

APPROVED
CITY OF RIVERSIDE
BUILDING & SAFETY DIVISION

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PERMIT: RP-2021-07077 DATE: 05/01/23

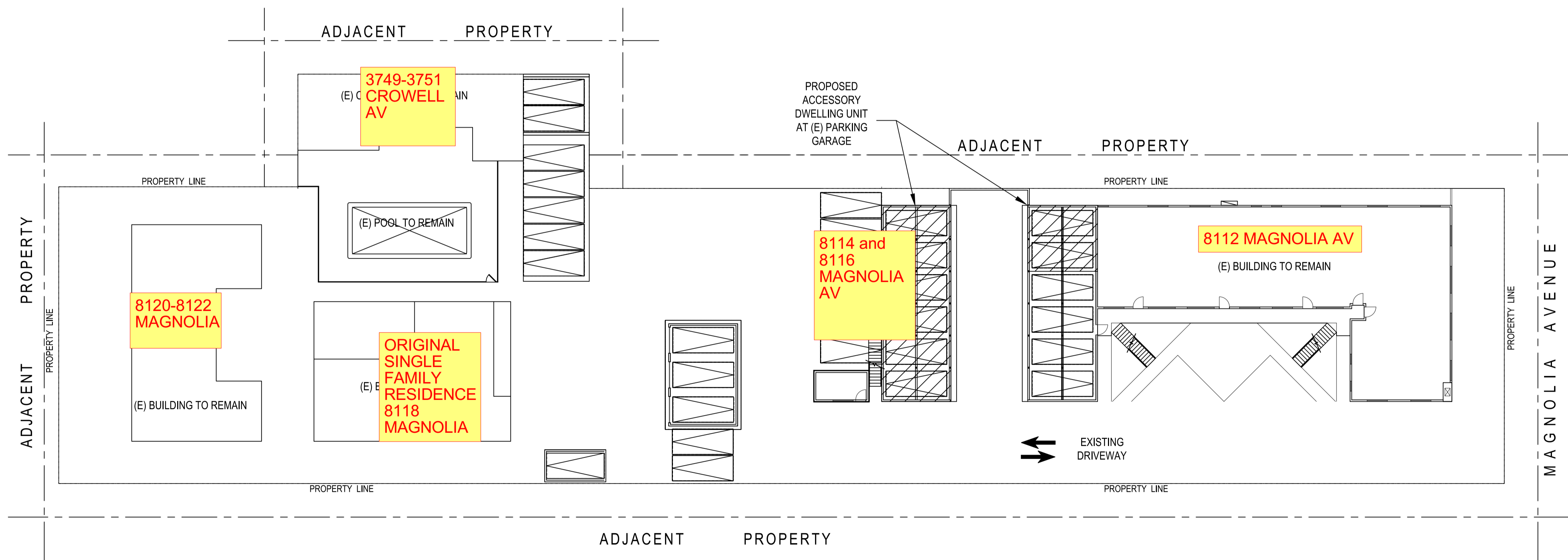
ADDITION FOUR ACCESSORY DWELLING UNITS (ADU) AT EXISTING COVERED PARKING GARAGE

8112 MAGNOLIA AVE, RIVERSIDE, CA 92504

GENERAL NOTES	GRAPHIC SYMBOLS	SCOPE OF WORK	PROJECT DATA																																																												
<p>1. EVERY DWELLING UNIT SHALL BE PROVIDED WITH HEATING FACILITIES CAPABLE OF MAINTAINING A ROOF TEMPERATURE OF 68°F @3-FT ABOVE FLOOR.</p> <p>2. ALL ESCAPE OR RESCUE WINDOWS SHALL HAVE A MIN. NET CLEAR OPENABLE AREA OF 5.7 S.F. THE MIN. NET CLEAR OPENABLE HEIGHT SHALL BE 24" THE MIN. NET CLEAR OPENABLE WIDTH DIMENSION SHALL BE 20".</p> <p>3. ALL EXTERIOR DOORS REQUIRE A LANDING. DOOR LANDINGS SHALL HAVE A WIDTH AT LEAST EQUAL TO THE WIDTH OF THE DOOR. SHALL HAVE A LENGTH MEASURED IN THE DIRECTION OF TRAVEL AT LEAST 36", AND SHALL HAVE A SLOPE NOT GREATER THAN 1/4" PER FOOT.</p> <p>4. WHERE EXTERIOR LATH AND PLASTER IS USED A WEEP SCREED SHALL BE INSTALLED. THE SCREED SHALL BE PLACED A MIN. OF 4" ABOVE TO THE EARTH AND/OR 2" ABOVE PAVED AREA.</p> <p>5. BRACED WALL PANELS SHALL START AT NOT MORE THAN 8" FROM EACH END OF A BRACED WALL LINE.</p> <p>6. BRACED WALL LINES SHALL NOT BE OFFSET BY MORE THAN 4".</p> <p>7. BRACED WALL PANEL CONSTRUCTION SHALL BE EITHER PLYWOOD OR PORTLAND CEMENT AND SHALL NOT BE MIXED WITHIN A BRACED WALL LINE.</p> <p>8. PLYWOOD BRACED WALLS SHALL BE 1/2" STRUCTURE I GRADE PLYWOOD, SHALL NOT BE LESS THAN 4' IN LENGTH NOR HAVE A HEIGHT WIDTH RATIO LESS THAN 2:1.</p>	<p>DETAIL NO. — DWG NO.</p> <p>SECTION REFERENCE (SHOWN ON PLAN) — SECTION NO. — DWG NO.</p> <p>KEYNOTE — [X]</p> <p>DOOR SYMBOL — [D]</p> <p>WINDOW SYMBOL — [W]</p> <p>COLUMN SYMBOLS AND CENTER LINE — [C]</p> <p>REVISION MARK — [R]</p> <p>REVISION NO. — [R]</p> <p>NORTH ARROW — [N]</p> <p>FLOOR NO. — [F]</p> <p>UNIT NO. — [U]</p> <p>DWG NUMBER — [D]</p> <p>DWG NAME — [N]</p> <p>DWG SCALE — [S]</p> <p>SHEET NAME — [S]</p> <p>COVER SHEET — [CS]</p> <p>SHEET NO. — [SN]</p> <p>DISCIPLINE LETTER — [DL]</p> <p>SHEET NUMBER — A0.00</p>	<p>1. CHANGE 1ST FLOOR COVERED PARKING GARAGE TO 4 ACCESSORY DWELLING UNITS (ADU)</p> <p>CODE COMPLIANCE</p> <p>2019 CALIFORNIA BUILDING CODE 2019 CALIFORNIA RESIDENTIAL CODE 2019 CALIFORNIA MECHANICAL CODE 2019 CALIFORNIA PLUMBING CODE 2019 CALIFORNIA ELECTRICAL CODE 2019 CALIFORNIA GREEN BUILDING CODE 2019 CALIFORNIA FIRE CODE 2019 T-24 ENERGY STANDARDS 2019 EDITION 2020 RIVERSIDE BUILDING CODE, LAWS</p>	<table border="1"> <tr> <td>SITE ADDRESS</td> <td>8112 MAGNOLIA AVE, RIVERSIDE, CA 92504</td> <td>OCCUPANCY GROUP</td> <td>R2</td> </tr> <tr> <td>ASSESSOR PARCEL NO. (APN)</td> <td>231101030</td> <td>FIRE SPRINKLER</td> <td>NO-SPRINKLER</td> </tr> <tr> <td>LEGAL LOT DESCRIPTION</td> <td>LOT: 3</td> <td>EXTERIOR WAL FIRE RATING</td> <td>1 HR FIRE RATED WALL</td> </tr> <tr> <td>ZONING</td> <td>MS12</td> <td>USEAGE</td> <td>APARTMENT</td> </tr> <tr> <td>LOT SIZE</td> <td>0.93 ACRES</td> <td></td> <td></td> </tr> <tr> <td>CONSTRUCTION TYPE</td> <td>TYPE V-A</td> <td></td> <td></td> </tr> <tr> <td>EXISTING NO. OF UNITS</td> <td>BUILDING 1</td> <td>BUILDING 2</td> <td>BUILDING 3&4 (NOT IN SCOPE)</td> </tr> <tr> <td>PROPOSED NO. OF ADU</td> <td>1</td> <td>3</td> <td>-</td> </tr> <tr> <td>EXISTING MAIN DWELLING BUILDING NO. OF STORIES</td> <td>2 STORY</td> <td>2 STORY</td> <td>1 STORY</td> </tr> <tr> <td>NUMBER OF PARKING</td> <td>TOTAL 6 = (E) 12 - 6 (CONVERT TO 3 UNITS)</td> <td>TOTAL 4 = (E) 6 - 2 (CONVERT TO 1 UNIT)</td> <td>(E) 13 NO CHANGE</td> </tr> <tr> <td>PROPOSED HABITABLE AREA</td> <td>1112 SQFT</td> <td>367 SQFT</td> <td>-</td> </tr> <tr> <td>HABITABLE AREA</td> <td>1200 SQFT</td> <td>8900 SQFT</td> <td>4929 SQFT</td> </tr> <tr> <td>NON HABITABLE AREA</td> <td>TOTAL 0 SQFT = (E) 1112 - 1112</td> <td>TOTAL 783 SQFT = (E) 1150 - 367</td> <td></td> </tr> <tr> <td>EXISTING FLOOR AREA</td> <td>15,029 SQFT</td> <td></td> <td></td> </tr> <tr> <td>FAR CALCULATION</td> <td>TOTAL = 16,508 SQFT = (E) 15029 + (N) 1112 + (N) 367 SQFT</td> <td>ALLOWABLE = 32,888 SQFT OK!</td> <td></td> </tr> </table>	SITE ADDRESS	8112 MAGNOLIA AVE, RIVERSIDE, CA 92504	OCCUPANCY GROUP	R2	ASSESSOR PARCEL NO. (APN)	231101030	FIRE SPRINKLER	NO-SPRINKLER	LEGAL LOT DESCRIPTION	LOT: 3	EXTERIOR WAL FIRE RATING	1 HR FIRE RATED WALL	ZONING	MS12	USEAGE	APARTMENT	LOT SIZE	0.93 ACRES			CONSTRUCTION TYPE	TYPE V-A			EXISTING NO. OF UNITS	BUILDING 1	BUILDING 2	BUILDING 3&4 (NOT IN SCOPE)	PROPOSED NO. OF ADU	1	3	-	EXISTING MAIN DWELLING BUILDING NO. OF STORIES	2 STORY	2 STORY	1 STORY	NUMBER OF PARKING	TOTAL 6 = (E) 12 - 6 (CONVERT TO 3 UNITS)	TOTAL 4 = (E) 6 - 2 (CONVERT TO 1 UNIT)	(E) 13 NO CHANGE	PROPOSED HABITABLE AREA	1112 SQFT	367 SQFT	-	HABITABLE AREA	1200 SQFT	8900 SQFT	4929 SQFT	NON HABITABLE AREA	TOTAL 0 SQFT = (E) 1112 - 1112	TOTAL 783 SQFT = (E) 1150 - 367		EXISTING FLOOR AREA	15,029 SQFT			FAR CALCULATION	TOTAL = 16,508 SQFT = (E) 15029 + (N) 1112 + (N) 367 SQFT	ALLOWABLE = 32,888 SQFT OK!	
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**CALIFORNIA GREEN CODE
MANDATORY REQUIREMENTS – RESIDENTIAL**

*The following requirements shall be incorporated into this project.
(Highlighted items to be filled-in by applicant.)*

APPLICABILITY

These regulations are applicable to all new residential projects as well as to additions or alterations that increase the conditioned area, volume, or size of the structure. For such additions or alterations, the requirements shall only apply within the specific area of that addition or alteration.

SITE DEVELOPMENT

1. Preservation of slopes, management of storm water drainage and erosion controls shall be established on all construction sites for new buildings. The following measures shall be implemented, as appropriate:
 - a) Retention basins of sufficient size shall be utilized on the site to retain storm water.
 - b) Where storm water is conveyed to a public drainage system, water shall be filtered by use of a barrier system, wattle or other approved method.
 - c) Compliance with all applicable storm water management regulations shall be mandatory.
2. Surface water shall be kept from entering the building.

ENERGY EFFICIENCY

1. All new buildings shall comply with the applicable requirements of the California Energy Code.

WATER EFFICIENCY

1. All plumbing fixtures identified in the following schedule will comply with the maximum flow rates shown.

Fixture Type	Maximum Flow Rate
Shower Head	2.0 gpm @ 80 psi
Kitchen Faucet	1.8 gpm @ 60 psi
Lavatory Faucet	1.2 gpm @ 60 psi
Water Closet	1.28 gallons per flush
Urinal	0.125 gallons per flush <i>(Wall mount)</i>

2. Automatic irrigation system controllers which are either soil moisture or weather based shall be installed.

ENVIRONMENTAL QUALITY

1. All duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other acceptable material to reduce the amount of dust or debris which may collect in the system.
2. All adhesives, sealants, caulks, paints and coatings shall comply with the applicable SCAQMD VOC rules and verification of compliance shall be provided at the request of the Building Inspector.
3. All carpet and carpet cushion installed in the building interior shall meet one of the following standards:
 - a) Carpet and Rug Institute's Green Label Plus Program
 - b) California Dept of Public Health Standard Practice for testing of VOCs (Spec 01350)
 - c) NSF/ANSI 140 at the Gold level
 - d) Scientific Certifications Systems Indoor Advantage Gold
4. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in the ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et. seq.).
5. At least 80% of resilient flooring (if used) shall comply with the VOC limits of the CHPS, RFCT or California Department of Public Health.
6. A capillary break shall be installed between the concrete slab and supporting grade for habitable and heated structures.
7. Building materials with visible signs of water damage shall not be installed. Moisture content of framing members shall be verified (and documentation provided to the Building Inspector) as 19 percent or less prior to enclosure.
8. All bathroom exhaust fans shall be ENERGY STAR compliant and ducted to the outside of the building. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a readily accessible humidistat capable of adjustments between 50 to 80 percent relative humidity.

MATERIAL CONSERVATION

1. Annular spaces around pipes, electric cables, conduits or other openings in bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar or equivalent methods acceptable to the Building Official.
2. The Construction Waste Management Plan shall require that at least 65% of all nonhazardous construction waste generated by this project as identified in the following table is recycled and/or salvaged.

Waste Material Type	(A) Estimated weight of waste before any recycling or salvage (in tons)	(B) Estimated weight of recycled or salvaged waste (in tons)	(C) Projected Diversion Rate (in Percent)
Asphalt			Calculate the Projected Diversion Rate Percentage by using the following formula: $(B) \div (A) \times 100 = (C)$ <i>NOTE: Total diversion rate shall not be less than 65%</i> ↓
Concrete			
Metal			
Wood			
Insulation			
Drywall			
Carpet and pad			
Cardboard and paper			
Plastics			
Glass			
Other:			
Other:			
TOTAL FOR ALL MATERIALS			

- a) All subcontractors shall comply with the project's Construction Waste Management Plan.
- b) This project shall generate the least amount of waste possible by planning and ordering carefully, following all proper storage and handling procedures to reduce broken and damaged materials and reusing materials whenever possible. Waste materials shall be sorted on site prior to removal.
- c) All construction waste removed from the site shall be documented and said documentation shall be provided in an organized format to the enforcement agency in order to verify compliance with the Construction Waste Management Plan.

BUILDING MAINTENANCE AND OPERATION

1. At the time of final building inspection, a manual or other media providing the following information shall be placed in the building:
 - a) Directions to the owner that the manual shall remain with the building.
 - b) Operation and maintenance instructions for all equipment and appliances.
 - c) Information from local utilities concerning conservation programs.
 - d) Public transportation and/or carpooling available in the area.
 - e) Educational materials on the positive impacts of an interior relative humidity between 30–60 percent and how those levels may be achieved and maintained.
 - f) Information concerning water-conserving landscaping and irrigation design.
 - g) Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
 - h) Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
 - i) Information about state solar energy and incentive programs available.
 - j) A copy of any special reports or commissioning reports required to verify compliance with the Green Code standards.

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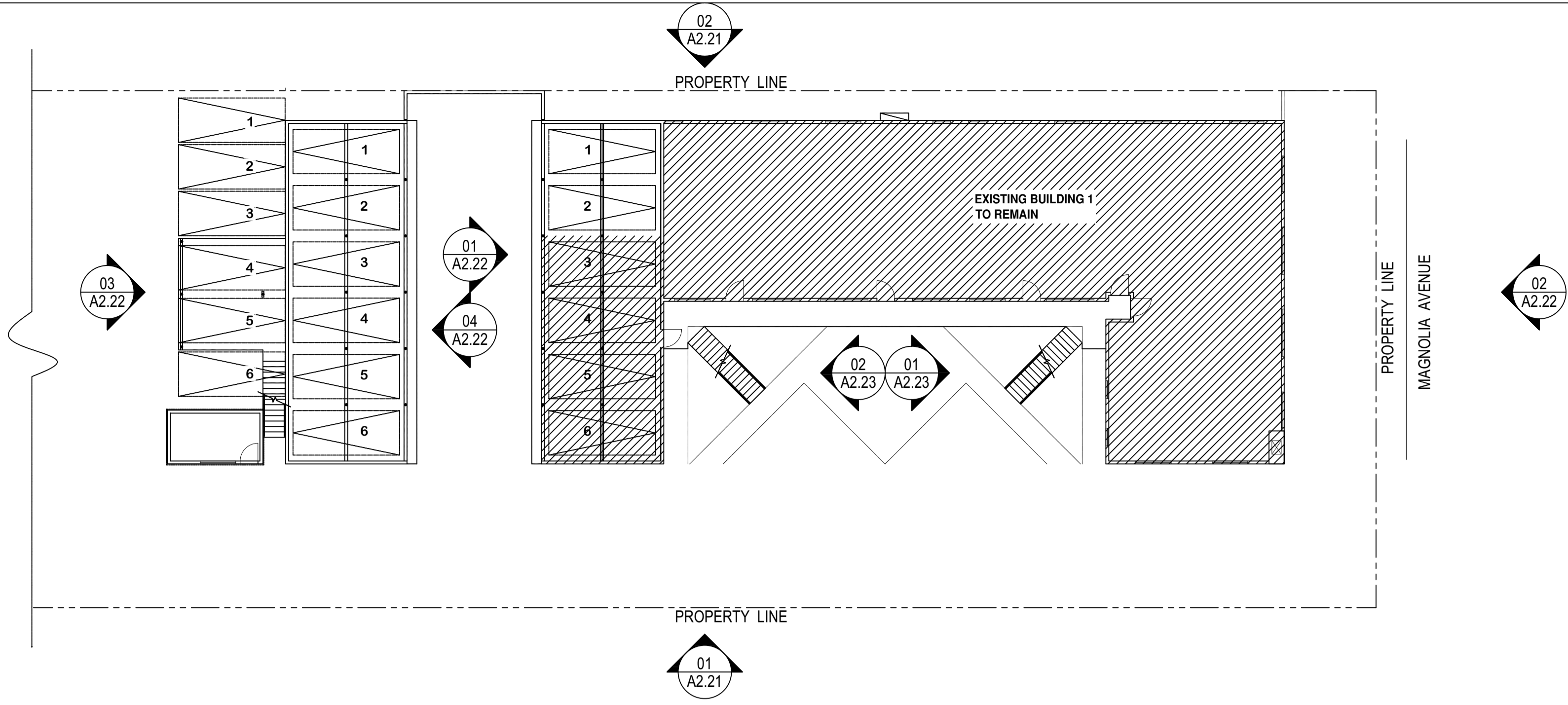


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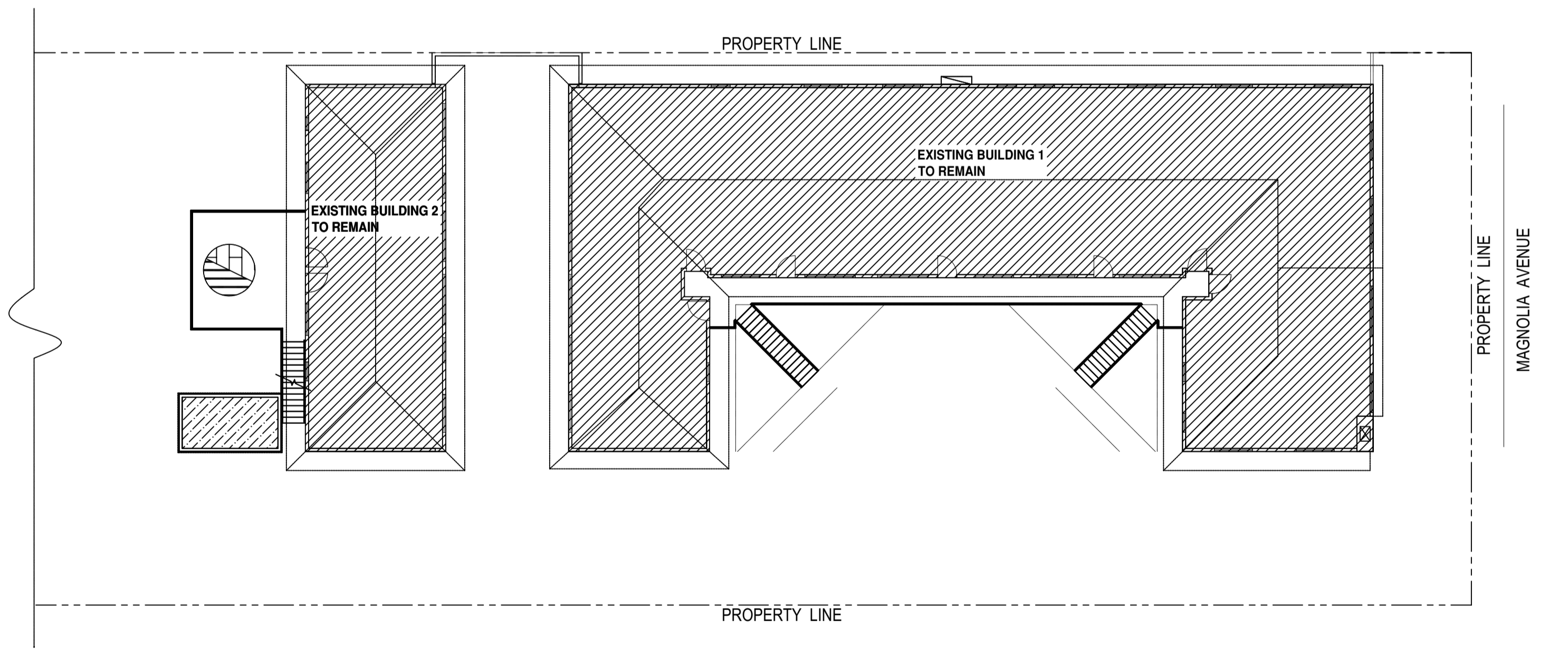
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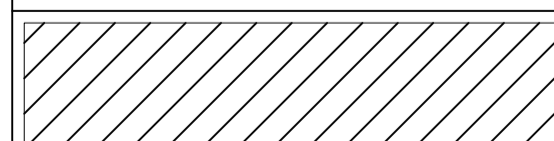
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EXISTING SITE PLAN 01
 Scale: 1/16"=1'-0"



EXISTING SECOND FLOOR & ROOF PLAN 02
 Scale: 1/16"=1'-0"

LEGEND	
SYMBOL	DESCRIPTION
	EXISTING APARTMENT BUILDING TO REMAIN

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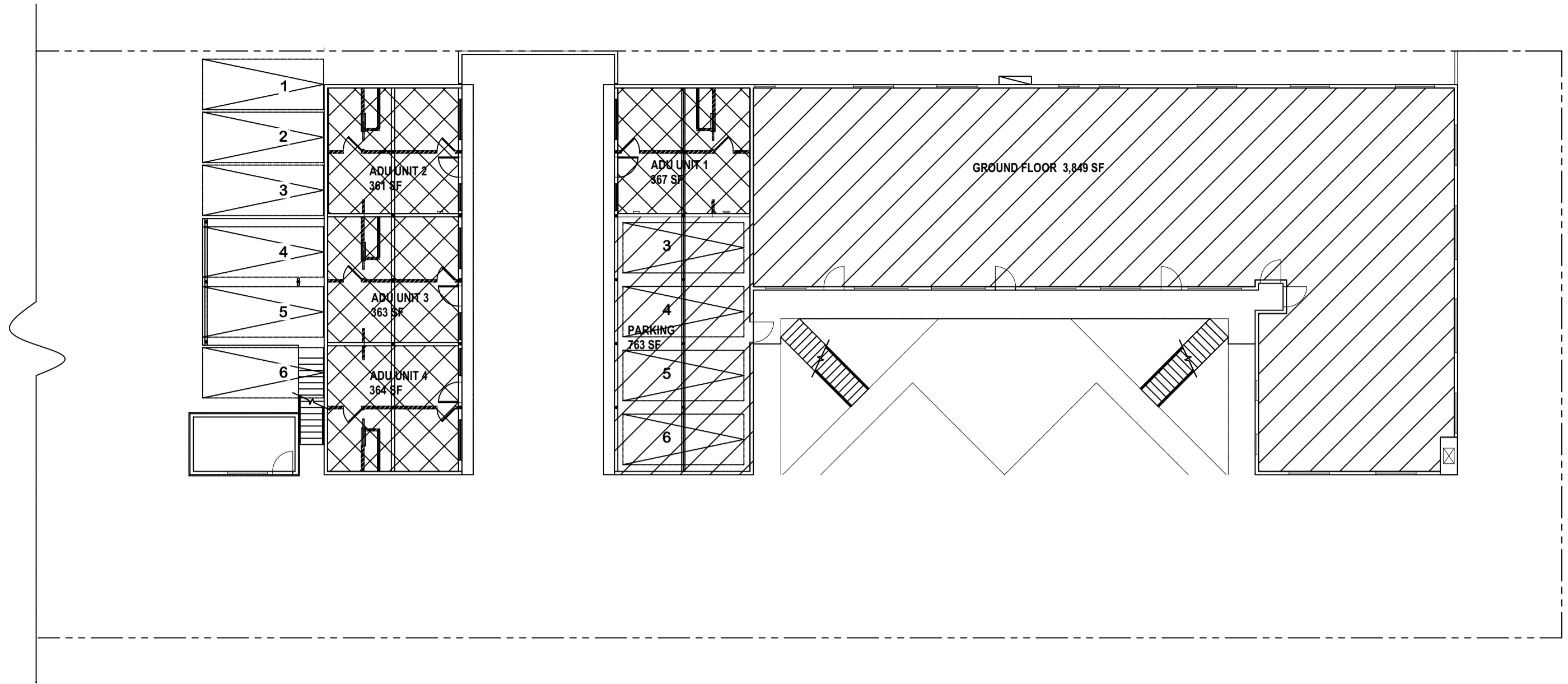


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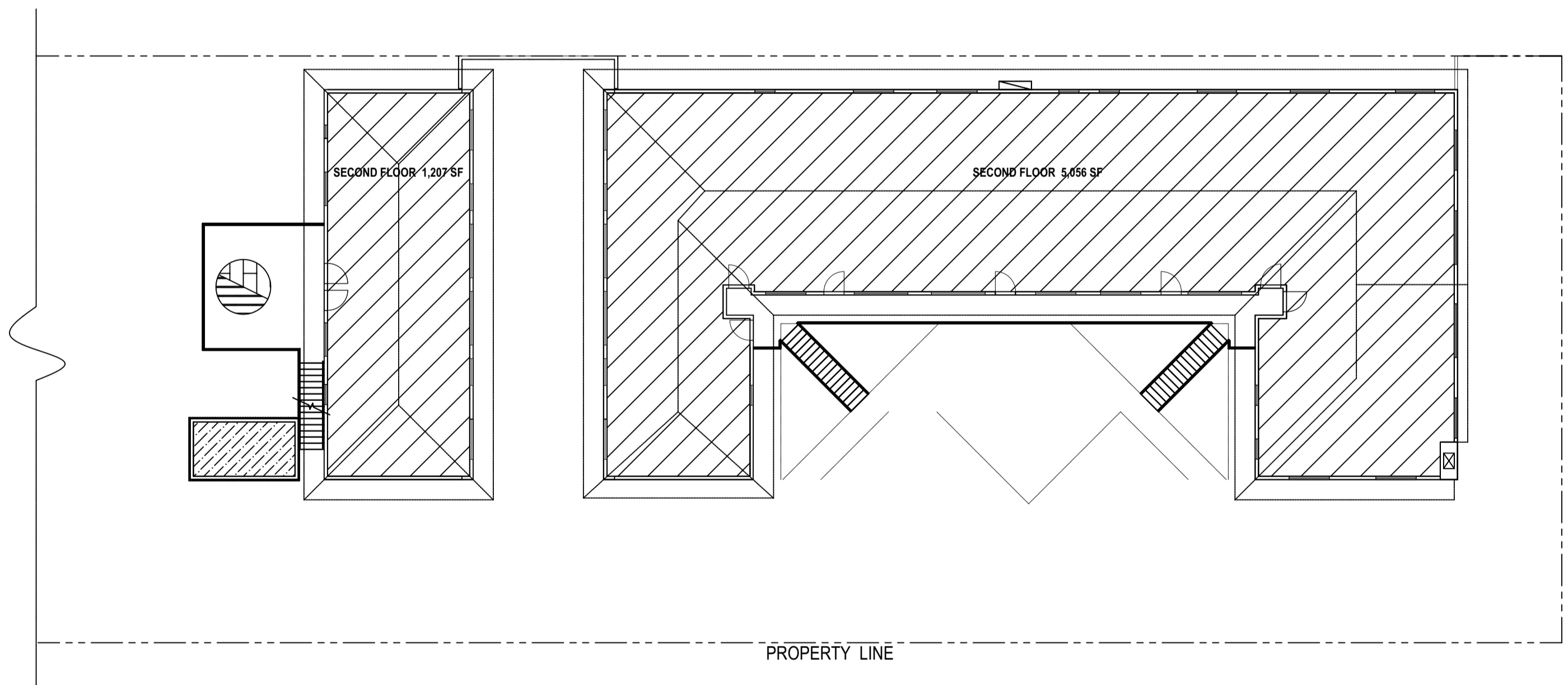
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GROUND FLOOR AREA MAP 01
 Scale: 1/16"=1'-0"



SECOND FLOOR AREA MAP 02
 Scale: 1/16"=1'-0"

RESIDENTIAL FLOOR AREA BUILDING 1	
GROUND FLOOR	4,979 SF (3,849+367+763)
2ND FLOOR	5,056 SF
TOTAL	10,035 SF
ADU	367 SF

RESIDENTIAL FLOOR AREA BUILDING 2	
GROUND FLOOR	1,088 SF (361+363+364)
2ND FLOOR	1,207 SF
TOTAL	2,295 SF
ADU	1,088 SF

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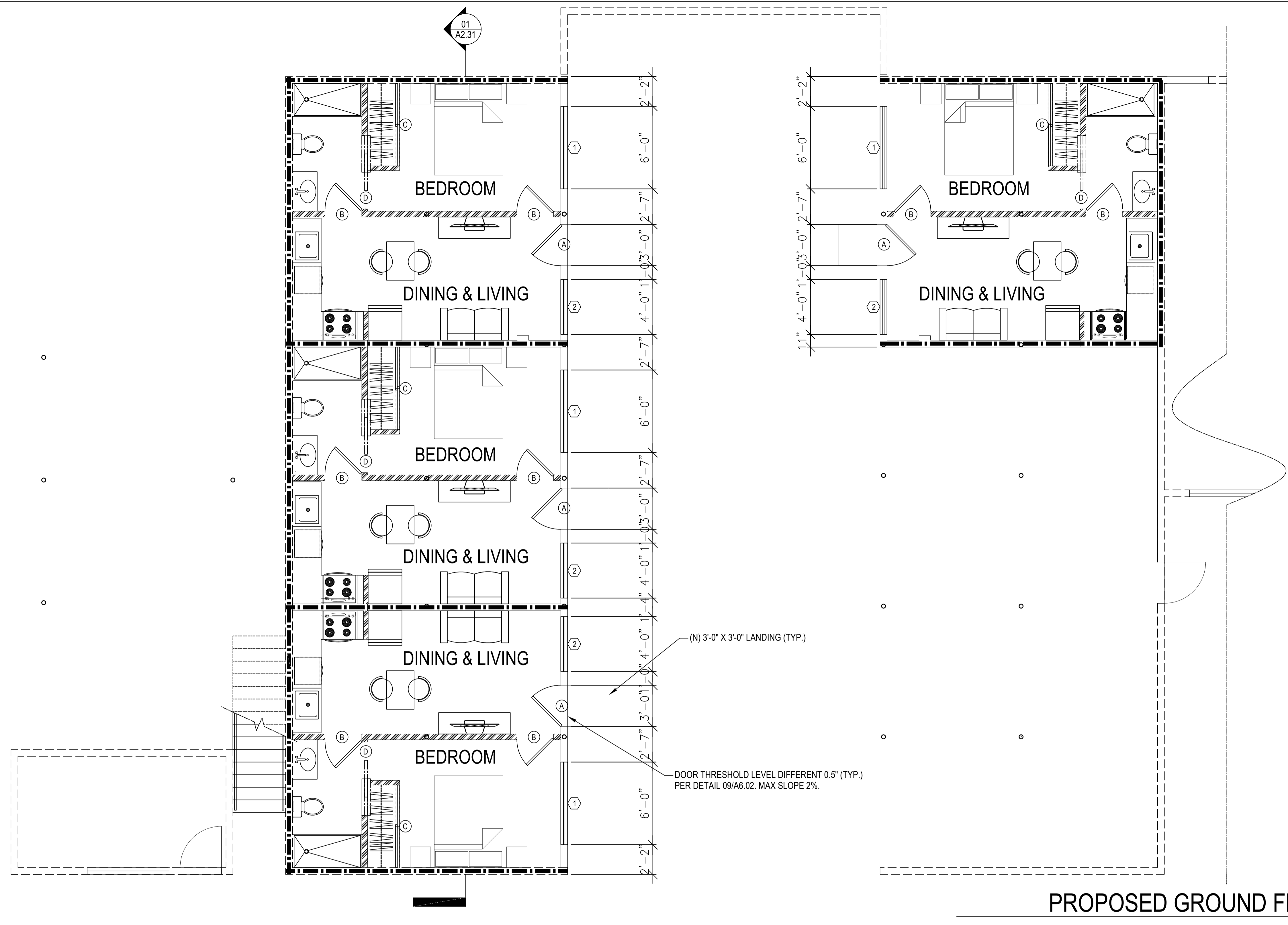


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PROPOSED GROUND FLOOR PLAN 01
 Scale: 1/4"=1'-0"

LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	NEW EXTERIOR WALL CONSTRUCTION. REFER TO 01&02/A6.01	(A)	DOOR SYMBOL PER SCHEDULE ON SHEET A2.31
	NEW INTERIOR WALL CONSTRUCTION. REFER TO 03/A6.01	(1)	WINDOW SYMBOL PER SCHEDULE ON SHEET A2.31
	EXISTING WALL TO REMAIN		
	(E) EXTERIOR OR (N) TENANT DEMISING WALL, G.C. TO VERIFY EXISTING WALL CONDITION TO COMPLY DETAIL A6.02-01 & 02, 1-HR FIRE RATED, STC-50 MIN., REPAIR / REPLACE WHEN APPLICABLE		

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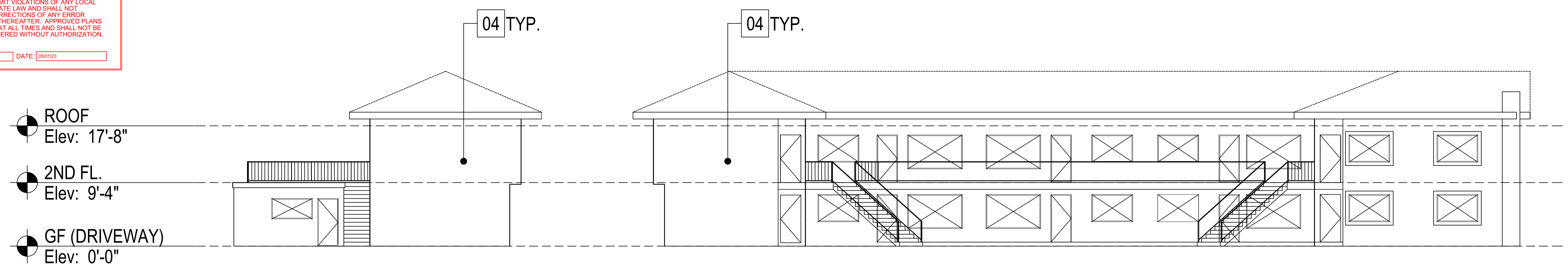


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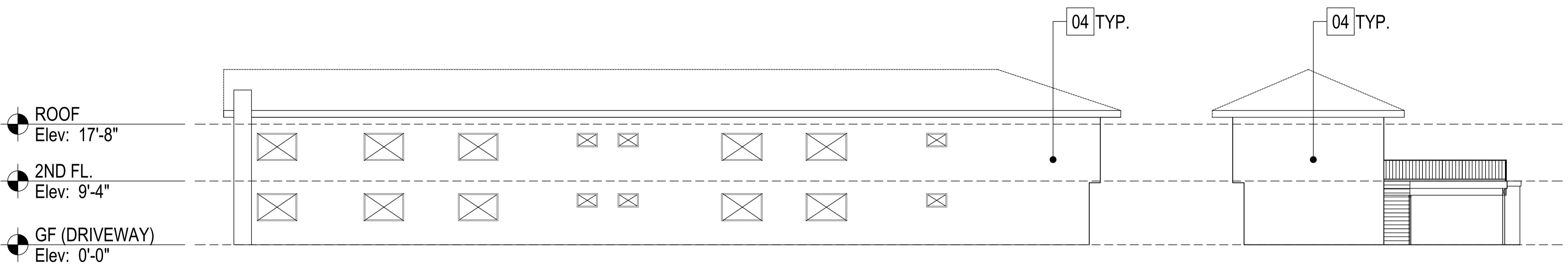
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EXISTING EAST ELEVATION 01
 Scale: 1/8"=1'-0"



EXISTING WEST ELEVATION 02
 Scale: 1/8"=1'-0"

ELEVATION KEY NOTES	
SYMBOL	DESCRIPTION
01	(N) EXT. STUCCO WALL TO MATCH EXISTING MAIN DWELLING BUILDING
02	(N) ALUMINUM WINDOW 1/4" DOUBLE GLAZING W/ TEMPERED GLASS. SEE A2.31, WINDOW SCHEDULE
03	(N) EXTERIOR WOOD COMPOSITE DOOR W/ METAL FRAME. SEE A2.31 DOOR SCHEDULE
04	(E) EXT. STUCCO WALL

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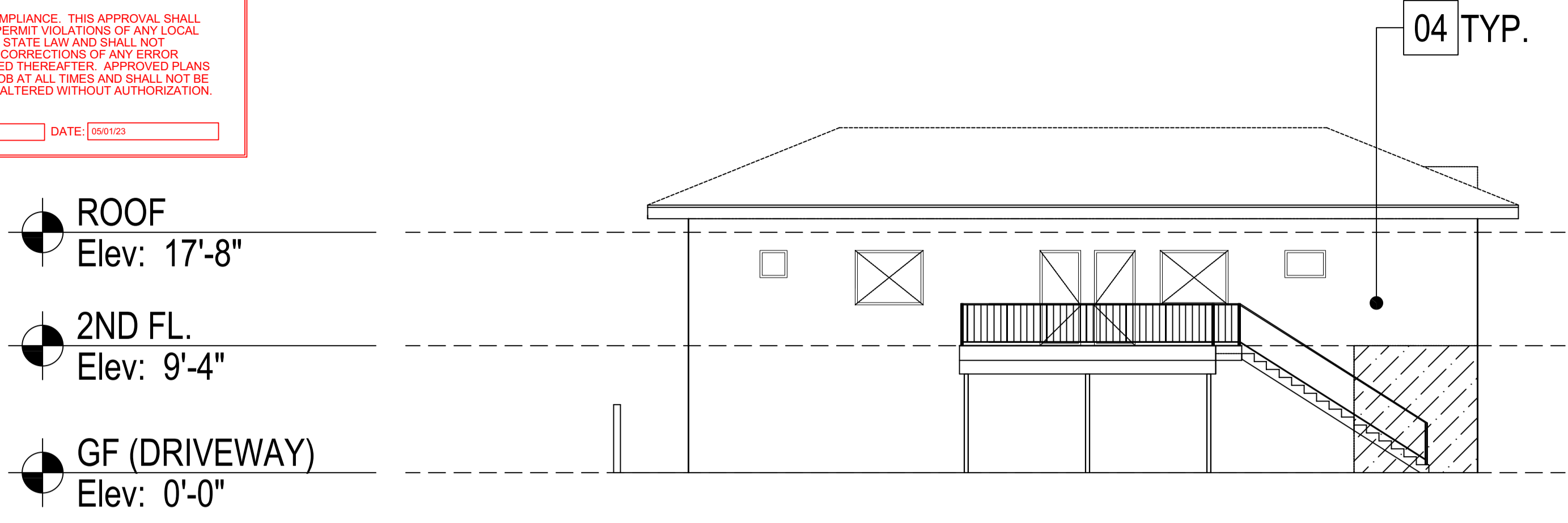


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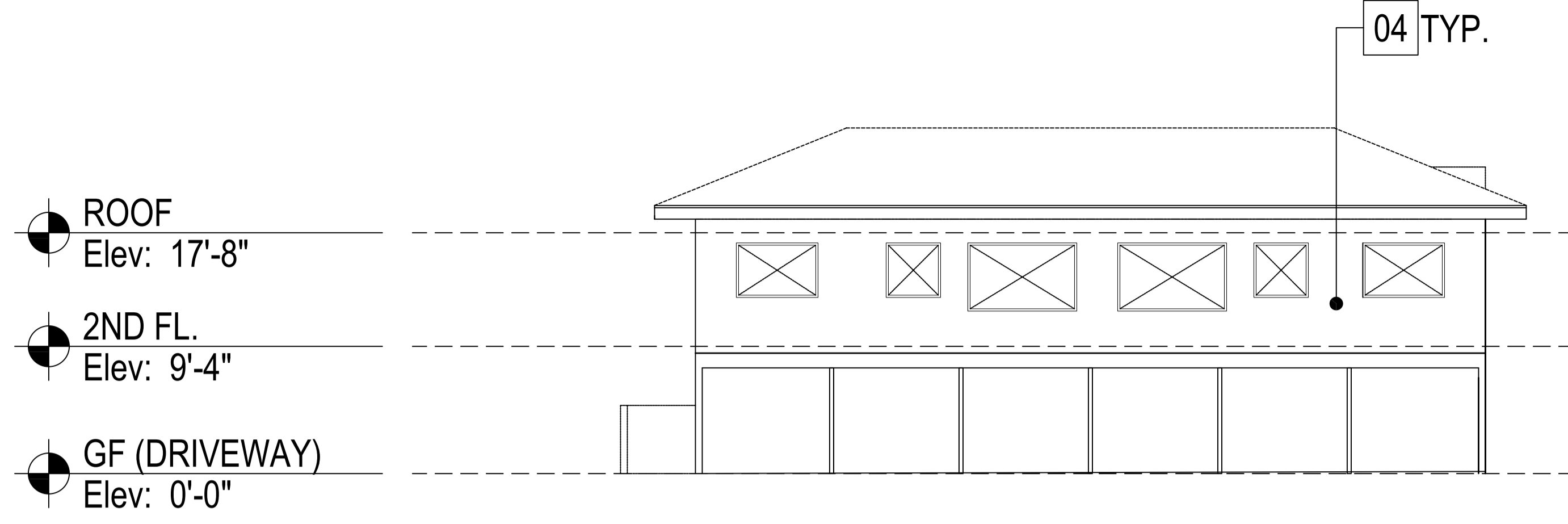
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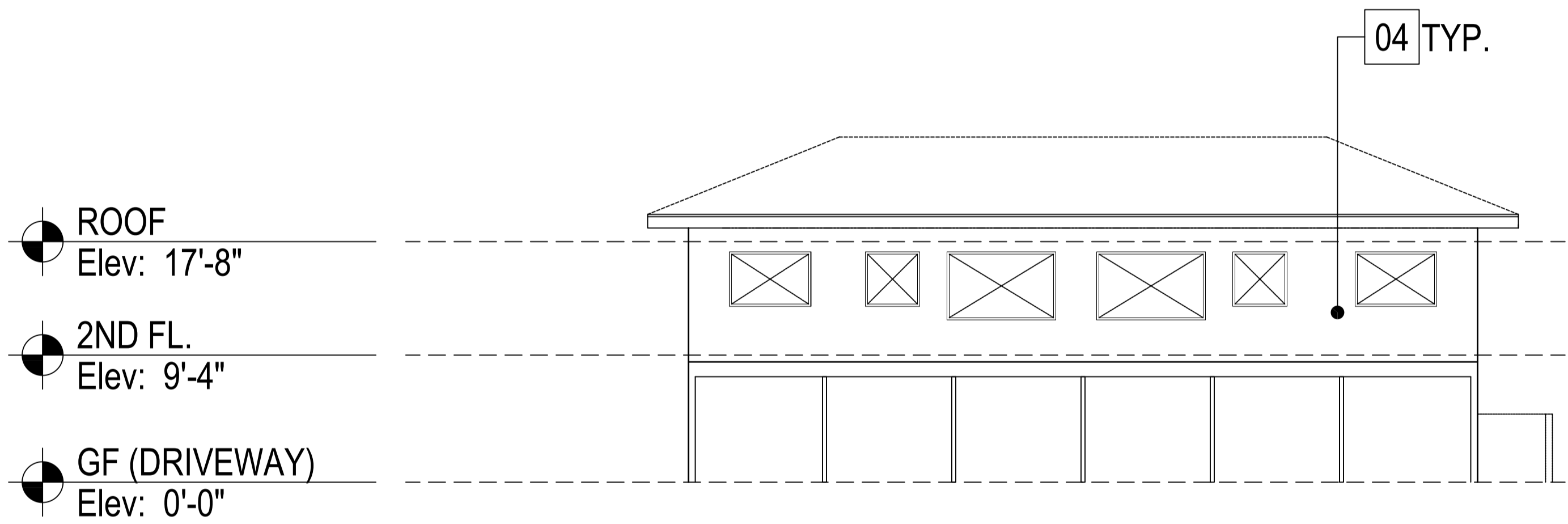
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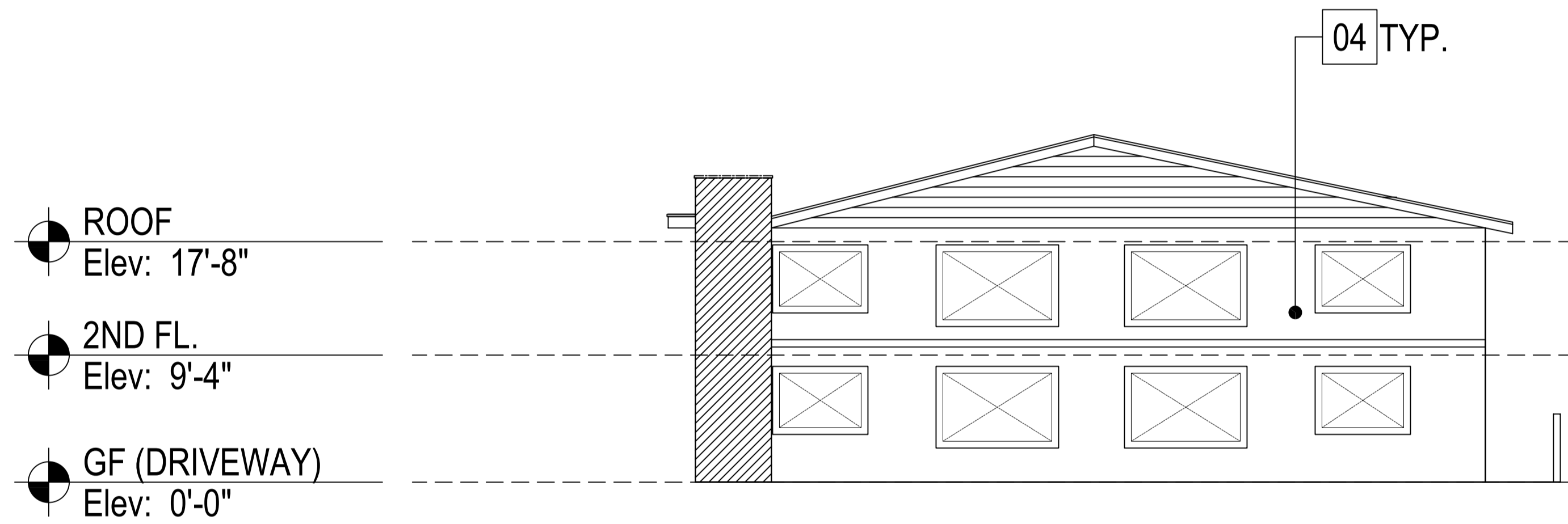
BUILDING 2 EXISTING SOUTH ELEVATION 03
 Scale: 1/8"=1'-0"



BUILDING 1 EXISTING SOUTH ELEVATION 01
 Scale: 1/8"=1'-0"



BUILDING 2 EXISTING NORTH ELEVATION 04
 Scale: 1/8"=1'-0"



BUILDING 1 EXISTING NORTH ELEVATION 02
 Scale: 1/8"=1'-0"

ELEVATION KEY NOTES	
SYMBOL	DESCRIPTION
01	(N) EXT. STUCCO WALL TO MATCH EXISTING MAIN DWELLING BUILDING
02	(N) ALUMINUM WINDOW 1/4" DOUBLE GLAZING W/ TEMPERED GLASS. SEE A2.31, WINDOW SCHEDULE
03	(N) EXTERIOR WOOD COMPOSITE DOOR W/ METAL FRAME. SEE A2.31 DOOR SCHEDULE
04	(E) EXT. STUCCO WALL

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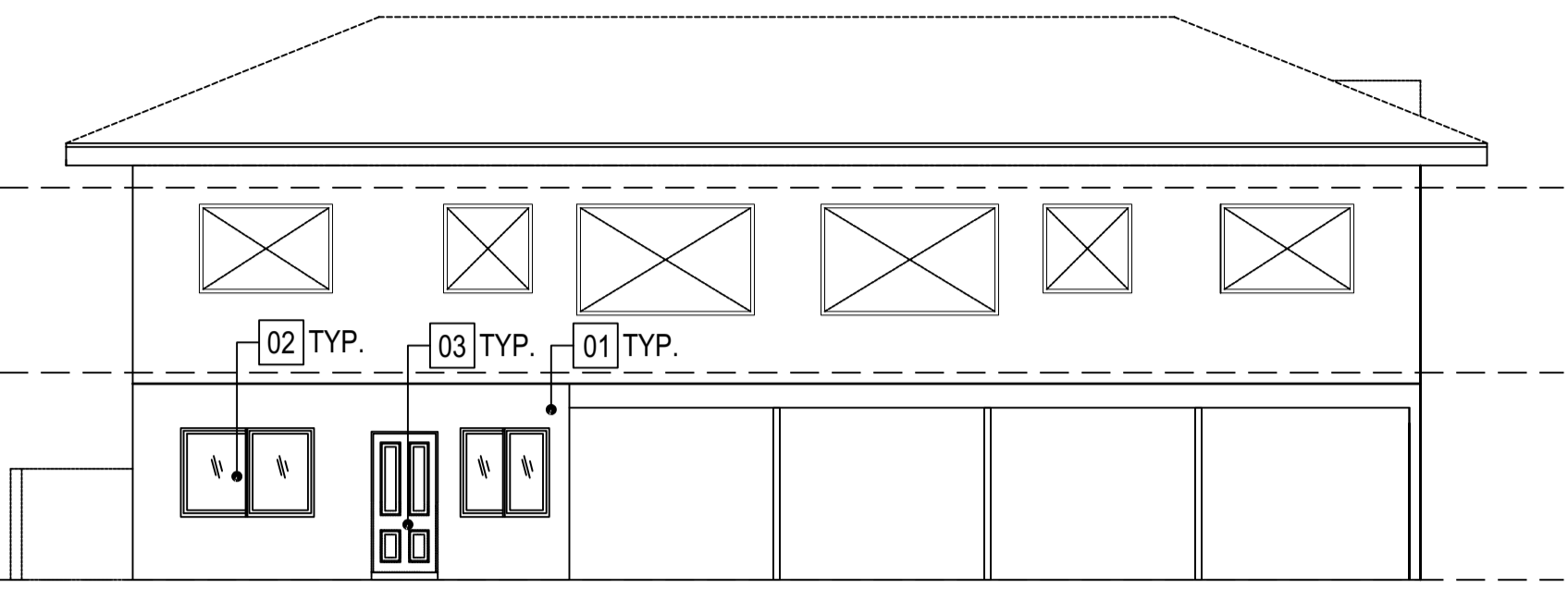
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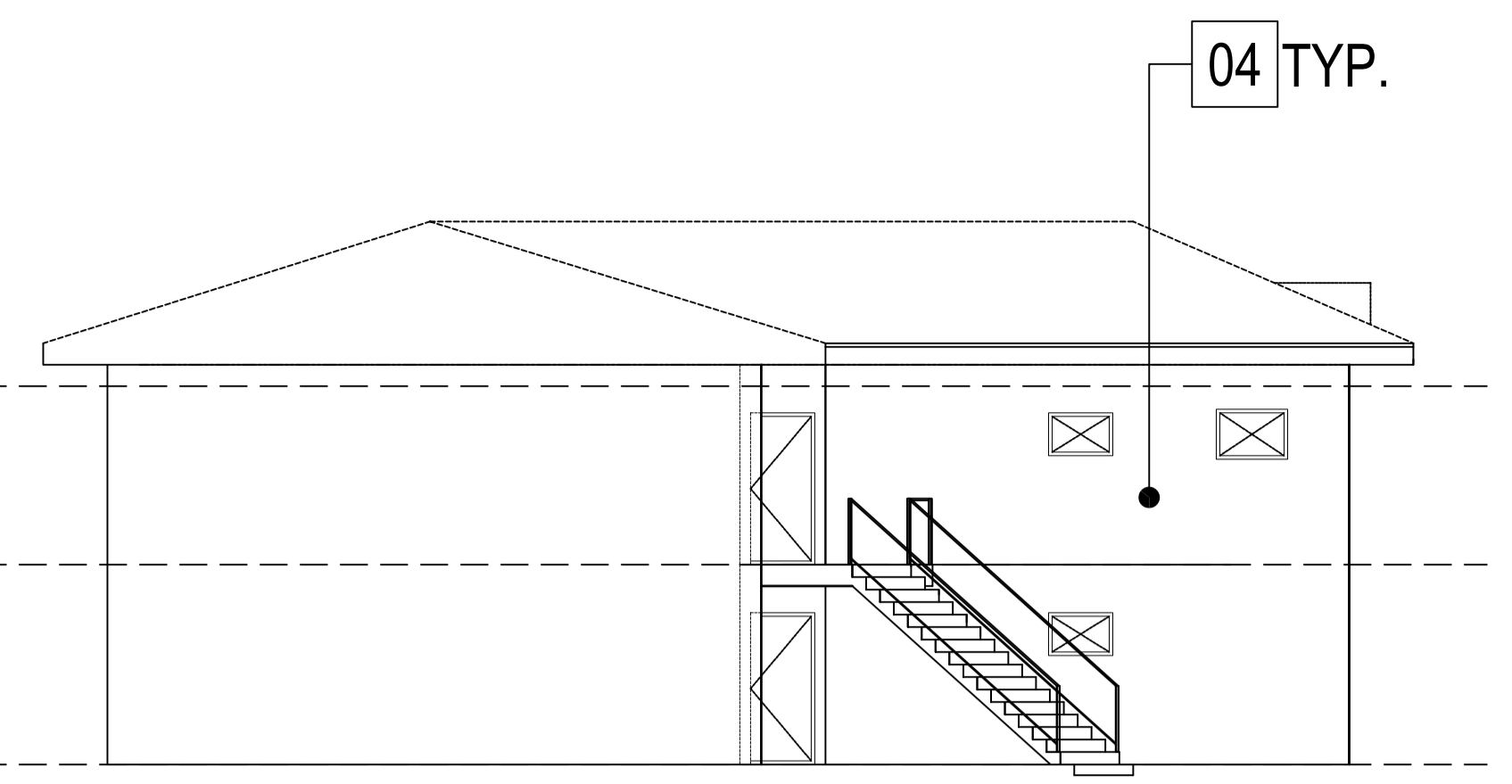
PERMIT: SP-2021-07077 DATE: 05/01/23

- ROOF
Elev: 17'-8"
- 2ND FL.
Elev: 9'-4"
- GF (DRIVEWAY)
Elev: 0'-0"



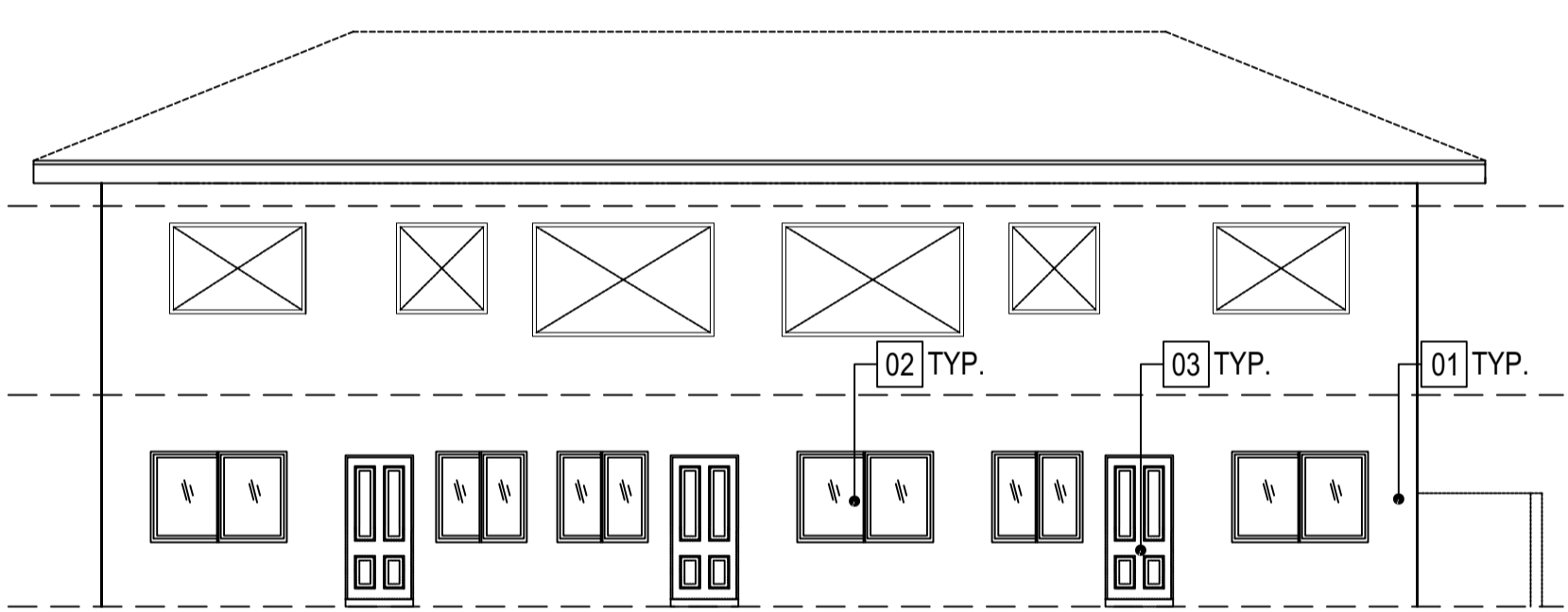
PROPOSED BUILDING 1 SOUTH ELEVATION 03
 Scale: 1/8"=1'-0"

- ROOF
Elev: 17'-8"
- 2ND FL.
Elev: 9'-4"
- GF (DRIVEWAY)
Elev: 0'-0"



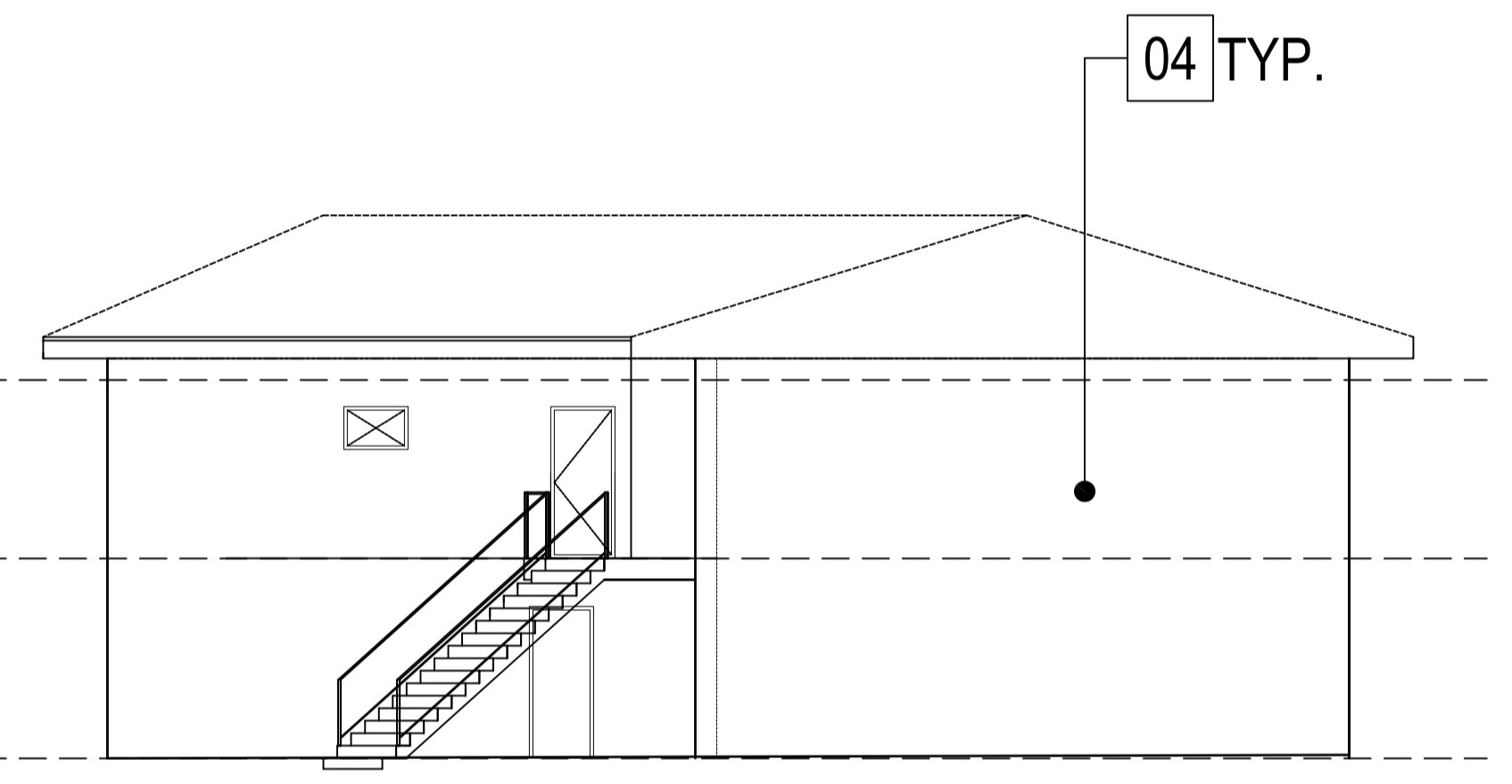
EXISTING INTERIOR SOUTH ELEVATION 01
 Scale: 1/8"=1'-0"

- ROOF
Elev: 17'-8"
- 2ND FL.
Elev: 9'-4"
- GF (DRIVEWAY)
Elev: 0'-0"



PROPOSED BUILDING 2 NORTH ELEVATION 04
 Scale: 1/8"=1'-0"

- ROOF
Elev: 17'-8"
- 2ND FL.
Elev: 9'-4"
- GF (DRIVEWAY)
Elev: 0'-0"



EXISTING INTERIOR NORTH ELEVATION 02
 Scale: 1/8"=1'-0"

ELEVATION KEY NOTES

SYMBOL	DESCRIPTION
01	(N) EXT. STUCCO WALL TO MATCH EXISTING MAIN DWELLING BUILDING
02	(N) ALUMINUM WINDOW 1/4" DOUBLE GLAZING W/ TEMPERED GLASS. SEE A2.31, WINDOW SCHEDULE
03	(N) EXTERIOR WOOD COMPOSITE DOOR W/ METAL FRAME. SEE A2.31 DOOR SCHEDULE
04	(E) EXT. STUCCO WALL

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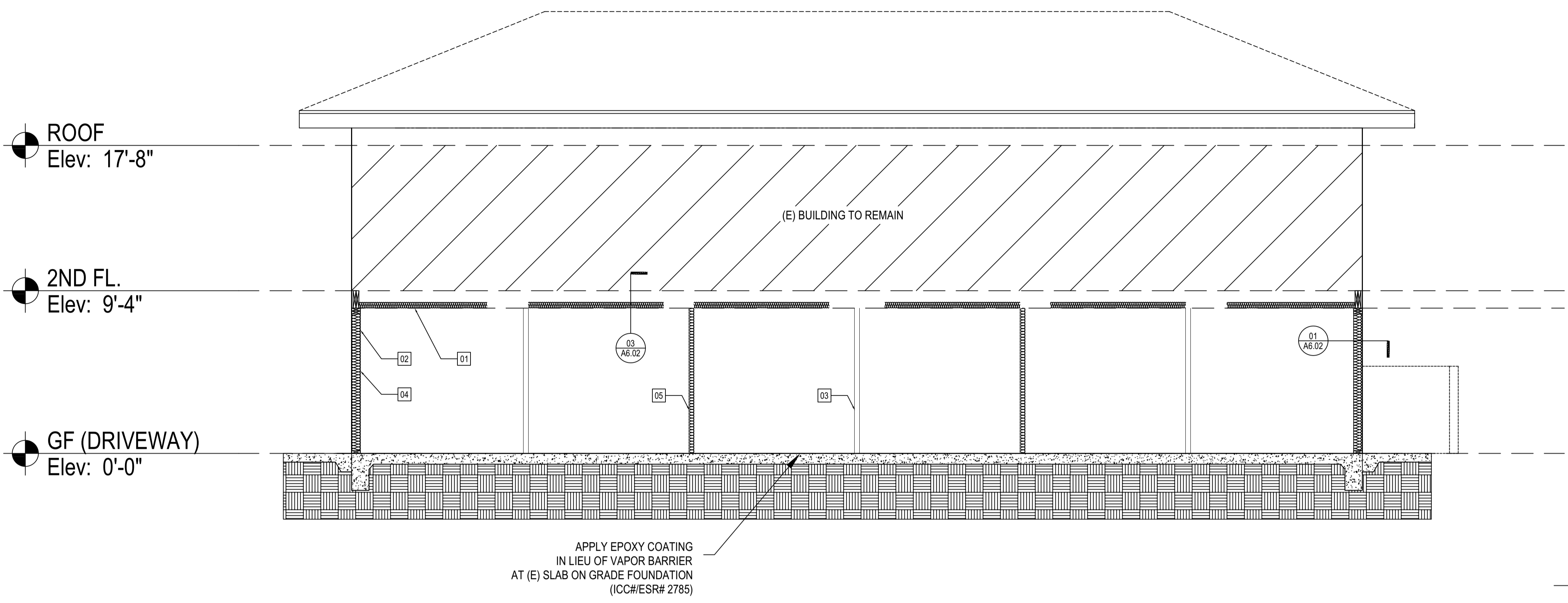


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PROPOSED ADU SECTION 01
 Scale: 1/4"=1'-0"

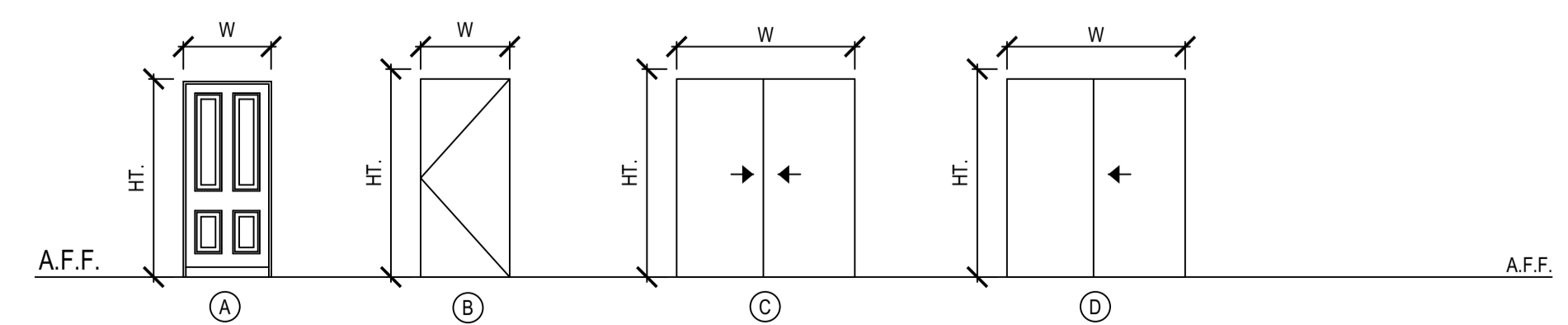
SECTION KEY NOTES

SYMBOL	DESCRIPTION
01	R-30 INSULATION AT ATTIC CEILING ABOVE, TYP.
02	R-19 INSULATION AT EXTERIOR WALL TYP.
03	5/8" TYPE "X" GYP. BD. WALLS & FRAME MEMBERS SUPPORTING THE FLOOR FRAMING SHALL BE EQUALLY PROTECTED (302.4 EX.3)
04	EXTERIOR STUCCO WALL, COLOR AND STYLE TO MATCH EXISTING DWELLING
05	R-19 INSULATION AT TENANT DEMISING WALL TYP.

DOOR SCHEDULE (REFER TO DOOR SPECS. ON THIS SHEET)

TYPE	SIZE			DOOR TYPE				DOOR MATERIAL				DOOR FINISH		FRAME MATERIAL				FRAME FINISH		RATING (MINUTES)	REMARKS			
	WIDTH	HT.	THK.	SINGLE DOOR	PAIR DOORS	SLIDING	FOLDING	WOOD	ALUMINUM	HOLLOW METAL	FIBER GLASS	TEMP. GLASS	PAINT	STAIN	FACTORY	VINYL	WOOD	HOLLOW METAL	ALUMINUM			PAINT	STAIN	FACTORY
A	3'-0"	6'-8"	0-1 3/4"	•				•					•			•								EXTERIOR ENTRANCE DOOR
B	2'-8"	6'-8"	0-1 3/4"	•				•					•			•								
C	6'-0"	6'-8"	0-1 3/4"			•		•					•			•								
D	2'-8"	6'-8"	0-1 3/4"			•		•					•			•								

DOOR TYPES

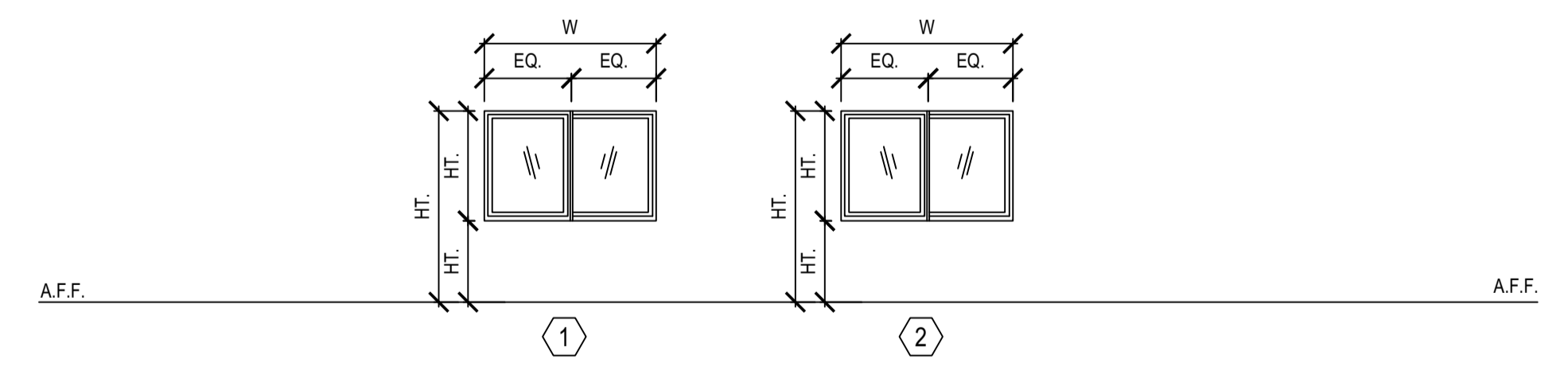


- NOTES**
- CONTRACTOR SHALL VERIFY WITH OWNER/ARCH. ALL DOOR SIZES, MATERIALS, FINISHES AND LOCATIONS PRIOR TO ORDERING.
 - PROVIDE WEATHER STRIPPING FOR ALL EXTERIOR DOORS TYP.
 - EXIT DOORS SHALL BE OPERABLE FROM INSIDE WITHOUT USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
 - SIZE OF THE STORAGE UNDER THE STAIRCASE VERIFY IN FIELD.
 - EXTERIOR DOOR ASSEMBLIES SHALL BE APPROVED NONCOMBUSTIBLE MATERIAL.
 - EXTERIOR GLAZED DOOR : SHGC VALUE: 0.29 MAX. U-FACTOR : 0.32 MAX. FOR RESIDENTIAL

WINDOW SCHEDULE (REFER TO WINDOW SPECS. ON THIS SHEET)

TYPE	WINDOW SIZE				WINDOW TYPE										GLASS MATERIAL	WEATHER STRIPPING		SHG-C	U-FACTOR	REMARKS
	WIDTH (w)	HEIGHT (h)	HEADER HEIGHT ABOVE FINISHED FLOOR	BOTTOM SEAL HEIGHT FROM FINISHED FLOOR	CURTAIN WALL	SLIDING	SINGLE HUNG	PICTURE	SINGLE AWNING	AWNING TRANSOM	CASEMENT	BUTT JOINT WINDOW	STOREFRONT DOOR & WINDOW	TEMPERED GLASS		SPANDREL GLAZING	YES			
1	6'-0"	4'-0"	6'-8"	2'-10"		•								•		•		0.29 MAX.	0.32 MAX.	
2	4'-0"	4'-0"	6'-8"	2'-10"		•								•		•		0.29 MAX.	0.32 MAX.	

WINDOW TYPES



- NOTES**
- CONTRACTOR SHALL VERIFY WITH OWNER/ARCH. ALL WINDOW SIZES, MATERIALS, FINISHES AND LOCATIONS PRIOR TO ORDERING.
 - FOR WINDOW TYPES REFER TO EXTERIOR ELEVATIONS.
 - ALL GLAZING TO BE LOW E DOUBLE GLAZING. REFER TO TITLE 24 ENERGY CALCS. FOR FENESTRATION TYPE.
 - GLAZING SHGC VALUE: 0.29 MAX. U-FACTOR : 0.32 MAX.
 - IN PUBLIC AREA (OUTSIDE THE UNIT) WHERE GLAZED OPENINGS AREA PROVIDED IN ACCESSIBLE ROOMS OR SPACES FOR OPERATION BY OCCUPANTS, AT LEAST OPENING SHALL COMPLY WITH SECTION 1138 A. 4: "CONTROLS AND OPERATION MECHANISMS"

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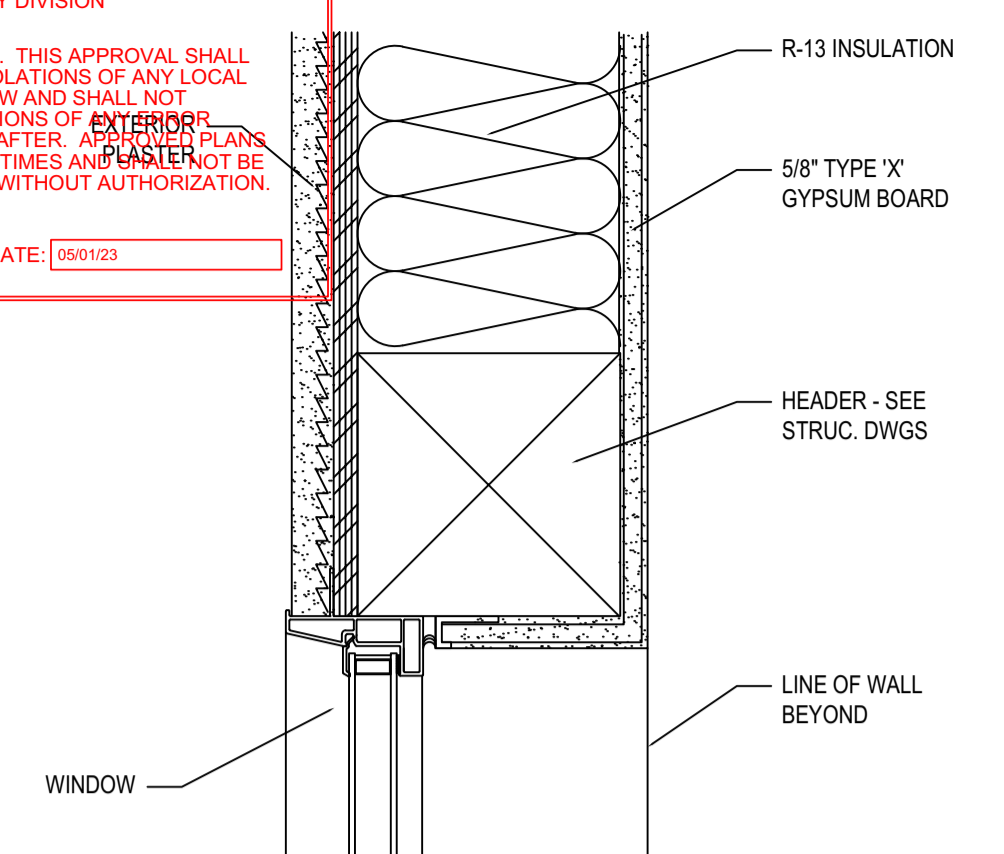


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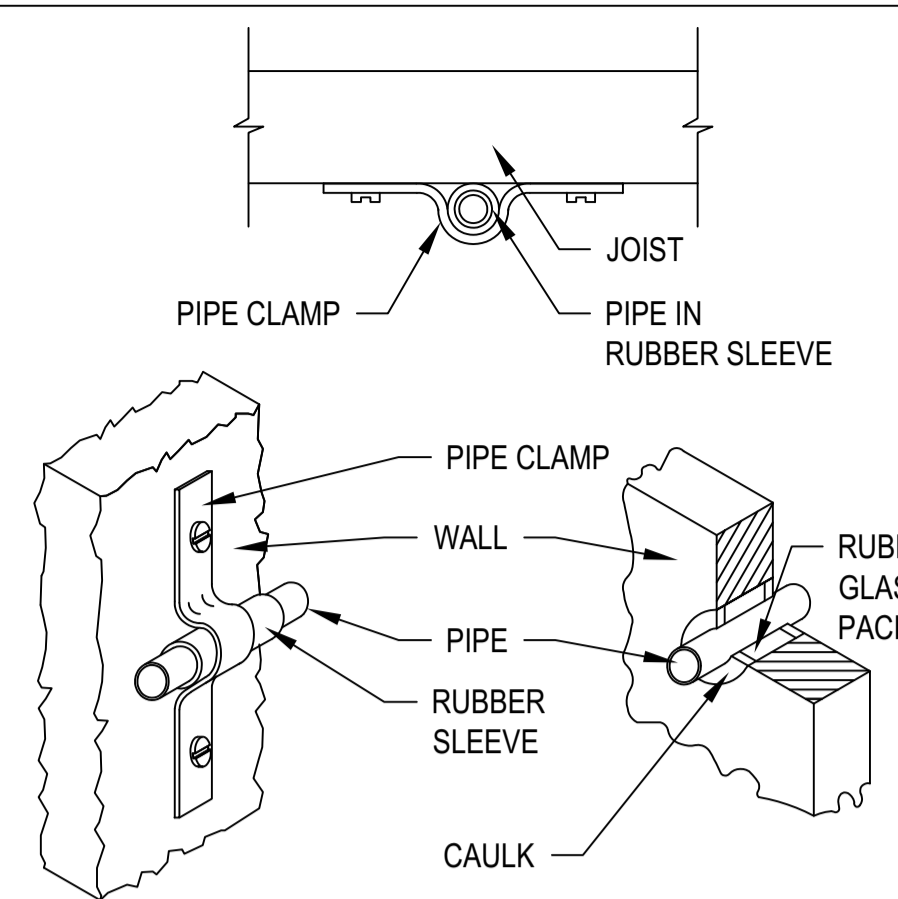
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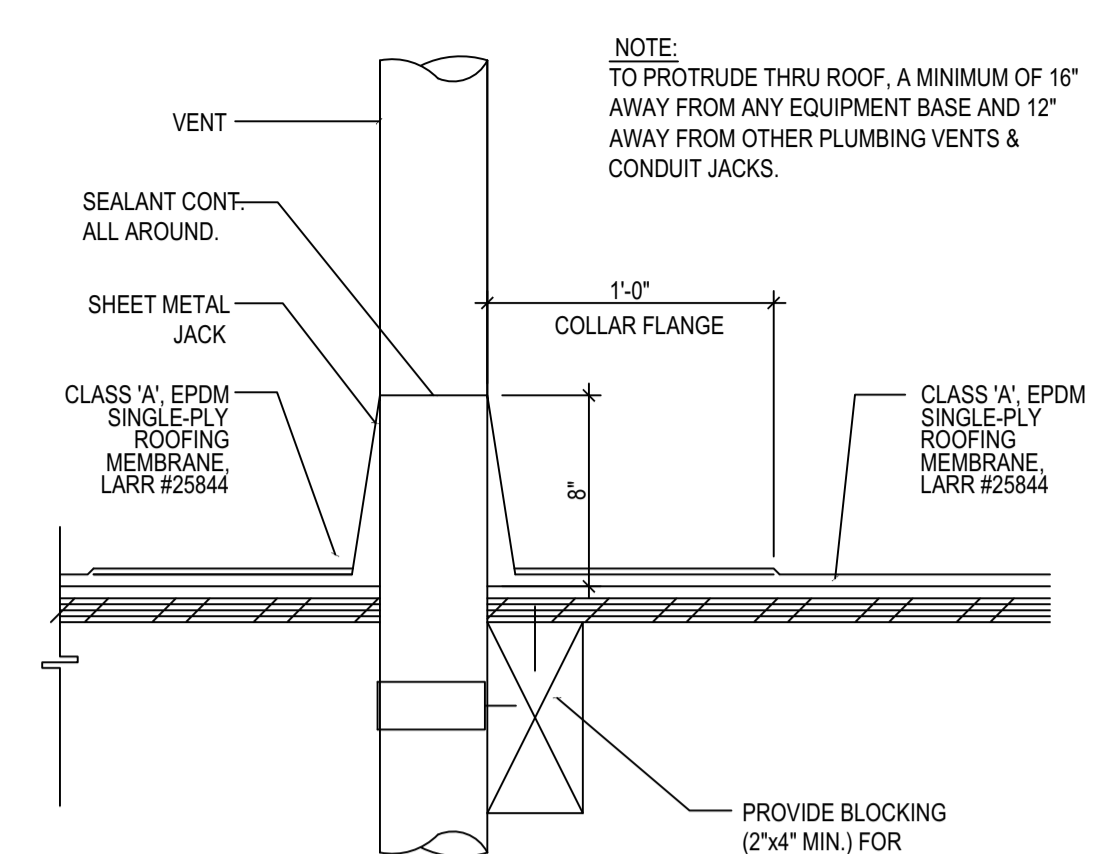
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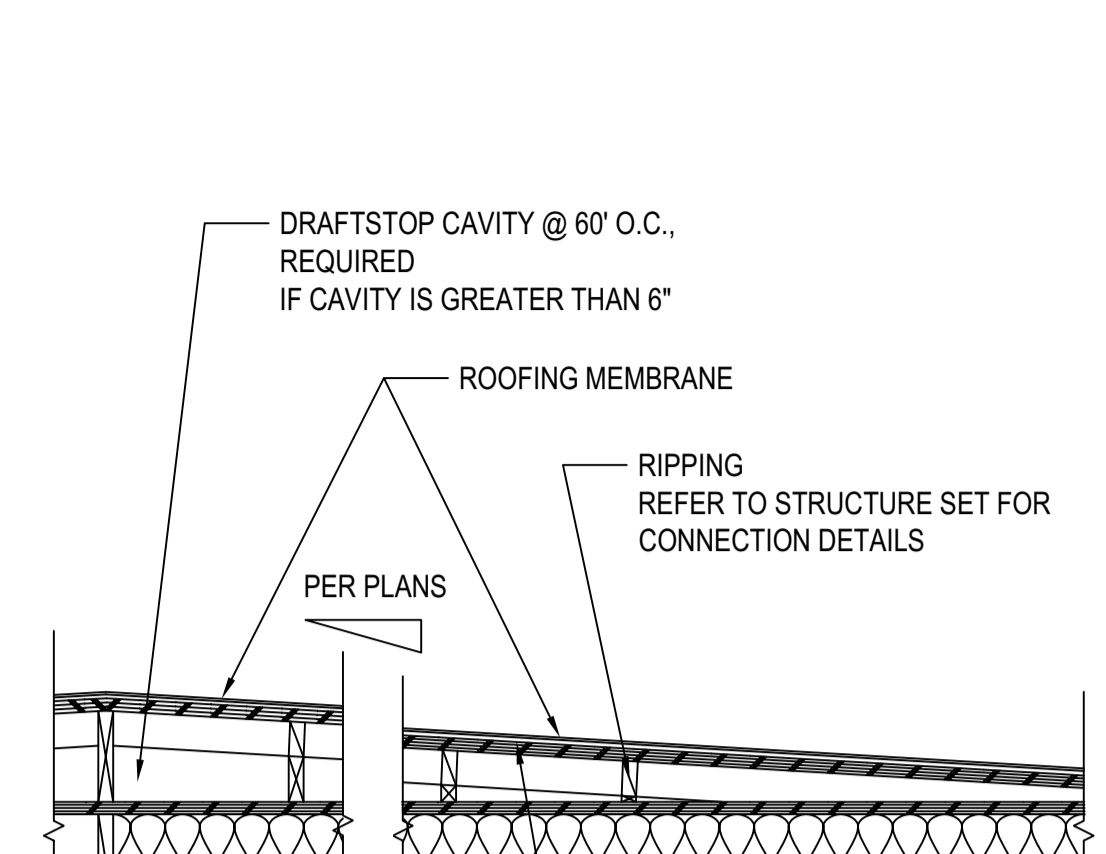
WINDOW HEAD 13
 Scale: N.T.S.



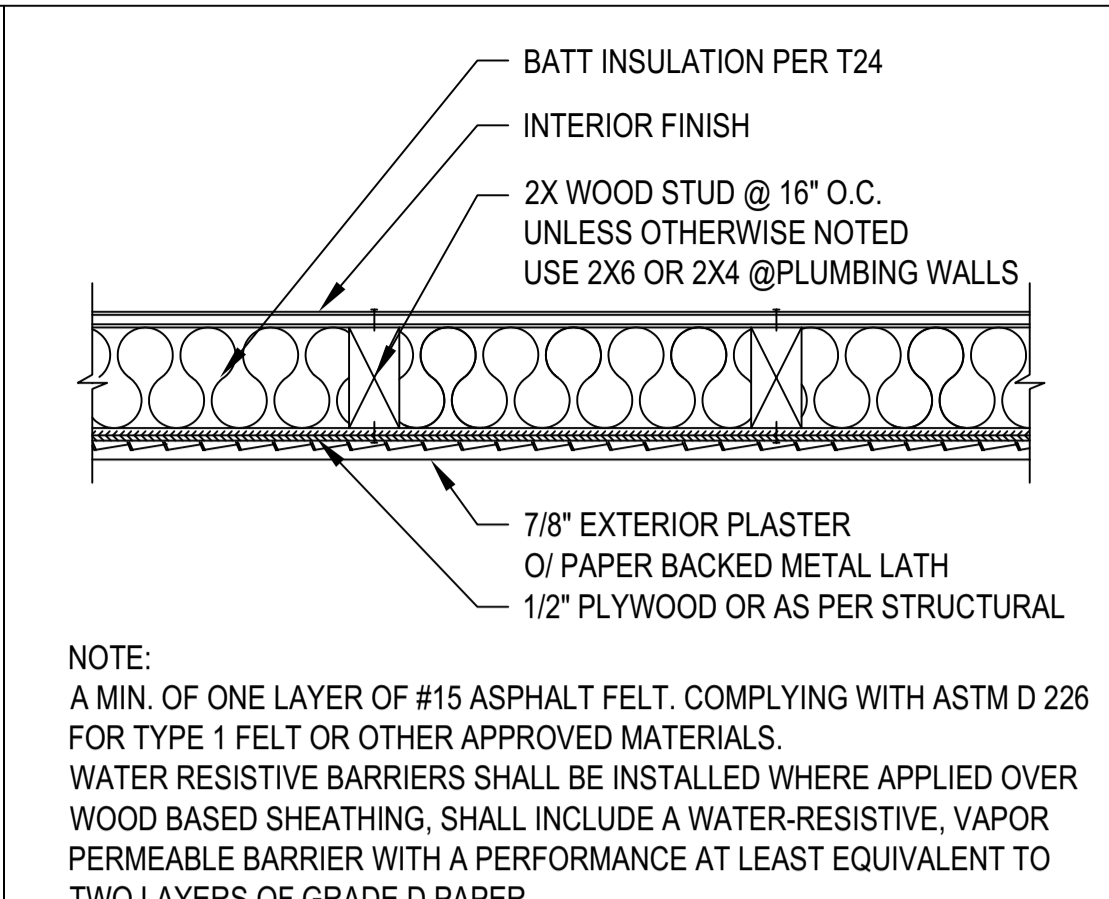
PIPING ISOLATION TYP. 11
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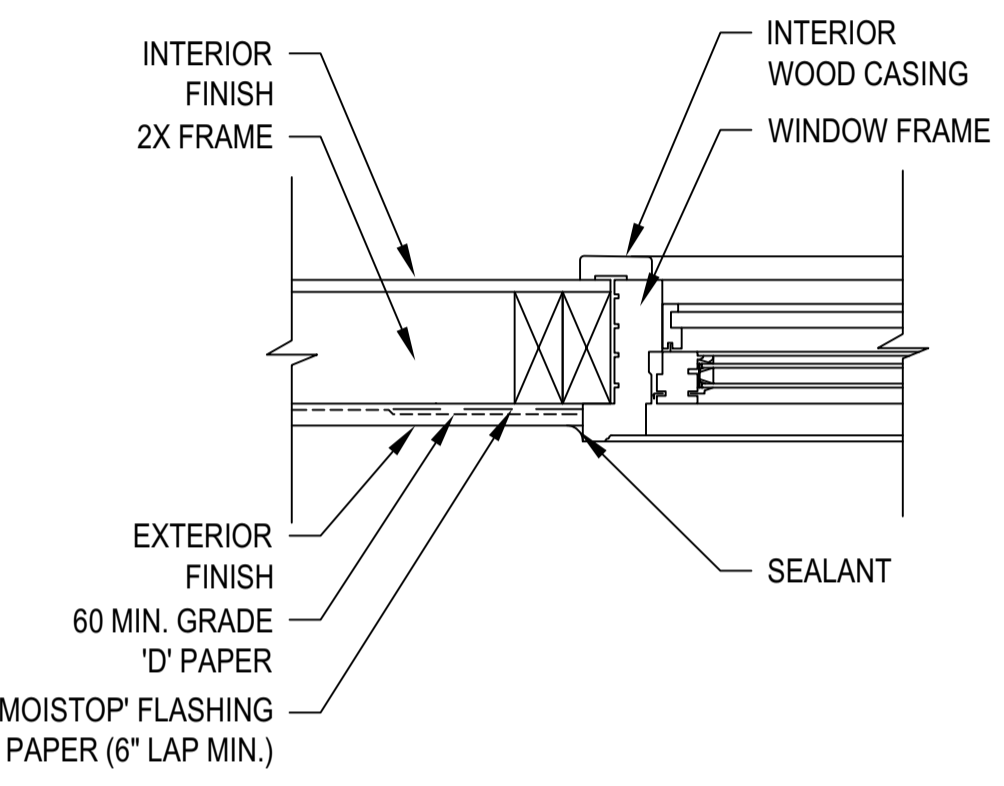
VENT AT ROOF 08
 Scale: N.T.S.



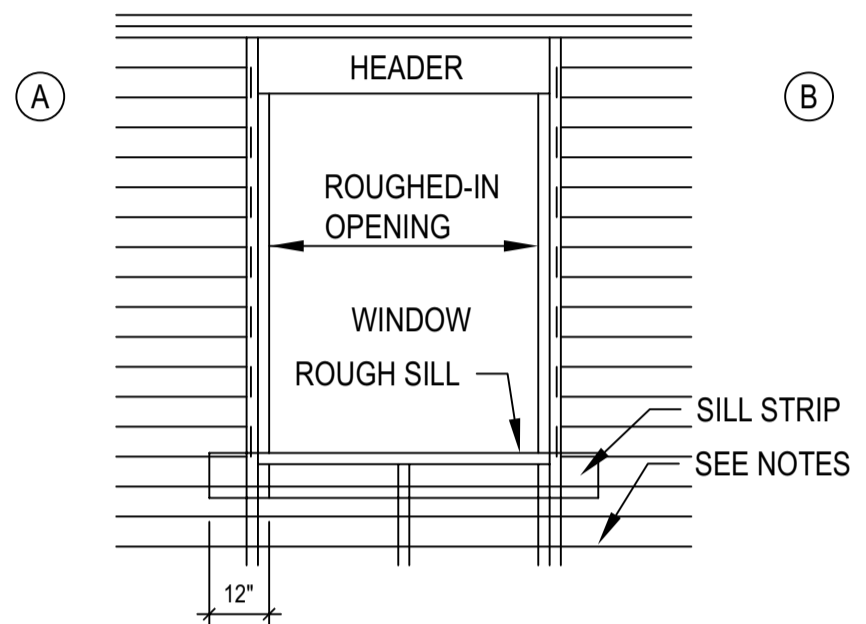
ROOFING DETAIL TYP. 04
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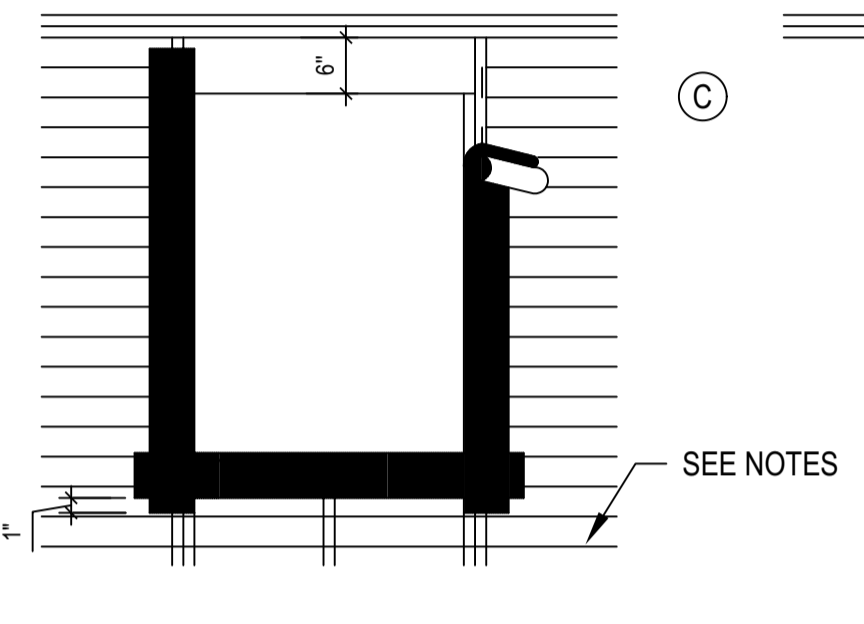
EXTERIOR WALL TYP. 01
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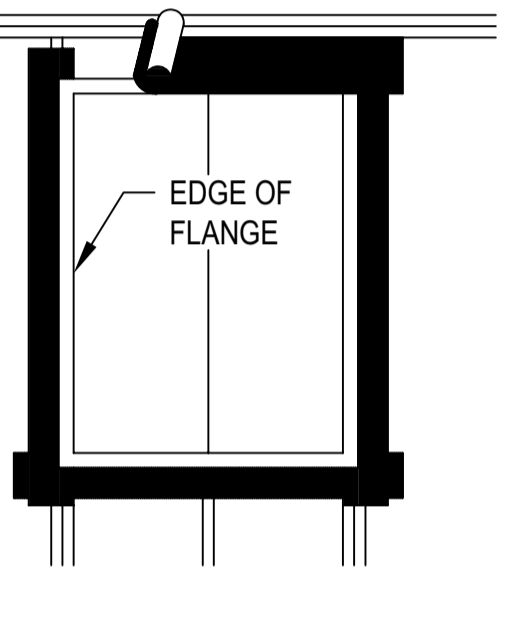
WINDOW JAMB/SILL 14
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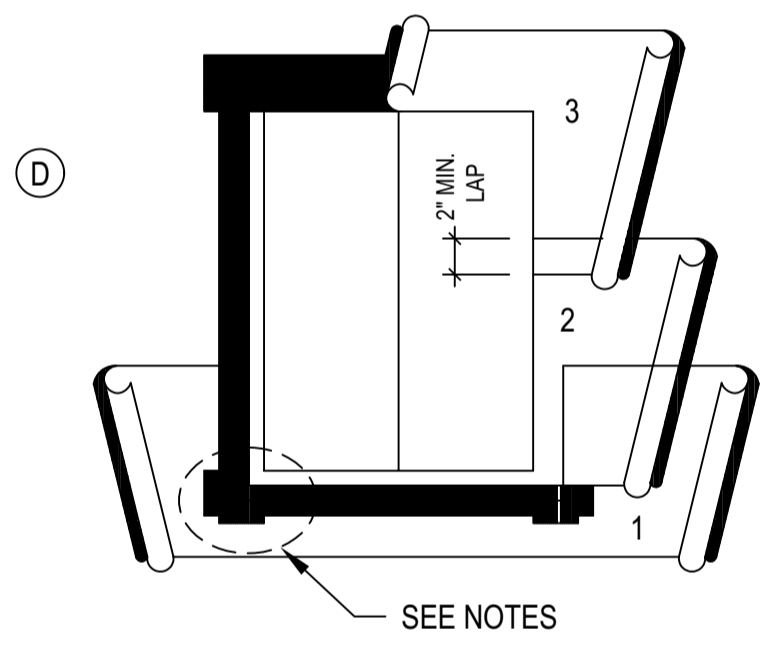
ATTACH A SILL STRIP OF FLASHING MATERIAL AT LEAST 12\"/>



AFTER SILL STRIP IS IN PLACE ATTACH JAMB STRIPS (SIDE OF OPENING) AT LEAST 12\"/>



APPLY A CONTINUOUS BEAD OF BUTYL RUBBER SEALANT TO THE BACK SURFACES OF THE WINDOW FLANGE, THEN PLACE THE WINDOW INTO THE ROUGH OPENING WITH FLANGES OVER THE INSTALLED FLASHING STRIPS. AFTER WINDOW IS PLACED, INSTALL THE HEAD FLASHING OVER THE WINDOW FLANGE. THIS IS ANOTHER STRIP OF FLASHING AT LEAST 12\"/>



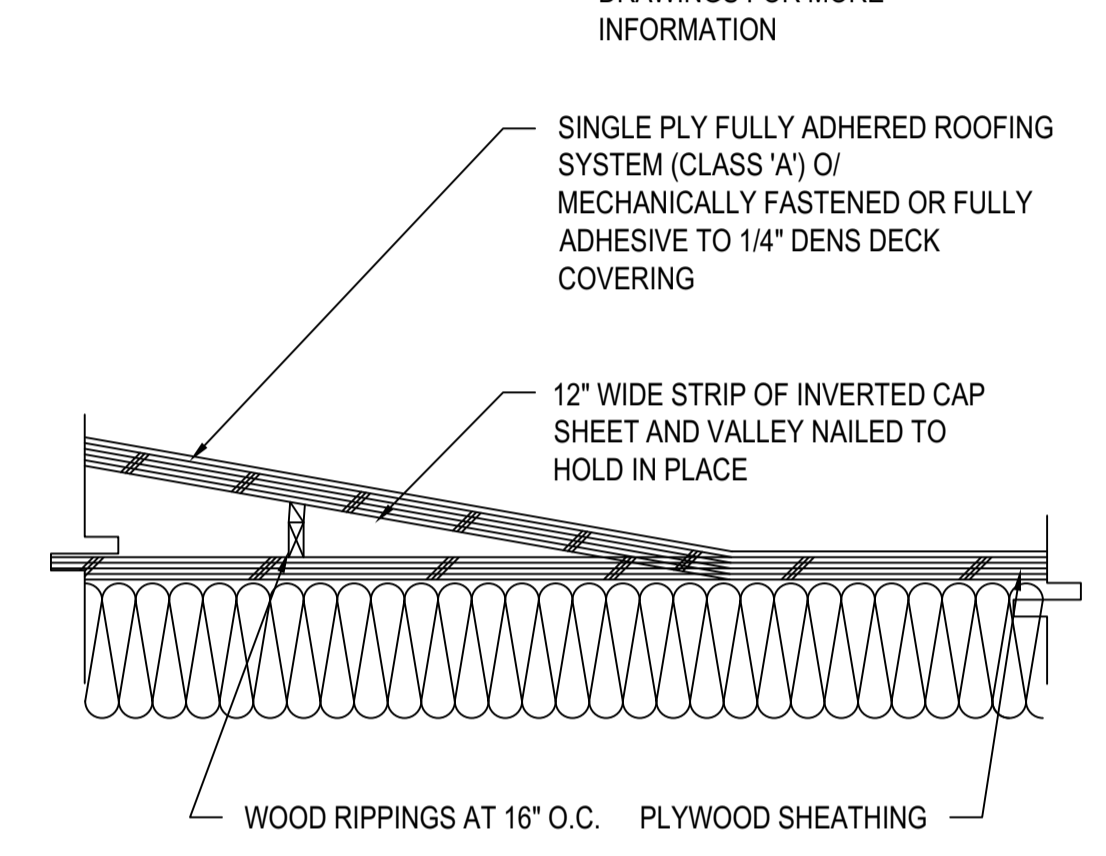
STARTING AT THE BOTTOM OF THE WALL (SOLE PLATE), LAY WATER-RESISTANT PAPER UNDER THE SILL STRIP. CUT ANY EXCESS WATER-RESISTANT PAPER THAT MAY EXTEND ABOVE THE SILL FLANGE ON EACH SIDE OF THE OPENING. (SHOWN IN DIAGRAM AS SHORT DASH LINES). INSTALL SUCCEEDING COURSES OF WATER-RESISTANT PAPER (B.C. ETC.) OVER JAMB AND HEAD FLANGES IN SHINGLE-BOARD FASHION.

NOTES: SECTION 1708(B), UNIFORM BUILDING CODE CALLS FOR FLASHING OF ALL EXTERIOR OPENINGS EXPOSED TO WEATHER TO MAKE THEM WEATHER PROOF. SINCE U.B.C. DOES NOT OUTLINE PROCEDURES FOR WINDOW FLASHING, TECHNIQUES SHOWN HERE ARE RECOMMENDED. USE 'MOISTOP' FLASHING BY FORTIFIBER CORP. OR EQUAL WHENEVER POSSIBLE FOR FLASHING MATERIAL. CAULK BACK OF WINDOW FRAMES BEFORE SETTING. USE WINDOWS THAT ARE WATERTIGHT.

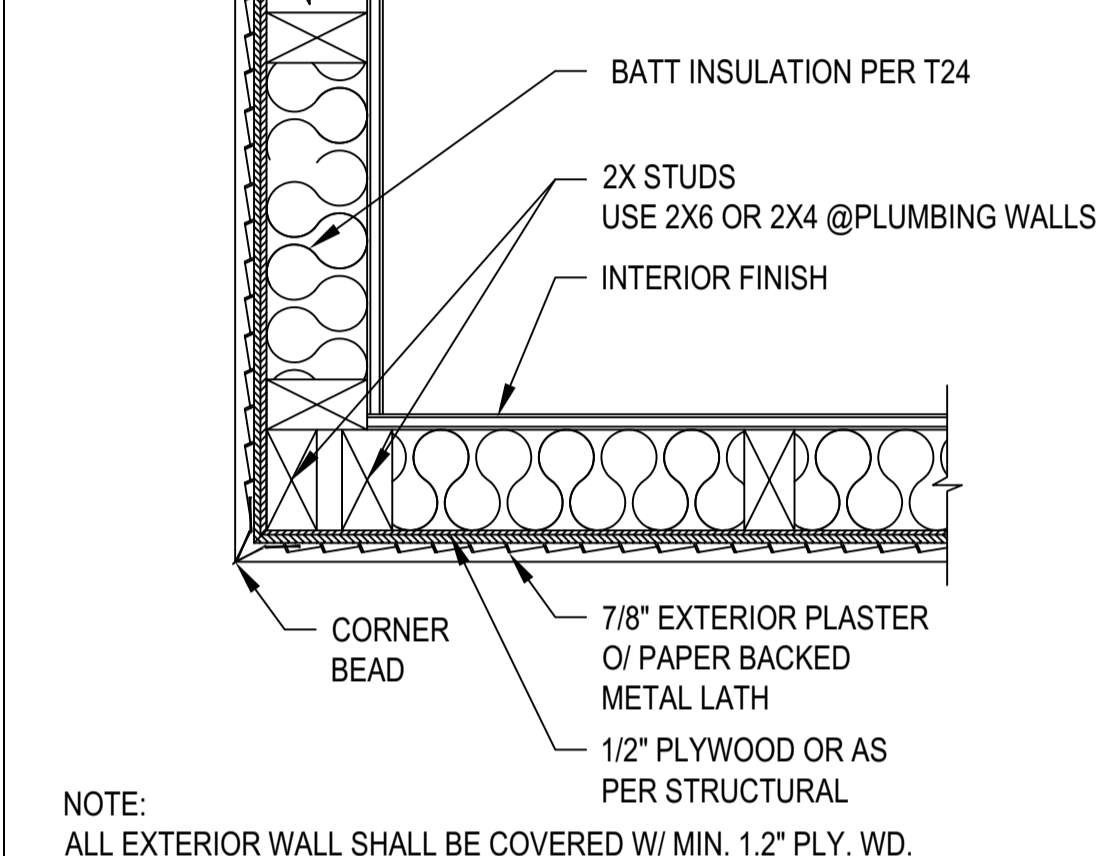
26 GA. G.I. FLASHING REQUIRED AS SHOWN IN OTHER WINDOW DETAILS TO BE INSTALLED BY SHEET METAL CONTRACTOR.

LINE WIRE, WHEN USED AS BACKING TO SUPPORT WATER-RESISTANT BUILDING PAPER OR FELT BENEATH LATH FOR STUCCO SHOULD BE INSTALLED ACCORDING TO INDUSTRY STANDARDS AND PRACTICE. NO ATTACHMENT DEVICE NOR THE WIRE BACKING SHOULD COVER OR PENETRATE FLASHING MATERIAL. PERIPHERAL FLASHING AT ALL EDGES OF WALL OPENING MUST COVER WIRE BACKING.

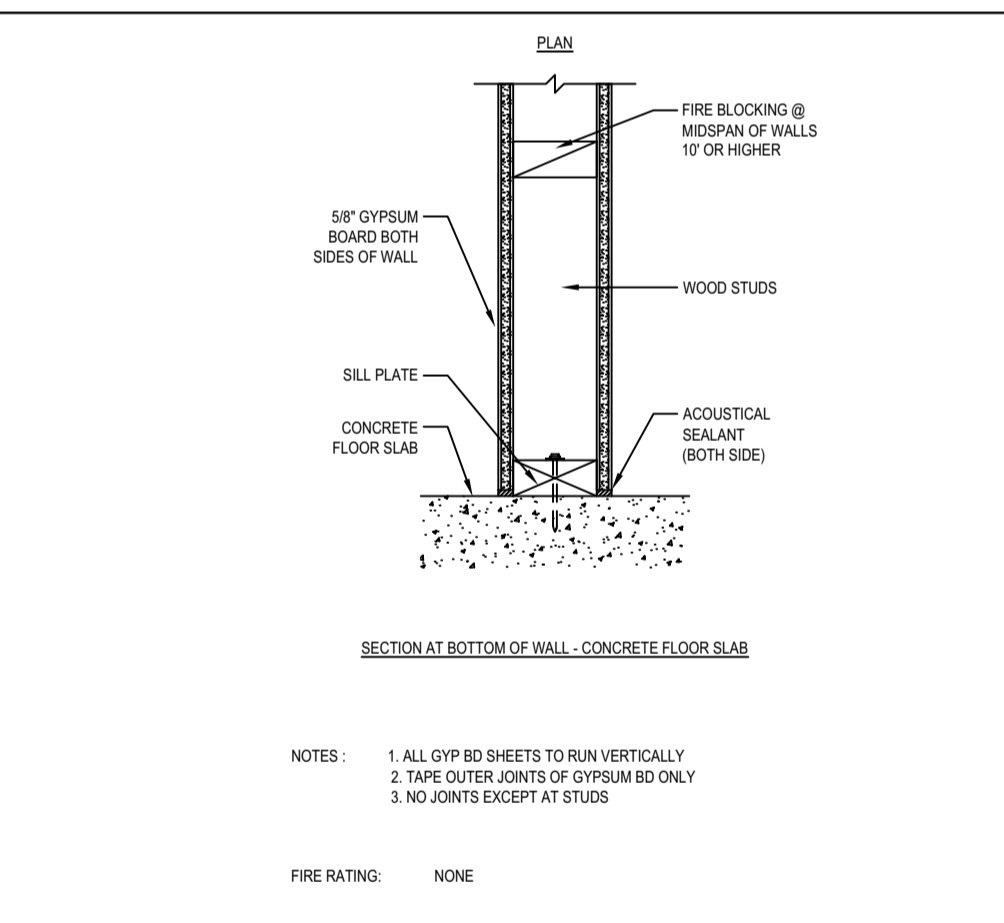
WINDOW FLASHINGS INSTALLATION TYP. 09
 Scale: N.T.S.



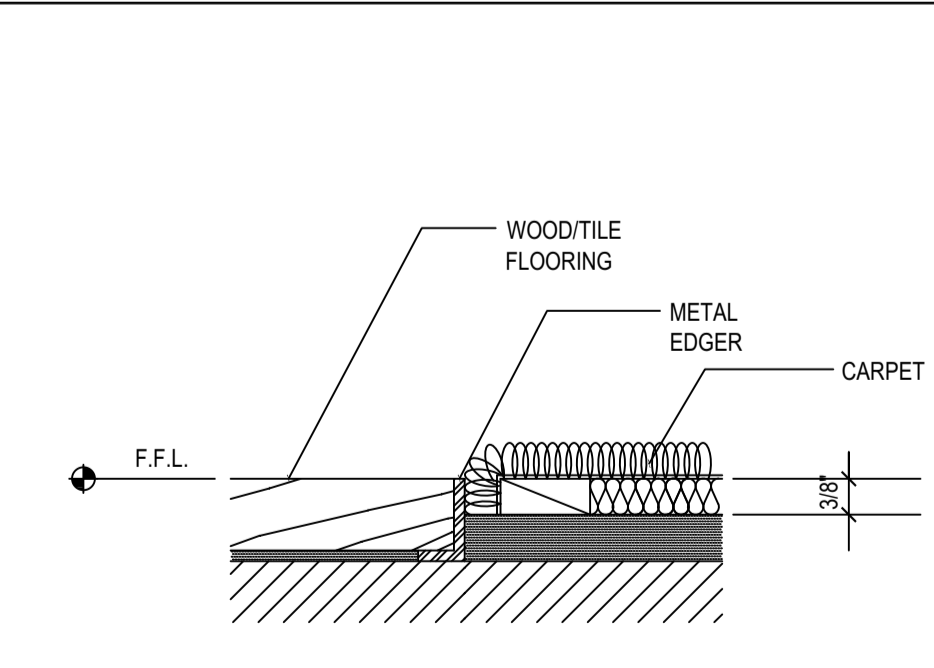
BASE FLASHING DETAIL TYP. 05
 Scale: N.T.S.



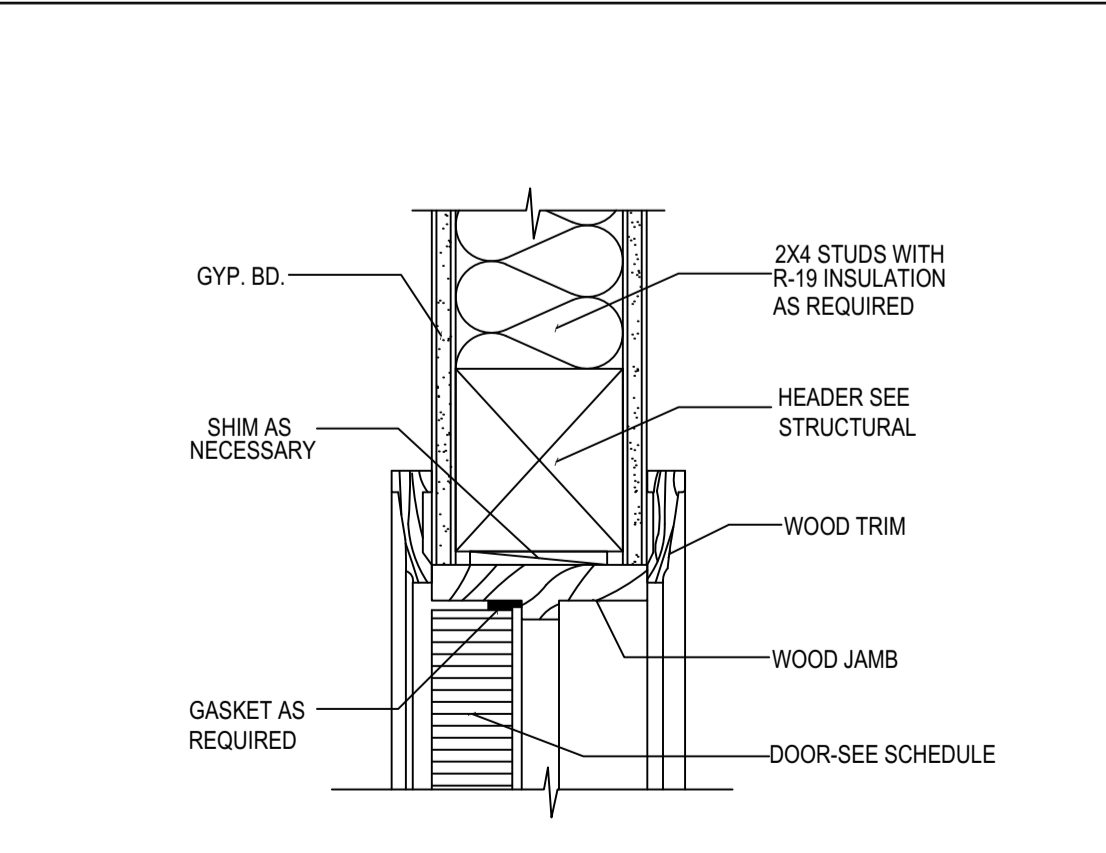
EXTERIOR WALL CORNER TYP. 02
 Scale: N.T.S.



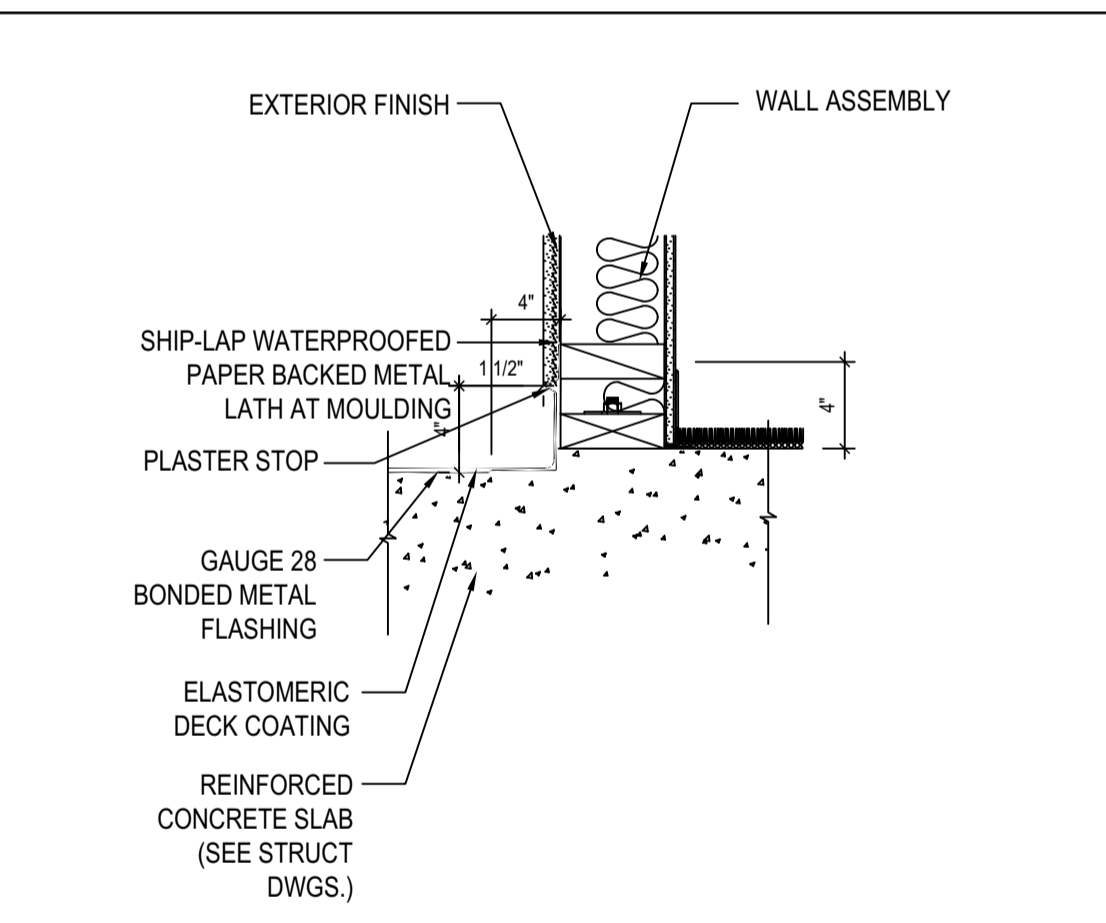
INT. WALL BOT. CONNECTION 15
 Scale: N.T.S.



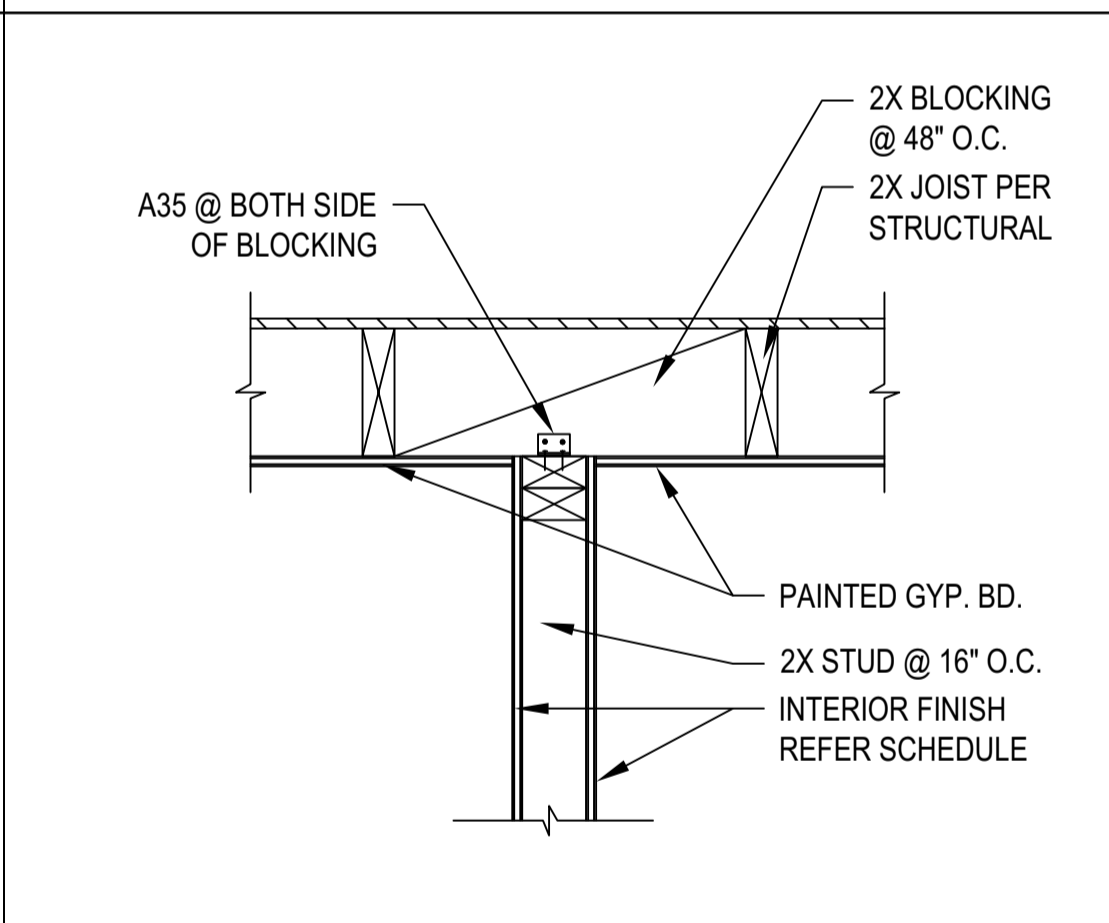
FLOOR TRANSITION DETAIL 12
 Scale: N.T.S.



TYP. WOOD DOOR HEAD DETAIL 10
 Scale: N.T.S.



FACIA BOARD FLASHINGS DETAIL 07
 Scale: N.T.S.



INTERIOR WALL TO JOIST TYP. 03
 Scale: N.T.S.

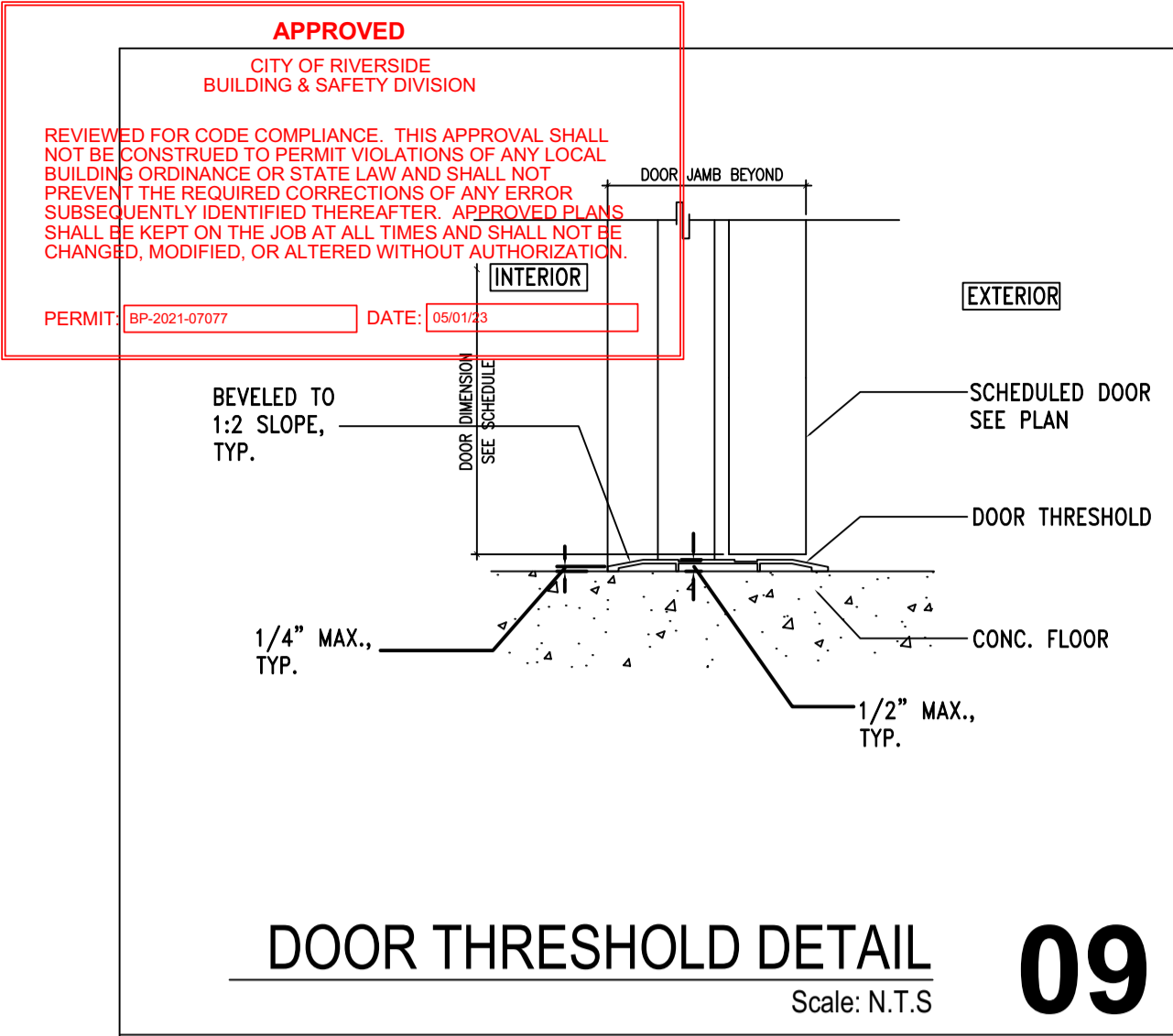
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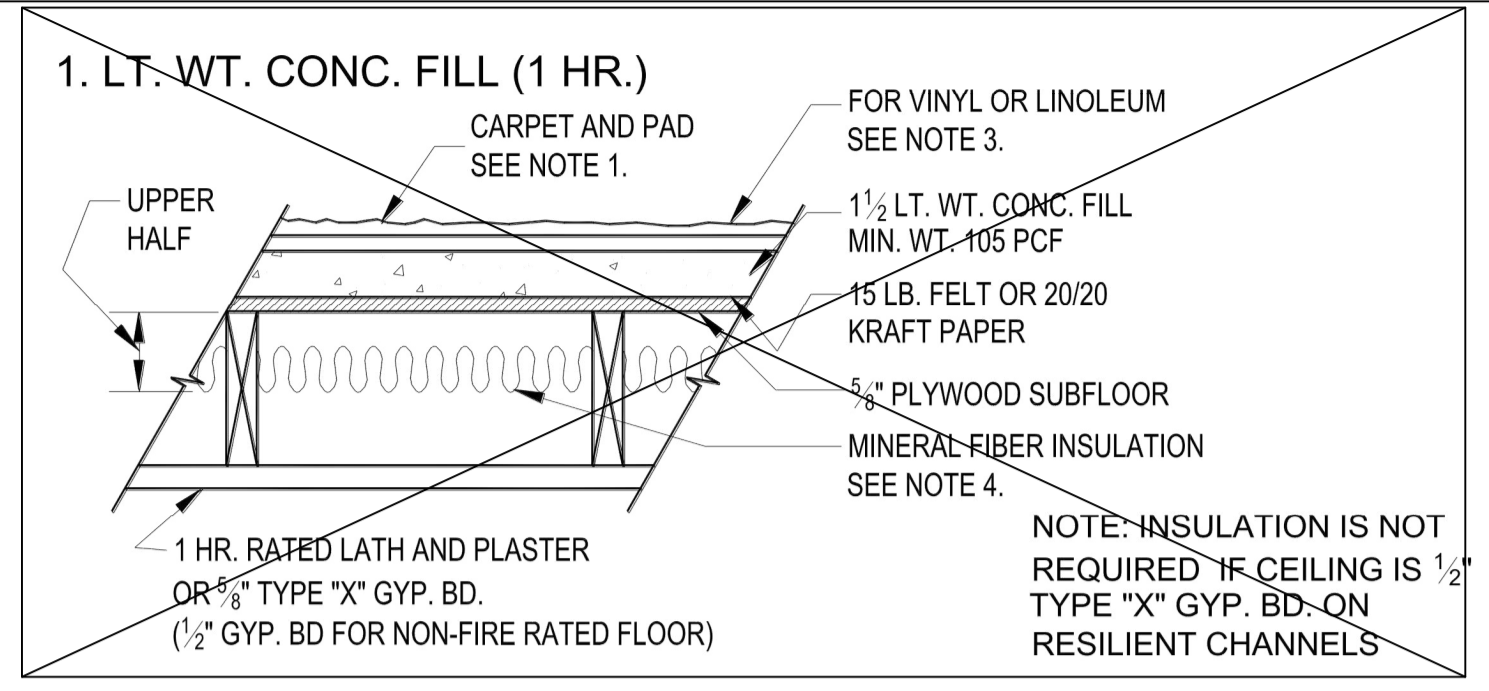
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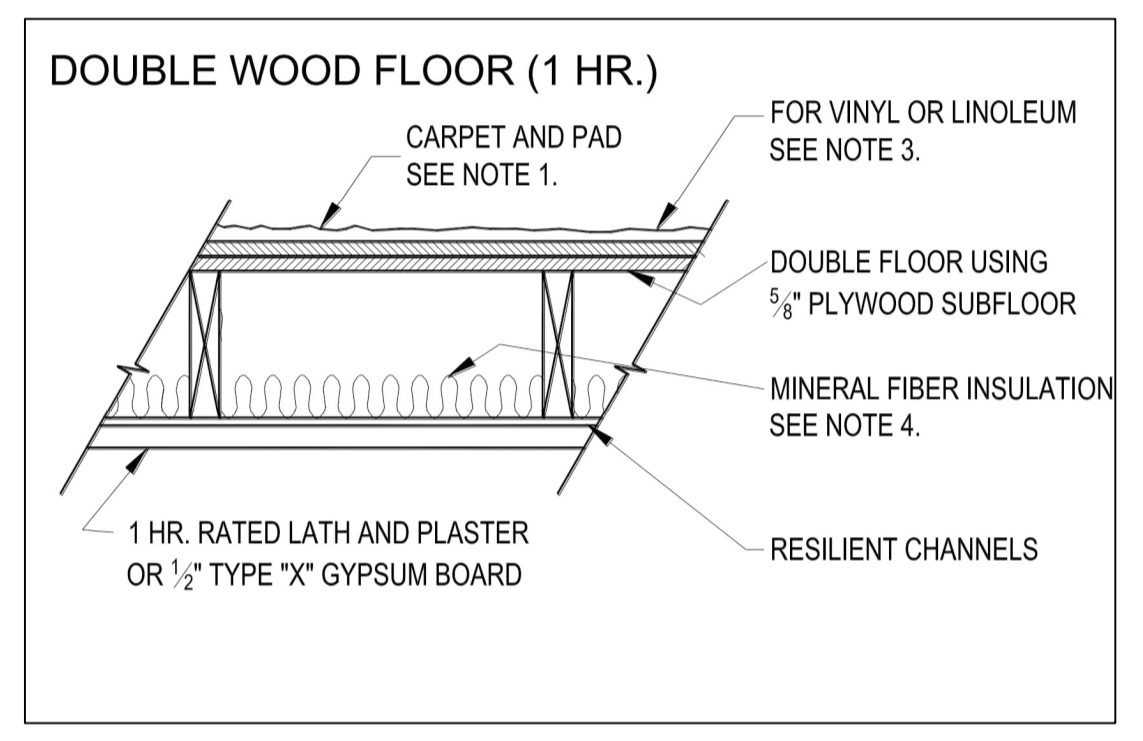


- DETAIL NOTES:**
- 13 OZ. FACE WT. CARPET (31 OZ. TOT) AND 40 OZ. JUTTED PAD, OR 48 OZ. FOAM RUBBER, OR 3/8" REBONDED URETHANE FOAM (4 PCF), OR 1/2" URETHANE FOAM (2.4 PCF).
 - TYPE AND SPACING OF RESILIENT CHANNELS AND THE ATTACHMENT OF CHANNELS AND GYPSUM BOARD OR LATH SHALL BE AS REQUIRED FOR FIRE RATINGS.
 - SHEET VINYL AND LINOLEUM FLOOR COVERINGS WITH 1/8" MINIMUM THICKNESS RESILIENT BACKING MAY BE SUBSTITUTED FOR CARPET AND PADDING IN KITCHEN AND BATHROOM AREAS, IF CEILINGS ARE ON RESILIENT CHANNELS.
 - THE MINERAL FIBER INSULATION SHALL HAVE A THERMAL RESISTANCE R VALUE OF 11 OR GREATER AS DETERMINED BY FEDERAL SPECIFICATION HH-1-521E.



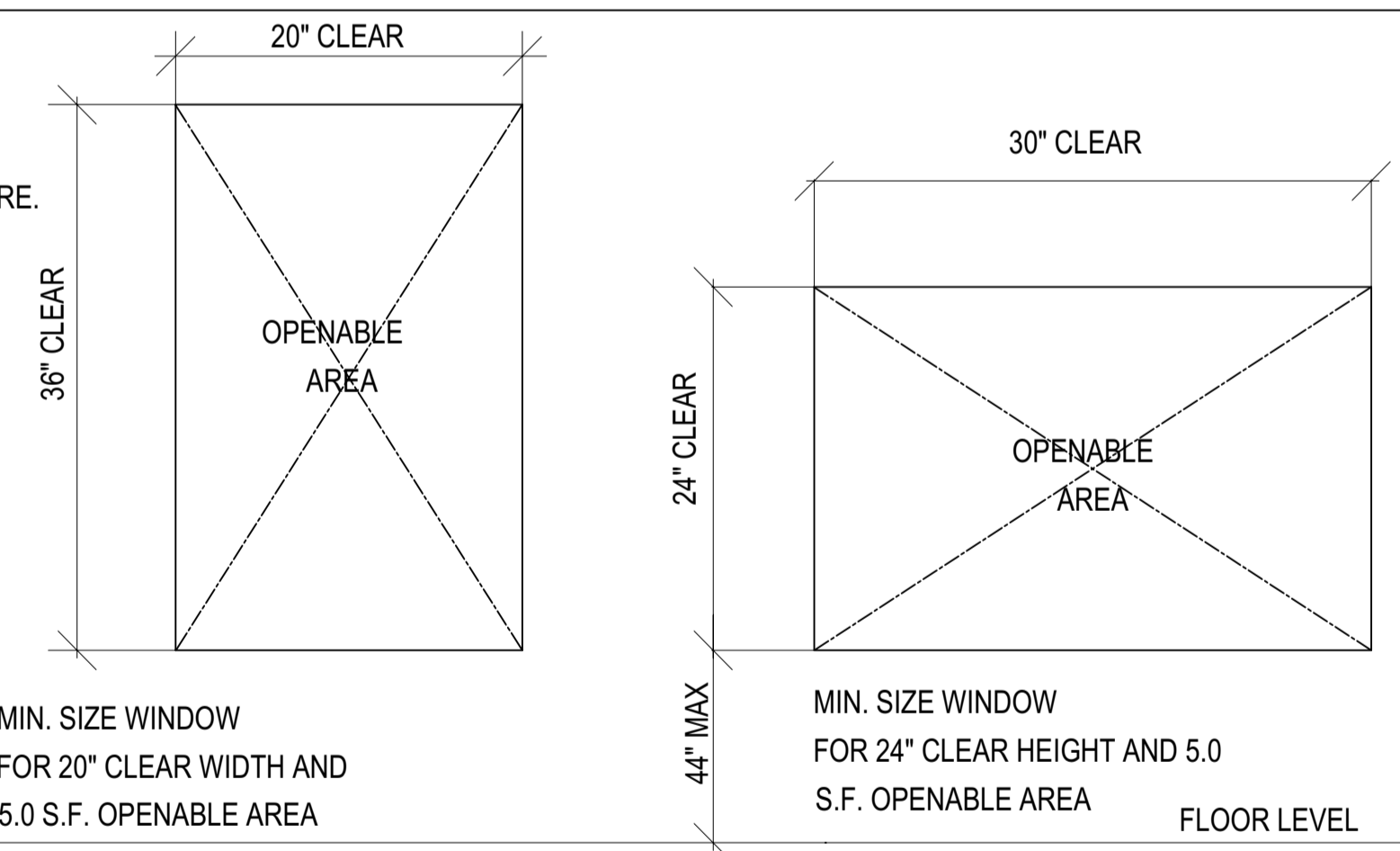
- GENERAL NOTES:**
- ALL PENETRATIONS INTO SOUND RATED PARTITIONS OR FLOOR-CEILING ASSEMBLIES SHALL BE SEALED, LINED, OR INSULATED WITH AN APPROVED PERMANENT RESILIENT SEALANT.
 - ALL RIGID CONDUITS, DUCTS, PLUMBING PIPES, AND APPLIANCE VENTS LOCATED IN SOUND RATED ASSEMBLIES SHALL BE ISOLATED FROM THE BUILDING CONSTRUCTION BY MEANS OF RESILIENT SLEEVES, MOUNTS, OR A MINIMUM 1/4" THICK APPROVED RESILIENT MATERIAL.
 - AN APPROVED PERMANENT AND RESILIENT ACOUSTICAL SEALANT SHALL BE PROVIDED ALONG THE JOINT BETWEEN THE FLOOR AND THE SEPARATION WALLS.
 - METAL VENTILATING AND CONDITIONED AIR DUCTS LOCATED IN SOUND RATED ASSEMBLIES SHALL BE LINED (EXCEPTION: DUCTS SERVING ONLY EXIT WAYS, KITCHEN COOKING FACILITIES, AND BATHROOMS NEED NOT BE LINED).
 - MINERAL FIBER INSULATION SHALL BE INSTALLED IN JOIST SPACES WHENEVER A PLUMBING, PIPING, OR DUCT PENETRATES A FLOOR-CEILING ASSEMBLY OR WHERE SUCH UNIT PASSES THROUGH THE PLANE OF THE FLOOR-CEILING ASSEMBLY FROM WITHIN A WALL. THE INSULATION SHALL BE INSTALLED TO A POINT 12" BEYOND THE PIPE OR DUCT. THIS REQUIREMENT IS NOT APPLICABLE TO FIRE SPRINKLER PIPE, GAS LINE OR ELECTRICAL CONDUIT.
 - ELECTRICAL OUTLET BOXES IN OPPOSITE FACES OF SEPARATION WALLS SHALL BE SEPARATED HORIZONTALLY BY 24" AND NOTE THAT BACK AND SIDES OF BOXES SHALL BE SEALED WITH 1/8" RESILIENT SEALANT AND BACKED BY A MINIMUM OF 2" THICK MINERAL FIBER INSULATION.
 - NO WALL FURNACE SHALL BE INSTALLED IN SOUND RATED PARTITIONS.
 - NO ELECTRICAL PANEL SHALL BE INSTALLED IN SOUND RATED PARTITIONS.

CONSTRUCTION NOTE:
G.C. TO VERIFY (E) UPPER FLOORING MATERIAL TO DETERMINE MINERAL FIBER INSULATION LOCATION ACCORDINGLY

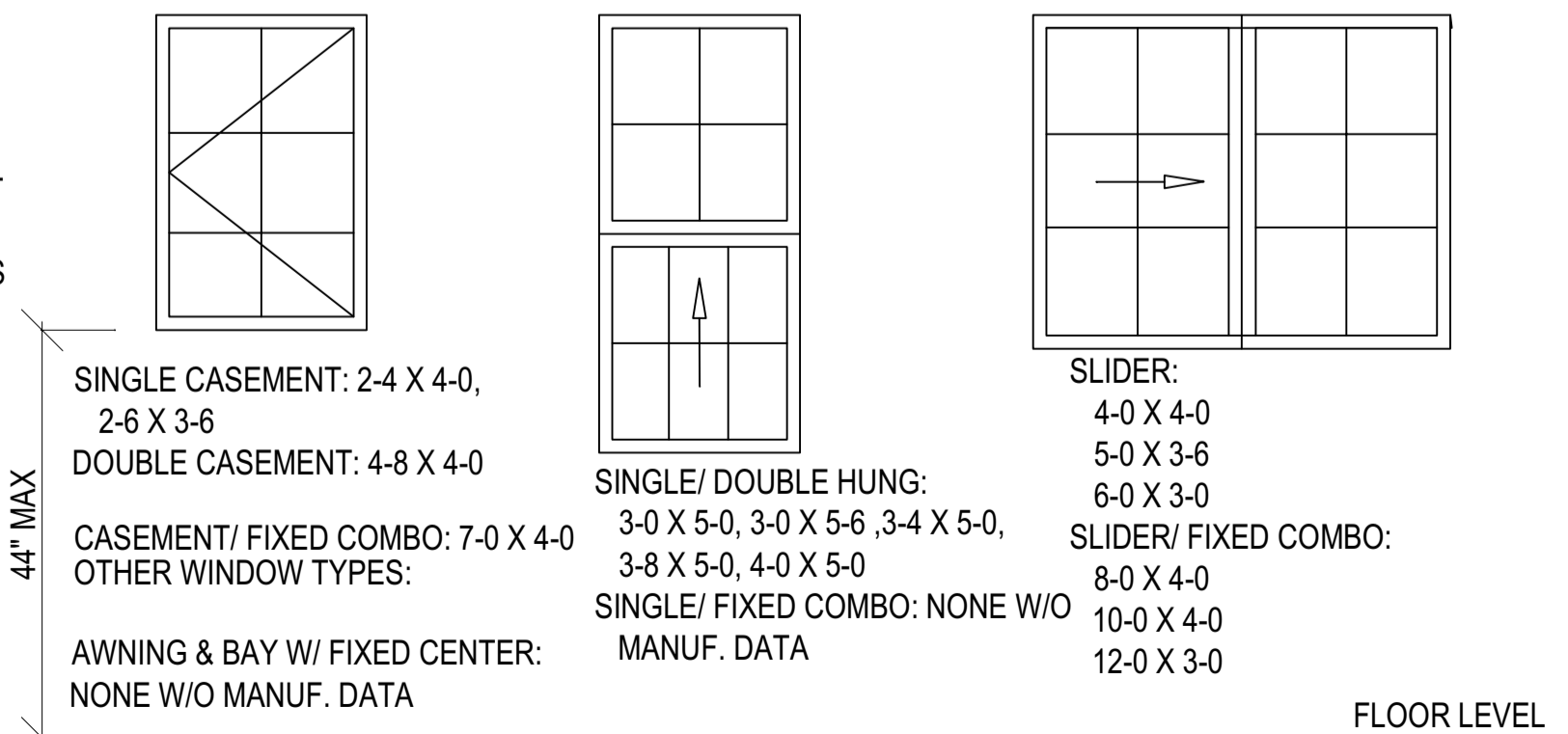


1-HR STC-50 FLOOR-CEILING ASSEMBLY **03**
Scale: N.T.S.

- 20" MIN. CLEAR WIDTH
- 24" MIN. CLEAR HEIGHT
- 5.0 SF MIN. OPENABLE AREA AT GRADE-FLOOR ONLY, 5.7 SF MIN. ELSEWHERE.

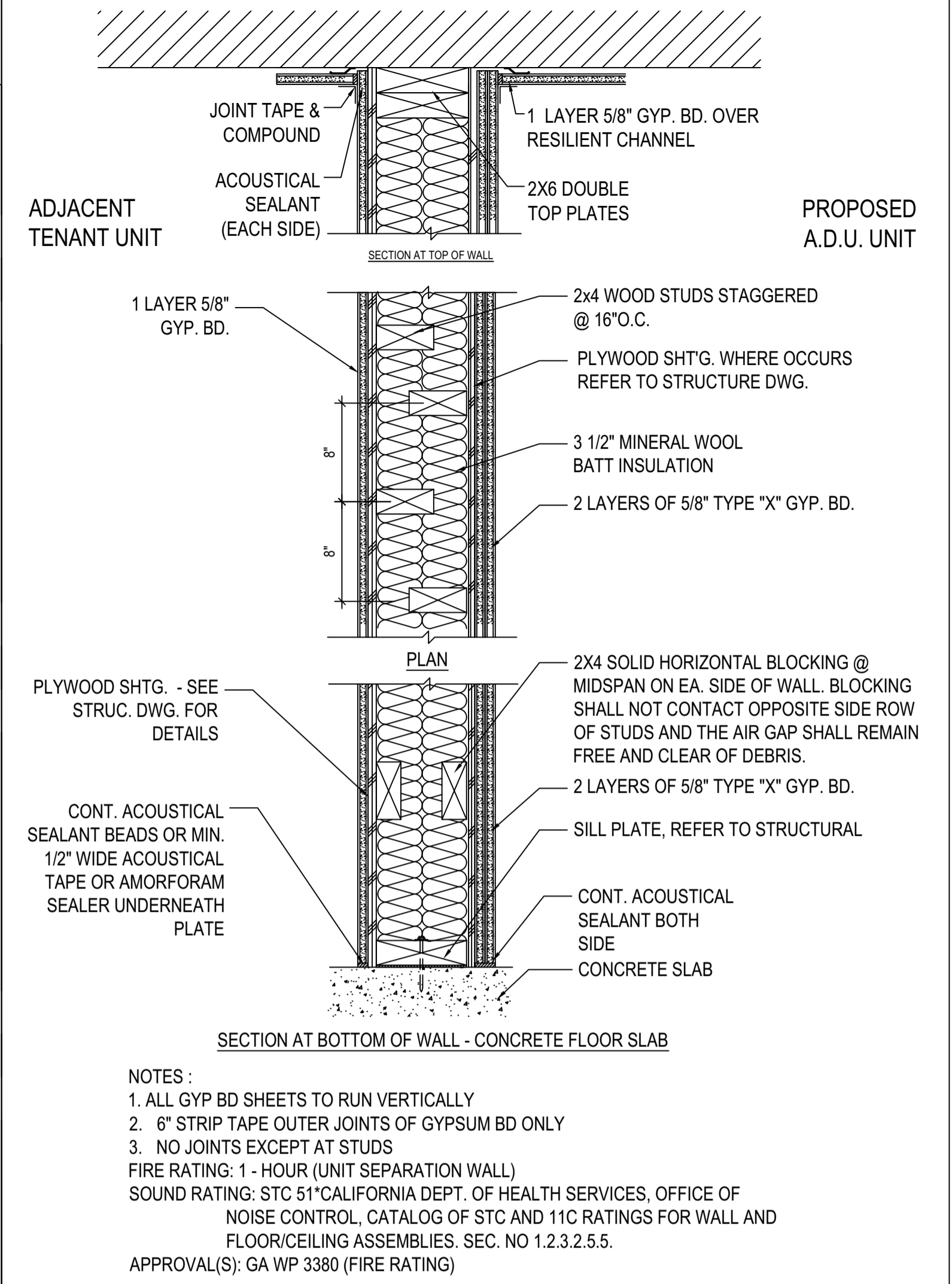


THE FOLLOWING WINDOW SIZES WILL BE THE MINIMUM ALLOWED FOR 5.0 SF.



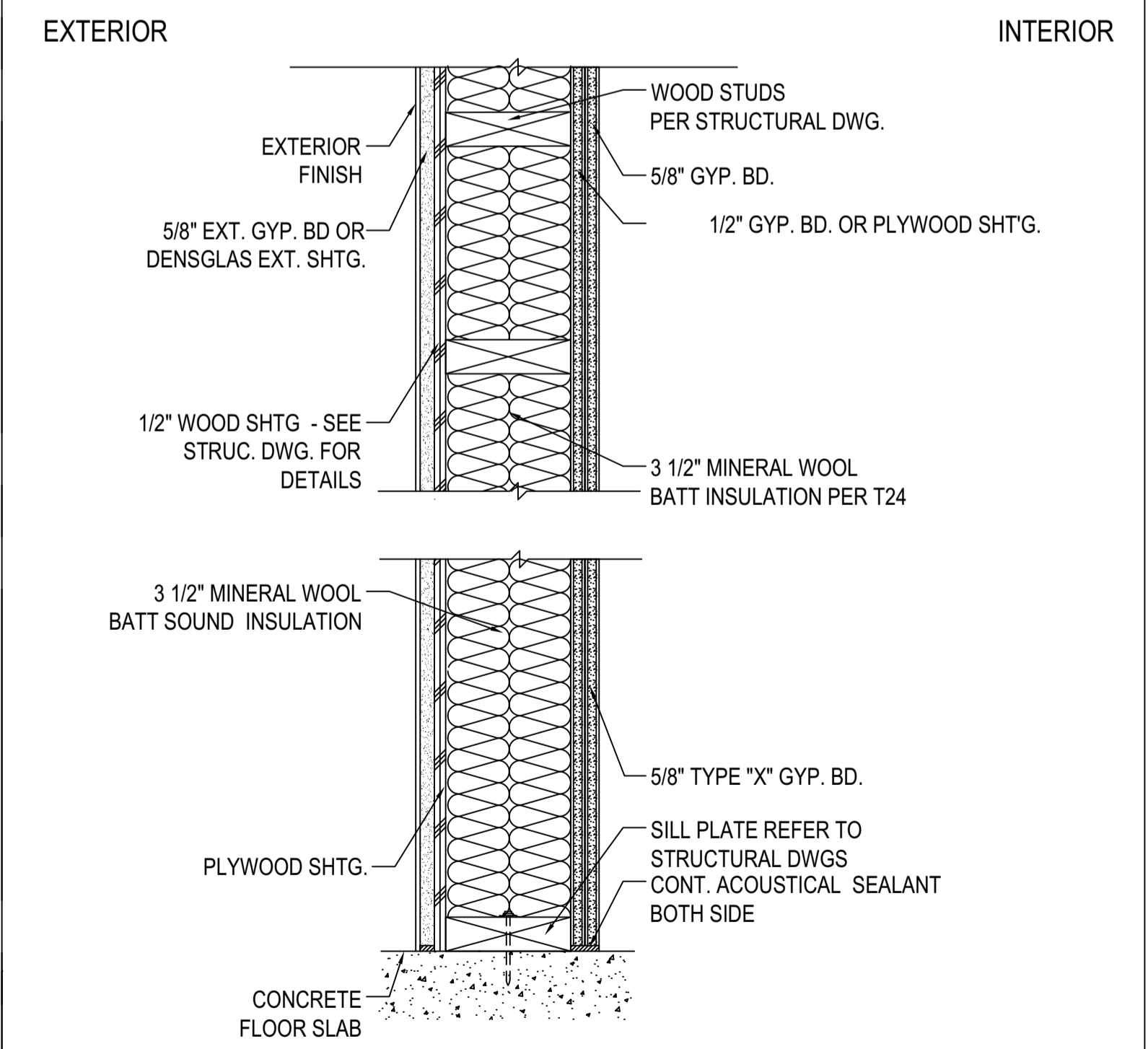
NOTE: SIZES ARE TAKEN FROM DATA SUPPLIED BY WINDOW MANUFACTURERS. HOWEVER, THESE ARE GENERAL DIMENSIONS AND MUST BE VERIFIED WITH ACTUAL WINDOWS INSTALLED TO MEET MINIMUM EGRESS REQUIREMENTS.

EMERGENCY ESCAPE/ RESCUE OPENING (R310) **04**
Scale: N.T.S.



- NOTES:**
- ALL GYP BD SHEETS TO RUN VERTICALLY
 - 6" STRIP TAPE OUTER JOINTS OF GYPSUM BD ONLY
 - NO JOINTS EXCEPT AT STUDS
- FIRE RATING: 1 - HOUR (UNIT SEPARATION WALL)
SOUND RATING: STC 51 CALIFORNIA DEPT. OF HEALTH SERVICES, OFFICE OF NOISE CONTROL, CATALOG OF STC AND IIC RATINGS FOR WALL AND FLOOR/CEILING ASSEMBLIES. SEC. NO 1.2.3.2.5.5.
APPROVAL(S): GA WP 3380 (FIRE RATING)

1-HR FIRE RATED, STC-50 TENANT DEMISING WALL **02**
Scale: N.T.S.



- NOTES:**
- ALL GYP BD SHEETS TO RUN VERTICALLY
 - TAPE OUTER JOINTS OF GYPSUM BD ONLY
 - NO JOINTS EXCEPT AT STUDS
- FIRE RATING: 1 - HOUR (TYPE V-A, EXTERIOR WALL)
SOUND RATING: STC 50 CALIFORNIA DEPT. OF HEALTH SERVICES, OFFICE OF NOISE CONTROL, CATALOG OF STC AND IIC RATINGS FOR WALL AND FLOOR/CEILING ASSEMBLIES. SEC. NO 1.2.1.2.2.2.
APPROVAL(S): GA.WP 3441, UL DESIGN NO U329

1-HR FIRE RATED, STC-50 EXTERIOR WALL **01**
Scale: N.T.S.

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2019 Low-Rise Residential Mandatory Measures Summary

§ 110.01: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures. Regardless of the compliance approach adopted, the following measures shall apply. Exceptions may apply.

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2019 Low-Rise Residential Mandatory Measures Summary

§ 150.01(A): Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any duct.

§ 150.01(B): Liquid Line Drier. Air conditioners and heat pump systems must be equipped with liquid line filter driers as required, as specified by the manufacturer's instructions.

§ 150.01(C): Storage Tank Insulation. Unfired hot water tanks, such as storage tanks and backing 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.

§ 150.02(A): Gas or Propane Water-Heating System Piping and Space Conditioning System Insulation. All domestic hot water piping must be insulated as specified in Section 605.11 of the California Plumbing Code. In addition, the following piping conditions must be met: 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 1/4 inch and less than one inch; hot water piping with a nominal diameter less than 1/4 inch that is associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, beyond water pumps, and from the heating source to a hot water tank.

§ 150.03: Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and use as required by Section 120.3(b). Insulation exposed to weather must be water resistant and protected from UV light (to adhesive tapes). Insulation covering chilled water piping and refrigerant piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Piping insulation buried below grade must be installed in a waterproof and non-cracking casing or sleeve.

§ 150.01(F): 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 with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for 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 with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters.

2019 Low-Rise Residential Mandatory Measures Summary

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 § 150.01(F).

§ 150.01(F): 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 unless provided at the discretion of the building official.

§ 150.01(G): Multifamily Attached Dwelling Units. Multifamily attached dwelling units must have mechanical ventilation unless provided at rates in accordance with ASHRAE 62.2-2010 and must be either a balanced system or continuous supply or 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 (2.0 air changes per year) or less.

§ 150.01(H): 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 150.01(H-1). All unit airflows must be within 20 percent of the unit with the lowest airflow rate as related to the individual unit's maximum required airflow rate needed for compliance.

§ 150.01(I): 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 RA3.7.2 to confirm it is rated by IHL 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 Manufacturer. 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): Covers. Any pool or spa heating system or equipment must be installed with at least 3 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in bulkhead connectors to allow for future solar heating.

§ 110.4(C): Pools. Outdoor pools or spas that have a heat pump or gas heater must have a cover.

§ 110.4(D): 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.

§ 150.01(G): 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.

§ 110.8: Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.5.

§ 150.01(A): Luminaires Efficacy. All installed luminaires must meet the requirements in Table 150.0-A.

§ 150.01(B): 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 sealed by a dimmer, vacancy sensor control, or air spaced control.

§ 150.01(C): Recessed Downlights in Ceilings. Luminaires recessed into ceilings must meet all of the requirements for insulation contact (IC) lighting or leakage, sealing, maintenance, and socket and light source as described in § 150.01(C).

§ 150.01(D): 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 Hz.

§ 150.01(E): 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.

§ 150.01(F): 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 § 150.01(F).

§ 150.01(G): Screw based luminaires. Screw based luminaires must contain labels that comply with Reference Joint Appendix JA4.

§ 150.01(H): Light Sources in Enclosed or Recessed Luminaires. Lamps and other replaceable light sources that are not compliant with the ABE elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.

§ 150.01(I): Light Sources in Drawers, Cabinets, and Linen Closets. Light sources installed in 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.

§ 150.01(J): Interior Switches and Controls. All forward phase out dimmers used with LED lighting sources must comply with MEMA SSL 7A.

§ 150.01(K): Interior Switches and Controls. Exhaust fans must be readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.

§ 150.01(L): Interior Switches and Controls. Controls and equipment must be installed in accordance with manufacturer's instructions.

§ 150.01(M): Interior Switches and Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to comply with § 150.01(L).

§ 150.01(N): Interior Switches and Controls. Lighting controls must comply with the applicable requirements of § 110.5.

2019 Low-Rise Residential Mandatory Measures Summary

§ 150.01(G): 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 controls according to § 110.5, meets the Installation Certificate requirements of § 130.4, meets the EMC requirements of § 130.0(a), and meets all other requirements in § 150.01(G).

§ 150.01(H): Interior Switches and Controls. A multistage programmable controller may be used to comply with dimmer requirements in § 150.01(G) if it provides the functionality of a dimmer according to § 110.5, and complies with all other applicable requirements in § 150.01(G).

§ 150.01(I): Interior Switches and Controls. In bedrooms, 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 readily configured to manual operation using the manual control required under Section 150.01(I).

§ 150.01(J): Interior Switches and Controls. Luminaires that are or contain light sources that meet Reference Joint Appendix JA4 requirements for dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls.

§ 150.01(K): 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 requirements of Item 150.01(K)(A) (ON and OFF switch) and the requirements in either § 150.01(K)(B) (photocell) and either a motion sensor or automatic time control, or § 150.01(K)(C) (automated time clock), or an EMCS.

§ 150.01(L): 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 garages with less than eight vehicles per one must comply with either § 150.01(K) or with the applicable requirements in Sections 110.5, 130.0, 130.2, 130.4, 140.0, 140.1 and 141.0.

§ 150.01(M): Residential Outdoor Lighting. For low-rise residential buildings with four or more dwelling units, any outdoor lighting for residential parking lots or garages with a total of eight or more vehicles must be controlled by an occupant sensor in each space by at least 50 percent of power as determined according to § 130.0(C).

§ 150.01(N): 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).

§ 150.01(O): Residential Garages for Light 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, 140.0, and 141.0.

§ 150.01(P): Interior Common Areas of Low-rise Multifamily Residential Buildings. In a low-rise multifamily residential building where the total interior common area is 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 comply with Table 150.0-A and be controlled by an occupant sensor.

§ 150.01(Q): Interior Common Areas of Low-rise Multifamily Residential Buildings. In a low-rise multifamily residential building where the total interior common area is 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 comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.0 and 141.0.

§ 150.01(R): 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 designated points of ingress and egress.

Solar Ready Buildings.

§ 110.10(a): 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 residence 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(d).

§ 110.10(a)(2): Low-rise Multifamily Buildings. Low-rise multifamily 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): 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 8 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be composed 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 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 multifamily 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 200 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 including the 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)(3): Shading. The solar zone must not contain any obstructions, including but not limited to trees, chimneys, architectural features, and roof-mounted equipment.

§ 110.10(b)(4): 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 back 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)(5): Structural Design Loads on Construction Documents. The construction documents must indicate a location reserved for members and mounting equipment and a pathway reserved for routing of conductors from the solar zone to the point of interconnection with the electrical service, and for single family residences and control water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.

§ 110.10(c): Interconnection Pathways. The construction documents must indicate a location reserved for members and mounting equipment and a pathway reserved for routing of conductors from the solar zone to the point of interconnection with the electrical service, and for single family residences and control 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): Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps.

§ 110.10(f): 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."

8112 MAGNOLIA AVENUE
RIVERSIDE, CA 92504

HEAT PUMP EQUIPMENT SHCHEDULE

SYMBOL	UNIT TYPE	SERVICE	LOCATION	MANUFACTURE & MODEL	HEATING CAPACITY BTU/HR	COP	COOLING CAPACITY BTU/HR	EER	FAN CFM	INDOOR FAN ELECTRIC DATA			WEIGHT LBS	REMARKS	
										V	PH	HZ			
HP 1	THROUGH WALL	UNIT	UNIT	LG LT1237HNR	9,200	3.6	11,000	9.8	290	240	1	60	15.3	82	AUTOMATIC SHUTOFF, SLEEP SETTING, TIMER

- KEY NOTES:
- 1 7" HOOD EXHAUST TO EXTERIOR
 - 2 6" EXHAUST DUCT
 - 3 PROVIDE NEW THROUGH WALL HEAT PUMP UNIT

2 UNIT 2 MECHANICAL PLAN
Scale 1/2" = 1'-0"

1 UNIT 1 MECHANICAL PLAN
Scale 1/2" = 1'-0"

SUBMITTAL:
PLAN CHECK SUBMITTAL
APRIL 2021

REVISIONS:

SCALE: AS NOTED

SHEET TITLE:

SHEET NUMBER:

APPROVED
 CITY OF RIVERSIDE
 BUILDING & SAFETY DIVISION

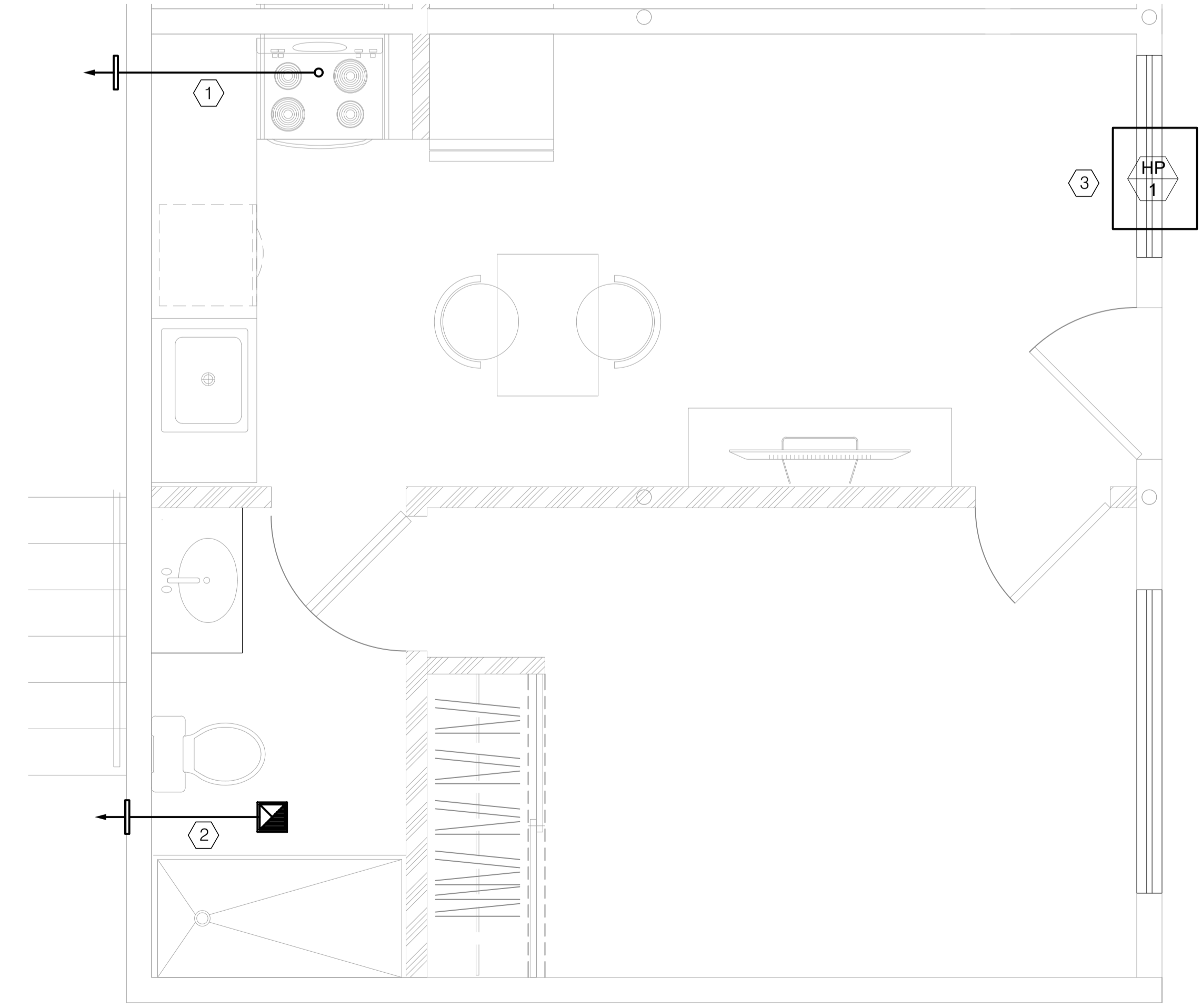
REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.

PERMIT: SP 2121-07077 DATE: 05/01/23

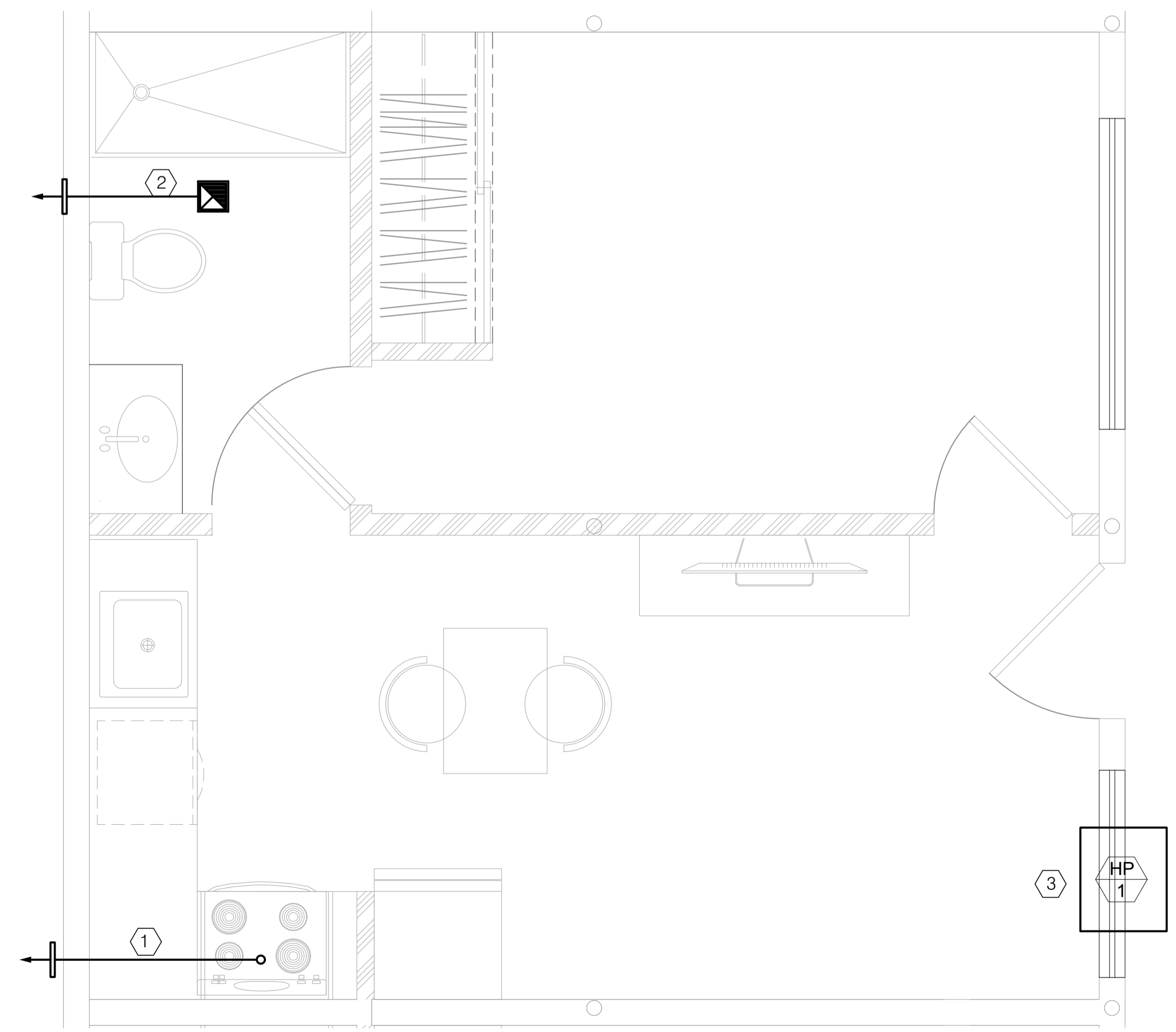


8112 MAGNOLIA AVENUE
 RIVERSIDE, CA 92504

- KEY NOTES:
- ① 7" HOOD EXHAUST TO EXTERIOR
 - ② 6" EXHAUST DUCT
 - ③ PROVIDE NEW THROUGH WALL HEAT PUMP UNIT



2 UNIT 4 MECHANICAL PLAN
 Scale 1/2" = 1'-0"



1 UNIT 3 MECHANICAL PLAN
 Scale 1/2" = 1'-0"

SUBMITTAL:	PLAN CHECK SUBMITTAL APRIL 2021
REVISIONS:	
SCALE:	AS NOTED
SHEET TITLE:	
SHEET NUMBER:	

APPROVED
CITY OF RIVERSIDE
BUILDING & SAFETY DIVISION

REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.

PERMIT: **SP 2021-07077** DATE: **05/01/23**



2019 CALGREEN RESIDENTIAL MANDATORY MEASURES EFFECTIVE JANUARY 1, 2020	
HCD SHL 615 (New 01/20)	
See specific referenced sections for complete details on CALGreen mandatory requirements.	
2019 CALGREEN CODE	
SECTION	REQUIREMENTS
Chapter 1 – ADMINISTRATION	
Scope	
101.3.1	Applies to ALL newly constructed residential buildings: low-rise, high-rise, and hotels/motels.
102.3	Requires a completed Residential Occupancies Application Checklist or alternate method acceptable to the enforcing agency to be used for documentation of conformance.
Chapter 3 – GREEN BUILDING	
Additions and alterations	
301.1.1	<ul style="list-style-type: none"> Applies to additions or alterations of residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. Requirements only apply within the specific area of the addition or alteration.
Low-rise and high-rise residential buildings	
301.2	Banners identify provisions applying to low-rise only [LR] or high-rise only [HR].
Mixed occupancy buildings	
302.1	<p>Requires each portion of mixed occupancy buildings to comply with CALGreen measures applicable for the specific occupancy.</p> <p>Exceptions:</p> <ul style="list-style-type: none"> Accessory structures and accessory occupancies serving residential buildings to comply with Chapter 4 and Appendix A4, as applicable. Live/work units complying with the California Building Code Section 419 shall not be considered a mixed occupancy. Live/work units are required to comply with Chapter 4 and Appendix A4, as applicable.

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2019 CALGREEN RESIDENTIAL MANDATORY MEASURES EFFECTIVE JANUARY 1, 2020	
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See specific referenced sections for complete details on CALGreen mandatory requirements.	
2019 CALGREEN CODE	
SECTION	REQUIREMENTS
Chapter 4 – RESIDENTIAL MANDATORY MEASURES	
Division 4.1 – PLANNING AND DESIGN	
Storm water drainage and retention during construction	
4.106.2	Projects which disturb less than 1 acre of soil and are not part of a larger common plan of development shall manage storm water drainage during construction.
Grading and paving	
4.106.3	Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings.
Exception: Additions and alterations which do not alter the existing drainage path.	
Electric vehicle (EV) charging for new construction	
4.106.4	<ul style="list-style-type: none"> Comply with Section 4.106.4.1, 4.106.4.2 or 4.106.4.3 for future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625. <p>Exceptions:</p> <ol style="list-style-type: none"> On a case-by-case basis where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon 1 of the following: <ol style="list-style-type: none"> Where there is no commercial power supply. Verification that meeting requirements will alter the local utility infrastructure design requirements on the utility side of the meter increasing costs to the homeowner/developer by more than \$400.00 per dwelling unit. Accessory Dwelling Units and Junior Accessory Dwelling Units without additional parking facilities. <p>Note: For definitions of Accessory Dwelling Units and Junior Accessory Units, see CALGreen Chapter 2.</p>

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2019 CALGREEN CODE	
SECTION	REQUIREMENTS
EV charging: 1- & 2-family dwellings/townhouses with attached private garages	
4.106.4.1	<ul style="list-style-type: none"> Install a listed raceway to accommodate a dedicated 208/240-volt branch circuit for each dwelling unit. Raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). Raceway shall originate at the main service or subpanel and 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. 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.
Identification	
4.106.4.1.1	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."
EV charging for multifamily dwellings	
4.106.4.2	<ul style="list-style-type: none"> Applies to all multifamily dwelling units with parking facilities on the site. 10% of the total number of parking spaces provided for all types of parking facilities, but in no case less than 1, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE. Calculations for the number of EV spaces shall be rounded up to the nearest whole number. <p>Note: Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.</p>

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2019 CALGREEN RESIDENTIAL MANDATORY MEASURES EFFECTIVE JANUARY 1, 2020	
HCD SHL 615 (New 01/20)	
See specific referenced sections for complete details on CALGreen mandatory requirements.	
2019 CALGREEN CODE	
SECTION	REQUIREMENTS
EV charging space (EV space) locations	
4.106.4.2.1	Construction documents shall indicate the location of proposed EV spaces. Where common use parking is provided at least 1 EV space shall be located in the common use parking areas and shall be available for use by all residents.
EV charging stations (EVCS)	
4.106.4.2.1.1	<p>When EV chargers are installed, EV spaces (required by Section 4.106.4.2.2, Item 3.) shall comply with at least 1 of the following options:</p> <ol style="list-style-type: none"> 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. The EV space shall be located on an accessible route to the building, as defined in the California Building Code, Chapter 2. <p>Exception: EVCS 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.</p>
EV charging space (EV space) dimensions	
4.106.4.2.2	<p>EV spaces shall be designed to comply with the following:</p> <ol style="list-style-type: none"> The minimum length of each EV space shall be 18 feet. The minimum width of each EV space shall be 9 feet. 1 in every 25 EV spaces, but not less than 1, shall also have an 8-foot wide minimum aisle. A 5-foot wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet. <ol style="list-style-type: none"> Surface slope for this EV space and aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083% slope) in any direction.

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2019 CALGREEN RESIDENTIAL MANDATORY MEASURES EFFECTIVE JANUARY 1, 2020	
HCD SHL 615 (New 01/20)	
See specific referenced sections for complete details on CALGreen mandatory requirements.	
2019 CALGREEN CODE	
SECTION	REQUIREMENTS
Single EV space required	
4.106.4.2.3	<ul style="list-style-type: none"> Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. Raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). 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. 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.
Multiple EV spaces required	
4.106.4.2.4	<ul style="list-style-type: none"> 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 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 planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.
Identification	
4.106.4.2.5	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.

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2019 CALGREEN RESIDENTIAL MANDATORY MEASURES EFFECTIVE JANUARY 1, 2020	
HCD SHL 615 (New 01/20)	
See specific referenced sections for complete details on CALGreen mandatory requirements.	
2019 CALGREEN CODE	
SECTION	REQUIREMENTS
EV charging for hotels and motels	
4.106.4.3	<ul style="list-style-type: none"> Applies to all newly constructed hotels and motels. Construction documents shall identify the location of EV spaces. <p>Note: Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.</p>
Number of required EV spaces	
4.106.4.3.1	Table 4.106.4.3.1 shows the number of required EV spaces based on the total number of parking spaces provided for all types of parking facilities.
EV charging space (EV space) dimensions	
4.106.4.3.2	<p>EV spaces shall be designed to comply with the following:</p> <ul style="list-style-type: none"> Minimum length of each EV space shall be 18 feet. Minimum width of each EV space shall be 9 feet.
Single EV space required (similar to 4.106.4.2.3)	
4.106.4.3.3	<ul style="list-style-type: none"> Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. Raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). 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. 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.

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2019 CALGREEN RESIDENTIAL MANDATORY MEASURES EFFECTIVE JANUARY 1, 2020	
HCD SHL 615 (New 01/20)	
See specific referenced sections for complete details on CALGreen mandatory requirements.	
2019 CALGREEN CODE	
SECTION	REQUIREMENTS
Multiple EV spaces required (similar to 4.106.4.2.4)	
4.106.4.3.4	<ul style="list-style-type: none"> 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 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 planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.
Identification (similar to 4.106.4.2.5)	
4.106.4.3.5	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.
Accessible EV spaces	
4.106.4.3.6	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 EV charging stations in the California Building Code, Chapter 11B.
Division 4.2 – ENERGY EFFICIENCY	
Scope	
4.201.1 & 5.201.1	<ul style="list-style-type: none"> Energy efficiency requirements for low-rise residential (Section 4.201.1) and high-rise residential/hotels/motels (Section 5.201.1) are now in both residential and nonresidential chapters of CALGreen. Standards for residential buildings do not require compliance with levels of minimum energy efficiency beyond those required by the 2019 California Energy Code.

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2019 CALGREEN RESIDENTIAL MANDATORY MEASURES EFFECTIVE JANUARY 1, 2020	
HCD SHL 615 (New 01/20)	
See specific referenced sections for complete details on CALGreen mandatory requirements.	
2019 CALGREEN CODE	
SECTION	REQUIREMENTS
Division 4.3 – WATER EFFICIENCY AND CONSERVATION	
Water conserving plumbing fixtures and fittings	
4.303.1	<p>Plumbing fixtures and fittings shall comply with the following:</p> <ul style="list-style-type: none"> 4.303.1.1 – Water closets: ≤ 1.28 gal/flush. 4.303.1.2 – Wall mounted urinals: ≤ 0.125 gal/flush; all other urinals ≤ 0.5 gal/flush. 4.303.1.3.1 – Single showerheads: ≤ 1.8 gpm @ 80 psi. 4.303.1.3.2 – Multiple showerheads: combined flow rate of all showerheads controlled by a single valve shall not exceed 1.8 gpm @ 80 psi, or only 1 shower outlet is to be in operation at a time. 4.303.1.4.1 – Residential lavatory faucets: maximum flow rate ≤ 1.2 gpm @ 60 psi; minimum flow rate ≥ 0.8 gpm @ 20 psi. 4.303.1.4.2 – Lavatory faucets in common and public use areas of residential buildings: ≤ 0.5 gpm @ 60 psi. 4.303.1.4.3 – Metering faucets: ≤ 0.2 gallons per cycle. 4.303.1.4.4 – Kitchen faucets: ≤ 1.8 gpm @ 60 psi; temporary increase to 2.2 gpm allowed but shall default to 1.8 gpm.
Standards for plumbing fixtures and fittings	
4.303.2	Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet applicable standards referenced in Table 1701.1 of the California Plumbing Code.
Outdoor potable water use in landscape areas	
4.304.1	New 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.
Division 4.4 – MATERIAL CONSERVATION & RESOURCE EFFICIENCY	
Rodent proofing	
4.406.1	Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be closed with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency to prevent passage of rodents.

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2019 CALGREEN RESIDENTIAL MANDATORY MEASURES EFFECTIVE JANUARY 1, 2020	
HCD SHL 615 (New 01/20)	
See specific referenced sections for complete details on CALGreen mandatory requirements.	
2019 CALGREEN CODE	
SECTION	REQUIREMENTS
Construction waste management	
4.408.1	<ul style="list-style-type: none"> Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance. Provide documentation to the enforcing agency per Section 4.408.5. <p>Exceptions:</p> <ol style="list-style-type: none"> Excavated soil and land-clearing debris. Alternative waste reduction methods developed by working with local enforcing agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite. The 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.
Construction waste management plan	
4.408.2	Submit a construction waste management plan meeting Items 1 through 5 in Section 4.408.2. Plans shall be updated as necessary and shall be available for examination during construction.
Waste management company	
4.408.3	Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that diverted construction and demolition waste materials meet the requirements in Section 4.408.1.

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2019 CALGREEN RESIDENTIAL MANDATORY MEASURES EFFECTIVE JANUARY 1, 2020	
HCD SHL 615 (New 01/20)	
See specific referenced sections for complete details on CALGreen mandatory requirements.	
2019 CALGREEN CODE	
SECTION	REQUIREMENTS
Waste stream reduction alternative [LR]	
4.408.4 & 4.408.4.1	<ul style="list-style-type: none"> Projects that generate a total combined weight of construction and demolition waste disposed in landfills, which do not exceed 3.4 pounds per square foot of the building area shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1. Projects that generate a total combined weight of construction and demolition waste disposed 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.
Operation and maintenance manual	
4.410.1	At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which covers 10 specific subject areas shall be placed in the building.
Recycling by occupants	
4.410.2	<p>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 is identified for the depositing, storage and collection of nonhazardous materials for recycling, including (at minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.</p> <p>Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are not required to comply with the organic waste portion of this section.</p>
Division 4.5 – ENVIRONMENTAL QUALITY	
Fireplaces - General	
4.503.1	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 all applicable local ordinances.

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8112 MAGNOLIA AVENUE
RIVERSIDE, CA 92504

SUBMITTAL:
**PLAN CHECK SUBMITTAL
APRIL 2021**

REVISIONS:

SCALE: **AS NOTED**

SHEET TITLE:

SHEET NUMBER:

APPROVED
 CITY OF RIVERSIDE
 BUILDING & SAFETY DIVISION

REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.

PERMIT: **SP321-07077** DATE: **05/01/23**



2019 CALGREEN RESIDENTIAL MANDATORY MEASURES EFFECTIVE JANUARY 1, 2020
 HCD SHL 615 (New 01/20)

See specific referenced sections for complete details on CALGreen mandatory requirements.

2019 CALGREEN CODE

SECTION	REQUIREMENTS
Protection of mechanical equipment during construction	
4.504.1	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 intake and distribution component openings shall be covered. Taps, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of water, dust and debris entering the system may be used.
Adhesives, sealants and caulks	
4.504.2.1	Adhesives, sealants 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 shall also 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. 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 (CCR), Title 17, commencing with Section 94507.
Paints and coatings	
4.504.2.2	Architectural paints and coatings shall comply with VOC limits in Table 1 of the Air Resources Board 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.

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2019 CALGREEN RESIDENTIAL MANDATORY MEASURES EFFECTIVE JANUARY 1, 2020
 HCD SHL 615 (New 01/20)

See specific referenced sections for complete details on CALGreen mandatory requirements.

2019 CALGREEN CODE

SECTION	REQUIREMENTS
Aerosol paints and coatings	
4.504.2.3 & 4.504.2.4	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 shall additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49. • Documentation is required per Section 4.504.2.4.
Carpet systems	
4.504.3	Carpet installed in the building interior shall meet the testing and product requirements of 1 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.
Carpet cushion	
4.504.3.1	Carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.
Carpet adhesive	
4.504.3.2	Carpet adhesives shall meet the requirements of Table 4.504.1.

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2019 CALGREEN RESIDENTIAL MANDATORY MEASURES EFFECTIVE JANUARY 1, 2020
 HCD SHL 615 (New 01/20)

See specific referenced sections for complete details on CALGreen mandatory requirements.

2019 CALGREEN CODE

SECTION	REQUIREMENTS
Resilient flooring systems	
4.504.4	Where resilient flooring is installed, at least 80% of floor area receiving resilient flooring shall comply with 1 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).
Composite wood products	
4.504.5 & 4.504.5.1	Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in the Air Resources Board's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), as shown in Table 4.504.5. • Documentation is required per Section 4.504.5.1. • Definition of Composite Wood Products: Composite wood products include hardwood plywood, particleboard, and medium density fiberboard. "Composite wood products" do not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists, or finger-joined lumber, all as specified in CCR, Title 17, Section 93120.1(a).

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2019 CALGREEN RESIDENTIAL MANDATORY MEASURES EFFECTIVE JANUARY 1, 2020
 HCD SHL 615 (New 01/20)

See specific referenced sections for complete details on CALGreen mandatory requirements.

2019 CALGREEN CODE

SECTION	REQUIREMENTS
Concrete slab foundations	
4.505.2	Concrete slab foundations or concrete slab-on-ground floors required to have a vapor retarder by the California Building Code, Chapter 19, or the California Residential Code, Chapter 5, respectively, shall also comply with this section.
Capillary break	
4.505.2.1	A capillary break shall be installed in compliance with at least 1 of the following: 1. A 4-inch thick base of ½ inch or larger clean aggregate shall be provided with a vapor retarder 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.
Moisture content of building materials	
4.505.3	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% moisture content. Moisture content shall be verified in compliance with the following: 1. Moisture content shall be determined with either a probe-type or a contact-type moisture meter. Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements in Section 101.8. 2. Moisture readings shall be taken at a point 2 feet to 4 feet from the grade stamped end of each piece to be verified. 3. At least 3 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. Manufacturers' drying recommendations shall be followed for wet-applied insulation products prior to enclosure.

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2019 CALGREEN RESIDENTIAL MANDATORY MEASURES EFFECTIVE JANUARY 1, 2020
 HCD SHL 615 (New 01/20)

See specific referenced sections for complete details on CALGreen mandatory requirements.

2019 CALGREEN CODE

SECTION	REQUIREMENTS
Bathroom exhaust fans	
4.506.1	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 manual or automatic adjustment between a relative humidity range of ≤ 50% to a maximum of 80%. b. A humidity control may be a separate component to the exhaust fan and is not required to be integral or built-in. Note: For CALGreen, a bathroom is a room which contains a bathtub, shower, or tub/shower combination. Fans or mechanical ventilation is required in each bathroom.
Heating and air-conditioning system design	
4.507.2	Heating and air-conditioning systems shall be sized, designed and equipment selected using the following methods: 1. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J – 2016 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods. 2. Duct systems are sized according to ANSI/ACCA 1 Manual D – 2016 (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 systems function are acceptable.

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2019 CALGREEN RESIDENTIAL MANDATORY MEASURES EFFECTIVE JANUARY 1, 2020
 HCD SHL 615 (New 01/20)

See specific referenced sections for complete details on CALGreen mandatory requirements.

2019 CALGREEN CODE

SECTION	REQUIREMENTS
CHAPTER 7 – INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS	
Installer training	
702.1	HVAC system installers shall be trained and certified in the proper installation of HVAC systems and equipment by a recognized training or certification program. 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.
Special inspection	
702.2	When required by the enforcing agency, special inspectors must be qualified and able to demonstrate competence to the enforcing agency in the discipline in which they are inspecting.
Documentation	
703.1	Documentation of compliance shall include, but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the local enforcing agency. Other specific documentation or special inspections necessary to verify compliance are specified in appropriate sections of CALGreen.

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8112 MAGNOLIA AVENUE
 RIVERSIDE, CA 92504

SUBMITTAL:
**PLAN CHECK SUBMITTAL
 APRIL 2021**

REVISIONS:

SCALE: **AS NOTED**

SHEET TITLE:

SHEET NUMBER:
M-4



8112 MAGNOLIA AVENUE
RIVERSIDE, CA 92504

SUBMITTAL:
PLAN CHECK SUBMITTAL
APRIL 2021

REVISIONS:

SCALE: AS NOTED

SHEET TITLE:

SHEET NUMBER:

P-1

GENERAL NOTES
CITY OF RIVERSIDE
BUILDING & PLUMBING SHALL BE PROVIDED AS FOLLOWS:

REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATION OF ANY CITY, COUNTY, STATE OR FEDERAL BUILDING ORDINANCE OR STATE LAW. THE APPLICANT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE CITY OF RIVERSIDE. THE APPLICANT SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES. ANY CHANGES, MODIFICATIONS OR ADDITIONS TO THE PERMIT SHALL BE APPROVED BY THE CITY OF RIVERSIDE.

PERMIT: RP 2021-0707

1. WASTE: SCHEDULE 40 PVC DWV
2. DOMESTIC HOT WATER PIPING SHALL BE INSULATED WITH OWENS-CORNING 25 ASJ/SSL SECTIONAL FIBERGLASS WITH KRAFT PAPER JACKET, 1-1/2" THICK. ELBOWS AND OTHER FITTINGS SHALL BE INSULATED WITH SECTIONAL FIBERGLASS WITH FITTED PVC FITTING COVERS BY THE SAME MANUFACTURER. PROVIDE CELLULAR GLASS OR CORK INSERTS BETWEEN PIPING HANGERS AND PIPE.
3. SHOWER SHALL BE PROVIDED WITH MIXING VALVE THAT WILL PROVIDE SCALD AND THERMAL SHOCK PROTECTION IN ACCORDANCE WITH ASSE 1016 OR ASME A112.18.1/CSA B125.1
4. WATER PIPES SHALL NOT BE RUN OR LAID IN THE SAME TRENCH AS BUILDING SEWER OR DRAINAGE PIPING CONSTRUCTED OF CLAY OR MATERIALS THAT ARE NOT APPROVED FOR USE WITHIN A BUILDING UNLESS BOTH OF THE FOLLOWING CONDITIONS ARE MET: (CPC 609.2)
 - 4.1. THE BOTTOM OF THE WATER PIPE SHALL BE NOT LESS THAN 12 INCHES ABOVE THE TOP OF THE SEWER OR DRAIN LINE.
 - 4.2. THE WATER PIPE SHALL BE PLACED ON A SOLID SHELF EXCAVATED AT ONE SIDE OF THE COMMON TRENCH WITH A CLEAR HORIZONTAL DISTANCE OF NOT LESS THAN 12 INCHES FROM THE SEWER OR DRAIN LINE.
5. HORIZONTAL DRAINAGE PIPING SHALL BE RUN IN PRACTICAL ALIGNMENT AND A UNIFORM SLOPE OF NOT LESS THAN 1/4 INCH PER FOOT OR 2 PERCENT TOWARD THE POINT OF DISPOSAL PROVIDED THAT, WHERE IT IS IMPRACTICAL DUE TO THE DEPTH OF THE STREET SEWER, TO THE STRUCTURAL FEATURES, OR TO THE ARRANGEMENT OF A BUILDING OR STRUCTURE TO OBTAIN A SLOPE OF 1/4 INCH PER FOOT OR 2 PERCENT, SUCH PIPE OR PIPING 4 INCHES OR LARGER IN DIAMETER SHALL BE PERMITTED TO HAVE A SLOPE OF NOT LESS THAN 1/8 INCH PER FOOT OR 1 PERCENT, WHERE FIRST APPROVED BY THE AUTHORITY HAVING JURISDICTION. (CPC 708.1)
6. EACH HORIZONTAL DRAINAGE PIPE SHALL BE PROVIDED WITH A CLEANOUT AT ITS UPPER TERMINAL, AND EACH RUN OF PIPING, THAT IS MORE THAN 100 FEET IN TOTAL DEVELOPED LENGTH, SHALL BE PROVIDED WITH A CLEANOUT FOR EACH 100 FEET, OR FRACTION THEREOF, IN LENGTH OF SUCH PIPING. AN ADDITIONAL CLEANOUT SHALL BE PROVIDED IN A DRAINAGE LINE FOR EACH AGGREGATE HORIZONTAL CHANGE IN DIRECTION EXCEEDING 135 DEGREES. A CLEANOUT SHALL BE INSTALLED ABOVE THE FIXTURE CONNECTION FITTING, SERVING EACH URINAL, REGARDLESS OF THE LOCATION OF THE URINAL IN THE BUILDING. (CPC 707.4)

LEGEND AND ABBREVIATION

SYMBOL	ABBREVIATION	DESCRIPTION
---	W	WASTE BELOW FLOOR
---	V	VENT
---	CW	DOMESTIC COLD WATER
---	HW	DOMESTIC HOT WATER
---	G	GAS
---	SOV	SHUT-OFF VALVE
---	CO	CLENOUT
---	FCO	FLOOR CLENOUT
---	WCO	WALL CLENOUT
---		PIPING ELBOW UP
---		PIPING ELBOW DOWN
---		CAP
⊙	P.O.C	POINT OF CONNECTION
⊙	P.O.D	POINT OF DEMOLITION
⊙	BFP	BACKFLOW PREVENTER

PLUMBING FIXTURE SCHEDULE

NO.	DESCRIPTION	W	V	T	CW	HW	REMARKS
WC-1	WATER CLOSET	4"	2"	INT	1/2"	-	FLOOR MOUNTED, FLUSH TANK, 1.28 GPF
L-1	LAVATORY	2"	1-1/2"	1-1/2"	1/2"	1/2"	COUNTER TOP, 1.2 GPM
S-1	SINK	2"	1-1/2"	1-1/2"	1/2"	1/2"	COUNTER TOP, 1.5 GPM
SH-1	SHOWER	2"	2"	2"	1/2"	1/2"	PROVIDE SHOWER VALVE WITH SINGLE LEVER PRESSURE BALANCED VALVE, INTEGRAL STOPS, TEMPERATURE LIMIT STOPS, 1.8 GPM FLOW
DW-1	DISHWASH ER	2"	2"	1-1/2"	-	1/2"	

DOMESTIC WATER HYDRAULIC CALCULATIONS

TYPE OF SYSTEM	FLUSH TANK	NOTE: ALL LOSSES SHOWN IN P.S.I.
PIPE LOSSES ARE BASED ON: COPPER PIPE AND FITTING		
MAXIMUM COLD WATER DEMAND:	133 FU	46 GPM
AVAILABLE PRESSURE (CITY STREET MAIN):		
LOSS THROUGH WATER METER:	NEW 2" WATER METER SIZE @	46 GPM
FALL THROUGH PRV-1	NEW 2" ZURN MODEL ZW209 SIZE @	46 GPM
LOSS THROUGH BFP ZURN 375		46 GPM
AVAILABLE PRESSURE AFTER PRV		80 PSI
RESIDUAL PRESSURE AT FIXTURE		25 PSI
STATIC LOSS BUILDING HEIGHT		11 PSI
ADDITIONAL LOSSES		36 PSI
AVAILABLE PRESSURE FOR FRICTION LOSS		44 PSI
TOTAL DEVELOPED LENGTH		300 FT
TOTAL DEVELOPED LENGTH INCLUSIVE OF 25% FOR FITTINGS		375 FT
ALLOWABLE FRICTION LOSS PER 100 FT		12 PSI
WATER VELOCITY NOT TO EXCEED 5.0 F.P.S		

WATER FIXTURE CALCULATIONS

FIXTURE	NUMBER OF EXISTING FIXTURES	NUMBER OF FIXTURES ADDED	X	FIXTURE UNITS	=	TOTAL FIXTURE
DISHWASHER	15	4	X	1.5	=	28.5
LAVATORY	15	4	X	1	=	19
WATER CLOSET	15	4	X	2.5	=	47.5
SHOWER	15	4	X	2	=	38
KITCHEN SINK	15	4	X	1.5	=	28.5
TOTAL FIXTURE UNIT						161.5

WASTE FIXTURE CALCULATIONS

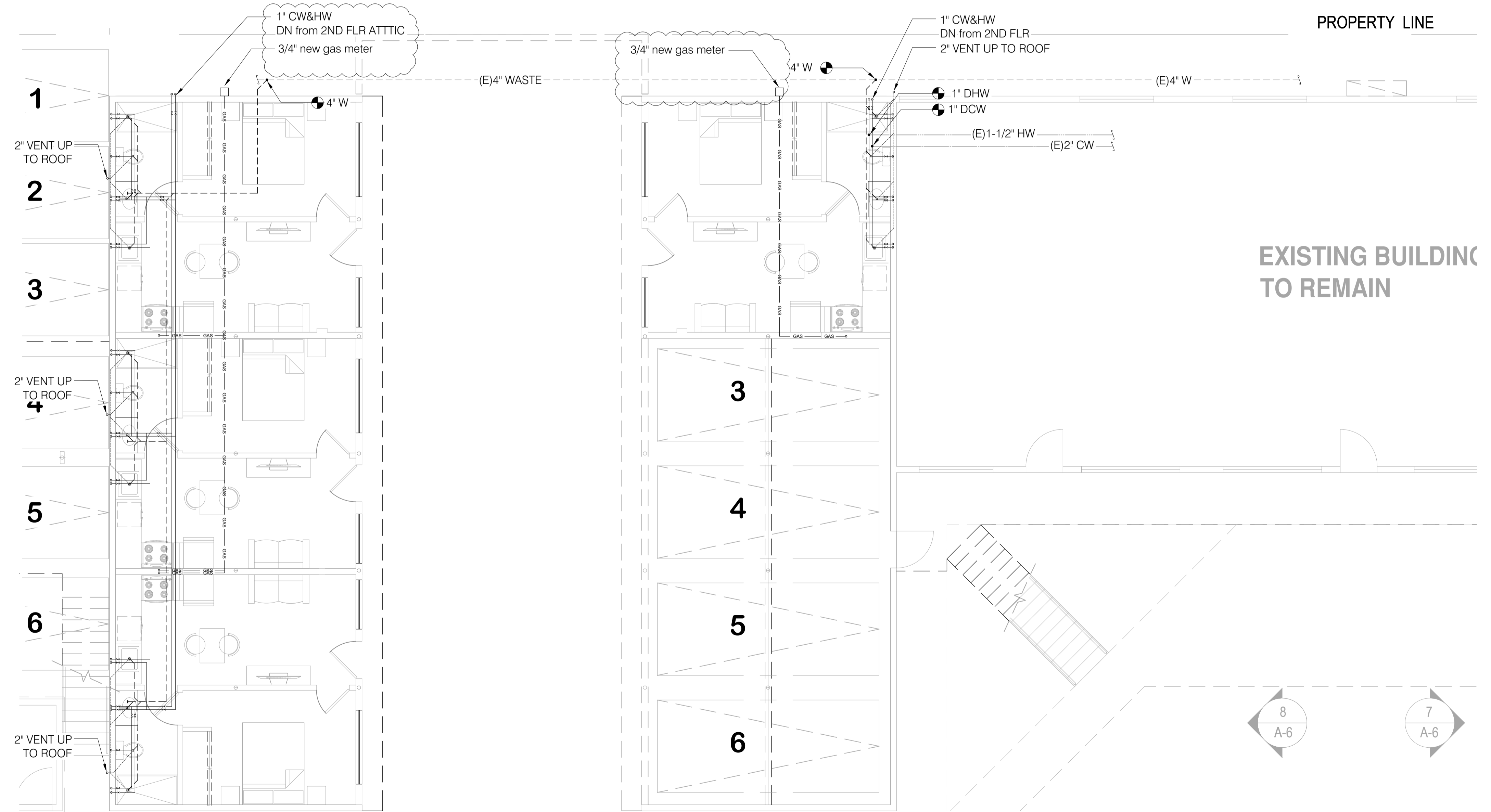
FIXTURE	NUMBER OF EXISTING FIXTURES	NUMBER OF FIXTURES ADDED	X	FIXTURE UNITS	=	TOTAL FIXTURE UNITS
DISHWASHER	15	4	X	2	=	38
LAVATORY	15	4	X	1	=	19
WATER CLOSET	15	4	X	3	=	57
SHOWER	15	4	X	2	=	38
KITCHEN SINK	15	4	X	2	=	38
TOTAL DRAINAGE FIXTURE UNIT						190

DOMESTIC COLD WATER PIPE SIZING FOR COPPER PIPE TYPE L
5 FPS MAX. VELOCITY MAX. FRICTION LOSS 12 PSI/100FT

PIPE SIZE	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6
GPM	-	-	-	-	-	-	-	-	-	-
FT	3	13	30	56	103	254	455	719	-	-
FU										

DOMESTIC HOT WATER PIPE SIZING FOR COPPER PIPE TYPE L
5 FPS MAX. VELOCITY MAX. FRICTION LOSS 12 PSI/100FT

PIPE SIZE	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6
GPM	-	-	-	-	-	-	-	-	-	-
FT	3	8	16	28	46	119	245	406	-	-
FU										



1 PLUMBING SITE PLAN

Scale 3/16" = 1'-0"
0 5' 10'

APPROVED
CITY OF RIVERSIDE
BUILDING & SAFETY DIVISION

REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES. SECOND FLOOR SHALL BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.

PERMIT: SP-2021-07077 DATE: 05/01/23

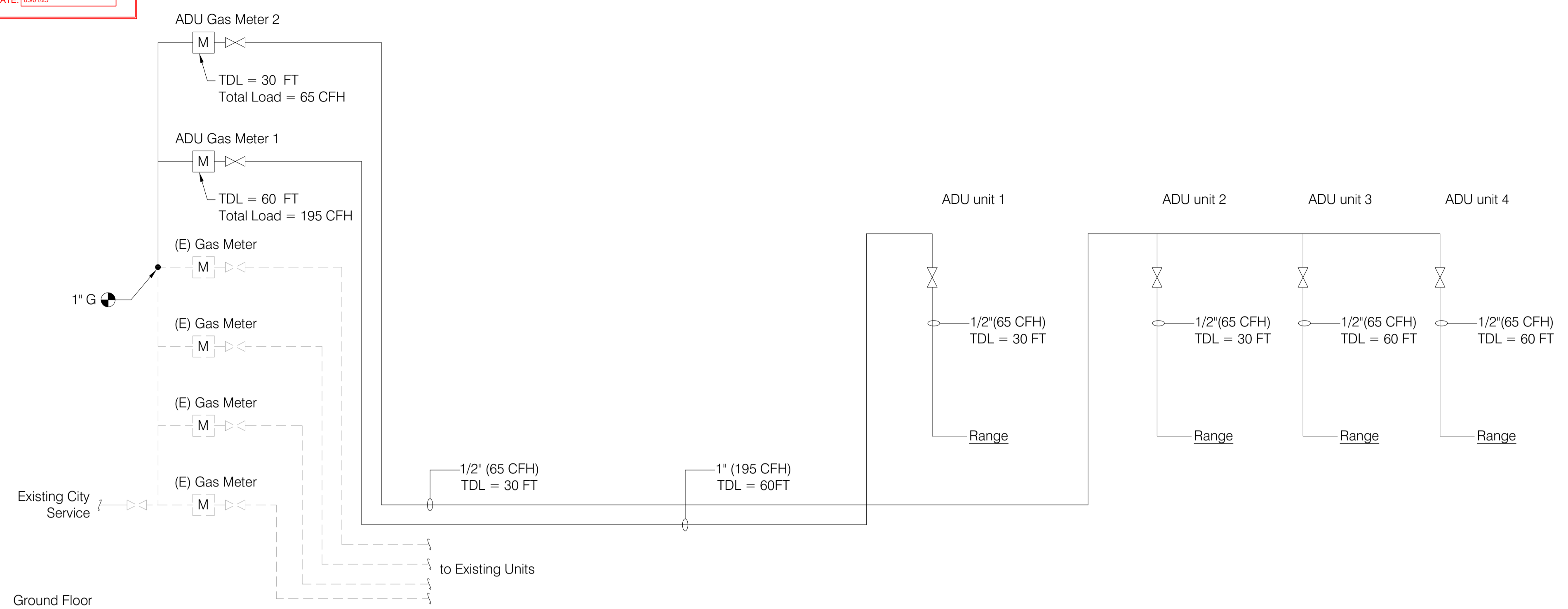


**TABLE 1716.2(1)
SCHEDULE 40 METALLIC PIPE (NPSA SA-TABLE 6.20)(1) 1**

NOMINAL SIZE (in.)	PIPE SIZE (in.)													
	CAPACITY IN CUBIC FEET OF GAS PER HOUR													
	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8		
1/2	172	360	678	1390	2090	4020	6400	11300	21100	41800	67600	139000	252000	399000
3/4	118	247	466	957	1430	2760	4400	7780	15000	28700	45500	95500	173000	275000
1	95	199	374	758	1150	2220	3520	6250	12000	23000	37000	76700	139000	220000
1 1/4	81	170	320	657	985	1960	3020	5350	10000	19700	31900	65600	119000	189000
1 1/2	72	151	284	583	873	1680	2680	4740	9060	17500	28300	59200	106000	167000
2	65	137	257	528	791	1520	2430	4290	8160	15800	25600	52700	95700	152000
2 1/2	60	126	237	486	728	1400	2230	3950	8050	14600	23600	48500	88100	139000
3	56	117	220	452	677	1300	2080	3670	7490	13600	22000	45100	81900	126000
3 1/2	52	110	207	424	635	1220	1950	3450	7030	12700	20600	42300	76900	122000
4	50	104	195	400	600	1160	1840	3260	6640	12000	19500	40000	72600	115000
4 1/2	44	92	173	355	532	1020	1630	2890	5890	10600	17200	35400	64300	102000
5	40	83	157	322	482	928	1480	2610	5330	9650	15600	32100	58300	92300
5 1/2	37	77	144	296	443	854	1360	2410	4910	8880	14400	29500	53600	84900
6	34	71	134	275	412	794	1270	2240	4560	8260	13400	27500	49900	79000
6 1/2	30	63	119	244	366	704	1120	1980	4050	7320	11900	24300	44200	70000
7	27	57	108	221	331	638	1020	1860	3670	6630	10700	22100	40100	63400
7 1/2	25	53	99	203	305	587	925	1650	3370	6100	10800	20300	36900	58400
8	23	49	92	189	283	546	870	1540	3140	5880	9190	18900	34300	54300
8 1/2	22	46	86	177	266	512	816	1440	2940	5330	8620	17300	32200	50900
9	21	43	82	168	251	484	773	1360	2780	5030	8150	16700	30400	48100
9 1/2	20	41	78	159	239	459	732	1290	2640	4780	7740	15900	29900	45700
10	19	39	74	152	228	438	699	1240	2520	4560	7380	15200	27500	43600
10 1/2	18	38	71	145	218	420	669	1180	2410	4360	7070	14500	26400	41800
11	17	36	68	140	209	403	643	1140	2320	4190	6790	14000	25300	40100
11 1/2	17	35	66	135	202	389	619	1090	2230	4040	6540	13400	24400	38600
12	16	34	63	130	195	375	598	1060	2160	3990	6320	13000	23600	37300
12 1/2	16	33	61	126	189	361	579	1020	2090	3780	6110	12600	22800	36100
13	15	32	59	122	183	352	561	992	2020	3660	5930	12200	22100	35000
13 1/2	15	31	58	118	178	342	545	963	1960	3550	5760	11800	21500	34000
14	14	30	56	115	173	333	530	937	1910	3460	5600	11500	20900	33100
14 1/2	14	28	53	109	164	316	503	890	1810	3280	5320	10900	19800	31400
15	13	27	51	104	156	301	480	860	1750	3150	5070	10400	18900	30000
15 1/2	13	26	49	100	150	289	460	833	1660	3000	4860	9980	18100	28700
16	12	25	47	96	144	277	442	781	1590	2880	4670	9590	17400	27600
16 1/2	11	24	45	93	139	267	426	752	1530	2780	4500	9240	16800	26600
17	11	23	44	90	134	258	411	727	1480	2680	4340	9020	16200	25600
17 1/2	11	22	42	86	130	250	398	703	1430	2590	4200	8630	15700	24800
18	10	22	41	84	126	242	386	682	1390	2520	4070	8370	15200	24100
18 1/2	10	21	40	81	122	235	375	662	1350	2440	3960	8130	14800	23400
19	10	21	40	81	122	235	375	664	1310	2380	3850	7910	14400	22700
20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1. Table entries are rounded to 3 significant digits.
2. NA means a item of size (N/A) (0.25 in. or less).

2016 CALIFORNIA PLUMBING CODE 227



1 GAS RISER DIAGRAM
NOT TO SCALE

JGBS60DEK
GE® 30" Free-Standing Gas Range

DIMENSIONS AND INSTALLATION INFORMATION (IN INCHES)

ELECTRICAL RATING: 120V, 60Hz, 15A

INSTALLATION INFORMATION: Before installing, consult installation instructions packed with product for current dimensional data.

JGBS60DEK
GE® 30" Free-Standing Gas Range

FEATURES AND BENEFITS

- 15,000 BTU burner - Delivers a wide range of heat output ideal for most cooking requirements.
- Precise Simmer burner - Delicate foods don't burn with low, even heat.
- Sealed cooktop burners - Contain spills and make cleaning quick and easy.
- Black matte steel grates - Enjoy a high-end look with a durable, matte coating.
- Standard clean oven - Smooth surface makes cleaning by hand easier.
- 4.8 cu. ft. oven capacity - Enough room to cook an entire meal at once.
- Flexible broiling - Use any sized pan under the broiler for maximum broil flexibility.
- Sabbath Mode
- Model JGBS60DEKBB - Black on black
- Model JGBS60DEKWW - White on white
- Model JGBS60DEKCC - Bisque on bisque

2 RANGE SPECIFICATION
NOT TO SCALE

8112 MAGNOLIA AVENUE
RIVERSIDE, CA 92504

SUBMITTAL:
PLAN CHECK SUBMITTAL
APRIL 2021

REVISIONS:

SCALE: AS NOTED

SHEET TITLE:

SHEET NUMBER:
P-4

APPROVED
 CITY OF RIVERSIDE
 BUILDING & SAFETY DIVISION

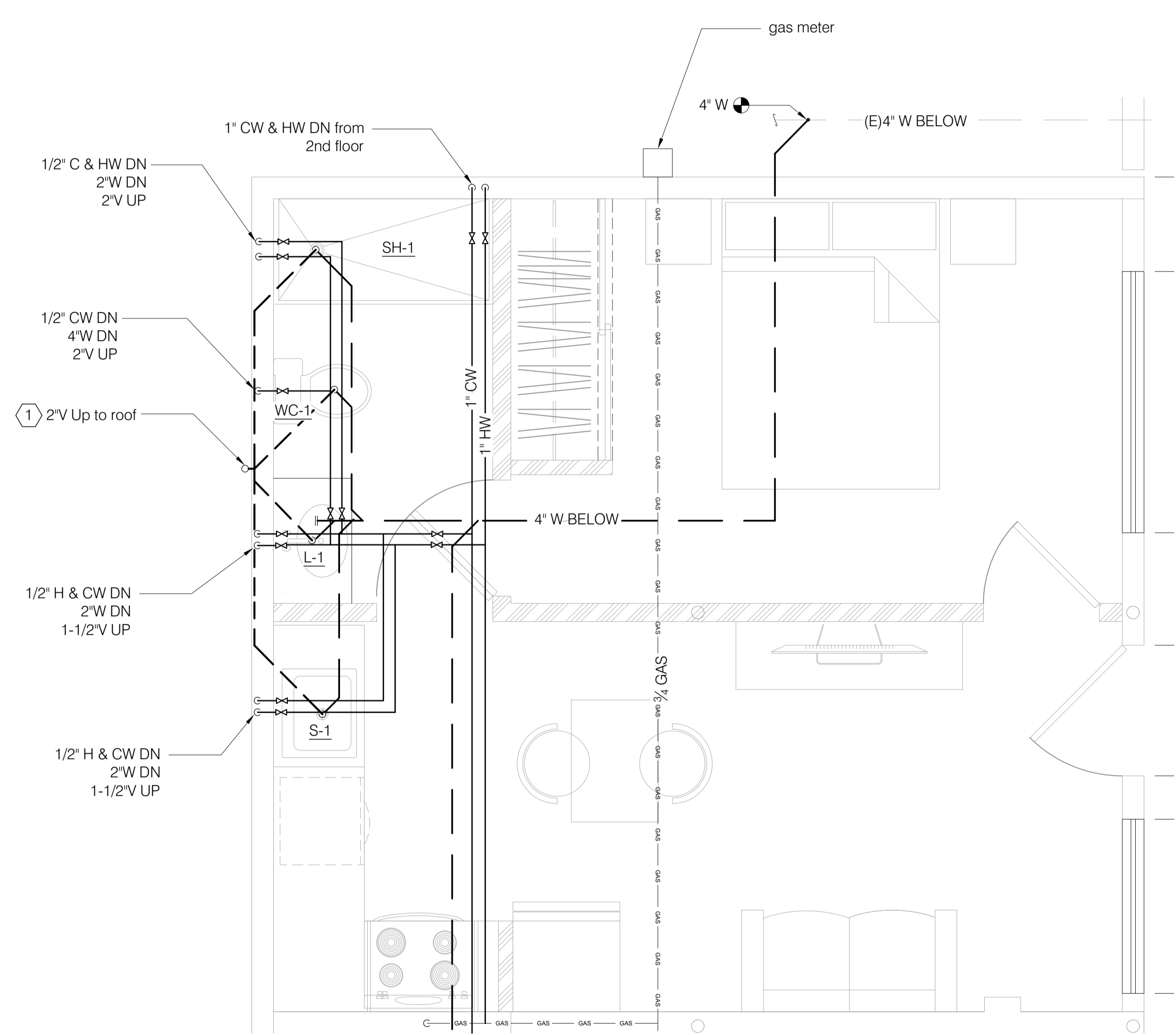
REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.

PERMIT: SP 2121-07077 DATE: 05/01/23

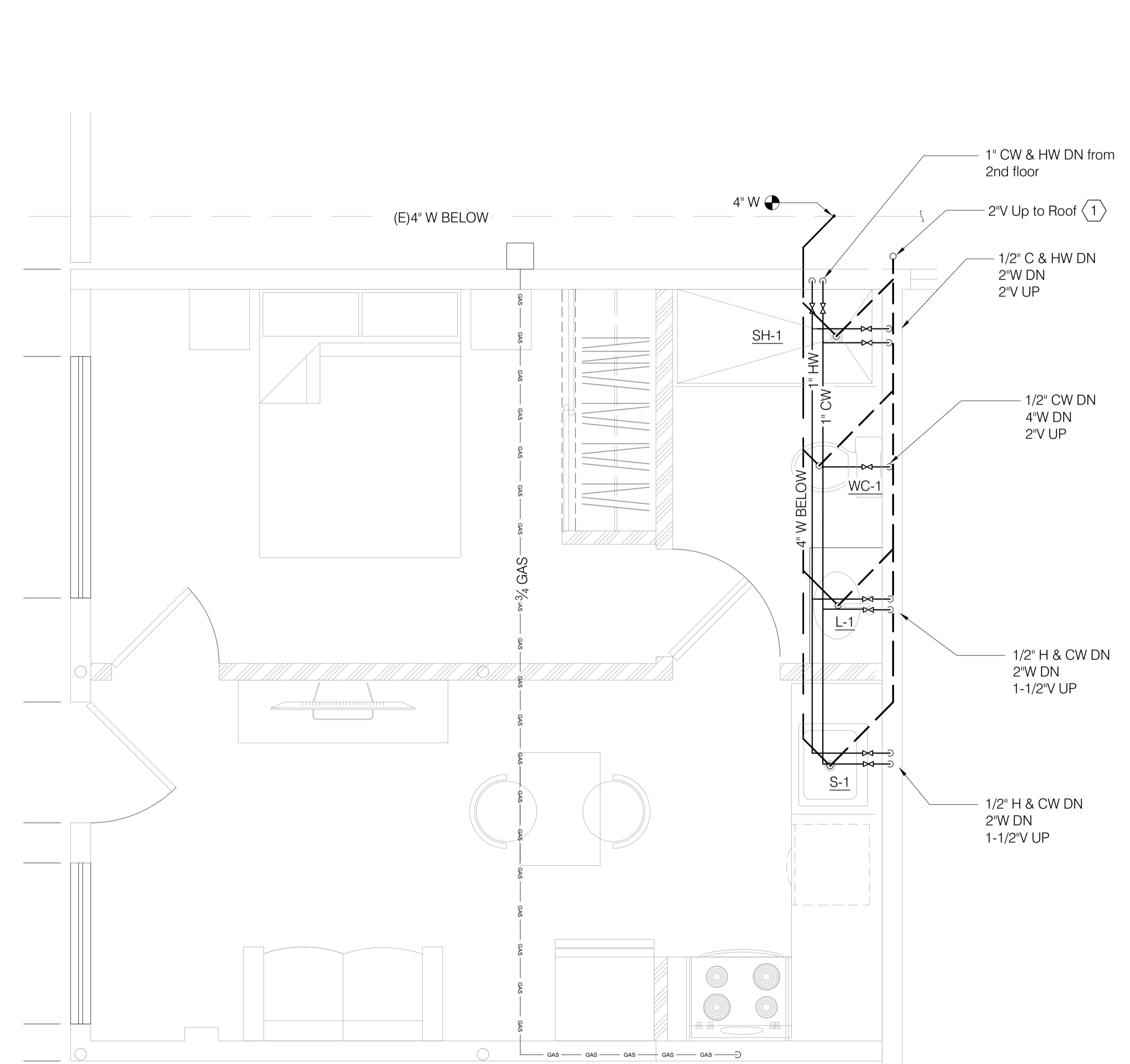


KEY NOTES:

① EACH VENT PIPE OR STACK SHALL EXTEND THROUGH ITS FLASHING AND SHALL TERMINATE VERTICALLY NOT LESS THAN 6 INCHES ABOVE THE ROOF NOR LESS THAN 1 FOOT FROM A VERTICAL SURFACE. EACH VENT SHALL TERMINATE NOT LESS THAN 10 FEET FROM, OR NOT LESS THAN 3 FEET ABOVE, AN OPENABLE WINDOW, DOOR, OPENING, AIR INTAKE, OR VENT SHAFT, OR NOT LESS THAN 3 FEET IN EVERY DIRECTION FROM A LOT LINE, ALLEY AND STREET EXCEPTED.



2 UNIT 2 PLUMBING PLAN
 Scale 1/2" = 1'-0"



1 UNIT 1 PLUMBING PLAN
 Scale 1/2" = 1'-0"

8112 MAGNOLIA AVENUE
 RIVERSIDE, CA 92504

SUBMITTAL:	PLAN CHECK SUBMITTAL APRIL 2021
REVISIONS:	
SCALE:	AS NOTED
SHEET TITLE:	
SHEET NUMBER:	P-2

APPROVED
 CITY OF RIVERSIDE
 BUILDING & SAFETY DIVISION

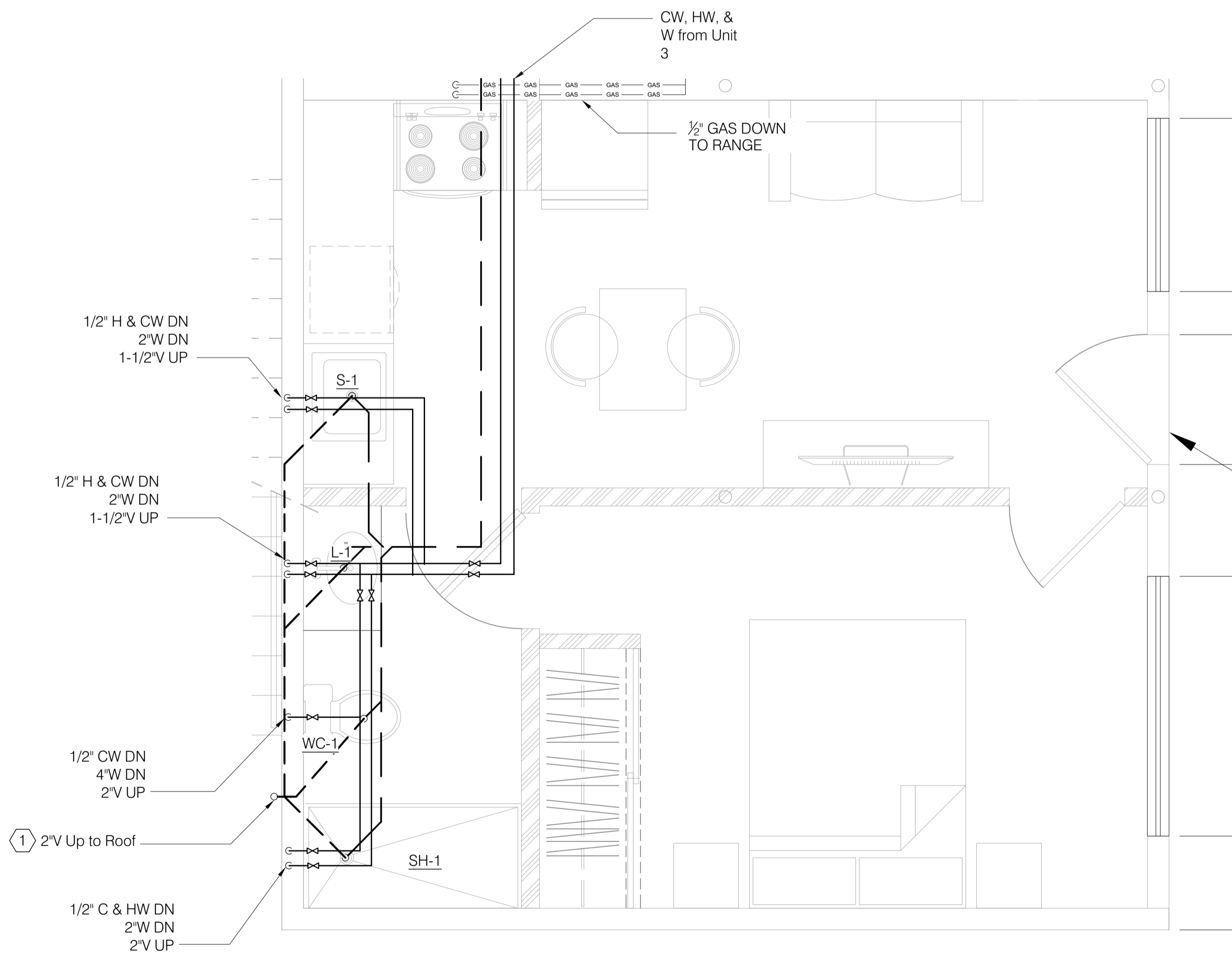
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PERMIT: SP 2421-07077 DATE: 05/01/23

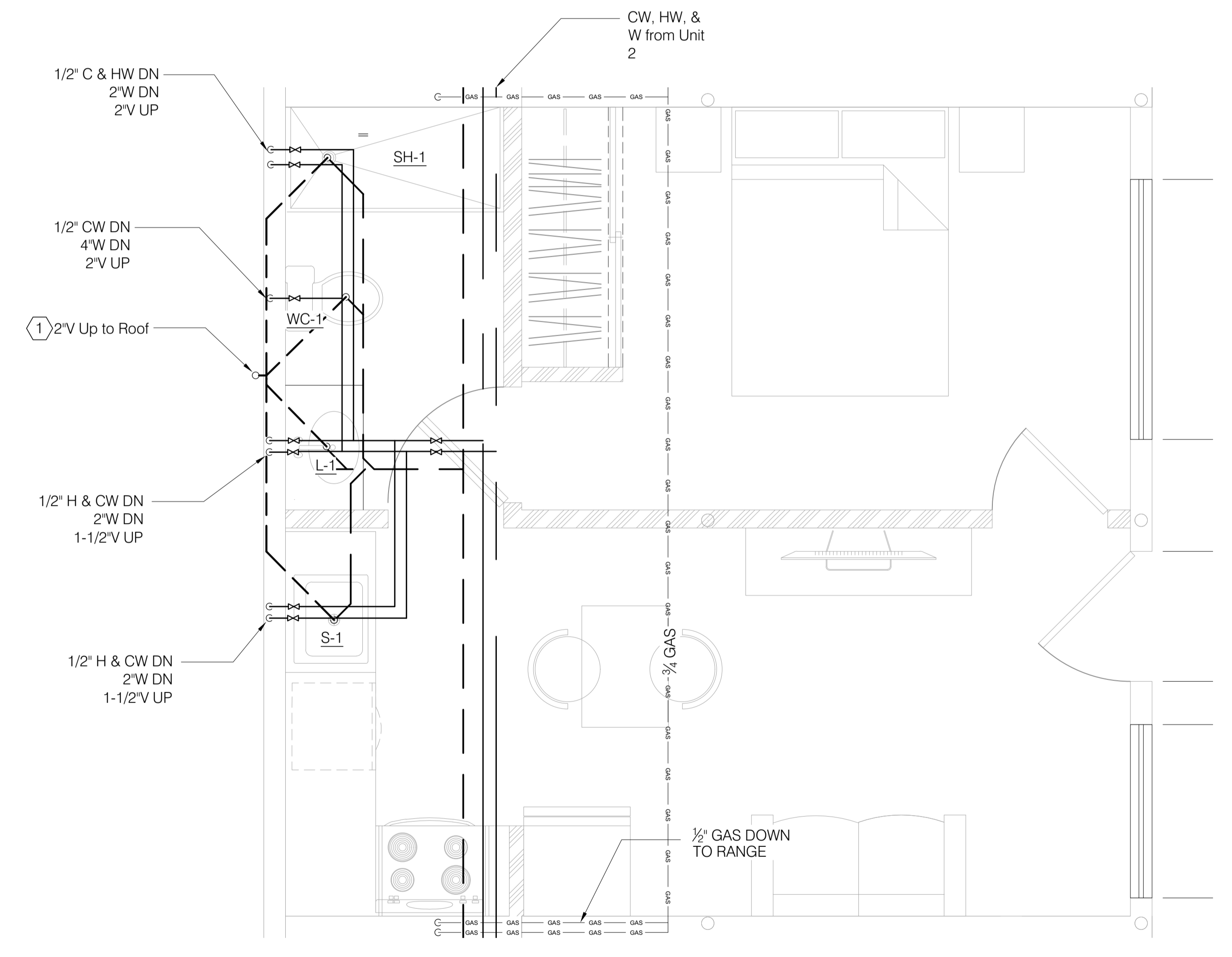


KEY NOTES:

- 1 EACH VENT PIPE OR STACK SHALL EXTEND THROUGH ITS FLASHING AND SHALL TERMINATE VERTICALLY NOT LESS THAN 6 INCHES ABOVE THE ROOF NOR LESS THAN 1 FOOT FROM A VERTICAL SURFACE. EACH VENT SHALL TERMINATE NOT LESS THAN 10 FEET FROM, OR NOT LESS THAN 3 FEET ABOVE, AN OPENABLE WINDOW, DOOR, OPENING, AIR INTAKE, OR VENT SHAFT, OR NOT LESS THAN 3 FEET IN EVERY DIRECTION FROM A LOT LINE, ALLEY AND STREET EXCEPTED.



2 UNIT 4 PLUMBING PLAN
 Scale 1/2" = 1'-0"



1 UNIT 3 PLUMBING PLAN
 Scale 1/2" = 1'-0"

8112 MAGNOLIA AVENUE
 RIVERSIDE, CA 92504

SUBMITTAL:	PLAN CHECK SUBMITTAL APRIL 2021
REVISIONS:	
SCALE:	AS NOTED
SHEET TITLE:	
SHEET NUMBER:	P-3

APPROVED
CITY OF RIVERSIDE
BUILDING & SAFETY DIVISION

REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.

PERMIT: **SP 2521-07077** DATE: **05/01/23**



8112 MAGNOLIA AVENUE
RIVERSIDE, CA 92504

A. MATERIALS

1. ALL MATERIALS SHALL BE NEW AND OF QUALITY AS SPECIFIED ON THE PLANS OR SPECIFICATIONS AND MUST CARRY THE UNDERWRITERS LABORATORIES APPROVAL COVERING THE PURPOSE FOR WHICH THEY ARE USED, IN ADDITION TO MEETING ALL REQUIREMENTS OF THE CURRENT APPLICABLE CODES AND REGULATIONS.

B. CONDUIT

- ALL WIRING SHALL BE INSTALLED IN LISTED METALLIC CONDUIT EXCEPT AS PERMITTED BELOW. RGS, WITH A 20 MIL PVC COATING WILL BE USED WHEN IN CONTACT WITH EARTH. IMC MAY BE USED IN INDOOR LOCATIONS NOT IN CONTACT WITH THE EARTH. EMT MAY BE USED IN INDOOR LOCATIONS NOT IN CONTACT WITH EARTH, NOT IN CONCRETE SLABS OR WALLS AND NOT SUBJECT TO DAMAGE. PVC MAY BE USED IN OR BELOW CONCRETE AND DIRECT BURIED IN EARTH. FLEXIBLE STEEL CONDUIT SHALL BE USED FOR INDOOR FINAL CONNECTIONS TO EQUIPMENT IN LENGTHS NOT TO EXCEED 72". LIQUID-TIGHT FLEXIBLE STEEL CONDUIT SHALL BE FOR OUTDOOR FINAL CONNECTIONS TO EQUIPMENT NOT TO EXCEED 36".
- WHERE CONDUIT ENTERS OUTLET BOXES, FIXTURES OR CABINETS, FIRMLY FASTEN WITH STEEL SET SCREW, COMPRESSION CONNECTORS, OR DOUBLE LOCKNUTS FOR GRC. ALL CONNECTIONS SHALL HAVE BUSHINGS OR INSULATED THROAT CONNECTORS. FIRMLY FASTEN CONDUIT TO THE BUILDING CONSTRUCTION. RUN EXPOSED CONDUIT PARALLEL TO THE BUILDING LINES, SUPPORTED BY APPROPRIATE HANGERS (UNISTRUT, T & B OR APPELTON, OR EQUAL).
- COVER METALLIC CONDUIT IN CONTACT WITH EARTH WITH POLYETHYLENE TAPED SPIRAL WRAPPED, 1/2 LAPPED TO PROVIDE 20 MIL THICKNESS. TAPE SHALL BE SCOTCH NO. 50 TAPE. CONDUIT AND DUCTS NOT UNDER BUILDINGS AND FEEDER DUCTS SHALL BE INSTALLED PER N.E.C. 300-5. MAKE JOINTS WITH COMPOUND TO BE WATERTIGHT.
- FITTINGS AND CONDUIT BODIES SHALL BE STEEL. NO DIECAST FITTINGS.
- CONDUIT SIZES SHALL BE AS REQUIRED BY CODE AND AS INDICATED OR SPECIFIED.
- ALL EMPTY CONDUIT SYSTEMS SHALL HAVE A NYLON PULL STRING TO FACILITATE INSTALLATION OF FUTURE WIRE.
- SCHEDULE 40 PVC CONDUIT SHALL BE PERMITTED UNDERGROUND WITH PROPER FITTINGS, ALL UL APPROVED AND CEMENTED JOINTS. PENETRATIONS THROUGH FLOOR SLABS AND BENDS GREATER THAN 22" SHALL BE WRAPPED RIGID GALVANIZED STEEL ELBOWS.
- CONDUITS AND OUTLETS SHALL BE CONCEALED WITH THE BUILDING STRUCTURE, EXCEPT THAT CERTAIN MOTOR AND LIGHTING FEEDER CONDUITS MAY BE RUN EXPOSED IN CERTAIN AREAS AS INDICATED ON THE DRAWINGS. CONDUIT SHOWN TO BE INSTALLED IN CABINETS, COUNTERS, AND CASEWORK SHALL BE RUN AS DIRECTED BY THE ARCHITECT.
- ALL CONDUIT SYSTEMS SHALL HAVE A CODE SIZED COPPER GROUND CONDUCTOR INCREASE CONDUIT SIZE AS REQUIRED.
- CONDUIT PENETRATION THROUGH ROOF SHALL HAVE ROOF FLASHING WITH CAULK TYPE COUNTER FLASHING SLEEVE. INSTALLATION SHALL BE WATERTIGHT.
- CONDUITS SHALL BE ROUTED SURFACE ON THE STRUCTURE, PARALLEL AND PERPENDICULAR TO THE STRUCTURE.

C. OUTLET, PULL, AND JUNCTION BOXES

- EACH SWITCH, LIGHT RECEPTACLE OR OTHER OUTLET SHALL BE PROVIDED WITH A CODE GAUGE GALVANIZED STEEL OUTLET BOX. JUNCTION AND PULL BOXES SHALL BE CODE GAUGE. GALVANIZED STEEL OUTLET BOXES SHALL BE OF THE ONE PIECE, KNOCKOUT TYPE, IN GENERAL 4" SQUARE WITH PLASTER RING. PLASTER RINGS SHALL BE SET TO PROVIDE NOT MORE THAN 1/8" FROM WALL SURFACE TO RING. IN NO CASE SHALL PLASTER RING PROJECT BEYOND SURFACE OF WALL. SINGLE GANG RINGS SIMILAR TO STEEL CITY 52050 SHALL BE USED FOR 4" BOXES IN UNFINISHED BRICK NUMBER 180 BOXES MAY BE USED FOR UNFINISHED MASONRY FLUSH WALL OUTLETS. CENTER ALL OUTLET BOXES IN BLOCK COURSE.
- BOXES INSTALLED IN POURED CEMENT FLOORS SHALL BE FLUSH TYPE CAST IRON OR STEEL WITH WATERTIGHT GASKETED COVERS. WHERE BOXES ARE INSTALLED IN FLOORS WITH TILE OR CARPET FLOOR COVERING, COVERS SHALL BE OF THE RECESSED TYPE TO ACCOMMODATE THE FLOOR COVERING.
- BOXES FOR TELEPHONE, COMPUTER, T.V., FIRE ALARM, SECURITY, AND SIMILAR SYSTEMS SHALL BE MINIMUM 4" SQUARE AND 2-1/8" DEEP.

D. PANEL BOARDS

- CIRCUIT BREAKER TYPE AS INDICATED ON DRAWINGS. UNLESS INDICATED OTHERWISE, ALL PANELS SHALL HAVE PANEL BOARD TYPE CONSTRUCTION WITH BOLT-ON CIRCUIT BREAKERS FOR 3Ø PANELS. MANUFACTURERS SHALL BE GENERAL ELECTRIC, SQUARE D, SIEMENS, CUTLER-HAMMER OR EQUAL WITH VOLTAGE, SIZES, AND RATINGS AS INDICATED ON DRAWINGS.
- THE CIRCUIT BREAKERS SHALL BE OPERABLE IN ANY POSITION AND BE REMOVABLE FROM THE FRONT OF THE PANEL BOARD WITHOUT DISTURBING THE ADJACENT UNITS. BRANCH BREAKERS SHALL BE OF SUCH DESIGN THAT COMBINATION OF SINGLE-POLE, DOUBLE-POLE, AND THREE-POLE BREAKERS CAN BE ASSEMBLED ON THE SAME PANEL. EACH BRANCH CIRCUIT SHALL BE CLEARLY NUMBERED. BRANCH AND MAIN TERMINALS SHALL BE OF THE SOLDERLESS TYPE. HANDLE TIES TO FORM MULTI-POLE BREAKERS NOT ACCEPTABLE.
- WIRE TERMINATION FOR PANEL BOARDS AND CIRCUIT BREAKERS SHALL BE LISTED AS SUITABLE FOR 75 DEGREES C.
- PROVIDE A TYPED CIRCUIT INDEX BEHIND CLEAR PLASTIC COVER ON INSIDE OF DOOR. INFORMATION SHALL INCLUDE ROOM AND TYPE LOAD SERVED. ALL CIRCUIT BREAKERS SHALL BE IDENTIFIED, INCLUDING SPARES. INDEX CARD FRAME SHALL BE METAL, SECURED TO DOOR.
- WHERE PANEL BOARDS ARE INSTALLED FLUSH WITH THE WALLS, EXTEND EMPTY CONDUITS FORM THE PANEL BOARD TO AN ACCESSIBLE SPACE ABOVE OR BELOW. PROVIDE 3/4" (MINIMUM SIZE) CONDUIT FOR EVERY THREE SINGLE SPARE CIRCUIT BREAKERS OR SPACE OR EQUIVALENT MULTI-POLE ARRANGEMENT, OR FRACTION THEREOF, BUT NOT LESS THAN TWO CONDUITS FOR EACH PANEL.
- PANEL BOARDS TO BE PROVIDED WITH COPPER BUSSING ONLY.
- LOAD CENTERS SHALL NOT BE ALLOWED UNLESS NOTED OTHERWISE.
- ALL NEW PANELBOARDS SHALL COMPLY WITH NEC ARTICLE 110.16. EQUIPMENT MANUFACTURERS SHALL PROVIDE WARNING LABELS FOR ALL PANELBOARDS, GENERATORS, AUTOMATIC TRANSFER SWITCHES, ETC TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICE, OR MAINTENANCE OF THE EQUIPMENT.

E. WIRES

- CONDUCTOR SIZES SHOWN ON THE DRAWINGS ARE BASED ON COPPER WIRE. UNLESS OTHERWISE SPECIFIED, ALL WIRE SHALL BE TYPE XHHW FOR FEEDERS OR BRANCH CIRCUITS LARGER THAN 4 AWG. TYPE THHN/THWN INSULATION FOR FEEDERS AND BRANCH CIRCUITS 4 AWG AND SMALLER. ALL BRANCH CIRCUIT WIRING SHALL BE COPPER. SERVICE AND PANEL FEEDERS #1/0 AND LARGER MAY BE ALUMINUM, PROVIDED THE CONDUCTOR SIZES ARE INCREASED FOR EQUAL OR GREATER AMPACITY AND EQUAL OR LESS EQUIVALENT VOLTAGE DROP. INCREASE CONDUIT SIZE AS REQUIRED. THE WIRES SHALL BE MARKED WITH COLOR TO SIMPLIFY CIRCUIT IDENTIFICATION. UNLESS OTHERWISE REQUIRED BY LOCAL ORDINANCES GROUND WIRES SHALL BE GREEN, NEUTRAL WIRES SHALL BE 120V- WHITE, 277V- GRAY, AND LIVE WIRES 208Y/120V AND 120/240 SHALL BE BLACK (PHASE A), RED (PHASE B), AND BLUE (PHASE C), FOR 480Y/277V CIRCUITS, THE COLOR CODE SHALL BE BROWN (PHASE A), ORANGE (PHASE B), AND YELLOW (PHASE C). THE WIRE SHALL BE 12 AWG UNLESS OTHERWISE INDICATED. CIRCUIT SHALL BE LABELED IN EACH J-BOX.
- WHERE COOPER WIRE IS USED, COOPER CONDUCTOR MATERIAL SHALL COMPLY WITH N.E.C. 310-14 AND ALL CONNECTIONS AND TERMINATIONS SHALL BE MACHINE COMPRESSION TYPE EQUAL TO BURNDY "HI PLUG" OR "MACADAPT", NO EXCEPTIONS.
- NO WIRE SHALL BE INSTALLED IN THE CONDUIT SYSTEM UNTIL THE CONDUIT SYSTEM IS COMPLETE. USE MINERALAC NO. 100 OR EQUIVALENT AS A LUBRICANT TO FACILITATE THE INSTALLATION OF THE CONDUCTORS IN THE CONDUIT SYSTEM.
- SPLICES IN EXTERIOR PULL BOXES AND MANHOLES SHALL BE WEATHERPROOF USING "SCOTCHCAST" SPLICE KIT OR APPROVED EQUAL. SEAL ENDS OF CONDUITS AND DUCTS WITH "DUCTSEAL" OR APPROVED EQUAL.
- PROVIDE SOLID CONDUCTOR FOR 12 AWG AND SMALLER.

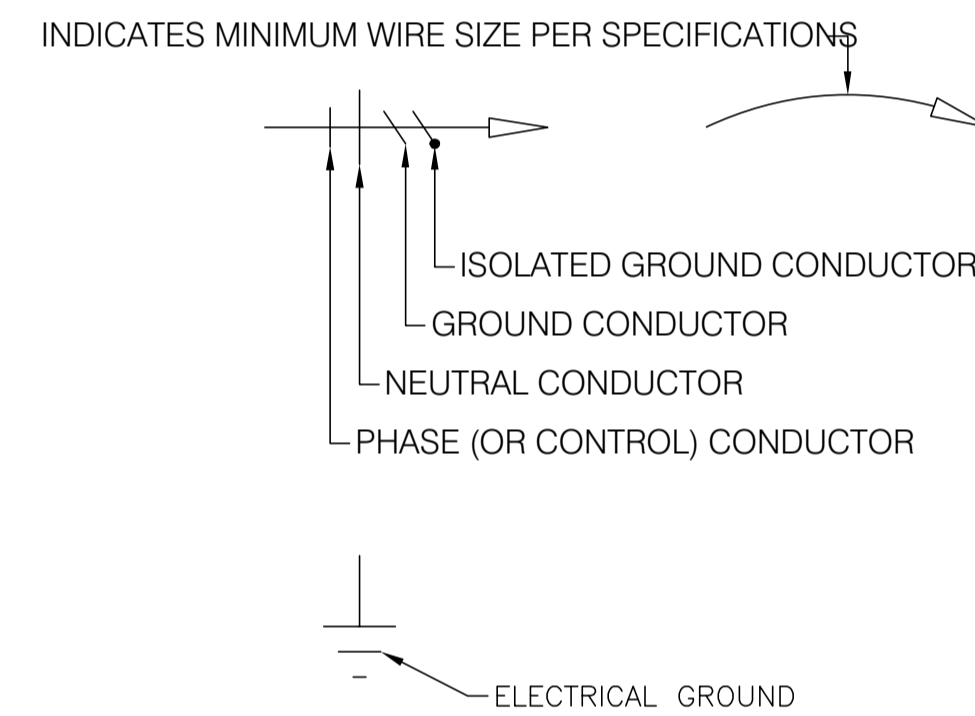
F. SYSTEM GROUNDING

- GROUNDING SHALL COMPLY WITH REQUIREMENTS OF ARTICLE 250. ALL EXPOSED NONCURRENT CARRYING METALLIC PARTS OF ELECTRICAL EQUIPMENT, METALLIC RACEWAY SYSTEMS, METALLIC CABLE ARMOR, GROUNDING CONDUCTOR OF NONMETALLIC SHEATHED CABLES, GROUNDING CONDUCTOR IN NONMETALLIC RACEWAYS, AND GROUNDED CONDUCTORS OF THE WIRING SYSTEM SHALL BE GROUNDED.
- GROUNDING CONDUCTOR (NEUTRAL) OF THE WIRING SYSTEM SHALL BE CONNECTED TO THE SYSTEM GROUNDING CONDUCTOR AT A SINGLE PLACE IN EACH SYSTEM BY REMOVABLE BONDING JUMPERS, SIZED ACCORDING TO THE APPLICABLE PROVISIONS OF THE NATIONAL ELECTRICAL CODE. THE GROUNDED CONDUCTOR (NEUTRAL) TO THE GROUNDING CONDUCTOR CONNECTION SHALL BE LOCATED IN THE ENCLOSURE FOR THE SYSTEMS OVERCURRENT PROTECTION OR WHERE OTHERWISE INDICATED ON THE PLANS OR SPECIFICATIONS.
- A GROUND BUS SEPARATE FROM THE NEUTRAL BUS SHALL BE PROVIDED IN ALL SWITCHBOARDS AND PANELBOARDS. GROUND BUSS SHALL BE RETORQUED(CHECKED) PRIOR TO ENERGIZING EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.
- GROUND BUSES AND NEUTRAL BUSES IN ALL DISTRIBUTION PANELS, SWITCHBOARDS, PANELBOARDS, AND THOSE PROVIDED IN ANY EQUIPMENT SHALL BE ISOLATED EXCEPT WHERE REQUIRED TO BE CONNECTED AS SPECIFIED ABOVE FOR THE SERVICE ENTRANCE AND IN TRANSFORMER TERMINAL COMPARTMENTS.
- WHEN INDICATED ON THE DRAWINGS, EQUIPMENT GROUNDING CONDUCTORS SHALL BE EXTENDED FROM THE GROUND BUS IN THE DISTRIBUTION EQUIPMENT TO THE RECEPTACLE, FIXTURE OR DEVICE LUGS WHERE THEY ARE PROVIDED. WHERE LUGS ARE NOT PROVIDED, EQUIPMENT GROUNDING CONDUCTORS SHALL BE CONNECTED TO EQUIPMENT ENCLOSURES. THE CONNECTIONS SHALL BE ARRANGED SUCH THAT REMOVAL OF THE RECEPTACLE, EQUIPMENT GROUND CONDUCTORS, OR GROUND JUMPERS FROM GROUND BUSING SHALL NOT AFFECT THE GROUND SYSTEM.
- RACEWAYS MAY NOT BE USED AS A GROUNDING CONDUCTOR FOR POWER AND LIGHTING CIRCUITS. ALL CONDUIT SHALL HAVE SEPARATE CODE SIZED GREEN GROUND WIRE INSTALLED IN THE CONDUIT TO INSURE A CONTINUOUS GROUNDING PATH.
- IN INACCESSIBLE LOCATIONS, MAKE CONNECTIONS BY EXOTHERMIC WELD PROCESS.
- IN ACCESSIBLE LOCATIONS, CONNECTIONS SHALL BE MADE WITH BOLTED THROUGH, APPROVED SOLDERLESS BRONZE GROUNDING DEVICES.
- BOND TOGETHER METAL SIDING NOT ATTACHED TO GROUNDED STRUCTURE BOND TO GROUND.

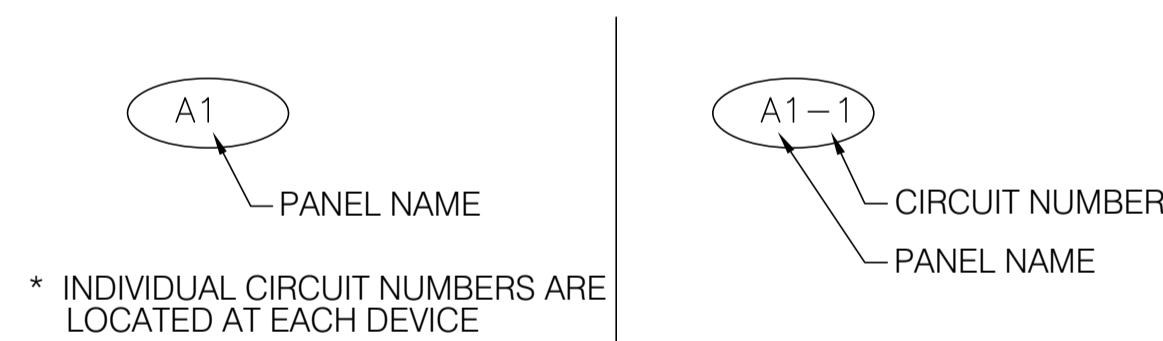
GENERAL NOTES

- ALL 120-VOLT, SINGLE PHASE, 15- AND 20-AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS OR DEVICES INSTALLED IN DWELLING UNIT KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECT BY A LISTED COMBINATION-TYPE ARC-FAULT CIRCUIT INTERRUPTER, INSTALLED TO PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT. (CEC 210.12(A) ALTERNATIVELY AREAS MAY BE PROTECTED BY MEANS DESCRIBED IN 210.12(A)(2) THROUGH (6).
- IN DWELLING UNITS IN ALL AREAS SPECIFIED IN 210.52, ALL 15- AND 20-AMPERE, 125- AND 250-VOLT NONLOCKING-TYPE RECEPTACLES SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES. (CEC 406.12)
- ALL 125-VOLT, SINGLE PHASE, 14- AND 20-AMPERE RECEPTACLES INSTALLED IN BATHROOMS, GARAGES, OUTDOORS, CRAWL SPACES, UNFINISHED PORTIONS OR AREAS OF THE BASEMENT, KITCHENS, SINKS, BOATHOUSES, BATHTUBS OR SHOWER STALLS, AND LAUNDRY AREAS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL. (CEC 210.8(A)) THE GROUND-FAULT CIRCUIT INTERRUPTER SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION. (CEC 210.8)
- AT LEAST ONE 120-VOLT, 20-AMPERE BRANCH CIRCUIT SHALL BE PROVIDED TO SUPPLY THE BATHROOM RECEPTACLE OUTLETS. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS. (CEC 210.11(C)(3))
- IN BATHROOMS, GARAGES, LAUNDRY ROOMS AND UTILITY ROOMS, AT LEAST ONE LUMINAIRE IN EACH OF THESE SPACES SHALL BE CONTROLLED BY AN OCCUPANCY OR VACANCY SENSOR PROVIDING AUTOMATIC-OFF FUNCTIONALITY. IF AN OCCUPANT SENSOR IS INSTALLED, IT SHALL BE INDIVIDUALLY CONFIGURED TO MANUAL-ON OPERATION USING THE MANUAL CONTROL REQUIRED UNDER SECTION 150.0(K)2C. (CEC 150.0(D)1)
- ALL LIGHT SOURCES INSTALLED IN CEILING RECESSED DOWNLIGHT LUMINAIRES MUST BE HIGH EFFICACY AND CERTIFIED TO THE COMMISSION AS HIGH EFFICACY LIGHT SOURCES IN ACCORDANCE WITH REFERENCE JOINT APPENDIX JA8 AND MARKED AS REQUIRED BY JA8. (CEC TABLE 150.0-A) ADDITIONALLY, LUMINAIRES RECESSED INTO CEILING SHALL CONFORM TO REQUIREMENTS OF 150.0(D)1C:
 - LISTED, AS DEFINED IN SECTION 100.1 FOR ZERO CLEARANCE INSULATION CONTACT (IC) BY UL;
 - HAVE A LABEL THAT CERTIFIES THE LUMINAIRE IS AIRTIGHT WITH AIR LEAKAGE LESS THAN 2.0 CFM AT 75 PASCALS WHEN TESTED IN ACCORDANCE WITH ASTM E283;
 - BE SEALED WITH A GASKET OR CAULK BETWEEN THE LUMINAIRE HOUSING AND CEILING, AND HAVE ALL AIR LEAK PATHS BETWEEN CONDITIONED AND UNCONDITIONED SPACES SEALED WITH A GASKET OR CAULK;
 - FOR LUMINAIRES WITH HARDWIRED BALLASTS OR DRIVERS, ALLOW BALLAST OR DRIVER MAINTENANCE AND REPLACEMENT TO BE READILY ACCESSIBLE TO BUILDING OCCUPANTS FROM BELOW THE CEILING;
 - SHALL NOT CONTAIN SCREW BASE SOCKETS.

TYPICAL WIRING DESIGNATIONS

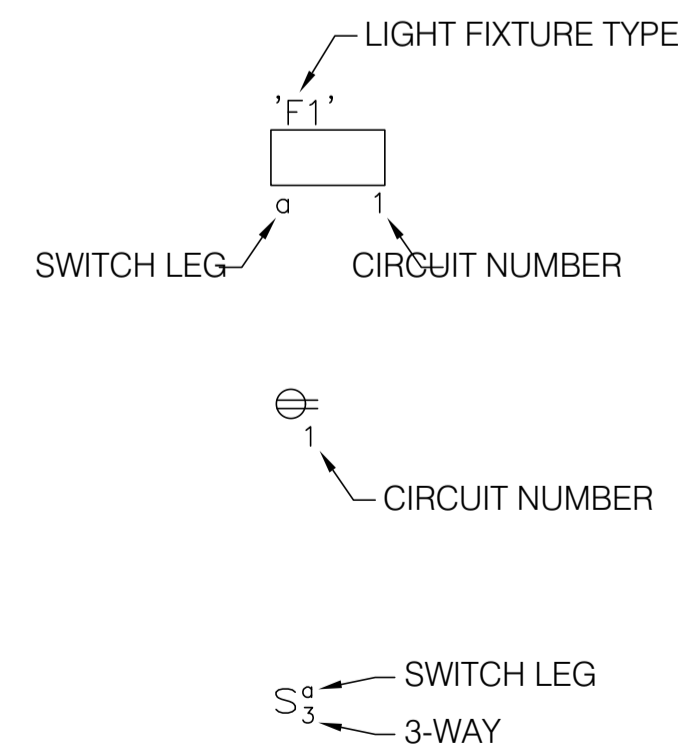


ROOM CIRCUIT DESIGNATIONS



* INDIVIDUAL CIRCUIT NUMBERS ARE LOCATED AT EACH DEVICE

TYPICAL DEVICE DESIGNATIONS



SWITCHES

- S SWITCH, SINGLE POLE
- S₂ SWITCH, DOUBLE POLE
- S₃ SWITCH, THREE WAY
- S₄ SWITCH, FOUR WAY
- S_K SWITCH, KEY OPERATED
- S_P SWITCH, WITH PILOT LIGHT
- S_{WP} SWITCH, WEATHERPROOF
- S_X SWITCH, EXPLOSIONPROOF
- S_D SWITCH, DIMMER

PANELS

- ▴ PANEL, FLUSH
- ▾ PANEL, SURFACE
- CONTROL PANEL (AS NOTED), FLUSH
- ▭ CONTROL PANEL (AS NOTED), SURFACE

RECEPTACLES AND OUTLETS

- ⊕ DUPLEX RECEPTACLE
- ⊕ DOUBLE DUPLEX (QUAD) RECEPTACLE
- ⊕ ISOLATED GROUND DUPLEX RECEPTACLE
- ⊕ ISOLATED GROUND DOUBLE DUPLEX (QUAD) RECEPTACLE
- ⊕ GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE
- ⊕ DOUBLE DUPLEX (QUAD) GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
- ⊕_{WP} GROUND FAULT CIRCUIT INTERRUPTER/ WEATHERPROOF DUPLEX RECEPTACLE
- ⊕ SINGLE RECEPTACLE
- ⊕ FLOOR OUTLET
- ⊕ SPECIAL OUTLET OR EQUIPMENT CONNECTION (AS NOTED)
- DROP CORD (AS NOTED)
- ▣ POWER POLE

SUBMITTAL:
**PLAN CHECK SUBMITTAL
APRIL 2021**

REVISIONS:

SCALE: **AS NOTED**

SHEET TITLE:

SHEET NUMBER:

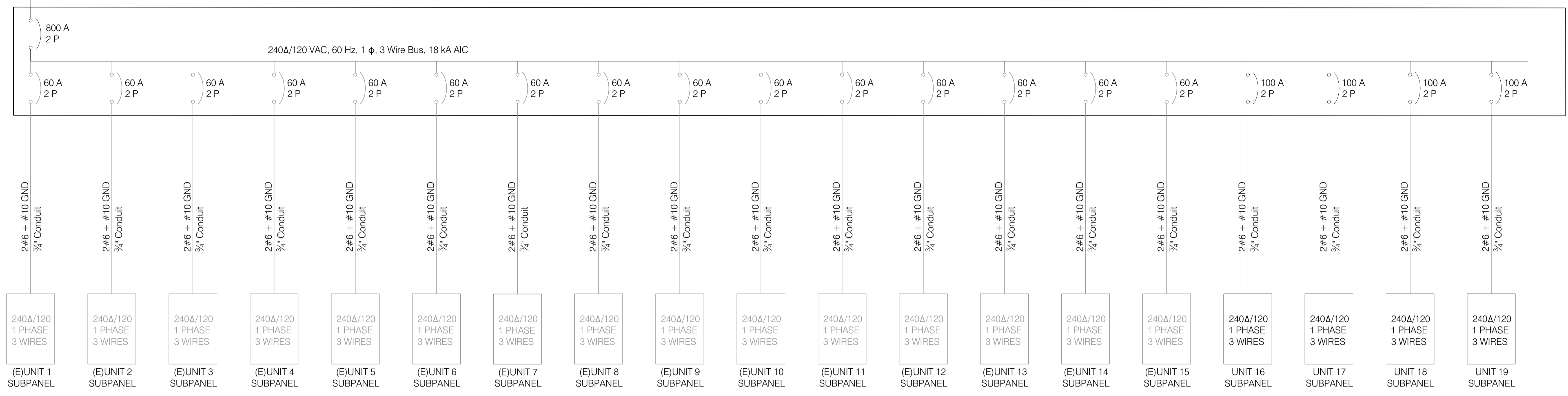
APPROVED
 CITY OF RIVERSIDE
 BUILDING & SAFETY DIVISION
 From City Power

REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT A PERMIT.

PERMIT: RP 2421-07077 DATE: 05/01/2021



NOTES:
 1. RESIDENTIAL LOADCENTER - TYPE HOM BREAKERS (10 KAIC) - SERIES RATED @ 65,000 AIC MANUFACTURERE TO PAINT UNIT LOADCENTER WHITE.



CEIB Residential Load Calculation Worksheet #5
 (Revised 07/24/16)

Central Electric Inspection Bureau

STEP 1
 (Required loads for dwelling units)

18000	sq. ft. @ 3 watts sq. ft. (Total all units)	54000	watts
38	Small Appliance Circuits @ 1500 watts ea.	57000	watts
6	Laundry Circuit(s) @ 1500 watts ea.	9000	watts
		120000	watts

STEP 2
 List All Appliance Loads (Nameplate Ratings in watts) (Volts X Amps = Watts):

19	Ranges, Cooktops, Ovens	TOTAL of ALL units	15200	watts
0	Electric Water Heaters	TOTAL of ALL units	0	watts
0	Electric Clothes Dryers - See *	TOTAL of ALL units	0	watts
6	Gas Clothes Dryer Motors	TOTAL of ALL units	1800	watts
19	Dishwashers	TOTAL of ALL units	22800	watts
19	Disposals	TOTAL of ALL units	15200	watts
19	Microwave	TOTAL of ALL units	28500	watts
19	Refrigerator	TOTAL of ALL units	28500	watts
	Other Appliances	TOTAL of ALL units	0	watts
	Other Appliances	TOTAL of ALL units	0	watts
	Other Appliances	TOTAL of ALL units	0	watts
	Other Appliances	TOTAL of ALL units	0	watts
	Other Appliances	TOTAL of ALL units	0	watts
		112000	watts	

STEP 3
 List All Other Loads (Nameplate Ratings - in watts) (Volts X Amps = Watts):
 (Examples: Whirlpool motors, attic fans, garage door openers, swimming pool equipment, sump pumps, etc.)

	Other Load	TOTAL of ALL units	0	watts
	Other Load	TOTAL of ALL units	0	watts
	Other Load	TOTAL of ALL units	0	watts
	Other Load	TOTAL of ALL units	0	watts
	Other Load	TOTAL of ALL units	0	watts
	Other Load	TOTAL of ALL units	0	watts
	Other Load	TOTAL of ALL units	0	watts
	Other Load	TOTAL of ALL units	0	watts
	Other Load	TOTAL of ALL units	0	watts
	Other Load	TOTAL of ALL units	0	watts
	Other Load	TOTAL of ALL units	0	watts
		0	watts	

STEP 4
 Compute the HVAC load and enter the LARGER of these air-conditioning or space heating loads.

ENTER TOTAL OF ALL UNITS:

⊙	Air Conditioning Load (Volts X Amps = Watts) (Combined nameplate ratings of ALL A/C compressors plus ALL blower motors)	20520	watts
○	Electric Space Heating Load (Volts X Amps = Watts) (ALL central electric furnaces, electric baseboard heaters, ceiling radiant heat, etc.)		watts
○	Heat Pump with Central Electric Furnace (Volts X Amps = Watts) (Combined nameplate ratings of ALL heat pump compressors plus ALL electric furnaces)		watts
		20520	watts

STEP 5
 Enter total of all loads as determined by Steps 1 through 4

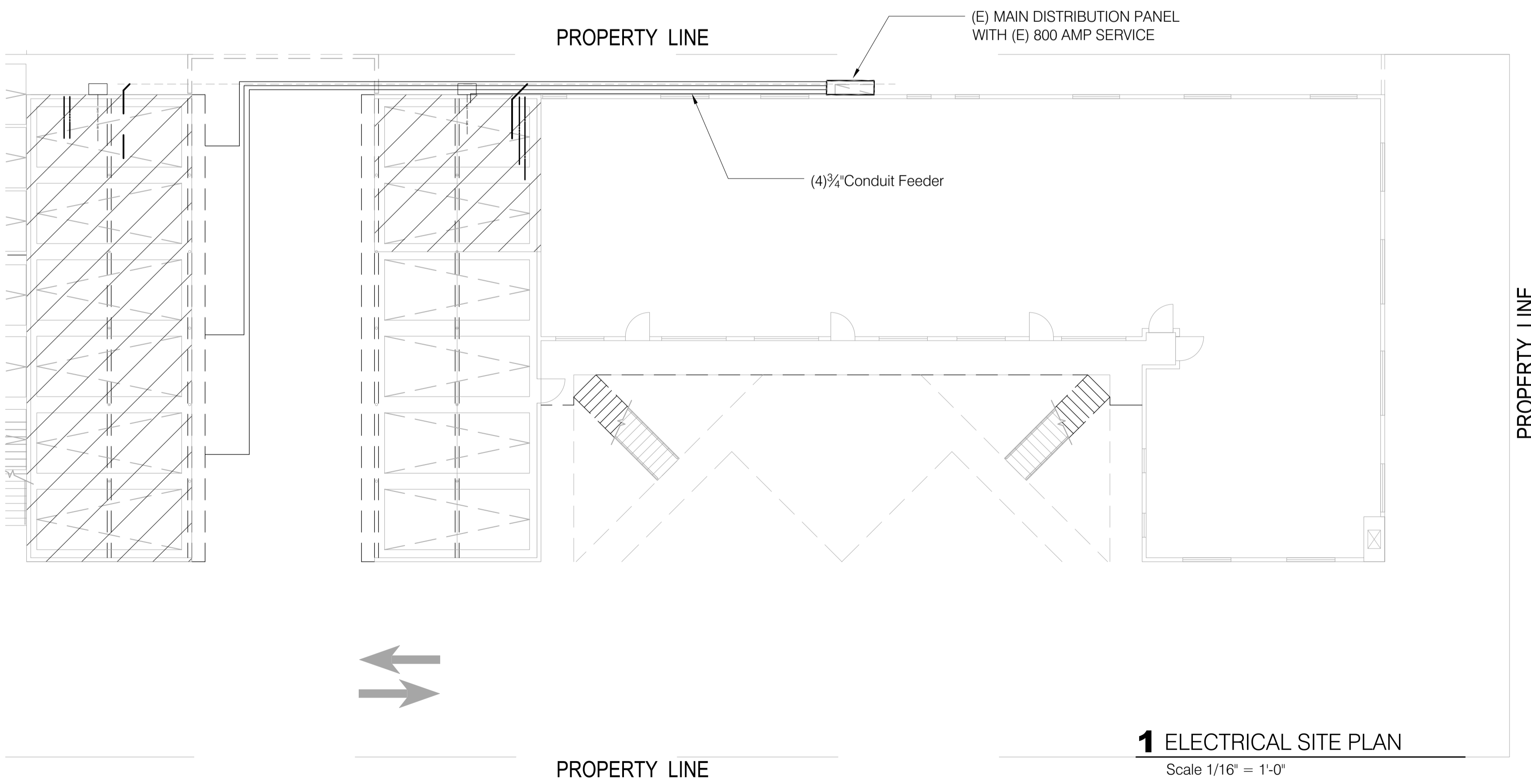
252520 watts

STEP 6
 Compute the minimum size service required:

Total Watts (from step 5)	252520	watts	÷	Service Voltage	240	volts	=	Total Amps	1052.17	amps
Multiply Total Amps by 0.45 (45%) =										
Total Amps	1052.17	amps	×	0.45 percent (45%)			=	Dwelling Units Demand Amps	473.48	amps

STEP 7
 Compute the minimum size service required:

Dwelling Units Demand Amps	473.48	amps	+	House Load Amps	0.00		=	Minimum Service Ampacity	473.48	amps
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1 ELECTRICAL SITE PLAN
 Scale 1/16" = 1'-0"
 0 5' 10'

8112 MAGNOLIA AVENUE
 RIVERSIDE, CA 92504

SUBMITTAL:
PLAN CHECK SUBMITTAL
 APRIL 2021

REVISIONS:

SCALE: AS NOTED

SHEET TITLE:

SHEET NUMBER:
E-2

APPROVED
 CITY OF RIVERSIDE
 BUILDING & SAFETY DIVISION

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PERMIT: SP-2021-07077 DATE: 05/01/23



- NOTES:
- SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS IN EACH UNIT SHALL BE INTERCONNECTED TO SOUND AT THE SAME TIME. PROVIDE 1/2" C - 3#14 CU THWN BETWEEN SMOKE DETECTORS.
 - RECEPTACLES TO SERVE COUNTERTOP SURFACE IN KITCHEN AND BATHROOM SHALL BE GFI TYPE. DISHWASHER RECEPTACLES TO BE GFI.
 - THE LIGHTINGS FIXTURES IN THE CLOSETS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 410-8 OF THE NEC.
 - VERIFY TELEPHONE AND TV OUTLET LOCATION PRIOR TO ROUGH-IN.
 - REFER TO MECHANICAL AND ARCHITECTURAL DRAWING FOR EXACT EQUIPMENT LOCATION.
 - EXHAUST FANS SHALL BE CONTROLLED SEPARATELY FROM LIGHTING SYSTEM.

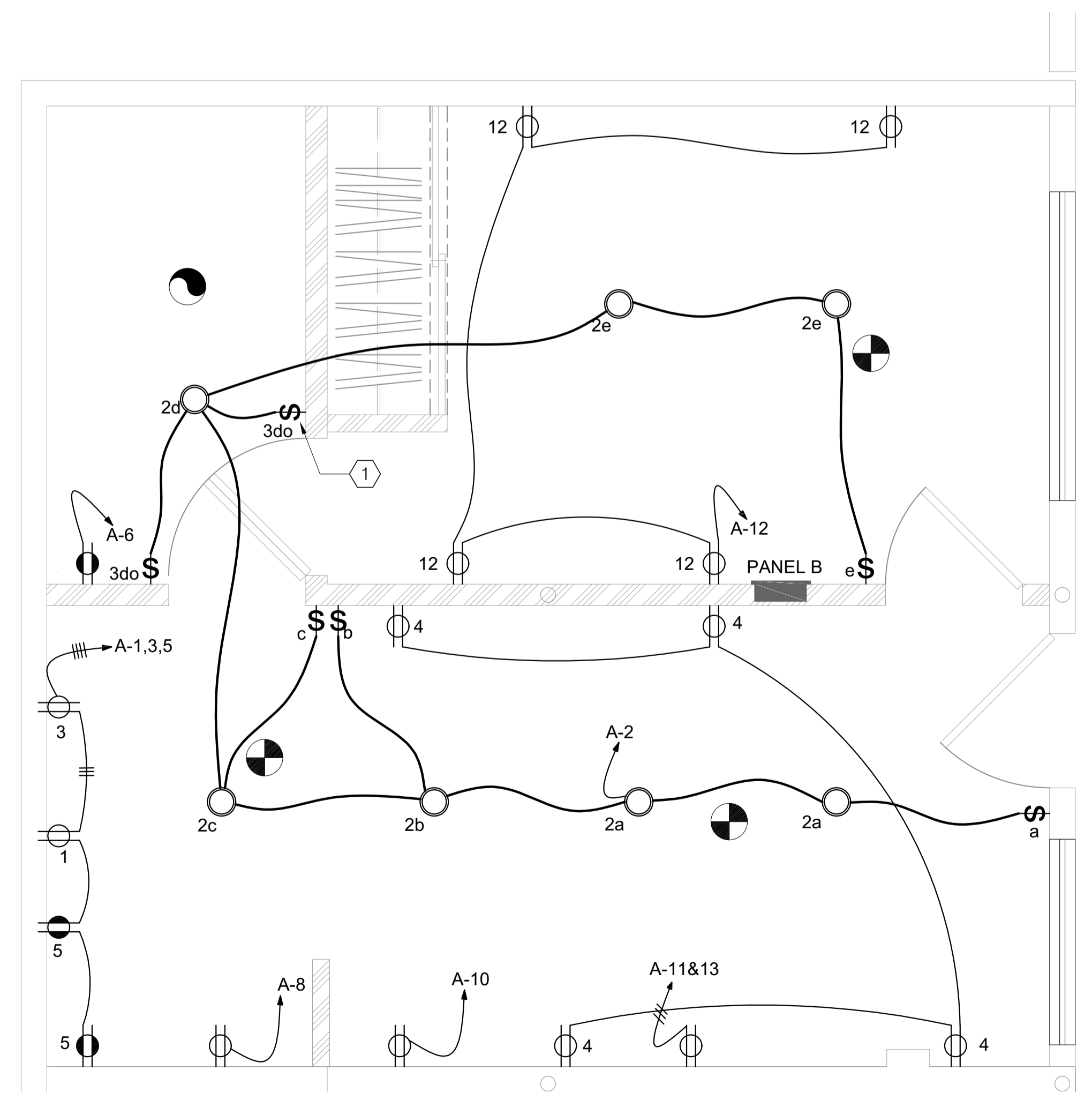
KEY NOTES:

① PROVIDE OCCUPANCY SENSOR FOR BATHROOM LIGHT

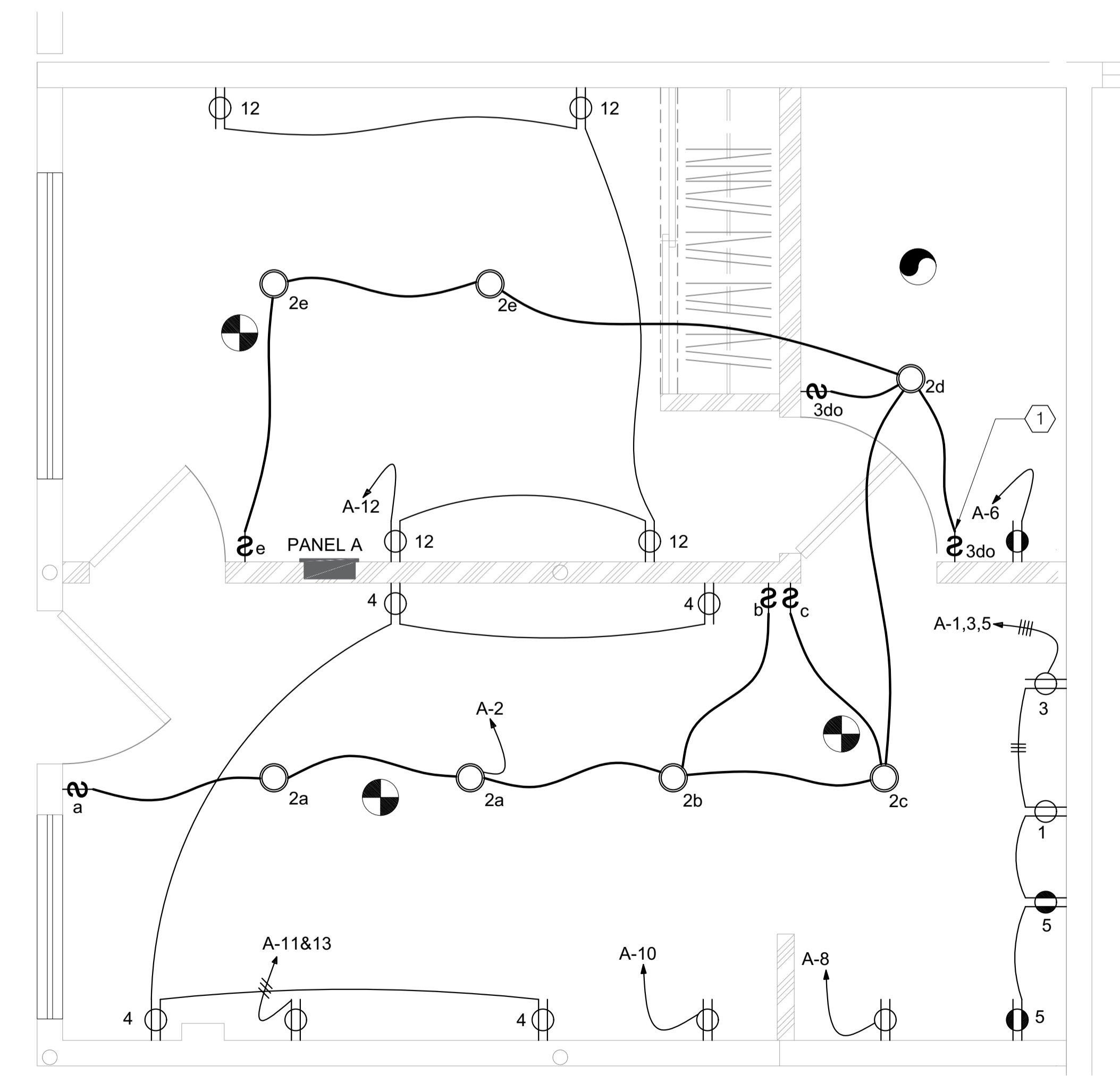
LIGHTING FIXTURE SCHEDULE					
TYPE	SYMBOL	DESCRIPTION	MANUFACTURER & MODEL	LAMPS	VOLTAGE
A1	○	4" RECESSED LED	COMMERCIAL ELECTRIC 91740	9 WATT	120V

MOUNTING:		PANEL - B												MAIN											
RECESSED		120 \ 240 VOLTS 1 PHASE 3 WIRE												BUS 100 AMPS											
LOCATION	VOLT AMPS		L	T	G	R	E	S	C	B	K	R	T	C	M	S	E	T	VOLT AMPS		LOCATION				
	A	B																	A	B					
DISHWASHER	1200		1																	2	20	1	360	LIGHTS	
GARBARGE DISPOSAL		800																		4	20	3	720	LIVING ROOM	
SMALL APPLIANCE	1500																			6	20	5	360	BATHROOM	
SMALL APPLIANCE		1500																		8	20	7	1500	MICROWAVE/HOOD	
HP-1	1080																			10	20	9	1500	REFRIGERATOR	
		1080																		12	20	4	720	BEDROOM	
																				13	14	20	1	3000	STOVETOP
																				15	16				
																				17	18				
VOLT - AMPS PER LINE		A														B									
		9000														6320									
TOTAL VOLT - AMPS =		15320														63.83		LCL = 0							
NOTES:		1. PROVIDE ARC FAULT PROTECTION TYPE CIRCUIT BREAKER AND SEPARATE NEUTRAL WIRE																							

MOUNTING:		PANEL - A												MAIN											
RECESSED		120 \ 240 VOLTS 1 PHASE 3 WIRE												BUS 100 AMPS											
LOCATION	VOLT AMPS		L	T	G	R	E	S	C	B	K	R	T	C	M	S	E	T	VOLT AMPS		LOCATION				
	A	B																	A	B					
DISHWASHER	1200		1																	2	20	1	360	LIGHTS	
GARBARGE DISPOSAL		800																		4	20	3	720	LIVING ROOM	
SMALL APPLIANCE	1500																			6	20	5	360	BATHROOM	
SMALL APPLIANCE		1500																		8	20	7	1500	MICROWAVE/HOOD	
HP-1	1080																			10	20	9	1500	REFRIGERATOR	
		1080																		12	20	4	720	BEDROOM	
																				13	14	20	1	3000	STOVETOP
																				15	16				
																				17	18				
VOLT - AMPS PER LINE		A														B									
		9000														6320									
TOTAL VOLT - AMPS =		15320														63.83		LCL = 0							
NOTES:		1. PROVIDE ARC FAULT PROTECTION TYPE CIRCUIT BREAKER AND SEPARATE NEUTRAL WIRE																							



2 UNIT 2 ELECTRICAL POWER AND LIGHTING PLAN
 Scale 1/2" = 1'-0"



1 UNIT 1 ELECTRICAL POWER AND LIGHTING PLAN
 Scale 1/2" = 1'-0"

8112 MAGNOLIA AVENUE
 RIVERSIDE, CA 92504

SUBMITTAL:
 PLAN CHECK SUBMITTAL
 APRIL 2021

REVISIONS:

SCALE: AS NOTED

SHEET TITLE:

SHEET NUMBER:

APPROVED
 CITY OF RIVERSIDE
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PERMIT: SP 2421-07077 DATE: 05/01/23

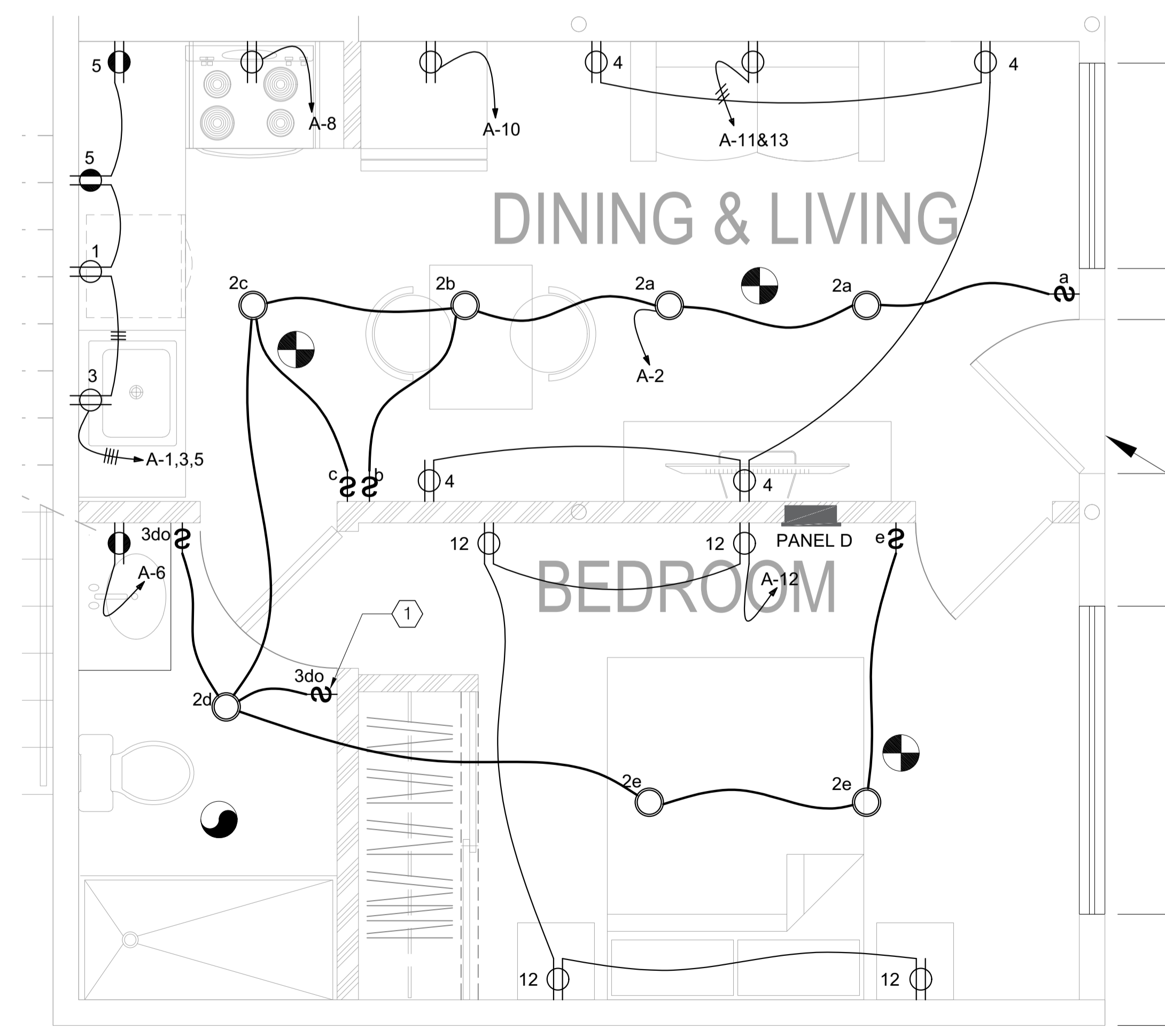


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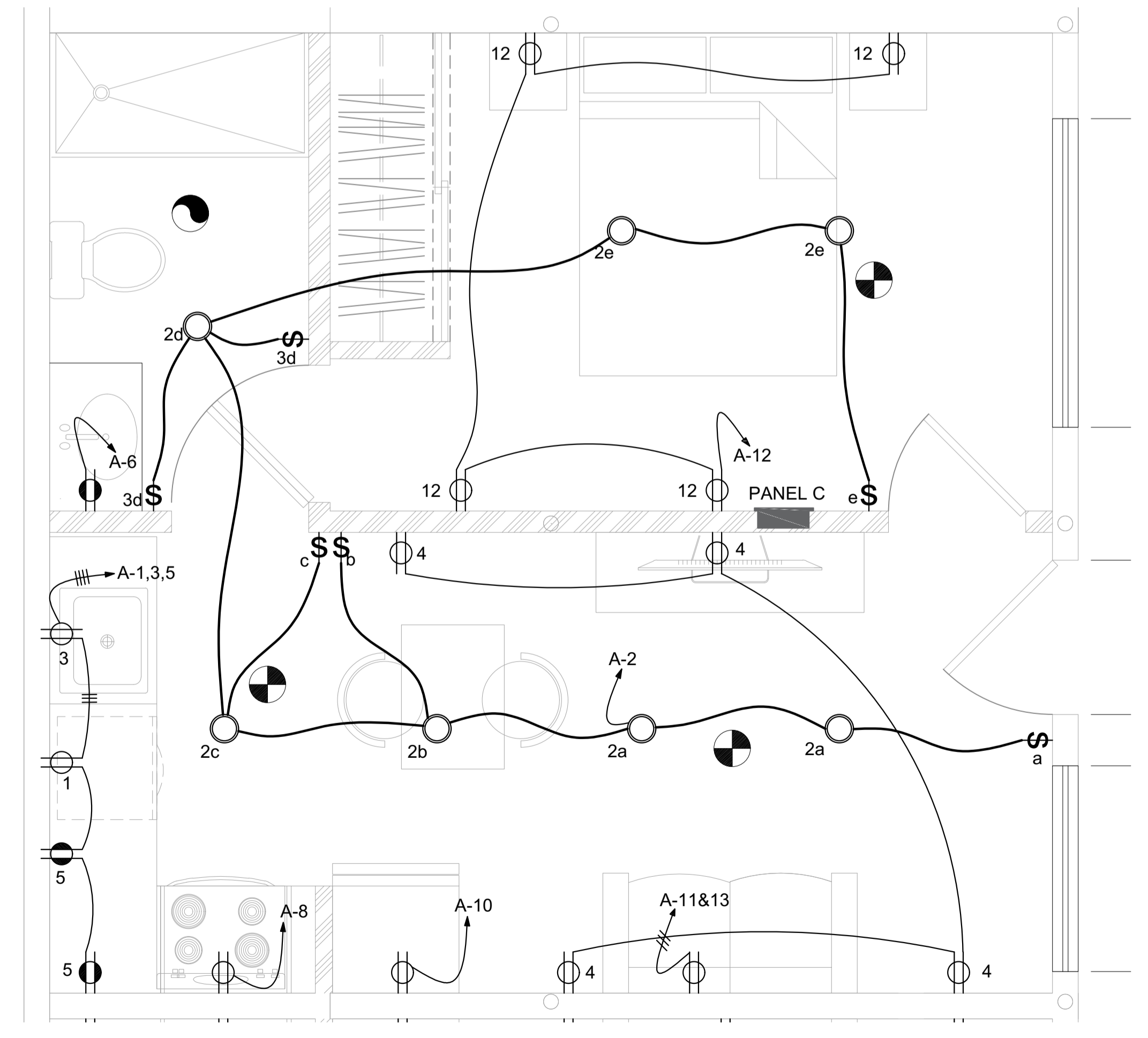
- KEY NOTES:
- 1 PROVIDE OCCUPANCY SENSOR FOR BATHROOM LIGHT

MOUNTING:		PANEL - C												MAIN							
RECESSED		120 \ 240 VOLTS 1 PHASE 3 WIRE												BUS 100 AMPS							
LOCATION	VOLT AMPS		L	R	M	C	B	K	R	C	T	C	B	K	R	C	VOLT AMPS		LOCATION		
	A	B															A	B			
DISHWASHER	1200																	7	360	LIGHTS	
GARBARGE DISPOSAL		800																	720	LIVING ROOM	
SMALL APPLIANCE	1500																		360	BATHROOM	
SMALL APPLIANCE		1500																	1500	MICROWAVE/HOOD	
HP-1	1080																		1500	REFRIGERATOR	
		1080																	720	BEDROOM	
																			3000	STOVETOP	
VOLT - AMPS PER LINE		A		9000												B		6320			
TOTAL VOLT - AMPS =		15320														AMPS =		63.83		LCL = 0	
NOTES:		1. PROVIDE ARC FAULT PROTECTION TYPE CIRCUIT BREAKER AND SEPARATE NEUTRAL WIRE																			

MOUNTING:		PANEL - D												MAIN							
RECESSED		120 \ 240 VOLTS 1 PHASE 3 WIRE												BUS 100 AMPS							
LOCATION	VOLT AMPS		L	R	M	C	B	K	R	C	T	C	B	K	R	C	VOLT AMPS		LOCATION		
	A	B															A	B			
DISHWASHER	1200																	7	360	LIGHTS	
GARBARGE DISPOSAL		800																	720	LIVING ROOM	
SMALL APPLIANCE	1500																		360	BATHROOM	
SMALL APPLIANCE		1500																	1500	MICROWAVE/HOOD	
HP-1	1080																		1500	REFRIGERATOR	
		1080																	720	BEDROOM	
																			3000	STOVETOP	
VOLT - AMPS PER LINE		A		9000												B		5240			
TOTAL VOLT - AMPS =		14240														AMPS =		59.33		LCL = 0	
NOTES:		1. PROVIDE ARC FAULT PROTECTION TYPE CIRCUIT BREAKER AND SEPARATE NEUTRAL WIRE																			



2 UNIT 4 ELECTRICAL POWER AND LIGHTING PLAN
 Scale 1/2" = 1'-0"



1 UNIT 3 ELECTRICAL POWER AND LIGHTING PLAN
 Scale 1/2" = 1'-0"

8112 MAGNOLIA AVENUE
 RIVERSIDE, CA 92504

SUBMITTAL:	PLAN CHECK SUBMITTAL APRIL 2021
REVISIONS:	
SCALE:	AS NOTED
SHEET TITLE:	
SHEET NUMBER:	

APPROVED
CITY OF RIVERSIDE
BUILDING & SAFETY DIVISION
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PERMIT: 2021-04-08 DATE: 05/01/23



CERTIFICATE OF COMPLIANCE
Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC) (Page 2 of 3)
D. Altered Space Conditioning System (Sections 150.2(b)(14) and F)
This section does not apply to this project.
E. Entirely New or Complete Replacement Duct System, with or without Equipment Changeout (Sections 150.2(b)(10) and 150.2(b)(11), F)
This section does not apply to this project.
F. Entirely New or Complete Replacement Space Conditioning System (Section 150.2(b)(13))

01	02	03	04	05	06	07	08	09	10	11	12
System 1	Unit 2	Ductless mini-split HP	All new heating components	HSPF	8	Ductless mini-split HP	All new cooling components	SEER	14	SetbackTherm ostat	n/a

Required Documentation:
CF2R-MCH-01-E - Space Conditioning Systems
Duct insulation requirement for the new portions of supply air and return air ducts or plenums: R6 (CF-8-10, 12 and 13) and R8 (CF-21 and 14-16)
CF2R and CF3R-MCH-20-H Duct Leakage Test required
Leakage rate compliance <= 5%
CF2R and CF3R-MCH-22 Fan Efficacy
CF2R and CF3R-MCH-23 Airflow Rate Verification
Compliance: Fan Efficacy <= 0.58 W/cfm for non-gas furnaces and 0.45 W/cfm for gas furnaces and System Airflow >= 350 cfm per ton.
Alternative Compliance: CF2R and CF3R-MCH-28 Return Duct Design verification is an alternative to MCH-22 and MCH-23 verification.
CF2R and CF3R-MCH-25 Refrigerant Charge verification required when refrigerant containing components are installed or altered (applicable in CF-2, 8-15).
Exceptions:
Heating-only systems are exempt from the 0.58 W per cfm and 350 cfm per ton requirements.
Note: An "entirely new or replacement duct system" means at least 75% of the duct system is new duct material, and up to 25% may consist of reused parts from the dwelling unit's existing duct system (e.g., registers, grilles, boots, air handler, coil, plenums, duct material) if the reused parts are accessible and can be sealed to prevent leakage.

Registration Number: 221-A010062082A-A02000A Registration Date/Time: 2021-04-08 23:07:45 HERS Provider: CaCERTS
CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.004 Schema Version: rev 20200901 Report Generated: 2021-04-08 23:06:50

CERTIFICATE OF COMPLIANCE
Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC) (Page 2 of 3)
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01	02	03	04	05	06	07	08	09	10	11	12
System 1	Unit 3	Ductless mini-split HP	All new heating components	HSPF	8	Ductless mini-split HP	All new cooling components	SEER	14	SetbackTherm ostat	n/a

Required Documentation:
CF2R-MCH-01-E - Space Conditioning Systems
Duct insulation requirement for the new portions of supply air and return air ducts or plenums: R6 (CF-8-10, 12 and 13) and R8 (CF-21 and 14-16)
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01	02	03	04	05	06	07	08	09	10	11	12
System 1	Unit 4	Ductless mini-split HP	All new heating components	HSPF	8	Ductless mini-split HP	All new cooling components	SEER	14	SetbackTherm ostat	n/a

Required Documentation:
CF2R-MCH-01-E - Space Conditioning Systems
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Registration Number: 221-A010062082A-A02000A Registration Date/Time: 2021-04-08 23:07:45 HERS Provider: CaCERTS
CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.004 Schema Version: rev 20200901 Report Generated: 2021-04-08 23:07:28

CERTIFICATE OF COMPLIANCE
Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC) (Page 3 of 3)
Documentation Author's Declaration Statement
1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Q. Yibo
Signature Date: 2021-04-08 23:07:45
Company: Pacific Engineering and Risk Consulting Group
Address: 22760 Hawthorne Blvd Suite 107 Torrance CA 90505
Phone: 558-888-3804

Responsible Person's Declaration statement:
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. That the energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 2 of the California Code of Regulations.
4. 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 for the enforcement agency for approval with this building permit sign-off.
5. I will ensure that a registered copy of this Certificate of Compliance shall be made available with the building permit issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Q. Yibo
Date Signed: 2021-04-08 23:07:45
Company: Pacific Engineering and Risk Consulting Group
Address: 22760 Hawthorne Blvd Suite 107 Torrance CA 90505
Phone: 558-888-3804

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

Documentation Author Name: Q. Yibo
Signature Date: 2021-04-08 23:07:45
Company: Pacific Engineering and Risk Consulting Group
Address: 22760 Hawthorne Blvd Suite 107 Torrance CA 90505
Phone: 558-888-3804

Responsible Person's Declaration statement:
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. That the energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 2 of the California Code of Regulations.
4. 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 for the enforcement agency for approval with this building permit sign-off.
5. I will ensure that a registered copy of this Certificate of Compliance shall be made available with the building permit issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Q. Yibo
Date Signed: 2021-04-08 23:07:45
Company: Pacific Engineering and Risk Consulting Group
Address: 22760 Hawthorne Blvd Suite 107 Torrance CA 90505
Phone: 558-888-3804

Registration Number: 221-A010062082A-A02000A Registration Date/Time: 2021-04-08 23:07:45 HERS Provider: CaCERTS
CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.004 Schema Version: rev 20200901 Report Generated: 2021-04-08 23:07:28

CERTIFICATE OF COMPLIANCE
Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC) (Page 1 of 3)
Project Name: 8112 Magnolia Ave Date Prepared: 2021-04-08
A. General Information
CF1R-ALT-02 is applicable to multiple space conditioning systems contained within a single dwelling unit. When multiple dwelling units must be documented, use one CF1R-ALT-02 document for each dwelling unit.

01	02	03	04	05	06	07	08	09	10		
01 Project Name	8112 Magnolia Ave	02 Date Prepared	2021-04-08	03 Project Location	8112 Magnolia Ave	04 Building Type	Multifamily	05 CA City	Riverside	06 Dwelling Unit Name	8112 Magnolia Ave
07 Zip Code	92504	08 Dwelling Unit Conditioned Floor Area (ft²)	1479	09 Climate Zone	10	10 Number of Space Conditioning (SC) Systems in this Dwelling Unit:	1				

B. Space Conditioning (SC) System Information

01	02	03	04	05	06	07	08	09	10
SC System ID or Name	SC System Location or Area Served	CF1R served by this SC System (ft²)	Is the SC system a ducted system?	Is installing a refrigerant containing component?	Installing new SC system components?	Installing more than 40 feet of duct?	Installing entirely new duct system?	Installing entirely new SC system?	Alteration Type
System 1	Unit 3	370	No	No	Yes	No	No	Yes	Entirely new or complete replacement space conditioning system

C. Extension of Existing Duct System, Greater Than 40 Feet (Section 150.2(b)(10)(b))
This section does not apply to this project.

Registration Number: 221-A010062082A-A02000A Registration Date/Time: 2021-04-08 23:07:45 HERS Provider: CaCERTS
CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.004 Schema Version: rev 20200901 Report Generated: 2021-04-08 23:06:50

CERTIFICATE OF COMPLIANCE
Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC) (Page 1 of 3)
Project Name: 8112 Magnolia Ave Date Prepared: 2021-04-08
A. General Information
CF1R-ALT-02 is applicable to multiple space conditioning systems contained within a single dwelling unit. When multiple dwelling units must be documented, use one CF1R-ALT-02 document for each dwelling unit.

01	02	03	04	05	06	07	08	09	10		
01 Project Name	8112 Magnolia Ave	02 Date Prepared	2021-04-08	03 Project Location	8112 Magnolia Ave	04 Building Type	Multifamily	05 CA City	Riverside	06 Dwelling Unit Name	8112 Magnolia Ave
07 Zip Code	92504	08 Dwelling Unit Conditioned Floor Area (ft²)	1479	09 Climate Zone	10	10 Number of Space Conditioning (SC) Systems in this Dwelling Unit:	1				

B. Space Conditioning (SC) System Information

01	02	03	04	05	06	07	08	09	10
SC System ID or Name	SC System Location or Area Served	CF1R served by this SC System (ft²)	Is the SC system a ducted system?	Is installing a refrigerant containing component?	Installing new SC system components?	Installing more than 40 feet of duct?	Installing entirely new duct system?	Installing entirely new SC system?	Alteration Type
System 1	Unit 4	370	No	No	Yes	No	No	Yes	Entirely new or complete replacement space conditioning system

C. Extension of Existing Duct System, Greater Than 40 Feet (Section 150.2(b)(10)(b))
This section does not apply to this project.

Registration Number: 221-A010062082A-A02000A Registration Date/Time: 2021-04-08 23:07:45 HERS Provider: CaCERTS
CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.004 Schema Version: rev 20200901 Report Generated: 2021-04-08 23:07:28

8112 MAGNOLIA AVENUE
RIVERSIDE, CA 92504

SUBMITTAL:
PLAN CHECK SUBMITTAL
APR. 2021
REVISIONS:
SCALE: AS NOTED
SHEET TITLE:
SHEET NUMBER:

CERTIFICATE OF COMPLIANCE		CF1R-ALT-01-E	
Prescriptive Residential Alterations		(Page 1 of 5)	
Project Name		8112 Magnolia Ave - 8112 Magnolia Ave	Date Prepared:
			2021-04-08
<p style="color: red; font-size: small;">REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL INSTRUCT TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.</p>			
A. General Information			
01	Project Name	8112 Magnolia Ave	02 Date Prepared
			2021-04-08
03	Project Location	8112 Magnolia Ave	04 Building Front Orientation (deg)
			90
05	CA City	Riverside	06 Number of Altered Dwelling Units
			4
07	Zip Code	92504	08 Fuel Type
			Natural gas
09	Climate Zone	10	10 Total Conditioned Floor Area (ft²):
			1479
11	Building Type	Multifamily	12 Slab Area (ft²):
			1479
13	Project Scope	Insulation Adding Fenestration/Glazing Space cooling system Space heating system	14 Exceptions to Minimum Ages Solar Reflectance and Minimum Thermal Emittance or SRI:
			n/a

B. Building Insulation Details - Framed (Section 150.2(b)1)												
01	02	03	04	05	06			07	08	09	10	11
Tag/ID	Assembly Type	Frame Type	Frame Depth (inches)	Frame Spacing (inches)	Proposed				Required		Comments	
					Cavity R-value	Continuous Insulation R-value	U-Factor	Appendix JA4 Reference				
								Table	Cell			
Insulation #1	Ceiling	Wood	2x4	@ 16 in. O. C.	30	4	0.028	4.2.1	8C	19		
Insulation #2	Wall	Wood	2x4	@ 16 in. O. C.	19	4	0.055	4.3.1	5C	13		

Note:

- Where insulation is installed above the roofing membrane, or above the layer used to seal the roof from water penetration, the insulation shall have a maximum water absorption of 0.3 percent by volume when tested according to ASTM Standard C272.

CERTIFICATE OF COMPLIANCE	CF1R-ALT-01-E
Prescriptive Residential Alterations	(Page 2 of 5)
<p style="color: red; font-weight: bold;">APPROVED</p> <p style="color: red; font-weight: bold;">CITY OF RIVERSIDE BUILDING & SAFETY DIVISION</p>	
REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.	
C. Building Insulation Details - Non-Framed	This section does not apply to this project.
D. Opaque Surface Details - Mass Walls (Section 150.1(c).1)	This section does not apply to this project.
PERMIT: BP 2021 07077 DATE: 06/01/23	

E. Roof Replacement (Section 150.2(b)1H)
This section does not apply to this project.

F. Fenestration/Glazing Allowed Areas and Efficiencies (Section 150.2(b)1)									
01	02	03	04		05		06		07
Alteration Type	Maximum Allowed Fenestration Area For All Orientation (ft ²)	Maximum Allowed West-Facing Fenestration Area Only (ft ²)	Existing Fenestration Area for All Orientations (ft ²)	Existing West-Facing Fenestration Area (ft ²)	Maximum Allowed U-factor (Windows)	Maximum Allowed U-factor (Skylights)	Maximum Allowed SHGC (Windows)	Maximum Allowed SHGC (Skylights)	Comments
Adding Fenestration/ Glazing	295.8	74	0	0	0.30	0.30	0.23	0.23	

G. Fenestration Proposed Areas and Efficiencies - Add (Section 150.2(b)1A)													
Note: Doors with greater than or equal to 25 percent glazed area are considered glazed doors and are treated as fenestration products.													
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Tag/ID	Fenestration Type	Frame Type	Dynamic Glazing	Orientation N, S, W, or E	Number of Panes	Proposed Fenestration Area N, S, E (ft ²)	Proposed West Facing Fenestration Area (ft ²)	Proposed U-factor	Proposed U-factor Source	Proposed SHGC	Proposed SHGC Source	Exterior Shading Device	Combined SHGC from CF1R-ENV-03
Window #1	Operable window	Non-metal	None	North	Single Pane	120	n/a	0.3	NFRC	0.23	NFRC	None	n/a
Window #2	Operable window	Non-metal	None	South	Double pane	40	n/a	0.3	NFRC	0.23	NFRC	None	n/a

CERTIFICATE OF COMPLIANCE		CF1R-ALT-01-E
Prescriptive Residential Alterations		(Page 3 of 5)
<p style="color: red; font-weight: bold;">APPROVED</p> <p style="color: red; font-weight: bold;">CITY OF RIVERSIDE BUILDING & SAFETY DIVISION</p> <p style="color: red; font-weight: bold;">REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.</p>		
15	Maximum Allowed Fenestration Area	160
16	Existing + Proposed Fenestration Area	295.8
17	Compliance Statement	Design complies with the total allowed fenestration area
18	PERMIT: LBR-202-07077, DATE: 05/04/23 Existing + Proposed West-Facing Fenestration Area	n/a
19	Maximum Allowed West Facing Fenestration Area	74
20	Compliance Statement	n/a
21	Proposed Fenestration U-factor (Windows)	0.3
22	Required Fenestration U-factor (Windows)	0.30
23	Compliance Statement	Design complies with the maximum allowed fenestration U-value
24	Proposed Fenestration SHGC (Windows)	0.23
25	Required Fenestration SHGC (Windows)	0.23
26	Compliance Statement	Design complies with the maximum allowed fenestration SHGC
27	Proposed Fenestration U-factor (Skylights)	n/a
28	Required Fenestration U-factor (Skylights)	0.30
29	Compliance Statement	n/a
30	Proposed Fenestration SHGC (Skylights)	n/a
31	Required Fenestration SHGC (Skylights)	0.23
32	Compliance Statement	n/a
H. Fenestration Proposed Areas and Efficiencies - Replace (Section 150.2(b)1B)		
This section does not apply to this project.		

CERTIFICATE OF COMPLIANCE	CF1R-ALT-01-E
Prescriptive Residential Alterations	(Page 4 of 5)
APPROVED CITY OF RIVERSIDE BUILDING & SAFETY DIVISION REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.	
I. Space Conditioning (SC) Systems - Heating/Cooling - Single Family Dwelling (Section 150.2(b)).	This section does not apply to this project.
J. Water Heating Systems (Section 150.2(b)1H)	This section does not apply to this project.
PERMIT: <input type="text" value="DP 2021 07077"/> DATE: <input type="text" value="06/01/23"/>	

K. Multifamily Space Conditioning Systems And Water Heating Systems					
01	02	03	04	05	06
Dwelling Unit Name	Dwelling Unit Total CFA (ft ²)	Central Water Heating System Identification or Name	Dwelling Unit Water Heating System Identification or Name	Dwelling Unit: Alteration to Existing or Installation of Space Conditioning System(s)?	Comments
Unit 1	370	n/a	n/a	Yes	
Unit 2	370	n/a	n/a	Yes	
Unit 3	370	n/a	n/a	Yes	
Unit 4	370	n/a	n/a	Yes	

CERTIFICATE OF COMPLIANCE		CF1R-ALT-01-E
Prescriptive Residential Alterations		(Page 5 of 5)
<p align="center"> <small> REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION. </small> </p>		
Documentation Author's Declaration Statement		
I. I certify that this Certificate of Compliance documentation is accurate and complete.		
Documentation Author Name: Yibo Qi	Documentation Author Signature: <i>Yibo Qi</i>	
Company: Pacific Engineering and Risk Consulting Group	Signature Date: 2021-04-08 23:07:45	
Address: 22760 Hawthorne Blvd Suite 107	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip: Torrance CA 90505	Phone: 858-888-3804	
Responsible Person's Declaration statement		
I certify the following under penalty of perjury, under the laws of the State of California: <ol style="list-style-type: none"> The information provided on this Certificate of Compliance is true and correct. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer). That the energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. 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. I will ensure that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy. 		
Responsible Designer Name: Yibo Qi	Responsible Designer Signature: <i>Yibo Qi</i>	
Company: Pacific Engineering and Risk Consulting Group	Date Signed: 2021-04-08 23:07:45	
Address: 22760 Hawthorne Blvd Suite 107	License: M39581	
City/State/Zip: Torrance CA 90505	Phone: 858-888-3804	



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CERTIFICATE OF COMPLIANCE APPROVED	CF1R-ALT-02-E
CITY OF RIVERSIDE BUILDING & SAFETY DIVISION	
Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC)	(Page 1 of 3)
Project Name: 8112 Magnolia Ave	Date Prepared: 2021-04-08

REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL INSTRUCTED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.

A. General Information
 CF1R-ALT-02 is applicable to multiple space conditioning systems contained within a single dwelling unit. When multiple dwelling units must be documented, use one CF1R-ALT-02 document for each dwelling unit.

PERMIT: BP-2021-07077 DATE: 05/01/23

01	Project Name	8112 Magnolia Ave	02	Date Prepared	2021-04-08
03	Project Location	8112 Magnolia Ave	04	Building Type	Multifamily
05	CA City	Riverside	06	Dwelling Unit Name	8112 Magnolia Ave
07	Zip Code	92504	08	Dwelling Unit Conditioned Floor Area (ft²)	1479
09	Climate Zone	10	10	Number of Space Conditioning (SC) Systems in this Dwelling Unit:	1

B. Space Conditioning (SC) System Information									
01	02	03	04	05	06	07	08	09	10
SC System ID or Name	SC System Location or Area Served	CFA served by this SC System (ft ²)	Is the SC system a ducted system?	Installing a refrigerant containing component?	Installing new SC system components?	Installing more than 40 feet of ducts?	Installing entirely new duct system?	Installing entirely new SC system?	Alteration Type
System 1	Unit 1	370	No	No	Yes	No	No	Yes	Entirely new or complete replacement space conditioning system

C. Extension of Existing Duct System, Greater Than 40 Feet (Section 150.2(b)1Diib)

This section does not apply to this project.

CERTIFICATE OF COMPLIANCE	CF1R-ALT-02-E
APPROVED CITY OF RIVERSIDE BUILDING & SAFETY DIVISION	(Page 2 of 3)
Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC)	
D. Altered Space Conditioning System (Sections 150.2(b)1E and F)	
<p>REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING OR FINANCIAL STATE LAW, AND SHALL PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.</p>	This section does not apply to this project.
E. Entirely New or Complete Replacement Duct System, with or without Equipment Changeout (Sections 150.2(b)1Diia and 150.2(b)1E, F)	
<p>PERMIT: <input type="text" value="BP 2021-07077"/> DATE: <input type="text" value="06/01/23"/></p>	This section does not apply to this project.

F. Entirely New or Complete Replacement Space Conditioning System (Section 150.2(b)1C)											
01	02	03	04	05	06	07	08	09	10	11	12
System ID/ Name	SC System Description of Area Served	Heating System Type	Altered Heating Component	Heating Efficiency Type	Heating Minimum Efficiency Value	Cooling System Type	Altered Cooling Component	Cooling Efficiency Type	Cooling Minimum Efficiency Value	Required Thermostat Type	New Duct R-Value
System 1	Unit 1	Ductless mini-split HP	All new heating components	HSPF	8	Ductless mini-split HP	All new cooling components	SEER	14	SetbackTherm ostat	n/a

Required Documentation:
CF2R-MCH-01-E - Space Conditioning Systems
- Duct insulation requirement for the new portions of supply-air and return-air ducts or plenums: R6 (CZ 1-10, 12 and 13) and R8 (CZ 11 and 14-16)
CF2R and CF3R-MCH-20-H Duct Leakage Test required
- Leakage rate compliance: <= 5%.
CF2R and CF3R-MCH-22 Fan Efficacy
CF2R and CF3R-MCH-23 Airflow Rate Verification
- Compliance: Fan Efficacy <= 0.58 W/cfm for non-gas furnaces and 0.45 W/cfm for gas furnaces and System Airflow >= 350 cfm per ton.
- Alternative Compliance: CF2R and CF3R-MCH-28 Return Duct Design verification is an alternative to MCH-22 and MCH-23 verification.
CF2R and CF3R-MCH-25-H Refrigerant Charge verification required when refrigerant containing components are installed or altered (applicable in CZ 2, 8-15).

Exceptions:
Heating-only systems are exempt from the 0.58 W per cfm and 350 cfm per ton requirements.
Note: An "entirely new or replacement duct system" means at least 75% of the duct system is new duct material, and up to 25% may consist of reused parts from the dwelling unit's existing duct system (e.g., registers, grilles, boots, air handler, coil, plenums, duct material) if the reused parts are accessible and can be sealed to prevent leakage

CERTIFICATE OF COMPLIANCE		CF1R-ALT-02-E
<p align="center">APPROVED</p> <p align="center">CITY OF RIVERSIDE BUILDING & SAFETY DIVISION</p>		(Page 3 of 3)
<p align="center">Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC)</p>		
<p align="center">REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.</p>		
<p>Documentation Author's Declaration Statement</p>		
<p>I. I certify that this Certificate of Compliance documentation is accurate and complete.</p>		
Documentation Author Name: Qi, Yibo PERMIT: <u>BP-2021-07077</u> DATE: <u>05/01/23</u>	Documentation Author Signature: <i>Yibo Qi</i>	
Company: Pacific Engineering and Risk Consulting Group	Signature Date: 2021-04-08 23:07:45	
Address: 22760 Hawthorne Blvd Suite 107	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip: Torrance CA 90505	Phone: 858-888-3804	
<p>Responsible Person's Declaration statement</p>		
<p>I certify the following under penalty of perjury, under the laws of the State of California:</p> <ol style="list-style-type: none"> The information provided on this Certificate of Compliance is true and correct. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer). That the energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. 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. I will ensure that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy. 		
Responsible Designer Name: Qi, Yibo	Responsible Designer Signature: <i>Yibo Qi</i>	
Company : Pacific Engineering and Risk Consulting Group	Date Signed: 2021-04-08 23:07:45	
Address: 22760 Hawthorne Blvd Suite 107	License: M39581	
City/State/Zip: Torrance CA 90505	Phone: 858-888-3804	



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CERTIFICATE OF COMPLIANCE APPROVED	CF1R-ALT-02-E
<small>CITY OF RIVERSIDE BUILDING & SAFETY DIVISION</small>	
Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC)	(Page 1 of 3)
Project Name: 8112 Magnolia Ave	Date Prepared: 2021-04-08

REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL INSTRUCTED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.

A. General Information
 CF1R-ALT-02 is applicable to multiple space conditioning systems contained within a single dwelling unit. When multiple dwelling units must be documented, use one CF1R-ALT-02 document for each dwelling unit.
 PERMIT: BP-2021-07077 DATE: 05/01/23

01	Project Name	8112 Magnolia Ave	02	Date Prepared	2021-04-08
03	Project Location	8112 Magnolia Ave	04	Building Type	Multifamily
05	CA City	Riverside	06	Dwelling Unit Name	8112 Magnolia Ave
07	Zip Code	92504	08	Dwelling Unit Conditioned Floor Area (ft ²)	1479
09	Climate Zone	10	10	Number of Space Conditioning (SC) Systems in this Dwelling Unit:	1

B. Space Conditioning (SC) System Information									
01	02	03	04	05	06	07	08	09	10
SC System ID or Name	SC System Location or Area Served	CFA served by this SC System (ft ²)	Is the SC system a ducted system?	Installing a refrigerant containing component?	Installing new SC system components?	Installing more than 40 feet of ducts?	Installing entirely new duct system?	Installing entirely new SC system?	Alteration Type
System 1	Uni 2	370	No	No	Yes	No	No	Yes	Entirely new or complete replacement space conditioning system

C. Extension of Existing Duct System, Greater Than 40 Feet (Section 150.2(b)1Diib)

This section does not apply to this project.

CERTIFICATE OF COMPLIANCE	CF1R-ALT-02-E
APPROVED CITY OF RIVERSIDE BUILDING & SAFETY DIVISION	(Page 2 of 3)
Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC)	
D. Altered Space Conditioning System (Sections 150.2(b)1E and F)	
REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING OR FINANCIAL STATE LAWS. THIS APPROVAL SHALL PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.	This section does not apply to this project.
E. Entirely New or Complete Replacement Duct System, with or without Equipment Changeout (Sections 150.2(b)1Diia and 150.2(b)1E, F)	
PERMIT: <input type="text" value="BP 2021-07077"/> DATE: <input type="text" value="06/01/23"/>	This section does not apply to this project.

F. Entirely New or Complete Replacement Space Conditioning System (Section 150.2(b)1C)											
01	02	03	04	05	06	07	08	09	10	11	12
System ID/ Name	SC System Description of Area Served	Heating System Type	Altered Heating Component	Heating Efficiency Type	Heating Minimum Efficiency Value	Cooling System Type	Altered Cooling Component	Cooling Efficiency Type	Cooling Minimum Efficiency Value	Required Thermostat Type	New Duct R-Value
System 1	Uni 2	Ductless mini-split HP	All new heating components	HSPF	8	Ductless mini-split HP	All new cooling components	SEER	14	SetbackTherm ostat	n/a

Required Documentation:
CF2R-MCH-01-E - Space Conditioning Systems
- Duct insulation requirement for the new portions of supply-air and return-air ducts or plenums: R6 (CZ 1-10, 12 and 13) and R8 (CZ 11 and 14-16)
CF2R and CF3R-MCH-20-H Duct Leakage Test required
- Leakage rate compliance: <= 5%.
CF2R and CF3R-MCH-22 Fan Efficacy
CF2R and CF3R-MCH-23 Airflow Rate Verification
- Compliance: Fan Efficacy <= 0.58 W/cfm for non-gas furnaces and 0.45 W/cfm for gas furnaces and System Airflow >= 350 cfm per ton.
- Alternative Compliance: CF2R and CF3R-MCH-28 Return Duct Design verification is an alternative to MCH-22 and MCH-23 verification.
CF2R and CF3R-MCH-25-H Refrigerant Charge verification required when refrigerant containing components are installed or altered (applicable in CZ 2, 8-15).

Exceptions:
Heating-only systems are exempt from the 0.58 W per cfm and 350 cfm per ton requirements.
Note: An "entirely new or replacement duct system" means at least 75% of the duct system is new duct material, and up to 25% may consist of reused parts from the dwelling unit's existing duct system (e.g., registers, grilles, boots, air handler, coil, plenums, duct material) if the reused parts are accessible and can be sealed to prevent leakage

CERTIFICATE OF COMPLIANCE		CF1R-ALT-02-E
<p align="center">APPROVED</p> <p align="center">CITY OF RIVERSIDE BUILDING & SAFETY DIVISION</p>		(Page 3 of 3)
<p align="center">Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC)</p>		
<p align="center">REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.</p>		
<p>Documentation Author's Declaration Statement</p>		
<p>I. I certify that this Certificate of Compliance documentation is accurate and complete.</p>		
Documentation Author Name: Qi, Yibo PERMIT: <input type="text" value="BP-2021-07077"/> DATE: <input type="text" value="05/01/23"/>	Documentation Author Signature: <i>Yibo Qi</i>	
Company: Pacific Engineering and Risk Consulting Group	Signature Date: 2021-04-08 23:07:45	
Address: 22760 Hawthorne Blvd Suite 107	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip: Torrance CA 90505	Phone: 858-888-3804	
<p>Responsible Person's Declaration statement</p>		
<p>I certify the following under penalty of perjury, under the laws of the State of California:</p> <ol style="list-style-type: none"> The information provided on this Certificate of Compliance is true and correct. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer). That the energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. 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. I will ensure that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy. 		
Responsible Designer Name: Qi, Yibo	Responsible Designer Signature: <i>Yibo Qi</i>	
Company : Pacific Engineering and Risk Consulting Group	Date Signed: 2021-04-08 23:07:45	
Address: 22760 Hawthorne Blvd Suite 107	License: M39581	
City/State/Zip: Torrance CA 90505	Phone: 858-888-3804	



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CERTIFICATE OF COMPLIANCE APPROVED	CF1R-ALT-02-E
CITY OF RIVERSIDE BUILDING & SAFETY DIVISION	
Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC)	(Page 1 of 3)
Project Name: 8112 Magnolia Ave	Date Prepared: 2021-04-08

REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL INSTRUCTED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.

A. General Information
 CF1R-ALT-02 is applicable to multiple space conditioning systems contained within a single dwelling unit. When multiple dwelling units must be documented, use one CF1R-ALT-02 document for each dwelling unit.

PERMIT: BP-2021-07077 DATE: 05/01/23

01	Project Name	8112 Magnolia Ave	02	Date Prepared	2021-04-08
03	Project Location	8112 Magnolia Ave	04	Building Type	Multifamily
05	CA City	Riverside	06	Dwelling Unit Name	8112 Magnolia Ave
07	Zip Code	92504	08	Dwelling Unit Conditioned Floor Area (ft²)	1479
09	Climate Zone	10	10	Number of Space Conditioning (SC) Systems in this Dwelling Unit:	1

B. Space Conditioning (SC) System Information									
01	02	03	04	05	06	07	08	09	10
SC System ID or Name	SC System Location or Area Served	CFA served by this SC System (ft ²)	Is the SC system a ducted system?	Installing a refrigerant containing component?	Installing new SC system components?	Installing more than 40 feet of ducts?	Installing entirely new duct system?	Installing entirely new SC system?	Alteration Type
System 1	Unit 3	370	No	No	Yes	No	No	Yes	Entirely new or complete replacement space conditioning system

C. Extension of Existing Duct System, Greater Than 40 Feet (Section 150.2(b)1Diib)

This section does not apply to this project.

CERTIFICATE OF COMPLIANCE	CF1R-ALT-02-E
APPROVED CITY OF RIVERSIDE BUILDING & SAFETY DIVISION	
Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC)	(Page 2 of 3)
D. Altered Space Conditioning System (Sections 150.2(b)1E and F)	
<p>REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING OR FINANCIAL STATE LAW, AND SHALL PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.</p>	This section does not apply to this project.
E. Entirely New or Complete Replacement Duct System, with or without Equipment Changeout (Sections 150.2(b)1Diia and 150.2(b)1E, F)	
<p>PERMIT: <input type="text" value="BP 2021-07077"/> DATE: <input type="text" value="06/01/23"/></p>	This section does not apply to this project.

F. Entirely New or Complete Replacement Space Conditioning System (Section 150.2(b)1C)											
01	02	03	04	05	06	07	08	09	10	11	12
System ID/ Name	SC System Description of Area Served	Heating System Type	Altered Heating Component	Heating Efficiency Type	Heating Minimum Efficiency Value	Cooling System Type	Altered Cooling Component	Cooling Efficiency Type	Cooling Minimum Efficiency Value	Required Thermostat Type	New Duct R-Value
System 1	Unit 3	Ductless mini-split HP	All new heating components	HSPF	8	Ductless mini-split HP	All new cooling components	SEER	14	SetbackTherm ostat	n/a

Required Documentation:
CF2R-MCH-01-E - Space Conditioning Systems
- Duct insulation requirement for the new portions of supply-air and return-air ducts or plenums: R6 (CZ 1-10, 12 and 13) and R8 (CZ 11 and 14-16)
CF2R and CF3R-MCH-20-H Duct Leakage Test required
- Leakage rate compliance: <= 5%.
CF2R and CF3R-MCH-22 Fan Efficacy
CF2R and CF3R-MCH-23 Airflow Rate Verification
- Compliance: Fan Efficacy <= 0.58 W/cfm for non-gas furnaces and 0.45 W/cfm for gas furnaces and System Airflow >= 350 cfm per ton.
- Alternative Compliance: CF2R and CF3R-MCH-28 Return Duct Design verification is an alternative to MCH-22 and MCH-23 verification.
CF2R and CF3R-MCH-25-H Refrigerant Charge verification required when refrigerant containing components are installed or altered (applicable in CZ 2, 8-15).

Exceptions:
Heating-only systems are exempt from the 0.58 W per cfm and 350 cfm per ton requirements.
Note: An "entirely new or replacement duct system" means at least 75% of the duct system is new duct material, and up to 25% may consist of reused parts from the dwelling unit's existing duct system (e.g., registers, grilles, boots, air handler, coil, plenums, duct material) if the reused parts are accessible and can be sealed to prevent leakage

CERTIFICATE OF COMPLIANCE		CF1R-ALT-02-E
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<p align="center">Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC)</p>		
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<p>Documentation Author's Declaration Statement</p>		
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Documentation Author Name: Qi, Yibo PERMIT: <input type="text" value="BP-2021-07077"/> DATE: <input type="text" value="05/01/23"/>	Documentation Author Signature: <i>Yibo Qi</i>	
Company: Pacific Engineering and Risk Consulting Group	Signature Date: 2021-04-08 23:07:45	
Address: 22760 Hawthorne Blvd Suite 107	CEA/ HERS Certification Identification (if applicable):	
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Responsible Designer Name: Qi, Yibo	Responsible Designer Signature: <i>Yibo Qi</i>	
Company : Pacific Engineering and Risk Consulting Group	Date Signed: 2021-04-08 23:07:45	
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CERTIFICATE OF COMPLIANCE APPROVED	CF1R-ALT-02-E
<small>CITY OF RIVERSIDE BUILDING & SAFETY DIVISION</small>	
Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC)	(Page 1 of 3)
Project Name: 8112 Magnolia Ave	Date Prepared: 2021-04-08

REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL INSTRUCTED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING ORDINANCE OR STATE LAW AND SHALL NOT PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.

A. General Information
 CF1R-ALT-02 is applicable to multiple space conditioning systems contained within a single dwelling unit. When multiple dwelling units must be documented, use one CF1R-ALT-02 document for each dwelling unit.
 PERMIT: BP-2021-07077 DATE: 05/01/23

01	Project Name	8112 Magnolia Ave	02	Date Prepared	2021-04-08
03	Project Location	8112 Magnolia Ave	04	Building Type	Multifamily
05	CA City	Riverside	06	Dwelling Unit Name	8112 Magnolia Ave
07	Zip Code	92504	08	Dwelling Unit Conditioned Floor Area (ft ²)	1479
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B. Space Conditioning (SC) System Information									
01	02	03	04	05	06	07	08	09	10
SC System ID or Name	SC System Location or Area Served	CFA served by this SC System (ft ²)	Is the SC system a ducted system?	Installing a refrigerant containing component?	Installing new SC system components?	Installing more than 40 feet of ducts?	Installing entirely new duct system?	Installing entirely new SC system?	Alteration Type
System 1	Unit 4	370	No	No	Yes	No	No	Yes	Entirely new or complete replacement space conditioning system

C. Extension of Existing Duct System, Greater Than 40 Feet (Section 150.2(b)1Diib)

This section does not apply to this project.

CERTIFICATE OF COMPLIANCE	CF1R-ALT-02-E
Alterations to Space Conditioning Systems (formerly CF-1R-ALT-HVAC)	(Page 2 of 3)
APPROVED CITY OF RIVERSIDE BUILDING & SAFETY DIVISION	
D. Altered Space Conditioning System (Sections 150.2(b)1E and F) REVIEWED FOR CODE COMPLIANCE. THIS APPROVAL SHALL NOT BE CONSTRUED TO PERMIT VIOLATIONS OF ANY LOCAL BUILDING OR FINANCIAL STATE LAW. SHALL PREVENT THE REQUIRED CORRECTIONS OF ANY ERROR SUBSEQUENTLY IDENTIFIED THEREAFTER. APPROVED PLANS SHALL BE KEPT ON THE JOB AT ALL TIMES AND SHALL NOT BE CHANGED, MODIFIED, OR ALTERED WITHOUT AUTHORIZATION.	This section does not apply to this project.
E. Entirely New or Complete Replacement Duct System, with or without Equipment Changeout (Sections 150.2(b)1Diia and 150.2(b)1E, F) PERMIT: <input type="text" value="BP 2021-07077"/> DATE: <input type="text" value="06/01/23"/>	This section does not apply to this project.

F. Entirely New or Complete Replacement Space Conditioning System (Section 150.2(b)1C)											
01	02	03	04	05	06	07	08	09	10	11	12
System ID/ Name	SC System Description of Area Served	Heating System Type	Altered Heating Component	Heating Efficiency Type	Heating Minimum Efficiency Value	Cooling System Type	Altered Cooling Component	Cooling Efficiency Type	Cooling Minimum Efficiency Value	Required Thermostat Type	New Duct R-Value
System 1	Unit 4	Ductless mini-split HP	All new heating components	HSPF	8	Ductless mini-split HP	All new cooling components	SEER	14	SetbackTherm ostat	n/a

Required Documentation:
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 - Duct insulation requirement for the new portions of supply-air and return-air ducts or plenums: R6 (CZ 1-10, 12 and 13) and R8 (CZ 11 and 14-16)
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