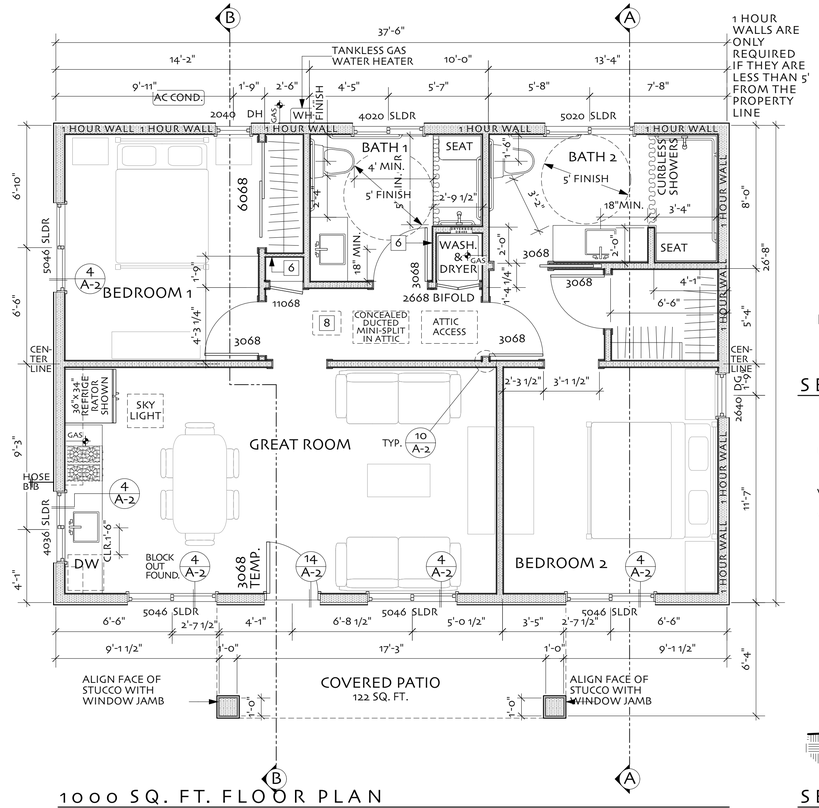
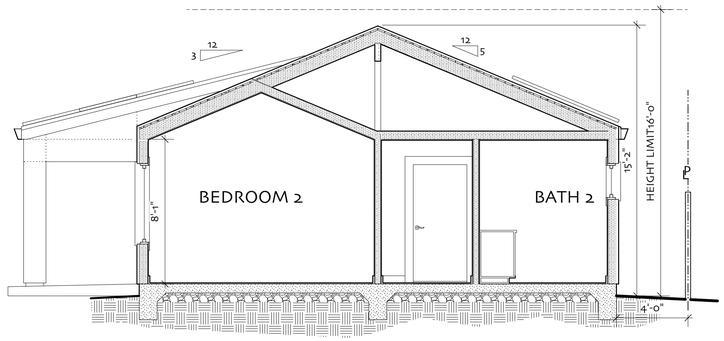
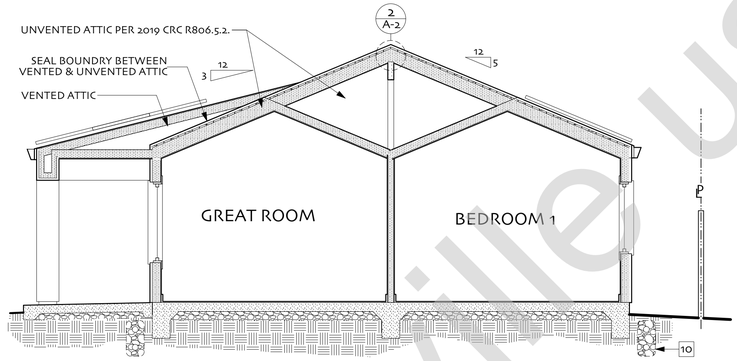


1000 SQ. FT. FLOOR PLAN

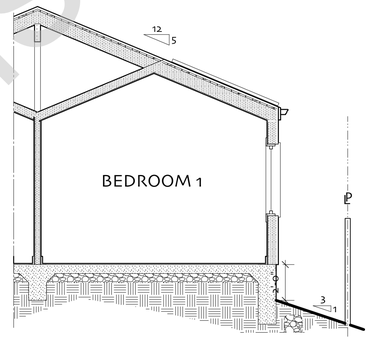
SCALE 1/4"=1'-0"



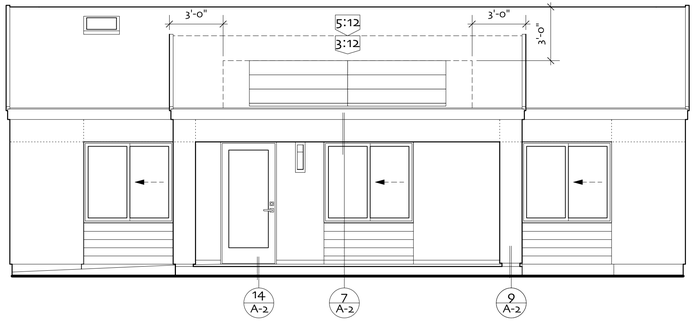
SECTION A



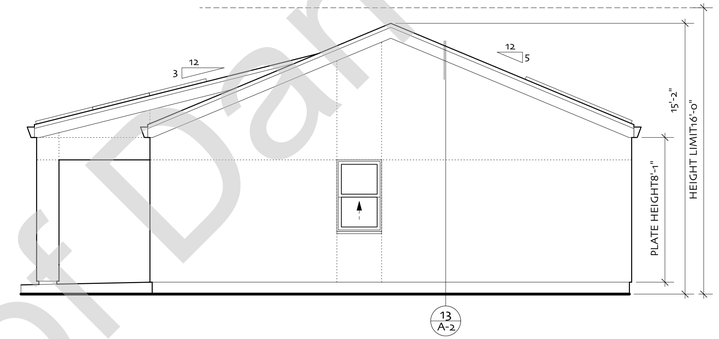
SECTION B



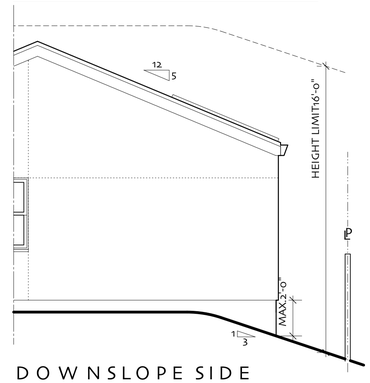
DOWNSLOPE SECTION B



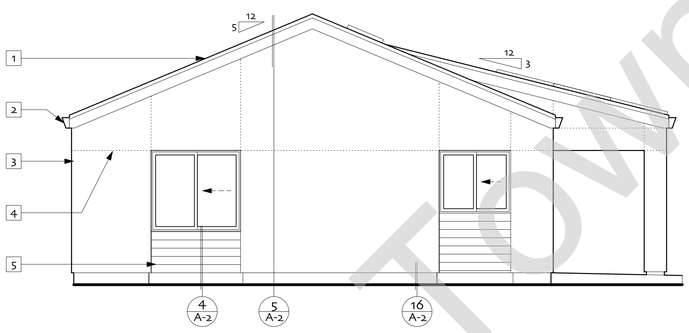
FRONT ELEVATION



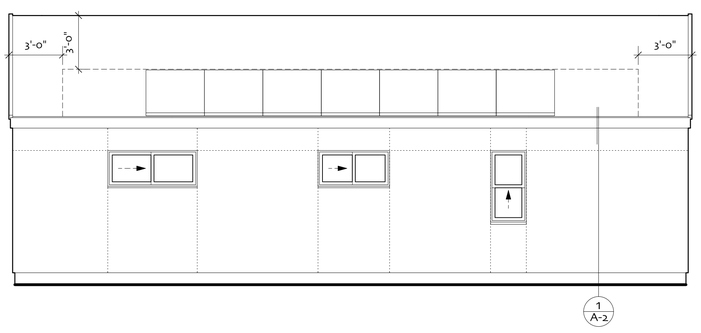
SIDE ELEVATION



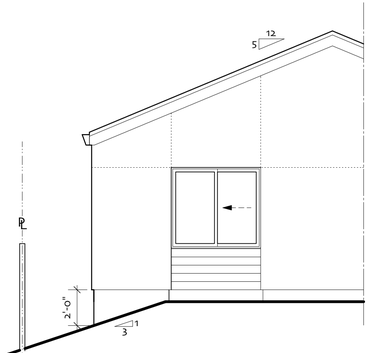
DOWNSLOPE SIDE



SIDE ELEVATION



BACK ELEVATION



DOWNSLOPE SIDE

FLOOR PLAN NOTES

1. PROVIDE BLOCKING FOR 42 INCH MINIMUM LENGTH GRAB BAR PER CBC 11B-604.3.1

2. THE LAVATORY HEIGHT OF THE RIM OR COUNTER SURFACE SHALL NOT EXCEED 34 INCHES MAXIMUM HEIGHT PER CBC 11B-606.3.

3. BATHROOM SINKS SHALL BE A MINIMUM OF 18 INCHES TO THE SIDEWALL FROM THE CENTERLINE OF THE SINK.

4. STANDARD ROLLING TYPE SHOWER COMPARTMENT SHALL BE 30 INCH MINIMUM WIDTH BY 60 INCH MINIMUM CLEAR DEPTH WITH A FULL OPENING WITH ON THE LONG SIDE OF 60 INCHES MINIMUM PER CBC 11B-608.2.2.

5. MAXIMUM FLOOR SLOPE IN SHOWER STILL NOT EXCEED 1/2 INCH PER FOOT. 2 INCH MINIMUM DEPTH TO DRAIN INLET.

6. 2x6 FLAT STUDS @ 12" O.C.

7. INSULATE CEILINGS AND WALLS BETWEEN BEDROOMS AND GREAT ROOM WITH R-11 SOUND ATTENUATION BATTS.

8. PANASONIC FV-10VE1 ENERGY RECOVERY VENTILATOR SET TO 50 CFM

9. WEATHER STRIP & TEMPERED GLASS ON EXTERIOR DOOR.

10. CONTINUOS DRAIN SYSTEM ON 4 SIDES OF HOUSE; SDR-35 PVC PIPES WITH 1% MIN. SLOPE TO DRAIN. TOP PIPE IS SOLID 4"Ø FOR RAIN LEADERS. BOTTOM PIPE IS SEPARATE SYSTEM OF 4"Ø PIPIES WITH PERFORATIONS DOWN. PIPES IN 12" WIDE FILTER FABRIC WRAPPED TRENCH WITH CLASS II DRAIN ROCK FILL. 6" COMPACTED NATIVE SOIL OVER TRENCH. SLOPE SURFACE GRADE 5% MINIMUM AWAY FROM BUILDING.

ELEVATION NOTES

THESE ARE SUGGESTED EXTERIOR MATERIALS. CONSULT WITH TOWN OF DANVILLE TO DETERMINE WHICH MATERIALS WILL BE COMPATIBLE WITH THE MATERIALS AND COLORS OF THE PRIMARY RESIDENCE.

1. ASPHALT COMP ROOF AT 3:12 AND 5:12 (ENGINEERED FOR CONCRETE TILE IN CASE MAIN HOUSE HAS CONCRETE TILE ROOF).

2. 6" SOLDERED BONDERIZED GSM FASCIA GUTTERS WITH NO RIBBING AND WITH CONCEALED DOWNSPOUT 2" I.D. PVC DOWNSPOUTS.

3. 7/8" 3 COAT STUCCO WITH SMOOTH FINISH OVER EXPANDED METAL LATH OVER 3 LAYERS 30 LB. FELT OVER 1/2" CDX PLYWOOD.

4. DOUBLE V-GROOVE 26 GA. BONDERIZED STUCCO SCREED 1/2" BETWEEN POINTS.

5. ACCENT PANEL OF CEDAR RAIN SCREEN, LAP SIDING, PORCELAIN WOOD LOOK TILE, OR ANOTHER TILE SELECTED BY OWNER ON 2X4 STUD WALLS BELOW WINDOWS ONLY. SEE DETAIL 4/A-2 TO RECESS FOUNDATION 1 1/2" BY WIDTH OF WINDOW R.O. + 3"

SHEET INDEX

	ARCHITECTURAL
A-1	FLOOR PLANS & ELEVATIONS
A-2	ROOF, CEILING & ELECTRICAL PLANS & DETAILS
A-3	GENERAL NOTES
	TITLE 24
EC	ENERGY CALCULATIONS
EC M	RESID. MANDATORY MEASURES
	STRUCTURAL
SN1	GENERAL NOTES
SN2	GENERAL SPECIFICATIONS
S1	ROOF FRAMING & FOUNDATION
SD1	SHEARWALL SCHEDULE
SD2	TYPICAL DETAILS
SD3	FOUNDATION DETAILS
SD4	ROOF RAMING DETAILS

CODE COMPLIANCE

OCCUPANCY GROUP: R3/U
TYPE OF CONSTRUCTION: VB
2019 CALIFORNIA RESIDENTIAL CODE
2019 CALIFORNIA MECHANICAL CODE
2019 CALIFORNIA PLUMBING CODE
2019 CALIFORNIA ELECTRICAL CODE
2019 CALIFORNIA ENERGY CODE
2019 CALIFORNIA BUILDING GREEN STANDARDS CODE
2019 CALIFORNIA BUILDING CODE (STRUCTURAL ONLY)
TYPE V CONSTRUCTION

THE FOLLOWING TO BE DEFERRED AND/OR REVIEWED AND APPROVED UNDER A SEPARATE PERMIT
- A. FIRE SPRINKLERS
- B. GAS LINE SIZING CALCULATIONS
- C. ELECTRICAL LOAD CALCULATIONS
- D. PHOTOVOLTAIC SYSTEM

STRUCTURAL ENGINEER & TITLE 24

JUSTEN PEEK
ADVANCED ENGINEERING
3361 WALNUT BLVD. SUITE 100
BRENTWOOD CA 94513
(925) 516-3502
jp@advengineering.com

FRANCIS GARCIA
ARCHITECT
2950 BUSKIRK AVE, STE. 300 WALNUT CREEK, CA 94597
925 984 9983
www.francisgarciaarchitect.com

1000 S.F. 2 BEDROOM A.D.U. FOR THE TOWN OF DANVLLE

Rev. No.	Revision

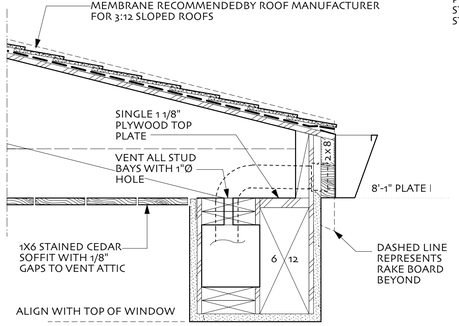
Drawn: FG
Date: 7-21-2020
Scale: 1/4"=1'-0"

LICENSED ARCHITECT FRANCIS GARCIA RENEWAL 08/31/21 STATE OF CALIFORNIA

CONTEMPORARY DOWNSLOPE RIGHT PLAN

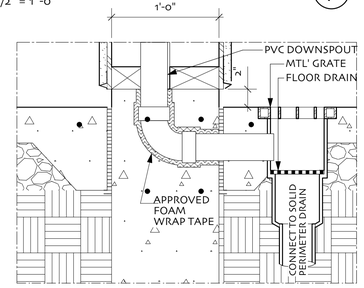
A-1

Town of Danville use only



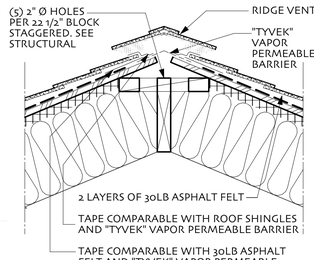
EAVE AT 3:12 PORCH ROOF 7

SCALE 1 1/2" = 1' -0"



COLUMN BASE 9

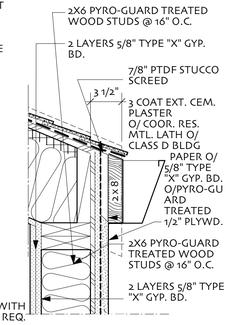
SCALE 1 1/2" = 1' -0"



VAPOR DIFFUSION PORT PER 2019 CRC R806.5.2.1. 1000 SF ATTIC /600x144"/5F=240 SQ. IN. REQUIRED 37'-6" RIDGE = (18) 22 1/2" BLOCKS WITH (5) 2"Ø HOLES WITH 3.14 SQ. IN. EACH HOLE. 3.14x(5)x(18) = 282 > 240 SQ. IN. REQ.

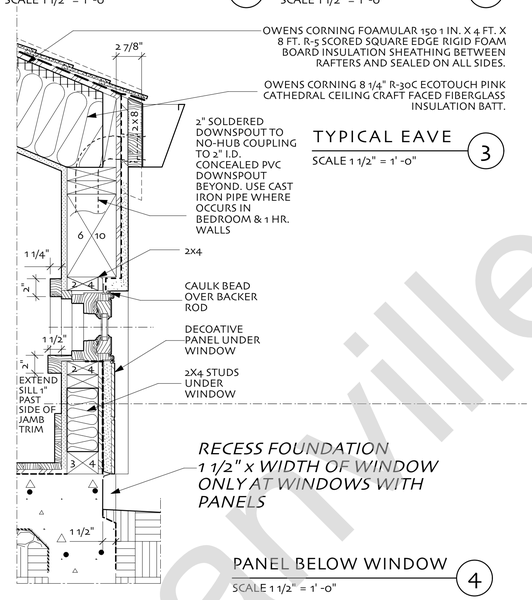
VAPOR DIFFUSION PORT 2

SCALE 1 1/2" = 1' -0"



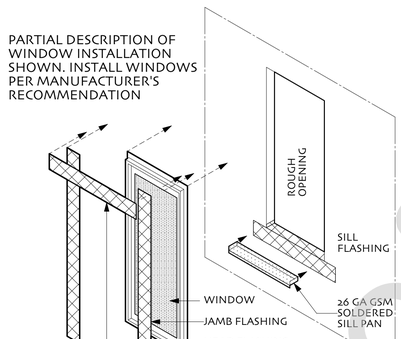
EAVE AT 1 HR. WALL 1

SCALE 1 1/2" = 1' -0"



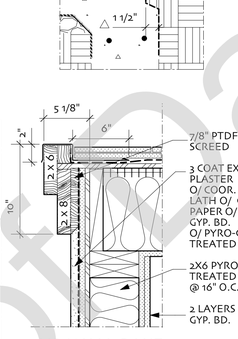
TYPICAL EAVE 3

SCALE 1 1/2" = 1' -0"



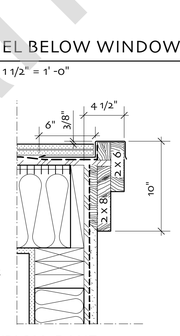
WINDOW FLASHING 15

NOT TO SCALE



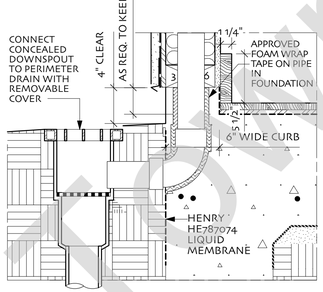
1 HR WALL RAKE 13

SCALE 1 1/2" = 1' -0"



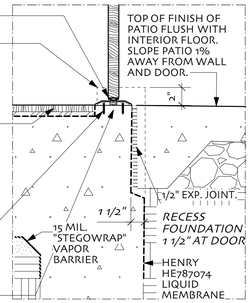
TYPICAL RAKE 5

SCALE 1 1/2" = 1' -0"



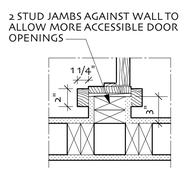
CURB AT WALL 16

SCALE 1 1/2" = 1' -0"



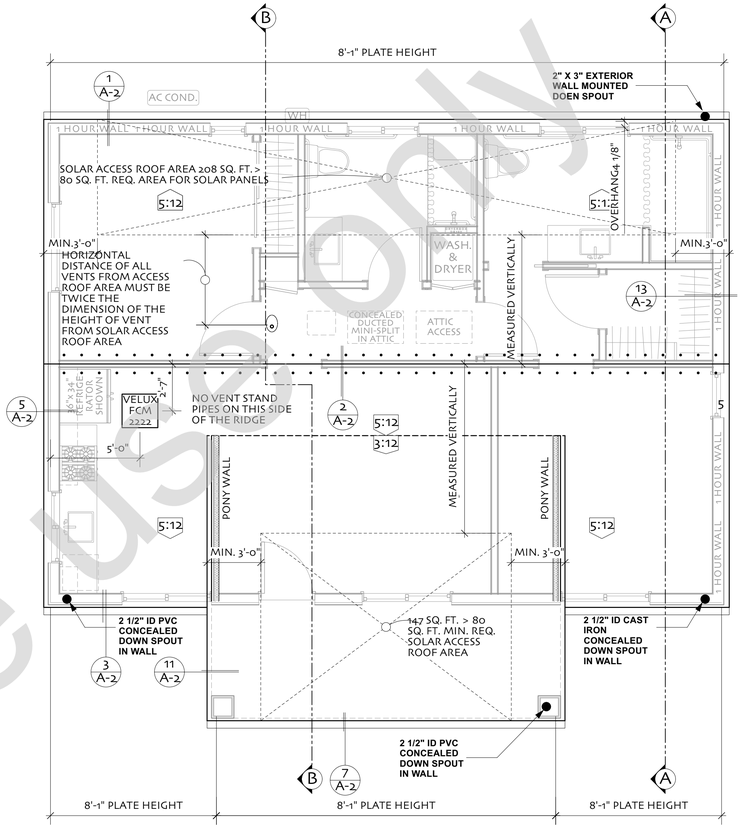
DOOR THRESHOLD 14

SCALE 1 1/2" = 1' -0"



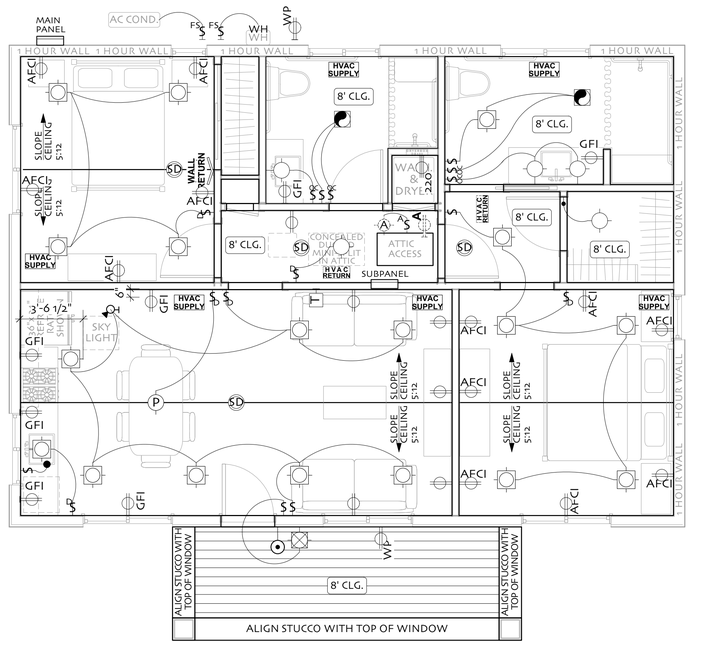
JAMB TRIM 6

SCALE 1 1/2" = 1' -0"



ROOF PLAN

SCALE 1/4"=1'-0"



ELECTRICAL AND REFLECTED CEILING PLAN

SCALE 1/4"=1'-0"

MINIMUM QUALIFYING SIZE OF THE PHOTOVOLTAIC SOLAR SYSTEM

EQUATION 7-1 FROM THE "2019 RESIDENTIAL COMPLIANCE MANUAL

kWpv required = (CFA x A)/1000 + (NDwell x B)
WHERE:
kWpv = kWdc size of the PV system
CFA = Conditioned floor area
NDwell = Number of dwelling units
A = Adjustment factor from Table 7-1
B = Dwelling adjustment factor from Table 7.1

(1000 x .613)/1000 + (1x1.27) = 1.883 kWpv

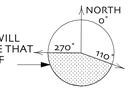
1883 WATTS / 7 PANELS = 269 WATTS MIN. / PANEL MIN.
1883 WATTS / 6 PANELS = 313 WATTS MIN. / PANEL MIN.

THE SOLAR ZONE MAY BE REDUCED TO ≥ 50 PERCENT OF THE POTENTIAL SOLAR ZONE AREA WHEN SOLAR ACCESS IS LIMITED. COORDINATE WITH A SOLAR ENERGY EXPERT AND THE TOWN OF DANVILLE TO DETERMINE THE SOLAR ENERGY POTENTIAL OF THE SITE FOR THE HOUSE.

SOLAR ZONE IS ONLY REQUIRED TO BE ON ONE OF THE ≥ ROOF PLANES SHOWN. TO DETERMINE WHICH SIDE TO LOCATE THE SOLAR ZONE, USE THE FIGURE BELOW.

FIGURE 7-4:

THE SOLAR ZONE WILL BE ON ROOF PLANE THAT IS IN THE RANGE OF ORIENTATIONS SHOWN SHADED.



ELECTRICAL LEGEND

- STANDARD LIGHT SWITCH
- MANUAL ON/AUTO OFF OCCUPANCY SENSOR
- DIMMER SWITCH
- FUSED SWITCH
- SWITCH IN ATTIC
- JAMB SWITCH
- DOORBELL BUTTON
- T THERMOSTAT
- SUBPANEL ELECTRICAL SUB-PANEL
- RECESSED LED FIXTURE
- SURFACE-MOUNTED LED LIGHT
- WALL MOUNTED LIGHT FIXTURE
- LED PENDANT LIGHT FIXTURE (P)
- EXTERIOR LED FIXTURE WITH MOTION SENSOR & PHOTOCELL
- (A) FLUORESCENT LIGHT FIXTURE IN ATTIC
- SURFACE MOUNTED LED SPOT LIGHT
- GARBAGE DISPOSAL
- DUPLEX OUTLET
- WP WEATHERPROOF GFI DUPLEX OUTLET
- DUPLEX OUTLET WITH W/ GFI (GFI)
- 220 STANDARD 220 VOLT OUTLET
- DUPLEX OUTLET IN ATTIC (A)
- AFCI ARCH FAULT CIRCUIT DUPLEX OUTLET
- (SD) HARD-WIRED 120V SMOKE ALARM W BATTERY BACKUP
- EXHAUST FAN/LIGHT COMBO

NOTE: OUTLETS FOR APPLIANCES ARE NOT SHOWN ON PLAN. PLEASE REFER TO APPLIANCE INSTALLATION INSTRUCTIONS FOR APPLIANCES THAT REQUIRE OUTLETS.

FRANCIS GARCIA
ARCHITECT
2950 BUSKIRK AVE, STE. 300 WALNUT CREEK, CA 94597
925 984 9983
www.francisgarciaarchitect.com

1000 S.F. 2 BEDROOM A.D.U. FOR THE TOWN OF DANVLLE

Rev. No.	Revision

LICENSED ARCHITECT FRANCIS GARCIA RENEWAL 10/31/20 STATE OF CALIFORNIA

Drawn: FG
Date: 7-21-2020
Scale: AS NOTED

CONTEMPORARY DOWN SLOPE RIGHT ROOF & ELECT PLAN & DETAILS

A-2

Town of Danville Use Only

SPECIFICATIONS

SEE ALSO STRUCTURAL NOTES BY STRUCTURAL ENGINEER. WHERE CONFLICTS OCCUR STRUCTURAL ENGINEERS NOTES SHALL GOVERN.

CONCRETE & CONCRETE BLOCK

A. CONCRETE

1. Concrete shall be machine mixed with a maximum 7 1/2 gallons of water per sack of cement.

2. Mixing water shall be clean and free from injurious amounts of oil, acids, alkalies, organic materials or other deleterious substances.

3. Course aggregate shall be hard, durable crushed stone or gravel graded per ASTM C33.

4. Sand shall be clean, hard, durable, washed free from silt, loam, or clay.

5. Concrete shall conform to ASTM 94 and reach a minimum strength of 2500 P.S.I. in 28 days or as specified in the soils report.

6. Concrete quality shall conform to provisions of Sec. 1905 CBC

7. Cement shall conform to ASTM C150, Type I or II.

8. All concrete shall be thoroughly consolidated during placement, using a mechanical vibrator.

9. Except where detailed on structural drawings, reinforcement shall not be displaced or cut to provide clearance for penetrations, inserts, or embedments.

10. Removal of forms: supporting vertical surfaces min. 2 days: supporting horizontal surfaces min. 14 days.

11. Only one grade of concrete shall be permitted on the job site at one time.

B. CONCRETE BLOCK

1. All concrete blocks shall be grade N load bearing unit F =1500 #PSI (U.N.O.) conforming to A.S.T.M. C-90 (medium weight concrete blocks).

2. Mortar (type S mortar) mix shall be 1 part cement, 4-1/2 parts sand, and a maximum of part lime putty or dry hydrated lime.

3. Mortar joints shall be a minimum of 3/8 and shall be full head and bed.

4. Grout mix shall be 1 part cement, 3 parts sand, 2 parts pea gravel, and sufficient water to cause the grout to flow into all joints without segregation.

5. Grout pours shall not exceed 4 feet in height Grout cells as noted on plans, F c 2000 P.S.I. min.

6. When grouting is stopped for one hour or longer, horizontal construction joints shall be formed by stopping the pour of grout 1-1/2" below the top of the uppermost unit.

7. Vertical reinforcement shall be held in position at the top and bottom and at intervals not exceeding 192 bar diameters.

8. Dry pack shall be 1:2 stiff mix.

9. Concrete block retaining walls shall conform to provisions set forth in CBC Chapter 16 for structural masonry walls.

10. Provide an approved waterproofing on earth side of retaining wall with protection board before backfilling. Provide back of wall drain or weep holes as per detail.

11. Block units shall have a moistcure content not to exceed 30% at time of laying to prevent dehydration of mortar and grout, and shall be free of all substances which might impair the bond of the units to mortar and grout.

12. Proper units shall be used to provide for all windows, doors, bond beams, lintels, pilasters etc. with a minimum of cutting.

13. Lay masonry in running bond except as designated otherwise on drawings. Provide masonry bonds at all corners and intersections-

14. All grout shall be thoroughly consolidated and re--consolidated, using a mechanical masonry vibrator.

15. Masonry Fireplaces shall be constructed and reinforced per code, and according to the recommendations of the Masonry Institute of America. Chimneys shall have terra cotta flue linings. Install ash dump at each fireplace.

STEEL

A. STRUCTURAL STEEL AND MISCELLANEOUS METALS

1. Structural steel shapes and plates shall conform to ASTM A36 identified with mark and mill certification.

2. Steel pipe columns shall conform to ASTM A53 Type E or S Grade B. Note dimension on plans shows out side diameter.

3. Steel tube columns shall conform to ASTM A500, Grade B.

4. All welding shall conform to standard code and A.W.S. for arc and gas welding. Use the electric arc process F-70 electrodes: low hydrogen electrodes for welding bolts and rebar as per ASTM A233.

5. All welding shall be performed by certified welders in a shop approved by local ordinances.

6. Structural field welding shall have special inspection, in accordance with CBC 1704.

7. Fasteners: Bolts and nuts shall conform to ASTM A307. All bolt heads and nuts that bear on wood shall have malleable iron washers if exposed or cut washers if concealed. All anchor bolts shall be hook bolts (with 2 hook), see plan for spacing.

8. Exposed exterior steel shall be galvanized, UNO

9. Exposed interior steel shall be shop primed and field (final) coated.

B. REINFORCING STEEL

1. Reinforcing steel shall be deformed bars conforming to ASTM designation A615~40, intermediate grade.

2. Wire fabric shall be electrically welded steel, ASTM A185. Lap 6 at edges.

3. Detailing fabrication and placing of reinforcing steel shall conform to or equal that set forth in the Manual of Standard Practice for Detailing Reinforced Concrete Structures, and better where required by the drawings.

4. Standard hooks shall comply with recommended sizes as shown in above manual, unless otherwise noted.

5. Lap all bar splices, 36 diameters in concrete and 40 diameters in concrete block, or 24",whichever is greater, stagger splices: bars shall be continuous in length as long as possible.

6. Suitable devices shall be used to hold the reinforcing in its true horizontal and vertical positions. These devices shall be sufficiently rigid and numerous to prevent displacement of the reinforcing during the placing of the concrete.

7. All dowels, anchor bolts and other inserts shall be well secured in place prior to pouring concrete.

8. All pipes and ducts through concrete to be sleeved. Verify openings with plumber and electrician.

9. All welded wire fabric shall be tied at three places to each dowel except locations where slab is designed as a floating slab.

10. Clear distance of reinforcement shall be as follows:
a) Wall surface = 1"
b) Formed surface in contact w/earth = 2"
c) Unformed surface in contact w/earth = 3"
d) Clear distance between bars = 2"

WOOD

A. MATERIALS

1. All lumber shall be Douglas Fir, and shall be stamped with a grademark of the following grades by an approved grading agency UNO

A. Studs and plates- standard grade min.

B. Joists and rafter- #2 grade min. UNO

C. Beam and lintel - #1 grade min. UNO

D. Post: 4X post - #2 grade, U.N.O. (exposed #1)
6x post & larger - #1 grade

2. Glu-Laminated Timber Beams

A. Industrial appearance grade UNO

B. All members shall be composed of 1-1/2" laminations, Fbx-2400 PSI, dry use condition. Each member shall bear specific identification for location and shall be accompanied by a Certificate of Inspection by the inspection agency- Standard camber.

C. Prior to fabrication, shop drawings shall be prepared and submitted to the Architect for approval. Taper seats for level bearing.

D. Design, fabrication and construction of structural glu-lam members shall conform in all applicable respects to the following governing standards:

1. The American Institute of Timber Construction Standards, Manual #301.

2. The commercial standard for structural glued laminated timber, CS-253.

3. Standard specifications for structural glued laminated Douglas Fir timber of the WCLA1 Comb. F, DF.

4. WCLIB certificate of lumber grades.

5. Approved inspection certificate in gluing procedures to be submitted to the building department prior to erection.

6. Each piece to be imprinted with standard identification marks.

3. Structural plywood shall be graded per A.P.A. PSI-83, and shall be interior type sheathing C-D grade with exterior glue, UNO All horizontal plywood shall be laid with face grain perpendicular to joists and with staggered joints.

B. CONNECTIONS

1. Nailing: Minimum nailing requirements for standard connections unless specifically shown or noted otherwise.

Timber Nailing Schedule
Taken from CBC Table 2304.9.1

3. A. Plywood sheathing: (at floors) UNO
Use T&G plywood (PI 48/24, CDX) w/10d common nails.
Supported panel edges nailed @ 6" o.c. Intermediate nailed @ 12" o.c.
Glue plywood to floor joist.
Nail immediately after gluing.

B. Plywood sheathing: (at roof) UNO
Use plywood (CDX) w/8d common nails.
Supported panel edges nailed @ 6" o.c. Intermediate nailed @ 12" o.c.
Blocking not required UNO

4. For flush framing of joists, use Simpson std. U joist hanger or equal. Provide rafter ties 4' -0" o.c. immediately above ceiling joists where ceiling joists are not parallel to roof rafters.

5. All manufactured connection hardware shall be as designated on drawings and installed and full nailed in conformance to manufacturer's instructions and applicable ICBO approvals.

6. Install lag screws in drilled lead holes with a diameter equal to of the shank diameter (lag screws shall not be hammered in). Wax or soap lag screws. Provide washers under heads bearing on wood. Holes shall be properly aligned.

7. Bolt holes shall be drilled 1/16" larger than the bolt diameter. Provide washers under all bolt heads and nuts bearing on wood. Holes shall be properly aligned. In no case shall misalignment be allowed which prevents proper bearing or alignment of members. Oversized holes shall not be allowed. Nuts shall be tightened snug.

8. Nails to be common wire nails.

C. INSTALLATION

1. Cutting and Notching of Studs:

Studs in exterior walls and bearing partitions may be cut or notched to a depth not exceeding 25% of stud width. Cutting or notching of studs in non-bearing partitions shall not exceed 40% of the width.

2. A hole not greater in diameter than 40% of the stud width may be bored in any wood stud. Bored holes not greater than 60% of the width of the stud are permitted in non-bearing partitions. In no case shall the edge of the bored hole be nearer than 5/8" to the edge of the stud. Bored holes shall not be located at the same section of stud as a cut or notch.

3. All lumber in contact with concrete shall be pressure treated (Wolminized) Douglas Fir or construction grade Redwood.

4. All stud walls shown on Structural Drawings shall have 2 x 4 studs placed at 16" o.c. except where noted otherwise.

5. Top plates shall be doubled on all stud walls. UNO

6. Cripples under headers shall be continuous to sole plate.

7. Block all stud walls as required for sheathing.

8. Provide blocking 2x wide of equal depth of the members between all joists and rafters at their supports, unless members are nailed to a rim joist

9. Install all horizontal members with crown up.

10. All members in bearing shall be accurately cut and aligned so that full bearing is provided without the use of shims.

11. Bearing posts shall have full blocking or support under.

12. Double joist under all parallel non-bearing partitions. Use 2-16d nails at i6" o.c. to nail double joist together unless noted otherwise.

13. All joists shall have a minimum of 2" bearing at supports. Lapping joists shall have 6" laps centered over interior supports.

14. Provide 2X solid blocking on joists and rafters @ 8'-0" o.c. and at supports.

15. Sills and Plates:
Sills and plates at shear walls shall be continuous and free of cuts and notches. Perforations shall be allowed with a maximum of 1 3/4" diameter and shall be located as close to the center as possible. Sill plates shall be pressure treated Douglas Fir. Sill bolts shall have 7" minimum embedment and be 12" maximum from ends of sills and corners. Provide metal washers under all bolt heads and nuts bearing on wood. All bolts through wood to be drive fit. At least 2 bolts shall be provided for each board.

16. Double joists around all openings

17. Non-Bearing Stud Wall Requirements:
Maximum Height
Up to 12' 2 x 4 @ 16" o.c
Up to 18' 2 X 6 @ 16" o.c
Up to 20'`2 x8 @ 16" o.c.
Lintels as Follows: (U.N.O.)

Roof Lintel	Floor Lintel
Opening=8'-0" Use 4 x 8	Opening=8'-0" Use 4x10
Opening =6'-0" Use 4 x 6	Opening=6'-0" Use 4x8
Opening=4'-0" Use 4 x 4	Opening=4'-0" Use 4x6

18. Provide double trimmers at all openings 6'-0" wide or greater UNO

19. Fire stops are required at the following locations:

A. In concealed spaces of stud walls and partitions, including furred spaces, at the ceiling and floor levels and at 10 foot intervals along the length of the wall.

B. At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings.

C. In concealed spaces between stair stringers at the top and bottom of the run and between studs along and incline with the run of stairs if the walls under the stairs are unfinished.

D. In openings around vents, pipes, ducts, chimneys, fireplaces and similar openings that afford a passage for fire at ceiling and floor levels, with non-combustible materials.

E. Gas vents and non-combustible piping, in walls, passing through three floors or less shall be effectively draft stopped at each floor or ceiling.

20. Lap 4-0" minimum at top plate splice, with 8-16d nails at each side of splice U.N.O. Splices in upper and lower plates shall be staggered at least 10 feet.

21. All wood posts shall be 4X width of beam (UNO) 4 X 10 and larger beams/headers shall have post caps at ends, where indicated on plan.

22. Plywood at shear walls to be continuous at wall and door jamb intersections.

23. Provide boundary nailing to end posts at each shear wall.

24. Structural members shall not be cut for pipe, ducts, sleeves, etc., unless specifically noted or detailed.

25. Provide 3/8" min. particle board (underlayment under vinyl floors).

THERMAL AND MOISTURE PROTECTION

A. INSULATION

1. Minimum insulation to be as follows:
Roof and ceiling - Refer to
Exterior walls - Title 24
Floors wood - Notes
Sound Attenuation- See notes on Floor Plan

2. Cold Walls:
Portion of building between living space and an unheated garage, storage room and portion of wall above ceiling of an adjacent section of a split-level dwelling to be insulated same as roof, walls, or floor of dwelling.

3. It may be necessary to increase the depth of framing members to accommodate thicker insulation materials than that shown on drawings. Verify with Architect.

4. Install ceiling insulation as required to allow air circulation at eave vents.

5 Studs must be constructed, installed, and insulated as per Chapter 6, CMC

6. All insulation must meet California Energy Commission quality standards and be certified by the manufacturer

7. Provide water heater insulation blanket (R-12 or greater) or combined interior/exterior insulation (R-16 or greater): first 5 feet of pipes closest to tank insulated (R-3 or greater).

8. Insulate recirculating hot water piping in unheated spaces.

9. Insulation installer shall post in a conspicuous location in the building a certificate signed by the installer and builder stating that the installation conforms with the requirements of Title 24, chapter 2-53 and that the materials installed conform with the requirements of Title 20, Chapter 2, Subchapter 4, Article 3.

10. All insulation materials shall have a flame spread rating not to exceed 25 and a smoke density not to exceed 450.

11. Leave 1" dead air space between the insulation and roof sheathing for venting.

B. GYPSUM WALLBOARD

1. Gypsum board work and materials shall meet all requirements of ANSI No.97-I, for the Application and Finishing of Wallboard. Joint compound system mixed, applied, and finished in compliance with manufacturers printed directions, to be invisible after finished, including all metal corner beads and trim.

2. Gypsum wallboard on stud walls: (Nailed Application): Cooler nails at 7" o.c. all studs, plates, and blocking, use 5d nails with wallboard and 6d nails with 5/8" wallboard unless otherwise noted on drawings. Avoid breaking face paper.

Gypsum wallboard on stud walls: (Screwed Application):
USG (or equal) Type W screws spaced 16" o.c. max. for walls, 12" o.c. max. for ceilings.

3. Use 1/2" gypsum wallboard where stud spacing is 16" o.c. and 5/8" where stud spacing is greater than 16"o.c.

4. Use 5/8" type "x" gypsum board on all garage ceilings, walls and beams, and on all framing supporting stairs. Framing shall be at 16"oc max. Provide perimeter blocking between the ceiling joists for solid backing for the attachment of the sheetrock to the ceiling.

5. Use "Durorock" or equal backing board where tile is to be applied to walls UNO. All tub/shower walls shall have a smooth, hard, nonabsorbent surface over a moisture resistant underlayment to a height of 72 inches above the drain inlet (min). CBC R 307.2 (min).

C. LATH AND PLASTER

1. Stucco lath shall be key mesh bond lath self furred paper backed lath stapled to all studs, top and bottom plates, and blocking with 16 gauge staples 6" o.c.

2. All horizontal or sloping surfaces to receive exterior finishes shall have one layer of (min) 30# felt underlayment.

3. Plaster soffits to be over expanded metal lath.

4. Exterior cement plaster shall consist of three coats over paper backed metal lath.

5. Provide exterior plaster weep screed at grade beam/sill plate line.

D. TILE

1. Provide materials obtained from only one source for each type of tile and color to minimize variations in appearance and quality.

2. All tile installed over wood studs or solid wood backing: Studs shall be protected from moisture by 15# felt or 4 mil. polyethylene film. Metal lath shall be nailed at 4" o.c. vertical and 16" o.c. horizontal. Tile to be installed over 3 part mortar bed: scratch coat, floating coat, and bond coat. All work shall be done in accordance with the Ceramic Tile Institute's most current handbook and A.N.S.I. A108.1.

3. Grout joints for marble and granite tile shall be held as tight as possible and shall be uniform in width.

4. Grout joints for ceramic tile shall be as per manufacturer's recommendations and shall be uniform in width.

5. Where tile meets another flooring material (i.e., carpet, wood), concealed stripping as required shall be used to form the tightest possible joining. Door thresholds shall be correctly located and centered under the closed door line. Exposed screws or nails are not acceptable.

E. CAULKING AND SEALANTS

1. Apply in strict accordance with manufacturer's printed instructions.

2. Seal all joints around openings to provide a watertight and airtight seal. Clean joints thoroughly. Areas adjacent to joints shall be masked if necessary to obtain a neat sealer line, free of stains on adjacent surfaces. Joints shall be filled with back-up material as required by manufacturer.

3. All locations indicated on drawings and wherever air, water, or dust may infiltrate between construction members and as directed by builder shall be caulked. Set exterior edges or all exterior thresholds in sealant to provide weather tight seal.

4. Caulk and/or seal all exposed exterior and interior joints above and below grade and all those exterior and interior joints and appendages concealed by other building materials, flashing, etc.. Caulking and/or sealant material at exposed areas shall be in color as near as possible to match abutting natural or painted finishes.

5. Caulking and sealant compounds indicated on drawings and corresponding to the following list shall be Standard Dry Wall products, Inc., or as otherwise approved and complying with the applicable Federal Specifications. Neoprene Sealing Tapes and Strips shall be as manufactured by Dupont, Elastomer Chemicals Department.

GLAZING

1. Glass in doors or within 18" of floor, within 24" of door, and immediately adjacent to tubs & showers to be fully tempered float glass. Leave labels attached until final inspection.

2. All skylights within building to be double-glazed. All glass in skylights shall be fully tempered, safety glass, or wire glass. Approved plastics may be used. Skylights to comply with Chapter 24 of the California Building Code.

3. All egress or rescue windows from sleeping rooms shall have a minimum net clear opening of 5.7 square feet. Minimum net opening height shall be 24", minimum net width 20" with finished sill height not more than 44" above the floor.

SHEET METAL

1. Provide galvanized sheet metal (G.S.M.) side wall flashing at full perimeter of chimneys. G.S.M. saddle at high side.

2. Provide G.S.M. sheet metal flashing at any roof valley: edge of flashing shall be minimum 7" from center of valley.

3. Provide G.S.M. flashing for all vents or pipes penetrating roofs or roof decks.

4. Provide G.S.M. flashing at all roof-to-wall intersections.

5. Provide G.S.M. gutters continuous at full perimeter of roof. Provide exposed G.S.M. downspouts as noted on roof plan and building elevations. See gutter details for profile.

6. Provide all additional G.S.M. flashing as shown on construction documents or as may be otherwise required.

7. All flashing is to be 26 gauge galvanized sheet steel unless noted otherwise: meeting requirements of ASTM A525, mill prepared to receive paint finish, fabricated and installed in accordance with latest edition SMACNA requirements.

MECHANICAL AND PLUMBING

1. The plumbing and HVAC mechanical systems shall be designed by the Mechanical Subcontractor or his representative based upon energy calculations provided. The Mechanical Subcontractor shall size and specify equipment, provide duct layout and sizing.

2. Water meter, water line pipe and gas line pipe sizing calculations along with one line isometric drawings may be required to be provided if the building inspector requests these items.

3. Plumbing drain waste and vent and/or mechanical ducting along with electrical panel/wiring sizing calculations may be required to be provided by contractor if the field inspector requests these items. See deferred submittals

4. Installation instructions for all listed equipment shall be provided to the field inspector, time of inspection.

5. The Mechanical Subcontractor shall verify location of all registers and return air grills with Architect prior to commencing the work.

6. Setback thermostats are to be used on all heating systems.

7. Gas-fired space heating equipment to have intermittent ignition devices.

8. Attic Furnace Shall Be Set On Vibration Isolation Mounts. Provide a level working platform not less than 30" in depth in front of firebox side. If the furnace temperature-limit control, air filter, fuel-control valve, vent collar or air-handling unit is not serviceable from firebox side of furnace, a continuous floor not less than 24" in width shall be provided from platform in front of the firebox side of the furnace to in front of this equipment.

9. All air ducts penetrating separation wall or ceiling between garage and living area shall be 26 gauge minimum w/ R-6 insulation

10. All fixed appliances are to be securely fastened into place per UMC Section 304.4.

11. Sinks and water closets to have flexible pipe to water supply. Water closets shall have maximum 1.28 gpf + WaterSense. Lavatory, and sink faucets shall have a maximum flow rate of 1.2 gpm @ 60psi; minimum 0.8 gpm @ 20psi. Kitchen faucets shall have a flow rate of 1.8 gpm @ 60psi. May temporarily increase to 2.2gpm @60psi, but must default to 1.8 gpm. Shower heads shall have a maximum flow rate of 2.0 gpm @80psi +WaterSense per California Energy Commission.

12. All shower doors and sliding glass tub doors shall be 3/16" minimum fully tempered clear glass. Glass enclosure doors and panels must be labeled Category II. Swing door outward. Net area of shower receptor shall be not less than 7.1 square feet of floor area and encompass a 30" diameter circle.

13. Under floor Clean-outs shall be within 20 feet of the crawl space access, per Sect 707.1 All Clean-outs shall be water tight and air tight per Sect. 707.3

14. Pressure test is required for all gas lines prior to final inspection. (Minimum 1-1/2 times proposed maximum working pressure for half an hour. Maximum range for the pressure gage shall not exceed five times the test pressure per Sect. 1214.3.1

15. Provide 15" min. between the center of plumbing fixtures such as water closets and sinks and the nearest wall or object, per Sect. 407.6

16. Provide approved Excess Gas Shut-Off Valve (motion sensitive to be triggered when the gas flow exceeds the design flow limit) at each connection of a gas appliiance to a gas line per C.C.Co. Ordinance 2004-27.

17. Provide approved Excess Gas Shut-Off Device (non-motion sensitive such as earthquake and to be triggered after 300,000 BTU flow) at the downstream meter per C.C.Co. Ordinance 2000-11.

14. Provide water supply at each refrigerator .

15. Drain pipes from upper level to be cast iron and wrapped in insulation for sound dampening. All plumbing shall be separated from structure with plumbing pipe isolators.

16. At water heater provide temperature and pressure relief valve with drain to exterior 6" to 24" to grade with pipe end pointed down.

17. Provide washer & dryer space with recessed water supply, fuel gas connection. 4" dia., 14 foot max. smooth metal dryer vent to outside air.

18. Termination of all environmental air ducts shall be a minimum of three feet from property lines or any openings into the building.

19. Provide min. 60 sq in. of screened louvered monoxide vents per car 12" from floor

20. Attic furnace shall be set on vibration isolation mounts on 3/4" plywood platform with 30"min space of platform w/ a minimum 24" wide access walk within 20 ft. of access portal of at least 30" x 30" at unit for service.

21. All gas fired mechanical appliances shall be provided with seismic anchorage. Vent cooktop to outside air. provide fuel gas and electrical components as required.

22. Verify locations of FAU and exterior condenser units.

23. Prefabricated metal fireplace unit. U. Listed or ICBO unit to have tight fitting glass doors and outside air supply. Install per CBC chapter with manufacturers flue and cap. provide spark arrestors for fireplace chimney. Verify surround and mantel materials and layout with owner.

24. Provide underfloor access with insulated door 18" x 24".

25. Flush and raised hearths shall be minimum 20" deep and 12" beyond each side of fireplace opening. Verify finish material with owner.

26. Tubs and showers shall have tempered glass enclosures and door U.N.O

27. All shower heads shall have 1.8 gpm maximum rate; lavatory faucets 1.2 gpm maximum rate and kitchen sink faucets shall have 1.8 gpm maximum rate. Toilets shall be 1.28 gallons per flush.

ELECTRICAL

A. GENERAL

1. Electrical Plan is a suggested layout. Consult with Owner for specialty electrical features such as central vacuum system, intercom, security system, cable televisions outlets, phone outlets, special lighting, etc., prior to construction.

2. The Electrical Contractor is responsible to perform all electrical wiring and installations to meet all applicable state and local code requirements, industry standards, and utility company requirements.

3. Electrical contractor is responsible to supply lateral service to building and to provide power to all mechanical systems and appliances as required per manufacturer's specifications.

4. For services exceeding 200 amps, submit a SCI letter from PG&E indicating the short-circuit current available at the service supply terminals (NEC 230--65). Provide at least 36" x 30" work space from finish grade to 6'-6" above finish grade.

5. Electrical system shall have a concrete enclosed electrode (UFER) electrical ground per (NEC 250-81).

6. Over and under gas and electric meters are not allowed.

7. Provide branch circuits as per NEC Article 220-3.

8. All electrical equipment shall be listed by an approved testing lab (NEC 110-3(a)).

9. All electrical fixtures are to be installed according to manufacturer's specifications.

10. Smoke detectors shall be 110v with battery backup and interconnected, which are audible in all sleeping areas will be provided at the following locations:
a. All bedrooms
b. In hallways and immediately adjacent to bedrooms
c. above tops of stairs
d. at least at every level
e. one additional where ceiling line elevation change> 2 feet .

11. All circuits are to be labeled and properly indentified ant the sub-panel.

B. WIRING

1. Provide G.F.I. for all outlets installed in bathrooms, garages, outdoors, and areas where water may be present.

2. Locate common wall junction boxes servicing two spaces in separate stud bays.

3. Conductors shall be annealed copper, insulated, sized as required, installed in rigid metallic conduit (RSC) or metallic tub (EMT) as required. Aluminum conductors will not be permitted.

4. 240v outlets require metal boxes. Provide metal or one hr. rated boxes at walls and ceilings between the garage and house.

5. Outlet boxes for ceiling fans shall be listed specifically for that use (NEC 370-17).

C. LIGHTING

1. Recessed lighting fixtures in insulated ceilings shall be listed for zero clearance insulation cover.

2. Exterior lights shall be labeled "suitable for wet locations", unless under a porch roof where they can be labeled "suitable for damp locations" (NEC 410-4).

3. Kitchens: At least 50% of the total wattage of kitchen lighting must be from high efficacy luminaries. Non high efficacy luminaires must be switched separately from high efficacy luminaires. (150(K)2)

4. Bathrooms, utility rooms, garages and laundry rooms: High efficacy lighting or manual-on occupancy sensors required. (150(K)3)

5. Exterior attached to building: High efficacy luminaires or combined photosensor/ occupancy sensor required. (150(K)6)

6. All other interior spaces: High efficacy luminaires, occupancy sensor, OR dimmers required. Luminaires that are not high efficacy luminaires can be allowed in closets less than 70 square feet. (150(K) 4)

7. Recessed lighting: When installed in insulated ceilings, must be both Type IC (insulated covered) and rated airtight. (150 (K)5)

8. 2 small appliance branch circuits are required for the kitchen and are limited to supplying wall and counter space outlets for the kitchen, pantry, breakfast room, dining room, or similar areas. These circuits cannot serve outside plugs, range hood, disposals, dishwashers or microwaves — only the required countertop/wall outlets including the refrigerator. CEC 210.11(c)(1) and 210.52 (a) and 210.52(c).
a. In addition, a dedicated 20-amp circuit is required to serve the required bathroom outlets. this circuit cannot supply any other receptacles, lights, fans, etc. (exception-where the circuit supplies a single bathroom, outlets for other equipment within the same bathroom shall be permitted to be supplied.) CEC 210.52 (c)(3) and exception: cec210.23(a)(1) and (a)(2).
b. A dedicated 20-amp branch circuit shall be provided to supply the laundry receptacle outlet. CEC 210.11(c)(2) and 210.52(f).

9. Provide a grounding system as per nec article 250-81 c, min 20 of #4awg bare copper wire in the footing or grade beam, 2" from the bottom. Also provide electric grounding, ("bond") of metal piping to service equipment, cold water and gas pipe.

10. Provide main and sub-panel amperages prior to first inspection.

CAL GREEN MANDATORY MEASURES

Enhanced Durability and reduced Maintenance (4.406)
Joints and openings.
Annular spaces around pipes, electric cables, conduits, or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable to the enforcing agency.

Construction Waste Reduction, Disposal and Recycling (4.408)
A minimum of 50% of the construction waste generated at the site is diverted to recycle or salvage. This is achieved either by using City pre-certified landfills or implementation of a waste management plan. Waste management plan shall be pre-approved by Building and Safety Services Division.

Building Maintenance and Operation (4.410)
An operation and maintenance manual shall be provided to the building occupant or owner.

ENVIRONMENTAL QUALITY - Pollutant Control (4.504)
Duct openings and other related air distribution component openings shall be covered during construction.

Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits.

Paints, stains and other coatings shall be compliant with VOC limits.

Aerosol paints and coatings shall be compliant with product weighted MIR limits for ROC and other toxic compounds.

Carpet and carpet systems shall be compliant with VOC limits.

Documentation shall be provided to the City building inspector verifying that compliant VOC limit finish materials have been used.

Particleboard, medium density fiberboard (MDF), and hardwood plywood used in interior finish systems shall comply with low formaldehyde emission standards.

Interior Moisture Control (4.505)
Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following:
1. Moisture content shall be determined with either a probe-type or contact-type moisture meter.
2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece to be verified.
3. At least three random moisture readings shall be per- formed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing. Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure.

Environmental Comfort (4.507)
Duct systems are sized, designed, and equipment is selected using the following methods:
1. Establish heat loss and heat gain values according to Air Conditioning Contractors of America (ACCA) Manual J or equivalent.
2. Size duct systems according to ACCA 29-D (Manual D) or equivalent.
3. Select heating and cooling equipment according to ACCA 36-S (Manual S) or equivalent.

Bathroom fan shall be ENERGY STAR compliant and ducted to outside of building and shall be controlled by a humidistat capable of adjustment between a relative humidity range of 50 to 80 percent.

Qualifications (702)
HVAC system installers are trained and certified in the proper installation of HVAC systems.
Verifications (703)
Verification of compliance with this code may include construction documents, plans specifications builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which show substantial conformance.

FRANCIS GARCIA ARCHITECT
2950 BUSKIRK AVE, STE. 300 WALNUT CREEK, CA 94597
925 984 9983
www.francisgarciaarchitect.com

1000 S.F. 2 BEDROOM A.D.U. FOR THE TOWN OF DANVLLE

Rev. No.	Revision

LICENSED ARCHITECT FRANCIS GARCIA C-19820 REN. 02-28-21 STATE OF CALIFORNIA

Drawn: FG
Date: 7-21-2020
Scale:

GENERAL NOTES

A-3

Town of Danville Use Only