

# VINCENT DO'S RESIDENCE

## 236 ALDEN RD, HAYWARD, CA 94541



### PROJECT DATA - SITE PLAN

### VINCENT DO'S RESIDENCE

#### STRUCTURAL GENERAL NOTES

##### A. GENERAL

1. ALL WORK SHALL CONFORM TO CURRENT 2022 CBC, CBC, CMC, CPC, 2022 NEC, 2022 CEC. LAWS & ORDINANCES
2. THE CONTRACTOR SHALL VERIFY & BE RESPONSIBLE FOR ALL DIMENSIONS & CONDITIONS AT THE JOB SITE AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BETWEEN ACTUAL CONDITIONS & WHAT IS SHOWN ON THE DRAWINGS BEFORE PROCEEDING WITH THE WORK.
3. ANY OMISSIONS OR CONFLICTS BETWEEN THE ARCHITECTURAL, STRUCTURAL & MECHANICAL DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE CITY INSPECTOR.
4. SHOP DRAWINGS REQUIRED BY THE SPECIFICATIONS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION, & ALLOW REASONABLE TIME FOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE BUILDING DURING THE CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING & GUYS IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES. ANY DEVIATIONS MUST BE APPROVED PRIOR TO ERECTION.
6. ALL CONDITIONS NOT CLEARLY SHOWN OR DETAILED SHALL BE OF THE SAME TYPE & CHARACTER AS THOSE SHOWN FOR SIMILAR CONDITIONS.

##### B. FOUNDATION

1. FOUNDATION EXCAVATIONS SHALL BE FREE OF LOOSE MATERIAL PRIOR TO THE PLACEMENT OF ANY REINFORCING STEEL OR CONCRETE.

##### C. CONCRETE

1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS.
2. CONCRETE SHALL BE REGULAR WEIGHT HARD ROCK TYPE (150#CF) & AGGREGATE SHALL CONFORM TO ASTM C33 U.O.N.
3. CEMENT SHALL CONFORM TO ASTM C150, TYPE 1 OR 2.
4. PLACEMENT OF CONCRETE SHALL BE IN CONFORMANCE WITH ACI 301.
5. CONCRETE SHALL BE MACHINE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C-94. SUBMIT MIX DESIGN TO THE ARCHITECT FOR APPROVAL PRIOR TO PLACING CONCRETE.
6. PROVIDE MINIMUM CLEAR COVER OF CONCRETE OVER REINFORCING AS FOLLOWS

##### D. REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL CONFORM TO ASTM SPECIFICATION A615 GRADE 60 FOR #5 AND LARGER BARS AND GRADE 40 FOR #3 & #4.
2. ALL REINFORCING STEEL SHALL BE LAPPED AS NOTED BELOW. #4: 24" FOR BOTTOM BARS AND 28" FOR TOP BARS; #5: 30" FOR BOTTOM BARS AND 35" FOR TOP BARS; #6: 40" FOR BOTTOM BARS AND 46" FOR TOP BARS AT SPLICES UNLESS OTHERWISE NOTED ON PLANS. SPLICES SHALL BE LOCATED AS DETERMINED IN THE PLANS. STAGGER ALL LAPS SPLICES.
3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A82 AND A185.
4. ANCHOR BOLTS, DOWELS AND OTHER EMBEDDED ITEMS SHALL BE SECURELY TIED IN PLACE BEFORE CONCRETE IS PLACED, USE CYT THREAD ANCHOR BOLTS ONLY.

##### E. STRUCTURAL & MISC. STEEL

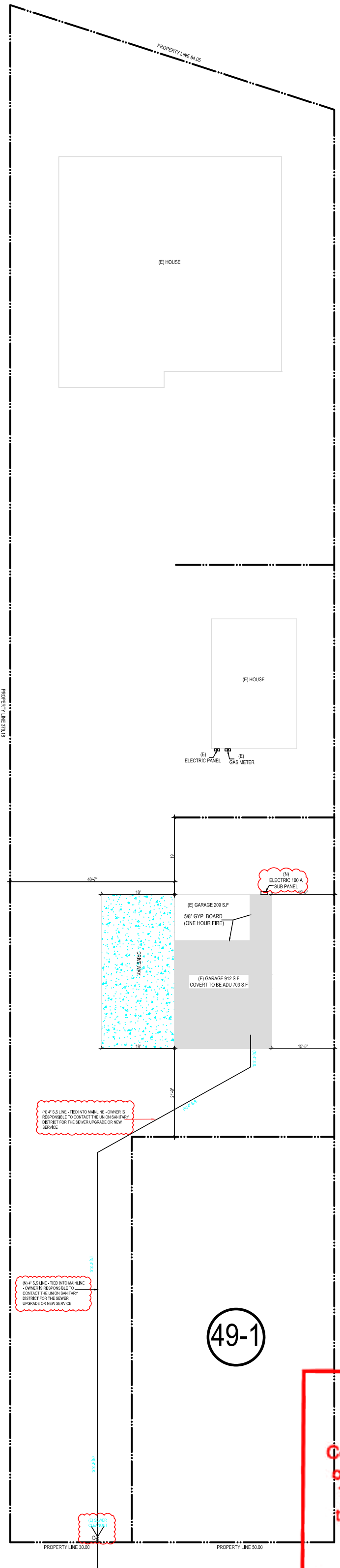
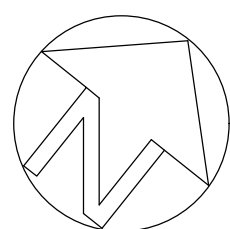
1. FABRICATION AND ERECTION TO BE IN ACCORDANCE WITH LATEST AISC SPECIFICATIONS. STRUCTURAL STEEL SHALL BE ASTM A36, EXCEPT TUBE COLUMNS WHICH ARE ASTM A500, GRADE B.
2. WELDING TO BE IN ACCORDANCE WITH AWS SPECIFICATIONS. WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS USING E77XX ELECTRODES.
3. ALL PLATES, ETC., TO BE BOLTED TO CONCRETE ELEMENTS, SHALL NOT BE FABRICATED UNTIL THE BOLTS HAVE BEEN LOCATED IN THE FIELD.
4. BOLTS SHALL BE ASTM A307 TYPE. THREADS MAY BE INCLUDED IN THE SHEAR PLANES
5. STEEL TO BE SHOP PRIMED FOR, EXCEPT WHERE EMBEDDED IN CONCRETE OR TO BE WELDED.
6. ALL WELDING SHALL BE CONTINUOUSLY INSPECTED BY AN INDEPENDENT INSPECTOR APPROVED BY THE BUILDING DEPARTMENT.

##### F. WOOD FRAME CONSTRUCTION

1. GENERAL WOOD FRAMING: WOOD FRAMING THROUGHOUT THE BUILDING SHALL BE CONSTRUCTED IN ACCORDANCE WITH CALIFORNIA BUILDING CODE (2019) AND THE STANDARD PRACTICES RECOMMENDED BY AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND WCLA GRADING. FOR NAILING SEE SECTION J. BOLTS IN WOOD FRAMING SHALL BE STANDARD MACHINE BOLTS WITH STANDARD MALLEABLE IRON WASHERS.
3. WOOD PLATES: BEARING DIRECTLY UPON CONCRETE SHALL BE P.T.D.F.
4. UNLESS OTHERWISE NOTED ON DRAWINGS OR IN SPECIFICATIONS, FRAMING MEMBERS SHALL HAVE THE FOLLOWING GRADING:



10/31/2023, 3:00:28 PM  
BLD2023-02832  
Damien Curry

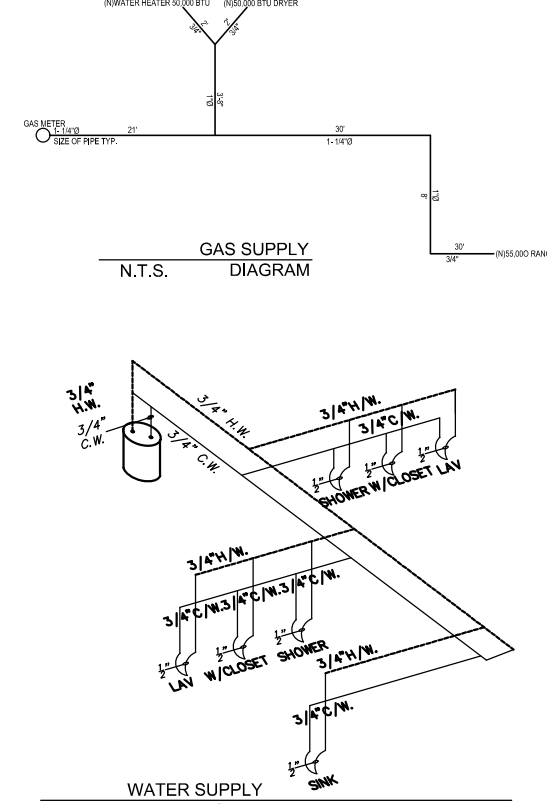


SITE PLAN  
NOT TO SCALE

**Alameda County Building Division Notes:**  
Review and approved of any proposals, plans or other submissions associated therewith, shall in no way be deemed to satisfy or comply with any applicable Conditions, Covenants and Restrictions (CC&Rs).

Applicants are responsible for contacting their Homeowner Associations (if any) to ensure compliance with CC&Rs

10/31/2023, 1:54:49 PM  
BLD2023-02832  
Kevin Zhang



AD2

REVIEWED  
ALAMEDA COUNTY PUBLIC WORKS AGENCY  
BUILDING INSPECTION DEPARTMENT  
Construction shall not be changed from what is shown, on this plan unless authorized by the Building Official. This plan shall be kept at the building site for use by the Building Inspector. Do not mark or alter this plan. Affixing of this stamp on these plans shall not be interpreted as permission to violate or omit any provisions of the adopted codes of any other law, rule, or regulation that is applicable to this construction project.

10/31/2023, 1:54:42 PM  
BLD2023-02832  
Kevin Zhang

#### PROJECT DATA

OWNER: VINCENT DO  
EXISTING USE: SINGLE FAMILY RESIDENCE  
LOCATION: 236 ALDEN RD, HAYWARD, CA 94541  
APN: 413-0047-049-02  
ZONING: R3  
LOT GROSS SIZE: 0.5 ACRES = 22,216 S.F.  
OCCUPANCY GROUP: R-3  
TYPE OF CONSTRUCTION: V-B  
FIRE SPRINKLER: NONE  
YEAR BUILT: 1980  
ALLOWABLE FLOOR AREA: 0.51 ACRES = 22,216 S.F.  
LOT AVERAGE SLOPE: (FLAT)  
FLOOR AREA: EXISTING PROPOSAL TOTAL  
DWELLING: 2,700 S.F. 2,700 S.F.  
GARAGE: 912 S.F. 912 S.F.  
TOTAL FOOTPRINT: 2,700 S.F.  
FAR: 1,1%

#### SCOPE OF WORK

CONVERSION OF EXISTING GARAGE INTO ADU:  
TOTAL EXISTING GARAGE AREA: 912 S.F.  
AREA TO BE CONVERTED TO ADU: 703 S.F.  
ADU SPECIFICATIONS:  
. BEDROOMS: 2  
. BATHROOMS: 2  
. LIVING ROOM: 1  
. KITCHEN: 1

#### STRUCTURAL GENERAL NOTES

##### G. NAIL SCHEDULE

1. WOOD MEMBERS SHALL BE CONNECTED WITH NAILING INDICATED IN TABLE 2304.9.1 OF 2022 CBC UNLESS GREATER SIZES AND NUMBER OF NAILS ARE SHOWN OR NOTED ON DRAWINGS; NAILS EXPOSED TO WEATHER SHALL BE GALVANIZED; NAILS SHALL BE COMMON WIRE NAILS; HOLES FOR NAILS SHALL BE PROVIDED WHERE THE WOOD TENDS TO SPLIT; SPLIT WOOD MEMBERS SHOULD BE REPLACED AND REMOVED FROM THE JOB PROMPTLY. SHORT PLYWOOD NAILS FOR EQUIVALENT SHEAR VALUE MAY BE USED. SEE PLANS FOR NAIL SPACING. NAIL ROOF SHEATHING 8d @ 6" O.C. AT SUPPORTED EDGES. 8d @ 10" INCHES O.C. AT INTERMEDIATE SUPPORTS. FLOOR SHEATHING 8d @ 6" O.C. AT BOUNDARIES AND PANEL EDGES AND 8d @ 10" O.C. AT INTERMEDIATE SUPPORTS. PLYWOOD WALL SHEATHING SHALL BE NAILED PER SHEAR WALL SCHEDULE AT SHEAR WALLS, AND AT A MINIMUM OF 8d @ 6" O.C. ALL OTHER EDGES.
2. AT PRESSURE TREATED LUMBER USE HOT-DIPPED GALVANIZED, STAINLESS STEEL, SILICON BRONZE, OR COPPER.

##### G. FIRE SPRINKLES

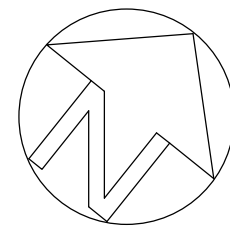
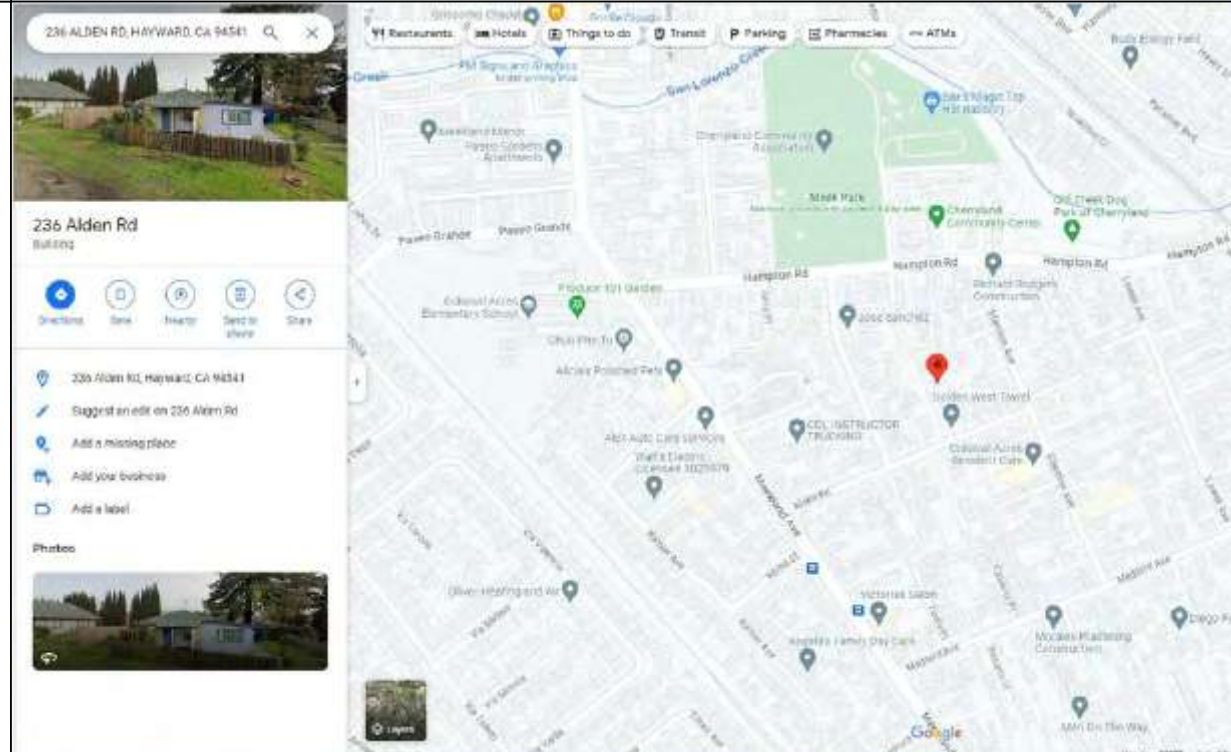
ALL CONSTRUCTION SITES MUST COMPLY WITH APPLICABLE PROVISION OFF THE CFC CHAPTER 14 AND OUR STANDARD DETAIL AND SPECIFICATION SI-7

#### APPLICABLE CODES

##### CODE COMPLIANCE

ALL CONSTRUCTION SHALL CONFORM TO ALL GOVERNING LAWS, CODES AND ORDINANCES INCLUDING BUT NOT LIMITED TO THE FOLLOWING:  
-2022 CALIFORNIA BUILDING CODES: CBC, CMC, CPC, CFC & CEC, CRC.  
-2022 CA ENERGY CODE  
-ALAMEDA COUNTY MUNICIPAL CODE  
-ALL LOCAL ORDINANCES

#### VICINITY MAP



#### SHEET IN DEX

##### ARCHITECTURE

- |     |                                  |
|-----|----------------------------------|
| A-1 | SITE PLAN, SUMMARY, NOTES, AREA  |
| A-2 | PROPOSAL FLOOR AND ELECTRIC PLAN |
| A-3 | ELEVATIONS PLANS                 |
| A-4 | FOUNDATION & DETAILS             |
| A-5 | ROOF FRAMING PLAN & DETAILS      |
| A-6 | T-24 ENERGY REPORT               |
| A-7 | CG-1 CAL GREEN MANDATORY         |
| A-8 | CG-2 CAL GREEN MANDATORY         |

#### NOTES

- a) Please note that a Building Permit cannot be issued until all clearances by all reviewing departments ( listed above) have been approved on the project. Check the status of your permit by visiting [www.sipermits.org](http://www.sipermits.org) and contact the individual departments directly with any questions.
- b) Revised plans, when required, must be clouded with delta number with a revision mark at each location where revision has occurred and be noted that additional comments may be triggered once revised plan are reviewed.
- c) When comments cite a section of code and require a revision, correction or amendment to plans, required information shall be specifically & directly provided on plans. Generic references to code section(s) is not acceptable.

REVISION	BY

Date: JULY 2023

Scale: AS SHOWN

Drawn: LUYEN HONG NGUYEN

Signed: *Thuy*

SHEET NO:

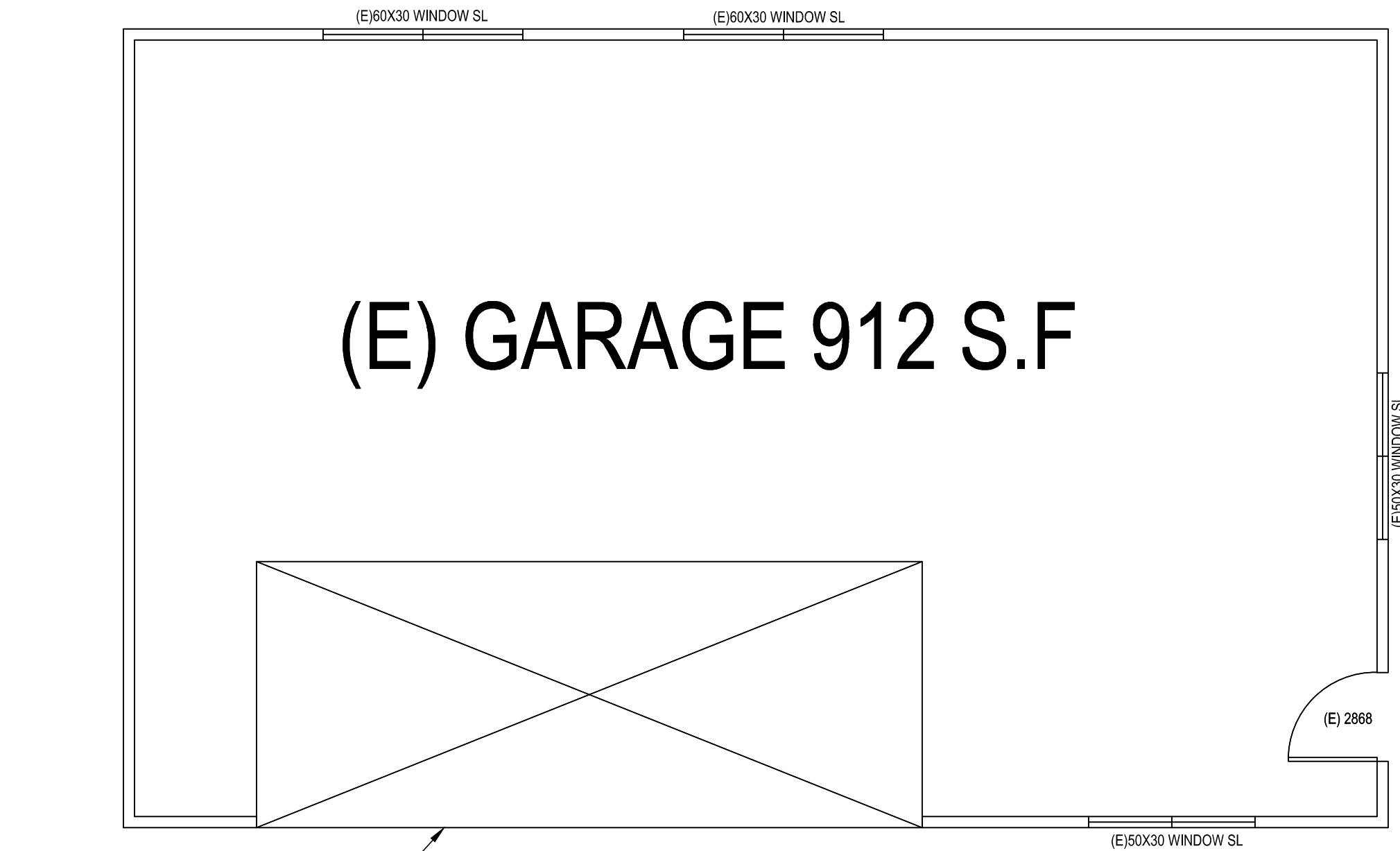
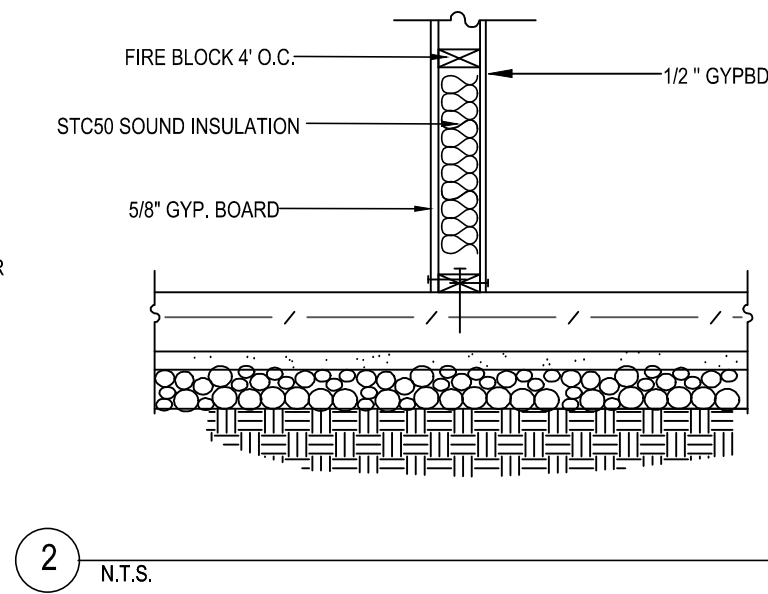
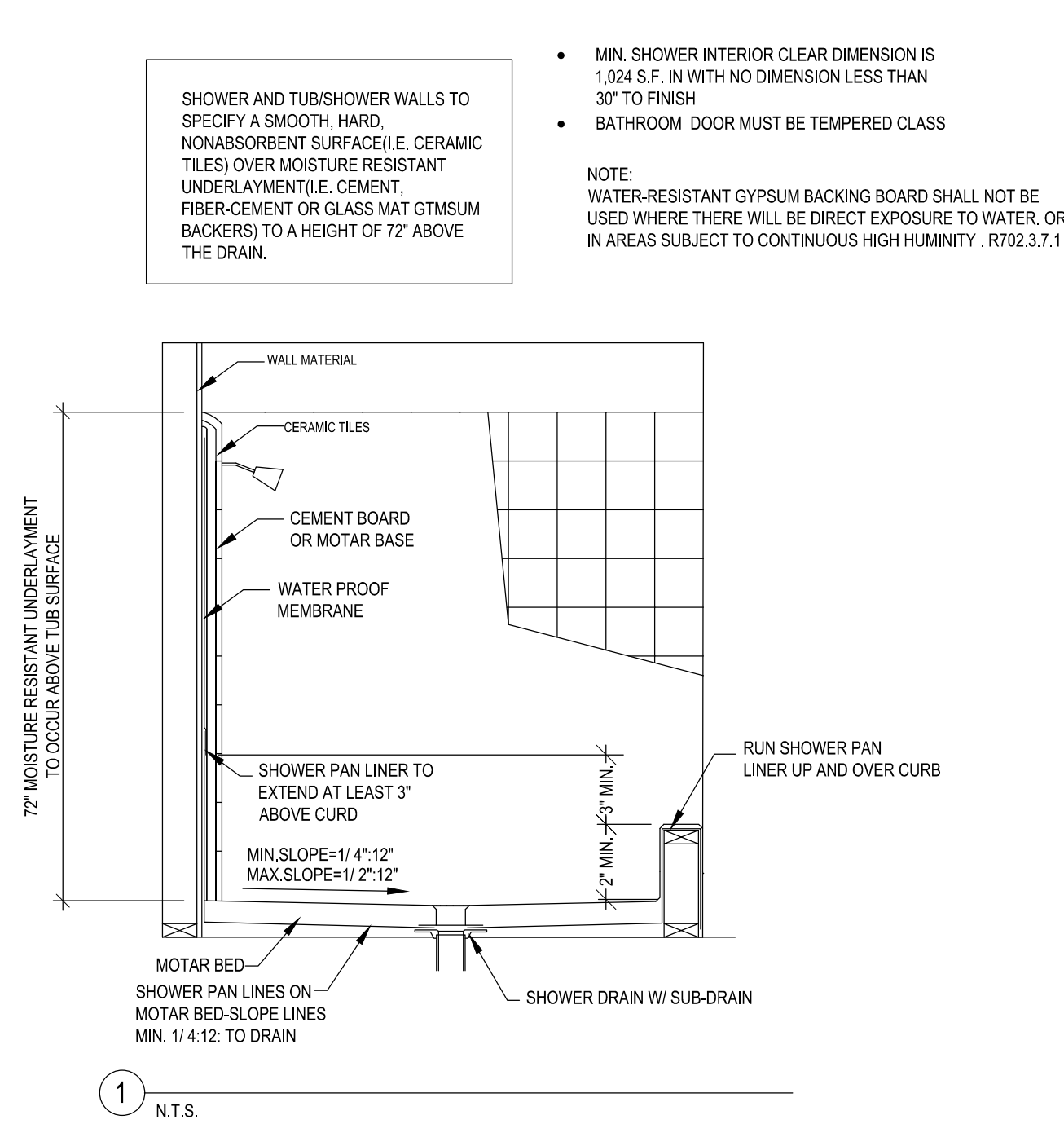
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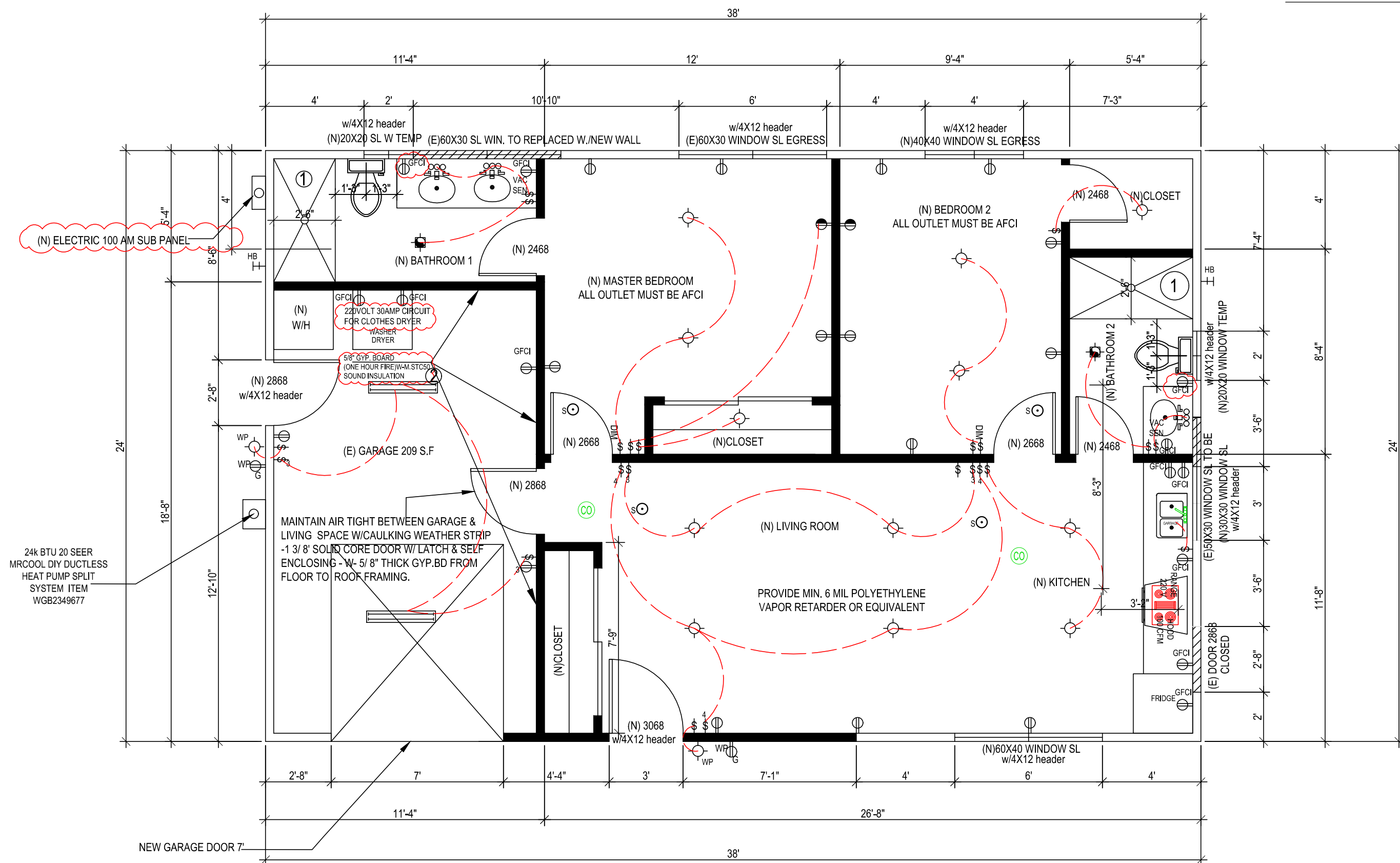
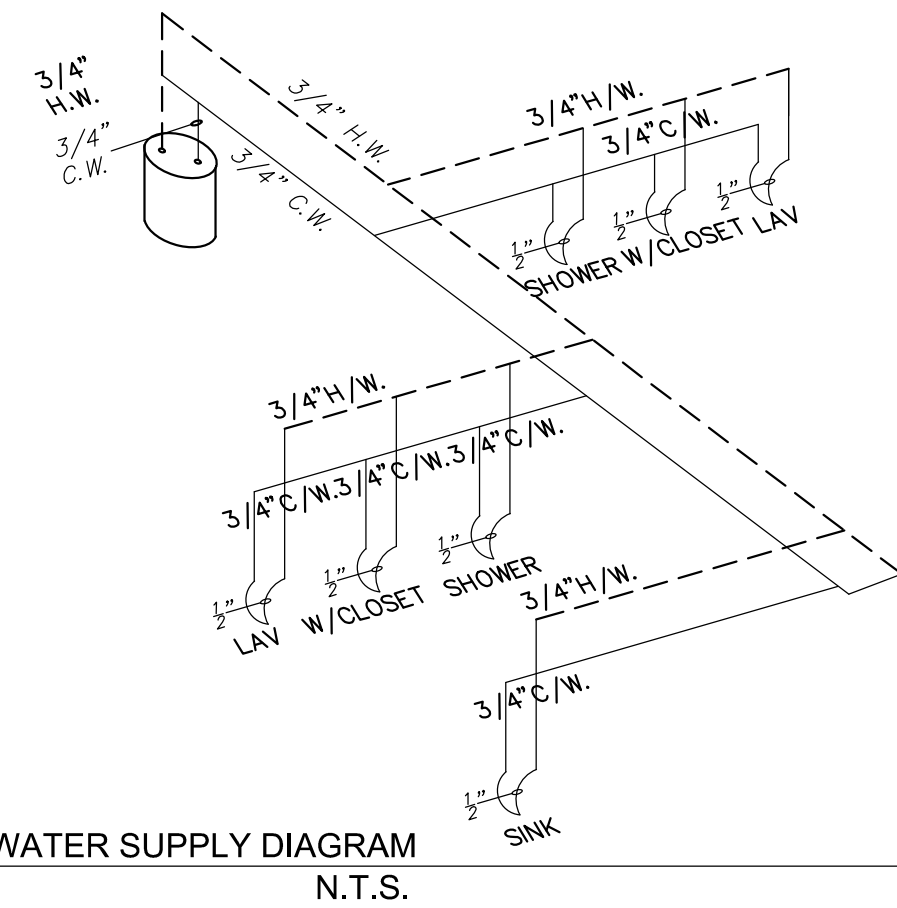
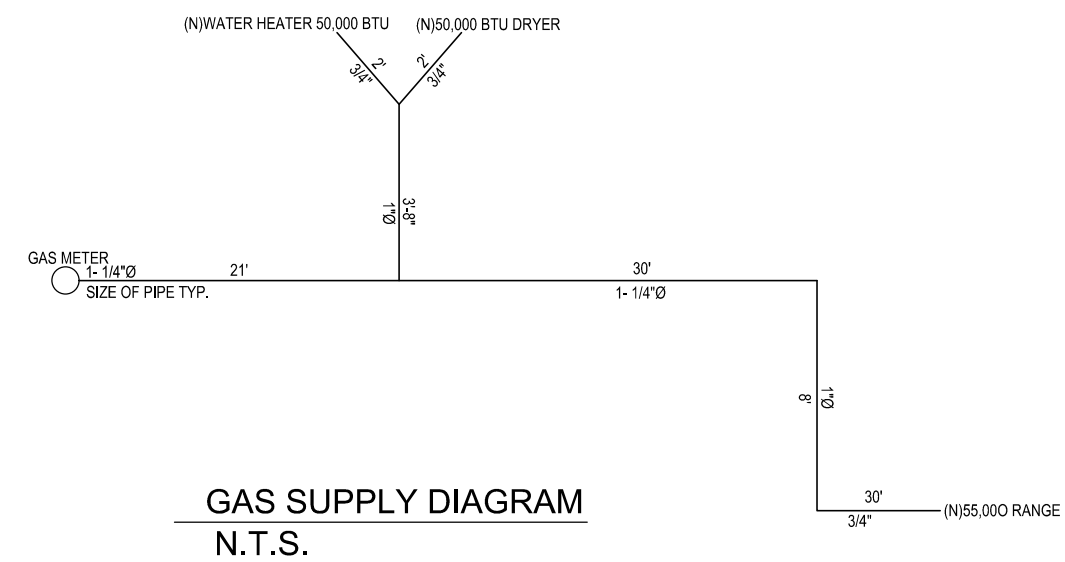
2. ALL CONCRETE TO BE POURED ON UNDISTURBED SOIL.
2. ALL LUMBER IN CONTACT WITH CONCRETE SHALL BE FOUNDATION GRADE RWD OR PRESSURE TREATED.
3. ALL LUMBER USED IN CONSTRUCTION LOCATED NEARER THAN 8" TO EARTH SHALL BE F.G. RWD OR P.T.
4. PROVIDE SOLID BLOCKING FOR ALL PONY WALLS LESS THAN 14" HIGH
5. PROVIDE FIRESTOPS @ CONCEALED DRAFT OPENING, CEILING LINES, FLOOR LINES, FURRED AREAS, SUSPENDED CEILINGS, STAIR STRINGERS, SHOWERS, CHIMNEY ENCLOSURES, & MID HEIGHT OF WALLS OVER 10' IN HEIGHT.
6. VERIFY MIN. 22"x30" FLOOR ACCESS, ATTIC ACCESS WITH 30" CLEARING ABOVE OPENING.
7. DOORS, WINDOWS, & SHOWER DOORS WITHIN HAZARDOUS AREAS TO BE TEMPERED.
8. ALL POSTS, BEAMS & WALLS SUPPORTING THE FLOOR/ CEILING SHALL HAVE ONE-HOUR FIRE PROTECTION.
9. ALL NEW WINDOWS AND GLASS SLIDING DOOR SHALL BE LOW-E DUAL GLAZED U.N.O.
10. MATERIAL GRADE STAMPS WILL BE CHECKED ON FRAME INSPECTION.
11. ALL CONSTRUCTION SHALL COMPLY WITH THE 2019 EDITION OF THE CBC, CMC, CPC, CEC, CRC AND CFC AND THE 2019 CALIFORNIA ENERGY CODE.
12. CHANGES FROM THE APPROVED PLANS DURING CONSTRUCTION OTHER THAN:  
1.) CABINET CHANGES WHEN NOT BEING SUPPORTED ENTIRELY BY THE ROOF STRUCTURE, APPROVED PLAN, 2.) INTERIOR NON-STRUCTURAL WALL FINISHES; SHALL CAUSE PLAN APPROVAL AND CONSTRUCTION TO BE SUSPENDED.  
A NEW PLAN CHECK (FOR A NEW PLAN) SHOWING CHANGES WILL BE SUBMITTED FOR REVIEW AND APPROVAL THROUGH THE NORMAL PLAN CHECK PROCESS.
13. FIRELOCKING WITH NON-COMBUSTIBLE MATERIAL SHALL BE PROVIDED IN OPENINGS AROUND VENTS, PIPES, DUCTS, FIREPLACES, AND SIMILAR OPENINGS PER CBC 708.2.1 (4).
14. PROVIDE SMOKE DETECTORS (HARDWIRED 110v W/BATT BACK-UP) IN EVERY BEDROOM, THE HALL WAY TO THE BEDROOM, VENTILATED CARBON MONOXIDE SMOKE ALARM DETECTOR IN ALL SLEEPING ROOM.
15. IN EACH NEW BEDROOM, THERE IS AT LEAST ONE WINDOW, FOR EMERGENCY ESCAPE OR RESCUE: REQUIRE OPENING OF MINIMUM NET CLEAR AREA, 5.7 SQ. FT. HEIGHT 24", WIDTH 20", AND MAXIMUM FINISHED OPENING HEIGHT 44" ABOVE FINISH FLOOR
16. NEW 3'X3' MIN. CONCRETE LANDING AT ALL NEW EXTERIOR DOOR. LANDING SHALL NOT BE LOWER THAN 1'-1/2" FROM FLOOR LEVEL.
17. BATHROOM SLIDING DOOR MUST BE TEMPERED GLASS.
18. ALL NEW BEDROOM MUST BE AFCI CIRCUIT.
19. PRESSURE OR THERMOSTATIC MIXING VALVE AT THE SHOWERS AND TUBS, WHICH LIMIT WATER TEMPERATURE TO 120 DEGREES F
20. THE SHOWERS MUST HAVE INSIDE DIMENSION OF AT LEAST 30 INCHES. THE TOTAL FLOOR AREA OF A SHOWER MUST BE AT LIST 1,024 SQUARE INCHES. OPENING TO SHOWER MUST BE MIN. 24 INCHES WIDE. THE DOOR MUST BE TEMPERED GLASS.(SEE DETAILS)

1. MOTION SENSOR WITH INTEGRAL PHOTOCONTROL
2. ALL HARDWIRED LIGHTING IN BATHROOMS, GARAGES, LAUNDRY AND UTILITY ROOMS MUST BE HIGH EFFICACY OR CONTROLLED BY A MANUAL-ON MOTION SENSOR
3. ALL HARDWIRED LIGHTING IN OTHER ROOMS (HALLWAYS, DINING ROOMS, FAMILY ROOMS AND BEDROOMS) SHALL BE HIGH EFFICACY OR CONTROLLED BY A MANUAL-ON OCCUPANT SENSOR OR A DIMMER MUST CONTROL IT
4. ALL SWITCHES ON A MULTIPLE SWITCHED CIRCUIT SHALL BE CONTROLLED BY THE DIMMER SWITCH ON THAT CIRCUIT
5. ALL RECESSED FIXTURES SHALL BE LABELED AS BEING CERTIFIED TO HAVE A LEAKAGE RATING OF LESS THAN 2.0 AT 75 PASCAL
6. ALL HIGH EFFICACY FIXTURES AND NON-HIGH EFFICACY FIXTURES SHALL BE SWITCHED SEPARATELY
7. SMOKE DETECTOR SYSTEM SHALL BE HARD-WIRED, INTERCONNECTED TO SOUND SIMULTANEOUSLY AND EQUIPPED WITH BATTERY BACK UP.
8. MIN. 50% OF WATTAGE OF LIGHTS IN KITCHEN SHALL BE HIGH EFFICACY AND THOSE THAT ARE NOT SHALL BE SWITCHED SEPARATELY
9. LIGHTS MOUNTED TO EXTERIOR OF BUILDING SHALL BE HIGH EFFICACY OR ON A PHOTO CONTROL/MOTION SENSOR COMBINATION

LAMP POWER RATING:	MINIMUM LAMP EFFICACY:
15 watts or less	40 lumens per watt
over 15 watts to 40 watts	50 lumens per watt
over 40 watts	60 lumens per watt



(E) FLOOR PLAN  
SCALE: 1 / 4" = 1'-0"



(N)PROPOSAL FLOOR PLAN AND ELECTRIC PLAN  
SCALE: 1 / 4" = 1'-0"



Date: JULY 2023

Scale: AS SHOWN

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Drawn: LUYEN HONG NGUYEN

Signed: Thuy

PROPOSAL FLOOR AND ELECTRIC PLAN  
236 ALDEN RD, HAYWARD, CA 94541

REVISION	BY
<p>ED</p> <p>IC WORKS AGENCY</p> <p>N-DEPARTMENT</p> <p>anged from what is shown,</p> <p>y by the Building Official.</p> <p>uilding site for use by</p> <p>mark or alter this plan.</p> <p>ese plans shall not be</p> <p>to violate or omit any</p> <p>s of any other law, rule, or</p> <p>this construction project.</p>	

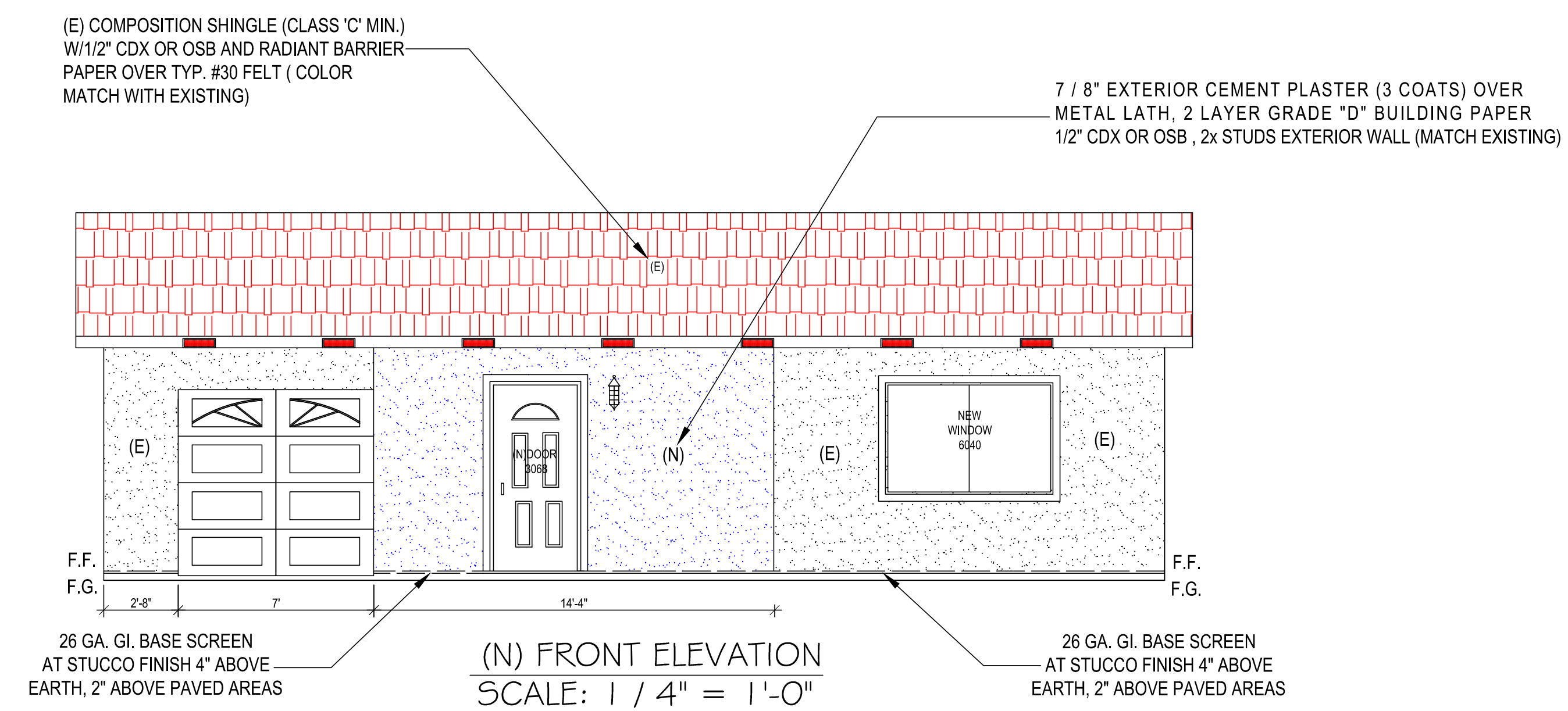
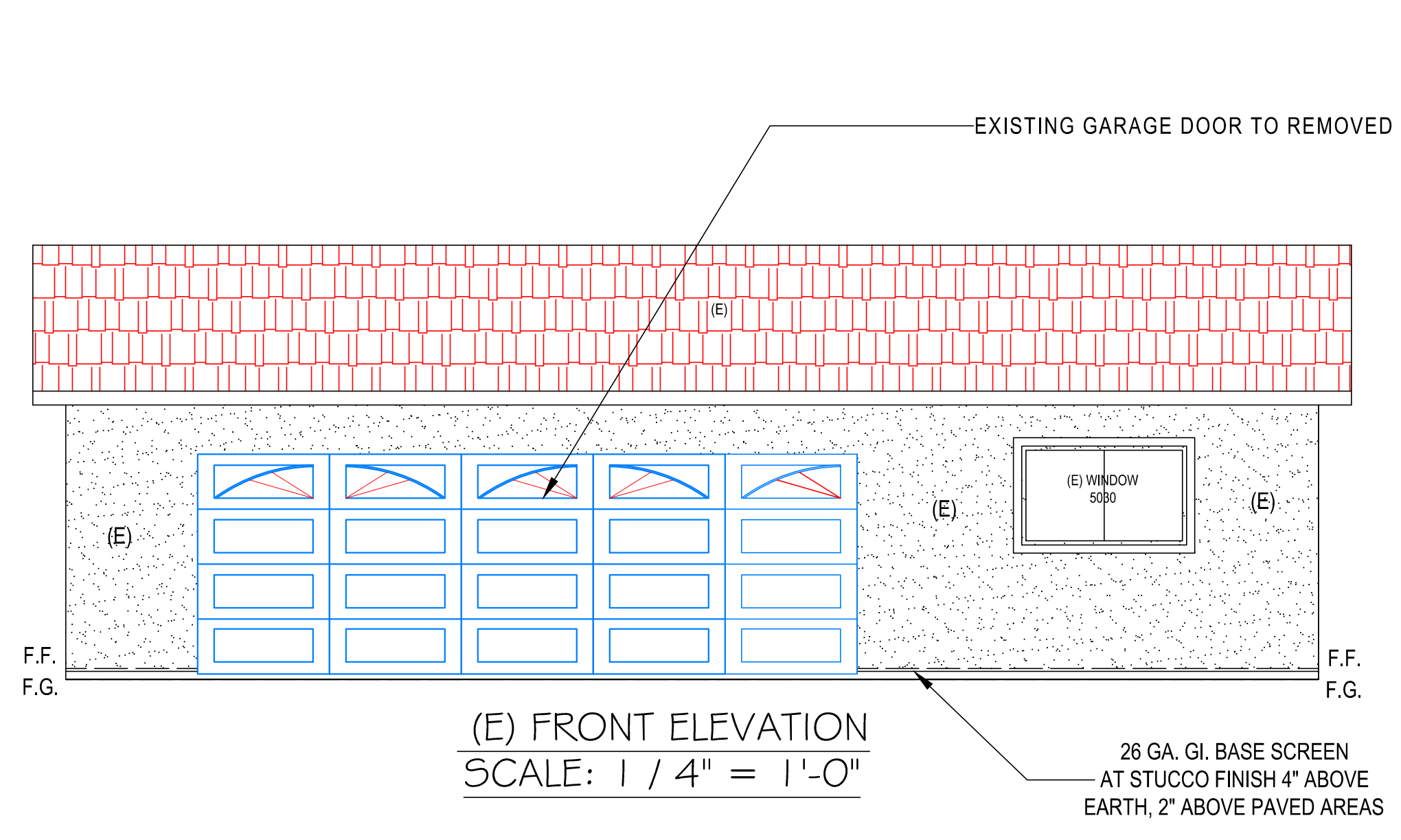
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Kevin Zhang

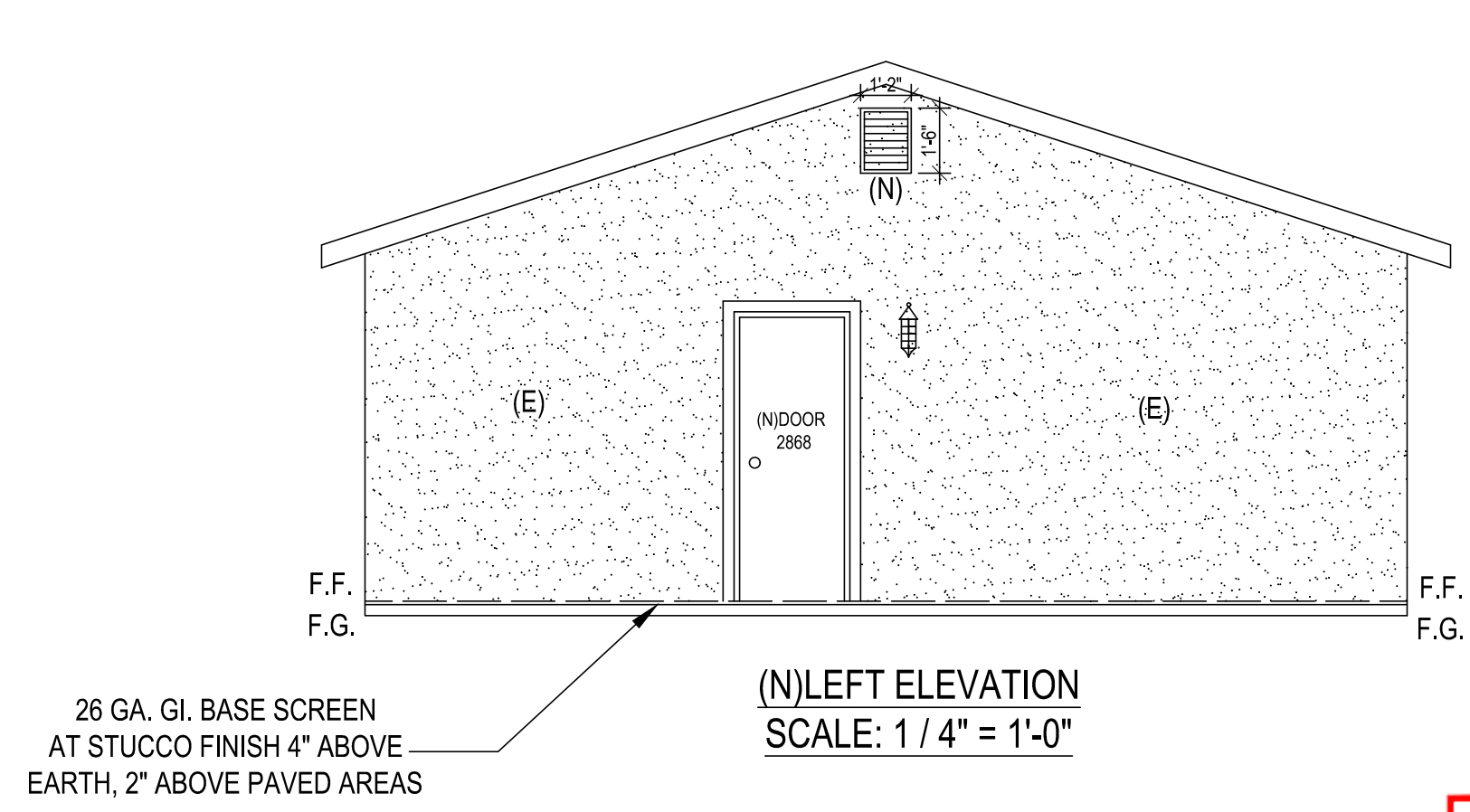
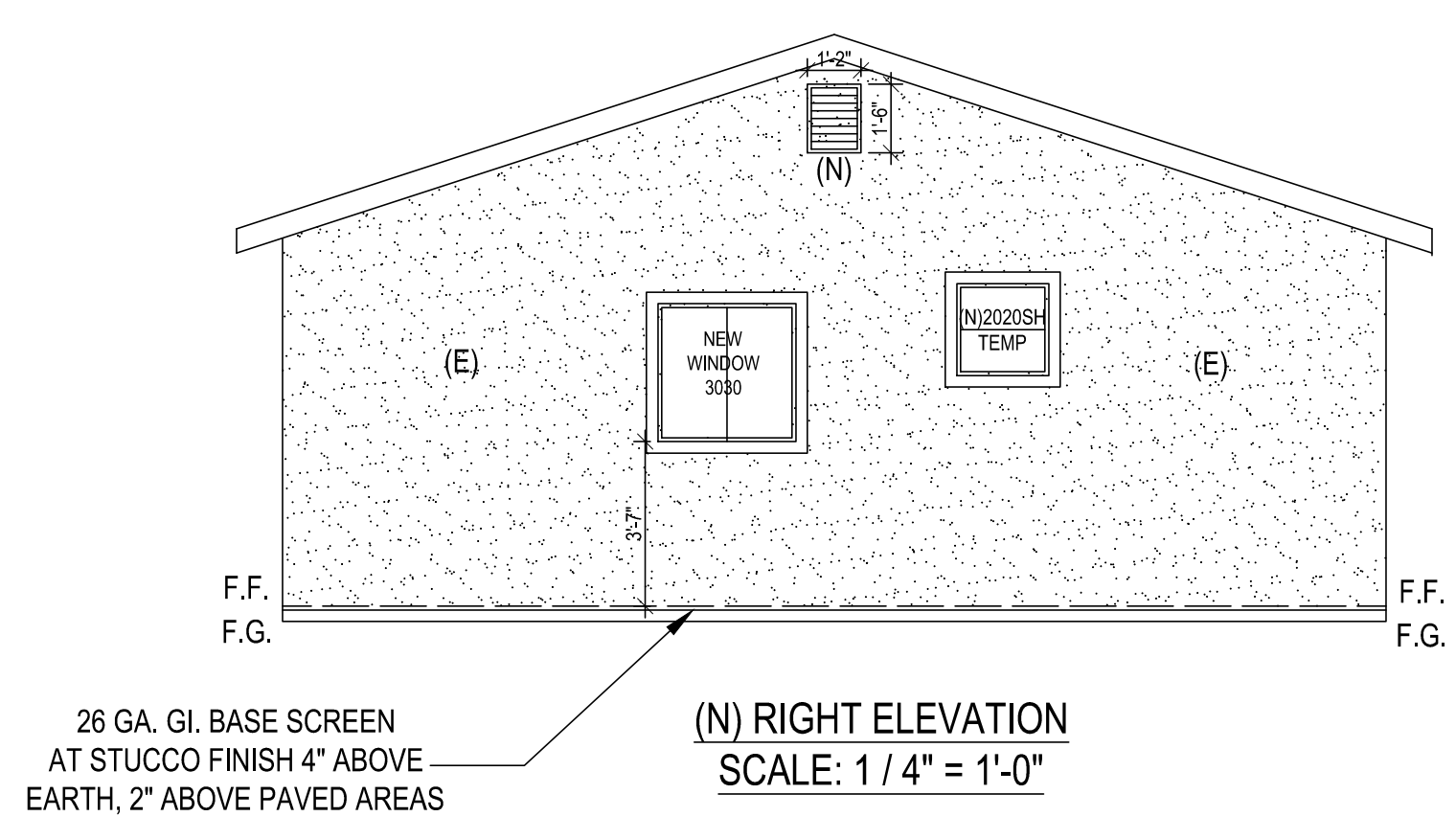
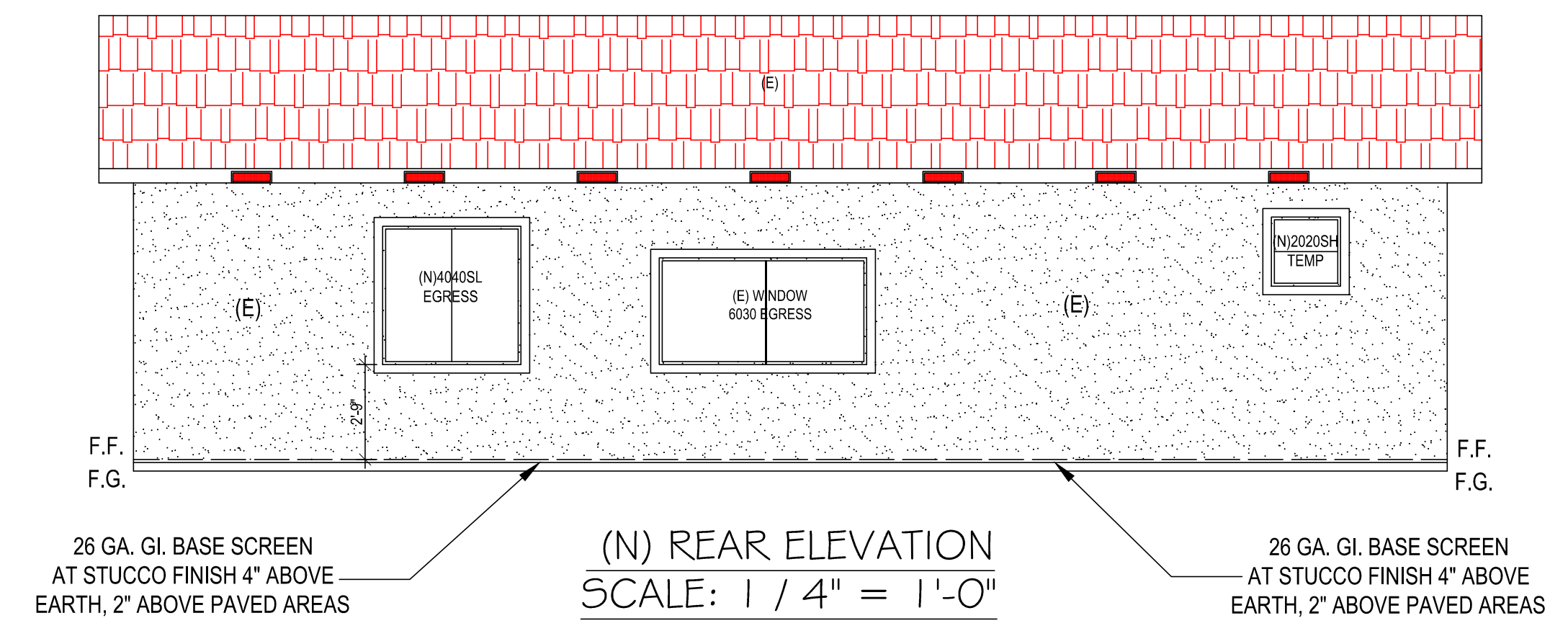
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ROOF VENTILATION:  
REQUIRED: 682 S.I.  
710 SF/150 = 4.73 SFx144= 682 S.I.  
PROPOSED: 636 S.I.  
14 EAVE VENTS: 14x 14x5 = 14x 44 = 616 S.I.  
2 GABLE VENT 2x 14x16 = 2x110 = 220 S.I.  
TOTAL = 836 S.I.



**Specifications**

Brand Construction Metals

MFR # EV1453/B

Zone # G408111453

Country of Origin United States

Category Attic Exhaust Ventilator

**Need Help?**

Our customer service team is here for you.

Frequently Asked Questions

UNBRICK.IT

**Description**

14 x 5 eave vent. Galvanized sheet metal frame 18 galvanized wire mesh 23 gauge, 44 sq in. Net free vent area. Flexible end tabs for easy installation act as nailing flange to fasten to rafters or trusses.

**CONSTRUCTION METALS**

**14x5 Eave Vent**

Zone #: G408111453 MFR #: EV1453/B

14 x 5 Eave Vent

Hover or click to zoom

Hold to improve our product images

**Product Details**

Gable Louvers help provide attic ventilation to exhaust unwanted heat and moisture which can damage wood or roofing materials. A balanced ventilation system (50% intake ventilation combined with 50% exhaust ventilator) can also lower utility bills. Conforms to Federal Specification QQ-5775A, Type 1, Class 4 ASTM A-950, meets PHA codes, 28-Gauge galvanized steel, 1-piece construction with a 2-in. thick frame, 1/8 in. Galvanized wire mesh prevents entry from birds or large insects.

- Net free area: 110 sq. in.
- Durable polyester paint finish
- Rough opening: 14-1/4 in. x 18-1/4 in.
- Extra nailing flange for reroofed or siding applications
- 1/8 in. galvanized wire mesh to keep out birds and insects
- Screen included
- Return Policy
- California residents see Prop 65 WARNING

Gable Louvers help provide attic ventilation to exhaust unwanted heat and moisture which can damage wood or roofing materials. A balanced ventilation system (50% intake ventilation combined with 50% exhaust ventilator) can also lower utility bills. Conforms to Federal Specification QQ-5775A, Type 1, Class 4 ASTM A-950, meets PHA codes, 28-Gauge galvanized steel, 1-piece construction with a 2-in. thick frame, 1/8 in. Galvanized wire mesh prevents entry from birds or large insects.

★★★★★ 20 in. - Stainless & Stainless GI

14 in. x 18 in. Rectangular White Galvanized Steel Built-in Screen Gable Louver Vent

Hover or click to zoom

Hold to improve our product images



**TOMMY DRAFTING**  
9743 WHITE PINE WAY, ELK GROVE, CA 95624  
Email: helennguyen3689@gmail.com  
Tel: (916) 526-5881 & (408) 876-8402

Date: JULY 2023  
Scale: AS SHOWN  
Drawn: LUEN HONG NGUYEN  
Signed: *Thuy*

PROPOSAL ELEVATION  
236 ALDEN RD, HAYWARD, CA 94541

REVISION	BY

REVIEWED  
ALAMEDA COUNTY PUBLIC WORKS AGENCY  
BUILDING INSPECTION DEPARTMENT  
Construction shall not be changed from what is shown,  
on this plan unless authorized by the Building Official.  
This plan shall be kept at the building site for use by  
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regulation that is applicable to this construction project.

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BLD2023-02832  
Kevin Zhang

SHEET NO:  
**A-3**





**TOMMY DRAFTING**

9743 WHITE PINE WAY, ELK GROVE, CA 95624  
Email: helennguyen3689@gmail.com  
Tel: (916) 526-5881 & (408) 876-8402

Date: JULY 2023

Scale: AS SHOWN

Drawn: LUYEN HONG NGUYEN

Signed:

T-24 ENERGY REPORT  
236 ALDEN RD, HAYWARD, CA 94541

REVISION

BY

SHEET NO:

T-24

**CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD**

Project Name: Detached Garage Conversion To An ADU  
Calculation Date/Time: 2023-10-24T14:56:38-07:00  
Calculation Description: Title 24 Analysis  
Input File Name: 236 ALDEN RD, HAYWARD, CA 94541 NEW ADU 703 S.F  
10-24-2023-rbd22x

CF1R-PHF-01E  
(Page 1 of 10)

GENERAL INFORMATION																
01	Project Name		Detached Garage Conversion To An ADU													
02	Run Title		Title 24 Analysis													
03	Project Location		236A Alden Rd, Hayward, CA 94541													
04	City		Hayward										Software Version		2022	
05	Zip code		94541										Software Version		EnergyPro 9.1	
06	Climate Zone		5										Front Orientation (deg/ Cardinal)		180	
07	Building Type		Single family										Number of Dwelling Units		1	
08	Project Scope		Addition and/or Alteration										Number of Bedrooms		2	
09	Addition Cond. Floor Area (ft <sup>2</sup> )		0										Number of Stories		1	
10	Existing Cond. Floor Area (ft <sup>2</sup> )		703										Penetration Average U-factor		0.41	
11	Total Cond. Floor Area (ft <sup>2</sup> )		703										Glazing Percentage (%)		0.39%	
12	ADU Bedroom Count		2													

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

Registration Number: 223-P018040208-000-000-0000000-0000  
Registration Date/Time: 2023-10-24 15:00:17  
CA Building Energy Efficiency Standards - 2022 Residential Compliance  
Report Version: 2022.0.000  
Schema Version: rev 20220901

**CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD**

Project Name: Detached Garage Conversion To An ADU  
Calculation Date/Time: 2023-10-24T14:56:38-07:00  
Calculation Description: Title 24 Analysis  
Input File Name: 236 ALDEN RD, HAYWARD, CA 94541 NEW ADU 703 S.F  
10-24-2023-rbd22x

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ENERGY USE SUMMARY	Standard Design Source Energy (EER1) (kBtu/h <sup>2</sup> - yr)	Standard Design TDV Energy (EDR2) (kBtu/h <sup>2</sup> - yr)	Proposed Design Source Energy (EER1) (kBtu/h <sup>2</sup> - yr)	Proposed Design TDV Energy (EDR2) (kBtu/h <sup>2</sup> - yr)	Compliance Margin (EER1)	Compliance Margin (EDR2)
Space Heating	0	72.49	0	74.25	0	-1.76
Space Cooling	0	24.52	0	23.85	0	0.67
IAQ Ventilation	0	5.16	0	5.16	0	0
Water Heating	0	190.62	0	188.93	0	1.69
Self Utilization/Feasibility Credit						
Efficiency Compliance Total	0	292.79	0	292.19	0	0.6
Photovoltaics	0		0			
Battery						
Flexibility						
Indoor Lighting	0	10.22	0	10.22		
Appl. & Cooking	0	40.76	0	40.72		
Plug Loads	0	68.34	0	68.34		
Outdoor Lighting	0	2.01	0	2.01		
TOTAL COMPLIANCE	0	413.12	0	413.48		

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ENERGY USE INTENSITY	Standard Design (kBtu/h <sup>2</sup> - yr)	Proposed Design (kBtu/h <sup>2</sup> - yr)	Compliance Margin (kBtu/h <sup>2</sup> - yr)	Margin Percentage
Gross EUI <sup>1</sup>	90.07	89.97	0.1	0.11
Net EUI <sup>2</sup>	90.07	89.97	0.1	0.11

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.  
• Ducts with high level of insulation.  
• New ductwork added is less than 25 ft. in length.  
• Non-standard duct location (see location other than R13).  
• Solar water heating credit, single family building.

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 this modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF1Rs and CF2Rs are required to be completed in the HERS Registry.  
• Indoor air-quality ventilation  
• Duct sealing required if a duct system component, plenum, or air handling unit is altered.

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft <sup>2</sup> )	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Detached Garage Conversion To An ADU	703	1	2	1	0	1

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ZONE INFORMATION											
01	02	03	04	05	06	07	08	09	10	11	
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Status					
NEW ADU	Conditioned	Altered FAU & A/C1	703	9	DHW Sys 1	Existing Unchanged					

OPAQUE SURFACES											
01	02	03	04	05	06	07	08	09	10	11	
Name	Zone	Construction	Altitude	Orientation	Gross Area (ft²)	Window and Door Area (ft²)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition	
Front-To Remain	NEW ADU	R-13 Wall	180	Front	304	85	90	none	Existing	No	
Left-To Remain	NEW ADU	Wall 13	270	Left	192	0	90	none	Existing	No	
Rear-To Remain	NEW ADU	R-13 Wall	0	Back	304	36	90	none	Existing	No	
Right-To Remain	NEW ADU	Wall 13	90	Right	192	15	90	none	Existing	No	
Existing Roof	NEW ADU	R-0 Roof Attic	n/a	n/a	703	n/a	n/a	none	Existing	No	

ATTIC									
01	02	03	04	05	06	07	08	09	10
Name	Construction	Type	Roof Rise [x in 12]	Roof Reflectance	Roof Enclosure	Radient Barrier	Cool Roof	Status	Verified Existing Condition
Attic NEW ADU	Attic Roof/NEW ADU	Ventilated	4	0.1	0.85	No	No	Existing	No

PENETRATION / GLAZING															
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Altitude	Width (ft)	Height (ft)	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition	
New Window	Window	Front-To Remain	Front	180	1	15	15	0.71	Table 110A-A	0.73	Table 110A-B	Bug Screen	New	NA	

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01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientalo n	Azimuth	Width (ft)	Height (ft)	U-fact.	Area (ft²)	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition	
New Window 2	Window	Right To Remain	Back	0	1	36	0.32	NFRC	0.25	NFRC	Bug Screen	New	NA		
Window	Window	Right To Remain	Right	90	1	15	0.32	NFRC	0.25	NFRC	Bug Screen	New	NA		

OPAQUE DOORS	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Side of Building	Area (ft <sup>2</sup> )	U-factor	Status	Verified Existing Condition											
New Garage Door	Front-To Remain	49	0.5	Existing	No											
New Door	Front-To Remain	21	0.5	New	n/a											

01	02	03	04	05	06	07	08	09	10
Name	Zone	Area (ft <sup>2</sup> )	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated	Status	Verified Existing Condition
Slab-on-Grade	NEW ADU	703	0.1	none	0	80%	No	Existing	No

OPAQUE SURFACE CONSTRUCTIONS							
01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-13 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-13	None / None	0.101	Inside Finish: Gypsum Board Cavity / Frame: R-13 / 2x4 Exterior Finish: 3 Coat Stucco

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01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
Wall 13	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-13	None / None	0.101	Inside Finish: Gypsum Board Cavity / Frame: R-13 / 2x4 Exterior Finish: 3 Coat Stucco
Attic Roof/NEW ADU	Attic Roofs	Wood Framed Ceiling	2x4 @ 16 in. O. C.	R-0	None / 0	0.644	Roofing: Light Roof (Asphalt Shingles) Roof Deck: Wood Siding/Sheathing/Decking Cavity / Frame: no insul. / 2x4

BUILDING ENVELOPE - HERS VERIFICATION	01	02	03	04	05
Quality Insulation Installation (QI)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50	n/a	CFM50
Not Required	Not Required	n/a	n/a	n/a	n/a

WATER HEATING SYSTEMS											
01	02	03	04	05	06	07	08	09	10	11	12
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (H)	Status	Verified Existing Condition	Existing Water Heating System
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 100W Heater 1-2	11	Solar-DHW	None	n/a	DHW Heater 1 110W Heater 1-2 11	Existing	No	

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WATER HEATERS														
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Heating Efficiency	Rated Input Type	Input Rating or Pilot	Tank Insulation R-value (In/Ex)	Standby Loss or Recovery Eff.	2nd Ht. Rating or Flow Rate	Tank Location	Status	Verified Existing Condition	
DHW Heater 1	Gas	Small Storage	1	50	EF	0.6	Btu/Hr	75000	0	76		Existing	No	
DHW Heater 1-2	Gas	Small Storage	1	40	EF	0.62	Btu/Hr	75000	0	76		Existing	No	

SOLAR WATER HEATING SYSTEMS										
01	02	03	04	05	06	07	08	09	10	
Name	Collector Manufacturer	Collector Brand	Collector Model	Number of Collectors	Altitude from North	Tilt from Horizontal	Tank Volume (gal)	SRCC/JAPMO Number	Solar Savings Fraction	
Solar-DHW	(DG-300 rated system)	n/a	SAIJO NEIGHBORHOOD PLARHS-WELLFLOWER	n/a	n/a	n/a	n/a	n/a	0.02	

WATER HEATING - HERS VERIFICATION						
01	02	03	04	05	06	07
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Shower Drain Water Heat Recovery
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required
DHW Sys 1 - 2/1	Not Required	Not Required	Not Required	None	Not Required	Not Required

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SPACE CONDITIONING SYSTEMS											
01	02	03	04	05	06	07	08	09	10	11	12
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
Altered FAU & A/C1	Heating and cooling system other	Heating Component 1	1	Cooling Component 1	1	HVAC Fan 1	Air Distribution System 1	Setback	New	No	

01	02	03	04
Name	System Type	Number of Units	Heating Efficiency
Heating Component 1	Central gas furnace	1	AFUE-80

HVAC - COOLING UNIT TYPES								
01	02	03	04	05	06	07	08	09
Name	System Type	Number of Units	Efficiency Metric	Efficiency EER/EEER/CEER	Efficiency SEER/SEER2	Zonally Controlled	Multi-speed Compressor	HERS Verification
Cooling Component 1	Central split AC	1	EER/SEER	12.2	14	Not Zonal	Single Speed	Cooling Component 1-hera-cool

01	02	03	04	05	06
Name	Verified Airflow	Airflow Target	Verified EER/EER2	Verified SEERSEER2	Verified Refrigerant Charge
Cooling Component 1-her-cool	Not Required	0	Not Required	Not Required	Not Required

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HVAC - DISTRIBUTION SYSTEMS																
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	
Name	Type	Design Type	Duct Ins. R-value	Duct Location	Surface Area	Bypass Duct		Duct Leakage	HERS Verification	Status	Verified Existing Condition	Existing Distribution	New Ducts 25 ft			
			Supply Y	Return Y	Supply Y	Return Y	Supply Y	Return Y								
Air Distribution System 1	Conditioned space - entirely	Non-Verified	R-8	R-8	Con ditioned Zone e	Con ditioned Zone e	n/a	n/a	No Bypass Duct	Existing (not specified)	Air Distribution System 1 -herm-d	Existing + New	No		No	