

**County Government Center** 

455 County Center, 2nd Floor Redwood City, CA 94063 650-363-4161 T planning.smcgov.org

September 2, 2020

Guadalupe Lopez 411 Chesterfield Avenue Half Moon Bay, CA 94019

Dear Ms. Lopez:

SUBJECT: Coastside Design Review Continuance

Highland Avenue, El Granada

APN 047-161-100; County File No. PLN 2017-00191

At its meeting of August 13, 2020, the San Mateo County Coastside Design Review Committee (CDRC) considered your design review application to construct a new 4,590 sq. ft., 3-story single-family residence with attached 660 sq. ft. 3-car garage on an 8,663 sq. ft. legal parcel and road extension (approx. 140 linear feet) for access to the parcel, associated with a staff-level Coastal Development Permit (CDP). The proposed house will be built on an existing foundation (BLD 2007-00781) built over 25 years ago. Three (3) significant trees are proposed for removal. Approximately 190 cubic yards (cy) (131 cy cut, 59 cy fill) of grading proposed. This project is not appealable to the California Coastal Commission.

The CDRC was unable to make the findings for a design review recommendation of approval based on certain design deficiencies. In order to resolve these deficiencies in the project's design, a more thorough review of the "Standards for Design for One-Family and Two-Family Residential Development in the Midcoast" manual is required. As such, requirements from the CDRC for further project redesign are as follows:

- a. Increase accuracy, continuity, and consistency within the drawing set, including but not limited to:
  - (1) Coordinate roof forms, elevations, and sections to accurately depict the roof forms.
  - (2) Provide accurate specs and samples for colors as well as architectural elements like the metal gate, the garage doors, and the front entry doors.
  - (3) Remove antiquated design info that is not being utilized.
  - (4) Accurately label the rooms.



- (5) Include a landing area for the exterior steps.
- (6) Confirm volumes of cut and fill needed for road extension and house
- b. Per Section 6565.20(D). Elements of Design; 3. Roof Design; a. Massing and Design of Roof Forms; Standards: (1) When planning a new home or second story addition, begin with a primary roof form. Consider additions to the primary roof such as secondary roof forms and dormers that may serve to reduce the home's apparent mass and scale, provide visual interest and have an appropriate number of roof forms. Additional roof forms shall be architecturally compatible with the primary roof form's slope and material:
  - (1) Revise massing and design of roof forms to Include secondary roof forms that are compatible with the primary roof form's slope and material in order to reduce the home's apparent mass and scale and provide visual interest.
  - (2) Generally, reduce ceiling height.
- c. Per Section 6565.20(E). Additional Site Planning and Design Considerations; Standards: 1.c. Vary in design style, exterior detail, roof lines, finish materials, and landscaping enough to avoid overly repetitive appearance: Provide more articulation of the massing of the house rather than only utilizing applied material changes.
- d. Per Section 6565.20(D). Building Mass, Shape and Scale; (2) On downslope lots, minimize unused, enclosed space between the lowest floor and the grade below.
  (3) Minimize building extensions out over a slope supported on high stilts: Reduce the amount of crawl space beneath the house.
- e. Suggestions (not required):
  - (1) Consider removing the small room attached to the garage.
  - (2) Revise landscape plan to provide a more organic appearance and avoid linear planting patterns.

As such, you were presented with the following available options at the end of the CDRC's deliberation of the project: (i) request for a decision from the CDRC on the plans presented or (ii) request that the project be considered at the next meeting to provide you with ample time to consider and incorporate the elements recommended for project redesign. You chose the second option, and the CDRC directed staff to schedule your project for consideration at a later date.

Please contact Camille Leung, Senior Planner, at <a href="mailto:cleung@smcgov.org">cleung@smcgov.org</a>, if you have any questions.

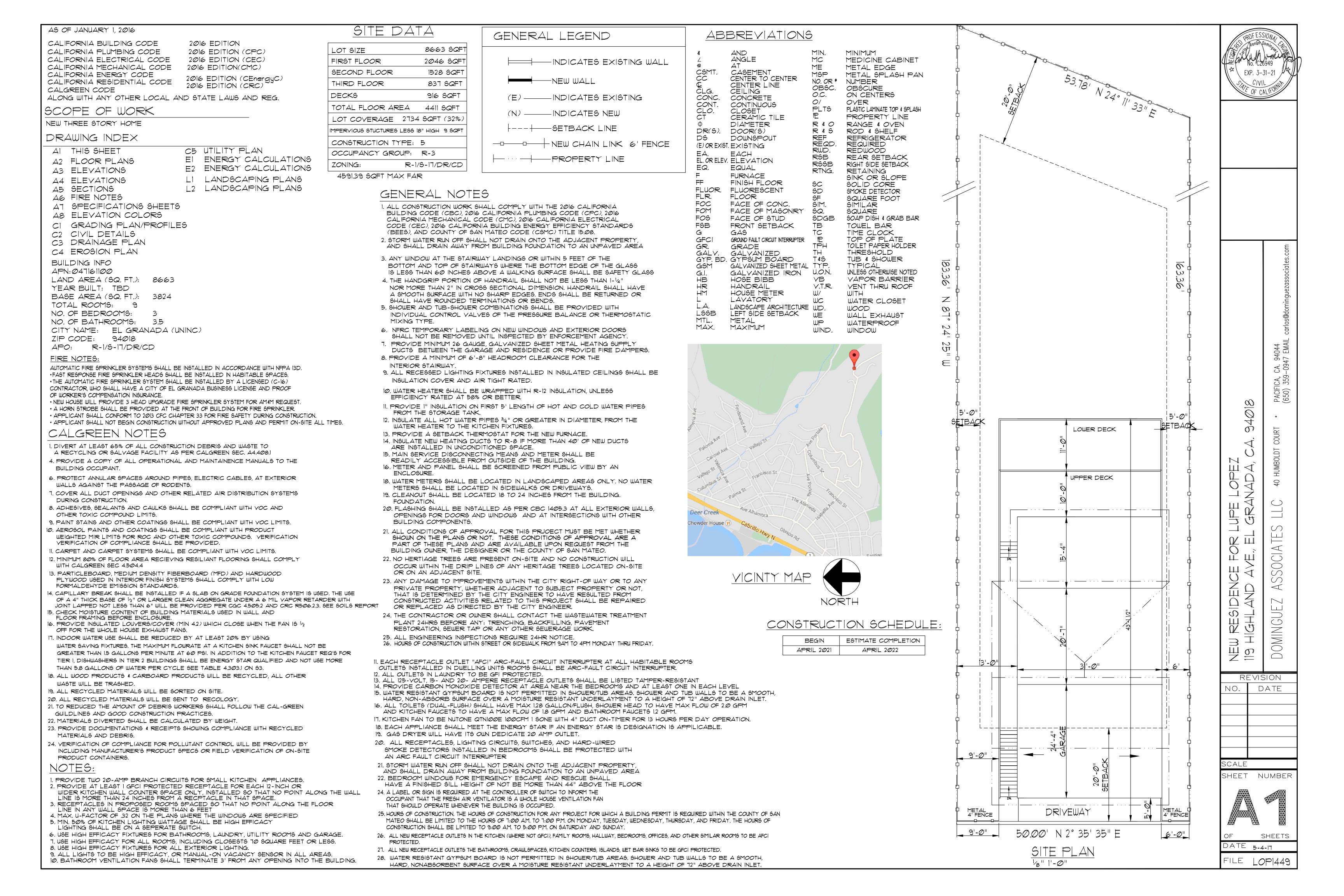
To provide feedback, please visit the Department's Customer Survey at the following link: <a href="http://planning.smcgov.org/survey">http://planning.smcgov.org/survey</a>.

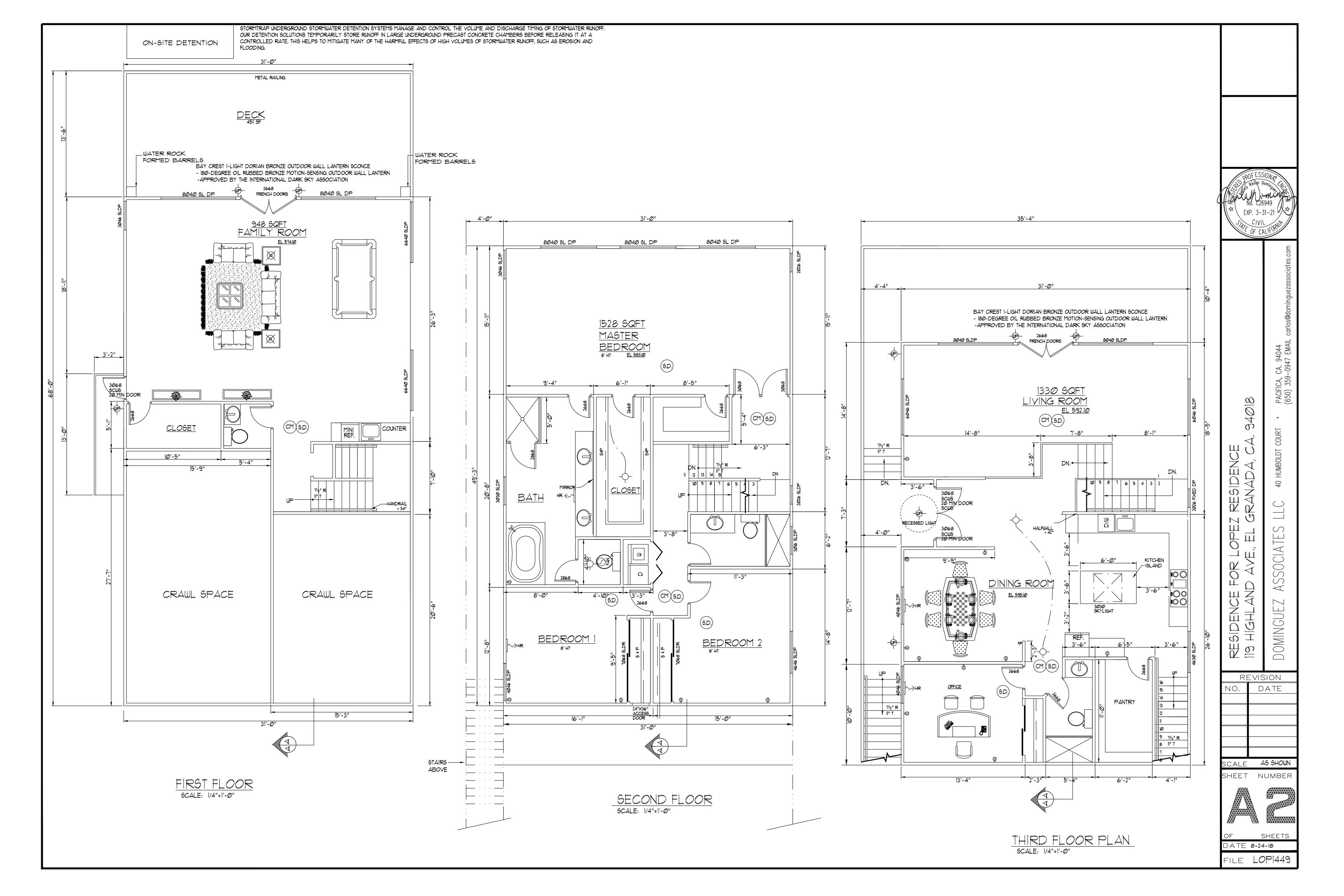
Sincerely,

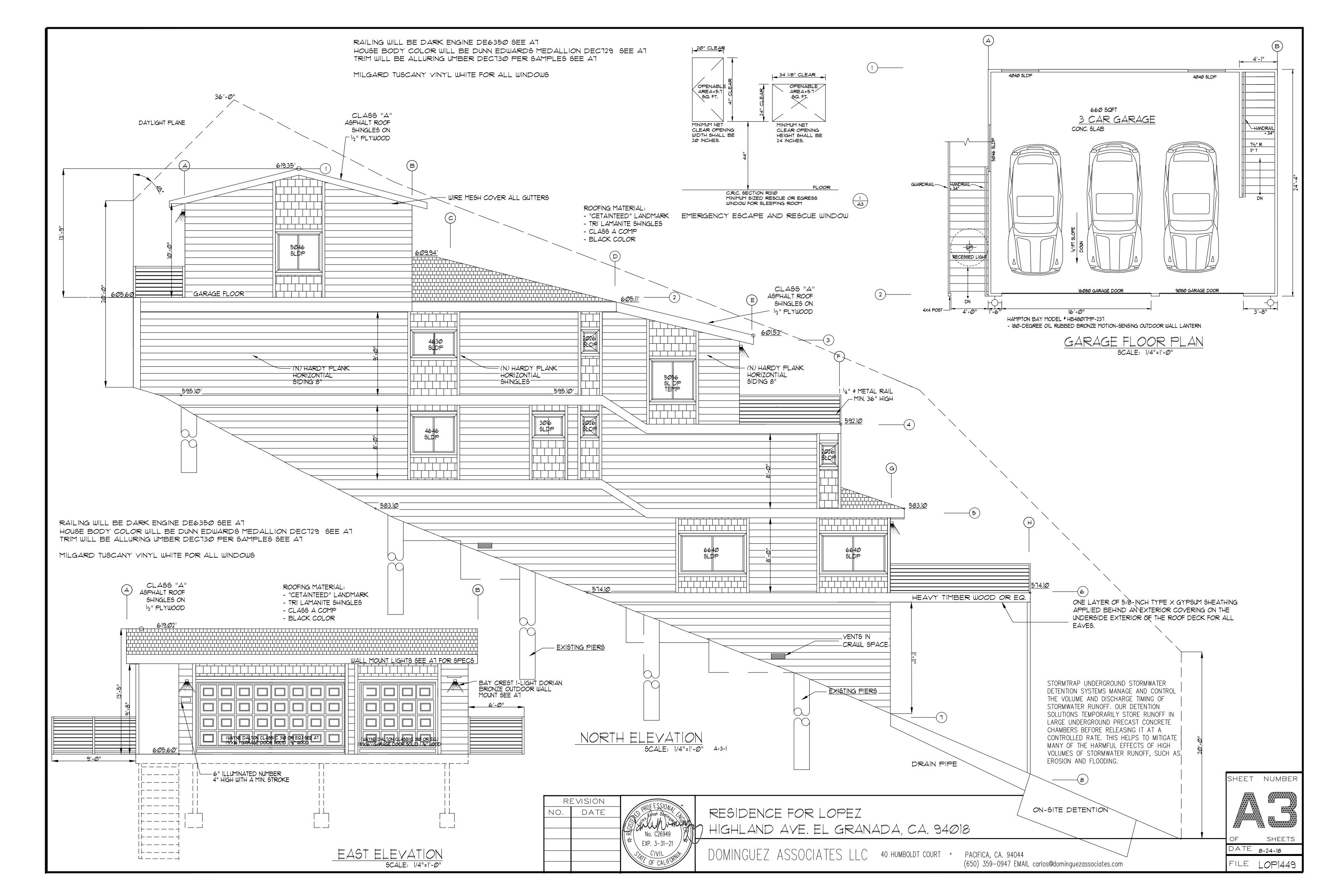
Ruemel Panglao, Design Review Officer

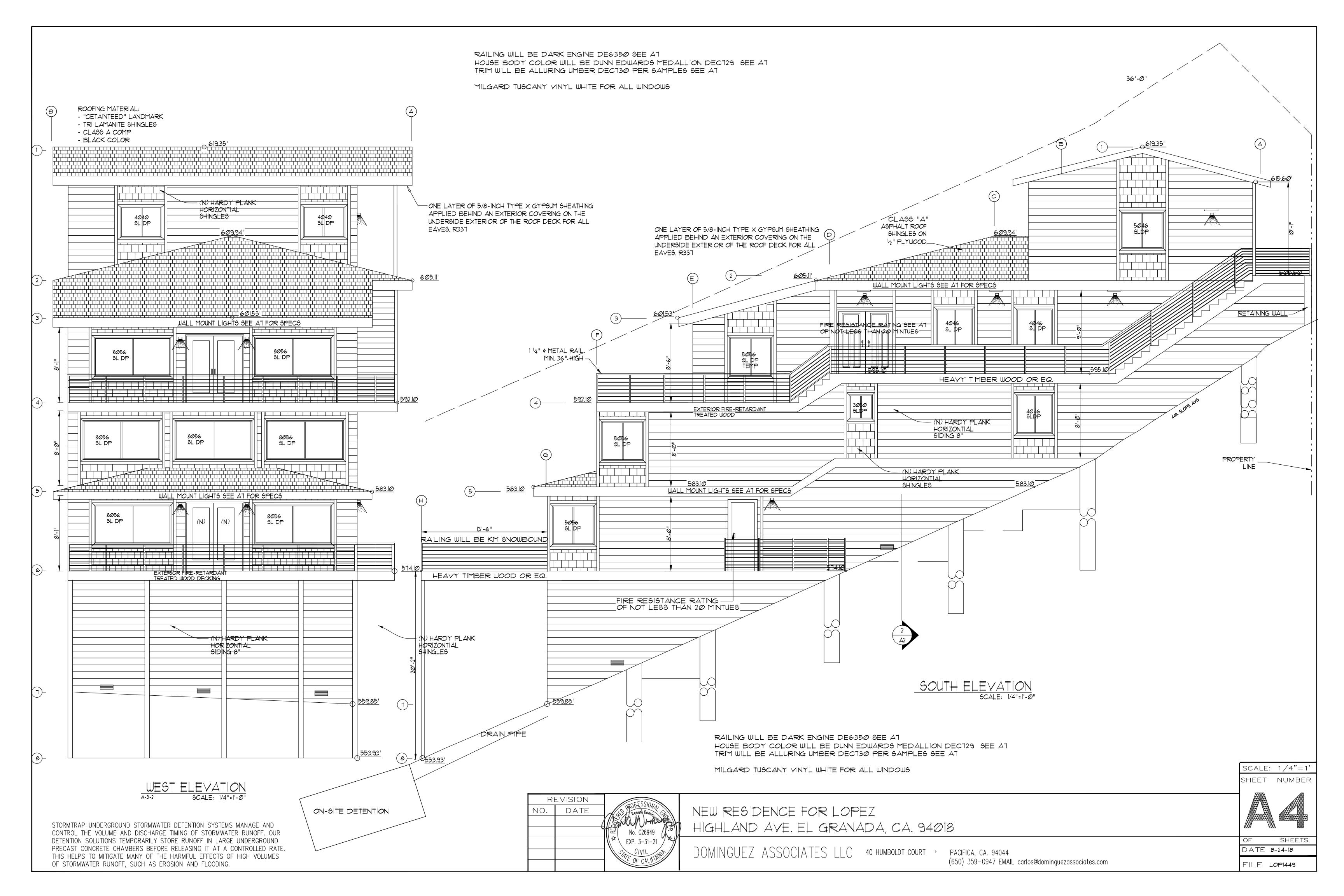
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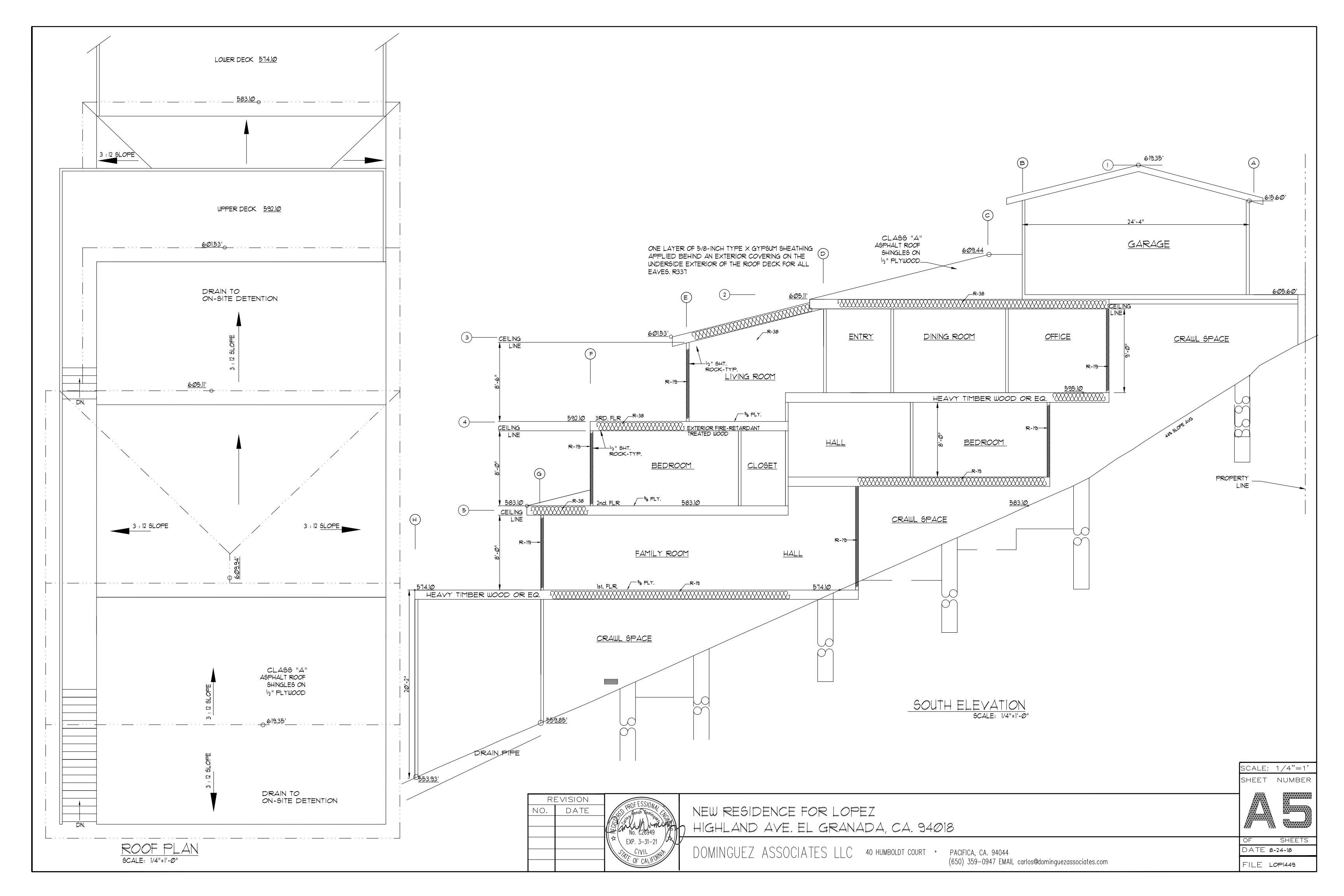
cc: Katie Kostiuk, Member Architect
Rebecca Katkin, Member Architect
Chris Johnson, El Granada Community Representative
Carlos Dominguez, Designer and Engineer
Steven Dominguez, Designer and Engineer













## Fire Marshal's Office San Mateo County Fire

CAL FIRE

2010 CRC –R327 Development Worksheet

**Project is located in State Responsibility Area (SRA):** □ **Yes** □ **No** If in SRA, is project in a Very High Fire Hazard Severity Zone (VHFHSZ):  $\Box$  Yes  $\Box$  No

Project is located in Local Responsibility Area (LRA): ☐ Yes ☐ No If in LRA, is project in a Very High Fire Hazard Severity Zone (VHFHSZ): ☐ Yes ☐ No

Applicable Code Section(s)	OK	N/A	Approved Material (if applicable)	Location On Plans
Roofing				
Class B minimum (SM Co Div VII, Sec 9113; 2010				
CRC R902.1.2)				
Class A in VHFHSZ (2010 CRC R902.1.1)	X			SEE A3 AND A4
Where roof profile allows for a space between the roof				
covering and deck, the spaces shall be constructed to				
prevent the intrusion of flames and embers, fire stopped				
or have one layer of No. 72 ASTM D 3909 cap sheet				
over the combustible decking. (R327.5.2)				
Valley flashings min. 0.019-inch (No 26 galv.) corrosion				
resistant metal over 36 inch wide underlayment of No.				
72 lb mineral-surfaced nonperforated ASTM D 3909 cap				
sheet. (R327.5.3)				
Roof gutters shall be provided with the means to prevent				
the accumulation of debris. (R327.5.4)				

Applicable Code Section(s)	OK	N/A	Approved Material (if applicable)	Location On Plans
Vents	1			
Ventilation openings for attics, enclosed eave soffits, enclosed rafter spaces and underfloor areas shall be noncombustible, corrosion resistant, and have wire mesh with 1/16 <sup>th</sup> to 1/8 <sup>th</sup> inch (1.6-3.2 mm) openings or its equivalent. (R327.6.2)	×			FIRE NOTES A6
Eave Vents				
Vents shall not be installed in eaves and cornices.				
Exceptions: 1. Approved flame and ember resistant				
vents. 2.1 Attic is fully protected by an automatic fire	×			FIRE NOTES A6
sprinkler system, and 2.2 Exterior wall and underside of	^			
eave is non-combustible, and is more than 12 ft from				
ground, patio, porch, deck or similar surface. (R327.6.3)				
Exterior Coverings				
Exterior walls shall comply with one of the following				
(R327.7.3):				
1. Noncombustible material				
<ol> <li>Ignition-resistant material</li> <li>One layer of 5/8" type X gypsum sheathing behind</li> </ol>				A3 AND A4
exterior covering.				AJ AND A4
4. 1-hour fire resistant exterior assembly.				
5. Heavy-timber exterior wall assembly	×			
6. Log wall construction.	^			
7. Wall assemblies meeting SFM 12-7A-1				
Open Roof Eaves: The exposed roof deck on the				
underside of the roof eave shall comply with one of 1				
through 4 as for exterior walls above (R327.7.4).				
Ex: 1. 2" nominal solid wood rafter tails. 2. 2" nominal				
solid wood blocking between rafter tails. 3. Fascia and				
other architectural trim boards.				

Applicable Code Section(s)	ОК	N/A	Approved Material (if applicable)	Location On Plans
Doors				
<ul> <li>Exterior door assemblies, including garage doors, shall comply with one of the following (R327.8.3):</li> <li>Surface or cladding be of non-combustible, or ignition-resistant material.</li> <li>Constructed of solid core wood having stiles and rails not less than 1-3/8" with interior field panel thickness no less than 1-1/4" thick.</li> <li>Have a fire resistance rating of not less than 20 minutes.</li> <li>Meet SFM 12-7A-1</li> </ul>	×			Д3
		l		
<ul> <li>Decking</li> <li>The walking surface material of decks, porches, balconies and stairs shall be constructed of one of the following where any portion of such surface is within 10 ft. of the structure (R327.9.3):</li> <li>I. Ignition-resistant materials that complies with SFM 12-7A-4 and 12-7A-5.</li> <li>Exterior fire-retardant-treated wood.</li> <li>Noncombustible material.</li> <li>Material complying with SFM 12-7A-4A when attached to a noncombustible or ignition resistant wall covering. Ex: When decking surface material meets ASTM E 84, Class B flame spread, the wall material can of any that other wise complies with R327.7.3.</li> </ul>	×			Д3
Accessory Structure				
Trellises, arbors, patio covers, carports, gazebos and similar structures attached to applicable buildings and detached buildings within 50 ft shall be constructed of noncombustible or ignition resistant material. (R327.10)		NΑ		

Office of the State Fire Marshal – WUI Products web site: <a href="http://www.osfm.fire.ca.gov/strucfireengineer/pdf/bml/wuiproducts.pdf">http://www.osfm.fire.ca.gov/strucfireengineer/pdf/bml/wuiproducts.pdf</a> San Mateo County Fire Marshals Office – (650) 573-3846

Applicable Code Section(s)	ок	N/A	Approved Material (if applicable)	Location On Plans
Exterior Coverings (continued)				1
The exposed underside of enclosed roof eaves and roof				
eave soffits shall be protected by one of the 1 through 4				
items as for exterior walls or have boxed in soffits				
meeting SFM 7A-3 (R327.7.5).				
Ex: Fascia and other architectural trim boards.				
Exterior porch ceilings shall be protected by one of the 1				
through 4 items as for exterior walls or have porch				
ceiling assemblies meeting SFM 7A-3 (R327.7.6).				
Ex: Architectural trim boards.				
Exposed underside of floor projections shall be				
protected by one of the 1 through 4 items as for exterior				
walls or have an underside assembly meeting SFM 7A-3				
(R327.7.7).				
Ex: Architectural trim boards.				
The underfloor area of overhangs, or elevated buildings;				
and underside of appendages shall be enclosed to grade				
or the underside shall be protected by one of the 1				
through 4 items as for exterior walls or have an				
assembly meeting SFM 7A-3 (R327.7.8 & R327.7.9).				
Ex: Heavy-timber structural columns and beams do not				
require protection.				

Exterior windows, glazed doors, glazed openings within exterior doors and structural glass veneer shall be

Note - Provide on window schedule and call out on floor

tempered pane meeting Section 2406 Safety Glazing.

1. Multipane glass units with a minimum of one

3. 20 minute minimum Fire Rated Window.

constructed of one of the following:

plan. (R327.8.2)

4. Meet SFM 12-7A-2.

ROOFS AND ROOF EDGES. CBC 105A / CRC R331.5

A NONCOMBUSTIBLE (TILE OR METAL) OR CLASS 'A' ROOFING ASSEMBLY IS REQUIRED IN SRA - YERY HIGH FIRE HAZARD SEVERITY ZONES, ALL OTHER AREAS IN SANTA CRUZ COUNTY REQUIRE A CLASS 'A' MINIMUM ROOFING ASSEMBLY. INCLUDING LRA, SRA-MODERATE OR SRA-HIGH AREAS.

WHERE THE ROOF PROFILE ALLOWS A SPACE BETWEEN THE ROOF COVERING AND THE ROOF DECKING, THE SPACES SHALL: BE CONSTRUCTED TO PREVENT THE INTRUSION OF FLAMES AND EMBERS'S BE FIRESTOPPED WITH APPROVED MATERIALS' OR HAVE ONE LAYER OF NO. 12 CAP SHEET INSTALLED OVER THE COMBUSTIBLE DECKING. WHERE PROVIDED, VALLEY FLASHING MUST BE NOT LESS THAN 26 GAUGE GALVANIZED SHEET METAL OVER A 36-INCH WIDE NO. 12 ASTM CAP SHEET.

EXTERIOR WALLS/SIDING. CBC 101A.3 /CRC R331.1.3

NONCOMBUSTIBLE, LISTED IGNITION-RESISTANT MATERIALS, HEAVY TIMBER, 5/8" TYPE X GYPSUM SHEATHING BEHIND EXTERIOR COVERING, EXTERIOR PORTION OF I-HR ASSEMBLY OR LOG WALL CONSTRUCTION IS ALLOWED. THE OSFM WEBSITE (SEE LINK ABOVE) LISTS MANY TYPES OF EXTERIOR WALL COVERINGS THAT ARE APPROVED.

NOTE: IGNITION-RESISTANT MATERIALS ARE THOSE TESTED BY A FACILITY RECOGNIZED BY THE SFM OR ICC-EVALUATION SERVICE TO HAVE A FLAME-SPREAD RATING NOT OVER 25, AND COMPLY WITH ACCELERATED WEATHERING TESTS.

EAVES AND PORCH CEILINGS CBC 101A.4, A6 / CRC 331.1.4. R331.1.6

THE EXPOSED ROOF DECK UNDER UNENCLOSED EAVES AND UNDERSIDE OF PORCH CEILINGS SHALL BE NONCOMBUSTIBLE, LISTED IGNITION-RESISTANT MATERIALS, OR 5/8" TYPE X GYPSUM SHEATHING BEHIND EXTERIOR

SOLID WOOD RAFTER TAILS ON THE EXPOSED UNDERSIDE OF ROOF EAVES HAVING A MINIMUM 2" NOMINAL DIMENSION MAY BE UNPROTECTED.

VENTS. CBC 106A / CRC R331.6

ATTIC VENTS AND UNDERFLOOR VENT OPENINGS MUST RESIST THE INTRUSION OF FLAME AND EMBERS OR SHALL BE A MINIMUM OF 1/16" AND MAXIMUM 1/8" CORROGION-RESISTANT, NONCOMBUSTIBLE WIRE MESH OR EQUIVALENT. COMBUSTIBLE VENTS ON TOP OF ROOFS MAY BE COVERED WITH THIS MATERIAL TO COMPLY. VENTILATION OPENINGS ON THE UNDERSIDE OF EAVES ARE NOT PERMITTED, UNLESS A SFM APPROVED VENT IS INSTALLED, OR EAVES ARE FIRE SPRINKLERED, OR VENT IS 12 FEET ABOVE A WALKING SURFACE OR GRADE BELOW.

WINDOWS AND EXTERIOR DOORS. CBC 108A / CRC R331.8

-WINDOWS MUST BE INSULATED GLASS WITH A MINIMUM OF I TEMPERED PANE OR 20 MIN RATED OR GLASS BLOCK. -EXTERIOR DOORS MUST BE NONCOMBUSTIBLE OR IGNITION RESISTANT MATERIAL OR 1 3/8" SOLID CORE, OR HAVE A 20 MIN FIRE-RESISTANCE RATING.

EXTERIOR DECKING AND STAIRS. CBC 109A / CRC R331.9

WALKING SURFACES OF DECKS, PORCHES, BALCONIES AND STAIRS WITHIN 10 FEET OF THE BUILDING MUST BE CONSTRUCTED OF NONCOMBUSTIBLE, FIRE-RETARDANT TREATED OR HEAVY-TIMBER CONSTRUCTION. ALTERNATE MATERIALS CAN BE USED OF THEY ARE IGNITION-RESISTANT AND PASS PERFORMANCE REQUIREMENTS SPECIFIED BY THE STATE FIRE MARSHAL.

UNDERFLOOR AND APPENDAGES. CBC 101A8 / CRC R331.1.8

EXPOSED UNDERFLOORS, UNDERSIDE OF CANTILEVERED AND OVERHANGING DECKS, BALCONIES AND SIMILAR APPENDAGES SHALL BE NON-COMBUSTIBLE, IGNITION RESISTANT, 5/8" TYPE X GYPSUM SHEATHING BEHIND EXTERIOR COVERING, EXTERIOR PORTION OF 1-HR ASSEMBLY, MEET PERFORMANCE CRITERIA SFM STANDARD 12-7A-3 OR BE ENCLOSED TO GRADE.

FIRE		
RESCU	Coastside Fire Protection District Fire Prevention Bureau Standard Detail & Specification Manual	
Section:	Developer Information Effective: 11/10/99	
Title:	Alternate Means or Methods Revised: 7/28/15	
Number:	DI-008 Approved: Ja Sarl	n= n
District for Rec	provisions of this standard shall outline the procedure and policy of the Coastside quests for Alternate Materials or Methods of Construction or Alternate Design. This coarts of Section 104.9 of the California Fire Code.	
material. It is h	plicant must submit two copies of the request, plans and all accompanying substantia ighly recommended that the submittal be prepared by a Licensed Engineer, Architect incer depending on the area of the request.	
Project Inforn	nation:	
Project APN #:		
Owner Phone:	GUADALUPE LOPEZ  411 CHESTERFIELD AVE	
	e: DOMINGUEZ ASSOCIATES	
	ess: 40 HUMBOLDT CT PACIFICA CA 94044  be: R-3	
REQUESTING NO	Iternate: (Separate form for each request) TTO HAVE A TURNAROUND FLANCISE Access Road to Yellow 20 Feet in width with no	
Justification: ( WILL PROVIDE	Findings of Equivalency) 3 HEAD UPGRADED FIRE SPRINKLER SYSTEM FOR THE NEW HOME	
	<del></del>	
Petitioners Sign	nature: Position: Date: 11-9-18	
	omments to   ire Marshal	

When a bridge is used as a part of emergency access, it shall be constructed and maintained in accordance with AASHTO HB-17. The bridge shall be designed for a live load sufficient to carry the imposed loads of fire apparatus as stated herein:

1. Weight: Every private bridge hereafter constructed or re-constructed due to damage, deterioration, or obsolescence shall be designed to support an imposed load of fire apparatus weighing at least 75,000 lbs. Vehicle loads shall be posted and dated at both entrances to bridges. (HS20-44 Highway loading)

2. Height: A minimum clear vertical clearance of 13 ½ feet as measured from the driving surface of the bridge shall be provided. In situations where a grade change occurs which might require a greater vertical clearance, such additional clearance shall be determined on a case-by-case basis by the Fire Marshal.

3. Width: All bridges must be a minimum of 20 feet clear width. The Fire Marshal may allow the width to be reduced for a bridge providing access to R-3, U-1, or U-2 occupancies. One-way bridges, and bridges with less than 20' of clear width, require a turnout at both ends of the bridge.

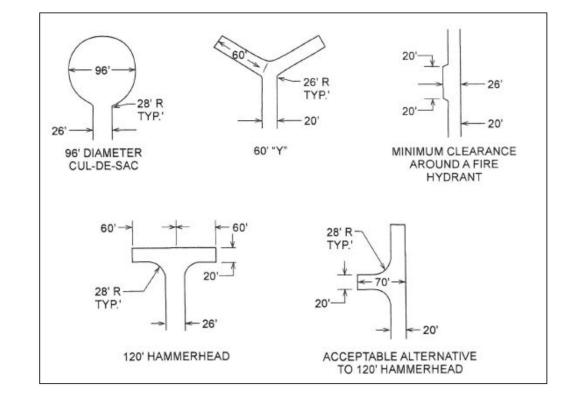
4. Certification: Every private bridge providing fire apparatus access hereinafter constructed or re-constructed shall be engineered by a licensed civil or structural engineer and approved by the Fire Marshal. Certification that the bridge complies with the design standards required in sub-section (a) of this section must be provided by the design

5. Re-certification: Every private bridge shall be re-certified every ten (10) years or whenever deemed necessary by the Fire Marshal.

Gates shall be a minimum of 2 feet wider than the roadway they serve. Overhead gate structures shall have a minimum of 15 ½ feet of vertical clearance. Locked gates shall be provided with a Knox Box or Knox Padlock for fire department access. Electric gates shall be provided with a Knox Gate Switch and automatically open during power failures unless equipped with manual override capability (when authorized by Coastside Fire Dist.). Gates providing fire access to a driveway or other roadway shall be located at least 35 feet from the primary road or street and shall open to allow a vehicle to stop without obstructing traffic on the adjoining roadway.

Contact Coastside Fire District for Knox Box application.

a maximum longitudinal slope no greater than eight percent (8%). The longitudinal slope is defined as the slope corresponding to the long axis of a vehicle as it travels into, out of, and through a turnaround. This slope shall be maintained beginning at and ending at the point of tangency of the edge of pavement curves for the turnaround. The cross slope perpendicular to the longitudinal slope shall not exceed five percent (5%).



1. Road grades shall not exceed 15% without the approval of the Fire Marshal. (See surface requirements above.)

2. Road grades shall not exceed 20%. 3. Grades 15% to 20% shall be limited to 150 ft. in length.

Parking on emergency access roads shall be as follows: a. 20-26 feet road width – no parking on either side of the roadway.

b. 26-35 feet road width – parking is allowed on only one side of roadway.

c. 36 feet road width – parking is not restricted.

d. Turnaround bulbs – no parking is allowed in bulb if diameter is less than 96 feet. e. The posting of no parking signs may be required on roadways were parking is

Smoke alarm/detector are to be hardwired, interconnected, or with battery back-up Escape or rescue windows shall have a minimum net clear openable area of 5.7 square feet, 5.0 sq. ft. allowed at grade. The minimum net clear openable height dimension shall be 24 inches. The net clear openable width dimension shall be 20 inches. Finished sill height shall be not more than 44 inches above the finished floor.

• Identify rescue windows in each bedroom and verify that they meet all requirements. Add this to plans.

New attached garage to meet occupancy separation requirements. Provide note/detail.

New residential buildings shall have internally illuminated address numbers contrasting with the background so as to be seen from the public way fronting the building. Residential address numbers shall be at least six feet above the finished surface of the driveway. Where buildings are located remotely to the public roadway, additional signage at the driveway/roadway entrance leading to the building and/or on each individual building shall be required by the Coastside Fire District. This remote signage shall consist of a 6 inch by 18 inch green reflective metal sign with 3 inch reflective Numbers/ Letters similar to Hy-Ko 911 or equivalent.

Roof Covering: As per Coastside Fire District Ordinance 2016-01, the roof covering of every new building or structure, and materials applied as part of a roof covering assembly, shall have a minimum fire rating of Class "A" or higher as defined in the current edition of the California Building Code.

• The building is in a Very High Fire Hazard Severity Zone and will require a Class A

 Vegetation Management: The Coastside Fire District Ordinance 2016-01, the 2013 California Fire Code and Public Resources Code 4291. A fuel break of defensible space is required around the perimeter of all structures to a distance of not less than 30 feet and may be required to a distance of 100 feet or to the property line. In SRA (State Responsible Area) the fuel break is 100 feet or to the property line. Trees located within the defensible space shall be pruned to remove dead and dying portions, and limbed up 6 to 10 feet above the ground. New trees planted in the defensible space shall be located no closer than 10 feet to adjacent trees when fully grown or at maturity. Remove that portion of any existing tree, which extends within 10 feet of the outlet of a chimney or stovepipe or is within 5 feet of any structure.

A fuel break or defensible space is required around the perimeter of all structures, existing and new, to a distance of not less than 30 feet and may be required to a distance of 100 feet or to the property line. This is neither a requirement nor and authorization for the removal of living trees.

Trees located within the defensible space shall be pruned to remove dead and dying portions, and limbed up 6 feet above the ground. New trees planted in the defensible space shall be located no closer than 10 to adjacent trees when fully grown or at

Fire Access Roads: The applicant must have a maintained asphalt surface road for ingress and egress of fire apparatus. The San Mateo County Department of Public

Works, the Coastside Fire District Ordinance 2016-01, and the California Fire Code shall set road standards. As per the 2013 CFC, dead-end roads exceeding 150 feet shall be provided with a turnaround in accordance with Coastside Fire District specifications. As per the 2013 CFC, Section Appendix D. road width shall not be less than 20 feet. Fire access roads shall be installed and made serviceable prior to combustibles being placed on the project site and maintained during construction. Approved signs and painted curbs or lines shall be provided and maintained to identify fire access roads and state the prohibition of their obstruction. If the road Width does not allow parking on the Street (20 foot road) and on-street parking is desired, an additional improved area shall be

developed for that use.

Fire Hydrant: As per 2016 CFC, Appendix B and C, a fire district approved fire hydrant (Clow 960) must be located within 250 feet of the proposed single-family dwelling unit measured by way of drivable access. As per 2016 CFC, Appendix B the hydrant must produce a minimum fire flow of 1,000 gallons per minute at 20 pounds per Square inch residual pressure for 2 hours. Contact the local water purveyor for water flow details

Show location of fire hydrant on a site plan. A fire hydrant is required within 500 feet of the building and flow a minimum of 1000 gpm at 20 psi. This information is to be verified by the water purveyor in a letter initiated by the applicant and sent to San Mateo County Fire/CAL Fire or Coastside Fire District. If there is not a hydrant within 500 feet with the required flow, one will have to be installed at the applicant's expense.

Automatic Fire Sprinkler System: As per San Mateo County Building Standards and Coastside Fire District Ordinance Number 2016-01, the applicant is required to install an automatic fire Sprinkler System throughout the proposed or improved dwelling and garage. All attic access locations will be provided with a pilot head on a metal upright. All areas that are accessible for Storage purposes shall be equipped with fire sprinklers including closets and bathrooms. The only exception is small linen closets less than 24 Square feet with full depth shelving. The plans for this system must be submitted to the San Mateo County Planning and Building Division or The City of HMB. A building permit will not be issued until plans are received, reviewed and approved. Upon submission of plans, the County or City will forward a complete set to the Coastside Fire District for review. The fee schedule for automatic fire sprinkler systems shall be in accordance with Half Moon Bay Ordinance No. 2006-01. Fees shall be paid prior to plan review. Installation of underground sprinkler pipe shall be flushed and visually inspected by Fire District prior to hook-up to riser. Any soldered fittings must be pressure tested with trench open. Please call Coastside Fire District to schedule an inspection.

Exterior bell and interior horn/strobe: are required to be wired into the required flow Switch on your fire sprinkler system. The bell, horn/strobe and flow Switch, along with the garage door opener are to be wired into a separate circuit breaker at the main electrical panel and labeled.

Add note to the title page that the building will be protected by an automatic fire sprinkler System.

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REVISION NO. DATE SCALE

NUMBER HEET



8-24-18



**LAMPING** 

No. of Bulbs: Light Type: 1 A-19,MED

Bulb/LED Color Temp.: CRI:

Carton Height: 9.0

Carton Weight: Carton Cubic Feet: Small Package Shippable: 2.156 0.602 Yes

Image File Name: 72211-615B.jpg

Hours: Included: Included: No N

t: Master Cubic Feet: Multi-Pack: Master Pack: 4.132 6

Initial Delivered Lumens: Lumens:

**MEASUREMENTS** Length: Min Overall Max Overall Height: Chain Length: Safety Cable Net Weight: Included: 0.99

wax Bulb Socket:
Wattage: E26,MED Canopy Width: Canopy Height: Canopy Length: Center to Backplate Width:Backplate 4.5 Center to Top: 0.05

SHADE / GLASS

Master Pack Width: Master Pack Height: Master Pack Length: 11.5 19.25 32.25 14.674

A WARNING: Handling this product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or wakwings: randing this product can expose you to chemicals including lead, which is known to the state of california at cases called a state of california at called a state of california at called a state of ca For additional information, please contact Customer Care: 1-800-221-7977 | Product depicted on this spec sheet is protected by United States Federal and/or State laws including US Patent, Trademark and/or Copyright and unfair competition laws. Unauthorized reproduction or use carries severe legal penalties. Rev 08.05.2020 04:54 PM

Landmark®, Landmark® Premium, Landmark® Pro Shingles, Landmark® Pro/Architect 80 (NW Region Only) Shingles

**Technical Data Sheet** 

PRODUCT INFORMATION Landmark shingles reflect the same high manufacturing standards and superior warranty protection as the rest of CertainTeed's line of roofing products. Landmark Premium (and Algae Resistant-AR), Landmark PRO (and AR) and Landmark (and AR) are built with the industry's toughest fiber glass mat base, and their strict dimensional tolerance assures consistency. Complex granule color blends and

subtle shadow lines produce a distinctive color selection. Landmark is produced with the unique NailTrak® nailing feature. Please see the installation instruction section below for important information

In the Northwest Region Landmark PRO (AR) is double-branded as Landmark PRO/Architect 80 (AR). Landmark algae-resistant (AR) shingles are algae-resistant and help protect against dark or black discoloration, sometimes called staining or streaking, caused by blue-green algae. AR shingles are not

Colors: Please refer to the product brochure or CertainTeed website for the colors available in your

**Limitations:** Use on roofs with slopes greater than 2" per foot. Low-slope applications (2:12 to < 4:12) require additional underlayment. In areas where icing along eaves can cause the back-up of water, apply CertainTeed WinterGuard® Waterproofing Shingle Underlayment, or its equivalent, according to application instructions provided with the product and on the shingle package.

Product Composition: Landmark Series shingles are composed of a fiber glass mat base. Ceramiccoated mineral granules are tightly embedded in carefully refined, water-resistant asphalt. Two pieces of the shingle are firmly laminated together in a special, tough asphaltic cement. All Landmark shingles have self-sealing adhesive strips.

ASTM D3018 Type I ASTM D3462 ASTM E108 Class A Fire Resistance ASTM D3161 Class F Wind Resistance ASTM D7158 Class H Wind Resistance UL 790 Class A Fire Resistance

CSA Standard A123.5 (Regional)
Miami-Dade Product Control Approved Florida Product Approval # FL5444 Meets TDI Windstorm Requirements

ICC-ES ESR-1389 and ESR-3537

Technical Data: Weight/Square (approx.) 219 to 238 lb \*\* Dimensions (overall) 13 1/4" x 38 3/4" Shingles/Square (approx.) Weather Exposure

\*Includes Landmark PRO AR/Architect 80 \*\*Dependent on manufacturing location

240 to 267 lb \*\* 13 1/4" x 38 3/4" 13 1/4" x 38 3/4" 5 5/8"

20 Moores Road Malvern, PA 19355 © 01/20 CertainTeed

CertainTeed

**Technical Data Sheet** 

Landmark® Series Shingles

Mountain Ridge® shingles of a like color.

FOR MORE INFORMATION

Sales Support Group: 800-233-8990

year. Older roofs should be looked at more frequently.

Detailed installation instructions are supplied on each bundle of Landmark shingles and must be followed.

Hips and Ridges: For capping hip and ridge apply CertainTeed Shadow Ridge®, Cedar Crest® or

These shingles do not require maintenance when installed according to manufacturer's application

defects when applied to stated CertainTeed application instructions for this product. In addition. Landmark Premium (and AR), Landmark PRO (and AR), Landmark PRO/Architect 80 AR, and Landmark

(and AR) carry 10-years of SureStart™ Protection. Landmark AR shingles carry a 10-year algae

Web site: <a href="https://www.certainteed.com">www.certainteed.com</a> See us at our on-line specification writing tool, CertaSpec®, at <a href="https://www.certainteed.com/certaspec">www.certainteed.com/certaspec</a>.

instructions. However, to protect the investment, any roof should be routinely inspected at least once a

Landmark Premium (and AR), Landmark PRO/Architect 80 AR, Landmark PRO (and AR), and Landmark (and AR) shingles carry a lifetime limited, transferable warranty to the consumer against manufacturing

resistance warranty. Landmark Premium AR, Landmark PRO AR, and Landmark PRO/Architect 80 AR shingles carry a 15-year algae resistance warranty. For specific warranty details and limitations, refer to the warranty itself (available from the local supplier, roofing contractor or on-line at <a href="www.certainteed.com">www.certainteed.com</a>).

Separate application sheets may also be obtained from CertainTeed.





FRONT ENTRY DOOR





HOME PRODUCTS COLOR & INSPIRATION HOW TO ABOUT US DIRECTORY

Color & Inspiration - Colors

MEDALLION DEC729 PAINT COLOR



Medallion DEC729 RL#643

Orange Yellows, Yellows, Green Yellows, Perfect Palette®

Munsell: HUE=1.54Y / VALUE=6.6 / CHROMA=3.9

MAIN COLOR



HOME PRODUCTS COLOR & INSPIRATION HOW TO ABOUT US DIRECTORY DESIG

Color & Inspiration - Colors

ALLURING UMBER DEC730 PAINT COLOR



Alluring Umber

DEC730 RL#648

Orange Yellows, Yellows, Green Yellows, Architectural Styles, Perfect Palette®

Munsell: HUE=2.10Y / VALUE=5.0 / CHROMA=4.1

TRIM COLOR



HOME PRODUCTS COLOR & INSPIRATION HOW TO ABOUT US DIRECTORY

Color & Inspiration - Colors

DARK ENGINE DE6350 PAINT COLOR



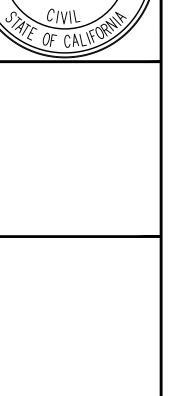
Dark Engine

DE6350 RL#589

Cool Neutrals, Architectural Styles, Exteriors, 2019, Perfect Palette® LRV 5

Munsell: HUE=5.38PB / VALUE=2.6 / CHROMA=0.3

RAILING COLOR



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NO.

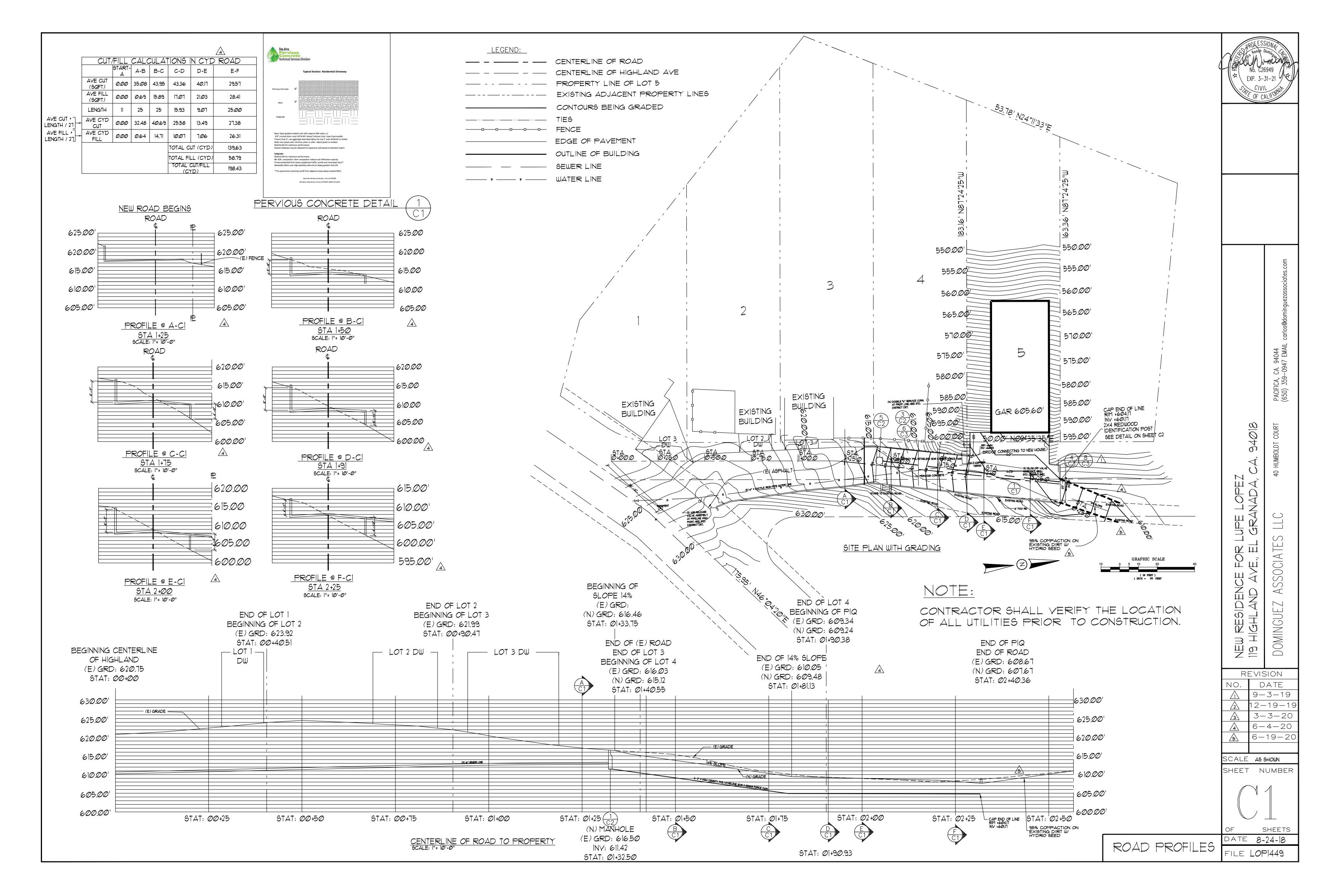
SHEET NUMBER



5-4-17

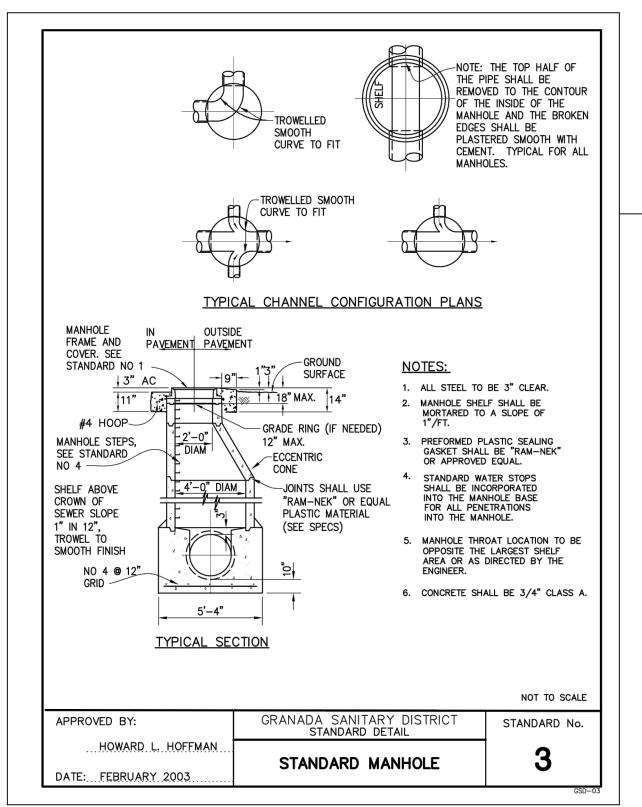
FILE LOP1449



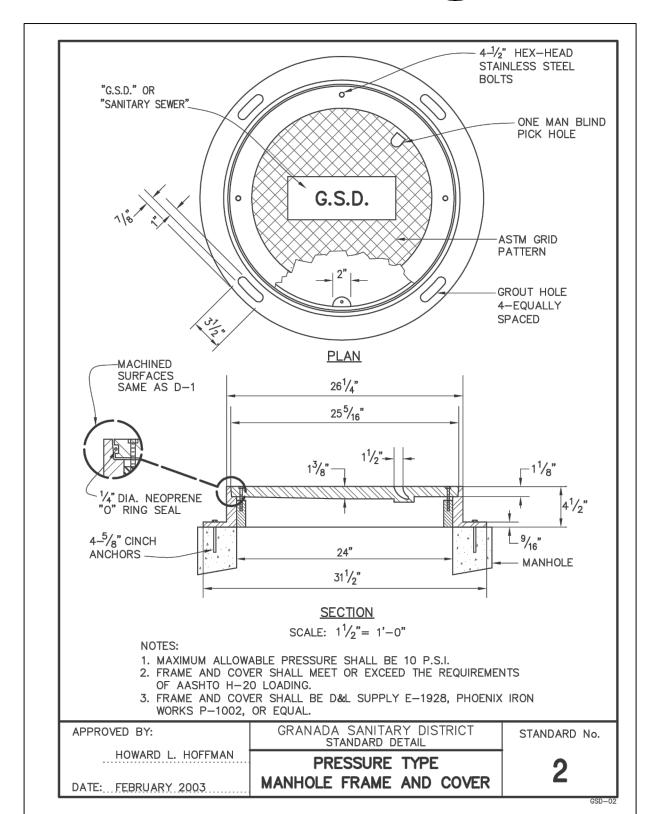


# SEWER NOTES:

- 1. YOUR ATTENTION IS DIRECTED TO THE TECHNICAL SPECIFICATIONS AND STANDARD DETAILS OF THE GRANADA SANITARY DISTRICT BEING APPLICABLE TO THIS PROJECT.
- 2. ALL TRENCH BEDDING AND STRUCTURAL BACKFILL MATERIAL SHALL BE AS SPECIFIED ON THE STANDARD DETAIL SHEET NO. 13.
- HDPE PIPE SHALL BE BEDDED IN SAND CONFORMING TO CALTRANS SPECIFICATION JULY 1992, SECTION 19 PARAGRAPH 19-3,025B SAND BEDDING.
- 3. TESTING AND CLEANING OF THE CONSTRUCTED PIPELINE SHALL BE IN ACCORDANCE WITH THE STANDARDS OF THE GRANADA SANITARY. 4. THE CONTRACTOR IS EXPECTED TO COMPLETE CONSTRUCTION OF THE MAIN SEWER WITHIN A CONTINUOUS 10 CALENDAR DAY PERIOD. NO TRENCH
- SECTION SHALL BE LEFT UNCOVERED AT THE END OF EVERY WORKING DAY.
- 5. THE CONTRACTOR SHALL SUBMIT RECORD DRAWINGS (AS-BUILT) TO DISTRICT UPON COMPLETION OF CONSTRUCTION.
- 6. THE CONTRACTOR SHALL SUBMIT TO THE DISTRICT SUFFICIENT CONSTRUCTION PHOTOGRAPHS OF THE PROJECT'S CONSTRUCTION.
- 1. THE CONTRACTOR SHALL NOT ALLOW THE SITE TO BE LITTERED WITH TRASH AND WASTE MATERIAL. UPON COMPLETION OF WORK, THE SITE SHALL BE CLEANED AND RESTORED TO A CONDITION ACCEPTABLE TO THE DISTRICT.
- 8. THE CONTRACTOR SHALL CONDUCT HIS OPERATION TO OFFER LEAST POSSIBLE OBSTRUCTION AND INCONVENIENCE TO THE PUBLIC. THE CONTRACTOR SHALL MAINTAIN ALL ACCESS TO AND FROM PUBLIC STREETS MID SHALL TAKE ALL NECESSARY PRECAUTIONS TO MINIMIZE CONSTRUCTION DUST AND NOISE.
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO ANY EXISTING UTILITIES. ALL REPAIRS SHALL BE DONE BY CONTRACTOR AT HIS EXPENSE.
- 10. COSTS FOR TRENCH BACKFILL TESTING SHALL BE BORNE BY THE CONTRACTOR/DEVELOPER 11 COPIES OF CERTIFIED COMPACTION TESTS SHALL BE FORWARDED TO SAN MATEO COUNTY PUBLIC WORKS AND DISTRICT ENGINEER, PRIOR TO FINAL APPROVAL OF THE PROJECT BY THE COUNTY. 12. CONTRACTOR/OWNER TO RETAIN SURVEYOR/ENGINEER TO PLACE CONSTRUCTION STAKES REQUIRED FOR THE WORK, PRIOR TO COMMENCEMENT OF WORK MID FOR REVIEW BY THE PUBLIC



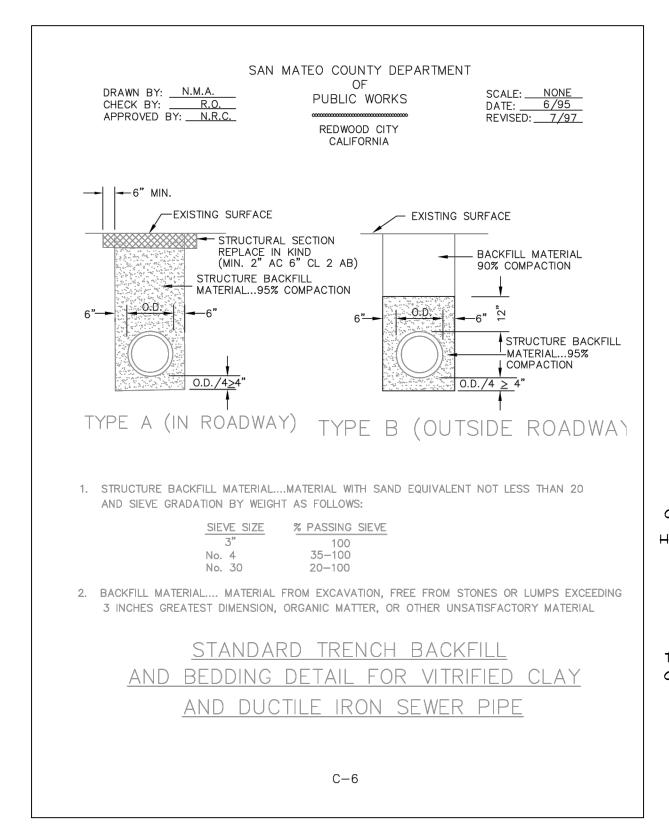


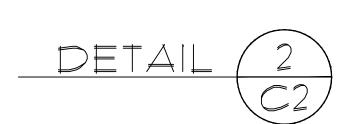


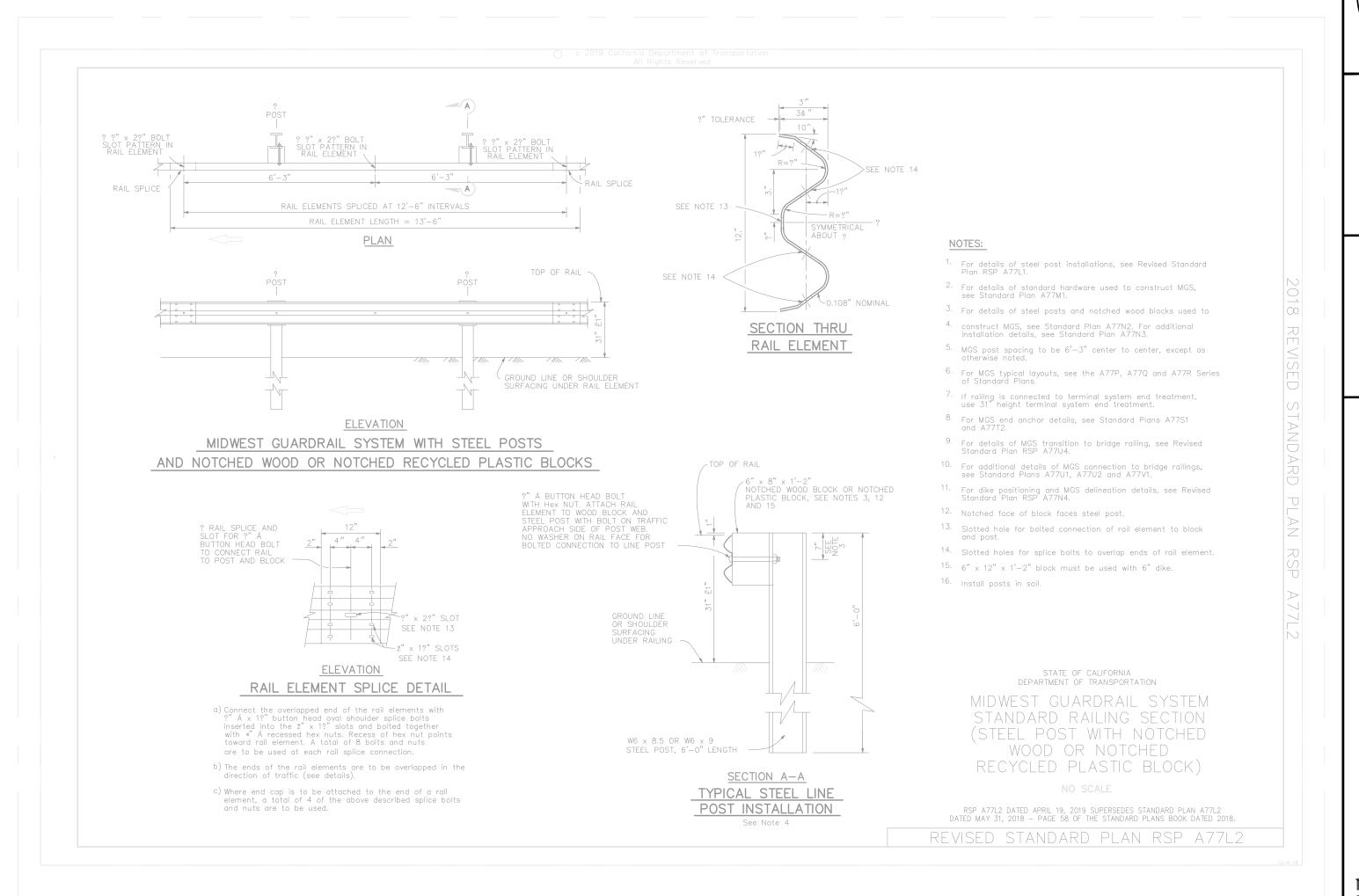
# MANHOLE FRAME AND COVER

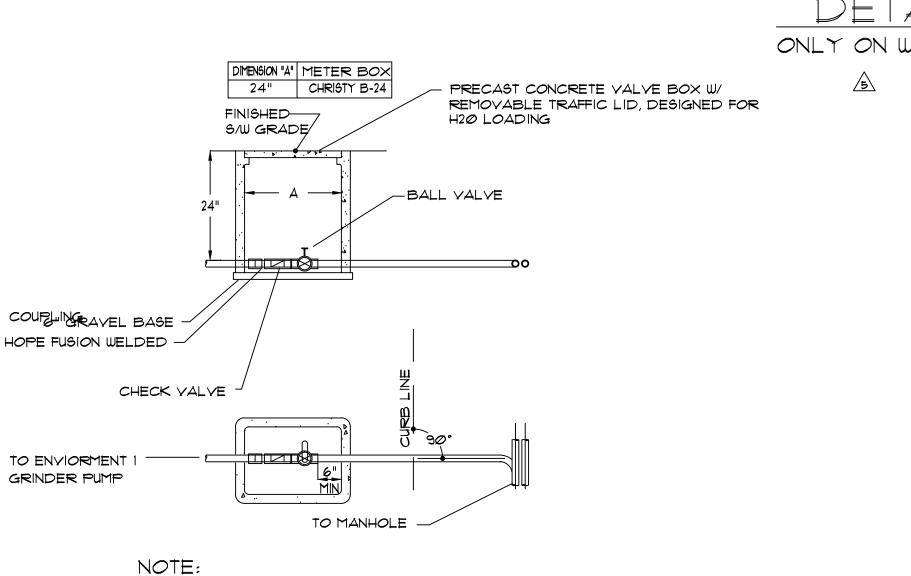
SEE GRANADA SANITARY DISTRICT STANDARD DETAIL # 2 MANHOLE FRAME AND COVER

- 1. BASE SHALL BE CLASS "B" (5 SACK) CONCRETE PLACED AGAINST UNDISTURBED EARTH.
- 2. CONDUIT SHALL BE LAID THROUGH MANHOLE WHENEVER POSSIBLE.
- 3. CONCRETE CHANNELS SHALL BE BRUSH FINISHED.
- 4. PRECAST BARREL AND ECCENTRIC CONE SHALL CONFORM TO ASTM SPECIFICATION C-418 EXCEPT THAT TYPE II CEMENT SHALL BE USED.
- 5. MORTAR JOINTS SHALL USE "RAM-NEK" OR EQUAL PLASTIC MATERIAL (SEE SPECS)
- 6. MANHOLE FRAME MAY BE ADJUSTED EITHER BEFORE OR AFTER PAVING, BUT THE FINAL GRADE OF THE FRAME MUST MATCH THAT OF THE PAYING WITHIN 1/2".
- 7. WHERE FRAME IS SET AFTER PAVING, EXPOSED CONCRETE SURFACES SHAL BY COLORED.
- WITH SS I PAVING OIL BEFORE THE CONCRETE HAS SET.
- 8. COLLAR SHALL BE CLASS "B" (5 SACK) CONCRETE.
- 9. NO CONCRETE SHALL BE PLACED PRIOR TO FORM INSPECTION BY THE AGENCY ENGINEER.



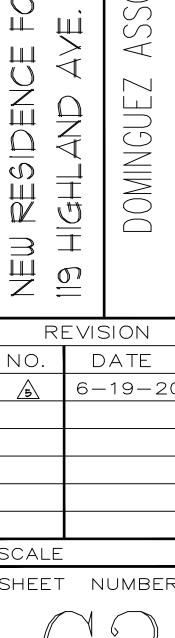






- DISTRICT SEWER LINE AND CUSTOMER SEWER LINE SHALL BE RUN IN A STRAIGHT LINE PERPENDICULAR TO THE PROPERTY FROM MAIN TO PROPERTY LINE.
- 2. ALL CONNECTIONS TO POLYETHELENE SDR25 SHALL BE HOPE FUSION WELDED
- 3. BALL VALVE SHALL BE FULL PORTED, 160 P.S.I. PRESSURE RATING, TRUE UNION BLOCKING VALVE AND PYC YALVES W/ YLTON O-RINGS.
- 4. CHECK YALVE SHALL BE FULL PORTED, PYC W/ FABRIC REINFORCED BUNS-N FLAPPER, FRICTION LOSS & 6" WATER COL. AT FULL FLOW, METAL PARTS SHAL BE 300 SERIES STAINLESS STEEL, AND SEATS AT LOW PRESSURES





SHEETS

DATE 8-24-18

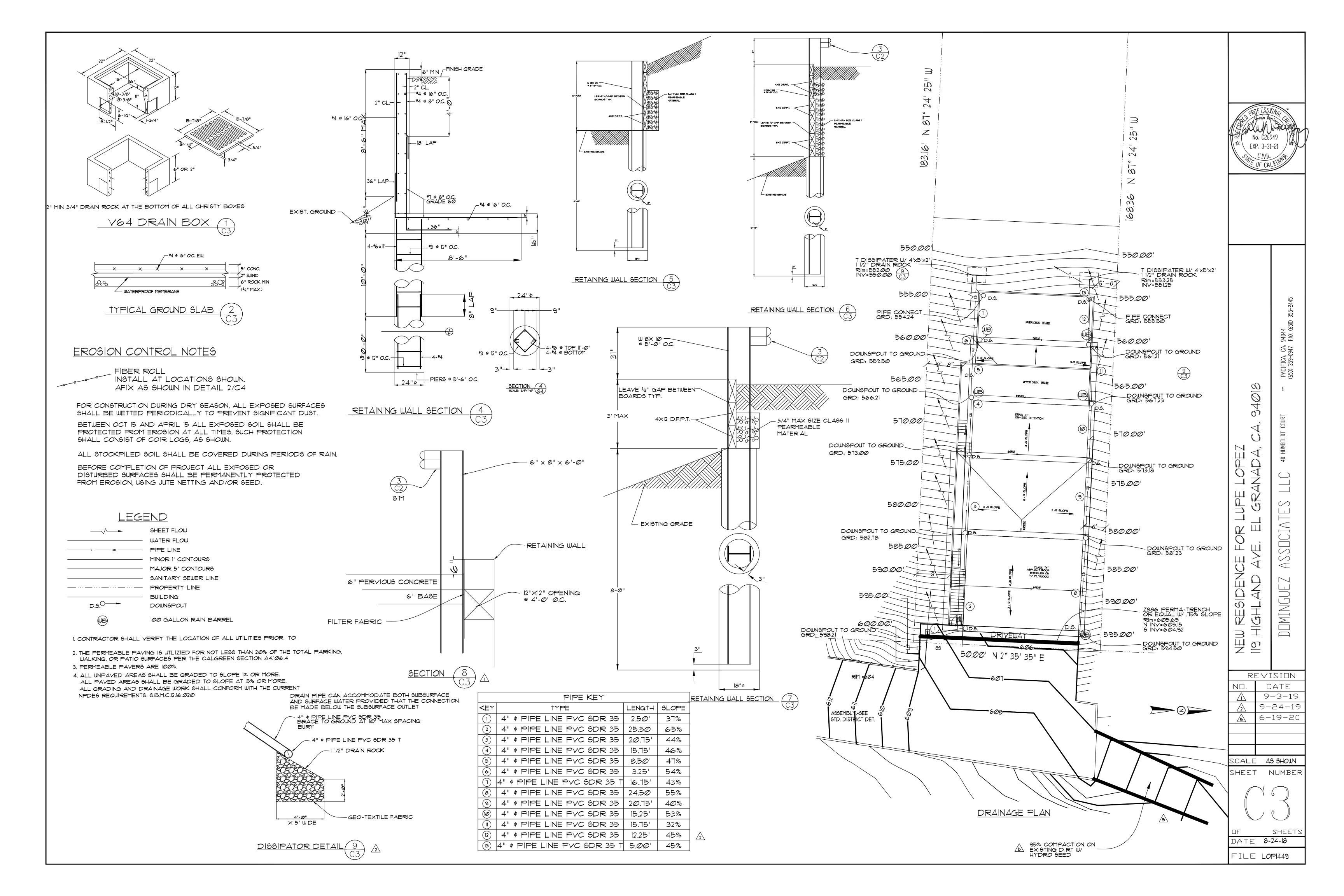
FILE LOP1449

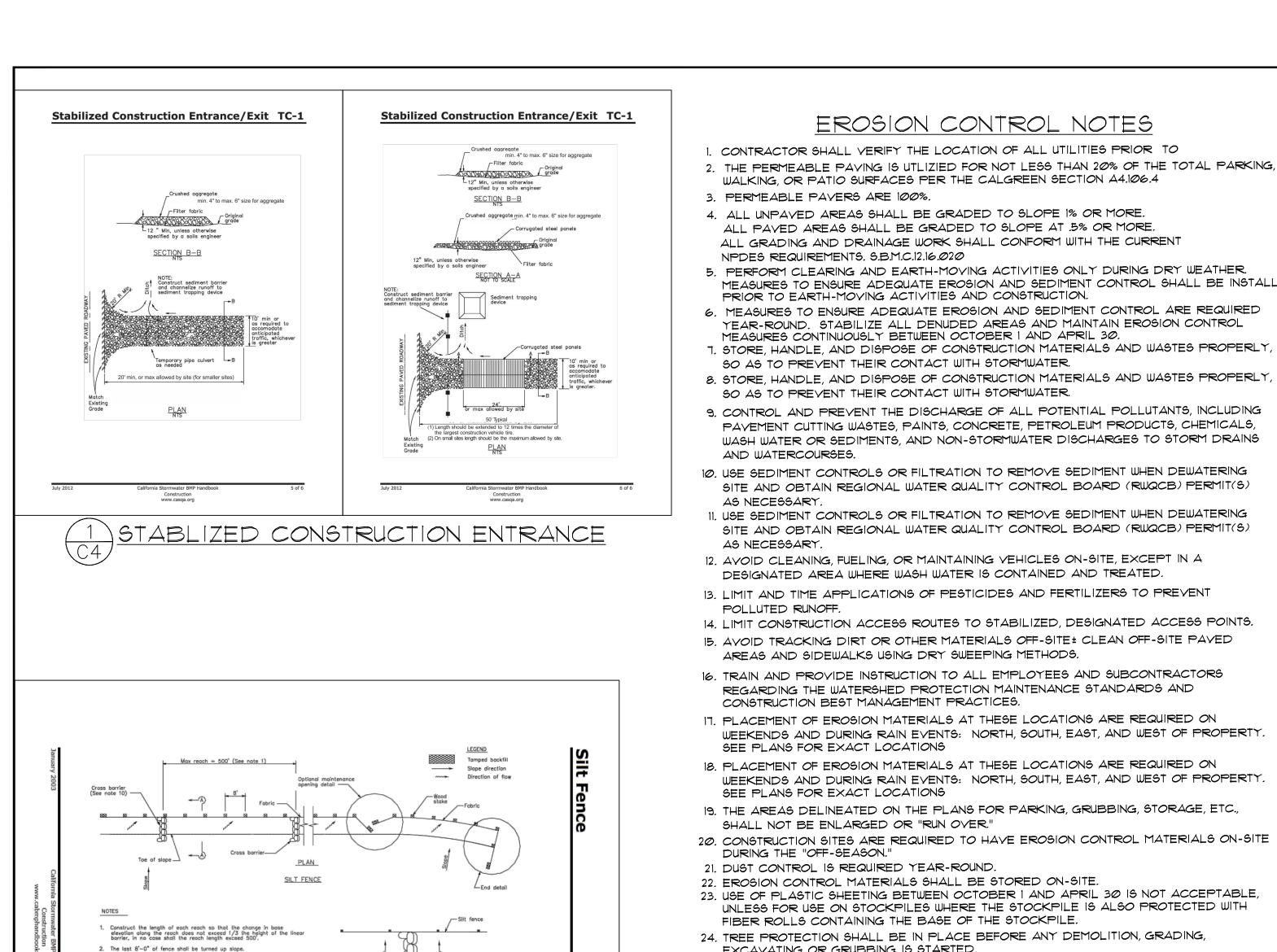
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DETAIL





Stake dimensions are nominal.

<u>C4</u>

4. Dimension may vary to fit field condition,

Stokes shall be spaced at 8'-0" maximum and shall be positioned on downstream side of fence.

Stakes to overlap and fence fabric to fold around each stake one full turn. Secure fabric to stake with 4 staples.

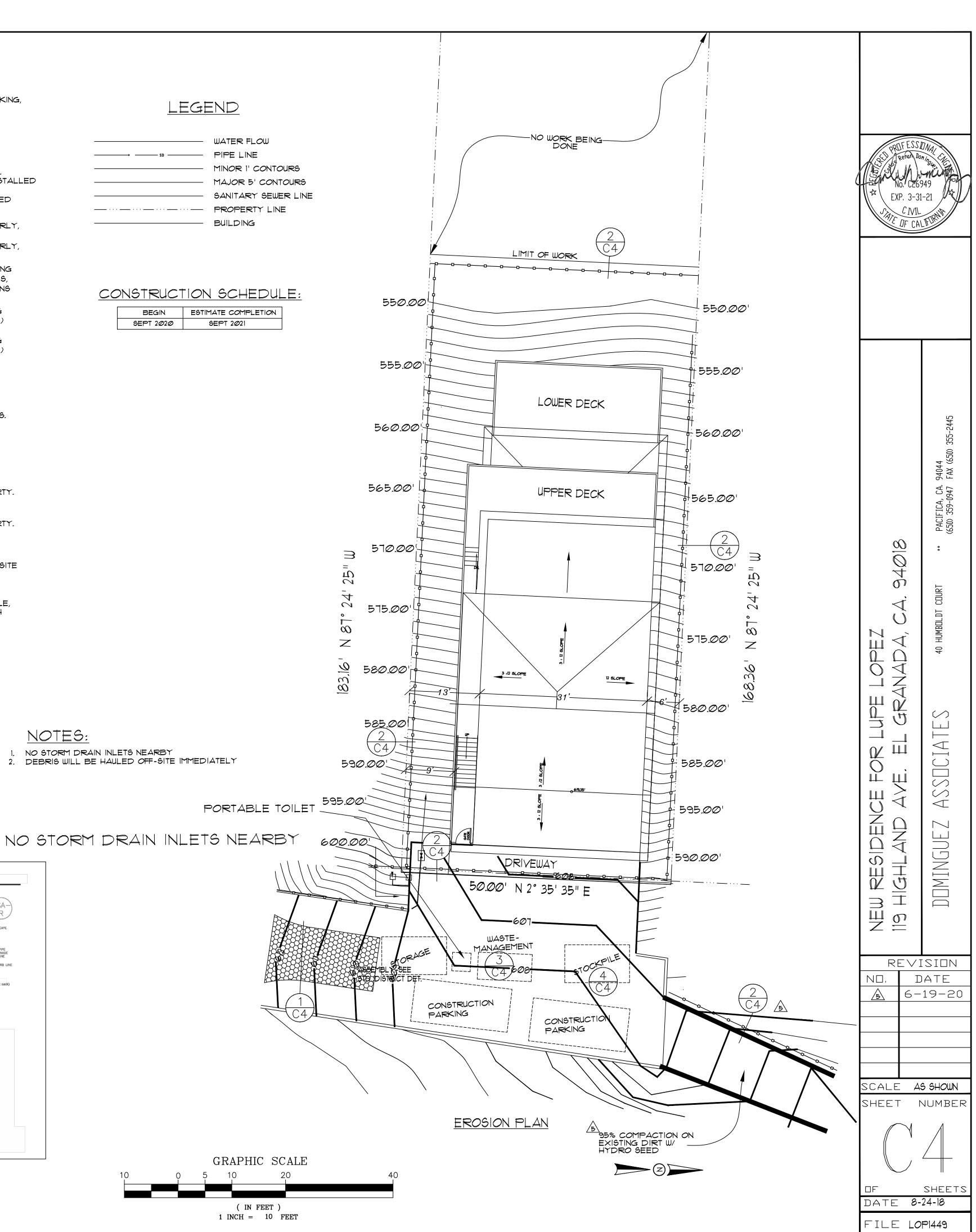
 Stokes shall be driven tightly together to prevent potential flow-through of sediment at joint. The tops of the stakes shall be secured with wire. For end stoke, fence fabric shall be folded around two stakes one full turn and secured with 4 staples.

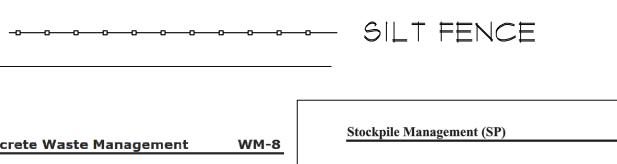
Minimum 4 staples per stake. Dimensions shown are typical. Cross barriers shall be a minimum of 1/3 and a maximum of 1/2 the height of the linear barrier,

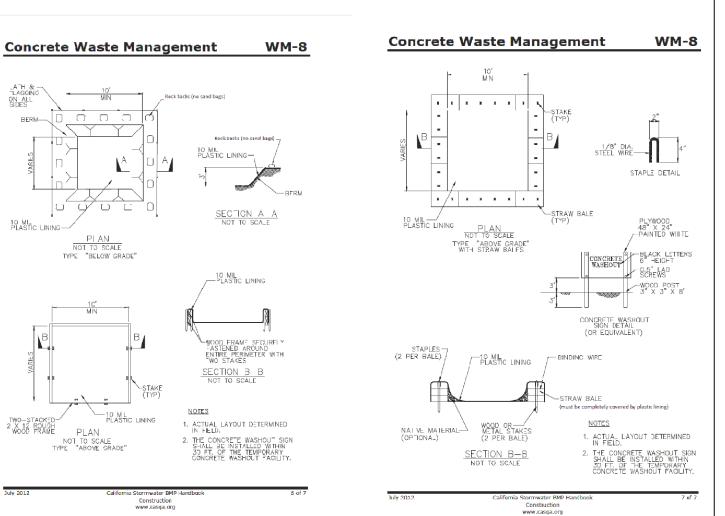
13. Sandbag rows and layers shall be offset to eliminate gaps.

 Maintenance openings shall be constructed in a manner to ensure sediment remains behind silt fence. 12. Joining sections shall not be placed at sump locations.

SILT FENCE DETAIL

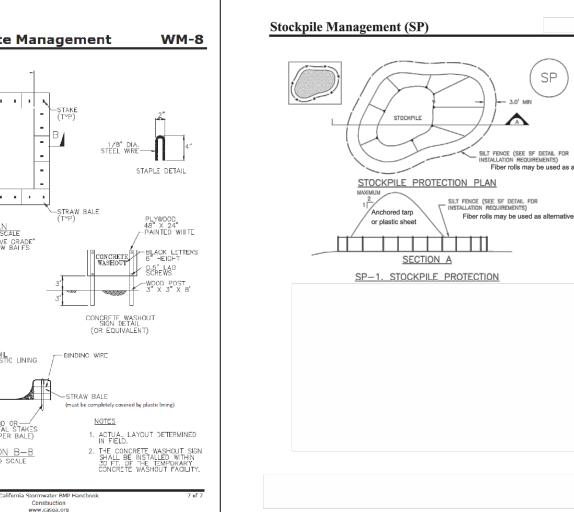


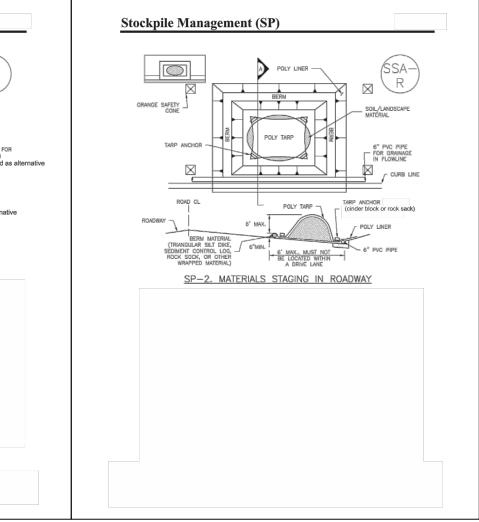




Toe of slope

SECTION C-C





EROSION CONTROL NOTES

WALKING, OR PATIO SURFACES PER THE CALGREEN SECTION A4.106.4

ALL PAYED AREAS SHALL BE GRADED TO SLOPE AT .5% OR MORE.

ALL GRADING AND DRAINAGE WORK SHALL CONFORM WITH THE CURRENT

5. PERFORM CLEARING AND EARTH-MOVING ACTIVITIES ONLY DURING DRY WEATHER.

6. MEASURES TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL ARE REQUIRED YEAR-ROUND. STABILIZE ALL DENUDED AREAS AND MAINTAIN EROSION CONTROL

7. STORE, HANDLE, AND DISPOSE OF CONSTRUCTION MATERIALS AND WASTES PROPERLY

8. STORE, HANDLE, AND DISPOSE OF CONSTRUCTION MATERIALS AND WASTES PROPERLY

9. CONTROL AND PREVENT THE DISCHARGE OF ALL POTENTIAL POLLUTANTS, INCLUDING PAYEMENT CUTTING WASTES, PAINTS, CONCRETE, PETROLEUM PRODUCTS, CHEMICALS,

SITE AND OBTAIN REGIONAL WATER QUALITY CONTROL BOARD (RWQCB) PERMIT(S)

SITE AND OBTAIN REGIONAL WATER QUALITY CONTROL BOARD (RWQCB) PERMIT(S)

11. USE SEDIMENT CONTROLS OR FILTRATION TO REMOVE SEDIMENT WHEN DEWATERING

12. AVOID CLEANING, FUELING, OR MAINTAINING VEHICLES ON-SITE, EXCEPT IN A DESIGNATED AREA WHERE WASH WATER IS CONTAINED AND TREATED.

15. AVOID TRACKING DIRT OR OTHER MATERIALS OFF-SITE \* CLEAN OFF-SITE PAVED

16. TRAIN AND PROVIDE INSTRUCTION TO ALL EMPLOYEES AND SUBCONTRACTORS REGARDING THE WATERSHED PROTECTION MAINTENANCE STANDARDS AND

WEEKENDS AND DURING RAIN EVENTS: NORTH, SOUTH, EAST, AND WEST OF PROPERTY.

WEEKENDS AND DURING RAIN EVENTS: NORTH, SOUTH, EAST, AND WEST OF PROPERTY.

UNLESS FOR USE ON STOCKPILES WHERE THE STOCKPILE IS ALSO PROTECTED WITH

WASH WATER OR SEDIMENTS, AND NON-STORMWATER DISCHARGES TO STORM DRAINS

MEASURES TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED

4. ALL UNPAYED AREAS SHALL BE GRADED TO SLOPE 1% OR MORE.

PRIOR TO EARTH-MOVING ACTIVITIES AND CONSTRUCTION.

SO AS TO PREVENT THEIR CONTACT WITH STORMWATER.

SO AS TO PREVENT THEIR CONTACT WITH STORMWATER.

AREAS AND SIDEWALKS USING DRY SWEEPING METHODS.

FIBER ROLLS CONTAINING THE BASE OF THE STOCKPILE.

CONSTRUCTION BEST MANAGEMENT PRACTICES.

SEE PLANS FOR EXACT LOCATIONS

SEE PLANS FOR EXACT LOCATIONS

DURING THE "OFF-SEASON."

SHALL NOT BE ENLARGED OR "RUN OVER."

21. DUST CONTROL IS REQUIRED YEAR-ROUND.

EXCAYATING OR GRUBBING IS STARTED.

MEASURES CONTINUOUSLY BETWEEN OCTOBER I AND APRIL 30.

3. PERMEABLE PAYERS ARE 100%.

AND WATERCOURSES.

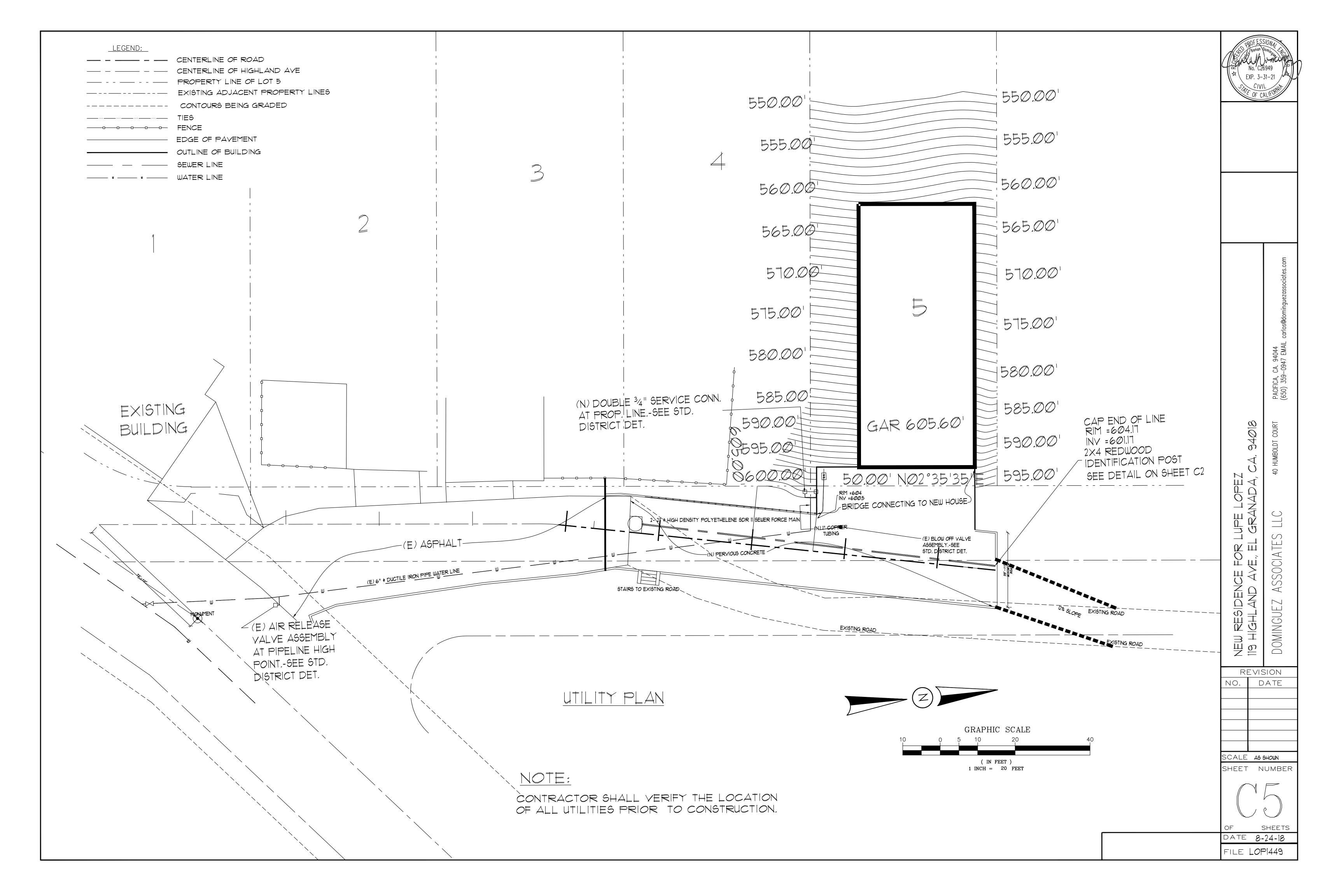
AS NECESSARY.

AS NECESSARY.

POLLUTED RUNOFF.

NPDES REQUIREMENTS. S.B.M.C.12.16.020





BEGINNING OF CURVE END OF PAVEMENT (E)GRD: 599.98 BEGIN OF 10% SLOPE (N) GRD: 605.58 (E) GRD: 599.98 STAT: Ø+ØØ (N) GRD: 605.36 END OF CURVE STAT: 0+17.77 END OF SLOPE (E)GRD: 599.98 (E) GRD: 609.84 (N) GRD: 605.51 STAT: 00+62.46 STAT: Ø+Ø9.77 (E) GRD: 607.51 (E) GRD: 610.46 PROFILE D (N) GRD: 606.09 (N) GRD: 608.59 ROAD STAT: Ø+25 STAT: 0+50 615.00 − 615*.*00 7615.00 7615.00 \_615*.00* 615.00 615.00<sub>C</sub> 615.00 <sub>F</sub> (E) ROAD <del>-</del>610.00 610.00 610.00 605.00 605.00 605.00 605.00 600.00 ±600.00 -(N) PAVED ROAD -±600.00 600.00 605.00 605.00 PROFILE @ B-C6 SCALE: 1"= 10'-0" 600.00 600.00 STAT: Ø+ØØ STAT: Ø+25 STAT: 00+50 PROFILE C PROFILE B CENTERLINE OF ROAD CONNECTING
TO EXISTING ROAD
SCALE: 1"= 10'-0" NEW RESIDENCE 119 HIGHLAND AVI SCALE AS SHOWN SHEET NUMBER

94018

REVISION

DATE

SHEETS

DATE 12-19-19

FILE LOP1449

ROAD PROFILES

06 08			Zip Code Climate Zone			07 09	Co	omplianc	e Manager Ve Software Ve	$\overline{}$		_	016.2.1 (695)
10 12				Single Family Newly Constructed		11 13	Fron		ition (deg/Ca	rdinal)			
14		Total C	ond. Floor Area (ft <sup>2</sup> )	3408		15			Number of 2	Zones			
16 18		Additio	Slab Area (ft <sup>2</sup> ) on Cond. Floor <mark>Are</mark> a	<b>-</b>		17 19			Number of S tural Gas Ava				
20			dition Slab Are <mark>a (</mark> ft <sup>2</sup> )	1		21			ing Percenta	$\overline{}$			
	IANCE RES		omplies with Compu	iter Performance									
	02			ures that require field te	esting and/or verifica	ation by a certi	fied HERS	rater un	der the super	rvision o	f a CEC-a	appro	ved HERS provider.
	03	This buildi	ng incorp <mark>orates one</mark>	or more Special Feature	es shown below								
					ENERGY US	E SUMMARY							
	Ener	04 gy Use (kTD	V/ft <sup>2</sup> -vr)	05 Standard De	esign	06 Proposed D	esign	+	07 Compliance	Margin	_	Pe	08 ercent Improvement
		Space Heati	ing	10.54		12.22			-1.68				-15.9%
		Space Cooli IAQ Ventilat		0.72		0.00			0.72				0.0%
		Water Heati	-	5.81		4.83 0.00			0.98				16.9%
		oliance Ener		17.97		17.95			0.02				0.1%
CERTII	FICATE O	Efficiency Sta				R-03032017-695			e, Apr 11, 20	Rep	RS Provid		CalCERTS inc. at: 2017-04-11 15:07:04 CF1R-PRF-01 Page 4 of 7
	ation Des		tle 24 Analysis		Inp	ut File Name	: ENERG	YBuilding	g1.ribd16x				
	01		02	03	I	04	05	06	07	08	0:	9	10
	Nam		Туре	Surface (Orienta		Width (ft)	Height (ft)	Multipl	<del>- ` ` `</del>	U-fac			Exterior Shading
	Windo		Window	WEST WALL SOUTH WALL	, ,			1	84.0 30.0	0.29		$\rightarrow$	Insect Screen (default) Insect Screen (default)
	Windo	v 3	Window	NORTH WA	LL (Left-0)			1	32.0	0.29	0.3	31	Insect Screen (default)
	Window		Window	NORTH WAL	_ ` /			1	60.0 49.0	0.29	_	-	Insect Screen (default) Insect Screen (default)
	Window		Window Window	WEST Wall 2 NORTH WAL				1	96.0 53.0	0.29		-	Insect Screen (default) Insect Screen (default)
	Windo	v 8	Window	SOUTH WALL	3 (Right-180)			1	66.0	0.29	0.3	31	Insect Screen (default)
OPAGU	Windo	E CONSTRU	Window	west WALL	3 (Left-0)			1	98.0	0.29	0.3	31	Insect Screen (default)
	01		02	03	04		0:		06				07
Co	onstruction	Name	Surface Type	Construction Type	Frami	ng	Total C R-va	lue	Winter Design				embly Layers
				N HE	RS P		V		:		Cavity / Fra	ame: l	rpsum Board R-19 / 2x6 lation: R5 Sheathing
R	R-19 Wall w/	1 XPS	Exterior Walls	Wood Framed Wall	2x6 @ 16 i	n. O.C.	R1	19	0.050	• E	xterior Fi	nish: 3	lation: R5 Sheathing B Coat Stucco
										. 0	avity / Fra	ame: l	rpsum Board R-13 / 2x4 lation: R5 Sheathing
R	R-13 Wall w/	1 XPS	Exterior Walls	Wood Framed Wall	2x4 @ 16 i	n. O.C.	R 1	13	0.063	• E		nish: 3	3 Coat Stucco
R-1	9 Floor Cra	wlspace	Floors Over Crawlspace	Wood Framed Floor	2x6 @ 16 i	n. O.C.	R 1	19	0.049	• F	loor Deck	: Woo	arpeted od Siding/sheathing/decking R-19 / 2x6
-										• F		: Woo	d Siding/sheathing/decking
R-19	Floor No C	awlspace	Interior Floors	Wood Framed Floor	2x6 @ 16 i	n. O.C.	R 1	19	0.048	• 0	eiling Bel	ow Fil	R-19 / 2x6 nish: Gypsum Board
A4	ttic RoofFL0	OOR 3	Attic Roofs	Wood Framed Ceiling	2x4 Top Chord of R in. O.		nor	ne	0.644	• F	Roof Deck	: Woo	no insul. / 2x4 Top Chrd d Siding/sheathing/decking pof (Asphalt Shingle)
			Ceilings (below		11. 0.		1101		5.077	- //	nside Finis	sh: Gy	psum Board R-9.1 / 2x4
	R-30 Roof	Attic	attic)	Wood Framed Ceiling	2x4 @ 24 i	n. O.C.	RS	30	0.032				sts: R-20.9 insul.
CA Build	FICATE O	Efficiency St  F COMPLIA esidential B	Building	.00 0000	Cal	R-03032017-69	e/Time: 1	5:06, Tue		Re	RS Provid		CalCERTS inc at: 2017-04-11 15:07:04 CF1R-PRF-01 Page 7 of 7
			tle 24 Analysis	TEMENT	шр	out File Name	LIVERG	. Juliuin(	y i iiibu i toX				
1. I certi	ify that this	Certificate of	Compliance documer	TEMENT ntation is accurate and co	mplete.								
	entation Aut					Documentation	n Author S	ignature:		Nati	DOM	ngi	UEZ
Compar	ny:		TEC			Signature Dat		20				,	
DOM Address		ASSOCIA <sup>-</sup>	IES			2017-04-1 CEA/HERS C			tion (If applica	ble):			
40 HU City/Sta	UMBOLD	ТСТ				Phone:							
pacific	ca, CA 94					650-359-0	947						
			CLARATION STATE	MENT ne laws of the State of Ca	lifornia:								
1. 2. 3.	I am eligible I certify that Regulations The buildin	e under Divis t the energy t s. g design feat , calculations	ion 3 of the Busin <mark>ess</mark> features and performa tures or system design	and Professions Code to ance specifications identifi n features identified on thi tions submitted to the enfo	accept responsibility led on this Certificate s Certificate of Comp	of Compliance	conform to stent with is building	the requi the inform permit ap	rements of Tit ation provided plication.	le 24, Pa	rt 1 and F	ole co	mpliance documents,
MATT Compar	T DOMIN	GUEZ		1 6		Date Signed:				MUTT	DOM,	NG	MEZ
	-	ASSOCIA	TES	7 HE	RS F	2017-04-1	1 15:19:	20					
Address 40 HL	s: UMBOLD	т ст				License: C26949							
City/Sta						Phone: 650-359-0	Q/17						
Digitally	r signed by C	alCERTS. Thi	is digital signature is p curacy of the information	rovided in order to secure t on.	the content of this reg			o way impl	ies Registratio	n			Easy to Verify at CalCERTS.com
			118126A-000-000-00000 tandards - 2016 Resid		Registration Date/Tim		2017-04-11 1 5	15:19:20			RS Provid		at CalCERTS.com  CalCERTS inc at: 2017-04-11 15:07:04

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name Residential Building

Calculation Description Title 24 Analysis

Project Name: Residential Building

GENERAL INFORMATION

Calculation Description: Title 24 Analysis

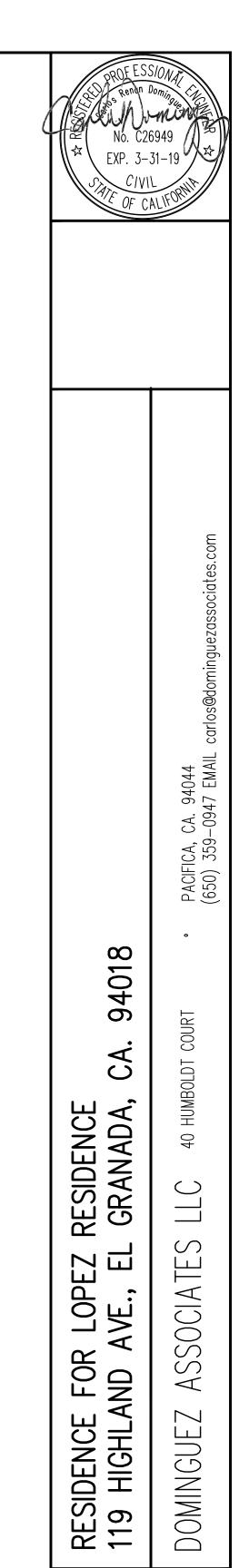
CF1R-PRF-01

Page 1 of 7

Calculation Date/Time: 15:06, Tue, Apr 11, 2017

Input File Name: ENERGYBuilding1.ribd16x

RTIFICATE OF COMPLIANCE - RESIDEN ject Name: Residential Building culation Description: Title 24 Analysis	ITIAL PERFORMANCE C	Calcu	lation Date/Tir	<b>ne:</b> 15:06, Tue, A ERGYBuilding1.r			Page 2 of 7	Project Name: Residential Bu Calculation Description: Titl	uilding				: 15:06, Tue, Apr RGYBuilding1.rib	,		Page
		ENERGY DESI	N RATING					ZONE INFORMATION								
rgy Design Rating (EDR) is an alternate way	to express the energy perfo			system where 10	represents the energy	y performan	ice of the Residential	01	02	03		04	05	06		07
rgy Services (RESNET) reference home char combines high levels of energy efficiency w	racterization of the 2006 Inte	rnational Energy Co	nservation Code	(IECC). A score o	zero represents the e	energy perfor	rmance of a building				I	e Floor Area	Avg. Ceiling			
ch as domestic appliances and consumer ele								Zone Name	Zone Type	HVAC System Nam	ne	(ft <sup>2</sup> )	Height	Water Heating		ater Heating Sys
24, Part 11 (CALGreen).								FIRST FLOOR	Conditioned	HVAC System1		837	9	DHW Sys		DHW Sys 2
Standard Design building under the 2016 B								2ND FLOOR	Conditioned	HVAC System1		1528	9	DHW Sys		DHW Sys 2
rovided for Information. Similarly, the EDR sorgy can both be seen	core of the Proposed Desig	i is provided separa	ely Irolli the ED	R value of installed	r v so mat the effects	s or eniciency	y and renewable	FLOOR 3	Conditioned	HVAC System1		1043	9	DHW Sys	rs 1	DHW Sys 2
EDR of Standard Design	EDR of Proposed	Design	EDR '	/alue of Proposed	PV Fi	inal EDR of P	Proposed Design	OPAQUE SURFACES								
40.3	40.2			0.0		4	40.2	01	02	0	)3	04	05	06	07	
Design meets Tier 1 requirement of								Name	Zone	Const	ruction	Azimuth	Orientation	Gross Area (ft <sup>2</sup> )	Window & Doo	or Area (ft <sup>2</sup> ) T
Design meets Tier 2 requirement of	30% or greater code compl	ance margin (CALG	een A4.203.1.2.2	2) and QII verificati	on prerequisite.			WEST WALL	FIRST FLOOR	R-19 Wal	ll w/1 XPS	270	Front	243	84	
Design meets Zero Net Energy (ZNI (PV) renewable energy generation							g on-site photovoltaic	SOUTH WALL	FIRST FLOOR		ll w/1 XPS	180	Right	243	30	
į, ,			9 ()			'		EAST WALL	FIRST FLOOR		ll w/1 XPS	90	Back	279	0	
UIRED SPECIAL FEATURES								NORTH WALL	FIRST FLOOR		II w/1 XPS	0	Left	243	32	
ollowing are features that must be installed as	condition for meeting the mod	eled energy performa	nce for this comp					Raised Floor	FIRST FLOOR		Crawlspace			837		
cts with high level of insulation		<b> (</b>		- In				NORTH WALL 2	2ND FLOOR	R-19 Wal		100	Left	443	60	
FEATURE SUMMARY	V CU		110					SOUTH Wall 2	2ND FLOOR	R-19 Wal		180	Right	443	49	
llowing is a summary of the feature <mark>s th</mark> at mus ed in the building components tables below.	at be field-verified by a certified	HERS Rater as a co	ndition for meetin	g the modeled ener	gy performance for this o	computer anal	alysis. Additional detail is	EAST Wall 2 WEST Wall 2	2ND FLOOR 2ND FLOOR	R-19 Wal	ll w/1 XPS	90	Back	243	96	
ng-level Verifications:								Raised Floor 2	2ND FLOOR		Crawlspace	2/0	rront	1528	96	+
mechanical ventilation								NORTH WALL 3	FLOOR 3	R-19 Floor R-19 Wal		0	Left	405	53	+
ng System Verifications: one								SOUTH WALL 3	FLOOR 3	R-19 Wal		180	Right	405	66	
Distribution System Verifications:								west WALL 3	FLOOR 3	R-19 Wal		0	Left	243	98	
ct Sealing estic Hot Water System Verifications:								east WALL 3	FLOOR 3	R-19 Wal		0	Left	243	0	+
None								Roof	FLOOR 3	R-30 R		1		1403		
DING - FEATURES INFORMATION									·	,			•			
01 0	03		04	05	06		07	ATTIC								
Project Name Conditioned F	Number of Floor Area (ft2)		of Bedrooms	Number of Zones	Number of Ver Cooling Sys		Number of Water Heating Systems	01	02	03	04		05	06	07	0
-	108 1	io Itamboi	3	3	0	otomo	2	Name	Construction	Туре	Roof Rise	Roof	Reflectance	Roof Emittance	Radiant Barri	ier Cool
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TIFICATE OF COMPLIANCE - RESIDER ect Name: Residential Building ulation Description: Title 24 Analysis  DING ENVELOPE - HERS VERIFICATION 01 Quality Insulation Installation (QII) Not Required  ER HEATING SYSTEMS 01 Name SHW Sys 1 DHW Sys 2  ER HEATERS 01 02 03  Heater Element Type Tank OHW Heater 1 Gas Sm Instanta CE CONDITIONING SYSTEMS	Quality Installation  Quality Installation  Quality Installation  Note: The property of Units (gal)  all neous 1 n/a  1 n/a  02  System Type  Other Heating and Cooling	OMPLIANCE MET Calci Input  02 of Spray Foam Insult Required  03 Distribution Typ Standard Standard Standard  06 Energy Factor or Efficiency Rat  0.95 EF 1200 0.95 EF 1200	O7 Tank Ring/Pilot (I	03 Building Envelope Not Requi  04 Water Heater DHW Heater 1 (1) DHW Heater 2 (1)  08 Insulation -value n/a n/a 04	Pr 11, 2017 ibd16x  Air Leakage red  05  Number of H  1  1  09  ndby Loss / covery Eff NEEA  n/a  05  Fan Nam	Heaters  10  N/a  n/a  n/a	2017-04-11 15:07:04  CF1R-PRF-01 Page 5 of 7  04 CFM50  06 Solar Fraction (%) .0% .0%  11 Tank Location or Ambient Condition n/a n/a n/a	Registration Number: 217-P0101 CA Building Energy Efficiency State  CERTIFICATE OF COMPLIA Project Name: Residential B Calculation Description: Tit  HVAC - DISTRIBUTION SYSTE 01 Name Air Distribution System 1  HVAC DISTRIBUTION - HERS N 01 Name Air Distribution System 1-hers- HVAC - FAN SYSTEMS 01 Name HVAC Fan 1  IAQ (Indoor Air Quality) FANS 01 Dwelling Unit	ANCE - RESIDENTIAL PERFOUIDING  LIVER - RESIDENTIAL PERFOUIDING  L	Registration D Report Version  ORMANCE COMPLIAN  03 Duct Leakage Sealed and teste  03 Duct Leakage Target (%) 5.0  02 Type Single Speed PSC Furna	ICE METHOD Calculatio Input File Insulated  04 Verified Duct Location Not Required	on Date/Time Name: ENEF  04 tion R-value  8  0 t Verifier Des	: 15:06, Tue, Apr RGYBuilding1.rib  05 Duct Locat Attic  5 d Duct ign squired Not  03 Fan Power (Watte 0.58  04  IAQ Fan Type	HERS Report  r 11, 2017 rd16x  tion Bypa  tion Bypa  tion Ducts Required D  ucts Required I	06 ass Duct None  07 Deeply Buried Ducts Not Required  HERS	OF 11 Part of the
ETIFICATE OF COMPLIANCE - RESIDER ect Name: Residential Building culation Description: Title 24 Analysis  DING ENVELOPE - HERS VERIFICATION 01 Quality Insulation Installation (QII) Not Required  ER HEATING SYSTEMS 01 Name DHW Sys 1 DHW Sys 2  ER HEATERS 01 02 03 Heater Element Type Tank DHW Heater 1 Gas DHW Heater 2 Gas CE CONDITIONING SYSTEMS 01 SC Sys Name HVAC System1	Quality Installation  Quality Installation  Quality Installation  Note: The property of Units (gal)  all neous 1 n/a  02  System Type  DHW  DHW  DHW  DHW  Of Units (gal)  all n/a  02  System Type	OMPLIANCE MET Calci Input  02 of Spray Foam Insult Required  03 Distribution Typ Standard Standard  06 Energy Factor or Efficiency Rat  0.95 EF 1200  03 Heating Unit I	O7 Tank Ring/Pilot (I	03 Building Envelope Not Requi  04 Water Heater DHW Heater 1 (1) DHW Heater 2 (1)  08 Insulation -value nt/Ext) Re n/a 04 Cooling Unit Name	Pr 11, 2017 ibd16x  Air Leakage red  05  Number of H  1  1  09  ndby Loss / covery Eff NEEA  n/a  05  Fan Nam	Heaters  10  N/a  n/a  n/a	2017-04-11 15:07:04  CF1R-PRF-01 Page 5 of 7  04 CFM50  06 Solar Fraction (%) .0% .0%  11 Tank Location or Ambient Condition n/a n/a  06 Distribution Name	Registration Number: 217-P0101 CA Building Energy Efficiency State  CERTIFICATE OF COMPLIA Project Name: Residential B Calculation Description: Tit  HVAC - DISTRIBUTION SYSTE 01 Name Air Distribution System 1  HVAC DISTRIBUTION - HERS N 01 Name Air Distribution System 1-hers- HVAC - FAN SYSTEMS 01 Name HVAC Fan 1  IAQ (Indoor Air Quality) FANS 01 Dwelling Unit	ANCE - RESIDENTIAL PERFOUIDING  LIVER - RESIDENTIAL PERFOUIDING  L	Registration D Report Version  ORMANCE COMPLIAN  03 Duct Leakage Sealed and teste  03 Duct Leakage Target (%) 5.0  02 Type Single Speed PSC Furna	ICE METHOD Calculatio Input File Insulated  04 Verified Duct Location Not Required	on Date/Time Name: ENEF  04 tion R-value  8  0 t Verifier Des	: 15:06, Tue, Apr RGYBuilding1.rib  05 Duct Locat Attic  5 d Duct ign squired Not  03 Fan Power (Watte 0.58  04  IAQ Fan Type	HERS Report  r 11, 2017 rd16x  tion Bypa  tion Bypa  tion Ducts Required D  ucts Required I	06 ass Duct None  07 Deeply Buried Ducts Not Required  HERS	OF 11 Part of the
RTIFICATE OF COMPLIANCE - RESIDER RECT Name: Residential Building Culation Description: Title 24 Analysis  LDING ENVELOPE - HERS VERIFICATION 01 Quality Insulation Installation (QII) Not Required  TER HEATING SYSTEMS 01 Name DHW Sys 1 DHW Sys 2  TER HEATERS 01 02 03 Heater Element Type Tank DHW Heater 1 Gas DHW Heater 2 Gas CE CONDITIONING SYSTEMS 01 SC Sys Name HVAC System1 CC - HEATING UNIT TYPES	Quality Installation  Quality Installation  Quality Installation  Note: The property of Units (gal)  all neous 1 n/a  1 n/a  02  System Type  Other Heating and Cooling	OMPLIANCE MET Calci Input  02 of Spray Foam Insult Required  03 Distribution Typ Standard Standard  06 Energy Factor or Efficiency Rat  0.95 EF 1200  03 Heating Unit I	O7 Tank Ring/Pilot (I	03 Building Envelope Not Requi  04 Water Heater DHW Heater 1 (1) DHW Heater 2 (1)  08 Insulation -value nt/Ext) Re  104 Cooling Unit Name cooling Component 1	Pr 11, 2017 ibd16x  Air Leakage red  05  Number of H  1  1  09  ndby Loss / covery Eff NEEA  n/a  n/a  NEEA  NAME  HVAC Far	Heaters  10  Na Heat Pump To n/a n/a n/a n/a	2017-04-11 15:07:04  CF1R-PRF-01 Page 5 of 7  04 CFM50  06 Solar Fraction (%) .0% .0%  11 Tank Location or Ambient Condition n/a n/a  n/a  06 Distribution Name Air Distribution System 1	Registration Number: 217-P0101 CA Building Energy Efficiency State  CERTIFICATE OF COMPLIA Project Name: Residential B Calculation Description: Tit  HVAC - DISTRIBUTION SYSTE 01 Name Air Distribution System 1  HVAC DISTRIBUTION - HERS N 01 Name Air Distribution System 1-hers- HVAC - FAN SYSTEMS 01 Name HVAC Fan 1  IAQ (Indoor Air Quality) FANS 01 Dwelling Unit	ANCE - RESIDENTIAL PERFOUIDING  LIVER - RESIDENTIAL PERFOUIDING  L	Registration D Report Version  ORMANCE COMPLIAN  03 Duct Leakage Sealed and teste  03 Duct Leakage Target (%) 5.0  02 Type Single Speed PSC Furna	ICE METHOD Calculatio Input File Insulated  04 Verified Duct Location Not Required	on Date/Time Name: ENEF  04 tion R-value  8  0 t Verifier Des	: 15:06, Tue, Apr RGYBuilding1.rib  05 Duct Locat Attic  5 d Duct ign squired Not  03 Fan Power (Watte 0.58	HERS Report  r 11, 2017 rd16x  tion Bypa  tion Bypa  tion Ducts Required D  ucts Required I	06 ass Duct None  07 Deeply Buried Ducts Not Required  HERS	OF1F Pa  O7 HERS Verifi Air Distribution 1-hers-o  Low-lea Air Ha  O4 S Verification  06 HERS Verifi
RTIFICATE OF COMPLIANCE - RESIDER ect Name: Residential Building culation Description: Title 24 Analysis  DING ENVELOPE - HERS VERIFICATION 01 Quality Insulation Installation (QII) Not Required  TER HEATING SYSTEMS 01 Name DHW Sys 1 DHW Sys 2  TER HEATERS 01 02 03 Heater Element Type Tank DHW Heater 1 Gas DHW Heater 2 Gas CE CONDITIONING SYSTEMS 01 SC Sys Name HVAC System1  C - HEATING UNIT TYPES 01	Quality Installation  Quality Installation  Quality Installation  Note: The property of Units (gal)  all neous 1 n/a  1 n/a  02  System Type  Other Heating and Cooling	OMPLIANCE MET Calci Input  O2 Of Spray Foam Insult Required  O3 Distribution Typ Standard Standard  O6 Energy Factor or Efficiency Rat  0.95 EF 1200  0.95 EF 1200  Heating Unit Meating Unit Meating Compo	O7 Tank Ring/Pilot (I	03 Building Envelope Not Requi  04 Water Heater DHW Heater 1 (1) DHW Heater 2 (1)  08 Insulation -value nt/Ext) Re  104 Cooling Unit Name cooling Component 1	Pr 11, 2017 ibd16x  Air Leakage red  05  Number of H  1  1  09  ndby Loss / covery Eff NEEA  n/a  n/a  HVAC Far	Heaters  10  N/a  n/a  n/a	2017-04-11 15:07:04  CF1R-PRF-01 Page 5 of 7  04 CFM50  06 Solar Fraction (%) .0% .0%  11 Tank Location or Ambient Condition n/a n/a  n/a  06 Distribution Name Air Distribution System 1	Registration Number: 217-P0101 CA Building Energy Efficiency State  CERTIFICATE OF COMPLIA Project Name: Residential B Calculation Description: Tit  HVAC - DISTRIBUTION SYSTE 01 Name Air Distribution System 1  HVAC DISTRIBUTION - HERS N 01 Name Air Distribution System 1-hers- HVAC - FAN SYSTEMS 01 Name HVAC Fan 1  IAQ (Indoor Air Quality) FANS 01 Dwelling Unit	ANCE - RESIDENTIAL PERFOUIDING  LIVER - RESIDENTIAL PERFOUIDING  L	Registration D Report Version  ORMANCE COMPLIAN  03 Duct Leakage Sealed and teste  03 Duct Leakage Target (%) 5.0  02 Type Single Speed PSC Furna	ICE METHOD Calculatio Input File Insulated  04 Verified Duct Location Not Required	on Date/Time Name: ENEF  04 tion R-value  8  0 t Verifier Des	: 15:06, Tue, Apr RGYBuilding1.rib  05 Duct Locat Attic  5 d Duct ign squired Not  03 Fan Power (Watte 0.58	HERS Report  r 11, 2017 rd16x  tion Bypa  tion Bypa  tion Ducts Required D  ucts Required I	06 ass Duct None  07 Deeply Buried Ducts Not Required  HERS	O7 HERS Verifi Air Distribution 1-hers-o  04 S Verification  06 HERS Verifi
RTIFICATE OF COMPLIANCE - RESIDER Sect Name: Residential Building Culation Description: Title 24 Analysis  LDING ENVELOPE - HERS VERIFICATION 01 Quality Insulation Installation (QII) Not Required  TER HEATING SYSTEMS 01 Name SOLUTION DHW Sys 1 DHW Sys 2  TER HEATERS 01 02 03 Heater Element Type Tank DHW Heater 1 Gas DHW Heater 2 Gas Instanta CE CONDITIONING SYSTEMS 01 SC Sys Name HVAC System1 CC - HEATING UNIT TYPES 01 Name	Quality Installation  Quality Installation  Quality Installation  Note: The property of Units (gal)  all neous 1 n/a  1 n/a  02  System Type  Other Heating and Cooling	OMPLIANCE MET Calci Input  O2 Of Spray Foam Insu ot Required  O3 Distribution Typ Standard Standard  O6 Energy Factor or Efficiency Rat  O.95 EF 1200  O.95 EF 1200  Heating Unit I Heating Compo	O7 Tank Ring/Pilot (I	03 Building Envelope Not Requi  04 Water Heater DHW Heater 1 (1) DHW Heater 2 (1)  08 Insulation -value nt/Ext) Re  104 Cooling Unit Name cooling Component 1	Pr 11, 2017 ibd16x  Air Leakage red  05  Number of H  1  1  09  ndby Loss / covery Eff NEEA  n/a  n/a  NEEA  NAME  HVAC Far	Heaters  10  N/a  n/a  n/a  n/a  Efficiency	2017-04-11 15:07:04  CF1R-PRF-01 Page 5 of 7  04  CFM50  06  Solar Fraction (%) .0% .0%  11  Tank Location or Ambient Condition n/a n/a  n/a  06  Distribution Name  Air Distribution System 1  04 ciency	Registration Number: 217-P0101 CA Building Energy Efficiency State  CERTIFICATE OF COMPLIA Project Name: Residential B Calculation Description: Tit  HVAC - DISTRIBUTION SYSTE 01 Name Air Distribution System 1  HVAC DISTRIBUTION - HERS N 01 Name Air Distribution System 1-hers- HVAC - FAN SYSTEMS 01 Name HVAC Fan 1  IAQ (Indoor Air Quality) FANS 01 Dwelling Unit	ANCE - RESIDENTIAL PERFOUIDING  LIVER - RESIDENTIAL PERFOUIDING  L	Registration D Report Version  ORMANCE COMPLIAN  03 Duct Leakage Sealed and teste  03 Duct Leakage Target (%) 5.0  02 Type Single Speed PSC Furna	ICE METHOD Calculatio Input File Insulated  04 Verified Duct Location Not Required	on Date/Time Name: ENEF  04 tion R-value  8  0 t Verifier Des	: 15:06, Tue, Apr RGYBuilding1.rib  05 Duct Locat Attic  5 d Duct ign squired Not  03 Fan Power (Watte 0.58	HERS Report  r 11, 2017 rd16x  tion Bypa  tion Bypa  tion Ducts Required D  ucts Required I	06 ass Duct None  07 Deeply Buried Ducts Not Required  HERS	2017-04-11 15  CF1 Pri  O7 HERS Verif Air Distribution 1-hers-  O4 S Verification  06 HERS Verif
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REVISION

NO. DATE

SHEET NUMBER

DATE 8-1-16

FILE LOP1449

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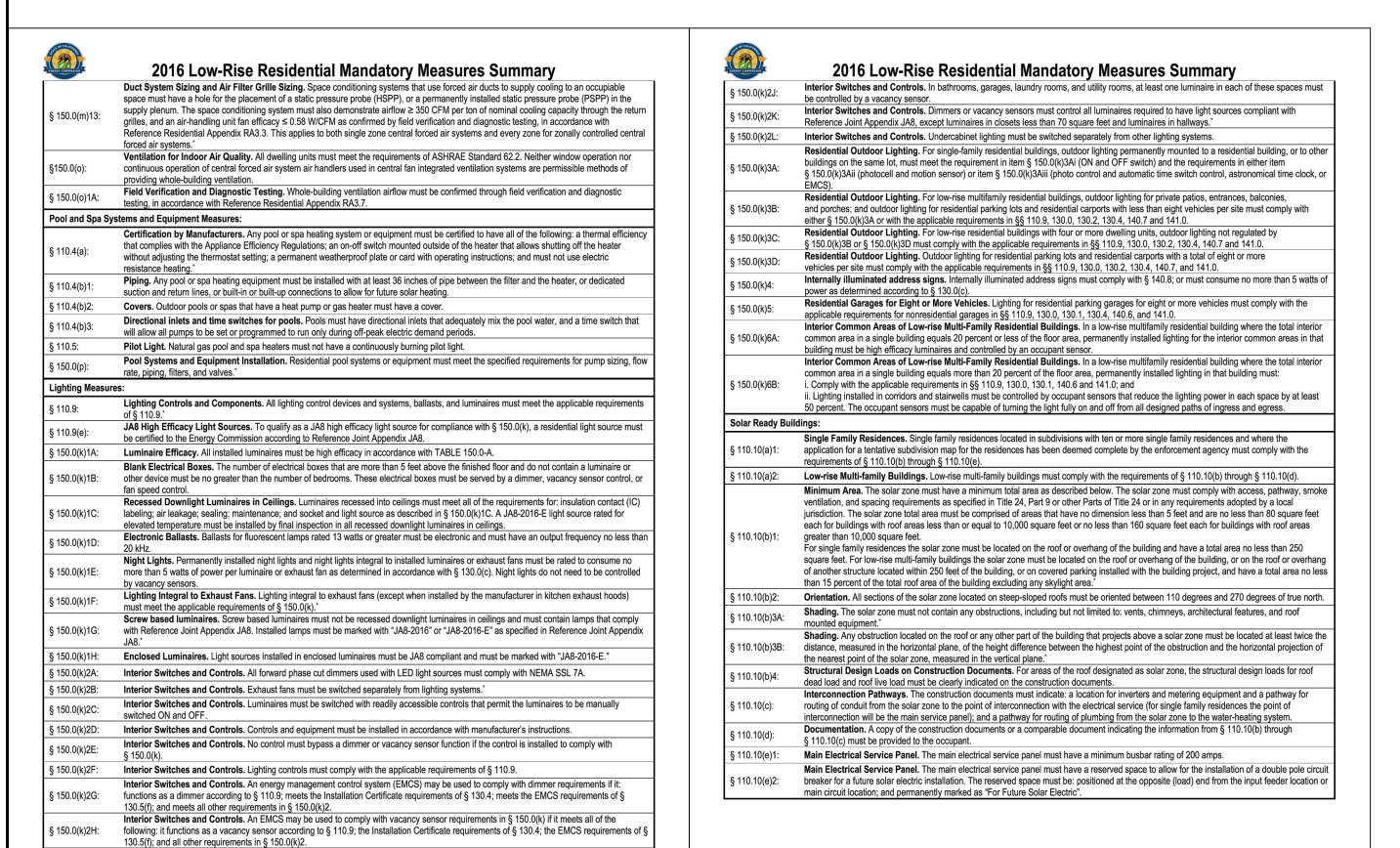
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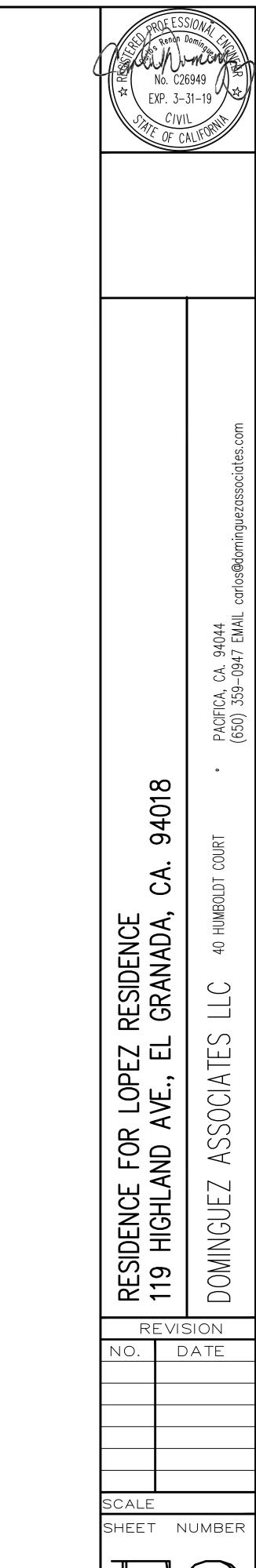
Interior Switches and Controls. A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it

provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2.

	2016 Low-Rise Residential Mandatory Measures Summary		2016 Low-Rise Resident
NOTE: Low-rise re	esidential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach	§ 150.0(h)3A:	Clearances. Installed air conditioner and heat pump dryer vent.
(Original 08/2016)	espective section for more information. *Exceptions may apply.	§ 150.0(h)3B:	Liquid Line Drier. Installed air conditioner and heat present manufacturer's instructions.
Building Envelop	e Measures:	§ 150.0(j)1:	Storage Tank Insulation. Unfired hot water tanks, st
§ 110.6(a)1:	Air Leakage. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 cfm/ft² or less when tested per NFRC-400 or ASTM E283 or AAMA/WDMA/CSA 101/I.S.2/A440-2011.*		R-12 external insulation or R-16 internal insulation whater piping and cooling system line insulation. I be insulated according to the requirements of TABLE
§ 110.6(a)5:	Labeling. Fenestration products must have a label meeting the requirements of § 10-111(a).	§ 150.0(j)2A:	nominal diameter of 3/4 inch or larger; all piping asso
§ 110.6(b):	Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from TABLES 110.6-A and 110.6-B for compliance and must be caulked and/or weatherstripped.*		piping from the heating source to storage tank or between fixtures.*
§ 110.7:	Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.	§ 150.0(j)2B:	Water piping and cooling system line insulation. A and non-crushable casing or sleeve.*
§ 110.8(a):	Insulation Certification by Manufacturers. Insulation specified or installed must meet Standards for Insulating Material.	§ 150.0(j)2C:	Water piping and cooling system line insulation.
§ 110.8(g):	Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(g).	§ 150.0(j)3:	piping for steam and hydronic heating systems or hot Insulation Protection. Insulation must be protected to
§ 110.8(i):	Roofing Products Solar Reflectance and Thermal Emittance. The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) when the installation of a cool roof is specified on the CF1R.		Insulation Protection. Insulation exposed to weathe
§ 110.8(j):	Radiant Barrier. A radiant barrier must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.	§ 150.0(j)3A:	aluminum, sheet metal, painted canvas, or plastic co- cause degradation of the material.
<b>3</b>	Ceiling and Rafter Roof Insulation. Minimum R-22 insulation in wood-frame ceiling; or the weighted average U-factor must not exceed 0.043.  Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alteration. Attic access doors must have permanently attached	§ 150.0(j)3B:	Insulation Protection. Insulation covering chilled wa
§ 150.0(a):	insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a continuous roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling."	§ 150.0(n)1:	Class I or Class II vapor retarder.  Gas or Propane Systems. Systems using gas or pro 120V electrical receptacle within 3 feet of the water h termination and the space where the water heater is i
§ 150.0(b):	Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.	0.470.0(.)0	water heater, and allows natural draining without pur
§ 150.0(c):	<b>Wall Insulation.</b> 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 U-factor of 0.074 or less). Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102, equivalent to an installed value of R-13 in a	§ 150.0(n)2: § 150.0(n)3:	Recirculating Loops. Recirculating loops serving mu Solar Water-heating Systems. Solar water-heating
§ 150.0(d):	wood framed assembly.*  Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.*	Ducts and Fans	Corporation (SRCC) or by a listing agency that is app
§ 150.0(f):	Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3%; have a water vapor permeance no greater than 2.0 perm/inch; be protected from physical damage and UV light	§ 110.8(d)3:	Ducts. Insulation installed on an existing space-cond contractor installs the insulation, the contractor must or
§ 150.0(g)1: § 150.0(g)2: § 150.0(q):	deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).  Vapor Retarder. In Climate Zones 1-16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d).  Vapor Retarder. In Climate Zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.  Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration must not exceed 0.58.*	§ 150.0(m)1:	CMC Compliance. All air-distribution system ducts a §§ 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMA0 of supply-air and return-air ducts and plenums must a minimum installed level of R-4.2 when entirely in co (RA3.1.4.3.8). Connections of metal ducts and inner of mastic, tape, or other duct-closure system that meets meets the requirements of UL 723. If mastic or tape is
Fireplaces, Decor	ative Gas Appliances, and Gas Log Measures:		tape must be used. Building cavities, support platform
§ 150.0(e)1A:	Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.		sheet metal, duct board or flexible duct must not be u ducts. Ducts installed in cavities and support platform
§ 150.0(e)1B:	Combustion Intake. Masonry or factory-built fireplaces must 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 combustion-air control device.*	§ 150.0(m)2:	Factory-Fabricated Duct Systems. Factory-fabricate connections, and closures; joints and seams of duct s
§ 150.0(e)1C:	Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control."		tapes unless such tape is used in combination with m
§ 150.0(e)2:	Pilot Light. 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.	§ 150.0(m)3:	Field-Fabricated Duct Systems. Field-fabricated du mastics, sealants, and other requirements specified f
Space Conditioni	ng, Water Heating, and Plumbing System Measures:	§ 150.0(m)7:	<b>Backdraft Dampers.</b> All fan systems that exchange automatic dampers.
§ 110.0-§ 110.3:	Certification. Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the Energy Commission.*	§ 150.0(m)8:	Gravity Ventilation Dampers. Gravity ventilating sys manually operated dampers in all openings to the out
§ 110.2(a):	HVAC Efficiency. Equipment must meet the applicable efficiency requirements in TABLE 110.2-A through TABLE 110.2-K.*		Protection of Insulation. Insulation must be protected
§ 110.2(b):	Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for	§ 150.0(m)9:	wind. Insulation exposed to weather must be suitable plastic cover. Cellular foam insulation must be protec solar radiation.
	compression heating is higher than the cut-off temperature for supplementary heating.*  Thermostats. All unitary heating or cooling systems not controlled by a central energy management control system (EMCS) must have a	§ 150.0(m)10:	Porous Inner Core Flex Duct. Porous inner core flex
§ 110.2(c):	setback thermostat.*  Water Heating Recirculation Loops Serving Multiple Dwelling Units. Water heating recirculation loops serving multiple dwelling units must	§ 150.0(m)11:	Duct System Sealing and Leakage Test. When spa occupiable space, the ducts must be sealed and duct accordance with § 150.0(m)11and Reference Reside
§ 110.3(c)5:	meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c)5.	§ 150.0(m)12:	Air Filtration. Mechanical systems that supply air to conditioning component, except evaporative coolers,
§ 110.3(c)7:	Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBTU/hr (2 kW) must have isolation valves with hose bibbs or other fittings on both cold water and hot water lines of water heating systems to allow for water tank flushing when the valves are closed.		pressure drop, and labeling requirements of § 150.0(
§ 110.5:	Pilot Lights. 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:	Building Cooling and Heating Loads. Heating and/or cooling loads are calculated in accordance with ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; SMACNA Residential Comfort System Installation Standards Manual; or ACCA Manual J using design conditions specified in § 150.0(h)2.		

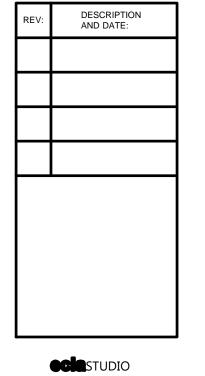
§ 150.0(h)3A:	Clearances. Installed air conditioner and heat pump outdoor condensing units must have a clearance of at least 5 feet from the outlet of any dryer vent.  Liquid Line Drier. Installed air conditioner and heat pump systems must be equipped with liquid line filter driers if required, as specified by
§ 150.0(h)3B:	manufacturer's instructions.
§ 150.0(j)1:	Storage Tank Insulation. Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must ha 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:	Water piping and cooling system line insulation. For domestic hot water system piping, whether buried or unburied, all of the following mube insulated according to the requirements of TABLE 120.3-A: the first 5 feet of hot and cold water pipes from the storage tank; all piping with 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.*
§ 150.0(j)2B:	Water piping and cooling system line insulation. All domestic hot water pipes that are buried below grade must be installed in a water product and non-crushable casing or sleeve.*
§ 150.0(j)2C:	Water piping and cooling system line insulation. Pipe for cooling system lines must be insulated as specified in § 150.0(j)2A. Distribution piping for steam and hydronic heating systems or hot water systems must meet the requirements in TABLE 120.3-A.*
§ 150.0(j)3:	Insulation Protection. Insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind
§ 150.0(j)3A:	Insulation Protection. Insulation exposed to weather must be installed with a cover suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. The cover must be water retardant and provide shielding from solar radiation that car cause degradation of the material.
§ 150.0(j)3B:	Insulation Protection. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must have Class I or Class II vapor retarder.
§ 150.0(n)1:	Gas or Propane Systems. Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: 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 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. Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.
§ 150.0(n)3:	<b>Solar Water-heating Systems.</b> Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC) or by a listing agency that is approved by the Executive Director.
Ducts and Fans	Measures:
§ 110.8(d)3:	<b>Ducts.</b> Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
	CMC Compliance. All air-distribution system ducts and plenums must be installed, 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. Portion of supply-air and return-air ducts and plenums must be insulated to a minimum installed level of R-6.0 (or higher if required by CMC § 605.0) or higher if required by CMC § 605.0)
§ 150.0(m)1:	tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area of the ducts.*
§ 150.0(m)1:	(RA3.1.4.3.8). Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must 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 1/4 inch, the combination of mastic and either mesh of tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area of the ducts.*  Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
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§ 150.0(m)2:	(RA3.1.4.3.8). Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must 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 ½ inch, the combination of mastic and either mesh of tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area of the ducts.*  Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.  Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.  Backdraft Dampers. All fan systems that exchange air between the conditioned space and the outside of the building must have backdraft or automatic dampers.
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§ 150.0(m)2: § 150.0(m)3: § 150.0(m)7:	(RA3.1.4.3.8). Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must 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 ½ inch, the combination of mastic and either mesh of tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area of the ducts.*  Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.  Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.  Backdraft Dampers. All fan systems that exchange air between the conditioned space and the outside of the building must have backdraft or automatic dampers.  Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.  Protection of Insulation. Insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, prote
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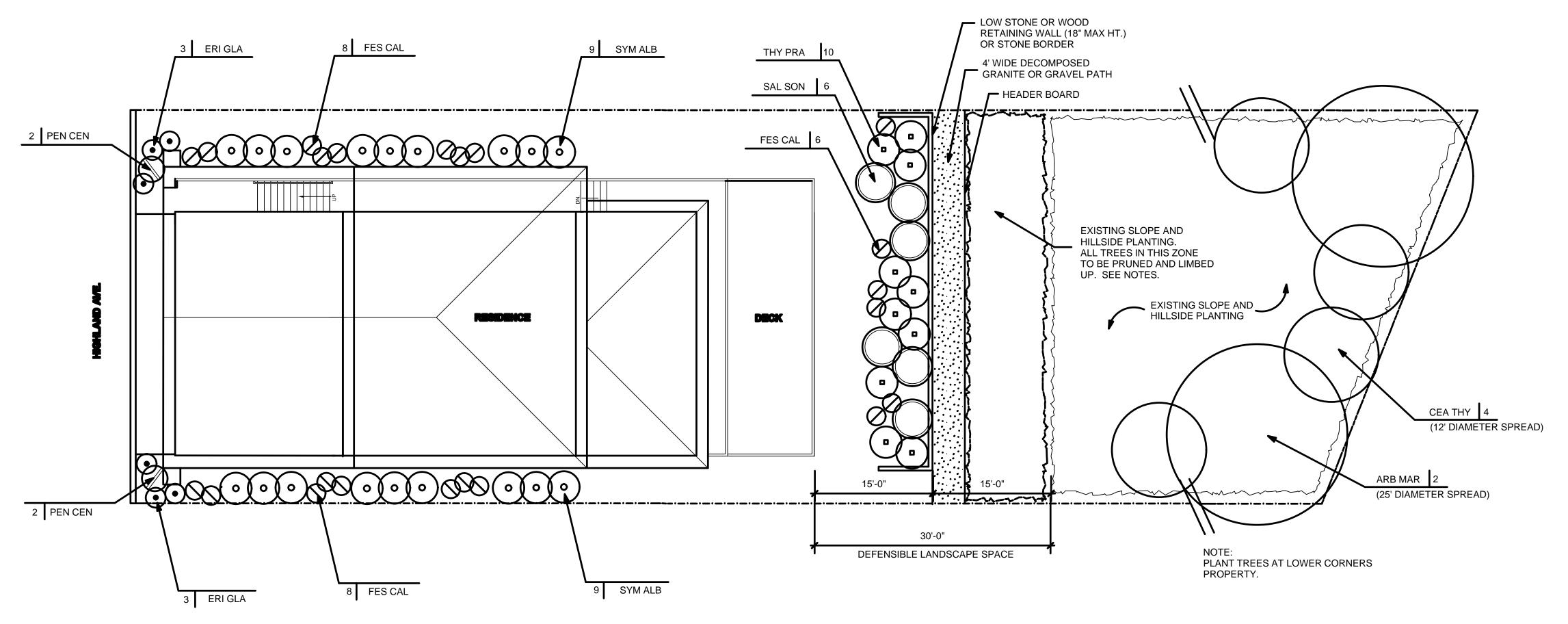


landscapærchitecture 850STANNA**SV**E#4 ALBAŅ**V**A 94706

eddie@eclastucdion www.eclastuckiom PLA4408

PLANNING REVIEW

12/21/18 SCALE: 1/8" = 1'-0"



# PLANT LIST

QTY	. CONTAINER	SPREAD	BOTANIC NAME	COMMON NAME	WUCOLS WATER FACTOR	SUNSET ZONE
<u>TRE</u> 2 4	<u>ES:</u> 24" B 24" B	25' DIA 12' DIA	ARBUTUS MARINA CEANOTHUS THYRSIFLORUS 'SNOW FLURRY'	STRAWBERRY TREE SNOW FLURRY CEANOTHUS	LOW (.2) LOW (.2)	8,9, 14-24 5,7,8,9,14-17,19-42
SHR	UBS AND PERENN	NIALS:				
6 4 6 18	1G 1 G 5 G 1 G		ERIGERON GLAUCUS PENSTEMON CENTRANTHIFOLIUS SALVIA SONOMENSIS SYMPHORICARPUS ALBUS	SEASIDE DAISY S SCARLET BUGLER CREEPING SAGE COMMON SNOWBERRY	LOW (.2) LOW (.2) LOW (.2) LOW (.2)	4-6,15-17, 22-24 7-23 7,9,14-24 1-11, 14-21
GRA	SSES AND GROU	NDCOVERS	<u>.</u>			
22 10	1 G 1 G		FESTUCA CALIFORNICA THYMUS PRAECOX	CALIFORNIA FESCUE MOTHER OF THYME	LOW (.2) LOW (.2)	4-9, 14-24 1-24

1. SEE IRRIGATION PLAN FOR LANDSCAPE AREA SQUARE FOOTAGES.

2. ALL WUCOLS PLANT FACTORS ARE UNDER 0.3 3. NO TURF IS TO BE PLANTED IN THIS PLANTING PLAN

4. TURF SHALL NOT EXCEED 25% OF LANDSCAPE AREA IN RESIDENTIAL AREAS

5. NO TURF PERMITTED IN NON-RESIDENTIAL AREAS 6. TURF NOT PERMITTED ON SLOPES GREATER THAN 25%

7. TURF IS PROHIBITED IN PARKWAYS LESS THAN 10 FEET WIDE

# PLANT NOTES:

LAYOUT IN ADVANCE ALL PLANT MATERIAL PER PLANTING PLAN. LANDSCAPE ARCHITECT TO APPROVE LOCATION OF PLANT MATERIAL PRIOR TO PLANTING. CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT A MINIMUM OF ONE WEEK IN ADVANCE OF PLANTING DATES.

AMENDMENT or APPROVED EQUAL:
"DIESTEL STRUCTURED COMPOST" 50/50 RATIO, 4 CUBIC FEET PER 1000 SF. SOURCE: LYNGSO GARDEN MATERIALS, SAN CARLOS (650)364-1730

PLANTING HOLES FOR TREES AND SHRUBS TO BE TWICE ROOTBALL WIDTH AND EQUAL TO ROOTBALL DEPTH. ALL 15G AND LARGER PLANTS TO BE PLANTED ON NATIVE SOIL, EXCEPT WHERE PLANTING IN FILL.

FOR TOP OF ROOTBALLS: PLANT ALL 1 AND 5 GALLON CANS 1/2" ABOVE THE GROUND. PLANT ALL 15 GALLONS, 2" ABOVE THE GROUND. BRING MULCH AND SOIL AMENDMENT AROUND AND OVER EXPOSED ROOT BALL. KEEP MULCH AWAY FROM BASE OF TRUNKS AND STEMS.

- FERTILIZER: FERTILIZE WITH AGRIFORM TABLETS (20-10-5). USE ONE TABLET FOR ONE GALLON, THREE TABLETS FOR FIVE GALLON, FIVE TABLETS FOR 15 GALLON, EIGHT TABLETS FOR 24" BOX, TWELVE TABLETS FOR 36" BOX PLANTS. (GLACIAL ROCK DUST MAY BE SUBSTITUTED FOR FERTILIZER TABLETS. APPLY AT SUPPLIER RECOMMENDED RATES.)
- MULCH: APPLY 1/4" FIR CHIP MULCH OVER ALL SHRUB AND GROUND COVER AREAS TO A DEPTH OF THREE INCHES. PULL BARK 2-3" AWAY FROM BASE OF ALL PLANTS.

A MINIMUM OF 3-INCH LAYER OF MULCH SHALL BE APPLIED ON ALL EXPOSED SOIL SURFACES OF PLANTING AREAS EXCEPT TURF AREAS, CREEPING OR ROOTING GROUNDCOVERS, OR DIRECT SEEDING APPLICATIONS WHERE MULCH IS CONTRAINDICATED.

- LANDSCAPE CONTRACTOR WILL REPLACE ALL DEAD PLANTS AND PLANTS NOT IN VIGOROUS CONDITION AS DIRECTED BY LANDSCAPE ARCHITECT. PLANTS USED FOR REPLACEMENT SHALL BE OF THE SAME KIND AND SIZE SPECIFIED AND PLANTED AS SPECIFIED ABOVE. ALL REPLACEMENT OF PLANTS SHALL BE DONE BEFORE FINAL ACCEPTANCE.
- PROVIDE PLANT GUARANTEE PROPOSAL WITH BID. (MINIMUM 6 MONTHS FOR PLANTS UP TO 15 GALLON, 1 YEAR FOR 24" BOX OR LARGER.
- **VEGETATION MANAGEMENT:** MAINTAIN DEFENSIBLE VEGETATIVE FUEL BREAK MIN. 30' AROUND STRUCTURE. TREES WITHIN DEFENSIBLE SPACE TO BE PRUNED TO REMOVE DEAD AND DYING PORTIONS, AND LIMBED UP 6'-10' ABOVE GROUND. NEW TREES PLANTED IN DEFENSIBLE SPACE SHALL BE LOCATED NO CLOSER THAN 10' TO ADJACENT TREES WHEN FULL GROWN OR AT MATURITY.

			Lopez	Residence				
•	ootranspiration (E	•	33.70					
	ATED TOTAL WA							
ETWU=ET0 X (	).62 X [((PF X HA		_		l			
HYDROZONE	PLANTING DESCRIPTION	PLANT FACTOR	IRRIGATION METHOD	IRRIGATION EFFICIENCY (IE)	ETAF (PF/IE)	LANDSCAPE AREA (SF)	ETAF X AREA	ETWU (GAL/YR)
Regular Landso	cape Areas							
1	SHRUBS	0.20	DRIP	0.81	0.25	60.00	14.81	309.54
2	SHRUBS	0.20	DRIP	0.81	0.25	214.00	52.84	1,104.03
3	SHRUBS	0.20	DRIP	0.81	0.25	370.00	91.36	1,908.83
4	SHRUBS	0.20	DRIP	0.81	0.25	268.00	66.17	1,382.62
5	TREES	0.20	BUBBLERS	0.81	0.25	1,434.00	354.07	7,398.02
SUBTOTAL					0.25	2,346.00	NA	12,103.04
Special Landsc	ape Areas							
					1.00		0.00	0.00
SUBTOTAL					1.00	0.00	NA	0.00
TOTALS						2,346.00		
ETWU TOTAL							ETWU	12,103.04
MAWA: MAXIM	UM ALLOWED \	WATER US	E					
MAWA = (ETO)	(0.62) [ (ETAF X	LA) + ((1-E	TAF) X SLA)]					
ET0	CONVERSION FACTOR	ETAF	ETAF X LA = D	1-ETAF X SLA = E	D+E			MAWA (GAL/YR)
33.7	0.62	0.55	1,290.30	0.00	1,290.30		MAWA	26,959.53
55.1	0.02	0.55	1,230.30	0.00	1,230.00		IVIZVVZ	20,000.00
						ETWU COMPI	LIES WIT	H MAWA
ETWU AVERAG	GE ETAF MUST	BE: RESID	ENTIAL: < .55, N	MAWA ETAF: RES	IDENTIA	L= 0.55, NON-	RESIDEN	ITIAL= 0.45
			0.4-0.6, H=0.7-1.0					
	FFICIENCY (IE):							
MAX LAWN AR	TA - 050/							

SYMBOL	COMPONENT	MANUFACTURER	MODEL	NOTES / SIZE / COLOR
[W]	WATER METER-EXISTING			VERIFY SIZE IN FIELD
VELO REQUIRI	ED WEATHER BASED CONTR	ROLLER:		
⟨ <b>c</b> ⟩	CONTROLLER	HUNTER	I-CORE IC-600-PL 6-STATION	
	WEATHER SENSOR	HUNTER	WIRELESS SOLAR SYNC, WSS-SEN	
	ED EQUIPMENT AT THE POIN		I=	
<u> </u>	GATE VALVE	NIBCO	T-113	LEAD FREE LINE SIZE
Υ	WYE STRAINER	WILKINS	SXL	1"
BF	BACKFLOW PREVENTER	FEBCO	LF825Y	1" LEAD FREE REDUCED PRESSURE ASSEMBLY
PR	PRESSURE REDUCER	WATTS	LFN	1"
SM	SUBMETER	BADGER		METER SIZE
MV	MASTER VALVE	HUNTER	ICV-101G	1"
FS	FLOW METER	CST	FSI-T10-001	1"
EE BUBBLER	SYSTEM TO INCLUDE:			
<b>∰</b>	REMOTE CONTROL VALVE	HUNTER	ICV-151G	1"
•	BUBBLER	RAINBIRD	1402	GPM: 0.5
IP SYSTEM TO	) INCLUDE:			
<b>⊕</b>	DRIP IRRIGATION CONTROL VALVE ASSEMBLY TO INCLUDE:			
	REMOTE CONTROL VALVE	HUNTER	ICV-101G	1"
	FILTER & PRESSURE REGULATOR	HUNTER	PCZ DRIP CONTROL ZONE KIT	1"
D	TRANSITION TO DRIP ZONE			
Æ	DRIP FLUSHOUT			RE
$\overline{\mathbb{H}}$	HOSE BIBB			SEE PLUMBING DRAWINGS
=====	SLEEVE		SCH 40 WITH SCH 80 SOLVENT WELD FITTINGS	SIZE: 1.5X COMBINED SIZE OF ENCLOSED PIPES
	MAINLINE			PIPE SIZE:
	LATERAL PIPE			0-12 GPM: 1" PIPE
	INLINE EMITTER TUBING	NETAFIM	TECHLINE CV, 17MM	0.4 GPH EMITTERS. EMITTER SPACING: 18 INCHES ROW SPACING: 18 INCHES
	HYDROZONE			
MBOLS FOR C	OMPONENTS ARE LARGER	THAN ACTUAL SIZE AND MA	AY BE SHOWN IN PAVED ARE	AS FOR GRAPHIC CLARITY.

### IRRIGATION DESIGN INTENT

THE DRIP IRRIGATION SYSTEM IS DESIGNED TO REDUCE WATER USE TO THE LOWEST PRACTICAL AMOUNT TO PROVIDE HEALTHY PLANT GROWTH. IT IS DESIGNED TO PREVENT RUNOFF, LOW HEAD DRAINAGE AND OVERSPRAY. SEPARATE VALVES ARE USED TO IRRIGATE EACH HYDROZONE. THE SYSTEM INCORPORATES HIGH QUALITY, HEAVY DUTY, WATER CONSERVING EQUIPMENT. BACKFLOW PROTECTION IS PROVIDED AT THE POINT OF CONNECTION. A SMART CONTROLLER PROVIDES EVAPOTRANSPIRATION SENSOR DATA FOR SCHEDULING.

### CONTROLLER

- AUTOMATIC WEATHER-BASED IRRIGATION CONTROLLER SHALL BE INSTALLED ON THE IRRIGATION SYSTEM
- IRRIGATION CONTROLLER USES EVAPOTRANSPIRATION DATA AND UTILIZES A RAIN SENSOR.
- 3. IRRIGATION CONTROLLER PROGRAMMING DATA WILL NOT BE LOST DUE TO AN INTERRUPTION IN THE PRIMARY POWER SOURCE.

### IRRIGATION NOTES

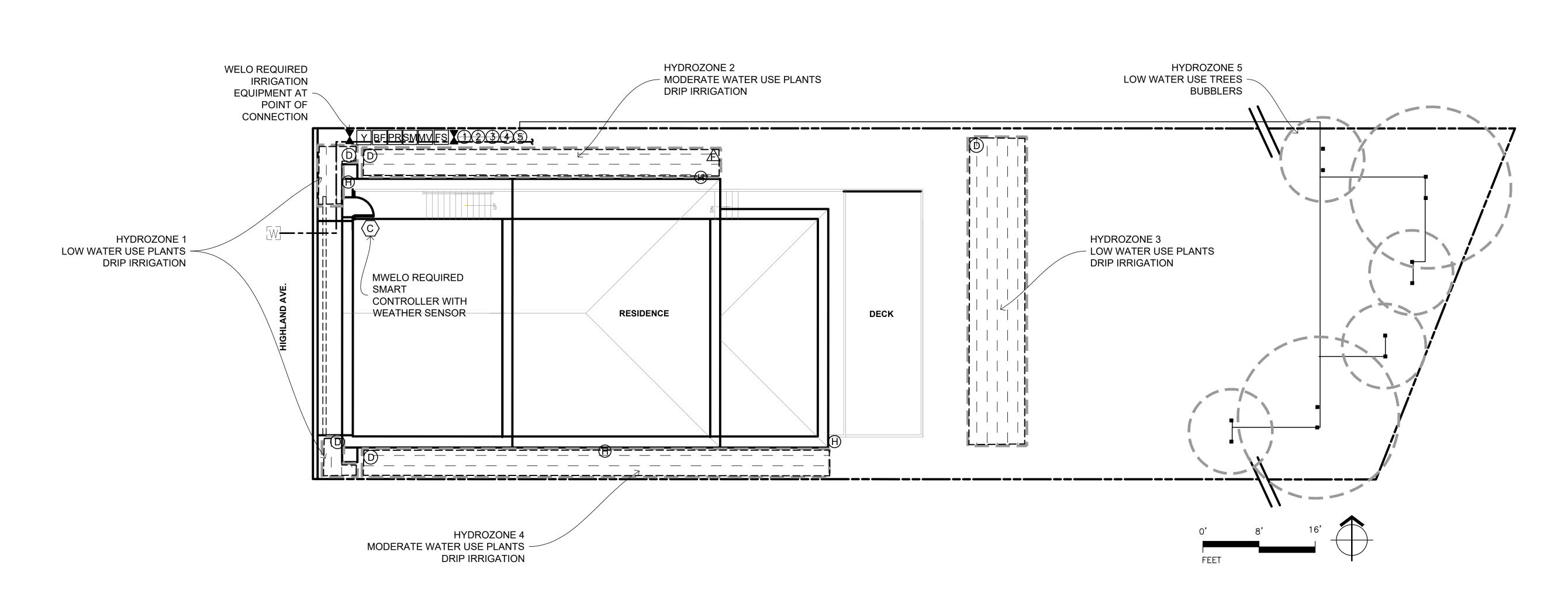
- 1. CONTRACTOR TO HAVE C-27 LICENSE
- AREAS LESS THAN 10 FEET IN ANY DIRECTION SHALL BE IRRIGATED WITH SUBSURFACE IRRIGATION OR OTHER MEANS THAT PRODUCES NO RUNOFF OR OVERSPRAY.
- 3. FOR NON-RESIDENTIAL PROJECTS WTH LANDSCAPE AREAS OF 1,000 SQ. FT. OR MORE, PRIVATE SUBMETER(S) TO MEASURE LANDSCAPE WATER USE
- SHALL BE INSTALLED.

  4. A PRIVATE LANDSCAPE SUBMETER IS INSTALLED AT NON-RESIDENTIAL LANDSCAPE AREAS OF 1,000 SQ. FT. OR MORE
- A PRESSURE REGULATOR IS INSTALLED ON THE IRRIGATION SYSTEM TO ENSURE DYNAMIC PRESSURE OF THE SYSTEM IS WITHIN THE
- MANUFACTURER'S RECOMMENDED PRESSURE RANGE

  6. A MANUAL SHUTOFF VALVE SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO
- THE POINT OF CONNECTION TO THE WATER SUPPLY
  7. FOR GRAPHIC CLARITY SYMBOLS ARE NOT TO SCALE AND PLACEMENT IS
- DIAGRAMMATIC
- 8. ALL EQUIPMENT TO BE FIELD LOCATED BY OWNER
- 9. CONTRACTOR TO FIELD VERIFY PSI AT POC
- 10. CONTRACTOR TO FIELD VERIFY ALL EQUIPMENT11. CONTRACTOR TO ENSURE THAT THE SYSTEM IS FULLY FUNCTIONAL AND
- HYDRAULICALLY SOUND

  12. AT THE TIME OF FINAL INSPECTION THE PERMIT APPLICANT MUST PROVIDE THE OWNER OF THE PROPERTY WITH A CERTIFICATE OF COMPLETION, CERTIFICATE OF INSTALLATION, IRRIGATION SCHEDULE OF LANDSCAPE AND
- IRRIGATION MAINTENANCE

  13. UNLESS CONTRAINDICATED BY A SOILS TEST, COMPOST AT A RATE OF A MINIMUM OF FOUR CUBIC YARDS PER 1,000 SQ. FT. OF PERMEABLE AREA SHALL BE INCORPORATED TO A DEPTH OF SIX INCHES INTO THE SOIL



NOT FOR CONSTRUCTION

AND DATE:

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SIDI

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IRRIGATION PLAN

FOR PLANNING REVIEW

12/21/18

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

DRAWN:

L2