SAN LUIS OBISPO COUNTY

DEPARTMENT OF PLANNING AND BUILDING

Promoting the wise use of land – Helping to build great communities

THIS IS A NEW PROJECT REFERRAL

DATE: 5/3/2016

TO: _____

FROM: Cody Scheel (805-781-5157 or cscheel@co.slo.ca.us)
North County Team / Development Review

PROJECT DESCRIPTION: DRC2015-00124 MCLEAN – Minor use permit for a distance waiver for an as-built guest house over an existing garage. Project location is 4890 Ranchita Oak Way, San Miguel. APN: 019-011-046

Return this letter with your comments attached no later than 14 days from receipt of this referral. CACs please respond within 60 days. Thank you.

PART 1 - IS THE ATTACHED INFORMATION ADEQUATE TO COMPLETE YOUR REVIEW?

- ❑ YES (Please go on to PART II.)
- ❑ NO (Call me ASAP to discuss what else you need. We have only 10 days in which we must obtain comments from outside agencies.)

PART II - ARE THERE SIGNIFICANT CONCERNS, PROBLEMS OR IMPACTS IN YOUR AREA OF REVIEW?

- ❑ YES (Please describe impacts, along with recommended mitigation measures to reduce the impacts to less-than-significant levels, and attach to this letter.**)**
- ❑ NO (Please go on to PART III.)

PART III - INDICATE YOUR RECOMMENDATION FOR FINAL ACTION.

Please attach any conditions of approval you recommend to be incorporated into the project's approval, or state reasons for recommending denial.

IF YOU HAVE "NO COMMENT," PLEASE SO INDICATE, OR CALL.

_____

_____

_____

_____	_____	_____
Date	Name	Phone

GENERAL APPLICATION FORM

San Luis Obispo County Department of Planning and Building

DRC2015-00124 MCLEAN CASEY &
MINOR USE PERMIT
AS-BUILT HOUSE OVER PERMITTED GARAGE
NCELPO/ NCELPO
AG

APPLICATION TYPE - CHECK ALL THAT APPLY

- ☐ Emergency Permit ☐ Tree Permit ☑ Minor Use Permit
- ☐ Conditional Use Permit/Development Plan ☐ Plot Plan
- ☐ Curb, Gutter & Sidewalk Waiver ☐ Other ☐ Site Plan
- ☐ Surface Mining/Reclamation Plan ☐ Zoning Clearance
- ☐ Amendment to approved land use permit ☐ Variance

APPLICANT INFORMATION Check box for contact person assigned to this project

☑ Landowner Name CASEY & LYNN McLEAN Daytime Phone 714-313-6308
Mailing Address 4212 GARDENA AVE Long Beach Zip Code 90807
Email Address:

☐ Applicant Name SAME AS ABOVE Daytime Phone
Mailing Address Zip Code
Email Address:

☐ Agent Name MARGARET HEELY HILSTINE Daytime Phone 805-550-3552
Mailing Address Zip Code
Email Address:

PROPERTY INFORMATION

Total Size of Site: 39.8 Assessor Parcel Number(s): 019-011-046
Legal Description: ESTERO DISTRICT
Address of the project (if known): 4890 Ranchita Oak Way, San Miguel, CA
Directions to the site (including gate codes) - describe first with name of road providing primary access to the site, then nearest roads, landmarks, etc.: PASO ROBLES - EAST Ranchita Canyon Rd. - LEFT ON TO Ranchita OAK WAY
Describe current uses, existing structures, and other improvements and vegetation on the property: AS-BUILT OVER PERMITTED GARAGE - MOVE THEM 50 ft from MAIN House GUEST HOUSE - MODIFIED - DISTANCE

PROPOSED PROJECT

Describe the proposed project (inc. sq. ft. of all buildings):

LEGAL DECLARATION

I, the owner of record of this property, have completed this form accurately and declare that all statements here are true. I do hereby grant official representatives of the county authorization to inspect the subject property.

Property owner signature Date

FOR STAFF USE ONLY

AMENDMENT APPLICATION

San Luis Obispo County Department of Planning and Building File No _____

What are the Element(s) or Ordinance(s) requested for amendment:

☐ Land Use Element _____ Area Plan ☐ Framework for Planning
☐ Ag & Open Space Element ☐ Local Coastal Plan ☐ Land Use Ordinance
☐ Coastal Zone LUO ☐ Real Property Division Ordinance ☐ Construction Ordinance
☐ Growth Management Ordinance ☑ Other Modify 50' distance main house - guest house

If you are proposing an amendment to the maps of the general plan, complete the following:

What is the Existing Land Use Category?:

☐ Open Space ☐ Recreation ☐ Agriculture ☐ Rural Lands
☐ Residential Rural ☐ Residential Suburban ☐ Residential Single Family
☐ Residential Multi-Family ☐ Commercial Retail ☐ Commercial Service
☐ Industrial ☐ Office & Professional ☐ Public Facilities

What is the Existing Combining Designation(s)?: _____

What is the Requested Land Use Category?

☐ Open Space ☐ Recreation ☐ Agriculture ☐ Rural Lands
☐ Residential Rural ☐ Residential Suburban ☐ Residential Single Family
☐ Residential Multi-Family ☐ Commercial Retail ☐ Commercial Service
☐ Industrial ☐ Office & Professional ☐ Public Facilities

What is the Requested Combining Designation(s)?: _____

If you are proposing an amendment to the text of the general plan, complete the following:

Page No. _____ Paragraph: _____ Attach a copy of the existing text clearly specifying the language proposed for change and the proposed changes

If you are proposing an amendment to an ordinance, complete the following:

Section No. _____ Attach a copy of the existing text clearly specifying the language proposed for change and the proposed changes

For all amendment requests, complete the following:

Reason for the request:: _____

Describe existing and future access to the proposed project site: _____

Surrounding land use: What are the uses of the land surrounding your property (when applicable, please specify all agricultural uses):

North: _____ South: _____
East: _____ West: _____

Proposed water source: ☐ On-site well ☐ Shared well ☐ Other _____
☐ Community System - List the agency or company responsible for provision: _____
Do you have a valid will-serve letter? ☐ Yes If yes, please submit copy ☐ No

Proposed sewage disposal: ☐ Individual on-site system ☐ Other _____
☐ Community System -List the agency or company responsible for sewage disposal: _____
Do you have a valid will-serve letter? ☐ Yes If yes, please submit copy ☐ No

Fire Agency: - List the agency responsible for fire protection: _____

ENVIRONMENTAL DESCRIPTION FORM

San Luis Obispo County Department of Planning and Building File No _____

The California Environmental Quality Act (CEQA) requires all state and local agencies to consider and mitigate environmental impacts for their own actions and when permitting private projects. The Act also requires that an environmental impact report (EIR) be prepared for all actions that may significantly affect the quality of the environment. The information you provide on this form will help the Department of Planning and Building determine whether or not your project will significantly affect the quality of the environment.

To ensure that your environmental review is completed as quickly as possible, please remember to:

Answer **ALL** of the questions as accurately and completely as possible.

Include any additional information or explanations where you believe it would be helpful or where required. Include additional pages if needed.

If you are requesting a land division or a re-zoning, be sure to include complete information about future development that may result from the proposed land division or rezoning.

Include references to any reports or studies you are aware of that might be relevant to the questions asked or the answers you provide.

Should a determination be made that the information is inaccurate or insufficient, you will be required to submit additional information upon request.

Physical Site Characteristic Information

Your site plan will also need to show the information requested here

1. Describe the topography of the site:

   Level to gently rolling, 0-10% slopes: _____acres

   Moderate slopes of 10-30%: _____acres

   Steep slopes over 30%: _____acres

2. Are there any springs, streams, lakes or marshes on or near the site? ☐ Yes ☐ No

   If yes, please describe:_____

3. Are there any flooding problems on the site or in the surrounding area ☐ Yes ☐ No

   If yes, please describe:_____

4. Has a drainage plan been prepared? ☐ Yes ☐ No

   If yes, please include with application.

5. Has there been any grading or earthwork on the project site? ☐ Yes ☐ No

   If yes, please explain:_____

6. Has a grading plan been prepared? ☐ Yes ☐ No

   If yes, please include with application.

7. Are there any sewer ponds/waste disposal sites on/adjacent to the project? ☐ Yes ☐ No

8. Is a railroad or highway within 300 feet of your project site? ☐ Yes ☐ No

9. Can the proposed project be seen from surrounding public roads? ☐ Yes ☐ No

   If yes, please list:_____

Water Supply Information

1. What type of water supply is proposed?
   ☑ Individual well ☐ Shared well ☐ Community water system
2. What is the proposed use of the water?
   ☐ Residential ☐ Agricultural: explain _____
   ☐ Commercial/Office: explain _____
   ☐ Industrial: explain _____
3. What is the expected daily water demand associated with the project? _____
4. How many service connections will be required? _____
5. Do operable water facilities exist on the site?
   ☐ Yes ☐ No If yes, please describe: _____
6. Has there been a sustained yield test on proposed or existing wells?
   ☐ Yes ☐ No If yes please attach
7. Does water meet the Health Agency's quality requirements?
   Bacteriological? ☐ Yes ☐ No Chemical? ☐ Yes ☐ No
   Physical? ☐ Yes ☐ No Water analysis report submitted? ☐ Yes ☐ No
8. Please check if any of the following have been completed on the subject property and/or submitted to County Environmental Health.
   ☐ Well Driller's Letter ☐ Water Quality Analysis ☐ OK or ☐ Problems
   ☐ Will Serve Letter ☐ Pump Test _____ Hours _____ GPM
   ☐ Surrounding Well Logs ☐ Hydrologic Study ☐ Other _____

Please attach any letters or documents to verify that water is available for the proposed project.

Sewage Disposal Information

If an on-site (individual) subsurface sewage disposal system will be used:

1. Has an engineered percolation test been accomplished?
   ☐ Yes ☐ No If yes, please attach a copy.
2. What is the distance from proposed leach filed to any neighboring water wells? _____ feet
3. Will subsurface drainage result in the possibility or effluent reappearing in surface water or on adjacent lands, due to steep slopes, impervious soil layers or other existing conditions?
   ☐ Yes ☐ No
4. Has a piezometer test been completed? ☐ Yes ☐ No
5. Will a Waste Discharge Permit from the Regional Water Quality Control Board be required?
   ☐ Yes ☐ No
   (a waste discharge permit is typically needed when you exceed 2,500 gallons per day)

If a community sewage disposal system is to be used:

1. Is this project to be connected to an existing sewer line?
   ☐ Yes ☐ No Distance to nearest sewer line: _____
   Location of connection: _____
2. What is the amount of proposed flow? _____ g.p.d.
3. Does the existing collection treatment and disposal system have adequate additional capacity to accept the proposed flow? ☐ Yes ☐ No

Solid Waste Information

1. What type of solid waste will be generated by the project? ☐ Domestic ☐ Industrial ☐ Agricultural ☐ Other, please explain? _____
2. Name of Solid Waste Disposal Company: _____
3. Where is the waste disposal storage in relation to buildings? _____
4. Does your project design include an area for collecting recyclable materials and/or composting materials? ☐ Yes ☐ No

Community Service Information

1. Name of School District: _____
2. Location of nearest police station: _____
3. Location of nearest fire station: _____
4. Location of nearest public transit stop: _____
5. Are services (grocery / other shopping) within walking distance of the project? ☐ Yes ☐ No
   If yes, what is the distance? _____ feet / miles

Historic and Archeological Information

1. Please describe the historic use of the property: _____
   _____
2. Are you aware of the presence of any historic, cultural or archaeological materials on the project site or in the vicinity? ☐ Yes ☐ No
   If yes, please describe: _____
3. Has an archaeological surface survey been done for the project site? ☐ Yes ☐ No
   If yes, please include **two** copies of the report with the application.

Commercial/Industrial Project Information

Only complete this section if you are proposing a commercial or industrial project or zoning change.

1. Days of Operation: _____ Hours of Operation: _____
2. How many people will this project employ? _____
3. Will employees work in shifts? ☐ Yes ☐ No
   If yes, please identify the shift times and number of employees for each shift _____
   _____
4. Will this project produce any emissions (i.e. gasses, smoke, dust, odors, fumes, vapors,)?
   ☐ Yes ☐ No
   If yes, please explain: _____
5. Will this project increase the noise level in the immediate vicinity? ☐ Yes ☐ No
   If yes, please explain: _____
   (If loud equipment is proposed, please submit manufacturers estimate on noise output)
6. What type of industrial waste materials will result from the project? Explain in detail:

7. Will hazardous products be used or stored on-site? ☐ Yes ☐ No

If yes, please describe in detail: _____

_____

8. Has a traffic study been prepared? ☐ Yes ☐ No If yes, please attach a copy
9. Please estimate the number of employees, customer and other project-related traffic trips to or from the project.
   Between 7:00 - 9:00 a.m. _____ Between 4:00 to 6:00 p.m. _____
10. Are you proposing any special measures (carpooling, public transit, telecommuting) to reduce automobile trips by employees?
    ☐ Yes ☐ No If yes, please specify what you are proposing _____

    _____
11. Are you aware of any potentially problematic roadway conditions that may exist or result from the proposed project, such as poor sight distance at access points, connecting with the public road? ☐ Yes ☐ No
    If yes, please describe _____

Agricultural Information

Only complete this section: 1) within the Agricultural land use category or 2) your site is currently in agricultural production.

1, Is the site currently in Agricultural Preserve (Williamson Act)? ☐ Yes ☐ No
2. If yes, is the site currently under land conservation contract? ☐ Yes ☐ No
3. If your land is currently vacant or in agricultural production, are there any restrictions on the crop productivity of the land? That is, are there any reasons (i.e. poor soil, steep slopes) the land cannot support a profitable agricultural crop? Please explain in detail:_____

   _____

Special Project Information

1. Describe any amenities included in the project, such as park areas, open spaces, common recreation facilities, etc.(these also need to be shown on your site plan): _____

   _____
2. Will the development occur in phases? ☐ Yes ☐ No
   If yes describe: _____
3. Do you have any plans for future additions, expansion or further activity related to or connected with this proposal? ☐ Yes ☐ No
   If yes, explain: _____
4. Are there any proposed or existing deed restrictions? ☐ Yes ☐ No
   If yes, please describe: _____

Energy Conservation Information

1. Describe any special energy conservation measures or building materials that will be incorporated into your project✱: _____

✱ The county's Building Energy Efficient Structures (BEES) program can reduce your construction permit fees. Your building must exceed the California State Energy Standards (Title 24) in order to qualify for this program. If you are interested in more information, please contact the Building Services Division of the Department of Planning and Building at (805) 781-5600.

Environmental Information

1. List any mitigation measures that you propose to lessen the impacts associated with your project: _____

   _____

   _____

2. Are you aware of any unique, rare or endangered species (vegetation or wildlife) associated with the project site? ☐ Yes ☐ No

   If yes, please list: _____

3. Are you aware of any previous environmental determinations for all or portions of this property? ☐ Yes ☐ No

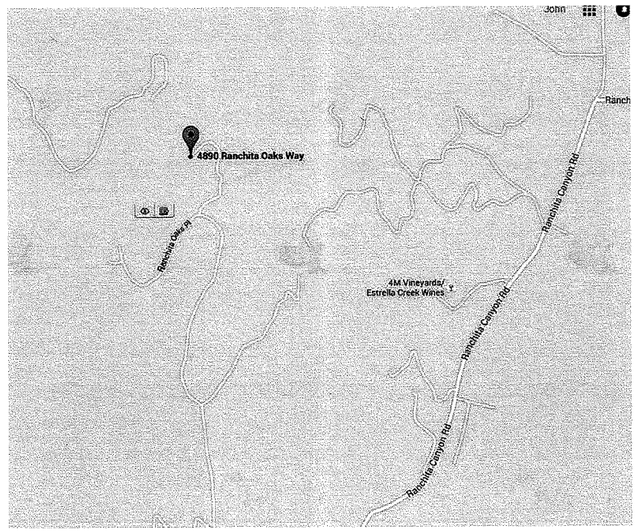
   If yes, please describe and provide "ED" number(s): _____

Other Related Permits

1. List all permits, licenses or government approvals that will be required for your project (federal, state and local): _____

(If you are unsure if additional permits are required from other agencies, please ask a member of department staff currently assigned in either current planning or the environmental division)

ARCHITECTURAL & STRUCTURAL PLANS
FOR McLEAN
AS-BUILT GUEST UNIT
COD2014-00604



VICINITY MAP

SHEET INDEX

T-1.1	TITLE SHEET
A-1.1	SITE PLAN
A-2.1	FLOOR PLAN
A-3.1	ELEVATIONS
T-24	ENERGY COMPLIANCE
GC-1	RESIDENTIAL MANDATORY MEASURES
ASP	ACHITECTURAL SPECIFICATIONS PAGE
S-1.1	FOUNDATION AND DECK FRAMING PLAN
D-1.1	STRUCTURAL DETAILS
SSP	SP SPECIFICATIONS

PROJECT INFORMATION

OWNER	CASEY & LYNN McLEAN
PROJECT ADDRESS	4890 RANCHITA OAKS WAY SAN MIGUEL, CA 93451
APN	019-011-046
PHONE	714-981-5025

PROJECT STATISTICS

LOT SIZE	39.8 ACRES
AREA OF NEW DISTURBANCE	200 SQ. FT.
GRADING NEEDED	0 CUBIC YARDS CUT/ 0 CUBIC YARDS FILL
OCCUPANCY TYPE	R-3, U
CONSTRUCTION TYPE	VB
BUILDING HEIGHT	±22'-0"
FIRE SPRINKLERS	NO
PROPOSED UPPER GUEST UNIT	540 SQ. FT.
PROPOSED DECK AREA	58 SQ. FT.
EXISTING LOWER GARAGE	1,170 SQ. FT.
EXISTING RESIDENCE	2,895 SQ. FT.

PROJECT DESCRIPTION

AS-BUILT DECK AND GUEST UNIT ABOVE EXISTING DETACHED GARAGE AS PER PLANS ATTACHED.

EXISTING PERMIT INFORMATION

PERMIT - C8065 FINALED

PERMIT INFOBUILDACTIVITIESFEESCONDITIONSVALUATIONS
GARAGE-PRIVATE
DETACHED GARAGE

PARCEL: 019-011-046
ADDRESS:
04890 RANCHO VISTA RD NCELPO
APPLICATION DATE: 11/30/2000
ISSUED DATE: 10/7/2002
EXPIRATION DATE:
FINALED DATE: 1/29/2008
COMMUNITY: NORTH CTY. PLANNING AREA, EL POMAR-ESTRELLA SUB AREA
PLANNING AREA: NORTH COUNTY PLANNING AREA, EL POMAR-ESTRELLA SUB AREA
COASTAL ZONE: NO
STAFF ASSIGNED:
CONSTRUCTION TYPE:
OCCUPANCY GROUP: R3
STATUS: FINALED

CONSULTANTS

STRUCTURAL & CIVIL ENGINEER
JK ENGINEERING
610 10TH ST, STE A
PASO ROBLES, CA 93446
805.423.3077

DRAFTSMAN
JJK DESIGNS
610 10TH ST, STE A
PASO ROBLES, CA 93446
805.423.3079

FIXTURE FLOW RATE REQUIRMENTS

THE FOLLOWING FIXTURES SHALL BE OF WATER CONSERVATION:

RESIDENTIAL:

WATER CLOSETS:	1.28 GALLON PER FLUSH MAXIMUM
SHOWER HEAD FLOW:	2.0 GALLON PER MINUTE AT 80 PSI
LAVATORY / SINK FIXTURE:	1.5 GALLON PER MINUTE AT 60 PSI
KITCHEN FAUCETS:	2.2 GALLON PER MINUTE AT 60 PSI

NON COMPLIANT FIXTURES MEANS ANY OF THE FOLLOWING:
RESIDENTIAL:
ANY TOILET MANUFACTURED TO USE MORE THAN 1.6 GAL OF WATER PER FLUSH.
ANY SHOWERHEAD MANUFACTURED WITH 2.5 GALLONS PER MINUTE.
ANY INTERIOR FAUCET THAT EMITS MORE THAN 2.2 GALLONS PER MINUTE.

GENERAL CONSTRUCTION NOTES

1. ALL WORK SHALL CONFORM WITH THE:
   2013 CBC (2012 IBC AND CALIFORNIA AMENDMENTS)
   2013 CEC (2011 NEC AND CALIFORNIA AMENDMENTS)
   2013 CMC (2012 IAPMO UMC AND CALIFORNIA AMENDMENTS)
   2013 CPC (2012 IAPMO UPC AND CALIFORNIA AMENDMENTS)
   2013 CRC
   2013 CENC AND T-24.
   2013 CALIFORNIA GREEN BUILDING CODE
   2013 CFC (2012 IFC AND CALIFORNIA AMENDMENTS)
2. THESE NOTES SHALL APPLY TO ALL DRAWINGS UNLESS OTHERWISE NOTED OR SHOWN. FEATURES OF CONSTRUCTION SHOWN ARE TYPICAL AND THEY SHALL APPLY GENERALLY THROUGHOUT SIMILAR CONDITIONS. ALL OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR GENERAL NOTES SHALL BE BROUGHT TO THE ATTENTION OF THE ARHCITECT/ ENGINEER BY THE GENERAL CONTRACTOR BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.
3. ALL WORK AND CONSTRUCTION METHODS AND MATERIALS SHALL COMPLY WITH ALL PROVISIONS OF THE BUILDING CODES AND OTHER RULES, REGULATIONS AND ORDINANCES GOVERNING THE CONSTRUCTION SITE. BUILDING CODE REQUIREMENTS IN ALL CASES TAKE PRECEDENCE OVER THE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF ANYONE SUPPLYING LABOR AND/OR MATERIALS TO BRING TO THE ATTENTION OF THE ARCHITECT/ENGINEER ANY DISCREPANCIES OR CONFLICTS BETWEEN THE REQUIREMENTS OF THE CODE AND THE DRAWINGS.
4. DO NOT SCALE THE DRAWINGS. DIMENSIONS SHOWN SHALL TAKE PRECEDENCE OVER DRAWING SCALE OR PROPORTION. LARGE SCALE DRAWINGS SHALL TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS.
5. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE SHOWN, THEY DO NOT INDICATE METHOD OF CONSTRUCTION. CONTRACTOR SHALL SUPERVISE AND DIRECT WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY FIELD REPRESENTATIVES OF THE ARCHITECT/ENGINEER SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES REQUIRED FOR SAME, WHICH ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY SUPPORT SERVICES PERFORMED BY THE ARCHITECT/ENGINEER DURING CONSTRUCTION SHALL BE DISTINGUISHED FROM CONTINUOUS AND DETAILED INSPECTION SERVICES WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS, AND THEREFORE THEY DO NOT GUARANTEE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.
6. CONTRACTOR HEREBY GUARANTEES TO THE OWNER AND THE ARCHITECT/ENGINEER THAT ALL MATERIALS, FIXTURES, AND EQUIPMENT FURNISHED TO THE PROJECT ARE NEW UNLESS OTHERWISE SPECIFIED. CONTRACTOR ALSO WARRANTS THAT ALL WORK WILL BE OF GOOD QUALITY AND FREE FROM ANY FAULTS AND DEFECTS FOR A PERIOD OF ONE YEAR AFTER THE DATE OF SUBSTANTIAL COMPLETION, UNLESS A GREATER WARRANTY OR GUARANTEE IS REQUIRED BY THE PROJECT SPECIFICATIONS.
7. ANYONE SUPPLYING LABOR AND/OR MATERIALS TO THE PROJECT SHALL CAREFULLY EXAMINE ALL SUBSURFACES TO RECEIVE WORK. ANY CONDITIONS DETRIMENTAL TO WORK SHALL BE REPORTED IN WRITING TO THE CONTRACTOR PRIOR TO BEGINNING WORK. COMMENCEMENT OF WORK SHALL IMPLY ACCEPTANCE OF ALL SUBSURFACES.
8. REFER TO ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR DEPRESSED SLABS CURB, FINISHES, TEXTURES, CLIPS, GROUNDS, ETC., NOT SHOWN ON STRUCTURAL DRAWINGS.
9. ANY MATERIALS STORED AT THE SITE SHALL BE COMPLETELY SUPPORTED FREE OF THE GROUND, COVERED AND OTHERWISE PROTECTED TO AVOID DAMAGE FROM THE ELEMENTS.
10. MORE DETAILED INFORMATION SHALL TAKE PRECEDENCE OVER LESSER DETAILED INFORMATION. SPECIFICATIONS SHALL TAKE PRECEDENCE OVER DRAWINGS.
11. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL APPLICABLE CODES AND LOCAL ORDINANCES.
12. THE CONTRACTOR AND ALL SUB-CONTRACTORS WILL BE HELD ACCOUNTABLE TO THE ABOVE GENERAL NOTES FOR THE CONSTRUCTION OF THE PROJECT.
13. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE OR DISBURSE ANY EXCESS MATERIAL FROM PROJECT SITE.
14. THIS SET OF PLANS TO BE ON JOB SITE AT ALL TIMES DURING CONSTRUCTION. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE APPROVED PLANS. NO CHANGES OR REVISIONS TO THE APPROVED PLANS OR SPECIFICATIONS SHALL BE PERMITTED UNLESS SUBMITTED TO AND APPROVED BY THE BUILDING OFFICIAL. THE ISSUANCE OF A PERMIT SHALL NOT PREVENT THE BUILDING OFFICIAL FROM REQUIRING THE CORRECTION OF ERRORS OR OMISSIONS FROM THE APPROVED PLANS AND SPECIFICATIONS. [CBC 108]
15. ALL CONTRACTORS AND SUB-CONTRACTORS MUST HAVE ON FILE WITH THE BUILDING DEPARTMENT, A LIST OF ALL SUCH CONTRACTORS AND SUB-CONTRACTORS WITH APPROPRIATE CURRENT BUSINESS LICENSE NUMBERS.
16. UNLESS NOTED OTHERWISE, ALL VESTIBULES, CLOSETS, COLUMNS, PROJECTIONS, RECESSES, OR OTHER ADJACENT AREAS WITHIN SCHEDULED AREA SHALL HAVE FINISHES AS SCHEDULED FOR THE RESPECTIVE SPACES IN WHICH THEY OCCUR.
17. CONTRACTOR SHALL VERIFY ALL SETBACKS, EASEMENTS, CONTOURS, AND BUILDING PAD PRIOR TO CONSTRUCTION.
18. TRUSS CALCULATIONS FOR APPROVED PROJECTS ARE REQUIRED TO BE ON THE JOB SITE AT TIME OF FRAMING INSPECTION WITH THE APPROPRIATE REQUIRED SIGNATURES AND STATEMENT AS FOLLOWS: TRUSS CALCULATIONS SHALL INCLUDE THE WET-STAMP AND SIGNATURE OF THE TRUSS DESIGN ENGINEER. IN ADDITION, THEY SHALL INCLUDE ON THE COVER SHEET A WET- SIGNED STATEMENT FROM THE PROJECT'S DESIGN ENGINEER THAT TRUSS CALCULATIONS AND LAYOUTS ARE IN SUBSTANTIAL CONFORMANCE WITH THE STRUCTURAL DESIGN AND INTENT OF THE STRUCTURE. FAILURE TO PROVIDE THEM AS STATED WILL RESULT IN A CORRECTION AND A FAILURE TO PASS FRAMING INSPECTION. [BSP]
19. VERIFY LOCATION OF ALL UTILITY TIE-INS AT STREET AND POINT OF CONNECTIONS AT BUILDING PRIOR TO CONSTRUCTION.
20. A COPY OF SOILS REPORT SHALL BE ON SITE DURING FOUNDATION INSPECTION.
21. ALL PROPERTY CORNERS SHOULD BE ESTABLISHED AT THE TIME OF FOUNDATION INSPECTION WITH THE MARK OF A LICENSED SURVEYOR.

JOHNNY J. KUDLA
610 10th ST.
UNIT A
PASO ROBLES, CA.
PH: (805) 423-3079
FAX: (805) 237-0480

PLAN PREPARED FOR:

CASEY & LYNN MCLEAN
4890 RANCHITA OAKS WAY
SAN MIGUEL, CA 93451

REVISION LOG

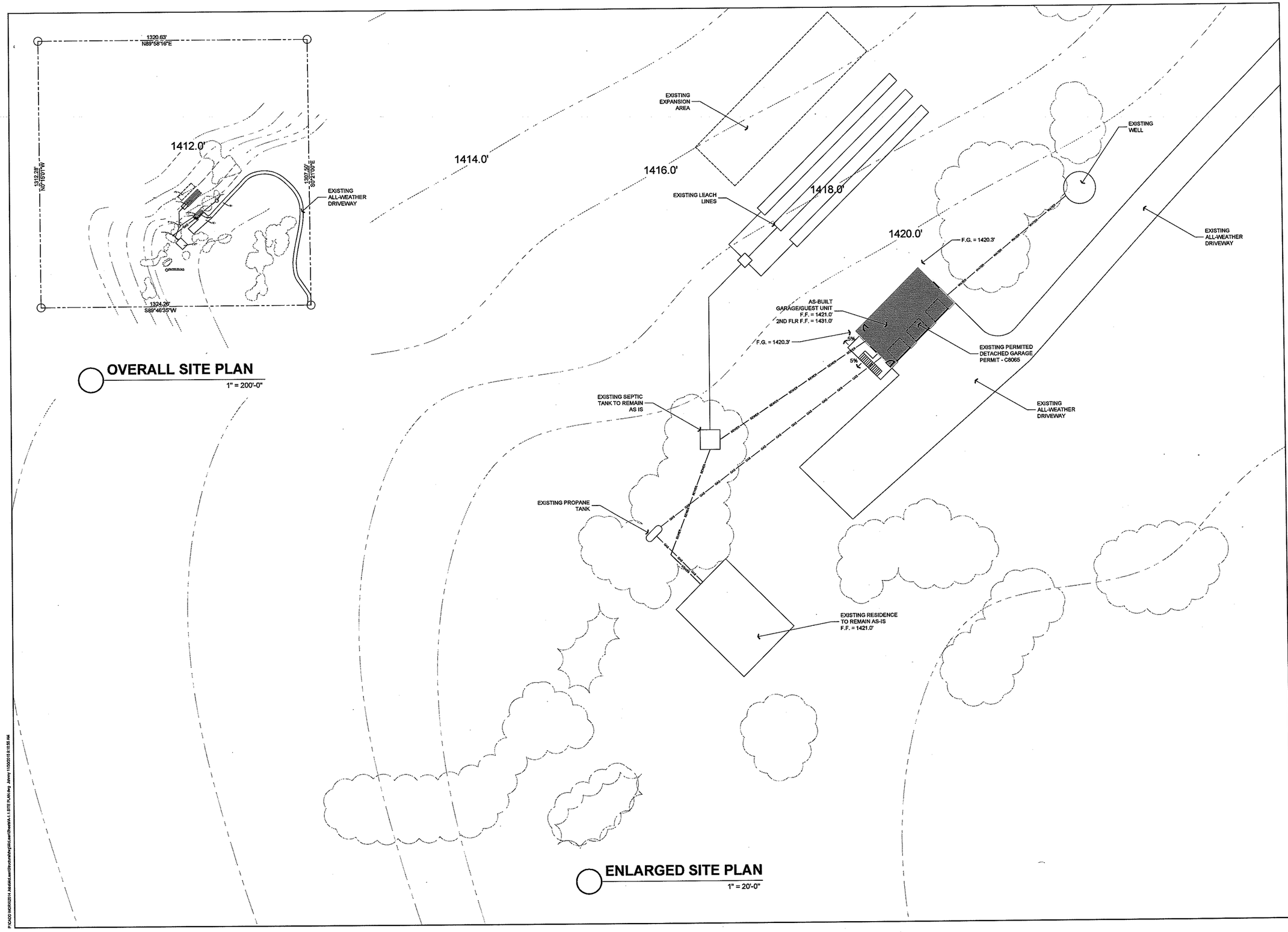
REV.	DESCRIPTION	DATE

These drawings are the exclusive property of JJK design and shall be used solely for the purpose of this project on this site. Any use other than the project upon which it is intended for without the written consent of JJK design and John Kudla is prohibited.

PROJECT NO. —
FILE NAME T-1.1 TITLE SHEET.DWG
DRAWN BY JJK
DATE 12/14/2015 1:18 PM
SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
T-1.1

P:\COD\WORK\2014 JobWiki\Jeff\Structural\Plans\Jeff\Sheet\T-1.1 TITLE SHEET.dwg Johnny 12/11/2015 1:50:13 PM



JOHNNY J. KUDLA
610 10th ST.
UNIT A
PASO ROBLES, CA.
PH: (805) 423-3079
FAX: (805) 237-0480

PLAN PREPARED FOR:

CASEY & LYNN MCLEAN
4890 RANCHITA OAKS WAY
SAN MIGUEL, CA 93451

REVISION LOG

REV.	DESCRIPTION	DATE

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PROJECT NO. —

FILE NAME A-1.1 SITE PLAN.DWG

DRAWN BY JJK

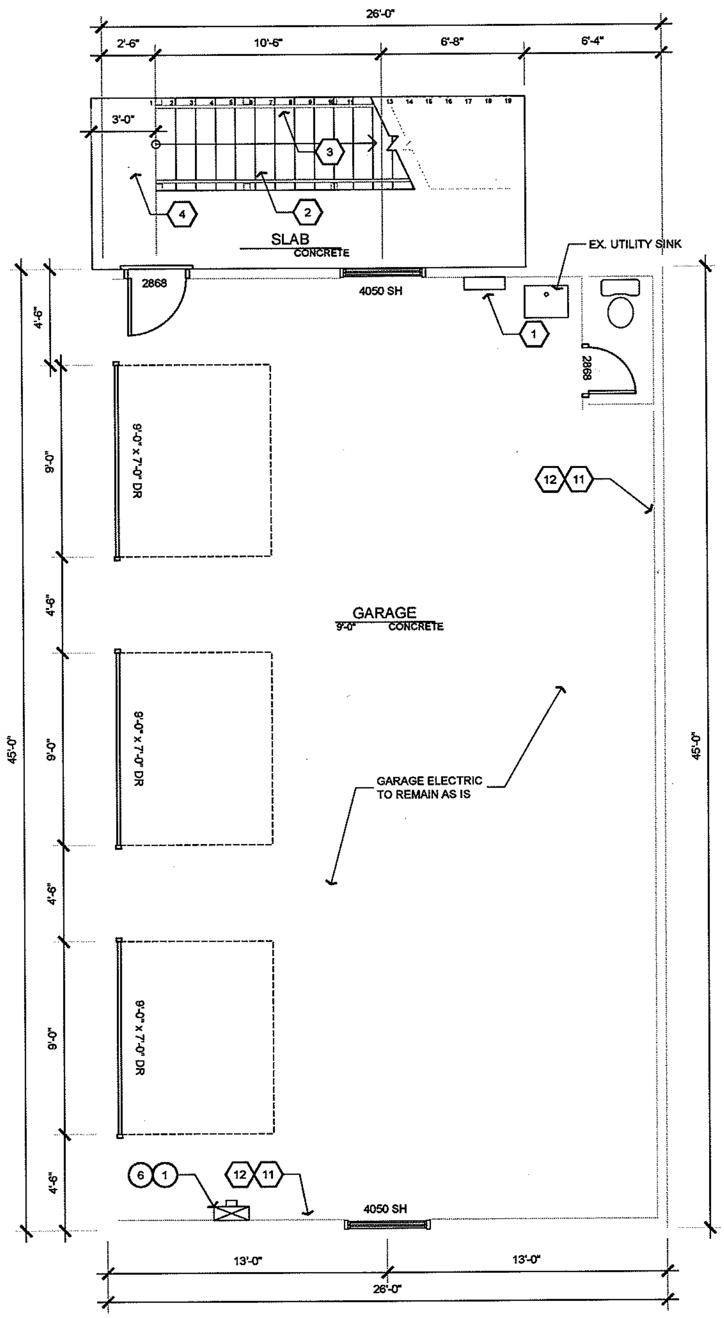
DATE 12/14/2015 1:18 PM

SHEET TITLE:

SITE PLAN

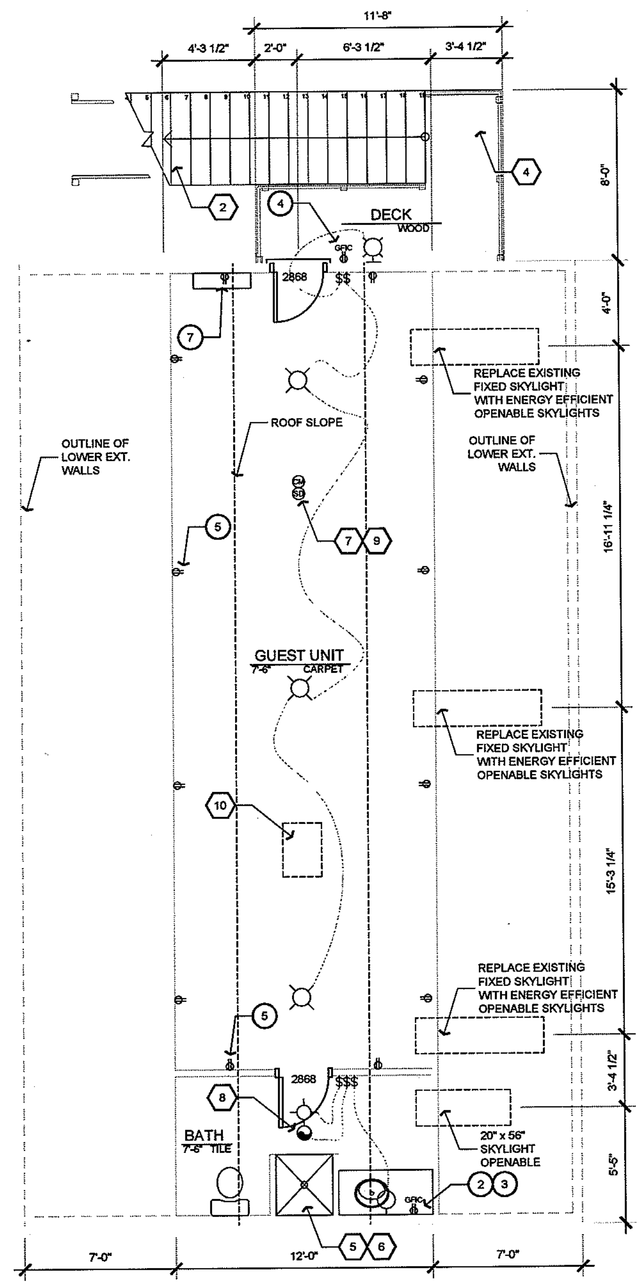
SHEET NUMBER:

A-1.1



LOWER FLOOR PLAN

1/4" = 1'



UPPER FLOOR PLAN

1/4" = 1'

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LIGHTING NOTES

THE REQUIREMENTS APPLY ONLY TO PERMANENTLY INSTALLED LUMINAIRES, I.E., LUMINAIRES THAT ARE PART OF THE HOUSE, AS OPPOSED TO PORTABLE LUMINAIRES SUCH AS TORCHIERES OR TABLE LAMPS THAT ARE PROVIDED BY THE OCCUPANT. PERMANENTLY INSTALLED LUMINAIRES INCLUDE CEILING LUMINAIRES, CHANDELIERS, VANITY LAMPS, WALL SCONCES AND ANY OTHER TYPE OF LUMINAIRE THAT IS A PERMANENT PART OF THE HOUSE.

THE NEW REQUIREMENTS MAY BE SUMMARIZED AS FOLLOWS:

- KITCHENS. AT LEAST HALF THE INSTALLED WATTAGE OF LUMINAIRES IN KITCHENS SHALL BE HIGH EFFICACY AND THE ONES THAT ARE NOT MUST BE SWITCHED SEPARATELY.
- LIGHTING IN BATHROOMS, GARAGES, LAUNDRY ROOMS AND UTILITY ROOMS. ALL LUMINAIRES SHALL EITHER BE HIGH EFFICACY OR SHALL BE CONTROLLED BY AN OCCUPANT SENSOR.
- OTHER ROOMS. ALL LUMINAIRES SHALL EITHER BE HIGH EFFICACY OR SHALL BE CONTROLLED BY AN OCCUPANT SENSOR OR DIMMER. CLOSETS THAT ARE LESS THAN 70 SQUARE FOOT ARE EXEMPT FROM THIS REQUIREMENT.
- OUTDOOR LIGHTING. ALL LUMINAIRES MOUNTED TO THE BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL BE HIGH EFFICACY LUMINAIRESOR SHALL BE CONTROLLED BY A PHOTOCONTROL/MOTION SENSOR COMBINATION.
- COMMON AREAS OF MULTIFAMILY BUILDINGS. ALL LUMINAIRES IN THE COMMON AREAS OF MULTIFAMILY BUILDINGS SHALL EITHER BE HIGH EFFICACY OR SHALL BE CONTROLLED BY AN OCCUPANT SENSOR.

LUMINAIRES THAT ARE RECESSED INTO INSULATED CEILINGS ARE REQUIRED TO BE RATED FOR INSULATION CONTACT ("IC-RATED") SO THAT INSULATION CAN BE PLACED OVER THEM. THE HOUSING OF THE LUMINAIRE SHALL BE AIRTIGHT TO PREVENT CONDITIONED AIR ESCAPING INTO THE CEILING CAVITY OR ATTIC, UNCONDITIONED AIR INFILTRATING FROM THE CEILING OR ATTIC INTO THE CONDITIONED SPACE. AN ADDITIONAL SET OF REQUIREMENTS APPLY TO PARKING LOTS OR GARAGES WITH SPACE FOR EIGHT OR MORE CARS, WHICH ARE TYPICALLY FOR MULTIFAMILY BUILDINGS. THE NONRESIDENTIAL STANDARDS FOR PARKING LOTS AND/OR GARAGES APPLY IN THESE CASES (§132, §147).

6.2 HIGH EFFICACY LUMINAIRES

A LUMINAIRE IS THE LIGHTING INDUSTRY'S TERM FOR LIGHT FIXTURE. A LUMINAIRE CONSISTS OF THE HOUSING, POWER SUPPLY (BALLAST), LAMP, REFLECTOR, AND IN SOME CASES A LENS. A LAMP IS THE LIGHTING INDUSTRY'S TERM FOR A LIGHT BULB. LUMINAIRES CAN BE DESIGNED TO BE RECESSED INTO THE CEILING, SUSPENDED BY A ROD OR CHAIN, OR SURFACE MOUNTED ON THE WALL OR CEILING.

A HIGH EFFICACY LUMINAIRE IS ONE THAT CONTAINS ONLY HIGH EFFICACY LAMPS AND MUST NOT CONTAIN A CONVENTIONAL (MEDIUM) SCREW-BASED SOCKET. TYPICALLY, HIGH EFFICACY LUMINAIRES CONTAIN, PIN-BASED SOCKETS, LIKE COMPACT OR LINEAR FLUORESCENT LAMP SOCKETS, THOUGH OTHER TYPES SUCH AS SCREW SOCKETS SPECIFICALLY RATED FOR HIGH INTENSITY DISCHARGE LAMPS (LIKE METAL HALIDE LAMPS) MAY ALSO BE LIGIBLE FOR EXTERIOR USE. LUMINAIRES WITH MODULAR COMPONENTS THAT ALLOW CONVERSION BETWEEN SCREW-BASED AND PIN-BASED SOCKETS WITHOUT CHANGING THE LUMINAIRE HOUSING OR WIRING SHALL NOT BE CONSIDERED HIGH EFFICACY LUMINAIRES. THESE REQUIREMENTS PREVENT LOW EFFICACY LAMPS BEING RETROFITTED IN HIGH EFFICACY LUMINAIRES. ALSO, COMPACT FLUORESCENT LUMINAIRES WITH PERMANENTLY INSTALLED BALLASTS THAT ARE CAPABLE OF OPERATING A RANGE OF LAMP WATTAGES, THE HIGHEST OPERATING INPUT WATTAGE OF THE RATED LAMP/BALLAST COMBINATION MUST BE USE FOR DETERMINING THE LUMINAIRE WATTAGE.

THERE ARE TWO QUALIFYING REQUIREMENTS FOR A HIGH EFFICACY LUMINAIRE: THAT THE LUMENS PER WATT FOR THE LAMP BE ABOVE A SPECIFIED THRESHOLD AND THAT ELECTRONIC BALLASTS BE USED IN CERTAIN APPLICATIONS.

6.2.1 LUMENS PER WATT

THE LUMEN IS THE UNIT OF VISIBLE LIGHT. TO BE RATED AS HIGH EFFICACY, A LAMP MUST PRODUCE A CERTAIN NUMBER OF LUMENS FOR EACH WATT OF ELECTRICAL POWER IT CONSUMES. EFFICACY IS THEREFORE MEASURED IN LUMENS PER WATT. ALMOST ALL FLUORESCENT LAMPS EQUIPPED WITH ELECTRONIC BALLASTS QUALIFY AS HIGH EFFICACY LIGHT SOURCES; INCANDESCENT LAMPS (INCLUDING ANY SCREW-IN INCANDESCENT LAMPS, LIKE REGULAR 'A' OR REFLECTOR LAMPS, OR QUARTZ HALOGEN LAMPS, OR LOW VOLTAGE LAMPS, LIKE HALOGEN MR LAMPS) DO NOT. TO BE CLASSIFIED AS HIGH EFFICACY, A LAMP MUST MEET THE REQUIREMENTS LISTED IN TABLE 6-1 (DOCUMENTED IN TABLE 150-C OF THE STANDARDS):

FOR SIMPLICITY, THE POWER USED BY THE BALLAST IS IGNORED WHEN DETERMINING THE LUMENS PER WATT FOR PURPOSES OF COMPLIANCE WITH THE RESIDENTIAL LIGHTING REQUIREMENTS.

TABLE 6-1 - HIGH EFFICACY LAMPS

LAMP POWER	REQUIRED LAMP EFFICACY
< 15 W	40 LM/W
15-40 W	50 LM/W
>40 W	60 LM/W

NOTE: THE WATTAGE OF THE BALLAST IS NOT INCLUDED WHEN DETERMINING LAMP EFFICACY. MERCURY VAPOR LAMPS DO NOT USUALLY MEET THE REQUIREMENTS; METAL HALIDE OR COMPACT FLUORESCENT LAMPS (CFLS) ARE GOOD REPLACEMENTS. FOR OTHER LAMP TYPES SUCH AS LEDS YOU SHOULD CHECK WITH THE LAMP MANUFACTURER AND PROVIDE DOCUMENTS SHOWING THAT THE LAMP MEETS THE REQUIREMENTS. TO CALCULATE THE EFFICACY OF A LAMP, FIND OUT FROM THE MANUFACTURER HOW MANY LUMENS IT PRODUCES, THEN DIVIDE THIS NUMBER BY THE RATED WATTAGE OF THE LAMP. DO NOT INCLUDE ANY WATTS CONSUMED BY THE BALLAST.

T-24 MANDATORY MEASURES

Building Envelope Measeures:

§116(a)1: Doors and windows between conditioned and unconditioned spaces are manufactured to limit air leakage.
§116(a)4: 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; all joints and penetrations are caulked and sealed.
§118(a): Insulation specified or installed meets Standards for Insulating Material. Indicate type and include on CF-6R Form.
§118(i): The thermal emittance and solar reflectance values of the cool roofing material meets the requirements of §118(i) when the installation of a Cool Roof is specified on the CF-1R 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 design labeled 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(f): Air retarding wrap is tested, labeled, and installed according to ASTM E1677-95(2000) when specified on the CF-1R Form.
§150(g): Mandatory Vapor barrier installed in Climate Zones 14 or 16.
§150(l): 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 2.0 perm/inch and shall be protected from physical damage and UV light deterioration.

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)5: 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:fan-type central furnaces, household cooking appliances (appliances with an electrical supply voltage connection with pilot lights that consume less than 150 Btu/hr are exempt), and pool 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 minimal 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 system, or other 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)2: Cooling system piping (suction, chilled water, or brine lines),and piping insulated between heating source and indirect hot water tank shall be insulated to Table 150-B and Equation 150-A.
§150(j)2: Pipe insulation for steam hydronic heating systems or hot water systems >15 psi, meets the requirements of Standards Table 123-A.
§150(j)3A: Insulation is protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind.
§150(j)3A: Insulation for chilled water piping and refrigerant suction lines includes a vapor retardant or is enclosed entirely in conditioned space.

LEGEND

- CEILING MOUNTED EXHAUST FAN TO EXTERIOR
- 115 V DUPLEX RECEPTACLE @ +18" AFF. U.O.N.
- 115 V GFIC DUPLEX RECEPTACLE
- 3-WAY SWITCH
- SINGLE POLE SWITCH
- SMOKE DETECTOR, HARD-WIRED TOGETHER
- GAS STUB (SIZE AS REQ'D)
- ELECTRIC SUB-PANEL
- FAN
- CARBON MONOXIDE DETECTOR
- HOSE BIB
- RECESSED CAN LIGHT FIXTURE, FLUORESCENT
- WALL MOUNTED LIGHT FIXTURE
- WALL MOUNTED EXTERIOR FIXTURE, DOWNCAST
- CEILING MOUNTED PENDANT FIXTURE
- CEILING MOUNTED LIGHT FIXTURE
- CEILING MOUNTED FAN w/ LIGHT FIXTURE PROVIDE SEPARATE SWITCH FOR FAN & LIGHT
- 2X4 FLUORESCENT LIGHT FIXTURE

FLOOR PLAN CALLOUTS

1. PROVIDE A NEW TANKLESS GAS WATER HEATER WITH SEISMIC STRAPPING WITHIN THE UPPER AND LOWER ⅓ OF THE VERTICAL DIMENSION OF THE WATER HEATER WITH THE LOWER STRAP TO BE NO LESS THAN 4" ABOVE THE CONTROLS PER CPC 51.05. AND PRESSURE RELIEF VALVE W/ A FULL SIZED DRAIN OF GALVANIZED STEEL, HARD DRAWN COPPER, CPVC, PB OR LISTED RELIEF VALVE DRAIN TUBE WITH FITTINGS TO THE EXTERIOR OF THE BUILDING WITH THE END OF PIPE NOT MORE THAN 2 FEET NOR LESS THAN 6" ABOVE THE GRADE, POINTING DOWNWARD. THE THERMAL END BEING UNTHREADED. UPC SEC. 608.5.
2. EXTERIOR STAIRS WITH 7" MAX RISE AND 11" MIN TREAD. FOR R-3, U, OR WITHIN R-2, 7.75" MAX RISE AND 10" MIN TREAD. USE ¾" CDX PLY SUB-FLOOR ON TREAD, RISER AND LANDING (TYP). THE MINIMUM HEADROOM IN ALL PARTS OF THE STAIRWAY SHALL NOT BE LESS THAN 6 FEET 8 INCHES (2032MM) MEASURED VERTICALLY FROM THE SLOPED LINE ADJOINING THE TREAD NOSING OR FROM THE FLOOR SURFACE OF THE LANDING OR PLATFORM ON THAT PORTION OF THE STAIRWAY (CRC 311.7.2).
3. HANDRAILS PER CRC R311.7.7. HANDRAIL HEIGHT, MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING, OR FINISH SURFACE OF RAMP SLOPE, SHALL BE NOT LESS THAN 34INCHES (864 MM)AND NOT MORE THAN 38 INCHES (965 MM) (CRC R311.7.7.1) HANDRAILS FOR STAIRWAYS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE FLIGHT, FROM A POINT DIRECTLY ABOVE THE TOP RISER OF THE FLIGHT TO A POINT DIRECTLY ABOVE THE LOWEST RISER OF THE FLIGHT. HANDRAIL ENDS SHALL BE RETURNED OR SHALL TERMINATE IN NEWEL POSTS OR SAFETY TERMINALS. HANDRAILS ADJACENT TO A WALL SHALL HAVE A SPACE OF NOT LESS THAN 11/2 INCH (38 MM) BETWEEN THE WALL AND THE HANDRAILS.ALL REQUIRED HANDRAILS SHALL BE OF ONE OF THE FOLLOWING TYPES OR PROVIDE EQUIVALENT GRASPABILITY.
TYPE I. HANDRAILS WITH A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF AT LEAST 11/4 INCHES (32 MM) AND NOT GREATER THAN 2 INCHES (51 MM). IF THE HANDRAIL IS NOT CIRCULAR, IT SHALL HAVE A PERIMETER DIMENSION OF AT LEAST 4 INCHES (102 MM) AND NOT GREATER THAN 61/4 INCHES (160 MM) WITH A MAXIMUM CROSS SECTION OF DIMENSION OF 2 1/4 INCHES (57 MM). EDGES SHALL HAVE A MINIMUM RADIUS OF 0.01 INCH (0.25 MM).
TYPE II. HANDRAILS WITH A PERIMETER GREATER THAN 61/4 INCHES (160 MM) SHALL HAVE A GRASPABLE FINGER RECESS AREA ON BOTH SIDES OF THE PROFILE. THE FINGER RECESS SHALL BEGIN WITHIN A DISTANCE OF 3/4 INCH (19 MM) MEASURED VERTICALLY FROM THE TALLEST PORTION OF THE PROFILE AND ACHIEVE A DEPTH OF AT LEAST 5/16 INCH (8 MM) WITHIN 7/8 INCH (22 MM) BELOW THE WIDEST PORTION OF THE PROFILE. THIS REQUIRED DEPTH SHALL CONTINUE FOR AT LEAST 3/8 INCH (10 MM) TO A LEVEL THAT IS NOT LESS THAN 13/4 INCHES (45 MM) BELOW THE TALLEST PORTION OF THE PROFILE. THE MINIMUM WIDTH OF THE HANDRAIL ABOVE THE RECESS SHALL BE 11/4 INCHES (32 MM) TO A MAXIMUM OF 23/4 INCHES (70 MM). EDGES SHALL HAVE A MINIMUM RADIUS OF 0.01 INCH(0.25 MM) (CRC R311.7.7.3).
4. PROVIDE 36" SQUARE MINIMUM LANDING @ BOTTOM OF STAIRWAY CRC R311.3
5. INDIVIDUAL VALVES OF THE PRESSURE BALANCE OR THE THERMOSTATIC MIXING VALVE TYPE ARE REQUIRED AT THE SHOWERS AND TUB-SHOWER COMBINATION PER CPC 420
6. SHOWERS AND WALLS ABOVE BATHTUBS WITH SHOWER HEADS SHALL BE FINISHED WITH A SMOOTH, NONABSORBENT SURFACE TO A HEIGHT NOT LESS THAN 72" ABOVE THE DRAIN INLET. CRC R307.2
7. SMOKE DETECTORS HARDWIRED AND INTERCONNECTED TO ONE ANOTHER. PROVIDE BATTERY BACKUP TO ALL SMOKE DETECTOR UNITS (TYP). CRC R314.4 A SINGLE ALARM SHALL ACTIVATE ALL ALARMS AND BE CLEARLY AUDIBLE. CRC R314.3
8. ROOMS CONTAINING BATHTUBS, SHOWERS, SPAS AND SIMILAR BATHING FIXTURES SHALL BE MECHANICALLY VENTILATED IN ACCORDANCE WITH THE CMC 403.7 & T-4.4 THE MINIMUM LOCAL EXHAUST RATES SHALL BE 50 CFM FOR INTERMITTENT VENTILATION OR 20 CFM FOR CONTINUOUS VENTILATION. CRC R303.3. FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL. HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50 PERCENT TO A MAXIMUM OF 80 PERCENT. A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO THE EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL. NOTES: FOR THE PURPOSES OF THIS SECTION, A BATHROOM IS A ROOM WHICH CONTAINS A BATHTUB, SHOWER, OR TUB/SHOWER COMBINATION. LIGHTING INTEGRAL TO BATHROOM EXHAUST FANS SHALL COMPLY WITH THE CALIFORNIA ENERGY CODE.
9. AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED IN DWELLING UNITS AND IN SLEEPING UNITS WITHIN WHICH FUEL-BURNING APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGES. DETECTOR SHALL BE HARDWIRED WITH A BATTERY BACKUP. CRC R315.1.1
10. PROVIDE 20" X 30" ATTIC ACCESS.
11. 5/8" TYPE "X" GYPSUM BOARD ON GARAGE SIDE SEPARATING DWELLING AND ATTIC AREA FROM GARAGE PER CRC TABLE R302.6 ON CEILINGS AND WALLS.
12. GARAGES AND CARPORTS SHALL ALSO COMPLY WITH CRC R309 (FLOOR SURFACE, SPRINKLERS, FLOOD AREAS, ETC.)

ELECTRICAL CALLOUTS

1. EXISTING A 200 AMP MINIMUM ELECTRIC METER WITH #4 UFER GROUND TO FOUNDATION
2. GFIC OUTLETS ON ALL ABOVE COUNTER OUTLETS IN BATHROOMS MOUNTED AT 42" ABOVE FINISH FLOOR (TYP)
3. AT LEAST ONE 20-AMPERE BRANCH CIRCUIT SHALL BE PROVIDED TO SUPPLY BATHROOM RECEPTACLE OUTLET(S). SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS. EXCEPTION: WHERE THE 20-AMPERE CIRCUIT SUPPLIES A SINGLE BATHROOM, OUTLETS FOR OTHER EQUIPMENT WITHIN THE SAME BATHROOM SHALL BE PERMITTED TO BE SUPPLIED IN ACCORDANCE WITH CEC 210.23(A)(1) AND (A)(2).
4. WATER-PROOF GFIC OUTLETS AT 18" ABOVE FINISH FLOOR IN FRONT AND REAR OF BUILDING (TYP).
5. ALL ALL INTERIOR, NON GFIC, OUTLETS SHALL BE ARC-FAULT CIRCUIT INTERRUPTER PROTECTION (AFCI) AND SHALL BE IN ACCORDANCE WITH NEC ART.210-12. SEE GENERAL ELECTRICAL NOTES #2.
6. FUTURE CONDUITS FOR PV SOLAR SYSTEM REQUIREMENTS. PROVIDE SCHEDULE 40 PVC CONDUIT FROM THE LOAD SIDE OF THE NEW ELECTRICAL PANEL DISCONNECT TO ATTIC AREA. CONDUIT SIZE SHALL BE AS FOLLOWS:
   100A 20 AMPS @ 120 VOLTS (1) ¾" CONDUIT
   120A 24 AMPS @ 120 VOLTS (1) ¾" CONDUIT
   150A 30 AMPS @ 120 VOLTS (1) ¾" CONDUIT
   200A 40 AMPS @ 120 VOLTS (1) 1" CONDUIT
   400A 80 AMPS @ 120 VOLTS (1) 1¼" CONDUIT
7. NEW IN WALL HEATER TO MATCH T-24 REPORT (SEE SHEET T-24)

FIXTURE FLOW RATE REQUIRMENTS:

THE FOLLOWING FIXTURES SHALL BE OF WATER CONSERVATION:

RESIDENTIAL:

WATER CLOSETS:	1.28 GALLON PER FLUSH MAXIMUM
SHOWER HEAD FLOW:	2.0 GALLON PER MINUTE AT 80 PSI
LAVATORY / SINK FIXTURE:	1.5 GALLON PER MINUTE AT 60 PSI
KITCHEN FAUCETS:	2.2 GALLON PER MINUTE AT 60 PSI

NON COMPLIANT FIXTURES MEANS ANY OF THE FOLLOWING:

RESIDENTIAL:

ANY TOILET MANUFACTURED TO USE MORE THAN 1.6 GAL OF WATER PER FLUSH.
ANY SHOWERHEAD MANUFACTURED WITH 2.5 GALLONS PER MINUTE.
ANY INTERIOR FAUCET THAT EMITS MORE THAN 2.2 GALLONS PER MINUTE.

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REVISION LOG

REV.	DESCRIPTION	DATE

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FLOOR PLAN

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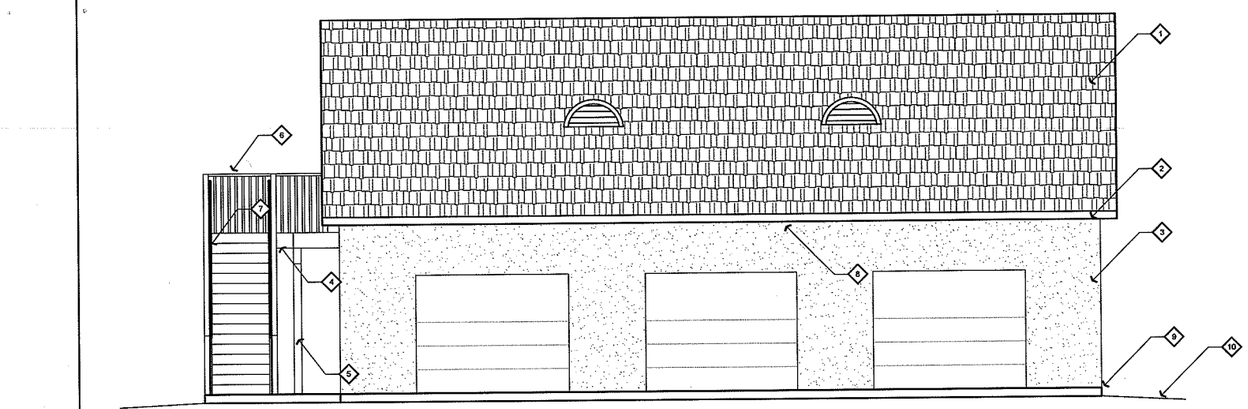
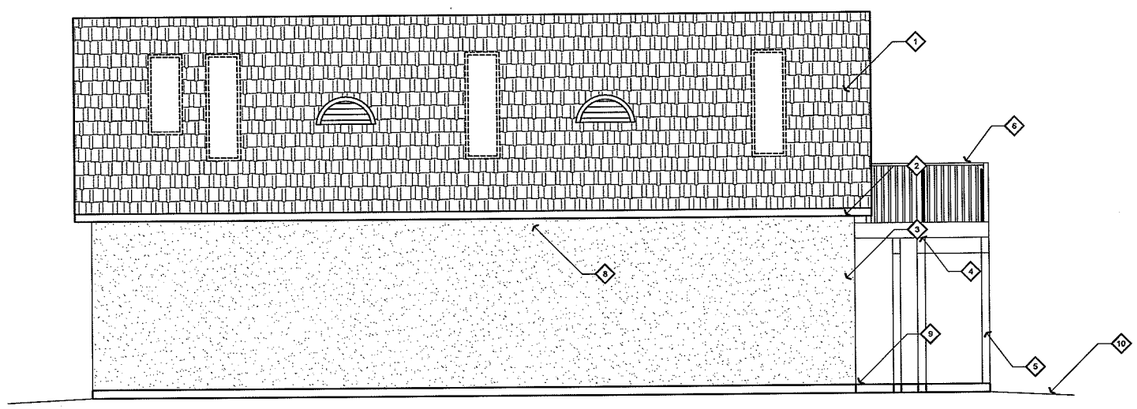


FRONT ELEVATION
1/4" = 1'



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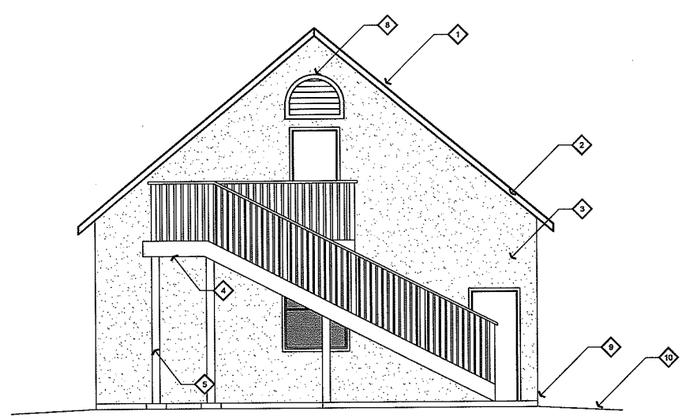

LEFT ELEVATION
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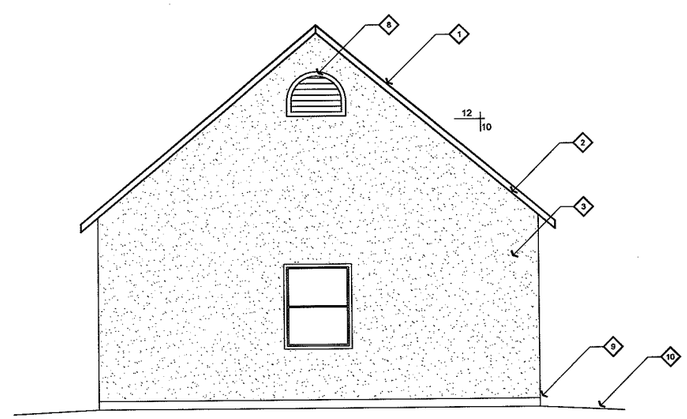

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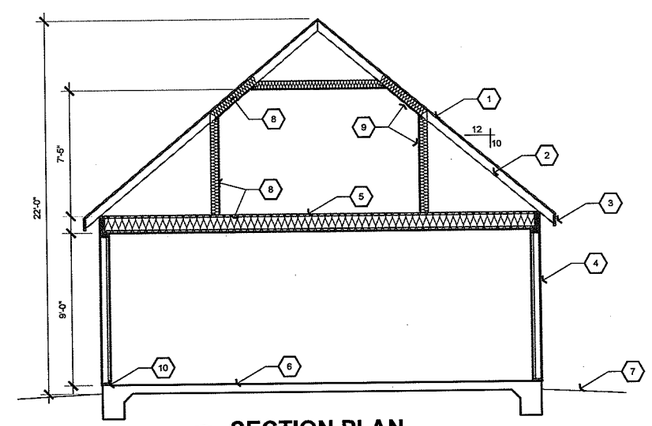

SECTION PLAN
XX
1/4" = 1'

ELEVATION CALLOUTS

1. EX. COMPOSITION SHINGLE ROOFING OF MIN OF CLASS A OVER 30 LB MINIMUM ROOFING FELT (TYP)
2. EX. 2 X 8 HEM FIR FASCIA (TYP) .
3. EX. 7/8" CEMENT PLASTER O/ 3.4# RIBBED LATH AND APPROVED BUILDING PAPER O/ 5/8" PLYWOOD SHEATHING W/ 8d @ 6"-6"-12" ON HOR. SURFACE OF EXTERIOR (TYP)
4. NONCOMBUSTIBLE OR IGNITION RESISTANT MATERIAL ON EXPOSED UNDERSIDE. WHERE EXPOSED, WOOD SHALL BE FIRE RETARDANT-TREATED
5. 6x6 POST
6. GUARD @ 42" ABOVE FINISHED FLOOR. PROVIDE 2X2 PICKETS SPACED PER CBC 1013.3.
7. HANDRAILS PER CRC R311.7.7. HANDRAIL HEIGHT, MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING, OR FINISH SURFACE OF RAMP SLOPE, SHALL BE NOT LESS THAN 34INCHES (864 MM)AND NOT MORE THAN 38 INCHES (965 MM) (CRC R311.7.7.1) HANDRAILS FOR STAIRWAYS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE FLIGHT, FROM A POINT DIRECTLY ABOVE THE TOP RISER OF THE FLIGHT TO A POINT DIRECTLY ABOVE THE LOWEST RISER OF THE FLIGHT. HANDRAIL ENDS SHALL BE RETURNED OR SHALL TERMINATE IN NEWEL POSTS OR SAFETY TERMINALS. HANDRAILS ADJACENT TO A WALL SHALL HAVE A SPACE OF NOT LESS THAN 11/2 INCH (38 MM) BETWEEN THE WALL AND THE HANDRAILS.ALL REQUIRED HANDRAILS SHALL BE OF ONE OF THE FOLLOWING TYPES OR PROVIDE EQUIVALENT GRASPABILITY.
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8. ATTIC VENTILATION CALCULATIONS: HOUSE ATTIC AREA = 1170 SQ FT
   REQUIRED ATTIC VENTILATION = 1170 / 300 = 3.9 SQ. FT. = 562 SQ. IN.
   USE (4) 24" HALFROUND LOMANCO DORMER VENTS (NFVA = 90) = 360 SQ. IN.
   USE (2) 36" HALFROUND GABLE END VENT(OR EQUAL) (NFVA = 160) = 320 SQ. IN.
   USE (7) 22"x3.5" UNDER EAVE VENTS (NFVA = 41) = 287 SQ. IN.
9. EX. 24 GA. WEEP SCREED FLASHING AT BASE OF CEMENT PLASTER AND INSTALLED PER CBC2512.1.2. WEEP SCREED SHALL BE CORROSION RESISTANT WITH A MINIMUM VERTICAL ATTACHMENT FLANGE OF 3-1/2" AND SHALL BE PROVIDED AT OR BELOW THE FOUNDATION PLATE LINE. THE SCREED SHALL BE PLACED A MINIMUM OF 4" ABOVE THE EARTH GRADE AND 2" MINIMUM ABOVE PAVED SURFACE.
10. EX. SLOPE AWAY FROM BUILDING 5% FOR 10'-0" MINIMUM (TYP)

SECTION CALLOUTS

1. EX COMPOSITION SHINGLE ROOFING OF MIN OF CLASS A OVER 30 LB MINIMUM ROOFING FELT (TYP)
2. EX. ENGINEERED ROOF TRUSSES @ 24" O/C. MAX. SEE FRAMING PLAN
3. EX 2 X 8 HEM FIR FASCIA (TYP)
4. 7/8" CEMENT PLASTER O/ 3.4# RIBBED LATH AND APPROVED BUILDING PAPER
5. FLOOR JOISTS PER PLAN
6. 4" CONC. PAD PER FOUNDATION PLAN
7. SLOPE AWAY FROM BUILDING 5% FOR 10'-0" MIN (TYP)
8. BUILDING INSULATION:
   EXTERIOR WALL: R-15 MINIMUM(TYP)
   CEILING: R-38 MINIMUM(TYP)
   FLOOR: R-30 MINIMUM(TYP)
9. INTERIOR FINISH MATERIAL:
   WALLS: 1/2" GYPSUM BOARD
   CEILING: 5/8" GYPSUM BOARD (GARAGE WALLS & CEILING USE 5/8" TYPE "X" BOARD AND FOR USABLE AREA UNDER STAIRS)
10. WALL FRAMING:
    EXTERIOR WALLS: 2X6 STUD WALLS @ 16" O/C
    INTERIOR WALLS: 2X4 STUD WALLS @ 16" O/C

JOHNNY J. KUDLA
610 10th ST.
UNIT A
PASO ROBLES, CA.
PH: (805) 423-3079
FAX: (805) 237-0480

PLAN PREPARED FOR:

CASEY & LYNN MCLEAN
4890 RANCHITA OAKS WAY
SAN MIGUEL, CA 93451

REVISION LOG

REV.	DESCRIPTION	DATE

These drawings are the exclusive property of JJK design and shall be used solely for the purpose of this project on this site. Any use other than the project upon which it is intended for without the written consent of JJK design and John Kudla is prohibited.

PROJECT NO. —
FILE NAME A-3.1 ELEVATIONS.DWG
DRAWN BY JJK
DATE 12/14/2015 1:19 PM
SHEET TITLE:
ELEVATIONS

SHEET NUMBER:
A-3.1

P:\CADD WORK\2014 Jobs\Kudla sent\Drawings\Kudla sent\Revised\A-3.1 ELEVATIONS.dwg Johnny 11/24/2015 11:08:47 AM

WINDOWS									
01	02	03	04	05	06	07	08	09	10
Name	Type	Surface (Orientation-Azimuth)	Width (ft)	Height (ft)	Multiplier	Area (ft²)	U-factor	SHGC	Exterior Shading
Skylight	Skylight	Roof (- specify -0)			1	9.0	0.39	0.37	
Skylight 2	Skylight	Roof (- specify -0)			1	9.0	0.39	0.37	
Skylight 3	Skylight	Roof (- specify -0)			1	9.0	0.39	0.37	
Skylight 4	Skylight	Roof (- specify -0)			1	7.0	0.39	0.37	
Window	Window	Northeast Wall 2 (Back-45)	—	—	1	20.0	0.39	0.37	Insect Screen (default)
Window 2	Window	Southwest Wall 2 (Front-225)	—	—	1	20.0	0.39	0.37	Insect Screen (default)

DOORS			
01	02	03	04
Name	Side of Building	Area (ft²)	U-factor
Door	Southwest Wall	18.1	0.50
Door 2	Southwest Wall 2	18.1	0.50
Garage Door	Southwest Wall 2	63.0	0.50
Garage Door 2	Southwest Wall 2	63.0	0.50
Garage Door 3	Southwest Wall 2	63.0	0.50

CalCERTS, Inc. HERS PROVIDER

OPAQUE SURFACES							
01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft²)	Window & Door Area (ft²)	Tilt (deg)
Northeast Wall	Upstairs Living	R-13 Wall	45	Back	90		90
Southwest Wall	Upstairs Living	R-13 Wall	225	Front	90	18.1	90
Northwest Wall	Upstairs Living	R-13 Wall	315	Left	337.5		90
Southeast Wall	Upstairs Living	R-13 Wall	135	Right	337.5		90
Roof 2	Upstairs Living	R-30 Roof Attic			1136		
Interior Surface	Upstairs Living>>__Garage__	R-19 Floor No Crawlspace			1170		
Northeast Wall 2	__Garage__	R-0 Wall	45	Back	195	20	90
Southwest Wall 2	__Garage__	R-0 Wall	225	Front	195	36.1	90
Northwest Wall 2	__Garage__	R-0 Wall	315	Left	337.5		90
Southeast Wall 2	__Garage__	R-0 Wall	135	Right	337.5	189	90

OPAQUE SURFACES – Cathedral Ceilings											
01	02	03				06	07	08	09	10	11
Name	Zone	Type	Orientation	Area (ft²)	Skylight Area (ft²)	Roof Rise (x in 12)	Roof Pitch	Roof Tilt (deg)	Roof Reflectance	Roof Emittance	Framing Factor
Roof	Upstairs Living	R-30 Roof Attic1	- specify -	34.1	34	10	0.83	39.81	0.1	0.85	0.07

ATTIC							
01	02	03	04	05	06	07	08
Name	Construction	Type	Roof Rise	Roof Reflectance	Roof Emittance	Radiant Barrier	Cool Roof
Attic Upstairs Living	Attic RoofUpstairs Living	Ventilated	10	0.1	0.85	No	No

REQUIRED SPECIAL FEATURES

The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.

- Cathedral Ceiling

HERS FEATURE SUMMARY

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building components tables below.

Building-level Verifications:
- IAQ mechanical ventilation

Cooling System Verifications:
- -- None --

HVAC Distribution System Verifications:
- -- None --

Domestic Hot Water System Verifications:
- -- None --

ENERGY DESIGN RATING

This is the sum of the annual TDV energy consumption for energy use components included in the performance compliance approach for the Standard Design Building (Energy Budget) and the annual TDV energy consumption for lighting and components not regulated by Title 24, Part 6 (such as domestic appliances and consumer electronics) and accounting for the annual TDV energy offset by an on-site renewable energy system.

	Reference Energy Use	Energy Design Rating	Margin	Percent Improvement
Total Energy (kTDV/ft²-yr)*	240.29	222.28	18.08	7.5%

* Includes calculated Appliances and Miscellaneous Energy Use (AMEU)

BUILDING - FEATURES INFORMATION						
01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft2)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
McLean Residence	566	1	1	1	0	1

ZONE INFORMATION						
01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Water Heating System 2
Upstairs Living	Conditioned	Ductless Mini Split1	566	8	DHW Sys 1	

GENERAL INFORMATION					
01	Project Name	McLean Residence			
02	Calculation Description	Title 24 Analysis			
03	Project Location	4890 Ranchita Vista Way			
04	City	San Miguel	05	Standards Version	Compliance 2015
06	Zip Code	93451	07	Compliance Manager Version	BEMCmpMgr 2013-4 (744)
08	Climate Zone	CZ4	09	Software Version	EnergyPro 6.6
10	Building Type	Single Family	11	Front Orientation (deg/Cardinal)	225
12	Project Scope	Newly Constructed	13	Number of Dwelling Units	1
14	Total Cond. Floor Area (ft²)	566	15	Number of Zones	1
16	Slab Area (ft²)	0	17	Number of Stories	2
18	Addition Cond. Floor Area	N/A	19	Natural Gas Available	No
20	Addition Slab Area (ft²)	N/A	21	Glazing Percentage (%)	8.0%

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

ENERGY USE SUMMARY				
04	05	06	07	08
Energy Use (kTDV/ft²-yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	22.98	32.54	-9.56	-41.6%
Space Cooling	20.18	33.41	-13.23	-65.6%
IAQ Ventilation	1.70	1.70	0.00	0.0%
Water Heating	93.32	52.44	40.88	43.8%
Photovoltaic Offset	—	0.00	0.00	—
Compliance Energy Total	138.18	120.09	18.09	13.1%

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Jim Reed	Documentation Author Signature: *Jim Reed*
Company: Jim Reed	Signature Date: 2015-12-14 12:44:42
Address: 610 10th St Unit C	CEA/HERS Certification Identification (if applicable): CC2006321
City/State/Zip: Paso Robles, CA 93446	Phone: 805-239-8670

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name: John Kudla	Responsible Designer Signature: *John Kudla*
Company: JJK Designs	Date Signed: 2015-12-14 12:45:18
Address: 610 10TH ST. STE. A	License: Johnny Kudla
City/State/Zip: PASO ROBLES, CA 93446	Phone: 805-423-3079

Digitally signed by CalCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

IAQ (Indoor Air Quality) FANS					
01	02	03	04	05	06
Dwelling Unit	IAQ CFM	IAQ Watts/CFM	IAQ Fan Type	IAQ Recovery Effectiveness(%)	HERS Verification
SFam IAQVentRpt	20.66	0.25	Default	0	Required

CalCERTS, Inc. HERS PROVIDER

WATER HEATERS							
01	02	03	04	05	06	07	08
Name	Heater Element Type	Tank Type	Tank Volume (gal)	Energy Factor or Efficiency	Input Rating	Tank Exterior Insulation R-value	Standby Loss (Fraction)
DHW Heater 1	Propane	Small Instantaneous	0	0.84	185000-Btu/hr	0	0

WATER HEATING - HERS VERIFICATION						
01	02	03	04	05	06	07
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Point-of Use	Recirculation Control	Central DHW Distribution
DHW Sys 1 - 1/1	—	—	—	—	—	—

SPACE CONDITIONING SYSTEMS					
01	02	03	04	05	06
SC Sys Name	System Type	Heating Unit Name	Cooling Unit Name	Fan Name	Distribution Name
Heat Pump System 1-2	Heat Pump Heating and Cooling System	Heat Pump System 1	Heat Pump System	None	None

HVAC - HEAT PUMPS									
01	02	03	04	05	06	07	08	09	10
		Heating			Cooling				
Name	Type	HSPF/COP	Cap 47	Cap 17	SEER	EER	Zonally Controlled	Multispeed Compressor	HERS Verification
Heat Pump System 1	DuctlessHeatPump	9	12000	10000	14	12.2	No	No	Heat Pump System 1-hers-cool

HVAC COOLING - HERS VERIFICATION					
01	02	03	04	05	06
Name	Verified Airflow	Airflow Target	Verified EER	Verified SEER	Verified Refrigerant Charge
Heat Pump System 1-hers-cool	Not Required	—	Not Required	Not Required	Not Required

OPAQUE SURFACE CONSTRUCTIONS						
01	02	03	04	05	06	07
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Winter Design U-value	Assembly Layers
R-0 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O.C.	none	0.302	• Inside Finish: Gypsum Board • Cavity / Frame: no insul. / 2x4 • Exterior Finish: Wood Siding/sheathing/decking
Attic RoofUpstairs Living	Attic Roofs	Wood Framed Ceiling	2x4 Top Chord of Roof Truss @ 24 in. O.C.	none	0.644	• Cavity / Frame: no insul. / 2x4 Top Chrd • Roof Deck: Wood Siding/sheathing/decking • Roofing: Light Roof (Asphalt Shingle)
R-13 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O.C.	R 13	0.095	• Inside Finish: Gypsum Board • Cavity / Frame: R-13 / 2x4 • Exterior Finish: Wood Siding/sheathing/decking
R-30 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O.C.	R 30	0.032	• Inside Finish: Gypsum Board • Cavity / Frame: R-9.1 / 2x4 • Over Floor Joists: R-20.9 insul.
R-30 Roof Attic1	Cathedral Ceilings	Wood Framed Ceiling	2x4 @ 24 in. O.C.	R 30	0.042	• Inside Finish: Gypsum Board • Cavity / Frame: R-30 / 2x4 • Roof Deck: Wood Siding/sheathing/decking • Roofing: Light Roof (Asphalt Shingle)
R-19 Floor No Crawlspace	Interior Floors	Wood Framed Floor	2x6 @ 16 in. O.C.	R 19	0.048	• Floor Surface: Carpeted • Floor Deck: Wood Siding/sheathing/decking • Cavity / Frame: R-19 / 2x6 • Ceiling Below Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION			
01	02	03	04
Quality Insulation Installation (QII)	Quality Installation of Spray Foam Insulation	Building Envelope Air Leakage	CFM50
Not Required	Not Required	Not Required	—

WATER HEATING SYSTEMS					
01	02	03	04	05	06
Name	System Type	Distribution Type	Water Heater	Number of Heaters	Solar Fraction (%)
DHW Sys 1 - 1/1	DHW	Standard	DHW Heater 1	1	.0%

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

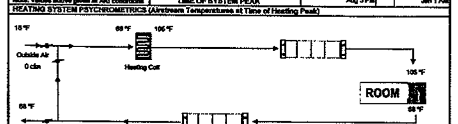
Project Name: Casey & Lynn McLean	Date: 11/30/2015
System Name: Ductless Mini Split	Floor Area: 566

ENGINEERING CHECKS	
Number of Systems	1
Heating System	
Output per System	12,000
Total Output (Btuh)	12,000
Output (Btuh/sqft)	21.2
Cooling System	
Output per System	1
Total Output (Btuh)	1
Total Output (Tons)	0.0
Total Output (Btuh/sqft)	0.0
Total Output (sqft/Ton)	6,792,000.0
Air System	
CFM per System	0
Airflow (cfm)	0
Airflow (cfm/sqft)	0.00
Airflow (cfm/Ton)	0.0
Outside Air (%)	0.0 %
Outside Air (cfm/sqft)	0.00

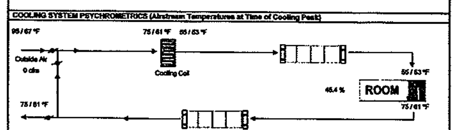
Note: values above given at ARI conditions

SYSTEM LOAD	COIL COOLING PEAK CFM	Sensible	Latent	COIL HTG. PEAK CFM	Sensible
Total Room Loads	339	7,130	135	231	9,001
Return Vented Lighting		0			
Return Air Ducts		0			0
Return Fan		0			0
Ventilation	0	0	0	0	0
Supply Fan		0			0
Supply Air Ducts		0			0
TOTAL SYSTEM LOAD		7,130	135		9,001
HVAC EQUIPMENT SELECTION					
Standard Heat Pump		1	0		5,546
Total Adjusted System Output (Adjusted for Peak Design conditions)		1	0		5,546
TIME OF SYSTEM PEAK		Aug 3 PM			Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



2013 Low-Rise Residential Mandatory Measures Summary

NOTE: Low-rise residential buildings subject to the Standards must comply with all applicable mandatory measures listed, regardless of the compliance approach used. Exceptions may apply. Review the respective code section for more information.

Building Envelope Measures:	
§110.6(a)1:	Doors and windows between conditioned and unconditioned spaces are manufactured to limit air leakage.
§110.6(a)5:	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).
§110.7:	Exterior doors and windows are weatherstripped; all joints and penetrations are caulked and sealed.
§110.8(a):	Insulation specified or installed meets Standards for Insulating Material. Indicate type and include on the CF2R.
§110.8(i):	The thermal emittance and aged solar reflectance values of the cool roofing material meets the requirements of §110.8(i) when the installation of a cool roof is specified on the CF1R.
§110.8(j):	A radiant barrier shall have an emittance of 0.05 or less when the installation of a radiant barrier is specified on the CF1R.
§150.0(a):	Minimum R-30 insulation in wood-frame ceiling; or the weighted average U-factor shall not exceed 0.031. Minimum R-19 in a rafter roof alteration. Attic access doors shall have permanently attached insulation using adhesive or mechanical fasteners. The attic access shall be gasketed to prevent air leakage.
§150.0(b):	Loose fill insulation shall conform with manufacturer's installed design labeled R-value.
§150.0(c):	Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less (R-19 in 2x6 or 0.074 maximum U-factor).
§150.0(d):	Minimum R-19 insulation in raised wood-frame floor or 0.037 maximum U-factor.
§150.0(g)1:	In Climate Zones 14 and 16 a Class II vapor retarder shall be installed on the conditioned space side of all insulation in all exterior walls, vented attics and unvented attics with air-permeable insulation.
§150.0(g)2:	In Climate Zones 1-16 with unvented crawl spaces the earth floor of the crawl space shall be covered with a Class I or Class II vapor retarder.
§150.0(g)3:	In a building having a controlled ventilation crawl space, a Class I or Class II vapor retarder shall be placed over the earth floor of the crawl space to reduce moisture entry and protect insulation from condensation, as specified in the exception to Section 150.0(d).
§150.0(l):	Slab edge insulation shall: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3%; have water vapor permeance rate is no greater than 2.0 perm/inch, be protected from physical damage and UV light deterioration; and when installed as part of a heated slab floor meets the requirements of §110.8(g).
§150.0(q):	Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors shall have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration shall not exceed 0.58.
Fireplaces, Decorative Gas Appliances and Gas Log Measures:	
§150.0(e)1A:	Masonry or factory-built fireplaces have a closable metal or glass door covering the entire opening of the firebox.
§150.0(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 readily accessible, operable, and tight-fitting damper or a combustion-air control device.
§150.0(e)1C:	Masonry or factory-built fireplaces have a flue damper with a readily accessible control.
§150.0(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:	
§110.0-§110.3:	HVAC equipment, water heaters, showerheads, faucets and all other regulated appliances are certified to the Energy Commission.
§110.3(c)5:	Water heating recirculation loops serving multiple dwelling units meet the air release valve, backflow prevention, pump isolation valve, and recirculation loop connection requirements of §110.3(c)5.
§110.5:	Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces, household cooking appliances (appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu/hr are exempt), and pool and spa heaters.
§150.0(h)1:	Heating and/or cooling loads are calculated in accordance with ASHRAE, SMACNA or ACCA using design conditions specified in §150.0(h)2.
§150.0(h)3A:	Installed air conditioner and heat pump outdoor condensing units shall have a clearance of at least five feet from the outlet of any dryer vent.
§150.0(i):	Heating systems are equipped with thermostats that meet the setback requirements of §110.2(c).
§150.0(j)1A:	Storage gas water heaters with an energy factor equal to or less than the federal minimum standards shall be externally wrapped with insulation having an installed thermal resistance of R-12 or greater.
§150.0(j)1B:	Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, have R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
§150.0(j)2A:	For domestic hot water system piping, whether buried or unburied: the first 5 feet of hot and cold water pipes from the storage tank, all piping with a nominal diameter of 3/4 inch or larger, all piping associated with a domestic hot water recirculation system regardless of the pipe diameter, piping from the heating source to storage tank or between tanks, piping buried below grade, and all hot water pipes from the heating source to kitchen fixtures must be insulated according to the requirements of TABLE 120.3-A.
§150.0(j)2B:	All domestic hot water pipes that are buried below grade must be installed in a water proof and non-crushable casing or sleeve that allows for installation, removal, and replacement of the enclosed pipe and insulation.

2013 Low-Rise Residential Mandatory Measures Summary

NOTE: Low-rise residential buildings subject to the Standards must comply with all applicable mandatory measures listed, regardless of the compliance approach used. Exceptions may apply. Review the respective code section for more information.

Building Envelope Measures:	
§110.6(a)1:	Doors and windows between conditioned and unconditioned spaces are manufactured to limit air leakage.
§110.6(a)5:	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).
§110.7:	Exterior doors and windows are weatherstripped; all joints and penetrations are caulked and sealed.
§110.8(a):	Insulation specified or installed meets Standards for Insulating Material. Indicate type and include on the CF2R.
§110.8(i):	The thermal emittance and aged solar reflectance values of the cool roofing material meets the requirements of §110.8(i) when the installation of a cool roof is specified on the CF1R.
§110.8(j):	A radiant barrier shall have an emittance of 0.05 or less when the installation of a radiant barrier is specified on the CF1R.
§150.0(a):	Minimum R-30 insulation in wood-frame ceiling; or the weighted average U-factor shall not exceed 0.031. Minimum R-19 in a rafter roof alteration. Attic access doors shall have permanently attached insulation using adhesive or mechanical fasteners. The attic access shall be gasketed to prevent air leakage.
§150.0(b):	Loose fill insulation shall conform with manufacturer's installed design labeled R-value.
§150.0(c):	Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less (R-19 in 2x6 or 0.074 maximum U-factor).
§150.0(d):	Minimum R-19 insulation in raised wood-frame floor or 0.037 maximum U-factor.
§150.0(g)1:	In Climate Zones 14 and 16 a Class II vapor retarder shall be installed on the conditioned space side of all insulation in all exterior walls, vented attics and unvented attics with air-permeable insulation.
§150.0(g)2:	In Climate Zones 1-16 with unvented crawl spaces the earth floor of the crawl space shall be covered with a Class I or Class II vapor retarder.
§150.0(g)3:	In a building having a controlled ventilation crawl space, a Class I or Class II vapor retarder shall be placed over the earth floor of the crawl space to reduce moisture entry and protect insulation from condensation, as specified in the exception to Section 150.0(d).
§150.0(l):	Slab edge insulation shall: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3%; have water vapor permeance rate is no greater than 2.0 perm/inch, be protected from physical damage and UV light deterioration; and when installed as part of a heated slab floor meets the requirements of §110.8(g).
§150.0(q):	Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors shall have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration shall not exceed 0.58.
Fireplaces, Decorative Gas Appliances and Gas Log Measures:	
§150.0(e)1A:	Masonry or factory-built fireplaces have a closable metal or glass door covering the entire opening of the firebox.
§150.0(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 readily accessible, operable, and tight-fitting damper or a combustion-air control device.
§150.0(e)1C:	Masonry or factory-built fireplaces have a flue damper with a readily accessible control.
§150.0(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:	
§110.0-§110.3:	HVAC equipment, water heaters, showerheads, faucets and all other regulated appliances are certified to the Energy Commission.
§110.3(c)5:	Water heating recirculation loops serving multiple dwelling units meet the air release valve, backflow prevention, pump isolation valve, and recirculation loop connection requirements of §110.3(c)5.
§110.5:	Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces, household cooking appliances (appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu/hr are exempt), and pool and spa heaters.
§150.0(h)1:	Heating and/or cooling loads are calculated in accordance with ASHRAE, SMACNA or ACCA using design conditions specified in §150.0(h)2.
§150.0(h)3A:	Installed air conditioner and heat pump outdoor condensing units shall have a clearance of at least five feet from the outlet of any dryer vent.
§150.0(i):	Heating systems are equipped with thermostats that meet the setback requirements of §110.2(c).
§150.0(j)1A:	Storage gas water heaters with an energy factor equal to or less than the federal minimum standards shall be externally wrapped with insulation having an installed thermal resistance of R-12 or greater.
§150.0(j)1B:	Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, have R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
§150.0(j)2A:	For domestic hot water system piping, whether buried or unburied: the first 5 feet of hot and cold water pipes from the storage tank, all piping with a nominal diameter of 3/4 inch or larger, all piping associated with a domestic hot water recirculation system regardless of the pipe diameter, piping from the heating source to storage tank or between tanks, piping buried below grade, and all hot water pipes from the heating source to kitchen fixtures must be insulated according to the requirements of TABLE 120.3-A.
§150.0(j)2B:	All domestic hot water pipes that are buried below grade must be installed in a water proof and non-crushable casing or sleeve that allows for installation, removal, and replacement of the enclosed pipe and insulation.

2013 Low-Rise Residential Mandatory Measures Summary

§150.0(j)2C:	Pipe for cooling system lines shall be insulated as specified in §150.0(j)2A. Piping insulation for steam and hydronic heating systems or hot water systems with pressure > 15 psig shall meet the requirements in TABLE 120.3-A.
§150.0(j)3:	Insulation is protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind.
§150.0(j)3A:	Insulation exposed to weather shall either be rated for outdoor use or installed with a cover suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation protected as specified or painted with coating that is water retardant and provides shielding from solar radiation that degrades the material.
§150.0(j)3B:	Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I or Class II vapor retarding facing, or the insulation shall be installed at the thickness that qualifies as a Class I or Class II vapor retarder.
§150.0(n)1:	Systems using gas or propane water heaters to serve individual dwelling units shall include: a 120V electrical receptacle within 3 feet of the water heater; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than 2 inches higher than the base of the installed water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu/hr.
§150.0(n)2:	Recirculating loops serving multiple dwelling units shall meet the requirements of §110.3(c)5.
§150.0(n)3:	Solar water-heating systems and collectors shall be certified and rated by the Solar Rating and Certification Corporation (SRCC) or by a testing agency approved by the Executive Director.
Ducts and Fans Measures:	
§150.0(m)1:	All air-distribution system ducts and plenums installed are sealed and insulated to meet the requirements of CMC §601.0, §602.0, §603.0, §604.0, §605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Supply-air and return-air ducts and plenums are insulated to a minimum installed level of R-6.0 (or higher if required by CMC §605.0) or enclosed entirely in directly conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Connections of metal ducts and inner core of flexible ducts are mechanically fastened. 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 sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ¼ inch, the combination of mastic and either mesh or tape shall be used. 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. 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.
§150.0(m)2:	Factory-Fabricated Duct Systems shall comply with specified requirements for duct construction, connections, and closures; 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.
§150.0(m)3-6:	Field-Fabricated Duct Systems shall comply with requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction; duct insulation R-value ratings; duct insulation thickness; and duct labeling.
§150.0(m)7:	All fan systems that exchange air between the conditioned space and the outside of the building must have backdraft or automatic dampers.
§150.0(m)8:	Gravity ventilating systems serving conditioned space have either automatic or readily accessible, manually operated dampers except combustion inlet and outlet air openings and elevator shaft vents.
§150.0(m)9:	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind but not limited to the following: insulation exposed to weather shall be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation shall be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation.
§150.0(m)10:	Flexible ducts cannot have porous inner cores.
§150.0(m)11:	When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts shall be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.
§150.0(m)12:	Mechanical systems that supply air to an occupiable space through ductwork exceeding 10 feet in length and through a thermal conditioning component, except evaporative coolers, shall be provided with air filter devices that meet the requirements of §150.0(m)12.
§150.0(m)13:	Space conditioning systems that utilize forced air ducts to supply cooling to an occupiable space shall have a hole for the placement of a static pressure probe (HSPP), or a permanently installed static pressure probe (PSPP) in the supply plenum. The space conditioning system must also demonstrate airflow ≥ 350 CFM per ton of nominal cooling capacity through the return grilles, and an air-handling unit fan efficacy ≤ 0.58 W/CFM as confirmed by field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.
§150.0(m)15:	Zonally controlled central forced air cooling systems shall be capable of simultaneously delivering, in every zonal control mode, an airflow from the dwelling, through the air handler fan and delivered to the dwelling, of ≥ 350 CFM per ton of nominal cooling capacity, and operating at an air-handling unit fan efficacy of ≤ 0.58 W/CFM as confirmed by field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.
§150.0(o):	All dwelling units shall meet the requirements of ASHRAE Standard 62.2. Neither window operation nor continuous operation of central forced air system air handlers used in central fan integrated ventilation systems are permissible methods of providing the Whole Building Ventilation.
§150.0(o)1A:	Whole Building Ventilation airflow shall be confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.
Pool and Spa Heating Systems and Equipment Measures:	
§110.4(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 that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and shall not use electric resistance heating.

2013 Low-Rise Residential Mandatory Measures Summary

§110.4(b)1:	Any pool or spa heating equipment shall be installed with at least 36 inches of pipe between filter and heater or dedicated section and return lines, or built-up connections for future solar heating.
§110.4(b)2:	Outdoor pools or spas that have a heat pump or gas heater shall have a cover.
§110.4(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.
§110.5:	Natural gas pool and spa heaters shall not have a continuous burning pilot light.
§150.0(p):	Residential pool systems or equipment shall meet specified pump sizing, flow rate, piping, filters, and valve requirements.
Lighting Measures:	
§110.9:	All lighting control devices and systems, ballasts, and luminaires shall meet the applicable requirements of §110.9.
§150.0(k)1A:	Installed luminaires shall be classified as high-efficacy or low-efficacy for compliance with §150.0(k) in accordance with TABLE 150.0-A or TABLE 150.0-B, as applicable.
§150.0(k)1B:	When a high efficacy and low efficacy lighting system are combined in a single luminaire, each system shall separately comply with the applicable provisions of §150.0(k).
§150.0(k)1C:	The wattage and classification of permanently installed luminaires in residential kitchens shall be determined in accordance with §130.0(c). In residential kitchens, the wattage of electrical boxes finished with a blank cover or where no electrical equipment has been installed, and where the electrical box can be used for a luminaire or a surface mounted ceiling fan, shall be calculated as 180 watts of low efficacy lighting per electrical box.
§150.0(k)1D:	Ballasts for fluorescent lamps rated 13 watts or greater shall be electronic and shall have an output frequency no less than 20 kHz.
§150.0(k)1E:	Permanently installed night lights and night lights integral to installed luminaires or exhaust fans shall be rated to consume no more than 5 watts of power per luminaire or exhaust fan as determined in accordance with §130.0(c). Night lights do not need to be controlled by vacancy sensors.
§150.0(k)1F:	Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) shall meet the applicable requirements of §150.0(k).
§150.0(k)2A:	High efficacy luminaires must be switched separately from low efficacy luminaires.
§150.0(k)2B:	Exhaust fans shall be switched separately from lighting systems.
§150.0(k)2C:	Luminaires shall be switched with readily accessible controls that permit the luminaires to be manually switched ON and OFF.
§150.0(k)2D:	Controls and equipment are installed in accordance with manufacturer's instructions.
§150.0(k)2E:	No control shall bypass a dimmer or vacancy sensor function if the control is installed to comply with §150.0(k).
§150.0(k)2F:	Lighting controls comply with applicable requirements of §110.9.
§150.0(k)2G:	An Energy Management Control System (EMCS) may be used to comply with dimmer requirements if: it functions as a dimmer according to §110.9; meets Installation Certificate requirements of §130.4; the EMCS requirements of §130.5; and all other requirements in §150.0(k)2.
§150.0(k)2H:	An Energy Management Control System (EMCS) may be used to comply with vacancy sensor requirements of §150.0(k) if: it functions as a vacancy sensor according to §110.9; meets Installation Certificate requirements of §130.4; the EMCS requirements of §130.5; and all other requirements in §150.0(k)2.
§150.0(k)2I:	A multiscene programmable controller may be used to comply with dimmer requirements of this section if it provides the functionality of a dimmer according to §110.9, and complies with all other applicable requirements in §150.0(k)2.
§150.0(k)3A:	A minimum of 50 percent of the total rated wattage of permanently installed lighting in kitchens shall be high efficacy.
§150.0(k)3B:	Kitchen lighting includes all permanently installed lighting in the kitchen except internal lighting in cabinets that illuminate only the inside of the cabinets. Lighting in areas adjacent to the kitchen, including but not limited to dining and nook areas, are considered kitchen lighting if they are not separately switched from kitchen lighting.
§150.0(k)4:	Permanently installed lighting that is internal to cabinets shall use no more than 20 watts of power per linear foot of illuminated cabinet.
§150.0(k)5:	A minimum of one high efficacy luminaire shall be installed in each bathroom; and all other lighting installed in each bathroom shall be high efficacy or controlled by vacancy sensors.
§150.0(k)6:	Lighting installed in attached and detached garages, laundry rooms, and utility rooms shall be high efficacy luminaires and controlled by vacancy sensors.
§150.0(k)7:	Lighting installed in rooms or areas other than in kitchens, bathrooms, garages, laundry rooms, and utility rooms shall be high efficacy, or shall be controlled by either dimmers or vacancy sensors.
§150.0(k)8:	Luminaires recessed into ceilings shall: be listed for zero clearance insulation contact (IC) by Underwriters Laboratories or other nationally recognized testing/rating laboratory; have a label that certifies that the luminaire is airtight with air leakage less than 2.0 CFM at 75 Pascals when tested in accordance with ASTM E283; be sealed with a gasket or caulk between the luminaire housing and ceiling, and shall have all air leak paths between conditioned and unconditioned spaces sealed with a gasket or caulk; and allow ballast maintenance and replacement without requiring cutting holes in the ceiling. For recessed compact fluorescent luminaires with ballasts to qualify as high efficacy for compliance with §150.0(k), the ballasts shall be certified to the Energy Commission to comply with the applicable requirements in §110.9.
§150.0(k)9A:	For single-family residential buildings, outdoor lighting permanently mounted to a residential building or other buildings on the same lot shall be high efficacy, or may be low efficacy if it meets all of the following requirements: i. Controlled by a manual ON and OFF switch that does not override to ON the automatic actions of Items ii or iii below; and ii. Controlled by a motion sensor not having an override or bypass switch that disables the motion sensor, or controlled by a motion sensor having a temporary override switch which temporarily bypasses the motion sensing function and automatically reactivates the motion sensor within 6 hours; and iii. Controlled by one of the following methods:

DUCT DYNASTY
Title 24 | HERS Rating | Duct Fixer & Testing

PLAN PREPARED FOR:

CASEY & LYNN MCLEAN
4890 RANCHITA OAKS WAY
SAN MIGUEL, CA 93451

REVISION LOG

REV.	DESCRIPTION	DATE

These drawings are the exclusive property of DUCT DYNASTY and shall be used solely for the purpose of this project on this site. Any use other than the project upon which it is intended for without the written consent of DUCT DYNASTY AND Jim Reed is prohibited.

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2013 CA. GREEN BUILDING STANDARDS CODE: RESIDENTIAL MANDATORY MEASURES

SITE DEVELOPEMENT:

4.106.1 GENERAL. PRESERVATION AND USE OF AVAILABLE NATURAL RESOURCES SHALL BE ACCOMPLISHED THROUGH EVALUATION AND CAREFUL PLANNING TO MINIMIZE NEGATIVE EFFECTS ON THE SITE AND ADJACENT AREAS. PRESERVATION OF SLOPES, MANAGEMENT OF STORM WATER DRAINAGE AND EROSION CONTROLS SHALL COMPLY WITH THIS SECTION.

4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. PROJECTS WHICH DISTURB LESS THAN ONE ACRE OF SOIL AND ARE NOT PART OF A LARGER COMMON PLAN OF DEVELOPMENT WHICH IN TOTAL DISTURBS ONE ACRE OR MORE, SHALL MANAGE STORM WATER DRAINAGE DURING CONSTRUCTION. IN ORDER TO MANAGE STORM WATER DRAINAGE DURING CONSTRUCTION, ONE OR MORE OF THE FOLLOWING MEASURES SHALL BE IMPLEMENTED TO PREVENT FLOODING OF ADJACENT PROPERTY, PREVENT EROSION AND RETAIN SOIL RUNOFF ON THE SITE.

1. RETENTION BASINS OF SUFFICIENT SIZE SHALL BE UTILIZED TO RETAIN STORM WATER ON THE SITE.
2. WHERE STORM WATER IS CONVEYED TO A PUBLIC DRAINAGE SYSTEM, COLLECTION POINT, GUTTER OR SIMILAR DISPOSAL METHOD, WATER SHALL BE FILTERED BY USE OF A BARRIER SYSTEM, WATTLE OR OTHER METHOD APPROVED BY THE ENFORCING AGENCY.
3. COMPLIANCE WITH A LAWFULLY ENACTED STORM WATER MANAGEMENT ORDINANCE.

4.106.3 GRADING AND PAVING. CONSTRUCTION PLANS SHALL INDICATE HOW THE SITE GRADING OR DRAINAGE SYSTEM WILL MANAGE ALL SURFACE WATER FLOWS TO KEEP WATER FROM ENTERING BUILDINGS. EXAMPLES OF METHODS TO MANAGE SURFACE WATER INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

I. SWALES
2. WATER COLLECTION AND DISPOSAL SYSTEMS
3. FRENCH DRAINS
4. WATER RETENTION GARDENS
5. OTHER WATER MEASURES WHICH KEEP SURFACE WATER AWAY FROM BUILDINGS AND AID IN GROUNDWATER RECHARGE. EXCEPTION: ADDITIONS AND ALTERATIONS NOT ALTERING THE DRAINAGE PATH.

INDOOR WATER USE:

4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL COMPLY WITH THE FOLLOWING:

4.303.1.1 WATER CLOSETS. THE EFFECTIVE FLUSH VOLUME OF ALL WATER CLOSETS SHALL NOT EXCEED 1.28 GALLONS PER FLUSH. TANK -TYPE WATER CLOSETS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATER SENSE SPECIFICATION FOR TANK-TYPE TOILETS. NOTE: THE EFFECTIVE FLUSH VOLUME OF DUAL FLUSH TOILETS IS DEFINED AS THE COMPOSITE, AVERAGE FLUSH VOLUME OF TWO REDUCED FLUSHES AND ONE FULL FLUSH.

4.303.1.2 URINALS. THE EFFECTIVE FLUSH VOLUME OF URINALS SHALL NOT EXCEED 0.5 GALLONS PER FLUSH.

4.303.1.3 SHOWERHEADS:

4.303.1.3.1 SINGLE SHOWERHEAD. SHOWERHEADS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 2.0 GALLONS PER MINUTE AT 80 PSI. SHOWERHEADS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATER SENSE SPECIFICATION FOR SHOWERHEADS.

4.303.1.3.2 MULTIPLE SHOWERHEADS SERVING ONE SHOWER. WHEN A SHOWER IS SERVED BY MORE THAN ONE SHOWERHEAD, THE COMBINED FLOW RATE OF ALL SHOWERHEADS AND/OR OTHER SHOWER OUTLETS CONTROLLED BY A SINGLE VALVE SHALL NOT EXCEED 2.0 GALLONS PER MINUTE AT 80 PSI, OR THE SHOWER SHALL BE DESIGNED TO ALLOW ONLY ONE SHOWER OUTLET TO BE IN OPERATION AT A TIME. NOTE: A HAND-HELD SHOWER SHALL BE CONSIDERED A SHOWERHEAD.

4.303.1.4 FAUCETS:

4.303.1.4.1 RESIDENTIAL LAVATORY FAUCETS. THE MAXIMUM FLOW RATE OF RESIDENTIAL LAVATORY FAUCETS SHALL NOT EXCEED 1.5 GALLONS PER MINUTE AT 60 PSI. THE MINIMUM FLOW RATE OF RESIDENTIAL LAVATORY FAUCETS SHALL NOT BE LESS THAN 0.8 GALLONS PER MINUTE AT 20 PSI.

4.303.1.4.2 LAVATORY FAUCETS IN COMMON AND PUBLIC USE AREAS. THE MAXIMUM FLOW RATE OF LAVATORY FAUCETS INSTALLED IN COMMON AND PUBLIC USE AREAS (OUTSIDE OF DWELLINGS OR SLEEPING UNITS) IN RESIDENTIAL BUILDINGS SHALL
NOT EXCEED 0.5 GALLONS PER MINUTE AT 60 PSI.

4.303.1.4.3 METERING FAUCETS. METERING FAUCETS WHEN INSTALLED IN RESIDENTIAL BUILDINGS SHALL NOT DELIVER MORE THAN 0.25 GALLONS PER CYCLE.

4.303.1.4.4 KITCHEN FAUCETS. THE MAXIMUM FLOW RATE OF KITCHEN FAUCETS SHALL NOT EXCEED 1.8 GALLONS PER MINUTE AT 60 PSI. KITCHEN FAUCETS MAY TEMPORARILY INCREASE THE FLOW ABOVE THE MAXIMUM RATE, BUT NOT TO EXCEED 2.2 GALLONS PER MINUTE AT 60 PSI, AND MUST DEFAULT TO A MAXIMUM FLOW RATE OF 1.8 GALLONS PER MINUTE AT 60 PSI. NOTE: WHERE COMPLYING FAUCETS ARE UNAVAILABLE, AERATORS OR OTHER MEANS MAY BE USED TO ACHIEVE REDUCTION.

4.303.2 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS. PLUMBING FIXTURES AND FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE, AND SHALL MEET THE APPLICABLE STANDARDS REFERENCED IN TABLE 1401.1 OF THE CALIFORNIA PLUMBING CODE. SEC"NON 4.304

OUTDOOR WATER USE:

4.304.1 IRRIGATION CONTROLLERS. AUTOMATIC IRRIGATION SYSTEM CONTROLLERS FOR LANDSCAPING PROVIDED BY THE BUILDER AND INSTALLED AT THE TIME OF FINAL INSPECTION SHALL COMPLY WITH THE FOLLOWING:

1. CONTROLLERS SHALL BE WEATHER- OR SOIL MOISTURE-BASED CONTROLLERS
THAT AUTOMATICALLY ADJUST IRRIGATION IN RESPONSE TO CHANGES IN PLANTS' NEEDS AS WEATHER CONDITIONS CHANGE.
2. WEATHER-BASED CONTROLLERS WITHOUT INTEGRAL RAIN SENSORS OR COMMUNICATION SYSTEMS THAT ACCOUNT FOR LOCAL RAINFALL SHALL HAVE A SEPARATE WIRED OR WIRELESS RAIN SENSOR WHICH CONNECTS OR COMMUNICATES WITH THE CONTROLLER(S). SOIL MOISTURE-BASED CONTROLLERS ARE NOT REQUIRED TO HAVE RAIN SENSOR INPUT.
NOTE: MORE INFORMATION REGARDING IRRIGATION CONTROLLER FUNCTION AND SPECIFICATIONS IS AVAILABLE FROM THE IRRIGATION ASSOCIATION.

ENHANCED DURABILITY AND REDUCED MAINTENANCE:

4.406.1 RODENT PROOFING. ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS OR OTHER OPENINGS IN-SOLEBOTTOM PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR A SIMILAR METHOD ACCEPTABLE TO THE ENFORCING AGENCY.

CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING:

4.408.1 CONSTRUCTION WASTE MANAGEMENT. RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 70 PERCENT OF THE NON-HAZARDOUS CONSTRUCTION AND DEMOLITION WASTE IN ACCORDANCE WITH EITHER SECTION 4.408.2, 4.408.3 OR 4.408.4, OR MEET A MORE STRINGENT LOCAL CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT ORDINANCE. EXCEPTIONS:

1. EXCAVATED SOIL AND LAND-CLEARING DEBRIS.
2. ALTERNATE WASTE REDUCTION METHODS DEVELOPED BY WORKING WITH LOCAL AGENCIES IF DIVERSION OR RECYCLE FACILITIES CAPABLE OF COMPLIANCE WITH THIS ITEM DO NOT EXIST OR ARE NOT LOCATED REASONABLY CLOSE TO THE JOBSITE.
3. THE ENFORCING AGENCY MAY MAKE EXCEPTIONS TO THE REQUIREMENTS OF THIS SECTION WHEN ISOLATED JOB-SITES ARE LOCATED IN AREAS BEYOND THE HAUL BOUNDARIES OF THE DI VERSION FACILITY.

4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN. SUBMIT A CONSTRUCTION WASTE MANAGEMENT PLAN IN CONFORMANCE WITH ITEMS 1 THROUGH 5. THE CONSTRUCTION WASTE MANAGEMENT PLAN SHALL BE UPDATED AS NECESSARY AND SHALL BE AVAILABLE DURING CONSTRUCTION FOR EXAMINATION BY THE ENFORCING AGENCY.

1. IDENTIFY THE CONSTRUCTION AND DEMOLITION WASTE MATERIALS TO BE DIVERTED FROM DISPOSAL BY RECYCLING, REUSE ON THE PROJECT OR SALVAGE FOR FUTURE USE OR SALE. 2. SPECIFY IF CONSTRUCTION AND DEMOLITION WASTE MATERIALS WILL BE SORTED ON-SITE (SOURCE-SEPARATED) OR BULK MIXED (SINGLE STREAM).
3. IDENTIFY DIVERSION FACILITIES WHERE THE CONSTRUCTION AND DEMOLITION WASTE MATERIAL WILL BE TAKEN.
4. IDENTIFY CONSTRUCTION METHODS EMPLOYED TO REDUCE THE AMOUNT OF CONSTRUCTION AND DEMOLITION WASTE GENERATED.
5. SPECIFY THAT THE AMOUNT OF CONSTRUCTION AND DEMOLITION WASTE MATERIALS DIVERTED SHALL BE CALCULATED BY WEIGHT OR VOLUME, BUT NOT BY BOTH.

4.408.3 WASTE MANAGEMENT COMPANY. UTILIZE A WASTE MANAGEMENT COMPANY, APPROVED BY THE ENFORCING AGENCY, WHICH CAN PROVIDE VERIFIABLE DOCUMENTATION THAT THE PERCENTAGE OF CONSTRUCTION AND DEMOLITION WASTE MATERIAL DIVERTED FROM THE LANDFILL COMPLIES WITH SECTION 4.408.1. NOTE: THE OWNER OR CONTRACTOR MAY MAKE THE DETERMINATION IF THE CONSTRUCTION AND DEMOLITION WASTE MATERIALS WILL BE DIVERTED BY A WASTE MANAGEMENT COMPANY.

4.408.4 WASTE STREAM REDUCTION ALTERNATIVE. PROJECTS THAT GENERATE A TOTAL COMBINED WEIGHT OF CONSTRUCTION AND DEMOLITION WASTE DISPOSED OF IN LANDFILLS, WHICH DO NOT EXCEED FOUR (4) LBS./SQ. FT. OF THE BUILDING AREA SHALL MEET THE MINIMUM 70 PERCENT CONSTRUCTION WASTE REDUCTION REQUIREMENT IN SECTION 4.408.1.

4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. [HR] PROJECTS THAT GENERATE A TOTAL COMBINED WEIGHT OF CONSTRUCTION AND DEMOLITION WASTE DISPOSED OF IN LANDFILLS, WHICH DO NOT EXCEED TWO (2) POUNDS PER SQUARE FOOT OF THE BUILDING AREA, SHALL MEET THE MINIMUM 70-PERCENT CONSTRUCTION WASTE REDUCTION REQUIREMENT IN SECTION 4.408.1.

4.408.5 DOCUMENTATION. DOCUMENTATION SHALL BE PROVIDED TO THE ENFORCING AGENCY WHICH DEMONSTRATES COMPLIANCE WITH SECTION 4.408.2, ITEMS 1 THROUGH 5, SECTION 4.408.3 OR SECTION 4.408.4. NOTES:

1. SAMPLE FORMS FOUND IN "A GUIDE TO THE CALIFORNIA GREEN BUILDING STANDARDS CODE (RESIDENTIAL)" LOCATED AT WWW.HCD.CA.GOV/CALGREEN.HTML MAY BE USED TO ASSIST IN DOCUMENTING COMPLIANCE WITH THIS SECTION.
2. MIXED CONSTRUCTION AND DEMOLITION DEBRIS (C&D) PROCESSORS CAN BE LOCATED AT THE CALIFORNIA DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY (CALRECYCLE).

BUILDING MAINTENANCE AND OPERATION:

4.410.1 OPERATION AND MAINTENANCE MANUAL. AT THE TIME OF FINAL INSPECTION, A MANUAL, COMPACT DISC, WEB-BASED REFERENCE OR OTHER MEDIA ACCEPTABLE TO THE ENFORCING AGENCY WHICH INCLUDES ALL OF THE FOLLOWING SHALL BE PLACED IN THE BUILDING:

1. DIRECTIONS TO THE OWNER OR OCCUPANT THAT THE MANUAL SHALL REMAIN WITH THE BUILDING THROUGHOUT THE LIFE CYCLE OF THE STRUCTURE.
2. OPERATION AND MAINTENANCE INSTRUCTIONS FOR THE FOLLOWING:
   A. EQUIPMENT AND APPLIANCES, INCLUDING WATER-SAVING DEVICES AND SYSTEMS, HV AC SYSTEMS, WATER-HEATING SYSTEMS AND OTHER MAJOR APPLIANCES AND EQUIPMENT.
   B. ROOF AND YARD DRAINAGE, INCLUDING GUTTERS AND DOWNSPOUTS.
   C. SPACE CONDITIONING SYSTEMS, INCLUDING CONDENSERS AND AIR FILTERS.
   D. LANDSCAPE IRRIGATION SYSTEMS.
   E. WATER REUSE SYSTEMS.
3. INFORMATION FROM LOCAL UTILITY, WATER AND WASTE RECOVERY PROVIDERS ON METHODS TO FURTHER REDUCE RESOURCE CONSUMPTION, INCLUDING RECYCLE PROGRAMS AND LOCATIONS.
4. PUBLIC TRANSPORTATION AND/OR CARPOOL OPTIONS AVAILABLE IN THE AREA.
5. EDUCATIONAL MATERIAL ON THE POSITIVE IMPACTS OF AN INTERIOR RELATIVE HUMIDITY BETWEEN 30-60 PERCENT AND WHAT METHODS AN OCCUPANT MAY USE TO MAINTAIN THE RELATIVE HUMIDITY LEVEL IN THAT RANGE.
6. INFORMATION ABOUT WATER-CONSERVING LANDSCAPE AND IRRIGATION DESIGN AND CONTROLLERS WHICH CONSERVE WATER.
7. INSTRUCTIONS FOR MAINTAINING GUTTERS AND DOWNSPOUTS AND THE IMPORTANCE OF DIVERTING WATER AT LEAST 5 FEET AWAY FROM THE FOUNDATION.
8. INFORMATION ON REQUIRED ROUTINE MAINTENANCE MEASURES, INCLUDING, BUT NOT LIMITED TO, CAULKING, PAINTING, GRADING AROUND THE BUILDING, ETC.
9. INFORMATION ABOUT STATE SOLAR ENERGY AND INCENTIVE PROGRAMS AVAILABLE.
10. A COPY OF ALL SPECIAL INSPECTION VERIFICATIONS REQUIRED BY THE ENFORCING AGENCY OR THIS CODE. FIREPLACES

4.503.1 GENERAL. ANY INSTALLED GAS FIREPLACE SHALL BE A DIRECT-VENT SEALED-COMBUSTION TYPE. ANY INSTALLED WOOD-STOVE OR PELLET STOVE SHALL COMPLY WITH U.S. EPA PHASE II EMISSION LIMITS WHERE APPLICABLE. WOOD-STOVES, PELLET STOVES AND FIREPLACES SHALL ALSO COMPLY WITH APPLICABLE LOCAL ORDINANCES.

SECTION 4.504 POLLUTANT CONTROL:

4.504.1 COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. AT THE TIME OF ROUGH INSTALLATION, DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF WATER, DUST AND DEBRIS, WHICH MAY ENTER THE SYSTEM. 4.504.2 FINISH MATERIAL POLLUTANT CONTROL. FINISH MATERIALS SHALL COMPLY WITH THIS SECTION.

4.504.2.1 ADHESIVES, SEALANTS AND CAULKS. ADHESIVES, SEALANTS AND CAULKS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS OF THE FOLLOWING STANDARDS UNLESS MORE STRIN-GENT LOCAL OR REGIONAL AIR POLLUTION OR AIR QUALITY MANAGEMENT DISTRICT RULES APPLY:

1. ADHESIVES, ADHESIVE BONDING PRIMERS, ADHESIVE PRIMERS, SEALANTS, SEALANT PRIMERS, AND CAULKS SHALL COMPLY WITH LOCAL OR REGIONAL AIR POLLUTION CONTROL OR AIR QUALITYMANAGEMENT DISTRICT RULES WHERE APPLICABLE OR SCAQMD RULE 1168 VOC LIMITS, AS SHOWN IN TABLE 4.504.1 OR 4.504.2, AS APPLICABLE. SUCH PRODUCTS ALSO SHALL COMPLY WITH THE RULE 1168 PROHIBITION ON THE USE OF CERTAIN TOXIC COMPOUNDS (CHLOROFORM, ETHYLENE DICHLORIDE, METHYLENE CHLORIDE, PERCHLOROETHYLENE AND TRICHLOROETHYLENE), EXCEPT FOR AEROSOL PRODUCTS, AS SPECIFIED IN SUBSECTION 2 BELOW.
2. AEROSOL ADHESIVES, AND SMALLER UNIT SIZES OF ADHESIVES, AND SEALANT OR CAULKING COMPOUNDS (IN UNITS OF PRODUCT, LESS PACKAGING, WHICH DO NOT WEIGH MORE THAN 1 POUND AND DO NOT CONSIST OF MORE THAN 16 FLUID OUNCES) SHALL COMPLY WITH STATEWIDE VOC STANDARDS AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS, OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94507.

4.504.2.2 PAINTS AND COATINGS. ARCHITECTURAL PAINTS AND COATINGS SHALL COMPLY WITH VOC LIMITS IN TABLE 1 OF THE ARB ARCHITECTURAL SUGGESTED CONTROL MEASURE, AS SHOWN IN TABLE 4.504.3, UNLESS MORE STRINGENT LOCALLIMITS APPLY. THE VOC CONTENT LIMIT FOR COATINGS THAT DO NOT MEET THE DEFINITIONS FOR THE SPECIALTY COATINGS CATEGORIES LISTED IN TABLE 4.504.3 SHALL BE DETERMINED BY CLASSIFYING THE COATING AS A FLAT, NONFLAT OR NONFLAT-HIGH GLOSS COATING, BASED ON ITS GLOSS, AS DEFINED IN SUBSECTIONS 4.21, 4.36, AND 4.3 7 OF THE 2007 CALIFORNIA AIR RESOURCES BOARD, SUGGESTED CONTROL MEASURE, AND THE CORRESPONDING FLAT, NONFLAT OR NONFLAT-HIGH GLOSS VOC LIMIT IN TABLE 4.504.3 SHALL APPLY.

4.504.2.3 AEROSOL PAINTS AND COATINGS. AEROSOL PAINTS AND COATINGS SHALL MEET THE PRODUCT-WEIGHTED MIR LIMITS FOR ROC IN SECTION 94522(A)(3) AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS AND OZONE DEPLETING SUBSTANCES, IN SECTIONS 94522(C)(2) AND (D)(2) OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94520; AND IN AREAS UNDER THE JURISDICTION OF THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT ADDITIONALLY COMPLY WITH THE PERCENT VOC BY WEIGHT OF PRODUCT LIMITS OF REGULATION 8, RULE 49.

4.504.2.4 VERIFICATION. VERIFICATION OF COMPLIANCE WITH THIS SECTION SHALL BE PROVIDED AT THE REQUEST OF THE ENFORCING AGENCY. DOCUMENTATION MAY INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING:
1. MANUFACTURER'S PRODUCT SPECIFICATION.
2. FIELD VERIFICATION OF ON-SITE PRODUCT CONTAINERS.

4.504.3 CARPET SYSTEMS. ALL CARPET INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE TESTING AND PRODUCT REQUIREMENTS OF ONE OF THE FOLLOWING:
1. CARPET AND RUG INSTITUTE'S GREEN LABEL PLUS PROGRAM.
2. CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES U SING ENVIRONMENTAL CHAMBERS," VERSION 1.1, FEBRUARY 2010 (ALSO KNOWN AS SPECIFICATION 01350.)
3. NSF/ANSI 140 AT THE GOLD LEVEL.
4. SCIENTIFIC CERTIFICATIONS SYSTEMS INDOOR ADVANTAGE™GOLD.

4.504.3.1 CARPET CUSHION. ALL CARPET CUSHION INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE REQUIREMENTS OF THE CARPET AND RUG INSTITUTE'S GREEN LABEL PROGRAM.

4.504.3.2 CARPET ADHESIVE. ALL CARPET ADHESIVE SHALL MEET THE REQUIREMENTS OF TABLE 4.504.1.

4.504.4 RESILIENT FLOORING SYSTEMS. WHERE RESILIENT FLOORING IS I I INSTALLED, AT LEAST 80 PERCENT OF FLOOR AREA RECEIVING RESILIENT FLOORING SHALL COMPLY WITH ONE OR MORE OF THE FOLLOWING:
1. VOC EMISSION LIMITS DEFINED IN THE COLLABORATIVE FOR HIGH PERLORMANCE SCHOOLS (CHPS) HIGH PERLORMANCE PRODUCTS DATABASE.
2. PRODUCTS COMPLIANT WITH CHPS CRITERIA CERTIFIED UNDER THE GREENGUARD CHILDREN & SCHOOLS PROGRAM.
3. CERTIFICATION UNDER THE RESILIENT FLOOR COVERING INSTITUTE (RFCI) FLOORSCORE PROGRAM.
4. MEET THE CALIFOMIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES U SING ENVIRONMENTAL CHAMBERS," VERSION 1.1, FEBRUARY 2010 (ALSO KNOWN AS SPECIFICATION 01350).

4.504.5 COMPOSITE WOOD PRODUCTS. HARDWOOD PLYWOOD, PARTICLEBOARD AND MEDIUM DENSITY FIBERBOARD COMPOSITE WOOD PRODUCTS USED ON THE INTERIOR OR EXTERIOR OF THE BUILDING SHAH MEET THE REQUIREMENTS FOR FORMALDEHYDE AS SPECIFIED IN ARB'S AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD (17 CCR 93120 ET SEQ.), BY OR BEFORE THE DATES SPECIFIED IN THOSE SECTIONS, AS SHOWN IN TABLE 4.504.5.

4.504.5.1 DOCUMENTATION. VERIFICATION OF COMPLIANCE WITH THIS SECTION SHALL BE PROVIDED AS REQUESTED BY THE ENFORCING AGENCY. DOCUMENTATION SHALL INCLUDE AT LEAST ONE OF THE FOLLOWING:
1. PRODUCT CERTIFICATIONS AND SPECIFICATIONS.
2. CHAIN OF CUSTODY CERTIFICATIONS.
3. PRODUCT LABELED AND INVOICED AS MEETING THE COMPOSITE WOOD PRODUCTS REGULATION (SEE CCR, TITLE 17, SECTION 93120, ET SEQ.).
4. EXTERIOR GRADE PRODUCTS MARKED AS MEETING THE PS-1 OR PS-2 STANDARDS OF THE ENGINEERED WOOD ASSOCIATION, THE AUSTRALIAN ASINZS 2269 OR EUROPEAN 636 3S STANDARDS.
5. OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY. SECTION 4.505 INTERIOR MOISTURE CONTROL 4.505.1 GENERAL. BUILDINGS SHALL MEET OR EXCEED THE PROVISIONS OF THE CALIFORNIA BUILDING STANDARDS CODE.

4.505.2 CONCRETE SLAB FOUNDATIONS. CONCRETE SLAB FOUNDATIONS REQUIRED TO HAVE A VAPOR RETARDER BY THE CALIFORNIA BUILDING CODE, CHAPTER 19 OR CONCRETE SLAB-ON-GROUND FLOORS REQUIRED TO HAVE A VAPOR RETARDER BY THE CALIFORNIA RESIDENTIAL CODE, CHAPTER 5, SHALL ALSO COMPLY WITH THIS SECTION. 4.505.2.1 CAPILLARY BREAK. A CAPILLARY BREAK SHALL BE INSTALLED IN COMPLIANCE WITH AT LEAST ONE OF THE FOLLOWING:
1. A 4-INCH-THICK (101.6 RNRN) BASE OF L/ZINCH (12.7 MM) OR LARGER CLEAN AGGREGATE SHALL BE PROVIDED WITH A VAPOR RETARDER IN DIRECT CONTACT WITH CONCRETE AND A CONCRETE MIX DESIGN, WHICH WILL ADDRESS BLEEDING, SHRINKAGE, AND CURLING, SHALL BE USED. FOR ADDITIONAL INFORMATION, SEE AMERICAN CONCRETE INSTITUTE, ACI 302.2R-06.
2. OTHER EQUIVALENT METHODS APPROVED BY THE ENFORCING AGENCY.
3. A SLAB DESIGN SPECIFIED BY A LICENSED DESIGN PROFESSIONAL.
   4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS. 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. EQUIVALENT MOISTURE VERIFICATION METHODS MAY BE APPROVED BY THE ENFORCING AGENCY AND SHALL SATISFY REQUIREMENTS FOUND IN SECTION 101.8 OF THIS CODE.
   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 PERFORMED 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.

SECTION 4.506 INDOOR AIR QUALITY AND EXHAUST:

4.506.1 BATHROOM EXHAUST FANS. EACH BATHROOM SHALL BE MECHANICALLY VENTILATED AND SHALL COMPLY WITH THE FOLLOWING:
1. FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING.
2. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL.
   A. HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF:C:; 70 PERCENT TO A MAXIMUM OF 80 PERCENT. A HUMIDITY CONTROL MAY UTILIZE MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT.
   B. A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO THE EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL (I.E., BUILT-IN).

NOTES:
1. FOR THE PURPOSES OF THIS SECTION, A BATHROOM IS A ROOM WHICH CONTAINS A BATHTUB, SHOWER, OR TUB/SHOWER COMBINATION.
2. LIGHTING INTEGRAL TO BATHROOM EXHAUST FANS SHALL COMPLY WITH THE CALIFORNIA ENERGY CODE.

SECTION 4.507 ENVIRONMENTAL COMFORT: I I 4.507.1 RESERVED

4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN. HEATING AND AIR-CONDITIONING SYSTEMS SHALL BE SIZED, DESIGNED AND HAVE THEIR EQUIPMENT SELECTED USING THE FOLLOWING METHODS: 30
1. THE HEAT LOSS AND HEAT GAIN IS ESTABLISHED ACCORDING TO ANSI! ACCA 2 MANUAL J-2004 (RESIDENTIAL LOAD CALCULATION), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.
2. DUCT SYSTEMS ARE SIZED ACCORDING TO ANSI! ACCA 1 MANUAL D-2009 (RESIDENTIAL DUCT SYSTEMS), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.
3. SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI! ACCA 3 MANUAL S-2004 (RESIDENTIAL EQUIPMENT SELECTION) OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

EXCEPTION: USE OF ALTERNATE DESIGN TEMPERATURES NECESSARY TO ENSURE THE SYSTEMS FUNCTION ARE ACCEPTABLE.

TABLE 4.504.1
ADHESIVE VOC LIMIT[1,2]
Less Water and Less Exempt Compounds in Grams per Liter

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesive	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesives not specifically listed	50
SPECIALTY APPLICATIONS	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
SUBSTRATE SPECIFIC APPLICATIONS	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

1. If an adhesive is used to bond dissimilar substrates together, the adhesive with the highest VOC content shall be allowed.
2. For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule 1168.

TABLE 4.504.2
SEALANT VOC LIMIT
Less Water and Less Exempt Compounds in Grams per Liter

SEALANTS	CURRENT VOC LIMIT
Architectural	250
Marine deck	760
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420
SEALANT PRIMERS	
Architectural Nonporous Porous	 250 775
Modified bituminous	500
Marine deck	760
Other	750

TABLE 4.504.3
VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[2,3]
Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds

COATING CATEGORY	EFFECTIVE 1/1/2010	EFFECTIVE 1/1/2012
Flat coatings	50	
Nonflat coatings	100	
Nonflat-high gloss coatings	150	
SPECIALTY COATINGS		
Aluminum roof coatings	400	
Basement specialty coatings	400	
Bituminous roof coatings	50	
Bituminous roof primers	350	
Bond breakers	350	
Concrete curing compounds	350	
Concrete/masonry sealers	100	
Driveway sealers	50	
Dry fog coatings	150	
Faux finishing coatings	350	
Fire resistive coatings	350	
Floor coatings	100	
Form-release compounds	250	
Graphic arts coatings (sign paints)	500	
High temperature coatings	420	
Industrial maintenance coatings	250	
Low solids coatings[1]	120	
Magnesite cement coatings	450	
Mastic texture coatings	100	
Metallic pigmented coatings	500	
Multicolor coatings	250	
Pretreatment wash primers	420	
Primers, sealers, and undercoaters	100	
Reactive penetrating sealers	350	
Recycled coatings	250	
Roof coatings	50	
Rust preventative coatings	400	250
Shellacs Clear Opaque	 730 550	
Specialty primers, sealers and undercoaters	350	100
Stains	250	
Stone consolidants	450	
Swimming pool coatings	340	
Traffic marking coatings	100	
Tub and tile refinish coatings	420	
Waterproofing membranes	250	
Wood coatings	275	
Wood preservatives	350	
Zinc-rich primers	340	

1. Grams of VOC per liter of coating, including water and including exempt compounds.
2. The specified limits remain in effect unless revised limits are listed in subsequent columns in the table.
3. Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2008. More information is available from the Air Resources Board.

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TABLE 4.504.5
FORMALDEHYDE LIMITS[1]
Maximum Formaldehyde Emissions in Parts per Million

PRODUCT	CURRENT LIMIT
Hardwood plywood veneer core	0.05
Hardwood plywood composite core	0.05
Particleboard	0.09
Medium density fiberboard	0.11
Thin medium density fiberboard[2]	0.13

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PLAN PREPARED FOR:
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REVISION LOG

REV.	DESCRIPTION	DATE

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PROJECT NO. —
FILE NAME 2013 CA GREEN BLDG STANDARDS CODE.DWG
DRAWN BY JJK
DATE 12/14/2015 1:19 PM

SHEET TITLE:
RESIDENTIAL MANDATORY MEASURES

SHEET NUMBER:
GC-1

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CODES AND STANDARDS

ALL WORK SHALL CONFORM WITH THE:
2013 CBC (2012 IBC AND CALIFORNIA AMENDMENTS)
2013 CEC (2011 NEC AND CALIFORNIA AMENDMENTS)
2013 CMC (2012 IAPMO UMC AND CALIFORNIA AMENDMENTS)
2013 CPC (2012 IAPMO UPC AND CALIFORNIA AMENDMENTS)
2013 CENC AND T-24.

SECTION 120

1. 1403(D)(1) ALL SWINGING DOORS AND WINDOWS EXPOSED TO AMBIENT CONDITIONS OR TO UNCONDITIONED AREAS, SUCH AS GARAGES, SHALL BE FULLY WEATHER-STRIPPED, GASKETED OR OTHERWISE TREATED TO LIMIT INFILTRATION.
2. 1403(D)(1) ALL MANUFACTURED WINDOWS AND SLIDING GLASS DOORS SHALL MEET THE AIR INFILTRATION STANDARDS OF THE AMERICAN NATIONAL STANDARDS INSTITUTE WHEN TESTED IN ACCORDANCE WITH ASTM E282-73 AND SHALL BE CERTIFIED AND LABELED.
3. 1403(D)(2) ALL FAN SYSTEMS EXHAUSTING AIR FROM THE BUILDING ENVELOPE TO THE OUTSIDE SHALL BE PROVIDED WITH BACK-DRAFT DAMPERS OR AUTOMATIC DAMPERS.
4. 1404(D)(1) ALL TRANSVERSE DUCT, PLENUM, AND FITTED JOINTS SHALL BE SEALED WITH PRESSURE SENSITIVE TAPE OR MASTIC TO PREVENT AIR LOSS.
5. 1401(D)(2) INSULATION OF ALL DUCTS SHALL CONFORM TO THE PROVISIONS OF SECTION 1005 OF THE UNIFORM MECHANICAL CODE, CURRENT EDITION.
6. 1406(A) INDICATE THE MAKE AND MODEL NUMBER OF THE HOT WATER HEATER ON THE PLANS. THE UNIT MUST BE CERTIFIED BY THE CALIFORNIA ENERGY COMMISSION. (AMERICAN APPLIANCE G.V.F. 433-T).
7. 1406(D) RECIRCULATING HOT WATER PIPING IN ATTICS, GARAGES, CRAWL SPACES, OR UNHEATED SPACES OTHER THAN BETWEEN FLOORS OR IN INTERIOR WALLS SHALL BE INSULATED TO PROVIDE MAXIMUM LOSS OF NOT MORE THAN 50 BTU/HR. PER LINEAR FOOT FOR LARGER SIZES.
8. 1406(F) SHOWER HEADS, LAVATORY AND SINK FAUCETS MUST BE OF A MAKE AND MODEL NUMBER CERTIFIED BY THE CALIFORNIA ENERGY COMMISSION.

CARPENTRY

1. WOOD FRAMING MEMBERS TO BE AS FOLLOWS OR EQUAL EXCEPT AS SHOWN ON DRAWINGS:

A. POSTS	NO. 2 DOUGLAS FIR
B. COLUMNS	NO. 2 DOUGLAS FIR
C. JOISTS, BEAMS, AND STRINGERS	NO. 2 DOUGLAS FIR
D. BLOCKING, BRIDGING, 2X4 STUDS	UTILITY GRADE DOUGLAS FIR
E. STUDS 2X6 AND LARGER	NO. 2 DOUGLAS FIR
F. SILLS, SLEEPERS, PLATES, AND NAILING BLOCKS ON OR EMBEDDED IN CONCRETE	PRESSURE TREATED DOUGLAS FIR
G. DECKING (NOT EXPOSED)	UTILITY GRADE DOUGLAS FIR
H. DECKING (EXPOSED)	NO. 2 DOUGLAS FIR
I. RAFTERS	NO. 2 DOUGLAS FIR
J. HEADERS (INTERIOR)	NO. 2 DOUGLAS FIR
K. HEADERS (EXTERIOR)	NO. 2 DOUGLAS FIR

3. OTHER SIZES AS NOTED ON PLANS
4. ALL WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
5. ALL MISCELLANEOUS STEEL TO BE A-36, FABRICATED IN ACCORDANCE WITH AISC.
6. STEEL BOLTS TO BE A-307 OR BETTER. USE A-36 THREADED ROD WHEN COUPLING BOLT TO HOLDOWN & WHEN EPOXY IS REQUIRED.
7. ALL WELDING TO BE WITH E60XX OR E70XX ELECTRODES IN ACCORDANCE WITH AWS. (CERTIFIED WELDER).
8. ALL JOISTS OR BEAMS FRAMING INTO (NOT BEARING ON) BEAMS, HEADERS OR GIRDERS SHALL BE SUPPORTED WITH "U" TYPE "SIMPSON" OR EQUAL JOIST BEAM HANGERS. ALL POST-BEAM AND POST-FOOTING CONNECTIONS TO BE MADE WITH "SIMPSON" POST CAP AND POST BASE, AS REQUIRED.
9. BLOCK SOLID BETWEEN JOISTS AND RAFTERS AT BEARING WALLS. CROSS BRIDGE OR SOLID BLOCKING AT 8'-0" ON CENTER MAXIMUM WHEN DEPTH THICKNESS RATIO IS SIX TO ONE.
10. ALL PLYWOOD TO BE STANDARD GRADE WITH EXTERIOR GLUE. MINIMUM ROOF NAILING TO BE 8D AT 6-6-12" ON CENTER. MINIMUM FLOOR NAILING TO BE 10D AT 6-6-10" ON CENTER. STAGGER JOINTS ½". PLYWOOD INDEX I.D. FOR FLOORS 40/20 & ROOFS 32/16. CBC 23 03
11. DOUBLE FLOOR JOISTS UNDER BEARING PARTITIONS. CBC 2308.8.4
12. BUILDER SHALL PROVED A MINIMUM OF 22"X30" ACCESS READILY ACCESSIBLE TO ATTIC SPACES AND A MINIMUM OF 30"X30" ACCESS WITH ATTIC MOUNTED FURNACE. 30" HEADSPACE IS REQUIRED. UMC 708.
13. MINIMUM CEILING HEIGHT IN HABITABLE AREAS TO BE 7'-6". HALLS MAY BE REDUCED TO 7'-0".
14. MINIMUM WIDTH FOR A CORRIDOR IS 36 INCHES. CBC 1133B.3
15. ALL EXTERIOR DOORS OR DOORS TO UNHEATED SPACES TO BE WEATHER-STRIPPED AND HAVE A SOLID CORE.
16. BUILDER TO PROVIDE VAPOR BARRIERS FOR FLOORS AND CEILINGS OF 15 LB. BUILDING PAPER OR KRAFT PAPER, FOIL BACK OR KRAFT BACK INSULATION AND 4 MIL POLYETHYLENE ON WARM SIDE OF INSULATION. REQUIRED TO 1 PERM.
17. SUPPORTING COLUMNS AND OTHER SUPPORTING ELEMENTS IN GARAGE(S) AND CARPORT(S) BENEATH ANOTHER STORY SHALL BE ONE-HOUR FIRE RESISTIVE CONSTRUCTION AND ARE JACKETED CBC 714 AND 721.2.4.3
18. INSTALL TRUSS TIE-DOWNS AT EACH RAFTER TAIL, "SIMPSON" H-1 CLIPS.
19. DECK AND BALCONY GUARDRAILS TO BE MINIMUM OF 36" HIGH AND OPEN GUARDRAILS AND STAIR RAILING SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL DESIGN SUCH THAT NO OBJECT 4" IN DIAMETER CAN PASS THROUGH. CBC 1009
20. STAIRWAY TO HAVE MAXIMUM RISE 7" AND MINIMUM RUN 11" CBC 1009.3. PROVIDE HANDRAIL FOR STAIRS WITH 4 OR MORE RISERS, GRIP PORTION OF HANDRAIL SHALL BE GREATER THAN 1-1/4" AND LESS THAN OR EQUAL TO 2" IN CROSS SECTIONAL DIMENSIONS CBC 1012, GUARDRAILS ARE REQUIRED FOR STAIRS AND PORCHES OVER 30" ABOVE GRADE CBC 1013. MINIMUM HEADROOM 80" CBC 1009.2. MINIMUM WIDTH 36". CBC 1009.1.
21. GUARDRAILS, STAIR HANDRAILS, OR BALCONY RAILING SHALL BE DESIGNED TO RESIST A HORIZONTAL FORCE OF 50 LBS. PER LINEAL FOOT APPLIED AT THE TOP OF THE RAILING CBC 1607A.7
22. MAXIMUM FLOOR LEVEL CHANGE AT DOOR IS 0.75" (½" HANDICAPPED ACCESS REQUIRED) EXCEPT IF STAIRS OR WHEN EXTERIOR LANDINGS ARE USED AND DOOR DOES NOT SWING OVER TOP STEP. CBC 1133B.2.4.
23. SILLS OF NON-BEARING PARTITIONS OR NON-SHEAR PARTITIONS MAY BE ATTACHED TO CONCRETE SLAB WITH RAMSET PINS #3320 OR #3348 AT 2'-0" ON CENTER. CHARGE TO BE USED SHALL BE DETERMINED BY DENSITY OF SLAB.
24. PROVIDE BRACING FOR EXTERIOR AND MAIN CROSS-STUD PARTITIONS. (FOR CONVENTIONAL LIGHT FRAME CONSTRUCTION ONLY) CBC 2308.9.3
25. BEARING WALLS SHALL BE BRACED AT EACH END OF OR AS NEAR AS POSSIBLE, AT EVERY 25' LINEAL WALL. THIS 1X6 NOTCHED BRACING TO RUN DIAGONALLY IN A STRAIGHT LINE FROM TOP PLATE TO THE BOTTOM PLATE AT AN ANGLE AS NEAR AS POSSIBLE TO 45 DEGREES BUT ALWAYS AT SUFFICIENT ANGLES TO INCLUDE 4 STUD SPACES.
26. PROVIDE LATERAL CROSS-BRACE AT PLATE LINE OF GARAGE (FOR CONVENTIONAL LIGHT FRAME CONSTRUCTION ONLY).
27. MANUFACTURERS CERTIFICATION OF GLU-LAM BEAMS SHALL BE PROPERLY IDENTIFIED FOR THE LOCATION AND SPECIFIC JOB SITE AT THE TIME OF INSPECTIONS CBC 2303.1.3.
28. ALL PLUMBING WALLS TO BE OF 2X6 MATERIALS EXCEPT WHERE NECESSARY.
29. ALL LUMBER SHALL HAVE A GRADE MARKED WITH A STAMP OF THE ASSOCIATION COVERING THE SPECIES AND UNDER WHOSE GRADING RULES IT WAS PRODUCED PER CBC 2303.1.1.
30. TRUSSES TO BE FABRICATED IN A SHOP OF AN I.C.C. APPROVED FABRICATOR IN ACCORDANCE WITH CBC 2303.4 AND 1704A.2.2
31. LAP ALL DOUBLE TOP PLATES PER FRAMING PLAN AT SPLICES.
32. SILLS TO BE DF PRESSURE-TREATED AT CONCRETE CBC 2304.11.2.4.
33. FOUNDATION VENTS EQUAL TO ONE SQUARE FOOT FOR EACH 150 SQUARE FEET OF UNDERFLOOR AREA CBC 1203.3
34. ACCESSIBLE WATER CLOSET COMPARTMENTS MUST HAVE 36" WIDTH AND 48" CLEAR IN FRONT OF THE WATER CLOSET. CBC 11 27A.2.1
35. RAFTERS SPANS SHALL COMPLY WITH AF&PA SPAN TABLES FOR JOISTS AND RAFTERS AND CBC TABLES 2308.10.3 (1-6)
36. FLOOR JOISTS SHALL COMPLY WITH SPAN CBC TABLES 2308.8 (1) & (2).
37. CEILING JOIST SPANS SHALL COMPLY WITH CBC TABLES 2308.10.2 (1) & (2).
38. PROVIDE DRAFT STOPS AT ALL DUCTS, VENTS, FIREPLACE FLUE, AND VERTICAL FRAMED SHAFTS AS PER CBC 717.3
39. PROVIDE FIRE BLOCKING AT FLOOR, CEILING COVES AND SOFFITS AS PER UMC 708.2.
40. PROVIDE WEATHER PROTECTION PER CBC 1405.2.
41. ALL NAILING SHALL BE IN COMPLIANCE WITH CBC TABLE 2304.9.1.
4. PROVIDE FIRESTOPS PER CBC 708 INCLUDING BUT NOT LIMITED TO CONCEALED SPACES OF STUD WALLS, INCLUDING FURRED AREAS WITH CONCEALED SPACES AT CEILING AND FLOOR LEVELS, AND AT 10' INTERVALS ALONG THE WALL LENGTH. ALSO PROVIDE FIRE STOPS AT ALL OPENINGS AROUND VENTS, PIPES DUCTS, CHIMNEYS, FIREPLACES, AND SIMILAR OPENINGS WHICH AFFORD PASSAGE OF FIRE BETWEEN FLOORS TO CEILINGS OR ATTICS
5. FIREPLACES: ALL FIREPLACES SHALL HAVE APPROVED CLOSEABLE METAL GLASS DOORS. OUTSIDE COMBUSTION AIR IS NOT REQUIRED ON INTERIOR FIREPLACES INSTALLED OVER A CONCRETE SLAB

ROOFING

1. IN ALL AREAS WHERE FIRE PROTECTION IS PROVIDED BY CALIFORNIA DEPARTMENT OF FORESTRY, THE ROOF COVERING SHALL BE MINIMUM CLASS "C" LISTED OR NON-COMBUSTIBLE TILE. CBC SECTION 1505
2. IN CALIFORNIA DEPARTMENT OF FORESTRY FIRE PROTECTION AREAS, THE INSTALLER OF THE ROOF COVERING SHALL PROVIDE CERTIFICATION TO THE BUILDING OWNER, AND TO THE INSPECTION AUTHORITY HAVING JURISDICTION.
3. ALL ROOFING SHALL BE APPLIED ACCORDING TO MANUFACTURERS RECOMMENDATIONS OVER A 15 LB ASPHALT FELT DRY SHEET. USE 30 LB. FELT AT CLAY OR CONCRETE TILE ROOFING. WOOD SHAKES TO BE INTERLACED WITH AN 18" WIDE STRIP OF 30 LB A.S.F.
4. ROOF COVERINGS AND INSTALLATION SHALL CONFORM TO CBC 1507 AND TABLES 1507.3.7, 1507.4.3(1-2), 1507.8
5. ALL FLASHINGS TO BE IN COMPLIANCE WITH CBC 1503.2 & 1507.
6. PROVIDE RAFTER TIES AT EXPOSED ROOF (PITCHED CEILING), EITHER MECHANICAL TIES AT RIDGE, 2 FT. O.C. OR EQUIVALENT MATERIAL CBC 2308.10.4.

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7. ROOF BRACING AND PURLINS SHALL BEAR TO PARTITIONS CBC 2308.10.5

SHEET METAL

1. PROVIDE AND INSTALL SHEET METAL DUCTS FROM ALL HOODS AND EXHAUST FANS TO OUTSIDE
2. ALL REQUIRED FLASHINGS TO BE 26 GA. GALVANIZED METAL, INCLUDING GUTTERS AND DOWNSPOUTS.
3. HEATING DUCTS TO BE INSTALLED WITHOUT IMPINGEMENT ON BUILDING SURFACE.
4. ALL METHODS OF FLASHING AND COUNTER FLASHING CHIMNEY, PARAPETS, BALCONIES, LANDING, EXTERIOR STAIRWAYS, ROOF TO WALL CONNECTIONS SHALL BE IN COMPLIANCE WITH CBC 1507.5.6
5. PROVIDE AN APPROVED FLASHING FOR EXTERIOR OPENINGS AND PARAPET WALLS CBC 1405.10.2

PLUMBING

1. PROVIDE AND INSTALL PLUMBING AND FIXTURES AS INDICATED ON PLANS ACCORDING TO STATE AND LOCAL PLUMBING CODES
2. NO PLUMBING VENTS VENTS ARE TO BE LOCATED WITHIN 3 FEET FROM A PROPERTY LINE.
3. WATER CLOSETS TO BE WATER SAVER TYPES: AMERICAN STANDARD #2122.448 OR EQUAL.
4. PROVIDE INSECT AND RODENT PROOFING WHERE ALL PLUMBING, WIRING AND VENTS PASS THROUGH THE PLATE
5. PROVIDE A WATER HEATER WITH A PRESSURE RELIEF VALVE HAVING A FULL SIZED DRAIN OF GALVANIZED STEEL OR HARD DRAWN COPPER TO THE OUTSIDE OF THE BUILDING WITH THE END NOT MORE THAN 2 FEET OR LESS THAN 6" ABOVE GRADE, POINTING DOWNWARD, THE TERMINAL END BEING UNTHREADED. UPC 1007(E)
6. WATER HEATERS CAPABLE OF IGNITING FLAMMABLE VAPORS SHALL BE INSTALLED ON AND 18" HIGH PLATFORM IF LOCATED IN A RESIDENTIAL GARAGE. ALL WATER HEATERS WITHIN A CABINET SHALL HAVE COMBUSTION AIR AS REQUIRED
7. PROVIDE SEISMIC ANCHOR OR STRAP AND WRAP WATER HEATER
8. LAVATORY / SINK FIXTURES FLOW SHALL NOT EXCEED 2.2 GALLONS PER MINUTE AT 40 PSI
9. WATER HEATER EQUIPMENT CERTIFIED BY CEC (2-5307)(A) TITLE 24 CAC
10. NO GAS PIPING SHALL BE INSTALLED IN OR ON THE GROUND, UNDER ANY BUILDING OR STRUCTURE. ALL EXPOSED GAS PIPING SHALL BE KEPT AT LEAST 6" ABOVE GRADE OR STRUCTURE
11. SHOWER STALL MUST CONFORM TO THE REQUIREMENTS OF UPC (1024 IN.) (THRESHOLD 2" - 9" DEEP)
12. MAIN PLUMBING DRAIN SIZE AND LOCATION SHALL CONFORM TO UPC (FOUR WATER CLOSETS REQUIRE A 4" DIAMETER DRAIN PIPING) (PIPING SHALL BE PVC)
13. WATER PRESSURE NOT TO EXCEED 80 PSI. IF WATER PRESSURE EXCEEDS 80 PSI OR AS DETERMINED BY BUILDING OFFICIALS, A PRESSURE RELIEF VALVE (PRV) SHALL BE USED
14. ALL OVERHEAD POTABLE WATER PIPING, AND ANY BRANCH FEED PIPES LOCATED IN OUTSIDE WALLS SHALL BE CONSTRUCTED OF TYPE I RIGID COPPER
15. OVERHEAD POTABLE WATER PIPING LOCATED IN ATTIC SPACES, IN UNDER FLOOR AREAS, AND EXTERIOR WALLS SHALL BE COVERED WITH INSULATION PROVIDING A MINIMUM RESISTANCE FACTOR OF R-3 OR GREATER. THE R-3 PIPE INSULATION SHALL BE IN ADDITION TO WALL INSULATION REQUIRED BY CALIFORNIA ENERGY STANDARDS
16. ALL OVERHEAD POTABLE WATER PIPING, AND ANY BRANCH FEED PIPES LOCATED IN OUTSIDE WALLS SHALL BE CONSTRUCTED OF TYPE "L" PEX
17. WHERE CONDENSATE OR DEFROST LIQUIDS ARE GENERATED IN AN ATTIC OR FURRED SPACE AND DAMAGE MAY RESULT FROM OVERFLOW, A SECONDARY WATER-TIGHT PAN OF CORROSION RESISTANT METAL SHALL BE INSTALLED BENEATH THE COOLING COIL OR UNIT TOP TO CATCH THE OVERFLOW CONDENSATE. THE PAN SHALL BE PROVIDED WITH A MINIMUM 3/4" Ø DRAIN WHICH IS TRAPPED AND VENTED PER THE UPC AND SHALL BE DISCHARGED AT A POINT WHICH CAN BE READILY OBSERVED [CBC 1203]
18. HOT WATER, COLD WATER AND GAS PIPING SHALL BE BONDED TO MAIN ELECTRICAL PANEL IN AN APPROVED MANNER [NEC 250-80]
19. INDIRECT WASTE LINES SHALL BE DISCHARGED INTO THE BUILDING DRAINAGE SYSTEM BY MEANS OF AN AIR GAP.

UTILITY

1. CLOTHES DRYER SHALL BE VENTED TO EXTERIOR OF BUILDING
2. L.P.G. APPLIANCES SHALL NOT BE IN A BELOW GROUND PIT, BASEMENT OR OTHER SIMILAR LOCATIONS
3. APPLIANCES INSTALLED IN ABOVE GRADE UNDER FLOOR SPACE OR BASEMENT SHALL BE PROVIDED WITH AN APPROVED MEANS FOR REMOVAL OF UNBURNED GAS
4. APPLIANCES GENERATING A GLOW, SPARK OR FLAME MUST BE AT LEAST 18 INCHES ABOVE FLOOR LEVEL IN A GARAGE
5. PROVIDE COMBUSTION AIR OPENINGS WITHIN 12" OF THE FLOOR AND CEILING FOR GAS BURNING EQUIPMENT
6. GAS COOKING APPLIANCES SHALL HAVE INTERMITTENT IGNITION DEVICES. SEC. 2-3552(I) TITLE 24 CMC

HEATING AND AIR CONDITIONING

1. DUE TO CLIMACTIC VARIATIONS IN LOCATION, BUILDER OR HEATING CONTRACTOR TO PROVIDE HEAT LOSS CALCULATIONS AND LAYOUT.
2. SPECIFY HEATING TYPE AND FUEL AS SELECTED BY OWNER. BUILDER TO MAKE NECESSARY CHANGES IN PLANS TO ACCOMMODATE CHIMNEYS, VENTS, ETC. TO BE LOCATED AND INSTALLED AS REQUIRED.
3. ALL DUCTS TO BE INSTALLED WITHOUT IMPINGEMENT ON BUILDING SURFACES.
4. PROVIDE FURNACE ACCESS AND CLEARANCE AS REQUIRED BY 1997 UMC AND OTHER APPLICABLE CODES.
5. BUILDER TO PROVIDE ORIGINAL OCCUPANT WITH A LIST OF HEATING, COOLING, WATER HEATING AND LIGHTING SYSTEMS AND CONSERVATION OR SOLAR DEVICES.
6. HEATING SYSTEM TO PROVIDE 70° F @ 3'-0" ABOVE FLOOR IN EACH HABITABLE ROOM. CBC 310.11
7. WARM AIR FURNACES ARE NOT PERMITTED IN A BEDROOM, BATHROOM, OR CLOSETS.
8. THERMOSTATICALLY CONTROLLED HEATING AND COOLING SYSTEMS (EXCEPT HEAT PUMPS) SHALL HAVE AN AUTOMATIC THERMOSTAT WITH A CLOCK MECHANISM IN WHICH THE OCCUPANT CAN MANUALLY PROGRAM TO AUTOMATICALLY SET BACK THE THERMOSTATS SET POINTS FOR AT LEAST 2 PERIODS WITHIN 24 HOURS.
9. FOR FURNACE AND WATER-HEATERS LOCATED IN ATTIC OR UNDER-FLOOR SPACES PROVIDE THE FOLLOWING :
   A. AN ACCESS OPENING AND PASSAGE WAY OF SUFFICIENT SIZE TO PERMIT REMOVAL OF THE LARGEST PIECE OF THE FURNACE OR WATER HEATER (30" X 30" MIN.) ACCESS OPENING TO BE WITHIN 20' OF UNIT.
   B. ATTIC PASSAGE WAY TO HAVE CONTINUOUS FLOORING, 24" WIDE MINIMUM.
   C. A LEVEL WORKING PLATFORM OF NOT LESS THAN 30" IN DEPTH IN FRONT OF FIREBOX OR FURNACE OR IF FURNACE TEMPERATURE LIMIT CONTROL, VENT COLLAR, AIR FILTER, FUEL CONTROL VALVE, OR AIR HANDLING UNIT IS NOT SERVICEABLE FROM FIREBOX SIDE A CONTINUOUS FLOOR NOT LESS THAN 24" IN WIDTH SHALL BE PROVIDED FROM THE PLATFORM, FIREBOX SIDE, TO AND IN FRONT OF THIS EQUIPMENT.
   D. UNDER FLOOR FURNACE IS SUPPORTED FROM THE GROUND SHALL REST ON A CONCRETE SLAB 3" MIN., ABOVE ADJOINING GROUND.
   E. SUSPENDED FURNACES MUST HAVE MIN. 6" CLEARANCE TO GROUND.
   F. FURNACE ROOM SHALL BE 12" WIDER THAN FURNACE. MIN. CLEAR WORKING SPACE TO BE 3" ON SIDES, BACK, AND TOP.
   G. A 30" DEEP WORKING SPACE SHALL BE PROVIDED ALONG ENTIRE FRONT OF FIRE BOX SIDE OF FURNACE WHEN DOOR IS OPEN.
   H. AN UNOBSTRUCTED ACCESS WORKING SPACE NOR LESS THAN 24" IN WIDTH AND 30" IN HEIGHT SHALL BE PROVIDED AT AIR FILTERS, FUEL CONTROL VALVES, VENT COLLARS, AIR HANDLING UNITS AND EXTERNALLY MOUNTED CONTROLS (15" IN THE LEAST DIMENSION IF EQUIPMENT CAN BE SERVICED FROM OPENING WITHOUT REMOVING PERMANENT CONSTRUCTION).
10. HEAT PUMPS: SHALL BE INSTALLED WITH A CONTROL TO PREVENT SUPPLEMENTARY HEATER OPERATION WHEN THE HEATING LOAD CAN BE MET BY THE HEAT PUMP ALONE. SUPPLEMENTARY HEATER OPERATION IS PERMITTED DURING TRANSIENT PERIODS, AS START-UPS FOLLOWING ROOM THERMOSTATS SET-POINT ADVANCE, AND DURING DEFROST. SUPPLEMENTARY HEAT MAY BE DERIVED FROM ANY SOURCE OF ELECTRIC RESISTANCE HEATING OR COMBUSTION HEATING.
11. IN ALL BATHS AND UTILITY AREAS NOT HAVING OPENABLE WINDOWS, INSTALL EXHAUST FANS CAPABLE OF PROVIDING AT LEAST 5 AIR CHANGES PER HOUR PER ROOM.
12. WHERE A COOLING COIL OR COOLING UNIT IS LOCATED IN AN ATTIC OR FURRED SPACE WHERE DAMAGE IS CAPABLE OF RESULTING FROM CONDENSATE OVERFLOW, AN ADDITIONAL WATER TIGHT AN OR CORROSION-RESISTANT METAL SHALL BE INSTALLED BENEATH THE COOLING COIL OR UNIT TO CATCH THE OVERFLOW. CONDENSATE OR WASTE WATER SHALL DRAIN BY MEANS OF AN INDIRECT WASTE PIPE.

LIGHTING

1. LIGHTING IN KITCHEN AND BATHROOMS SHALL BE SEPARATELY SWITCHED TO APPROVED FIXTURES WITH A MINIMUM EFFICIENCY OF AT LEAST 40 LUMENS PER WATT (FLUORESCENT FIXTURES).
2. ALL RECESSED LIGHT FIXTURES INSTALLED IN AREAS TO RECEIVE INSULATION SHALL BE IC RATED UNITS (INSULATION ZERO CLEARANCE TYPE) AND NO PENETRATION OR REMOVAL OF INSULATION SHALL BE ALLOWED.
3. FLUORESCENT LIGHTING SHALL BE USED FOR GENERAL LIGHTING IN A BATHROOM OR ADJACENT ROOM WITH BATHROOM PLUMBING SUCH AS A LAVATORY AREA.

ELECTRICAL

1. ALL ELECTRICAL WIRING AND INSTALLATIONS SHALL BE AS REQUIRED BY STATE AND LOCAL ELECTRICAL CODES.
2. EACH DWELLING SHALL BE PROVIDED WITH AN APPROVED SMOKE DETECTION UNIT LOCATED AS SHOWN ON PLANS. THE UNIT SHALL BE INSTALLED IN AN AREA THAT IS CENTRALLY LOCATED GIVING EGRESS TO ALL ROOMS THAT ARE USED AS SLEEPING AREAS. CARE SHOULD BE EXERCISED TO ENSURE THAT INSTALLATION DOES NOT INTERFERE WITH THE OPERATING CHARACTER OF THE DETECTOR. WHEN ACTIVATED THE DETECTOR SHALL PROVIDE AN AUDIBLE ALARM TO BE HEARD IN ALL SLEEPING AREAS. CONNECT TO HOUSE CURRENT AND PROVIDE BATTERY BACK-UP CBC 907.2.11.4 LOCATION OF SMOKE DETECTOR TO BE PER CBC 907.2.11
3. FOR NEW CONSTRUCTION, AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED IN DWELLING UNITS AND IN SLEEPING UNITS WITHIN WHICH FUEL-BURNING APPLIANCES ARE INSTALLED; AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGES. CONNECT TO HOUSE CURRENT AND PROVIDE BATTERY BACK-UP CBC 420.4.1 / 420.4.1.1 / 420.4.1.2
4. PROVIDE AN ATTIC LIGHT SWITCH TO ATTIC LIGHT AT 5'-0" ABOVE FINISH FLOOR.
5. ALL WIRING TO BE ROMEX.
6. PROVIDE A PERMANENT ELECTRICAL OUTLET AND LIGHTING FIXTURE AT OR NEAR THE FURNACE OR WATER HEATER CONTROLLED BY A SWITCH LOCATED AT THE REQUIRED ACCESS OPENING.
7. ALL BATHROOM AND KITCHEN RECEPTACLES WITHIN 6'-0" OF SINK SURFACE SHALL G.F.I. CIRCUIT PROTECTION NEC 210-8
8. IN DINING AREA, A RECEPTACLE OUTLET SHALL BE INSTALLED AT EACH COUNTER SPACE WIDER THAN 12" NEC 210-52(B).
9. ELECTRICAL OUTLETS SHALL BE INSTALLED SO THAT AT NO POINT AROUND THE PERIMETER WALL OF ANY HABITABLE ROOM IS THERE NO MORE THAN 6' MEASURED HORIZONTALLY FROM SUCH AN OUTLET, INCLUDING ANY WALL 2' OR WIDER. (BATHROOM AND UTILITY ROOMS EXCEPTED). NEC 210-52(A).
10. AT LEAST ONE (1) WALL SWITCH CONTROLLED LIGHTING OUTLET SHALL BE INSTALLED IN EVERY HABITABLE ROOM, IN HALLWAYS, BATHROOMS STAIRWAYS, ATTACHED GARAGES, AND AT OUTDOOR ENTRANCES. AT LEAST ONE (1) LIGHTING OUTLET OUTLET SHALL BE INSTALLED IN AN ATTIC UNDER FLOOR SPACE, UTILITY ROOM, AND BASEMENT USED FOR STORAGE OR CONTAINING EQUIPMENT NEC 210-70.
11. CEILING MOUNTED LIGHT FIXTURES IN CLOTHES CLOSETS SHALL BE MIN 18" FROM EDGE OF SHELVES MEASURED HORIZONTALLY RECESSED AND FLUORESCENT FIXTURES MIN. 6". PENDANT LIGHTS ARE NOT PERMITTED. NEC 410-7.
12. 200 AMP ELECTRICAL METER WITH #4 UFER GROUND TO FOUNDATION FOR EACH DWELLING.
13. GFIC OUTLETS ON ALL ABOVE COUNTER OUTLETS IN KITCHEN MOUNTED +44" ABOVE FINISH FLOOR (TYP). OUTLETS SHALL BE LOCATED NO FARTHER THAN 24" AWAY FROM ANY POINT ALONG THE COUNTER AREA WIDER THAN 12". ON ANY PENINSULA / EATING BAR OUTLETS SHALL BE MOUNTED AT +27" ABOVE FINISH FLOOR AND SHALL BE LOCATED NO FARTHER THAN 24" AWAY FROM ANY POINT ALONG PENINSULA / EATING BAR. AT EATING BAR FACING KITCHEN SET GFIC AT +39". TURN OUTLET SIDEWAYS TO CLEAR COUNTER.
14. GFIC OUTLETS ON ALL ABOVE COUNTER OUTLETS IN BATHROOMS MOUNTED AT +42" ABOVE FINISH FLOOR (TYP).
15. GFIC OUTLETS ON ALL ABOVE COUNTER OUTLETS IN GARAGE MOUNTED AT +44" ABOVE FINISH FLOOR (TYP).
16. PROVIDE 110 V CEILING OUTLET FOR GARAGE DOOR OPENER.
17. PROVIDE WATERPROOF GFIC OUTLETS AT +18" ABOVE FINISH GRADE IN FRONT AND REAR OF BUILDING.
18. PROVIDE GFIC OUTLETS AT +27" ABOVE FINISH FLOOR ON ISLAND (SIDES OF ISLAND UNIT).
19. GFIC OUTLETS AT +44" ABOVE FINISH FLOOR IN LAUNDRY ROOM AT COUNTER.
20. PROVIDE GAS, 220V OUTLET, AND 110V OUTLET TO STOVE, COOK TOP, AND / OR OVENS (TYP). ALSO PROVIDE ELECTRICAL FOR EXHAUST HOOD ABOVE COOKTOP (TYP)
21. EQUIPMENT REGULATED BY THIS CODE REQUIRING ELECTRICAL CONNECTIONS OF MORE THAN 50 VOLTS SHALL HAVE A POSITIVE MEANS OF DISCONNECT ADJACENT TO AND IN SIGHT FROM THE EQUIPMENT SERVED. A 120 VOLT RECEPTACLE SHALL BE LOCATED WITHIN 25 FEET OF THE EQUIPMENT FOR SERVICE AND MAINTENANCE PURPOSES.
22. ALL ELECTRICAL DISCONNECT MEANS SHALL BE LEGIBLY MARKED TO INDICATE ITS PURPOSE UNLESS LOCATED AND ARRANGED SO THE PURPOSE IS EVIDENT. MARKINGS SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND ENVIRONMENT INVOLVED. IDENTIFICATION IS TO BE SPECIFIC ie. LIVIN ROOM LIGHTS, RESTROOM RECEPTACLES, ETC.
23. SMALL APPLIANCE OUTLETS: IN THE KITCHEN, PANTRY, BREAKFAST ROOM, DINING ROOM, OR SIMILAR AREA OF A DWELLING UNIT, THE TWO OR MORE 20-AMPERE SMALL-APPLIANCE BRANCH CIRCUITS REQUIRED BY 21 0.L1 (C)(I) SHALL SERVE ALL WALL AND FLOOR RECEPTACLE OUTLETS COVERED BY 210.52(A), ALL COUNTERTOP OUTLETS COVERED BY 210.52(C), AND RECEPTACLE OUTLETS FOR REFRIGERATION EQUIPMENT.
24. LAUNDRY AREAS: IN DWELLING UNITS, AT LEAST ONE RECEPTACLE OUTLET SHALL BE INSTALLED FOR THE LAUNDRY. NO OTHER OUTLETS SHALL BE ON THIS CIRCUIT.

EXCEPTION NO.1: IN ADDITION TO THE REQUIRED RECEPTACLES SPECIFIED BY 210.52, SWITCHED RECEPTACLES SUPPLIED FROM A GENERAL-PURPOSE BRANCH CIRCUIT AS DEFINED IN 210. 70 (A) (1), EXCEPTION NO.1, SHALL BE PERMITTED.

EXCEPTION NO.2: THE RECEPTACLE OUTLET JOR REFRIGERATION EQUIPMENT SHALL BE PERMITTED TO BE SUPPLIED FROM AN INDIVIDUAL BRANCH CIRCUIT RATED 15 AMPERES OR GREATER. PROVIDE CLEARANCES AROUND THE FAN AS REQUIRED BY THE 2010 CMC AND OTHER APPLICABLE CODES. LIGHTING NOTES: LIGHTING IN KITCHEN AND BATHROOMS SHALL BE SEPARATELY SWITCHED TO APPROVED FIXTURES WITH A MINIMUM EFFICIENCY OF AT EAST 40 LUMENS PER WATT (FLUORESCENT TYPE FIXTURES). ALL RECESSED LIGHT FIXTURES INSTALLED IN AREAS TO RECEIVE INSULATION SHALL BE "IC" RATED UNITS (INSULATION ZERO CLEARANCE TYPE) AND NO PENETRATION OR REMOVAL OF INSULATION SHALL BE ALLOWED. FLUORESCENT LIGHTING SHALL BE USED FOR GENERAL LIGHTING IN A BATHROOM OR ADJACENT ROOM WITH BATHROOM PLUMBING SUCH AS LAVATORY AREA.

25. ALL METAL PIPING SYSTEMS IN OR ATTACHED TO THE STRUCTURE SHALL BE PROPERLY GROUNDED AND BONDING JUMPERS ARE TO BE SIZED PER CEC TABLE 250.122
26. ALL FRAMES OF ELECTRIC RANGES, WALL MOUNTED OVENS, COUNTER MOUNTED COOKING UNITS, CLOTHES DRYERS AND OUTLET OR JUNCTION BOXES THAT ARE PART OF THE CIRCUIT FOR THESE APPLIANCES SHALL BE PROPERLY GROUNDED.

WINDOWS

3. SAFETY GLAZING SHALL BE PER CBC 2406 AND LOCATED IN BUT NOT LIMITED TO THE FOLLOWING AREAS, (A) ALL DOORS; (B) WITHIN 24" OF DOORS; (C) WITHIN 18" OF FLOORS; (D) WITHIN TUB / SHOWER ENCLOSURES; (E) WITHIN HOT TUBS, WHIRLPOOL, SAUNA, SAUNA AND STEAM ROOMS; (F) GLAZING IN PORTION OF BUILDING WALL ENCLOSING THESE COMPARTMENTS WHERE THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60" ABOVE A STANDING DRAIN.
4. ALL GLASS TO BE DUAL GLAZED, EXCEPT IN GARAGE.
5. ALL SKYLIGHTS WITHIN DWELLING TO BE DUAL GLAZED. IF JOB BUILT, A 1/16" PLASTIC PANEL MAY BE ADDED TO INSIDE. ALL GLASS IN SKYLIGHTS SHALL BE WIRE GLASS OR TEMPERED GLASS, MINIMUM THICKNESS 7/32". APPROVED PLASTICS MAY ALSO BE USED.
6. SKYLIGHT SHALL COMPLY WITH CBC 2603.7 (PLASTICS) OR CBC 2409 (GLAZING).
7. GLAZING IN AREAS SUBJECT TO HUMAN IMPACT OR HAZARDOUS LOCATIONS SHALL BE OF SAFETY GLAZING MATERIALS, SUCH AS LAMINATED GLASS, TEMPERED GLASS, WIRE GLASS AND SAFETY PLASTIC CBC SEC. 2406.4, INCLUDING GLAZING IN FIXED OR OPERABLE PANELS ADJACENT TO A DOOR IN A CLOSED POSITION AND WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN 24" ARC OF EITHER EDGE OF DOOR IN A CLOSED POSITION AND WHERE THE EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" ABOVE THE WALKING SURFACE.
8. SLIDING GLASS DOORS TO BE TEMPERED.
9. UNLESS AN EXTERIOR DOOR IS PROVIDED, ONE WINDOW IN EACH BEDROOM SHALL HAVE A FINISHED HEIGHT OF NOT MORE THAN 44" ABOVE FINISH FLOOR. SUCH WINDOWS SHALL HAVE A CLEAR OPENABLE AREA OF NOT LESS THAN 5.7 SQ. FT. WITH NO DIMENSION LESS THAN 20" IN WIDTH OR 24" IN HEIGHT CBC 310.4.
10. WINDOW AREA MUST BE AT LEAST 1/10 OF THE FLOOR AREA, 10 SQ. FT. MIN. IN HABITABLE ROOMS AND SHALL BE PROVIDED WITH NATURAL VENTILATION BY MEANS OF OPENABLE EXTERIOR OPENINGS WITH AREA OF NOT LESS THAN 1/20 OF THE FLOOR AREA OF SUCH WITH A MINIMUM OF 5 SQ. FT. CBC 1202.2.1
11. SHOWER DOORS AND BATH ENCLOSURES NOT TO BE LESS THAN 3/16" FULL TEMPERED SAFETY GLASS.
12. GLASS WINDOWS AND DOORS INCLUDING SHOWER ENCLOSURES SUBJECT TO HUMAN IMPACT MUST HAVE SAFETY GLAZING OR PROTECTIVE GRILL OR PUSH BAR CBC 2406.

INSULATION

1. ALL HEATING DUCTS LOCATED IN UNHEATED SPACES TO BE WRAPPED WITH 2" OF DUCT INSULATION. FLOOR INSULATION TO BE MINIMUM R-19.
2. CEILING INSULATION TO BE R-30 OR AS REQUIRED BY ENERGY CALCULATIONS.
3. ALL INSULATION TO BE CERTIFIED AND LABELED AS COMPLYING WITH THE CEC'S STANDARDS FOR INSULATING MATERIALS.
4. ALL EXTERIOR WALLS TO BE CAULKED BETWEEN SOLE PLATES AND FLOOR AND BETWEEN EXTERIOR WALL PANELS.
5. PROVIDE SOUND INSULATION IN PARTY WALLS EQUAL TO A SOUND TRANSMISSION CLASS 50 (STC 50) OR MORE. CAC T-25-1092
6. THE INSULATION INSTALLER SHALL POST IN A CONSPICUOUS LOCATION IN THE BUILDING A CERTIFICATE SIGNED BY THE INSTALLER AND THE BUILDER STATING THE INSULATION CONFORMS WITH REQUIREMENTS OF TITLE 24. PART 2 CHAPTER 2-53, & THE MATERIALS INSTALLED CONFORM WITH THE REQUIREMENTS OF TITLE 20, CHAPTER 7, SUB-CHAPTER 4, ARTICLE 3. THIS CERTIFICATE SHALL STATE THE MANUFACTURER'S NAME AND MATERIAL IDENTIFICATION, THE INSTALLED WEIGHT PER SQUARE FOOT CONSISTENT WITH THE MANUFACTURER'S LABELED DENSITY FOR THE DESIRED "R" VALUE. (SECTION 1403(D), TITLE 20 CAC)

DRYWALL / EXTERIOR FINISH

1. ALL UTILITY AREAS CONTAINING LAUNDRY FACILITIES SHALL BE FINISHED ON WALLS AND CEILING WITH WATERPROOF GYPSUM BOARD OR OTHER WATERPROOF MATERIAL.
2. ALL WALL SURFACES BEHIND CERAMIC TILE OR OTHER FINISH WALL MATERIALS ARE TO BE CONSTRUCTED OF MATERIAL NOT ADVERSELY AFFECTED BY WATER. (IF GYPSUM BOARD IS USED, IT MUST BE APPROVED WR BOARD INSTALLED ACCORDING TO CBC STANDARDS)
3. FIRE SEPARATION BETWEEN DWELLINGS AND ENCLOSED GARAGES TO BE APPROVED FIRE SEPARATION RATED MATERIAL. GARAGE DOOR TO BE 1 3/8" SELF-CLOSING SOLID CORE DOOR. SEPARATION TO EXTEND FROM ROOF SHEATHING TO CONCRETE FLOOR. CARPORT OPENING ON (2) SIDES REQUIRE NO FIRE SEPARATION. ANY WINDOWS OPENING TO CARPORT ARE TO BE FIXED AND DOORS
4. PROVIDE ONE-HOUR FIRE RESISTANT CONSTRUCTION THROUGHOUT FOR GROUP R, DIVISION 1 OCCUPANCIES TWO-STORIES OR MORE IN HEIGHT OR HAVING MORE THAN 3000 SQ. FT. OF FLOOR AREA ABOVE THE FIRST STORY EXCEPT AS PROVIDED IN SECTION 310.2.2. ARE TO BE SELF-CLOSING AS PER GARAGE REQUIREMENTS CBC 302.4 EXCEPTION 3.
5. PROVIDE AN APPROVED WATERPROOF BUILDING PAPER UNDER WOOD SIDING. CBC 1402.1
6. VENEER INSTALLATION TO COMPLY WITH CBC SECTION 1403.
7. LATHING AND PLASTERING SHALL COMPLY WITH LOCAL REQUIREMENTS.
8. LOCATE A 26 GA. G.I. STUCCO WEEP SCREED AT BOTTOM OF ALL STUCCO WALLS, PER CBC 2506.5

CABINETS AND MILLWORK

1. CABINET MAKER TO VERIFY ALL DIMENSIONS ON JOB BEFORE ASSEMBLY OF CABINETWORK AS SHOWN ON PLAN.
2. PROVIDE A 4" TOE SPACE AT ALL KITCHEN AND VANITY CABINETS.
3. HEIGHT TO COMBUSTIBLE MATERIAL ABOVE KITCHEN RANGES, 30" (UNPROTECTED), 24" (PROTECTED).

MISCELLANEOUS

1. ALL GARAGE DOORS TO BE EQUIPPED WITH APPROVED SAFETY SPRINGS.
2. EQUIPMENT WHICH REQUIRES PREVENTATIVE MAINTENANCE TO MAINTAIN EFFICIENT OPERATION SHALL BE FURNISHED WITH COMPLETE NECESSARY MAINTENANCE INFORMATION.
3. AN UNDER-FLOOR PLENUM SPACE MUST MEET THE REQUIREMENTS OF UMC.
4. PLANS AND SPECIFICATIONS SHOULD BE PROVIDED BY THE CLIENT TO SOILS ENGINEER PRIOR TO GRADING. PLANS SHOULD INCLUDE GRADING PLANS, FOUNDATION PLANS, FOUNDATION DETAILS AND STRUCTURAL CALCULATIONS. STRUCTURAL LOADS SHOULD BE SHOWN ON THE STRUCTURAL CALCULATIONS.
5. SAFETY GLAZING SHALL BE PER CBC 2406 AND LOCATED IN BUT NOT LIMITED TO THE FOLLOWING AREAS: (A) ALL DOORS; (B) WITHIN 24" OF DOORS; (C) WITHIN 18" OF FLOORS; (D) WITHIN TUB/SHOWER ENCLOSURES; (E) WITHIN HOT TUBS, WHIRLPOOL, SAUNA AND STEAM ROOMS; (F) GLAZING IN A PORTION OF A BUILDING WALL ENCLOSING THESE COMPARTMENTS WHERE THE BOTTOM EDGE OF GLAZING IS LESS THAN 60" ABOVE AN STANDING SURFACE AND DRAIN INLET.
6. FIRE STOPPING OR FIRE BLOCKS WHERE COMBUSTIBLE CONSTRUCTION OCCURS SHALL BE INSTALLED IN 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 BOTH VERTICAL AND HORIZONTAL; 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 RUN AND BETWEEN STUDS ALONG AND IN LINE WITH THE RUN OF STAIRS IF THE WALLS UNDER STAIRS ARE UNFINISHED; D) IN OPENINGS AROUND VENTS, PIPES, DUCTS, CHIMNEYS, FIREPLACES AND SIMILAR OPENINGS WHICH AFFORD PASSAGE FOR FIRE AT CEILING AND FLOOR LEVELS, WITH NON COMBUSTIBLE MATERIALS; AND E) AT OPENINGS BETWEEN ATTIC SPACES AND CHIMNEY CHASES FOR FACTORY-BUILT CHIMNEYS. FIRE BLOCK CONSTRUCTION SHALL BE IN ACCORDANCE WITH CBC 717.2.
7. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE SPRINKLER SYSTEM (IF REQUIRED) WITH MECHANICAL, PLUMBING, ELECTRICAL, STRUCTURAL AND ARCHITECTURAL SYSTEM TO AVOID CONFLICTS. IF ANY SUCH CONFLICTS DO OCCUR, THEY SHALL BE REPORTED IMMEDIATELY TO THE OWNER AND/OR AGENT OF THE OWNER. WORK SHALL NOT PROCEED IN THE AREA OF CONFLICTS UNTIL THEY HAVE BEEN RESOLVED WITH THE OWNER AND/OR AGENT OF THE OWNER.
8. APPROVED BUILDING ADDRESS NUMBERS SHALL BE PLACED UPON THE STRUCTURE AS REQUIRED BY CITY ORDINANCE. THE INDIVIDUAL NUMBERS SHALL CONTRAST WITH THEIR BACKGROUND AND BE AT LEAST 5" IN HEIGHT AND 1" IN STROKE IN ALL AREAS ZONED RESIDENTIAL
9. ROOF DRAINAGE SYSTEMS SHOULD BE DESIGNED SO WATER IS NOT DISCHARGED ONTO OR INJECTED INTO BEARING SOILS OR NEAR STRUCTURES
10. NO PIPING SHALL BE DIRECTLY EMBEDDED IN CONCRETE OR MASONRY. ANY PIPING PASSING THROUGH WALLS SHALL BE PROTECTED FROM BREAKAGE. SLEEVES SHALL BE PROVIDED TO PROTECT PIPING THROUGH CONCRETE AND MASONRY WALLS AND CONCRETE FLOORS. VOIDS AROUND PIPING PASSING THROUGH CONCRETE FLOORS ON THE GROUND SHALL BE SEALED.

Fastening Schedule
Table 2304.9.1

Connection	Fastening a,m	Location
1. Joist to sill or girder	3 – 8d common	toenail
2. Bridging to joist	2 – 8d common	toenail each end
3. 1" x 6" subfloor or less to each joist	2 – 8d common	face nail
4. Wider than 1" x 6" subfloor to each joist	3 – 8d common	face nail
5. 2" subfloor to joist or girder	2 – 16d common	blind and face nail
6. Sole plate to joist blocking	16d @ 16" o/c	typical face nail
Sole plate to joist or blocking at braced wall panel	3" – 16D @ 16" o/c	braced wall panels
7. Top plate to stud	2 – 16d common	end nail
8. Stud to sole plate	4 – 8d common 2 – 16d common	toenail end nail
9. Double studs	16d common @ 24" o/c	face nail
10. Double top plates	16d common @ 16" o/c 8–16d common	typical face nail lap splice
11. Blocking between joists or rafters to top plate	3 – 8d common	toenail
12. Rim joist to top plate	8d @ 6" o/c	toenail
13. Top plates, laps and intersections	2 – 16d common	face nail
14. Continuous header, two pieces	16d common	16" o/c along edge
15. Ceiling joists to plate	3 – 8d common	toenail
16. Continuous header to stud	4 – 8d common	toenail
17. Ceiling joists, laps over partitions (see Section 2308.10.4.1, Table 2308.10.4.1)	3 – 16d common min. Table 2308.10.4.1	face nail
18. Ceiling joists parallel rafters (see Section 2308.10.4.1, Table 2308.10.4.1)	3 – 16d common min Table 2308.10.4.1	facenail
19. Rafter to plate (see Section 2308.10.1, Table 2308.10.1)	3 – 8d common	toenail
20. 1" diagonal brace to each stud and plate	2 – 8d common	face nail
21. 1" x 8" sheathing to each bearing	3 – 8d common	face nail
22. Wider than 1" x 8" sheathing to each bearing	3 – 8d common	face nail
23. Built-up corner studs	16d common	24" o/c
24. Built-up girder and beams	20d common @ 32" o/c 2 – 20d common	face nail @ top and bottom staggered on opposite sides face nail @ ends and @ ea. splice
25. 2" planks	16d common	at each bearing
26. Collar tie to rafter	3 – 10d common	face nail
27. Jack rafter to hip	3 – 10d common 2 – 16d common	toenail face nail
28. Roof rafter to 2-by ridge beam	2 – 16d common	toenail, face nail
29. Joist to band joist	3 – 16d common	face nail
30. Ledger strip	3 – 16d common	face nail
31. Wood structural panels and particleboard: Subfloor, roof and wall sheathing (to framing)	8d	
Single Floor (combination subfloor-underlayment to framing)	10d	
32. Panel siding (to framing)	8d	
33. Fiberboard sheathing	8d common	
34. Interior paneling	6d	

a. Common or box nails are permitted to be used except where otherwise stated.
b. Nails spaced at 6 inches on center at edges, 12 inches at intermediate supports except 6 inches at supports where spans are 48 inches or more. For nailing of wood structural panel and particleboard diaphragms and shear walls, refer to Section 2305. Nails for wall sheathing are permitted to be common, box or casing.
c. Common or deformed shank (6d – 2" x 0.113"; 8d – 21/2" x 0.131"; 10d – 3" x 0.148").
d. Common (6d – 2" x 0.113"; 8d – 21/2" x 0.131"; 10d – 3" x 0.148").
e. Deformed shank (6d – 2" x 0.113"; 8d – 21/2" x 0.131"; 10d – 3" x 0.148").
f. Corrosion-resistant siding (6d – 17/8" x 0.106"; 8d – 23/8" x 0.128") or casing (6d – 2" x 0.099"; 8d – 21/2" x 0.113") nail.
g. Fasteners spaced 3 inches on center at exterior edges and 6 inches on center at intermediate supports, when used as structural sheathing. Spacing shall be 6 inches on center on the edges and 12 inches on center at intermediate supports for nonstructural applications.
h. Corrosion-resistant roofing nails with 7/16-inch-diameter head and 11/2-inch length for 1/2-inch sheathing and 1 3/4-inch length for 25/32-inch sheathing.
i. Corrosion-resistant staples with nominal 7/16-inch crown and 1 1/8-inch length for 1/2-inch sheathing and 1 1/2-inch length for 25/32-inch sheathing. Panel supports at 16 inches (20 inches if strength axis in the long direction of the panel, unless otherwise marked).
j. Casing (11/2" x 0.080") or finish (11/2" x 0.072") nails spaced 6 inches on panel edges, 12 inches at intermediate supports.
k. Panel supports at 24 inches. Casing or finish nails spaced 6 inches on panel edges, 12 inches at intermediate supports.
l. For roof sheathing applications, 8d nails (21/2" x 0.113") are the minimum required for wood structural panels.
m. Staples shall have a minimum crown width of 7/16 inch.
n. For roof sheathing applications, fasteners spaced 4 inches on center at edges, 8 inches at intermediate supports.
o. Fasteners spaced 4 inches on center at edges, 8 inches at intermediate supports for subfloor and wall sheathing and 3 inches on center at edges, 6 inches at intermediate supports for roof sheathing.
p. Fasteners spaced 4 inches on center at edges, 8 inches at intermediate supports.

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REVISION LOG

REV.	DESCRIPTION	DATE

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PROJECT NO. —
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DATE 12/14/2015 1:19 PM
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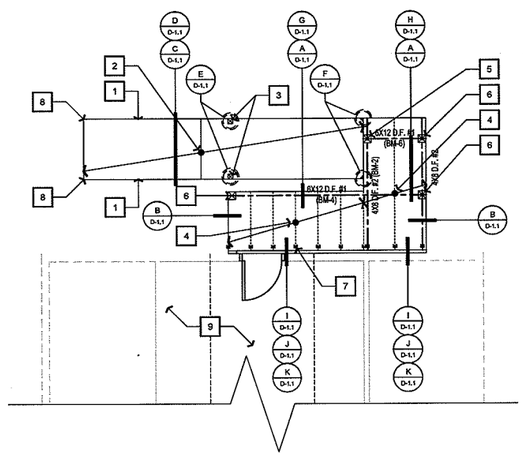
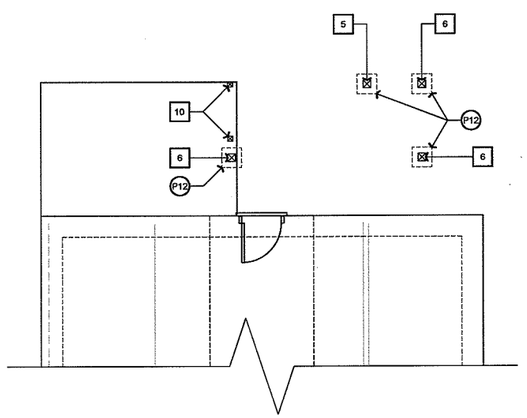


DECK FRAMING PLAN

1/4" = 1'



DECK FOUNDATION PLAN

1/4" = 1'

DECK FRAMING PLAN CALLOUTS

1. 4X12 D.F. #2 CONTINUOUS STAIR STRINGERS. (BM-1)
2. 4X12 D.F. #2 FLAT STAIR TREADS. CONNECT STAIR TREADS TO STRINGERS W/ SIMPSON TA9Z STAIRCASE ANGLES. SEE DETAIL (D/D-1.1)
3. EXISTING 4X4 D.F. #2 MID SPAN STRINGER SUPPORT POST. CONNECT EXISTING POST TO EXISTING STRINGER W/ (2)-5/8" Ø A307 BOLTS. SEE DETAIL (E/D-1.1)
4. 2X8 D.F. #2 DECK JOIST @ 16" O/C. (BM-3 & 5)
5. EXISTING 6X6 D.F. #1 POST W/ SIMPSON 1212HL STRAP TIE AT POST TO BEAM CONNECTION. ALSO PROVIDE CBS66 AT POST TO PAD FOOTING CONNECTION. SEE DETAIL (I/D-1.1)
6. EXISTING 6X6 D.F. #2 POST W/ SIMPSON 1212HT STRAP TIE AT POS TO BEAM CONNECTION. ALSO PROVIDE CBS66 AT POST TO PAD FOOTING CONNECTION. SEE DETAIL (J/-D1.1)
7. LUS26 AT 2X8 / LUS46 AT 4X8 DECK JOIST TO LEDGER CONNECTION. SEE DETAIL (I/D-1.1) & (J/D-1.1)
8. EXISTING STRINGER HAS EXISTING STANDOFF FROM EXISTING CONCRETE SLAB BELOW. THIS CONNECTION IS OK BY INSPECTION.
9. EXISTING GARAGE TO REMAIN. (NO CHANGE)
10. EXISTING 4X4 D.F. #2 STRINGER MID SPAN SUPPORT POST W/ ABU44 AT POST TO SLAB CONNECTION.

FRAMING NOTES

1. ALL LUMBER SHALL BE IDENTIFIED WITH THE GRADE MARK AND STAMP OF THE GRADING ASSOCIATION COVERING THE SPECIES AND UNDER WHOSE GRADING RULES THE LUMBER WAS PRODUCED.

SOIL NOTE

SOILS EXPANSION INDEX - VERY LOW (ASSUMED)

THE CONTRACTOR / OWNER SHALL NOTE THAT SOIL EXPANSION INDEX IS ASSUMED. THE ENGINEER / ARCHITECT OF RECORD ASSUMES NO RESPONSIBILITY FOR ASSUMED SOIL CONDITIONS. IT IS THE RESPONSIBILITY OF THE OWNER TO HIRE A GEOTECHNICAL ENGINEER TO PERFORM SOILS TESTING. AT A MINIMUM A SOILS EXPANSION TEST IS RECOMMENDED.

PAD FOOTING LEGEND

(P12) = 12" SQUARE X 18" DEEP INTO COMPETENT MATERIAL WITH:
(3)-# 4 BARS EACH WAY —> SEE DETAIL (L/D-1.1)
CBS66 AT 6X6 D.F. #1 POST TO PAD FTG CONNECTION

NOTES:
1. BARS SHALL BE A MINIMUM 3" CLEAR FROM BOTTOM AND SIDES OF FOOTING
2. PAD FOOTING TO BE PROVIDED CENTERED DIRECTLY BELOW DECK POST PER PLAN.

PROJECT DESIGN CRITERIA

GOVERNING BUILDING CODE			
2013 CALIFORNIA RESIDENTIAL CODE			
2013 CALIFORNIA BUILDING CODE			
GENERAL PARAMETERS			
CONSTRUCTION TYPE	TYPE V-B		
NUMBER OF STORIES	2		
MAX HEIGHT (ABV. GRADE)	9'-6"		
DECK	DL / L	8 / 40	PSF
GEOTECHNICAL PARAMETERS			
BEARING PRESSURE	1500	PSF	
LATERAL PASSIVE PRESSURE	N/A	PCF	
EFP (REST / ACTIVE)	N/A	PCF	
FRICTION COEFFICIENT	N/A		
WIND DESIGN PARAMETERS			
DESIGN PROCEDURE	SIMPLIFIED		
BASIC WIND SPEED	110 MPH		
EXPOSURE	B		
RISK CATEGORY	II		
INTERNAL PRESSURE COEFF.	N/A		
DESIGN LATERAL WIND PRESSURE	N/A PSF (H=30')		
DESIGN VERTICAL WIND PRESSURE	N/A PSF		
SEISMIC DESIGN PARAMETERS			
DESIGN PROCEDURE	EQUIV. FORCE		
SITE CLASS	D		
IMPORTANCE FACTOR	1.00		
OCCUPANCY CATEGORY	II		
MAPPED SPECTRAL RESPONSE	SS = 1.500	S1 = 0.600	
SPECTRAL RESPONSE COEFFICIENT	SDS = 1.000	SD1 = 0.600	
SEISMIC DESIGN CATEGORY	SDC = D		
SEISMIC FORCE RESISTING SYSTEM	WOOD STRUCTURAL RATED PANEL		
RESPONSE MODIFICATION FACTOR	R = 6.5		
DESIGN BASE SHEAR	0.14W		
ANALYSIS PROCEDURE USED	ASD		

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PROJECT NO. —

FILE NAME S-1.1 FOUNDATION AND DECK FRAMING PLAN.DWG

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SHEET TITLE:

FOUNDATION AND DECK FRAMING PLAN

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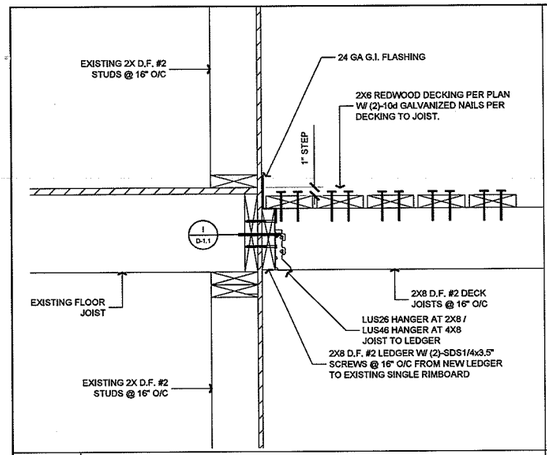
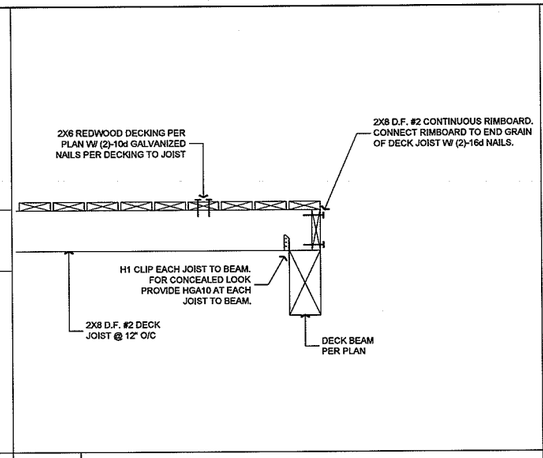
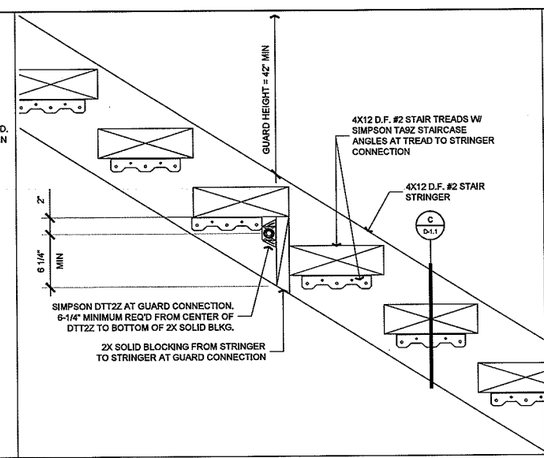


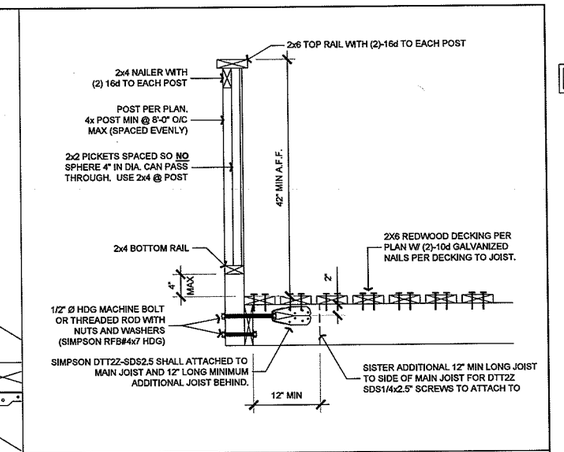
J LEDGER CONNECTION



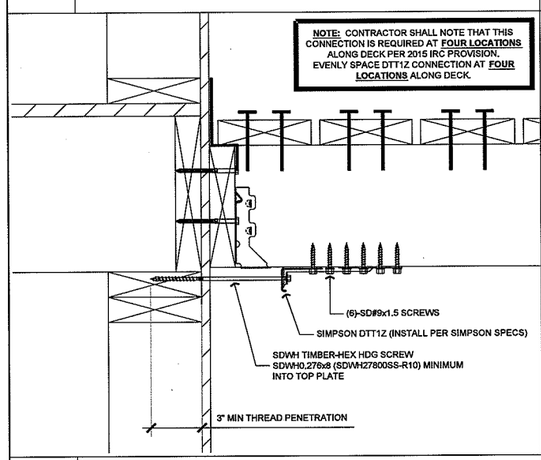
G DECK JOIST TO BEAM CONNECTION



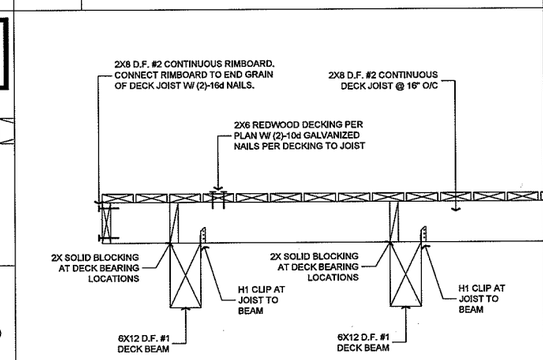
D TREAD TO STRINGER CONNECTION



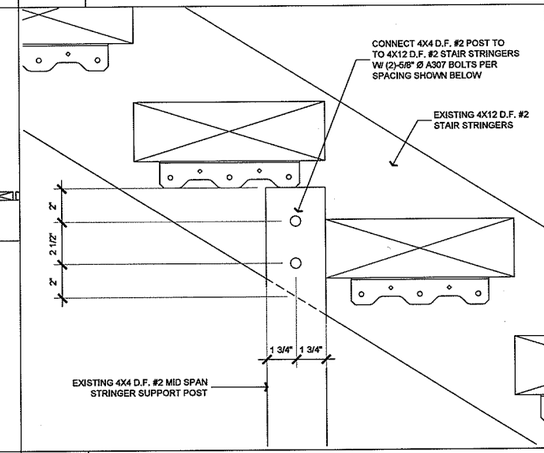
A GUARD DETAIL - PARALLEL TO JOIST



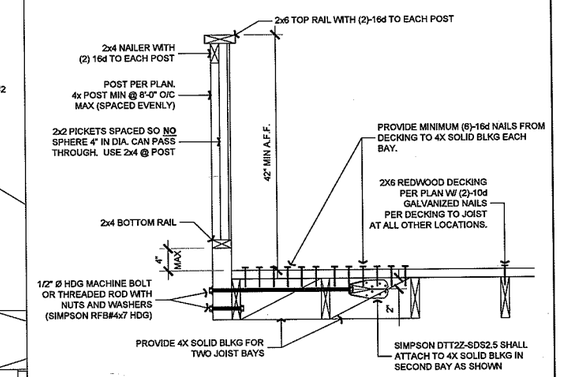
K DECK TENSION TIE CONNECTION



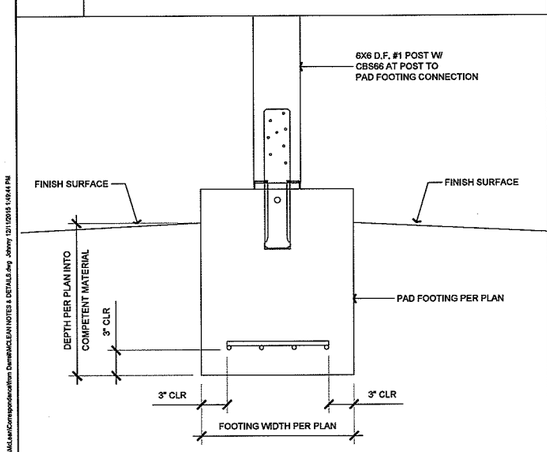
H DECK JOIST TO BEAM CONNECTION



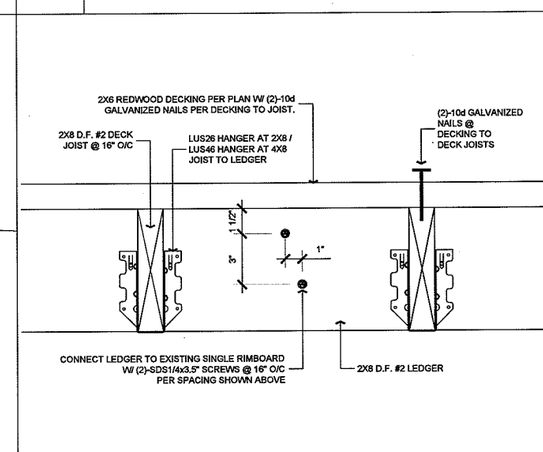
E STRINGER TO MIDSPAN SUPPORT POST



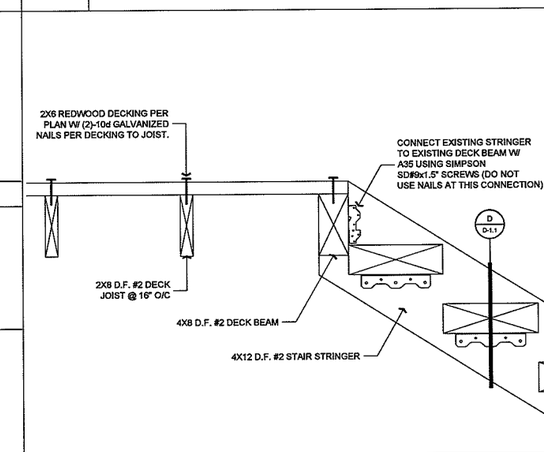
B GUARD DETAIL - PERPENDICULAR TO JOIST



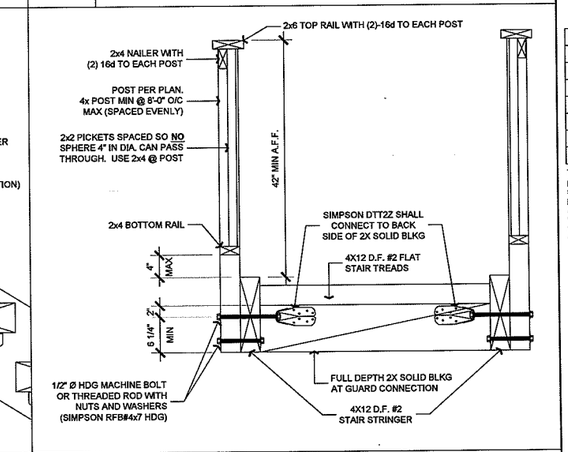
L PAD FOOTING DETAIL



I LEDGER CONNECTION



F STRINGER TO DECK BEAM CONNECTION



C GUARD AT STRINGER

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PROJECT NO. —
FILE NAME MCLEAN NOTES & DETAILS.DWG
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SHEET TITLE:

STRUCTURAL DETAILS

SHEET NUMBER:

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GENERAL NOTES

1. THE FOLLOWING NOTES, DETAILS, SCHEDULES & SPECIFICATIONS SHALL APPLY TO ALL PHASES OF THIS PROJECT UNLESSSS SPECIFICALLY OTHERWISE NOTED (UON). NOTES AND DETAILS ON THE STRUCTURAL PLANS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK

2. ALL DRAWINGS ARE CONSIDERED TO BE PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY APPLICABLE CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER OR ENGINEER.

3. REFER TO THE ARCHITECTURAL PLANS FOR THE FOLLOWING:
   3.1. DIMENSIONS
   3.1. SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR WALL LOCATIONS.
   3.2. SIZE AND LOCATION OF ALL FLOOR, ROOF AND WALL OPENINGS
   3.3. SIZE AND LOCATION OF ALL DRAINS, SLOPES, DEPRESSIONS, STEPS, ETC.
   3.4. SPECIFICATION OF ALL FINISHES & WATERPROOFING
   3.5. ALL OTHER NON-STRUCTURAL ELEMENTS

4. REFER TO THE MECHANICAL, ELECTRICAL AND PLUMBING PLANS FOR THE FOLLOWING:
   4.1. SIZE AND LOCATION OF ALL EQUIPMENT
   4.2. PIPE RUNS, SLEEVES, HANGERS AND TRENCHES
   4.3. ALL OTHER MECHANICAL, ELECTRICAL OR PLUMBING RELATED ELEMENTS

5. DO NOT SCALE STRUCTURAL PLANS. CONTRACTOR SHALL USE ALL WRITTEN DIMENSIONS ON ARCHITECTURAL PLANS.

6. CONSTRUCTION MATERIALS SHALL BE UNIFORMLY SPREAD OUT IF PLACED ON FLOOR OR ROOF SO AS TO NOT OVERLOAD THE FRAMING. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SHORING AND/OR BRACING AS REQUIRED.

7. SPECIFICATIONS AND DETAILING OF ALL WATERPROOFING AND DRAINAGE ITEMS, WHILE SOMETIMES SHOWN ON THE STRUCTURAL PLANS FOR GENERAL INFORMATION PURPOSES ONLY, ARE SOLELY THE DESIGN RESPONSIBILITY OF OTHERS.

8. THE ENGINEER WILL NOT BE RESPONSIBLE FOR AND WILL NOT HAVE CONTROL OR CHARGE OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION DELINEATED BY THESE PLANS. IT SHOULD BE UNDERSTOOD THAT THE CONTRACTOR OR HIS/HER AGENT(S) SHALL SUPERVISE AND DIRECT ALL WORK AND SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES AND CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION. PERIODIC OBSERVATIONS BY THE ENGINEER, HIS STAFF OR REPRESENTATIVES ARE NOT INTENDED TO INCLUDE VERIFICATION OF DIMENSIONS OR REVIEW THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES ON OR NEAR THE CONSTRUCTION SITE.

9. MODIFICATIONS OF THE PLANS, NOTES, DETAILS AND SPECIFICATIONS SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

10. ALL WORKMANSHIP SHALL CONFORM TO THE BEST PRACTICE PREVAILING IN THE VARIOUS TRADES PERFORMING THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES.

11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ONLY APPROVED STRUCTURAL PLANS ARE USED DURING THE COURSE OF CONSTRUCTION. THE USE OF UNAPPROVED DOCUMENTS SHALL BE AT THE CONTRACTOR'S OWN RISK. CORRECTIONS OF ALL WORK BASED ON SUCH DOCUMENTS SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.

12. THESE PLANS AND SPECIFICATIONS REPRESENT THE STRUCTURAL DESIGN ONLY. NO INFORMATION NOR WARRANTY IS PROVIDED FOR THE WORK OF ANY OTHER CONSULTANT (ARCHITECT, MECHANICAL, ELECTRICAL, ETC.). THIS INCLUDES, BUT IS NOT LIMITED TO, WATERPROOFING, DRAINAGE, VENTILATION, ACCESSIBILITY, OR DIMENSIONS.

FOUNDATIONS

1. REFER TO STRUCTURAL DESIGN PARAMETERS SECTION ON SHEET S-1.1 FOR ALL SOIL DESIGN VALUES USED IN CALCULATIONS.

2. SOILS VALUES PER GEOLOGIC/GEOTECHNICAL REPORT REFERENCED ON FOUNDATION PLAN. THIS REPORT AND ALL RECOMMENDATIONS CONTAINED THEREIN ARE TO BE CONSIDERED A PART OF THESE PLANS.

3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COPY OF THE SOILS REPORT FROM THE OWNER. A COPY OF THE SOILS REPORT SHALL BE ON THE JOB SITE DURING THE COURSE OF CONSTRUCTION.

4. UNEXPECTED SOIL CONDITIONS: ALLOWABLE VALUES AND SUBSEQUENT FOUNDATION DESIGNS ARE BASED ON SOIL CONDITIONS WHICH ARE SHOWN BY TEST BORINGS. ACTUAL SOIL CONDITIONS WHICH DEVIATE APPRECIABLY FROM THAT SHOWN IN THE TEST BORINGS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

5. ALL COMPACTION, FILL, BACKFILLING AND SITE PREPARATION SHALL BE PERFORMED IN ACCORDANCE WITH PROJECT SOILS REPORT OR CBC APPENDIX CHAPTER 33. ALL SUCH WORK SHALL BE PERFORMED UNDER THE SUPERVISION OF THE PROJECT SOILS ENGINEER.

6. EXCAVATE TO REQUIRED DEPTHS AND DIMENSIONS (AS INDICATED IN THE DRAWINGS), CUT SQUARE AND SMOOTH WITH FIRM LEVEL BOTTOMS. CARE SHALL BE TAKEN NOT TO OVER-EXCAVATE FOUNDATION AT LOWER ELEVATION AND PREVENT DISTURBANCE OF SOILS AROUND HIGH ELEVATION.

7. FOUNDATIONS SHALL BE POURED IN NEAT EXCAVATIONS.

8. EXCAVATE ALL FOUNDATIONS TO REQUIRED DEPTHS INTO COMPACTED FILL OR NATURAL SOIL (AS PER PLANS AND DETAILS) AND AS VERIFIED BY THE BUILDING OFFICIAL AND/OR SOILS ENGINEER.

9. ALL FOUNDATIONS SHALL BE INSPECTED AND APPROVED BY THE APPROPRIATE BUILDING OFFICIAL AND/OR A REPRESENTATIVE OF THE SOILS ENGINEER PRIOR TO FORMING AND PLACEMENT OF REINFORCING OR CONCRETE.

10. FOUNDATIONS SHALL NOT BE POURED UNTIL ALL REQUIRED REINFORCING STEEL, FRAMING HARDWARE, SLEEVES, INSERTS, CONDUITS, PIPES, ETC. AND FORMWORK IS PROPERLY PLACED AND INSPECTED BY THE APPROPRIATE BUILDING OFFICIAL/INSPECTOR(S).

11. IT IS THE RESPONSIBILITY OF THE CONTRACTOR IN CHARGE OF FRAMING TO PROPERLY POSITION ALL HOLDOWN BOLTS, ANCHOR BOLTS, COLUMN BASES, AND ALL OTHER CAST-IN-PLACE HARDWARE. REFER TO TYPICAL DETAILS. ALL HARDWARE TO BE SECURED PRIOR TO FOUNDATION INSPECTIONS.

12. THE SIDES AND BOTTOMS OF DRY EXCAVATIONS MUST BE MOISTENED JUST PRIOR TO PLACING CONCRETE; CONVERSELY, DE-WATER FOOTINGS AS REQUIRED TO REMOVE STANDING WATER AND TO MAINTAIN OPTIMUM WORKING CONDITIONS.

13. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND THE PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS, AND UTILITIES IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL SAFETY ORDINANCES. THE CONTRACTOR SHALL PROVIDE FOR THE DESIGN AND INSTALLATION OF ALL CRIBBING, BRACING AND SHORING REQUIRED.

CONCRETE

1. ALL CONCRETE SHALL HAVE:
   1.1. AN ULTIMATE COMPRESSIVE STRENGTH (F'C) OF 2500 PSI AT 28 DAYS (UON).
   1.2. A MAXIMUM SLUMP OF 5" AT POINT OF PLACEMENT.
   1.3. A W/C RATIO OF 0.55 OR LESS FOR ALL SLABS, WALLS, AND COLUMNS, AND 0.60 OR LESS FOR ALL FOUNDATIONS.
   1.4. A NORMAL DRY-WEIGHT DENSITY (UON)

2. SPECIAL INSPECTION IS NOT REQUIRED, EXCEPT WHERE SPECIFIED HEREIN, ON THE STRUCTURAL PLANS, OR BY THE BUILDING DEPARTMENT. AS A MINIMUM, SPECIAL INSPECTION IS ALWAYS REQUIRED ON:
   2.1. STRUCTURAL SLABS, FLAT PLATES
   2.2. WALLS, COLUMNS, BEAMS
   2.3. PILES, CAISSONS
   2.4. WELDING OF REINFORCEMENT, INSTALLATION OF MECHANICAL BAR SPLICE DEVICES, EPOXY APPLICATIONS

   WHEN REQUIRED OR SPECIFIED, SPECIAL INSPECTION SERVICES SHALL CONFORM TO CBC CHAPTER 17 AND SHALL BE PROVIDED BY AN ICC CERTIFIED INSPECTOR OR BUILDING DEPARTMENT APPROVED ENGINEER.

   THE BUILDING DEPARTMENT RESERVES THE RIGHT TO WAIVE OR REQUIRE THE SPECIAL INSPECTION REQUIREMENTS [CBC 1704.1 AND 1704.4] . NOTHING IN THESE PLANS WAIVES THE BUILDING DEPARTMENT RIGHT TO REQUIRE SPECIAL INSPECTION ON AT ANY POINT AND ON ANY MATERIAL.

3. TESTING OF MATERIALS USED IN CONCRETE CONSTRUCTION MUST BE PERFORMED AS NOTED ON STRUCTURAL PLANS OR AT THE REQUEST OF THE BUILDING DEPARTMENT TO DETERMINE IF MATERIALS ARE QUALITY SPECIFIED. TESTS OF MATERIALS AND OF CONCRETE SHALL BE MADE BY AN APPROVED AGENCY AND AT THE EXPENSE OF THE CONTRACTOR; SUCH TESTS SHALL BE MADE IN ACCORDANCE WITH THE STANDARDS LISTED IN CBC TABLE 1704.4.

   WHEN TESTING OF CONCRETE IS REQUIRED, FOUR (4) TEST CYLINDERS SHALL BE TAKEN FROM EACH 150 YARDS, OR FRACTION THEREOF, POURED IN ANY ONE DAY. ONE (1) CYLINDER SHALL BE TESTED AT SEVEN (7) DAYS; TWO (2) AT 28 DAYS; ONE (1) SHALL BE HELD IN RESERVE. IF CONTRACTOR ELECTS TO HAVE ADDITIONAL TESTS PERFORMED FOR "EARLY-BREAK" RESULTS, ADDITIONAL TEST CYLINDERS MUST BE TAKEN. AT NO TIME SHALL THE CONTRACTOR INSTRUCT THE TESTING AGENCY TO PERFORM TESTS ON A SCHEDULE DIFFERENT THAT ABOVE WITHOUT THE PRIOR AUTHORIZATION OF THE ENGINEER.

   CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH APPLICABLE TESTING REQUIREMENTS OF THE BUILDING DEPARTMENT. COPIES OF ALL TEST REPORTS SHALL BE PROVIDED TO ENGINEER AND BUILDING DEPARTMENT FOR REVIEW IN A TIMELY MANNER.

4. THE CONTRACTOR SHALL REMOVE AND REPLACE ANY CONCRETE WHICH FAILS TO ATTAIN SPECIFIED 28 DAY COMPRESSIVE STRENGTH IF SO DIRECTED BY THE ENGINEER. ANY DEFECTS IN THE HARDENED CONCRETE SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AND/OR ARCHITECT OR THE HARDENED CONCRETE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

5. ALL CONCRETE WORK SHALL CONFORM WITH CBC CHAPTER 19.

6. ALL CEMENT SHALL BE PORTLAND CEMENT TYPE I OR II AND SHALL CONFORM TO ASTM C 150.

7. ALL AGGREGATES SHALL CONFORM TO ASTM C33. MAXIMUM AGGREGATE SIZES:
   7.1. FOOTINGS: 1-1/2"
   7.2. ALL OTHER WORK: 1"

8. WHERE NOT SPECIFICALLY DETAILED, THE MINIMUM CONCRETE COVER ON REINFORCING STEEL SHALL BE:
   8.1. PERMANENTLY EXPOSED TO EARTH OR WEATHER
      8.1.1. CAST AGAINST EARTH: 3"
      8.1.2. CAST AGAINST FORMS: 2"
   8.2. NOT EXPOSED TO EARTH OR WEATHER
      8.2.1. SLABS, WALLS, JOISTS: 3/4"
      8.2.2. BEAMS, GIRDERS, COLUMNS: 1-1/2"

9. MINIMUM LAP SPLICE LENGTH FOR ALL REINFORCING STEEL SHALL BE 48 BAR DIAMETER (UON) ON THE STRUCTURAL PLANS AND/OR DETAILS. ALL LAP SPLICES TO BE STAGGERED.

10. ALL ANCHOR BOLTS USED IN CONCRETE CONSTRUCTION SHALL HAVE A MINIMUM TOTAL EMBEDMENT AS FOLLOWS (UON):
   10.1. 5/8" DIA.: 7"
   10.2. 3/4" DIA.: 8"
   10.3. 7/8" DIA.: 9"
   10.4. 1" DIA.: 10"

   OVERALL LENGTH OF ANCHOR BOLTS SHALL BE COORDINATED WITH SILL PLATE REQUIREMENTS AS INDICATED ELSEWHERE IN THESE SPECIFICATIONS. ALL ANCHOR BOLTS IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE HOT DIPPED ZINC GALVANIZED OR STAINLESS STEEL.

11. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, INSERTS, AND ANY OTHER HARDWARE TO BE CAST IN CONCRETE SHALL BE WELL SECURED IN POSITION PRIOR TO FOUNDATION INSPECTION. ALL HARDWARE TO BE INSTALLED IN ACCORDANCE WITH RESPECTIVE MANUFACTURER'S SPECIFICATIONS. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR LOCATIONS OF EMBEDDED ITEMS.

12. LOCATIONS OF ALL CONSTRUCTION JOINTS, OTHER THAN SPECIFIED ON THE STRUCTURAL PLANS, SHALL BE APPROVED BY THE ARCHITECT AND ENGINEER PRIOR TO FORMING. CONSTRUCTION JOINTS SHALL BE THOROUGHLY AIR AND WATER CLEANED AND HEAVILY ROUGHENED SO AS TO EXPOSE COARSE AGGREGATES. ALL SURFACES TO RECEIVE FRESH CONCRETE SHALL BE MAINTAINED CONTINUOUSLY WET AT LEAST THREE (3) HOURS IN ADVANCE OF CONCRETE PLACEMENT.

   UNLESSSS SPECIFICALLY DETAILED OR OTHERWISE NOTED, CONSTRUCTION AND CONTROL JOINTS SHALL BE PROVIDED IN ALL CONCRETE SLABS-ON-GRADE. JOINTS SHALL BE LOCATED SUCH THAT THE AREA DOES NOT EXCEED 400 SQ. FEET.

13. THE ARCHITECT, ENGINEER AND APPROPRIATE INSPECTORS SHALL BE NOTIFIED IN A TIMELY MANNER FOR A REINFORCEMENT INSPECTION PRIOR TO THE PLACEMENT OF ANY CONCRETE.

14. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ARCHITECT AND THE ENGINEER PRIOR TO PLACING SLEEVES,PIPES, DUCTS, CHASES, CORING AND OPENING ON OR THROUGH STRUCTURAL CONCRETE BEAMS, WALLS, FLOORS, AND ROOF SLABS UNLESSSS SPECIFICALLY DETAILED OR NOTED ON THE PLANS. ALL PILES OR CONDUITS PASSING THROUGH CONCRETE MEMBERS SHALL BE SLEEVED WITH STANDARD STEEL PIPE SECTIONS.

15. THE CONTRACTOR IS RESPONSIBLE FOR DESIGN, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL FORMWORK. FORMS SHALL BE PROPERLY CONSTRUCTED, SUFFICIENTLY TIGHT TO PREVENT LEAKAGE, SUFFICIENTLY STRONG, AND BRACED TO MAINTAIN THEIR SHAPE AND ALIGNMENT UNTIL NO LONGER NEEDED FOR CONCRETE SUPPORT. JOINTS IN FORMWORK SHALL BE TIGHTLY FITTED AND BLOCKED, AND SHALL PRODUCE A FINISHED CONCRETE SURFACE THAT IS TRUE AND FREE FROM BLEMISHES. FORMS FOR EXPOSED CONCRETE SHALL BE PRE-APPROVED BY THE ARCHITECT TO ENSURE CONFORMANCE WITH DESIGN INTENT.

16. REMOVE FORM WORK IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:
   16.1. FORMS AT SLAB EDGE: 1 DAY
   16.2. SIDE FORMS AT FOOTINGS: 2 DAYS
   16.3. ALL OTHER VERTICAL SURFACES: 7 DAYS
   16.4. BEAMS, COLUMNS, GIRDERS: 15 DAYS
   16.5. ELEVATED SLABS: 28 DAYS

   ENGINEER RESERVES THE RIGHT TO MODIFY REMOVAL SCHEDULE ABOVE BASED ON FIELD OBSERVATIONS, CONCRETE CONDITIONS, AND/OR CONCRETE TEST RESULTS.

17. ALL CONCRETE (EXCEPT SLABS-ON-GRADE 6" OR LESS) SHALL BE MECHANICALLY VIBRATED AS IT IS PLACED. VIBRATOR TO BE OPERATED BY EXPERIENCED PERSONNEL. THE VIBRATOR SHALL BE USED TO CONSOLIDATE THE CONCRETE. THE VIBRATOR SHALL NOT BE USED TO CONVEY CONCRETE, NOR SHALL IT BE PLACED ON REINFORCING AND/OR FORMS.

18. CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A MINIMUM OF FIVE (5) DAYS AFTER PLACEMENT.

19. CONCRETE SHALL NOT BE PERMITTED TO FREE FALL MORE THAN SIX (6) FEET. FOR HEIGHTS GREATER THAN SIX (6) FEET, USE TREMIE, PUMP OR OTHER METHOD CONSISTENT WITH APPLICABLE STANDARDS.

20. CONTRACTOR SHALL SUBMIT MIX DESIGNS FOR ALL CONCRETE WITH ULTIMATE COMPRESSIVE STRENGTH GREATER THAN 2500 PSI TO ARCHITECT AND ENGINEER FOR APPROVAL SEVEN (7) DAYS PRIOR TO PLACEMENT. MIX DESIGNS SHALL BE PREPARED B AN APPROVED TESTING LABORATORY. SUFFICIENT DATA MUST BE PROVIDED FOR ALL ADMIXTURES.

21. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF ALL DIMENSIONS, SLAB DEPRESSIONS, SLOPES, DRAINS, CURBS, AND CONTROL JOINTS.

REINFORCEMENT

1. REINFORCING STEEL SHALL BE TO DEFORMED, CLEAN, FREE OF RUST, GREASE OR ANY OTHER MATERIAL LIKELY TO IMPAIR CONCRETE BOND.

2. ALL BARS SHALL CONFORM TO ASTM A615, GRADE 60 MINIMUM (UON ON STRUCTURAL PLANS), EXCEPT THAT #3 & #4 BARS MAY BE GRADE 40. ALL WELD WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185.

3. REINFORCING STEEL THAT IS TO BE WELDED SHALL CONFORM TO ASTM A706. ALL WELDING OF REINFORCEMENT SHALL BE SUBJECT TO SPECIAL INSPECTION.

4. 4. CONTRACTOR SHALL TAKE NECESSARY STEPS (STANDARD TIES, ANCHORAGE DEVICES, ETC.) TO SECURE ALL REINFORCING STEEL IN THEIR TRUE POSITION AND PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT.

5. FABRICATION, PLACEMENT AND INSTALLATION OF REINFORCING STEEL SHALL CONFORM TO:
   5.1. CONCRETE REINFORCING STEEL INSTITUTE (CRSI) MANUAL OF STANDARD PRACTICE
   5.2. CBC SECTION 1907.

6. SHOP DRAWINGS FOR FABRICATION OF REINFORCING STEEL SHALL BE APPROVED BY THE CONTRACTOR AND SUBMITTED TO THE ARCHITECT AND ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. SHOP DRAWINGS ARE NOT REQUIRED FOR SLABS-ON-GRADE OR FOUNDATIONS UON ON THE STRUCTURAL PLANS.

7. HEATING OF REINFORCING STEEL TO AID IN BENDING AND SHAPING OF BARS IS NOT PERMITTED. ALL BENDS IN REINFORCING STEEL ARE TO BE MADE COLD. ALL BEND RADII SHALL CONFORM TO CRSI MANUAL OF STANDARD PRACTICE.

8. REFER TO CONCRETE AND MASONRY NOTES FOR SPECIFIC MINIMUM SPLICE LENGTH AND SPLICE STAGGERING REQUIREMENTS. LAP WELDED WIRE FABRIC (WWF) REINFORCEMENT TWO (2) MODULES MINIMUM (UON). ALL SPLICES ARE TO BE STAGGERED.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL AND CONNECTIONS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS, SEISMIC PROVISIONS SUPPLEMENTS NO. 1 AND 2, AND CODE OF STANDARD PRACTICE AS AMENDED TO DATE.

2. STEEL FABRICATION SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW BY THE ARCHITECT AND ENGINEER PRIOR TO FABRICATION.

3. MATERIALS:
   3.1. TUBE SECTIONS ("TS" OR "HSS") SHALL CONFORM TO ASTM A500 GR. B.
   3.2. PIPE SECTIONS SHALL BE WELDED SEAMLESS PIPE CONFORMING TO ASTM A53 GR. B OR ASTM A501.
      3.2.1. STD INDICATES STANDARD WALL
      3.2.2. EXT INDICATES EXTRA STRONG
      3.2.3. DBL INDICATES DOUBLE EXTRA STRONG
   3.3. ALL OTHER MATERIAL (PLATE, BARS, ETC.) SHALL CONFORM TO ASTM A36 (UON)

4. BOLTS:
   4.1. ALL BOLTS SHALL BE ASTM A307 (UON) ON THE STRUCTURAL PLANS.
   4.2. HIGH STRENGTH BOLTS COMPLYING WITH ASTM A325 AND A490, WHEN SPECIFIED, SHALL REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH CBC SECTION 1704.3.3.
   4.3. THREADED ROD, WHERE SPECIFIED, SHALL CONFORM WITH ASTM A307 (UON) ON THE STRUCTURAL PLANS.

5. BOLT HOLES SHALL BE DRILLED 1/32" TO 1/16" LARGER THAN THE SPECIFIED BOLT DIAMETER.
   5.1. WELDING:
   5.2. ALL WELDING SHALL BE PERFORMED USING SMAW, GMAW OR FCAW PROCESSES.
   5.3. ALL WELDED CONNECTIONS TO BE WELDED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS D1.1.
   5.4. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS.
   5.5. ALL WELDING SHALL BE PERFORMED WITH E70XX ELECTRODES WITH A MINIMUM CVN TOUGHNESS OF 20 FTLB AT -200F.
   5.6. WELD LENGTHS SPECIFIED ON THE PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE THE MINIMUM SIZE WELDS AS SPECIFIED IN SECTION 1.17.2 OF THE AISC MANUAL OF STEEL CONSTRUCTION 9TH EDITION.
   5.7. NO FIELD WELDING SHALL BE PERMITTED UON ON THE PLANS OR DETAILS.

6. NO HOLES OTHER THAN THOSE SPECIFICALLY DETAILED SHALL BE ALLOWED THROUGH STRUCTURAL STEEL MEMBERS. BURNING OR TORCHING OF HOLES IS NOT PERMITTED UNDER ANY CIRCUMSTANCES.

7. ALL STRUCTURAL STEEL SHALL BE PAINTED ONE SHOP COAT AND TOUCHED-UP IN THE FIELD WITH READ LEAD (OR APPROVED ZINC CHROMATE PRIMER) AS NECESSARY.

8. ANY STEEL MEMBER INTERFACING WITH WOOD FRAMING SHALL HAVE 1/2" DIAMETER STUDS WELDED AT 24" O.C. FOR ATTACHMENT OF WOOD NAILERS. THRU-BOLTING OF NAILERS SHALL NOT BE PERMITTED UON ON THE PLANS OR DETAILS.

9. PROVIDE HOT DIP GALVANIZING OR 3" MINIMUM CONCRETE COVER AROUND ALL STRUCTURAL STEEL BELOW GRADE.

MASONRY

1. SPECIAL INSPECTION IS REQUIRED FOR MASONRY WALLS PER CBC 1704.5

2. MASONRY UNITS: SHALL CONFORM TO ASTM C90, GRADE N, TYPE I, MEDIUM-WEIGHT. THE COMPRESSIVE STRENGTH OF THE MASONRY, F'M, SHALL BE 1500 PSI MINIMUM. REFER TO CBC 2103.

3. MORTAR: SHALL BE TYPE S, WITH A STRENGTH OF 1800 PSI MINIMUM @ 28 DAYS, PROPORTIONED IN CONFORMANCE WITH CBC TABLE 21-A. WHEN THE SPECIFIED MASONRY STRENGTH, F'M, IS GREATER THAN 2000 PSI, THEN THE MORTAR SHALL BE TYPE M. MORTAR STRENGTH SHALL BE EQUAL TO OR GREATER THAN THE MASONRY STRENGTH, F'M. NO MORTARS SHALL BE USED THAT HAVE STOOD FOR MORE THAN ONE-HOUR.

4. GROUT: STRENGTH SHALL BE NO LESS THAN 2500 PSI@ 28 DAYS. CEMENT CONTENT OF THE GROUT SHALL BE INCREASED, AS NECESSARY, TO ACHIEVE THE SPECIFIED MASONRY ASSEMBLY STRENGTH, F'M, AND ADEQUATE WORKABILITY. GROUT COMPRESSIVE STRENGTH, WHEN TESTED PER UBC STANDARD NO. 21-18 SHALL EQUAL OR EXCEED THE CONCRETE MASONRY UNIT STRENGTH. ALL GROUT ADDITIVES SHALL RECEIVE THE PRIOR APPROVAL OF THE ENGINEER AND THE BUILDING OFFICIAL.

5. ADMIXTURES: SHALL NOT BE PERMITTED IN MORTAR OR GROUT UNLESS SUSTAINING DATA HAS BEEN SUBMITTED TO AND APPROVED BY THE ENGINEER. FIRE CLAY, DIRT AND OTHER DELETERIOUS MATERIALS ARE PROHIBITED.

6. AGGREGATES: SAND FOR MORTAR SHALL CONFORM TO ASTM C144 EXCEPT THAT NOT LESS THAN 3% OF THE SAND SHALL PASS THE NUMBER 100 SIEVE. SAND AND PEA GRAVEL FOR GROUT SHALL CONFORM TO ASTM C404, TABLE 1, COARSE AGGREGATE, EXCEPT WHEN OTHER GRADINGS ARE SPECIFICALLY APPROVED BY THE ENGINEER.

7. WATER USED FOR MORTAR AND GROUT SHALL BE CLEAN AND FREE FROM DELETERIOUS AMOUNTS OF ACIDS, SALTS, ALKALI, AND ORGANIC MATERIALS.

8. STEEL REINFORCING: SHALL CONFORM TO ASTM A615, GRADE 60, CLEAN AND FREE OF RUST, EXCEPT THAT #3 BARS MAY BE GRADE 40. REINFORCING STEEL THAT IS TO BE WELDED SHALL CONFORM TO ASTM A706, AND THE WELDING SHALL BE SPECIAL INSPECTED.

9. ANCHOR BOLTS: SEE THE "STRUCTURAL STEEL" SPECIFICATIONS SECTION HEREIN.

10. ALL CELLS SHALL BE SOLID GROUTED (OR "FULLY" GROUTED). MASONRY UNITS SHALL BE LAID IN RUNNING BOND. SURFACES TO BE CLEANED OF ALL LOOSE DEBRIS PRIOR TO SETTING BLOCK. CELLS TO BE IN VERTICAL ALIGNMENT SUCH THAT MINIMUM VERTICAL UNOBSTRUCTED CORE (EXCLUDING HORIZONTAL BARS) IS 2½"X 3" FOR GROUT POURS UP TO 4 FEET AND 3"X3" FOR GROUT POURS UP TO 6 FEET.

11. ALL BED JOINTS ARE TO BE FULL-BEDDED IN MORTAR. END WALLS AND CROSS WEBS FORMING CELLS TO BE FILLED SHALL BE FULL-BEDDED IN MORTAR TO PREVENT LEAKAGE OF GROUT. ALL HEAD JOINTS ARE TO BE SOLIDLY FILLED AT LEAST 1½" BELOW TOP OF MASONRY. HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE GROUT POUR 1½" BELOW TOP OF MASONRY.

12. GROUT LIFTS SHALL NOT EXCEED 6 FEET. GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION IMMEDIATELY AFTER PLACING TO HELP ENSURE FILLING OF ALL VOIDS. RECONSOLIDATION BY VIBRATION MUST BE DONE AFTER THE INITIAL WATER LOSS AND BEFORE INITIAL SET. FOR GROUT POURS EXCEEDING 4 FEET, CLEANOUT OPENINGS SHALL BE PROVIDED AT THE BOTTOM OF EACH CELL WITH A VERTICAL BAR FOR EACH POUR, CONFORMING TO CBC SECTION 2104.6.1. CLEANOUTS SHALL BE SEALED AFTER INSPECTION AND BEFORE GROUTING. WHERE CLEANOUTS ARE NOT PROVIDED, SPECIAL PROVISIONS MUST BE MADE TO KEEP THE BOTTOM AND SIDES OF THE GROUT SPACES, AS WELL AS THE MINIMUM TOTAL CLEAR AREA REQUIRED, CLEAN AND CLEAR PRIOR TO GROUTING. FOR GROUT POURS EXCEEDING 4 FEET, CONFORM TO CBC HIGH-LIFT GROUTING REQUIREMENTS.

13. REINFORCEMENT PLACEMENT:
   13.1. REINFORCING SHALL BE HELD SECURELY IN POSITION. VERTICAL BARS SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT MORE THAN 200 BAR DIAMETERS
   13.2. LAP SPLICES SHALL BE 48 BAR DIAMETERS MINIMUM (UON). ADJACENT BAR LAPS SHALL BE STAGGERED 3'-0" MINIMUM. HOOKS SHALL BE 16 BAR DIAMETERS (UON)
   13.3. REINFORCING BARS TO HAVE GROUT COVERAGE OF AT LEAST ONE BAR DIAMETER (½" MINIMUM) FROM INSIDE FACE OF SHELL. HOWEVER THE CLEAR DISTANCE FROM OUTSIDE FACE OF MASONRY TO THE REINFORCING SHALL NOT BE LESS THAN 2" WHEN MASONRY IS EXPOSED TO SOIL OR 1½" FOR OTHER CONDITIONS.
   13.4. THE CLEAR DISTANCE BETWEEN PARALLEL BARS IS 1" MINIMUM AND (AND SHALL NOT BE LESS THAN 1 BAR DIAMETER), EXCEPT THAT THE TWO BARS IN A CONTACT SPLICE SHALL BE IN CONTACT. THIS CLEAR DISTANCE REQUIREMENT ALSO APPLIES TO THE CLEAR DISTANCE BETWEEN A CONTACT SPLICE AND ADJACENT SPLICES OR BARS. [EXCEPTION: THE MINIMUM CLEAR DISTANCE BETWEEN PARALLEL BARS IN COLUMNS AND PILASTERS IS 2.5 BAR DIAMETERS.

14. REFER TO THE STRUCTURAL DETAILS FOR WALL REINFORCING. AT A MINIMUM, BLOCK WALL VERTICAL REINFORCING SHALL BE #4 @ 18" O.C. AND HORIZONTAL REINFORCING SHALL BE #4 @ 16" O.C. AT LEAST ONE CONTINUOUS HORIZONTAL #4 BAR OR LARGER SHALL BE PLACED IN BOTH THE BOTTOM AND THE TOP COURSE OF MASONRY WALL. (UON).

15. SEE STRUCTURAL SHEETS FOR TYPICAL WALL DETAILS. AT A MINIMUM, DOOR AND WINDOW JAMBS SHALL HAVE 2 - #5 BARS, AND HEADERS (OR "LINTELS") SHALL HAVE 2 - #5 BARS, UON ON THE PLANS. JAMB AND LINTEL BARS SHALL EXTEND A MINIMUM OF 40 BAR DIAMETERS PAST THE OPENING.

16. JAMB REINFORCING STEEL SHALL EXTEND INTO THE FOUNDATION (OR DECK) BELOW WITH LAP BARS OF THE SAME DIAMETER BENT WITH 90-DEGREE STANDARD HOOKS INTO THE FOOTING OR DECK. JAMB STEEL SHALL CONTINUE TO THE TOP OF THE WALL, UNLESS DETAILED OTHERWISE ON THE PLANS, BUT SHALL NOT EXTEND LESS THAN 40 BAR DIAMETERS PAST THE OPENING.

17. MASONRY COLUMNS & PILASTERS: REFER TO THE STRUCTURAL DETAILS FOR REINFORCEMENT REQUIREMENTS. PROVIDE AT LEAST 4 - #3 TIES IN THE TOP 5" OF THE COLUMN, AND ENGAGE AT LEAST FOUR VERTICAL BARS AND/OR ANCHOR BOLTS WITH THE TIES. THE UPPERMOST TIE SHALL BE WITHIN 2" OF THE TOP OF THE COLUMN. BARS SHALL BE PLACED NOT LESS THAN 1½" AND NOT MORE THAN 5" FROM THE SURFACE OF THE COLUMN.

18. ANCHOR BOLT INSTALLATION: SECURE IN PLACE PRIOR TO GROUTING. PROVIDE 1" MINIMUM GROUT COVERAGE.

19. CONDUIT SLEEVES SHALL NOT BE SPACED CLOSER THAN THREE SLEEVE DIAMETERS CENTER-TO-CENTER. CONDUIT AND OTHER OBSTRUCTIONS SHALL BE STRATEGICALLY LOCATED SO AS TO AVOID CONFLICT WITH WALL REINFORCING AND CELL GROUT SPACES AND THE REQUIRED CLEARANCES.

20. WATERPROOFING SHALL TO BE PROVIDED ON THE FACE OF ALL MASONRY WALLS EXPOSED TO EARTH, PER THE ARCHITECTURAL PLANS AND SPECIFICATIONS.

21. THE CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES WHOSE WORK RELATES TO THE MASONRY INSTALLATION FOR PLACING OF ALL REQUIRED FRAMING. THIS INCLUDES, BUT IS NOT LIMITED TO, PLACING ANCHORS, BOLTS, PIPES, SLEEVES, NAILERS, BLOCKOUTS, REGLETS, FITTINGS, CONDUITS, ETC., PROVIDED BY OTHER TRADES WITHIN THE MASONRY CONSTRUCTION.

22. RETAINING WALLS SHALL NOT BE BACKFILLED UNTIL GROUT HAS SET A MINIMUM OF 14 DAYS (28 DAYS PREFERRED). ALL WALLS ARE TO BE FULLY BACKFILLED PRIOR TO FRAMING BEING PLACED ON OR AGAINST THE WALL. PER THE SOILS REPORT, ALL BACKFILL IS TO BE INSPECTED BY THE SOILS/GEOTECHNICAL ENGINEER AT THE TIME OF PLACEMENT.

23. HOT WEATHER CONSTRUCTION: MASONRY CONSTRUCTION IS NOT PERMITTED WHEN THE AMBIENT AIR TEMPERATURE EXCEEDS 100°F, OR IF IT EXCEEDS 90°F WITH A WIND VELOCITY OF 8 MPH OR GREATER. (EXCEPTION: IF PRECISE AND PROPER HOT WEATHER CONSTRUCTION AND PROTECTION REQUIREMENTS OF THE APPROPRIATE PRACTICE ARE IMPLEMENTED WHEN TEMPERATURES ARE FORECASTED TO REACH OR DO REACH THE LIMITS FOR NORMAL CONSTRUCTION. IF SUCH CONSTRUCTION IS NECESSARY, CONTACT THE ENGINEER FOR REQUIREMENTS.) CHECK LOCAL WEATHER REPORTS BEFORE THE START OF EACH DAY AND PERIODICALLY MEASURE AIR TEMPERATURE AND WIND SPEED DURING THE DAY. FOG SPRAY ALL NEWLY CONSTRUCTED MASONRY UNTIL DAMP, AT LEAST THREE TIMES A DAY UNTIL THE MASONRY IS THREE DAYS OLD.

24. COLD WEATHER CONSTRUCTION: COMPLY WITH CBC SECTION 2104.3.

TIMBER / LUMBER

1. ALL STRUCTURAL LUMBER SHALL BE DOUGLAS FIR-LARCH, S4S AND SHALL CONFORM TO CBC SECTION 2303.1.1.

2. THE MINIMUM LUMBER GRADE OF EACH MEMBER SHALL BE AS FOLLOWS UON ON PLANS AND DETAILS:
   2.1. 2X STUDS, BLOCKING, PLATES: STUD
   2.2. 2X JOISTS #2 OR BETTER
   2.3. 4X4 BEAMS OR POSTS #2 OR BETTER
   2.4. 4X6 OR LARGER BEAMS OR POSTS #1 OR BETTER

   IT IS RECOMMENDED (BUT NOT REQUIRED) THAT ALL EXPOSED MEMBERS BE SELECT STRUCTURAL OR BETTER AND FREE OF HEART CENTER DUE TO VISUAL CHARACTERISTICS.

3. ALL LUMBER IN CONTACT WITH CONCRETE OR MASONRY SHALL BE REDWOOD OR PRESSURE TREATED DOUGLAS FIR. CONTRACTOR SHALL COORDINATE WITH EOR IF PRESSURE TREATED MATERIAL UTILIZES A CORROSIVE TREATMENT GREATER THAN "DOT" PRIOR TO INSTALLATION. WHENEVER IT IS NECESSARY TO CUT, NOTCH, BORE OR SPLICE PRESSURE TREATED MATERIAL, ALL NEWLY CUT SURFACES SHALL BE THOROUGHLY PAINTED WITH THE SAME PRESERVATIVE.

4. MAXIMUM MOISTURE CONTENT FOR ALL STRUCTURAL MEMBERS SHALL NOT EXCEED 19%.

ALL PLYWOOD SHEATHING SHALL BE CDX GRADE (OR BETTER) DOUGLAS FIR WITH EXTERIOR GLUE. ALL SHEATHING SHALL CONFORM TO CBC STANDARD 23-2 AND GRADE-MARKED BY THE AMERICAN PLYWOOD ASSOCIATION (APA). PANEL INDEX TO BE 40/20 FOR FLOORS AND 24/0 FOR ROOFS (UON) ON THE PLANS AND DETAILS.

FASTENERS

1. NAILS:
   1.1. SHALL BE WITH "COMMON" NAILS (UON).
   1.2. SHALL NOT BE DRIVEN CLOSER THAN ½ THEIR LENGTH NOR CLOSER THAN ¼ OF THEIR LENGTH TO THE EDGE OR END OF A MEMBER, EXCEPT FOR SHEATHING.
   1.3. SHALL BE INSTALLED IN PRE-DRILLED LEAD HOLES IF NECESSARY TO AVOID SPLITTING.
   1.4. IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE HOT DIPPED ZINC GALVANIZED OR STAINLESS STEEL PER CRC 317.3
   1.5. ALL NAILING SHALL CONFORM TO 2013 CBC TABLE 2304.9.1.

2. LAG SCREWS:
   2.1. SHALL BE INSTALLED INTO PRE-DRILLED LEAD HOLES. LUBRICANT (OR SOAP) SHALL BE USED TO FACILITATE INSTALLATION AND PREVENT DAMAGE TO THE SCREWS.
   2.2. IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE HOT DIPPED ZINC GALVANIZED OR STAINLESS STEEL.

3. BOLTS:
   3.1. SHALL CONFORM TO ASTM A307 (UON) ON PLANS AND DETAILS.
   3.2. SHALL BE INSTALLED IN PRE-DRILLED HOLES A MAXIMUM OF 1/16" LARGER THAN THE SPECIFIED BOLT DIAMETER.
   3.3. WHEN INSTALLED AGAINST WOOD SURFACES, SHALL HAVE STANDARD WASHERS UNDER THE HEADS AND NUTS.
   3.4. IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE HOT DIPPED ZINC GALVANIZED OR STAINLESS STEEL.

4. ANCHOR BOLTS:
   4.1. SHALL BE 5/8" DIAMETER WITH 3X3X0.229" STEEL PLATE WASHERS AT SHEARWALLS.
   4.2. SHALL HAVE 7" MINIMUM EMBEDMENT. (CONTRACTOR TO COORDINATE LENGTH OF BOLTS WITH SILL PLATE THICKNESSES)
   4.3. SHALL CONFORM TO ASTM A307
   4.4. SHALL BE HOT DIPPED ZINC GALVANIZED OR STAINLESS STEEL
   4.5. SHALL NOT BE SPACED GREATER THAN 72" O.C. REFER TO SHEARWALL SCHEDULE FOR SPECIFIC ANCHOR BOLT SPACING REQUIREMENTS.
   4.6. SHALL BE PLACED A MAXIMUM OF 12" FROM WALL CORNERS, WALL ENDS, AND SILL PLATE SPLICES (BUT NOT LESS THAN 7 DIAMETERS), AND A MINIMUM OF TWO BOLTS PER PIECE OF SILL PLATE IS REQUIRED.
   4.7. SHALL BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION

5. OTHER HARDWARE:
   1.4. IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE HOT DIPPED ZINC GALVANIZED OR STAINLESS STEEL PER CRC 317.3

CARPENTRY

1. REFER TO 2013 CBC TABLE 2304.9.1. FOR ALL MINIMUM NAILING REQUIREMENTS.

2. REFER TO INDIVIDUAL SECTIONS FOR APPLICABLE MATERIAL SPECIFICATIONS.

3. FABRICATE, SIZE, INSTALL, CONNECT, FASTEN, BORE, NOTCH, AND CUT WOOD AND PLYWOOD WITH JOINTS TRUE, TIGHT, AND WELL-NAILED, SCREWED OR BOLTED AS REQUIRED. ALL MEMBERS TO HAVE SOLID BEARING WITHOUT BEING SHIMMED (UON). SET HORIZONTAL MEMBERS SUBJECT TO BENDING WITH THE CROWN UP. INSTALL FRAMING PLUMB, SQUARE, TRUE AND CUT FOR FULL BEARING. SPLICES ARE NOT PERMITTED BETWEEN BEARINGS. USE FULL LENGTHS (UON)

4. METAL FRAMING ANGLES, ANCHOR, CLIPS, STRAPS, TIES, HOLDOWNS, ETC. SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE CO. NO SUBSTITUTIONS SHALL BE PERMITTED WITHOUT PRIOR APPROVAL OF THE ENGINEER.

5. ALL WALLS ARE TO HAVE CONTINUOUS DOUBLE 2X TOP PLATES SPLICED AS FOLLOWINGS (UON) ON THE PLANS AND DETAILS.

6. WALL STUDS:
   6.1. (UON) USE THE FOLLOWING GUIDELINES FOR WALL FRAMING:
   6.2. USE 2X4 STUDS AT 16" O.C. FOR WALLS LESS THAN 9'-0" TALL.
   6.3. WALLS 9'-0" TO 16'-0" TALL SHALL BE CONSTRUCTED OF 2X6 STUDS AT 16" O.C.
   6.4. REQUEST SPECIFICALLY ENGINEERED WALL DETAILS FOR WALLS GREATER THAT 16'-0" TALL.

7. BLOCKING:
   7.1. PROVIDE MIN. ONE ROW OF NOMINAL 2" THICK BLOCKING OF SAME WIDTH AS STUD, FITTED SNUGLY AND SPIKED INTO STUDS AT MID-HEIGHT OF PARTITIONS OR WALLS OVER EIGHT FEET HIGH.
   7.2. ALL CRIPPLE WALLS (OR "PONY WALLS") LESS THAN 14" IN HEIGHT SHALL BE SOLID BLOCKING.
   7.3. REFER TO SHEARWALL SECTION FOR ADDITIONAL BLOCKING REQUIREMENTS.

8. NOTCHING:
   8.1. IS NOT PERMITTED OF ANY STRUCTURAL MEMBER WITHOUT PRIOR APPROVAL
   8.2. IN EXTERIOR AND BEARING WALLS, NOTCHES SHALL NOT EXCEED 25% OF THE STUD DEPTH.
   8.3. NON-BEARING PARTITION WALLS, NOTCHES SHALL NOT EXCEED 40% OF THE STUD DEPTH.
   8.4. SUCCESSIVE NOTCHES IN THE SAME MEMBER SHALL BE SPACED A MINIMUM OF 18" APART.

9. BORING:
   9.1. IS NOT PERMITTED OF ANY STRUCTURAL MEMBER WITHOUT PRIOR APPROVAL
   9.2. IN EXTERIOR AND BEARING WALLS, HOLES SHALL NOT EXCEED 40% OF THE STUD DEPTH.
   9.3. NON-BEARING PARTITION WALLS, SHALL MAY BE DRILLED NOT GREATER THAN 60% OF THE STUD DEPTH.
   9.4. SUCCESSIVE HOLES IN THE SAME MEMBER SHALL BE SPACED A MINIMUM OF 18" APART.

10. BEARING:
   10.1. PROVIDE A MINIMUM OF 1½" OF BEARING FOR ALL 2X JOISTS AND ALL 4X10 / 6X8 HEADERS & SMALLER.
   10.2. PROVIDE A MINIMUM OF 3" OF BEARING FOR ALL BEAMS AND HEADERS 4X12 / 6X10 & LARGER (UON).
   10.3. MEMBERS BEARING ON PREFABRICATED HANGERS ARE TO HAVE FULL BEARING AND NAILING PER MANUFACTURER'S SPECIFICATIONS.

11. POSTS:
   11.1. POSTS INSIDE WALLS SHALL BEAR ON SILL PLATES AND SHALL BE CONTINUOUS BETWEEN TOP AND BOTTOM PLATES, (UON).
   11.2. PROVIDE POSTS UNDER ALL BEAMS, GIRDERS OR DOUBLE JOISTS EQUAL TO THE WIDTH OF THE SUPPORTED MEMBER.
   11.3. POSTS ON UPPER LEVELS ARE TO BE STACKED ON POSTS OF EQUAL SIZE AT LEVELS BELOW, UNLESS A LARGER POST IS SPECIFIED ON THE PLANS.
   11.4. VERTICAL BLOCKING ("SQUASH BLOCKS") SHALL BE USED TO FULLY TRANSFER THE POST AREA THROUGH FLOORS TO FOUNDATION. VERTICAL BLOCKING SHALL BE EQUAL TO FLOOR THICKNESS PLUS 1/16".
   11.5. HEADERS FRAMING INTO CONTINUOUS POSTS WITHOUT TRIMMER STUDS SHALL BE SUPPORTED IN SIMPSON HUC HANGERS (UON).
   11.6. POSTS WHEN ISOLATED, SHALL BE SEATED IN SIMPSON POST OR COLUMN BASES (UON)

12. FLOOR FRAMING:
   12.1. PROVIDE WOOD JOISTS, AS SPECIFIED, LAID WITH THE CROWN UP AND SPACED AS INDICATED.
   12.2. PROVIDE A MINIMUM OF 1½" END BEARING UNLESSSS OTHERWISE SHOWN.
   12.3. PROVIDE FULL DEPTH SOLID 2X BLOCKING OR CROSS-BRIDGING BETWEEN THE JOISTS AT 8'-0" O.C. MAX. FOR FLOORS FRAMED WITH I JOISTS, REFER TO THE MANUFACTURER'S SPECIFICATIONS FOR BLOCKING REQUIREMENTS.
   12.4. PROVIDE FULL DEPTH SOLID 2X BLOCKING BETWEEN THE JOISTS UNDER ALL WALLS AND PARTITIONS WHERE THE WALL OR PARTITION IS PERPENDICULAR TO THE FLOOR FRAMING (INCLUDING FLOORS FRAMED WITH I JOISTS)
   12.5. INSTALL 3/4" PLYWOOD SHEATHING WITH THE FACE GRAIN ACROSS SUPPORTS, END SUPPORTS STAGGERED AND THE EDGES OF SHEETS CENTERED OVER SUPPORTS. IF T&G PLYWOOD IS NOT USED, PROVIDE BLOCKING AT ALL PLYWOOD EDGES. GLUE TO JOISTS AND FULLY NAIL WITH COMMON NAILS PER THE PLANS.

13. ROOF FRAMING:
   13.1. PROVIDE WOOD JOISTS, AS SPECIFIED, LAID WITH THE CROWN UP AND SPACED AS INDICATED.
   13.2. PROVIDE A MINIMUM OF 1½" END BEARING (UON).
   13.3. PROVIDE FULL DEPTH SOLID 2X BLOCKING OR CROSS-BRIDGING BETWEEN THE JOISTS AT 8'-0" O.C. MAX.
   13.4. PROVIDE ALL CRICKET FRAMING REQUIRED TO ACHIEVE POSITIVE DRAINAGE PER ARCHITECTURAL DRAWINGS.
   13.5. INSTALL PLYWOOD PANELS WITH THE FACE GRAIN ACROSS THE FRAMING AND CLOSE JOINTS AND NAIL AT EACH SUPPORT. FULLY NAIL WITH COMMON NAILS PER THE PLANS.
   13.6. PROVIDE SIMPSON "PSCL" CLIPS AT ALL PLYWOOD JOINTS PERPENDICULAR TO FRAMING. PROVIDE CLIPS MIDWAY BETWEEN FRAMING MEMBERS AT THE UNSUPPORTED EDGES OF PLYWOOD WHEN MEMBERS ARE SPACED AT 24" O.C. OR GREATER. IF CLIPS ARE NOT USED, PROVIDE SOLID BLOCKING FOR JOINTS PERPENDICULAR TO FRAMING.

14. SHEARWALLS:
   1.1. REFER TO PLANS FOR ALL SHEARWALL LOCATIONS, LENGTH TYPE AND NAILING.
   1.2. REFER TO SHEARWALL SCHEDULE ON TITLE SHEET FOR ADDITIONAL INFORMATION.
   1.3. SHEARWALL LENGTHS SPECIFIED ON PLANS ARE MINIMUM REQUIRED.
   1.4. SHEARWALLS TO BE NAILED WITH COMMON NAILS. ALL NAILS TO HAVE MINIMUM 3/8" EDGE DISTANCE TO PANEL OR FRAMING MEMBER.
   1.5. IF 3X FRAMING IS REQUIRED, STAGGER EDGE NAILING. 3X FRAMING IS REQUIRED AT:
      1.5.1. ALL PANEL JOINTS
      1.5.2. ALL SILL PLATES ON CONCRETE OR MASONRY
      1.5.3. ALL SILL PLATES AT DOUBLE-SIDED SHEARWALLS
   1.6. OSB MAY BE USED IN LIEU OF PLYWOOD.

ENGINEERED LUMBER

1. GLU-LAMINATED BEAMS
   1.1. SHALL BE 24F-V4 FOR SIMPLE SPANS AND 24F-V8 FOR BEAMS WITH CANTILEVERS WITH THE FOLLOWING MINIMUM PROPERTIES:
      1.1.1. FB = 2400 PSI
      1.1.2. FV = 165 PSI
      1.1.3. FC = 450 PSI
      1.1.4. E = 1800 PSI
   1.2. SHALL NOT BE NOTCHED, CUT OR DRILLED WITHOUT PRIOR APPROVAL FROM THE ENGINEER
   1.3. SHALL HAVE EXTERIOR GLUE AND WEATHER-TREATMENT PRIOR TO INSTALLATION
   1.4. SHALL BE FABRICATED BY AN APPROVED MANUFACTURER. AN A.I.T.C. CERTIFICATE OF COMPLIANCE SHALL BE GIVEN TO THE BUILDING INSPECTOR PRIOR TO INSTALLATION
   1.5. SHALL HAVE FACTORY STANDARD CAMBER, EXCEPT WHERE NOTED OTHERWISE ON THE PLANS

2. LAMINATED VENEER LUMBER (LVL):
   2.1. SHALL BE 1-3/4" MINIMUM THICKNESS WITH THE FOLLOWING MINIMUM PROPERTIES:
   2.2. E = 1900 KSI
   2.3. FB = 2600 PSI
   2.4. FV = 285 PSI
   2.5. FC (PARALLEL) = 2500 PSI
   2.6. FC (PERP.) = 750 PSI
   2.7. FT (PARALLEL) = 1500 PSI
   2.8. SPECIFIC GRAVITY = 0.50
   2.9. SHALL BE FABRICATED BY AN APPROVED MANUFACTURER
   2.10. SHALL BEAR A MINIMUM OF 3-1/2" ON SPECIFIED SUPPORTS. PROVIDE FULL DEPTH SOLID BLOCKING AT ALL BEARING POINTS
   2.11. SHALL BE NAILED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. UNLESSSS OTHERWISE APPROVED, NAILING INTO THE TOP EDGE SHALL NOT BE SPACED ANY CLOSER THAN:
      2.11.1. 16D 6"
      2.11.2. 10D 4"
      2.11.3. 8D 3"
      2.11.4. WHEN NAILING MUST BE REDUCED, STAGGER ROWS A MINIMUM OF 1/2" APART WHILE MAINTAINING PROPER EDGE DISTANCES
   2.12. SHALL BE, WHEN COMPRISED OF MULTIPLE MEMBERS, CONNECTED WITH 16D NAIL, 1/2" BOLTS OR 1/4" LAG SCREWS IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
   2.13. SHALL NOT BE CUT, NOTCHED OR DRILLED WITHOUT SPECIFIC WRITTEN APPROVAL OF THE ENGINEER.

3. PARALLEL STRAND LUMBER (PSL):
   3.1. SHALL BE 2-1/2" MINIMUM THICKNESS WITH THE FOLLOWING MINIMUM PROPERTIES:
      3.1.1. E = 2000 KSI
      3.1.2. FB = 2900 PSI
      3.1.3. FV = 290 PSI
      3.1.4. FC (PARALLEL) = 2900 PSI
      3.1.5. FC (PERP.) = 750 PSI
      3.1.6. FT (PARALLEL) = 2025 PSI
      3.1.7. SPECIFIC GRAVITY = 0.50
   3.2. SHALL BE FABRICATED BY AN APPROVED MANUFACTURER
   3.3. SHALL BEAR A MINIMUM OF 3-1/2" ON SPECIFIED SUPPORTS. PROVIDE FULL DEPTH SOLID BLOCKING AT ALL BEARING POINTS
   3.4. SHALL BE NAILED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. UNLESS OTHERWISE APPROVED, NAILING SHALL NOT BE SPACED ANY CLOSER THAN:
      3.4.1. NARROW FACE: 6" FOR 16D COMMON, 4" FOR 10D COMMON, AND 3" FOR 8D COMMON
      3.4.2. WIDE FACE: 8" FOR 16D COMMON, 6" FOR 10D & 8D COMMON
      3.4.3. WHEN NAILING MUST BE REDUCED, STAGGER ROWS A MINIMUM OF 1/2" APART WHILE MAINTAINING PROPER EDGE DISTANCES
   3.5. SHALL NOT BE CUT, NOTCHED OR DRILLED WITHOUT SPECIFIC WRITTEN APPROVAL OF THE ENGINEER.

4. PLYWOOD I JOISTS:
   4.1. TYPE AND MANUFACTURER SHALL BE CLEARLY NOTED ON THE PLANS. SUBSTITUTIONS SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL OF THE ENGINEER.
   4.2. SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE CODE APPROVALS AND MANUFACTURER'S SPECIFICATIONS.
   4.3. SHALL BEAR A MINIMUM OF 1-3/4" AT ALL END SUPPORTS, AND 3-1/2" AT INTERMEDIATE SUPPORTS. PROVIDE FULL DEPTH SOLID BLOCKING AT ALL BEARING POINTS.
   4.4. SHALL BE INSTALLED WITH INTERMEDIATE BLOCKING OR BRIDGING AS SPECIFIED BY THE MANUFACTURER. ONLY OMIT INTERMEDIATE BLOCKING WHEN SPECIFICALLY ALLOWED BY THE MANUFACTURER.
   4.5. SHALL NOT BE CUT, NOTCHED OR DRILLED WITHOUT SPECIFIC WRITTEN APPROVAL OF THE ENGINEER.

TRUSSES

1. REFER TO THE STRUCTURAL AND ARCHITECTURAL PLANS FOR ADDITIONAL DESIGN LOADS AND CONDITIONS. BOTTOM CHORDS SHALL BE DESIGNED TO RESIST A MINIMUM CEILING LIVE LOAD OF 10 PSF.

2. TRUSS CALCULATIONS AND DETAILS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER AND THE BUILDING DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

3. ALL TRUSSES SHALL BE FABRICATED IN THE SHOP OF A LICENSED FABRICATOR APPROVED BY THE GOVERNING BUILDING DEPARTMENT.

4. EACH TRUSS SHALL BE LEGIBLY BRANDED, MARKED OR OTHERWISE HAVE PERMANENTLY AFFIXED THERETO THE FOLLOWING INFORMATION LOCATED WITHIN 2 FEET OF THE CENTER OF THE SPAN ON THE FACE OF THE BOTTOM CHORD:
   4.1. IDENTITY OF THE COMPANY MANUFACTURING THE TRUSS
   4.2. THE DESIGN LOAD, AND
   4.3. THE SPACING OF THE TRUSSES.

5. WALLS:
   5.1. TRUSSES SHALL BEAR ON EXTERIOR WALLS ONLY (UON).
   5.2. ALL INTERIOR WALLS SHALL BE NON-BEARING (UON).
   5.3. ALL APPROVED INTERIOR BEARING LOCATIONS SHALL BE SPECIFICALLY NOTED ON THE STRUCTURAL PLANS.

6. BEARING:
   6.1. SECURING OF BEARING WALLS (UON) TRUSSES SHALL BE SECURED AT ALL BEARING POINTS WITH SIMPSON SEISMIC ANCHORS (E.G. H1).
   6.2. INTERIOR NON-BEARING WALLS SHALL BE ISOLATED FROM THE TRUSSES WITH SIMPSON TRUSS CLIPS (E.G. STC, DTC, HTC4) OR APPROVED EQUAL.
   6.3. TRUSSES TO BE MANUFACTURED WITH NECESSARY CAMBER TO ACCOUNT FOR DEAD LOAD DEFLECTIONS AND ELIMINATE ACCIDENTAL BEARING ON INTERIOR NON-BEARING WALLS.

7. BLOCKING AND BRACING SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. AS A MINIMUM, THE TRUSSES SHALL BE BLOCKED AT THE FOLLOWING LOCATIONS:
   7.1. ALL BEARING POINTS
   7.2. ALONG RIDGE

8. ERECT TRUSSES ACCORDING TO THE APPROVED SHOP DRAWINGS. LIFT MEMBERS ONLY AT DESIGNATED LIFT POINTS. PROVIDE ERECTION BRACING TO KEEP THE MEMBERS STRAIGHT AND PLUMB AS REQUIRED TO ASSURE ADEQUATE LATERAL SUPPORT FOR INDIVIDUAL MEMBERS AND THE ENTIRE SYSTEM UNTIL THE SHEATHING IS APPLIED.

SPECIAL INSPECTION REQUIREMENTS

1. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR SCHEDULING, COORDINATION, AND EXPENSES INVOLVED IN THE EXECUTION OF THE FOLLOWING INSPECTIONS. REQUESTS FOR INSPECTIONS SHALL BE MADE NO LATER THAN 48 HOURS PRIOR TO THEIR NECESSITY.

2. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO INSURE THAT THE FOLLOWING ELEMENTS ARE VISIBLE AND AVAILABLE FOR INSPECTION:
   2.1. EPOXY ANCHORS
   2.2. WELDING (REFER TO STRUCTURAL STEEL SECTION FOR SPECIFIC REQUIREMENTS)
   2.3. ALL BOLTED CONNECTIONS EXCEPT A307 BOLTS

3. A PRE-CONSTRUCTION MEETING INCLUDING THE SPECIAL INSPECTOR, ENGINEER OF RECORD (EOR), ARCHITECT RESPONSIBLE FOR THE STRUCTURAL OBSERVATIONS, THE CONTRACTOR, AND ALL APPROPRIATE SUBCONTRACTORS SHALL BE HELD TO REVIEW THE DETAILS OF THE STRUCTURAL SYSTEM TO BE STRUCTURALLY OBSERVED.

4. DURING THE COURSE OF CONSTRUCTION THE SPECIAL INSPECTOR SHALL VISUALLY REVIEW THE STRUCTURAL ELEMENTS FOR GENERAL CONFORMANCE WITH THE APPROVED PLANS. ANY OBSERVED DEFICIENCIES SHALL HE REPORTED IN WRITING TO THE OWNER'S REPRESENTATIVE, TO THE CONTRACTOR, AND TO THE BUILDING DEPARTMENT.

5. UPON COMPLETION OF THE APPLICABLE SHEARWALLS AND/OR ANCHORAGE SYSTEM AND PRIOR TO COVERING THE SHEARWALL/ANCHORAGE SYSTEM, THE SPECIAL INSPECTOR SHALL SUBMIT A LETTER TO THE EOR AND BLDG. DEPARTMENT WITH HIS/HER WET STAMP AND SIGNATURE ATTESTING TO (1) THE DATES ON WHICH VISUAL REVIEWS WERE CONDUCTED, (2) DEFICIENCIES OBSERVED, AND (3) CORRECTIONS TAKEN. THE LETTER SHALL CERTIFY THAT ALL REPORTED DEFICIENCIES WHICH, TO THE BEST OF THE OBSERVER'S KNOWLEDGE, HAVE BEEN RESOLVED.

6. PRIOR TO COVERING THE WORK, THE SHEARWALLS AND/OR ANCHORAGE SYSTEM SHALL BE INSPECTED AND APPROVED BY THE DEPARTMENT INSPECTION STAFF ASSIGNED TO THE PROJECT. SUCH APPROVAL BY THE DEPARTMENT IS REQUIRED PRIOR TO COVERING. THE SPECIAL INSPECTOR IS NOT AUTHORIZED TO APPROVE THE COVERING OF THE SHEARWALLS OR ANCHORAGE SYSTEM. THE OBSERVATIONS OF THE SPECIAL INSPECTOR ARE ADVISORY ONLY AND THEY DO NOT IN ANY WAY BIND THE INSPECTOR OR CONSTITUTE A CERTIFICATION THAT THE SHEARWALLS WILL PASS DEPARTMENT INSPECTION.

JK ENGINEERING
239-4151

John A. Kudla
Civil Engineering &
Structural Design
R.C.E. #50652
610 10th ST. UNIT 'A' PASO ROBLES, CA.

PLAN PREPARED FOR:
CASEY & LYNN MCLEAN
4890 RANCHITA OAKS WAY
SAN MIGUEL, CA 93451

REVISION LOG

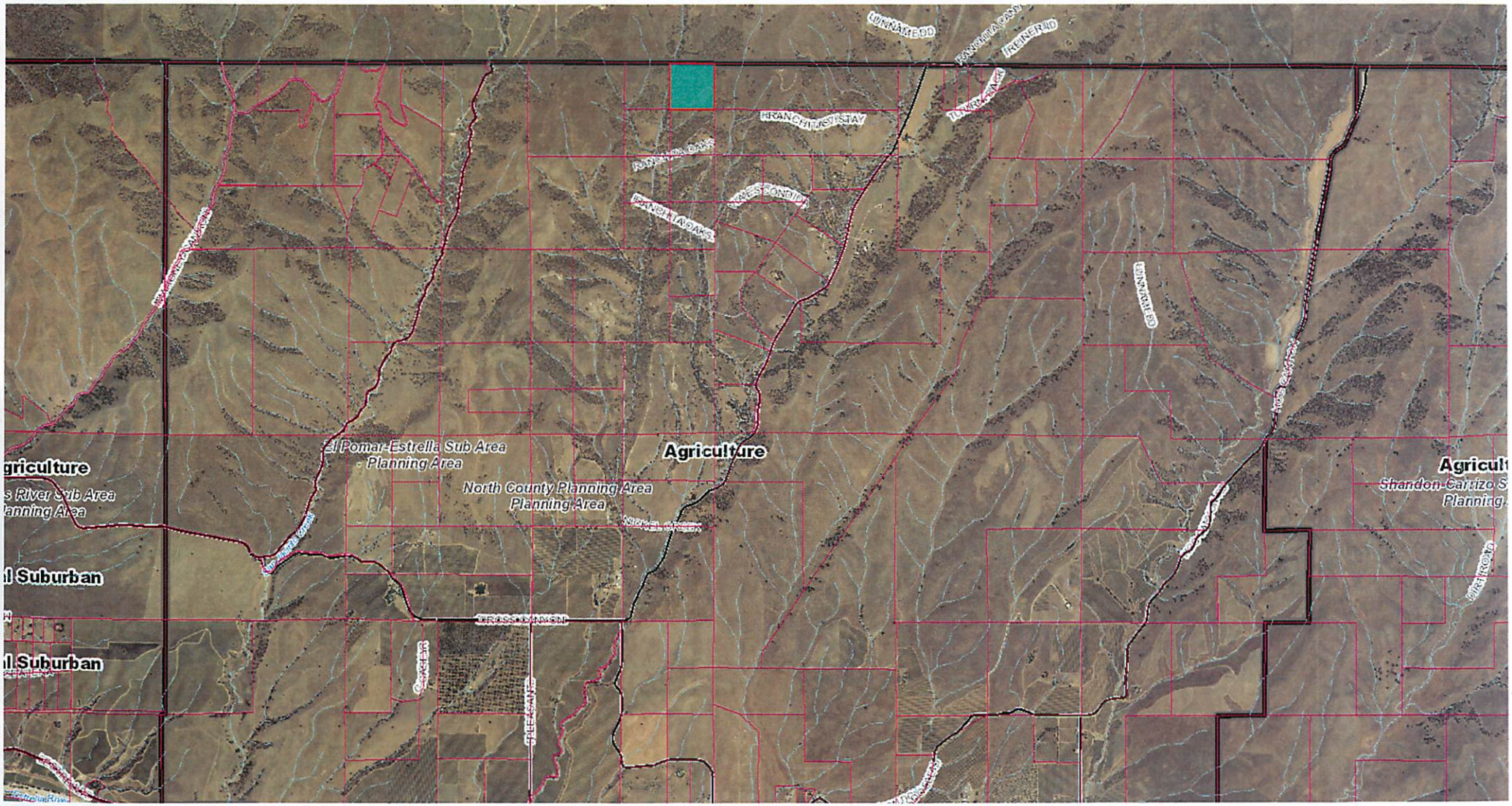
REV.	DESCRIPTION	DATE

These drawings are the exclusive property of J.K. Engineering and shall be used solely for the purpose of this project on this site. Any use other than the project upon which it is intended for without the written consent of J.k. Engineering and John Kudla is prohibited.

PROJECT NO. —
FILE NAME STRUCTURAL SP.DWG
DRAWN BY JJK
DATE 12/14/2015 1:20 PM
SHEET TITLE:
SP
SPECIFICATIONS

SHEET NUMBER:
SSP

P:\CADD WORK\2014 Jobs\McLean\Correspondence\STRUCTURAL SP.dwg Johnny 11/30/2015 11:22:04 AM



LUNNAMEDD
RANCHITA CANY
IRENER ID
TUMBRA TRACK
RANCHITA STAY
RANCHITA OAKS
WAYES CONDIDA
RANCHITA OAKS
LUNNAMEDD
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North County Planning Area
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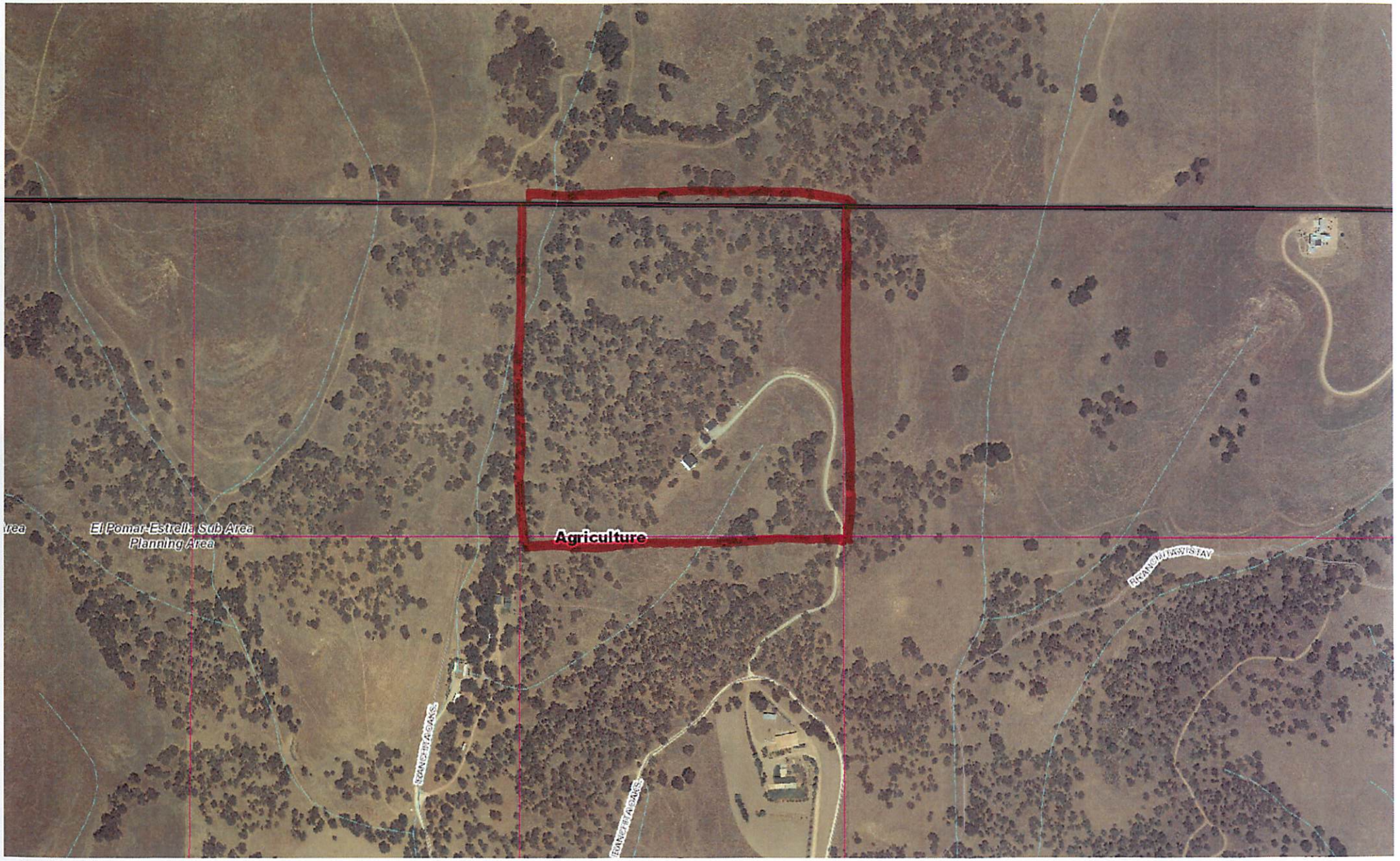
El Pomar-Estrella Sub Area
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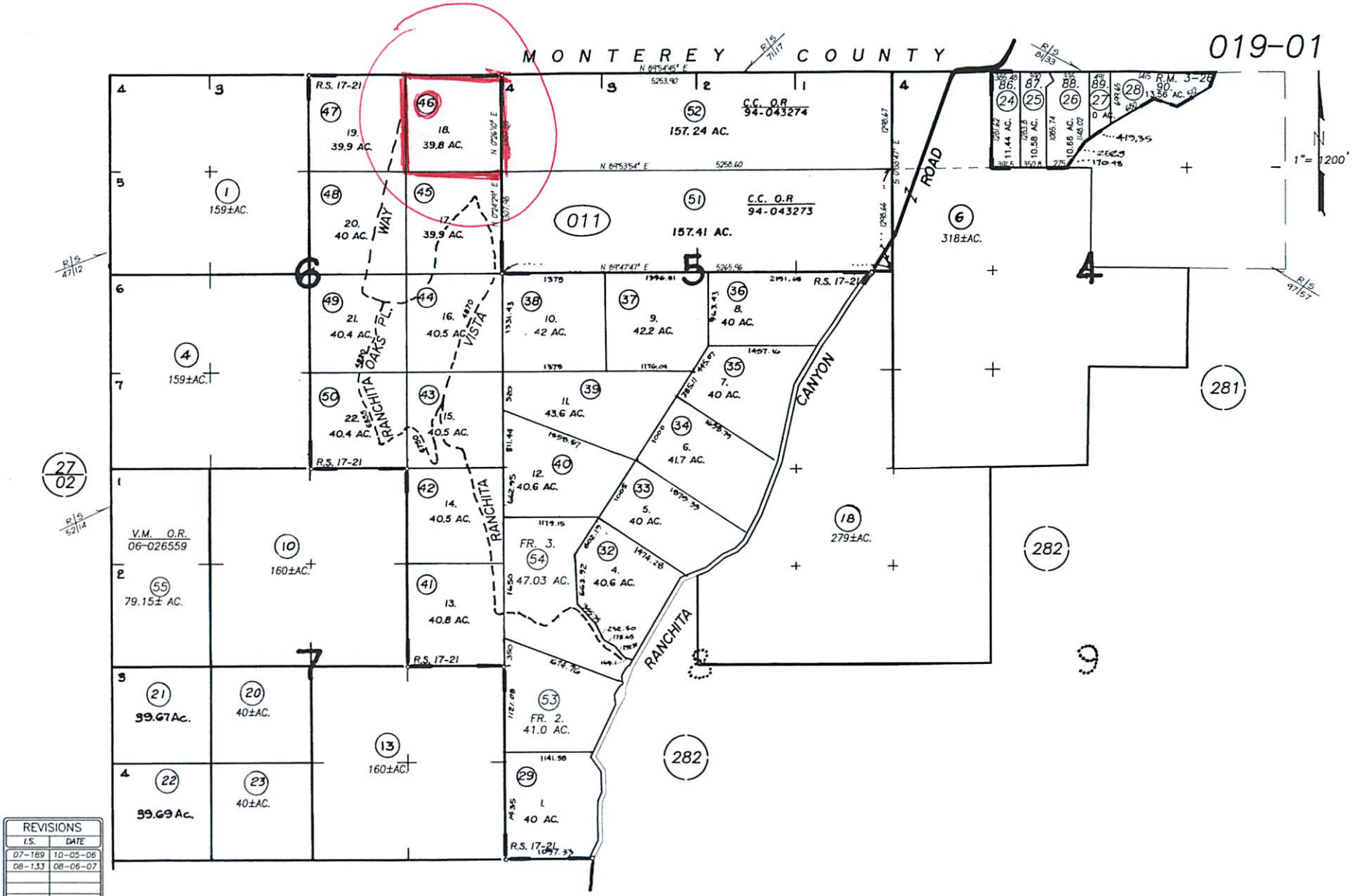

REVISIONS	
I.S.	DATE
07-189	10-05-06
08-133	08-06-07

600' 0 1200' 2400'

JAV 05-25-97 THIS MAP IS PREPARED FOR ASSESSMENT PURPOSES ONLY.

T. 25 S., R. 13 E., M.D.M.
INDEPENDENCE TRACT 1B, R.M. Bk. 3 , Pg. 26

ASSESSOR'S MAP, COUNTY OF SAN LUIS OBISPO, CA.
BOOK 019 PAGE 01

Parcel Summary Report For Parcel # 019-011-046

5/2/2016
2:47:09PM

San Luis Obispo County Department of Planning and Building
County Government Center San Luis Obispo, California 93408 Telephone: (805) 781-5600

People Information

Role	Name and Address
OWN	MCLEAN CASEY G 4212 GARDENA AVE LONG BEACH CA 90807-
OWN	MCLEAN FAMILY TRUST
OWN	MCLEAN LYNN L

Address Information

Status	Address
P	04890 RANCHITA VISTA WY NCELPO

Lot Information:

Tract / Twnshp	Block / Range	Section	Community:	Plan/Area:	Lue 1:	Lue 2:	Lue 3:	Lot:	Flags:	Misc
T25S	R13E	06P	North Cty. Plan	North County I	AG			Y	VN	
APV.C02-	169	0001	North Cty. Plan	North County I				N	S2	

Parcel Information

Status	Description
Active	R/S 17/21 PAR 18 LESS 45% MIN RTS

Notes

MR. FAIRBAIRN LEFT A MUP APPLICATION FOR A DISTANCE WAIVER FOR AN AS BUILT GUEST HOUSE AT THE PLANNING COUNTER WITHOUT FEES AND ASKED THAT THE FEES BE PAID OUT OF ESCROW. THE PROPERTY IS APPARENTLY IN A SHORT SALE WITH THE BANK. ART WILL TALK TO CHRIS CRAIG ABOUT THIS. NO CASE NUMBER HAS BEEN ASSIGNED. JZB 2/19/13.

Tax Districts

PLEASANT VALLEY

PASO ROBLES JT(27,40) (SB1537)

SAN LUIS OBISPO JT(27,40)

ESTRELLA

AREA NO. 21

Parcel Summary Report For Parcel # 019-011-046

San Luis Obispo County Department of Planning and Building
County Government Center San Luis Obispo, California 93408 Telephone: (805) 781-5600

NO. 01

Case Information

Case Number:	Case Status:	
C8055	FNL	Primary Parcel

Description:
SINGLE FAMILY DWELLING & GRADING

C8065	FNL	Primary Parcel

Description:
DETACHED GARAGE

C9276	FNL	Primary Parcel

Description:
FIRESPRINKLERS FOR SFD PIPING BLAZEMASTER/SPRINKLE TYCO LF11 CONCEALED PENDENT 14' X14' FLAT CEILINGS

COD2011-00794	CLD	Primary Parcel

Description:
PERMITS REQUIRED

COD2014-00604	REC	Primary Parcel

Description:
INVESTIGATION: UNPERMITTED SECONDARY (MUP REQUIRED FOR DISTANCE IF GUEST HOUSE) WAS "FAIRBAIRN" C11-00794

DRC2015-00124	REC	Primary Parcel

Description:
AS-BUILT HOUSE OVER PERMITTED GARAGE

PMT2002-10362	FNL	Primary Parcel

Description:
GRADING FOR ACCESS ROAD & 2 PADS BOTH ON CUT/FILL TIM ROBERTS,RCE/BUENA REFERENCED ON PLAN/AS-BUILT

PMT2004-02199	FNL	Primary Parcel

Description:
SUNROOM - 540 SF W/ ELECTRICAL ICBO # 4590P (FOUR SEASONS)

PMT2015-03412	REC	Primary Parcel

Description:
AS BUILT GUEST HOUSE

S010352C	RDD	Primary Parcel

Description:
PROP 1 COND CERT OF COMP