

APPROVED PLAN
JOB COPY

Permit Number: B10-0425
Issue Date: 7-21-15



GREEN POINTS

Points for Accelerated Building Permit:
Residential Addition
First 350 sq. ft. = 10.0
499 - 350 = 149 Each additional 100 sq. ft.: 1.5 x 9 = 13.5
Total Points required = 23.5
Total Green Points provided = 53

ITEM	POINTS
A. INTEGRATED DESIGN FEATURES	
5. b. U.S. Green Building Council Member HOME SIZE CHART	1
Number of Bedrooms (2-1,357 sq. ft.)	6
B. SITE	
1. Recycle 75% Job site & demolition waste	2
C. FOUNDATION	
1. Incorporate 35% recycled flyash in new concrete	4
8. Use non toxic form release agent on concrete forms	1
D. STRUCTURAL FRAME	
6. Use OSB (sub-floor 1, roof sheathing 1)	1
E. EXTERIOR FINISH	
3. Install house wrap under siding	1
5. Use Low/No VOC Exterior Paint.	2
F. PLUMBING	
1. Insulate all hot water pipes.	2
3. Install dual flush/high efficiency toilets.	1
G. ELECTRICAL	
2. Dimmer switch light controls.	3
I. INSULATION	
2. Install recycled-content, formaldehyde-free fiberglass insulation.	1
J. WINDOWS	
1. a. double-paned	1
c. Low-emissivity (low-E)	2
L. RENEWABLE ENERGY AND ROOFING	
4. Install photovoltaic panels.	14
N. INDOOR AIR QUALITY & FINISHES	
2. Use low/no VOC paint	1
O. FLOORING	
1. Select FSC certified wood flooring.	6
P. OTHER	
1. Incorporate listing of green features into cover of blueprints.	1
TOTAL	52

△ = SYMBOL USED TO DESIGNATE GREEN POINT LOCATIONS ON PLANS

CITY OF SANTA CRUZ GREEN POINTS CHECK LIST

FIRE DEPARTMENT NOTES

1. THESE BUILDING PLANS ARE IN COMPLIANCE WITH THE CALIFORNIA BUILDING AND FIRE CODES (2007 AND DISTRICT AMENDMENTS).
2. SMOKE DETECTORS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS AND APPROVED BY THE CENTRAL FIRE PROTECTION DISTRICT.
A) ONE SMOKE DETECTOR ADJACENT TO EACH SLEEPING AREA (HALL, FOYER, BALCONY, OR ETC).
B) ONE SMOKE DETECTOR IN EACH SLEEPING ROOM.
C) ONE SMOKE DETECTOR AT THE TOP OF STAIRWAY OF 24" RISE OR GREATER AND IN AN ACCESSIBLE LOCATION BY A LADDER.
D) THERE MUST BE AT LEAST ONE SMOKE DETECTOR ON EACH FLOOR LEVEL REGARDLESS OF AREA USAGE.
3. STREET ADDRESS NUMBERS WILL BE POSTED AND MAINTAINED PLAINLY VISIBLE FROM THE STREET. NUMBERS SHALL BE 4" MIN. HIGH AND OF A CONTRASTING COLOR WITH THEIR BACKGROUND.
4. ROOF COVERING SHALL BE NOT LESS THAN CLASS "B" RATED.
5. AN APPROVED SPARK ARRESTOR SHALL BE INSTALLED ON TOP OF CHIMNEYS. MESH SHALL NOT EXCEED 1/2".
6. THE JOB COPIES OF THE BUILDING PLANS AND PERMITS MUST BE ON SITE DURING INSPECTIONS.

PROJECT DESCRIPTION:

THIS PROPOSAL IS FOR AN ADDITION TO AN EXISTING SINGLE FAMILY DWELLING.

SHEET INDEX

- 1 SITE PLAN, EXISTING EXTERIOR ELEVATIONS & DATA
 - 2 PROPOSED PLAN & REFLECTED CEILING PLAN
 - 3 PROPOSED FOUNDATION PLAN & ROOF PLAN
 - 4 PROPOSED EXTERIOR ELEVATIONS
 - 5 BUILDING SECTIONS & DETAILS
 - 6 ELECTRICAL PLAN
- EC-1 ENERGY COMPLIANCE FORMS

PROJECT DATA:

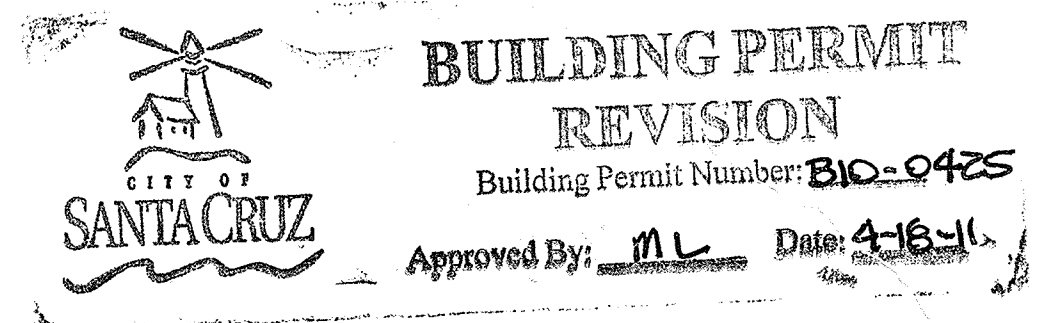
A.P.N.: 010-141-14
OCCUPANCY GROUP: R-3 & U
TYPE OF CONSTRUCTION: V-B
LOT SIZE: 5,402 SQ. FT.
ADDRESS: 344 PINE STREET, SANTA CRUZ, CA
OWNER: NICHOLAS & LORI R. STOLL
EXISTING SFD: 858 SQ. FT.
EXISTING GARAGE: 387 SQ. FT.
PROPOSED ADDITIONS: 499 SQ. FT.
EXISTING LOT COVERAGE: 23%
PROPOSED LOT COVERAGE: 32%

EXTERIOR MATERIALS

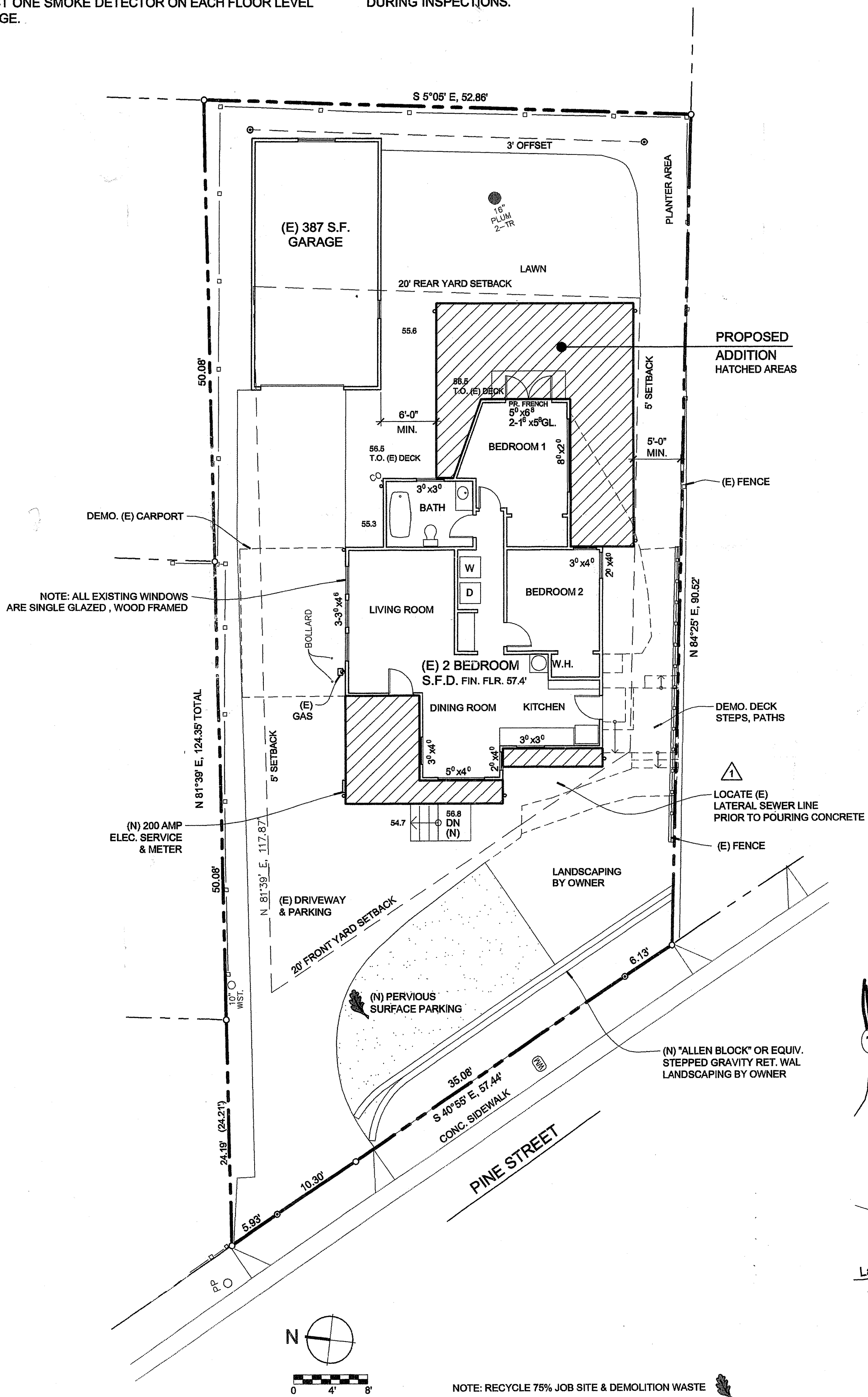
SIDING: STUCCO
ROOFING: ARCHITECTURAL GRADE COMPOSITION SHINGLES

CODE COMPLIANCE:

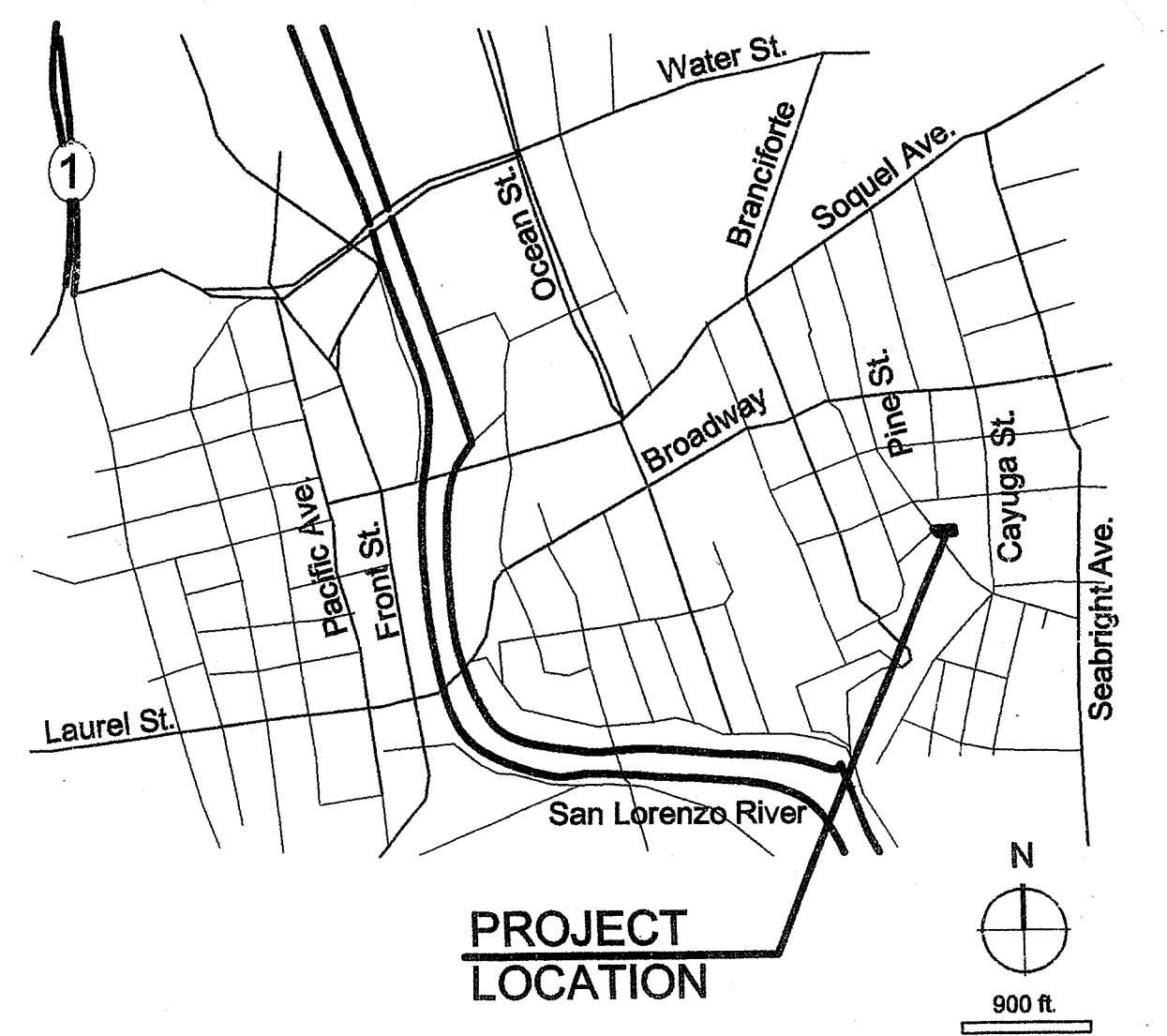
THE FOLLOWING CODES ARE IN EFFECT:
2007 CALIFORNIA BUILDING CODE
2007 CALIFORNIA PLUMBING CODE
2007 CALIFORNIA MECHANICAL CODE
2007 ElectC
2007 CALIFORNIA EnergyC
SANTA CRUZ CITY ORDINANCES



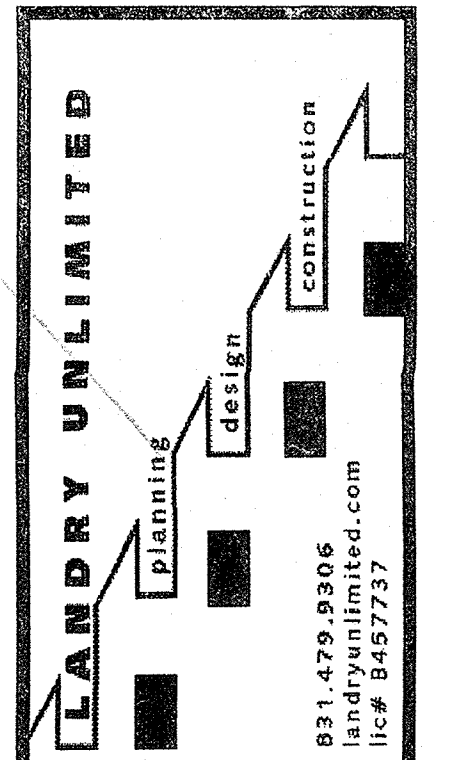
EXISTING ELEVATIONS
1/8" = 1'-0"



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



VICINITY MAP
NO SCALE



REVISIONS

△	SCC 01/18/11
△	CLIENT REV. 03/25/11

344-5623
Lori Stoll

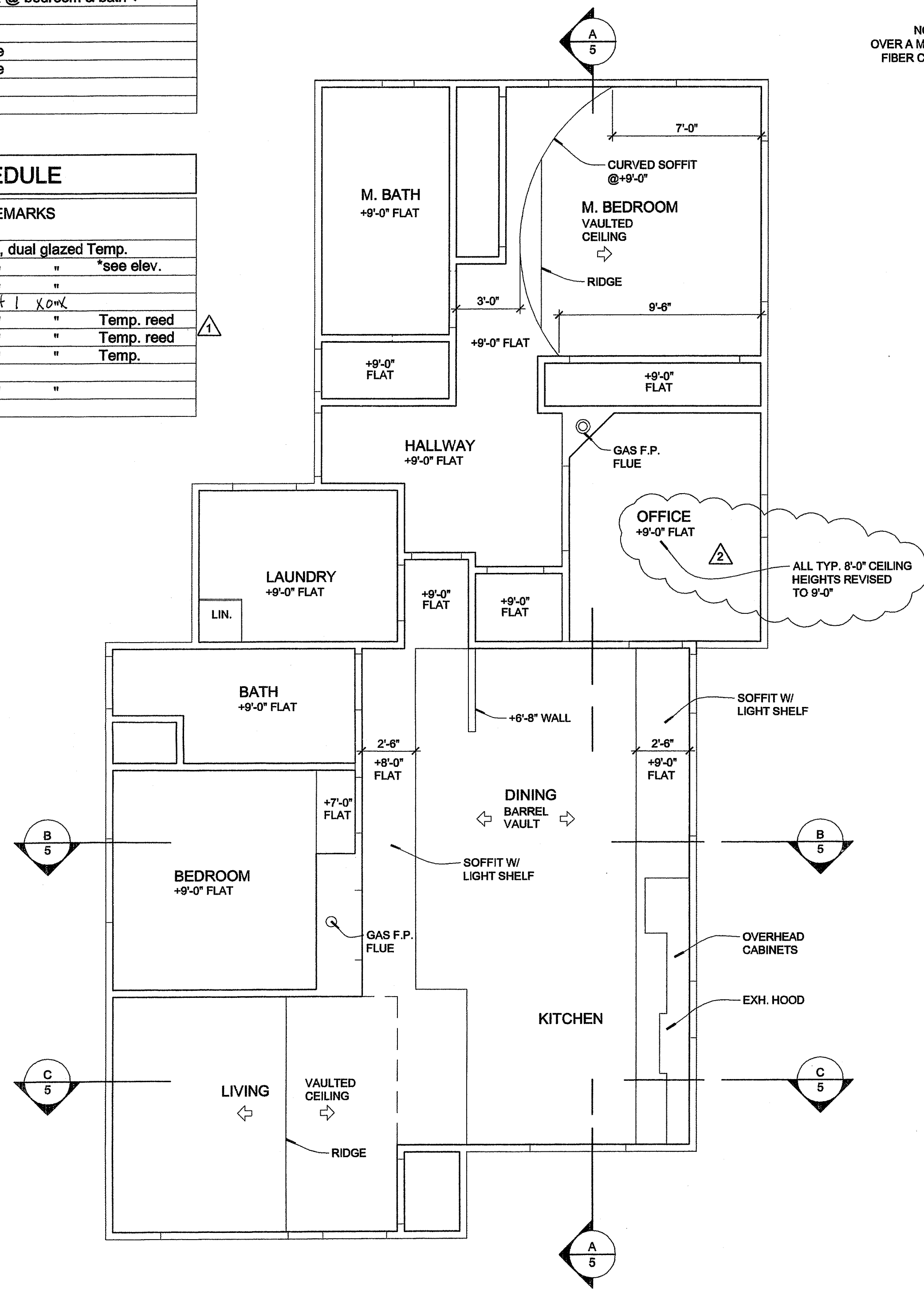
STOLL RESIDENTIAL ADDITION
344 PINE STREET
SANTA CRUZ, CA 95062
APN: 010 - 141 - 14

DATE: 12/09/10

DOOR SCHEDULE				
MARK	SIZE	TYPE	COUNT	REMARKS
1	3'-0" x 8'-0"	S.C. Swing ✓	1	Entry, weather strip
2	6'-0" x 6'-8"	Sliding glass	2	Vinyl & temp. glass, weather strip
3	NOT USED			
4	3'-0" x 6'-8"	S.C. Swing ✓	1	Exterior, weather strip
5	3'-0" x 6'-8"	H.C. Bi-fold ✓	1	Coat Closet
6	2'-8" x 6'-8"	H.C. Swing ✓	4	Priv. lock @ bedroom & bath ✓
7	2'-6" x 6'-8"	H.C. Swing ✓	1	Closet
8	2'-8" x 6'-8"	H.C. Pocket ✓	2	Priv. lock
9	8'-0" x 6'-8"	H.C. Sliding ✓	1	Wardrobe
10	7'-0" x 6'-8"	H.C. Sliding ✓	1	Wardrobe
11	2'-8" x 6'-8"	H.C. Bi-fold ✓	1	Closet
		H.C. Swing ✓	1	Closet

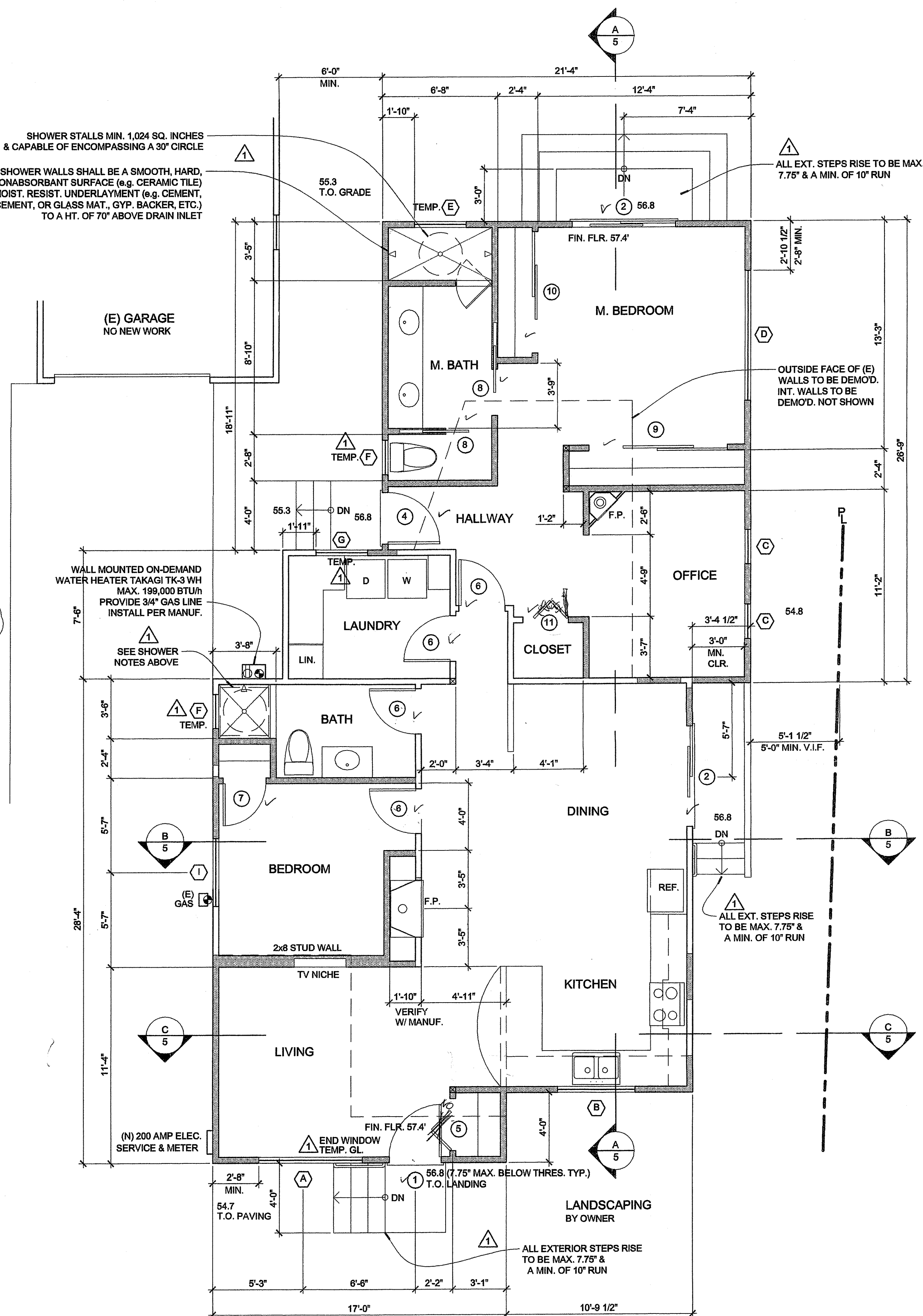
WINDOW SCHEDULE				
MARK	SIZE	TYPE	COUNT	REMARKS
A	8'-0" x 4'-0"	3 eq. Casement	1	Vinyl, dual glazed Temp.
B	4'-6" x 4'-0"	Slider Single hung	1	" " " " *see elev.
C	3'-0" x 3'-6"	Single hung	2	" " " " " " " "
D	7'-6" x 2'-6"	3 eq. Awning slider	1	fixed count 1 x oak
E	3'-0" x 1'-6"	Slider	1	" " " " Temp. reed
F	2'-0" x 1'-6"	Slider	2	" " " " Temp. reed
G	3'-0" x 3'-0"	Slider	1	" " " " Temp.
H	NOT USED			
I	4'-0" x 4'-0"	Slider	1	" " " " " "

Note: All glass to be dual glazed low "E"
ALL MEASUREMENTS TO BE VERIFIED IN FIELD.



WALL LEGEND

- EXISTING (E) WALL OR CONSTRUCTION TO BE REMOVED
- EXISTING (E) WALL TO REMAIN
- NEW (N) WALL - 2x4 STUDS @ 16" W/1/2" G.B. EA. SIDE EXTERIOR SIDING TO MATCH (E)



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

LANDRY UNLIMITED
 PLANNING DESIGN CONSTRUCTION
 931.479.9306
 info@landryunlimited.com
 Lic# 6457737

U.S. GREEN BUILDING COUNCIL
 MEMBER

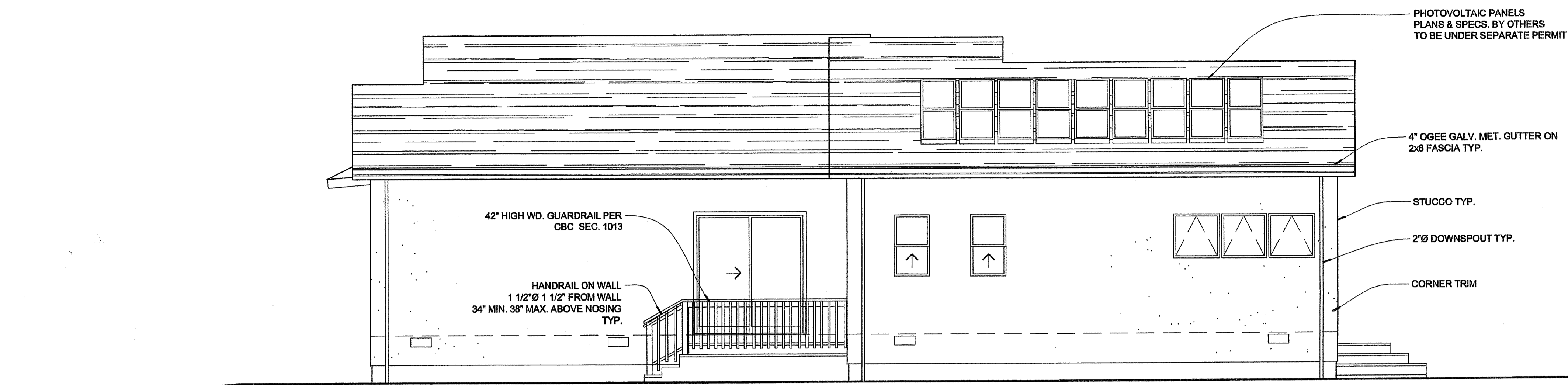
REVISIONS
 SCC 01/18/11
 CLIENT REV. 03/25/11

STOLL RESIDENTIAL ADDITION
 344 PINE STREET
 SANTA CRUZ, CA 95062
 APN: 010 - 141 - 14

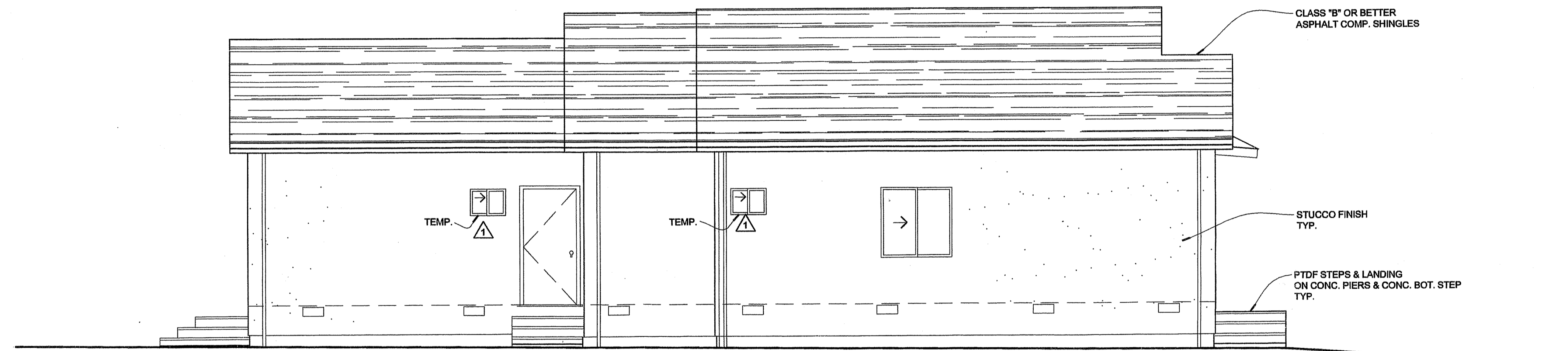
DATE: 12/09/10

2

PROPOSED REFLECTED CEILING PLAN
1/4" = 1'-0"



SOUTH



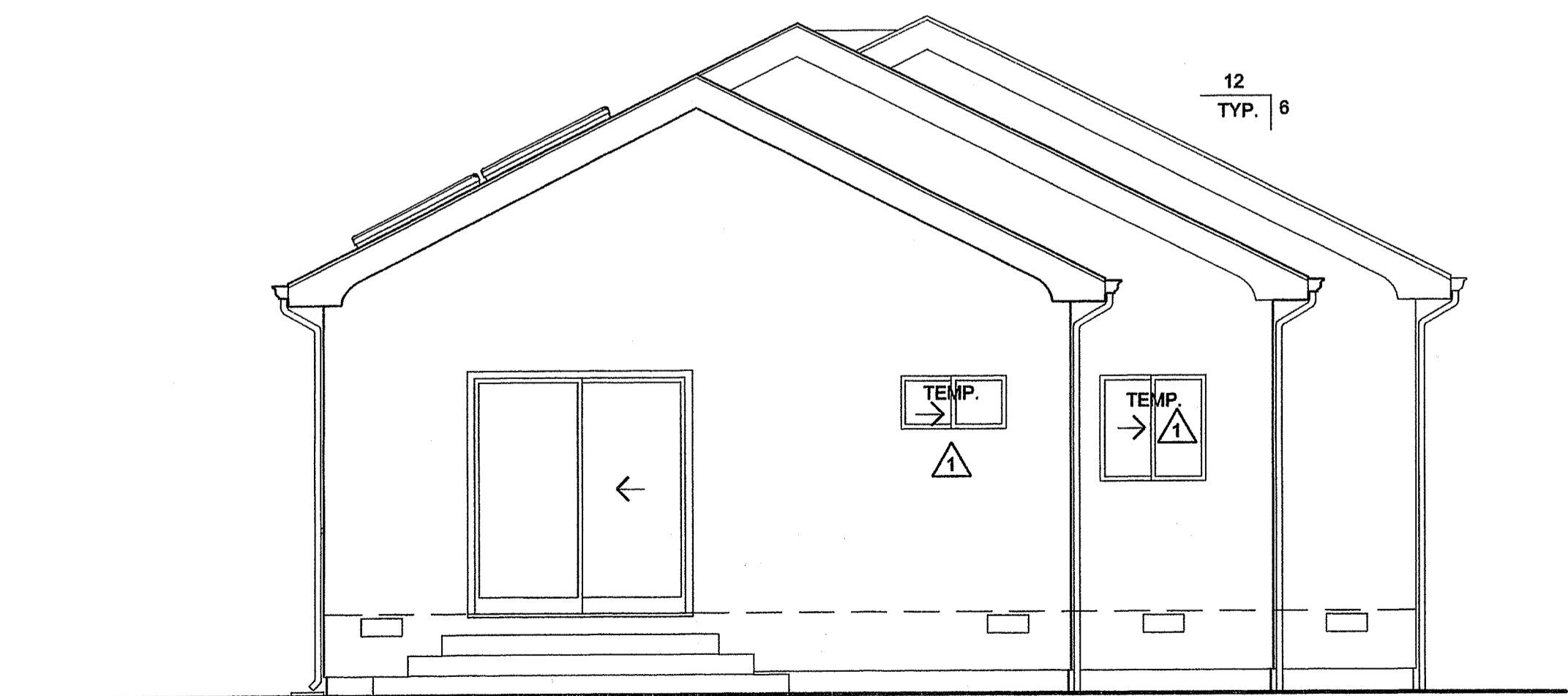
NORTH

PROVIDE (N) 6"x14" SCREENED FOUND. VENTS
546 SQ. FT. UNDER FLOOR AREA

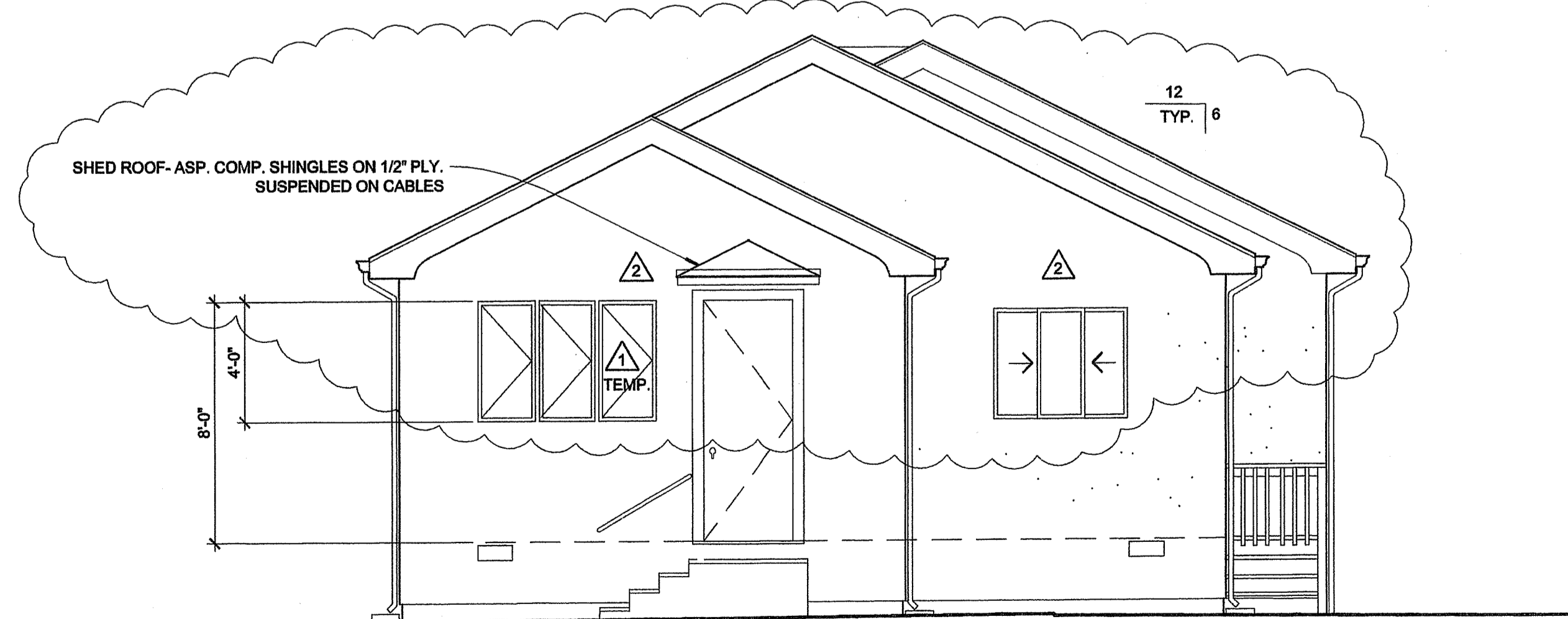
1 SQ. FT. PER EVERY 150 SQ. FT. = 3.64 SQ. FT.
8 - 6"x14" (58 SQ. FT.) 4.64 SQ. FT.
VENTILATION PROVIDED

PROVIDE (N) 6"x14" SCREENED FOUND. VENTS
871 SQ. FT. UNDER FLOOR AREA

1 SQ. FT. PER EVERY 150 SQ. FT. = 4.47 SQ. FT.
9 - 6"x14" (58 SQ. FT.) = 5.22 SQ. FT.
VENTILATION PROVIDED



EAST



WEST

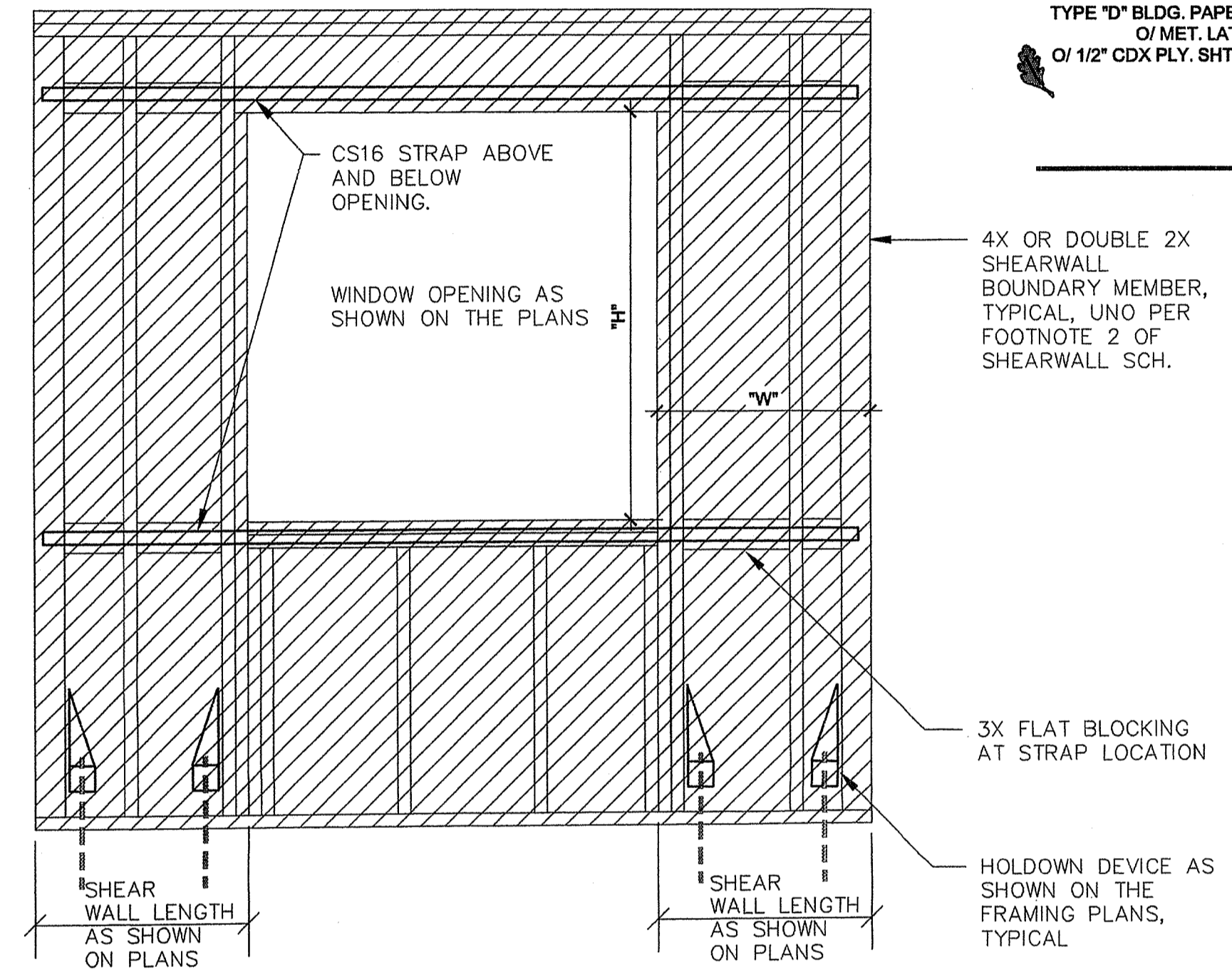
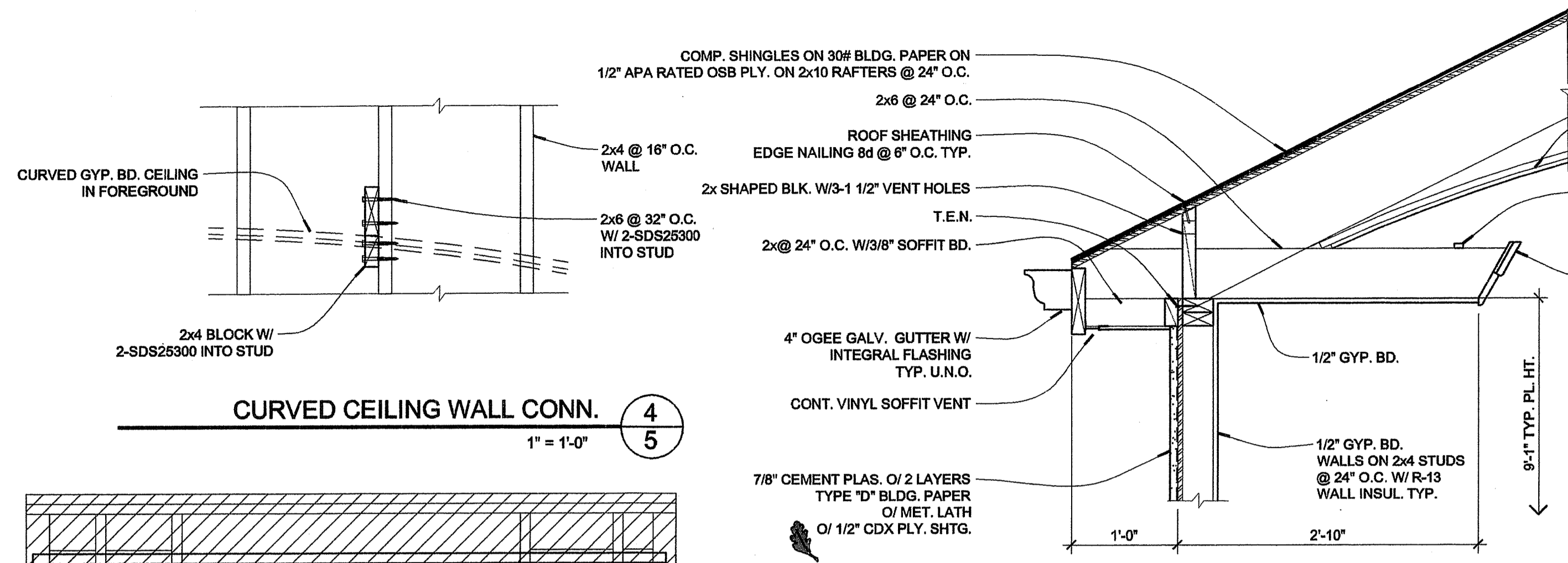
PROPOSED EXTERIOR ELEVATIONS
1/4" = 1'-0"



REVISIONS	
1	SCC 01/18/11
2	CLIENT REV. 03/25/11

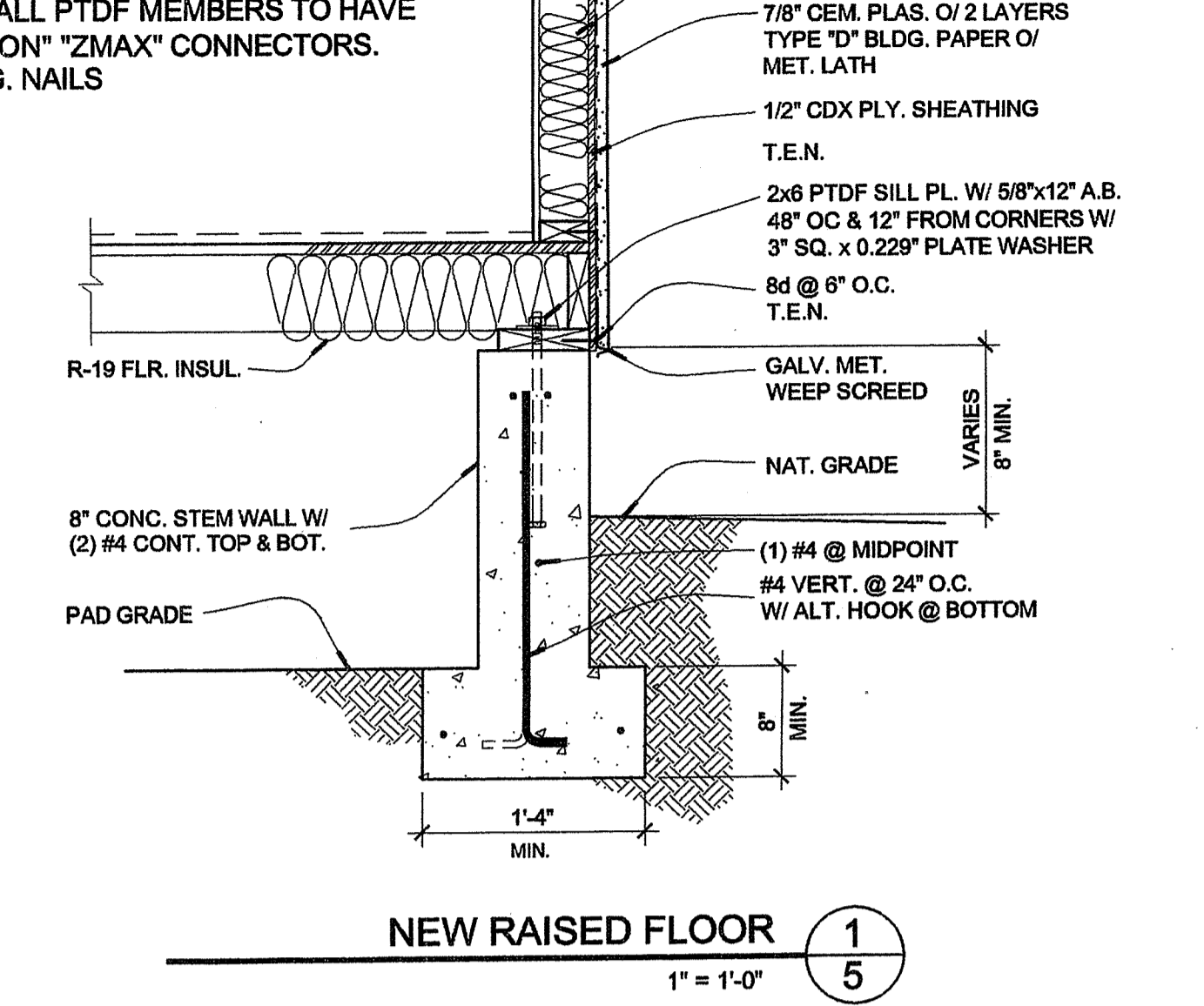
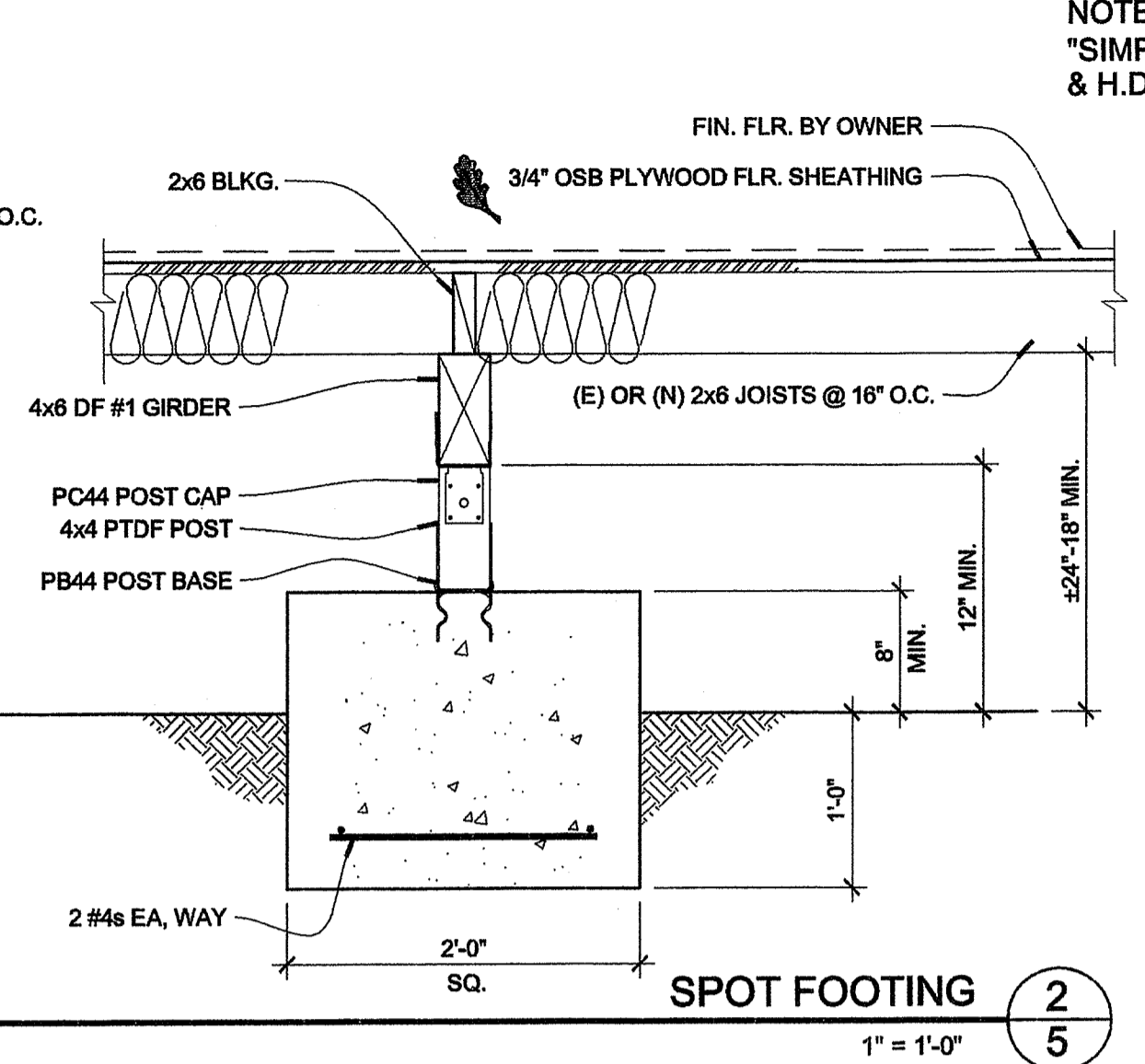
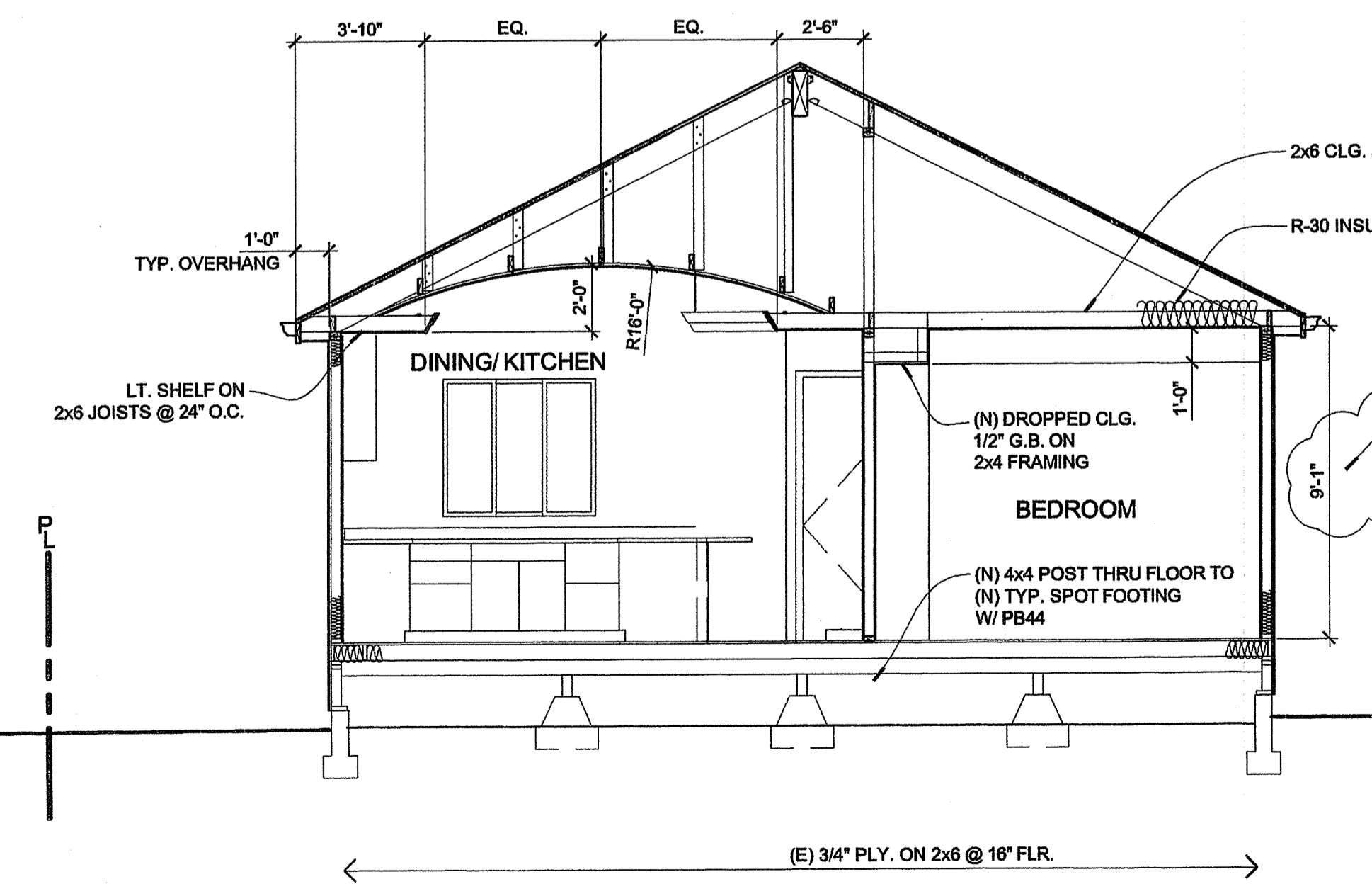
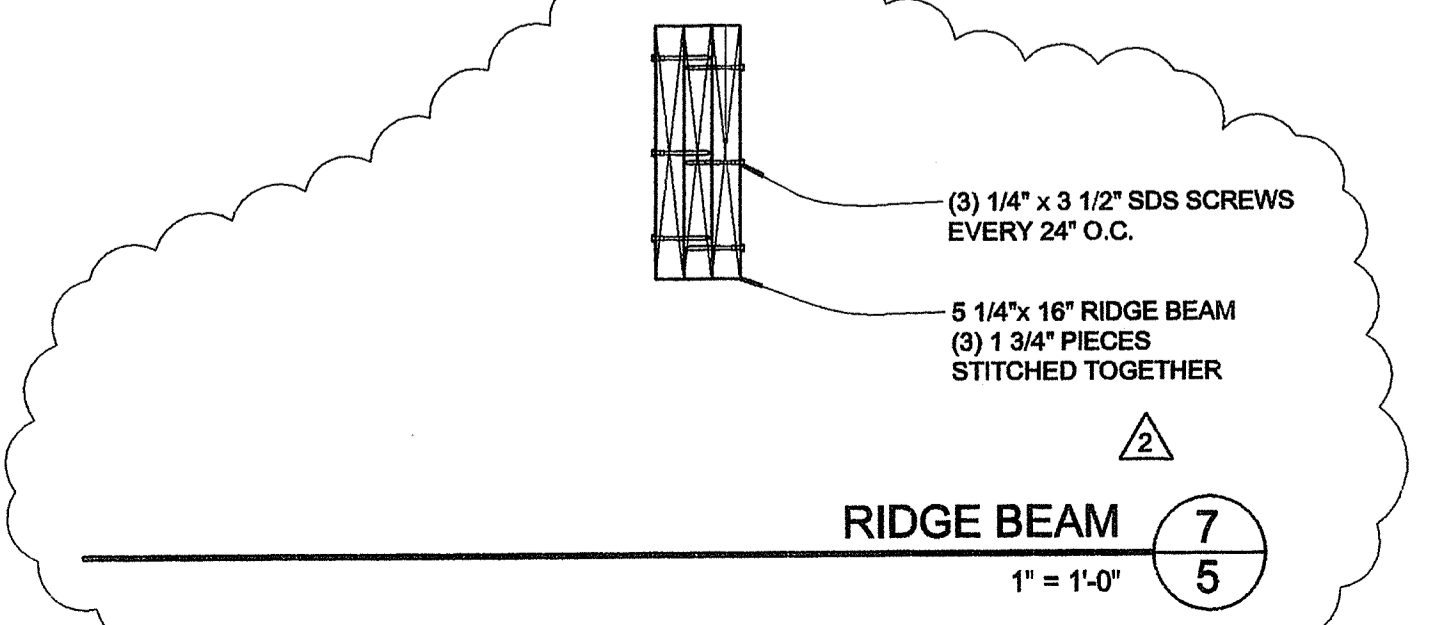
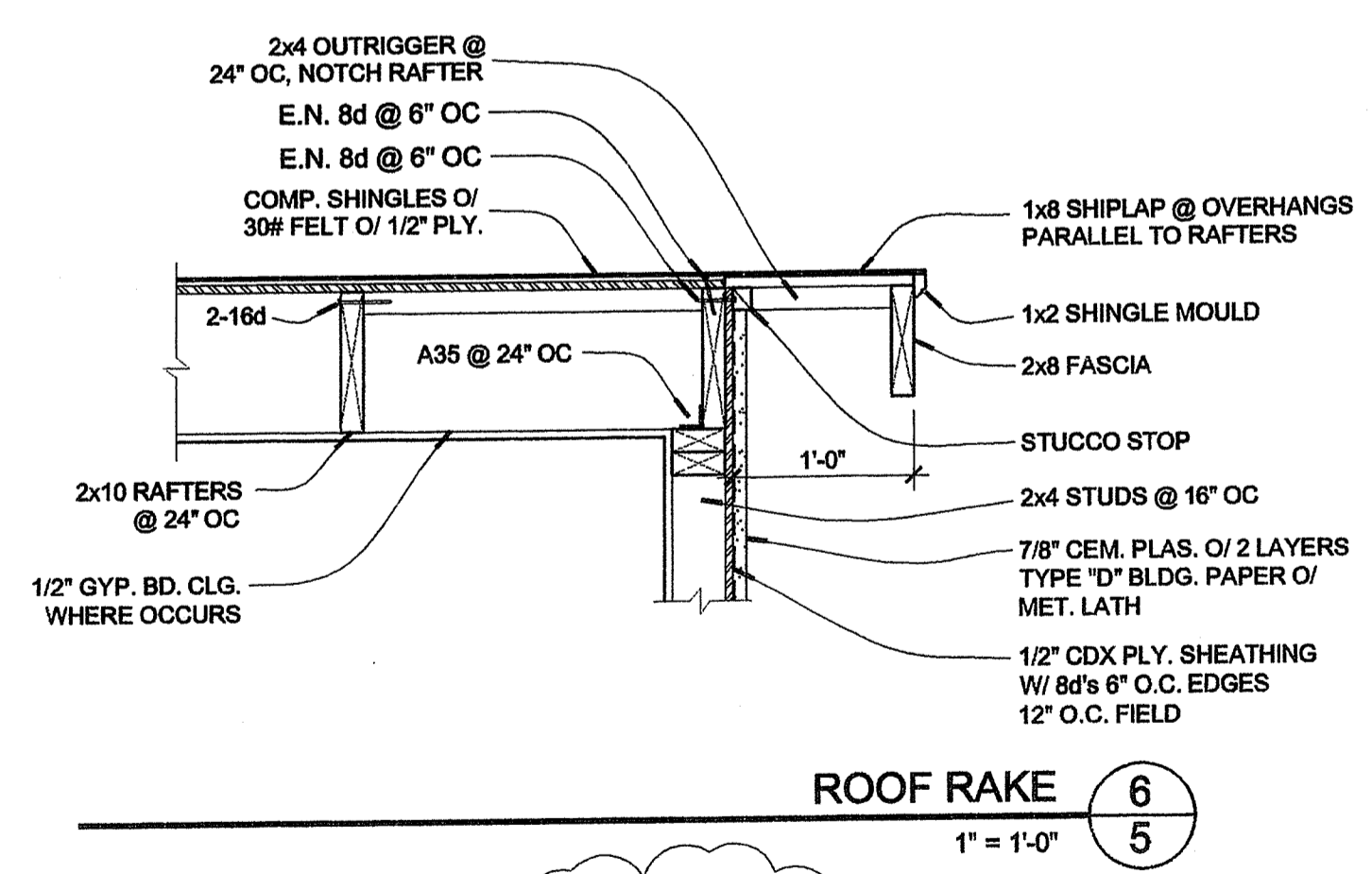
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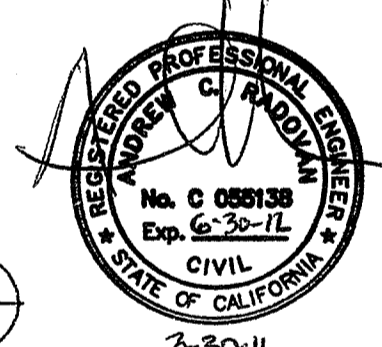
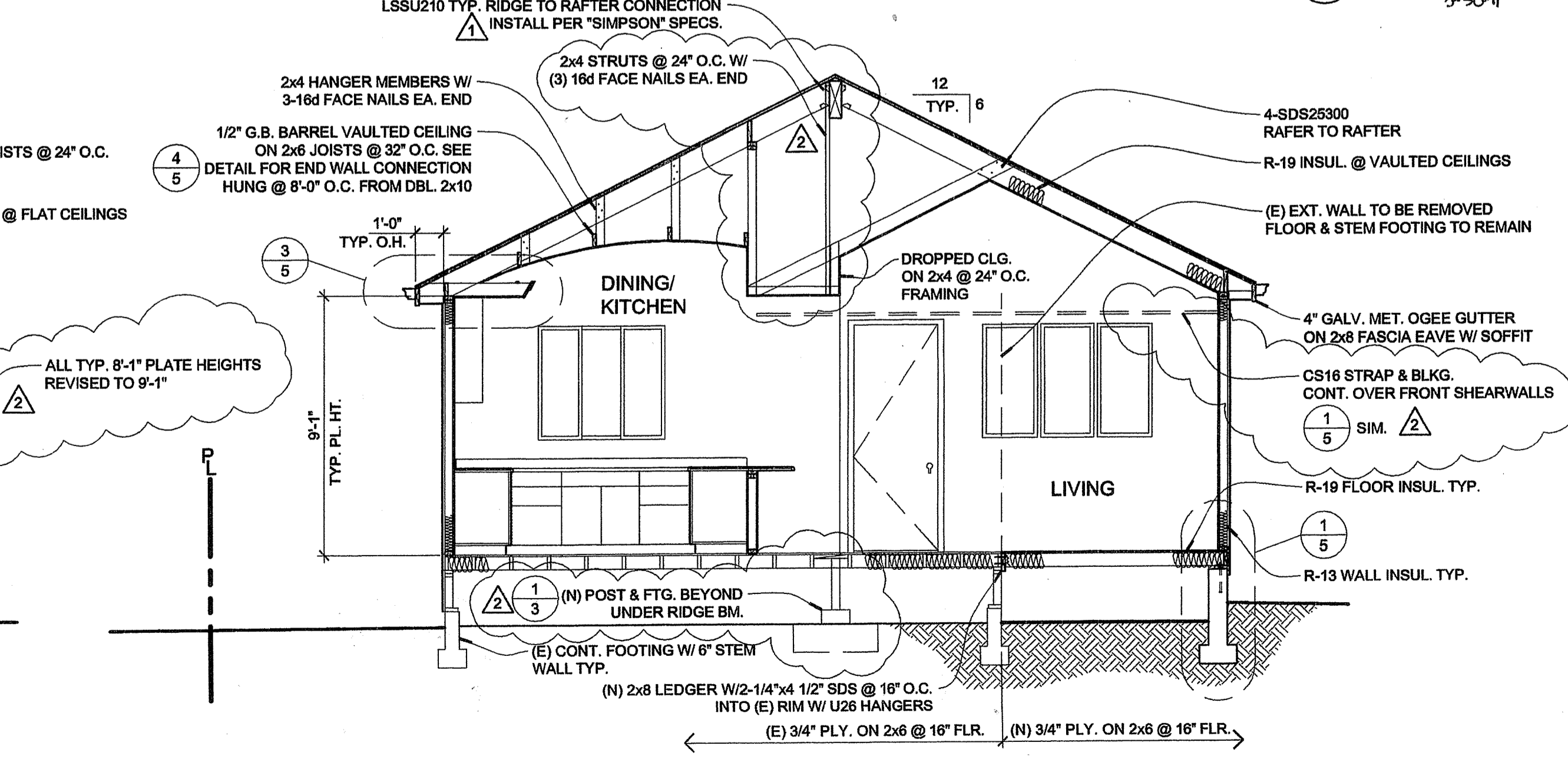
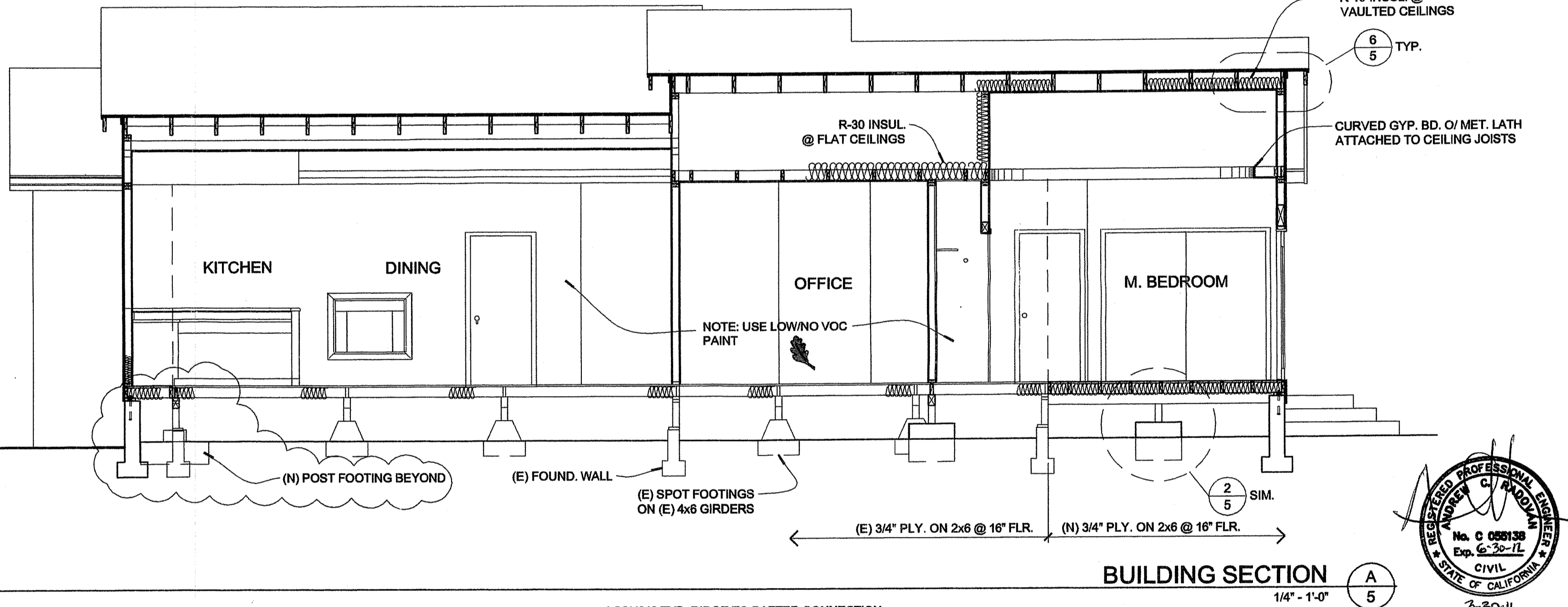


NOTES:
THE MINIMUM WALL PIER WIDTH, "W" FOR SHEARWALLS WITH PENETRATIONS IS ONE HALF THE OPENING HEIGHT, "H".
NAIL SHEARWALL SHEATHING PER SHEARWALL SCHEDULE.
NAILS CS16 STRAP WITH NAILS AS SPECIFIED BY SIMPSON. FILL EVERY NAIL HOLE IN STRAP OVER BLOCKING, FILL EVERY OTHER NAIL HOLE AT SILL, HEADER NAILING.

STRAPS @ SHEARWALLS W/ PERFORATIONS 5/5
1" = 1'-0"



NOTE: ALL PTDF MEMBERS TO HAVE "SIMPSON" "ZMAX" CONNECTORS. & H.D.G. NAILS



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planning design construction
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lic# B497737



REVISIONS

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STOLL RESIDENTIAL ADDITION
344 PINE STREET
SANTA CRUZ, CA 95062
APN: 010 - 141 - 14

DATE: 12/14/10

MANDATORY MEASURES SUMMARY: RESIDENTIAL MF-1R Page 1
 Project Title..... Stoll proposed home ***** Date: 04/08/11 11:22:00
 Project Address..... 344 Pine Street *****
 Documentation Author..... Lynette Sergius CEA CEPE *****
 Building Permit #
 Plan Check / Date
 Field Check / Date

Climate Zone..... 03
 Compliance Method..... MICROPASS v8.1 for 2008 CEC Standards (R03)
 User#-MP1308 User-AREA Title 24 Run-RevISED for 9' wall ht.

NOTE: Low-rise residential buildings subject to the standards must comply with all applicable mandatory measures listed, regardless of the compliance approach used. More stringent energy measures listed on the Certificate of Compliance (CF-IR-ADD, or CF-IR-ALT Form) shall supersede the items marked with an asterisk (*) below. This Mandatory Measures Summary shall be incorporated into the permit documents and the applicable features shall be considered by all parties as minimum component performance specifications whether they are shown elsewhere in the documents or in this summary. Submit all applicable sections of the MF-1R Form with plans.

BUILDING ENVELOPE MEASURES:
 116(a): Doors and windows between conditioned and unconditioned spaces are manufactured to limit air leakage.
 116(b): Fenestration products (except field-fabricated windows) have a label listing the certified U-Factor, certified Solar Heat Gain Coefficient (SHGC), and infiltration that meets the requirements of 10-111(a).
 117: Exterior doors and windows are weather-stripped at joints and penetrations are caulked and sealed.
 118(a): Insulation specified or installed meets standards for insulating materials. Indicate type and location on CF-IR Form.
 118(b): The thermal emittance and solar reflectance values of the cool roofing material meets the requirements of 118(1) when the installation of a cool roof is specified on the CF-IR Form.
 *150(a): Minimum R-19 insulation in wood-frame ceiling or equivalent U-factor.
 150(b): Loose fill insulation shall conform with manufacturer's installed label R-value.
 *150(c): Minimum R-13 insulation in wood-frame wall or equivalent U-factor.
 *150(d): Minimum R-13 insulation in raised wood-frame floor or equivalent U-factor.
 150(e): Air retarding wrap is tested, labeled, and installed according to ASTM E167-95(2000) when specified on the CF-IR Form.
 150(f): Mandatory vapor barrier installed in Climate Zones 14 or 16.
 150(i): Water absorption rate for slab edge insulation material alone without facings is no greater than 0.3%; water vapor permeance rate is no greater than 2 perm/inch and shall be protected from physical damage and UV light deterioration.

FIREPLACES, DECORATIVE GAS APPLIANCES AND GAS LOG MEASURES:
 150(e)1A: Masonry or factory-built fireplaces have a closable metal or glass door covering the entire opening of the firebox.
 150(e)1B: Masonry or factory-built fireplaces have a combustion outside air intake, which is at least six square inches in area and is equipped with a damper that is readily accessible, operable, and tight-fitting damper and/or a combustion-air control device.
 150(e)2: Continuous burning pilot lights and the use of indoor air for cooling a firebox jacket when that indoor air is vented to the outside of the building, are prohibited.

SPACE CONDITIONING, WATER HEATING AND PLUMBING SYSTEM MEASURES:
 110-113: HVAC equipment, water heaters, showerheads, faucets and all other regulated appliances are certified by the Energy Commission.
 113(c): Water heating recirculation loops serving multiple dwelling units and high-rise residential occupancies meet the air release valve, backflow prevention, pump isolation valve, and recirculation loop connection requirements of 113(c)5.
 115: Continuously burning pilot lights are prohibited for natural gas: water heaters, furnaces, household cooking appliances (appliances with an electrical supply voltage connection with pilot lights that consume less than 100 Btu/hr and spa heaters).
 150(h): Heating and/or cooling loads are calculated in accordance with ASHRAE, SMACNA or ACCA.
 150(i): Heating systems are equipped with thermostats that meet the setback requirements of Section 112(c).
 150(j)1A: Storage gas water heaters rated with an Energy Factor no greater than the federal minimum standard are externally wrapped with insulation having an installed thermal resistance of R-12 or greater.
 150(j)1B: Unfired storage tanks, such as storage tanks or backup tanks for solar water-heating systems or indirect hot water tanks have R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
 150(j)2: First 5 feet of hot and cold water pipes closest to water heater tank, non-recirculating systems, and entire length of recirculating sections of hot water pipes are insulated per standards Table 150-B.
 150(j)3: Cooling system piping (section on chilled water, or brine lines), and piping insulated between heating source and indirect hot water tank shall be insulated to Table 150-B and equivalent hydronic heating systems or hot water systems >15 psi, meets the requirements of standards Table 153-A.
 150(j)4: Pipe insulation for steam heating systems or hot water systems >15 psi, meets the requirements of standards Table 153-A.
 150(j)5A: Insulation for chilled water piping and refrigerant suction lines includes a vapor retardant or is enclosed entirely in conditioned space.
 150(j)6: Solar water-heating systems and/or collectors are certified by the solar rating and certification corporation.

DUCTS AND FANS MEASURES:
 150(m): All air-distribution system ducts and plenums installed, are sealed and insulated to meet the requirements of CMC Sections 601, 602, 603, 604, 605 and standard 6-5; supply-air and return-air ducts and plenums are insulated to a minimum installed level of R-4.2 or enclosed entirely in conditioned space. A minimum installed level of R-4.2 or enclosed entirely in conditioned space meets the applicable requirements of UL 181, UL 182A, or UL 182B, or a tape is used to sealant that meets the requirements of UL 722, if mastic or tape is used to seal openings greater than 1/4 inch, the combination of mastic and either mesh or tape shall be used.
 150(m)1: Building cavities, support platforms for air handlers, and plenums defined or constructed with materials other than sealed sheet metal, duct board or flexible duct shall not be used for conveying conditioned air.
 150(m)2: Support platforms for air handlers, ducts, and plenums installed in building cavities and support platforms shall not be compressed to cause reductions in the cross-sectional area of the ducts.
 150(m)3: Joints and seams of duct systems and their components shall not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
 150(m)4: Exhaust fan systems have back draft or automatic dampers.
 150(m)5: Gravity ventilating systems serving conditioned space have either automatic or readily accessible, manually operated dampers.
 150(m)6: Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Cellular foam insulation shall be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation that can cause degradation of the material.
 150(m)10: Flexible ducts cannot have porous inner cores.
 150(o): All dwelling units shall meet the requirements of ANSI/ASHRAE Standard 62.2-2007 Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings. Window operation is not a permissible method of providing the whole building ventilation required in section 4 of that standard.

POOL AND SPA HEATING SYSTEMS AND EQUIPMENT MEASURES:
 114(a): Any pool or spa heating system shall be certified to have: a thermal efficiency that complies with the Appliance Efficiency Regulations; an on-off switch mounted outside of the heater; a permanent weatherproof plate or card with operating instructions; and shall not use electric resistance heating or a pilot light.
 114(b): Any pool or spa heating equipment shall be installed with at least 36" of pipe between filter and heater, or dedicated suction and return lines, or built-up connections for future solar heating.
 114(b)2: Outdoor pools or spas that have a heat pump or gas heater shall have a cover.
 114(b)3: Pools shall have directional inlets that adequately mix the pool water and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
 150(p): Residential pool systems or equipment meet the pump sizing, flow rate, piping, filters and valve requirements of 150(p).
RESIDENTIAL LIGHTING MEASURES:

150(k)1: High efficacy luminaires or LED Light Engine with Integral Heat Sink has an efficacy that is no lower than the efficacy contained in Table 150-C and is not a low efficacy luminaire as specified by 150(k)2.
 150(k)3: The wattage of permanently installed luminaires shall be determined as specified by 150(c).
 150(k)4: Ballasts for fluorescent lamps rated 13 Watts or greater shall be electronic and shall have an output frequency no less than 20 kHz.
 150(k)5: Permanently installed night lights and night lights integral to a permanently installed luminaire or exhaust fan shall contain only high efficacy lamps meeting the minimum efficacies contained in Table 150-C and shall not contain a line-voltage socket or line-voltage lamp holder. OR shall be rated to consume no more than five watts of power as determined by 150(c), and shall not contain a medium screw-base socket.
 150(k)6: Lighting integral to exhaust fans, in rooms other than kitchens, shall meet the applicable requirements of 150(k).
 150(k)7: All switching devices and controls shall meet the requirements of 150(k)7.

150(k)8: A minimum of 50 percent of the total rated wattage of permanently installed lighting in kitchens shall be high efficacy.
 EXCEPTION: Up to 50 percent of the total rated wattage of less than or equal to 2,500 ft² or 100 watts for dwelling units larger than 2,500 ft² may be exempt from the 50% high efficacy requirement when: all low efficacy luminaires in the kitchen are controlled by a manual or occupant sensor, dimmer, energy management system (EMS), or a multi-scan programmable control system; and all permanently installed luminaires in garages, laundry rooms, closets greater than 70 square feet, and utility rooms are high efficacy and controlled by a manual or occupant sensor.
 150(k)9: Permanently installed lighting that is internal to cabinets shall use no more than 20 watts per linear foot of 11 limited cabinet.
 150(k)10: Permanently installed luminaires in bathrooms, attached and detached garages, laundry rooms, closets and utility rooms shall be high efficacy.
 EXCEPTION 1: Permanently installed low efficacy luminaires shall be allowed provided they are controlled by a manual or occupant sensor certified to comply with the applicable requirements of 119.
 EXCEPTION 2: Permanently installed low efficacy luminaires in closets less than 70 square feet are not required to be controlled by a manual or occupant sensor.
 150(k)11: Permanently installed luminaires located in rooms or areas other than in kitchens, bathrooms, garages, laundry rooms, closets, and utility rooms shall be high efficacy luminaires.
 EXCEPTION 1: Permanently installed low efficacy luminaires shall be allowed provided they are controlled by either a dimmer switch that complies with the applicable requirements of 119, or by a manual or occupant sensor that complies with the applicable requirements of 119.
 EXCEPTION 2: Lighting in detached storage building less than 1000 square feet located on a residential site is not required to comply with 150(k)11.
 150(k)12: Luminaires recessed into insulated ceilings shall be listed for zero clearance insulation contact (ZC) by Underwriters Laboratories or other nationally recognized testing/rating laboratory; and have a label that certifies the lighting fixture air leakage less than 2.0 CFM at 75 Pascals when tested in accordance with ASTM E283; and be sealed with a gasket or caulk between the luminaire housing and ceiling.
 150(k)13: Limited outdoor lighting, including lighting for private patios in low-rise residential buildings with four or more dwelling units, entrances, balconies, and porches, which are permanently mounted to a residential building or to other buildings on the same lot shall be high efficacy.
 EXCEPTION 1: Permanently installed outdoor low efficacy luminaires shall be allowed provided that they are controlled by a manual on/off switch, a motion sensor not having an override or bypass switch that disables the motion sensor, and one of the following controls: a photocontrol; or an astronomical time clock not having an override or bypass switch that disables the astronomical time clock; OR an energy management control system (EMS) not having an override or bypass switch that allows the luminaire to be always on.
 EXCEPTION 2: Outdoor luminaires used to comply with Exception 1 to 150(k)13 may be controlled by a temporary override switch which bypasses the motion sensing function provided that the motion sensor is automatically reactivated within six hours.
 EXCEPTION 3: Permanently installed luminaires in or around swimming pool, water features, or other location subject to Article 680 of the California Electric Code need not be high efficacy luminaires.
 150(k)14: Internally illuminated address signs shall comply with Section 148: water features, other location subject to Article 680 of the California Electric Code need not be high efficacy luminaires.
 150(k)15: Lighting for parking lots and carports with a total of 8 or more vehicles per site shall comply with the applicable requirements in Sections 130, 132, 134, and 147. Lighting for parking garages for 8 or more vehicles shall comply with the applicable requirements of sections 130, 131, 134, and 146.
 150(k)16: Permanently installed lighting in the enclosed, non-utility spaces of low-rise residential buildings with four or more dwelling units shall be high efficacy luminaires.
 EXCEPTION: Permanently installed low efficacy luminaire(s) certified to comply with the applicable requirements of 119.

Climate Zone..... 03
 Compliance Method..... MICROPASS v8.1 for 2008 CEC Standards (R03)
 User#-MP1308 User-AREA Title 24 Run-RevISED for 9' wall ht.

GENERAL INFORMATION
 HERS Verification..... Not Required
 Conditioned Floor Area..... 13122 sf
 Building Type..... Single Family Detached
 Construction Type..... Existing/Alteration
 Vintage Assumption..... Before 1978
 Natural Gas at site..... Yes
 Building Front Orientation..... Front Facing 270 deg (W)
 Number of Dwelling Units..... 1
 Number of Building Stories..... Full Year
 Weather Data Type..... Full Year
 Floor Construction Type..... Raised Floor
 Number of Building Zones..... 1
 Conditioned Volume..... 13122 cf
 Slab-on-Grade Area..... 0 sf
 Average Percentage Glazing..... 0.4 % of floor area
 Average Glazing U-Factor..... 0.4 Btu/hr-sf-F
 Average glazing SHGC..... 0.4
 Average Ceiling Height..... 9.7 ft

MICROPASS ENERGY USE SUMMARY

Energy Use (kWh/yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	88.87	22.43	45.68	70.1%
Space Cooling	22.20	15.57	67.8%	
Ventilation Fans	0.98	0.98	0.00	0.0%
Water Heating	26.52	16.70	9.62	37.0%
Total	118.57	46.50	72.07	60.8%

*** Building complies with Computer Performance ***

BUILDING ZONE INFORMATION

Zone Type	Floor Area (sf)	Volume (cf)	# of Dwell Units	Temp. Type	Vent. Type	Vent. Rate (cfm)	Verified (Y/N)
1 - Existing Residence	858	7722	0.63	2.5	Yes	Setback	2.0 Standard No
ADD - New (Added) Residence	499	5400	0.37	1.5	Yes	Setback	2.0 Standard No

OPAQUE SURFACES

Surface	Frame Area (sf)	U-Factor (Btu/hr-sf-F)	Cavity (ft)	Act. R-Value	Solar Appendix 344 Reference	Location/Comments
1 - Existing 7 Wall	180	0.356	0	0	90 Yes 4.3.1 A1	CEC default
10 Wall	82	0.356	0	0	90 Yes 4.3.1 A1	CEC default
13 Wall	153	0.356	0	0	180 Yes 4.3.1 A1	CEC default
16 Roof	858	0.079	11	n/a	0 Yes 4.2.1 A2	CEC default
20 Floor	858	0.097	0	0	n/a 0 No 4.4.1 A1	CEC default
1 - Deleted 8 Wall	173	0.102	13	0	0	90 Yes 4.3.1 A3 Upgrade
11 Wall	82	0.102	13	0	0	90 Yes 4.3.1 A3 Upgrade
14 Wall	153	0.102	13	0	180	90 Yes 4.3.1 A3 Upgrade
17 Roof	858	0.032	30	40	0	Yes 4.2.1 A10 New vault min.
21 Floor	858	0.037	19	0	n/a	0 No 4.4.1 A4 Upgrade
1 - Deleted 2 Wall	173	0.356	0	0	270	90 Yes 4.3.1 A1 CEC default
3 Wall	140	0.356	0	0	0	90 Yes 4.3.1 A1 CEC default
4 Wall	128	0.356	0	0	180	90 Yes 4.3.1 A1 CEC default
5 Door	40	0.500	0	0	180	90 Yes 4.5.1 A4
ADD - New (Added) 6 Wall	260	0.102	13	0	270	90 Yes 4.3.1 A3 Minimum batt
9 Wall	252	0.102	13	0	0	90 Yes 4.3.1 A3 Minimum batt
12 Wall	175	0.102	13	0	180	90 Yes 4.3.1 A3 Minimum batt
15 Wall	252	0.102	13	0	180	90 Yes 4.3.1 A3 Minimum batt
18 Roof	307	0.032	30	0	0	Yes 4.2.1 A8 New attic min.
20 Floor	201	0.037	19	0	0	15 Yes 4.2.1 A10 New vault min.
22 Floor	499	0.037	19	0	n/a	0 No 4.4.1 A4 To crawlspace

FENESTRATION SURFACES

Orientation	Area (sf)	U-Factor (Btu/hr-sf-F)	SHGC	Act. R-Value	Exterior Shade Type	Location/Comments
1 - New (Added) 6 Wind Left (W)	19.0	0.400	0.400	0	90	standard Vinyl/Wood Oper Low E2
7 Wind Back (E)	7.5	0.400	0.400	90	90	standard Vinyl/Wood Oper Low E2
8 Door Right (E)	40.0	0.400	0.400	180	90	standard Vinyl/Wood Pr Dr Low E2
1 - Deleted 1 Wind Front (W)	29.0	0.990	0.740	270	90	standard Wood single operable
2 Wind Left (W)	31.0	0.990	0.740	90	90	standard Wood single operable
3 Wind Back (E)	38.0	0.990	0.740	90	90	standard Wood single operable
4 Door Back (E)	33.3	0.990	0.740	180	90	standard Wood single operable
5 Wind Right (S)	32.0	0.990	0.740	180	90	standard Wood single operable
ADD - New (Added) 9 Wind Front (W)	48.0	0.400	0.400	270	90	standard Vinyl/Wood Oper Low E2
10 Wind Left (W)	8.0	0.400	0.400	90	90	standard Vinyl/Wood Oper Low E2
11 Wind Back (E)	8.0	0.400	0.400	90	90	standard Vinyl/Wood Oper Low E2
12 Door Back (E)	40.0	0.400	0.400	90	90	standard Vinyl/Wood Oper Low E2
13 Wind Right (S)	20.5	0.400	0.400	180	90	standard Vinyl/Wood Oper Low E2

HEATING AND COOLING LOAD SUMMARY

Description	Heating (Btu/hr)	Cooling (Btu/hr)
Opaque Conduction and Solar	12488	3317
Glazing Conduction and Solar	1458	5563
Infiltration	4855	624
Internal Gain	n/a	200
Ducts	0	2771
Sensible Load	20611	16955
Latent Load	n/a	2180
Minimum Total Load	20611	16955

Note: The loads shown are only one of the criteria affecting the selection of HVAC equipment. Other relevant design factors such as air flow requirements, outside air, outdoor design temperatures, coil sizing, availability of equipment, oversizing safety margin, etc., must also be considered. It is the HVAC designer's responsibility to consider all factors when selecting the HVAC equipment.

HEATING AND COOLING LOAD SUMMARY BY ZONE

Zone	Floor Area (sf)	Volume (cf)	Heating (Btu/hr)	Cooling (Btu/hr)
ZONE '1'	858	7722		
Description				
Opaque Conduction and Solar	5450	1481		
Glazing Conduction and Solar	1144	1393		
Infiltration	3070	395		
Internal Gain	n/a	1588		
Ducts	0	1262		
Sensible Load	9663	6118		
Latent Load	n/a	893		
Minimum Zone Load	9663	7011		
ZONE 'ADD/N'	499	5400		
Description				
Opaque Conduction and Solar	7036	2170		
Glazing Conduction and Solar	2124	430		
Infiltration	1785	230		
Internal Gain	n/a	1510		
Ducts	0	1510		
Sensible Load	10948	8677		
Latent Load	n/a	1247		
Minimum Zone Load	10948	9944		

CERTIFICATE OF COMPLIANCE: RESIDENTIAL COMPUTER METHOD CF-1R Page 1
 Project Title..... Stoll proposed home ***** Date: 04/08/11 11:22:00
 Project Address..... 344 Pine Street *****
 Documentation Author..... Lynette Sergius CEA CEPE *****
 Building Permit #
 Plan Check / Date
 Field Check / Date

Climate Zone..... 03
 Compliance Method..... MICROPASS v8.1 for 2008 CEC Standards (R03)
 User#-MP1308 User-AREA Title 24 Run-RevISED for 9' wall ht.

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GENERAL INFORMATION
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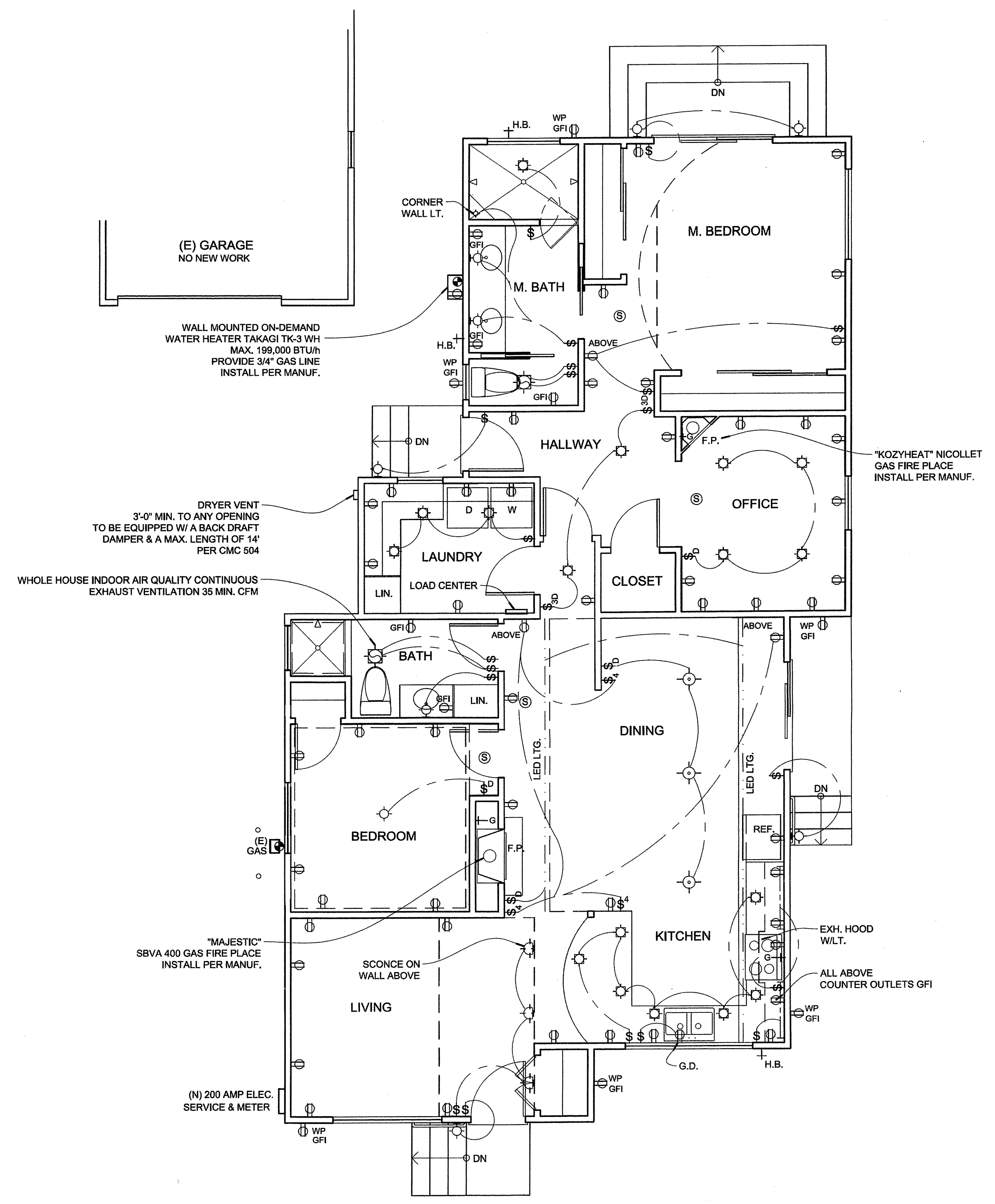
LEGEND

⊕	DUPLEX OUTLET	⊕	CEILING MOUNTED LIGHT FIXTURE
⊕	WP=WEATHER PROOF	F	FLUORESCENT
⊕	GFI= GROUND FAULT CIRCUIT INTERRUPTER	⊕	RECESSED LIGHT FIXTURE
⊕	DUPLEX OUTLET 1/2 SWITCHED	⊕	LED FIXTURE TO BE SELECTED
⊕	FOUR PLEX OUTLET	⊕	100 CFM EXHAUST FAN
⊕	220 VOLT OUTLET	⊕	EXHAUST FAN
⊕	SWITCH	NOTE:	ALL EXH. FANS TO BE SEPARATELY SWITCHED FROM THE LIGHTING SYSTEM
⊕	3 = 3 WAY OR MULTIPLE	⊕	EXH. FAN & LIGHT COMBINATION
⊕	D = DIMMER	⊕	UNDER CABT. FLUOR. LT.
⊕	SWITCH WITH PLUG BELOW	⊕	CLG. MTD. FLUOR. LT. FIXT.
⊕	TELEPHONE RECEPTACLE	⊕	PENDANT MOUNTED LIGHT FIXTURE
⊕	CABLE TV	⊕	WALL MOUNTED LIGHT FIXTURE
⊕	GAS OUTLET	⊕	WALL SCONCE
⊕	SHOWER HEAD	⊕	GAS COCK
⊕	HOSE BIBB		
⊕	SMOKE DETECTOR		

F = FLUORESCENT
D = DIRECTIONAL SPOT
MS = MOTION SENSOR WITH PHOTO CELL
OS = MANUAL ON OCCUPANCY SENSOR
HE = HIGH EFFICACY
NOTE: OWNER TO SELECT FIXTURES & FINISHES.
(E) LIGHTING & POWER NOT SHOWN TO REMAIN, VERIFY & MODIFY AS REQ'D.

- ELECTRICAL NOTES**
- THIS PROJECT SHALL COMPLY WITH THE 2007 CALIFORNIA TITLE 24 ENERGY CODE.
1. ALL ELECTRICAL OUTLETS THAT SERVE KITCHEN COUNTER TOPS SHALL BE GFCI PROTECTED.
 2. ALL BATHROOM OUTLETS SHALL BE GFCI PROTECTED.
 3. ALL BRANCH CIRCUITS THAT SUPPLY 125 VOLT, 15 AND 20 AMPERE OUTLETS INSTALLED IN DWELLING UNIT BEDROOMS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER (S), (AFCI).
 4. ALL LIGHTING IN KITCHEN, BATHS & LAUNDRY ROOMS SHALL TO BE FLUORESCENT OR PROVIDED WITH AN APPROVED OCCUPANCY SENSOR SWITCH.
 5. EXHAUST FANS IN BATHROOMS ARE CAPABLE OF PROVIDING FIVE AIR CHANGES PER HOUR.
 6. ALL OUTDOOR LIGHTING ATTACHED TO BUILDING SHALL BE HIGH EFFICACY.
 7. MINIMUM BRANCH CIRCUITS SHALL BE INSTALLED PER DEC Art. 210.11 (C) 1-2-3.

- MECHANICAL & PLUMBING NOTES**
1. BOND WATER PIPES AND ABOVE GROUND METAL GAS PIPING TO THE SERVICE GROUND.
 2. TERMINATION OF ALL ENVIRONMENTAL AIR DUCTS SHALL BE A MINIMUM OF 3' FROM ANY OPENINGS INTO THE BUILDING (i.e., DRYERS, BATH AND UTILITY FANS, ETC. MUST BE 3' AWAY FROM DOORS, WINDOWS, OPENINGS SKYLIGHTS OR ATTIC VENTS).
 3. WATER CLOSETS TO BE MAX. 1.6 GALLONS PER FLUSH.
 4. SHOWER AND TUB-SHOWER COMBINATIONS SHALL BE PROVIDED WITH INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE OR THE THERMOSTATIC MIXING VALVE TYPE.
 5. PRESSURE ABSORBING DEVICES OR APPROVED MECHANICAL DEVICES ARE REQUIRED ON WATER LINES, LOCATED AS CLOSE AS POSSIBLE TO QUICK ACTING VALVES, THAT WILL ABSORB HIGH PRESSURES RESULTING FROM THE QUICK ACTING VALVES (i.e., CLOTHES AND DISHWASHER).
 6. INSULATE ALL HOT WATER PIPES
 7. USE DUCT MASTIC ON ALL DUCT JOINTS.



LANDRY UNLIMITED
 Planning design construction
 931.475.8306
 lic# B457737



REVISIONS

△

STOLL RESIDENTIAL ADDITION
 344 PINE STREET
 SANTA CRUZ, CA 95062
 1/11 -14

DATE: 12/14/11

6

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