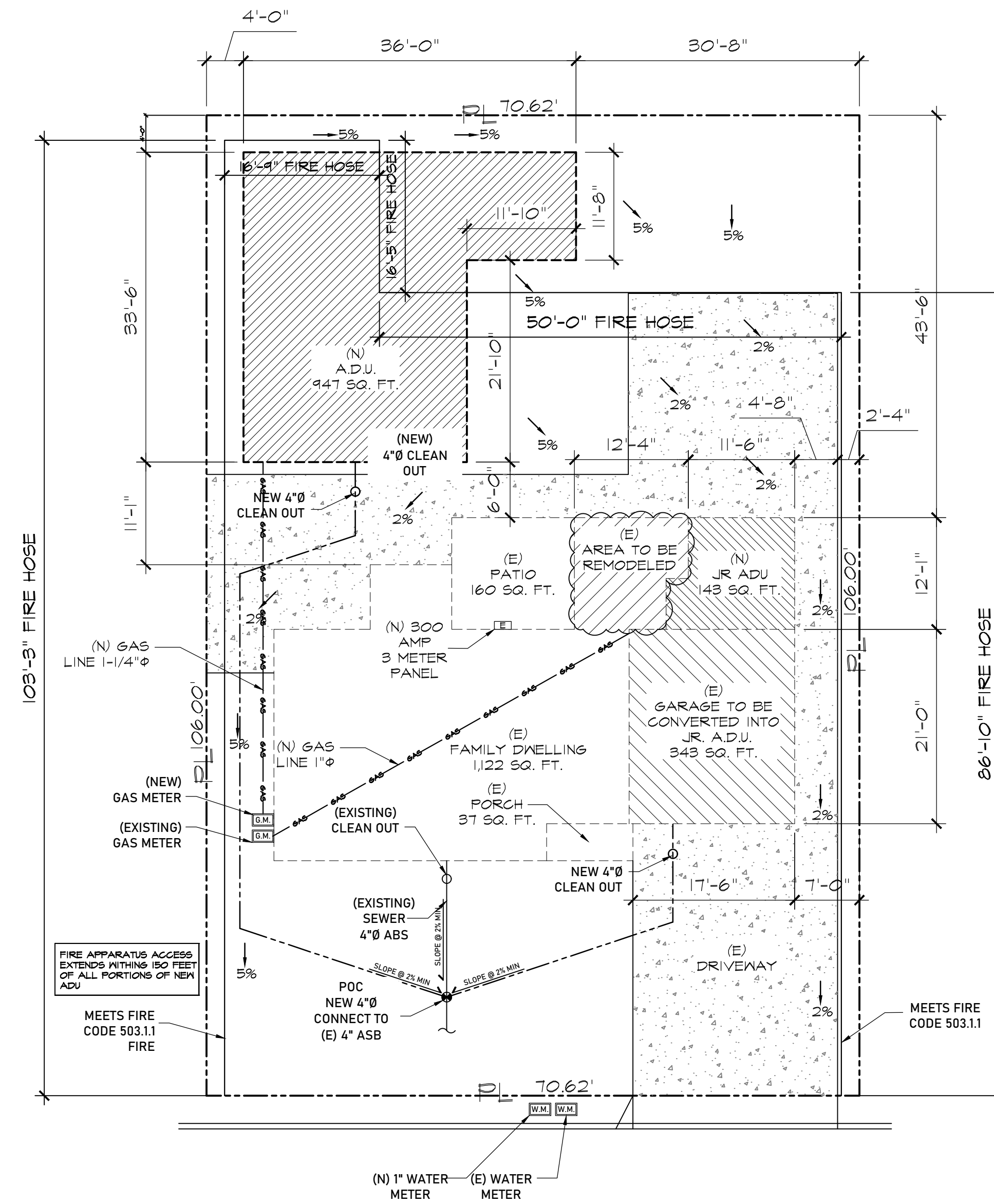


# GARAGE CONVERSION INTO JR A.D.U. & NEW DETACH A.D.U.

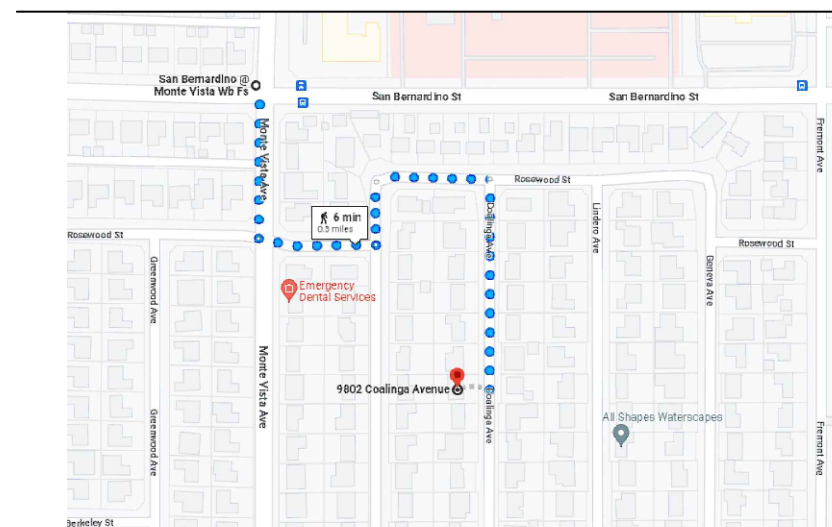
9802 COALINGA AVENUE  
MONTCLAIR, CA. 91763

APN # 1010-022-10



9802 COALINGA AVE.

## BUS SCHEDULE



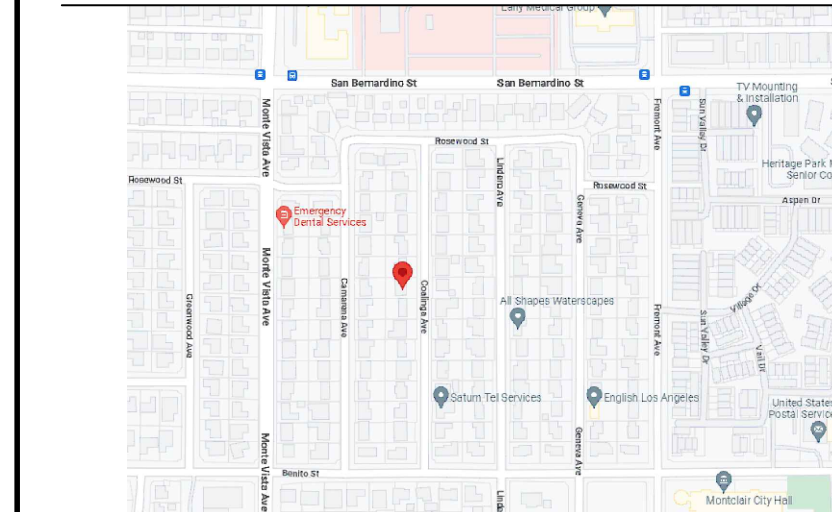
## GENERAL NOTES

- THE CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO ANY WORK AND SHALL BE RESPONSIBLE FOR ALL WORK AND MATERIALS INCLUDING THAT FURNISHED BY SUBCONTRACTORS.
- DIMENSIONS TAKE PRECEDENCE OVER DRAWINGS; DO NOT SCALE DRAWINGS TO DETERMINE ANY LOCATION. THE OWNER OR DESIGNER SHALL BE NOTIFIED IF ANY DISCREPANCY OCCURS PRIOR TO CONTINUING WITH WORK.
- ALL PLAN DIMENSIONS ARE FROM CENTER LINE OF STUD OR FACE OF FINISH UNLESS OTHERWISE INDICATED.
- ANY CHANGES PRIOR TO APPROVED SET OF PLANS, C.B. HOME DESIGN MUST BE NOTIFIED. CONTRACTOR OR PERSON CONDUCTING WORK SHOULD NOTIFY C.B. HOME DESIGN IF ANY DISCREPANCY OCCURS DURING CONSTRUCTION. C.B. HOME DESIGN IS NOT RESPONSIBLE FOR CONTRACTOR OR HOME BUILDER PERFORMANCE TO PERFORM WORK.
- ALL CONSTRUCTION SHALL COMPLY WITH THE APPLICABLE BUILDING CODES AND LOCAL RESTRICTIONS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING MECHANICAL AND ELECTRICAL SERVICES AND DISTRIBUTION SYSTEMS WHETHER SHOWN OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE OR REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE PERFORMANCE OF THE WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OR REMEDY OF ANY FAULTY, IMPROPER OR INTERIOR MATERIALS OR WORKMANSHIP WHICH SHALL APPEAR WITHIN (1) YEAR OR AS OTHERWISE SPECIFIED FOR A SPECIFIC COMPONENT AFTER THE COMPLETION AND ACCEPTANCE OF THE WORK UNDER THIS CONTRACT.
- SILICONE CAULK SHALL BE USED AT THE FOLLOWING LOCATIONS INCLUDING BUT NOT LIMITED TO:
  - METAL DOORS AND WALL CONNECTIONS
  - CONDUIT AND PIPE PENETRATIONS AT WALLS AND CEILING.
  - JUNCTION OF MILLWORK (GABINETS, SHELVES, BOOTHS).
  - STAINLESS STEEL TO WALLS
  - DO NOT CAULK ANY OTHER AREAS, ESPECIALLY AT GREYWOOD
- CONTRACTOR IS TO CLEAN WORK AREAS ON A DAILY BASIS SO AS NOT TO ACCUMULATE DEBRIS.
- UPON PROJECT COMPLETION CONTRACTOR IS TO CLEAN WORK AREAS AND JOB SITE THOROUGHLY SO AS TO REMOVE ALL CONSTRUCTION DUST, RESIDUE, AND DEBRIS.
- DO NOT OBSTRUCT STREETS, SIDEWALKS, ALLEYS OR OTHER RIGHT-OF-WAY WITHOUT FIRST OBTAINING PROPER PERMITS.
- ALL WORK SHALL BE ACCOMPLISHED WITH QUALITY WORKMANSHIP OF THE HIGHEST INDUSTRY STANDARDS. ALL MATERIALS SHALL BE INSTALLED STRICT ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS. MATERIALS AND METHODS SHALL CONFORM TO THE APPROPRIATE NATIONAL TRADE BOOK; I.E. TILE COUNCIL OF AMERICA HANDBOOK FOR CERAMIC TILE INSTALLATION, ARCHITECTURAL WOODWORK INSTITUTE, 'QUALITY STANDARDS' ETC.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR JOB SAFETY, AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE SAFETY OF WORKERS AND OCCUPANTS AT ALL TIMES.
- ALL CONSTRUCTION SHALL BE PERFORMED DURING THE HOURS OF 7:00 AM TO 6:00 PM, MONDAY THROUGH SATURDAY. NO WORK IS TO OCCUR ON SUNDAYS OR HOLIDAYS.
- THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MINOR ITEMS WHICH ARE OBVIOUSLY AND REASONABLE NECESSARY TO COMPLETE AN INSTALLATION.
- MINIMUM FLAME SPREAD CLASSIFICATION OF INTERIOR FINISH SHALL CONFORM TO THE BUILDING CODE AND LOCAL GOVERNING BUILDING CODES/ORDINANCES.
- PROJECT SHALL CONFORM TO THE:
  - 2022 CALIFORNIA RESIDENTIAL CODE (CRC)
  - 2022 CALIFORNIA BUILDING CODE (CBC)
  - 2022 CALIFORNIA MECHANICAL CODE (CMC)
  - 2022 CALIFORNIA PLUMBING CODE (CPC)
  - 2022 CALIFORNIA ELECTRICAL CODE (CEC)
  - 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE AND ALL CITY AND COUNTY LAWS AND ORDINANCES.
- ADDITIONAL MECHANICAL, ELECTRICAL AND PLUMBING PERMITS SHALL BE OBTAINED AS REQUIRED.

## ABBREVIATIONS

AC	ASPHALTIC CONCRETE	SALV	GALVANIZED
CLG	CEILING	GYP BD	GYPSON BOARD
CLR	CLEAR	HORIZ	HORIZONTAL
CONC	CONCRETE	HT	HEIGHT
CONT	CONTINUOUS	JSTS	JOISTS
DIA	DIAMETER	MAX	MAXIMUM
DIM	DIMENSION	MIN	MINIMUM
DWS	DRAWING	NO	NUMBER
EA	EACH	OC	ON CENTER
EL	ELEVATION	REQD	REQUIRED
EQ	EQUAL	SIM	SIMILAR
EN	EACH WAY	SQ	SQUARE
(E)	EXISTING	THK	THICK
FF	FINISH FLOOR	TP	TOP PLATE
FG	FINISH GRADE	TYP	TYPICAL
FL	FLOOR	W	WITH
FT	FOOT, FEET	WH	WATER HEATER

## VICINITY MAP



## TABULATIONS

OCCUPANCY GROUP: R-3  
CONSTRUCTION TYPE: V-B  
LOT: 7526 SQ. FT.

EXISTING RESIDENCE: 1,122 SQ. FT.  
EXISTING GARAGE TO BE CONVERTED INTO JR. A.D.U.: 343 SQ. FT.  
PARTIAL DWELLING TO BE ATTACHED TO JR. A.D.U.: 143 SQ. FT.  
TOTAL JR. A.D.U. SIZE: 486 SQ. FT.  
EXISTING PORCH: 37 SQ. FT.  
EXISTING PATIO: 160 SQ. FT.

NEW A.D.U.: 143 SQ. FT.

TOTAL FLOOR AREA: 2,752 SQ. FT.  
LOT COVERAGE: 2,752/7526 = 36% LOT COVERAGE  
BUILDING HEIGHT: 1 STORY  
USE: SINGLE FAMILY DWELLINGS

## ADMINISTRATIVE REQ'S

- THE PERSON IN CHARGE OF THE CONSTRUCTION OR INSTALLATION, WHO IS ELIGIBLE UNDER DIVISION 3 OF THE BUSINESS AND PROFESSIONS CODE TO ACCEPT RESPONSIBILITY FOR THE CONSTRUCTION OR INSTALLATION OF REGULATED MANUFACTURED DEVICES SHALL POST OR MAKE AVAILABLE WITH THE BUILDING PERMIT(S) ISSUED FOR THE BUILDING, THE CERTIFICATE OF INSTALLATION DOCUMENTATION FOR MANUFACTURED DEVICES REGULATED BY THE APPLIANCE EFFICIENCY REGULATIONS OR PART 6. SUCH CERTIFICATE OF INSTALLATION DOCUMENTATION SHALL BE MADE AVAILABLE TO THE ENFORCEMENT AGENCY FOR ALL APPLICABLE INSPECTIONS. THESE CERTIFICATES SHALL:
  - IDENTIFY FEATURES, MATERIALS, COMPONENTS OR MANUFACTURED DEVICES, AND SYSTEM DIAGNOSTIC RESULTS REQUIRED TO VERIFY COMPLIANCE WITH APPLIANCE EFFICIENCY REGULATIONS AND PART 6.
  - STATE THE NUMBER OF THE BUILDING PERMIT UNDER WHICH THE CONSTRUCTION OR INSTALLATION WAS PERFORMED, SECTIONS OF THE CERTIFICATE (S), FOR WHICH SUBMITTAL TO A HERS PROVIDER DATA REGISTRY IS REQUIRED, SHALL DISPLAY THE UNIQUE REGISTRATION NUMBER ASSIGNED BY THE HERS DATA REGISTRY.
  - INCLUDE A DECLARATION STATEMENT INDICATING THAT THE CONSTRUCTED OR INSTALLED FEATURES, MATERIALS, COMPONENTS OR MANUFACTURED DEVICES CONFORM TO ALL APPLICABLE CODES AND REGULATIONS, AND TO THE REQUIREMENTS FOR SUCH DEVICES GIVEN IN THE PLANS AND SPECIFICATIONS APPROVED BY THE LOCAL ENFORCEMENT AGENCY.
  - BE SIGNED BY THE DOCUMENTATION AUTHOR TO CERTIFY THE DOCUMENTATION IS ACCURATE AND COMPLETE.
  - BE SIGNED BY THE INDIVIDUAL ELIGIBLE UNDER DIVISION 3 OF THE BUSINESS AND PROFESSIONS CODE TO ACCEPT RESPONSIBILITY FOR CONSTRUCTION OR INSTALLATION IN THE APPLICABLE CLASSIFICATION FOR THE SCOPE OF WORK SPECIFIED ON THE CERTIFICATE OF INSTALLATION DOCUMENT(S).
- THE BUILDER SHALL PROVIDE THE BUILDING OWNER OR THE PERSON(S) RESPONSIBLE FOR OPERATION AND MAINTENANCE OF THE FEATURE, MATERIAL, COMPONENT OR MECHANICAL DEVICE INSTALLED (IN CASE OF MULTI-TENANT OR CENTRALLY OPERATED BUILDINGS) WITH THE FOLLOWING AT THE TIME OF OCCUPANCY:
  - COMPLIANCE INFORMATION, THE APPROPRIATE COMPLETED AND SIGNED CERTIFICATE(S) OF COMPLIANCE, CERTIFICATE(S) OF INSTALLATION, AND IF APPLICABLE CERTIFICATE(S) OF VERIFICATION DOCUMENTATION SUBMITTED.
  - OPERATING INFORMATION, THE APPROPRIATE CERTIFICATE(S) OF COMPLIANCE AND A LIST OF THE FEATURES, MATERIALS, COMPONENTS, AND MECHANICAL DEVICES INSTALLED IN THE BUILDING AND INSTRUCTION ON HOW TO OPERATE THEM CORRECTLY AND EFFICIENTLY.
  - MAINTENANCE INFORMATION, REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY STATED AND INCORPORATED ON A READILY ACCESSIBLE LABEL. THE LABEL MAY BE LIMITED TO IDENTIFYING THE OPERATION AND MAINTENANCE MANUAL.
  - VENTILATION INFORMATION, A DESCRIPTION OF THE QUANTITY OF OUTDOOR AIR THAT THE VENTILATION SYSTEM IS DESIGNED TO PROVIDE TO THE BUILDING CONDITIONED SPACE, AND INSTRUCTIONS FOR PROPER OPERATION AND MAINTENANCE.
- THE ENFORCEMENT AGENCY SHALL NOT ISSUE A CERTIFICATE OF OCCUPANCY UNTIL ALL REQUIRED CERTIFICATES OF VERIFICATION ARE POSTED AND MADE AVAILABLE TO THE BUILDING DEPARTMENT FOR ALL APPLICABLE INSPECTIONS, AND THAT ALL CERTIFICATES OF VERIFICATION CONFORM TO THE SPECIFICATIONS OF SECTION 10-103(A)(5).

## CONSULTANTS

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(626)274-5651

## SCOPE OF WORK

- GARAGE CONVERSION INTO JR. A.D.U. (343 SQ. FT.)
- 2-NEW BEDROOMS, KITCHEN, LIVING ROOM, BATH & LAUNDRY
- PARTIAL (E) DWELLING TO BE CONVERTED TO JR. A.D.U. (143 SQ. FT.)
- NEW BEDROOM
- NEW A.D.U. (143 SQ. FT.)
- THREE NEW BEDROOMS, TWO NEW BATHS & NEW LIVING ROOM, KITCHEN & LAUNDRY

## SHEET INDEX

- |       |  |
|-------|--|
| T-1   | COVER SHEET SITE   |
| A-1   | DEMOLITION PLAN  |
| A-2   | PROPOSED FLOOR PLAN TO GARAGE CONVERSION INTO A.D.U.       |
| A-3   | PROPOSED FLOOR PLAN TO NEW DETACH A.D.U.                   |
| A-4   | ELEVATIONS GARAGE CONVERSION INTO A.D.U.                   |
| A-5   | ELEVATIONS NEW DETACH A.D.U.                               |
| S-1   | STRUCTURAL NOTES & DETAILS                                 |
| S-2   | FOUNDATION PLAN & DETAILS TO GARAGE CONVERSION INTO A.D.U. |
| S-3   | FRAMING PLAN & DETAILS TO GARAGE CONVERSION INTO A.D.U.    |
| S-4   | FOUNDATION PLAN & DETAILS TO NEW DETACH A.D.U.             |
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| U-1   | WASTE, GAS, MECHANICAL & COLD & HOT PLAN A.D.U.            |
| U-2   | WASTE & GAS PLAN GARAGE CONVERSION INTO A.D.U.             |
| U-3   | COLD & HOT PLAN GARAGE CONVERSION INTO A.D.U.              |
| ENV-1 | TITLE-24 NEW DETACHED A.D.U.                               |
| ENV-2 | TITLE-24 NEW DETACHED A.D.U.                               |
| ENV-3 | TITLE-24 NEW DETACHED A.D.U.                               |
| ENV-4 | TITLE-24 EXISTING RESIDENCE                                |
| ENV-5 | TITLE-24 EXISTING RESIDENCE                                |
| ENV-6 | TITLE-24 GARAGE CONVERSION INTO J.A.D.U.                   |
| ENV-7 | TITLE-24 GARAGE CONVERSION INTO J.A.D.U.                   |



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**OWNER INFO:**  
- OSCAR & BERTA RODRIGUEZ  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763  
- (909)238-8508

**PROJECT ADDRESS:**  
- GARAGE CONVERSION INTO A.D.U. & NEW DETACH A.D.U.  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763

**JOB NUMBER:**  
CB23016

**DRAWN BY:**  
GC/JC/OP

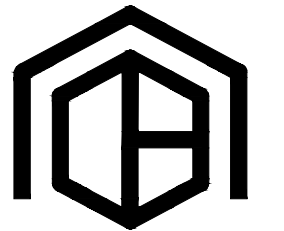
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3/32" = 1'-0"

**REVISIONS:**

**SHEET TITLE:**  
SITE PLAN

**SHEET NO.:**

T-1



**C.B. HOME**  
— DESIGN —

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NEW DETACH A.D.U.  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763

**JOB NUMBER:**  
CB23016  
**DRAWN BY:**  
GC/JC/OP  
**SCALE:**  
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**REVISIONS:**  
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**SHEET TITLE:**  
DEMOLITION PLAN

**SHEET NO.:**

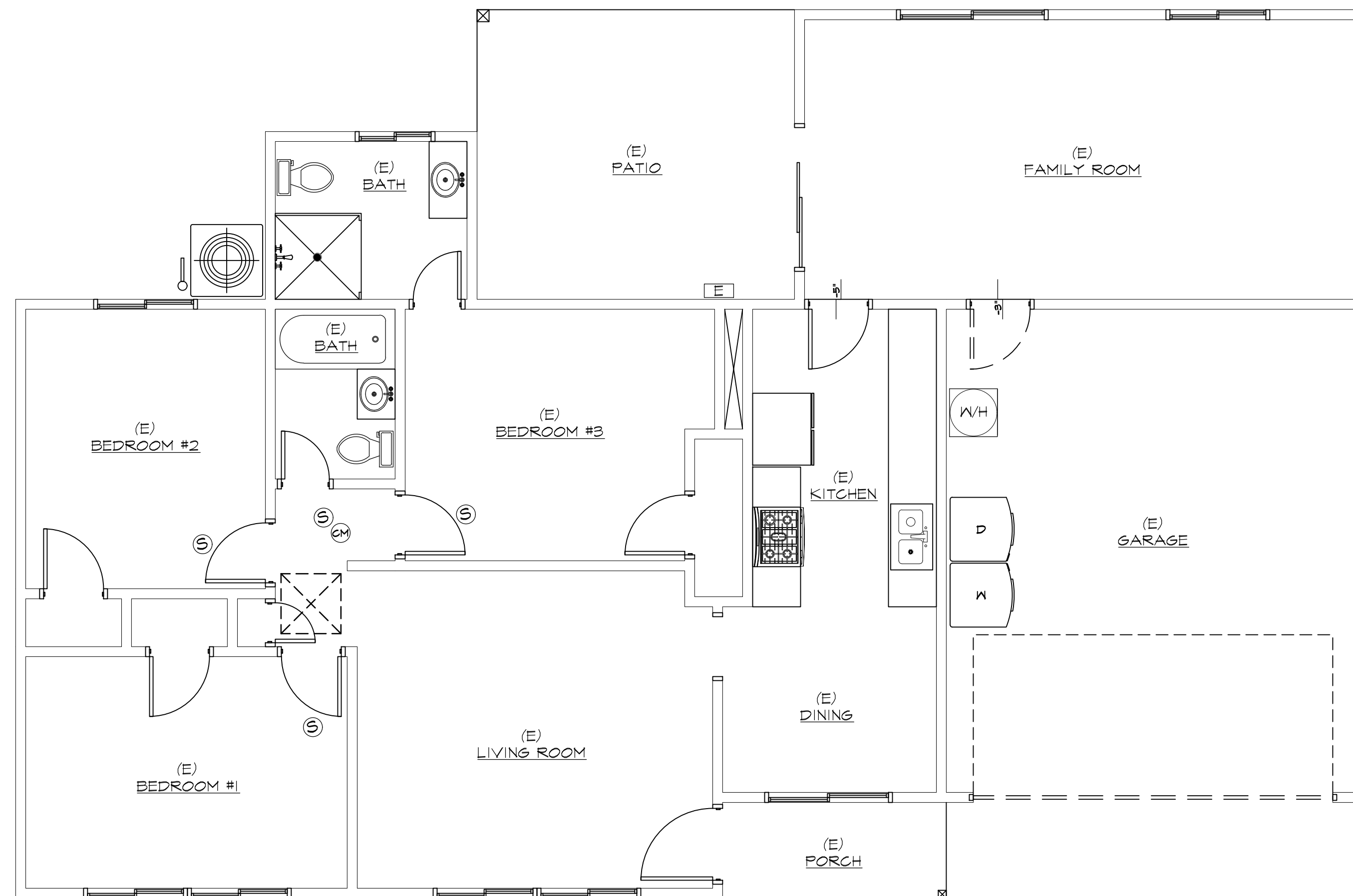
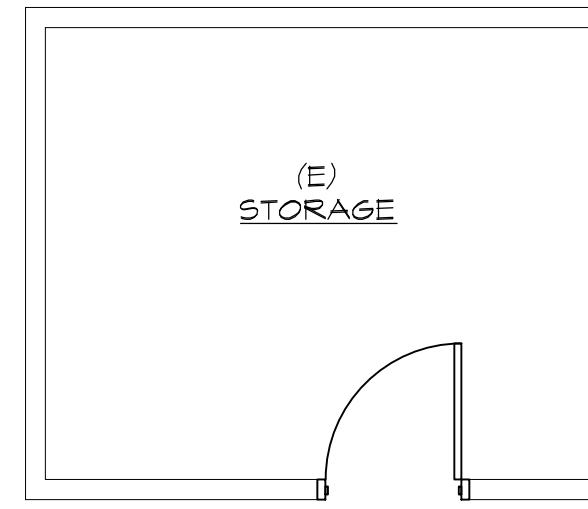
A-1

**GENERAL NOTES**

1. PROVIDE LOW FLOW TOILETS(1.20 G/P), SHOWERHEADS (1.8 GPM), LAVATORY FAUCETS (1.2 GPM), KITCHEN FAUCET (1.8 GPM).
2. SHOWER MAX TEMPERATURE OF 120" TO BE PROVIDED BY THE USE OF PRESSURE BALANCE THERMOSTATIC MIXING VALVES.
3. WALL COVERINGS IN SHOWERS AND TUBS TO BE GEMENT PLASTER, TILE, OR EQUAL TO 2" ABOVE DRAIN. ENCLOSURES MUST BE OF APPROVED SAFETY GLAZING AND DOORS MUST SWING OUT OF SHOWERS. WINDOWS IN ENCLOSURE WALLS SHALL BE LABELED SAFETY GLAZING WHEN LESS THAN 60" ABOVE THE DRAIN.
4. PROVIDE A MINIMUM ONE DEDICATED 20 AMPERE CIRCUIT TO BATHROOMS.
5. HEATING EQUIPMENT LOCATED IN AN ATTIC SPACE REQUIRING INSPECTION OR MAINTENANCE SHALL PROVIDE AN ACCESS OPENING NOT LESS THAN 30 INCHES BY 30 INCHES, A CONTINUOUS SOLID FLOOR NOT LESS THAT 24 INCHES AND A CLEAR SPACE OF 30" DEEP AND 30" WIDE LOCATED AT THE FRONT OF SERVICE SIDE OF EQUIPMENT.
6. FIRST SWITCH TO THE ENTRANCE OF BATHROOM(S) AND/OR KITCHEN SHALL BE A FLUORESCENT FIXTURE. (PLUG IN TYPE OR WITH BALLAST)
7. ALL BRANCH CIRCUITS THAT SUPPLY 15 & 20 AMP. RECEPTACLE OUTLETS INSTALLED IN BEDROOMS TO BE PROTECTED BY AN AFCI.
8. ALL DUCTING AND CONNECTORS FOR HEATING AND/OR AIR CONDITIONING SHALL BE UL 181 APPROVED.
9. ALL BRANCH CIRCUITS IN A SINGLE FAMILY RESIDENCE SHALL BE PROTECTED BY COMBINATION TYPE AFCI DEVICES, EXCEPT KITCHENS, BATHROOMS, GARAGES & BASEMENT.
10. A 12" MINIMUM ACCESS PANEL TO BATHTUB TRAP CONNECTION IS REQUIRED UNLESS PLUMBING IS WITHOUT SLIP JOINTS.
11. PROVIDE INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE OR THE THERMOSTATIC MIXING VALVE TYPE FOR SHOWERS AND TUB SHOWERS.
12. THE CENTER OF THE 15,20,AND 30-AMPERE RECEPTACLES SHALL BE INSTALLED NOT LESS THAN 12" ABOVE THE FLOOR OR WORKING SURFACE.
13. AN APPROVED SEISMIC GAS SHUTOFF VALVE WILL BE INSTALLED ON THE FUEL GAS LINE ON THE DOWN STREAM SIDE OF THE UTILITY METER AND BE RIGIDLY CONNECTED TO THE EXTERIOR OF THE BUILDING OR STRUCTURE CONTAINING THE FUEL GAS PIPING. (SEPARATE PLUMBING PERMIT REQUIRED)
14. CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN DWELLING UNITS AND IN SLEEPING UNITS WITHIN WHICH FUEL-BURNING APPLIANCES ARE INSTALLED AND IN DWELLING THAT HAVE ATTACHED GARAGES. CARBON MONOXIDE ALARM SHALL BE PROVIDED OUTSIDE OF EACH SEPARATE DWELLING UNIT SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS AND ON EVERY LEVEL OF A DWELLING UNIT INCLUDING BASEMENTS.
15. GARAGE SHALL BE SEPARATED FROM THE DWELLING AND ITS ATTIC AREA IN ACCORDANCE WITH TABLE R302.6
16. DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE CONSTRUCTED OF A MIN. NO. 26 GAGE SHEET STEEL OR OTHER APPROVED MATERIAL AND SHALL NOT HAVE OPENINGS INTO THE GARAGE (R302.5.2)
17. HEATER SHALL BE CAPABLE OF MAINTAINING A MINIMUM ROOM TEMPERATURE OF 65° AT A POINT 3 FEET ABOVE THE FLOOR AND 2 FEET FROM EXTERIOR WALLS IN ALL HABITABLE ROOMS AT THE DESIGN TEMPERATURE (R303.4)
18. DAMP PROOFING, WHERE REQUIRED, SHALL BE INSTALLED WITH MATERIALS AND AS REQUIRED IN SECTION R406.1
19. VEHICULAR ACCESS DOORS SHALL COMPLY WITH SECTION R612.4
20. BUILDING SHALL HAVE APPROVED ADDRESS NUMBERS, BUILDING NUMBERS OR APPROVED BUILDING IDENTIFICATION PLACED IN A POSITION THAT IS PLAINLY LESIBLE AND VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. (R314.1)
21. PROTECTION OF WOOD AND WOOD BASED PRODUCTS FROM DECAY SHALL BE PROVIDED IN THE LOCATIONS SPECIFIED PER SECTION R311.1 BY THE USE OF NATURALLY DURABLE WOOD OR WOOD THAT IS PRESERVATIVE-TREATED IN ACCORDANCE WITH ANPA II FOR THE SPECIES, PRODUCT, PRESERVATIVE AND END USE. PRESERVATIVES SHALL BE LISTED IN SECTION 4 OF ANPA UI.

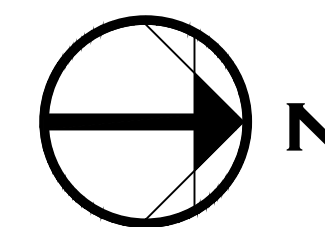
**WALL SCHEDULE**

- EXISTING 2X STUD WALL
- EXIST. 2X STUD WALL TO BE REMOVED



**DEMOLITION PLAN**

1/4" = 1'-0"

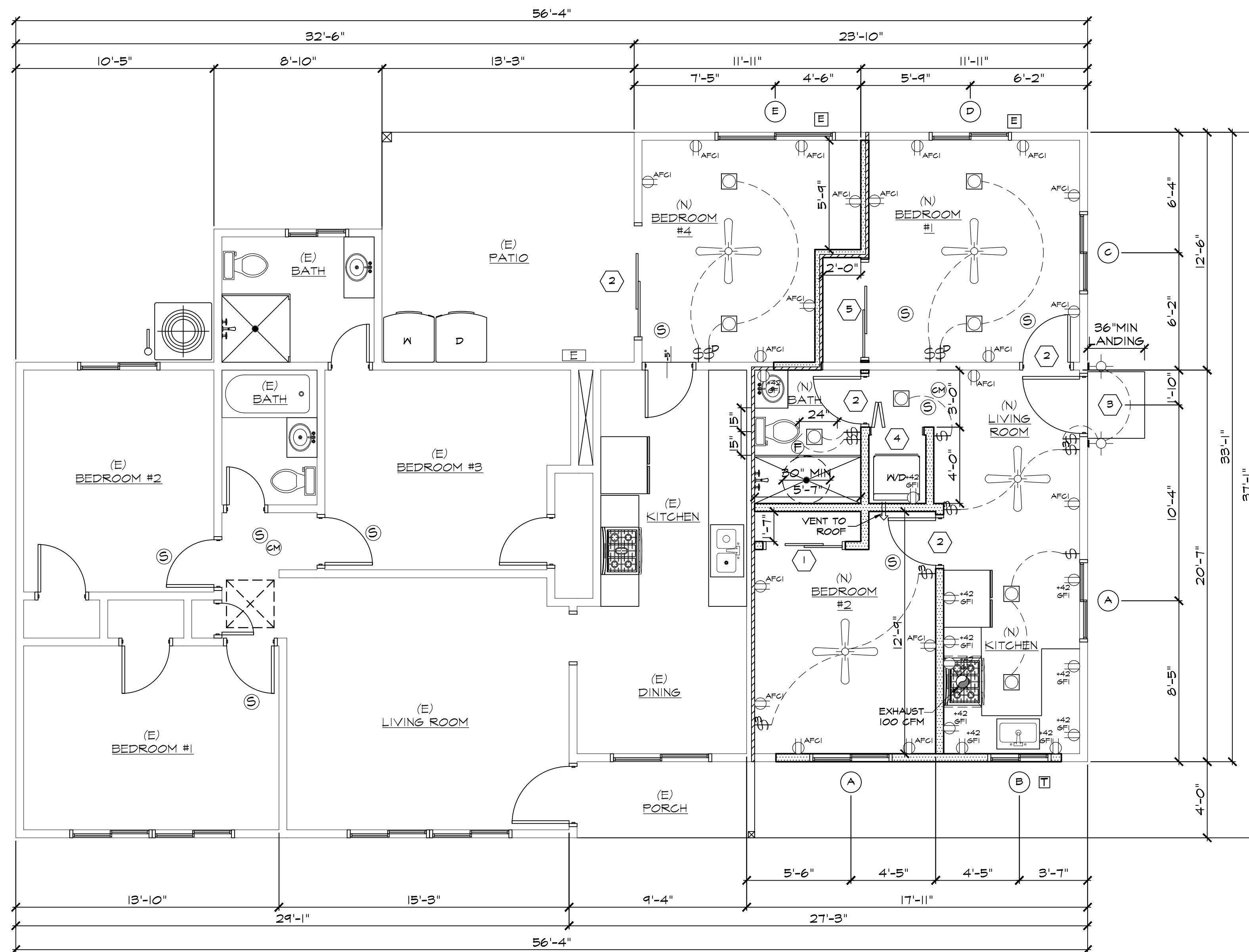


LOAD CALCULATIONS FOR MAIN DWELLING	
ADDRESS: 9802 COALINGA AVE., MONTCLAIR	
TOTAL FLOOR AREA SQUARE FOOTAGE:	1,122 SQ. FT.
1. LIGHTING AND RECEPTACLE:	3 x 1,122 = 3,366 VA
2. SMALL APPLIANCE:	2 x 1,500 = 3,000 VA
TOTAL:	6,366 VA
4. APPLY DEMAND FACTOR:	3,000 x 100% = 3,000 VA
REMAIN:	(6,366 - 3,000) x 35% = 1,178.1 VA
TOTAL:	4,178.1 VA
5. APPLIANCE:	
A. DISPOSER	1 x 720 = 720 VA
B. DISHWASHER	1 x 1,200 = 1,200 VA
C. REFRIGERATOR	1 x 1,200 = 1,200 VA
TOTAL:	3,120 VA
6. AIR CONDITIONER:	
A. AC CONDENSER	1 x 1,800 VA
TOTAL	1,800 VA
TOTAL OF ITEM #4, #5, #6:	9,098.1 VA
7. TOTAL LOADS OF THIS BUILDING:	9,098.1 VA
OR	
38 AMPS @ 208/240 V, SINGLE PHASE, THREE WIRE	
REQUIRED 100 AMP 208/240V, 1 PHASE, 3 WIRE SERVICE	

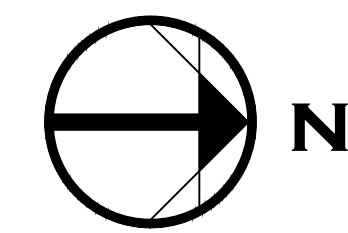
LOAD CALCULATIONS FOR DETACH ADU	
ADDRESS: 9802 COALINGA AVE., MONTCLAIR	
TOTAL FLOOR AREA SQUARE FOOTAGE:	947 SQ. FT.
1. LIGHTING AND RECEPTACLE:	3 x 947 = 2,841 VA
2. SMALL APPLIANCE:	2 x 1,500 = 3,000 VA
TOTAL:	5,841 VA
4. APPLY DEMAND FACTOR:	3,000 x 100% = 3,000 VA
REMAIN:	(5,841 - 3,000) x 35% = 994.35 VA
TOTAL:	3,994.35 VA
5. APPLIANCE:	
A. DISPOSER	1 x 720 = 720 VA
B. DISHWASHER	1 x 1,200 = 1,200 VA
C. REFRIGERATOR	1 x 1,200 = 1,200 VA
TOTAL:	3,120 VA
6. AIR CONDITIONER:	
A. AC CONDENSER	1 x 1,800 VA
TOTAL	1,800 VA
TOTAL OF ITEM #4, #5, #6:	8,914.35 VA
7. TOTAL LOADS OF THIS BUILDING:	8,914.35 VA
OR	
37 AMPS @ 208/240 V, SINGLE PHASE, THREE WIRE	
REQUIRED 100 AMP 208/240V, 1 PHASE, 3 WIRE SERVICE	

LOAD CALCULATIONS FOR JR ADU	
ADDRESS: 9802 COALINGA AVE., MONTCLAIR	
TOTAL FLOOR AREA SQUARE FOOTAGE:	486 SQ. FT.
1. LIGHTING AND RECEPTACLE:	3 x 486 = 1,458 VA
2. SMALL APPLIANCE:	2 x 1,500 = 3,000 VA
TOTAL:	4,458 VA
4. APPLY DEMAND FACTOR:	3,000 x 100% = 3,000 VA
REMAIN:	(4,458 - 3,000) x 35% = 510.3 VA
TOTAL:	3,510.3 VA
5. APPLIANCE:	
A. DISPOSER	1 x 720 = 720 VA
B. DISHWASHER	1 x 1,200 = 1,200 VA
C. REFRIGERATOR	1 x 1,200 = 1,200 VA
TOTAL:	3,120 VA
6. AIR CONDITIONER:	
A. AC CONDENSER	1 x 1,800 VA
TOTAL	1,800 VA
TOTAL OF ITEM #4, #5, #6:	8,430.3 VA
7. TOTAL LOADS OF THIS BUILDING:	8,430.3 VA
OR	
35 AMPS @ 208/240 V, SINGLE PHASE, THREE WIRE	
REQUIRED 100 AMP 208/240V, 1 PHASE, 3 WIRE SERVICE	

EXTERIOR FOAM DETAILS WILL NOT BE PERMITTED AT FIRST STORY ELEVATIONS WHERE SUBJECT TO PHYSICAL DAMAGE



PROPOSED FLOOR PLAN  
1/4" = 1'-0"



DOOR SCHEDULE

SYM.	QTY.	SIZE	THK	TYPE	MATERIAL	REMARKS
1	1	4'-0" X 6'-8"	1 3/4"	DBL. SLIDING	WOOD	
2	3	2'-6" X 6'-8"	1 3/4"	SWING H.C.D.	WOOD	
3	1	3'-0" X 6'-8"	1 3/4"	SWING S.C.D.	WOOD	
4	1	2'-8" X 6'-8"	1 3/4"	BIFOLD	WOOD	
5	1	5'-0" X 6'-8"	1 3/4"	DBL. SLIDING	WOOD	
6	1	5'-0" X 6'-8"	1 3/4"	DBL. SLIDING	VINYL/GLASS	EXISTING

WINDOW SCHEDULE

SYM.	QTY.	SIZE	TYPE	MATERIAL	U-FCTR	SHGC	REMARKS
A	2	4'-0" X 4'-0"	SLIDER	VINYL	0.32	0.25	
B	1	3'-0" X 3'-0"	SLIDER	VINYL	0.32	0.25	TEMP
C	1	4'-0" X 2'-0"	SLIDER	VINYL	0.32	0.25	EXISTING
D	1	4'-0" X 4'-0"	SLIDER	VINYL	0.32	0.25	EXISTING
E	1	6'-0" X 2'-0"	SLIDER	VINYL	0.32	0.25	EXISTING

LEGEND

- (N) WINDOW CALL OUT
- (D) DOOR CALL OUT
- (S) SMOKE ALARMS TO BE HARD WIRED VIA BATTERY BACK UP TYP. AND LOW BATTERY SIGNAL. INTERCONNECTED SO THAT ACTIVATION OF ONE ALARM WILL ACTIVATE ALL THE ALARMS WITHIN THE INDIVIDUAL DWELLING UNIT.
- ⊕ POLE SWITCH
- ⊕ 3 WAY POLE SWITCH
- ⊕ DIMMER POLE SWITCH
- ⊕ WALL MOUNTED LIGHT HIGH EFFICACY
- ⊕ CEILING MOUNTED RECESSED LIGHT HIGH EFFICACY
- M.S. MOTION SENSOR
- P.C. PHOTOCELL
- ↔ 4" DIA DRYER VENT TO ROOF
- (N) 30"X30" ATTIC ACCESS W/30" MIN HEADROOM ABOVE
- (CM) CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN DWELLING UNITS AND SLEEPING UNITS WITHIN WHICH FUEL BURNING APPLIANCES ARE INSTALLED AND IN DWELLINGS THAT HAVE ATTACHED GARAGES.
- ⊕ OUTLET 110 VOLTS (TAMPER RESISTANT OUTLETS REQUIRED IN KITCHEN, BEDROOMS, DEN, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, HALLS, LIBRARY, SUNROOMS AND RECREATION ROOMS)
- ⊕ EXHAUST FAN W/ REMIPISTAT CONTROL. CAPABLE OF PROVIDING 50 CFM. DUCTED TO TERMINATE TO THE OUTSIDE OF BUILDING. ENERGY STAR COMPLIANT
- ⊕ KITCHEN RANGE FAN CAPABLE OF PROVIDING 100 CFM. DUCTED TO TERMINATE TO THE OUTSIDE OF BUILDING.
- ⊕ 200 AMP ELECTRICAL PANEL
- ⊕ TEMPERED SAFETY GLAZING
- ⊕ WINDOW MEETS EMERGENCY EGRESS REQUIREMENTS. 44" MAX TO SILL, MIN 24" CLR HT., 20" CLR WIDTH, 5.7 SQ. FT. MIN. NET CLEAR OPENING.

WALL SCHEDULE

- EXISTING 2X STUD WALL
- NEW 2x4 STUD WALL
- 1 HOUR RATED WALL 5/8" GYP. BOARD, TYPE 'X' FLOOR TO ROOF



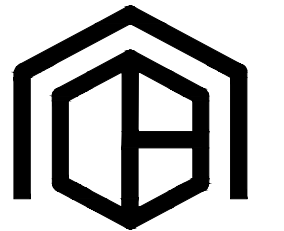
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**OWNER INFO:**  
- OSCAR & BERTA RODRIGUEZ  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763  
- (909)238-8508

**PROJECT ADDRESS:**  
- GARAGE CONVERSION INTO A.D.U. & NEW DETACH A.D.U.  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763

**JOB NUMBER:**  
CB23-016  
**DRAWN BY:**  
GC/JC/OP  
**SCALE:**  
1/4" = 1'-0"  
**REVISIONS:**  
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.  
**SHEET TITLE:**  
PROPOSED FLOOR PLAN TO GARAGE CONVERSION INTO A.D.U.

**SHEET NO.:**

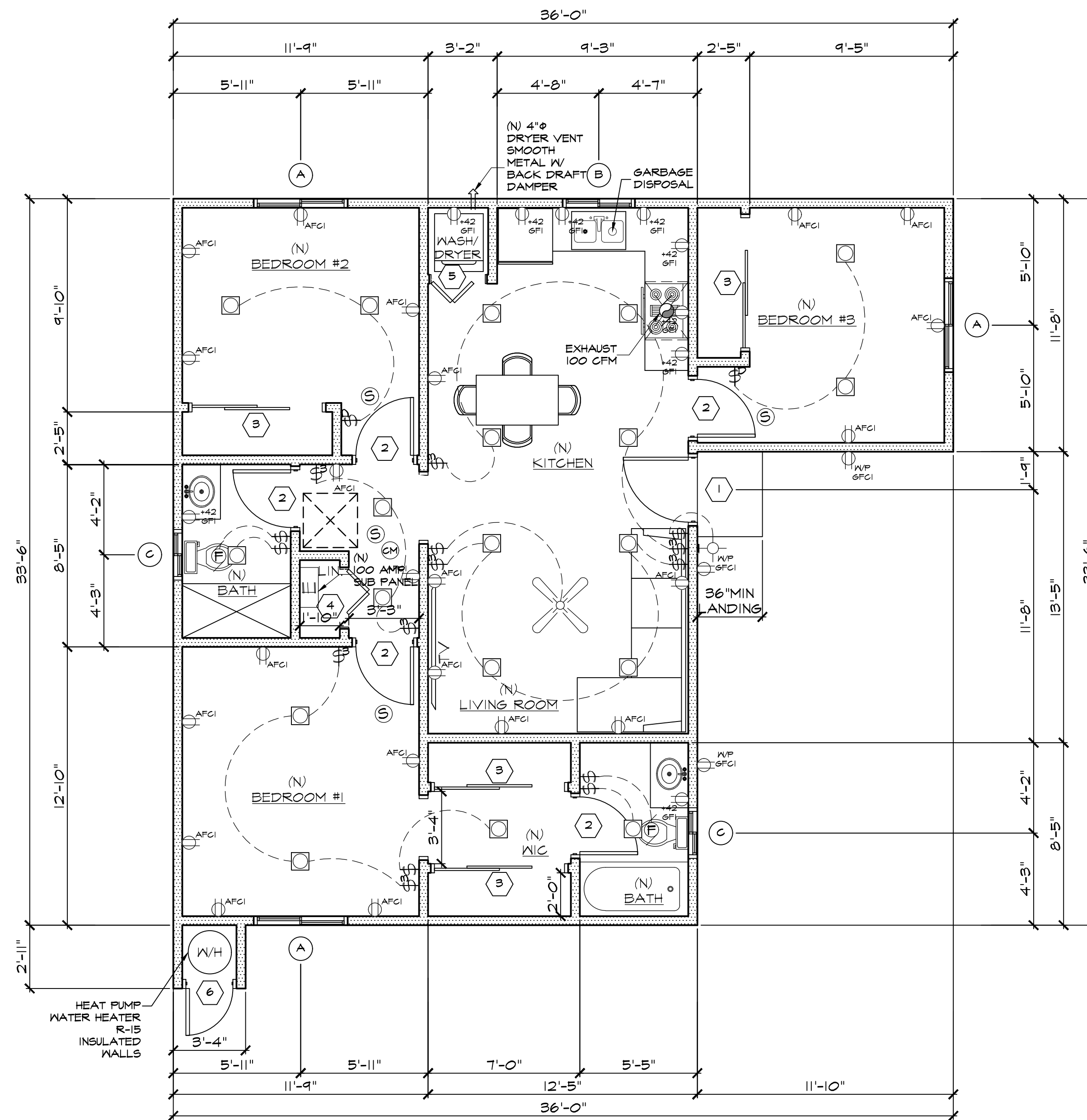


**C.B. HOME**  
— DESIGN —

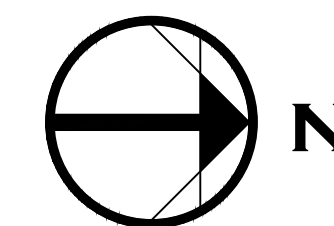
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PHONE: (626) 279-5657  
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EXTERIOR FOAM DETAILS WILL NOT BE PERMITTED AT FIRST STORY ELEVATIONS WHERE SUBJECT TO PHYSICAL DAMAGE



**PROPOSED FLOOR PLAN**  
1/4" = 1'-0"



**DOOR SCHEDULE**

SYM.	QTY.	SIZE	THK	TYPE	MATERIAL	REMARKS
(1)	1	3'-0" X 6'-8"	1 3/4"	SWING S.C.D.	WOOD	
(2)	5	2'-8" X 6'-8"	1 3/8"	SWING H.C.D.	WOOD	
(3)	4	6'-0" X 6'-8"	1 3/4"	SLIDING DBL.	WOOD	
(4)	1	2'-8" X 6'-8"	1 3/4"	BI FOLD	WOOD	
(5)	1	2'-8" X 6'-8"	1 3/4"	BI FOLD	WOOD	
(6)	1	2'-6" X 6'-8"	1 3/4"	SWING S.C.D.	WOOD	LOUVERED DOOR

**WINDOW SCHEDULE**

SYM.	QTY.	SIZE	TYPE	MATERIAL	U-FACTR	SHGC	REMARKS
(A)	3	4'-0" X 4'-0"	SLIDER	VINYL	0.32	0.25	
(B)	1	3'-0" X 3'-0"	SLIDER	VINYL	0.32	0.25	
(C)	2	2'-0" X 2'-0"	SLIDER	VINYL	0.32	0.25	

**LEGEND**

- (○) WINDOW CALL OUT
- (◇) DOOR CALL OUT
- (⊕) SMOKE ALARMS TO BE HARD WIRED VIA BATTERY BACK UP TYP. AND LOW BATTERY SIGNAL. INTERCONNECTED SO THAT ACTUATION OF ONE ALARM WILL ACTIVATE ALL THE ALARMS WITHIN THE INDIVIDUAL DWELLING UNIT.
- ⊕ POLE SWITCH
- ⊕ 3 WAY POLE SWITCH
- ⊕ DIMMER POLE SWITCH
- ⊕ MALL MOUNTED LIGHT HIGH EFFICACY
- ⊕ CEILING MOUNTED RECESSED LIGHT HIGH EFFICACY
- M.S. MOTION SENSOR
- P.C. PHOTOCELL
- ⊕ (N) 30'X30" ATTIC ACCESS W/30" MIN HEADROOM ABOVE
- ⊕ CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN DWELLING UNITS AND SLEEPING UNITS WITHIN HIGH PUE. BURNING APPLIANCES ARE INSTALLED AND IN DWELLING THAT HAVE ATTACHED GARAGES.
- ⊕ OUTLET 110 VOLTS (TAMPER RESISTANT OUTLETS REQUIRED IN KITCHEN, BEDROOMS, DENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARY, SUNROOMS AND RECREATION ROOMS)
- ⊕ EXHAUST FAN W/ HUMIDISTAT CONTROL. CAPABLE OF PROVIDING 50 CFM. DUCTED TO TERMINATE TO THE OUTSIDE OF BUILDING. ENERGY STAR COMPLIANT
- ⊕ KITCHEN RANGE FAN CAPABLE OF PROVIDING 100 CFM. DUCTED TO TERMINATE TO THE OUTSIDE OF BUILDING.
- ⊕ 200 AMP ELECTRICAL PANEL
- ⊕ TEMPERED SAFETY GLAZING
- ⊕ WINDOW MEETS EMERGENCY EGRESS REQUIREMENTS. 44" MAX TO SILL, MIN 24" CLR HT., 20" CLR WIDTH, 5.7 SQ. FT. MIN. NET CLEAR OPENING.
- ⊕ 4" DIA DRYER VENT

**WALL SCHEDULE**

- EXISTING 2X STUD MALL
- NEW 2x4 STUD MALL
- 1 HOUR RATED MALL 5/8" GYP. BOARD. TYPE 'X' FLOOR TO ROOF

**OWNER INFO:**

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- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763  
- (909)238-8508

**PROJECT ADDRESS:**

- GARAGE CONVERSION INTO A.D.U. & NEW DETACH A.D.U.  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763

**JOB NUMBER:**  
CB23-016

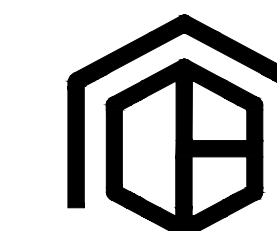
**DRAWN BY:**  
GC/JC/OP

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

**REVISIONS:**

**SHEET TITLE:**  
PROPOSED FLOOR PLAN TO NEW DETACH A.D.U.

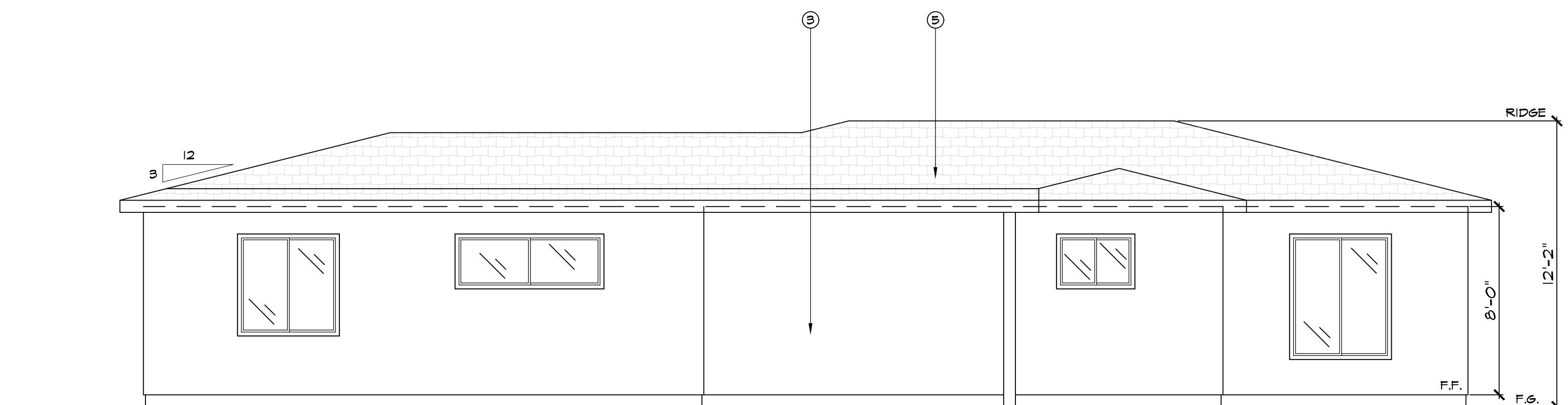
**SHEET NO.:**



**C.B. HOME**  
— DESIGN —

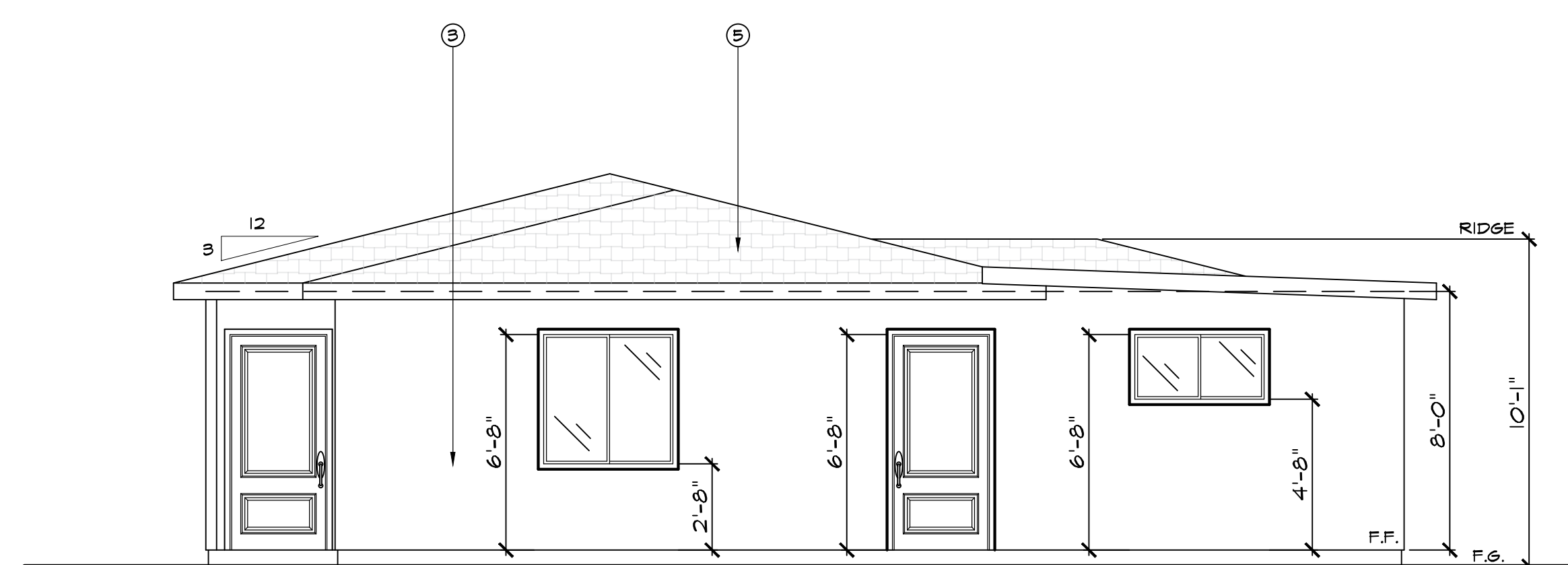
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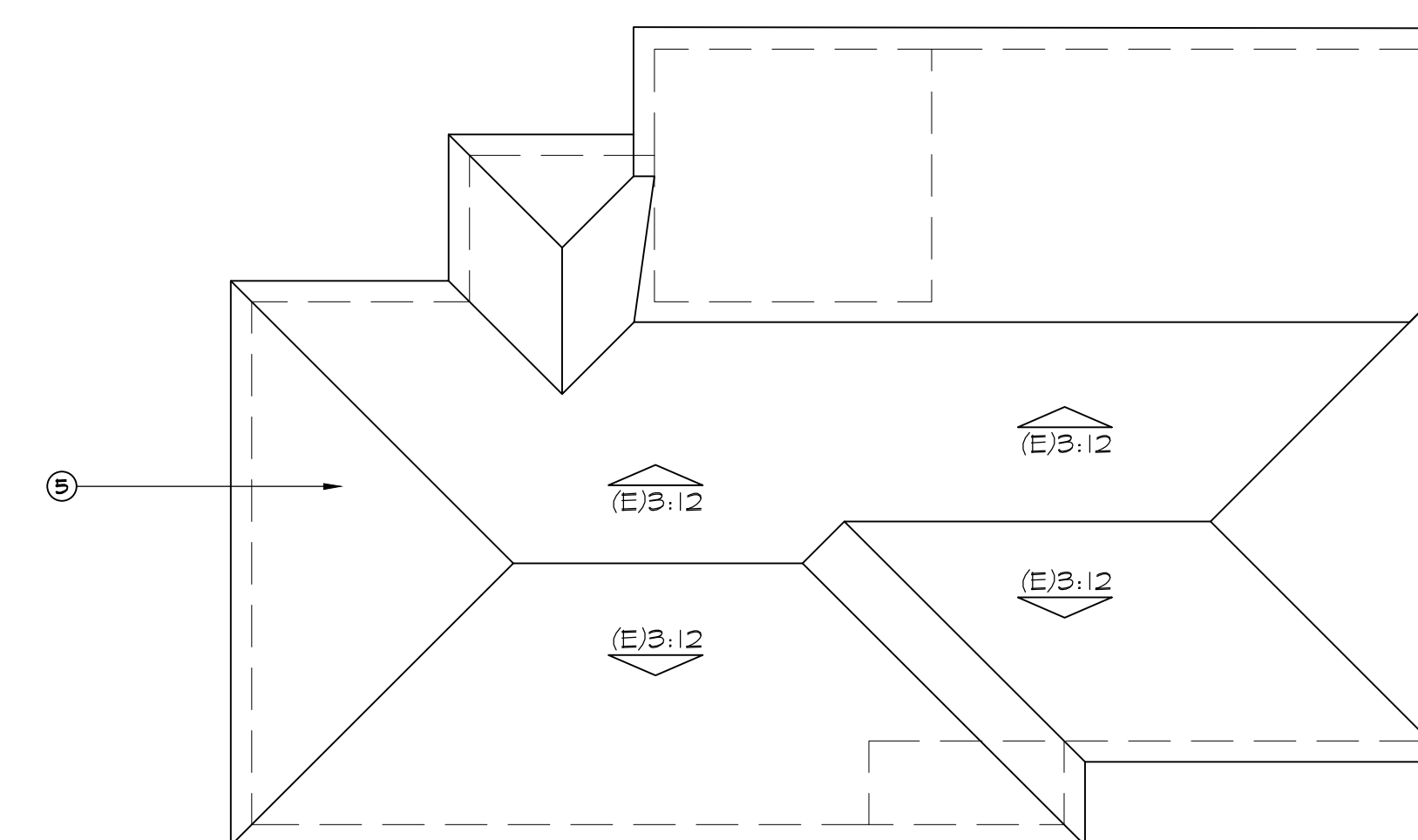
WEST/REAR ELEVATION

1/4" = 1'-0"



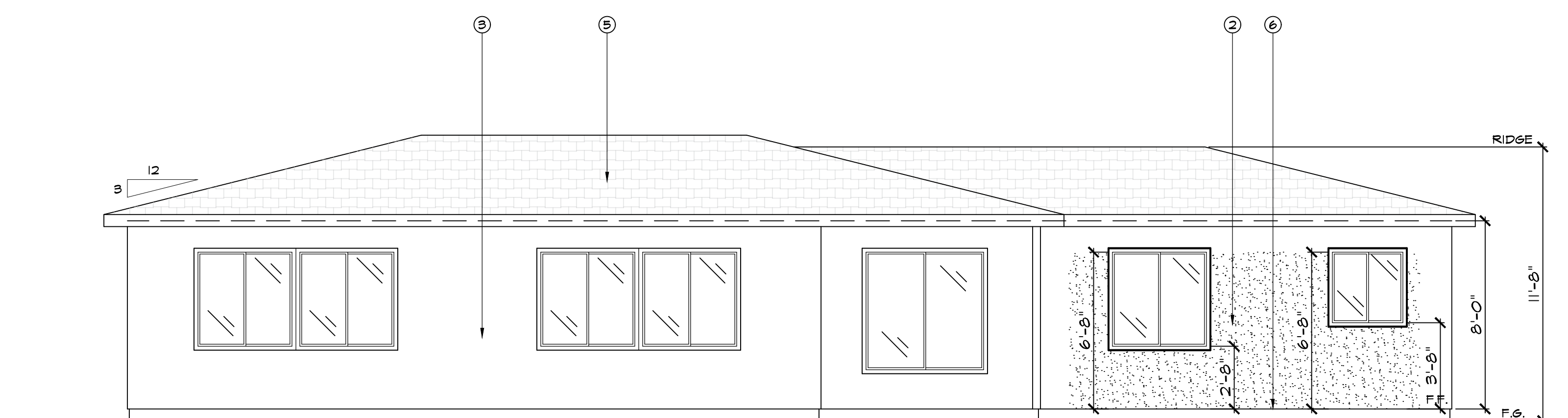
NORTH/RIGHT ELEVATION

1/4" = 1'-0"



ROOF PLAN

1/8" = 1'-0"



EAST/FRONT ELEVATION

1/4" = 1'-0"

**KEY NOTES**

- ① NEW ROOFING 220# COMPOSITION SHINGLES #80 FELT, CLASS "A" (TO MATCH EXISTING) TYPICAL ICC ESR-1475
- ② NEW STUCCO TO MATCH EXISTING, PROVIDE 2-LAYERS OF GRADE 'D' PAPER UNDER LATH.
- ③ EXISTING STUCCO TO REMAIN.
- ④ 12 X 24 HALF ROUND DORMER VENT
- ⑤ EXISTING ROOF TO REMAIN
- ⑥ MINIMUM 0.011" (NO. 26 GALVANIZED SHEET GAGE) CORROSION-RESISTANT OR PLASTIC KEEP SCREED LOCATED BELOW THE FOUNDATION PLATE LINE AND 6 INCHES ABOVE GRADE ON ALL EXTERIOR STUD WALL OR 2 INCHES ABOVE PAVED AREAS.
- ⑦ NEW ROLLED TORCH-DOWN ICC ESR-1388

**OWNER INFO:**

- OSCAR & BERTA RODRIGUEZ
- 9802 COALINGA AVENUE
- MONTCLAIR, CA. 91763
- (909)238-8508

**PROJECT ADDRESS:**

- GARAGE CONVERSION INTO A.D.U. & NEW DETACH A.D.U.
- 9802 COALINGA AVENUE
- MONTCLAIR, CA. 91763

**JOB NUMBER:**  
CB23016

**DRAWN BY:**  
GC/JC/OP

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

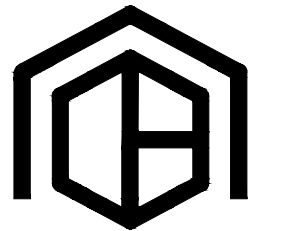
**REVISIONS:**

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**SHEET TITLE:**  
GARAGE CONVERSION INTO A.D.U. ELEVATIONS & ROOF PLAN

**SHEET NO.:**

A-4



**C.B. HOME**  
— DESIGN —

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- MONTCLAIR, CA. 91763  
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**PROJECT ADDRESS:**

- GARAGE CONVERSION INTO A.D.U. &  
NEW DETACH A.D.U.  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763

**JOB NUMBER:**

CB23016

**DRAWN BY:**

GC/JC/OP

**SCALE:**

1/4" = 1'-0"

**REVISIONS:**

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**SHEET TITLE:**

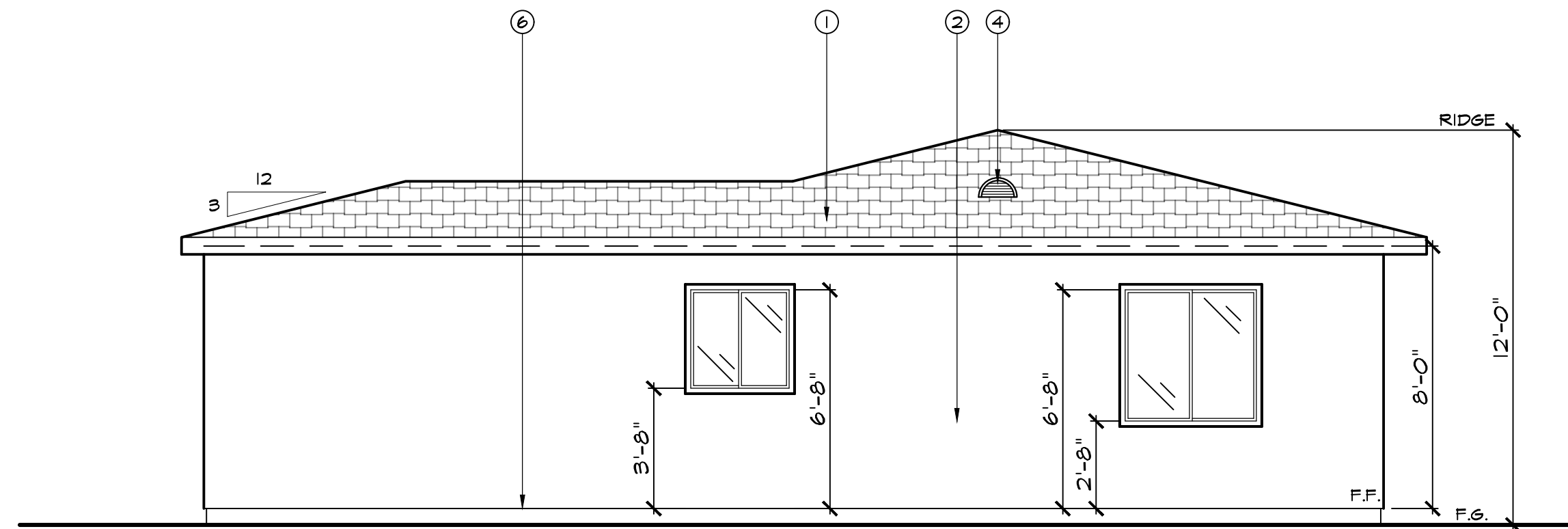
NEW DETACH A.D.U.

ELEVATIONS & ROOF PLAN

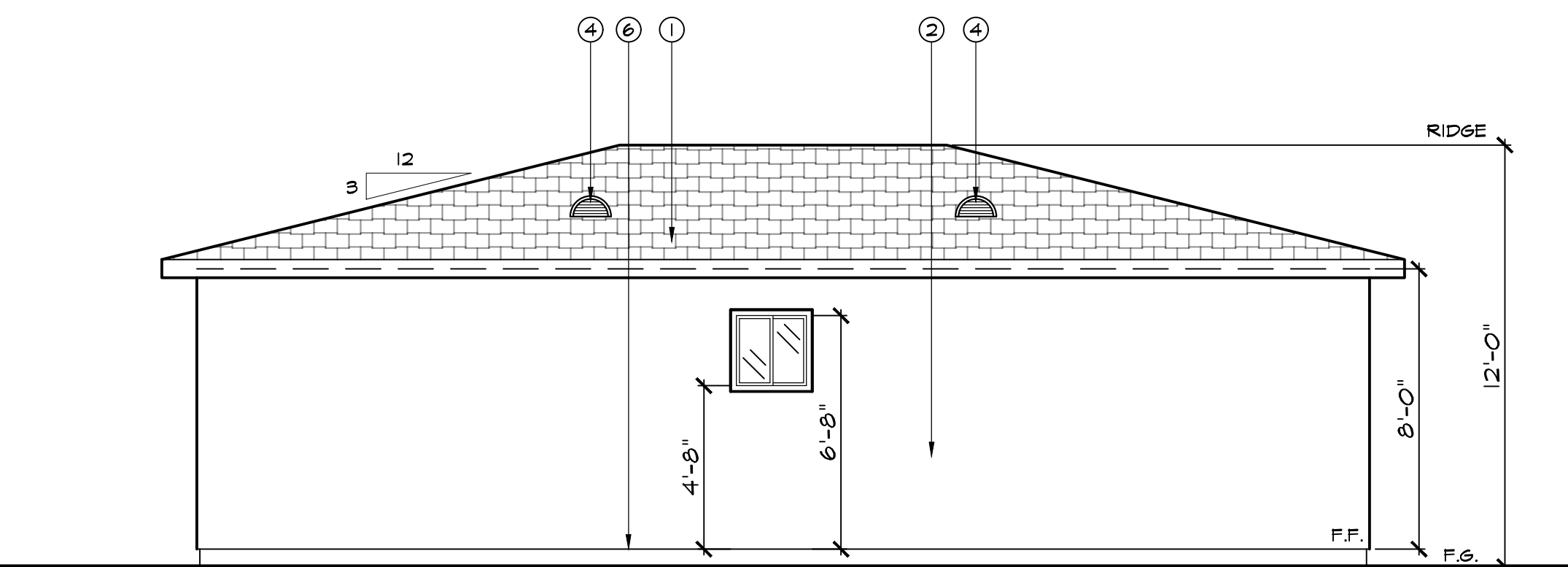
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A-5

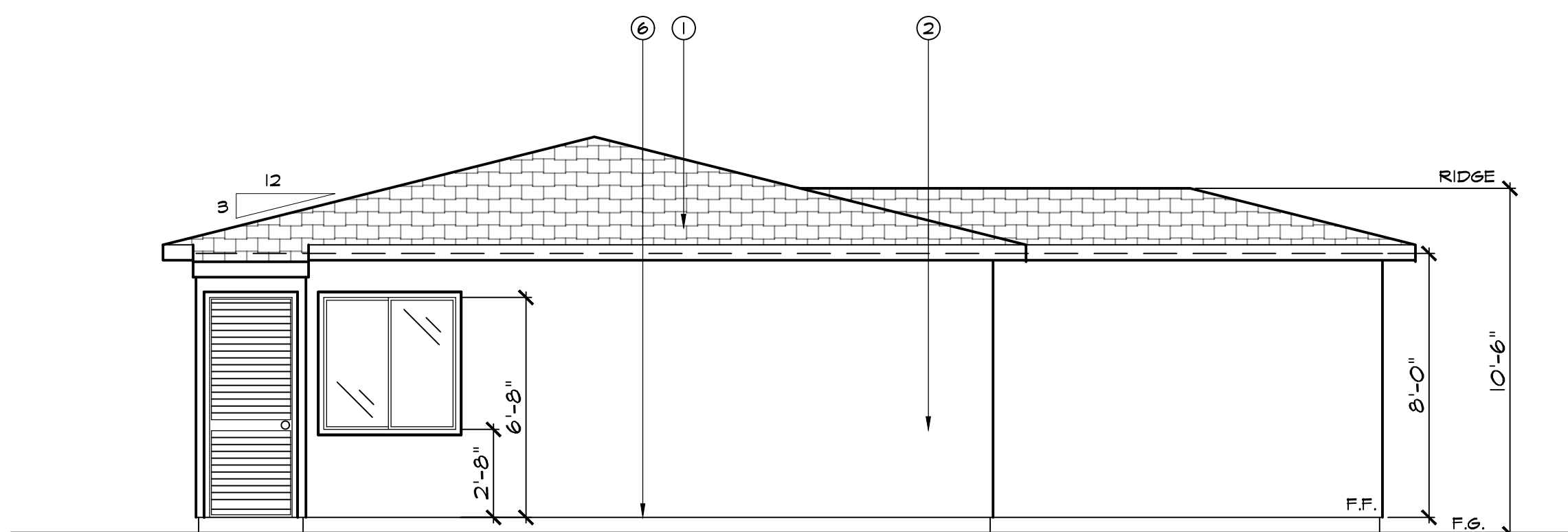
SOLAR  
2.78 KW REQUIRED  
PER TITLE 24  
350 WATT PANEL X 8 = 2.8KW



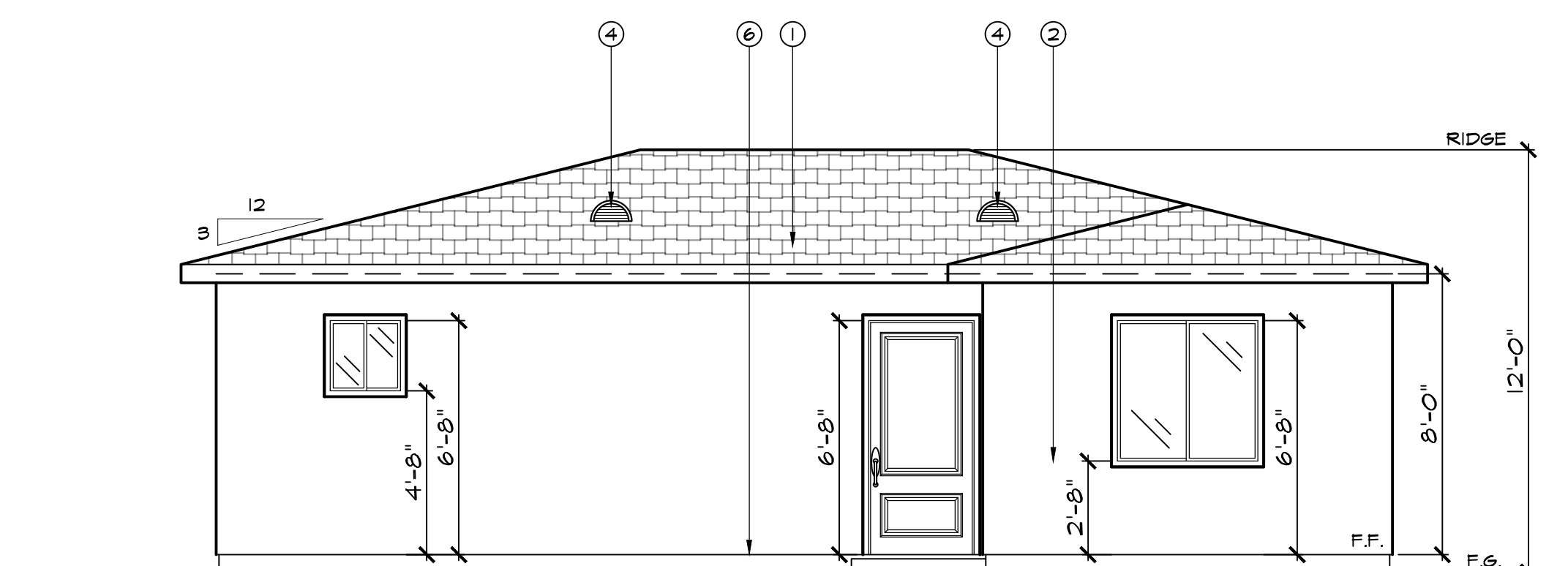
WEST/REAR ELEVATION  
1/4" = 1'-0"



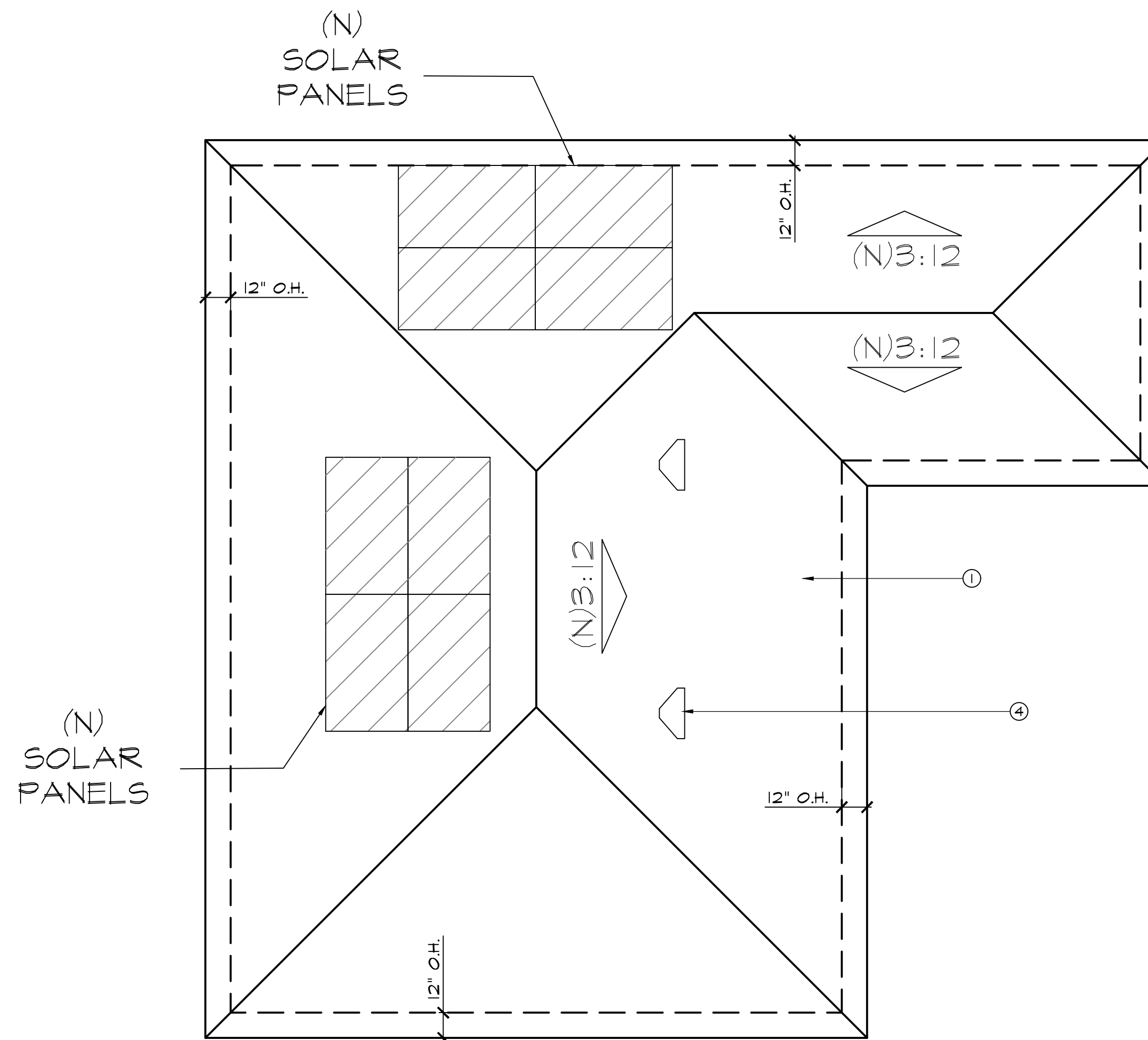
SOUTH/LEFT ELEVATION  
1/4" = 1'-0"



EAST/FRONT ELEVATION  
1/4" = 1'-0"



NORTH/RIGHT ELEVATION  
1/4" = 1'-0"



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

**ATTIC VENTILATION**

FIRST FLOOR ATTIC:  
(947 SQ. FT.) 1/150 = 6.31 SQ. FT. REQUIRED  
6.31 X 144 = 909.12 SQ. IN.  
= 50% 3" ABOVE THE EAVE VENTS (5) NEW 12"X24" DORMER VENT (100 SQ. FT.) = 500 PROVIDED  
= 50% WITH EAVE VENTS (22) NEW 3-3"Ø VENT (21 SQ. FT.)  
22 X 21 = 462 PROVIDED  
TOTAL VENTILATION PROVIDED = 962 SQ. FT.

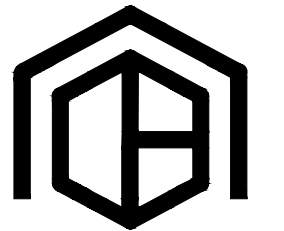
**VENT NOTES:**

- 1. OPENINGS SHALL HAVE CORROSION-RESISTANT WIRE MESH OR OTHER APPROVED MATERIAL WITH 1/8" MIN. AND 1/4" MAX OPENING.
- 2. A MINIMUM OF 1-IN. AIRSPACE SHALL BE PROVIDED BETWEEN INSULATION AND ROOF SHEATHING.

**KEY NOTES**

- 1. NEW ROOFING 220# COMPOSITION SHINGLES #80 FELT, CLASS "A" (TO MATCH EXISTING) TYPICAL ICC ESR-1475
- 2. NEW STUCCO TO MATCH EXISTING, PROVIDE 2-LAYERS OF GRADE 'D' PAPER UNDER LATH.
- 3. EXISTING STUCCO TO REMAIN.
- 4. 12 X 24 HALF ROUND DORMER VENT
- 5. EXISTING ROOF TO REMAIN
- 6. MINIMUM 0.014" (NO. 26 GALVANIZED SHEET GAGE) CORROSION-RESISTANT OR PLASTIC KEEP SCREED LOCATED BELOW THE FOUNDATION PLATE LINE AND 6 INCHES ABOVE GRADE ON ALL EXTERIOR STUD WALL OR 2 INCHES ABOVE PAVED AREAS.
- 7. NEW ROLLED TORCH-DOWN ICC ESR-1388

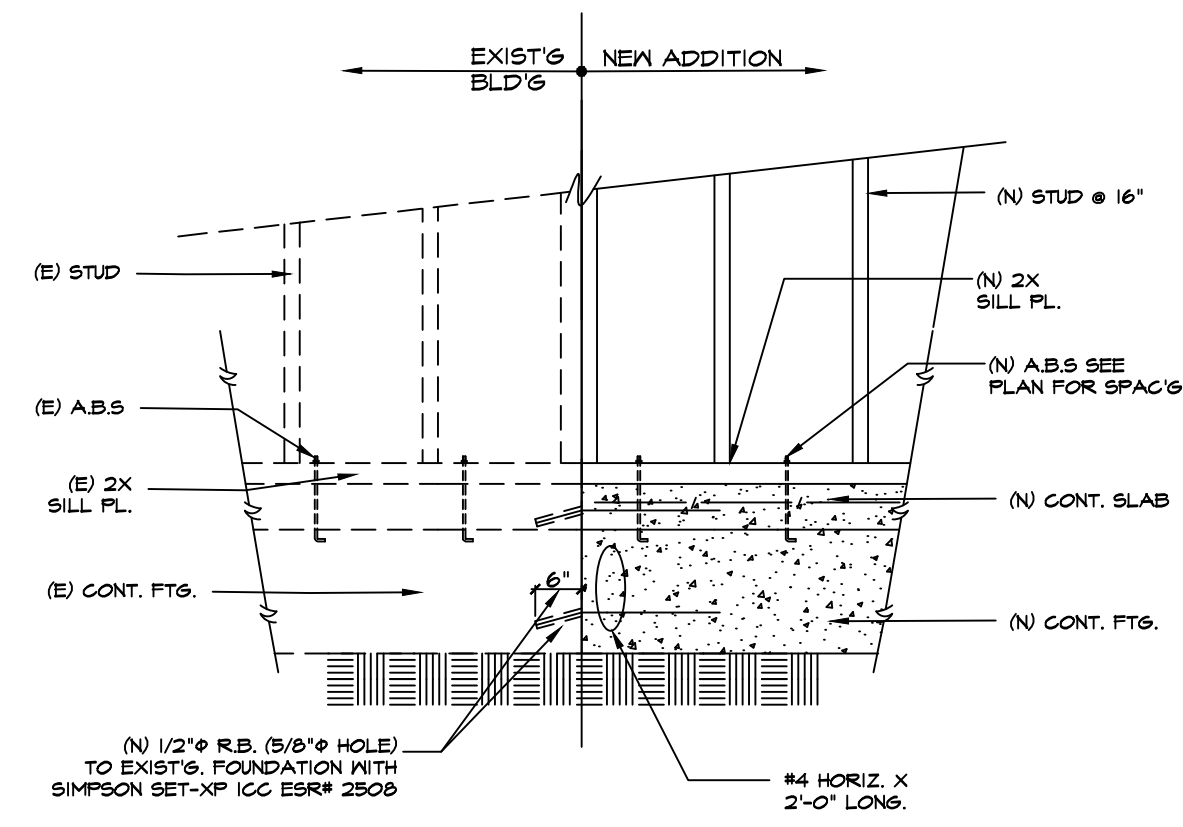




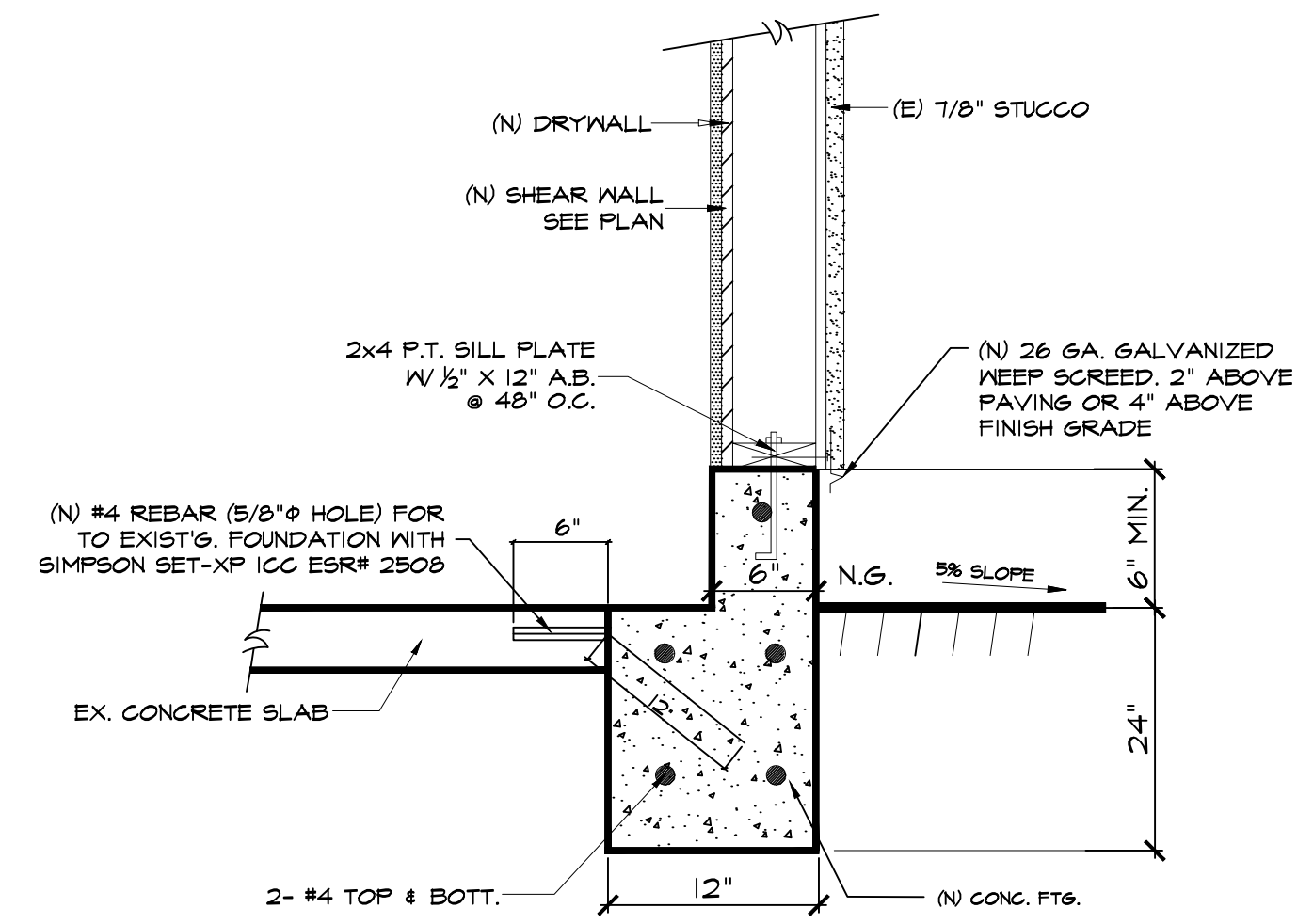
**C.B. HOME**  
— DESIGN —

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PHONE: (626) 279-5657  
EMAIL: CBHOME626@GMAIL.COM

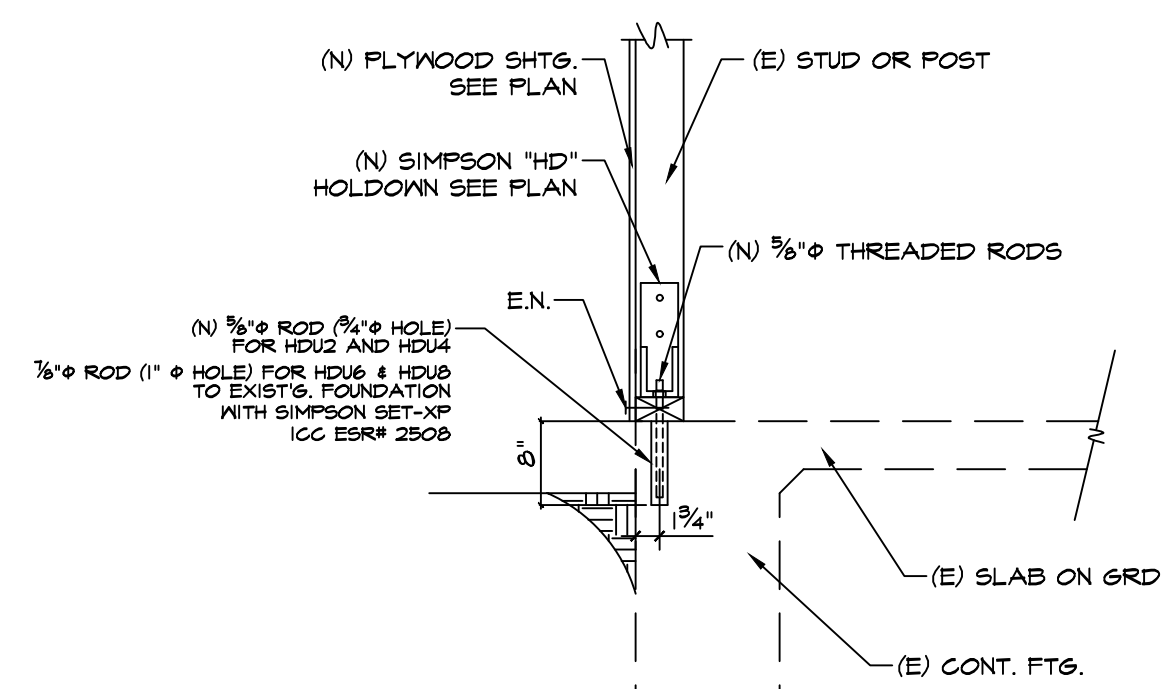
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**DETAIL - 1**  
SCALE: N.T.S.

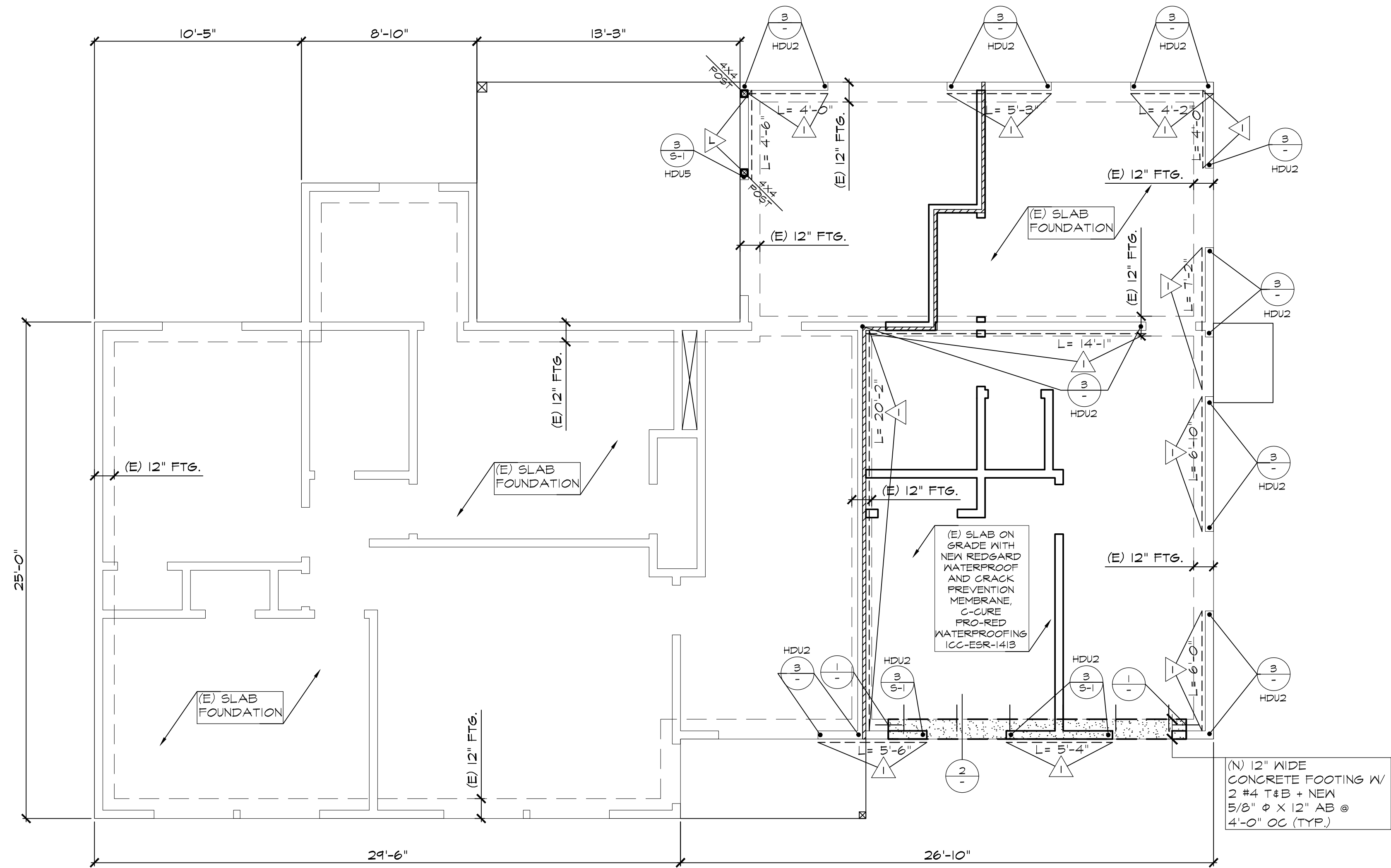


**DETAIL - 2**  
SCALE: N.T.S.



NOTE:  
SPECIAL INSPECTION REQ'D.

**DETAIL - 3**  
SCALE: N.T.S.



**FOUNDATION PLAN**  
1/4" = 1'-0"

**OWNER INFO:**

- OSCAR & BERTA RODRIGUEZ  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763  
- (909)238-8508

**PROJECT ADDRESS:**

- GARAGE CONVERSION INTO A.D.U. &  
NEW DETACH A.D.U.  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763

**JOB NUMBER:**  
CB23016

**DRAWN BY:**  
GC/JC/OP

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

**REVISIONS:**

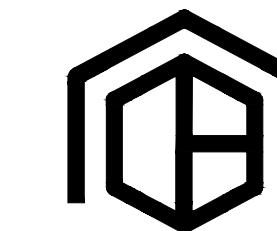
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**SHEET TITLE:**

FOUNDATION PLAN &  
DETAILS TO GARAGE  
CONVERSION INTO A.D.U.

**SHEET NO.:**

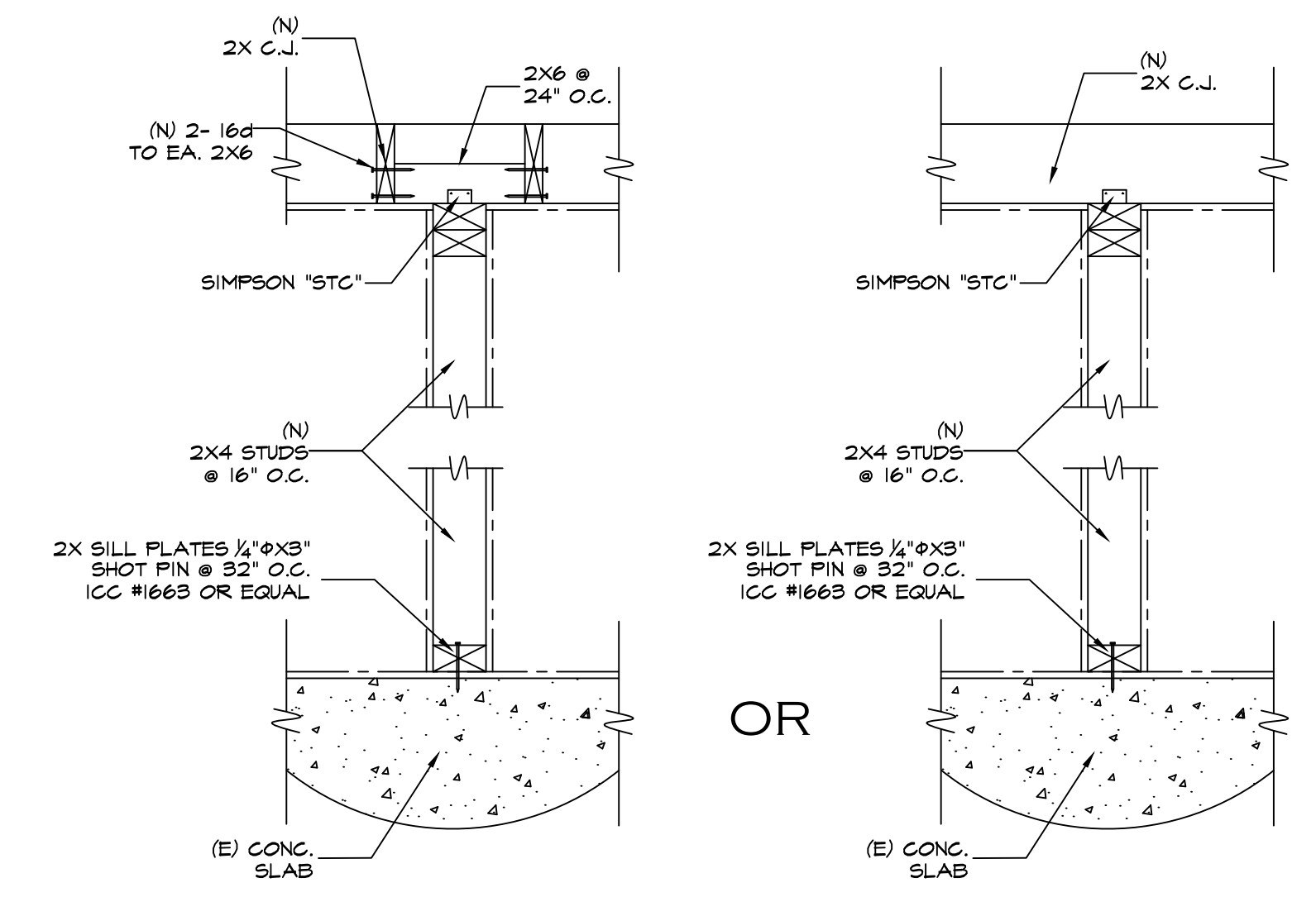




**C.B. HOME**  
DESIGN

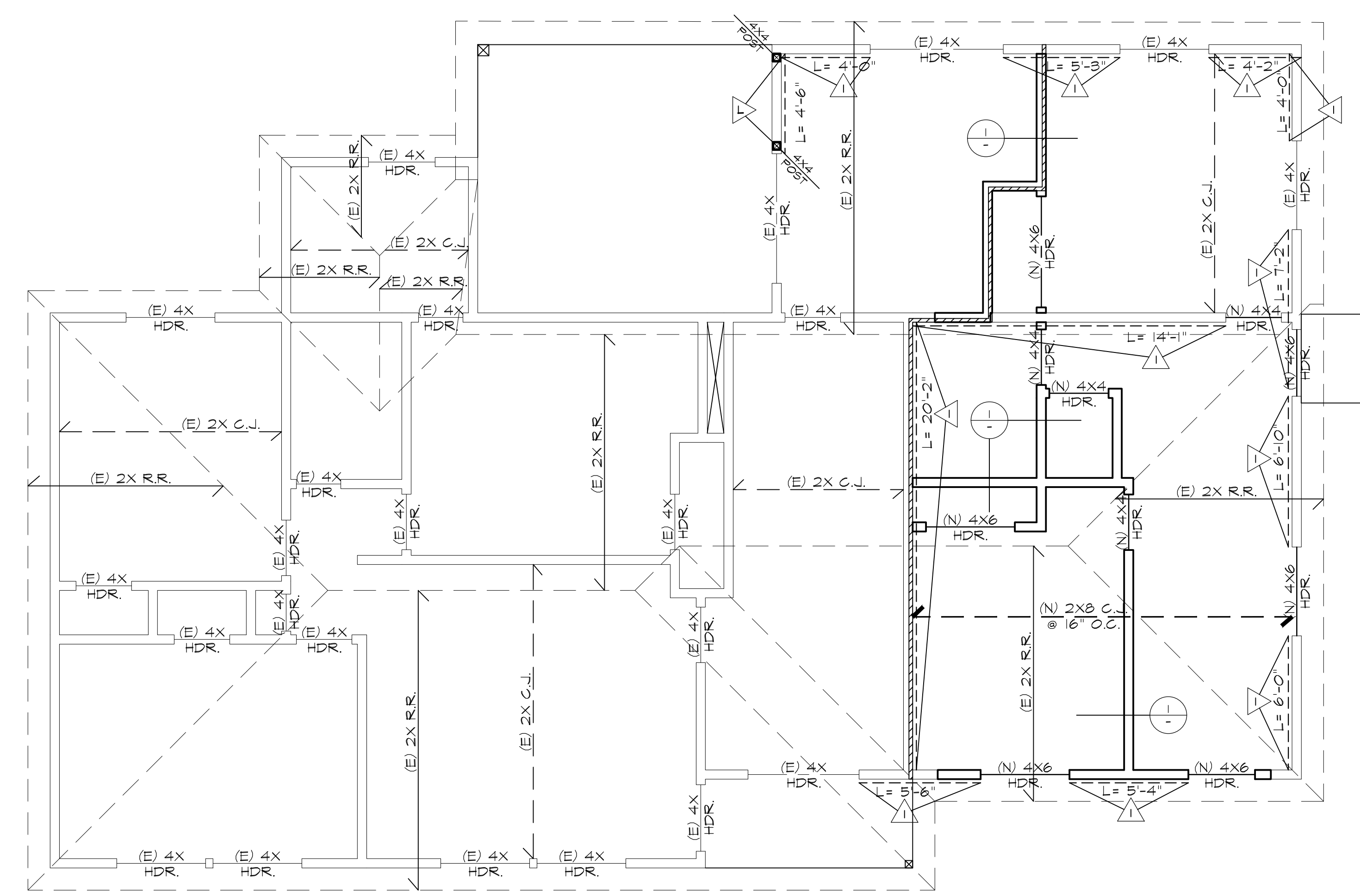
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PHONE: (626) 279-5657  
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OR

**DETAIL - 1**  
SCALE: N.T.S.



**FRAMING PLAN**  
1/4" = 1'-0"

**OWNER INFO:**

- OSCAR & BERTA RODRIGUEZ  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763  
- (909)238-8508

**PROJECT ADDRESS:**

- GARAGE CONVERSION INTO A.D.U. &  
NEW DETACH A.D.U.  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763

**JOB NUMBER:**  
CB23-016

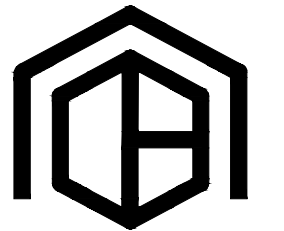
**DRAWN BY:**  
GC/JC/OP

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

**REVISIONS:**  
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.  
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**SHEET TITLE:**  
FRAMING PLAN & DETAILS  
TO GARAGE CONVERSION  
INTO A.D.U.

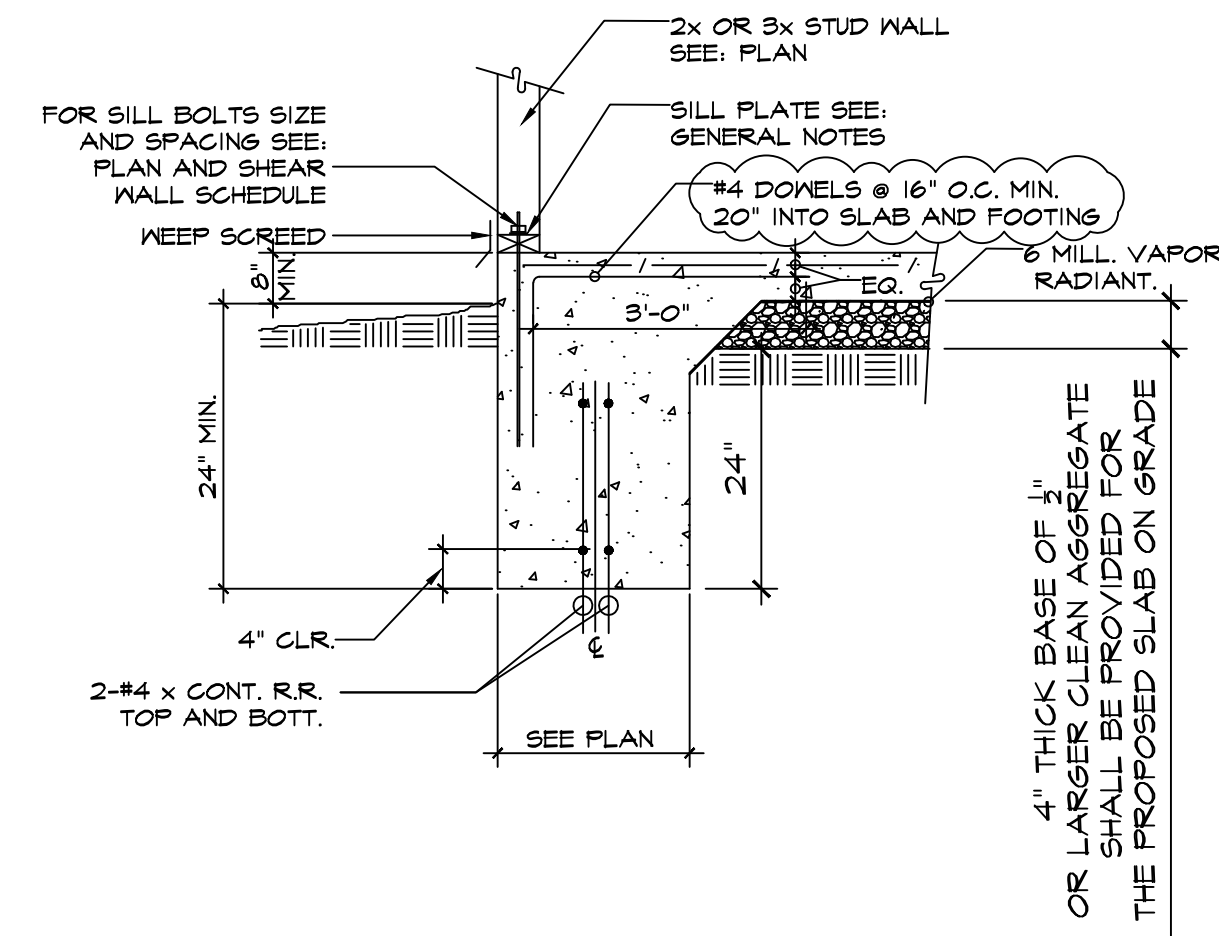
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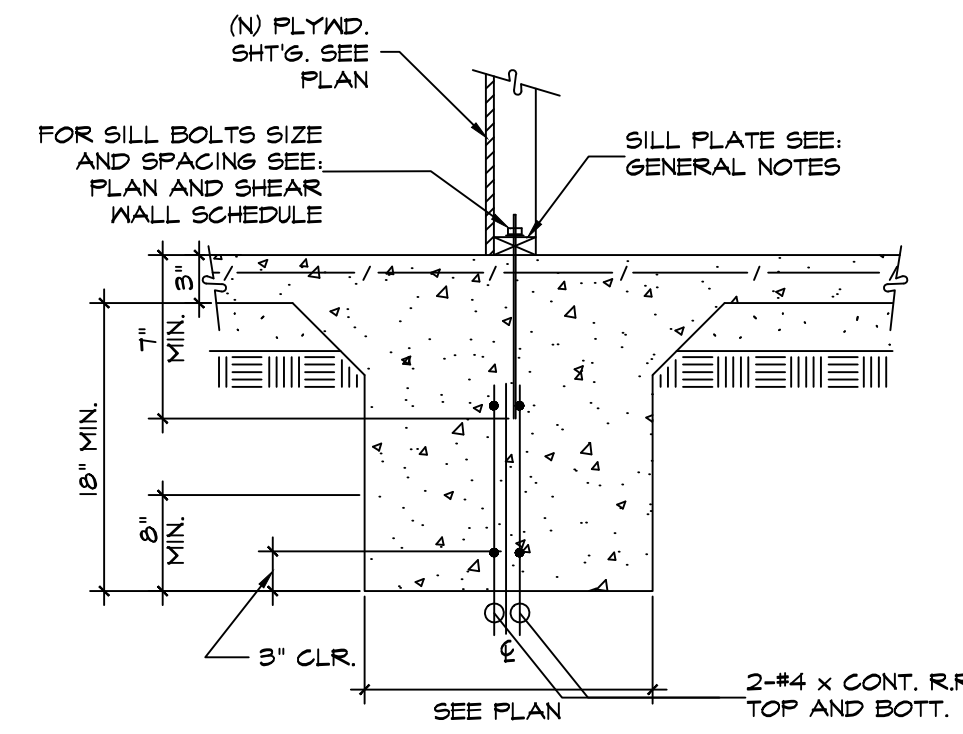
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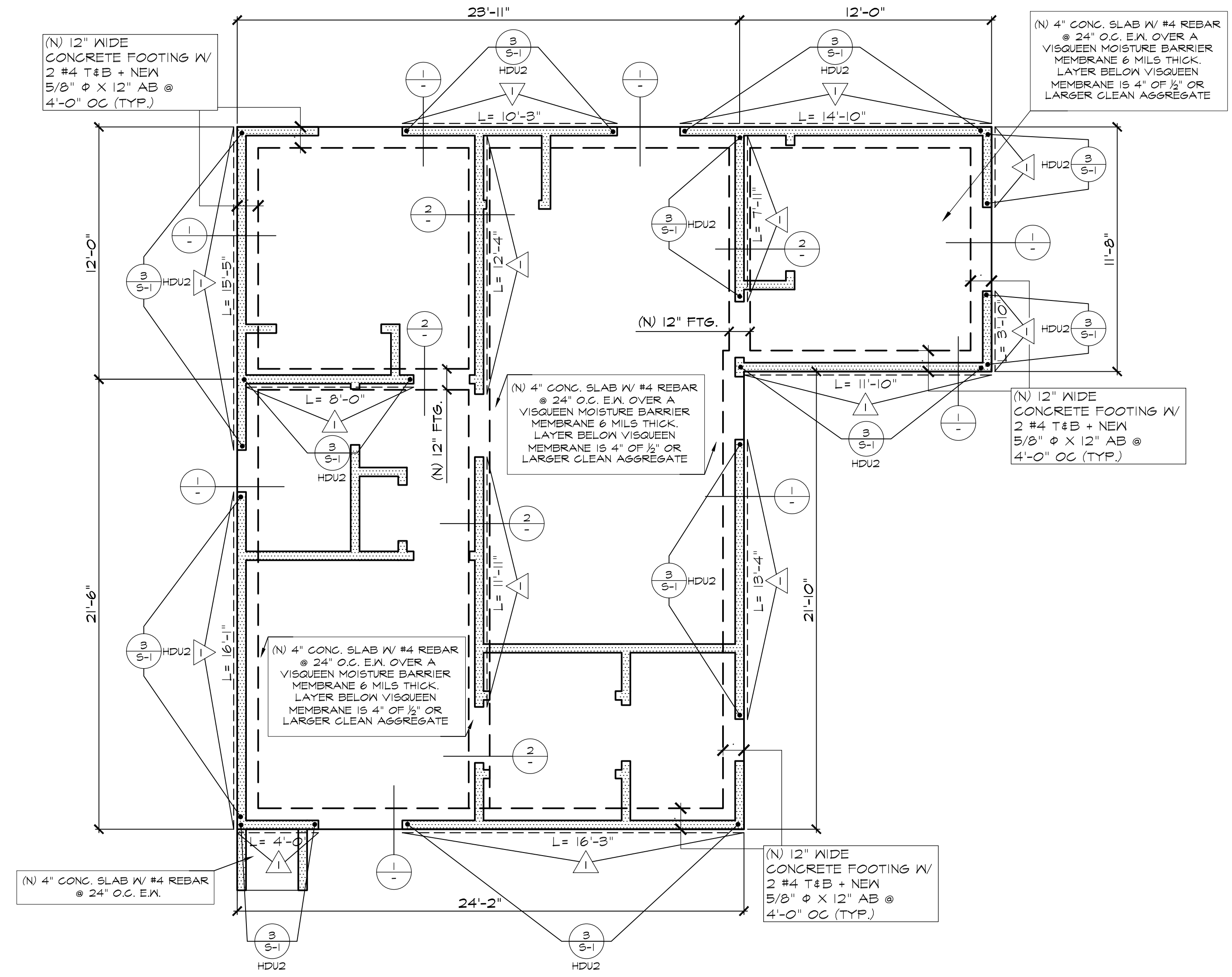
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**DETAIL - 1**  
SCALE: N.T.S.



**DETAIL - 2**  
SCALE: N.T.S.



**FOUNDATION PLAN**

1/4" = 1'-0"

**OWNER INFO:**

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- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763  
- (909)238-8508

**PROJECT ADDRESS:**

- GARAGE CONVERSION INTO A.D.U. &  
- NEW DETACH A.D.U.  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763

**JOB NUMBER:**  
CB23016

**DRAWN BY:**  
GC/JC/OP

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

**REVISIONS:**

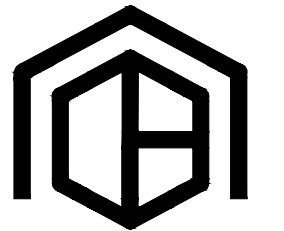
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**SHEET TITLE:**

FOUNDATION PLAN &  
DETAILS TO NEW DETACH  
A.D.U.

**SHEET NO.:**

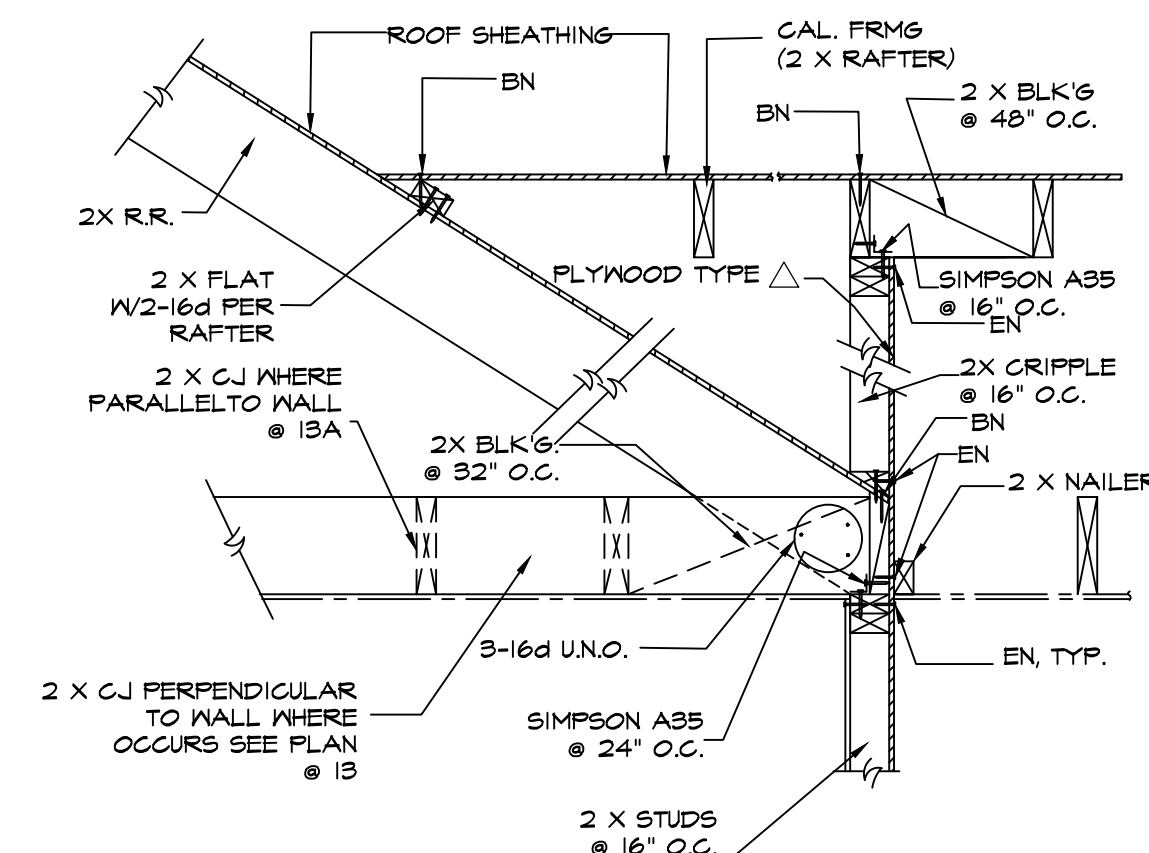
**S-4**



**C.B. HOME**  
DESIGN

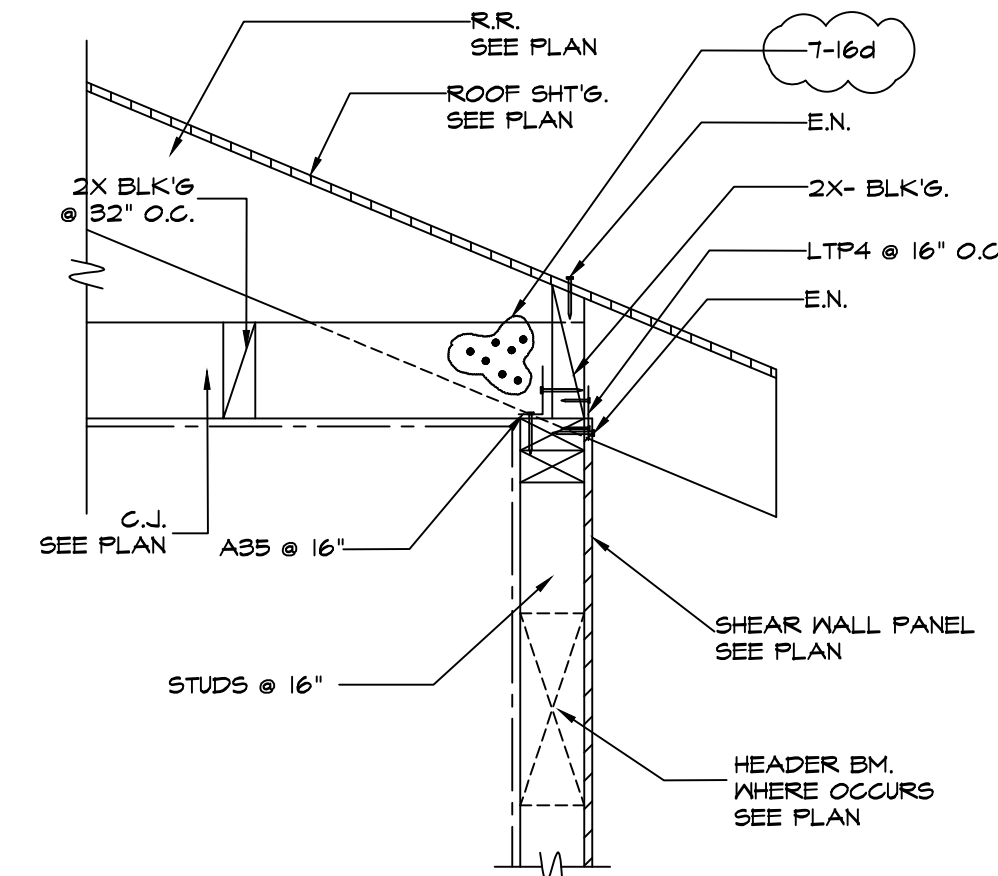
1346 W. PHILADELPHIA ST.  
ONTARIO, CA 91762  
PHONE: (626) 279-5657  
EMAIL: CBHOME626@GMAIL.COM

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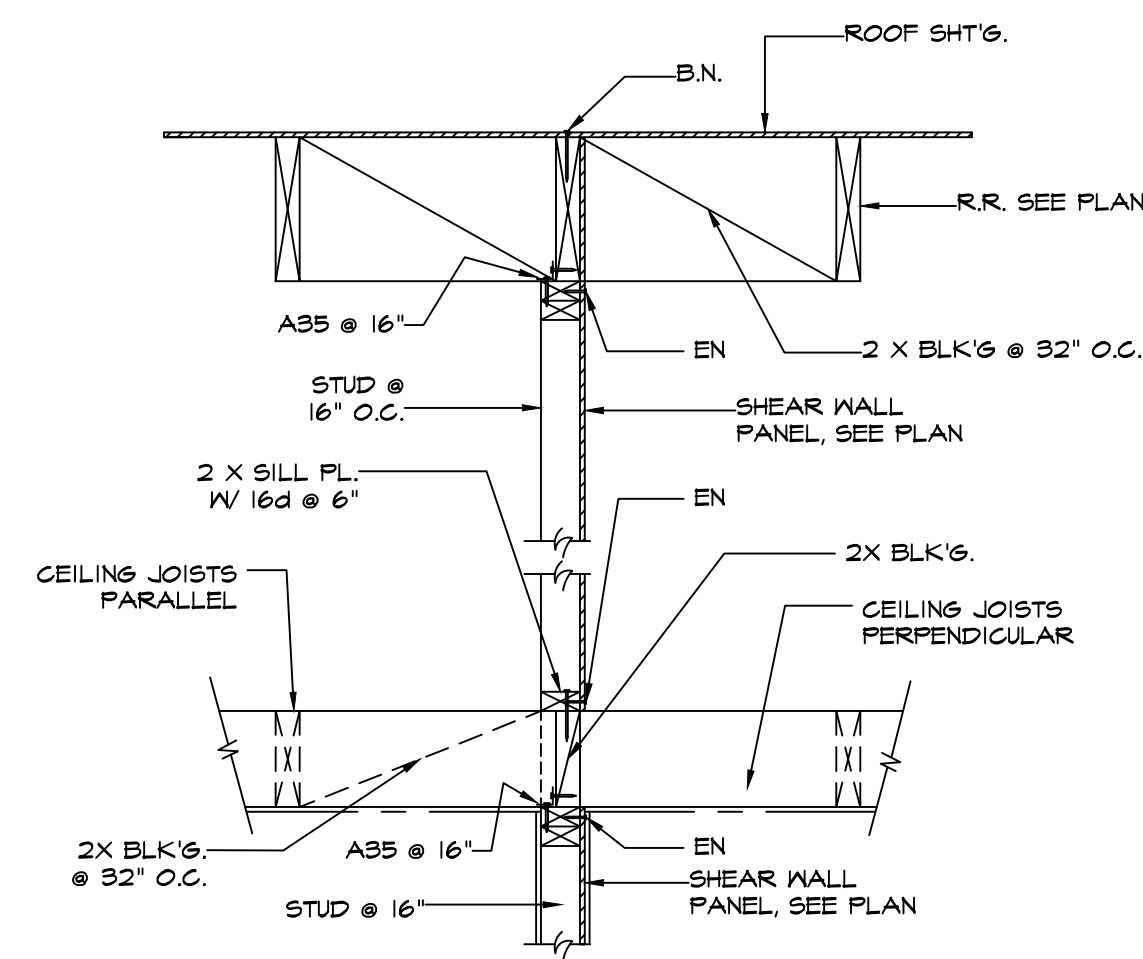
**DETAIL - 4**

SCALE: N.T.S.



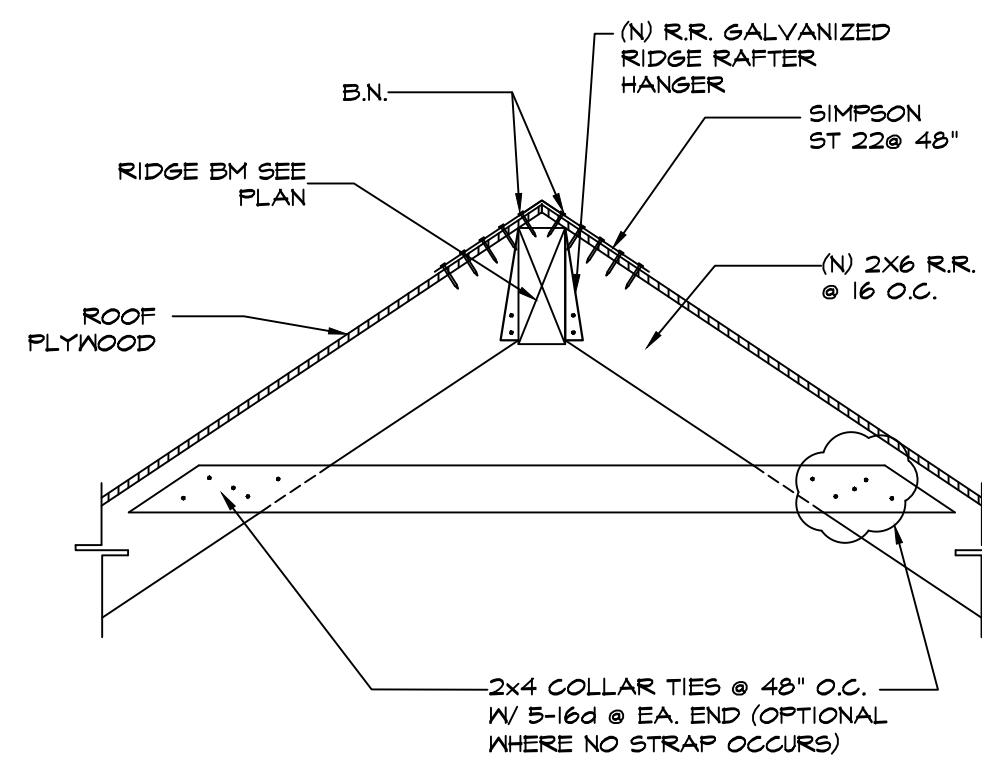
**DETAIL - 1**

SCALE: N.T.S.



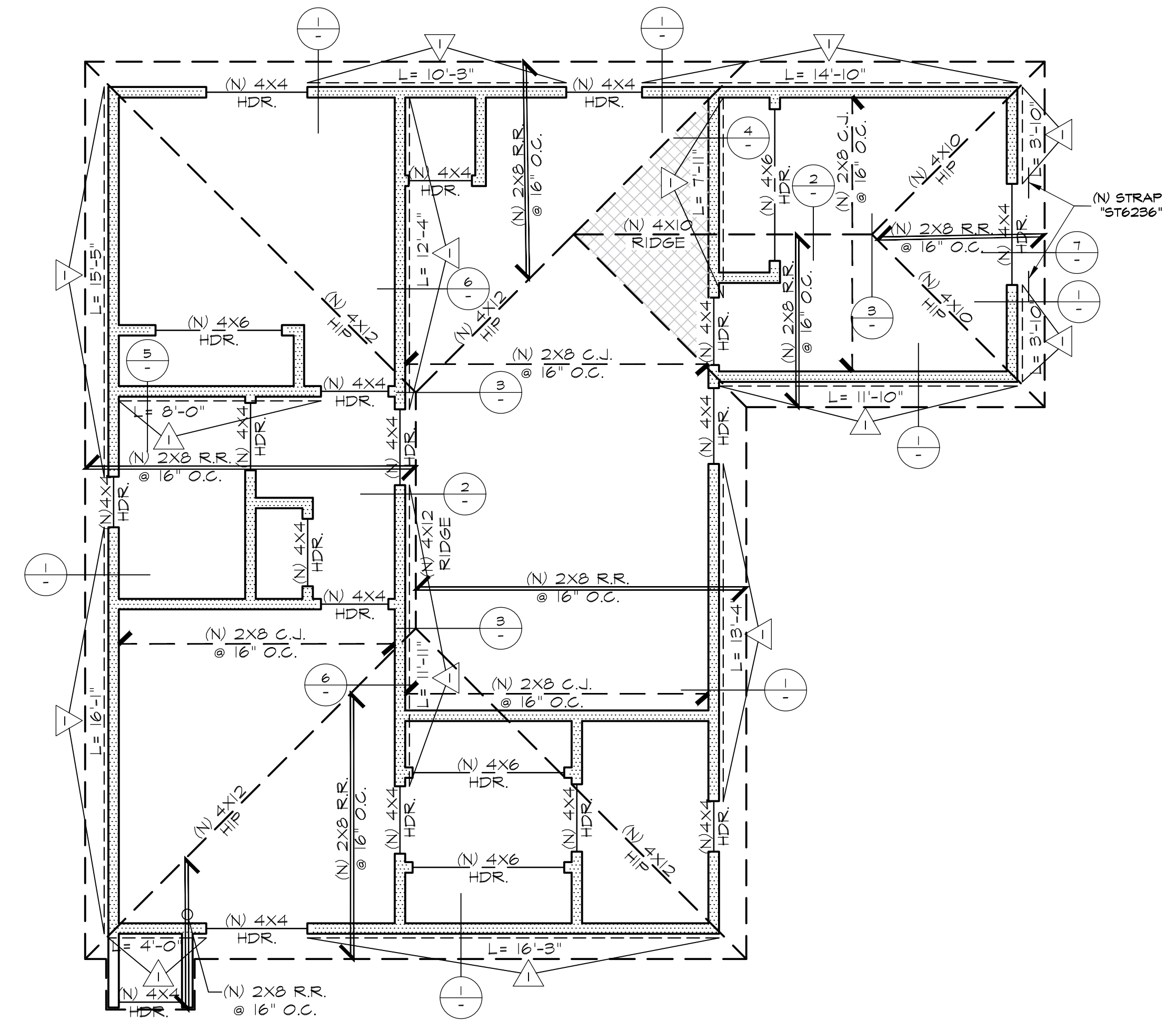
**DETAIL - 5**

SCALE: N.T.S.



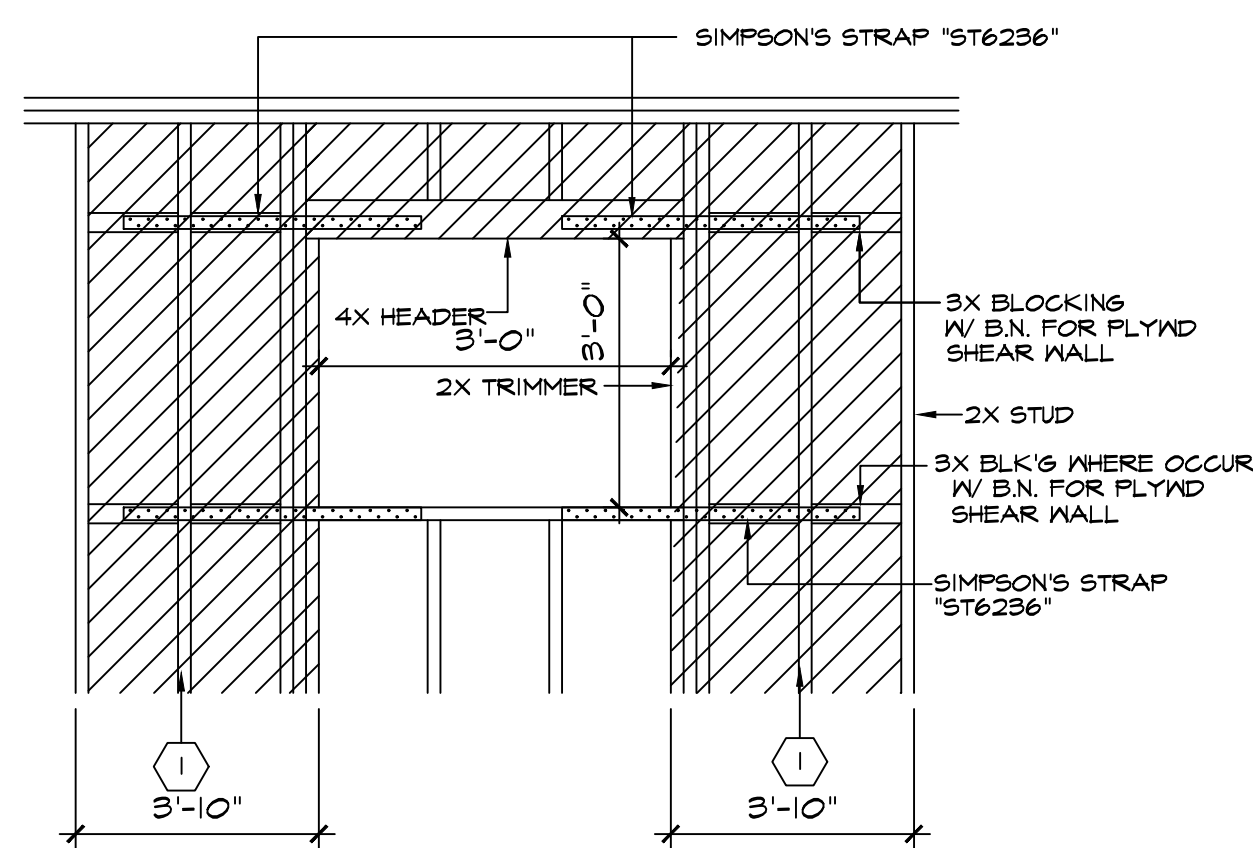
**DETAIL - 2**

SCALE: N.T.S.



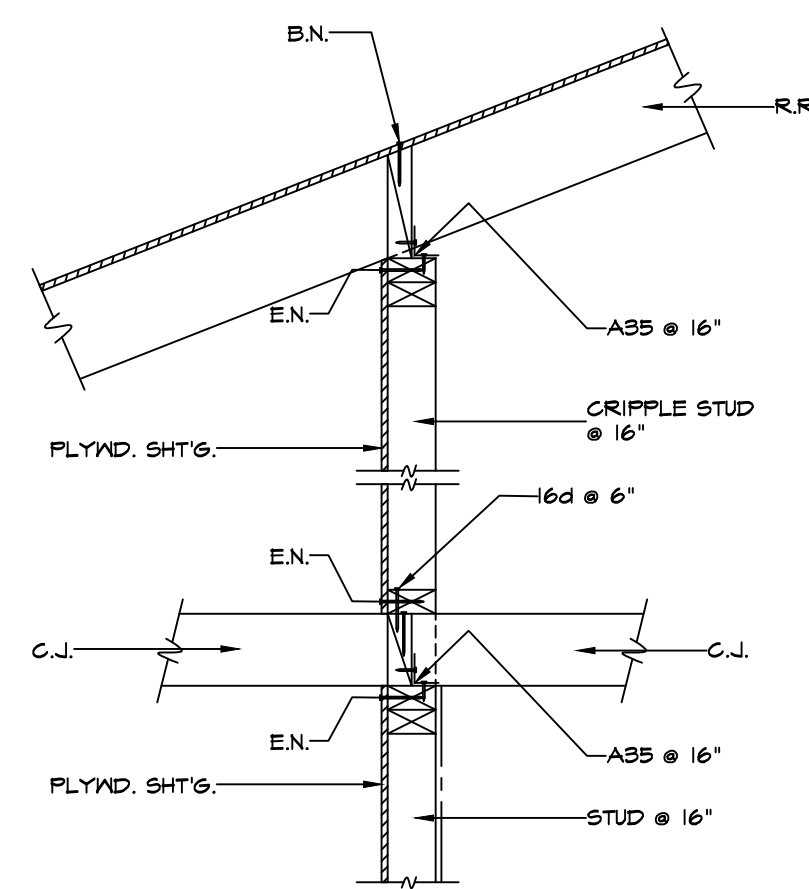
**FRAMING PLAN**

1/4" = 1'-0"



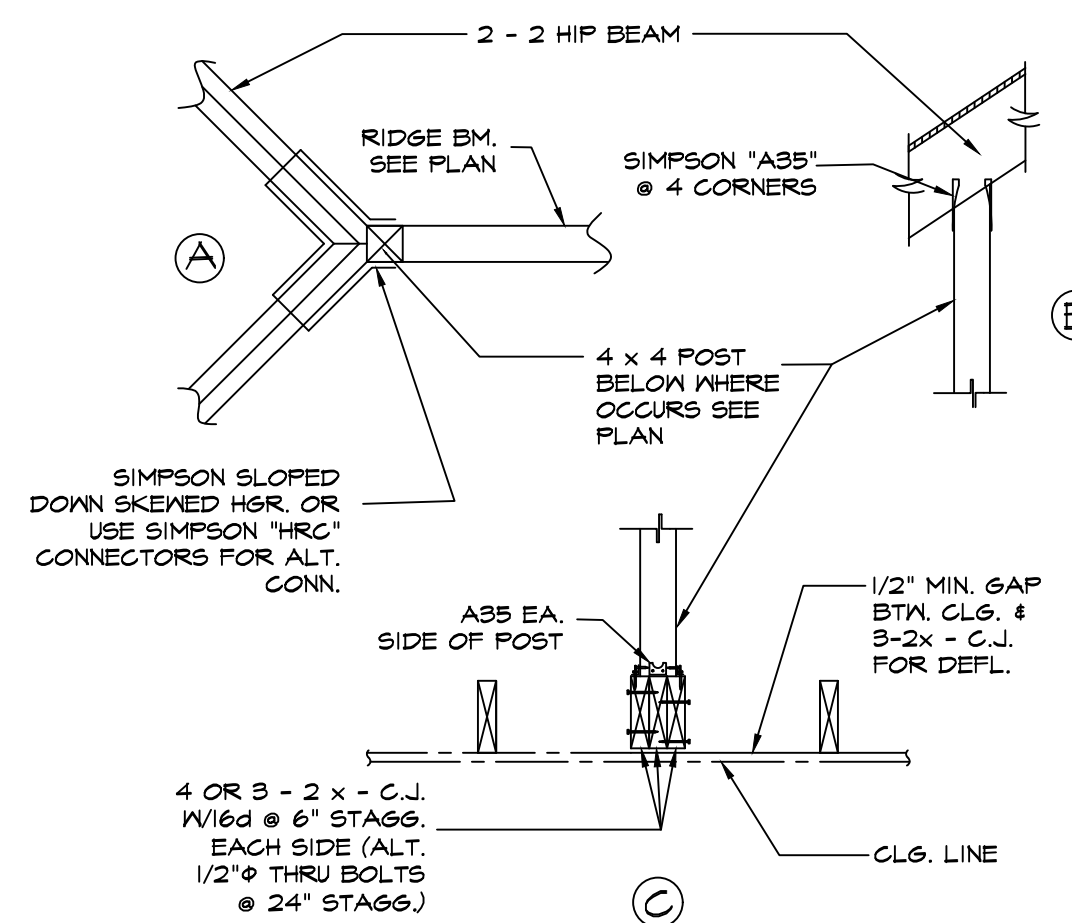
**DETAIL - 7**

SCALE: N.T.S.



**DETAIL - 6**

SCALE: N.T.S.



**DETAIL - 3**

SCALE: N.T.S.

**OWNER INFO:**

- OSCAR & BERTA RODRIGUEZ  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763  
- (909)238-8508

**PROJECT ADDRESS:**

- GARAGE CONVERSION INTO A.D.U. &  
NEW DETACH A.D.U.  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763

**JOB NUMBER:**

CB23016

**DRAWN BY:**

GC/JC/OP

**SCALE:**

1/4" = 1'-0"

**REVISIONS:**

.

.

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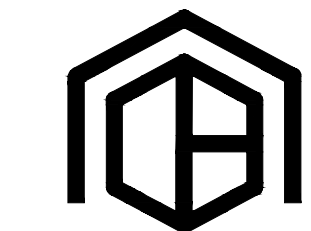
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**SHEET TITLE:**

FRAMING PLAN & DETAILS  
TO NEW DETACH A.D.U.

**SHEET NO.:**

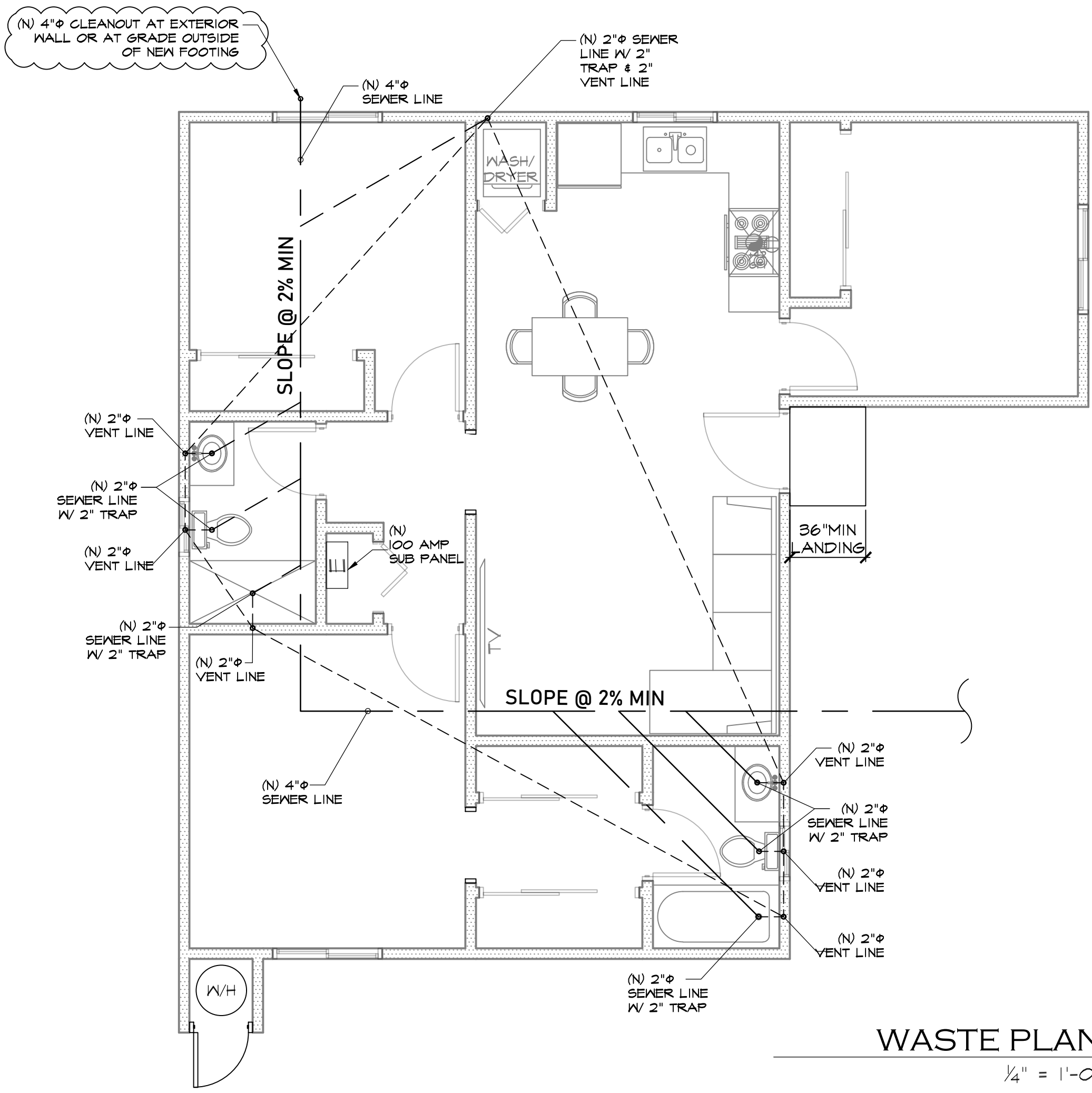
S-5



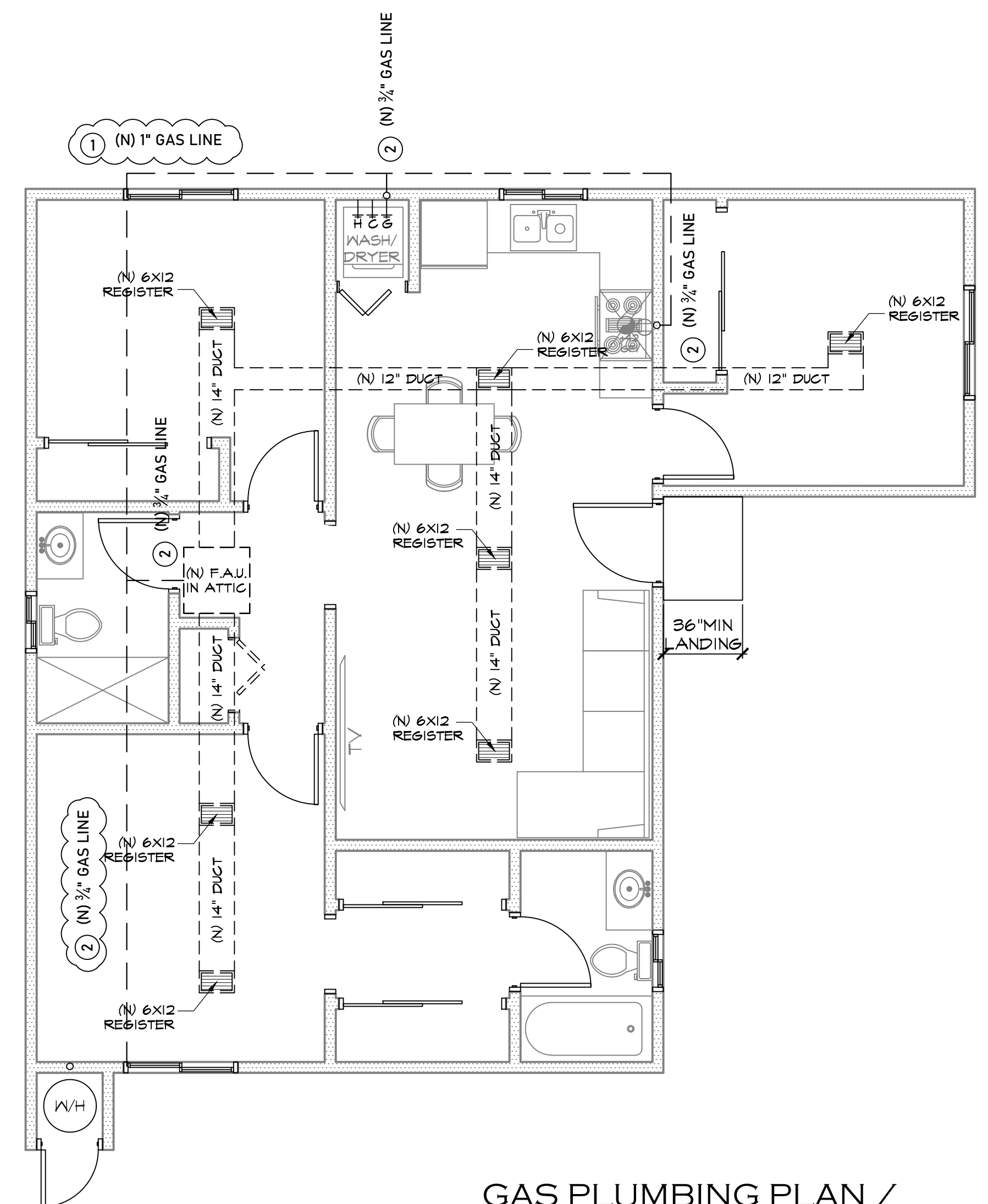
**C.B. HOME**  
DESIGN

1346 W. PHILADELPHIA ST.  
ONTARIO, CA 91762  
PHONE: (626) 279-5657  
EMAIL: CBHOME626@GMAIL.COM

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**WASTE PLAN**  
1/4" = 1'-0"



**GAS PLUMBING PLAN / MECHANICAL PLAN**  
1/4" = 1'-0"

- ① 1-1/4" (270,000 BTUH) GAS SUPPLY
- ② 3/4" (71,000 BTUH)
- ③ 3/4" (36,000 BTUH) FAU
- ④ 3/4" (35,000 BTUH) STOVE

GAS LOAD CALCULATIONS FOR ADDITION/REMODEL  
JOB ADDRESS: 9802 COALINGA AVE., MONTCLAIR  
GAS PIPE SCHEDULE (PER TABLE 1215.2(1))

TOTAL DEVEL. LENGTH : 70 FEET		
1/2"	38 CFH	OR 38,000 BTUH
3/4"	82 CFH	OR 82,000 BTUH
1"	149 CFH	OR 149,000 BTUH
1-1/4"	317 CFH	OR 317,000 BTUH
1-1/2"	476 CFH	OR 476,000 BTUH
2"	896 CFH	OR 896,000 BTUH
2-1/2"	1,447 CFH	OR 1,447,000 BTUH
3"	2,492 CFH	OR 2,492,000 BTUH

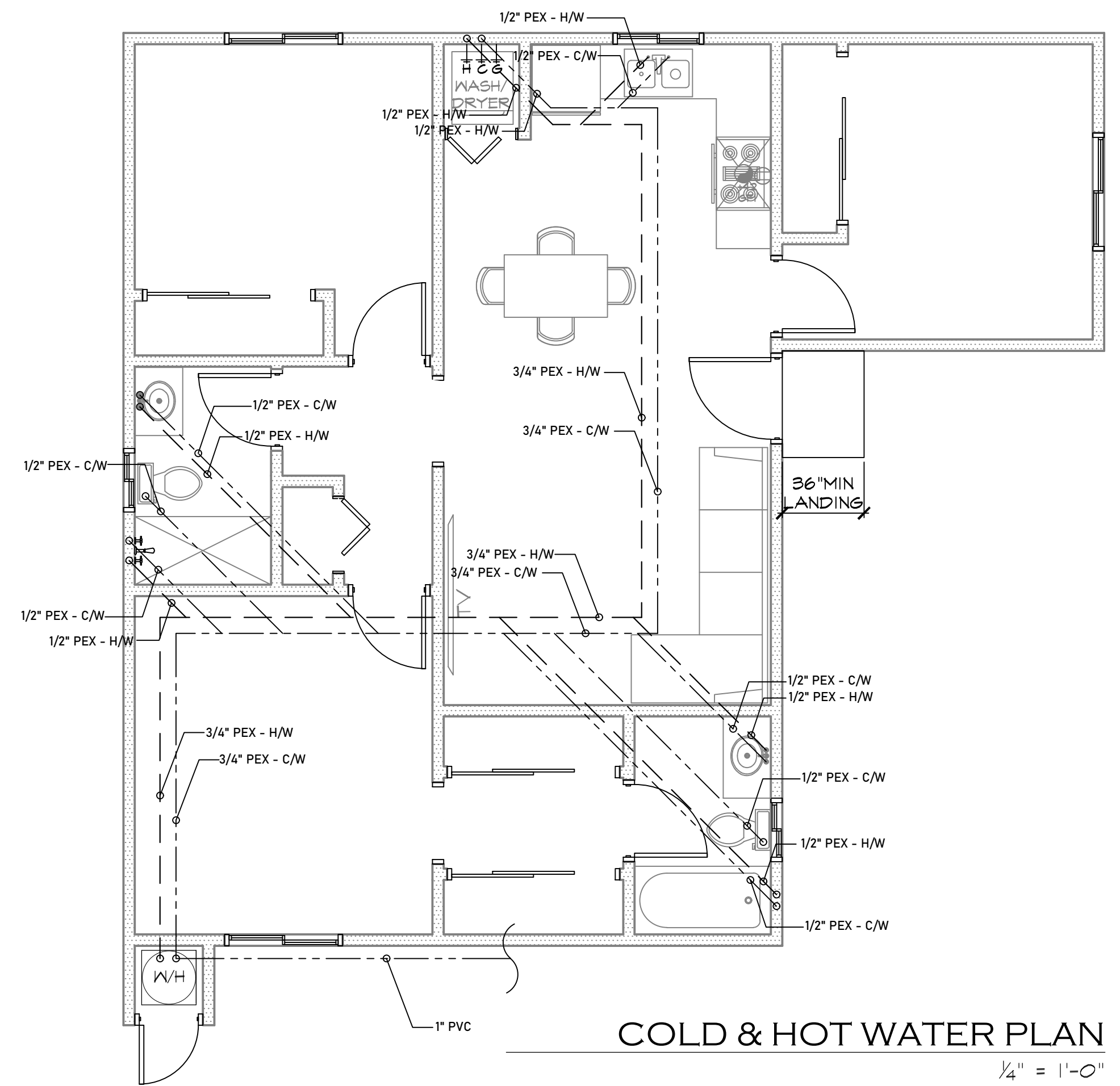
NEW GAS LOAD  
GAS RANGE STOVE: 35,000 BTUH  
FAU: 36,000 BTUH

TOTAL: 71,000 BTUH  
WE NEED 1" GAS PIPE FROM GAS METER

LOAD CALCULATIONS FOR DETACH ADU  
ADDRESS: 9802 COALINGA AVE., MONTCLAIR  
TOTAL FLOOR AREA SQUARE FOOTAGE: 947 SQ. FT.

1. LIGHTING AND RECEPTACLE:	3 x 947 = 2,841 VA
2. SMALL APPLIANCE:	2 x 1,500 = 3,000 VA
TOTAL:	5,841 VA
4. APPLY DEMAND FACTOR:	3,000 x 100% = 3,000 VA
REMAIN:	(5,841 - 3,000) x 35% = 994.35 VA
TOTAL:	3,994.35 VA
5. APPLIANCE:	
A. DISPOSER	1 x 720 = 720 VA
B. DISHWASHER	1 x 1,200 = 1,200 VA
C. REFRIGERATOR	1 x 1,200 = 1,200 VA
TOTAL:	3,120 VA
6. AIR CONDITIONER:	
A. AC CONDENSER	1 x 1,800 VA
TOTAL	1,800 VA
TOTAL OF ITEM #4, #5, #6:	8,914.35 VA
7. TOTAL LOADS OF THIS BUILDING:	8,914.35 VA
OR	
37 AMPS @ 208/240 V, SINGLE PHASE, THREE WIRE	
REQUIRED 100 AMP 208/240V, 1 PHASE, 3 WIRE SERVICE	

LOCATION	WATTAGE			LTG	REC	MIS	PANEL SUB-PANEL			WATTAGE	LTG	ENTER CABT. AT TOP			LOCATION
	ØA	ØB	ØC				FEEDER	ØA	ØB			ØC	MTG.	A. BUSSING	
AC CONDENSER									1	1	40A				HOOD/MICRO
KITCHEN OUTLETS						4	3	20A			20A	4	1		BATH FAN
KITCHEN OUTLETS						3	5	20A			15A	6	1		SMOKE DETECTORS
REFRIGERATOR						1	7	20A			20A	8	1		H.P. WATER HEATER
STOVE						1	9	20A			15A	10	8		KITCHEN/LIVING LIGHTS
GARBAGE DISPOSAL						1	11	20A			20A	14	2		BEDROOM 1 LIGHTS
WASHER/DRYER						1	13	20A			20A	14	2		BEDROOM 2 LIGHTS
BEDROOM 1 OUTLETS						6	15	20A			20A	16	2		BEDROOM 3 LIGHTS
BEDROOM 2 OUTLETS						5	17	20A			20A	18	5		LIVING OUTLETS
BEDROOM 3 OUTLETS						6	19	20A			20A	20	3		EXTERIOR OUTLETS
EXTERIOR OUTLETS						3	21	20A			20A	22			
FAU						1	23	40A				24			
												25			
												27			
												28			
												29			
												30			



**COLD & HOT WATER PLAN**  
1/4" = 1'-0"

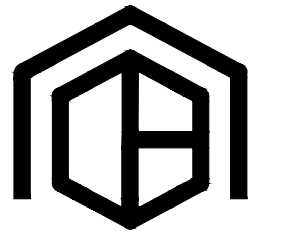
**OWNER INFO:**  
- OSCAR & BERTA RODRIGUEZ  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763  
- (909)238-8508

**PROJECT ADDRESS:**  
- GARAGE CONVERSION INTO A.D.U. & NEW DETACH A.D.U.  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763

**JOB NUMBER:**  
CB23016  
**DRAWN BY:**  
GC/JC/OP  
**SCALE:**  
1/4" = 1'-0"  
**REVISIONS:**

**SHEET TITLE:**  
WASTE, GAS, MECHANICAL, COLD & HOT PLAN - A.D.U.

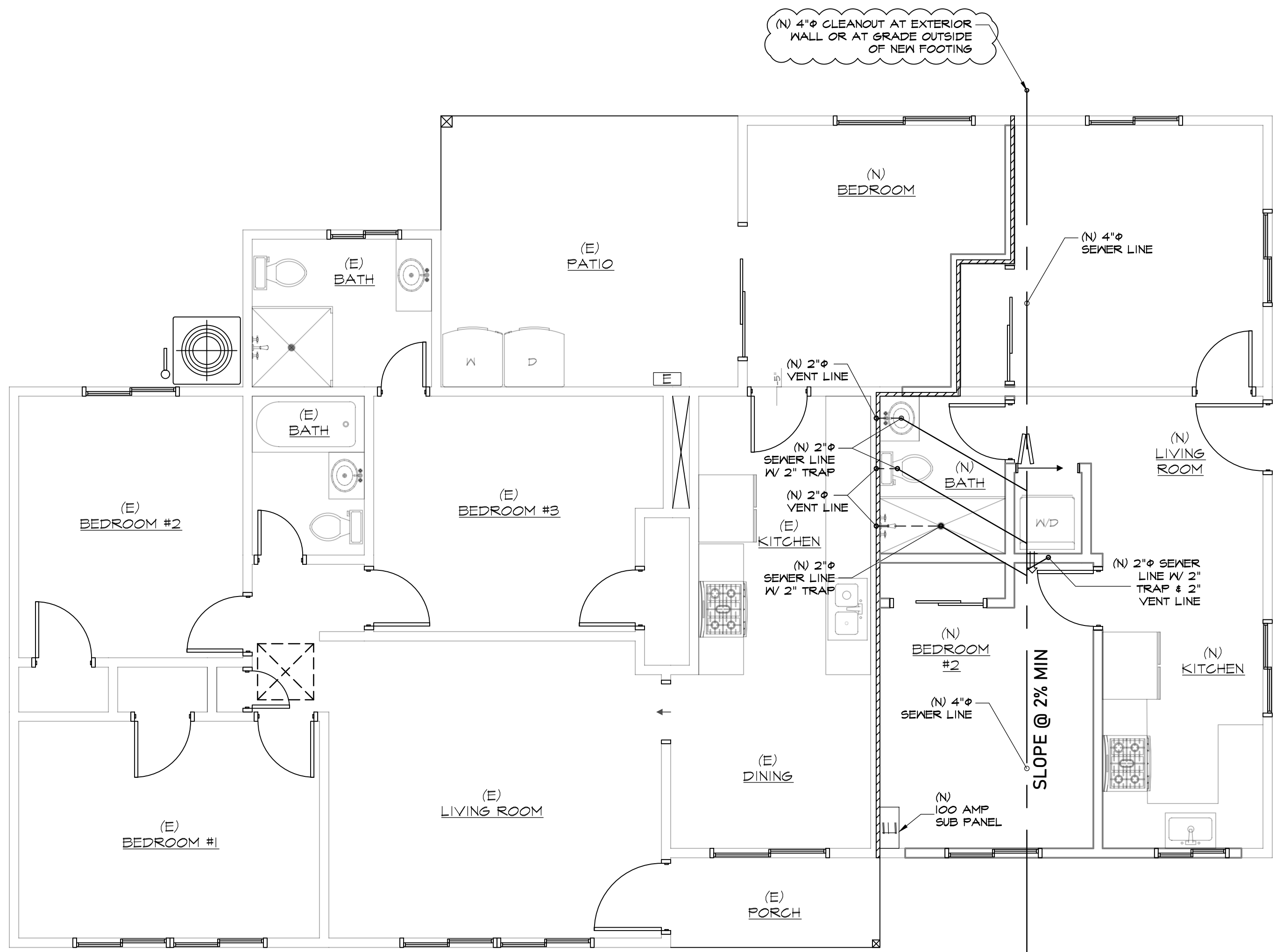
**SHEET NO.:**



**C.B. HOME**  
DESIGN

1346 W. PHILADELPHIA ST.  
ONTARIO, CA 91762  
PHONE: (626) 279-5657  
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**WASTE PLAN**  
1/4" = 1'-0"

- ① 1" (270,000 BTUH) GAS SUPPLY
- ② 3/4" (71,000 BTUH)
- ③ 3/4" (36,000 BTUH) FAU
- ④ 3/4" (35,000 BTUH) STOVE
- ⑤ 1" (199,000 BTUH) WATER HEATER

**GAS LOAD CALCULATIONS FOR ADDITION/REMODEL**  
JOB ADDRESS: 9802 COALINGA AVE., MONTCLAIR  
GAS PIPE SCHEDULE (PER TABLE 1215.2(1))

TOTAL DEVEL. LENGTH : 70 FEET			
1/2"	38 CFH	OR	38,000 BTUH
3/4"	82 CFH	OR	82,000 BTUH
1"	149 CFH	OR	149,000 BTUH
1-1/4"	317 CFH	OR	317,000 BTUH
1-1/2"	476 CFH	OR	476,000 BTUH
2"	896 CFH	OR	896,000 BTUH
2-1/2"	1,447 CFH	OR	1,447,000 BTUH
3"	2,492 CFH	OR	2,492,000 BTUH

NEW GAS LOAD  
GAS RANGE STOVE: 35,000 BTUH  
FAU: 36,000 BTUH  
TANKLESS WATER HEATER: 199,000 BTUH

TOTAL: 270,000 BTUH  
WE NEED 1" GAS PIPE FROM GAS METER

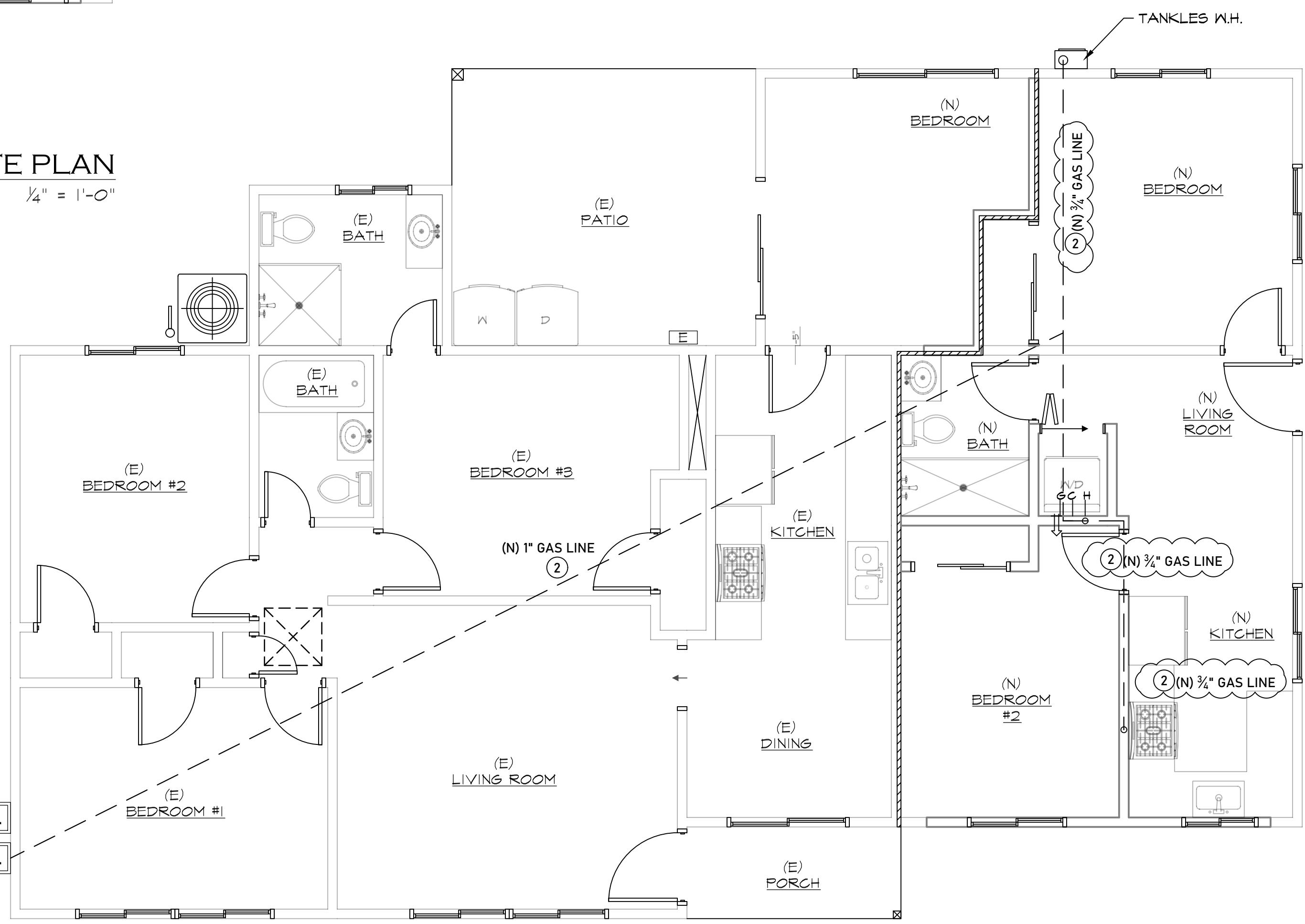
LOCATION	WATTAGE			LTO	REC	MIS	CIR	BKR	PANEL SUB-PANEL			LTO	REC	MIS	CIR	BKR	LTO	REC	MIS	CIR	BKR	LOCATION	
	0A	0B	0C						A	B	C												
MINI SPLIT									1	40A													HOOD/MICRO
KITCHEN OUTLETS									3	20A													BATH FAN
KITCHEN OUTLETS									3	5 20A													SMOKE DETECTORS
REFRIGERATOR									1	7 20A													TANKLESS W.H.
STOVE									1	9 20A													KITCHEN/LIVING LIGHTS
WASHER/DRYER									1	11 20A													BEDROOM 1 LIGHTS
BEDROOM 1 OUTLETS									6	13 20A													BEDROOM 2 LIGHTS
BEDROOM 2 OUTLETS									5	15 20A													LIVING OUTLETS
LIVING ROOM LIGHTS									2	17 20A													EXTERIOR OUTLETS
									19	20A													
									21	20A													
									23	40A													
									25														
									27														
									29														

**LOAD CALCULATIONS FOR JR ADU**  
ADDRESS: 9802 COALINGA AVE., MONTCLAIR  
TOTAL FLOOR AREA SQUARE FOOTAGE: 486 SQ. FT.

1. LIGHTING AND RECEPTACLE:	3 x 486 = 1,458 VA
2. SMALL APPLIANCE:	2 x 1,500 = 3,000 VA
TOTAL:	4,458 VA
4. APPLY DEMAND FACTOR:	3,000 x 100% = 3,000 VA
REMAIN:	(4,458 - 3,000) x 35% = 510.3 VA
TOTAL:	3,510.3 VA
5. APPLIANCE:	
A. DISPOSER	1 x 720 = 720 VA
B. REFRIGERATOR	1 x 1,200 = 1,200 VA
TOTAL:	3,120 VA
6. AIR CONDITIONER:	
A. AC CONDENSER	1 x 1,800 VA
TOTAL	1,800 VA
TOTAL OF ITEM #4, #5, #6:	11,688.3 VA
7. TOTAL LOADS OF THIS BUILDING:	11,688.3 VA

OR

35 AMPS @ 208/240 V, SINGLE PHASE, THREE WIRE  
REQUIRED 100 AMP 208/240V, 1 PHASE, 3 WIRE SERVICE



**GAS PLAN**  
1/4" = 1'-0"

- ① 1" (65,000 BTUH)
- ② 3/4" (35,000 BTUH)
- ③ 1/2" (40,000 BTUH)
- ④ 3/4" (100,000 BTUH)

**OWNER INFO:**

- OSCAR & BERTA RODRIGUEZ  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763  
- (909)238-8508

**PROJECT ADDRESS:**

- GARAGE CONVERSION INTO A.D.U. &  
NEW DETACH A.D.U.  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763

**JOB NUMBER:**

CB23016

**DRAWN BY:**

GC/JC/OP

**SCALE:**

1/4" = 1'-0"

**REVISIONS:**

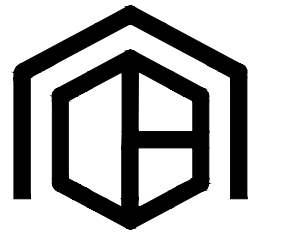
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**SHEET TITLE:**

WASTE & GAS PLAN -  
GARAGE CONVERSION

**SHEET NO.:**

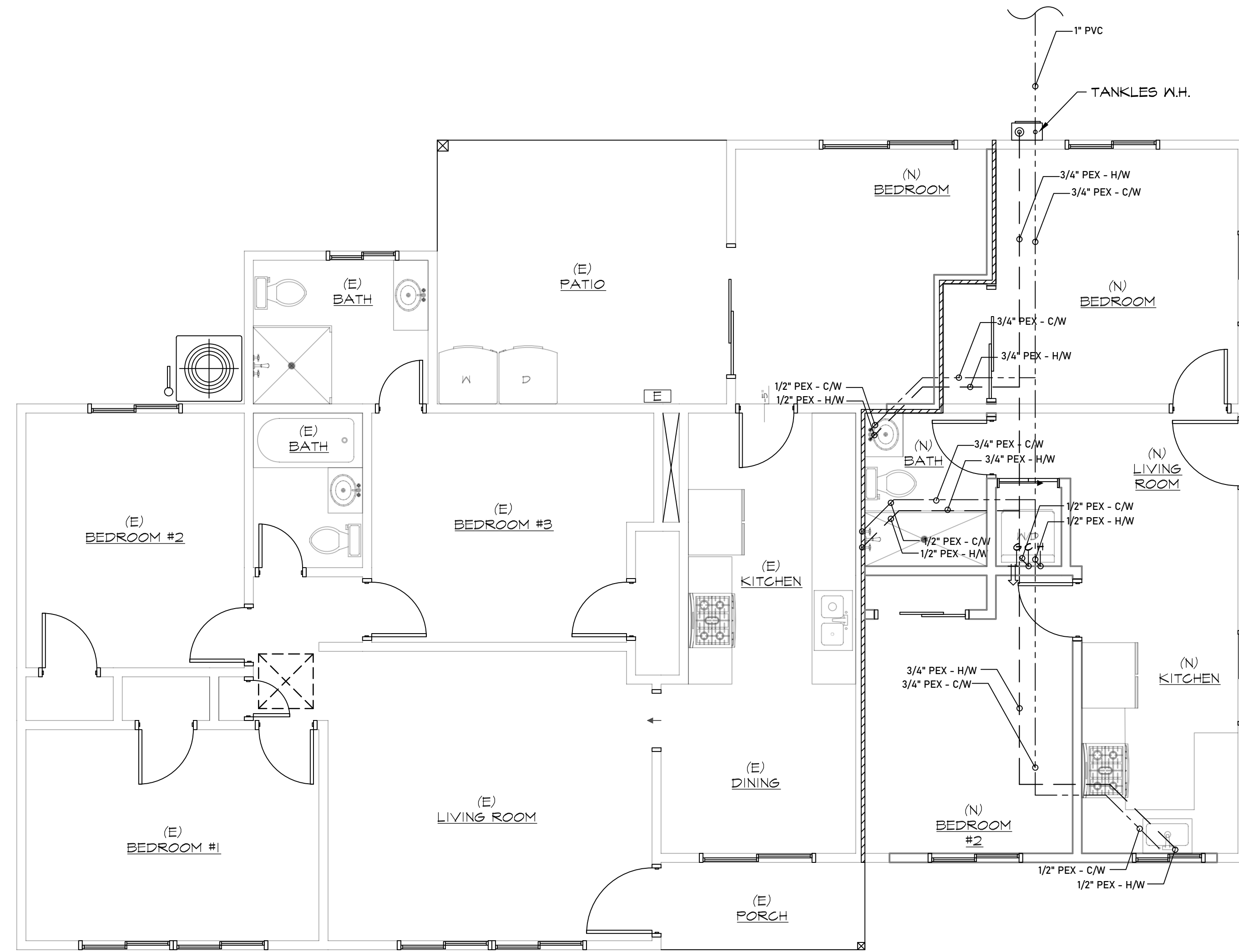
U-2



**C.B. HOME**  
DESIGN

1346 W. PHILADELPHIA ST.  
ONTARIO, CA 91762  
PHONE: (626) 279-5657  
EMAIL: CBHOME626@GMAIL.COM

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**COLD & HOT WATER PLAN**

1/4" = 1'-0"

**OWNER INFO:**

- OSCAR & BERTA RODRIGUEZ  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763  
- (909)238-8508

**PROJECT ADDRESS:**

- GARAGE CONVERSION INTO A.D.U. &  
NEW DETACH A.D.U.  
- 9802 COALINGA AVENUE  
- MONTCLAIR, CA. 91763

**JOB NUMBER:**  
CB23-016

**DRAWN BY:**  
GC/JC/OP

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

**REVISIONS:**

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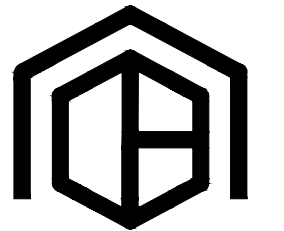
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**SHEET TITLE:**  
COLD & HOT WATER PLAN  
- GARAGE CONVERSION

**SHEET NO.:**

**U-3**



C.B. HOME DESIGN

1346 W. PHILADELPHIA ST.
ONTARIO, CA 91762
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OWNER INFO:
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- 9802 COALINGA AVENUE
- MONTCLAIR, CA. 91763
- (909)238-8508

PROJECT ADDRESS:
- GARAGE CONVERSION INTO A.D.U. & NEW DETACH A.D.U.
- 9802 COALINGA AVENUE
- MONTCLAIR, CA. 91763

JOB NUMBER:
CB23016

DRAWN BY:
GC/JC/OP

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

REVISIONS:

SHEET TITLE:
NEW ADU

SHEET NO:

ENV-1

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Residential Building
Calculation Date/Time: 2023-02-13T15:52:24-08:00
Input File Name: New A.D.U..ribd22x

ENERGY USE SUMMARY table with columns: Energy Use, Standard Design Source Energy (EDR1), Standard Design TDV Energy (EDR2), Proposed Design Source Energy (EDR1), Proposed Design TDV Energy (EDR2), Compliance Margin (EDR1), Compliance Margin (EDR2). Rows include Space Heating, Space Cooling, IAQ Ventilation, Water Heating, etc.

Registration Number: 423-P010025516A-000-000-000000-0000
Registration Date/Time: 02/13/2023 15:55
HERS Provider: CHEERS

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Residential Building
Calculation Date/Time: 2023-02-13T15:52:24-08:00
Input File Name: New A.D.U..ribd22x

ENERGY DESIGN RATINGS table with columns: Energy Design Ratings, Compliance Margins. Rows include Standard Design, Proposed Design. Includes RESU1: PASS.

Efficiency EDR includes improvements like a better building envelope and more efficient equipment
Total EDR includes efficiency and demand response measures such as photovoltaic (PV) system and batteries

Registration Number: 423-P010025516A-000-000-000000-0000
Registration Date/Time: 02/13/2023 15:55
HERS Provider: CHEERS

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Residential Building
Calculation Date/Time: 2023-02-13T15:52:24-08:00
Input File Name: New A.D.U..ribd22x

OPAQUE SURFACES table with columns: O1, O2, O3, O4, O5, O6, O7, O8. Rows include Name, Zone, Construction, Azimuth, Orientation, Gross Area (ft^2), Window and Door Area (ft2), Tilt (deg).

ATTIC table with columns: O1, O2, O3, O4, O5, O6, O7, O8. Rows include Name, Construction, Type, Roof Rise (x in 12), Roof Reflectance, Roof Emittance, Radiant Barrier, Cool Roof.

FENESTRATION / GLAZING table with columns: O1, O2, O3, O4, O5, O6, O7, O8, O9, O10, O11, O12, O13, O14. Rows include Name, Type, Surface, Orientation, Azimuth, Width (ft), Height (ft), Mult., Area (ft^2), U-factor, SHGC, SHGC Source, Exterior Shading.

OPAQUE DOORS table with columns: O1, O2, O3, O4. Rows include Name, Side of Building, Area (ft^2), U-factor.

Registration Number: 423-P010025516A-000-000-000000-0000
Registration Date/Time: 02/13/2023 15:55
HERS Provider: CHEERS

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Residential Building
Calculation Date/Time: 2023-02-13T15:52:24-08:00
Input File Name: New A.D.U..ribd22x

HERS FEATURE SUMMARY table with columns: O1, O2, O3, O4, O5, O6, O7. Rows include Project Name, Conditioned Floor Area (ft^2), Number of Dwelling Units, Number of Bedrooms, Number of Zones, Number of Ventilation Cooling Systems, Number of Water Heating Systems.

BUILDING - FEATURES INFORMATION table with columns: O1, O2, O3, O4, O5, O6, O7. Rows include Project Name, Conditioned Floor Area (ft^2), Number of Dwelling Units, Number of Bedrooms, Number of Zones, Number of Ventilation Cooling Systems, Number of Water Heating Systems.

ZONE INFORMATION table with columns: O1, O2, O3, O4, O5, O6, O7. Rows include Zone Name, Zone Type, HVAC System Name, Zone Floor Area (ft^2), Avg. Ceiling Height, Water Heating System 1, Status.

OPAQUE SURFACES table with columns: O1, O2, O3, O4, O5, O6, O7, O8. Rows include Name, Zone, Construction, Azimuth, Orientation, Gross Area (ft^2), Window and Door Area (ft2), Tilt (deg).

Registration Number: 423-P010025516A-000-000-000000-0000
Registration Date/Time: 02/13/2023 15:55
HERS Provider: CHEERS

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Residential Building
Calculation Date/Time: 2023-02-13T15:52:24-08:00
Input File Name: New A.D.U..ribd22x

HVAC - HEAT PUMPS table with columns: O1, O2, O3, O4, O5, O6, O7, O8, O9, O10, O11, O12, O13. Rows include Name, System Type, Number of Units, Heating Efficiency Type, Heating Cap 47, Heating Cap 17, Cooling Efficiency Type, SEER/SEER2, Zonally Controlled, Compressor Type, HERS Verification.

HVAC HEAT PUMPS - HERS VERIFICATION table with columns: O1, O2, O3, O4, O5, O6, O7, O8, O9. Rows include Name, Verified Airflow, Airflow Target, Verified EER/SEER2, Verified SEER/SEER2, Verified Refrigerant Charge, Verified HSPF/HSPF2, Verified Heating Cap 47, Verified Heating Cap 17.

HVAC - DISTRIBUTION SYSTEMS table with columns: O1, O2, O3, O4, O5, O6, O7, O8, O9, O10, O11, O12. Rows include Name, Type, Design Type, Duct Ins. R-value, Duct Location, Surface Area, Bypass Duct, Duct Leakage, HERS Verification.

Registration Number: 423-P010025516A-000-000-000000-0000
Registration Date/Time: 02/13/2023 15:55
HERS Provider: CHEERS

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Residential Building
Calculation Date/Time: 2023-02-13T15:52:24-08:00
Input File Name: New A.D.U..ribd22x

WATER HEATING SYSTEMS table with columns: O1, O2, O3, O4, O5, O6, O7, O8, O9. Rows include Name, System Type, Distribution Type, Water Heater Name, Number of Units, Solar Heating System, Compact Distribution, HERS Verification, Water Heater Name (#).

WATER HEATERS - NEEA HEAT PUMP table with columns: O1, O2, O3, O4, O5, O6, O7, O8. Rows include Name, # of Units, Tank Vol. (gal), NEEA Heat Pump Brand, NEEA Heat Pump Model, Tank Location, Duct Inlet Air Source, Duct Outlet Air Source.

WATER HEATING - HERS VERIFICATION table with columns: O1, O2, O3, O4, O5, O6, O7. Rows include Name, Pipe Insulation, Parallel Piping, Compact Distribution, Compact Distribution Type, Recirculation Control, Shower Drain Water Heat Recovery.

SPACE CONDITIONING SYSTEMS table with columns: O1, O2, O3, O4, O5, O6, O7, O8, O9. Rows include Name, System Type, Heating Unit Name, Heating Equipment Count, Cooling Unit Name, Cooling Equipment Count, Fan Name, Distribution Name, Required Thermostat Type.

Registration Number: 423-P010025516A-000-000-000000-0000
Registration Date/Time: 02/13/2023 15:55
HERS Provider: CHEERS

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Residential Building
Calculation Date/Time: 2023-02-13T15:52:24-08:00
Input File Name: New A.D.U..ribd22x

GENERAL INFORMATION table with columns: O1, O2, O3, O4, O5, O6, O7, O8, O9, O10, O11, O12, O13, O14, O15, O16, O17, O18, O19. Rows include Project Name, Run Title, Project Location, City, Zip code, Climate Zone, Building Type, Project Scope, Addition Cond. Floor Area (ft^2), Existing Cond. Floor Area (ft^2), Total Cond. Floor Area (ft^2), ADU Bedroom Count.

COMPLIANCE RESULTS table with columns: O1, O2, O3. Rows include Building Complies with Computer Performance, This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider, This building incorporates one or more Special Features shown below.

Registration Number: 423-P010025516A-000-000-000000-0000
Registration Date/Time: 02/13/2023 15:55
HERS Provider: CHEERS

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Residential Building
Calculation Date/Time: 2023-02-13T15:52:24-08:00
Input File Name: New A.D.U..ribd22x

ENERGY USE INTENSITY table with columns: Standard Design (kBtu/ft^2 - yr), Proposed Design (kBtu/ft^2 - yr), Compliance Margin (kBtu/ft^2 - yr), Margin Percentage. Rows include Gross EUI, Net EUI.

Notes:
1. Gross EUI is Energy Use Total (not including PV) / Total Building Area.
2. Net EUI is Energy Use Total (including PV) / Total Building Area.

REQUIRED PV SYSTEMS table with columns: O1, O2, O3, O4, O5, O6, O7, O8, O9, O10, O11, O12. Rows include DC System Size (kWdc), Exception, Module Type, Array Type, Power Electronics, CFI, Azimuth (deg), Tilt Input, Array Angle (deg), Tilt (x in 12), Inverter Eff. (%), Annual Solar Access (%).

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

Registration Number: 423-P010025516A-000-000-000000-0000
Registration Date/Time: 02/13/2023 15:55
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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

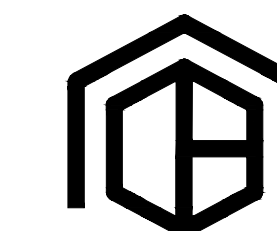
Project Name: Residential Building
Calculation Date/Time: 2023-02-13T15:52:24-08:00
Input File Name: New A.D.U..ribd22x

SLAB FLOORS table with columns: O1, O2, O3, O4, O5, O6, O7, O8. Rows include Name, Zone, Area (ft^2), Perimeter (ft), Edge Insul. R-value and Depth, Edge Insul. R-value and Depth, Carpeted Fraction, Heated.

OPAQUE SURFACE CONSTRUCTIONS table with columns: O1, O2, O3, O4, O5, O6, O7, O8. Rows include Construction Name, Surface Type, Construction Type, Framing, Total Cavity R-value, Interior / Exterior Continuous R-value, U-factor, Assembly Layers.

BUILDING ENVELOPE - HERS VERIFICATION table with columns: O1, O2, O3, O4, O5. Rows include Quality Insulation Installation (QII), High R-value Spray Foam Insulation, Building Envelope Air Leakage, CFM50, CFM50.

Registration Number: 423-P010025516A-000-000-000000-0000
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**C.B. HOME**  
DESIGN

1346 W. PHILADELPHIA ST.  
ONTARIO, CA 91762  
PHONE: (626) 279-5657  
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**CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD** CF1R-PRF-01-E  
 Project Name: Residential Building Calculation Date/Time: 2023-02-13T15:52:24-08:00  
 Calculation Description: Title 24 Analysis Input File Name: New A.D.U..rbd22x (Page 10 of 12)

01	02	03	04	05	06	07	08	09
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low-leakage Air Handler	Low Leakage Ducts Entirely in Conditioned Space
Air Distribution System 1-hers-dist	Yes	5.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No

01	02	03	04
Name	Type	Fan Power (Watts/CFM)	Name
HVAC Fan 1	HVAC Fan	0.45	HVAC Fan 1-hers-fan

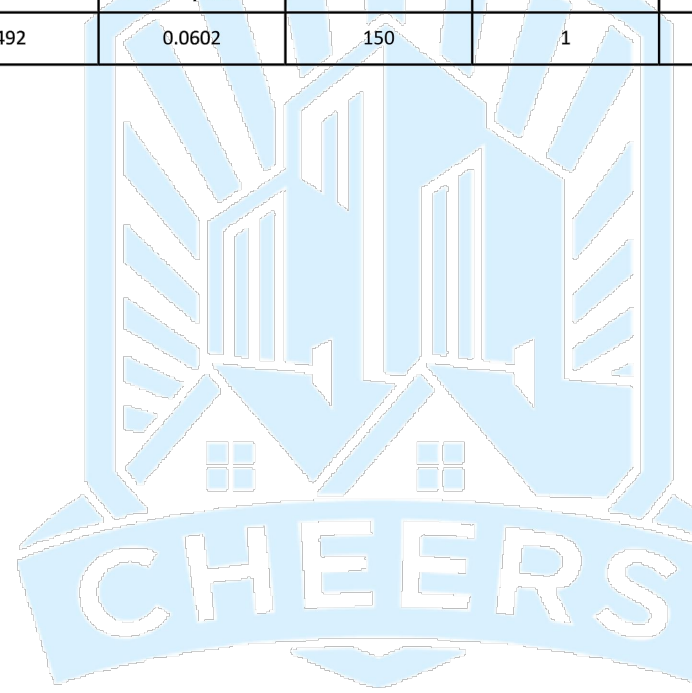
01	02	03
Name	Verified Fan Watt Draw	Required Fan Efficacy (Watts/CFM)
HVAC Fan 1-hers-fan	Required	0.45

01	02	03	04	05	06	07	08	09
Dwelling Unit	Airflow (CFM)	Fan Efficacy (W/CFM)	IAQ Fan Type	Includes Heat/Energy Recovery?	IAQ Recovery Effectiveness - SRE	Includes Fault Indicator Display?	HERS Verification	Status
Sfam IAQVentRpt	58	0.35	Exhaust	No	n/a	No	Yes	

Registration Number: 423-P010025516A-000-0000000-0000 Registration Date/Time: 02/13/2023 15:55  
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 CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000  
Report Generated: 2023-02-13 15:52:49  
 Schema Version: rev 20220901

**CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD** CF1R-PRF-01-E  
 Project Name: Residential Building Calculation Date/Time: 2023-02-13T15:52:24-08:00  
 Calculation Description: Title 24 Analysis Input File Name: New A.D.U..rbd22x (Page 11 of 12)

01	02	03	04	05	06	07	08	09
Name	Airflow Rate (CFM/t2)	Cooling Vent CFM	Cooling Vent Watts/CFM	Total Watts	Number of Fans	CFVCS Type	Exhausts to	HERS Verification
WH Fan 1	2.63	2492	0.0602	150	1	Not a CFVCS	Attic	Required



Registration Number: 423-P010025516A-000-0000000-0000 Registration Date/Time: 02/13/2023 15:55  
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Report Generated: 2023-02-13 15:52:49  
 Schema Version: rev 20220901

**CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD** CF1R-PRF-01-E  
 Project Name: Residential Building Calculation Date/Time: 2023-02-13T15:52:24-08:00  
 Calculation Description: Title 24 Analysis Input File Name: New A.D.U..rbd22x (Page 12 of 12)

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

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

Documentation Author Name: German Cortez	Documentation Author Signature: <i>German Cortez</i>
Company: C B Home Inc	Signature Date: 02/13/2023
Address: 1168 San Gabriel Blvd. #P Rosemead, CA 91770	CEA/ HERS Certification Identification (if applicable): Phone: (626) 279-5657

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

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

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

Responsible Designer Name: German Cortez	Responsible Designer Signature: <i>German Cortez</i>
Company: C B Home Inc	Date Signed: 02/13/2023
Address: 1168 San Gabriel Blvd. #P Rosemead, CA 91770	License: 961219 Phone: (626) 279-5657

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

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 CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000  
Report Generated: 2023-02-13 15:52:49  
 Schema Version: rev 20220901

**OWNER INFO:**  
 - OSCAR & BERTA RODRIGUEZ  
 - 9802 COALINGA AVENUE  
 - MONTCLAIR, CA. 91763  
 - (909)238-8508

**PROJECT ADDRESS:**  
 - GARAGE CONVERSION INTO A.D.U. &  
 NEW DETACH A.D.U.  
 - 9802 COALINGA AVENUE  
 - MONTCLAIR, CA. 91763

**JOB NUMBER:**  
CB23-016

**DRAWN BY:**  
GC/JC/OP

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

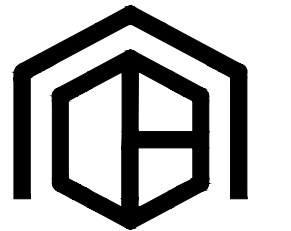
**REVISIONS:**  
.

**SHEET TITLE:**  
NEW ADU

**SHEET NO.:**

**ENV-2**





C.B. HOME DESIGN

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RESIDENTIAL MEASURES SUMMARY RMS-1

Table with columns: Project Name, Building Type, Date, Project Address, Area, Construction Type, Cavity, Special Features, Status. Includes details for New A.D.U. at 9802 Coalinga Avenue.

Table with columns: Orientation, Area, U-Fac, SHGC, Overhang, Sides, Exterior Shades, Status. Lists orientation values for Front, Left, Rear, and Right.

Table with columns: HVAC SYSTEMS, Qty, Heating, Min. Eff, Cooling, Min. Eff, Thermostat, Status. Lists Electric Heat Pump with 9.00 HSPF and 14.0 SEER.

Table with columns: HVAC DISTRIBUTION, Location, Heating, Cooling, Duct Location, R-Value, Status. Lists Ducted, Ducted, Attic, and R-0.

Table with columns: WATER HEATING, Qty, Type, Gallons, Min. Eff, Distribution, Status. Lists Heat Pump with 40 gallons and 3.83 efficiency.

EnergyPro 9.0 by EnergySoft User Number: 7432 ID: CB23-016 Page 15 of 23

2022 Single-Family Residential Mandatory Requirements Summary

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

- Building Envelope: Air Leakage, Labeling, Field fabricated exterior doors and fenestration products, Air Leakage, Insulation Certification by Manufacturers, Insulation Requirements for Heated Slab Floors, Roofing Products Solar Reflectance and Thermal Emittance, Radiant Barrier, Roof Deck, Ceiling and Rafter Roof Insulation, Wall Insulation, Loose-fill Insulation, R-Value, Raising-floor Insulation, Slab Edge Insulation, Vapor Retarder, Vapor Retarder, Fireplaces, Decorative Gas Appliances, and Gas Log, Pilot Light, Closable Doors, Combustion Inlets, Flue Damper, Masonry or factory-built fireplaces, Space Conditioning, Water Heating, and Plumbing System, Controls for Heat Pumps with Supplementary Electric Resistance Heaters, Energy Management Control Systems, Thermostats, Insulation, and Isolation Valves.

5/6/22

2022 Single-Family Residential Mandatory Requirements Summary

- Pilot Lights, Building Cooling and Heating Loads, Liquid Line Drier, Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation, Gas or Propane Water Heating Systems, Solar Water-heating Systems, Ducts and Fans: Ducts, CMC Compliance, Air Distribution System Ducts and Plenums, Field-Fabricated Duct Systems, Factory-Fabricated Duct Systems, Backdraft Damper, Gravity Ventilation Dampers, Protection of Insulation, Porous Inner Core Flex Duct, Duct System Sealing and Leakage Test, Air Filtration.

- Space Conditioning System Airflow Rate and Fan Efficiency, Ventilation and Indoor Air Quality: Requirements for Ventilation and Indoor Air Quality, Central Fan Integrated (CFI) Ventilation Systems, Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and Townhouses, Local Mechanical Exhaust, Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems, Certification by Manufacturers, Pool and Spa Systems and Equipment: Certification by Manufacturers, Pool and Spa Heating System or Equipment, Pooling, Covers, Directional Inlets and Time Switches for Pools, Pilot Light, Pool Systems and Equipment Installation, Lighting: Lighting Controls and Components, Luminaire Efficacy, Screw based luminaires, Recessed Downlight Luminaires in Ceilings, Clean-filter pressure drop, Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters.

5/6/22

2022 Single-Family Residential Mandatory Requirements Summary

- Space Conditioning System Airflow Rate and Fan Efficiency, Ventilation and Indoor Air Quality: Requirements for Ventilation and Indoor Air Quality, Central Fan Integrated (CFI) Ventilation Systems, Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and Townhouses, Local Mechanical Exhaust, Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems, Certification by Manufacturers, Pool and Spa Systems and Equipment: Certification by Manufacturers, Pool and Spa Heating System or Equipment, Pooling, Covers, Directional Inlets and Time Switches for Pools, Pilot Light, Pool Systems and Equipment Installation, Lighting: Lighting Controls and Components, Luminaire Efficacy, Screw based luminaires, Recessed Downlight Luminaires in Ceilings, Clean-filter pressure drop, Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters.

5/6/22

2022 Single-Family Residential Mandatory Requirements Summary

- Screw based luminaires, Light Sources in Enclosed or Recessed Luminaires, Light Sources in Drawers, Cabinets, and Linen Closets, Interior Switches and Controls, Accessible Controls, Multiple Controls, Mandatory Requirements, Energy Management Control Systems, Automatic Shut-off Controls, Dimmers, Independent controls, Residential Outdoor Lighting, Internally illuminated address signs, Residential Garages for Eight or More Vehicles, Solar Readiness: Single-Family Residences, Minimum Solar Zone Area, Azimuth, Shading, Structural Design Loads on Construction Documents, Interconnection Pathways, Documentation, Main Electrical Service Panel.

5/6/22

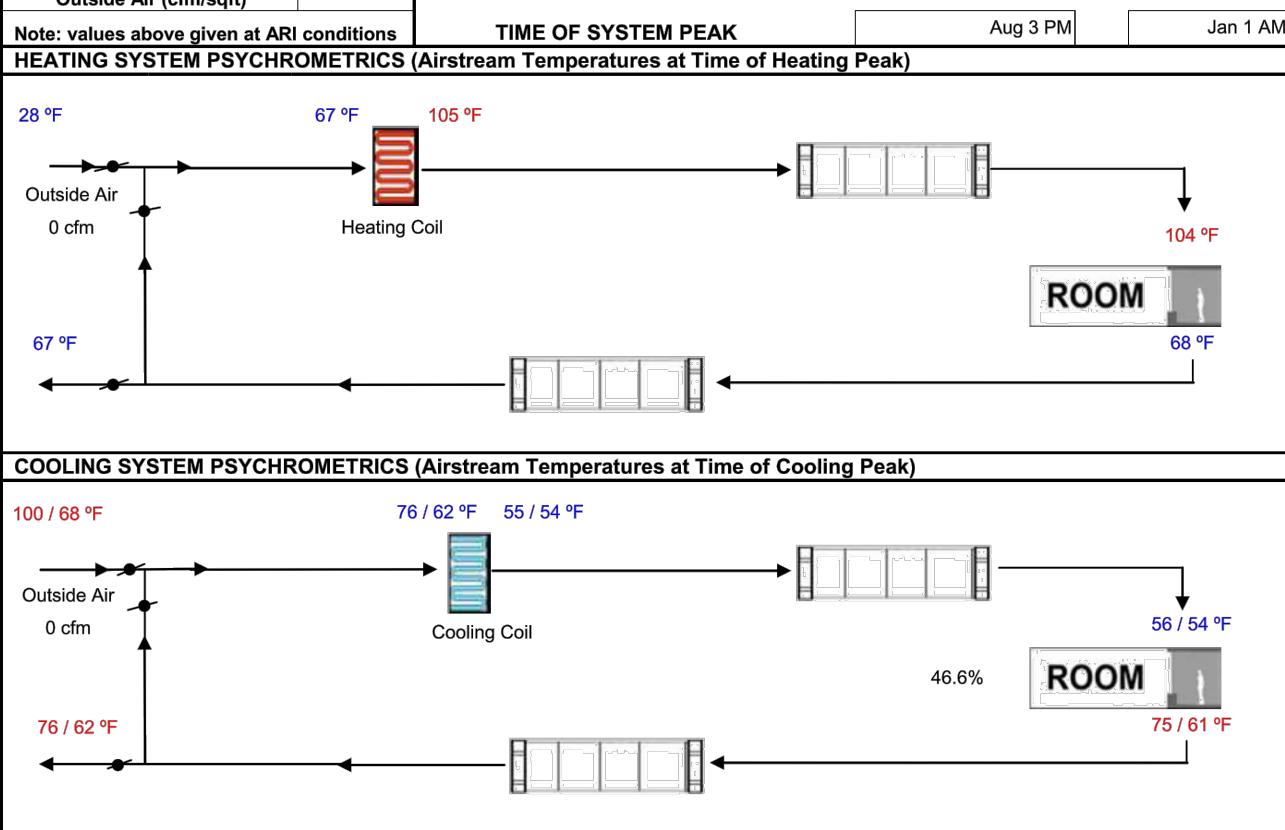
2022 Single-Family Residential Mandatory Requirements Summary

- Energy Storage System (ESS) Ready, Heat Pump Space Heater Ready, Electric Cooktop Ready, Electric Clothes Dryer Ready, Exceptions may apply.

5/6/22

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Table with columns: Project Name, Date, System Name, Floor Area, HVAC System, ENGINEERING CHECKS, SYSTEM LOAD, COIL COOLING PEAK, COIL HTG. PEAK, Air System, HEATING SYSTEM PSYCHROMETRICS, COOLING SYSTEM PSYCHROMETRICS.

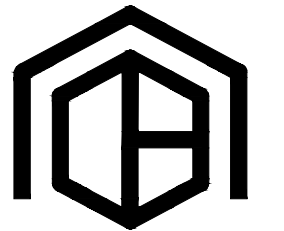


OWNER INFO: OSCAR & BERTA RODRIGUEZ, 9802 COALINGA AVENUE, MONTCLAIR, CA, 91763, (909)238-8508

PROJECT ADDRESS: GARAGE CONVERSION INTO A.D.U. & NEW DETACH A.D.U., 9802 COALINGA AVENUE, MONTCLAIR, CA, 91763

JOB NUMBER: CB23016, DRAWN BY: GC/JC/OP, SCALE: 1/4" = 1'-0", REVISIONS:

SHEET TITLE: NEW ADU, SHEET NO:



C.B. HOME DESIGN

1346 W. PHILADELPHIA ST.
ONTARIO, CA 91762
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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Residential Building
Calculation Date/Time: 2023-02-13T16:18:20-08:00
Calculation Description: Title 24 Analysis
Input File Name: Interior Remodel.rbd22x

CF1R-PRF-01-E (Page 1 of 9)

Table with 2 columns: Item, Value. Includes Project Name, Run Title, Project Location, City, Zip code, Climate Zone, Building Type, Project Scope, Addition Cond. Floor Area, Existing Cond. Floor Area, Total Cond. Floor Area, ADU Bedroom Count.

Table with 2 columns: Item, Value. Includes Building Complies with Computer Performance, Building does not require field testing or HERS verification, This building incorporates one or more Special Features shown below.

Registration Number: 423-P01002567A-000-000-000000-0000
Registration Date/Time: 02/13/2023 16:24
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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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Calculation Description: Title 24 Analysis
Input File Name: Interior Remodel.rbd22x

CF1R-PRF-01-E (Page 2 of 9)

Table with 8 columns: Energy Use, Standard Design Source Energy (EDR1), Standard Design TDV Energy (EDR2), Proposed Design Source Energy (EDR1), Proposed Design TDV Energy (EDR2), Compliance Margin (EDR1), Compliance Margin (EDR2). Includes Space Heating, Space Cooling, IAQ Ventilation, Water Heating, Self Utilization/Flexibility Credit, Efficiency Compliance Total, Photovoltaics, Battery, Flexibility, Indoor Lighting, Appl. & Cooking, Plug Loads, Outdoor Lighting, TOTAL COMPLIANCE.

Registration Number: 423-P01002567A-000-000-000000-0000
Registration Date/Time: 02/13/2023 16:24
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Calculation Date/Time: 2023-02-13T16:18:20-08:00
Calculation Description: Title 24 Analysis
Input File Name: Interior Remodel.rbd22x

CF1R-PRF-01-E (Page 3 of 9)

Table with 5 columns: Energy Use Intensity, Standard Design (kBtu/ft² - yr), Proposed Design (kBtu/ft² - yr), Compliance Margin (kBtu/ft² - yr), Margin Percentage. Includes Gross EUI, Net EUI.

Notes: 1. Gross EUI is Energy Use Total (not including PV) / Total Building Area. 2. Net EUI is Energy Use Total (including PV) / Total Building Area.

REQUIRED SPECIAL FEATURES: The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis. \* New ductwork added is less than 40 ft. in length.

Table with 7 columns: Item, Value. Includes Number of Dwelling Units, Number of Bedrooms, Number of Zones, Number of Ventilation Cooling Systems, Number of Water Heating Systems.

Table with 7 columns: Zone Name, Zone Type, HVAC System Name, Zone Floor Area (ft²), Avg. Ceiling Height, Water Heating System 1, Status. Includes Zone 1.

Registration Number: 423-P01002567A-000-000-000000-0000
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Calculation Description: Title 24 Analysis
Input File Name: Interior Remodel.rbd22x

CF1R-PRF-01-E (Page 4 of 9)

Table with 11 columns: Item, Value. Includes Name, Zone, Construction, Azimuth, Orientation, Gross Area (ft²), Window and Door Area (ft²), Tilt (deg), Wall Exceptions, Status, Verified Existing Condition. Includes E/Front Wall, S/Left Wall, W/Rear Wall, N/Right Wall, Roof.

Table with 10 columns: Item, Value. Includes Name, Construction, Type, Roof Rise (x in 12), Roof Reflectance, Roof Emissance, Radiant Barrier, Cool Roof, Status, Verified Existing Condition. Includes Attic Zone 1.

Table with 16 columns: Item, Value. Includes Name, Type, Surface, Orientation, Azimuth, Width (ft), Height (ft), Mult., Area (ft²), U-factor, U-factor Source, SHGC, SHGC Source, Exterior Shading, Status, Verified Existing Condition. Includes Window, Window 2.

Registration Number: 423-P01002567A-000-000-000000-0000
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Calculation Description: Title 24 Analysis
Input File Name: Interior Remodel.rbd22x

CF1R-PRF-01-E (Page 5 of 9)

Table with 16 columns: Item, Value. Includes Name, Type, Surface, Orientation, Azimuth, Width (ft), Height (ft), Mult., Area (ft²), U-factor, U-factor Source, SHGC, SHGC Source, Exterior Shading, Status, Verified Existing Condition. Includes Window 3, Window 4, Window 5, Window 6, Window 7, Window 8.

Table with 10 columns: Item, Value. Includes Name, Zone, Area (ft²), Perimeter (ft), Edge Insul. R-value and Depth, Edge Insul. R-value and Depth, Carpeted Fraction, Heated, Status, Verified Existing Condition. Includes Slab-on-Grade.

Registration Number: 423-P01002567A-000-000-000000-0000
Registration Date/Time: 02/13/2023 16:24
HERS Provider: CHEERS
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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Residential Building
Calculation Date/Time: 2023-02-13T16:18:20-08:00
Calculation Description: Title 24 Analysis
Input File Name: Interior Remodel.rbd22x

CF1R-PRF-01-E (Page 6 of 9)

Table with 8 columns: Item, Value. Includes Construction Name, Surface Type, Construction Type, Framing, Total Cavity R-value, Interior/Exterior Continuous R-value, U-factor, Assembly Layers. Includes Default Wall Prior to 197, Attic Roof Zone 1, Default Roof Prior to 197.

Table with 5 columns: Item, Value. Includes Quality Insulation Installation (QI), High R-value Spray Foam Insulation, Building Envelope Air Leakage, CFM50. Includes Not Required, n/a.

Table with 12 columns: Item, Value. Includes Name, System Type, Distribution Type, Water Heater Name, Number of Units, Solar Heating System, Compact Distribution, HERS Verification, Water Heater Name (#), Status, Verified Existing Condition, Existing Water Heating System. Includes DHW Sys 1.

Registration Number: 423-P01002567A-000-000-000000-0000
Registration Date/Time: 02/13/2023 16:24
HERS Provider: CHEERS
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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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Calculation Date/Time: 2023-02-13T16:18:20-08:00
Calculation Description: Title 24 Analysis
Input File Name: Interior Remodel.rbd22x

CF1R-PRF-01-E (Page 7 of 9)

Table with 15 columns: Item, Value. Includes Name, Heating Element Type, Tank Type, # of Units, Tank Vol. (gal), Heating Efficiency Type, Efficiency, Rated Input Type, Input Rating or Pilot, Tank Insulation R-value (Ins/Sq), Standby Loss or Recovery Eff, 1st Hr. Rating or Flow Rate, Tank Location, Status, Verified Existing Condition. Includes DHW Heater 1.

Table with 7 columns: Item, Value. Includes Name, Pipe Insulation, Parallel Piping, Compact Distribution, Compact Distribution Type, Recirculation Control, Shower Drain Water Heat Recovery. Includes DHW Sys 1 - 1/1.

Table with 12 columns: Item, Value. Includes Name, System Type, Heating Unit Name, Heating Equipment Count, Cooling Unit Name, Cooling Equipment Count, Fan Name, Distribution Name, Required Thermostat Type, Status, Verified Existing Condition, Existing HVAC System. Includes HVAC System 1.

Table with 4 columns: Item, Value. Includes Name, System Type, Number of Units, Heating Efficiency. Includes Heating Component 1.

Registration Number: 423-P01002567A-000-000-000000-0000
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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Residential Building
Calculation Date/Time: 2023-02-13T16:18:20-08:00
Calculation Description: Title 24 Analysis
Input File Name: Interior Remodel.rbd22x

CF1R-PRF-01-E (Page 8 of 9)

Table with 9 columns: Item, Value. Includes Name, System Type, Number of Units, Efficiency Metric, Efficiency EER/EER2/CEER, Efficiency SEER/SEER2, Zonally Controlled, Multi-speed Compressor, HERS Verification. Includes Cooling Component 1.

Table with 16 columns: Item, Value. Includes Name, Type, Design Type, Duct Ins. R-value, Duct Location, Surface Area, Bypass Duct, Duct Leakage, HERS Verification, Status, Verified Existing Condition, Existing Distribution system, New Ducts 25 Ft. Includes Air Distribution System 1.

Table with 4 columns: Item, Value. Includes Name, Type, Fan Power (Watts/CFM), Name. Includes HVAC Fan 1.

Table with 3 columns: Item, Value. Includes Name, Verified Fan Watt Draw, Required Fan Efficacy (Watts/CFM). Includes HVAC Fan 1-hers-fan.

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Project Name: Residential Building
Calculation Date/Time: 2023-02-13T16:18:20-08:00
Calculation Description: Title 24 Analysis
Input File Name: Interior Remodel.rbd22x

CF1R-PRF-01-E (Page 9 of 9)

Table with 2 columns: Item, Value. Includes Documentation Author Name, Signature, Date, Address, City/State/Zip, Phone. Includes German Cortez, C B Home Inc, 1168 San Gabriel Blvd. #P, Rosemead, CA 91770, (626) 279-5657.

Table with 2 columns: Item, Value. Includes Responsible Designer Name, Signature, Date, Address, City/State/Zip, Phone. Includes German Cortez, C B Home Inc, 1168 San Gabriel Blvd. #P, Rosemead, CA 91770, (626) 279-5657.

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OWNER INFO:
- OSCAR & BERTA RODRIGUEZ
- 9802 COALINGA AVENUE
- MONTCLAIR, CA. 91763
- (909)238-8508

PROJECT ADDRESS:
- GARAGE CONVERSION INTO A.D.U. & NEW DETACH A.D.U.
- 9802 COALINGA AVENUE
- MONTCLAIR, CA. 91763

JOB NUMBER:
CB23-016

DRAWN BY:
GC/JC/OP

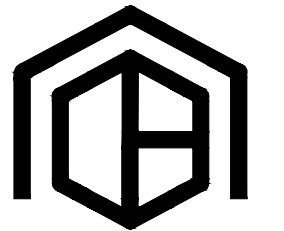
SCALE:
1/4" = 1'-0"

REVISIONS:

SHEET TITLE:
INTERIOR REMODEL

SHEET NO:

ENV-4



C.B. HOME DESIGN

1346 W. PHILADELPHIA ST.
ONTARIO, CA 91762
PHONE: (626) 279-5657
EMAIL: CBHOME62@gmail.com

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RESIDENTIAL MEASURES SUMMARY RMS-1

Table with columns: Project Name, Building Type, Addition, Date, Project Address, CA Climate Zone, Total Cont. Floor Area, Addition, # of Units. Includes insulation construction type table with Cavity, Area, Special Features, Status.

FENESTRATION

Table with columns: Orientation, Area, U-Fac, SHGC, Overhang, Sidesfins, Exterior Shades, Status. Rows for Front, Left, Rear.

HVAC SYSTEMS

Table with columns: Qty, Heating, Min. Eff, Cooling, Min. Eff, Thermostat, Status. Row for Gas Central Furnace.

HVAC DISTRIBUTION

Table with columns: Location, Heating, Cooling, Duct Location, R-Value, Status. Row for HVAC System.

WATER HEATING

Table with columns: Qty, Type, Gallons, Min. Eff, Distribution, Status. Row for Water Heating.

2022 Single-Family Residential Mandatory Requirements Summary

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

- Building Envelope: Air Leakage, Labeling, Field fabricated exterior doors and fenestration products, Air Leakage, Insulation Certification by Manufacturers, Insulation Requirements for Heated Slab Floors, Roofing Products Solar Reflectance and Thermal Emittance, Radiant Barrier, Roof Deck, Ceiling and Rafter Roof Insulation, Wall Insulation, Loose-fill Insulation, R-19 Insulation, R-19 Insulation in raised wood framing or 0.037 maximum U-factor, Slab Edge Insulation, Vapor Retarder, Vapor Retarder, Vapor Retarder, Fireplaces, Decorative Gas Appliances, and Gas Log, Pilot Light, Closable Doors, Combustion Inlets, Fire Damper, Space Conditioning, Water Heating, and Plumbing System.

2022 Single-Family Residential Mandatory Requirements Summary

- Pilot Lights, Building Cooling and Heating Loads, Liquid Line Drier, Water Piping, Solar Water-heating System Piping and Space Conditioning System Line Insulation, Insulation Protection, Gas or Propane Water Heating Systems, Solar Water-heating Systems, Ducts and Fans: Ducts, CMC Compliance, Field-Fabricated Duct Systems, Factory-Fabricated Duct Systems, Backdraft Damper, Gravity Ventilation Dampers, Protection of Insulation, Porous Inner Core Flex Duct, Duct System Sealing and Leakage Test, Air Filtration.

2022 Single-Family Residential Mandatory Requirements Summary

- Space Conditioning System Airflow Rate and Fan Efficiency, Ventilation and Indoor Air Quality: Requirements for Ventilation and Indoor Air Quality, Central Fan Integrated (CFI) Ventilation Systems, Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and Townhouses, Local Mechanical Exhaust, Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems, Certification by Manufacturers, Pool and Spa Systems and Equipment: Covers, Directional Inlets and Time Switches for Pools, Pilot Light, Lighting Controls and Components, Luminaire Efficacy, Recessed Downlight Luminaires in Ceilings, Clean-filter pressure drop and labeling, Electric Cooktop Ready, Electric Clothes Dryer Ready, Energy Storage System (ESS) Ready, Heat Pump Space Heater Ready, Electric Cooktop Ready, Electric Clothes Dryer Ready.

2022 Single-Family Residential Mandatory Requirements Summary

- Screw based luminaires, Light Sources in Enclosed or Recessed Luminaires, Light Sources in Drawers, Cabinets, and Linen Closets, Interior Switches and Controls, Accessible Controls, Multiple Controls, Mandatory Requirements, Energy Management Control Systems, Automatic Shutoff Controls, Dimmers, Residential Outdoor Lighting, Internally illuminated address signs, Residential Garages for Eight or More Vehicles, Solar Readiness: Minimum Solar Zone Area, Azimuth, Shading, Structural Design Loads on Construction Documents, Interconnection Pathways, Documentation, Main Electrical Service Panel.

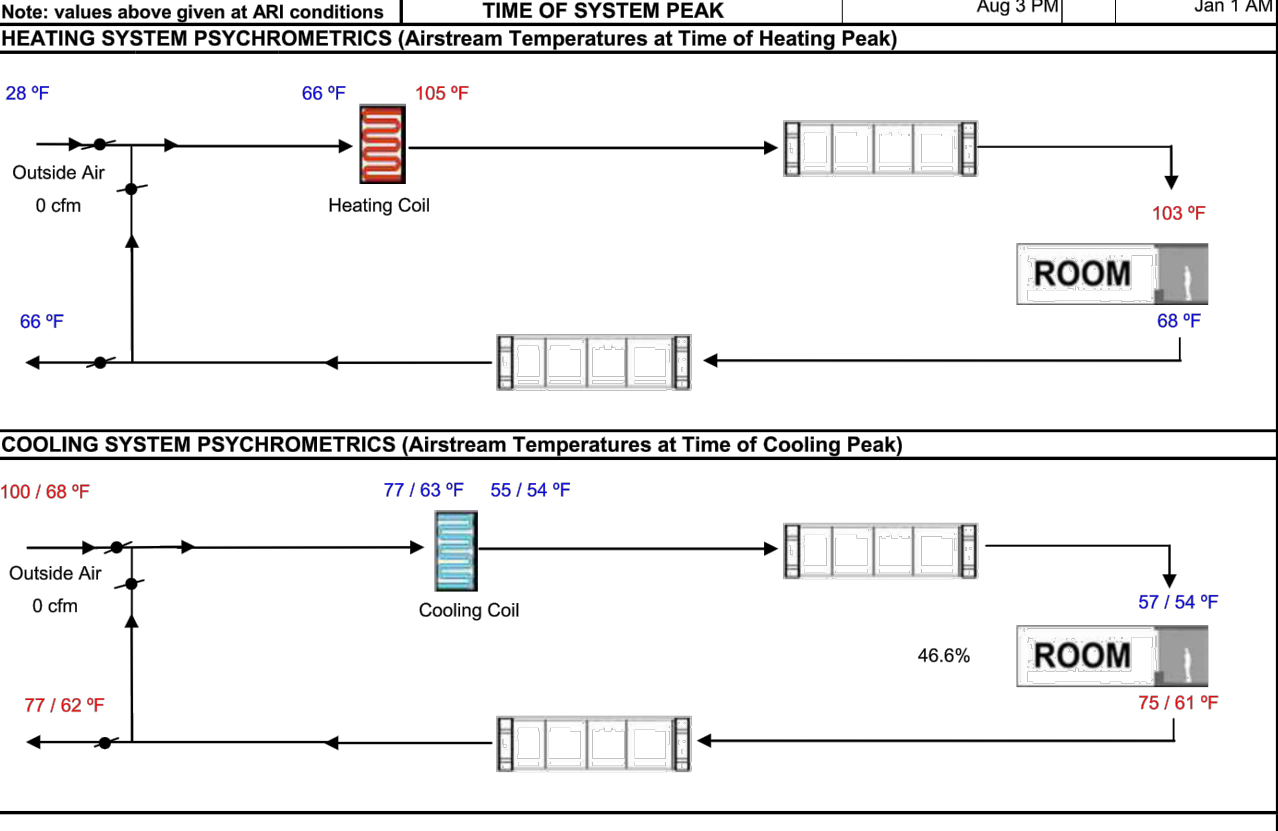
2022 Single-Family Residential Mandatory Requirements Summary

- Energy Storage System (ESS) Ready, Heat Pump Space Heater Ready, Electric Cooktop Ready, Electric Clothes Dryer Ready.

\*Exceptions may apply.

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Table with columns: Project Name, Interior Remodel, Date, Floor Area, HVAC System, ENGINEERING CHECKS, SYSTEM LOAD, COIL COOLING PEAK, COIL HTG. PEAK, HEATING SYSTEM PSYCHROMETRICS, COOLING SYSTEM PSYCHROMETRICS.



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JOB NUMBER:

CB23016

DRAWN BY:

GC/JC/OP

SCALE:

1/4" = 1'-0"

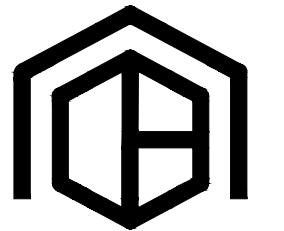
REVISIONS:

SHEET TITLE:

INTERIOR REMODEL

SHEET NO.:

ENV-5



C.B. HOME DESIGN

1346 W. PHILADELPHIA ST.
ONTARIO, CA 91762
PHONE: (626) 279-5657
EMAIL: CBHOME626@GMAIL.COM

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Residential Building
Calculation Date/Time: 2023-04-04T08:05:45-07:00
Input File Name: Garage Conversion Into JR. A.D.U..ribd22x
CF1R-PRF-01-E (Page 1 of 9)

Table with 2 columns: Item ID and Description. Includes Project Name, Run Title, Project Location, City, Zip code, Climate Zone, Building Type, Project Scope, Addition Cond. Floor Area, Existing Cond. Floor Area, Total Cond. Floor Area, and ADU Bedroom Count.

Table with 2 columns: Item ID and Description. Includes Building Complies with Computer Performance, This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider, and This building incorporates one or more Special Features below.

Registration Number: 423-PO10056041A-000-000-000000-0000
Registration Date/Time: 04/04/2023 08:09
HERS Provider: CHEERS
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Report Version: 2022.0.000
Report Generated: 2023-04-04 08:06:02
Schema Version: rev 20220901

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Residential Building
Calculation Date/Time: 2023-04-04T08:05:45-07:00
Input File Name: Garage Conversion Into JR. A.D.U..ribd22x
CF1R-PRF-01-E (Page 2 of 9)

Table with 7 columns: Energy Use, Standard Design Source Energy, Standard Design TDV Energy, Proposed Design Source Energy, Proposed Design TDV Energy, Compliance Margin (EDR1), and Compliance Margin (EDR2). Rows include Space Heating, Space Cooling, IAQ Ventilation, Water Heating, Self Utilization/Flexibility Credit, Efficiency Compliance Total, Photovoltaics, Battery, Flexibility, Indoor Lighting, Appl. & Cooking, Plug Loads, Outdoor Lighting, and TOTAL COMPLIANCE.

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CF1R-PRF-01-E (Page 3 of 9)

Table with 5 columns: Gross EUI, Net EUI, Standard Design (kBtu/ft²-yr), Proposed Design (kBtu/ft²-yr), Compliance Margin (kBtu/ft²-yr), and Margin Percentage.

Notes:
1. Gross EUI is Energy Use Total (not including PV) / Total Building Area.
2. Net EUI is Energy Use Total (including PV) / Total Building Area.

REQUIRED SPECIAL FEATURES
The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.
• Insulation below roof deck

HERS FEATURE SUMMARY
The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry
• Kitchen range hood
• Verified heat pump rated heating capacity

Table with 7 columns: Item ID, Project Name, Conditioned Floor Area, Number of Dwelling Units, Number of Bedrooms, Number of Zones, Number of Ventilation Cooling Systems, and Number of Water Heating Systems.

Table with 7 columns: Item ID, Zone Name, Zone Type, HVAC System Name, Zone Floor Area, Avg. Ceiling Height, Water Heating System 1, and Status.

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CF1R-PRF-01-E (Page 4 of 9)

Table with 11 columns: Item ID, Name, Zone, Construction, Azimuth, Orientation, Gross Area, Window and Door Area, Tilt, Wall Exceptions, Status, and Verified Existing Condition. Rows include E/Front Wall, S/Left Wall, W/Rear Wall, N/Right Wall, and Roof.

Table with 10 columns: Item ID, Name, Construction, Type, Roof Rise, Roof Reflectance, Roof Emittance, Radiant Barrier, Cool Roof, Status, and Verified Existing Condition. Rows include Attic Zone 1 and Attic Zone 2.

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CF1R-PRF-01-E (Page 5 of 9)

Table with 16 columns: Item ID, Name, Type, Surface, Orientation, Azimuth, Width, Height, Mult., Area, U-factor, SHGC, SHGC Source, Exterior Shading, Status, and Verified Existing Condition. Rows include Window 1 through Window 7.

Table with 6 columns: Item ID, Name, Side of Building, Area, U-factor, Status, and Verified Existing Condition. Rows include Door.

Table with 10 columns: Item ID, Name, Zone, Area, Perimeter, Edge Insul. R-value and Depth, Edge Insul. R-value and Depth, Carpeted Fraction, Heated, Status, and Verified Existing Condition. Rows include Slab-on-Grade 1 and Slab-on-Grade 2.

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Input File Name: Garage Conversion Into JR. A.D.U..ribd22x
CF1R-PRF-01-E (Page 6 of 9)

Table with 8 columns: Item ID, Construction Name, Surface Type, Construction Type, Framing, Total Cavity R-value, Interior / Exterior Continuous R-value, U-factor, and Assembly Layers. Rows include R-15 Wall, Default Wall Prior to 197, R-0 Wall, Attic Roof Zone 1, Attic Roof Zone 2, R-38 Roof Attic, and Default Roof Prior to 197.

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CF1R-PRF-01-E (Page 7 of 9)

Table with 5 columns: Item ID, Quality Insulation Installation, High R-value Spray Foam Insulation, Building Envelope Air Leakage, CFM50, and CFM50. Rows include Not Required.

Table with 12 columns: Item ID, Name, System Type, Distribution Type, Water Heater Name, Number of Units, Solar Heating System, Compact Distribution, HERS Verification, Water Heater Name (#), Status, Verified Existing Condition, and Existing Heating System. Rows include DHW Sys 1.

Table with 15 columns: Item ID, Name, Heating Element Type, Tank Type, # of Units, Tank Vol., Heating Efficiency Type, Efficiency, Rated Input Type, Input Rating or Pilot, Tank Insulation R-value, Standby Loss or Recovery Eff, 1st Hr. Rating or Flow Rate, Tank Location, Status, and Verified Existing Condition. Rows include DHW Heater 1.

Table with 7 columns: Item ID, Name, Pipe Insulation, Parallel Piping, Compact Distribution, Compact Distribution Type, Recirculation Control, and Shower Drain Water Heat Recovery. Rows include DHW Sys 1 - 1/1.

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CF1R-PRF-01-E (Page 8 of 9)

Table with 12 columns: Item ID, Name, System Type, Heating Unit Name, Heating Equipment Count, Cooling Unit Name, Cooling Equipment Count, Fan Name, Distribution Name, Required Thermostat Type, Status, Verified Existing Condition, and Existing HVAC System. Rows include HVAC System 1.

Table with 13 columns: Item ID, Name, System Type, Number of Units, Heating Efficiency Type, HSPF / HSPF2 / COP, Cap 47, Cap 17, Cooling Efficiency Type, SEER / SEER2 / CEER, Zonally Controlled, Compressor Type, and HERS Verification. Rows include Heat Pump System 1.

Table with 9 columns: Item ID, Name, Verified Airflow, Airflow Target, Verified EER/SEER2, Verified SEER/SEER2, Verified Refrigerant Charge, Verified HSPF/HSPF2, Verified Heating Cap 47, and Verified Heating Cap 17. Rows include Heat Pump System 1-hers-htpump.

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Input File Name: Garage Conversion Into JR. A.D.U..ribd22x
CF1R-PRF-01-E (Page 9 of 9)

Documentation Author's Declaration Statement
I, I certify that this Certificate of Compliance documentation is accurate and complete.
Documentation Author Name: German Cortez
Signature: German Cortez
Signature Date: 04/04/2023
Address: 1168 San Gabriel Blvd. #P
City/State/Zip: Rosemead, CA 91770
Phone: (626) 279-5657

Responsible Person's Declaration Statement
I certify the following under penalty of perjury under the laws of the State of California:
1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
Responsible Designer Name: German Cortez
Signature: German Cortez
Signature Date: 04/04/2023
Address: 1168 San Gabriel Blvd. #P
City/State/Zip: Rosemead, CA 91770
Phone: (626) 279-5657

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

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OWNER INFO:
- OSCAR & BERTA RODRIGUEZ
- 9802 COALINGA AVENUE
- MONTCLAIR, CA. 91763
- (909)238-8508

PROJECT ADDRESS:
- GARAGE CONVERSION INTO A.D.U. & NEW DETACH A.D.U.
- 9802 COALINGA AVENUE
- MONTCLAIR, CA. 91763

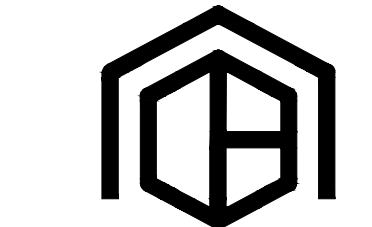
JOB NUMBER:
CB23016
DRAWN BY:
GC/JC/OP
SCALE:
1/4" = 1'-0"

REVISIONS:

SHEET TITLE:
GARAGE CONVERSION TO JR ADU

SHEET NO:

ENV-6



C.B. HOME DESIGN

1346 W. PHILADELPHIA ST. ONTARIO, CA 91762 PHONE: (626) 279-5657 EMAIL: CBHOME62@gmail.com

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-  
-

SHEET TITLE:  
GARAGE CONVERSION TO JR ADU

SHEET NO.:

ENV-7

RESIDENTIAL MEASURES SUMMARY									
Project Name		Building Type			Date		RMS-1		
Garage Conversion To Jr. ADU		Single Family			4/4/2023				
Project Address		California Energy Climate Zone		Total Cond. Floor Area		Addition		# of Units	
9802 Coalinga Avenue Montclair		CA Climate Zone 10		486		343		1	

Construction Type	Cavity (ft²)	Area (ft²)	Special Features	Status	Insulation	
					R-Value	Min. Eff.
Wall	Wood Framed	R 15	112	New		
Wall	Wood Framed	R 15	161	New		
Wall	Wood Framed	R 15	13	New		
Wall	Wood Framed	R 15	117	New		
Door	Opaque Door	R-5	20	New		
Slab	Unheated Slab-on-Grade	- no insulation	343	Perim = 0'	New	
Roof	Wood Framed Attic	R 38	343	Add-R-15.0	New	
Demising	Wood Framed	- no insulation	132	Altered		

Orientation	Area (ft²)	U-Fac	SHGC	Overhang	Sidelines	Exterior Shades	Status	fenestration	
								Glazing Percentage	U-Factor
Front (F)	25.0	0.300	0.23	none	none	N/A	New		
Rear (R)	16.0	0.300	0.23	none	none	N/A	New		
Right (R)	24.0	0.300	0.23	none	none	N/A	New		
Rear (R)	16.0	0.550	0.67	none	none	N/A	Existing		
Right (R)	8.0	0.550	0.67	none	none	N/A	Existing		

Qty.	Heating	Min. Eff.	Cooling	Min. Eff.	Thermostat	Status
1	Electric Heat Pump	8.20 HSPFP	Split Heat Pump	14.0 SEER	Setback	New

Location	Heating	Cooling	Duct Location	Duct R-Value	Status
HVAC System	Ductless / No Fan	Ductless	n/a	n/a	New

Qty.	Type	Gallons	Min. Eff.	Distribution	Status
1	Small Instantaneous Gas	1	0.36	Standard	New

RESIDENTIAL MEASURES SUMMARY									
Project Name		Building Type			Date		RMS-1		
Garage Conversion To Jr. ADU		Single Family			4/4/2023				
Project Address		California Energy Climate Zone		Total Cond. Floor Area		Addition		# of Units	
9802 Coalinga Avenue Montclair		CA Climate Zone 10		486		343		1	

Construction Type	Cavity (ft²)	Area (ft²)	Special Features	Status	Insulation	
					R-Value	Min. Eff.
Wall	Wood Framed	- no insulation	93	Existing		
Wall	Wood Framed	- no insulation	116	Existing		
Wall	Wood Framed	- no insulation	85	Existing		
Slab	Unheated Slab-on-Grade	- no insulation	143	Perim = 0'	Existing	
Roof	Wood Framed Attic	R 11	143	Existing		

Orientation	Area (ft²)	U-Fac	SHGC	Overhang	Sidelines	Exterior Shades	Status	fenestration	
								Glazing Percentage	U-Factor
Front (F)	25.0	0.300	0.23	none	none	N/A	New		
Rear (R)	16.0	0.300	0.23	none	none	N/A	New		
Right (R)	24.0	0.300	0.23	none	none	N/A	New		
Rear (R)	16.0	0.550	0.67	none	none	N/A	Existing		
Right (R)	8.0	0.550	0.67	none	none	N/A	Existing		

Qty.	Heating	Min. Eff.	Cooling	Min. Eff.	Thermostat	Status
1	Electric Heat Pump	8.20 HSPFP	Split Heat Pump	14.0 SEER	Setback	New

Location	Heating	Cooling	Duct Location	Duct R-Value	Status
HVAC System	Ductless / No Fan	Ductless	n/a	n/a	New

Qty.	Type	Gallons	Min. Eff.	Distribution	Status
1	Small Instantaneous Gas	1	0.36	Standard	New

2022 Single-Family Residential Mandatory Requirements Summary									
NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information.									
<b>Building Envelope:</b>									
§ 110.6(a): Air Leakage. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 1011.9/2840-2011.									
§ 110.6(b): Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 101-11.6(c).									
§ 110.6(b): Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6.A, 110.6.B, or 110.6.F for exterior doors. They must be caulked and/or weather-stripped.									
§ 110.7: Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather-stripped.									
§ 110.8(a): Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).									
§ 110.8(b): Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(b).									
§ 110.8(c): Roofing Products Solar Reflectance and Thermal Emittance. The thermal emittance and aged solar reflectance values of the roofing products must meet the requirements of § 110.8(c) and be labeled per §10-113 when the installation of a cool roof is specified on the CFR.									
§ 110.8(d): Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.									
§ 110.9(a): Roof Deck, Ceiling and Rafter Insulation. Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding 0.043. Ceiling and rafter roof insulation in wood-frame ceiling, or area-weighted average U-factor not exceeding 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration, as specified in § 107.7, including but not limited to placing insulation either above or below the roof deck or on top of a sprayed ceiling.									
§ 110.9(b): Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.									
§ 110.9(c): Wall Insulation. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-rafter assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Table 150.1.A.4.6.									
§ 110.9(d): Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.									
§ 110.9(e): Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water vapor permeance no greater than 2.0 perm inch; be protected from physical damage; have U-factor not greater than 0.20; and when installed as part of a heated slab floor, meet the requirements of § 110.8(b).									
§ 110.9(g)(1): Vapor Retarder. In climate zones 1 through 16, the fourth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d).									
§ 110.9(g)(2): Vapor Retarder. In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of the fenestration products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45, or area-weighted average U-factor of all fenestration must not exceed 0.45.									
<b>Fenestration Products, Decorative Gas Appliances, and Gas Log:</b>									
§ 110.5(e): Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.									
§ 110.5(i): Cloable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the freestanding combustion intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and lighting-damp or combustion-air control device.									
§ 110.5(j): Fuel Damper. Masonry or factory-built fireplaces must have a fuel damper with a readily accessible control.									
<b>Space Conditioning, Water Heating, and Plumbing System:</b>									
§ 110.5-§ 110.3: Certification. Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.									
§ 110.2(a): HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2.4 through Table 110.2.4.									
§ 110.2(b): Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and which the cut-on temperature for compression heating is higher than the cut-off temperature for supplementary heating; and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.									
§ 110.2(c): Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.									
§ 110.3(a): Insulation. Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.									
§ 110.3(b): Isolation Valves. Instantaneous water heaters with an input rating greater than 8.5 Btu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.									

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2022 Single-Family Residential Mandatory Requirements Summary									
§ 150.0(h)(3): Space Conditioning System Airflow Rate and Fan Efficiency. Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficiency $\leq 1.45$ watts per CFM for gas furnace air handlers and $\leq 1.33$ watts per CFM for all others. Small duct high velocity systems must provide an airflow $\geq 250$ CFM per ton of nominal cooling capacity, and an air-handling unit fan efficiency $\leq 0.82$ watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.									
<b>Ventilation and Indoor Air Quality:</b>									
§ 150.0(a): Requirements for Ventilation and Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(a).									
§ 150.0(a)(1): Central Fan Integrated (CFI) Ventilation Systems. Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per § 150.0(a)(1). A motorized damper is not installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed and controlled per § 150.0(a)(1)(B)(i). CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with § 150.0(a).									
§ 150.0(a)(1)(C): Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses. Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(a)(1)(C).									
§ 150.0(a)(1)(C): Local Mechanical Exhaust. Kitchens and bathrooms must have local mechanical exhaust, nonvented kitchen hoods must have demand-controlled exhaust system meeting requirements of § 150.0(a)(1)(G) enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting § 150.0(a)(1)(G)(iv). Airflow must be measured by the installer per § 150.0(a)(1)(G)(v), and rated for sound per § 150.0(a)(1)(G)(vi).									
§ 150.0(a)(H4): Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems. The airflow required per § 150.0(a)(1)(C) must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 § 7.2 at no less than the minimum airflow rates required by § 150.0(a)(1)(C).									
§ 150.0(a)(2): Field Verification and Diagnostic Testing. Whole-Dwelling Unit ventilation airflow, vent range hood airflow and sound rating, and HEV and ERV fan efficiency must be verified in accordance with Reference Residential Appendix RA3.7. Vent range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per § 150.0(a)(1)(G).									
<b>Pool and Spa Systems and Equipment:</b>									
§ 110.4(a): Certification by Manufacturers. Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDBS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions, and must not use electric resistance heating.									
§ 110.4(a)(1): Piping. Any pool or spa heating system or equipment must be installed with at least 3/8 inch of pipe between the filter and the heater, or dedicated suction and return lines, or built-in bulk-up connections to allow for future solar heating.									
§ 110.4(a)(2): Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.									
§ 110.4(a)(3): Directional Inlets and Time Switches for Pools. Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.									
§ 110.5: Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.									
§ 150.0(a): Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.									
<b>Lighting:</b>									
§ 110.9: Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.									
§ 150.0(a)(1): Luminaire Efficiency. All installed luminaires must meet the requirements in Table 150.0.A, except lighting integral to exhaust fans, kitchen range hoods, both vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting integral to racks, cabinets, and linen closets with an efficacy of at least 45 lumens per watt.									
§ 150.0(a)(1)(B): Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA3.									
§ 150.0(a)(1)(C): Recessed Downlight Luminaires in Ceilings. Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.									
§ 150.0(a)(1)(D): Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JAS elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.									
§ 150.0(a)(1)(E): Blank Electrical Boxes. The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.									
§ 150.0(a)(1)(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 § 150.0(a).									

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2022 Single-Family Residential Mandatory Requirements Summary									
§ 150.0(a)(1)(G): Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA3.									
§ 150.0(a)(1)(H): Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JAS elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.									
§ 150.0(a)(1)(I): Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinet or linen closets are not required to comply with Table 150.0.A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 100 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.									
§ 150.0(a)(2): Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.									
§ 150.0(a)(2)(B): Accessible Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off.									
§ 150.0(a)(2)(B): Multiple Controls. Controls must not bypass a dimmer, occupancy sensor, or vacancy sensor function if the dimmer or sensor is installed with comply with § 150.0(a).									
§ 150.0(a)(2)(C): Mandatory Requirements. Lighting controls must comply with the applicable requirements of § 110.9.									
§ 150.0(a)(2)(D): Energy Management Control System. An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical control specified in § 150.0(a).									
§ 150.0(a)(2)(E): Automatic Shutoff Controls. In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.									
§ 150.0(a)(2)(F): Dimmers. Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.									
§ 150.0(a)(2)(G): Independent controls. Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-recessed lighting.									
§ 150.0(a)(3): Residential Outdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photo-cell and motion sensor or automatic time switch control or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.									
§ 150.0(a)(4): Internally illuminated address signs. Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.									
§ 150.0(a)(5): Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for residential garages in §§ 110.8, 130.0, 130.1, 130.4, 140.6, and 141.0.									
<b>Solar Readiness:</b>									
§ 110.10(a)(1): Single-Family Residences. Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcing agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(a)(1).									
§ 110.10(a)(2): Minimum Solar Zone Area. The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and area no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhanging of the building and have a total area no less than 250 square feet.									
§ 110.10(a)(3): Azimuth. All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.									
§ 110.10(a)(4): Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof-mounted equipment.									
§ 110.10(a)(5): Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height dimension from 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(a)(6): Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.									
§ 110.10(a)(7): Interconnection Pathways. The construction documents must indicate a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system. Documentation. A copy of the construction documents or a comparable document indicating the information from § 110.10(a)(7) must be provided to the occupant.									
§ 110.10(a)(8): Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps.									
§ 110.10(a)(9): 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."									
<b>Electric and Energy Storage Ready:</b>									

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2022 Single-Family Residential Mandatory Requirements Summary									
§ 150.0(a): Energy Storage System (ESS) Ready. All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, or a dedicated rowlock from the main service to a subpanel that supplies all branch circuits in § 150.0(a); at least four branch circuits in § 150.0(a); and at least one dedicated and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment transfer switch within 3' of the main panelboard, with receptacles installed between the panelboard and the switch location to allow the connection of backup power source.									
§ 150.0(a): Heat Pump Space Heater Ready. Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unbracketed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready," and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."									
§ 150.0(a): Electric Clothes Dryer Ready. Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unbracketed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready," and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."									
§ 150.0(a): *Exceptions may apply.									

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2022 Single-Family Residential Mandatory Requirements Summary									
NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information.									
<b>Building Envelope:</b>									
§ 110.6(a): Air Leakage. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 1011.9/2840-2011.									
§ 110.6(b): Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 101-11.6(c).									
§ 110.6(b): Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6.A, 110.6.B, or 110.6.F for exterior doors. They must be caulked and/or weather-stripped.									
§ 110.7: Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather-stripped.									
§ 110.8(a): Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).									
§ 110.8(b): Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(b).									
§ 110.8(c): Roofing Products Solar Reflectance and Thermal Emittance. The thermal emittance and aged solar reflectance values of the roofing products must meet the requirements of § 110.8(c) and be labeled per §10-113 when the installation of a cool roof is specified on the CFR.									
§ 110.8(d): Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.									
§ 110.9(a): Roof Deck, Ceiling and Rafter Insulation. Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding 0.043. Ceiling and rafter roof insulation in wood-frame ceiling, or area-weighted average U-factor not exceeding 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration, as specified in § 107.7, including but not limited to placing insulation either above or below the roof deck or on top of a sprayed ceiling.									
§ 110.9(b): Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.									
§ 110.9(c): Wall Insulation. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-rafter assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Table 150.1.A.4.6.									
§ 110.9(d): Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.									
§ 110.9(e): Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water vapor permeance no greater than 2.0 perm inch; be protected from physical damage; have U-factor not greater than 0.20; and when installed as part of a heated slab floor, meet the requirements of § 110.8(b).									
§ 110.9(g)(1): Vapor Retarder. In climate zones 1 through 16, the fourth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d).									
§ 110.9(g)(2): Vapor Retarder. In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of the fenestration products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45, or area-weighted average U-factor of all fenestration must not exceed 0.45.									
<b>Fenestration Products, Decorative Gas Appliances, and Gas Log:</b>									
§ 110.5(e): Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.									
§ 110.5(i): Cloable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the freestanding combustion intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and lighting-damp or combustion-air control device.									
§ 110.5(j): Fuel Damper. Masonry or factory-built fireplaces must have a fuel damper with a readily accessible control.									
<b>Space Conditioning, Water Heating, and Plumbing System:</b>									
§ 110.5-§ 110.3: Certification. Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.									
§ 110.2(a): HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2.4 through Table 110.2.4.									
§ 110.2(b): Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and which the cut-on temperature for compression heating is higher than the cut-off temperature for supplementary heating; and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.									
§ 110.2(c): Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.									
§ 110.3(a): Insulation. Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.									
§ 110.3(b): Isolation Valves. Instantaneous water heaters with									