

# FIRE PROTECTION

THIS PROJECT SHALL MEET CRC 2019 SECTION R337 AS APPLICABLE

- SECTION R337.1 SCOPE, PURPOSE AND APPLICATION
- 1 R337.1.1 Scope. This chapter applies to building materials, systems and or assemblies used in the exterior design and construction of new buildings located within a Wildland-Urban Interface Fire Area as defined in Section R337.2.
  - 2 R337.1.5 Vegetation management compliance. Prior to building permit final approval, the property shall be in compliance with the vegetation management requirements prescribed in California Fire Code section 4906, including California Public Resources Code 4291 or California Government Code Section 51182. Acceptable methods of compliance inspection and documentation shall be determined by the enforcing agency and may include any of the following:
    1. Local, state or federal fire authority or designee authorized to enforce vegetation management requirements
    2. Enforcing agency
    3. Third-party inspection and certification authorized to enforce vegetation management requirements
    4. Property owner certification authorized by the enforcing agency
  - 3 R337.5.3 Roof valleys. Where valley flashing is installed, the flashing shall be not less than 0.019-inch (0.48 mm) No. 26 gage galvanized sheet corrosion-resistant metal installed over not less than one layer of minimum 72-pound (32.4 kg) mineral-surfaced nonperforated cap sheet complying with ASTM D 3909, at least 36-inch-wide (914 mm) running the full length of the valley.
  - 4 R337.5.4 Roof gutters. Roof gutters shall be provided with the means to prevent the accumulation of leaves and debris in the gutter.
  - 5 R337.6.1 General. Where provided, ventilation openings for enclosed attics, enclosed eave soffit spaces, enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters, and underfloor ventilation shall be in accordance with Section 1203 of the California Building Code and Sections R337.6.1 through R337.6.3 of this section to resist building ignition from the intrusion of burning embers and flame through the ventilation openings.
  - 6 R337.6.3 Ventilation openings on the underside of eaves and cornices: Vents shall not be installed on the underside of eaves and cornices.
 

Exceptions:

    1. The enforcing agency may accept or approve special eave and cornice vents that resist the intrusion of flame and burning embers.
    2. Vents complying with the requirements of Section R337.6.2 may be installed on the underside of eaves and cornices in accordance with either one of the following conditions:
      - 2.1. The attic space being ventilated is fully protected by an automatic sprinkler system installed in accordance with Section 903.3.1.1 of the California Building Code
  - 7 R337.7.3 Exterior walls. The exterior wall covering or wall assembly shall comply with one of the following requirements:
    1. Noncombustible material
    2. Ignition-resistant material
    3. Wall assemblies that meet the performance criteria in accordance with the test procedures for a 10-minute direct flame contact exposure test set forth in SFM Standard 12-7A-1

Exceptions: Any of the following shall be deemed to meet the assembly performance criteria and intent of this section:

    1. One layer of 5/8-inch Type X gypsum sheathing applied behind the exterior covering or cladding on the exterior side of the framing.
    2. The exterior portion of a 1-hour fire resistive exterior wall assembly designed for exterior fire exposure including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.
  - 8 R337.7.4 Open roof eaves. The exposed roof deck on the underside of unenclosed roof eaves shall consist of one of the following:
    1. Noncombustible material
    2. Ignition-resistant material
    3. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside exterior of the roof deck
    4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the roof deck designed for exterior fire exposure including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual

Exceptions: The following materials do not require protection:

    1. Solid wood rafter tails on the exposed underside of open roof eaves having a minimum nominal dimension of 2 inch (50.8 mm)
    2. Solid wood blocking installed between rafter tails on the exposed underside of open roof eaves having a minimum nominal dimension of 2 inch (50.8 mm)
    3. Gable end overhangs and roof assembly projections beyond an exterior wall other than at the lower end of the rafter tails
    4. Fascia and other architectural trim boards
  - 9 R337.7.5 Enclosed roof eaves and roof eave soffits. The exposed underside of enclosed roof eaves having either a boxed-in roof eave soffit with a horizontal underside, or sloping rafter tails with an exterior covering applied to the underside of the rafter tails, shall be protected by one of the following:
    1. Noncombustible material
    2. Ignition-resistant material
    3. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the rafter tails or soffit
    4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the rafter tails or soffit including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual
    5. Boxed-in roof eave soffit assemblies with a horizontal underside that meet the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3

Exceptions: The following materials do not require protection:

    1. Gable end overhangs and roof assembly projections beyond an exterior wall other than at the lower end of the rafter tails
    2. Fascia and other architectural trim boards
  - 10 R337.7.6 Exterior porch ceilings. The exposed underside of exterior porch ceilings shall be protected by one of the following:
    1. Noncombustible material
    2. Ignition-resistant material
    3. One layer of 5/8-inch Type X gypsum sheathing applied behind the exterior covering on the underside of the ceiling
    4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the ceiling assembly including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual
    5. Porch ceiling assemblies with a horizontal underside that meet the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3

Exception: Architectural trim boards.
  - 11 R337.7.7 Floor projections. The exposed underside of a cantilevered floor projection where a floor assembly extends over an exterior wall shall be protected by one of the following:
    1. Noncombustible material
    2. Ignition-resistant material
    3. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection
    4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the floor projection including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual
    5. The underside of a floor projection assembly that meet the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3

Exception: Architectural trim boards.
  - 12 R337.7.8 Underfloor protection. The underfloor area of elevated or overhanging buildings shall be enclosed to grade in accordance with the requirements of this chapter or the underside of the exposed underfloor shall consist of one of the following:
    1. Noncombustible material
    2. Ignition-resistant material
    3. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection
    4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the floor including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual
    5. The underside of a floor assembly that meets the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3

Exception: Heavy-timber structural columns and beams do not require protection.
  - 13 R337.7.9 Underside of appendages. When required by the enforcing agency the underside of overhanging appendages shall be enclosed to grade in accordance with the requirements of this chapter or the underside of the exposed underfloor shall consist of one of the following:
    1. Noncombustible material
    2. Ignition-resistant material
    3. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection
    4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the floor including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual
    5. The underside of a floor assembly that meets the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3

Exception: Heavy-timber structural columns and beams do not require protection.
  - 14 R337.8.2.1 Exterior windows and exterior glazed door assembly requirements. Exterior windows and exterior glazed door assemblies shall comply with one of the following requirements:
    1. Be constructed of multiple glazing with a minimum of one tempered pane meeting the requirements of Section 2406 Safety Glazing, or
    2. Be constructed of glass block units, or
    3. Have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 257, or
    5. Be tested to meet the performance requirements of SFM Standard 12-7A-2.
  - 15 R337.8.3 Exterior doors. Exterior doors shall comply with one of the following:
    1. The exterior surface or cladding shall be of noncombustible or ignition-resistant material, or
    2. Shall be constructed of solid core wood that comply with the following requirements:
      - 2.1. Stiles and rails shall not be less than 13/8 inches thick
      - 2.2. Raised panels shall not be less than 11/4 inches thick, except for the exterior perimeter of the raised panel that may taper to a tongue not less than 3/8 inch thick.
      3. Shall have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 252.
      4. Shall be tested to meet the performance requirements of SFM Standard 12-7A-1.
  - 16 R337.9.2 The walking surface material of decks, porches, balconies and stairs shall comply with the requirements of this section when any portion of such surface is within 10 feet (3048 mm) of the building.
  - 17 R337.9.3 Decking surfaces. The walking surface material of decks, porches, balconies and stairs shall be constructed with one of the following materials:
    1. Ignition-resistant material that complies with the performance requirements of both SFM Standard 12-7A-4 and SFM Standard 12-7A-5
    2. Exterior fire retardant treated wood
    3. Noncombustible material
    4. Any material that complies with the performance requirements of SFM Standard 12-7A-4A when attached exterior wall covering is also either noncombustible or ignition-resistant material

Exception: Wall material may be of any material that otherwise complies with this chapter when the decking surface material complies with the performance requirements ASTM E 84 with a Class B flame spread rating.

# FIRE PROTECTION

THIS PROJECT SHALL MEET CRC 2022 SECTION R337 AS APPLICABLE

## SPECIAL INSPECTIONS

## DEF. SUBMITTALS

UNDER THE PROVISION OF 2022 CBC SECT. 107.3.4.2 OF THE CBC, THE FOLLOWING SUBMITTALS ARE DEFERRED:

NONE

# AREAS

<b>REAR LS CONC WALLS (RETAINING)</b>			
3' HIGH LOWER LS WALL:	150	LIN	FT
3' HIGH UPPER LS WALL:	160	LIN	FT
<b>RET WALL TOTAL:</b>	<b>310</b>	<b>LIN</b>	<b>FT</b>

<b>SOUTH LS FRAMED WALL (NOT RETAINING)</b>			
4' HIGH LS WALL:	88±	LIN	FT

<b>TERRACES</b>			
REAR UPPER TERRACE:	2230	SQ	FT
REAR LOWER TERRACES:	2994	SQ	FT
<b>RET WALL TOTAL:</b>	<b>5224</b>	<b>SQ</b>	<b>FT</b>

## CODES

THESE DESIGN DOCUMENTS HAVE BEEN PREPARED UNDER THE FOLLOWING 2022 CODES AND ORDINANCES:

CALIF BUILDING CODE  
 CALIF ELEC CODE  
 CALIF PLUMB CODE  
 CALIF MECH CODE  
 GREEN BUILDING CODE  
 CALIF RESIDENTIAL CODE  
 CALIF ENERGY CODE  
 APPLICABLE JURISDICTIONAL ORDINANCES

## BUILDING CODE DATA

EXIST OCCUPANCY GROUP:	R-3/U
EXIST DESCRIPTION OF USE:	SF HOME / ATT GARAGE
EXIST TYPE OF CONSTRUCTION:	V-B
EXIST SPRINKLERS:	YES
APN:	173-300-003

## PROPERTY

PROJECT ADDRESS:	3605 KELSEY KNOLLS DR
LOT SIZE:	3.95 ACRES
SUBDIVISION:	NIELSEN RANCH
LOT NO:	70
FIRE ZONE:	YES
FIRE DISTRICT:	5
LATITUDE:	38.477712
LONGITUDE:	-122.712289
ZONING CODE:	PD 96-002-RC
GENERAL PLAN:	VERY LOW RESIDENTIAL
PLANNED DEVELOPMENT:	PD 96-002-RC

# CONSULTANTS

## GEOTECH. ENG.

RGH CONSULTANTS  
 1305 NORTH DUTTON AVE  
 SANTA ROSA, CA 95403  
 (707) 544-1072

SOILS REPORT  
 JOB NO: 3943.02.04.1  
 DATE: AUG 22,2022

## SURVEYOR

ADOBE ASSOC, INC  
 1220 N. DUTTON AVE  
 SANTA ROSA, CA 95401  
 PHONE 541-2300  
 JOB NO: 22129

## PROJECT DESCRIPTION

THE FOLLOWING EXTERNAL SITE IMPROVEMENTS ARE PROPOSED FOR THE EXISTING HOME ON THE SITE:

### REAR YARD:

- o DEVELOP HIGH & LOW ENTERTAINING TERRACES
- o INSTALL UPPER & LOWER LS CONC RET'G WALLS AS REQ'D FOR TERRACES
- o REMOVE EXIST WOOD STAIRS TO UPPER FLOOR AND REMOVE WOOD LANDING
- o LANDSCAPE HILLSIDE SLOPES ADJACENT TO NEW TERRACES

# SHEET INDEX

## TITLE SHEETS

T GENERAL PROJECT INFORMATION

## ARCHITECTURAL

- A1 PLOT PLAN, VICINITY MAP
- A1.1 SITE PLAN
- A2 EXTERIOR ELEVATION FLOOR PLAN
- A3 ELEC PLANS ELEC NOTES & SYMBOLS
- A4 SECTION

## CIVIL

- C1 OVERALL SITE
- C2 GRADING PLAN
- C3 SLOPE ANALYSIS
- C4 NEIGHBORHOOD CONTEXT

## STRUCTURAL

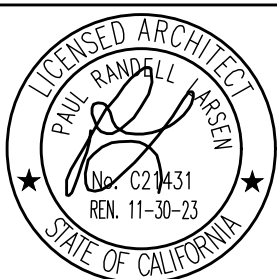
## REFERENCE

GEOTECHNICAL INVESTIGATION SOILS REPORT

REVISIONS	BY

RIK KADELLO DESIGNER  
 PAUL LARSEN ARCHITECT

IMPROVEMENTS OF EXISTING REAR YARD TERRACES FOR  
**VALERIE HALL HAWKINS**  
 3605 KELSEY KNOLLS DR, SANTA ROSA, CA AP 173-300-003

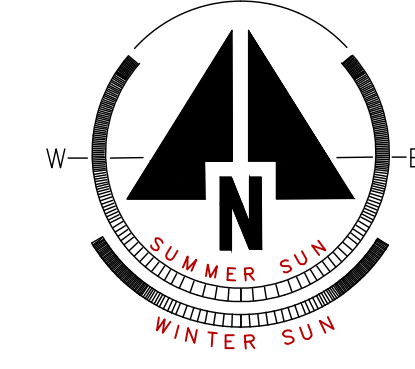
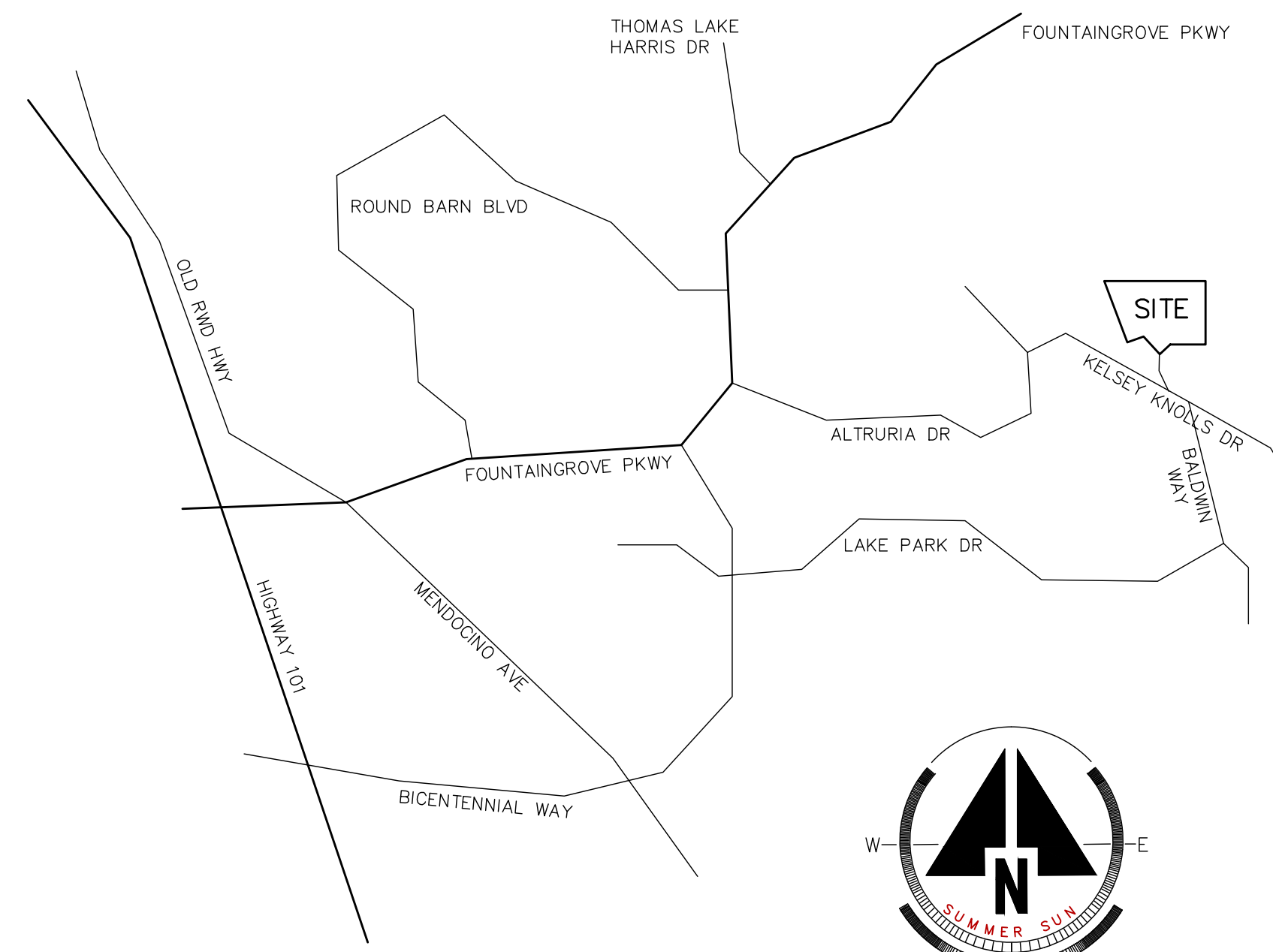


**KADELLO & LARSEN**  
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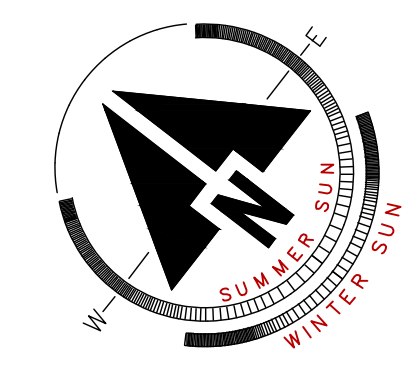
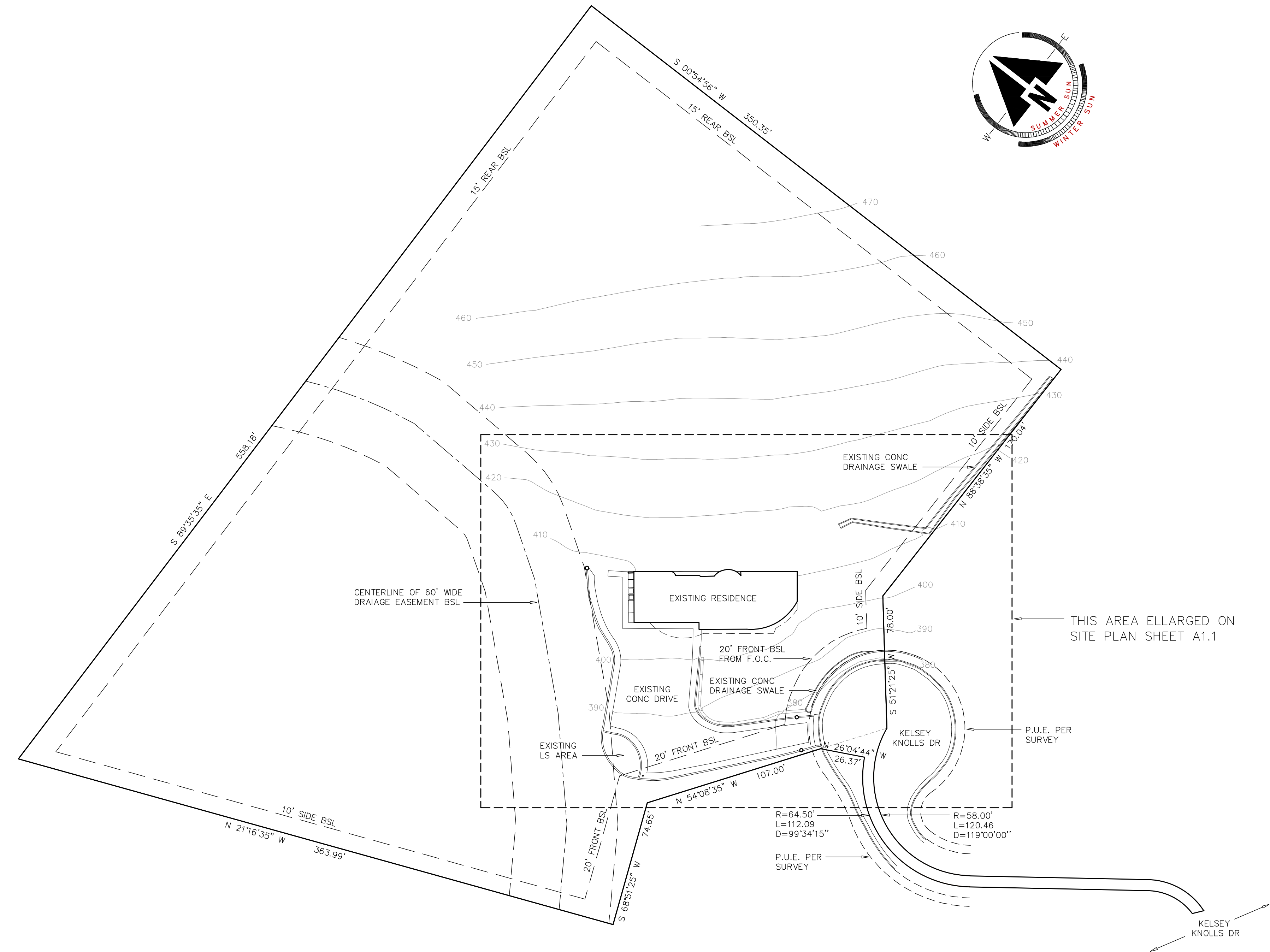
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**PRELIMINARY**  
 NOT FOR CONSTRUCTION



**VICINITY MAP**  
NOT TO SCALE



NOTE: THIS PLAN SHOWS EXISTING CONDITIONS ONLY. SEE SITE PLAN ON SHEET A1.1 FOR IMPROVEMENTS.

**PLOT PLAN**

**PRELIMINARY**  
NOT FOR CONSTRUCTION

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RICK KADELLO      DESIGNER  
 PAUL LARSEN      ARCHITECT

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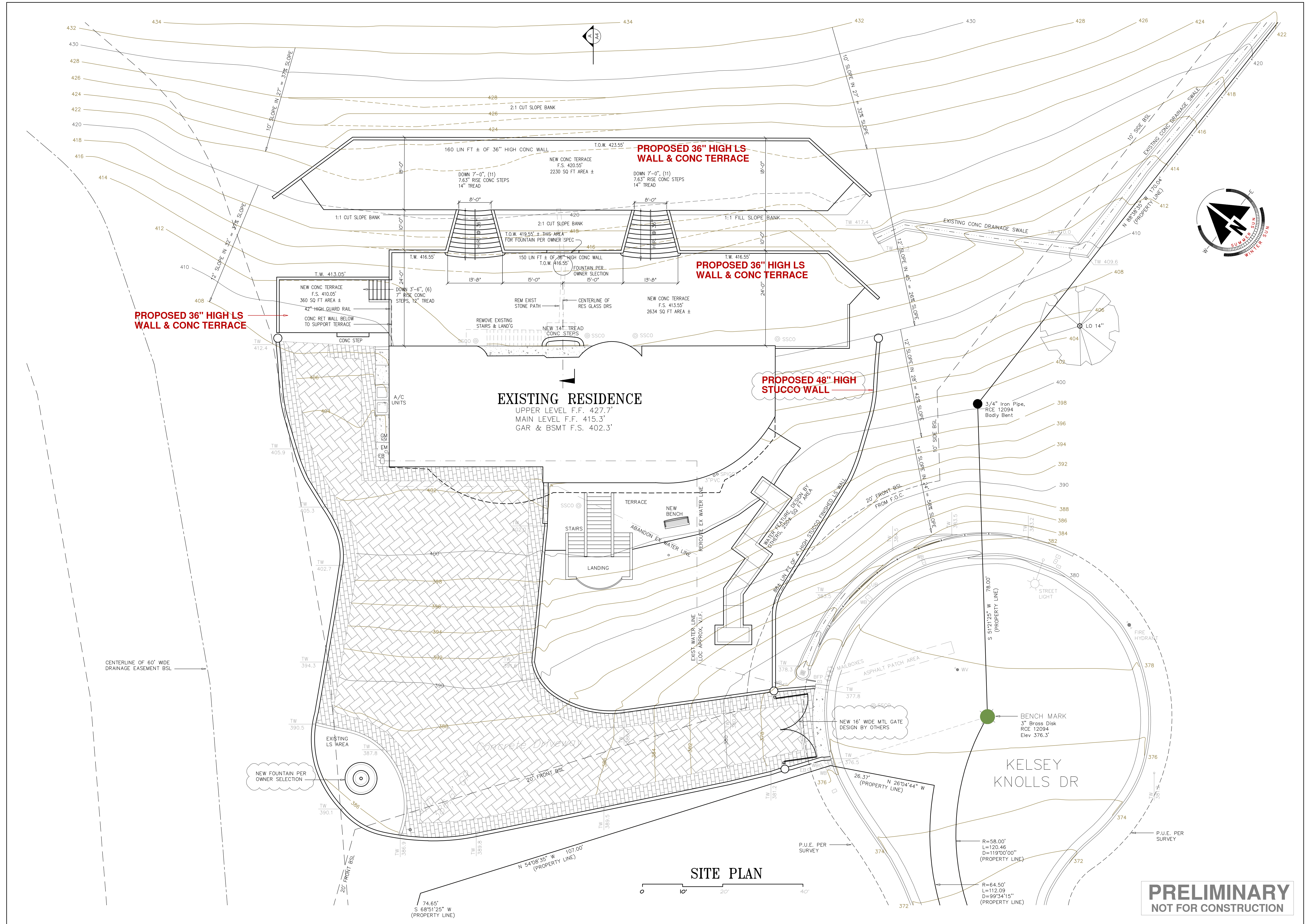
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BY	RSK
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DATE	7-11-23

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**SITE PLAN**

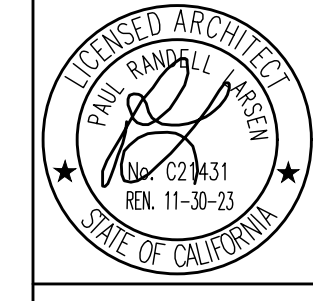
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REVISIONS	BY

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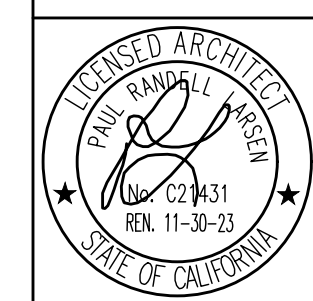
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JOB 2306

REVISIONS	BY

DESIGNER: RICK KADELLO  
 PAUL LARSEN  
 DESIGNER: ARCHITECT

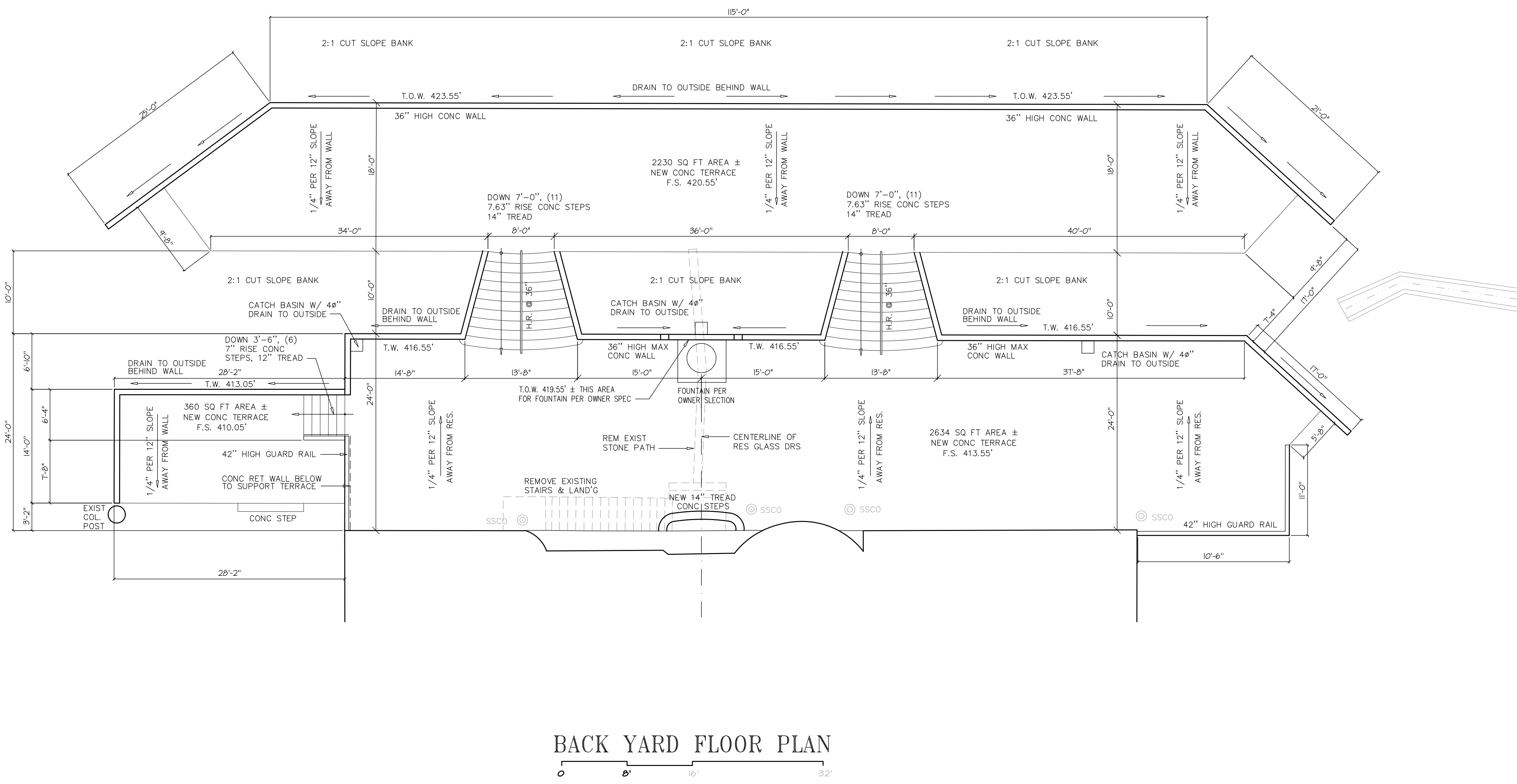
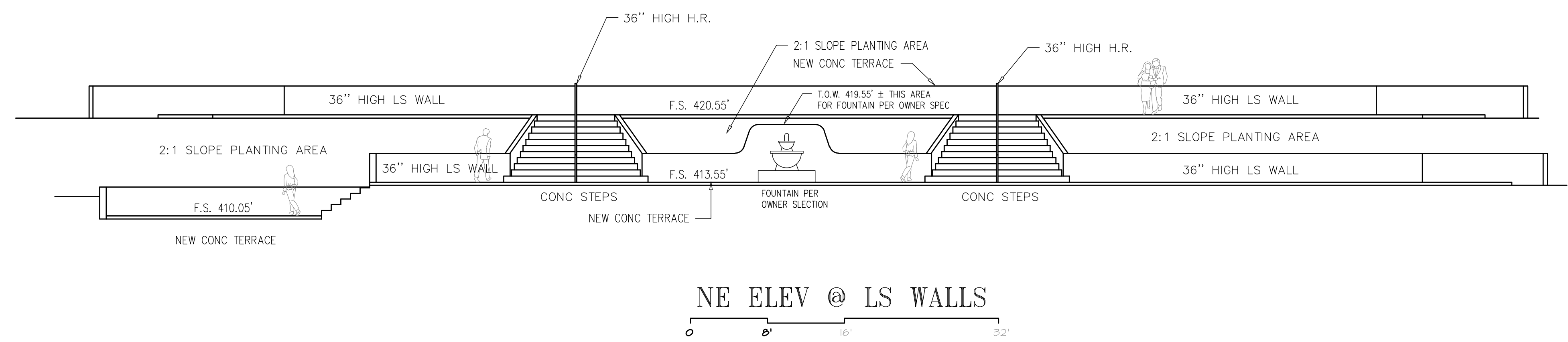
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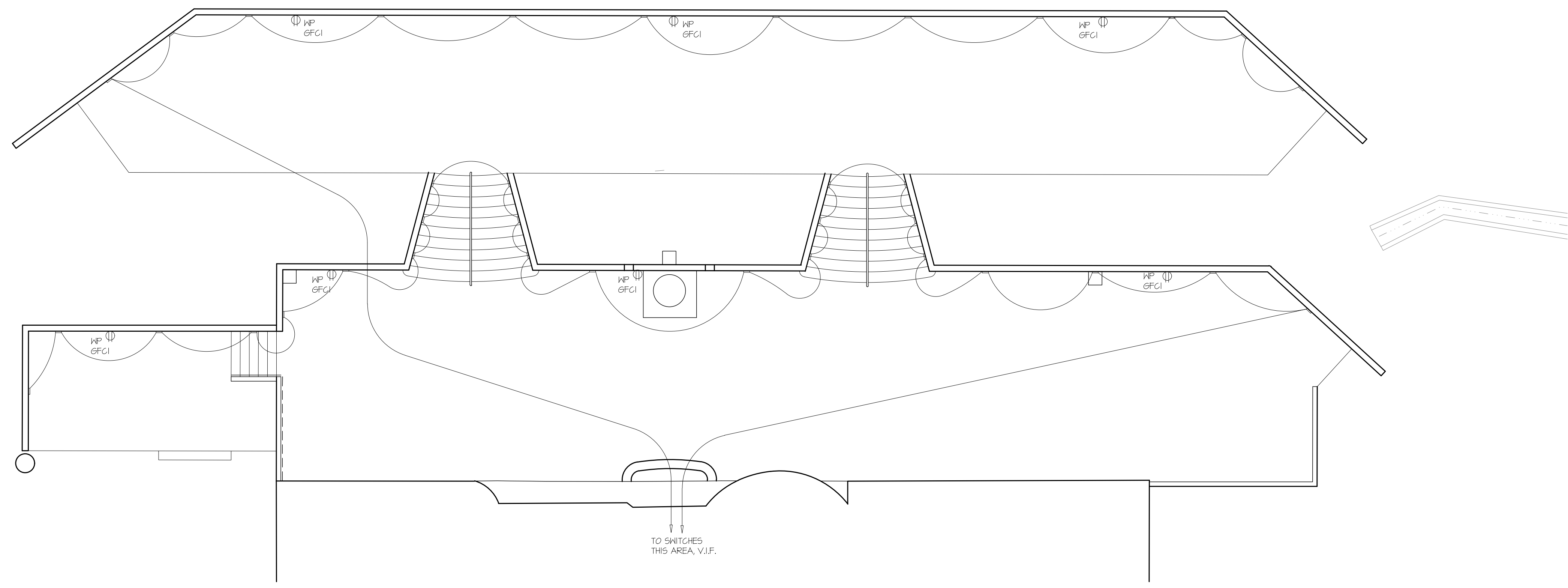
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 CHK:  
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BACK YARD ELEC PLAN

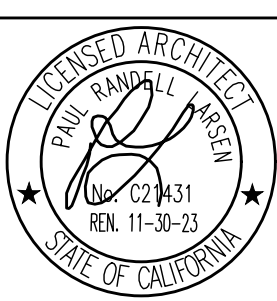


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DESIGNER  
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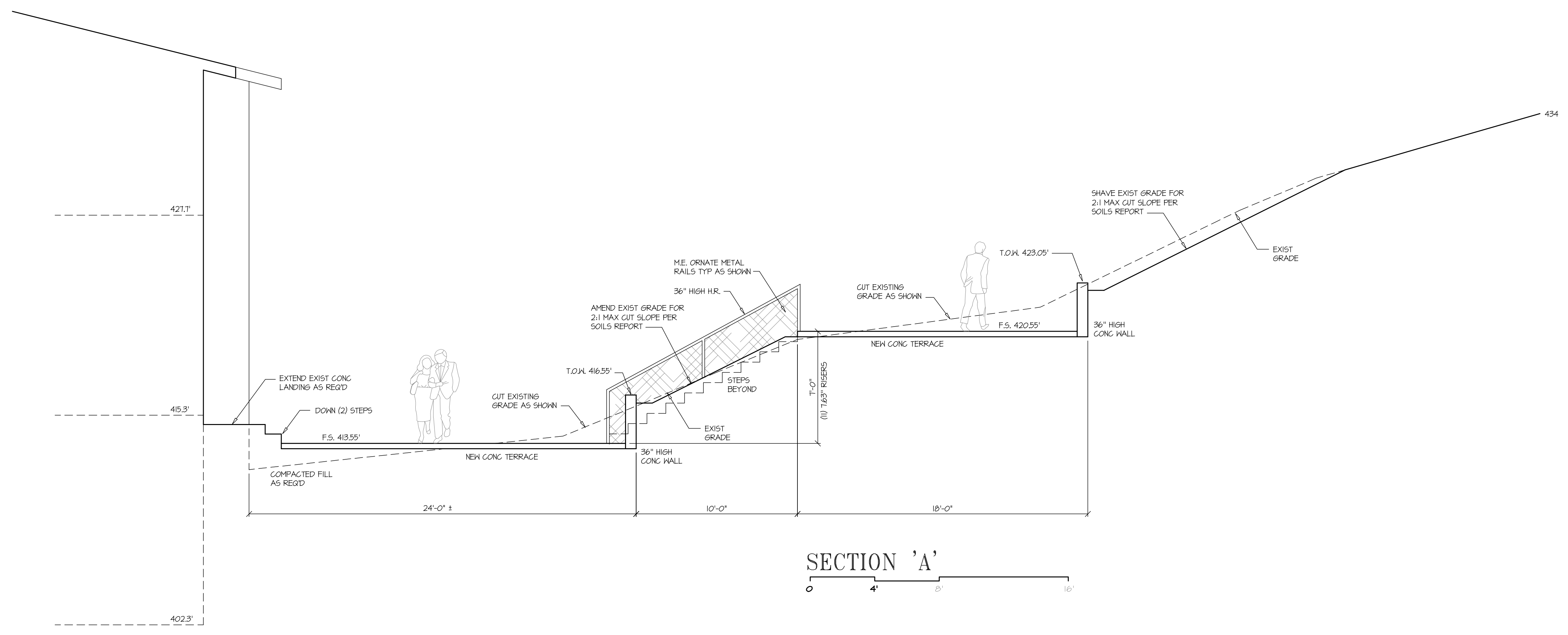
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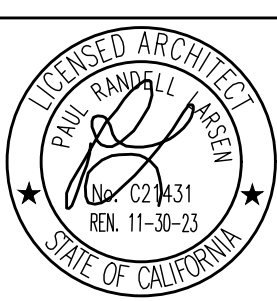
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