving multiple dwelling units must meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c)4. |
| § 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. |
| § 110.5: | **Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour ); and pool and spa heaters.' |
| § 150.0(h)1: | **Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2. |

## 2019 Low-Rise Residential Mandatory Measures Summary

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| **Requirements for 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)1C. | **Single Family Detached Dwelling Units.** 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 provided at rates determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(o)1C. |
| § 150.0(o)1E: | **Multifamily Attached Dwelling Units.** Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced system is not used, all units in the building must use the same system type and the dwelling-unit envelope leakage must be ≤ 0.3 CFM at 50 Pa (0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8. |
| § 150.0(o)1F: | **Multifamily Building Central Ventilation Systems**. Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B. All unit airflows must be within 20 percent of the unit with the lowest airflow rate as it relates to the individual unit's minimum required airflow rate needed for compliance. |
| § 150.0(o)1G: | **Kitchen Range Hoods.** Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2. |
| § 150.0(o)2: | **Field Verification and Diagnostic Testing.** Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is rated by HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2. |
| **Pool and Spa Systems and Equipment Measures:** | |
| § 110.4(a): | **Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Appliance Efficiency Regulations; 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 Measures:** | |
| § 110.9: | **Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.' |
| § 150.0(k)1A: | **Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A. |
| § 150.0(k)1B: | **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 must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or fan speed control. |
| § 150.0(k)1C: | **Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must meet all of the requirements for: insulation contact (IC) labeling; air leakage; sealing; maintenance; and socket and light source as described in § 150.0(k)1C. |
| § 150.0(k)1D: | **Electronic Ballasts for Fluorescent Lamps.** Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz. |
| § 150.0(k)1E: | **Night Lights, Step Lights, and Path Lights.** Night lights, step lights and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens. |
| § 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).' |
| § 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)2C: | **Interior Switches and Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.* |
| § 150.0(k)2D: | **Interior Switches and Controls.** Controls and equipment must be installed in accordance with manufacturer's instructions. |
| § 150.0(k)2E: | **Interior Switches and Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to comply with § 150.0(k). |
| § 150.0(k)2F: | **Interior Switches and Controls.** Lighting controls must comply with the applicable requirements of § 119.9. |

## 2019 Low-Rise Residential Mandatory Measures Summary

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| § 150.0(n)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(n)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: | **Storage Tank Insulation.** Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank. |
| § 150.0(j)2A: | **Water Piping, Solar Water-heating System Pipe, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation wall thickness of one inch or a minimum insulation R-value of 7.7: the first five feet of cold water pipes from the storage tank; all hot water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch; all hot water piping with a nominal diameter less than 3/4 inch that is associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, buried below grade, and from the heating source to kitchen fixtures.* |
| § 150.0(j)3: | **Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 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 include all of the following: A dedicated 125 volt, 20 amp electrical receptacle connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within three feet of the water heater without obstruction. Both ends of the unused conductor must be labeled with the word "spare" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words "Future 240V Use"; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than two inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hour. |
| § 150.0(n)2: | **Recirculating Loops.** Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5. |
| § 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 Measures:** | |
| § 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 the requirements of the CMC §§ 601.0, 602.0, 603.0, 604.0, 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 a minimum installed level of R-4.2 when ducts are entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Portions of the duct system completely exposed and surrounded by directly conditioned space are not required to be insulated. 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 requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ¼ inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, 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 cavities and support platforms must not be compressed to cause reductions in the cross-sectional area.' |
| § 150.0(m)2: | **Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands. |
| § 150.0(m)3: | **Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction. |
| § 150.0(m)7: | **Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers. |
| § 150.0(m)8: | **Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents. |
| § 150.0(m)9: | **Protection of Insulation.** Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation. |
| § 150.0(m)10: | **Porous Inner Core Flex Duct.** Porous inner core flex ducts must have a non-porous layer 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 § 150.0(m)11 and Reference Residential Appendix RA3. |
| § 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. Pressure drops and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service.* |
| § 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.* |

## 2019 Low-Rise Residential Mandatory Measures Summary

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| § 150.0(k)2G: | **Interior Switches and Controls.** An energy management control system (EMCS) may be used to comply with control requirements if it: provides functionality of the specified control according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.0(e), and meets all other requirements in § 150.0(k)2. |
| § 150.0(k)2H: | **Interior Switches and Controls.** A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2. |
| § 150.0(k)2I: | **Interior Switches and Controls.** In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by an occupant sensor or a vacancy sensor providing automatic-off functionality. If an occupant sensor is installed, it must be initially configured to manual-on operation using the manual control required under Section 150.0(k)2C. |
| § 150.0(k)2J: | **Interior Switches and Controls.** Luminaires that are or contain light sources that meet Reference Joint Appendix JA8 requirements for dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls.' |
| § 150.0(k)2K: | **Interior Switches and Controls.** Under cabinet lighting must be controlled separately from ceiling-installed lighting systems. |
| § 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 meet the requirement in item § 150.0(k)3Ai (ON and OFF switch) and the requirements in either § 150.0(k)3Aii (photocell and either a motion sensor or automatic time switch control) or § 150.0(k)3Aiii (astronomical time clock), or an EMCS. |
| § 150.0(k)3B: | **Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, outdoor lighting for private patios, entrances, balconies, and porches; and residential parking lots and carports with less than eight vehicles per site must comply with either § 150.0(k)3A or with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0. |
| § 150.0(k)3C: | **Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, any outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site and any outdoor lighting not regulated by § 150.0(k)3B or § 150.0(k)3D must comply with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0. |
| § 150.0(k)4: | **Internally Illuminated address signs**. Internally illuminated address signs must comply with § 140.8; or must consume no more than 5 watts of power as determined according to § 130.0(c). |
| § 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 Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0. |
| § 150.0(k)6A | **Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be comply with Table 150.0-A and be controlled by an occupant sensor. |
| § 150.0(k)6B: | **Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common areas in that building must:<br>i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and<br>ii. Lighting installed in corridors and stairwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress. |
| **Solar Ready Buildings:** | |
| § 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) through § 110.10(e). |
| § 110.10(a)2: | **Low-rise Multifamily Buildings.** Low-rise multi-family buildings that do not have a photovoltaic system installed must comply with the requirements of § 110.10(b) through § 110.10(d). |
| § 110.10(b)1: | **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. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.' |
| § 110.10(b)2: | **Azimuth.** All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees 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 distance, measured in the horizontal plane, 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) through § 110.10(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". |

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# 2915 ULRIC STREET DEVELOPMENT

2917, 2919, 2921 & 2923 ULRIC STREET, SAN DIEGO, CA 92111

CITY NO.

| NO. | DESCRIPTION | DATE |
|---|---|---|
| 1 | CITY DRAWINGS | 11/22/2022 |
| 2 | CITY RESUBMITTAL R2 | 08/09/2023 |
| 3 | CITY RESUBMITTAL R3 | 03/04/2024 |
| 4 | CITY RESUBMITTAL R4 | 05/28/2024 |
| 5 | CITY RESUBMITTAL R5 | 07/09/2024 |

Sheet Name

TITLE 24 CALCS - ADU 4

| | |
|---|---|
| GTC NO. | 322 |
| DATE: | 07/01/2024 |
| DRAWN BY: | GTC |
| CHECKED BY: | GTC |

SHEET NUMBER

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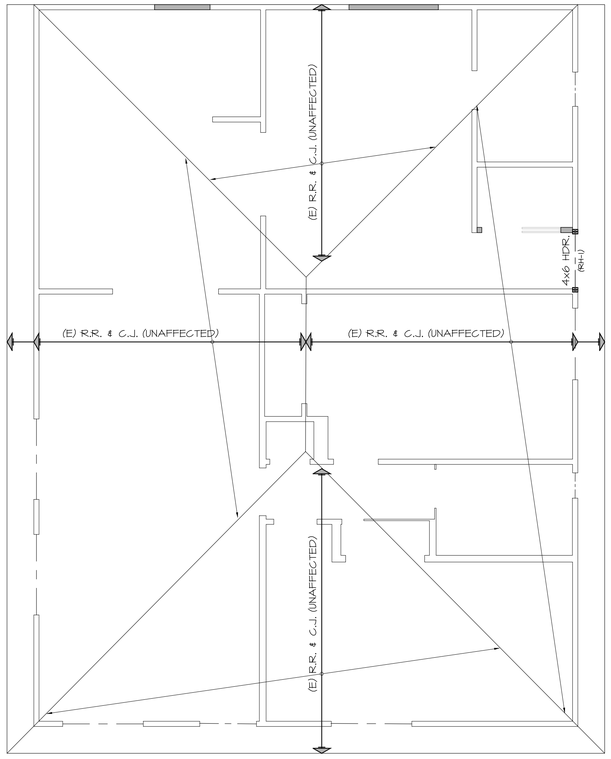
FOR STRUCTURAL REFERENCE ONLY

## NOTICE

EXISTING FRAMING & FOUNDATION TO BE VERIFIED IN FIELD. INTERIOR/EXTERIOR DEMO-WALLS TO BE VERIFIED AS NON-BEARING, AND CONTAINING NO LATERAL ELEMENT SUCH AS SHEAR WALLS, OR LET IN BRACES PRIOR TO DEMOLITION. SHOULD EXISTING FRAMING DEVIATE FROM PLANS, OR INTERIOR/EXTERIOR DEMO WALLS BE SUSPECTED AS BEARING, NOTIFY THE ENGINEER ON RECORD PRIOR TO RESUMING CONSTRUCTION.

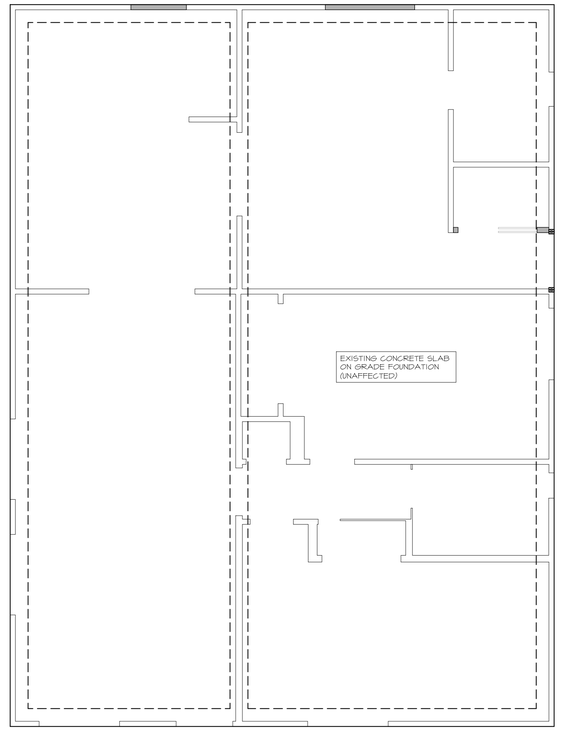
## FRAMING LEGEND

- EXISTING WALL PER PLAN
- NEW WALL PER PLAN
- DOUBLE 2x STUD OR KING STUD W/ TRIMMER
- EXISTING FOOTING PER PLAN




## ROOF FRAMING PLAN

ALL DIMENSIONS TO BE VERIFIED WITH ARCHITECTURAL PLANS
SEE SHEET S-1 & S-2 FOR COMPLETE SHEARWALL & HOLD-DOWN SCHEDULES SCALE: ¼" = 1'




## FOUNDATION PLAN

ALL DIMENSIONS TO BE VERIFIED WITH ARCHITECTURAL PLANS
SEE SHEET S-1 & S-2 FOR COMPLETE SHEARWALL & HOLD-DOWN SCHEDULES SCALE: ¼" = 1'

8/9/2024, 3:12:32 PM
PRJ-1077519
Hannan Al-Timimi

REVISIONS:

| | |
|---|---|
| 1 | |
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| 3 | |
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REGISTERED PROFESSIONAL ENGINEER
MILES T. LOVELACE
No. C 39734
Exp. 12/31/23
STATE OF CALIFORNIA

Digitally signed by Miles Lovelace
on July 8, 2024


LOVELACE ENGINEERING
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Project Name:

2915 ULRIC DEVELOPMENT

2915 ULRIC STREET
SAN DIEGO, CA 92111

Designer:

GTC DESIGN

1205 J STREET, SUITE D
SAN DIEGO, CA 92101

| | |
|---|---|
| Job No. | J23365 |
| Cad Ref. No: | - |
| Date Drawn: | 7/29/23 |
| Date Issued: | - |
| Proj. Engineer: | A.S. |
| Drawn By: | - |
| Checked By: | M.T.L. |
| Scale: | ¼" = 1'-0" |

Drawing Status:

- ☐ INFORMATION DWGS. (NOT FOR CONSTRUCTION)
- ☐ PRELIMINARY DWGS. (NOT FOR CONSTRUCTION)
- ☐ DESIGN DEVELOPMENT DWGS. (NOT FOR CONSTRUCTION)
- ☐ CHECK SET (NOT FOR CONSTRUCTION)
- ☐ PROGRESS DRAWINGS (NOT FOR CONSTRUCTION)
- ☐ PLAN CHECK DRAWINGS
- ☐ BID SET DRAWINGS
- ☐ CONSTRUCTION DOCUMENTS
- ☐ OTHER


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SHEET TITLE :

EXISTING MAIN HOUSE FRAMING PLANS

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