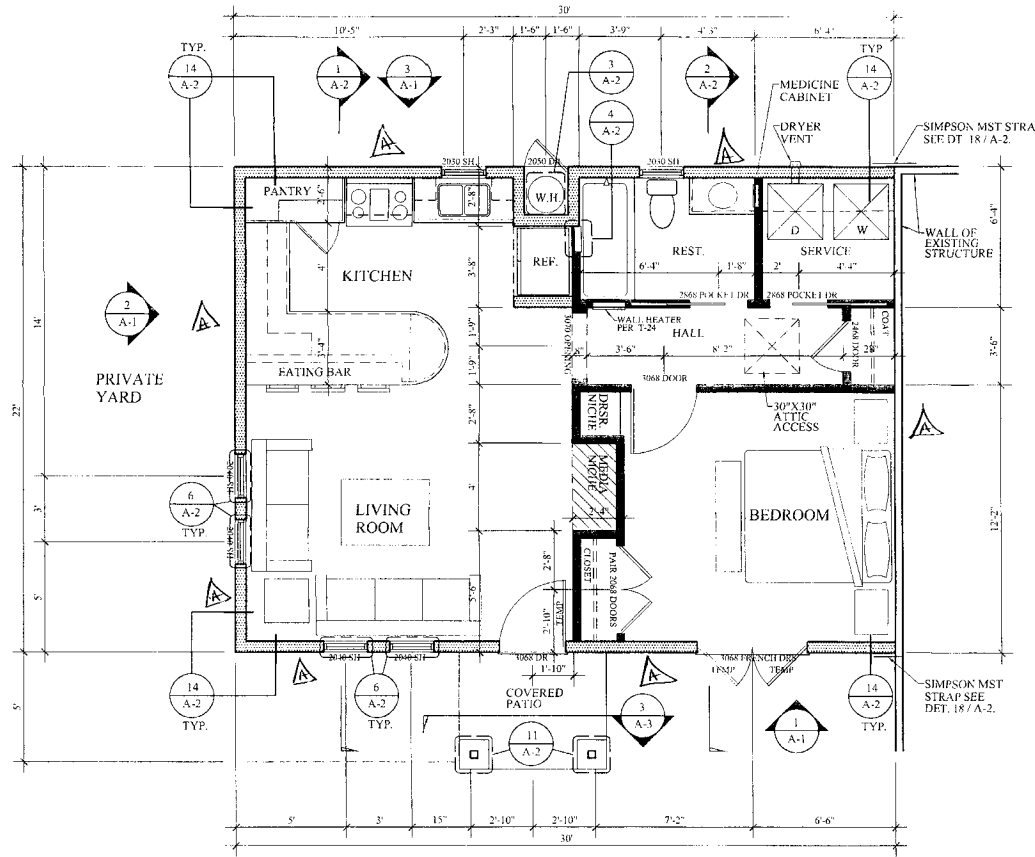
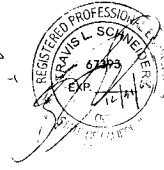


SITE PLAN
SCALE: 1/8"=1'-0"

NOTES
 -- THE SHADED AREA INDICATES THE LOCATION AND SIZE OF THE NEW A.D.U.
 -- ALL GRAPHICAL DEPICTIONS OF THE EXISTING STRUCTURES ARE ASSUMED, AND ARE TO BE REVISED OR ADDED TO AS NEEDED FOR FUTURE ADAPTATIONS OF THIS DESIGN.

All engineering has been placed in plan



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

USE 1/2" PLYWOOD OR OSB PANEL W/100 COMMON NAILS 46" O.C. KEDGES, 12" O.C. INT.
USE 2" WIDTH MIN. 1/2" PLYWOOD PANEL W/100 COMMON NAILS 46" O.C. KEDGES, 12" O.C. INT. SUPPLY HOLDINGS AT EACH END OF PANEL.

ALL HOLDINGS SHALL BE SIMPSON PHD2563 OR GREATER.
 IF 1/2" IS USED AS A SHEAR WALL PANEL, THE PANEL MUST BE RATED AT 15/32" (MIN.) AS STAMPED BY THE MANUFACTURER.
 FLOOR TWO SHEAR WALL PANELS MUST BE SUPPORTED BY DOUBLE JOISTS OR BLOCKING TO TRANSFER LOAD TO WALL SYSTEM.

PROVIDE 5/8" x 10" ANCHOR BOLTS, T INTO CONCRETE W/ 3"x3"x25" THICK WASHERS @ 6" O.C. AROUND PERIMETER OF SLAB AND ALL INTERIOR BEARING WALLS WITH BOLTS 12" MAX. FROM CORNERS AND NOT LESS THAN TWO BOLTS PER SILL, U.O.N.

ALL SHEARWALL PANELS MUST BE CONTINUOUS, FROM BOTTOM OF BOTTOM PLATE, TO TOP OF TOP PLATE, OR BLOCKED BETWEEN.

SHEARWALL SCHEDULE

- WALL LEGEND**
- 2x6 WOOD STUD WALL W/R-19 INSULATION @ EXTERIOR LOCATIONS
 - 2x4 WOOD STUD WALL W/5/8" TYPE 'X' GYP. BD. ON INTERIOR SIDE

- PLAN NOTES:**
- SLAB ON GRADE SHALL BE PLACED ON PROPERLY COMPACTED SOIL AS RECOMMENDED IN THE FOLLOWING:
 - TO BE ESTABLISHED ON A 12" THICK BLANKET OF NON-EXPANSIVE GRANULAR SOILS HAVING AN EXPANSION INDEX OF LESS THAN 20.
 - TO BE POURED OVER A 6-MIL POLYETHYLENE FILM COVERED WITH 2" OF CLEAN SAND.
 - SEE TYPICAL SECTIONS AND DETAILS WHERE NO DETAILS SHOWN OR NOTED ON THE DRAWINGS.
 - PROVIDE TWO LAYERS OF #15 FELT INSTALLED UNDER THE MANUF. W.D. HORIZ. SIDING OVER A MIN. 3/8" PLYWOOD SHEATHING - TYPICAL.
 - WOOD BEAMS OR HEADERS 4X10, 4X12 OR 6X14 SHALL HAVE 4X4 SUPPORTING POSTS AT BOTH ENDS.
 - ALL ANCHOR BOLTS ARE TO BE TIGHTENED AND SECURE PRIOR TO FOUNDATION INSPECTION.
 - EACH SUBMITTAL WILL BE REVIEWED FOR THE USE ON THE OTHER SIDE OF THE COMMON WALL. SPECIFY USE AT TIME OF APPLICATION.
 - ENERGY FENESTRATION U & SHGC VALUES OF EACH WINDOW MUST BE VERIFIED PRIOR TO FINAL INSPECTION.

VICINITY MAP

PROJECT DATA

BUILDING DEPARTMENT: COUNTY OF HUMBOLDT
BUILDING CODES: 2001 CBC, CPC, CMC, 2004 CEC & 2005 C.A. ENERGY EFFICIENCY STANDARDS
OCCUPANCY CLASSIFICATION: GROUP R, DIV. 3
CONSTRUCTION CLASS: TYPE V - N, NON-SPRINKLERED
PROJECT DESCRIPTION: 660 SQ. FT. ADDITION
STORIES: ONE (1)
SCOPE OF PROJECT: ADDITION OF AN ACCESSORY DWELLING UNIT TO AN EXISTING SINGLE FAMILY HOME. THE A.D.U. CONTAINS ONE BEDROOM, A BATHROOM, A SERVICE ROOM, A LIVINGROOM, AND A KITCHEN.

PROJECT DATA

LOT AREA	5000 S.F.
EXISTING / REA (HOUSE):	
EXISTING AREA (GARAGE):	
EXISTING FOOTPRINT:	
EXISTING LOT COVERAGE:	
AREA OF / D.U. ADDITION:	660 S.F.
TOTAL PROPOSED AREA:	
PROPOSED FOOTPRINT:	

SHEET INDEX

- T-1 TITLE SHEET / PROJ. INFO / SITE PLAN / FLOOR PLAN
- A-1 EXTERIOR ELEVATIONS / R.C.P.
- A-2 DESIGN DETAILS / SECTIONS
- A-3 FOUNDATION PLAN & FRAMING PLAN
- T-2 CALIF. ENERGY TITLE 24 COMPLIANCE

LEGAL DESCRIPTION

TRACT NUMBER: _____
LOT NUMBER: _____
ASSessor'S PARCEL NUMBER: _____

CONSULTANTS

OWNER: _____
DESIGNER: DOUG BROWN
 BROWN DESIGNS
 327 MAIN STREET
 P.O. BOX 152
 FERNDALE, CA 95536

APPROVED
 HUMBOLDT COUNTY
 BUILDING INSPECTION DEPARTMENT
 APR 28 2007
 BY: [Signature]
 25573
 4/24/07



THE TYPICAL ACCESSORY DWELLING UNIT

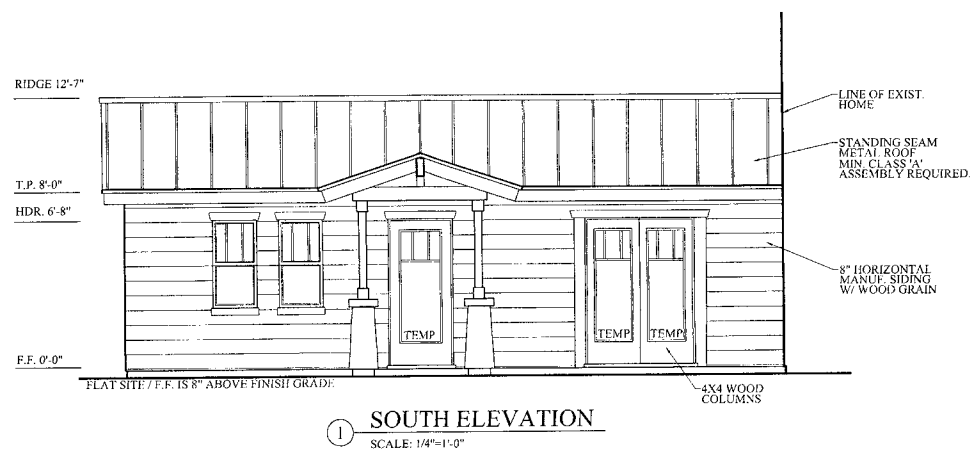
Job Address: _____

REVISIONS
PLAN CHECK CORRECTIONS DATED 4/20/07

DRAWN:	D.A.B.
SCALE:	AS NOTED
JOB NO.:	07001
DATE:	04/20/07
RELEASE DATE:	
CAD NAME:	
SHEET NO.:	

T-1

Plan # 3 -

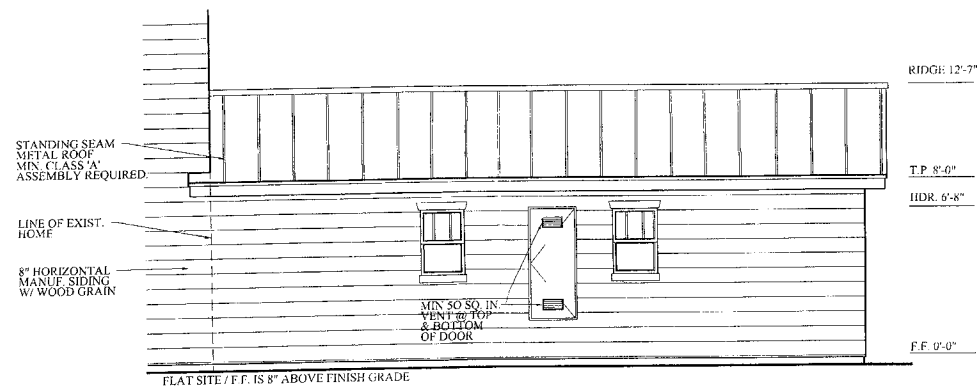


1 SOUTH ELEVATION
 SCALE: 1/4"=1'-0"

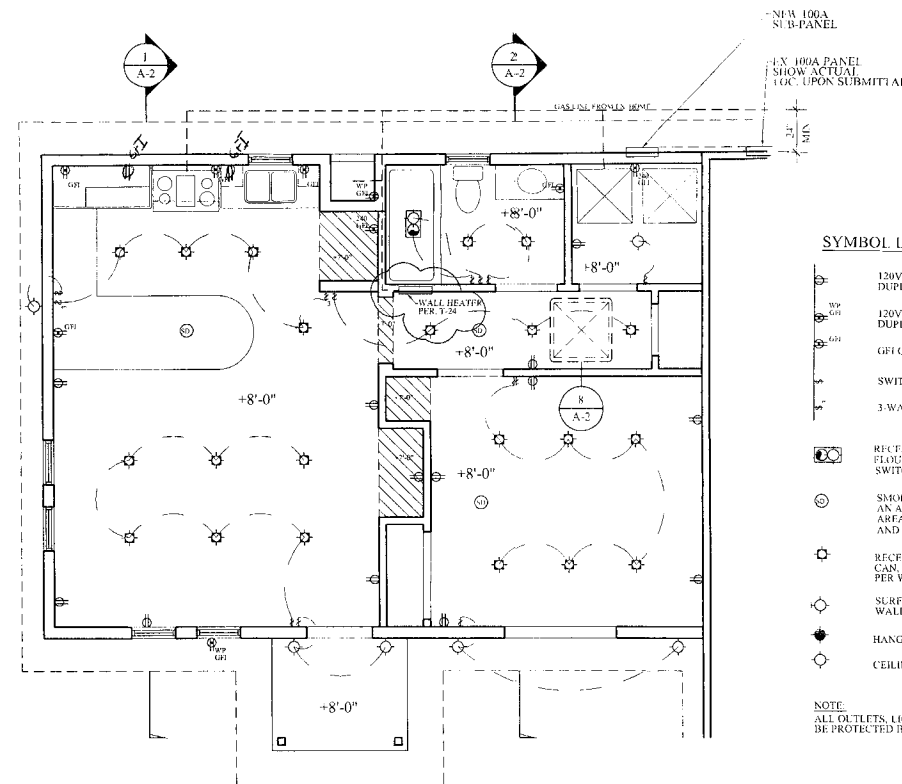


1 EAST ELEVATION
 SCALE: 1/4"=1'-0"

NOTE:
 THE WEST ELEVATION DOES NOT EXIST DUE TO THE LOCATION OF THE A.D.U. AND THE EXISTING STRUCTURE.



3 NORTH ELEVATION
 SCALE: 1/4"=1'-0"



4 R.C.P. / LIGHTING PLAN
 SCALE: 1/4"=1'-0"

- SYMBOL LEGEND**
- 120V DUPLEX CONVENIENCE DUPLEX OUTLET
 - 120V WEATHERPROOF DUPLEX RECEPTACLE W/ GFI
 - GFI OUTLET
 - SWITCHES
 - 3 WAY SWITCH
 - RECESSED COMBINATION OF FLOOR LIGHT EXHAUST FAN SWITCH CONTROLLED
 - SMOKE DETECTOR. SHALL SOUND AN ALARM AUDIBLE IN ALL SLEEPING AREAS, AND SHALL BE HARD WIEFD AND EQUIPPED WITH BATTERY BACKUP
 - RECESSED CAN - IC RATED, SEALED CAN. SEE F-24 FOR SPECIFIC LUMENS PER WATT RATING
 - SURFACE MOUNTED INCAND. WALL LIGHT FIXTURE
 - HANGING FIXTURE
 - CEILING FIXTURE
- NOTE:
 ALL OUTLETS, LIGHTS, SWITCHES IN SLEEPING ROOMS SHALL BE PROTECTED BY AN ARC FAULT CIRCUIT INTERRUPTER

APPROVED
 HUMBOLDT COUNTY
 BUILDING INSPECTION DEPARTMENT

APR 28 2007

BY: *[Signature]*

THE TYPICAL ACCESSORY DWELLING UNIT

Job Address: _____

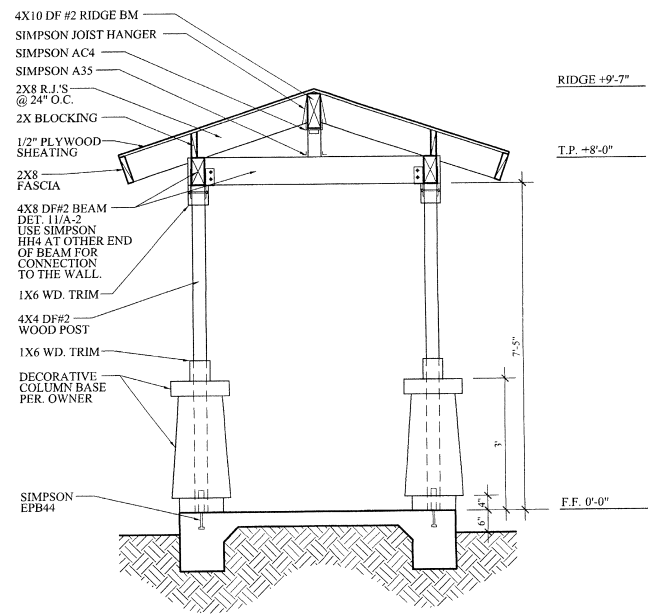
REVISIONS
 PLAN CHECK CORRECTIONS
 DATED 4/20/07

DRAWN: D.A.B.
 SCALE: AS NOTED
 JOB NO.: 07001
 DATE: 04/20/07
 RPT. DATE:
 CAD NAME:
 SHEET NO.:

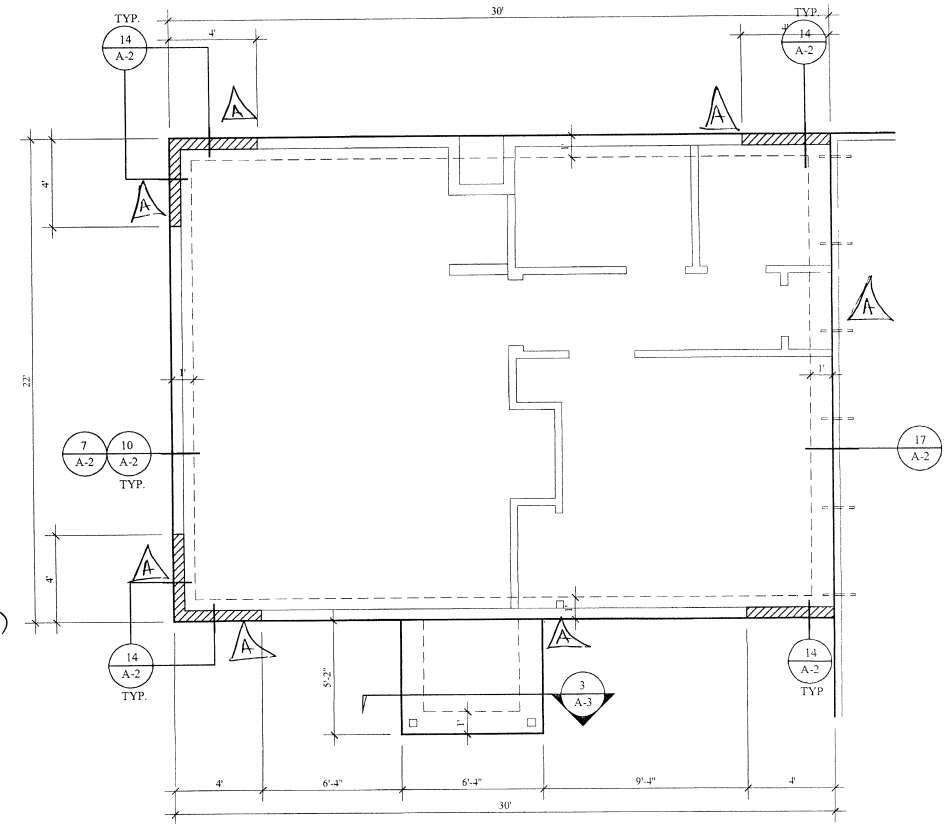
A-1

- Plan # 3 -

SUBMITTAL PLAN CHECK CORRECTED SET



3 ROOF OVER PORCH SECTION
 SCALE: 1/4"=1'-0"



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

GENERAL NOTES

- THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE, AND SHALL BE RESPONSIBLE FOR CONDITIONS OF ALL WORK AND MATERIALS INCLUDING THOSE FURNISHED BY SUB-CONTRACTORS. STRUCTURAL ENGINEER OF RECORD SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
- ALL MATERIALS AND WORKMANSHIP SHALL BE PERFORMED IN ACCORDANCE WITH 2001 CALIFORNIA BUILDING CODE.
- WHERE NO DETAILS SHOWN OR NOTED ON THE DRAWINGS, THE DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.
- OPENINGS, POCKETS, SLEEVES, ETC., SHALL NOT BE PLACED IN SLABS, BEAMS, WALLS, COLUMNS AND FOOTINGS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS.
- CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED FLOORS OR ROOF. LOADS SHALL NOT EXCEED DESIGN LIVE LOADS FOR EACH PARTICULAR LEVEL. PROVIDE ADEQUATE SHORING AND BRACING IF LOAD EXCEEDS DESIGN LIVE LOAD OR WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
- THIS SET OF DRAWINGS REPRESENT THE FINISHED STRUCTURE. METHOD OF CONSTRUCTION NOT NECESSARY INDICATED. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKERS AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO BRACING, SHORING, SCAFFOLDING, ETC.
- DESIGN LIVE LOADS:

ROOF LIVE LOADS:	20 PSF
FLOOR LIVE LOADS:	40 PSF
SEISMIC FORCE:	ZONE 4
A-ZONE:	NA-1.5
SEISMIC SOURCE:	S4
SOIL PROFILE TYPE:	S4
DISTANCE TO KNOWN FAULT:	0 KM
WIND FORCE:	80 MPH WIND ZONE

FOUNDATION NOTES

- THE FOUNDATION DESIGN IS BASED ON CBC-01 TABLE 18-4-A. ALLOWABLE SOIL BEARING VALUE IS 1000 PSF.
- FOUNDATION DESIGN SHALL BE 18" MINIMUM BELOW LOWEST ADJACENT FINAL GRADE, AND 12" MINIMUM WIDTH, BEAR ON FIRM NATIVE OR PROPERLY COMPACTED SOILS.
- SUBGRADE SHALL BE 2" SAND OVER POLYETHYLENE FILM VAPOR BARRIER.
- SIDE OF FOUNDATION MAY BE POURED AGAINST STABLE EARTH UNLESS SHOWN OR NOTED OTHERWISE.
- CONTRACTOR SHALL PROVIDE TEMPORARY AND PERMANENT DEWATERING FOR EITHER SURFACE WATER, GROUND WATER OR SEEPAGE WATER.
- CONTRACTOR SHALL PROTECT ALL UTILITY LINES, ETC. ENCOUNTERED DURING EXCAVATIONS AND BACKFILLING.
- CONTRACTOR SHALL PROVIDE AND INSTALL ALL CRIBBING SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN THE EARTH BANK.
- FOOTING BACKFILL AND UTILITY TRENCH BACKFILL SHALL BE PROPERLY COMPACTED.
- CONTRACTOR SHALL BRACE OR PROTECT FROM LATERAL LOADS FOR THE PIT AND RETAINING WALLS UNTIL ATTACHING SLABS ARE COMPLETELY IN PLACE AND HAVE ATTAINED FULL STRENGTH.

CONCRETE NOTES

- ALL CONCRETE SHALL BE NORMAL WEIGHT CONFORMING TO THE FOLLOWING:

LOCATION	28-DAY MIN. COMPRESSIVE STRENGTH	MAXIMUM AGGREGATE SIZE (IN.)	MIX DESIGN SLUMP (INCHES)
A. SLAB ON GRADE	2500 psi	1	4 (5" MAX)
B. FOOTINGS & GR BMS	2500 psi	1.5	4 (5" MAX)
- AGGREGATE SHALL CONFORM TO ASTM C-33.
- WATER SHALL BE CLEAN, FREE FROM DELETERIOUS AMOUNTS OF ACIDS, ALKALIS OR ORGANIC MATERIALS, OILS, SALTS AS PER 2001 CBC.
- CONCRETE MIXING OPERATIONS, ETC. SHALL CONFORM TO ASTM C-94.
- CONDUIT PLACED IN A CONCRETE SLAB SHALL NOT EXCEED 1/3 OF THE THICKNESS OF THE SLAB AND SHALL BE PLACED BETWEEN THE TOP AND BOTTOM REINFORCING STEEL. MINIMUM CLEAR DISTANCE BETWEEN CONDUITS SHALL BE 6".
- CONSTRUCTION JOINTS: THE SURFACES OF ALL CONSTRUCTION JOINTS SHALL BE CLEAN, FREE FROM LOOSE DEBRIS IMMEDIATELY BEFORE NEW CONCRETE IS PLACED. ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.
- ALL SAW CUTS IN SLAB ON GRADE SHALL BE MADE NOT LATER THAN 24 HOURS AFTER PLACING CONCRETE.

NOTES FOR ANCHOR BOLTS

- ALL STUD WALLS NOT SCHEDULED (INCLUDING WALLS BELOW WINDOWS, ETC.) SHALL HAVE 2X SILL PLATES WITH A MINIMUM OF 5" Ø X ANCHOR BOLTS AT 5'-0".
- ANCHOR BOLTS SHALL BE AT LEAST A307 QUALITY STEEL AND SHALL HAVE TREADED LENGTH OF 2" MINIMUM AT TOP, 3" MINIMUM TOTAL PROJECTION ABOVE TOP OF SLAB, 9" MINIMUM EMBEDMENT INTO CONCRETE AND A STANDARD BOLT HEAD OR AN EQUAL DEFORMITY IN THE EMBEDDED PORTION, 90° HOOK AT BOTTOM WITH 2.5" BEND DIAMETER AND 3" RETURN IS ACCEPTABLE.
- ANCHOR BOLTS SHALL BE LOCATED AT CENTERS OF SILL PLATES. THERE SHALL BE A MINIMUM OF TWO BOLTS PER PIECE OF SILL PLATE WITH ONE BOLT LOCATED WITHIN 12" OF EACH END OF EACH PIECE. A PROPERLY SIZED NUT AND WASHER SHALL BE TIGHTENED ON EACH BOLT TO THE PLATE.

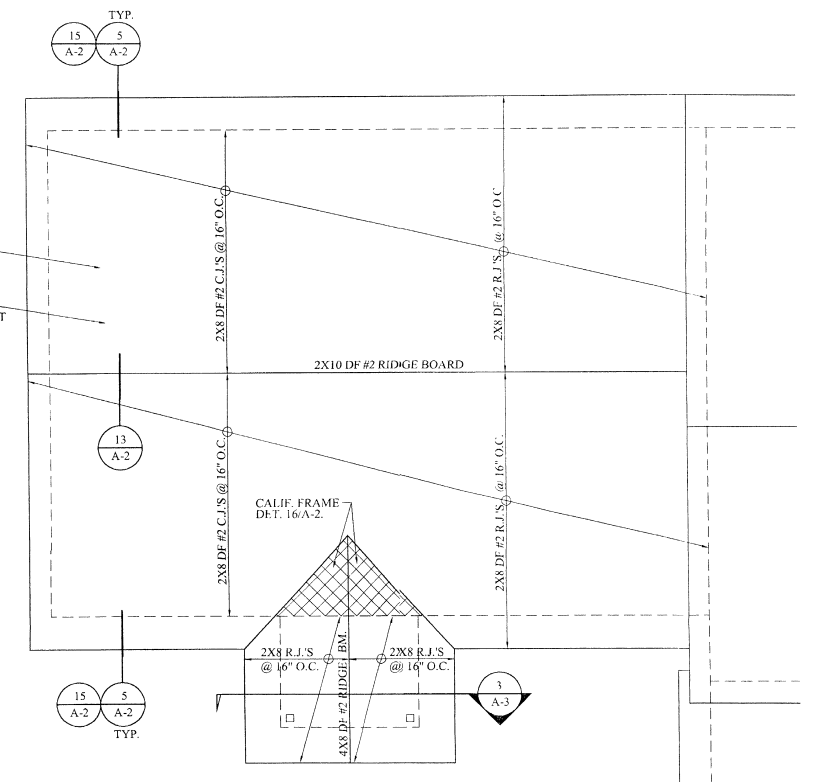
NOTES FOR PLYWOOD SHEAR WALL CONSTRUCTION:

- ALL EXTERIOR WALLS TO HAVE 1" MANUF. WOOD SIDING PAPER BACKED LATH W/ 16 GA STAPLES AT 6" O.C. APPLIED TO ALL STUDS, TOP & BOTTOM PLATES AND BLOCKING.
- ALL PLYWOOD SHALL BE APPLIED DIRECTLY TO FRAMING.
- ALL PLYWOOD PANEL EDGES SHALL BE BACKED WITH 2"X OR WIDER FRAMING.
- PROVIDE 8d NAILS AT 12" O.C. ALONG INTERMEDIATE FRAMING MEMBERS (FIELD) AT ALL PLYWOOD.
- TYPICAL EXTERIOR STUDS SHALL BE 2X4 DOUGLAS FIR STRUCTURAL NO. 2 GRADE AT 16" O.C. UNLESS NOTED OTHERWISE.
- TYPICAL INTERIOR STUDS SHALL BE 2X DOUGLAS FIR STRUCTURAL NO. 2 GRADE AT 16" O.C. UNLESS NOTED OTHERWISE.
- STAGGER EDGE NAILS AT ALL ADJOINING PANEL EDGES.
- IN SHEAR WALL LOCATIONS, FOUNDATION SILL PLATE AND ALL FRAMING MEMBERS RECEIVING EDGE NAILING FROM ADJUTING PANELS SHALL NOT BE LESS THAN A SINGLE INCH NOMINAL MEMBER AND STAGGER NAILING FOR ALL MEMBERS RECEIVING EDGE NAILING. SEE DET. 14A-2.
- SHEAR WALL SHALL RUN CONTINUOUSLY FROM FOUNDATION TO ROOF/FLOOR FRAMING.

WOOD

- ALL LUMBER SHALL BE GRADE MARKED DOUGLAS FIR AND SHALL HAVE THE FOLLOWING GRADES, UNLESS NOTED OTHERWISE:

JOISTS & RAFTERS	GRADE NO. 2 OR BETTER
BEAMS & STRINGERS	GRADE NO. 1 AND BETTER
DOUBLE TOP PLATES	GRADE NO. 1 AND BETTER
2X4 STUDS	CONSTRUCTION GRADE OR BETTER
3X4 & 2X6 STUDS	GRADE NO. 2 OR BETTER
POSTS AND TIMBERS	GRADE NO. 1 AND BETTER
- PLYWOOD SHEATHING SHALL BE FULL SIZE SHEET WHERE POSSIBLE WITH 48" X 32" MINIMUM SHEET SIZE AND LAID CONTINUOUSLY OVER TWO OR MORE SPANS WITH FACE GRAIN PERPENDICULAR TO SUPPORTS.
 - FLOOR SHEATHING SHALL BE GRADE MARKED D F P A EXTERIOR SHEATHING C-D GRADE 19/32" THICK WITH EXTERIOR GLUE. PANEL I.D. RATING 32/16 OR BETTER. EDGES SHALL HAVE APPROVED TONGUE-AND-GROOVE JOINTS. NAILED WITH 16d DEFORMED SHANK NAILS AT 6" O.C. AT EDGES AND BOUNDARIES, AT 10" O.C. IN FIELD UNLESS NOTED OTHERWISE.
 - ROOF SHEATHING SHALL BE GRADE MARKED D F P A EXTERIOR SHEATHING C-D GRADE 19/32" THICK WITH EXTERIOR GLUE. PANEL SPAN RATING 24/0 OR BETTER. NAILED WITH 8d COMMON NAILS AT 6" O.C. AT EDGES AND BOUNDARIES, AT 12" O.C. IN FIELD UNLESS NOTED OTHERWISE.
- ALL NAILS SHALL BE COMMON WIRE NAILS UNLESS NOTED OTHERWISE. SEE FRAMING PLANS OR DETAILS FOR NAIL SIZES AND SPACINGS. NAILS THAT NOT DETAILED OR NOTED SHALL BE IN ACCORDANCE WITH UBC TABLE NO. 23-1-9 - NAILING SCHEDULE.
- ALL JOIST HANGERS AND FRAMING CONNECTORS SHALL BE SIMPSON® OR APPROVED EQUAL.
- NO STRUCTURAL MEMBER SHALL BE CUT FOR PIPES, ETC. UNLESS SPECIFICALLY NOTED.
- BOLT HOLES SHALL BE SAME DIAMETER AS THAT OF THE BOLTS. PROVIDE WASHERS BETWEEN BOLT HEADS OR NUTS AND WOOD MEMBERS.
- TIGHTEN NUTS ON ALL BOLTS BEFORE CLOSING IN COMPLETION OF JOB.
- ALL SILL PLATES RESTING ON CONCRETE OR MASONRY SHALL BE PRESSURIE TREATED DOUGLAS FIR.
- ANCHOR BOLT DISTANCE FROM THE SILL END OR BREAK IS 6 TIMES THE BOLT DIAMETER, UP TO 12" MAX.
- PROVIDE DOUBLE JOISTS UNDER ALL PARTITIONS THAT ARE PARALLEL TO JOISTS. USE 2-16d NAILS AT 16" O.C. TO NAIL THE DOUBLE JOISTS TOGETHER.
- TOP PLATES FOR ALL STUD WALLS SHALL BE 2X2. LAP FOR TOP PLATES SHALL BE 48" LONG MINIMUM NAILED WITH 16d AT 4" AT EACH END UNLESS NOTED OTHERWISE. SPLICES IN UPPER AND LOWER PLATES SHALL BE STAGGERED 10'-0" MINIMUM.
- PRE-DRILL FOR NAILING AS REQUIRED WHEN NAIL SPACING BORED HOLES IN WOOD SPLITTING. PRE-DRILL HOLES SHALL BE SMALLER THAN THE DIAMETER OF THE NAILS.
- NO STUD IS ALLOWED TO BE OVER 10'-0" HIGH BETWEEN CROSS TIES WHERE IT IS BRACED OR BEARING WALL.
- THE HOLD-DOWN CONNECTORS SHALL BE TIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING.
- APPROVED PLATE WASHERS, IN LIEU OF CUT WASHERS, SHALL BE PROVIDED FOR ALL PLYWOOD SHEAR WALL SILL PLATE ANCHOR BOLTS.
- THE SILL PLATE ANCHOR BOLTS AND HOLD-DOWN CONNECTOR BOLTS AT ALL PLYWOOD SHEAR WALL SHALL HAVE THE PLATE WASHERS.
- CUTTING OR NOTCHING OF WOOD STUDS OR PLATES SHALL NOT EXCEED 25% OF THE STUD PLATE WIDTH WITH THE EXTERIOR AND BEARING WALL AND NOT TO EXCEED 40% OF THE STUD PLATE WIDTH IN NONBEARING PARTITIONS. BORED HOLES DIAMETER IS LIMITED TO 40% OF THE STUD PLATE WIDTH IN ANY STUD AND MAY BE 60% IN NONBEARING PARTITIONS OR WHEN THE BORED STUD IS DOUBLED.
- FULL LENGTH STUDS (BALLOON FRAME) SHALL BE USED ON EXTERIOR WALLS WITH VAULTED CEILING.



2 ROOF FRAMING PLAN
 SCALE: 1/4"=1'-0"

THE TYPICAL ACCESSORY DWELLING UNIT

Job Address: _____

REVISIONS
 PI AN CHECK CORRECTIONS
 DATED 4-9-07

DRAWN: D.A.B.
 SCALE: AS NOTED
 JOB NO.: 07001
 DATE: 04/20/07
 RELEASE DATE:
 CAD NAME:
 SHEET NO.:

A-3

SUBB 22573 PLAN CHECK CORRECTED SET

APPROVED
 HUMBOLDT COUNTY
 BUILDING INSPECTION DEPARTMENT
 APR 28 2007
 BY: [Signature]

Certificate Of Compliance : Residential (Part 1 of 4) CF-1R

ADU Submittal Project Title: Humboldt County
 Project Address: ABBAY TECHNICAL SERVICES (707) 826-1433
 Documentation Author: EnergyPro
 Compliance Method: CA Climate Zone 01

TDV (kbtu/sf-yr)	Standard Design	Facing North	Margin	Facing East	Margin	Facing South	Margin	Facing West	Margin
Space Heating	25.83	25.38	0.44	22.40	3.43	22.64	3.19	24.68	1.14
Space Cooling	0.11	0.00	0.11	0.02	0.10	0.08	0.03	0.01	0.10
Fans	1.01	1.11	-0.10	0.98	0.03	0.99	0.01	1.08	-0.07
Domestic Hot Water	26.36	25.22	1.13	25.22	1.13	25.22	1.13	25.22	1.13
Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	53.30	51.71	1.59	48.62	4.69	48.93	4.37	51.00	2.31

Percent better than Standard: 3.0%, 8.8%, 8.2%, 4.3%

BUILDING COMPLIES - NO HERS VERIFICATION REQUIRED

Building Type: Single Family Addition Multi Family Existing + Add/Alt

Building Front Orientation: All Four Orientations

Fuel Type: Natural Gas

Penetration: Area: 124 ft², Avg. U: 0.39, Ratio: 18.8%, Avg. SHGC: 0.37

Number of Dwelling Units: 1.00

BUILDING ZONE INFORMATION

Zone Name	Floor Area	Volume	# of Units	Zone Type	Thermostat Type	Vent	Area
Monterey 25 Wall Heater	660	6,204	1.00	Conditioned	Setback	2	n/a

OPAQUE SURFACES

Type	Frame	Area	U-Fac	Insulation	Act. Cav. Cont.	Azm.	Tilt	Gains Y/N	JA IV Reference	Location / Comments
Roof	Wood	660	0.032	R-30	R-0.0	0	0	X	New, 01-A17	1st Floor
Wall	Wood	164	0.074	R-19	R-0.0	0	90	X	New, 09-A5	1st Floor
Wall	Wood	180	0.074	R-19	R-0.0	0	90	X	New, 09-A5	1st Floor
Wall	Wood	257	0.074	R-19	R-0.0	0	90	X	New, 09-A5	1st Floor
Wall	Wood	216	0.074	R-19	R-0.0	0	270	X	New, 09-A5	1st Floor

Certificate Of Compliance : Residential (Part 2 of 4) CF-1R

ADU Submittal Project Title: Humboldt County
 Project Address: ABBAY TECHNICAL SERVICES (707) 826-1433
 Documentation Author: EnergyPro
 Compliance Method: CA Climate Zone 01

#	Type	Area	U-Factor	SHGC	True Azm	Cond. Stat.	Glazing Type	Location/Comments
1	Window	Front (N)	76.0	0.30	NFRC 0.37	90	New	Milgard Classic Low-E Vinyl 1st Floor
2	Window	Left (E)	36.0	0.30	NFRC 0.37	90	New	Milgard Classic Low-E Vinyl 1st Floor
3	Window	Rear (S)	12.0	0.30	NFRC 0.37	180	New	Milgard Classic Low-E Vinyl 1st Floor

1. Indicate source either from NFRC or Table 116A 2. Indicate source either from NFRC or Table 116B

INTERIOR AND EXTERIOR SHADING

#	Exterior Shade Type	SHGC	Window Hgt	Len	Overhang Hgt	Left Fin Len	Right Fin Len
1	Bug Screen	0.76					
2	Bug Screen	0.76					
3	Bug Screen	0.76					

THERMAL MASS FOR HIGH MASS DESIGN

Type	Area (sf)	Thick Heat (in.)	Cap. Cond.	R-Val.	JA IV Reference	Condition Status	Location/Comments
Slab Perimeter	104	None	No Insulation	26-A1	New		1st Floor

PERIMETER LOSSES

Type	Length	R-Val.	Insulation Location	JA IV Reference	Condition Status	Location/Comments
Slab Perimeter	104	None	No Insulation	26-A1	New	1st Floor

Certificate Of Compliance : Residential (Part 3 of 4) CF-1R

ADU Submittal Project Title: Humboldt County
 Project Address: ABBAY TECHNICAL SERVICES (707) 826-1433
 Documentation Author: EnergyPro
 Compliance Method: CA Climate Zone 01

Location	Heating Type	Minimum Eff	Cooling Type	Minimum Eff	Condition Status	Thermostat Type
Monterey 25 Wall Heater	Gravity Wall Furnace	71% AFUE	No Cooling	13.0 SEER	New	Setback

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Condition Status	Ducts Tested?
Monterey 25 Wall Heater	Ductless / with Fan		Attic	4.2	New	No

WATER HEATING SYSTEMS

System Name	Water Heater Type	Distribution	# in Syst.	Rated Input (Btu/hr)	Tank Cap. (gal)	Condition Status	Energy Factor or RE	Standby Loss (%)	Tank Insul. R-Value Ext.
Standard 40 gal EF = 60%	Small Gas	No Pipe Insulation	1	40,000	40	New	0.60	n/a	n/a

Multi-Family Central Water Heating Details

Control	#	HP	Type	In Plenum	Outside	Buried	Hot Water Piping Length (ft)	Add 1/2" Insulation

REMARKS
 Note: If clear glass is used for the windows then this will increase the compliance margin for this climate zone

COMPLIANCE STATEMENT
 This certificate of compliance lists building features and specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations, and the administrative regulations to implement them. This certificate has been signed by the individual with overall design responsibility. The undersigned recognizes that compliance using duct sealing, duct sealing, verification of refrigerant charge and TXVs, insulation installation quality, and building envelope sealing require installer testing and certification and field verification by an approved HERS rater.

Designer or Owner (per Business & Professions Code):
 Name: Anne M. McQueeney, CEA
 Title/Firm: Doug Brown - Brown Designs
 Address: P.O. Box 152, Ferndale, CA 95536
 Telephone: (707) 245-5360
 License #: 4/18/07 (date)
 Signature: [Signature]

Documentation Author:
 Name: Anne M. McQueeney, CEA
 Title/Firm: ABBAY TECHNICAL SERVICES
 Address: 1125 16th Street, Rm 216, Arcata, CA 95521
 Telephone: (707) 826-1433
 License #: 4-18-07 (date)
 Signature: [Signature]

Certificate Of Compliance : Residential (Part 4 of 4) CF-1R

ADU Submittal Project Title: Humboldt County
 Project Address: ABBAY TECHNICAL SERVICES (707) 826-1433
 Documentation Author: EnergyPro
 Compliance Method: CA Climate Zone 01

Special Features and Modeling Assumptions
 The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification to be used with the performance approach. The local enforcement agency determines the adequacy of the justification, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

Compliance using the Four Cardinal Orientation approach has been used. Project can be built in any Orientation.

HERS Required Verification
 Items in this section require field testing and/or verification by a certified home energy rater under the supervision of a HERS provider using approved testing and/or verification methods.

Mandatory Measures Summary: Residential (Page 1 of 2) MF-1R

NOTE: Lower residential buildings subject to the Standards must contain these measures regardless of the compliance approach used. More stringent compliance requirements from the Certificate of Compliance supersede the items marked with an asterisk (*) below. When this checklist is incorporated into the permit documents, the features noted shall be considered by all parties as minimum component performance specifications for the mandatory measures whether they are shown elsewhere in the documents or on this checklist only.

DESCRIPTION	N/A	DESIGNER	ENFORCEMENT
Building Envelope Measures			
§ 150(a) Minimum R-19 in wood ceiling insulation or equivalent U-factor in metal frame ceiling		[X]	
§ 150(b) Loose fill insulation manufacturer's labeled R-Value		[X]	
§ 150(c) Minimum R-13 wall insulation in wood framed walls or equivalent U-factor in metal frame walls (does not apply to exterior mass walls)		[X]	
§ 150(d) Minimum R-13 raised floor insulation in framed floors or equivalent U-factor		[X]	
§ 150(e) Installation of Fireplaces, Decorative Gas Appliances and Gas Logs			
1 Masonry and factory-built fireplaces have:			
a. double metal or glass door covering the entire opening of the firebox		[X]	
b. outside air intake with damper and control. Fuel damper air control		[X]	
2. No continuous burning gas pilot lights allowed		[X]	
§ 150(f) Air retarding wrap installed to comply with §151 meets requirements specified in the ACM Residential Manual			[X]
§ 150(g) Vapor barriers mandatory in Climate Zones 14 and 16 only			[X]
§ 150(h) Slab edge insulation - water absorption rate for the insulation alone without toppings no greater than 0.3%, water vapor permeance rate no greater than 2.0 perm-inch			[X]
§ 118 Insulation specified or installed meets insulation installation quality standards. Indicate type and include CR-66 Form			[X]
§ 116-17 Fenestration Products, Exterior Doors, and Infiltration/Exfiltration Controls			
1. Doors and windows between conditioned and unconditioned spaces designed to limit air leakage		[X]	[X]
2. Fenestration products (except fixed fabrications) have label with certified U-Factor, certified Solar Heat Gain Coefficient (SHGC), and infiltration certification		[X]	[X]
3. Exterior doors and windows weathertightened, all joints and penetrations caulked and sealed		[X]	[X]

Space Conditioning, Water Heating and Plumbing System Measures

§ 110-13 HVAC equipment: water heaters, showerheads and faucets certified by the Energy Commission		[X]	[X]
§ 150(h) Heating and/or cooling loads calculated in accordance with ASHRAE 55/62-1 or ACCA		[X]	
§ 150(i) Setback thermostat on all applicable heating and/or cooling systems		[X]	
§ 150(j) Water system pipe and tank insulation and cooling systems line insulation			
1. Storage gas water heaters rated with an Energy Factor less than 0.58 must be externally wrapped with insulation having an installed thermal resistance of R-12 or greater		[X]	
2. Back up tanks for solar systems, unvented storage tanks, or other indirect hot water tanks have R-12 external insulation or R-15 external insulation and isolated on the exterior of the tank showing the R-Value		[X]	
3. The following piping is insulated according to Table 150-A1B or Equation 150-A Insulation Thickness:			
1. 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 shall be insulated to Table 150-B		[X]	[X]
2. Cooling system piping (air conditioning, chilled water, or brine lines) piping installed between heating source and indirect hot water tank shall be insulated to Table 150-B and Equation 150-A		[X]	
4. Steam hydronic heating systems or hot water systems > 15 psi meet requirements of Table 123-A		[X]	
5. Insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance and wind		[X]	
6. Insulation for chilled water piping and refrigerant suction piping includes a vapor retarder or is enclosed entirely in conditioned space		[X]	
7. Solar water heating systems/collectors are certified by the Solar Rating and Certification Corporation		[X]	

Mandatory Measures Summary: Residential (Page 2 of 2) MF-1R

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DESCRIPTION	N/A	DESIGNER	ENFORCEMENT
Space Conditioning, Water Heating and Plumbing System Measures (continued)			
§ 150(m) Ducts and Fans			
1. All ducts and plenums installed, sealed and insulated to meet the requirements of the 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 or enclosed entirely in conditioned space. Openings shall be sealed with mastic, tape or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or aerosol resistant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than 1/4 inch, the combination of mastic and other mastic or tape shall be used			
2. Building cavities, support platforms for air handlers, and plenums defined or constructed with materials other than solid sheet metal, duct board or flexible duct shall not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms shall not be compressed to cause reductions in the cross-sectional area of the ducts			
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			
4. Exhaust fan systems have back draft or automatic dampers			[X]
5. Gravity ventilating systems serving conditioned space have either automatic or readily accessible, manually operating dampers			[X]
6. Protection of insulation. Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Cellular foam insulation shall be protected above or painted with a coating that is water retardant and provides shielding from solar radiation that can cause degradation of the material			
7. Flexible ducts cannot have porous inner cores			
§ 114 Pool and Spa Heating Systems and Equipment			
1. A thermal efficiency that complies with the Appliance Efficiency Regulations, on-off switch mounted outside of the heater, weatherproof lighting instructions, no electric resistance heating and no pilot light			
2. System is installed with:			
a. At least 36" of pipe between filter and heater for future solar heating			
b. Cover for outdoor pools or outdoor spas			
3. Pool system has directional inlets and a circulation pump time switch			

§ 115 Gas fired fan-type: central furnace, pool heaters, spa heaters or household cooking appliances have no continuously burning pilot light. (Exception: Non-electrical cooking appliances with pilot < 150 Btu/hr)

§ 118 (i) Cool Roof material meets specified criteria

Lighting Measures

§ 150(k)(1) HIGH EFFICIENCY LUMINAIRES OTHER THAN OUTDOOR HID contain only high efficiency lamps as outlined in Table 150-C, and do not contain a medium screw base socket (E24/E26). Ballasts for lamps 13 Watts or greater are electric and have an output frequency no less than 20 kHz		[X]	[X]
§ 150(k)(1) HIGH EFFICIENCY LUMINAIRES - OUTDOOR HID contain only high efficiency lamps as outlined in Table 150-C. Luminaires have factory installed HID ballast		[X]	
§ 150(k)(2) Permanently installed luminaires in kitchens shall be high efficiency luminaires. Up to 50% of the Wattsage, as determined in Section 119(c), of permanently installed luminaires in kitchens may be in luminaires that are not high efficiency luminaires, provided that these luminaires are controlled by switches separate from those controlling the high efficiency luminaires		[X]	[X]
§ 150(k)(3) Permanently installed luminaires in bathrooms, garages, laundry rooms, utility rooms, and other rooms shall be high efficiency luminaires OR are controlled by an occupant sensor certified to comply with Section 119(d)		[X]	[X]
§ 150(k)(4) Permanently installed luminaires located other than in kitchens, bathrooms, garages, laundry rooms, and utility rooms shall be high efficiency luminaires (except closets less than 70 ft ² OR are controlled by a dimmer switch OR are controlled by an occupant sensor that complies with Section 119(d) that does not turn on automatically or have an always-on timer)		[X]	[X]
§ 150(k)(5) Luminaires that are recessed into insulated ceilings are approved for zero clearance insulation cover (ZC) and are certified to ASTM E283 and labeled as air tight (AT) to less than 2.0 CFM at 75 Pascals		[X]	[X]
§ 150(k)(6) Luminaires providing outdoor lighting and permanently mounted to a residential building or to other buildings on the same lot shall be high efficiency luminaires (not including lighting enclosed swimming pool water features or other Article 680 locations) OR are controlled by occupant sensors with integral photo control certified to comply with Section 119(d)		[X]	[X]
§ 150(k)(7) Lighting for parking lots for 8 or more vehicles shall have lighting that complies with Sections 130, 132, and 147		[X]	
§ 150(k)(8) Permanently installed lighting in the enclosed, non-dwelling spaces of low-rise residential buildings with four or more dwelling units shall be high efficiency luminaires OR are controlled by occupant sensors (as certified to comply with Section 119(d))		[X]	

APPROVED
 HUMBOLDT COUNTY
 BUILDING INSPECTION DEPARTMENT
 APR 28 2007
 BY: [Signature]