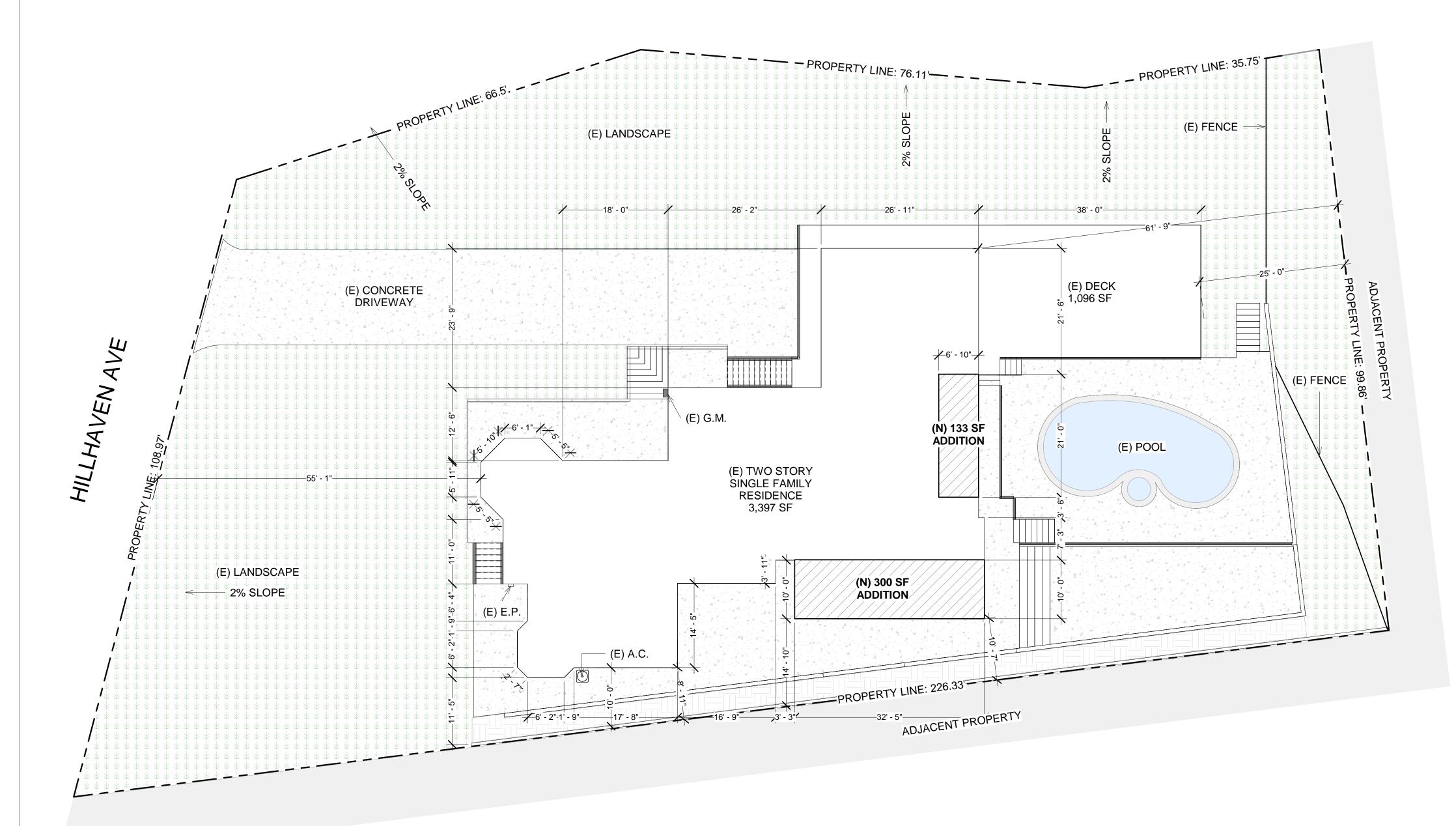
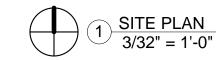
# HILLHAVEN AVE





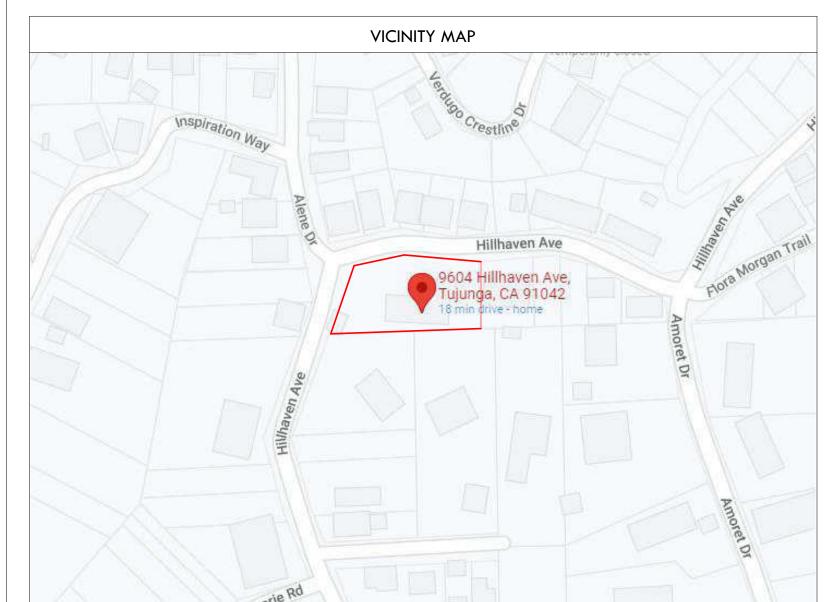
PROJE	CT INFORMATION
ZONING DESIGNATION:	RE11-1 SINGLE FAMILY RESIDENCE
OCCUPANCY:	R3 SINGLE FAMILY RESIDENCE
CONSTRUCTION TYPE:	TYPE-VB
FIRE SPRINKLERED:	NO
LOT SIZE:	21,633 SF
EXISTING HOUSE:	3,397 SF
EXISTING GARAGE:	400 SF
EXISTING DECK:	1,096 SF
NEW ADDITION:	433 SF
NEW HOUSE TOTAL:	3,830 SF
RFA CALCULATIONS:	3,397 SF + 433 SF = 3,830 SF TOTAL 21,633 SF LOT = 17% < 45% ALLOWED
LOT COVERAGE CALCULATIONS:	3,397 SF + 433 SF + 1,096 SF = 4,926 SF TOTAL 21,633 SF LOT = 23% < 50% ALLOWED
NUMBER OF STORIES:	2
BUILDING HEIGHT:	26'-8"
VERY HIGH FIRE HAZARD SEVERITY ZONE:	YES
HILLSIDE ZONE:	YES
METHANE ZONE:	NO
LIQUEFACTION:	NO

	LEGAL DESCRIPTION
ADDRESS:	9604 N HILLHAVEN AVE TUJUNGA CA 91042
TRACT:	TR 6701
LOT:	42
BLOCK:	NONE
APN:	2563036022

FLOOR AREA CALCULATIONS							
	(E) & (N) SF	ZONING	BUILDING	SCHOOL			
	EXISTING SF	3,397 SF	3,397 SF	4,893 SF			
	PROPOSED SF	433 SF	433 SF	469 SF			
	TOTAL	3,830 SF	3,830 SF	5,362 SF			

## **APPLICABLE CODES:**

2020 LABC, 2020 LARC, 2020 LAMC, 2020 LAPC, 2020 LAEC, 2020 LAGBC & ENERGY STANDARDS



SHEET INDEX
A-1 - SITE PLAN
A-2 - EXISTING & DEMO ROOF PLAN
A-3 - PROPOSED ROOF PLAN
A-4 - EXISTING & DEMO FLOOR PLAN
A-5 - PROPOSED FLOOR PLAN
A-6 - PROPOSED CEILING PLAN
A-7 - EXISTING ELEVATIONS
A-8 - EXISTING ELEVATIONS
A-9 - PROPOSED ELEVATIONS
A-10 - PROPOSED ELEVATIONS
A-11 - SECTIONS
A-12 - SECTIONS
A-13 - GENERAL NOTES
A-14 - FLASHING DETAILS & FIRE & SOUND RATED WALL
A-15 - GREEN FORMS
A-16 - SPECIFICATIONS

RFA ANALYSIS	
BUILDING ELEMENT	SF
(E) HOUSE	3,397 SF
(N) ADDITION	470 SF
TOTAL	3,867 SF
MAX FLOOR AREA (SLOPE ANALYSIS)	9,734 SF

SCOPE OF WORK

- (N) 433 SF ADDITION TO THE MAIN HOUSE

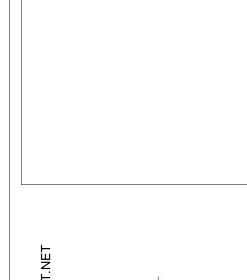
REVISE DATES:

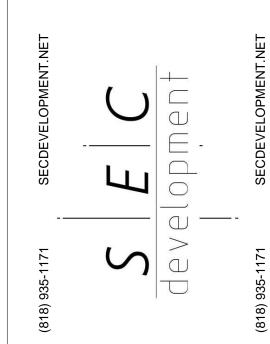
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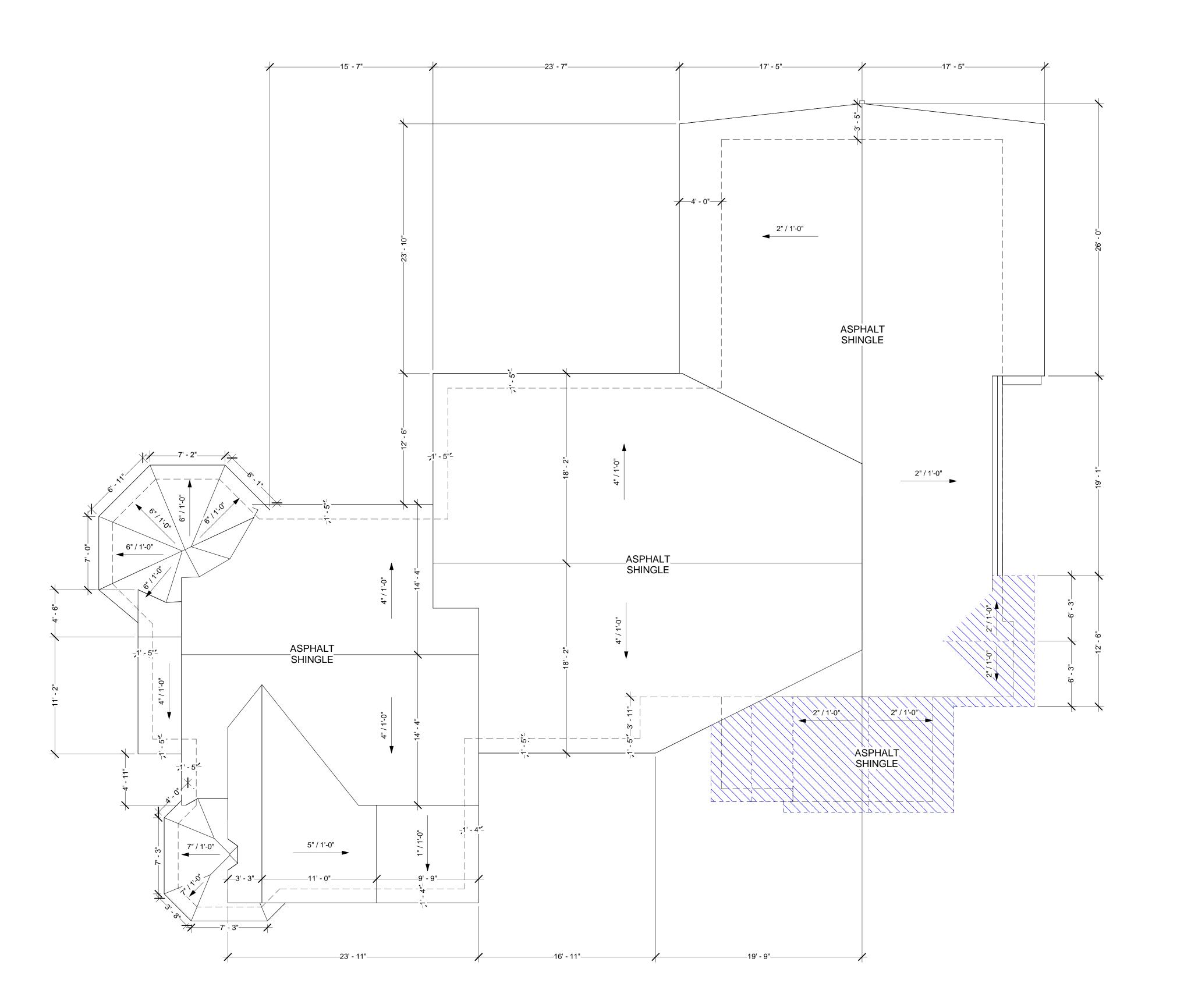
MERUZHAN MARGARYAN ADDRESS: 9604 HILLHAVEN AVE TUJUNGA CA 91042

SITE PLAN





PROJEC	T INFO
JOB NUMBER:	22065
DATE DRAWN:	12/19/22
DRAWN BY:	M.A.
CHECKED BY:	V.K.
SCALE:	3/32" = 1'-0"
A-	-1



1 EXISTING & DEMO ROOF PLAN 3/16" = 1'-0"

**DEMO LEGEND** 

∞ ⊒ EXISTING ROOF

**REVISE DATES:** 

CONTRACTOR TO VERIFY ALL DIMENSIONS, CONDITIONS, ETC., PERTAINING TO THE WORK AT THE SITE BEFORE PROCEEDING WITH

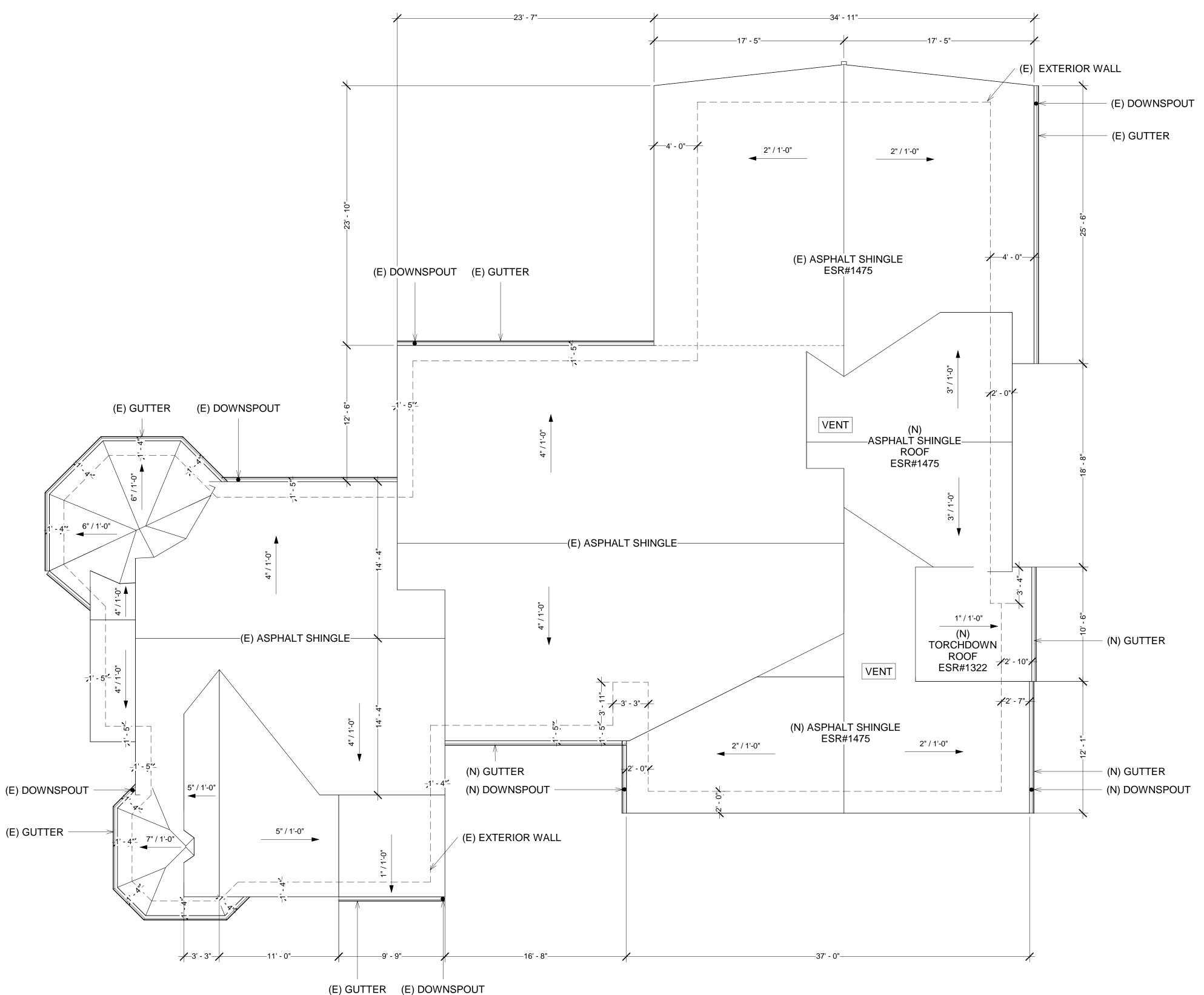
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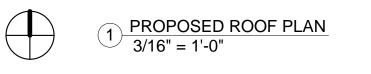
PROJECT FOR WHICH THEY HAVE

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THESE RESTRICTIONS.

THE WORK

PROJECT INFO 22065 JOB NUMBER: DATE DRAWN: 12/19/22 M.A. DRAWN BY: CHECKED BY: 3/16" = 1' **A-2** 





### **VHFHSZ NOTES:**

1. CLASS A ROOF COVERING IS REQUIRED FOR ALL BUILDINGS. WOOD SHAKES AND SHINGLES ARE NOT PERMITTED. 7207.4, 1505

2. VALLEY FLASHINGS SHALL BE NOT LESS THAN 0.019-INCH (0.48 MM) (NO. 26 GALVANIZED SHEET GAGE) CORROSION-RESISTANT METAL INSTALLED OVER A MINIMUM 36-INCH-WIDE (914MM) UNDERLAYMENT CONSISTING OF ONE LAYER OF NO. 72 ASTM CAP SHEET RUNNING THE FULL LENGTH OF THE VALLEY 705A.3

3. ROOF GUTTERS SHALL BE PROVIDED WITH THE MEANS TO PREVENT THE ACCUMULATION OF LEAVES AND DEBRIS IN THE GUTTER (705A.4)

4. (ROOF) (ATTIC)(EXTERIOR WALL) VENTS SHALL RESIST THE INTRUSION OF FLAME AND EMBERS INTO THE ATTIC AREA OF THE STRUCTURE, OR SHALL BE PROTECTED BY CORROSION-RESISTANT, NONCOMBUSTIBLE WIRE MESH WITH 1/4 BINCH (6 MM) OPENINGS OR ITS EQUIVALENT. VENTS SHALL NOT BE INSTALLED IN EAVES AND CORNICES. 706A.1, 706A.2, 706A.3, 7207.3

5. EAVES AND SOFFITS SHALL MEET THE REQUIREMENTS OF SFM 12-7A-3 OR SHALL BE PROTECTED BY IGNITION-RESISTANT MATERIALS OR NONCOMBUSTIBLE CONSTRUCTION ON THE EXPOSED UNDERSIDE. 707A.5

6. EXTERIOR WALLS SHALL BE APPROVED NONCOMBUSTIBLE OR IGNITIONRESISTANT MATERIAL, HEAVY TIMBER, OR LOG WALL CONSTRUCTION OR SHALL PROVIDE PROTECTION FROM THE INTRUSION OF FLAMES AND EMBERS IN ACCORDANCE WITH STANDARD SFM 12-7A-1. 707A.3

7. EXTERIOR WALL COVERINGS SHALL EXTEND FROM THE TOP OF FOUNDATION TO THE ROOF, AND TERMINATE AT 2-INCH (50.8 MM) NOMINAL SOLID WOOD BLOCKING BETWEEN RAFTERS AT ALL ROOF OVERHANGS, OR IN THE CASE OF ENCLOSED EAVES, TERMINATE AT THE ENCLOSURE. 704A.3.2

8. EXTERIOR WINDOWS, WINDOW WALLS, GLAZE DOORS, AND GLAZED OPENINGS WITHIN EXTERIOR DOORS SHALL BE INSULATING-GLASS UNITS WITH A MINIMUM OF ONE TEMPERED PANE, OR GLASS BLOCK UNITS, OR HAVE A FIRE- RESISTANCE RATING OF NOT LESS THAN 20 MINUTES, WHEN TESTED ACCORDING TO NFPA 257, OR CONFORM TO THE PERFORMANCE REQUIREMENTS OF SFM 12-7A-2. 708A.2.1

9. EXTERIOR DOOR ASSEMBLIES SHALL CONFORM TO THE PERFORMANCE REQUIREMENTS OF STANDARD SFM 12-7A-1 OR SHALL BE APPROVED NONCOMBUSTIBLE CONSTRUCTION, OR SOLID CORE WOOD HAVING STILES AND RAILS NOT LESS THAN 1 3/8 INCHES THICK WITH INTERIOR FIELD PANEL THICKNESS NO LESS THAN 1-1/4 INCHES THICK, OR SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 20 MINUTES WHEN TESTED ACCORDING TO ASNFPA 252. (EXCEPTION: NONCOMBUSTIBLE OR EXTERIOR FIRE-RETARDANT TREATED WOOD VEHICLE ACCESS DOORS) 708A.3

10. DECKING, SURFACES, STAIR TREADS, RISERS, AND LANDINGS OF DECKS, PORCHES, AND BALCONIES WHERE ANY PORTION OF SUCH SURFACE IS WITHIN 10 FEET (3048 MM) OF THE PRIMARY STRUCTURE SHALL BE CONSTRUCTED OF HEAVY TIMBER, NON COMBUSTIBLE OR OTHER APPROVED MATERIALS PER SEC.709A.3

11. THE UNDERSIDE OF CANTILEVERED AND OVERHANGING APPENDAGES AND FLOOR PROJECTIONS SHALL MAINTAIN THE IGNITION- RESISTANT INTEGRITY OF EXTERIOR WALLS, OR THE PROJECTION SHALL BE ENCLOSED TO THE GRADE. 707A.8

12. BUILDINGS SHALL HAVE ALL UNDERFLOOR AREAS COMPLETELY ENCLOSED TO THE GRADE WITH CONSTRUCTION AS REQUIRED FOR EXTERIOR WALLS. 707A.8, 7207.1

13. ALL UTILITIES, PIPES, FURNANCES, WATER HEATERS OR OTHER MECHANICAL DEVICES LOCATED IN AN EXPOSED UNDER-FLOOR AREA OF A RESIDENTIAL BUILDING SHALL BE ENCLOSED WITH MATERIALS AS REQUIRED FOR 1-HOUR FIRE-RESISTIVE CONSTRUCTION. 7207.2

14. THE SPACE BETWEEN THE ROOF COVERING AND ROOF DECKING SHALL BE CONSTRUCTED TO PREVENT THE INTRUSION OF FLAMES AND EMBERS AND BE FIRE STOPPED PER 705A.2.

15. NO TRELLIS IS PERMITTED WITHIN 10 FEET OF THE PRIMARY STRUCTURE.

16. TRELLIS MORE THAN 10 FEET FROM THE PRIMARY STRUCTURE SHALL BE CONSTRUCTED OF HEAVY TIMBER OR NON COMBUSTIBLE MATERIALS. MINIMUM OF 4 INCHES SPACING IS REQUIRED BETWEEN THE MEMBERS. *P/BC* 2020-023

# ATTIC VENT CALCULATIONS:

1 SQUARE FEET FOR EVERY 150 SQUARE FEET ATTIC FLOOR AREA

## **REQUIRED**:

433 SQUARE FEET OF ATTIC SPACE / 150 SQ FT = 2.95 SQ FT

2.95 SQ FT x 144 = 425.28 SQ IN NET FREE VENT REQUIRED

# PROVIDED:

(2) SOLAR POWERED VENT = 720 SQ IN NET FREE VENT

720 SQ IN OF NET FREE VENT PROVIDED > 425.28 SQ IN NET FREE VENT REQUIRED

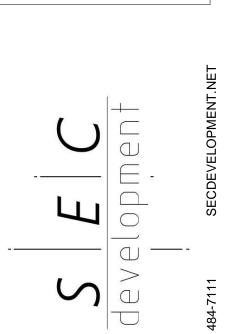
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> ADDRESS: 9604 HILLHAVEN AVE TUJUNGA CA 91042

PROPOSED ROOF PLAN



 PROJECT INFO

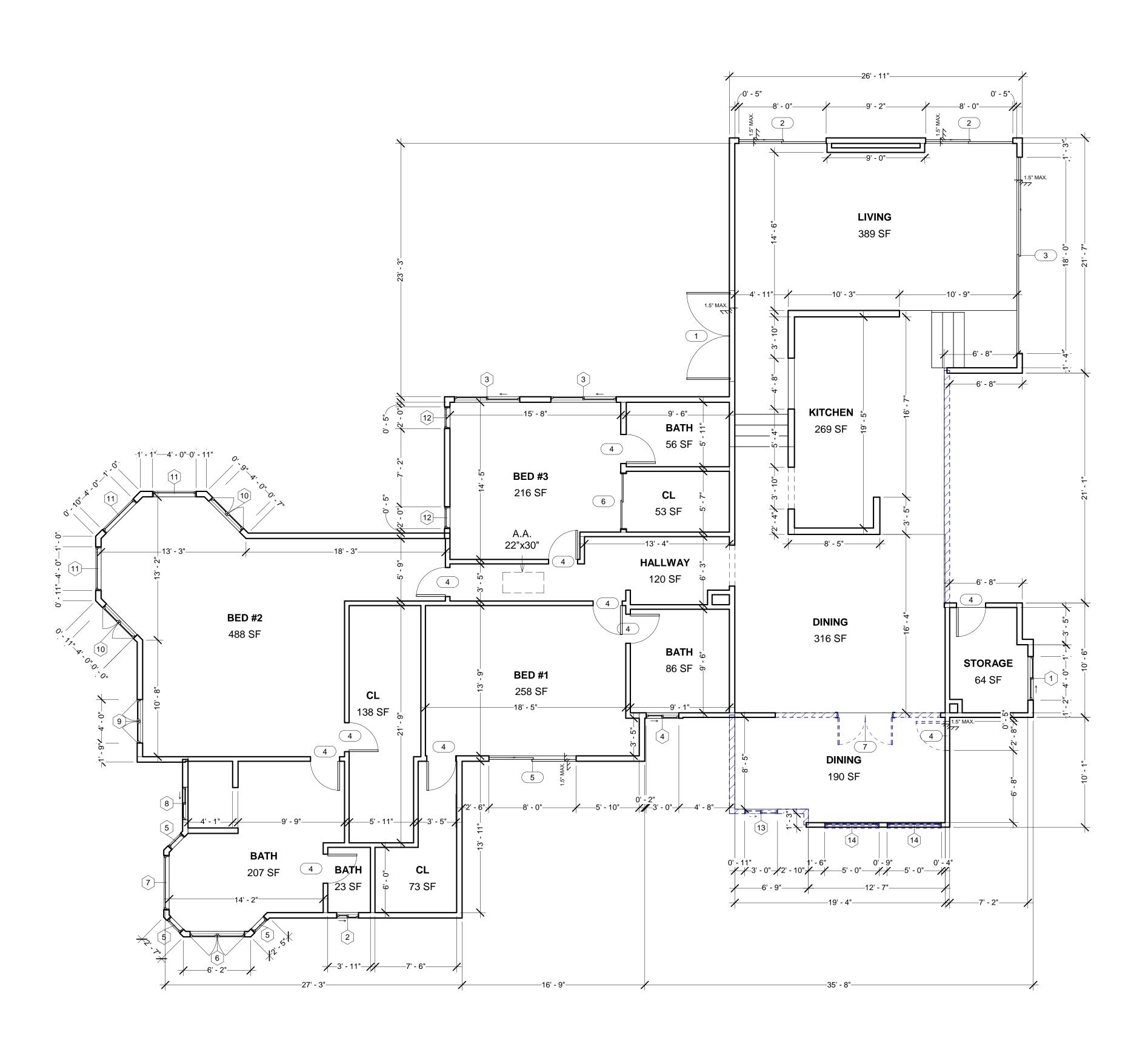
 JOB NUMBER:
 22065

 DATE DRAWN:
 12/19/22

 DRAWN BY:
 M.A.

 CHECKED BY:
 V.K.

 SCALE:
 3/16" = 1'



1 EXISTING & DEMO FLOOR PLAN 3/16" = 1'-0"

				EXISTING DO	OOR SCHEDULE	•			
MARK	WIDTH	HEIGHT	OPERATION	FRAMING	MATERIAL	TEMPERED	QUANTITY	U-FACTOR	SHGC
1	8'-0"	6'-8"	DOUBLE SWING	METAL	METAL	NO	1	N/A	N/A
2	8'-0"	8'-0"	SLIDING	VINYL	GLASS	YES	3	0.32	0.30
3	18'-0"	8'-0"	TRIPLE SLIDING	VINYL	GLASS	YES	1	0.32	0.30
4	2'-8"	6'-8"	SWING	WOOD	WOOD	NO	11	N/A	N/A
5	8'-0"	6'-8"	SLIDING	VINYL	GLASS	YES	1	0.32	0.30
6	5'-0"	7'-0"	DOUBLE SLIDING	WOOD	WOOD	NO	1	N/A	N/A
7	5'-0"	6'-8"	DOUBLE SWING	WOOD	WOOD	YES	1	0.32	0.30

				<b>EXISTING WII</b>	NDOW SCHEDUI	.E			
MARK	WIDTH	HEIGHT	OPERATION	FRAMING	TEMPERED	SILL HEIGHT	QUANTITY	U-FACTOR	SHGC
1	4'-0"	4'-0"	SLIDING	VINYL	NO	2'-8"	1	0.32	0.23
2	2'-0"	2'-0"	SLIDING	VINYL	YES ( ONLY 1)	4'-8"	1	0.32	0.23
3	6'-0"	4'-0"	SLIDING	VINYL	NO	2'-8"	2	0.32	0.23
4	3'-0"	4'-0"	SLIDING	VINYL	NO	2'-8"	1	0.32	0.23
5	1'-8"	4'-0"	FIXED	VINYL	NO	2'-8"	3	0.32	0.23
6	5'-0"	4'-0"	CASEMENT	VINYL	NO	2'-8"	1	0.32	0.23
7	5'-0"	4'-0"	FIXED	VINYL	NO	2'-8"	1	0.32	0.23
8	3'-0"	1'-0"	SLIDING	VINYL	YES	2'-8"	1	0.32	0.23
9	4'-0"	3'-0"	CASEMENT	VINYL	NO	3'-8"	1	0.32	0.23
10	4'-0"	4'-0"	CASEMENT	VINYL	NO	2'-8"	2	0.32	0.23
11)	4'-0"	4'-0"	FIXED	VINYL	NO	2'-8"	3	0.32	0.23
12	2'-0"	4'-0"	CASEMENT	VINYL	NO	2'-8"	2	0.32	0.23
13	3'-0"	4'-0"	SLIDING	VINYL	NO	2'-8"	1	0.32	0.23
(14)	5'-0"	3'-0"	ANGLED FIXED	VINYL	NO	5'-0"	2	0.32	0.23

LEGEND						
EXISTING WALL (2X4)						
DEMO WALL (2X4)						

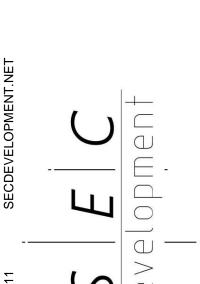
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(ISTING & DEMC FLOOR PLAN



 PROJECT INFO

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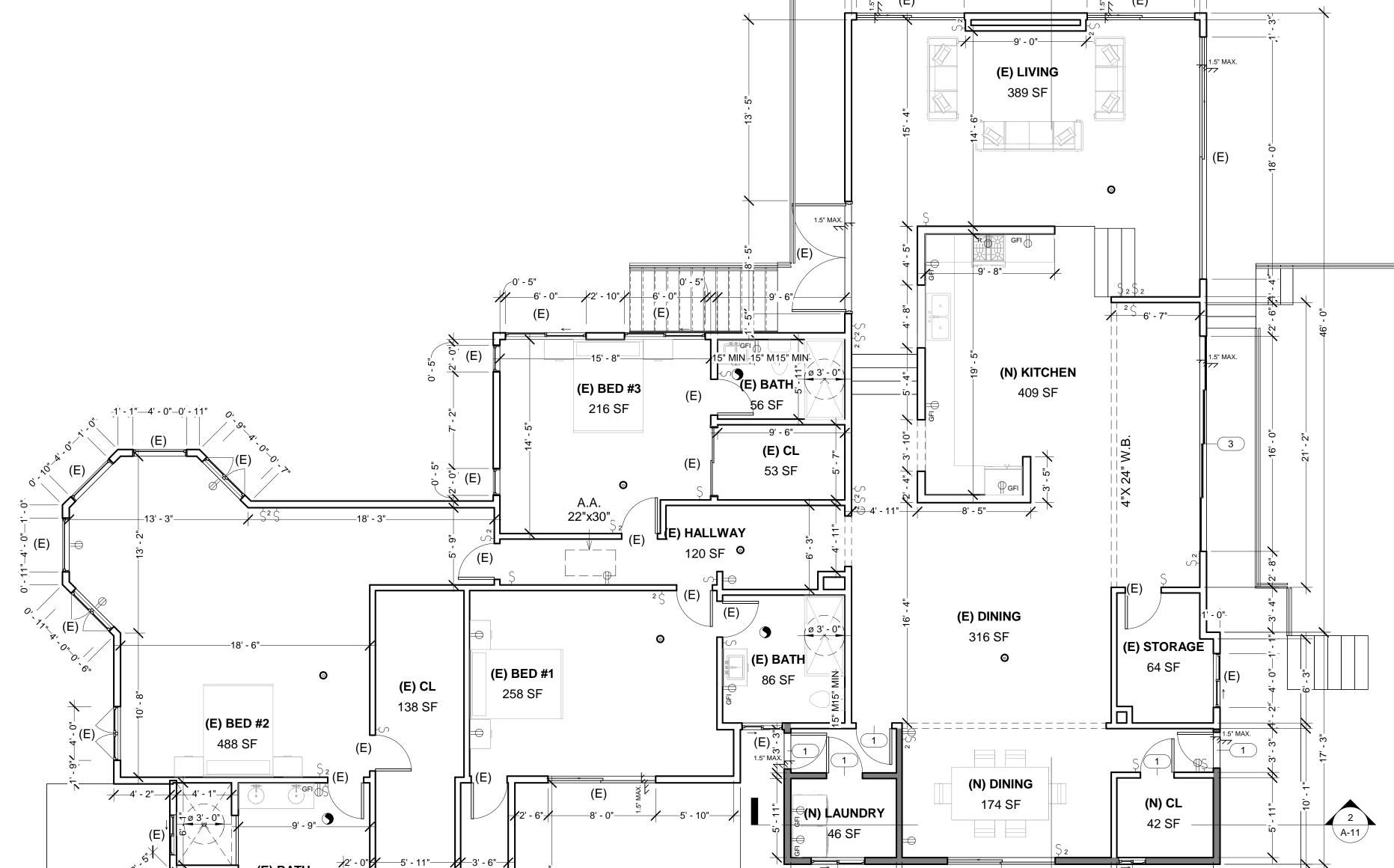
 DATE DRAWN:
 12/19/22

 DRAWN BY:
 M.A.

 CHECKED BY:
 V.K.

 SCALE:
 3/16" = 1'

(E) DECK



1 PROPOSED FLOOR PLAN
3/16" = 1'-0"

2

(E) BATH

207 SF

6' - 2"

(E) TØIL閏†

5" MI15" MIN

3' - 11"\_\_\_\_7' - 6"\_\_\_\_

									1
1	2'-8"	6'-8"	SWING	WOOD	WOOD	NO	5	N/A	N/A
2	8'-0"	8'-0"	DOUBLE SLIDING	WOOD	GLASS	YES	1	0.32	0.30
3	18'-0"	6'-8"	DOUBLE SLIDING	WOOD	GLASS	YES	1	0.32	0.30
PROPOSED WINDOW SCHEDULE									
MARK	WIDTH	HEIGHT	OPERATION	FRAMING	TEMPERED	SILL HEIGHT	QUANTITY	U-FACTOR	SHGC

FRAMING

PROPOSED WINDOW SCHEDULE									
MARK	WIDTH	HEIGHT	OPERATION	FRAMING	TEMPERED	SILL HEIGHT	QUANTITY	U-FACTOR	SHGC
1	2'-0"	2'-0"	DOUBLE SLIDING	VINYL	NO	4'-8"	1	0.32	0.30
2	4'-0"	3'-6"	DOUBLE SLIDING	VINYL	YES	3'-2"	1	0.32	0.30

PROPOSED DOOR SCHEDULE

MATERIAL

**NATURAL LIGHT CALCULATION:** 

(N) DINING: 174 SF

(N) DOOR 1 = 64 SF

REQUIRED: 13.92 SF

(E) KITCHEN: 409 SF

(N) DOOR 1= 120 SF

REQUIRED: 32.72 SF

409 SF X 8% = 32.72 SF

PROVIDED: 64 SF

174 SF X 8% = 13.92 SF

# NOTE:

+ SMOKE ALARM SHALL BE INTERCONNECTED HARD-WIRED WITH BATTERY BACKUP AND SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72.

HEIGHT

OPERATION

+ CARBON MONOXIDE ALARM SHALL BE INTERCONNECTED HARD-WIRED WITH BATTERY BACKUP.

+ FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF LESS THAN 50% TO A MAXIMUM OF 80% UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM.

+ ALL SHOWER ENCLOSURES SHOULD BE TEMPERED GLAZING.

+ THE NFRC TEMPORARY LABEL DISPLAYED ON WINDOWS AND SKYLIGHTS (INCLUDE TUBULAR) MUST REMAIN ON THE UNIT UNTIL FINAL INSPECTION HAS

ALL RECEPTACLES IN BATHROOMS,
GARAGES, ACCESSORY BUILDINGS,
OUTDOORS, CRAWL SPACES, UNFINISHED
ASEMENTS, KITCHENS, (WHERE
ECEPTACLES SERVE COUNTER TOP
URFACES), LAUNDRY, UTILITY, WET BAR
INKS (WITHIN 6' OF THE EDGE OF THE
INK), SHALL HAVE GROUND-FAULT
IRCUIT INTERRUPTER ( <b>GFCI</b> )

+ ALL BRANCH CIRCUITS SUPPLYING
RECEPTACLES IN FAMILY ROOMS,
DINING ROOMS, LIVING ROOMS,
PARLORS, LIBRARIES, DENS, BEDROOMS,
SUNROOMS, RECREATION ROOMS,
CLOSETS, HALLWAYS, AND SIMILAR
ROOMS OR AREAS SHALL BE PROTECTED
BY A LISTED ARC-FAULT CIRCUIT

ELECTRICAL LEGEND									
Ş	SINGLE SWITCH								
S	DOUBLE SWITCH								
Sp	DIMMER SWITCH								
Ψ	DOUBLE OUTLET								
GFI	GFI OUTLET								
⊕ <sub>R</sub>	RANGE OUTLET								
240V	240V OUTLET								

LEGEND									
EXISTING WALL (2X4)									
NEW WALL (2X4)									
ENERGY STAR EXHAUST 50 CFM DUCTED TO OUTSIDE AND CONTROLLED BY HUMIDISTAT									
SMOKE DETECTOR/ CARBON MONOXIDE	0								

TEMPERED QUANTITY U-FACTOR

SHGC

**VENT CALCULATIONS:** 

(N) DINING: 174 SF

174 SF X 4% = 6.96 SF

(N) DOOR 1= 32 SF

REQUIRED: 6.96 SF

(E) KITCHEN: 409 SF

(N) DOOR 1 = 60 SF

REQUIRED: 16.36 SF

409 SF X 4% = 16.36 SF

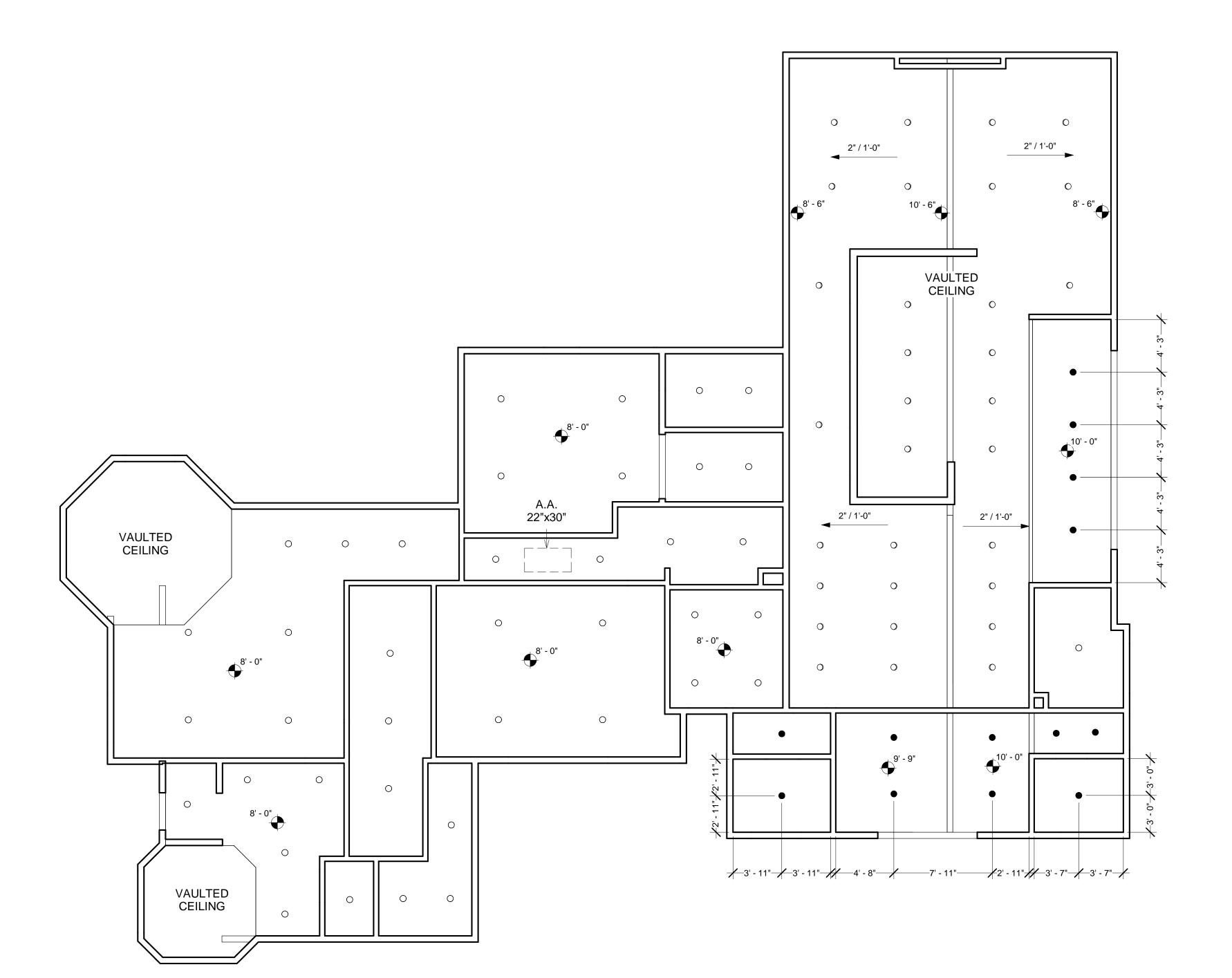
PROVIDED: 32 SF

PROJECT FOR WHICH THEY HAVE BEEN PREPARED AND DEVELOPED WITHOUT THE WRITTEN CONSENT OF **SEC DEVELOPMENT**. VISUAL CONTACT WITH THESE DRAWINGS SHALL CONSTITUTE CONCLUSIVE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.

**REVISE DATES:** 

PROPO! FLOOR P

PROJECT INFO	
JOB NUMBER:	22065
DATE DRAWN:	12/19/22
DRAWN BY:	M.A.
CHECKED BY:	V.K.
SCALE:	3/16" = 1'



1 PROPOSED CEILING PLAN 3/16" = 1'-0" TYPE OF LIGHT SYMBOL QUANTITY

RECESSED CAN 13

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**REVISE DATES:** 

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OWNER:
MERUZHAN MARGARYAN
ADDRESS:
9604 HILLHAVEN AVE
TUJUNGA CA 91042

PROPOSED CEILING PLAN

SECDEVELOPMENT.NET

SECDE  $\mathbf{S}$  484-7111 SECDE  $\mathbf{S}$ 

PROJECT INFO

JOB NUMBER: 22065

DATE DRAWN: 12/19/22

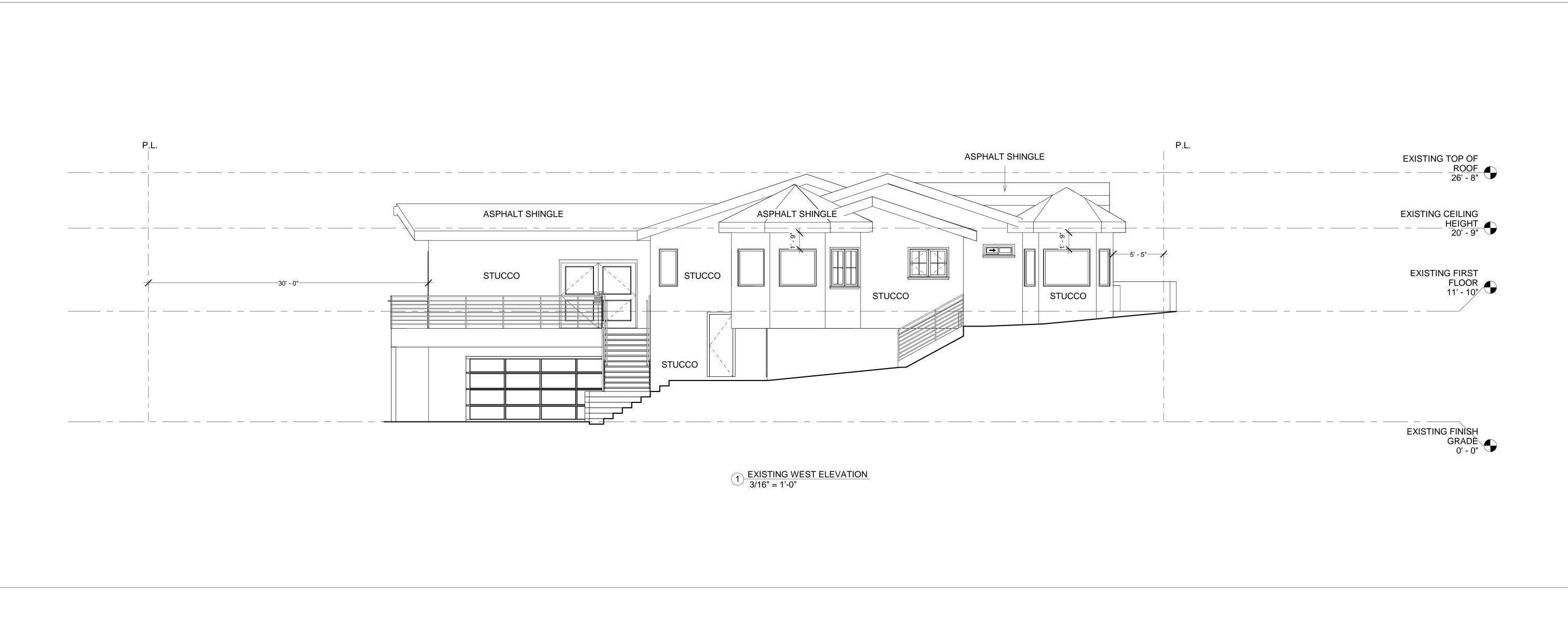
DRAWN BY: M.A.

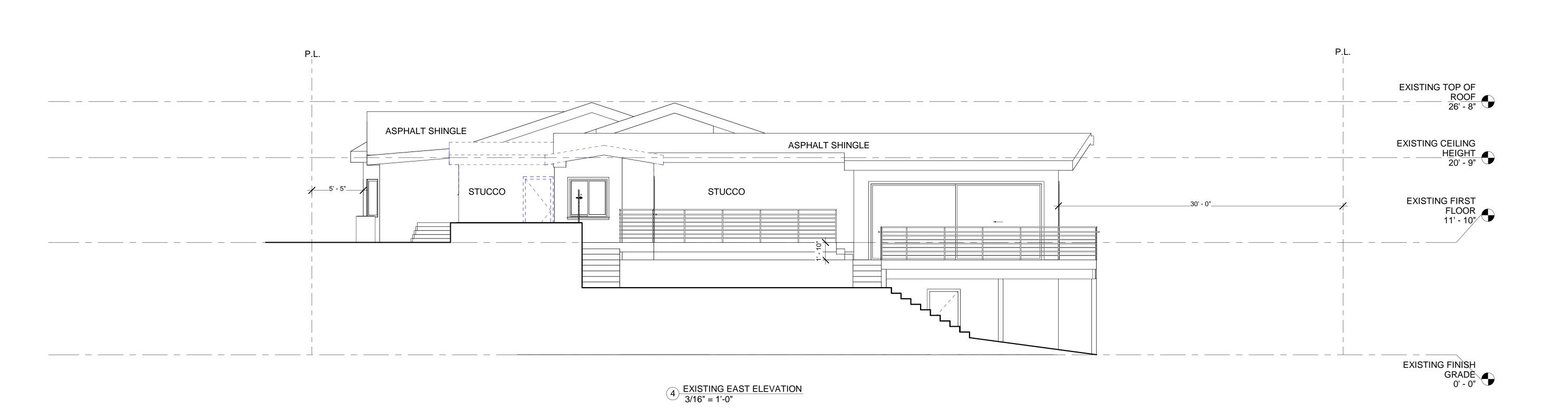
CHECKED BY: V.K.

MN BY: M.A.

CKED BY: V.K.

E: 3/16" = 1'





**REVISE DATES:** 

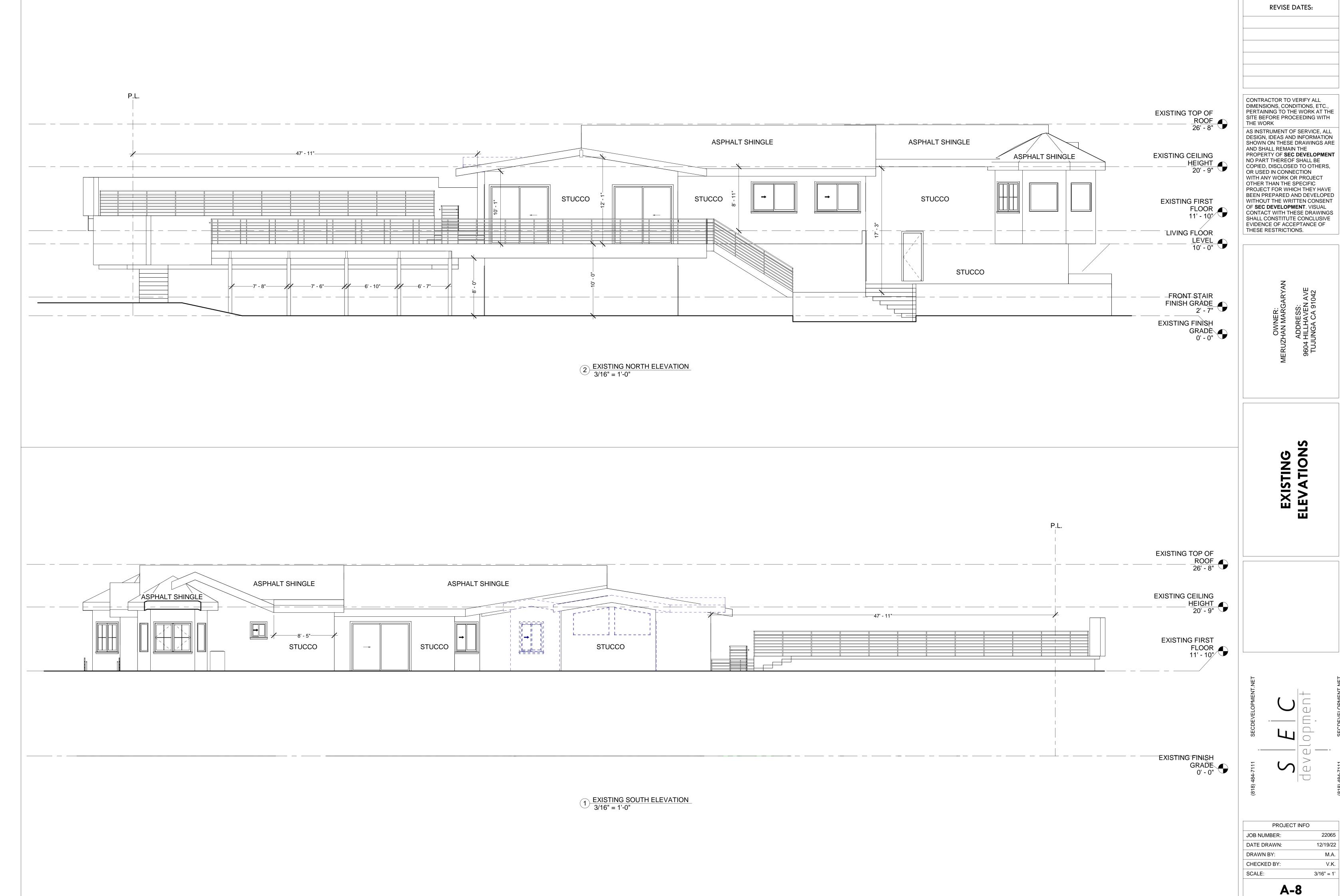
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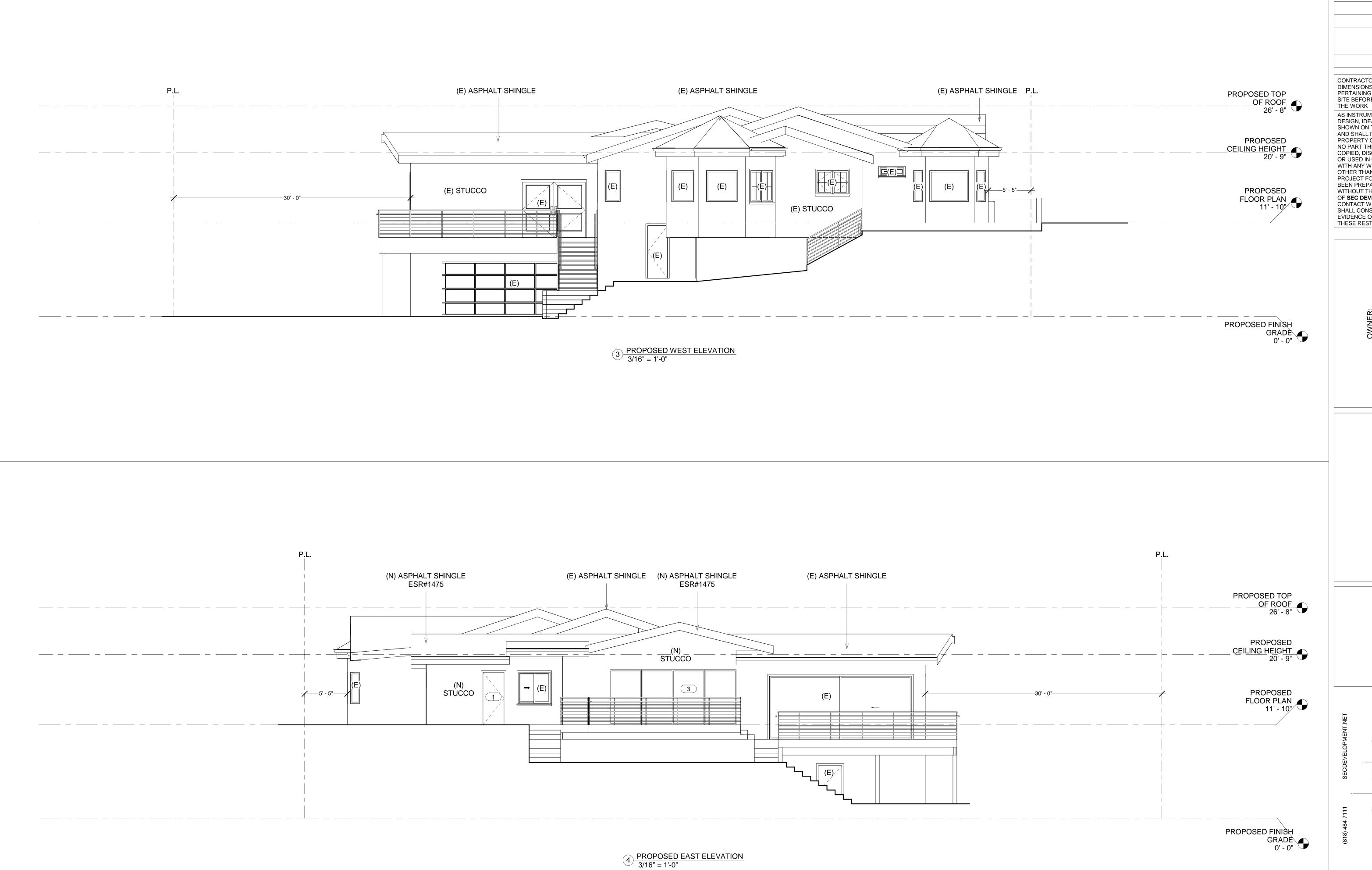
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CONTACT WITH THESE DRAWINGS
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EVIDENCE OF ACCEPTANCE OF
THESE RESTRICTIONS.

**EXISTING ELEVATIONS** 

PROJECT INFO 22065 JOB NUMBER: DATE DRAWN: 12/19/22 M.A. DRAWN BY: CHECKED BY: V.K. 1/4" = 1' SCALE:





CONTRACTOR TO VERIFY ALL DIMENSIONS, CONDITIONS, ETC.,
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**REVISE DATES:** 

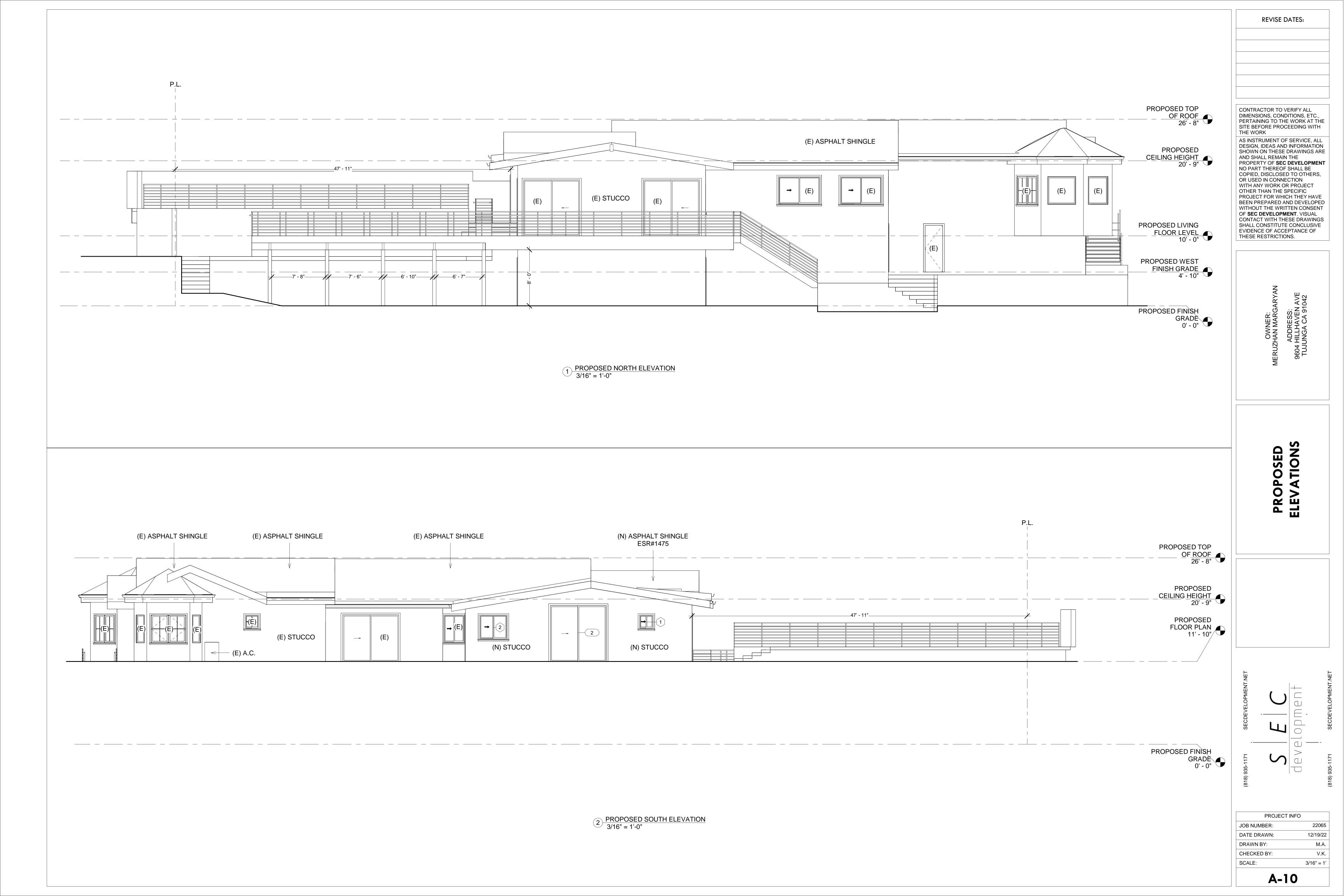
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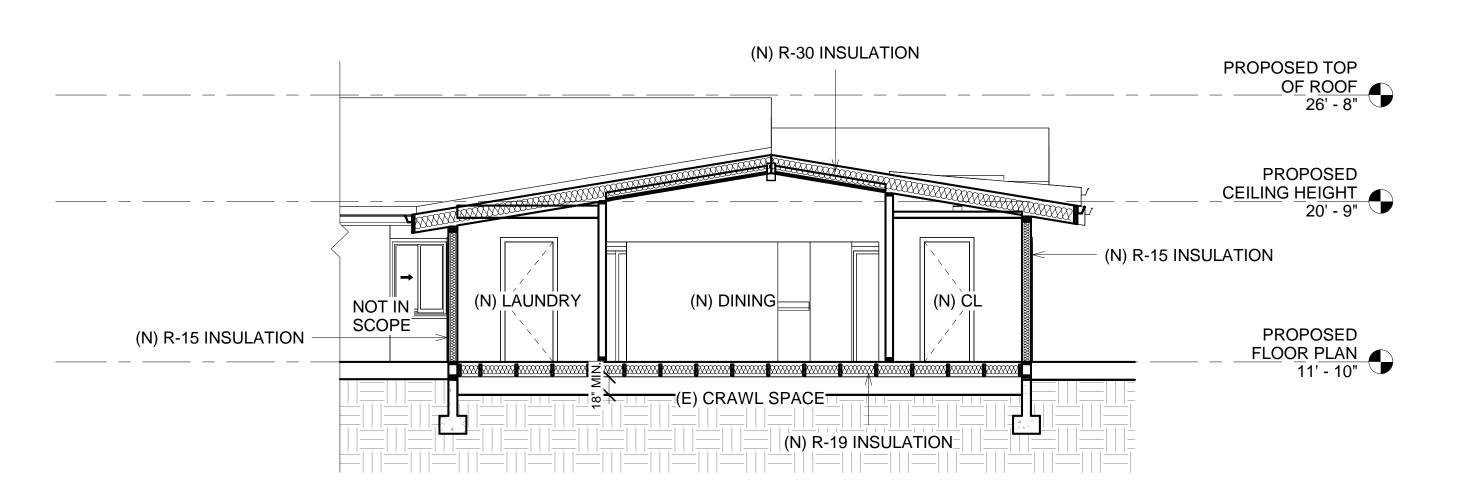
SHALL CONSTITUTE CONCLUSIVE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.

ONS PROPOSED ELEVATIONS

PROJECT INFO 22065 JOB NUMBER: DATE DRAWN: 12/19/22 M.A. DRAWN BY: V.K. CHECKED BY: SCALE: 3/16" = 1'



1 SECTION 1 3/16" = 1'-0"



2 SECTION 2 3/16" = 1'-0"

# NOTE:

1. MINIMUM 1" AIRSPACE REQUIRED BETWEEN INSULATION AND ROOF SHEATHING (R806.3CRC) PROVIDE MINIMUM STUD/RAFTER SIZE TO ACCOMODATE INSULATION. IF RAFTER-SPACE VENTILATION IS REQUIRED, PROVIDE 2X12, 2X8 AND 2X6 FOR R-30, R-19, AND R-13 RESPECTIVELY.

REVISE DATES:

CONTRACTOR TO VERIFY ALL
DIMENSIONS, CONDITIONS, ETC.,
PERTAINING TO THE WORK AT THE
SITE BEFORE PROCEEDING WITH
THE WORK

AS INSTRUMENT OF SERVICE, ALL DESIGN, IDEAS AND INFORMATION SHOWN ON THESE DRAWINGS ARE AND SHALL REMAIN THE PROPERTY OF SEC DEVELOPMENT NO PART THEREOF SHALL BE COPIED, DISCLOSED TO OTHERS, OR USED IN CONNECTION WITH ANY WORK OR PROJECT OTHER THAN THE SPECIFIC PROJECT FOR WHICH THEY HAVE BEEN PREPARED AND DEVELOPED WITHOUT THE WRITTEN CONSENT OF SEC DEVELOPMENT. VISUAL CONTACT WITH THESE DRAWINGS SHALL CONSTITUTE CONCLUSIVE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.

MERUZHAN MARGARYAN ADDRESS: 9604 HILLHAVEN AVE TUJUNGA CA 91042

**ECTIONS** 

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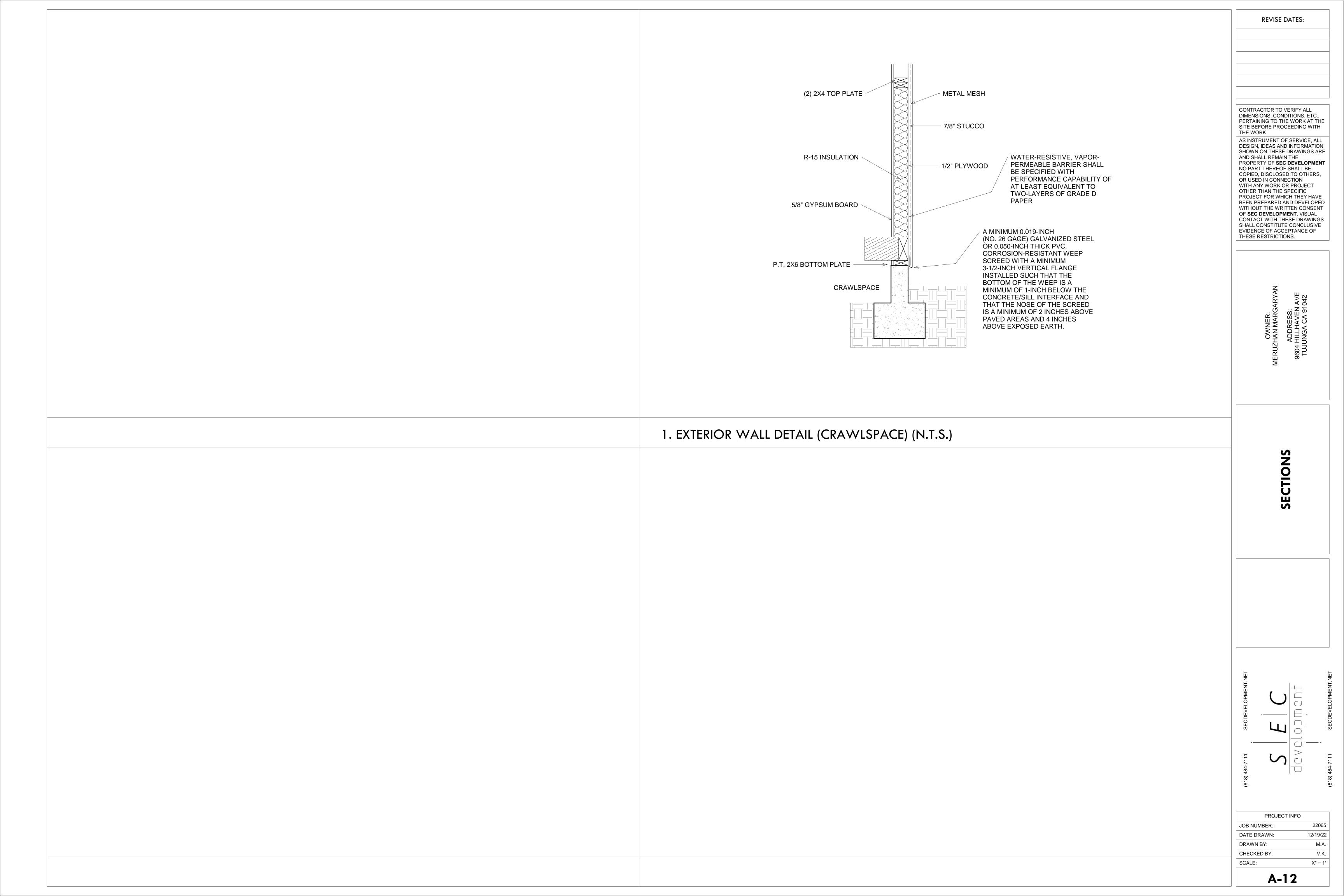
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# **MEANS OF EGRESS:**

PROVIDE EMERGENCY EGRESS FROM SLEEPING ROOMS. SHOW DETAILS ON PLANS. MINIMUM - 24" CLEAR HEIGHT, 20" CLEAR WIDTH, 5.7 SF MINIMUM AREA (5.0 SF AT GRADE LEVEL) & 44" MAXIMUM TO SILL. (R310.1) SHOW ON PLANS THAT THE ENTRY/EXIT DOOR MUST OPEN OVER A LANDING NOT MORE THAN 1.5" BELOW THE THRESHOLD. EXCEPTION: PROVIDING THE DOOR DOES NOT SWING OVER THE LANDING. LANDING SHALL BE NOT MORE THAN 7.75" BELOW THE THRESHOLD. STORM AND SCREEN DOORS ARE PERMITTED TO SWING OVER ALL EXTERIOR STAIRS AND LANDINGS. (R311.3.1) SHOW THE FOLLOWING STAIRWAY DETAILS ON PLANS:

7.75" MAXIMUM RISE & MINIMUM 10" RUN. (R311.7.5)

MINIMUM 6'-8" HEADROOM CLEARANCE. (R311.7.2) MINIMUM 36" CLEAR WIDTH. (R311.7.1)

HANDRAILS 34" TO 38" HIGH ABOVE TREAD NOSING (R311.7.8.1)

HANDGRIP PORTION OF HANDRAIL SHALL NOT BE LESS THAN 1.25" AND NO MORE THAN 2" CROSS-SECTIONAL DIMENSION HAVING A SMOOTH SURFACE WITH NO SHARP CORNERS. (R311.7.7.3)

MAXIMUM 4" CLEAR SPACING OPENING BETWEEN RAILS. (R312.1.3) ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS, UNDER-STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2 INCH GYPSUM BOARD. (R302.7)

ALL INTERIOR AND EXTERIOR STAIRWAYS SHALL BE ILLUMINATED. (R303.7) PROVIDE 42" HIGH GUARDS WITH MAXIMUM 4" CLEAR SPACING OPENING BETWEEN RAILS AT (

FOR GLASS HANDRAILS AND GUARDS, THE PANELS AND THEIR SUPPORT SYSTEM SHALL BE DESIGNED TO WITHSTAND THE LOADS SPECIFIED IN CHAPTER 16 OF 2014 LABC. A SAFETY FACTOR OF FOUR SHALL BE USED. THE MINIMUM NOMINAL THICKNESS OF THE GLASS SHALL BE 1/4 INCH. (2407)

## WATER CONSERVATION:

THE PROJECT SHALL DEMONSTRATE A 2-% REDUCTION IN WATER USE BY SPECIFYING PLUMBING FIXTURES AND FIXTURES THAT MEET THE FLOW RATES LISTED BELOW, OR THROUGH A CALCULATION SHOWING A 20% REDUCTION FROM BASELINE VALUES LISTED IN CALGREEN TABLE 4.303.1.

SHOWERHEADS 2.0 GALLONS PER MINUTE (GPM) 1\* LAVATORY FAUCET- RESIDENTIAL 1.5 GPM KITCHEN FAUCETS 1.8 GPM WATER CLOSETS 1.28 GALLONS PER FLUSH 2\* URINALS 0.5 GALLON PER FLUSH METERING FAUCETS 0.2 GALLON PER CYCLE

THE COMBINED FLOW RATE OF MULTIPLE SHOWER HEADS SHALL NOT EXCEED THE MAXIMUM FLOW RATE, OR THE SHOWER SHALL BE DESIGNED TO PERMIT ONE SHOWERHEAD TO BE IN OPERATION AT A TIME.

THE EFFECTIVE FLUSH VOLUME FOR DUAL-FLUSH TOILETS IS DEFINED AS THE COMPOSITE, AVERAGE FLUSH VOLUME OF TWO REDUCED FLUSHES AND ONE FULL FLUSH.

PANELS SHALL NOT BE LOCATED IN THE VICINITY OF EASILY IGNITABLE MATERIAL, SUCH AS CLOTHES

PROTECTED BY RIGID METAL CONDUIT, INTERMEDIATE METAL CONDUIT, ELECTRICAL METALLIC TUBING, SCHEDULE 80 PVC CONDUIT, PIPE, OR OTHER MEANS WHEN CABLE IS EXPOSED OR SUBJECT TO PHYSICAL DAMAGE. (CEC 334.15(B)) PROTECTED BY A 1.16 INCH STEEL PLATE OR SLEEVE, OR BE NOT LESS THAN 1-1/4 INCH FROM THE NEAREST EDGE OF THE FRAMING MEMBER, WHEN INSTALLED THROUGH FRAMING MEMBERS. STEEL

PLATES OR SLEEVES ARE REQUIRED ON ALL DOUBLE SHEAR WALLS WHEN CABLE IS INSTALLED EITHER THROUGH OR PARALLEL TO FRAMING MEMBERS (CEC 334.17). PROTECTED BY GUARD STRIPS WITHIN 6FT OF AN ATTIC ACCESS WHEN NO PERMANENT STAIRS OR LADDERS ARE PROVIDED. (CEC 334.23, 320.23)

PROTECTED BY GUARD STRIPS IN THE ENTIRE ATTIC WHEN PERMANENT STAIRS OR LADDERS ARE PROVIDED, ACCESS PANELS OR DOORS FROM THE SECOND FLOOR INTO THE ATTIC ARE CONSIDERED PERMANENT ACCESS AND GUARD STRIPS ARE REQUIRED IN THE ENTIRE ATTIC. HAVE A BENDING RADIUS NOT LESS THAN 5 TIMES THE DIAMETER OF THE CABLE (CEC 334.24). SUPPORTED AT INTERVALS NOT EXCEEDING 4-1/2 FEET AND WITHIN 12" OF EVERY OUTLET BOX,

JUNCTION BOX, CABINET OR FITTING (CEC 334.30). C. CIRCUITS AND RECEPTACLES RECEPTACLES SHALL BE INSTALLED SO THAT NO POINT ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6 FT. FROM AN OUTLET, INCLUDING ANY WALL SPACE 2 FT. WIDE OR

GREATER. NOTE: A FIXED PANEL OF A SLIDING GLASS DOOR IS CONSIDERED WALL SPACE. IN KITCHENS, BREAKFAST ROOMS, PANTRIES AND DINING ROOMS A MINIMUM OF 2-20A CICUITS SHALL BE PROVIDED (CEC 210.11 (C)(1)).

COUNTER SPACE RECEPTACLES SHALL BE GFCI (CEC 210.8 (A)) AND INSTALLED: - AT EACH WALL COUNTER SPACE THAT IS 12 IN. OR GREATER (CEC 210.52 (C)(1)); - NO MORE THAN 48 IN. OC. (CEC 210.52 (C)(1));

- MAXIMUM 24 IN. FROM THE END OF THE COUNTER (CEC 210.52 (C)(1)) - MAXIMUM 20 IN. ABOVE COUNTER SURFACE (CEC 210.52 (C)(5)); - ON ISLAND COUNTER SPACES (ONE RECEPTACLE MIN.) NOT MORE THAN 12 IN. BELOW COUNTER SURFACE (CEC 210.52 (C)(5) EXCEPTION). AN ISLAND WITH LESS THAN 12" BEHIND A RANGE TOP OF SINK IS CONSIDERED AS DIVIGING THE COUNTERTOP INTO TWO SEPARATE SPACES (CEC 210.52 (C)(2))

- ON PENINSULAR COUNTER SPACES (ONE RECEPTACLE MIN.) NOT MORE THAN 12 IN. BELOW COUNTER SURFACE (CEC) 210.52 (C)(5) EXCEPTION)); BATHROOMS SHALL HAVE A SEPARATE 20A CIRCUIT (CEC 210.11 (C)(3)) WITH AT LEAST ONE GFCI WALL RECEPTCLE WITHIN 36 IN. OF EACH BASIN (CEC 210.8 (A)(1); CEC 210.52 (D))

LAUNDRY ROOMS SHALL HAVE A SEPARATE 20A CIRCUIT WITH AT LEAST ONE RECEPTACLE SHALL BE PROVIDED (CEC 210.11 (C)(2)). ALL RECEPTACLES WITHIN 6 FT. OF A SINK SHALL BE GFCI IN GARAGES, AT LEAST ONE GFCI RECEPTACLE SHALL BE PROVIDED (CEC 210.52 (G)). ALL OTHER GARAGE RECEPTACLES EXCEPT THOSE DEDICATED TO AN APPLIANCE

IN HALLWAYS OF 10 FT. OR MORE IN LENGTH, AT LEAST ONE RECEPTACLE SHALL BE PROVIDED (CEC 210.52 (H)). OUTDOOR OUTLETS SHALL BE GFCI (CEC 210.8 (3)). ONE OUTLET SHALL BE INSTALLED AT THE FRONT OF THE DWELLING AND ONE AT THE REAR OF THE DWELLING. RECEPTACLES SHALL BE

ACCESSIBLE AT GRADE LEVEL AND NOT MORE THAN 6-1/2 FT. ABOVE GRADE (CEC 210.52 (E)). ALL CRAWL SPACE RECEPTACLES SHALL BE GFCI (CEC 210.8(A)(4)) ALL UNFINISHED BASEMENT RECEPTACLES SHALL BE GFCI UNLESS THEY ARE NOT READILY ACCESSIBLE OR ARE SERVICE A DEDICATED APPLIANCE (CEC 210.8 (A)(5)).

ALL RECEPTACLES WITHIN 6FT. OF A WET BAR SHALL BE GFCI (CEC 210.8(A)(7)) ALL RECEPTACLES ON 15A OR 20A BRANCH CIRCUITS THAT SUPPLY FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY COMBINATION-TYPE ARC-FAULT CIRCUIT INTERRUPTERS (AFCI), INCLUDING SWITCHED OUTLETS

(CEC 210.12(B)) ALL RECEPTACLES SERVING APPLIANCES OR MOTORS WITH A RATING OF 1 HP OR 6 AMPS SHALL BE ON A SEPARATE CIRCUIT.

FOR HVAC EQUIPMENT, A SEPARATE 15A OR 20A CIRCUIT WITH AN ACCESSIBLE RECEPTACLE AT THE EQUIPMENT SHALL BE PROVIDED WITHIN 25 FT OF THE EQUIPMENT (CEC 210.63). IF LOCATED IN AN UNDER FLOOR AREA, THE RECETACLE SHALL BE GFCI (CEC 210.8 (4)). D. LIGHTING (CEC 210.70)

 SWITCHED LIGHTING SHALL BE INSTALLED IN: - ALL HABITABLE ROOMS, BATHROOMS, HALLWAYS, AND STAIRWAYS AT EACH LEVEL, - AT ALL OUTDOOR ENTRANCES AND EXITS, - IN ALL ATTICS, UNDER FLOOR AREAS, UTILITY ROOMS AND BASEMENTS USED FOR

 NEAR HVAC EQUIPMENT IN ATTIC, UNDER FLOOR AREAS, ROOMS OR BASEMENTS, WITH A SWITCH AT THE ACCESS POINT. LIGHTING INSTALLED IN A CLOSET SHALL BE A SURFACE MOUNTED OR RECESSED FLUORESCENT

FIXTURE OR A SURFACE MOUNTED INCANDESCENT FIXTURE WITH COMPLETELY ENCLOSED LAMPS OR RECESSED INCANDESCENT FIXTURE WITH COMPLETELY ENCLOSED LAMPS. SURFACE INCANDESCENT LIGHTING SHALL BE INSTALLED A MINIMUM OF 12 IN. FROM THE NEAREST POINT OF A STORAGE SPACE. SURFACE FLUORESCENT LIGHTING AND RECESSED LIGHTING SHALL BE INSTALLED A MINIMUM OF 6 IN. FROM THE NEAREST POINT OF A STORAGE SPACE. (CEC 410.8. (D)).

IN BATHROOMS CONTAINING TUBS OR SHOWERS, A FAN CAPABLE OF EXHAUSTING 50 CFM SHALL BE INSTALLED (ENERGY STANDARDS 150 (O)).

IN NEW CONSTRUCTION, SMOKE ALARMS SHALL RECIEVE THEIR PRIMARY POWER FROM THE BUILDING WIRING. THE WIRING SHALL BE PERMANENT AND INSTALLED WITHOUT A DISCONNECTING SWITCH OTHER THAN THOSE REQUIRED FOR OVERCURRENT PROTECTION (CRC R314.4).

# **BUILDING ENVELOPE:**

PROVIDE A CLASS A, B OR C FIRE-RETARDANT ROOF COVERING PER SECTION R902.1 GLAZING IN THE FOLLOWING LOCATIONS SHALL BE SAFETY GLAZING CONFORMING TO THE HUMAN IMPACT LOADS OF SECTION R308.3 (SEE EXCEPTIONS) (R308.4):

> FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BI-FOLD DOOR ASSEMBLIES. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE IS WITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR OR WALKING SURFACE.

> GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS: 1) EXPOSED AREA OF AN INDIVIDUAL PANE GREATER THAN 9 SQUARE FEET.

2) BOTTOM EDGE LESS THAN 18 INCHES ABOVE THE FLOOR. 3) TOP EDGE GREATER THAN 36 INCHES ABOVE THE FLOOR. 4) ONE OR MORE WALKING SURFACES WITHIN 36 INCHES HORIZONTALLY OF THE

GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 36 INCHES ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE OF STAIRWAYS, LANDINGS BETWEEN FLIGHTS OF STAIRS LOTS SHALL BE GRADED TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS WITH A MINIMUM FALL OF 6 INCHES WITHIN THE FIRST 10 FEET (R401.3).

DAMPPROOFING, WHERE REQUIRED, SHALL BE INSTALLED WITH MATERIALS AND AS REQUIRED IN SECTION BUILDINGS SHALL HAVE APPROVED ADDRESS NUMBERS, BUILDING NUMBERS OR APPROVED BUILDING IDENTIFICATION PLACED IN A POSITION THAT IS PLAINLY LEGIBLE AND VISIBLE FROM THE STREET OR ROAD

FRONTING THE PROPERTY. (R319.1) PROTECTION OF WOOD AND WOOD BASED PRODUCTS FROM DECAY SHALL BE PROVIDED IN THE LOCATIONS SPECIFIED PER SECTION R317.1 BY THE USE OF NATURALLY DURABLE WOOD OR WOOD THAT IS PRESERVATIVE-TREATED IN ACCORDANCE WITH AWPA U1 FOR THE SPECIES, PRODUCT, PRESERVATIVE

AND END USE. PRESERVATIVES SHALL BE LISTED IN SECTION 4 OF AWPA U1. PROVIDE ANTI-GRAFFITI FINISH WITHIN THE FIRST 9 FEET, MEASURED FROM GRADE, AT EXTERIOR WALLS AND DOORS. EXCEPTION: MAINTENANCE OF BUILDING AFFIDAVIT IS RECORDED BY THE OWNER TO COVENANT AND AGREE WITH THE CITY OF LOS ANGELES TO REMOVE ANY GRAFFITI WITHIN 7-DAYS OF THE GRAFFITI BEING APPLIED. (6306)

## FIRE DEPARTMENT NOTES:

APPROVED BUILDING ADDRESS NUMBERS, BUILDING NUMBERS OR APPROVED BUILDING IDENTIFICATION SHALL BE PROVIDED AND MAINTAINED SO AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET FRONTING THE PROPERTY. THE NUMBERS SHALL CONTRAST WITH THEIR BACKGROUND, BE ARABIC NUMERALS OR ALPHABET LETTERS, AND BE A MINIMUM OF 4 INCHES HIGH WITH A MINIMUM STROKE WIDTH OF 0.5 INCH. FIRE CODE 505.1

ALL FIRE HYDRANTS SHALL MEASURE 6" X 4" X 2-1/2", BRASS OR BRONZE, CONFORMING TO AMERICAN WATER WORKS ASSOCIATION STANDARD C503, OR APPROVED EQUAL, AND SHALL BE INSTALLED IN ACCORDANCE WITH THE COUNTY OF LOS ANGELES FIRE DEPARTMENT REGULATION 8 THE MEANS OF EGRESS, AND EXIT DISCHARGE, SHALL BE ILLUMINATED AT ANY TIME THE BUILDING IS OCCUPIED WITH A LIGHT INTENSITY OF NOT LESS THAN 1 FOOT-CANDLE AT THE WALKING SURFACE LEVEL.

BUILDING CODE 1006.2 THE POWER SUPPLY FOR MEANS OF EGRESS ILLUMINATION SHALL NORMALLY BE PROVIDED BY THE PREMISES ELECTRICAL SUPPLY. IN THE EVENT OF POWER SUPPLY FAILURE, THE EMERGENCY POWER SYSTEM SHALL PROVIDE POWER FOR A DURATION OF NOT LESS THAN 90 MINUTES AND SHALL CONSIST OF STORAGE BATTERIES, UNIT EQUIPMENT OR AN ON-SITE GENERATOR. BUILDING CODE 1006.3 THE MINIMUM WIDTH OF EACH DOOR OPENING SHALL BE SUFFICIENT FOR THE OCCUPANT LOAD THEREOF

AND SHALL PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES. THE HEIGHT OF DOORS SHALL NOT BE LESS THAN 80 INCHES. BUILDING CODE 1008.1.1 EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. BUILDING CODE 1008.1.9

STORED IN BUILDINGS OR PLACED WITHIN 5 FEET OF CONMBUSTIBLE WALLS, OPENINGS OR COMBUSTIBLE

EXITS, EXIT ACCESS DOORS AND PATHS OF EGRESS TRAVEL THAT IS NOT IMMEDIATELY VISIBLE TO THE OCCUPANTS SHALL BE MARKED BY AN APPROVED EXIT SIGN THAT IS READILY VISIBLE FROM THE ANY DIRECTION OF EGRESS TRAVEL. EXIT SIGNS SHALL BE INTERNALLY OR EXTERNALLY ILLUMINATED. **BUILDING CODE 1011** DUMPSTER AND CONTAINERS WITH AN INDIVIDUAL CAPACITY OF 1.5 CUBIC YARDS OR MORE SHALL NOT BE

ROOF EAVES, UNLESS AREAS CONTAINING DUMPSTERS OR CONTAINERS ARE PROTECTED BY AN

APPROVED AUTOMATIC FIRE SPRINKLER SYSTEM. FIRE CODE 304.3.3

GENERAL NOTES:

SIGNED AND SUBMITTED COMPLIANCE DOCUMENTS FOR THE BUILDING OWNER AT OCCUPANCY. FOR LOW-RISE RESIDENTIAL BUILDINGS, SUCH INFORMATION SHALL, AT A MINIMUM, INCLUDE COPIES OF ALL CERTIFICATE OF COMPLIANCE, CERTIFICATE OF INSTALLATION, AND CERTIFICATE OF VERIFICATION DOCUMENTATION SUBMITTED. . [10-103(B)1] OPERATING INFORMATION. THE BUILDER SHALL PROVIDE THE BUILDING OWNER AT OCCUPANCY, OPERATING

COMPLIANCE INFORMATION THE BUILDER SHALL LEAVE IN THE BUILDING, COPIES OF THE COMPLETED,

INFORMATION FOR ALL APPLICABLE FEATURES, MATERIALS, COMPONENTS, AND MECHANICAL DEVICES INSTALLED IN THE BUILDING. OPERATING INFORMATION SHALL INCLUDE INSTRUCTIONS ON HOW TO OPERATE THE FEATURES, MATERIALS, COMPONENTS, AND MECHANICAL DEVICES CORRECTLY AND EFFICIENTLY. THE INSTRUCTIONS SHALL BE CONSISTENT WITH SPECIFICATIONS SET FORTH BY THE EXECUTIVE DIRECTOR. FOR RESIDENTIAL BUILDINGS, SUCH INFORMATION SHALL BE CONTAINED IN A FOLDER OR MANUAL WHICH PROVIDES ALL CERTIFICATE OF COMPLIANCE, CERTIFICATE OF INSTALLATION, AND CERTIFICATE OF VERIFICATION DOCUMENTATIONS. THIS OPERATING INFORMATION

SHALL BE IN PAPER OR ELECTRONIC FORMAT. [10-103(B)2] MAINTENANCE INFORMATION. THE BUILDER SHALL PROVIDE TO THE BUILDING OWNER AT OCCUPANCY MAINTENANCE INFORMATION FOR ALL FEATURES, MATERIALS, COMPONENTS, AND MANUFACTURED DEVICES THAT REQUIRE ROUTINE MAINTENANCE FOR EFFICIENT OPERATION. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY STATED AND INCORPORATED ON A READILY ACCESSIBLE LABEL. THE LABEL MAY BE LIMITED TO IDENTIFYING, BY TITLE AND/OR PUBLICATION NUMBER, THE OPERATION AND MAINTENANCE MANUAL FOR THAT PARTICULAR MODEL AND TYPE OF FEATURE, MATERIAL, COMPONENT OR

MANUFACTURED DEVICE. [10-103(B)3] VENTILATION INFORMATION. THE BUILDER SHALL PROVIDE TO THE BUILDING OWNER AT OCCUPANCY, A DESCRIPTION OF THE QUANTITIES OF OUTDOOR AIR THAT THE VENTILATION SYSTEM(S) ARE DESIGNED TO PROVIDE TO THE BUILDING'S CONDITIONED

SPACE, AND INSTRUCTIONS FOR PROPER OPERATION AND MAINTENANCE OF THE VENTILATION SYSTEM. [10-ALL SYSTEMS, EQUIPMENT, APPLIANCES AND BUILDING COMPONENTS SHALL COMPLY WITH THE APPLICABLE MANUFACTURING, CONSTRUCTION, AND INSTALLATION

PROVISIONS OF SECTIONS 110.0 THROUGH 110.11 FOR NEWLY CONSTRUCTED BUILDINGS ANY APPLIANCE REGULATED BY THE APPLIANCE EFFICIENCY REGULATIONS, TITLE 20 CALIFORNIA CODE OF REGULATIONS, SECTION 1601 ET SEQ., MAY BE INSTALLED ONLY IF THE APPLIANCE FULLY COMPLIES WITH SECTION 1608(A) OF THOSE REGULATIONS. [110.1(A)] SERVICE WATER-HEATING SYSTEMS SHALL BE EQUIPPED WITH AUTOMATIC TEMPERATURE CONTROLS

CAPABLE OF ADJUSTMENT FROM THE LOWEST TO THE HIGHEST ACCEPTABLE TEMPERATURE SETTINGS FOR THE INTENDED USE AS LISTED IN TABLE 3, CHAPTER 50 OF THE ASHRAE HANDBOOK, HVAC APPLICATIONS VOLUME, [110.3(A)1] ON SYSTEMS THAT HAVE A TOTAL CAPACITY GREATER THAN 167,000 BTU/HR, OUTLETS THAT REQUIRE

HIGHER THAN SERVICE WATER TEMPERATURES AS LISTED IN THE ASHRAE HANDBOOK, APPLICATIONS VOLUME, SHALL HAVE SEPARATE REMOTE HEATERS, HEAT EXCHANGERS, OR BOOSTERS TO SUPPLY THE OUTLET WITH THE HIGHER TEMPERATURE. [110.3(C)1] SERVICE HOT WATER SYSTEMS WITH CIRCULATING PUMPS OR WITH ELECTRICAL HEAT TRACE SYSTEMS

SHALL BE CAPABLE OF AUTOMATICALLY TURNING OFF THE SYSTEM. [110.3(C)2] CONTROLS FOR SERVICE WATER-HEATING SYSTEMS SHALL LIMIT THE OUTLET TEMPERATURE AT PUBLIC LAVATORIES TO 110F. [110.3(C)3]

UNFIRED SERVICE WATER-HEATER STORAGE TANKS AND BACKUP TANKS FOR SOLAR WATER-HEATING SYSTEMS SHALL HAVE: EXTERNAL INSULATION WITH AN INSTALLED R-VALUE OF AT LEAST R-12, OR

INTERNAL AND EXTERNAL INSULATION WITH A COMBINED R-VALUE OF AT LEAST R-16, OR THE HEAT LOSS OF THE TANK SURFACE BASED ON AN 80F WATER-AIR TEMPERATURE DIFFERENCE SHALL BE LESS THAN 6.5 BTU/HR PER SQUARE FOOT. [110.3 (C)4] FOR NONRESIDENTIAL, HIGH-RISE RESIDENTIAL, AND HOTEL/MOTEL BUILDINGS, SPACE CONDITIONING

SYSTEMS SHALL MEET THE EFFICIENCY STANDARDS SPECIFIED SECTION 120.2. CONTINUOUSLY BURNING PILOT LIGHT SHALL BE PROHIBITED FOR THE FOLLOWING NATURAL GAS SYSTEM OR EQUIPMENT LISTED BELOW: [110.5] FAN-TYPE CENTRAL FURNACES

HOUSEHOLD COOKING APPLIANCES, EXCEPT FOR HOUSEHOLD COOKING APPLIANCES WITHOUT AN ELECTRICAL SUPPLY VOLTAGE CONNECTION AND IN WHICH EACH PILOT CONSUMES LESS THAN 150 BTU/HR

POOL HEATERS SPA HEATERS

ANY POOL OR SPA HEATING SYSTEM OR EQUIPMENT SHALL: [110.4] A THERMAL EFFICIENCY THAT COMPLIES WITH THE APPLIANCE EFFICIENCY REGULATIONS HAVE A READILY ACCESSIBLE ON-OFF SWITCH, MOUNTED ON THE OUTSIDE OF THE HEATER THAT ALLOWS SHUTTING OFF THE HEATER WITHOUT ADJUSTING THE THERMOSTAT SETTING. NOT UTILIZE ELECTRIC RESISTANCE HEATING.

HAVE A COVER FOR OUTDOOR POOLS OR SPAS THAT HAVE A HEAT PUMP OR GAS HEATER. HAVE A PERMANENT, EASILY READABLE, AND WEATHERPROOF INSTRUCTION CARD THAT GIVES INSTRUCTIONS FOR THE ENERGY EFFICIENT OPERATION OF THE POOL OR SPA HEATER AND FOR THE PROPER CARE OF POOL OR SPA WATER WHEN A COVER IS USED

HAVE AT LEAST 36 INCHES OF PIPE INSTALLED BETWEEN THE FILTER AND HEATER OR DEDICATED SUCTION AND RETURN LINES, OR BUILT-IN OR BUILT-UP CONNECTIONS SHALL BE INSTALLED TO ALLOW FOR THE FUTURE ADDITION OF SOLAR HEATING EQUIPMENT HAVE DIRECTIONAL INLETS FOR THE POOL OR SPA THAT ADEQUATELY MIX THE POOL WATER.

A TIME SWITCH OR SIMILAR CONTROL MECHANISM SHALL BE INSTALLED AS PART OF A POOL WATER CIRCULATION CONTROL SYSTEM THAT WILL ALLOW ALL PUMPS TO BE SET OR PROGRAMMED TO RUN ONLY DURING THE OFF-PEAK ELECTRIC DEMAND PERIOD AND FOR THE MINIMUM TIME NECESSARY TO MAINTAIN THE WATER IN THE CONDITION REQUIRED BY APPLICABLE PUBLIC HEALTH STANDARDS. MANUFACTURED FENESTRATION PRODUCTS AND EXTERIOR DOORS SHALL HAVE AIR INFILTRATION RATES NOT EXCEEDING 0.3 CFM/FT2 OF WINDOW AREA, 0.3 CFM/FT2 OF RESIDENTIAL DOOR AREA, 0.3 CFM/FT2 OF

NONRESIDENTIAL SINGLE DOOR AREA, AND 1.0 CFM/FT2 OF NONRESIDENTIAL DOUBLE DOOR AREA. [110.6(A)1] FENESTRATION PRODUCTS SHALL BE RATED IN ACCORDANCE WITH NFRC 100 FOR U-FACTOR, NFRC 200 FOR SHGC, AND VT OR USE THE APPLICABLE DEFAULT VALUE. FENESTRATION PRODUCTS SHALL HAVE A TEMPORARY LABEL FOR MANUFACTURED FENESTRATION PRODUCTS OR A LABEL CERTIFICATE WHEN THE COMPONENT MODELING APPROACH IS USED AND FOR SITE-BUILT FENESTRATION MEETING THE

REQUIREMENTS OF SECTION 10-111(A)1. [110.6(A)2, 110.6(A)3, 110.6(A)4, 110.6(A)5] FIELD-FABRICATED FENESTRATION PRODUCTS AND EXTERIOR DOORS, OTHER THAN UNFRAMED GLASS DOORS AND FIRE DOORS. SHALL BE CAULKED BETWEEN THE FENESTRATION PRODUCTS OR EXTERIOR DOOR AND THE BUILDING. AND SHALL BE WEATHERSTRIPPED, [110.6(B)]

JOINTS, PENETRATIONS AND OTHER OPENINGS IN THE BUILDING ENVELOPE THAT ARE POTENTIAL SOURCES OF AIR LEAKAGE SHALL BE CAULKED, GASKETED, WEATHER STRIPPED, OR OTHERWISE SEALED TO LIMIT INFILTRATION AND EXFILTRATION. [110.7] INSULATION SHALL BE CERTIFIED BY DEPARTMENT OF CONSUMER AFFAIRS, BUREAU OF HOME FURNISHING

AND THERMAL INSULATION THAT THE INSULATION CONDUCTIVE THERMAL PERFORMANCE IS APPROVED PURSUANT TO THE CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 12, CHAPTER 12-13, ARTICLE 3, "STANDARDS FOR INSULATING MATERIAL." [110.8(A)] UREA FORMALDEHYDE FOAM INSULATION MAY ONLY BE USED IN EXTERIOR SIDE WALLS, AND REQUIRES A FOUR-MIL-THICK PLASTIC POLYETHYLENE VAPOR BARRIER BETWEEN THE UREA FORMALDEHYDE FOAM INSULATION AND THE INTERIOR SPACE IN ALL APPLICATIONS. [110.8(B)]

INSULATING MATERIAL SHALL BE INSTALLED IN COMPLIANCE WITH THE FLAME SPREAD RATING AND SMOKE DENSITY REQUIREMENTS OF THE CBC. [110.8(C)] INSULATION INSTALLED ON AN EXISTING SPACE CONDITIONING DUCT, IT SHALL COMPLY WITH SECTION 604.0

OF THE CMC. [110.8(D)3] EXTERNAL INSULATION INSTALLED ON AN EXISTING UNFIRED WATER STORAGE TANK OR ON AN EXISTING BACK-UP TANK FOR A SOLAR WATER-HEATING SYSTEM, IT SHALL HAVE AN R-VALUE OF AT LEAST R-12, OR

THE HEAT LOSS OF THE TANK SURFACE BASED ON AN 80 EF WATER-AIR TEMPERATURE DIFFERENCE SHALL BE LESS THAN 6.5 BTU PER HOUR PER SQUARE FOOT. . [110.8(D)2]

## STORM WATER MANAGEMENT:

ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEETFLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES OR WINDS. STOCKPILES OF EARTH AND OTHER CONSTRUCTION RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER. FUELS, OILS, SOLVENTS AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTING AND ARE NOT TO CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM. NON-STORMWATER RUNOFF FROM EQUIPMENT AND VEHICLE WASHING AND ANY OTHER ACTIVITY SHALL BE CONTAINED AT THE PROJECT SITE.

EXCESS OR WASTE CONCRETE MAY NOT BE WASHED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.

TRASH AND CONSTRUCTOIN RELATED SOLID WASTES MUST BE DEPOSITED INTO A CONVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPEARSAL BY WIND. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DESPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR

OTHER MEANS. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER. SCHEDULE CONSTRUCTION ACTIVITY TO REDUCE AREA AND DURATION OF SOIL EXPOSED TO EROSION BY

WIND, RAIN, RUNOFF AND VEHICLE TRACKING.

## INTERIOR ENVIRONMENT:

PROVIDE 15" MINIMUM BETWEEN THE CENTER OF WATER CLOSET TO ANY SIDE WALL. (CALIF. PLUMB. CODE PROVIDE 24" CLEAR SPACE IN FRONT OF ANY WATER CLOSET. (CALIF. PLUMB. CODE 407.6) BATHROOMS, WATER CLOSET COMPARTMENTS AND OTHER SIMILAR ROOMS SHALL BE PROVIDED NATURAL VENTILATION OR WITH MECHANICAL VENTILATION CAPABLE OF 50 CFM EXHAUSTED DIRECTLY TO THE

HEATER SHALL BE CAPABLE OF MAINTAINING A MINIMUM ROOM TEMPERATURE OF 68F AT A POINT 3 FEET ABOVE THE FLOOR AND 2 FEET FROM EXTERIOR WALLS IN ALL HABITABLE ROOMS AT THE DESIGN TEMPERATURE. (R303.9)

**RESIDENTIAL NOTES:** 

A MASONRY OR FACTORY-BUILT FIREPLACE SHALL HAVE THE FOLLOWING: [150.0(E)1] CLOSEABLE METAL OR GLASS DOORS COVERING THE ENTIRE OPENING OF THE FIREBOX; A COMBUSTION AIR INTAKE TO DRAW AIR FROM THE OUTSIDE OF THE BUILDING DIRECTLY INTO THE FIREBOX, WHICH IS AT LEAST SIX SQUARE INCHES IN AREA AND IS EQUIPPED WITH A READILY ACCESSIBLE, OPERABLE, AND TIGHT-FITTING DAMPER OR COMBUSTION-AIR CONTROL DEVICE (EXCEPTION: AN OUTSIDE COMBUSTION-AIR INTAKE IS NOT REQUIRED IF THE FIREPLACE WILL BE INSTALLED OVER CONCRETE SLAB FLOORING AND THE FIREPLACE WILL NOT BE LOCATED ON AN

A FLUE DAMPER WITH A READILY ACCESSIBLE CONTROL. [150.0 (E)C]

HEATING OR COOLING SYSTEMS SHALL BE EQUIPPED WITH A SETBACK THERMOSTAT THAT MEET THE REQUIREMENTS OF SECTION 110.2(C). [150.0(I)]

GAS OR PROPANE WATER HEATERS SHALL HAVE: [150.0(N)] A 120V ELECTRICAL RECEPTACLE THAT IS WITHIN 3 FEET FROM THE WATER HEATER. A CATEGORY III OR IV VENT, OR A TYPE B VENT WITH STRAIGHT PIPE.

CONDENSATE DRAIN THAT IS NO MORE THAN 2 INCHES HIGHER THAN THE BASE. A GAS SUPPLY LINE WITH A CAPACITY OF AT LEAST 200,000 BTU/HR ALL PUMPS AND PUMP MOTORS INSTALLED SHALL BE LISTED IN THE COMMISSION'S DIRECTORY OF CERTIFIED EQUIPMENT AND SHALL COMPLY WITH THE APPLIANCE EFFICIENCY REGULATIONS. [150.0(P)1.A] THE MINIMUM INSTALLED WEIGHT PER SQUARE FOOT OF ANY LOOSE-FILL INSULATION SHALL CONFORM

WITH THE INSULATION MANUFACTURER'S LABELED R-VALUE. [150.0 (B)] THE MINIMUM DEPTH OF CONCRETE-SLAB FLOOR PERIMETER INSULATION SHALL BE 16 INCHES OR THE DEPTH OF THE FOOTING OF THE BUILDING, WHICHEVER IS LESS. [150.1(C)(1)(D)]

THE CRAWL SPACE SHALL BE COVERED WITH A VAPOR RETARDER OVER THE ENTIRE FLOOR. [150.1(C)1.D]

INSULATIONS ARE REQUIRED FOR: [150.0(J)2.A] ALL HOT WATER PIPES FROM THE HEATING SOURCE TO THE KITCHEN FIXTURES.

ALL PIPING WITH A NOMINAL DIAMETER OF 3/4 INCH OR LARGER THE FIRST 5 FEET (1.5 METERS) OF HOT AND COLD WATER PIPES FROM THE STORAGE TANK. ALL PIPING ASSOCIATED WITH A DOMESTIC HOT WATER RECIRCULATION SYSTEM.

PIPING FROM THE HEATING SOURCE TO STORAGE TANK OR BETWEEN TANKS. PIPING BURIED BELOW GRADE. INSULATION SHALL BE PROVIDED FOR WATER HEATERS AS FOLLOWS: UNFIRED HOT WATER TANKS, SUCH AS STORAGE TANKS AND BACKUP STORAGE TANKS FOR SOLAR

WATER-HEATING SYSTEMS, SHALL BE EXTERNALLY WRAPPED WITH INSULATION HAVING AN INSTALLED THERMAL RESISTANCE OF R-12 OR GREATER OR HAVE INTERNAL INSULATION OF AT LEAST R-16 AND A LABEL ON THE EXTERIOR OF THE TANK SHOWING THE INSULATION R-VALUE. [150.0 (J)1]

INSTALLED LUMINAIRES SHALL BE CLASSIFIED AS HIGH-EFFICACY IN ACCORDANCE WITH TABLE

EXHAUST FANS SHALL BE SWITCHED SEPARATELY FROM LIGHTING SYSTEMS. LUMINARIES SHALL BE SWITCHED WITH READILY ACCESSIBLE CONTROLS THAT PERMIT THE

LUMINARIES TO BE MANUALLY SWITCHED ON AND OFF. LIGHTING INSTALLED IN ATTACHED AND DETACHED GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS, AT LEAST ONE LUMINAIRE IN EACH OF THESE SPACES SHALL BE CONTROLLED BY VACANCY SENSORS.

SOURCES COMPLIANT WITH REFERENCE JOINT APPENDIX JA8. EXCEPTION 1: LUMINAIRES IN CLOSETS LESS THAN 70 SQUARE FEET. **EXCEPTION 2: LUMINAIRES IN HALLWAYS.** A. IN A LOW-RISE MULTIFAMILY RESIDENTIAL BUILDING WHERE THE TOTAL INTERIOR COMMON AREA

DIMMERS OR VACANCY SENSORS SHALL CONTROL ALL LUMINAIRES REQUIRED TO HAVE LIGHT

IN A SINGLE BUILDING EQUALS 20 PERCENT OR LESS OF THE FLOOR AREA, PERMANENTLY INSTALLED LIGHTING FOR THE INTERIOR COMMON AREAS IN THAT BUILDING SHALL BE HIGH EFFICACY LUMINAIRES OR CONTROLLED BY AN OCCUPANT SENSOR.

IN A LOW-RISE MULTIFAMILY RESIDENTIAL BUILDING WHERE THE TOTAL INTERIOR COMMON AREA IN A SINGLE BUILDING EQUALS MORE THAN 20 PERCENT OF THE FLOOR AREA, PERMANENTLY INSTALLED LIGHTING IN THAT BUILDING SHALL

I) COMPLY WITH THE APPLICABLE REQUIREMENTS IN SECTIONS 110.9, 130.0, 130.1, 140.6 AND II) LIGHTING INSTALLED IN CORRIDORS AND STAIRWELLS SHALL BE CONTROLLED BY OCCUPANT SENSORS THAT REDUCE THE LIGHTING POWER IN EACH SPACE BY AT LEAST 50 PERCENT. THE OCCUPANT SENSORS SHALL BE CAPABLE OF TURNING THE LIGHT

### **FOUNDATION NOTES:**

CONCRETE STRENGTH FOR FOUNDATION SHALL BE 2,500 PSI MIN. (CRC R402.2. TABLE R402.2) MINIMUM FOOTING REINFORCEMENT SHALL BE ONE #4 BAR TOP AND BOTTOM (CRC R403.1.3) MINIMUM ANCHOR BOLT SIZE AND SPACING SHALL BE 5.8" DIA. AB @ 72" OC., WITH 7" EMBEDMENT, AND 3" X 3" X 1/4" PLATE WASHERS. ANCHOR BOLTS SHALL BE LOCATED A MAXIMUM OF 12" AND 4 1/2" MINIMUM FROM THE END OF THE PLATE (CRC R403.1.6, R602.11.1).

FULLY ON AND OFF FROM ALL DESIGNED PATHS OF INGRESS AND EGRESS.

## **EXISTING NONCOMPLIANT PLUMBING FIXTURES REPLACEMENT REQUIREMENT:**

SENATE BILL 407 (SB 407) REQUIRES NONCOMPLIANT PLUMBING FIXTURES TO BE REPLACED BY WATER-CONSERVING PLUMBING FIXTURES WHEN A PROPERTY IS UNDERGOING ALTERATIONS OR IMPROVEMENTS. THIS BILL APPLIES TO ALL SINGLE-FAMILY RESIDENTIAL AND MULTI-FAMILY RESIDENTIAL BUILDINGS CONSTRUCTED ON OR BEFORE JANUARY 1, 1994. FIXTURES INCLUDE WATER CLOSETS, URINALS, SHOWERHEADS, LAVATORY FAUCETS, AND KITCHEN FAUCETS. NONCOMPLIANT FIXTURES CAN ONLY BE REPLACED BY FIXTURES COMPLYING WITH REQUIREMENTS OF CALGREEN AND THE CALIFORNIA PLUMBING CODE.

THE WATER-CONCERVING PLUMBING FIXTURES CERTIFICATE OF COMPLIANCE MUST BE SUBMITTED TO THE BUILDING INSPECTOR PRIOR TO THE FINAL BUILDING INSPECTION.

# **SECURITY REQUIREMENTS:**

ALL ENTRY DOORS TO DWELLING UNITS OR GUEST ROOMS SHALL BE ARRANGED SO THAT THE OCCUPANT HAS A VIEW OF THE AREA IMMEDIATELY OUTSIDE THE DOOR WITHOUT OPENING THE DOOR. SUCH VIEW MAY BE PROVIDED BY A DOOR VIEWER, THROUGH WINDOWS LOCATED IN THE VICINITY OF THE DOOR OR THROUGH VIEW PORTS IN THE DOOR OR ADJOINING WALL. (6706) SCREENS, BARRICADES, OR FENCES MADE OF A MATERIAL WHICH WOULD PRECLUDE HUMAN CLIMBING SHALL BE PROVIDED AT EVERY PORTION OF EVERY ROOF, BALCONY, OR SIMILAR SURFACE WHICH IS

WITHIN 8 FT. OF THE UTILITY POLE OR ACCESS STRUCTURES. (6707) WOOD FLUSH-TYPE DOORS SHALL BE 1 3/8" THICK MINIMUM WITH SOLID CORE CONSTRUCTION. (6709.1) DOOR STOPS OF IN-SWINGING DOORS SHALL BE OF ONE-PIECE CONSTRUCTION WITH THE JAMB, OR JOINED BY RABBET TO THE JAMB. (6709.4)

EVERY DOOR IN A SECURITY OPENING FOR AN APARTMENT HOUSE SHALL BE PROVIDED WITH INCANDESCENT LIGHT BULB (60 WATT MIN) AT A MAXIMUM HEIGHT OF 8 FEET ON THE EXTERIOR SIDE OF ALL PIN-TYPE DOOR HINGES ACCESSIBLE FROM OUTSIDE SHALL HAVE NON-REMOVABLE HINGE PINS.

HINGES SHALL HAVE MIN. 1/4" DIA. STEEL JAMB STUD WITH 1/4" MIN. PROTECTION. THE STRIKE PLATE FOR LATCHES AND HOLDING DEVICE FOR PROJECTING DEAD BOLTS IN WOOD CONSTRUCTION SHALL BE SECURED TO THE JAMB AND THE WALL FRAMING WITH SCREWS NO LESS THAN 2-1/2" LONG. (6709.5, 6709.7) PROVIDE DEAD BOLTS WITH HARDENED INSERTS; DEADLOCKING LATCH WITH KEY-OPERATED LOCKS ON EXTERIOR. DOORS MUST BE OPERABLE FROM THE INSIDE WITHOUT A KEY, SPECIAL KNOWLEDGE, OR

SPECIAL EFFORT (LATCH NOT REQUIRED IN B, F, M AND S OCCUPANCIES). (6709.2) STRAIGHT DEAD BOLTS SHALL HAVE A MIN. THROW OF 1" AND AN EMBEDMENT OF NOT LESS THAN 5/8", AND A HOOK-SHAPED OR AN EXPANDING-LUG DEADBOLT SHALL HAVE A MINIMUM THROW OF 3/4". (6709.2) WOOD PANEL TYPE DOORS MUST HAVE PANELS AT LEAST 9/16 INCH THICK WITH SHAPED PORTIONS OF THE PANELS NOT LESS THAN 1/4 INCH THICK, AND INDIVIDUAL PANELS MUST BE NO MORE THAN 300 SQ. IN. IN AREA. MULLIONS SHALL BE CONSIDERED A PART OF ADJACENT PANELS EXCEPT MULLIONS NOT OVER 18 INCHES LONG MAY HAVE AN OVERALL WIDTH OF NOT LESS THAN 2 INCHES. STILES AND RAILS SHALL BE OF SOLID LUMBER IN THICKNESS WITH OVERALL DIMENSIONS OF NOT LESS THAN 1 3/8 INCHES AND 3 INCHES IN WIDTH. (6709.1 ITEM 2)

TO PROHIBIT RAISING AND REMOVAL OF THE MOVING PANEL FROM THE TRACK WHILE IN THE CLOSED **POSITION.** (6710) SLIDING GLASS DOORS SHALL BE EQUIPPED WITH LOCKING DEVICES AND SHALL BE SO CONSTRUCTED AND

SLIDING GLASS DOORS SHALL BE PROVIDED WITH A DEVICE IN THE UPPER CHANNEL OF THE MOVING PANEL

INSTALLED THAT THEY REMAIN INTACT AND ENGAGED WHEN SUBJECTED TO THE TESTS SPECIFIED IN SEC. METAL OR WOODEN OVERHEAD AND SLIDING DOORS SHALL BE SECURED WITH A CYLINDER LOCK, PADLOCK WITH A MIN. 9/32" DIAMETER HARDENED STEEL SHACKLE BOLTED, HARDENED STEEL HASPS, METAL SLIDE BOARD, BOLT OR EQUIVALENT DEVICE UNLESS SECURED ELECTRICALLY OPERATED. (6711) PROVIDE METAL GUIDES AT TOP AND BOTTOM OF METAL ACCORDION GRATE OR GRILLE-TYPE DOORS AND

WHENEVER THE CYLINDER PROJECTS BEYOND THE FACE OF THE DOOR OR IS OTHERWISE ACCESSIBLE TO GRIPPING TOOLS. (6712) IN GROUP B, F, M, AND S OCCUPANCIES, PANES OF GLAZING WITH AT LEAST ONE DIMENSION GREATER THAN 6 IN. BUT LESS THAN 48 IN, SHALL BE CONSTRUCTED OF TEMPERED OR APPROVED BURGLARY-

CYLINDER LOCKS OR PADLOCKS. CYLINDER GUARDS SHALL BE INSTALLED ON ALL CYLINDER LOCKS

RESISTANT MATERIAL OR PROTECTED WITH METAL BARS OR GRILLES. (6714) GLAZED OPENINGS WITHIN 40" OF THE DOOR LOCK WHEN THE DOOR IS IN THE CLOSED AND LOCKED POSITION, SHALL BE FULLY TEMPERED GLASS OR APPROVED BURGLARY-RESISTANT MATERIAL, OR SHALL BE PROTECTED BY METAL BARS, SCREENS OR

GRILLES HAVING A MAXIMUM OPENING OF 2". THE PROVISIONS OF THIS SECTION SHALL NOT APPLY TO VIEW PORTS OR WINDOWS WHICH DO NOT EXCEED 2" IN THEIR GREATEST DIMENSIONS. (6713) LOUVERED WINDOWS SHALL BE PROTECTED BY METAL BARS OR GRILLES WITH OPENINGS THAT HAVE AT LEAST ONE DIMENSION OF 6" OR LESS, WHICH ARE CONSTRUCTED TO PRECLUDE HUMAN ENTRY. (6715.3) OTHER OPENABLE WINDOWS SHALL BE PROVIDED WITH SUBSTANTIAL LOCKING DEVICES. IN GROUP B, F, M

MINIMUM 9/32" HARDENED STEEL SHACKLES AND BOLTED, HARDENED STEEL HASPS. (6715.2) SLIDING WINDOWS SHALL BE PROVIDED WITH LOCKING DEVICE IN THE UPPER CHANNEL OF THE MOVING PANEL TO PROHIBIT RAISING AND REMOVAL OF THE MOVING PANEL IN THE CLOSED OR PARTIALLY OPEN POSITION. (6715.1) SLIDING WINDOWS SHALL BE EQUIPPED WITH LOCKING DEVICES AND SHALL BE SO CONSTRUCTED AND

AND S OCCUPANCIES, SUCH DEVICES SHALL BE GLIDE BARS, BOLTS, CROSS-BARS, AND/OR PADLOCKS WITH

INSTALLED THAT THEY REMAIN INTACT AND ENGAGED WHEN SUBJECTED TO THE TESTS SPECIFIED IN SEC.

ALL OTHER OPENINGS MUST BE PROTECTED BY METAL BARS OR GRILLES WITH OPENINGS OF NOT LESS

ANY RELEASE FOR METAL BARS, GRILLES, GRATES OR SIMILAR DEVICES CONSTRUCTED TO PRECLUDE HUMAN ENTRY THAT ARE INSTALLED SHALL BE LOCATED ON THE INSIDE OF THE ADJACENT ROOM AND AT LEAST 24 INCHES FROM THE CLOSEST OPENING THROUGH SUCH METAL BARS, GRILLES, GRATES OR

SIMILAR DEVICES THAT EXCEEDS TWO INCHES IN ANY DIMENSION. (6715.4)

THAN 6 INCHES IN ONE DIMENSION. (6716)

CONTRACTOR TO VERIFY ALL

**REVISE DATES:** 

DIMENSIONS, CONDITIONS, ETC., PERTAINING TO THE WORK AT THE SITE BEFORE PROCEEDING WITH THE WORK AS INSTRUMENT OF SERVICE, ALL

DESIGN, IDEAS AND INFORMATION SHOWN ON THESE DRAWINGS ARE AND SHALL REMAIN THE PROPERTY OF **SEC DEVELOPMENT** NO PART THEREOF SHALL BE COPIED, DISCLOSED TO OTHERS, OR USED IN CONNECTION WITH ANY WORK OR PROJECT OTHER THAN THE SPECIFIC PROJECT FOR WHICH THEY HAVE BEEN PREPARED AND DEVELOPED WITHOUT THE WRITTEN CONSENT OF **SEC DEVELOPMENT**. VISUAL CONTACT WITH THESE DRAWINGS SHALL CONSTITUTE CONCLUSIVE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS.

PROJECT INFO 22065 JOB NUMBER: 12/19/22 DATE DRAWN M.A. DRAWN BY: CHECKED BY: V.K. SCALE: N.T.S.

# **WOOD WINDOW SILL PAN FLASHING** A GUIDE TO INSTALLING SLOPED SILL WOOD WINDOWS

Head Flashing

<u>G</u>

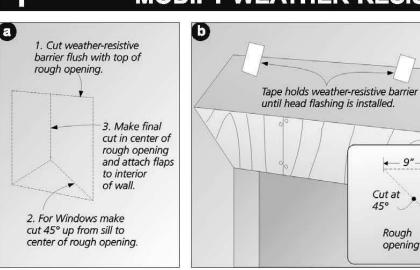
The "Wood Window Sill Pan Flashing" installation guide is designed for wood windows that utilize sloped sills, where the window is installed after the weather-resistive barrier is applied. Fortifiber Bullding Systems Group® provides this installation guide to assist installers by demonstrating an efficient and effective method for exterior window flashing installation. Compliance with the building code and proper installation are critical in reducing potential water leakage points.

- The following Fortifiber products are used in this guide: · FortiFlash Self Adhesive Waterproof Flashing Membrane
- 4, 6, 9, 12, 18 and 36 inch x 75' rolls FortiFlash® Commercial Self Adhesive Waterproof Flashing Membrane
- 6, 9, 12 and 18 Inch x 75' rolls FortiFlash® Butyl Self Adhesive
- Waterproof Flashing Membrane 4. 6. 9 and 12 inch x 75' rolls Moistop E-Z Seal Self Adhesive
- Flashing, 6, 9, 12 inch x 75' rolls Moistop neXT<sup>®</sup> Flashing, 6, 9 and 12
- inch x 200' rolls
- Moistop PF<sup>®</sup> Flashing, 6, 9, 12 and 18 inch x 300' rolls
- Moistop Corner Shield<sup>4</sup> Moistop® Sealant Fortifiber Sheathing Tape

# MODIFY WEATHER-RESISTIVE BARRIER

Cut at 45°

opening \_\_\_\_•

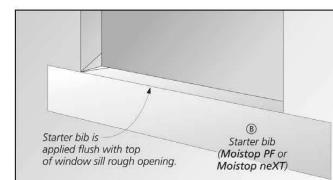


At the rough opening (1a), cut the weather-resistive barrier in an inverted "Y" fashion, and then fasten with the methods show above. To allow for head flashing integration, (1b) make the following diagonal cuts at the top of the rough opening comers. For 9" flashing measure as follows: 9" up and 9" over, (45° angle). Cut on the diagonal from marked point to the rough opening comer. Gently raise the top edge of the weatherresistive barrier and tape the comers and the center to the barrier suface above. This will allow for the installation of the window and the jamb and head flashing later.

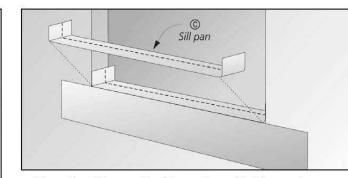
Weather-

Resistive

#### STARTER BIB INSTALL SILL PAN

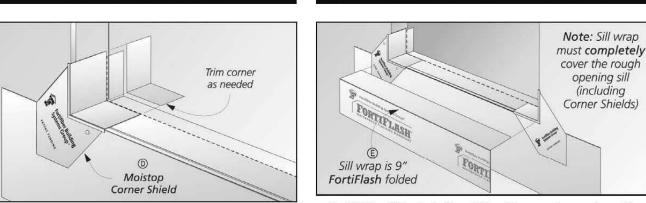


Cut the starter bib to the width of the rough opening plus twice the jamb flashing width, minus 1". Attach the starter bib flush along the bottom of the rough opening.



Place the sill pan with sides upturned in the rough opening. The leading edge of the sill pan must be aligned with the front of the rough opening.

#### 5 INSTALL SILL WRAP SILL CORNERS



Cut 9" FortiFlash to the width of the rough opening. Align Install Moistop Corner Shield at each comer on top of the back edge of FortiFlash to the marked fold line of the sill sill pan. If necessary, trim the back edge of the sill corners so pan and fold over the front of the bib.

NERAL FIBER INSULATION

SEE NOTE 4.

─¾ PLYWOOD SUBFLOOR

INSULATION (NOTE 2)

TWO LAYER OF TYPE "X"

2" x 4" STUDS

GYPSUM BOARD

**GENERAL NOTES:** 

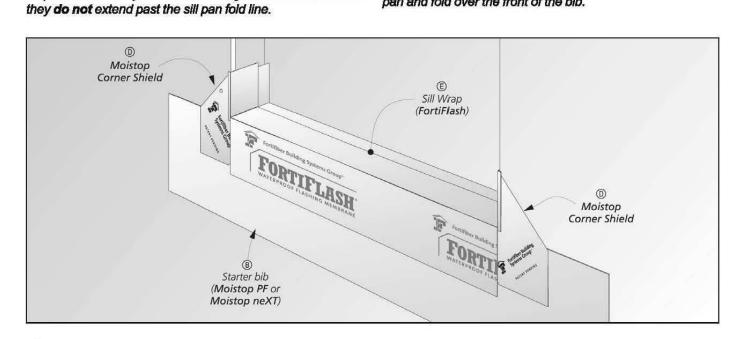
be substituted for carpet and padding in kitchen and bathroom areas, if ceilings are on resilient channels.

4. The mineral fiber insulation shall have a thermal resistance R value of 11 or greater as determined

1. 13 oz. face wt. carpet (31 oz. tot) and 40 oz. jutted pad, or 48 oz. foam rubber, or 3/8" rebonded

2. Type and spacing of resilient channels and the attachment of channels and gypsum board or lath

3. Sheet vinyl and linoleum floor coverings with 1/8" minimum thickness resilient backing may



4. CONCRETE SLAB - WITH CEILING (2 HR.)

MINL LATH AND PLASTER

OR %" MIN. GYPSUM BOARD

5. LT WT. CONC. FILL (2 HR.)

RESILIENT CLIPS OR

CHANNELS - ONE SIDE

urethane foam (4 pcf), or 1/2" urethane foam (2.4 pcf).

shall be as required for fire ratings.

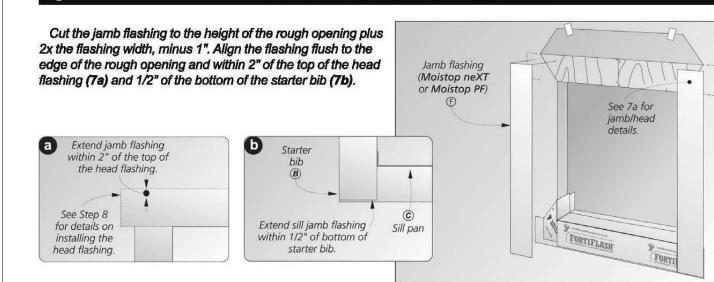
by Federal Specification HH-I-521E.

AS REQUIRED FOR FIRE RATING

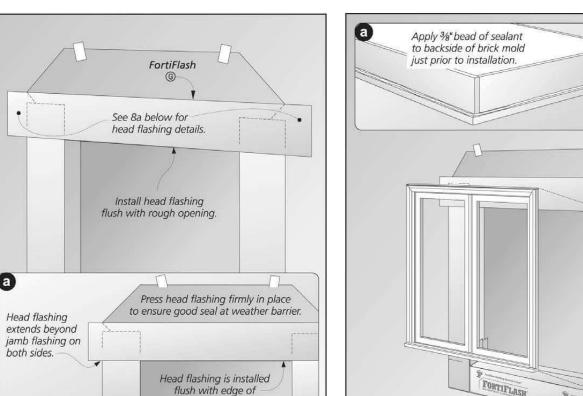
CARPET AND PAD

- 13 LIGHT WEIGHT CONCRETE

# **INSTALL JAMB FLASHING**



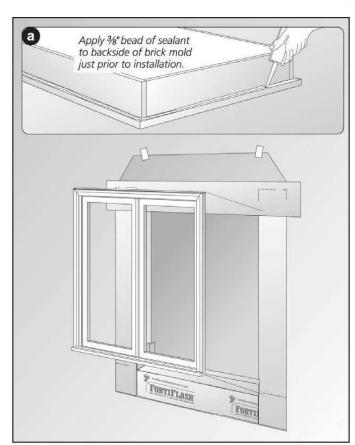
# HEAD FLASHING



Wipe the jamb flashing, weather-resistive barrier, and sheathing with a clean rag. Cut a piece of flashing to size Note: the length of the head flashing is the width of the rough opening + 2x the width of the flashing plus 2" (8a). Install the head flashing by pressing firmly in place in one

rough opening.

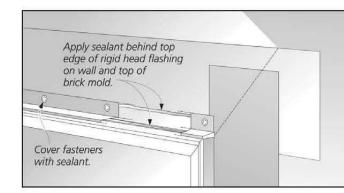
# **INSTALL WINDOW**



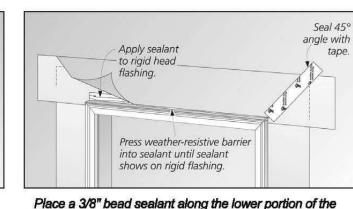
Before installing the door or window, apply a 3/8" continuous bead of Moistop Sealant (9a) to the backside (interior) of the brickmold. Install the window or door according to the manufacturer's instructions.

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# **RIGID HEAD FLASHING**



Prior to installing the rigid head flashing apply a 3/8" bead of sealant to the top of brick mold. Then place sealant on the top edge (interior side) of rigid head flashing. Place head flashing over brick mold and fasten with galvanized nails or screws. Apply sealant over these fasteners.



upturned leg of the rigid flashing. This will allow the weatherresistive barrier to be applied in sealant. Finally, allow the flap of the weather-resistive barrier to lay flat over the sealant and rigid head flashing. Press flap into sealant and apply a new piece of sheathing tape over the entire diagonal cut made in the weather resistive barrier and press firmly in place.

This recommendation refers to wood

windows with integral brick mold. For

other types of frames, special attention

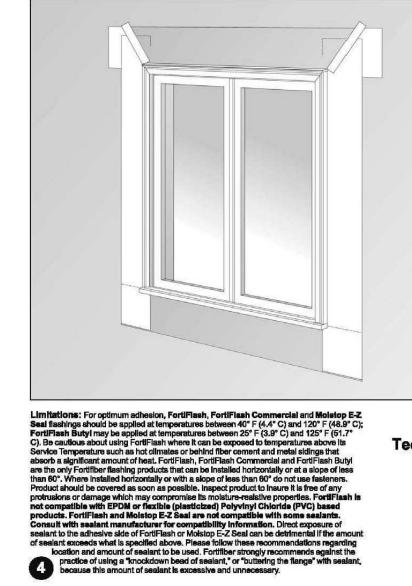
recommends the use of a well-integrated

manufacturer's instructions. Fortifiber

weather-resistive barrier with all of its

should be paid to the window

flashing systems.



Call 1-800-773-4777 Nationwide for

Technical Assistance or visit our website at www fortifiber com

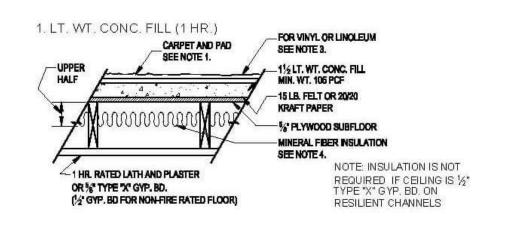


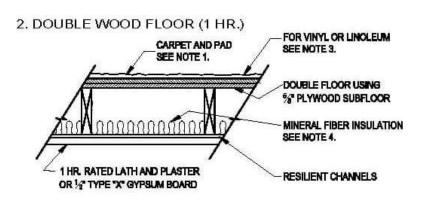
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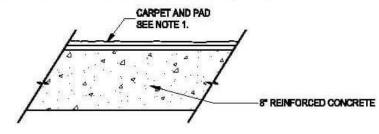
LATIDBS

### STANDARD SOUND RATED FLOOR - CEILING ASSEMBLIES STC 50 - IIC 50 FIRE RATING AS SHOWN





# 3. CONCRETE SLAB - NO CEILING (4 HR.)



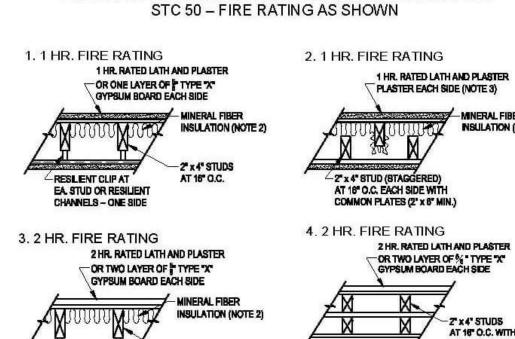
As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activitie Page 2 of 6

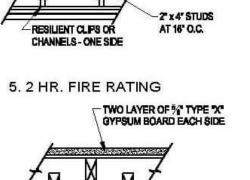
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# LATOBS

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# STANDARD SOUND RATED PARTITION ASEMBLIES

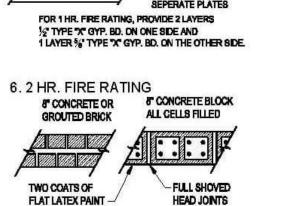




— 2" x 4" STUD (STAGGERED)

AT 16" O.C. EACH SIDE WITH

COMMON PLATES (2" x 6" MIN.)



**GENERAL NOTES:** 

- 1. The type and spacing of resilient channels and clips and the attachment of gypsum board or lath
- The mineral fiber insulation shall have a thermal resistance R value of 11 or greater as determined
- by Federal Specification RR-I-521B. 3. No test is on file to justify an STC 50 with one 5/8" type "X" gypsum board each side.

As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will provide Page 4 of 6

# LA

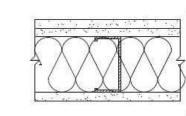
P/BC 2020-069

### FIRE RATED FLOOR-CEILING ASSEMBLIES USING METAL FRAMING STC 50 - IIC 50 FIRE RATING AS SHOWN

1. ONE HOUR FIRE RATED PARTITION

One layer 1/2" type "X" gypsum wallboard or veneer base applied parallel to one side of min. 2 1/2" No. 25 gauge metal studs 24" o.c. with 1" type "S" drywall screws 8" o.c. 2" mineral fiber 2.5 pcf friction fit in stud space. Two layers 1/2" type "X" gypsum wallboard or veneer base applied on other side parallel to studs with 1" type "S" drywall screws 36" o.c. in base layer and 1 5/8" type "S" drywall screws in face layer 12" o.c. stagger joints 24" o.c. each layer and

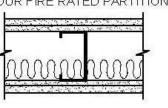
2. ONE HOUR FIRE RATED PARTITION



One layer 1/2" Type "X" plain or predecorated gypsum wallboard applied parallel to one side of min. 2 1/2" No. 25 studs 24" o.c. with 1" type "S" drywall screws 8" o.c. at

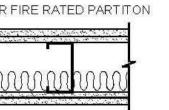
vertical joints and 3/8" adhesive beads at intermediate OPPOSITE SIDE: BASE LAYER 1/2" type "X" gypsum wallboard applied parallel to studs with 1" type "S" drywall screws 8" o.c. at vertical joints and 12"o.c. at intermediate studs. FACE LAYER 1/2" Type "x" plain or predecorated gypsum wallboard applied parallel to studs with 1 5/8" type "S" drywall screws 8" o.c. at vertical joints and 5/8" adhesive beads at intermediate studs. Joints staggered 24" each layer and side. Sound tested with 3½" glass fiber insulation friction fit in stud space and all layers screw attached without adhesive.

3. TWO HOUR FIRE RATED PARTITION



BASE LAYER 1/2" type "X" gypsum wallboard or veneer base applied parallel to each side of min. 2 1/2" No. 35 gauge metal stud 24" o.c. with 1" type "S" drywall screws 12" o.c. FACE LAYER 1/2" type "X" gypsum wallboard or veneer base applied on each side parallel to studs with 1 5/8" type "S" drywall screws 12" o.c. stagger joints 24" o.c each layer and side. Sound tested using 1 1/2" mineral fiber in stud space.

4. ONE HOUR FIRE RATED PARTITON



Min. 2 1/2" No. 25 gauge metal studs 24" o.c. max. 3/8" type "X" gypsum lath attached to studs each side with 1" self drilling screws, two per panel width per stud. 1/2" gypsum and sand plaster; 1 1/2" mineral fiber insulation 2.5 pcf. Alternate: Attach gypsum lath with resilient clips.

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ND LLS

**REVISE DATES:** 

CONTRACTOR TO VERIFY ALL

THE WORK

DIMENSIONS, CONDITIONS, ETC.,

PERTAINING TO THE WORK AT THE

SITE BEFORE PROCEEDING WITH

AS INSTRUMENT OF SERVICE, ALL

DESIGN, IDEAS AND INFORMATION

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OR USED IN CONNECTION

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EVIDENCE OF ACCEPTANCE OF

THESE RESTRICTIONS.

OF **SEC DEVELOPMENT**. VISUAL

NO PART THEREOF SHALL BE

WITH ANY WORK OR PROJECT

OTHER THAN THE SPECIFIC

PROJECT INFO JOB NUMBER: DATE DRAWN: DRAWN BY: CHECKED BY: V.K.

22065 12/19/22 M.A.

N.T.S.

**A-14** 

SCALE:

Storm Water Pollution Control Requirements for Construction Activities

The following notes shall be incorporated in the approved set of construction/grading plans and

Minimum Water Quality Protection Requirements for All Construction Projects

represents the minimum standards of good housekeeping which must be implemented on all construction

(COMPLETE AND INCORPORATE THIS FORM INTO THE PLANS)

Construction means constructing, clearing, grading or excavation that result in soil disturbance. Construction includes structure teardown (demolition). It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility; emergency construction activities required to immediately protect public health and safety; interior remodeling with no outside exposure of construction material or construction waste to storm water; mechanical permit work; or sign permit work. (Order No. 01-182, NPDES Permit No. CAS004001 - Part 5: Definitions)

- 1. Eroded sediments and pollutants shall be retained on site and shall not be transported from the site via sheet flow, swales, area drains, natural drainage or wind
- 2. Stockpiles of earth and other construction-related materials shall be covered and/or protected from being transported from the site by wind or water.
- 3. Fuels, oils, solvents and other toxic materials must be stored in accordance with their listing and shall not contaminate the soil nor the surface waters. All approved toxic storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of properly and shall not be washed into the drainage system.
- 4. Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained on the project site.
- 5. Excess or waste concrete may not be washed into the public way or any drainage system. Provisions
- shall be made to retain concrete waste on-site until it can be appropriately disposed of or recycled. 6. Trash and construction -related solid wastes must be deposited into a covered receptacle to prevent contamination of storm water and dispersal by wind.
- 7. Sediments and other materials shall not be tracked from the site by vehicle traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the street/public ways. Accidental depositions must be swept up immediately and may not be washed down by rain or by any other means.
- 8. Retention basins of sufficient size shall be provided to retain storm water runoff on-site and shall be properly located to collect all tributary site runoff.
- 9. Where retention of storm water runoff on-site is not feasible due to site constraints, runoff may be conveyed to the street and the storm drain system provided that an approved filtering system is installed and maintained on-site during the construction duration.

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Permi	it #	XXXXX-XXXXXXXX	Date:					
ITEM #	CODE SECTION	REQUIREMENT	REFERENCE SHEET (Sheet # or N/A	COMMENTS  (e.g. note #, detail # or reason for N/A				
	*	PLANNING AND DESIGN						
1	4.106.2	Storm water drainage and retention during construction	A-15	GRN 1				
2	4.106.3	Grading and paving	A-1	SITE PLAN				
3	4.106.5	Cool roof (additions $\geq$ 500 sq. ft. or $\geq$ 50%)	N/A					
	- 2	ENERGY EFFICIENCY	30 NO					
4	4.211.4	Solar ready (additions $\geq 2,000 \text{ sq. ft.}$ )						
	3	WATER EFFICIENCY & CONSERVATION	N					
5	4.303.1	Water conserving plumbing fixtures and fittings	A-15	GRN 14 NOTE #6				
6	4.303.1.3.2	Multiple showerheads serving one shower	A-15	GRN 18R NOTE #2				
7	4.303.4	Water use reduction	N/A					
8	4.304.1	Outdoor water use in landscape areas	A-15	GRN 14 NOTE #7				
9	4.304.2	Irrigation controllers	A-15	GRN 18R NOTE #3				
10	4.304.3	Metering outdoor water use	A-15	GRN 18R NOTE #5				
11	4.304.4	Exterior faucets	A-15	GRN 18R NOTE #6				
12	4.304.5	Swimming pool covers	A-15	GRN 18R NOTE #7				
13	4.305.1	Graywater ready	A-15	GRN 18R NOTE #8				
14	4.305.2	Recycled water supply to fixtures	A-15	GRN 18R NOTE #9				
15	4.305.3.1	Cooling towers (buildings≤25 stories)	A-15	GRN 18R NOTE #10				
16	4.305.3.2	Cooling towers (buildings > 25 stories)						
		MATERIAL CONSERVATION & RESOUR	CE EFFICIENC					
	4.406.1	Rodent proofing	A-15	GRN 14 NOTE #9				
	4.407.3	Flashing details	A-14	SEE DETAILS				
	4.407.4	Material protection	A-15	GRN 14 NOTE #10				
-	4.408.1	Construction waste reduction	A-15	GRN 14 NOTE #11				
21	4.410.1	Operation and maintenance manual ENVIRONMENTAL QUALITY	A-15	GRN 14 NOTE #11				

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GRN 9

2020 Los Angeles Green Building Code

ITM#	SECTION REQUIREMENT		SHEET (Sheet # or N/A)	e.g. note #, detail # or reason for N/A		
23 4.504.1		Covering of duct openings and protection of mechanical equipment during construction	A-15	GRN 14 NOTE #15		
24	4.504.2	Finish material pollutant control				
25	4.504.2.1	<ul> <li>Adhesives, sealants, caulks</li> </ul>	A 45	GRN 2		
26	4.504.2.2	<ul> <li>Paints and coatings</li> </ul>	A-15	GRN 2		
27	4.504.2.3	<ul> <li>Aerosol paints and coatings</li> </ul>				
28	4.504.2.4	- Verification				
29	4.504.3	Carpet systems	A-15	GRN 14 NOTE #17_		
30	4.504.3.1	Carpet cushion	A-15	GRN 14 NOTE #17		
31	4.504.4	Resilient flooring systems	A-15	GRN 14 NOTE #18		
32	4.504.5	Composite wood products	A-15	GRN 14 NOTE #19		
33	4.504.6	Filters	A-15	GRN 14 NOTE #21		
34	4.505.2.1	Capillary break	A-14	WALL DETAIL		
35	4.505.3	Moisture content of building materials	A-15	GRN 14 NOTE #23		
36	4.506.1	Bathroom exhaust fans	A-5, A-15	GRN 14 NOTE #24 & #25		
37	4.507.2	Heating and air-conditioning system design	A-15	GRN 14 NOTE #26		

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onflat-high gloss coatings

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cialty Coatings ninum roof coatings

lond breakers

riveway sealers

ry fog coatings

loor coatings

aux finishing coating:

Clear Top Coat

Decorative Coatings

Graphic arts coatings (sign paints

ndustrial maintenance coatings

ligh temperature coatings

.ow.solids.coatings<sup>1</sup> Magnesite cement coatings Mastic texture coatings

Metallic pigmented coating Multicolor coatings

retreatment wash prime

oof coatings, aluminum

ust preventative coatings

Opaque Specialty primers, sealers and undercoaters

Vood preservatives 350 inc-rich primers 100 rams of VOC per liter of coating, including water and including exempt compounds.

The specified limits remain in effection less registed limits are listed in subsequent columns in the

A Some ualtes in this table are derived from those specified by the California Air Resources Bloard, Architectural Coathigs Suggested Control Measure, February 5, 2016. More information is awailable from the Air Resources Board.

oof coatings

tains, Interior tone consolidants

(Rev. 01/01/20)

**FORM** 

**GRN 16** 

wimming pool coatings raffic marking coatings

Waterproofing membranes

Fub and tile refinish coatings

VOC CONTENT LIMITS FOR A RCHITECTURAL COATINGS \*\*

Grams of V0 Ciper Liter of Coating, Less Water and Less Exempt Compound

**FORM** 

GRN 9

**VOC AND FORMALDEHYDE LIMITS** 2020 Los Angeles Green Building Code (Incorporate this form into the plans)

wood plywood veneer core

Thin medium density fiberboard?

Indoor carpet adhesives

utdoor carpet adhesive: od flooring adhesive

ubber floor adhesives Subfloor adhesives Ceramic tile adhesives

/CT and asphalt tile adh

BS welding Plastic cement welding

Adhesive primer for plastic

op and trim adhesive

Special purpose contact adhesive

ove base adhesives luttipurpose construction adhesives

ctural glazing adhesives

Carpet pad adhesives

rdwood plywood composite core

"Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Woodlas fested in accordance with ASTM E 1333. For additional information, see *California* Code of *Regula* fons, Title 17, Sections 93120 through

SEALANT VOC LIMIT

Other:
Note: For additional information regarding methods to measure the VOC content specified in

ADHESIVE VOC LIMIT 1,2

If an addies be is used to bond dissimilar substrates together, the addies be with the highest you come it is alone allowed.

For additional information regarding methods to measure the VOC content specified in this table, see Sorth Coast Air Quality Management 0 ktnct Rule 1168, http://www.arb.ca.gou/DRD8/SC/CURHTMUR1168/PDF.

Less Water and Less Exempt Compounds in Grams per Lit

This medium density (berboard has a maximum thickness of  $\%_{in}$  inches (8 mm).

**FORM** 

**GRN 11** 2020 Los Angeles Green Building Code Tables 4.504.1, 4.504.2, 4.504.3, 4.504.5, 5.504.4.1, 5.504.4.2, 5.504.4.3, 5.504.4.5

> CONTRACTOR TO VERIFY ALL DIMENSIONS, CONDITIONS, ETC., PERTAINING TO THE WORK AT THE SITE BEFORE PROCEEDING WITH THE WORK

**REVISE DATES:** 

AS INSTRUMENT OF SERVICE, ALL DESIGN, IDEAS AND INFORMATION SHOWN ON THESE DRAWINGS ARE AND SHALL REMAIN THE PROPERTY OF SEC DEVELOPMENT NO PART THEREOF SHALL BE COPIED, DISCLOSED TO OTHERS, OR USED IN CONNECTION WITH ANY WORK OR PROJECT OTHER THAN THE SPECIFIC PROJECT FOR WHICH THEY HAVE BEEN PREPARED AND DEVELOPED WITHOUT THE WRITTEN CONSENT OF **SEC DEVELOPMENT**. VISUAL CONTACT WITH THESE DRAWINGS SHALL CONSTITUTE CONCLUSIVE EVIDENCE OF ACCEPTANCE OF

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**FORM** 



# 2020 Los Angeles Green Building Code

# **GRN 14**

#### GREEN BUILDING CODE PLAN CHECK NOTES RESIDENTIAL BUILDINGS

1. For each new dwelling and townhouse, provide a listed raceway that can accommodate a dedicated 208/240 volt branch circuit. The raceway shall not be burning fireplaces are prohibited per AQMD Rule 445. less than trade size 1 (nominal 1-inch inside diameter), shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. The panel or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE". (4.106.4.1)

22 4.503.1 Fireplaces and woodstoves

- 2 For common parking area serving R-occupancies, the electrical system shall have sufficient capacity to simultaneously charge all designated EV spaces at the full rated amperage of the Electric Vehicle Supply Equipment (EVSE). Design shall be based upon a 40-ampere minimum branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter), shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in
- accordance with the Los Angeles Electrical Code. (4.106.4.2)3. Roofs with slopes < 2:12 shall have a 3-year aged SRI value of at least 75 or both a 3-year aged solar reflectance of at least 0.63 and a thermal emittance of at least 0.75. Roofs with slopes  $\geq$  2:12 shall have an aged SRI value of at least
- (4.106.5)4. The required hardscape used to reduce heat island effects shall have a solar

rates in Section 4.303.1.

construction waste.

reflectance value of at least 0.30 as determined per ASTM E1918 or ASTM (4.106.7)5. The flow rates for all plumbing fixtures shall comply with the maximum flow

16 or both a 3-year solar reflectance of at least 0.20 and a thermal emittance of

- 6. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads controlled by a single valve shall not exceed 2.0 gallons per minute at 80psi, or the shower shall be designed to only allow one showerhead to be in operation at a time.
- 7. Installed automatic irrigation system controllers shall be weather- or soil-based
- 8. For projects that include landscape work, the Landscape Certification, Form GRN 12, shall be completed prior to final inspection approval (State Assembly Bill No. 1881) 9. Annular spaces around pipes, electric cables, conduits, or other openings in the building's envelope at exterior walls shall be protected against the passage of
- 10. Materials delivered to the construction site shall be protected from rain or other sources of moisture.

Section 313.0 of the Los Angeles Plumbing Code.

11. Only a City of Los Angeles permitted hauler will be used for hauling of

rodents by closing such openings with cement mortar, concrete masonry, or

metal plates. Piping prone to corrosion shall be protected in accordance with

12. For all new equipment, an Operation and Maintenance Manual including, at a minimum, the items listed in Section 4.410.1, shall be completed and placed in the building at the time of final inspection (4.410.1)

**FORM** 

13. All new gas fireplaces must be direct-vent, sealed combustion type. Wood 14. All duct and other related air distribution component openings shall be covered

A-15 GRN 14 NOTE #14

- with tape, plastic, or sheet metal until the final startup of the heating, cooling and ventilating equipment. . Paints and coatings, adhesives, caulks and sealants shall comply with the
- Volatile Organic Compound (VOC) limits listed in Tables 4.504.1-4.504.3. 16. The VOC Content Verification Checklist, Form GRN 2, shall be completed and verified prior to final inspection approval. The manufacturer's specifications
- the job site and be provided to the field inspector for verification. (4.504.2.4) 7. All new carpet and carpet cushions installed in the building interior shall meet the testing and product requirements of one of the following (4.504.3):

showing VOC content for all applicable products shall be readily available at

California Department of Public Health's Specification 01350 NSF/ANSI 140 at the Gold level Scientific Certifications Systems Indoor Advantage™ Gold

a. Carpet and Rug Institute's Green Label Plus Program

b. Certified under UL GREENGUARD Gold

- 18. 80% of the total area receiving resilient flooring shall comply with one or more of the following (4.504.4): a. VOC emission limits defined in the CHPS High Performance Products
- Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program d. Meet the California Department of Public Health's Specification 01350
- 19. New hardwood plywood, particle board, and medium density fiberboard composite wood products used in the building shall meet the formaldehyde limits listed in Table 4.504.5. 20. The Formaldehyde Emissions Verification Checklist, Form GRN 3, shall be
- completed prior to final inspection approval. 21. Mechanically ventilated buildings shall provide regularly occupied areas of the building with a MERV 13 filter for outside and return air. Filters shall be installed prior to occupancy and recommendations for maintenance with filters

of the same value shall be included in the operation and maintenance manual.

- 22. A 4-inch thick base of ½ inch or larger clean aggregate shall be provided for proposed slab on grade construction. A vapor barrier shall be provided in direct contact with concrete for proposed slab on grade construction. (4.505.2.1)
- Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed until it is inspected and found to 24. Newly installed bathroom exhaust fans shall be ENERGY STAR compliant and
- be ducted to terminate to the outside of the building. Fans must be controlled by a humidistat which shall be readily accessible. Provide the manufacturer's (4.407.4) 25. A copy of the construction documents or a comparable document indicating the

information from Energy Code Sections 110.10(b) through 110.10(c) shall be

(Energy Code §110.10(d))

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- 26. The heating and air-conditioning systems shall be sized and designed using ANSI/ACCA Manual J-2004, ANSI/ACCA 29-D-2009 or ASHRAE
- handbooks and have their equipment selected in accordance with ANSI/ACCA 36-S Manual S-2004.

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provided to the occupant."

(Rev. 01/01/20)

(4.303.1)

(4.406.1)

(4.408.1)



# PLUMBING FIXTURE FLOW RATES

Residential Occupancies 2020 Los Angeles Green Building Code (Incorporate this form into the plans)

#### SECTION 4.303.1 WATER REDUCTION FIXTURE FLOW RATES

FIXTURE TYPE	MAXIMUM ALLOWABLE FLOW RATE						
Showerheads	1.8 gpm @ 80 psi						
Lavatory faucets, residential	1.2 gpm @ 60 psi <sup>1,3</sup>						
Lavatory faucets, nonresidential	0.4 gpm @ 60 psi <sup>1,3</sup>						
Kitchen faucets	1:5 gpm @ 60 psi <sup>2,4</sup>						
Metering Faucets	0.2 gallons/cycle						
Gravity tank type water closets	1.28 gallons/flush <sup>5</sup>						
Flushometer tank water closets	1.28 gallons/flush <sup>5</sup>						
Flushometer valve water closets	1.28 gallons/flush <sup>5</sup>						
Urinals	0.125 gallons/flush						
Clothes Washers	ENERGY-STAR certified						
Dishwashers	ENERGY-STAR certified						

<sup>1</sup> Lavatory Faucets shall not have a flow rate less than 0.8 gpm at 20 psi. <sup>2</sup> Kitchen faucets may temporarily increase flow above the maximum rate, but not above 2.2gpm @ 60psi and must default to a maximum flow rate of 1.8 gpm @ 60psi.

Where complying faucets are unavailable, aerators or other means may be used to achieve reduction. <sup>4</sup> Kitchen faucets with a maximum 1.8 gpm flow rate may be installed in buildings that have water closets with a maximum flush rate of 1.06 gallons/flush installed throughout. <sup>5</sup> Includes single and dual flush water closets with an effective flush of 1.28 gallons or less.

Single Flush Toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is the average flush volume when tested in accordance with ASME A112.19.233.2. Dual Flush Toilets - The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The

effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. Flush volumes will be tested in accordance with ASME A112.19.2 and ASME

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# 2020 Los Angeles Green Building Code

# WATER CONSERVATION NOTES - ORDINANCE #184248

## PLUMBING SYSTEM

- 1. Multi-family dwellings not exceeding three stories and containing 50 units or less shall install a separate meter or submeter within common areas and within each individual
- 2. Water use reduction shall be met by complying with one of A. Provide a 20% reduction in the overall potable water use within the building. The reduction shall be based
- fixtures and fittings as required by the Los Angeles Plumbing Code. Calculations demonstrating a 20% reduction in the building "water use baseline", as established in Table 4.303.4.1, shall be provided; or
- Exception: Fixture replacements
- more of cumulative landscape area and where the entire
- 5. In other than single family dwellings, locks shall be installed on all publicly accessible exterior faucets and hose
- system in any permanently installed outdoor in-ground swimming pool or spa in one- and two-family dwellings. For irregular-shaped pools where it is infeasible to cover 100% of the pool due to its irregular shape, a minimum of
- water is available within 200 feet of the property line, water closets, urinals, floor drains, and process cooling and heating in the building shall be supplied from recycled water and shall be installed in accordance with the Los Angeles Plumbing Code.

(Rev. 01/01/20)

# RESIDENTIAL BUILDINGS

- dwelling unit.
- on the maximum allowable water use for plumbing
- B. New fixtures and fittings shall comply with the maximum flow rates shown in Table 4.303.4.2, or C. Plumbing fixtures shall use recycled water.
- 3. New building on a site with 500 square feet or more of cumulative landscape area shall have separate meters or submeters for outdoor water use.
- 4. Additions and alterations on a site with 500 square feet or potable water system is replaced, shall have separate meters or submeters for outdoor water use.
- 6. Provide a cover having a manual or power-operated reel
- 80% of the pool shall be covered.
- 7. Except as provided in this section, for sites with over 500 square feet of landscape area, alternate waste piping shall be installed to permit discharge from the clothes washer, bathtub, showers, and bathroom/restrooms wash basins to be used for a future graywater irrigation system. (4.305.1)
- 8. Except as provided in this section, where City-recycled

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- 9. In new buildings of 25 stories or less, the cooling towers shall comply with one of the following: A. Shall have a minimum of 6 cycles of concentration (blowdown); or B. A minimum of 50% of the makeup water supply to the
- sources, including treated backwash. (4.305.3.1) 10. In new buildings over 25 stories, the cooling towers shall comply with all of the following:

cooling towers shall come from non-potable water

- A. Shall have a minimum of 6 cycles of concentration (blowdown); and B. 100% of the makeup water supply to the cooling towers shall come from non-potable water sources, including treated backwash.
- 11. Where groundwater is being extracted and discharged, develop and construct a system for onsite reuse of the groundwater. Alternatively, the groundwater may be discharged to the sewer.
- 12. Provide a hot water system complying with one of the following (Los Angeles Plumbing Code Section 610.4.1): A. The hot water system shall not allow more than 0.6 gallons of water to be delivered to any fixture before hot water arrives. B. Where a hot water recirculation or electric resistance
- heat trace wire system is installed, the branch from the recirculating loop or electric resistance heat trace wire to the fixture shall contain a maximum of 0.6 gallons. C. Residential units having individual water heaters shall have a compact hot water system that meets all of the
- a. The hot water supply piping from the water heater to the fixtures shall take the most direct path. b. The total developed length of pipe from the water heater to farthest fixture shall not exceed the distances specified in Table 3.6.5 of the California
- Energy Code Residential Appendix. c. The hot water supply piping shall be installed and insulated in accordance with Section RA3.6.2 of the California Energy Code Residential Appendix.

## IRRIGATION SYSTEM

12. A water budget for landscape irrigation use that conforms to the California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO) is required for new landscape areas of 500 sq. ft. or more. The following methods to reduce potable water use in landscape areas include, but are not limited to, use of captured rainwater, recycled water, graywater, or water treated for irrigation purposes and conveyed by a water district or public entity.

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Page 1 of 1

22065 JOB NUMBER: 12/19/22 DATE DRAWN M.A. DRAWN BY: CHECKED BY: V.K. N.T.S. SCALE:

**A-15** 

PROJECT INFO

# PERFORMANCE PLATINUM"



### PERFORMANCE **PLATINUM™ High Efficiency Condensing Tankless** Gas Water Heaters are designed to provide continuous hot water **Environmentally Friendly**

Low Emissions – Ultra low NOx

burner meets SCAQMD rule 1146.2

Exclusive! Water Savings Setting

- upon activation, this setting can

save up to 1,100 gallons water/year

by reducing flow at the tap until set

temperature is achieved (optional)

film wrap - prevents dangerous

Industry Best! Freeze protection

upgrade kits are available

Warranty

temperatures and provides industry

Exclusive! Guardian OFW™ overheat

best side-to-side clearance of 1/2 inch

Maximum water temperature is 140°F.

For higher temperature applications,

12-Year heat exchanger - residential,

5-year parts and 1-year labor

BTU/h Only

(Outdoor model

5-year heat exchanger - commercial,

See Warranty Certificate for complete information

#### Efficiency ■ .93 UEF with stainless steel condensing

heat exchanger Easy Installation and Service

### Vent with 2", 3" or 4" PVC Built-in condensate neutralizer

1/2" Gas line compatibility up to 24 ft. Exclusive! Maintenance Notice Setting - Alerts homeowner, after

### 500 hours of use, to call for service Self-diagnostic system for easy

installation and service High-altitude capability – up to 8,400 ft. elevation above sea level<sup>2</sup> Digital remote control and 10 ft. of thermostat wire included - shows

#### temperature setting and service codes Requires 120V power supply (indoor models only)

Performance

Industry Best! Low Flow Activation -Minimum flow rate of .26 GPM and minimum activation flow rate of .40 GPM ensures hot water even in low demand situations

Recirculation Pump Kit-Ready -Providing faster hot water at the tap and savings of up to 12,000 gallons

Exclusive! Hot Start Programming Minimizes cold water bursts by staying in ready-fire state for back-to-back hot water needs

### Technology

■ EcoNet® Enabled – all Tankless products from 2010 to present can connect to EcoNet mobile app via Tankless EcoNet Accessory Kit

- For higher demand applications, easily link multiple tankless units to operate as one system:
- 2 Units: EZ Link cable - Up to 6 units: MIC-6 Control Board
- Up to 20 units: MIC-185 plus MICS-180 manifold control assembly



The new degree of comfort

→ 5 1/2" ← → 6 1/4" ←

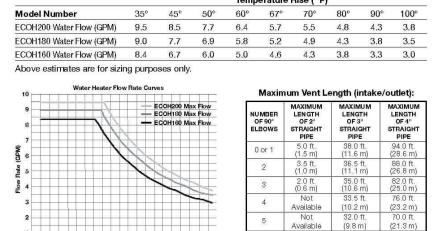
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DESCRIPTION					FEATURES				ROUGHING IN DIMENSIONS (SHOWN IN INCHES)						ENERGY INFO.		
MODEL	GAS INPUT BTU/H			NUMBER OF	TEMP.	MIN. FLOW/ ACTIVATION	GPM @ 67° RISE	GPM @45° RISE	MAX.	CONNE	CTION				VENT	SHIP	UNIFORM ENERGY FACTOR
NUMBER		TYPE	BATHROOMS*	RANGE	GPM	MAX.	MAX.		WATER	GAS	HEIGHT	WIDTH	DEPTH	DIAM.	(LBS.)	(UEF)	
Rheem Perfo	rmance	e Platini	ım™ ECOŀ	1200													
EGOH200DVLN-1	11,000- 199,900	Indoor Direct Vent	4	85° to 140° F	0.26/0.40	5.7	8.5	9.5	3/4	3/4	27-1/2	18-1/2	9-3/4	2", 3" or 4" PVC 2-Pipe	82	0.93	
ECOH200DVELN-1 (EcoNet® Included)	11,000- 199,900	Indoor Direct Vent	4	85° to 140° F	0.26/0.40	5.7	8.5	9.5	3/4	3/4	27-1/2	18-1/2	9-3/4	2", 3" or 4" PVC 2-Pipe	82	0.93	
ECOH200XLN-1	11,000- 199,900	Outdoor	4	85° to 140° F	0.26/0.40	5.6	8.5	9.5	3/4	3/4	27-1/2	18-1/2	9-3/4	N/A	82	0.93	
EGOH200XELN-1 (EcoNet <sup>®</sup> Included)	11,000- 199,900	Outdoor	4	85° to 140° F	0.26/0.40	5.6	8.5	9.5	3/4	3/4	27-1/2	18-1/2	9-3/4	N/A	82	0.93	
Rheem Perfo	rmance	e Platini	ım™ ECOŀ	1180													
ECOH180DVLN-1	11,000- 180,000	Indoor Direct Vent	3 - 4	85° to 140° F	0.26/0.40	5.2	7,7	9.0	3/4	3/4	27-1/2	18-1/2	9-3/4	2", 3" or 4" PVC 2-Pipe	82	0.93	
ECOH180DVELN-1 (EcoNet® Included)	11,000- 180,000	Indoor Direct Vent	3 - 4	85° to 140° F	0.26/0.40	5.2	7.7	9.0	3/4	3/4	27-1/2	18-1/2	9-3/4	2", 3" or 4" PVC 2-Pipe	82	0.93	
ECOH180XLN-1	11,000- 180,000	Outdoor	3 - 4	85° to 140° F	0.26/0.40	5.2	7.7	9.0	3/4	3/4	27-1/2	18-1/2	9-3/4	N/A	82	0.93	
ECOH180XELN-1 (EcoNet® Included)	11,000- 180,000	Outdoor	3 - 4	85° to 140° F	0.26/0.40	5.2	7.7	9.0	3/4	3/4	27-1/2	18-1/2	9-3/4	N/A	82	0.93	
Rheem Perfo	rmance	e Platinu	ım™ ECOŀ	1160													
ECOH160DVLN-1	11,000- 157,000	Indoor Direct Vent	3	85° to 140° F	0.26/0.40	4.6	6.7	8.4	3/4	3/4	27-1/2	18-1/2	9-3/4	2", 3" or 4" PVC 2-Pipe	82	0.93	
ECOH160XLN-1	11,000- 157,000	Outdoor	3	85° to 140° F	0.26/0.40	4.5	6.7	8.4	3/4	3/4	27-1/2	18-1/2	9-3/4	N/A	82	0.93	

temperature of incoming cold water and water heater set temperature. Refer to flow rate curves for accurate sizing. Uniform Energy Factor and Energy Factor based on Department of Energy (D.O.E.) requirements. All models are available in Natural Gas and Propane (LP). For Propane replace the N with P when ordering. Factory set maximum temperature is 120° F. See Use and Care Manual for setting. Consult factory for information on sizing the application.

Vent Termination Kits are required for Direct Vent models. Contact your distributor for details. Proper gas pressure must be ensured to supply tankless gas water heaters – up to 199,900 BTU/h for ECOH200 models, up to 180,000 BTU/h for ECOH180 models, up to 157,000 BTU/h for ECOH160 models. (Consult your gas supplier) Model Number



Venting & terminations - 2", 3" or 4" PVC, recess boxes, pipe covers, extra remote controls. EZ-Link™ cable, manifolds and cables, service valve kits, service parts, flush kits, recirculation pump kits and AllClear™ water treatment system. For more information on Tankless parts and accessories, see the Parts and Accessories Catalog or call 866-720-2076

In keeping with its policy of continuous progress and product improvement, Rheem reserves the right to make changes without notice.

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12/17 FORM NO. THD-3195 Rev. 8

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ASTM D3161

ASTM D3161,

**ASTM D7158.** 

Class H

**ASTM D3161,** 

Class F

ASTM D7158,

Class H

**ASTM D3161** 

ASTM D7158,

 $5^7/8 - 7^5/8$ 

0676-0148 GAF

LOCATION OF

NAIL LINE<sup>1</sup>

# **Installation Instructions for Temperature and Pressure Valve**

# **A WARNING**

Do not plug valve. Do not remove valve. death, or explosion.

valve provides protection against both excessive temperature and pressure. If f the temperature and pressure relief valve is either of these develop in the system, dripping or leaking, have a licensed plumber repair it. the valve will open and discharge water If your valve is opening, please call the heater manufacturer for assistance in Failure to follow these instructions can result in diagnosing the reason and addressing the cause.

Information

clearly visible.

250°F or greater.

# Installation Instructions

Installing T&P valve: Before starting water heater installation, apply Teflon® Tape or approved pipe sealant on threads and install a T&P valve in the opening marked, "T&P Relief Opening." Connect a drain pipe(Discharge Line) to T&P valve as outlined in "Important Drain Pipe Information."

- Replacing existing T&P valve: 1. Turn off power and/or gas supply to the water
- 2. Shut off the water supply and open a nearby hot
- water faucet.
- 3. Drain water from the tank until the water level is below the T&P opening. Note: For proper draining procedures refer to "Draining and Flushing" in the manufacturer's instruction manual.
- 4. Apply Teflon® Tape or approved pipe sealant on threads and install T&P valve. Connect a drain pipe(Discharge Line) to T&P valve as outlined in Important Drain Pipe Information."
- 5. Turn on the water supply and refill the tank until water flows from the open hot water faucet. Allow water to run for a couple of minutes to ensure all air is purged out of the tank. Close the hot water
- 6. Follow the manufacturer's instructions to restart water heater.

### Important General Information

- Install this temperature and pressure relief valve (T&P) valve directly in the top or side T&P opening that is indicated on the tank.
- The valve must be installed so that the temperature-sensing element is immersed in the
- water within the top 6"(152mm) of the tank. • It must be installed within the hot outlet service line (in the hot water flow) or directly in a tank tapping. This valve should be adequately insulated and isolated so it is not affected by conditions that are different than heater water temperature.
- Pressure and temperature relief settings are stamped on the valve. The pressure setting can never be above the allowable working pressure of the water heater as stated on the water heater's data plate.

Temperature and Pressure relief

Important Drain Pipe Installation

throughout its entire length.

To avoid water damage or scalding due to valve

valve outlet and run to a safe place for water

operation, a drain pipe must be connected to the

The drain pipe must be a short as possible and be

the same size as the valve discharge connection

Excessive length, over 15' long (4.57m), or the use

The drain pipe must pitch down from the valve and

terminate a maximum of 6" above the floor drain, or

outside ground level where any discharge will be

The drain line shall terminate plain, not threaded,

The drain pipe must not be capped, blocked,

The valve should be manually operated twice a

Before opening this valve, ensure that the outlet is

properly connected to discharge piping, otherwise,

personal injury or property damage could result.

To actuate the valve, hold the trip lever fully open

for approximately five seconds in order to flush the

valve seat free of any sediment. Then permit the

This device is designed for emergency safety relief

and shall not be used as an operating control. Use

the drain valve to drain water from the tank as

valve and the end of the drain pipe.

**Maintenance Instructions** 

valve check to snap shut.

plugged or contain any valve between the relief

with a material serviceable for temperatures up to

of more than two elbows can cause a restriction

and reduce the discharge capacity of the valve.

**ICC-ES Evaluation Report** 

**ESR-1322** 

Most Widely Accepted and Tru:

Reissued January 2020 Revised February 2020 This report is subject to renewal January 2022.

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### DIVISION: 07 00 00—THERMAL AND MOISTURE Section: 07 30 05-Roofing Felt and Underlayment

REPORT HOLDER:

### **EVALUATION SUBJECT:**

#### WEATHERWATCH® MINERAL SURFACED LEAK BARRIER, AND STORMGUARD® FILM SURFACED

1.0 EVALUATION SCOPE

- 1.1 Compliance with the following codes: ■ 2018, 2015, 2012, 2009 and 2006 International Building Code® (IBC)
- 2018, 2015, 2012, 2009 and 2006 International Residential Code® (IRC)
- Properties evaluated:
- Physical properties
- Water resistance 1.2 Evaluation to the following green standards:
- 2012 and 2008 ICC 700 National Green Building Standard™ (ICC 700-2012 and ICC 700-2008)
- Attributes verified:
- See Section 2.0

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

The attributes of the WeatherWatch®, and StormGuard® underlayments have been verified as conforming to the requirements of (i) ICC 700-2012 Sections 602.1.13 11.602.1.13 and 12.5.602.1.14; and (ii) ICC 700-2008 Section 602.10 for ice barriers. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

#### 3.0 DESCRIPTION 3.1 WeatherWatch®:

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

### 3.2 StormGuard®

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

#### 4.0 INSTALLATION

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

Prior to application, the deck surface must be free of frost, dust and dirt, loose nails, and other protrusions. Installation is limited to plywood substrates. The membrane is to be applied only when the ambient air and surface temperatures

are above 45°F (7.2°C) and below 120°F (48.9°C).

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

line of the exterior wall. Installation of the roof covering can proceed immediately following application of the membrane. The membrane should be covered by an approved asphalt shingle roof covering within the period established by the membrane manufacturer. For reroofing applications, the same procedures apply after removal of the existing roof covering

and roofing felts to expose the roof deck.

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# ES ICC EVALUATION SERVICE

**ICC-ES Evaluation Report ESR-1475** Reissued October 2019 Revised February 2020

This report is subject to renewal October 2021.

**DIVISION: 07 00 00—THERMAL AND MOISTURE** 

Section: 07 31 13—Asphalt Shingles

REPORT HOLDER:

**EVALUATION SUBJECT:** 

GAF SHINGLE ROOF COVERING SYSTEMS

1.0 EVALUATION SCOPE

Compliance with the following codes: ■ 2018, 2015, 2012, 2009 and 2006 International Building

■ 2018, 2015, 2012, 2009 and 2006 International Residential Code® (IRC)

Properties evaluated: ■ Weather resistance ■ Fire classification

■ Wind resistance 2.0 **USES** 

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

3.0 DESCRIPTION 3.1 Shingles:

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

location for field shingles. 3.1.2 Three-tab Shingles and Five-tab Shingles: Threetab and five-tab shingles are composed of a single layer of

to any finding or other matter in this report, or as to any product covered by the report. Copyright © 2020 ICC Evaluation Service, LLC. All rights reserved

www.icc-es.org | (800) 423-6587 | (562) 699-0543 A Subsidiary of the International Code Council® sides, and surfaced with mineral roofing granules on the

12/17 FORM NO. THD-3195 Rev. 8

Indoor Direct Vent Outdoor

PERFORMANCE PLATINUM

High Efficiency

Condensing Tankless

11,000-199,900 BTU/h

coNet • )) PERFORMANCE PLATINUM Tankless
Water Heater with EcoNet® WiFi Included

with added WiFi capability.

Smart Home Features

Product Includes

Indoor Direct Vent Factory-installed translator

Shares all efficiency, performance, technology,

warranty and safety values as standard models

Water leak detection alert and system shut off (indoor

Mobile alerts for notifications/maintenance reminders

Integration with NEST & WINK smart home systems

Mobile gas and water usage reports

Leak detection cable (for indoor models)

App available free in App Store and Google Play for Android

11,000-199,900 Wi-Fi Module, connection cable and power cord

ANDROID APP ON Available on the App Store

models only) - may qualify for insurance discounts

fiberglass mat, cut and bonded together in different patterns. The weather side is surfaced with mineral roofing granules, and the underside is surfaced with a mineral release agent. 3.1.4 Hip and Ridge Cap Shingles: Hip and ridge cap shingles consist of fiberglass mat, impregnated and coated with asphalt on both sides and surfaced with mineral roofing granules on the weather side and a mineral release agent

weather side and a mineral release agent on the underside.

3.1.3 Laminated Shingles: Laminated shingles are

composed of multiple thicknesses of coated and surfaced

Table 2 for product sizes, exposure to the weather and manufacturing locations. See also Figure 2. 3.1.4.1 Royal Sovereign® Ridge Cap Shingles: These ridge cap shingles are field-cut from Royal Sovereign® three-tab strip shingles. The field-cut ridge cap shingles are compatible with any of the GAF shingles recognized in this

on the back side for use in covering hips and ridges. See

3.1.4.2 Z®Ridge Ridge Cap Shingles: These shingles are strips that are scored for separation into four ridge cap

shingles. See Figure 2. 3.1.4.3 Seal-A-Ridge® Ridge Cap Shingles, Seal-A-Ridge® Protective Ridge Cap Shingles, Seal-A-Ridge® AS SBS-Modified IR Ridge Cap Shingles, and Seal-A-Ridge® ArmorShield® SBS-Modified IR Ridge Cap Shingles: These shingles are strips that are scored for separation into three ridge cap shingles. Seal-A-Ridge Ridge Cap Shingles are also labeled as Seal-A-Ridge Protective Ridge Cap Shingles. Seal-A-Ridge® ArmorShield® Ridge Cap Shingles are also labeled as Seal-

A-Ridge® AS SBS-Modified IR Ridge Cap Shingles. 3.1.4.4 Ridglass® Premium Ridge Cap Shingles: These shingles are individual, thick, ultra-high profile ridge cap shingles available in two widths. See Figure 2.

3.1.4.5 Timbertex® Premium Ridge Cap Shingles These shingles are double layer strips that are scored for 3.1.4.6 TimberCrest™ Premium SBS-Modified Ridge

Cap Shingles: These shingles are individual, thick, ultra-

high profile ridge cap shingles with a bullnose leading edge available in two widths. See Figure 2.

3.1.5.1 General: Starter Strip shingles are factory-made

fiberglass mat, impregnated and coated with asphalt on both shingles used under the first course of shingles being ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as

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

MAXIMUM EXPOSURE SHINGLE SHINGLE height x width) LOCATION TO THE WEATHER (inches) Fontana, CA Michigan City, IN

Timberline<sup>®</sup> Natural Shadow Timberline<sup>®</sup> NS **ASTM D7158,** Baltimore, MD Dallas, TX ASTM D3161, Fontana, CA Michigan City, IN Timberline HD®  $5^{5}/_{8}$ ASTM D7158. Tampa, FL Fuscaloosa, A Baltimore, MD ASTM D3161. Fontana, CA Michigan City, IN Timberline® HDZ™  $5^7/_8 - 7^5/_8$ ASTM D7158, ASTM D3161. Timberline<sup>®</sup> Cool Series<sup>®</sup> 13<sup>1</sup>/<sub>4</sub> x 39<sup>3</sup>/<sub>8</sub> **ASTM D7158,** Class H Timberline® CS aminated Fontana, CA 131/4 x 393/8 ASTM D7158 Class H Baltimore, MD Dallas, TX Ennis, TX **ASTM D3161,** Timberline Ultra HD®, Class F ASTM D7158, 55/a

Tampa, FL

uscaloosa, A

Fontana, CA

Fontana, CA

Michigan City, IN

13<sup>1</sup>/<sub>4</sub> x 39<sup>3</sup>/<sub>8</sub>

131/4 x 393/8

 $5^{5}/8$ 

Timberline® American

Fortitude®

Showing 1-5 of 5 results

CRRC PROD. ID MANUFACTURER BRAND AND MODEL PRODUCT TYPE COLOR SOLAR REFLECTANCE THERMAL EMITTANCE SRI INITIAL ♦ 3 YEAR ♦ INITIAL ♦ 3 YEAR ♦ INITIAL ♦ 3 YEAR ♦ 0676-0151 GAF Grand Sequoia® Reflector Series™ Asphalt Shi Brown 0.20 Pending 0.93 Pending 20 Pending 3 Plus Forest Brown Plus | Grand Timberline HD® Reflector Series™ Asphalt Shi Brown 0.18 Pending 0.90 Pending 16 Pending 4 0676-0130a GAF Aged Chestnut | Timberline® HDZ™ ngle RS Aged Chestunt | Timberline Ultra HD® Reflector Series™ Aged Chestnut | Timberline UHD® R

Barkwood | Timberline CS® Cool ngle mechanically fastened through the underlayment to the Timberline HD® Reflector Series™ Asphalt Shi Brown 0.20 Pending 0.93 Pending 20 Pending 4 sheathing or rafters. Timberline® HDZ™ RS+ Aged Grand Sequoia® Reflector Series™ Asphalt Shi Brown 0.19 Pending 0.92 Pending 19 Pending ▲

Showing 1-5 of 5 results

COOL ROOF RATING COUNCIL 2435 N, Lombard St. TEL (866) 465-2523 EMAIL: info@coolroofs.org Portland, OR 97217

Forest Brown | Grand Sequoia® RS | ngle





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

manufacturer's published installation instructions. In the event of a conflict, this report governs. 5.2 Installation is limited to use on plywood substrates on structures where nonclassified roof coverings are

5.3 Installation is limited to roofs with a slope of 2:12

(16.67%) or greater. 5.4 Installation is limited to use with roof coverings that do not involve hot asphalt or coal-tar pitch. 5.5 Installation is limited to use with roof coverings that are

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

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

6.0 EVIDENCE SUBMITTED

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

5.1 Installation must comply with this report and the 6.2 Data in accordance with ASTM D1970.

7.0 IDENTIFICATION

7.1 The WeatherWatch® and StormGuard® membranes described in this report must be identified by a label, on the container of each roll of membrane, bearing the

location, and the evaluation report number (ESR-1322). 7.2 The report holder's contact information is the following:

GAF name, the product name, the manufacturing

1 CAMPUS DRIVE PARSIPPANY, NEW JERSEY 07054 www.gaf.com

**REVISE DATES:** 

CONTRACTOR TO VERIFY ALL

THE WORK

DIMENSIONS, CONDITIONS, ETC.,

PERTAINING TO THE WORK AT THE

SITE BEFORE PROCEEDING WITH

AS INSTRUMENT OF SERVICE, ALL

DESIGN, IDEAS AND INFORMATION

AND SHALL REMAIN THE

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EVIDENCE OF ACCEPTANCE OF

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PROJECT INFO JOB NUMBER:

CHECKED BY:

SCALE:

V.K. N.T.S.

22065

DATE DRAWN:

DRAWN BY:

12/19/22 M.A.