



**CITY OF SOUTH PASADENA
PLANNING COMMISSION**

**AGENDA
REGULAR MEETING
TUESDAY, MARCH 12, 2024 AT 6:30 P.M.**

**AMEDEE O. "DICK" RICHARDS JR. COUNCIL CHAMBERS
1424 MISSION STREET, SOUTH PASADENA, CA 91030**

South Pasadena Planning Commission Statement of Civility

As your appointed governing board we will treat each other, members of the public, and city employees with patience, civility and courtesy as a model of the same behavior we wish to reflect in South Pasadena for the conduct of all city business and community participation. The decisions made tonight will be for the benefit of the South Pasadena community and not for personal gain.

NOTICE ON PUBLIC PARTICIPATION & ACCESSIBILITY

The South Pasadena Planning Commission Meeting will be conducted in-person from the Amedee O. "Dick" Richards, Jr. Council Chambers, located at 1424 Mission Street, South Pasadena, CA 91030.

The Meeting will be available:

- In Person – Council Chambers, 1424 Mission Street, South Pasadena
- Via Zoom: <https://us02web.zoom.us/j/83530439651> **Meeting ID: 8353 043 9651**

To maximize public safety while still maintaining transparency and public access, members of the public can observe the meeting via Zoom in the following methods below.

- Go to the Zoom website, <https://Zoom.us/join> and enter the Zoom meeting information; or
- Click on the following unique Zoom meeting link:
<https://us02web.zoom.us/j/83530439651>

- CALL TO ORDER:** Chair Lisa Padilla
- ROLL CALL:** Chair Lisa Padilla
Vice-Chair Amitabh Barthakur
Commissioner Jason Claypool
Commissioner Laura Dahl
Commissioner Mark Gallatin
- COUNCIL LIAISON:** Mayor Pro Tem Jack Donovan

APPROVAL OF AGENDA
Majority vote of the Commission to proceed with Commission business.

DISCLOSURE OF SITE VISITS AND EX-PARTE CONTACTS
Disclosure by Commissioners of site visits and ex-parte contact for items on the agenda.

PUBLIC COMMENT GUIDELINES (Public Comments are limited to 3 minutes)

The Planning Commission welcomes public input. If you would like to comment on an agenda item, members of the public may participate by one of the following options:

Option 1:
Participate in-person at the Council Chambers, 1424 Mission Street, South Pasadena.

Option 2:
Participants will be able to “raise their hand” using the Zoom icon during the meeting, and they will have their microphone un-muted during comment portions of the agenda to speak for up to 3 minutes per item.

Option 3:
Email public comment(s) to PlanningComments@southpasadenaca.gov. Public Comments received in writing will not be read aloud at the meeting, but will be part of the meeting record. Written public comments will be uploaded online for public viewing under Additional Documents. There is no word limit on emailed Public Comment(s). Please make sure to indicate:

- 1) Name (optional), and
- 2) Agenda item you are submitting public comment on, and
- 3) Submit by no later than 12:00 p.m., on the day of the Planning Commission meeting.

NOTE: Pursuant to State law, the Planning Commission may not discuss or take action on issues not on the meeting agenda, except that members of the Planning Commission or staff may briefly respond to statements made or questions posed by persons exercising public testimony rights (Government Code Section 54954.2). Staff may be asked to follow up on such items.

PUBLIC COMMENT

1. Public Comment – General (Non-Agenda Items)

CONSENT CALENDAR ITEM

2. Minutes from the Regular Meeting of February 13, 2024

PUBLIC HEARING – CONTINUED ITEM

3. Project No. 2500-HDP/DRX/VAR/PM/TRE – The proposed project is for a Hillside Development Permit (HDP) and Design Review Permit (DRX) for the construction of a new 3,214-square-foot, two-story, single-family dwelling along with a Parcel Merger (PM) application of the two existing lots within the Southwest Monterey Hills area, located at 4931 Harriman Avenue (APN: 5312-016-016 & 5312-016-017). The project includes two Variance (VAR) requests: 1) for a side yard setback of five feet in lieu of required seven feet and six inches, and 2) for an attached garage in front of the main structure. The project includes a Tree Removal Permit (TRE) for the removal four (4) trees. In accordance with the California Environmental Quality Act (CEQA), this project qualifies for a Categorical Exemption under Section 15303, Class 3 (New Construction or Conversion of Small Structures).

Recommendation:

Staff recommends that the Planning Commission continue this item to the April 9, 2024 Planning Commission meeting.

DISCUSSION

4. Proposed Inclusionary Housing Ordinance In-lieu Fee

Recommendation

Staff recommends that the Planning Commission review the analysis prepared by the City’s consultant and recommend that the City Council adopt a fee resolution.

PUBLIC HEARING

- 5. **Project No. 2461-HDP/DRX/VAR** – A request for a Hillside Development Permit (HDP) and Design Review Permit (DRX) for a 234-square-foot first-story addition and a 605-square-foot second-story addition, to an existing 1,990-square-foot single-family dwelling located at 2089 Hanscom Drive (APN: 5308-022-010). The project includes a raised deck, a one-car garage, and a carport. The request also includes a Variance (VAR) for a fence, located within the front yard setback, exceeding three (3) feet in height. In accordance with the California Environmental Quality Act (CEQA), this project qualifies for a Categorical Exemption under Section 15301, Class 1 (Existing Facilities).

Recommendation:

Staff recommends that the Planning Commission adopt a Resolution taking the following actions:

- 1. Finding the project exempt from California Environmental Quality Act (CEQA) analysis based on State CEQA Guidelines Section 15301 (Class 1).
- 2. Approve Project No. 2461-HDP/DRX/VAR, subject to the recommended conditions of approval.

ADMINISTRATION

- 6. **Comments from City Council Liaison**
- 7. **Comments from Planning Commissioners**
- 8. **Comments from Staff**

ADJOURNMENT

- 9. **Adjourn to the Regular Planning Commission meeting scheduled for April 9, 2024.**

PUBLIC ACCESS TO AGENDA DOCUMENTS AND BROADCASTING OF MEETINGS

Planning Commission meeting agenda packets are available online at the City website: <https://www.southpasadenaca.gov/government/boards-commissions/planning-commission/test-planning-commission-agendas-minutes-copy>

AGENDA NOTIFICATION SUBSCRIPTION

Individuals can be placed on an email notification list to receive forthcoming agendas by emailing CityClerk@southpasadenaca.gov or calling the City Clerk's Division at (626) 403-7230.

ACCOMMODATIONS



The City of South Pasadena wishes to make all of its public meetings accessible to the public. If special assistance is needed to participate in this meeting, please contact the City Clerk's Division at (626) 403-7230. Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities. Notification at least 48 hours prior to the meeting will assist staff in assuring that reasonable arrangements can be made to provide accessibility to the meeting (28 CFR 35.102-35.104 ADA Title II).

I declare under penalty of perjury that I posted this notice of agenda on the bulletin board in the courtyard of City Hall at 1414 Mission Street, South Pasadena, CA 91030, and on the City's website as required by law.

3/7/2024
Date

Robert (Dean) Flores, Senior Planner



**CITY OF SOUTH PASADENA
Planning Commission
Meeting Minutes
Tuesday, February 13, 2024, 6:30 PM
Amedee O. "Dick" Richards Jr. Council Chambers
1424 Mission Street, South Pasadena, CA 91030**

CALL TO ORDER:

A Regular Meeting of the South Pasadena Planning Commission was called to order by Chair Dahl on Tuesday, February 13, 2024 at 6:30 p.m. The meeting was held at 1424 Mission Street, South Pasadena, California.

ROLL CALL:

Present: Chair: Laura Dahl
Vice-Chair: Lisa Padilla
Commissioners: Jason Claypool, Mark Gallatin
Amitabh Barthakur (arrived during Item 14)

City Staff

Present: David Snow, Assistant City Attorney
Angelica Frausto-Lupo, Community Development Director
Alison Becker, Deputy Community Development Director
Matt Chang, Planning Manager
Dean Flores, Senior Planner
Braulio Madrid, Associate Planner
Lillian Estrada, Administrative Secretary

APPROVAL OF AGENDA:

Chair Dahl proposed reordering Agenda Items 13 and 14.

Approved, 4-0.

DISCLOSURE OF SITE VISITS AND EX-PARTE CONTACTS:

Commissioner Claypool and Vice-Chair Padilla visited the site for Item 14.

Commissioner Gallatin spoke with a resident regarding Item 14, met with a realtor who represents or is part of the ownership group of the project site, and visited the site in Item 14.

PUBLIC COMMENT:

1. Public Comment – General (Non-Agenda Items)

None.

BUSINESS ITEMS:

2. Introduction of Commissioners

Chair Dahl welcomed two new Commissioners, Commissioner Claypool and Commissioner Gallatin, who each shared a brief autobiography.

3. Planning Commission Reorganization

Recommendation:

Select Chair, Vice-Chair and Secretary.

Item to be revisited upon the arrival of Commissioner Barthakur.

CONSENT CALENDAR ITEMS:

Items to be revisited upon the arrival of Commissioner Barthakur.

PUBLIC HEARING – CONTINUED ITEM:

- 4. Project No. 2500-HDP/DRX/VAR/PM/TRE** – The proposed project is for a Hillside Development Permit (HDP) and Design Review Permit (DRX) for the construction of a new 3,214 square-foot, two-story, single-family dwelling along with a Parcel Merger (PM) application of the two existing lots within the Southwest Monterey Hills area, located at 4931 Harriman Avenue (APN: 5312-016-016 & 5312-016-017). The project includes two Variance (VAR) requests: 1) for a side yard setback of five feet in lieu of required seven feet and six inches, and 2) for an attached garage in front of the main structure. The project includes a Tree Removal Permit (TRE) for the removal of four (4) trees. In accordance with the California Environmental Quality Act (CEQA), this project qualifies for a Categorical Exemption under Section 15303, Class 3 (New Construction or Conversion of Small Structures).

Recommendation:

Staff recommends that the Planning Commission continue this item to the March 12, 2024 Planning Commission meeting.

Decision:

Commissioner Gallatin moved, seconded by Vice-Chair Padilla, to continue this item to the regularly scheduled Planning Commission meeting on March 12, 2024.

The Commissioners voted by voice vote.

Motion carried, 4-0.

PUBLIC HEARING:

14. Project No. 2579-CUP – A request for a Conditional Use Permit (CUP) for live entertainment for a concert venue, on-site sale and consumption of alcoholic beverages (Type 90 ABC license), and extended hours of operation at the east wing of the former school district building located at 1020 El Centro Street (APN: 5315-008-047). In accordance with the California Environmental Quality Act (CEQA), this project qualifies for a Categorical Exemption under Section 15301, Class 1 and Section 15331, Class 31.

Recommendation:

Staff recommends that the Planning Commission adopt a Resolution taking the following actions:

1. Finding the project exempt from California Environmental Quality Act (CEQA) analysis based on State CEQA Guidelines Section 15301 (Class 1) and Section 15331 (Class 31).
2. Approve Project No. 2579-CUP, subject to the recommended Conditions of Approval.

Chair Dahl recused herself from this item due to a conflict of interest because she owns property within 500 feet of the property and left the Chamber.

Vice-Chair Padilla presided over the meeting as Chair.

Staff Presentation:

Associate Planner Madrid provided a PowerPoint presentation.

Commissioner Barthakur joined the meeting.

Questions for Staff:

The Commissioners asked several questions, including, but not limited to, any proposed patio enclosure, proposed exterior signage location, potential noise impact, any re-review of approved CUPs, parking requirements, proposed hours of operation, potential number of patrons at an event, any outdoor box office area, ADA requirements, and level of indoor/outdoor activities during the event.

Applicant's Presentation:

Applicant Brandon Gonzalez introduced himself and his business partner Kyle Wilkerson, co-owners of *Sid The Cat Presents*, and gave a PowerPoint presentation. Project Architect Mark Gangi was also available to answer any questions.

Questions for Applicant:

The Commissioners asked several questions, including, but not limited to, regarding the ABC Type 90 license, any sound attenuation issues, projected attendance for weekend events versus weekday events, the general scale of the events, performances held at the Masonic Lodge over the last five (5) years, entrance and exit points, concerns for the adjacent residential uses, ADA accessibility, the torchieres on the entrance on Fairview Avenue, parking, and rideshare concerns.

Public Comments:

Matthew Gangi – Broker on the project and the lead on the community outreach – spoke about the over 200 meetings he had with members of the community.

Jason Adams – Owner and operator of the Bootleg Theatre in Los Angeles for over 20 years – expressed support for the Applicant and project.

Sally Kilby – Resident of a three-story, mostly senior, occupied building, located across the street from the venue's parking lot – expressed concerns about nighttime noise from the venue, the parking lot, the patio and adjacent sites and streets, and the number of shows planned.

Chris Gonzalez – Resident – expressed support for the project.

Mark Gangi – Architect – thanked Associate Planner Madrid for his assistance over the last 9 months and for putting the project together.

Mary Hoban – Spoke on behalf of community member and passionate advocate for arts, music industry attorney Dean Serwin, VP of Spark, in full support of the CUP.

Maria Taylor – Resident – mother of two (2) – performed at the Masonic Lodge and expressed support for the project.

Danny Nogueiras – Resident in nearby Glassell Park, a small business owner, a homeowner and a father - spoke in support of the project.

Josh Albrektson (via Zoom) – Resident – expressed support for the project.

Applicant's Rebuttal:

The Applicant spoke of a plan for a neighborhood hotline, providing the neighbors with contact information and a special email in the case of any disruptions or disturbances.

Commissioner Discussion:

The Commissioners engaged in a robust discussion and expressed support for this project.

The Commissioners and Associate Planner Madrid discussed the process regarding potential violations to the Conditions of Approval and several specific Conditions language.

The Commissioners and Assistant City Attorney Snow discussed additional Conditions of Approval:

- With respect to rideshare – ***The rideshare drop offs and pick-ups shall be directed to a loading area on Mission Street and all venue information and advertising shall identify the rideshare drop off/ pick-up zone.***
- Regarding directing patrons northerly upon departure – ***Patrons leaving the venue shall be directed northerly toward Mission Street rather than in other directions.***
- Regarding the hotline - ***The Applicant shall establish a venue hotline and provide notification to the neighboring areas within a 300-foot radius.***

The Commissioners agreed to the Applicant's proposed hours of operation and the proposed alcohol service hours (a modification to Condition P-9), and approved the daily operational hours for live entertainment from 7:00 p.m. to 12:30 a.m. and the sale of alcohol starting time two (2) hours prior to the show and continuing two (2) hours after the show.

Decision:

Commissioner Gallatin moved, seconded by Commissioner Claypool, to find the project exempt under California Environmental Quality Act (CEQA) Guidelines Section 15301, Class 1 and Section 15331, Class 31 and secondly, to approve Project 2579-CUP, a Conditional Use Permit (CUP) for live entertainment for a concert venue, the on-site sale and consumption of alcoholic beverages (Type-90 ABC license), the extended hours of operation at the east wing of the former school district building located at 1020 El Centro Street (APN: 5315-008-047), subject to the Conditions of Approval as supplemented by those drafted and read by the Assistant City Attorney Snow, and to adopt the Draft Resolution with modifications to Condition Nos. P9, P10, P11, and P46. The modified conditions of approval are as follows:

- P9. Daily hours for live entertainment are:
- 7pm to 12:30am
- P10. Daily hours of alcohol service concurrent with events:
- 5:00pm to 1:30am (2 hours before show, one hour after)
- P11. The facility shall shut down all music and amplified sound at the concert venue, no later than 12:30 am daily.
- P46. Subsequent sound report and sound reduction measures may be required by the City, if the proposed use creates a noise nuisance, as determined by South Pasadena Municipal Code, Chapter 19.

The additional conditions of approval are as follows:

- PC1. The applicant shall submit a circulation and ride share program to Community Development for review and approval prior to the issuance of a certificate of occupancy. The program shall include the required signage that directs everyone to the drop-off and pick-up services towards Mission Street.
- PC2. Patrons leaving the concert venue shall be directed towards Mission Street with appropriate signage. Signage shall be temporarily posted, during event hours. Proposed signage shall be submitted to Community Development for final review and approval.
- PC3. The applicant shall establish a venue Hotline for nearby residents and property owners to contact the operators with concerns related to the venue operations. Physical advertisement of the Hotline information shall be provided by mailing notices to residents within 300 ft., as conditioned by the Planning Commission.

Vice-Chair Padilla directed Staff to call the Roll:

Commissioner Claypool	Yes
Commissioner Gallatin	Yes
Commissioner Barthakur	Yes
Vice-Chair Padilla	Yes

Motion carried, 4-0.

The meeting recessed for 10 minutes.

Chair Dahl rejoined the meeting.

- 13. Proposed General Plan Update, Zoning Text Amendment, and Zoning Map Amendment** – Implementation of the General Plan Housing Opportunity Overlay land use designation, the Housing Opportunity Overlay zone in the South Pasadena Municipal Code (SPMC), and a Zoning Map Amendment consistent with the City’s 2021-2029 Housing Element (6th Cycle). The proposed General Plan Amendment, Zoning Text Amendment, and Zoning Map Amendment would apply to certain parcels located in two areas: the Ostrich Farm Mixed Use Area and the Huntington Drive Mixed-Use Area. The affected parcels generally fall on major arterials such as Fair Oaks Avenue, Monterey Road, Pasadena Avenue, and Huntington Drive, but the increased density allowance would also apply to some parcels immediately adjacent to major corridors.

The General Plan and zoning amendments are proposed to comply with a court order resulting from litigation regarding the City’s Housing Element adoption. Thus, pursuant to Government Code Section 6579, the amendments are not subject to the California Environmental Quality Act (CEQA) review beyond the Environmental Assessment (EA) previously completed for and adopted in conjunction with the City’s adoption of the Housing Element on May 10, 2023.

Recommendation:

Staff recommends that the Planning Commission adopt a Resolution taking the following actions to the City Council:

1. Adoption of a Resolution to amend the General Plan and General Plan Land Use Map creating the housing Opportunity (HO) Overlay land use designation.
2. Adoption of an Ordinance to approve a Zoning Text Amendment and Zoning Map Amendment to implement the necessary changes to the SMPC creating the Housing Opportunity (HO) Overlay Zone, consistent with the 2021-2029 Housing Element Housing Programs.

Staff Presentation:

Senior Planner Flores provided a PowerPoint presentation.

Questions for Staff:

The Commissioners asked about specific areas where the changes would apply and inquired about the deadline for the City to comply with the stipulated judgement.

Public Comment:

Josh Albrektson (via Zoom) – Resident – spoke about the stipulated judgment and zoning map concerns.

Commissioner Discussion:

The Commissioners engaged in a robust discussion, including regarding the properties located at 181, 185, and 187 Monterey Road.

Decision:

Chair Dahl moved, seconded by Vice-Chair Padilla, to adopt a Resolution to amend the General Plan and the General Plan Land Use Map creating the Housing Opportunity Overlay land use designation and to recommend to the City Council to adopt the Resolution and adopt an ordinance to approve the Zoning Text Amendment and Zoning Map Amendment to implement the changes necessary to create the Housing Opportunity Overlay Zone. In addition, to recommend that both Maps in the Land Use Element and the Zoning Code be amended from the Staff Recommendation to include the three (3) parcels on the south side of Monterey Road – 181, 185, and 187 Monterey Road – be included in the Housing Opportunity Overlay Zone.

Chair Dahl directed Staff to call the Roll:

Commissioner Claypool	Yes
Commissioner Gallatin	Yes
Commissioner Barthakur	Yes
Vice-Chair Padilla	Yes
Chair Dahl	Yes

Motion carried, 5-0.

The Commission revisited Items 3 and 4.

3. Planning Commission Reorganization

Recommendation:

Select Chair, Vice-Chair and Secretary.

Chair Dahl moved, seconded by Commissioner Gallatin, to nominate Vice-Chair Padilla to serve as Chair. Vice-Chair Padilla agreed to serve.

The Commissioners voted by voice vote.

Motion carried, 5-0.

Vice-Chair Padilla moved, seconded by Chair Dahl, to nominate Commissioner Barthakur to serve as Vice-Chair. Commissioner Barthakur agreed to serve.

The Commissioners voted by voice vote.

Motion carried, 5-0.

Chair Dahl moved, seconded by Commissioner Barthakur, to nominate Commissioner Gallatin to serve as Secretary. Commissioner Gallatin agreed to serve.

The Commissioners voted by voice vote.

Motion carried, 5-0.

Commissioner Dahl presided over the Consent Calendar Items.

CONSENT CALENDAR ITEMS:

4. **Minutes from the Regular Meeting of October 11, 2022**
5. **Minutes from the Special Meeting of November 21, 2022**
6. **Minutes from the Regular Meeting of December 13, 2022**
7. **Minutes from the Regular Meeting of March 14, 2023**
8. **Minutes from the Regular Meeting of April 11, 2023**
9. **Minutes from the Special Meeting of May 17, 2023**
10. **Minutes from the Regular Meeting of June 13, 2023**
11. **Minutes from the Regular Meeting of September 12, 2023**

Approved, 3-0-2. (Commissioners Claypool and Gallatin abstained)

Chair Padilla presided over the remainder of the meeting.

ADMINISTRATION

15. Comments from City Council Liaison

None.

16. Comments from Planning Commissioners

Commissioner Claypool thanked the Commissioners for welcoming him to the Commission and looks forward to working with the group.

Commissioner Gallatin remarked he was happy to join the group and reminded the Commission of the American Planning Association's National Conference April 13-16 in Minneapolis. The online conference component is on May 8-10.

Commissioner Dahl reminded the Commissioners about the upcoming Brown Act and Ethics training for Commissioners next week. She also reminded the Commissioners to turn in their Form 700.

Vice-Chair Barthakur welcomed Commissioners Claypool and Gallatin.

Chair Padilla welcomed the new Commissioners and thanked outgoing Chair Dahl for serving consistently and providing great leadership for the Commission. She also thanked Vice-Chair Barthakur for serving as Secretary.

17. Comments from Staff

Director Frausto-Lupo welcomed the new Commissioners.

ADJOURNMENT:

18. Adjournment to the Regular Planning Commission meeting scheduled on March 12, 2024 at 6:30 pm:

There being no further matters, Chair Padilla adjourned the meeting at 9:29 p.m.

Lisa Padilla, Chair



Community Development
Department

Memo

DATE: March 12, 2024

TO: Planning Commission

FROM: Angelica Frausto-Lupo, Community Development Director
Matt Chang, Planning Manager

PREPARED BY: Sandra Robles, Associate Planner

RE: Item No. 3. Project No. 2500-HDP/DRX/VAR/PM/TRE located at
4931 Harriman Avenue (APN: 5312-016-016 & 5312-016-017)

This item was continued from the regularly scheduled February 13, 2024, Planning Commission meeting.

Staff is recommending continuing this item to the next regularly scheduled Planning Commission meeting on April 9, 2024.



Planning Commission Agenda Report

ITEM NO. 4

DATE: March 12, 2024

FROM: Angelica Frausto-Lupo, Community Development Director

PREPARED BY: Alison Becker, AICP, Deputy Community Development Director
Robert (Dean) Flores, Senior Planner

SUBJECT: **Recommendation to City Council to adopt Inclusionary Housing Ordinance In-Lieu Fee.**

Recommendation

It is recommended that the Planning Commission review the analysis prepared by the City's consultant – Economic & Planning Systems (EPS) – to establish an affordable housing in-lieu fee and recommend that the City Council adopt a fee resolution.

Background

In 2021, the South Pasadena City Council adopted an Inclusionary Housing Ordinance (IHO) (SPMC 36.375), subsequently updated in 2023, that applies to all multi-family or mixed-use projects featuring 10 or more residential units. The ordinance requires a minimum of 15% of units to be set aside at specified levels of affordability. For rental projects, 7.5% of units need to be set aside for Extremely-Low Income Units and 7.5% for Very-Low-Income Units. Developers of for-sale projects have the option to choose whether to provide the required 15% inclusionary units as moderate income, low income, very low income, or a combination thereof. Additionally, the ordinance requires the establishment of an in-lieu fee option wherein applicants may opt to pay in certain situations rather than provide all or part of the inclusionary units on-site.

The in-lieu fee schedule was not established as part of the IHO. In 2021, the City Council authorized funding for the in-lieu fee study following adoption of the IHO. In April 2022, Planning Division staff and EPS presented the Planning Commission with their initial analysis and framework of the proposed IHO in-lieu fee based on the previous iteration of said ordinance (See Attachment 1). During the meeting, the Planning Commission directed staff to revise the framework to ensure financial feasibility for development of units. Further, with the anticipated adoption of the 2021-2029 Housing Element (6th Cycle) and subsequent update to the IHO in 2023, this item was temporarily paused until the City was ready to revisit the proposed in-lieu fee.

Discussion/Analysis

The Inclusionary Housing Ordinance favors on-site unit construction over payment of a fee to build units elsewhere in the City. Only certain situations qualify developers for payment of a fee in-lieu of construction. Accordingly, the in-lieu fee required of a rental project will always be calculated on a fractional unit. Ownership projects that choose not

to provide on-site affordable housing units may pay the fee for the entire obligation. In both cases, the South Pasadena Municipal Code requires the in-lieu fee to be deposited in an affordable housing fund for the development or maintenance of affordable housing, which could include allocation of funding to non-profit housing developers building affordable housing in the City.

Affordability Levels

In their analysis of affordability levels, EPS utilized Los Angeles County data based on a 3-person household for Very-Low-, Low-, and Moderate-income levels (see Table 1 below). They used this data to extrapolate the proposed in-lieu fee required based on project type (Rental vs. For-Sale) and affordability level as shown in Table 2.

Table 1 – Housing Affordability Levels (LA County 2023)




			
3 Person HH	Very Low Income (Rental)	Low Income (Rental)	Moderate Income (For Sale)
Annual Household Income	\$56,750	\$90,850	\$106,050
Affordable Housing Costs (30% of Income)	\$17,025	\$27,255	\$31,815
Affordable Rent/Sale Price (after other hsg. costs)	\$1,188/mo.	\$2,040/mo.	\$376,000

Table 2 – Proposed In-Lieu Fee Per Required Affordable Unit by Square Feet

Affordability Level	Project Type	Fee Per Affordable Unit Square Foot
Very-Low Income (50% AMI)	Rental	\$538
Low-Income (80% AMI)	Rental	\$297
Moderate Income (120% AMI)	For-Sale	\$371

Affordability Gap Analysis

EPS then used the affordability level data above to analyze the impact of paying the in-lieu payment relative to the financial feasibility of building affordable units on-site. They did this using an affordability gap analysis, which compares the costs of building the affordable units to their value at affordable levels. EPS calculated this gap for three inclusionary requirement scenarios, as reflected in the City’s updated IHO:

1. A rental project’s inclusionary requirement includes a fractional unit affordable to Very-Low-income households.
2. A rental project’s inclusionary requirement includes a fractional unit affordable to Low-income households.
3. A for-sale project’s inclusionary requirement includes units affordable to Moderate income households.

Fee Calculation Methodology

The City’s IHO’s definition of an in-lieu fee is the “amount that is equivalent to the cost of providing a comparable unit for each unit that would have been provided in the project.” As such, in order to determine the estimated cost of a proposed development, EPS used a financing gap approach, which represents a subsidy needed to finance the same unit type elsewhere. This approach aligns with the City’s IHO language as it reflects the actual cost to the developer to provide affordable units on-site (see Figure 1 below).

Figure 1 – Financing Gap Calculation



Then, EPS used this Financing Gap Calculation to determine the affordable unit subsidy per unit and per square feet for each affordability income level, which is known as the in-lieu fee calculation, as shown in Tables 3 and 4.

Table 3 – In-Lieu Fee for Affordable Rental Units

Financing Gap at Very Low Income (50% AMI)

Value/Unit	\$171,000
Costs/Unit	\$709,000
Subsidy per Affordable Unit	\$538,000
Subsidy per Affordable Sq. Ft. [1]	\$538

Financing Gap at Low Income (80% AMI)

Value/Unit	\$412,000
Costs/Unit	\$709,000
Subsidy per Affordable Unit	\$297,000
Subsidy per Affordable Sq. Ft. [1]	\$297

[1] Based on a 1,000 square foot unit.

Source: *Economic & Planning Systems*

Table 4 – In-Lieu Fee for Affordable For-Sale Units

Item	<i>Moderate (120% AMI)</i>
-------------	---------------------------------------

Proposed For-Sale In-Lieu Fee Calculation

Value/Unit	\$376,000
Costs/Unit	\$821,798
Subsidy per Affordable Unit	\$445,798
Subsidy per Affordable Sq. Ft. [1]	\$371

[1] Based on a 1,200 square foot unit.

Source: *Economic & Planning Systems, Inc.*

Finally, EPS used the in-lieu fee calculation for each scenario and provided examples of an in-lieu fee total for each project type as shown in Figures 2 and 3 below. A more detailed analysis of both the Affordability Gap Analysis and the in-lieu fee calculations can be found in EPS' Memorandum included as Attachment 2 of this staff report.

Figure 2 – Rental Project In-Lieu Fee Owed

Rental Project In-Lieu Fee Formula

For Projects Requiring a Partial Very-Low Income Unit:
Fractional Unit Required x Average Sq.Ft. of Market-Rate Units x \$538.00

For Projects Requiring a Partial Low-Income Unit:
Fractional Unit Required x Average Sq.Ft. of Market-Rate Units x \$297.00

Example Calculations

Example Project 1 is a 23-unit development with an average unit size of 900 sq. ft.

Affordable units required = 23 units*15% = 3.45 units

Inclusionary requirement is at least 2 Very-Low income units, 1 Low-income units, and either a fee paid on 0.45 Low-income units or an additional Low-income unit.

Fee Owed = 0.45 units x 900 sq. ft. x \$297 = \$120,285

Example Project 2 is a 58-unit development with an average unit size of 1,200 sq. ft.

Affordable units required = 58 units*15% = 8.7 units

Inclusionary requirement is 4 Very-Low income units, 4 Low-income units, and either a fee paid on 0.7 Very-Low income units or an additional Very-Low income unit.

Fee Owed = 0.7 units x 1,200 sq. ft. x \$538 = \$451,920

Figure 3 – For-Sale Project In-Lieu Fee Owed

For-Sale Project In-Lieu Fee Formula

For Projects Building Affordable Units On-Site:
Fractional Unit Required (if applicable) x Average Sq.Ft. of Market-Rate Units x \$371.00

For Projects Not Building Affordable Units On-Site:
Total Affordable Units Required x Average Sq.Ft. of Market-Rate Units x \$371.00

Example Calculation

Example Project is a 18-unit for-sale development. Each unit is 1,500 square feet, for a total project size of 21,000 square feet.

Affordable units required = 18 units*15% = 2.7 moderate-income units

Inclusionary requirement is 2 moderate income units, and a fee paid on 0.8 moderate income units; or a fee paid on 2.7 moderate income units

Fee for Fractional Unit = 0.7 units x 1,500 sq. ft. x \$371 = \$389,550

Fee for All Req. Units = 2.7 units x 1,500 sq. ft. x \$371 = \$1,502,550

To summarize, based on the analysis performed by EPS, the proposed IHO in-lieu fees shall be set based on the following project types listed in Table 2 and as below:

1. **\$538** per square foot for rental projects at Very-Low Income (50% AMI),
2. **\$297** per square foot for rental projects at Low Income (80% AMI), and
3. **\$371** per square foot for for-sale projects at Moderate Income (120% AMI).

Next Steps

If the Commission recommends approval of the IHO in-lieu fees, the City Council will hold a public hearing on the item tentatively scheduled on April 17, 2024.

Legal Review

The City Attorney has reviewed this item.

Attachments

1. April 18, 2022 Planning Commission Staff Report (Item No. 3)
2. Economic & Planning Systems (EPS) In-Lieu Fee Memorandum

ATTACHMENT 1

April 18, 2022 Planning Commission Staff Report



Planning Commission Agenda Report

ITEM NO. 3

DATE: April 18, 2022

FROM: Angelica Frausto-Lupo, Director of Community Development
Elizabeth Bar-El, AICP, Interim Deputy Director - Housing

SUBJECT: Discussion: Proposed Inclusionary Housing In-lieu Fee

Recommendation

It is recommended that the Commission review and provide comments on the analysis prepared by the City's consultant Economic & Planning Systems (EPS) for establishing an affordable housing in-lieu fee and the Council's direction from its March 16th meeting. The Commission's comments will be incorporated into the staff report for Council's public hearing to adopt a fee resolution.

Background

In 2021, the South Pasadena City Council adopted an inclusionary housing ordinance (SPMC 36.375) that now applies to all multi-family projects with three or more residential units. The ordinance requires that 20% of units, calculated from the allowable base density, be provided as deed-restricted, affordable units for qualified Very Low, Low or Moderate-income residents. The ordinance was developed with significant Planning Commission input, including a sub-committee that worked intensively with staff. The ordinance requires establishment of an in-lieu fee, which applicants may opt to pay in certain situations rather than provide all or part of the required inclusionary housing units on-site.

On March 16, 2022, staff presented the Council with alternative approaches to determining the in-lieu fee. The presentation included an explanation of how the City's consultants, Economic & Planning Systems (EPS), developed scenarios and analyzed the "Financing Gap" to calculate an appropriate fee reflective of the cost of providing on-site affordable units. The March 16 Council Report (Attachment 1), is provided for reference on the fee calculation and alternatives.

The Inclusionary Housing Ordinance clearly favors on-site unit construction over payment of a fee to build units elsewhere in the City. Only certain situations qualify developers for payment of a fee in-lieu of construction. Accordingly, the in-lieu fee required of a rental project will always be calculated on a fractional unit. Ownership projects that choose not to provide on-site affordable housing units may pay the fee for the entire obligation. In both of these cases, the Code requires the fee to be established so that the amount collected contributes in a meaningful way toward an affordable housing fund so that the City can allocate funding to non-profit housing developers building affordable housing in the City.

In its review of the options presented by EPS, and consistent with the Code's direction, the Council stated their preferred fee option as:

- A single fee for ownership projects;
- Rental project fees differentiated by size (Up to 10 units and 11+ units)
- Rental project fees for 11+ units differentiated by whether the fraction represents a unit that would have been Low Income or would have been Very Low Income

Based on this direction, staff and consultants have developed a recommendation, discussed below. The in-lieu fee must be adopted by Council at a legally-noticed public hearing. Although fee resolutions do not require Planning Commission's recommendation, this discussion is being held in order to share Commissioners' perspectives and public comments for the Council to consider in making their decision.

Inclusionary Housing Ordinance Requirements

As shown below, SPMC 36.375.050 (B) and C) specify the affordability levels of units to be provided according to project tenure (rental/ownership) and, for rental units, project size. Projects of 3-5 units would require one affordable unit provided on-site at any affordability level chosen by the applicant:

B. Inclusionary rental units.

1. Projects with 10 or fewer units shall have the option to designate an affordable unit as extremely low, very low, lower or moderate income; provided, that if the project includes two affordable units, either:

a. Both units shall be lower income; or

b. At least one shall be a very low income unit and the other unit may be very low, lower, or moderate.

2. Projects with 11 or more units shall provide 50 percent of required affordable units as extremely low or very low and 50 percent as lower income units. In case of an uneven number, one more unit shall be provided as very low.

C. Inclusionary ownership (for sale) units shall be provided at the moderate income level.

Units produced as deed-restricted affordable units are available only to eligible renters based on qualifying income levels. The State and County set rent levels to ensure that tenants do not overpay for housing. For affordable ownership units, the sales price is based on income and takes all housing costs into consideration. Tables produced by the County specify allowable costs for a range of household sizes and income levels. Table 1 below provides an example of the maximum allowable rents for a 3-person household at Very Low, Low and Moderate income levels and the purchase price for a moderate income unit if purchased by a household at 120% of the area median income (AMI).

Table 1: Maximum Housing Costs for 3-Person Household

Income Category	% of AMI	Adjusted Annual 3-Person HH Income [1]	Total Max Annual Spending on Housing [2]	Annual Spending on Other Housing Costs [3]	Maximum Aff. Monthly Rent or Mortgage Payment [4]	Maximum Affordable Sale Price [4]
Very Low (Rental)	50%	\$53,200	\$15,960	\$2,748	\$1,101	N/A
Low (Rental)	80%	\$85,200	\$25,560	\$2,748	\$1,901	N/A
Moderate (Rental)	120%	\$86,400	\$25,920	\$2,748	\$1,931	N/A
Moderate (For Sale)	120%	\$86,400	\$25,920	\$8,400	\$1,460	\$362,000

[1] HUD adjusts the maximum incomes for very-low and low-income households in Los Angeles County up by 148%. This type of adjustment is made in counties with unusually high or low household incomes, uneven housing cost-to-income ratios, or other considerations.
 [2] Assumes a housing cost to income ratio of 30 percent.
 [3] For rental units, other housing costs include utility expenditures consistent with the Los Angeles County CDA limits for a 2-bedroom unit (assumes use of electricity for heating and cooking). Utility costs effective July 2021. For for-sale units, other housing costs include estimated property taxes, homeowners insurance, and homeowner association (HOA) fees.
 [4] Maximum income available to pay for rent or mortgage and interest after allowance for other housing costs.
 [5] Affordable sale price is based on a 30-year mortgage with 10% downpayment and 3.5% annual interest rate.

Sources: Los Angeles County Community Development Authority; California Housing and Community Development; Economic & Planning Systems, Inc.

The inclusionary housing ordinance intentionally encourages developers to provide affordable units on-site. Projects that provide affordable units on-site are eligible for density bonuses as required by the state, as well as other project bonuses that are granted for achieving the community’s priority for consistent design and high-quality architecture to contribute to the City’s high quality physical environment, as defined by objective criteria in the ordinance.

Using a density bonus, a 3-unit project could provide the on-site affordable unit as a fourth unit, and a 4-unit project could provide a total of five units. Such projects would be entitled to concessions that might make it more attractive for a developer to build the unit, depending on the characteristics of the individual project.

Alternative Compliance – In-lieu Fee

The ordinance offers alternative means of compliance with the inclusionary housing requirement, and certain projects may choose the option of paying an in-lieu fee:

SPMC 36.375.050.D (Fractional Units): The applicant may choose to “*Pay the fractional amount above the whole number as an in-lieu fee equivalent to the fraction multiplied by the in-lieu fee as established by City Council resolution. All whole number units shall be provided on site or alternatively as allowed in SPMC 36.375.060 (Alternatives to On-Site Provision).*”

SPMC 36.375.060.A: “*For rental projects of three or four units or for any ownership project: payment of an in-lieu fee as established by City Council resolution and updated from*

time to time as deemed appropriate, subject to the provisions of SPMC 36.375.110 (In-Lieu Fee Payment and Administration).”

The ordinance also includes language to guide how the fee is calculated:

SPMC 36.375.110.B (In-Lieu Fee Payment and Administration) specifies the applicability of the in-lieu fee and states: *“The in-lieu fee shall be established in an amount that is equivalent to the cost of providing a comparable unit for each unit that would have been provided in the project based on the requirements of this section.”*

These ordinance provisions directed the consultants’ work in developing assumptions and factors to calculate the fee.

Establishment of this in-lieu fee is not subject to the State Mitigation Fee Act, as it is not proposed as an exaction to mitigate an impact as a condition of project approval; rather, it is offered as an option that an applicant may choose in order to waive a Code requirement.

The Council authorized funding for the in-lieu fee study following adoption of the inclusionary housing ordinance and approved a contract with Economic and Planning Systems (EPS) to perform the research and provide recommendations. The project kick-off meeting was held in November 2021. EPS produced a memo that outlines the methodology and assumptions that have resulted in their financing gap analysis, which is included as Attachment 2 to this report.

Discussion/Analysis

The Council has directed that the in-lieu fee be formulated to most accurately reflect the costs that developers would avoid by not building affordable units on-site. As explained in detail in Attachment 2, the financing gap is the difference between the costs of a unit’s market value and its value when restricted to a specific affordability level and its associated maximum rent or sales price. The table below, presented at the Council meeting, shows the financing gap for rental units that are Very Low, Low and Moderate, and for ownership (for-sale) units at two different levels of Moderate Income (110% of AMI and 120% of AMI).

Because of the specific Code limitations on applicants’ use of the in-lieu fee, especially for rental projects, the most equitable formula establishes a fee that is multiplied by the square footage of the average unit size to be provided in the project. Because EPS developed models using an average 1,000 square foot unit for rentals and an average 1,200 square foot unit for ownership projects, the financing gap per square foot (Table 2) has been calculated by taking the total financing gap and dividing it by those numbers.

Table 2: Affordable Housing Financing Gap

Item	Very Low Income Rental (50% AMI)	Low Income Rental (80% AMI)	Moderate* Income Rental (120% AMI)	Moderate Income For Sale (110% AMI)	Moderate Income For Sale (120% AMI)
Development Cost per Unit (incl. land, construction, soft costs, and profit/return)	\$670,000	\$670,000	\$670,000	\$588,000	\$588,000
Maximum Affordable Monthly Rent or Mortgage Payment (net of other housing costs)	\$1,101/ month	\$1,901/ month	\$1,931/ month	\$1,280/ month	\$1,460/ month
Value per Unit (NOI/Cap Rate or Sale Price)	\$181,000	\$421,000	\$355,000	\$317,000	\$362,000
Financing Gap per Unit	(\$489,000)	(\$249,000)	(\$315,000)	(\$271,000)	(\$226,000)
Financing Gap per Affordable Unit SqFt (rental: /1000sf; For Sale /1200sf)	\$489	\$249	\$315	\$226	\$188

Recommended Rental Project In-Lieu Fee

Several in-lieu fee options for rental projects were presented for Council’s consideration, based on the various financing gaps or a blend of two or more of them. As referenced above, the Council expressed a consensus for the option that differentiates between smaller (up to 10-unit) projects and larger (11+-unit) projects.

For the smaller projects, the applicant has a choice about the affordability level of the unit if it is included on-site. Since it is not possible to know exactly which unit is “not being built,” staff will recommend basing the fee on the middle ground, Low Income, unit.

For the larger projects, in order to accurately reflect the financing gap, Council preferred the “Next Unit” determination. Since the requirement is 50% Very Low income and 50% Low income, with an extra Very Low income unit in the case of an uneven number, the fractional unit that might be waived with payment of an in-lieu fee may be a Very Low income unit if the project includes an even number of units, or Low income unit, if an odd number of units are provided in the project. The required fee for a particular project would be based on the specific fraction of a unit that is not being provided.

Accordingly, staff’s recommendation to Council will be as follows:

- 3-10 unit projects: \$249/sf
- 11+ unit projects:
 - Even number of units provided on-site: \$489/sf
 - Odd number of units provided on-site: \$249/sf

Recommended Ownership Project In-Lieu Fee

For ownership projects, which may pay a fee for any portion of the required units in-lieu of providing the unit(s) on-site, staff presented two options: basing the fee on Moderate income households at 110% AMI or 120% AMI. Council did not specify a preferred option. Staff is

recommending the 110% level (\$226/sf) in order to be consistent with guidelines set by the State Department of Housing and Community Development (HCD) and Density Bonus law criteria that set affordable moderate income for-sale housing at 110% AMI. In this way, the City will collect funds to produce affordable housing that conforms to the State's standard definition. Furthermore, the higher fee will act as an incentive to build the units on-site, as is preferred by the City's ordinance.

Accordingly, staff's recommendation to Council for the in-lieu fee for ownership projects will be \$226/sf.

Some examples of fee calculations for projects of various sizes, both rental and ownership, are included in Attachment 3.

Comparison to Other Jurisdictions

Cities can take a variety of approaches to calculating inclusionary housing in-lieu fees. As explained on the website of the Grounded Solutions Network (www.inclusionaryhousing.org), a national organization that connects local experts with networks, knowledge and support to develop long-term affordable housing solutions:

“Each jurisdiction must determine how to set their fee level. There are several common approaches, but no single “right” formula. A key factor that shapes the decision about which formula to use is whether a jurisdiction wants to encourage on-site performance or collect the revenue to leverage other sources of funding to build affordable units off site.

All other things being equal, the higher the fee, the higher the chance that developers will choose to build units on site. A number of communities have made the mistake of setting in-lieu fees far below the cost of on-site performance, and this practice has resulted in poor overall performance of the affordable housing program.”

As stated above, South Pasadena's ordinance indicates the City's preference for on-site affordable housing, and the fee is recommended to be relatively high for this reason. For a point of comparison, staff reviewed the fees that have been established in several other Los Angeles County jurisdictions with inclusionary housing requirements. Several of these have increased their in-lieu fees over the past year. Pasadena, Alhambra, Glendale and Santa Monica have adopted fees based on the project's total market-rate square footage. West Hollywood, which only allows in-lieu fees as an alternative for projects of 10 units or less that require one unit, has a graduated flat fee based on the project's number of units. Pasadena, Alhambra and Santa Monica have a higher fee for ownership projects than for rental projects. Glendale and West Hollywood have one fee applicable to both rental and ownership projects.

Table 3 below compares the fees and shows a total fee based on a sample project with 20 units. The cities included in this table charge the in-lieu fee by multiplying it by the total square footage

in the market-rate project (not the average unit size). To compare with the figures provided above, the total fees for 1,000 square-foot rental units and 1,200 square-foot ownership units are calculated. Actual fees would differ from project to project based on unit size and how each city defines “gross floor area” for its calculations.

For West Hollywood, the 3- and 4-unit project fees are provided to compare with equivalent South Pasadena rental and ownership projects opting to pay the in-lieu fee. West Hollywood’s full (highest) fee, for a 10-unit project, is \$439,192, while smaller projects are treated as fractional units. Larger projects do not have an option to pay the in-lieu fee.

The proposed fees for South Pasadena are shown as the total for a comparable unit, although rental unit fees will always be lower as the fee will be based on a fraction of a whole unit (see Attachment 3). The amount per square foot is left blank, given the difference in calculation methods as described above, in order to present a more equivalent comparison.

Table 3: Comparison of Other Cities’ In-Lieu Fees

	Rental Projects		For-Sale/Ownership Projects	
	Per sf (see Table Notes)	Fee in lieu of one unit	Per sf (see Table Notes)	Fee in lieu of one unit (for-sale)
Alhambra	\$14.30	\$95,333.33	\$30.00	\$240,000
Glendale	\$49.50	\$330,000	\$49.50	\$396,000
Pasadena	\$50.92	\$254,600	\$52.43	\$314,580
Santa Monica	\$35.50	\$236,666.67	\$41.47	\$331,760
West Hollywood	N/A		N/A	
(3-unit project)		\$131,758		\$131,758
(4-unit project)		\$175,677		\$175,677
(10-unit project)		\$439,192		\$439,192
<i>South Pasadena, AS PROPOSED</i>	-	<i>\$249,000 OR \$489,000</i>	-	<i>\$271,000</i>

TABLE 3 NOTES:

- Total Fee in-lieu for one unit in hypothetical project of 20 units: The comparison cities calculate the in-lieu fee as one amount for the project, but for an equivalent comparison, the total fee is divided by the number of units that would have been required.
- Other cities’ fees are per square foot based on gross residential floor area
- South Pasadena’s fee is per square foot based on average unit size.
- Comparison based on highest fee for jurisdictions with complex, variable fee structures

Next Steps

May 18, 2022: Council hearing to adopt the in-lieu fee resolution

Attachments:

1. [Council Staff Report, March 16, 2022, Item 17](#) (starts on page 156 of document)
2. Memo: Background and methodology for financing gap analysis to establish the South Pasadena In-lieu Fee (Economic and Planning Systems)
3. Examples of Rental and Ownership Project In-lieu Fee calculations

ATTACHMENT 2

Economic & Planning Systems (EPS) In-Lieu Fee Memorandum

DRAFT MEMORANDUM

To: Alison Becker, City of South Pasadena

From: Julie Cooper, Thomas Gonzales, and Darin Smith

Subject: South Pasadena Inclusionary Housing In-Lieu Fee Calculation; EPS #214034

Date: February 23, 2024

Introduction

The City of South Pasadena (City) adopted an inclusionary housing policy in May 2021 and subsequently updated the policy in November 2023. The policy requires that a minimum of 15 percent of the total number of dwelling units in a residential or mixed-use development consisting of ten (10) or more units be provided at below-market-rate prices affordable to Very-Low, Low, and/or Moderate-income households, based on income standards established by the State of California's Department of Housing and Community Development (HCD).

The City's code allows, under certain circumstances, for development projects to pay an in-lieu fee as an alternative to providing required units. For-sale projects can pay an in-lieu fee instead of building on-site affordable units. Rental projects have the option to pay an in-lieu fee for any fractional affordable units required, as an alternative to rounding up to the next whole number of units that must be provided on-site.

The City hired Economic & Planning Systems, Inc. (EPS) to calculate an appropriate inclusionary housing in-lieu fee rate to charge in such instances. The City's code specifies that the in-lieu fee be established in an amount that is equivalent to the cost of providing a comparable unit for each unit that would have been provided in the project. As detailed in this memorandum, EPS has calculated the fee by estimating the subsidy necessary to support construction of an affordable housing unit, so that the cost of the fee is equivalent to the financial burden on a developer to provide an on-site unit. The calculated fees per square foot of affordable unit required are summarized in **Table 1** below.

The Economics of Land Use



*Economic & Planning Systems, Inc.
949 South Hope Street, Suite 103
Los Angeles, CA 90015-1454
213 489 3838 tel*

*Oakland
Sacramento
Denver
Los Angeles*

www.epsys.com

Table 1 Proposed In-Lieu Fee Per Required Affordable Unit Square Feet

Affordability Level	Project Type	Fee Per Affordable Unit Square Foot
Very-Low Income (50% AMI)	Rental	\$538
Low-Income (80% AMI)	Rental	\$297
Moderate Income (120% AMI)	For-Sale	\$371

EPS additionally analyzed the impact of paying the in-lieu payment on development feasibility relative to the financial impacts of building affordable units on-site, to inform the City whether a developer would be more likely to choose to provide affordable units on-site or pay the in-lieu fee (in the cases where they have such a choice). The analysis indicated that for an average hypothetical rental project, a developer could receive a comparable financial return whether building an additional affordable unit or paying the fractional fee. Therefore, a given developer may reasonably choose either option. Meanwhile, a developer of an average hypothetical for-sale project is more likely to achieve a higher return by providing units on-site to meet their inclusionary requirement rather than paying the in-lieu fee, primarily due to the benefits of utilizing the State Density Bonus Law.

Affordability Gap Analysis

This report estimates the subsidy needed to produce housing units that are affordable to households at the City’s specified income levels using an affordability gap analysis, which compares the costs of building the affordable units to their value at affordable levels. EPS calculated this gap for three inclusionary requirement scenarios, as reflected in the City’s ordinance:

- 1) A rental project’s inclusionary requirement includes a fractional unit affordable to Very-Low income households.
- 2) A rental project’s inclusionary requirement includes a fractional unit affordable to Low-income households.
- 3) A for-sale project’s inclusionary requirement includes units affordable to Moderate income households.

Table 2 details when a particular scenario would be applied to a given development project.

Table 2 Affordable Housing Requirements in South Pasadena by Development Type

Development Project Type	Projects with Fewer than 10 Units	Rental Project with 10 or More Units [1] [2]	For-Sale Project with 10 or More Units [2]
<i>Affordability Requirement [3]</i>	None	7.5% Very-Low Income Units + 7.5% Low-Income Units	15% Moderate-Income For-Sale Units
<i>Affordability Level Used for Fee Calculation</i>	N/A	Very Low Income, OR Low Income if # of Very-Low Income Units Built is > # of Low-Income Units Built	Moderate Income
<i>Type of Units if Provided On Site</i>	N/A	Rental	Either For Sale or For Rent

[1] The number of units affordable to Very-Low income households must be equal to or greater than the number of units affordable to Low-income households.

[2] Fractional units, if any, must be rounded up or paid via in-lieu fee.

Source : South Pasadena City Code

Product Prototypes

The following analysis uses prototype affordable residential products, which were informed by the City’s Housing Element Update and reflect the most common allowable building types at sites inventoried in the Housing Element as potential locations for the construction of affordable housing. The prototypes were reviewed and approved by City staff to utilize in this analysis.

The assumptions for the prototype products are summarized in **Table 2**. As shown, both the for-sale and the rental product prototypes are a two-bedroom unit within a four-story, wood frame building, developed at a density of 70 units per acre. The for-sale prototype is a 1,200 square feet condominium, while the rental prototype is a 1,000 square feet apartment. The analysis also assumes both prototypes are served by structured parking, at a ratio of one space per two-bedroom unit. This ratio represents the typical parking ratio that an affordable housing developer would look to achieve for a two-bedroom unit, and also reflects new State legislation that allows a developer to provide fewer parking spaces than required by the City standards if the development is constructed within ½-mile of a major transit hub, which applies to several of the sites identified for lower income units in the Housing Element.

Table 3 Unit Prototype Characteristics

Product Type	Construction Type	Density	Unit Size	Unit Sq. Ft.	Parking Type
For Sale	4-Story Wood Frame Condo Building	70 units/acre	2 Bedroom	1,200 sq. ft.	1 spaces per unit (structured)
Rental	4-Story Wood Frame Apartment Building	70 units/acre	2 Bedroom	1,000 sq. ft.	1 space per unit (structured)

Maximum Affordable Housing Rents and Prices

Income levels for affordable housing units are set for the County of Los Angeles by the California Department of Housing and Community Development (HCD) on an annual basis. **Table 4** shows the income limits for 2023 for a three-person household, as this analysis assumes the two-bedroom prototype units are occupied by three-person households.¹

The Area Median Income (AMI) for a family of three in Los Angeles County is \$88,400 in 2023. For the Low and Very-Low income categories, the maximum incomes do not correspond mathematically to the defined 50 and 80 percent of AMI, respectively, due to HCD adjustment factors for Los Angeles County. For example, the “Low” income group would definitionally represent households earning up to 80 percent of AMI, but due to the HCD adjustment factor, the resulting “Low” income maximum is slightly *above* the AMI. HCD makes these adjustments to “Low” and “Very Low” income levels in counties with relatively high housing costs and/or relatively high or low household incomes. HCD does not apply these adjustment factors to the Moderate income levels.

Table 4 2023 Household Income Limits for Los Angeles County

Income Group and Definition		2023 Maximum Income 3-Person Household
Very Low	>30% to ≤50% AMI + HUD adjustment [1]	\$56,750
Low	>50% to ≤80% AMI + HUD adjustment [1]	\$90,850
Median (Base)	>80% to ≤100% AMI	\$88,400
Moderate	>100% AMI to ≤120% AMI	\$106,050
HUD Adjustment Factor for Very Low & Low Income Groups		128.5%

[1] HUD applies adjustments to the amounts based on unusually high or low family income, uneven housing-cost-to income relationship, or other reasons.

Source: Los Angeles County, California Housing and Community Development (HCD).

¹ Based on California Health and Safety Code Section 50052.5.

Consistent with the City ordinance, the analysis assumes that households spend 30 percent of their gross annual income on total housing costs. For rental units, this includes rent and utilities.² Spending on utilities is subtracted from spending on total housing costs to determine the maximum rent that a household can pay in a year. For for-sale units, the 30 percent includes mortgage principal and interest, property taxes, and private mortgage insurance payments (collectively, "PITI"), plus estimates of annual Homeowners Association (HOA) fees. After subtracting taxes, insurance, and HOA fees from the spending on total housing costs, the remainder was used to calculate a maximum affordable house purchase price, based on average mortgage term assumptions.³

For the purposes of the affordability gap analysis, EPS used the County's maximum income levels for Very-Low income and Low-income households for rental units, and the levels for Moderate income for for-sale units. As summarized on **Table 5**, a three-person, Very-Low Income household can pay up to \$1,188 per month for a two-bedroom rental unit, and a Low-Income household can pay \$2,040 per month. These affordable rents are far below the market-rate rent for a newly constructed unit of the same size in South Pasadena, which EPS estimates at \$4,200 based on market data.⁴ For for-sale units, a three-person Moderate-income household can pay up to \$2,438 on monthly housing costs, which translates into a maximum purchase price of \$333,000 for a two-bedroom condominium unit.⁵ EPS estimates that a newly constructed market-rate unit of the same size could achieve a sale price of \$990,000 in South Pasadena, based on recent market transactions.⁶ It is important to note that the market-rate rents and prices reflect newer units (i.e., those built within the past 10 years for rental projects and within the past 25 years for for-sale projects), since it is only new development that would be subject to the inclusionary requirements.

² The utility allowance for a two-bedroom unit is based on a schedule published by the Los Angeles County Development Authority (LACDA)

³ Assumes a 30-year fixed mortgage with a 5.5 percent effective interest rate, plus a 10 percent down payment from the homebuyer.

⁴ Rent estimated based on average per square foot rents reported by CoStar for market-rate, two-bedroom apartments built since 2014 and located within South Pasadena and Pasadena, with a 3% "new construction" premium.

⁵ This calculation is further detailed in Table 7 below.

⁶ Price estimate based on transaction data obtained from Redfin for two-bedroom condominiums built since 1999 and located within South Pasadena and Pasadena. No "new construction" premium was added due to current interest rate trends that have slowed growth in home sale prices.

Table 5 Maximum Affordable Monthly Housing Costs for Three-Person Household in Los Angeles County

Income Category	% of AMI	Adjusted Annual 3-Person HH Income [1]	Annual Spending on Housing [2]	Annual Spending on Utilities [3]	Maximum Rent or Housing Payment Assumptions [4]	
					Annual	Monthly
Very Low (Rental)	50%	\$56,750	\$17,025	\$2,772	\$14,253	\$1,188
Low (Rental)	80%	\$90,850	\$27,255	\$2,772	\$24,483	\$2,040
Moderate (For-Sale)	120%	\$106,050	\$31,815	N/A	\$31,815	\$2,651

[1] Assumes adjustment factor of 128.5% in calculating the maximum income for Very-Low Income and Lo-wincome groups. See Table 4.

[2] Assumes a housing cost to income ratio of 30 percent.

[3] For rental units, other housing costs include utility expenditures consistent with the Los Angeles County Community Development Authority limits for a 2-bedroom unit (assumes use of electricity for heating and cooking). Utility costs effective July 2023. Utility costs are not factored into for sale

[4] Maximum income available to pay for rent or mortgage and interest after allowance for utilities.

[5] Affordable sale price is based on a 30-year mortgage with 10% downpayment and 5.5% annual interest rate.

Sources: Los Angeles County Community Development Authority; California HCD; Economic & Planning Systems, Inc.

Development Cost Assumptions

Residential development costs include land costs, direct or “hard” costs (e.g., labor and materials), and indirect or “soft” costs (e.g., architecture, entitlement, fees, marketing, etc.). Development cost estimates used in the analysis are based on data from recent land transactions in South Pasadena as well as from EPS interviews with housing developers both within South Pasadena and the larger Los Angeles region. A developer fee is also estimated and represents a typical level of compensation to an affordable housing developer for their time investment in developing the project. These assumptions are shown on **Table 6** and **Table 7** and indicate that the total development cost per unit is about \$709,000 for rental apartments and \$822,000 for for-sale condominiums. Again, these figures represent “prototypical” projects; the actual costs for a given project will vary by location and project design characteristics.

Revenue Assumptions

To calculate the value of the affordable units, several revenue-related assumptions were made regarding applicable income levels and the percentage of household income that can be put towards housing costs, including rent. In addition, translating a revenue estimate into an estimate of total value (i.e., sale price per unit) required assumptions for operating expenses and capitalization rates. The following assumptions were used:

- *Percentage of Gross Household Income Available for Housing Costs*—The City’s inclusionary housing ordinance indicates that lower-income households should pay no more than 30 percent of their gross income on housing costs. EPS calculated the rents and sale prices that three-person households at 50 percent AMI and 80 percent AMI for rental units and 120 percent AMI for for-sale units would be able to pay net of other housing-related costs (e.g. utilities, insurance and taxes, HOA fees), as shown above in **Table 5**.

- *Operating Costs for Rental Units*—The analysis assumes that affordable rental apartment operators incur annual operating costs of \$7,000 per unit, which include the cost of management, maintenance, and common utilities (those not paid by tenants). These operating costs assume that all affordable rental apartments constructed for Very-Low and Low-income households would be exempt from property taxes because they are income-restricted and constructed by non-profit developers. No operating costs were estimated for for-sale units, as these costs would be paid directly by the condominium occupant via HOA fees.
- *Capitalization Rate*—A capitalization rate represents the rate of return that an investor in a real estate project expects to receive, and generally indicates the project's relative risk (e.g., a lower capitalization rate suggests that a project is less risky, and therefore an investor is willing to accept a lower rate of return because the return is more guaranteed). The value of a rental project is calculated by dividing the net operating income (NOI) by the capitalization rate. For the rental prototypes, EPS utilized a capitalization rate of 4.25 percent.⁷ For the for-sale prototypes, the estimated value of the unit is equivalent to their affordable sale price.

Affordability Gap Results

Table 6 shows the subsidies required for construction of rental apartments for three-person households at Very-Low and Low-income levels (50 percent and 80 percent of AMI, adjusted, respectively). As shown, such units are estimated to cost approximately \$709,000 to develop. The estimated net operating income from those units at affordable rents would translate to values between \$171,000 to \$412,000, using the aforementioned capitalization rates. Based on this analysis, building a prototypical rental apartment unit affordable to a Very-Low income household would require a subsidy of approximately \$538,000, while a unit affordable to a Low-income household would require a subsidy of approximately \$297,000.

Table 7 shows the subsidies required for construction of for-sale condominium units affordable to three-person households earning Moderate income levels (120 percent of AMI). As shown, these households could afford to pay up to roughly \$376,000 for a unit, while such units are estimated to cost approximately \$822,000 to build. Based on this analysis, building a prototypical affordable for-sale condominium unit would require a subsidy of \$446,000.

⁷ Based on H1 2023 cap rate surveys for infill multifamily development in the Los Angeles region, published by CBRE, a real estate services firm

Table 6 Affordability Gap Pro Forma Analysis for Prototype Rental Unit Affordable to Very-Low and Low-Income Households

		4-Story Wood Frame Apartment Building with Structured Parking	
Input Assumptions		Very Low Income (50% AMI)	Low Income (80% AMI)
Prototype Unit Assumptions			
Density/Acre		70	70
Gross Unit Size		1,176	1,176
Net Unit Size [1]	85% efficiency	1,000	1,000
Number of Bedrooms		2	2
Number of Persons per Unit [2]		3	3
Parking Spaces/Unit [3]		1.00	1.00
Cost Assumptions			
Land/Unit [4]	\$4,750,000 /Acre	\$67,857	\$67,857
Direct Costs			
Direct Construction Costs/Unit [5]	\$350 /Gross Sq. Ft.	\$411,800	\$411,800
Parking Construction Costs/Unit	\$50,000 /Space	\$50,000	\$50,000
Subtotal, Direct Costs/Unit		\$461,800	\$461,800
Indirect Costs/Unit [6]	20% of direct costs	\$92,400	\$92,400
<i>Land + Direct + Indirect Cost Subtotal (before Developer Fee)</i>		\$622,057	\$622,057
Developer Fee (rounded)	14% of all costs	\$87,000	\$87,000
<i>Total Cost/Unit (rounded)</i>		\$709,000	\$709,000
Maximum Supported Unit Value			
Maximum Annual Rent Payment [7]		\$14,253	\$24,483
(less) Operating Expenses per Unit/Year [8]		(\$7,000)	(\$7,000)
Net Operating Income		\$7,253	\$17,483
Capitalization Rate [9]		4.25%	4.25%
<i>Total Unit Value [10]</i>		\$171,000	\$412,000
Affordability Gap		(\$538,000)	(\$297,000)

[1] Assumes that approx. 85% of gross building space can be rented, excluding common areas, circulation space, etc.

[2] Assumes an average unit for income-qualified worker households would be two bedrooms. State law (Health and Safety Code Section 50052.5) indicates that a two-bedroom unit should be assumed to be occupied by a three-person

[3] Assumption of 1.0 parking spaces/unit is consistent with the City's streamlined density bonus requirements for projects including affordable housing units.

[4] Estimate based on recent sales data from CoStar and conversations with local developers for projects of similar

[5] Cost assumptions include both labor and materials and are based on estimates from private developers active in South Pasadena and other parts of the region. EPS experience is that costs to develop affordable housing units are typically the same or higher than to develop market rate units.

[6] Includes estimated costs for architecture and engineering; entitlement and fees; project management; appraisal and market study; marketing, commissions, and general administration; financing and charges; insurance; developer

[7] See Table 5.

[8] Estimated operating expenses for affordable rental units is based on EPS discussions with affordable housing developers and operators working in Southern California. Excludes property tax; assumed to be built and managed by

[9] The capitalization rate is used to determine the current value of a property based on estimated future operating income, and is typically a measure of estimated operating risk. The capitalization rate used in this analysis is based on CBRE U.S. Cap Rate Study, First Half 2023 for Los Angeles market.

[10] The total supportable unit value is determined by dividing the net operating income by the capitalization rate.

Sources: Los Angeles County; California Housing and Community Development; CBRE; Rider Levett Bucknall; and Economic & Planning Systems

Table 7 Affordability Gap Pro Forma Analysis for Prototype For-Sale Unit Affordable to Moderate Income Households

Input Assumptions	4-Story Wood Frame Condo Building with Structured Parking
	Moderate Income (120% AMI)
Prototype Unit Assumptions	
Density/Acre	70
Gross Unit Size	1,412
Net Unit Size [1]	85% efficiency 1,200
Number of Bedrooms	2
Number of Persons per Unit [2]	3
Parking Spaces/Unit [3]	1.00
Cost Assumptions	
Land/Unit [4]	\$4,750,000 /acre \$67,857
Direct Construction Costs/Unit [5]	\$350 /net sq. ft. \$494,118
Parking Costs/Unit	\$50,000 /space \$50,000
Subtotal, Direct Costs/Unit	\$544,118
Indirect Costs/Unit [6]	20% of direct costs \$108,824
<i>Land + Direct + Indirect Cost Subtotal (before Developer Fee)</i>	<i>\$720,798</i>
Developer Fee (rounded)	14% of all costs \$101,000
<i>Total Cost/Unit (rounded)</i>	<i>\$821,798</i>
Maximum Supported Home Price	
Maximum Monthly Housing Payment [7]	\$2,651
Other Monthly Housing Costs	
Insurance	(\$125)
Taxes [8]	(\$305)
HOA Fee	(\$300)
Maximum Monthly Mortgage Payment (after Other Housing Costs)	\$1,921
Mortgage Assumptions	
Down Payment	10%
Interest Rate (annual)	5.50%
Loan Term (months)	360
Total Supportable Unit Value [9]	\$376,000
Affordability Gap	(\$445,798)

[1] Assumes that approx. 85% of gross building space can be rented, excluding common areas, circulation space, etc.

[2] Assumes an average unit for income-qualified worker households would be two bedrooms. State law (Health and Safety Code Section 50052.5) indicates that a two-bedroom unit should be assumed to be occupied by a three-person household.

[3] Assumption of 1.0 parking spaces/unit is consistent with the City's streamlined density bonus requirements for projects including affordable housing units.

[4] Estimate based on recent sales data from CoStar and conversations with local developers for projects of similar density.

[5] Cost assumptions include both labor and materials and are based on estimates from private developers active in South Pasadena and other parts of the region. EPS experience is that costs to develop affordable housing units are typically the same or higher than to develop market rate units.

[6] Includes estimated costs for architecture and engineering; entitlement and fees; project management; appraisal and market study; marketing, commissions, and general administration; financing and charges; insurance; developer fee and contingency.

[7] See Table 5.

[8] Taxes equal to approximately 1.1% of sale price.

[9] The total supportable unit value is equivalent to the down payment plus total mortgage amount, assuming a mortgage with terms for interest rate, term, and payment as shown in table.

Sources: Los Angeles County; California HCD; Zillow; Rider Levett Bucknall; and Economic & Planning Systems

In-Lieu Fee Calculations and Application

Rental Development In-Lieu Fee

As described above, a new rental development can only pay the in-lieu fee to account for a fractional or partial required affordable unit. For example, a project with 14 dwelling units would be required to provide 2.1 affordable units ($14 \text{ units} \times 15\% = 2.1 \text{ units}$). The developer in this case can either (a) build two affordable units and pay a fee equivalent to 0.1 affordable units, or (b) round up and build three affordable units on site. Per the requirements of the City's inclusionary ordinance, the number of units affordable to Very-Low income households provided by a rental project must be equal to or greater than the number of units affordable to Low-income households. In other words, if an odd number of affordable units is required, the number of units affordable to Very-Low income households must be one more than the number affordable to Low-income households.

In the example 14-unit project noted above, the project would include one unit affordable to a Low-income household and one unit affordable to a Very-Low income household. If the developer chose to round up the number of affordable units and provide a third unit, it would have to be affordable to a Very-Low income household. If the developer chose to pay the in-lieu fee, it would be to support 0.1 units affordable to Very-Low income households. As an alternate example, a 22-unit project would be required to build three full affordable units on-site ($22 \text{ units} \times 15\% = 3.3 \text{ units}$)--two affordable to Very-Low income households and one affordable to Low-income households. The in-lieu fee paid for the 0.3 required units would be to support a unit affordable to Low-income households; alternatively, if the developer rounded up, the additional affordable unit built on-site would have to be affordable to Low-income households.

Table 8 summarizes the calculation of in-lieu fees sufficient to cover the subsidy needed to support rental units affordable to Very-Low income and Low-income households in South Pasadena. The table shows the fee on both a per unit and per a square foot basis, based on a prototypical affordable rental unit of 1,000 square feet (see **Table 3**).

Given that new rental developments are required to build affordable units similar to the project's market-rate units, the required fee for a given project should be calculated using the average size of its market-rate units. In the example 14-unit development project, assuming an average market-rate unit size of 1,000 square feet, if the project needs to pay a fee on 0.1 units, the fee would be calculated as the subsidy needed to support 150 square feet of an affordable unit ($1,000 \text{ sq. ft.} \times 15\% = 150 \text{ sq. ft.}$). Alternatively, if the project had an average unit size of 800 square feet, the fee would be calculated as the subsidy to support 120 square feet of an affordable unit ($800 \text{ sq. ft.} \times 15\% = 120 \text{ sq. ft.}$).

Table 8 In-Lieu Fee Per Affordable Unit and Affordable Square Feet for Rental Projects**Item****Financing Gap at Very Low Income (50% AMI)**

Value/Unit	\$171,000
Costs/Unit	\$709,000
Subsidy per Affordable Unit	\$538,000
Subsidy per Affordable Sq. Ft. [1]	\$538

Financing Gap at Low Income (80% AMI)

Value/Unit	\$412,000
Costs/Unit	\$709,000
Subsidy per Affordable Unit	\$297,000
Subsidy per Affordable Sq. Ft. [1]	\$297

[1] Based on a 1,000 square foot unit.

Source: Economic & Planning Systems

Table 9 provides example calculations of full and partial affordable units required at various project size and the affordability level required for the partial or fractional affordable unit. **Figure 1** below it details the formula that developers would use to calculate the fee owed should they choose to pay the fee rather than round-up to build an additional affordable unit, followed by example calculations for illustration in **Figure 2**.

Table 9 Example Calculations of Full and Fractional Affordable Units Required and Associated Fee Basis for Typical Rental Projects by Size

Number of Units	Total Affordable Units Required	Min. Number of On-Site Very-Low Income Units	Typical Number of Low-Income Units	Fractional Affordable Units Required	Affordability Level Required for Partial Unit [1]
9 or fewer	0	0	0	0	N/A
10	1.5	1	0	0.5	Low-Income
11	1.65	1	0	0.65	
12	1.8	1	0	0.8	
13	1.95	1	0	0.95	Very-Low Income
14	2.1	1	1	0.1	
15	2.25	1	1	0.25	
16	2.4	1	1	0.4	
17	2.55	1	1	0.55	
18	2.7	1	1	0.7	
19	2.85	1	1	0.85	N/A
20	3	2	1	0	
21	3.15	2	1	0.15	Low-Income
22	3.3	2	1	0.3	
23	3.45	2	1	0.45	
24	3.6	2	1	0.6	
25	3.75	2	1	0.75	
26	3.9	2	1	0.9	
27	4.05	2	2	0.05	Very-Low Income
28	4.2	2	2	0.2	
29	4.35	2	2	0.35	
30	4.5	2	2	0.5	

[1] Per the City's inclusionary ordinance, the number of very-low income units must be equal to or greater than the number of low-income units. The table shows the minimum number of very-low income units that must be built on-site for a rental project of a given size. The table also shows the number of low-income units that a typical developer would choose to build in order to maximize project returns. When the number of very-low income units is equal to the number of low-income units, then the next unit built must be affordable at the very-low income households; accordingly, the (higher) Very-Low Income In-Lieu Fee amount must be paid on any fractional or partial units.

Figure 1 In-Lieu Fee Formula for New Rental Projects in South Pasadena

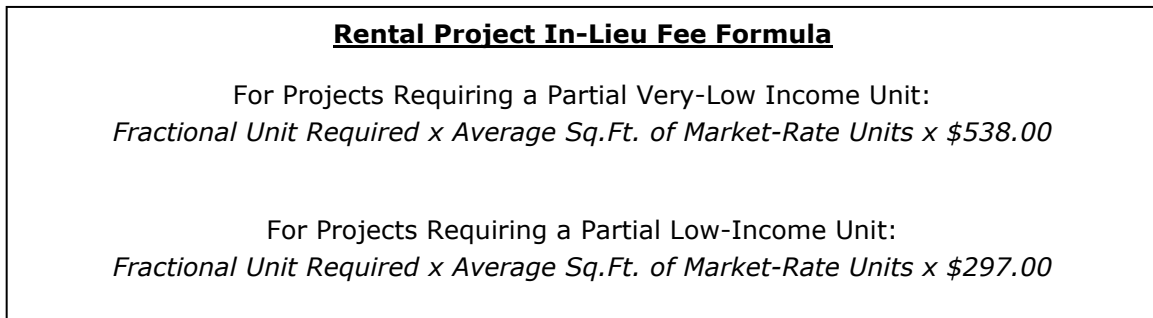
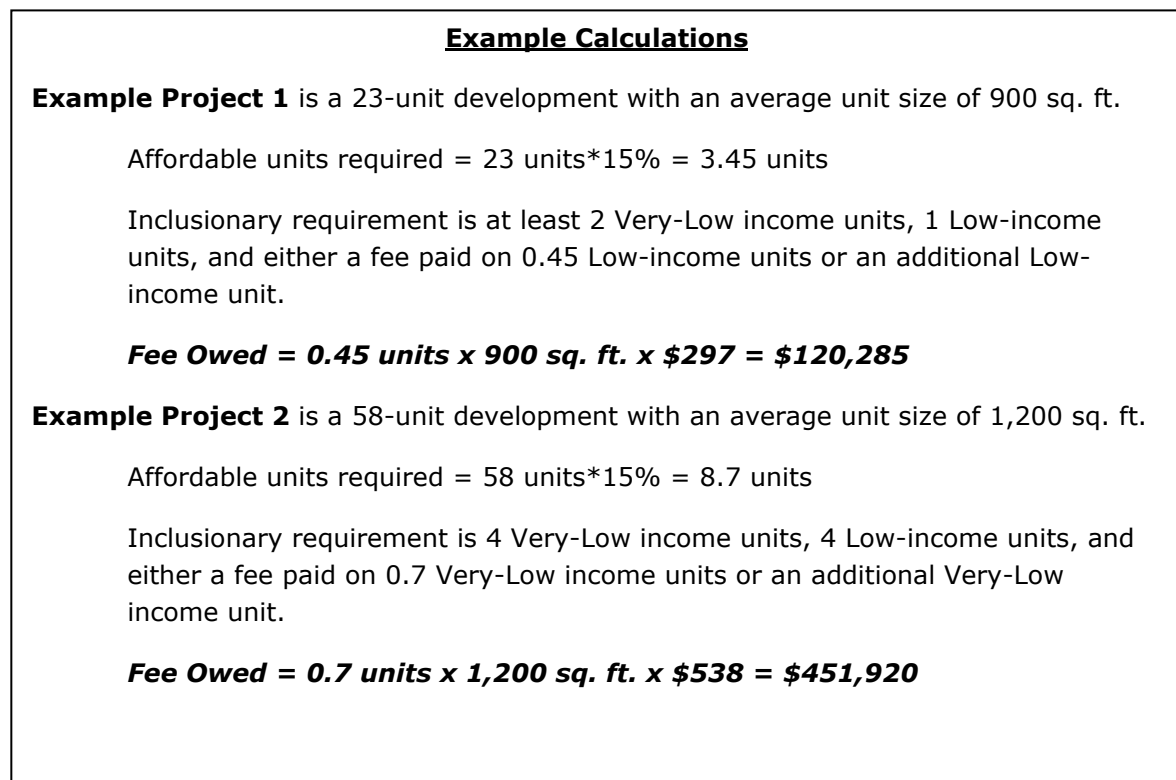


Figure 2 Example Calculations of In-Lieu Fees Owed for New Rental Projects



For-Sale Development In-Lieu Fee

For-sale developments have the option to pay an in-lieu fee for the entirety of their affordable unit requirement, or to provide on-site units affordable to Moderate-income households and pay an in-lieu fee on any fractional required units. **Table 10** summarizes the calculation of in-lieu fees needed to support the development of for-sale units affordable to Moderate income households in South Pasadena. The table shows the fee on both a per unit and a per square foot basis, based on a prototype affordable for-sale condominium unit of 1,200 square feet (see **Table 3**). As with rental developments, for-sale developments are required to build affordable units similar to the project’s market-rate units. Thus, the required fee for a given project should be calculated using the average size of its market-rate units. For example, if the average market-rate unit size in an 14-unit for-sale project is 1,500 square feet, the project needs to pay an in-lieu fee equivalent to the 2.1 required affordable units (14 units x 15%=2.1 units), and the fee would be calculated as the subsidy needed to support 3,150 square feet worth of units affordable to a moderate-income household (1,500 sq. ft.*2.1=3,150 sq. ft.).

Table 10 In-Lieu Fee Per Affordable Unit and Affordable Square Feet for For-Sale Projects

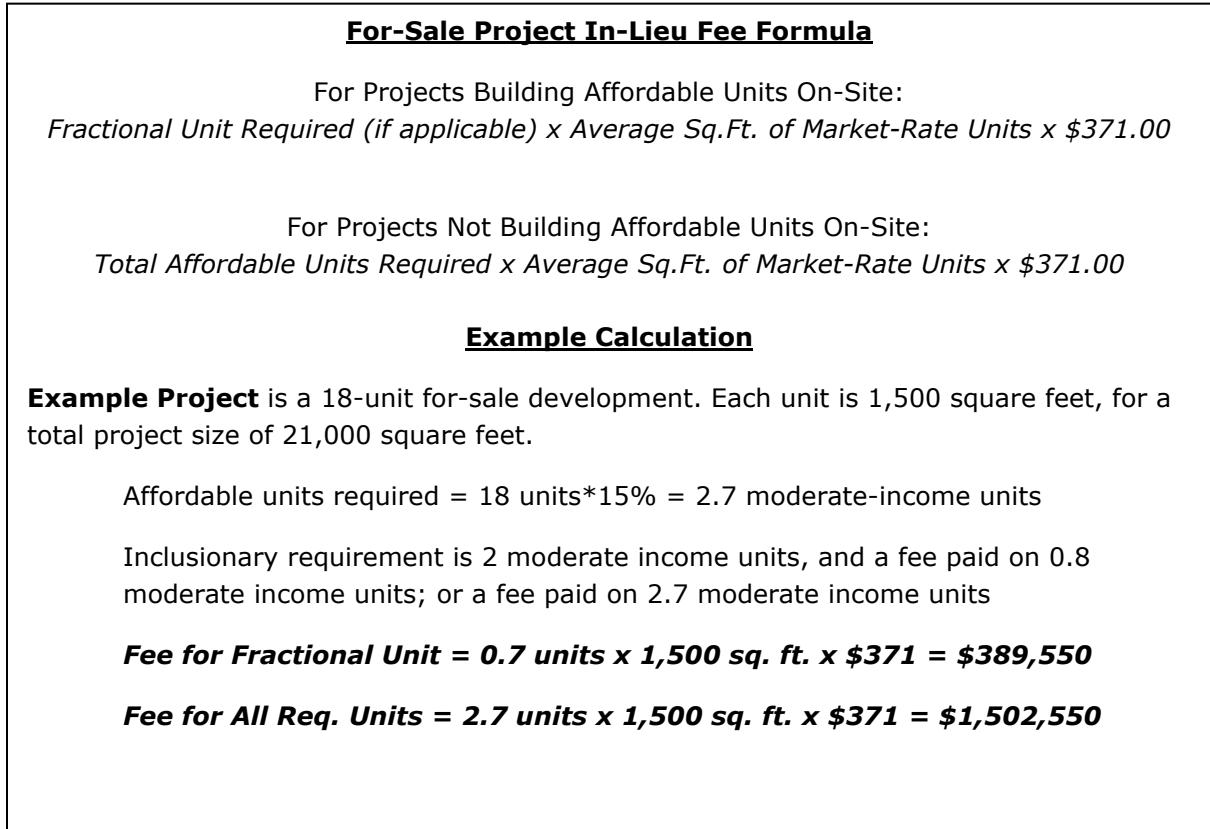
Item	<i>Moderate (120% AMI)</i>
<u>Proposed For-Sale In-Lieu Fee Calculation</u>	
Value/Unit	\$376,000
Costs/Unit	\$821,798
Subsidy per Affordable Unit	\$445,798
Subsidy per Affordable Sq. Ft. [1]	\$371

[1] Based on a 1,200 square foot unit.
 Source: *Economic & Planning Systems, Inc.*

Besides the difference in affordability level, a critical difference in the fee program for for-sale projects is that a developer may choose to pay the in-lieu fee for *all* required affordable units, not just for fractional or partial units.⁸ The formula for determining a for-sale project’s in-lieu fee requirement is presented in **Figure 3** below, followed by an example.

⁸ If a for-sale project includes affordable units on-site, an in-lieu fee can be paid on any required fractional units, or the developer can round-up to provide an additional affordable unit, as with rental projects.

Figure 3 In-Lieu Fee Formula and Calculation Example for New For-Sale Projects in South Pasadena



Feasibility Analysis

Given the City's preference for the development of on-site affordable units, there is a desire to understand the relative impact on development economics of constructing affordable units on-site versus paying the in-lieu fee. In the case of rental projects, developers have a choice between paying an in-lieu fee on a required fractional affordable unit or rounding up to provide that additional affordable unit on-site. In the case of for-sale projects, developers may choose between building the required affordable units on-site or paying the corresponding in-lieu fee for the whole affordable requirement. If the cost of the in-lieu fee is lower than the financial burden represented by building the on-site affordable units, developers will likely opt into paying the fee; conversely, if the fee is equal to or higher than the financial burden represented by building on-site units, developers become more likely to provide the units directly.

To assess the development feasibility impact of these trade-offs on new market-rate development, EPS modeled two market rate development scenarios using the same product prototypes used in the affordability gap analysis and summarized in **Table 3**.

The cost assumptions for developing the market-rate units are the same as the costs for the prototype affordable units, with one exception. The City is considering the provision of selected fee waivers for on-site affordable units – specifically, waiver of the City's Growth Capital Requirement Impact Fee and Public Arts fee. The savings associated with this waiver are included in each of the following feasibility models that include on-site affordable units.

Impact of In-Lieu Fees on Rental Development Feasibility

To provide an illustrative analysis of feasibility trade-offs associated with new rental projects, EPS formulated a hypothetical market-rate rental project for the analysis. The project included the following assumptions:

- *Lot Size* – EPS assumed that the project would be developed on a 0.8-acre lot. This lot size is similar to new residential development projects being proposed in the City.
- *Density and Unit Count* – EPS assumed that the base density for the lot is 70 units/acre, which would allow for 56 units on the 0.8-acre site. However, given the project's affordability requirements, it would automatically qualify for a density bonus under California's State Density Bonus law. Specifically, if project includes four Very-Low income units and four Low-income units on-site, it qualifies for a bonus of 25 percent over the base density (allowing for a total unit count of 70); if the project includes five Very-Low income units and four Low-income unit on-site, it qualifies for a bonus of 27.5 percent over the base density (allowing for a total unit count of 72).⁹

⁹ The density bonus is based on the percentage of affordable units relative to total unit count at the base density. Providing a higher percentage of units as affordable entitles a project to a higher density bonus. A detailed table of density bonuses by percentage of affordable units can be found at the following link: https://www.meyersnave.com/wp-content/uploads/California-Density-Bonus-Law_2023.pdf

The additional bonus units allowed over the base density would be rented at market rates.

- *Affordable Units* – Both projects are required to provide 8.4 affordable units – four units for Very-Low income households, four units for Low-income households, and either an additional unit for a Very-Low income household or an in-lieu fee paid to subsidize 0.4 units affordable to Very-Low income households.
- *Market Rate Rents* – The rent for the market-rate units is set at \$4,200 per month, based on EPS research of recent market rents in the South Pasadena market.

Table 11 shows the results of the feasibility analysis for the example rental project. For the project that rounds up and builds an additional on-site affordable unit, total returns are slightly less than if the in-lieu fee is paid for the fractional required unit. The additional bonus density that can be achieved when the developer rounds up the number of affordable units does not offset the additional cost of that unit.

Based on this analysis, the returns are comparable under either option: the difference is negligible in that the yield is less than 0.01 percentage points higher when paying the fractional fee on 0.4 Very-Low income units rather than rounding up and build an additional affordable unit on-site. Other project-specific factors are more likely to guide the developer's choice to build on-site or pay the in-lieu fee on fractional units.

For example, the developer may be less likely to build on-site if the fraction of a required unit is small versus large (say, 0.2 versus 0.8) or if the unit is a Low-income unit instead of a Very-Low income unit. This analysis also assumes that a developer takes full advantage of the State Density Bonus, which may not always be possible due to site constraints or other limitations. EPS anticipates that each developer will make a choice based on the economics of their own individual project.

Table 11 Feasibility Impact of Proposed In-Lieu Fee on a Rental Development Project

				<i>For Rent Property</i>	
				4-Story Wood Frame Apartment Building with Structured Parking	
				Round Up Fractional Unit (Build on Site)	Pay In-Lieu Fee on Fractional Unit
Development Program Assumptions					
Base Unit Count				56	56
Required Affordable Units				8.4	8.4
Very-Low Income Units				5	4
Low-Income Units				4	4
On-Site Affordable Units Built				9	8
% Units Very-Low Income				8.9%	7.1%
State Density Bonus [1]				27.5%	25.0%
Density Bonus Units				16	14
Total Built Units				72	70
Acreage				0.80	0.80
Density/Acre after Bonus				90	88
Gross Unit Size				1,176	1,176
Net Unit Size [2]		85% efficiency		1,000	1,000
Number of Bedrooms				2	2
Parking Spaces/Unit [3]				1.00	1.00
Cost Assumptions					
Land/Unit [4]	\$4,750,000 /Acre			\$52,778	\$54,286
Direct Construction Costs/Unit [5]				\$461,800	\$461,800
Indirect Costs/Unit [6]	20% of direct costs			\$92,360	\$92,360
Fractional Affordable Units					0.4
Square Feet of Affordable Units					400
Total In-Lieu Fee	\$538 per affordable sq. ft.				\$215,200
In-Lieu Fee per Unit Built					\$3,074
Fee Waiver for On-Site Affordable Units Per Unit [7]				(\$964)	(\$883)
Total Cost/Unit (rounded)				\$606,000	\$611,000
Total Development Cost				\$43,632,000	\$42,770,000
Project Value					
Revenue per Year per VLI Unit [8]	\$1,188 per month			\$14,253	\$14,253
Revenue per Year per LI Unit [8]	\$2,040 per month			\$24,483	\$24,483
Affordable Revenue per Year				\$169,197	\$154,944
MR Revenue per Year [9]	\$4,200 /mo per unit			\$3,175,200	\$3,124,800
Operating Costs [10]	30% OpEx Ratio			(\$1,003,319)	(\$983,923)
Total NOI				\$2,341,078	\$2,295,821
Yield on Cost [11]				5.37%	5.37%

[1] Per State Density Bonus Law (California Government Code Sections 65915 – 65918).

[2] Assumes that approx. 85% of gross building space can be rented, excluding common areas, circulation space, etc.

[3] Assumption of 1.0 parking spaces/unit, consistent with the City's density bonus requirements for projects including affordable housing

[4] Estimate based on recent sales data from CoStar and conversations with local developers for projects of similar density.

[5] See cost assumptions on Table 6.

[6] Includes estimated costs for architecture and engineering; entitlement and fees; project management; appraisal and market study; marketing, commissions, and general administration; financing and charges; insurance; developer fee and contingency.

[7] The City currently waives the Public Arts Fee on affordable units, which is equal to 1% of the unit costs. The City is additionally considering a waiver of the Growth Capital Requirement Fee for on-site affordable units, which is equal to \$1.64 per square foot. The pro forma models the savings to a developer of those fee waivers on the on-site affordable unit.

[8] See affordable rents assumptions on Table 5.

[9] Based on CoStar data for similar 2BR apartments located in South Pasadena.

[10] Reflective of properties in Los Angeles County. Inclusive of management, maintenance, common utility, and property tax costs.

[11] Yield on cost is calculated as NOI divided by total development costs, and is a typical return metric used for rental real estate projects.

Sources: Los Angeles County; California Housing and Community Development; CoStar; CBRE; and Economic & Planning Systems, Inc.

Impact of In-Lieu Fees on For-Sale Development Feasibility

To provide an illustrative analysis for feasibility trade-offs associated with the options for new for-sale housing projects to comply with the City's affordability requirements, EPS formulated a hypothetical market-rate for-sale project for the analysis. The project included the following assumptions:

- *Lot Size* – Similar to the rental project example, EPS assumed that the for-sale project would be developed on a 0.8-acre lot.
- *Density and Unit Count* – EPS again assumed that the density for the lot is 70 units/acre, which would allow for 56 units on the 0.8-acre site. EPS assumed that the project that builds eight Moderate income units would achieve a density bonus of 11 percent, for a total unit count of 63.
- *Affordable Units* – The project is required to provide nine units for Moderate income households on-site, or to pay an in-lieu fee for Moderate income units.
- *Market Rate Prices* – The sale price for the market-rate units is set at \$990,000, which is based on EPS research of recent condo sales in the South Pasadena market.

Table 12 shows the results of the feasibility analysis for the example for-sale project. Total profit margin returns for a project that builds on-site affordable units (and utilizes the State Density Bonus) are higher than for a project that pays the in-lieu fee. Therefore, a developer would be more likely to build on-site units rather than pay the fee. However, some developers may choose to pay the fee rather than build on-site due to project-specific factors.

It is worth noting that the fee waiver amounts considered are sufficiently small that they are unlikely to have a strong impact on a developer's decision to build on-site or not. However, they are slightly larger and could be more influential for the example for-sale project than for the example rental project.

Table 12 Feasibility Impact of Proposed In-Lieu Fee on a For-Sale Development Project

<i>For Sale Property</i>			
4-Story Wood Frame Condo Building with Structured Parking			
Input Assumptions	Build Affordable Units On Site	Pay In-Lieu Fee	
Development Program Assumptions			
Total Project Units	56	56	
Required Affordable Units	8.4	8.4	
On-Site Affordable (Moderate Income)	9	0	
% Moderate	16.1%	0.0%	
State Density Bonus [1]	11.0%	0.0%	
Density Bonus Units	7	0	
Total Built Units	63	56	
Total Project Acreage	0.80	0.80	
Density/Acre after Bonus	79	70	
Gross Unit Size	1,412	1,412	
Net Unit Size [2]	85% efficiency 1,200	1,200	
Number of Bedrooms	2	2	
Parking Spaces/Unit	1.00	1.00	
Cost Assumptions			
Land/Unit [3]	\$4,750,000 /acre	\$60,317	\$67,857
Direct Construction Costs/Unit [4]		\$544,118	\$544,118
Indirect Costs/Unit [5]	20% of direct costs	\$108,824	\$108,824
Total Affordable Units		8	
Square Feet of Affordable Units		10,080	
Total In-Lieu Fee [6]	\$371 per square foot	\$3,744,706	
In-Lieu Fee per Unit Built		\$66,870	
Fee Waiver for On-Site Affordable Units Per Unit [8]		(\$1,518)	
Total Cost/Unit (rounded)		\$711,740	\$787,668
<i>Total Development Cost</i>		\$44,839,634	\$44,109,412
Affordable For Sale Value [7]		\$395,000	
Market Rate For Sale Value [8]		\$990,000	\$990,000
<i>Total Project Value</i>		\$57,015,000	\$55,440,000
Profit Margin [9]		27.2%	25.7%

[1] Per State Density Bonus Law (California Government Code Sections 65915 – 65918).

[2] Assumes that approx. 85% of gross building space can be rented, excluding common areas, circulation space, etc.

[3] Estimate based on recent sales data from CoStar and conversations with local developers for projects of similar density.

[4] See cost assumptions on Table 7.

[5] Includes estimated costs for architecture and engineering; entitlement and fees; project management; appraisal and market study; marketing, commissions, and general administration; financing and charges; insurance; developer fee and contingency.

[6] In-lieu fee is based on required Moderate income units. See Table 10.

[7] The City currently waives the Public Arts Fee on affordable units, which is equal to 1% of the unit costs. The City is additionally considering a waiver of the Growth Capital Requirement Fee on on-site affordable units, which is equal to \$1.64 per square foot. The pro forma models the savings to a developer of those fee waivers on the on-site affordable unit.

[8] See affordable value assumptions on Table 7.

[9] Assumes \$825 per sq. ft. sale price based on Redfin data for similar for-sale housing units in South Pasadena.

[9] Profit margin is calculated as project value minus project costs, divided by project costs, and is a typical return metric used for for-sale residential development projects.

Sources: Los Angeles County; California Housing and Community Development; Economic & Planning Systems, Inc.



Planning Commission Agenda Report

ITEM NO. ____

DATE: March 12, 2024

FROM: Angelica Frausto-Lupo, Community Development Director
Matt Chang, Planning Manager

PREPARED BY: Sandra Robles, Associate Planner

SUBJECT: **Project No. 2461-HDP/DRX/VAR – A request for a Hillside Development Permit (HDP) and Design Review Permit (DRX) for a 234-square-foot first-story addition and a 605-square-foot second-story addition, to an existing 1,990-square-foot single-family dwelling located at 2089 Hanscom Drive (APN: 5308-022-010). The project includes a raised deck, a one-car garage, a carport, and a second-story balcony. The request also includes a Variance (VAR) for a fence, located within the front yard setback, exceeding three (3) feet in height. In accordance with the California Environmental Quality Act (CEQA), this project qualifies for a Categorical Exemption under Section 15301, Class 1 (Existing Facilities).**

Recommendation

Staff recommends that the Planning Commission adopt a Resolution (**Attachment 1**) taking the following actions:

1. Finding the project exempt under the California Environmental Quality Act (CEQA) Guidelines, Section 15301, Class 1 (Existing Facilities).
2. Approve Project No. 2461-HDP/DRX/VAR, subject to the recommended Conditions of Approval (**Attachment 1**).

Background

The subject site is a 7,760-square-foot, irregularly shaped lot located within the Southwest Monterey Hills area and zoned Residential Single-Family (RS). The subject property is surrounded by single-family residential uses to the north and east; the area adjacent to the southwestern part of the property is zoned Open Space (see **Figure 1**, to view the Aerial). The surrounding neighborhood includes an eclectic mix of architectural styles

including 20th Century Modern, Minimal Traditional, and Ranch-style, amongst others (see **Attachments 2 and 3** for Site and Neighborhood Images).

Figure 1: Aerial



The subject site is currently developed with a 1,990-square-foot, two-story single-family residence consisting of three bedrooms and two bathrooms. Originally constructed in 1954, the home underwent an 824-square-foot addition in 1979. The addition consisted of a new second story and a carport.

The subject site has an average slope of 41.31 percent; slopping upward from the front property line and leveling off into a building pad towards the northeast portion of the property, where the existing primary residence is situated and where the addition is proposed.

Project Description

The applicant is requesting approval to add a 234-square-foot first-story addition and a 605-square-foot second-story addition (839 total square feet) to an existing 1,990-square-foot, two-story, single-family dwelling. The project also includes a 269-square-foot raised deck to the west of the dwelling, a 547-square-foot raised deck to the south of the property, and a 961-square-foot second-story balcony.

Entitlements:

The applicant is requesting the following entitlement applications for the proposed project:

1. Hillside Development Permit (HDP) for the proposed 839-square-foot addition, a total of 816 square feet for two proposed raised decks, a 961-square-foot second-story balcony, a proposed retaining wall on a site with an average slope of 20 percent or greater;
2. Design Review Permit (DRX) for the review of the design aspects of the proposed development; and,
3. Variance (VAR) to increase the height of a fence within the front yard setback to six (6) feet. The South Pasadena Municipal Code (SPMC), Section 36.300.050(B) limits fences within the front yard setback to three (3) feet.

The architectural drawings are included as **Attachment 9**.

Project Analysis

General Plan Consistency

The City has updated its General Plan to be consistent with the 2021-2029 (6th Cycle) Housing Element, which included a new Downtown Specific Plan (DTSP) to replace the Mission Street Specific Plan (MSSP), amendments to the Zoning Code and Zoning Map, the creation of a Mixed-Use Overlay District and development standards. The subject property is not slated to be rezoned, but updated General Plan policy goals will apply throughout the City. The proposed project was deemed complete prior to the General Plan update, as such, the project was subject to the evaluation criteria at the time of submittal.

The General Plan land use designation of the site is Low Density Residential, which allows for detached single-family units. The proposed project does not involve the addition of another dwelling unit; therefore, the project is consistent with the General Plan.

Zoning Code Compliance & Development Standards

The subject property is zoned Residential Single-Family (RS), which is intended for the development of detached, single-family homes. A two-story residence is a use anticipated in this zoning district. The purpose of the Residential Design Review process is to ensure that the proposed site layout and building design are suitable and compatible with the City's design standards and guidelines. The proposed project meets the requirements of the City's adopted Design Guidelines for single-family residences on hillside sites. Development standards from SPMC Sections 36.340.050—Hillside Project Development Standards; 36.220.040—Residential Zoning District General Development Standards for the RS Zone; and 36.220.050(F)—Development of Small Nonconforming Residential Parcels, were applied to the project. **Table 1**, on the following page, provides

a breakdown of the proposed project and its compliance with SPMC Sections 36.220.040 and 36.220.050(F), regulating residential land uses.

Table 1: Residential Single-Family (RS) District General Development Standards & Development of Small Nonconforming Residential Parcels

Standard	Requirement	Proposed
Lot Coverage	50% (3,880 SF max. allowed)	39.5% (3,088 SF)
Floor Area Ratio (FAR)	35% (2,716 SF max. allowed)	34.99% (2,715 SF)

Hillside Development Permit

Pursuant to SPMC Section 36.340.020, any development on a site with an average slope of 20 percent or greater requires a Hillside Development Permit—the subject site has an average slope of 41.31 percent. The purpose of the Hillside Development Permit is to ensure that developments are designed to preserve the City’s scenic resources, encourage appropriate grading practices, and encourage appropriate design to maintain the hillside in a natural, open character. **Table 2** provides a breakdown of the existing conditions of the proposed project and its compliance with SPMC Section 36.340.050—Hillside Project Development Standards, regulating residential land uses.

Table 2: Hillside Project Development Standards

Standard	Requirement	Existing	Proposed
Front Setback	10 ft.	36’-3”	33’-9”
Side Setback	10% of lot width, min. of 4 ft., max. of 10 ft. Lot Width=81’ Side Setback Requirement=8’	West: 36’-8” East: 8’-9” (existing)	Complies West: 30’ East: 8’-9” (existing)
Building Height	Maximum height for structures with a roof pitch of 3:12 or greater is 28 ft. If a roof pitch is less than 3:12, the maximum height is 24 ft.	25’-6”	Complies: 25’-11”
Siting Restrictions	Structures shall not be placed so that they appear silhouetted against the sky when viewed from a public street	Complies	Complies
Placement Below Ridgeline	50 ft. between top of the structure and the top of the ridge or knoll	Complies	Complies

Standard	Requirement	Existing	Proposed
Height of Lowest Floor Level	Vertical distance between the lowest point where foundation meets grade and the lowest floor line of the structure shall not exceed 6 ft.	Complies	Complies
Downhill Building Walls	No single building wall on the downhill side of a house shall exceed 15 ft. in height above grade.	Complies	Complies
Decks	No portion of the walking surface of a deck with visible underpinnings shall exceed a height of six feet above grade. Decks should be integrated into the architecture of the house, not appearing as an “add-on” to the primary building mass	Complies	Complies
Driveways	Driveway shall not have a grade steeper than 5% within 10 ft. of the garage or carport entry. Finished grade of driveways shall not exceed an average of 15%	N/A	N/A (Existing driveway, no grading work to the existing driveway)
Natural State	A minimum of 25% of the lot area plus the percentage figure of the average slope must be remediated to its natural state in terms of slope and vegetation.	N/A	N/A (Applies to new development)
Height of New Retaining Walls	Maximum height of six (6) feet	Complies	Complies

Variance: Increased Height of Fence within Front Yard Setback

SPMC, Section 36.300.050—Walls, Fences, and Hedges—applies to all walls, fences, and hedges throughout the City, except for retaining walls. The section places a three-foot height limitation on fences located within the front yard setback. The applicant is requesting a six-foot motorized swing gate within the front yard setback. The average slope for the property is 41.31 percent and toward the southern portion of the lot the slope is more significant (see **Attachment 6** to view **Slope Analysis**). The placement of the existing driveway is at an angle, making it difficult for the applicant to place a gate beyond the 10-foot front yard setback (see **Figures 2 and 3** to view the front setback location and an image of the driveway). Due to the topography of the Southwest Monterey Hills area, each parcel is unique in its characteristics. The subject property is upslope and not comparable to the neighboring properties; the steep terrain of the project site is the driving factor for the Variance. If the proposed project were to meet the 10-foot setback requirement, the operable gate would be placed near the top of the driveway and would negate the added security that the applicant desires.

Soils & Grading

The applicant submitted a Geotechnical Investigation Report of the subject property (**Attachment 5**). According to the report, the subject project is feasible and concluded the following:

- A. Seismicity: According to the report, the subject site is located within a seismically active region of Southern California, but no active faults are crossing the property.
- B. Excavatability: According to the report, excavation should be able to be accomplished with conventional earthwork equipment.
- C. Surficial Soil Conditions: According to the report, the property is situated in previously placed fill of 3 to 4 feet, not suitable for additional fills and/or foundation support and are subject to remedial works recommended in the report.
- D. Seismic Induced Hazard: According to the report, the site is not located within the potential seismic induced landslide or liquefaction areas.
- E. Surficial Soil Removal and Recomposition: According to the report, all vegetation and other materials over 8 inches should be removed from the subject site.
- F. Groundwater: According to the report, no groundwater was encountered.

The addition is situated on a relatively flat building pad, as such, the grading for the residence will be minimal, as would normally be expected for structures constructed on building pads. The applicant submitted a Preliminary Grading and Drainage Plan for the subject property (**Attachment 8**). According to the grading plan, the proposed project will require minimal grading with 10 cubic yards of cut and 4 cubic yards of fill.

The documents reviewed by the City include a topographic map, slope analysis, and preliminary grading plan prepared by a Registered Professional Engineer. The applicant will provide a final grading plan prepared by Registered Professional Engineer. As required and conditioned, the final grading plan will be approved by the Public Works Department and the Building Division prior to grading permit issuance. As such, the grading for the retaining wall would not impact the safety of the site, adjacent properties, or the general safety and welfare of the public. The applicant is required to submit a draft Construction Management Plan to be reviewed and approved by the Public Works Department to reduce potential construction impacts on nearby residents (see **Attachment 1** for Conditions of Approval).

Design Review

Hillside Design Guidelines

The Hillside Development Design Guidelines in Section 36.340.040 of the SPMC and the City's residential design guidelines for hillside lots apply to the proposed project. To approve the project, the Planning Commission must find that the proposed project is

consistent with City's design requirements and must make the findings for approval for Design Review. These guidelines and findings require projects to be compatible within the neighborhood context and surrounding architectural characteristics so as not to adversely impact the character of the City. The City's adopted *Design Guidelines for Residential Single-Family Buildings on Hillside Lots*, state the following:

1. *Neighborhood Compatibility and Character: Alterations to existing hillside homes should be designed with consideration for the character and scale of the existing development in the vicinity. Compatibility should be developed in the design of residence following a review of exiting site conditions, visibility of the site, and the size, scale, and character of existing development within 500 feet of the site.*

The proposed addition is situated to the rear of the property and is set back approximately 33 feet from the front property line, which will result in a minimal visual impact from the front street view. The character of the existing neighborhood is a mix of architectural styles and sizes, consisting of a variety of one- and two-story homes. As such, the proposed addition will complement the scale of the existing neighborhood.

2. *View Protection: Preservation of views from adjoining hillside lots should be carefully considered in the design of a new home or addition to an existing home on a hillside lot.*

The views from the properties located south from the subject property (across the street), will not be visually impacted from the addition, as the subject property is located uphill. The property to the east is situated slightly uphill from the subject property and will not have view impacts. The property located northwest of the subject property will not have a view impact, as the property has views to the southwest.

3. *Scale and Massing: Vertical building walls should not exceed 15 feet in height above grade. Any vertical walls above 15 feet should be stepped back from adjacent lower walls by a minimum distance of ten feet. Flat building walls over one story in height and over 25 feet in horizontal dimension are discouraged to minimize unarticulated wall mass.*

The downhill building wall requirement would not apply to this addition, as the addition will be situated on an existing building pad, which does not allow for a stepped design, as such, the proposed project is in compliance.

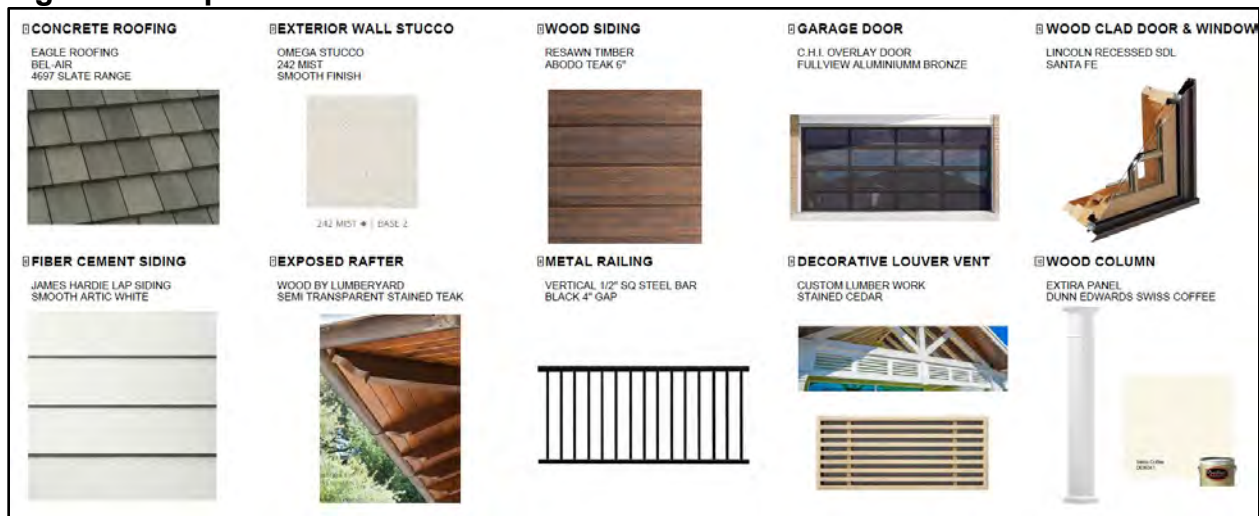
The surrounding neighborhood includes a mix of large, multi-story homes and small, one-story homes and a variety of architectural styles. The proposed addition will be to the rear of the property and will have minimal view impacts from hilltop homes. The proposed addition is designed with consideration of the character and scale of the existing multi-story residential developments in the vicinity.

Design Review

The existing building consists of three bedrooms and two bathrooms. The first floor will be reconfigured to accommodate one bedroom and an open floor plan with a kitchen, dining area, and family room with a small laundry room. The second floor will include two bedrooms, an office, a loft and two-and-a-half bathrooms. The second floor will also include a large balcony.

The proposed addition and remodel boasts a modern architectural style with large windows, a sleek deck and balcony, and a hipped roof. The architectural features include large wood clad doors and windows manufactured by Lincoln Windows. The exterior walls will be clad with a combination of smooth-finish stucco, fiber cement siding, and wood siding. The family room will include large folding doors to create an indoor/outdoor feel (see **Figure 4** for proposed materials).

Figure 4: Proposed Materials



As shown in the photo rendering and front elevations (**Figures 5, 6 and Attachment 9**), the mass and scale of the proposed project, would be well-proportioned and harmonious with the established neighborhood (see **Attachments 2 and 3 for Site and Neighborhood Images**). The applicant is proposing large windows from all elevations, but to address privacy concerns, the applicant has reduced the number of windows and size of windows to the east elevation (see **Figures 7-10** to view elevations and **Attachment 9**). The overall design of the project would result in an attractive and orderly development as intended by the General Plan and design guidelines. As required and conditioned, the final design, materials, and construction documents would be reviewed and approved by the Planning Division and Building Division prior to permit issuance.

Figure 5: Rendering Viewed from the Front Elevation



Figure 6: Rendering Viewed from the Top



Figure 7: Front (West) Elevation



Figure 8: Proposed South Elevation

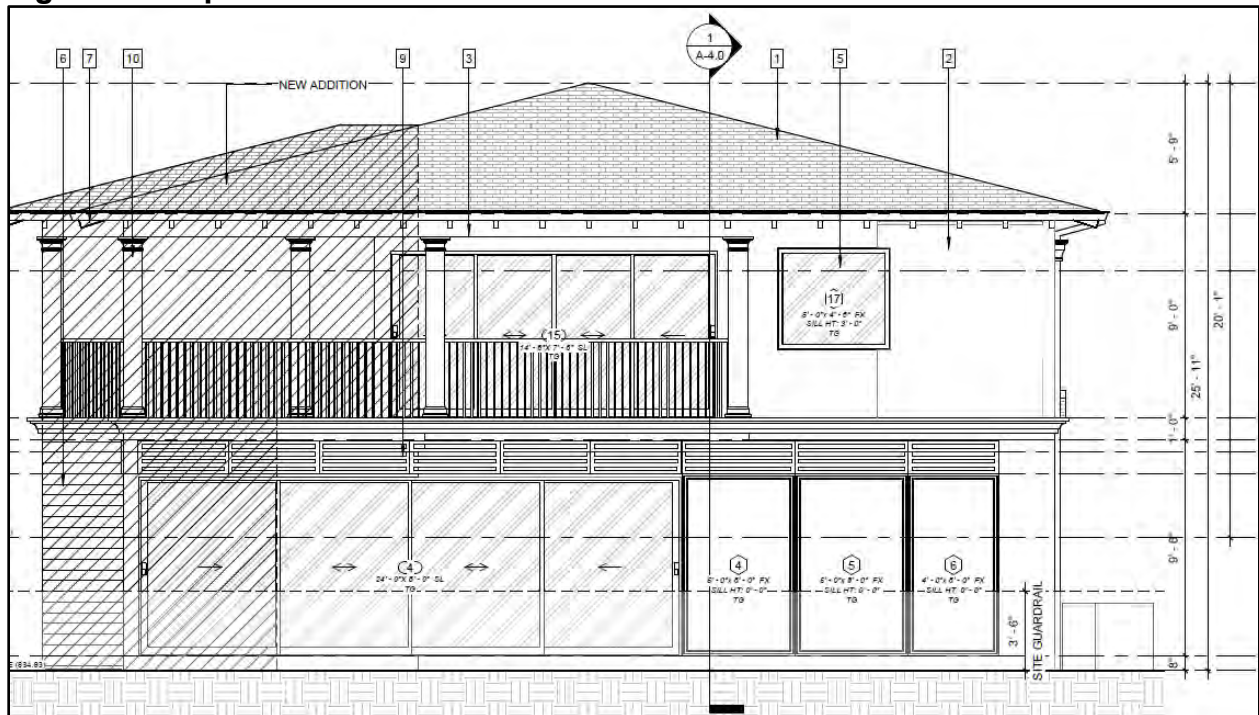


Figure 9: Proposed East Elevation

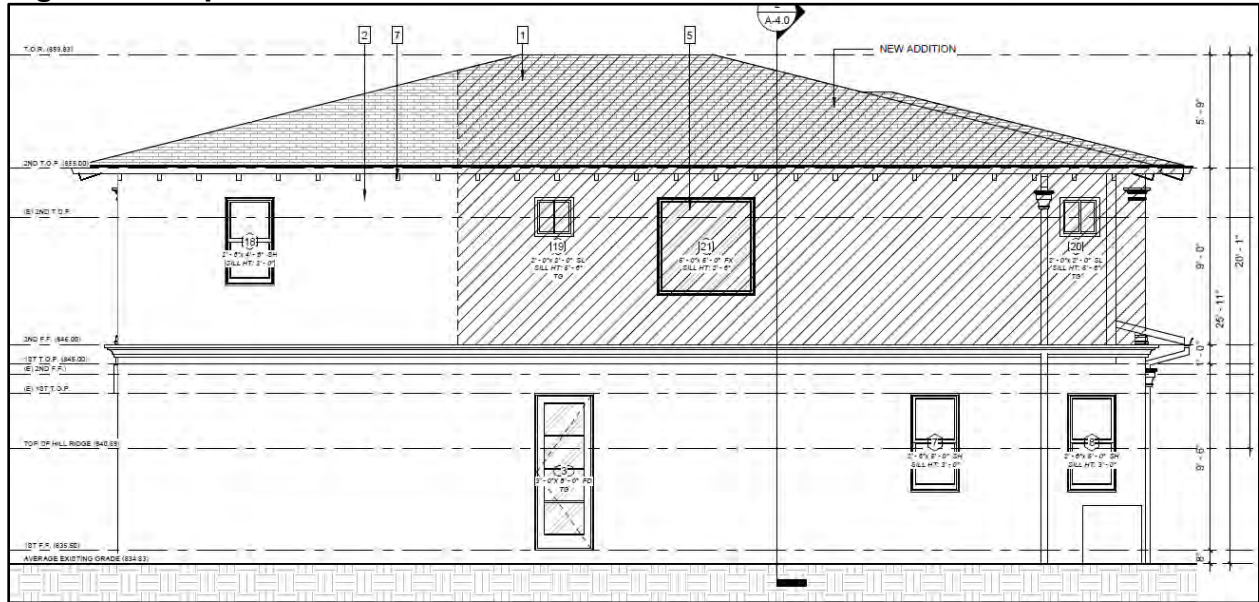


Figure 10: Proposed North Elevation



Findings

In order to approve the project, the Planning Commission shall find that the design and the proposed layout comply with the findings for a Hillside Development Permit, Design Review, and a Variance as stipulated in the South Pasadena Municipal Code. All findings for the proposed project may be found within the resolution (**Attachment 1**).

Environmental Analysis

This item is exempt from California Environmental Quality Act (CEQA) analysis based on State CEQA Guidelines Section 15301, Class 1 – Existing Facilities. Class 1 exemption includes additions to existing structures provided that the addition will not result in an increase of more than 10,000 square feet, in which the project site is in an area where all public facilities are available and is not located in an environmentally sensitive area.

Alternatives to Consider

Planning Commission may also consider the following alternatives to this recommendation:

1. The Planning Commission may approve the project with or without modified/added conditions;
2. The Planning Commission may continue the project to address comments discussed; or
3. The Planning Commission may deny the project.

Public Notification

Hearing notices were sent to all properties within a 300-foot radius of the property and to all properties located within the Southwest Monterey Hills Notification Area on February 29, 2024. A Public Hearing Notice was published on March 1, 2024 in the South Pasadena Review. In addition, the public was made aware that this item was to be considered at a public hearing by virtue of its inclusion on the legally publicly noticed agenda, posting of the same agenda and reports on the City's website.

Public Comments

At the time of writing this report, staff has not receive public comments regarding the proposed project.

Next Steps

If the Planning Commission approves the project, a 15-day appeal period will commence in which any person affected by the decision may appeal the decision for a public hearing by the City Council. Should there be no appeals during this 15-day period, the applicant may proceed through the Plan Check Process with the Building Division and staff will review the construction plans to ensure that all conditions are satisfied.

Attachments:

1. P.C. Resolution with Exhibit "A" – Conditions of Approval
2. Site Images
3. Neighborhood Images
4. Materials Brochures
5. Geotechnical Investigation Report
6. Slope Analysis
7. Landscape Plans
8. Preliminary Grading & Drainage Plans
9. Architectural Plans & Renderings

ATTACHMENT 1

P.C. Resolution with Exhibit “A” – Conditions of Approval

P.C. RESOLUTION NO. 24 - __

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF SOUTH PASADENA APPROVING PROJECT NO. 2461-HDP/DRX/VAR FOR A HILLSIDE DEVELOPMENT PERMIT AND DESIGN REVIEW PERMIT FOR A 234-SQUARE-FOOT, FIRST-STORY ADDITION, A 605-SQUARE-FOOT SECOND-STORY ADDITION AND A VARIANCE FOR A FENCE, LOCATED WITHIIN THE FRONT YARD SETBACK, EXCEEDING THREE FEET IN HEIGHT FOR AN EXISTING SINGLE-FAMILY DWELLING LOCATED AT 2089 HANSCOM DRIVE (APN: 5308-022-010); AND MAKING A DETERMINATION OF EXEMPTION UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

WHEREAS, on October 16, 2021, David Sun and Yun Hsieh (the “applicant”) submitted applications for a Hillside Development Permit (HDP) and Design Review Permit (DRX) to add a 234-square-foot first-story addition and a 605-square-foot second-story addition to an existing 1,990-square-foot, two-story, single-family dwelling located at 2089 Hanscom Drive (APN: 5308-022-010). The project also includes requests for the addition of an 816-square-foot deck, a 961-square-foot second-story balcony, a Variance (VAR) for a fence located within the front yard setback to exceed three feet in height with the highest portion of the fence being six feet in height (the above-referenced applications and requests are referred to herein as the “project” or “proposed project”); and

WHEREAS, the subject property is zoned Residential Single-Family (RS) and has a General Plan land use designation of Low Density Residential; and

WHEREAS, the proposed project is categorically exempt from the California Environmental Quality Act (CEQA), per CEQA Guidelines Section 15301, Class 1 - Existing Facilities. The project will not have a significant effect on the environment because the project falls under a Class 1 - Existing Facilities exemption as an addition to an existing structure that will not result in an increase of more than 10,000 square feet; the project is in an area where all public services and facilities are available to allow for maximum development permissible in the General Plan; and is not located in an environmentally sensitive area; and

WHEREAS, the Community Development Department evaluated the project for consistency with the City's General Plan, South Pasadena Municipal Code, the City's Design Guidelines, and all other applicable state and local regulations; and

WHEREAS, on March 1, 2024, the City of South Pasadena Planning Division, published a legal notice in the *South Pasadena Review*, a local newspaper of general circulation, indicating the date, time, and location of the public hearing in compliance with state law concerning Project No. 2461-HDP/DRX/VAR. On February 29, 2024 said public hearing notices were also mailed to each property owner within a 300-foot radius of the project site and within the Southwest Monterey Hills Notification Area in accordance with the requirements of South Pasadena Municipal Code declaring the project review by the Planning Commission; and

WHEREAS, the South Pasadena Planning Commission held a duly noticed public hearing on March 12, 2024, at which time it considered the staff report, oral report, the testimony, and the written evidence submitted by and on behalf of the applicant and by members of the public concerning Project No. 2461-HDP/DRX/VAR.

NOW, THEREFORE, THE PLANNING COMMISSION OF THE CITY OF SOUTH PASADENA DOES HEREBY FIND, DETERMINE, AND RESOLVE AS FOLLOWS:

SECTION 1: ACKNOWLEDGEMENTS

The foregoing recitals are true and correct and are incorporated and made an operative part of this resolution.

SECTION 2: ENVIRONMENTAL REVIEW FINDINGS

The Planning Commission has determined that the proposed project is Categorically Exempt from the provisions of the California Environmental Quality Act (CEQA), under CEQA Guidelines Section 15301, Class 1 - Existing Facilities. Class 1 exemption includes the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures involving negligible or no expansion of existing or former use. The project will not have a significant effect on the environment because the project falls under a Class 1 - Existing Facilities exemption as an addition to an existing structure that will not result in an increase of more than 10,000 square feet; the project is in an area where all public services and facilities are available to allow for maximum development permissible in the General Plan; and is not located in an environmentally sensitive area.

SECTION 3: HILLSIDE DEVELOPMENT PERMIT FINDINGS

Based upon the entire record made available at the March 12, 2024 public hearing, including the public hearing, the staff report, the oral presentation, and related documents submitted to the Planning Commission prior to and at the public hearing, the Planning Commission finds and determines that the proposed project is consistent with all applicable findings for approval of a Hillside Development Permit pursuant to the South Pasadena Municipal Code (SPMC), Section 36.410.065(F), as follows:

- 1. The proposed use complies with requirements of Division 36.340 (Hillside Protection) and all other applicable provisions of this Zoning Code.**

The project uses thoughtful site design which conforms to the hillside development standards and design guidelines. The project is considerate of the character and scale of the existing single-family developments in the vicinity as the addition and remodel is limited to the existing building pad and will not affect the neighboring

properties. With the exception of one Variance being requested for a fence to exceed the 3-foot height limitation within the front yard setback, proposed at 6 feet in height, the project as designed and conditioned, will comply with the Hillside Protection Ordinance and the RS standards in the SPMC.

2. The proposed use is consistent with the General Plan and any applicable specific plan;

The General Plan land use designation of the site is Low Density Residential, which allows for detached single-family units. The proposed project does not involve the addition of another dwelling unit; therefore, the project is consistent with the General Plan. The project is not located within a specific plan.

3. The establishment, maintenance, or operation of the use would not, under the circumstances of the particular case, be detrimental to the health, safety, or general welfare of the persons residing or working in the neighborhood of the proposed use;

The neighborhood is developed with a mix of hillside homes in both architectural style and scale; as required and conditioned, all construction documents, including grading plans and calculations, would be prepared by professional architects or engineers and must be formally reviewed and approved by the appropriate City departments prior to issuing permits. The proposed use of a single-family residential home will remain unchanged and as designed and conditioned, would not be detrimental to the health and safety or general welfare of persons residing or working in the neighborhood.

4. The use, as described and conditionally approved, would not be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the City; and,

Prior to commencing construction, the project is required to comply with and obtain all applicable building permits, including those necessary for grading, utilities, public works, and fire prevention. Additionally, the applicant shall provide a construction management plan, as required in the Southwest Monterey Hills Construction Plan area, prior to the issuance of building permits.

5. The design, location, operating characteristics, and size of the proposed use would be compatible with the existing and future land uses in the vicinity, in terms of aesthetics, character, scale, and view protection.

The proposed use of single-family residential will remain unchanged and the addition is consistent with the established residential neighborhood. The proposed addition is set back 33 feet from the front property line, which will result in a minimal visual impact from the front street view. The scale of the project is appropriate in size, when compared to the surrounding neighborhood and the topography of the land and the configuration of neighboring properties minimizes view impacts. With the exception

of the variance requested, the proposed design complies with the City's Hillside Design Guidelines, the Hillside Protection Ordinance, and the SPMC, including but not limited to building mass, scale, respect of the topography, and lot coverage

SECTION 4: DESIGN REVIEW FINDINGS

Based upon the entire record made available at the March 12, 2024 public hearing, including the public hearing, the staff report, the oral presentation, and related documents submitted to the Planning Commission prior to and at the public hearing, the Planning Commission finds and determines that the proposed project is consistent with all applicable findings for approval of a Design Review Permit pursuant to the South Pasadena Municipal Code (SPMC), Section 36.410.040(I), as follows:

- 1. Is consistent with the General Plan, any adopted design guidelines and any applicable design criteria for specialized areas (e.g., designated historic district or other special districts, plan developments, or specific plans);**

The General Plan designation for the subject property is Low Density Residential and the project complies with the density of one single-family dwelling. With the exception of the variance being requested by the Applicant, the proposed project complies with the City of South Pasadena's Design Guidelines for Hillside Homes as to architecture, scale, building mass, building height, lot coverage, and compatibility with the neighborhood. The surrounding neighborhood includes a mix of large, multi-story homes and small, one-story homes and a variety of architectural styles. The proposed addition and remodel will have minimal view impacts from hilltop homes.

- 2. Will adequately accommodate the functions and activities proposed for the site, will not unreasonably interfere with the use and enjoyment of the neighboring, existing, or future developments, and will not create adverse pedestrian or traffic hazards;**

The project involves construction of an addition and remodel to an existing single-family dwelling. The addition will provide additional space for residential living, with indoor and outdoor areas incorporated into the design. The ground-level addition will include an open floor plan with one bedroom and the second-story addition will accommodate two additional bedrooms and two-and-a-half bathrooms. The proposed addition and remodel is consistent with the design standards. Based upon the height and mass of the proposed addition and its location to the rear of the property, the addition will not interfere with the use and enjoyment of neighboring, existing, or future developments. As conditioned, the project's mass, scale, bulk, and temporary construction activities would not unreasonably interfere with the use and enjoyment of the neighboring, existing, or future developments, and will not create adverse pedestrian or traffic hazards. A construction management plan will be reviewed and approved by staff during the Building and Public Works permitting process.

- 3. Is compatible with the existing character of the surrounding neighborhood and that all reasonable design efforts have been made to maintain the attractive, harmonious, and orderly development contemplated by SPMC Section 36.410.040 and the General Plan; and**

The project site is surrounded by multi-story residential buildings of different architectural styles and sizes. Except for the variance sought, the project complies with all the development standards for zoning and hillside lots. The proposed addition is compatible with the neighborhood and with a 33-foot building setback from the front property line, it will have minimal street view impacts. The building height, size, and form fits the size of the lot. As proposed, the project complies with requirements contemplated by SPMC Section 36.410.040 and the General Plan.

- 4. Would provide a desirable environment for its occupants and neighbors, and is aesthetically of good composition, materials, and texture that would remain aesthetically appealing with a reasonable level of maintenance and upkeep.**

The proposed project has been designed with consideration to its future occupants and neighbors. The proposed project uses appropriate materials that complement the eclectic architecture of the surrounding neighborhood. The home features a modern design; large windows at the north, west, and south elevations; minimal windows at the east elevation for added privacy with the adjacent property; the residence will be clad with a combination of smooth stucco, fiber cement siding, and wood siding. The proposed project incorporates a composition of high-quality materials that further assists in allowing for the preservation of a desirable and aesthetically appealing presentation with reasonable maintenance.

SECTION 5: VARIANCE FINDINGS FOR INCREASE HEIGHT OF FENCE WITHIN THE FRONT YARD SETBACK

Based upon the entire record made available at the March 12, 2024 public hearing, including the public hearing, the staff report, the oral presentation, and related documents submitted to the Planning Commission prior to and at the public hearing, the Planning Commission finds and determines that the proposed project is consistent with all applicable findings to grant a Variance for an increased fence height within the front yard setback, pursuant to the South Pasadena Municipal Code (SPMC), Section 36.410.080, as follows:

- 1. There are special circumstances applicable to the subject property (e.g., location, shape, size, surroundings, topography, or other conditions), so that the strict application of this Zoning Code denies the property owner privileges enjoyed by other property owners in the vicinity and within the same zoning district, or creates an unnecessary and involuntarily created hardship, or unreasonable regulation which makes it impractical to require compliance with the development standards;**

There are special circumstances applicable to the subject property which consists of

an average slope of 41.31 percent and where the proposed fence is proposed, the slope is significant. SPMC, Section 36.300.050 requires that fences located within the front yard setback be limited to three (3) feet in height. In accordance to the SPMC, Section 36.340.050—Hillside Development Project Standards—the front yard setback is 10 feet from the front property line. The Applicant is requesting a six-foot motorized swing gate within the front yard setback, as the placement of the existing driveway is at an angle, making it challenging to place the fence beyond the 10-foot front yard setback. Due to the unique topography of the Southwest Monterey Hills area, each parcel is unique in its characteristics. The subject property is upslope and not comparable to neighboring properties; the steep terrain of the project site is the driving factor for the Variance.

2. Granting the Variance would:

- a. Be necessary for the preservation and enjoyment of substantial property rights possessed by other property owners in the same vicinity and zoning district, and denied to the subject property owner;**

The subject site is surrounded by existing single-family residences of varying architectural styles, sizes, and topography. The Southwest Monterey Hills area is unique in its topography and neighboring parcels are often not comparable. The subject site is situated upslope and the existing driveway is set at an angle, making it difficult for the Applicant to have a fence beyond the 10-foot front yard setback.

- b. Be consistent with the General Plan and any applicable specific plan, and the limitations established by the 1983 initiative;**

The proposed fence is consistent with the General Plan, the City's adopted Design Guidelines for additions to single-family residences on hillsides, and the height limit established by the 1983 initiative. The proposed fence does not impact limitations established by the 1983 initiative and does not impact goals established by the General Plan, as the fence does not increase density.

- c. Not constitute a grant of special privileges inconsistent with the limitations on other properties in the vicinity and in the same zoning district; and**

The granting of the Variance for the fence would not constitute a grant of special privileges that are inconsistent with the limitations on other properties in the vicinity and in the same zoning district. The subject site consists of a steep uphill slope and sits within the middle of developed parcels in a densely developed residential neighborhood consisting of single-family homes on substandard hillside lots and narrow streets. The subject site has a steep terrain and the increased fence height within the front-yard setback would not constitute special privileges, as other parcels do not have the same characteristics as the subject property.

- d. Not be materially detrimental to the public convenience, health, interest, safety, or welfare of the City, or injurious to the property or improvements in the vicinity and zoning district in which the property is located.**

The increased fence height would create added security to the subject property and would not be materially detrimental to the public convenience, health, interest, safety, or welfare of the City, or injurious to the property or improvements in the vicinity and zoning districts in which the property is located. The topography of the subject property is unique in that it is upslope and the added height to the fence would have minimal visual impact from the street.

- 3. The proposed project would be compatible with the existing aesthetics, character, and scale of the surrounding neighborhood, and considers impacts on neighboring properties.**

The architectural style of the neighborhood surrounding the project site is mixed with various architectural styles. The increased height of the fence within the front-yard setback would not have an impact to the neighboring properties, as the driveway is situated at an angle and the fence will have minimal visual impact from the street.

SECTION 6: RECORD OF PROCEEDING

The documents and other materials that constitute the record of the proceedings upon which the Planning Commission's decision is based, which include, but are not limited to, the staff reports, as well as all materials that support the staff reports for the proposed project, are located in the Community Development Department of the City of South Pasadena at 1414 Mission Street, South Pasadena, CA 91030. The custodian of these documents is the City Clerk of the City of South Pasadena.

SECTION 7: DETERMINATION

Based upon the findings outlined in Sections 2-5 above and provided during the public hearing, the Planning Commission of the City of South Pasadena hereby approves Project No. 2461-HDP/DRX/VAR and the applications for a Hillside Development Permit, Design Review Permit, and a Variance for the addition to an existing single-family dwelling and an increase in fencing height in the front yard area for a property located at 2089 Hanscom Drive, subject to the Conditions of Approval that are attached hereto as "Attachment 1".

SECTION 8: APPEAL

Any interested person may appeal this decision or any portion of this decision to the City Council. Pursuant to the South Pasadena Municipal Code, any such appeal must be filed with the City, in writing, and with appropriate appeal fee, no later than fifteen (15) days, following the date of the Planning Commission's final action.

SECTION 9: CERTIFICATION OF THE RESOLUTION

The Secretary shall certify that the foregoing Resolution was adopted by the Planning Commission of the City of South Pasadena at a duly noticed regular meeting held on the 12th day of March, 2024.

PASSED, APPROVED, AND ADOPTED this 12th day of March, 2024 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Lisa Padilla, Chair

ATTEST:

Mark Gallatin, Secretary to the Planning Commission

EXHIBIT "A"
CONDITIONS OF APPROVAL
PROJECT NO. 2461-HDP/DRX/VAR
2089 Harriman Avenue (APN: 5308-022-010)

The following approvals are granted as described below and as shown on the development plans submitted to and approved by the Planning Commission on March 12, 2024:

1. Hillside Development Permit (HDP) for the proposed 839-square-foot addition (234-square-foot first-story and 605-square-foot second-story), a total of 816 square feet for two proposed raised decks, a 961-square-foot second-story balcony, a proposed retaining wall on a site with an average slope of 20 percent or greater;
2. Design Review Permit (DRX) for the review of the design aspects of the proposed development; and,
3. Variance (VAR) to increase the height of a fence within the front yard setback to six (6) feet. The South Pasadena Municipal Code (SPMC), Section 36.300.050(B) limits fences within the front yard setback to three (3) feet.

Note: As a convenience to the applicant, the development requirements from applicable Departments/Agencies are listed herein. These requirements list what the applicant will be required to comply with in order to receive a Building Permit, a Certificate of Occupancy, or other Department-issued entitlement.

PLANNING DIVISION:

- P1. Approval by the Planning Commission does not constitute a building permit or authorization to begin any construction. An appropriate permit issued by the South Pasadena Building Division must be obtained prior to construction, enlargement, relocation, conversion or demolition of any building or structure on any of the properties involved with the project.
- P2. This Design Review and Hillside Development Permit and Variance and all rights hereunder shall terminate within twelve (12) months of the effective date of the Design Review and Hillside Development Permit unless otherwise conditioned and/or unless action is taken to secure Building Permits and maintain active Building Permits with the Building Division beginning with the submittal of the plans for Plan Check review.
- P3. All other requirements of any law, ordinance, or regulation of the State of California, City of South Pasadena, and any other government entity shall be complied with.
- P4. Compliance with and execution of all conditions listed herein shall be necessary prior to obtaining any occupancy inspection clearance and/or prior to obtaining any occupancy clearance.
- P5. Any changes to the proposed project shall be submitted for review and approval to the Planning Division.

- P6. The applicant and each successor in interest to the property which is the subject of this project approval, shall defend, indemnify and hold harmless the City of South Pasadena and its agents, officers and employees from any claim, action or proceeding against the City or its agents, officers or employees to attack, set aside, void or annul any approval of the City, City Council or Planning Commission concerning this approval. In the event of any claim or lawsuit, the applicant and/or successor shall submit a deposit in such amount as the City reasonably determines necessary to protect the City from exposure to fees, costs or liability with respect to such claim or lawsuit.
- P7. The construction site and the surrounding area shall be kept free of all loose materials resembling trash and debris in excess of that material used for immediate construction purposes. Such excess may include, but is not limited to: the accumulation of debris, garbage, lumber, scrap metal, concrete, asphalt, piles of earth, salvage materials, abandoned or discarded furniture, appliances or other household fixtures.
- P8. The applicant shall sign the Southwest Monterey Hills Construction Regulations Affidavit prior to submitting a Building Permit Application with the Building Division.
- P9. The hours of construction shall be limited to the following: 8:00 am and 7:00 pm Monday through Friday, 9:00 am and 7:00 pm Saturday, and construction on Sundays limited to 10:00 am to 6:00 pm.
- P10. During construction, the clearing, grading, earth moving, or excavation operations that cause excessive fugitive dust emissions shall be controlled by regular water or other dust preventive measures using the following procedures:
- a. All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage, preferable in the late morning and after work is done for the day;
 - b. All material transported on-site or off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust;
 - c. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized so as to prevent excessive amounts of dust; and
 - d. Visible dust beyond the property line emanating from the project shall be prevented to the maximum extent feasible.
- P11. The applicant shall submit final landscape and irrigation plans showing compliance with state law and the City's Water Efficient Landscape Ordinance (SMPC Section 35.50), for approval by the Community Development Director. The final landscape plans shall provide, but not limited, to the following:
- a. Screening of all above ground equipment from public view.
 - b. Incorporating Tree Removal Permit (TRE) conditions, as recommended by the Department of Public Works.
 - c. Using California Native plants.
- P12. The construction plan shall show that all lighting on the site will be directed downward and shielded to prevent off-lighting on adjacent properties.
- P13. A construction sign with contact information for the contractor shall be clearly posted on-site

during construction.

- P14. Any proposed revision to the approved plans shall require review and approval by the Community Development Department prior to construction. The Community Development Department may refer the proposed revision to the Planning Commission or Planning Commission Chair for approval.

BUILDING DIVISION:

- B1. The second sheet of building plans is to list all conditions of approval and to include a copy of the Planning Decision letter. This information shall be incorporated into the plans prior to the first submittal for plan check.
- B2. Plans prepared in compliance with the code in effect shall be submitted to Building Division for review prior to permit issuance.
- B3. Prior to the application of a building or grading permit, a preliminary Geotechnical report that specifically identifies and proposes mitigation measures for any soils or geological problems that may affect site stability or structural integrity shall be approved by the Building Official or his/her designee. The applicant shall reimburse the City for all costs incurred to have the project soils report evaluated by an independent, third-party, peer-level soils and /or geological engineer. Approval letter of the geotechnical report review shall be copied and pasted on the first sheet of building and grading plans.
- B4. School Developmental Fees shall be paid to the School District prior to the issuance of the building permit.
- B5. Fees shall be paid to the County of Los Angeles Sanitation District prior to issuance of the building permit.
- B6. Park Impact Fee to be paid at the time of permit issuance.
- B7. Per Chapter 16A of the City of South Pasadena Municipal Code, Growth fee to be paid at the time of permit issuance.
- B8. Plans shall be prepared under the supervision of an architect licensed in the State of California or a civil or structural engineer registered in the State of California. Each sheet of the plans and the cover sheet of the calculations is to be stamped and signed by the person preparing the plans. 5353 and 6730 of the State Business and Professions Code.
- B9. In accordance with paragraph 5538(b) of the California Business and Professions Code, plans are to be prepared and stamped by a licensed architect.
- B10. Structural calculations prepared under the direction of an architect, civil engineer or structural engineer shall be provided.
- B11. A geotechnical and soils investigation report is required, the duties of the soils engineer of record, as indicated on the first sheet of the approved plans, shall include the following:

- a. Observation of cleared areas and benches prepared to receive fill;
- b. Observation of the removal of all unsuitable soils and other materials;
- c. The approval of soils to be used as fill material;
- d. Inspection of compaction and placement of fill;
- e. The testing of compacted fills; and
- f. The inspection of review of drainage devices.

B12. The geotechnical and soils engineer shall review and approve the project grading and foundation plans to show compliance that their recommendations have been properly implemented.

B13. The owner shall retain the soils engineer preparing the Preliminary Soils and/or Geotechnical Investigation accepted by the City for observation of all grading, site preparation, and compaction testing. Observation and testing shall not be performed by another soils and/or geotechnical engineer unless the subsequent soils and/or geotechnical engineer submits and has accepted by Building Division, a new Preliminary Soils and/or Geotechnical Investigation.

B14. A grading and drainage plan shall be approved prior to issuance of the building permit. The grading and drainage plan shall indicate how all storm drainage including contributory drainage from adjacent lots is carried to the public way or drainage structure approved to receive storm water.

B15. Stormwater Planning Program LID Plan Checklist (MS4-1 Form) completed by Engineer of Record shall be copied on the first sheet of Grading Plans. The form can be found at the following link:

<https://www.dropbox.com/s/5p4yf08beipzyot/SP%20MS4-1%20LID%20Determination%20Form.pdf?dl=0>

B16. Foundation inspection will not be made until the excavation has been surveyed and the setbacks determined to be in accordance with the approved plans by a land surveyor licensed by the State of California. THIS NOTE IS TO BE PLACED ON THE FOUNDATION PLAN IN A PROMINENT LOCATION.

B17. Project shall comply with the CalGreen Residential mandatory requirements.

B18. No form work or other construction materials will be permitted to encroach into adjacent property without written approval of the affected property owner.

B19. Separate plan review and permit is required for each detached retaining wall.

- B20. Fire-resistance rating requirements for exterior walls and Maximum area of exterior wall openings and degree of open protection based on fire separation distance 0 feet to 3 feet, dwellings and accessory buildings with automatic residential fire sprinkler protection shall comply with Table R302.1(2). Roof eave projection of less than 2 feet of fire separation distance is not permitted. Whereas roof eave projection of fire separation distance between 2 and 3 feet is required to be fire-resistance rated.
- B21. Prior to the issuance of building permit, a written consent shall be obtained from the current easement holder(s) for any proposed development encroaching into existing easement(s).
- B22. When required by Fire Department, all fire sprinkler hangers must be designed, and their location approved by an engineer or an architect. Calculations must be provided indicating that the hangers are designed to carry the tributary weight of the water filled pipe plus a 250-pound point load. A plan indicating this information must be stamped by the engineer or the architect and submitted for approval prior to issuance of the building permit. A separate permit is required for Fire Sprinklers.
- B23. Existing single-family dwelling and accessory structures shall comply with redevelopment requirements per City's Low Impact Development (LID) Ordinance when such projects create, add, or replace ten thousand square feet of impervious surface area, or involve two thousand five hundred square feet or more in disturbed area where any portion of the disturbed area includes either or both an existing earth (native or otherwise) surface or a man-made surface (whether impervious or not) with an existing slope that is equal to or greater than twenty-five percent when calculated in accordance with the methods prescribed by the current Zoning Code.
- B24. Openings in the exterior wall of the garage addition with less than 3 feet of fire separation distance is not permitted per Section R301.2 of the residential code.
- B25. Demolition permit is required for any existing buildings, including accessory structures, which are to be demolished.
- B26. Building permits shall not be issued until the final map has been prepared to the satisfaction of the Building Official.

PUBLIC WORKS DEPARTMENT:

- PW1. The applicant shall pay all applicable City and LA County fees, including Public Works Department plan review fee and permit fees per the current adopted Master Fee Schedule which can be found on the City's website. This includes all costs incurred by the City and the Public Works Department for the use of professional services or consultants in the review, investigation, and/or plan check of the public improvement plans. The applicant shall provide receipts of all applicable fees paid prior to submitting plans for review.
- PW2. The applicant shall obtain City approval for any modifications or revisions to the approval of this project. Deviations not identified on the plans may not be approved by the City, potentially resulting in the need for the project to be redesigned.

- PW3. The applicant shall identify all on-site existing City easements. Any conflict with and/or presence of existing easements must be addressed. The applicant shall provide a Title Report, with effective date within the last 60 days. The applicant shall show all easements (if any) per the Title Report to the satisfaction of the Public Works Department.
- PW4. The applicant shall pay all applicable City and LA County fees, including Public Works Department plan review fee and permit fees per the current adopted Master Fee Schedule which can be found on the City's website. Additional plan check fees shall apply beyond two reviews. This includes all costs incurred by the City and the Public Works Department for the use of professional services or consultants in the review, investigation, and/or plan check of the public improvement plans. The applicant shall provide receipts of all applicable fees paid prior to submitting plans for review.
- PW5. If applicable, the applicant shall obtain an encroachment permit from the Public Works Department for any work proposed within the public right-of-way.
- PW6. Hanscom Drive shall be photographed and video recorded before the start of construction and after construction for assessing the damage caused to the street by construction related traffic. The applicant will be responsible to restore the road to its original condition. These video recordings and photographs shall be submitted to the City before the start of the project and immediately upon completion of the project.
- PW7. All sheets shall be stamped, if necessary, and signed by the appropriate persons in responsible control of plans, specifications, and instruments of service per Business and Professions Code Section 5536.2.
- PW8. The applicant shall provide a covenant for unconditional and indefinite maintenance of any private improvements within the public right-of-way. This covenant shall be reviewed and approved by the Public Works Department and the City Attorney and a fully executed covenant, in recordable form, shall be provided to the City prior to obtaining a permit.
- PW9. The applicant shall be responsible for posting a project sign at the entrance to the project site displaying the City's construction hours per SPMC Section 19A.13. The project sign shall be 24" x 36" and made of durable weather-resistant material. The applicant shall provide a 24-hour emergency contact number for the designated contact who will be responsible for maintaining the public right-of-way during the all stages of construction until the project is complete.
- PW10. The applicant shall obtain an encroachment permit from the Public Works Department for any work proposed within the public right-of-way.
- PW11. The applicant shall provide a Construction Management Plan to the Public Works Department for review and approval prior to issuance of permits. The Construction Management Plan shall include, but not be limited to, types of proposed construction activities, an on-site staging plan, haul route, construction schedule, and shall indicate a contractor parking location. All vehicles including workers' vehicles shall not be parked on the streets or public right-of-way. An offsite parking with a shuttle service should be

provided if necessary.

- PW12. The applicant shall provide a construction schedule for each stage of any major activities (i.e. demolition, grading, material delivery, etc.) and the timing of special access if necessary, as it relates to site staging, traffic, and access. If there are any changes to the construction schedule, the applicant shall submit a revised schedule to the Public Works Department.
- PW13. Any construction activity that may require roadway closures will require a traffic control plan prepared by a CA licensed civil or traffic engineer or a C-31 licensed contractor to be submitted for review. Safe pedestrian access, including ADA and bicycle, must be maintained at all times. At least 48 hours advance notice shall be given to all impacted businesses and residents for street and lane closures. All street closures will require an encroachment permit from the Public Works Department. Street closures are only allowed within the time limits specified in SPMC Chapter 19A. Approved street closures require Portable Changeable Message Signs (PCMS) to be placed in advance of the project site.
- PW14. The applicant shall obtain oversize/overload permits from the Public Works Department for any oversized equipment used during the stages of construction, including, but not limited to: demolition; clearing and grubbing; grading; material disposal; drilling for piles and/or caissons; trenching for footings; excavation for retaining walls; core sampling of soils; etc.
- PW15. The applicant shall post temporary "No Parking " signs along the entire perimeter of the property prior to the start of any construction. The temporary "No Parking" signs shall be covered at the end of each working day and uncovered at the start of the following working day prior to any construction activity.
- PW16. Prior to issuance of a grading permit, the applicant shall provide an erosion control plan for dust control techniques to be implemented during project construction which shall include, but not be limited to, use of appropriate BMPs, plans for daily watering of the construction site, limitations on construction hours, and adherence to standard construction practices such as watering of inactive and perimeter areas.
- PW17. The applicant shall provide a detailed drainage plan signed and stamped by a CA licensed civil engineer. Cross lot drainage is not permitted. Provide a copy of the approved plan from the Building & Safety Department.
- PW18. Temporary bins (low boy), if used, shall be "roll off" style to be provided by Athens Services. Athens Services has an exclusive agreement with the City for the provision of trash removal services: only Athens dumpsters can be used. Any dumpsters placed on the roadway shall require a protective barrier underneath (such as plywood) to protect the pavement. The applicant shall obtain a dumpster permit from the Public Works Department.
- PW19. No overnight storage of materials or equipment within the public right-of-way shall be permitted.
- PW20. The applicant shall show all existing and proposed trees, including size and species, and indicate their disposition. If any trees are to be removed, the applicant shall apply for a tree removal permit with the Public Works Department per City Ordinance No. 2328 amending

Section 34.10 of SPMC. See SPMC Section 34.12 for the required information and process for the trees that are proposed to be removed and/or impacted during construction. Replacement trees shall be planted per SPMC Section 34.12-5. If existing trees are to remain on the site, the applicant shall note on the plans “no trees to be removed” and provide methods of protecting existing trees during construction.

- PW21. The applicant shall show the existing grade, location, and dimensions of all existing and proposed conditions within the public-right-of-way including, but not limited to: curb and gutter, sidewalk, driveway, traffic striping, signage, utilities, storm drain facilities, trees, and other features.
- PW22. The applicant shall replace all broken, damaged, or out-of-grade curb and gutter, sidewalk, and driveway and repaint all curb markings along the perimeter of the property to the satisfaction of the City Engineer. In addition, existing sidewalk and driveway approaches that are below current City standards shall be replaced regardless of when or how such condition originally occurred per SPMC Section 31.54. All improvements within the public right-of-way shall conform to the current Standard Specifications for Public Works Construction (SSPWC) and Standard Plans for Public Works Construction (SPPWC).
- PW23. If applicable, the applicant shall remove and replace the existing driveway approach with/install a new driveway approach conforming to the current Standard Plans for Public Works Construction (SPPWC) Std Plan 110-2, Type B. Concrete shall be class 520-C-2500 and shall conform to the current Standard Specifications for Public Works Construction (SSPWC). The applicant shall verify the width with the Planning Department and the actual limits of concrete removal with the Public Works Department depending on the condition of the existing concrete pavement adjacent to the property.
- PW24. The applicant shall provide a 24-hour emergency contact number for the applicant and contact information of all utility agencies involved/impacted/potentially impacted by this project on the title sheet of the plans.
- PW25. The applicant shall show all utility poles adjacent to the properties and note to protect-in-place.
- PW26. The applicant shall show the location of all existing utilities (i.e. sewer lateral and water utility service lines) on adjacent street(s), as well as location and size of all existing or proposed utility service lines serving the property. Show all utility points of connection (POC).

FIRE DEPARTMENT:

- FD1. Required Code References: Current South Pasadena Municipal Code (SPMC); 2022 California Fire Code (CFC); 2022 California Building Code and NFPA standards.
- FD2. Fire Sprinklers are required. Submit plans to City for approval.
- FD3. Fire sprinklers shall not be able to shut off unless the domestic line to the property is shut off. There shall be no other means to turn off water to the sprinkler system. Ensure this sprinkler system is installed by an approved C-16 licensed contractor. Provide a set of

drawing of the sprinkler system to the Fire Department prior to beginning of work.

- FD4. Water Supplies. Water supplies for automatic sprinkler systems shall comply with this section and the standards referenced in Section 903.3.1. The potable water supply shall be protected against backflow in accordance with Health and Safety Code.
- FD5. Required water supply. An approved water supply capable of supplying the required fire flow for fire protection shall be provided to premises upon which facilities, buildings or portions of buildings are hereafter constructed or moved into or within the jurisdiction.
- FD6. Fire flow. Fire flow requirements for buildings or portions of buildings and facilities shall be determined by an approved method or Appendix B.
- FD7. Water Supply Test. The fire code official shall be notified prior to the water supply test. Water supply tests shall be witnessed by the fire code official or approved documentation of the test shall be provided to the fire code official prior to final approval of the water supply system.
- FD8. Additions and Alterations. All existing buildings and structures, regardless of the type of construction, type of occupancy or area, shall be provided with an automatic sprinkler system conforming to Section 903.3 and this code upon the occurrence of any of the following conditions:
- Within any twelve (12) calendar month period of time, combination of any addition and alteration to any existing building or structure where the valuation of the proposed work exceeds fifty percent (50%) of the valuation of the entire building or structure, as determined by the Building Official, and where such addition and alteration creates or alters a fire area large enough that if the existing building or structure were being built new today, an automatic sprinkler system would be required by this code;
- An automatic sprinkler system shall be installed throughout any existing Group R Occupancy building when the floor area of the Alteration or Combination of an Addition and Alteration, within any twelve (12) calendar months, is 50% or more of area and or valuation of the existing structure and where the scope of the work exposes building framing and facilitates sprinkler installation and is such that the Fire Code Official determines that the complexity of installing a sprinkler system would be similar as in a new building.
- FD9. Address Identification. New and existing buildings shall have *approved* address numbers, building numbers or *approved* building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Where required by the fire code official, address numbers shall be provided in additional approved locations to facilitate emergency response. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall be a minimum of 4 inches (101.6 mm) high with a minimum stroke width of 0.5 inch (12.7 mm). Address numbers shall be maintain.
- FD10. Notwithstanding anything else in this code, or any other code incorporated, herein, by reference any new roof shall be of Class "A" roof material.
- FD11. Groups R-2, R-2.1, R-3, R-3.1, and R-4. Single or multiple-station smoke alarms shall be installed and maintained in Groups R-2, R-2.1, R-3, R-3.1 and R-4 regardless of occupant load at all of the following locations:
- a. On the Ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms;

- b. In each room used for sleeping purposes.
 - c. In each story within a dwelling unit, including basements but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
- FD12. Interconnection. Where more than one smoke alarm is require to be install within an individual dwelling unit or sleeping unit in Group R-1, R-2, R-3, R-3.1, or R-4, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.
- FD13. Buildings under construction shall meet the condition of “Chapter 33 Fire Safety During Construction and Demolition” of the 2022 California Fire Code. Structures under construction, alteration or demolition, shall be provided with no less than one 2A10BC fire extinguisher as follows:
- a. At each stairway on all floor levels where combustibles materials have accumulated.
 - b. In every storage and construction shed.
 - c. Where special hazards exist included but not limited to, storage and use of combustible and flammable liquids.
- FD14. A set of plans must remain on the job site at all times. Appointments for inspectors should be made at least two days in advance of required inspection by calling the Fire Department at (626) 403-7304.
- FD15. For water meter related questions, please contact Public Works (626) 403 7240 or the Water Department at (626) 460 6393.
- FD16. The City of South Pasadena Fire Department reserves the right to change or otherwise modify requirements based upon receiving additional project information or other unforeseen circumstances.

ATTACHMENT 2

Site Images

[Link to Site Images](#)

ATTACHMENT 3

Neighborhood Images

[Link to Neighborhood Images](#)

ATTACHMENT 4

Materials Brochure

EXTIRA[®]
by JELD-WEN



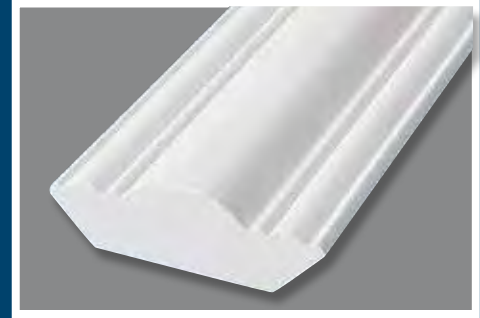
EXTIRA PANELS ARE READY TO WORK

EXTIRA PRODUCT INFORMATION, WARRANTY AND APPLICATION INSTRUCTIONS



EXTIRA[®]

by JELD-WEN



MOISTURE RESISTANT: As measured by ASTM D1037 for Water Absorption and Thickness Swelling.

ROT RESISTANT: As measured by AWPA E-16 Field Test for Evaluation of Wood Preservatives to be Used Out of Ground Contact: Horizontal Lap-Joint Method.

TERMITE RESISTANT: As measured by AWPA E-7 Standard Method of Evaluating Wood Preservatives by Field Tests with Stakes.

EXTIRA IS A REVOLUTIONARY PRODUCT FOR EXTERIOR APPLICATIONS THAT PERFORMS BETTER THAN WOOD OR MDF

	EXTIRA PANELS	TYPICAL MDF
APPLICATION	Exterior	Interior
COMPOSITION	Wood, phenolic resins, zinc borate, wax and other ingredients. No added urea formaldehyde.	Wood, urea formaldehyde resin. May emit formaldehyde.
MANUFACTURING PROCESS	Proprietary, patented steam injection technology using TEC™ manufacturing process.	Pressed between hot platens in an open press without steam injection.
BENEFITS	Consistent density. Resists moisture, rot and termite. Made for exterior performance.	Not uniformly dense throughout. No termite or rot protection. MR MDF (moisture resistance MDF) only offers moisture resistance for interior use.
WARRANTY	10 years	30 days

	EXTIRA 3/4"	MEDEX 3/4"	MR 50 GRADE 110 PER ANSI 208.2-2002	WOOD
THICKNESS SWELL (TS)	2.3%	3% ²	5% max	NA
ADVANCED BOND INTEGRITY (% strength retention)	90% ASTM D1037-96	Passes ²	50% min	NA
TERMITE RESISTANCE (10 is the highest score)	7.9 out of 10 (3 year exposure) ¹	None	None	None, 0.0 ¹
ROT RESISTANCE (0 is the highest score)	1.0 out of 5 (3 year exposure) ¹	None	None	None, 5.0 ¹

¹ Independent testing per AWPA E-7 and AWPA E-16

² Published material by Medex

WITH FIVE THICKNESSES AND THREE PANEL SIZES, EXTIRA MEASURES UP TO ANY PROJECT

EXTIRA PANEL SIZES AND THICKNESSES

SIZE (NOMINAL)	THICKNESS (+/-0.005")						
	7/16"*	1/2"	5/8"	11/16"*	3/4"	1"	1-1/4"
4' x 8' (49" x 97")	●	●	●	●	●	●	●
4' x 16' (49" x 194")	●	●	●	●	●	●	●
2' x 16' (25" x 194")	●	●	●	●	●	●	●

*Available by special order.



MANUFACTURING PROCESS BINDS NATURAL WOOD FIBERS WITH PHENOLIC RESINS AND ZINC BORATE.

Extira panels can be used for any non-structural paint-grade application, including exterior millwork, door and window parts, signage, and architectural components. While designed for exterior use, Extira panels also work well in high moisture interior applications such as bathrooms, medical installations, laboratories, countertop underlayment and casework.

EXTIRA – EXTERIOR GRADE SMOOTH TWO SIDE PANELS

- Extira is sold in panel dimensions, unprimed and is smooth on both sides.
- Extira meets industrial caliper requirements of +/- 0.005".
- Easy to work with; can be carved, routed and machined.
- Resists moisture, rot, and termites. Extira is made to be used outside.
- No added urea formaldehyde; made from sustainable materials.
- Made from the same proprietary process that creates MiraTEC® trim. Extira has the same performance properties.
- Class C fire rating; Flame spread 120; Smoke developed 95.
- Extira has a 10-year limited warranty that far exceeds competitive panel products.

EXTIRA IS THE BEST ALTERNATIVE

EXTIRA VS. THE COMPETITION

	EXTIRA	MDF	PLYWOOD	MF	PVC
Price	\$\$	\$	\$	\$\$	\$\$\$\$
Moisture Resistance	Good	Poor	Poor	Good	Best
Rot Resistance	Best	None	None	None	Best
Weathering ³	Good	Poor	Poor	Good	Good
UV Resistance ³	Good	Good	Best	Good	Poor ²
Warranty	10-Year	30-Days	None	Varies	5-Year to Lifetime
Machineability	Good	Good	Poor	Poor	Varies
Paintability ³	Best	Best	Good	Best	Poor

² PVC may have UV-related issues when painted a dark color

³ Ratings reflect uncoated material ranking. Extira must be field finished before use



EXTIRA PANELS CARVE BEAUTIFULLY



EXTIRA MACHINES WELL



ROUTE EXTIRA FOR ALL YOUR SIGN NEEDS

EXTIRA[®]

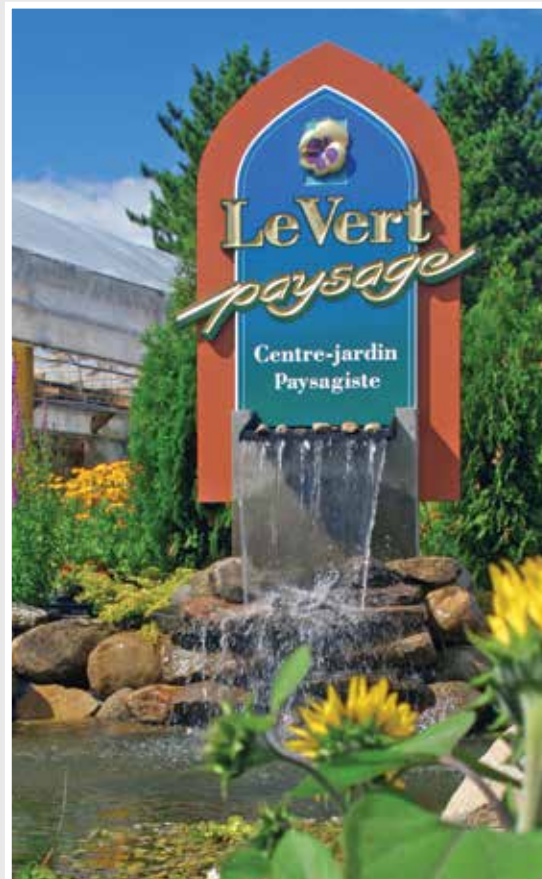
by JELD-WEN



SUPERIOR PERFORMANCE FOR EXTERIOR SIGNS

RESISTS MOISTURE, ROT AND TERMITES

Choosing material for outdoor signage can be challenging. Extira panels are backed by our 10-year limited warranty and ready to work outside.





ENVIRONMENTALLY FRIENDLY PANEL PRODUCT

SUSTAINABLE MATERIALS

- No old growth wood is used in the manufacture of Extira panel. It is made from wood that has no commercial timber value and is the byproduct of other operations. This leftover wood is also detrimental to the overall vitality of the forest.

>> All wood comes from an area within a 150-mile radius of the Towanda, PA production facility.

>> JELD-WEN® uses 100% northern hardwoods, which include maple, beech, oak and other species.

- Extira panel is treated with zinc borate, an EPA-registered biocide and a naturally occurring earth mineral that is environmentally safe and ensures protection against termites.

NO ADDED UREA FORMALDEHYDE

- Extira panel has no added urea formaldehyde. This is certified by Scientific Certification Systems under certificate number SCS-NAUF-01802.
- Through repeated testing by the Composite Panel Association (CPA), MiraTEC trim has demonstrated formaldehyde emissions equivalent to background levels found in the environment.

COMPLIES WITH CARB

- Extira panel is acknowledged by the California Air Resources Board's (CARB) Airborne Toxic Control Measure (ATCM) 93120 to utilize exempt status ultra-low emitting formaldehyde (ULEF) resins.

CONTRIBUTES TO GREEN BUILDING PROGRAMS

- Extira panel contributes to industry programs such as LEED and the National Green Building Standard.™



TOWANDA, PA MANUFACTURING FACILITY



LEFTOVER WOOD IS A PRIMARY INGREDIENT OF EXTIRA



INSTALLATION GUIDELINES

WHEN USING EXTIRA® PANELS FOR EXTERIOR MOULDINGS AND MILLWORK

EXTIRA®
by JELD-WEN



GENERAL INFORMATION:

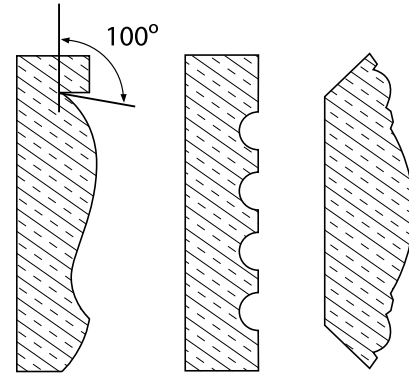
Extira was conceived and engineered to resist moisture, rot and termites, so it is perfect for exterior non-structural applications. It handles like wood but is smooth on both sides, and is sanded to meet caliper requirements of +/- 0.005".

MATERIAL SELECTION:

Extira panels are available in the following thicknesses: 1/2", 5/8", 3/4", 1" and 1-1/4". For exterior moulding and millwork applications, JELD-WEN, Inc. does not recommend using the 1/2" product other than when it is mechanically fastened or laminated to another substrate. Use 5/8" or thicker panels for soffit applications.

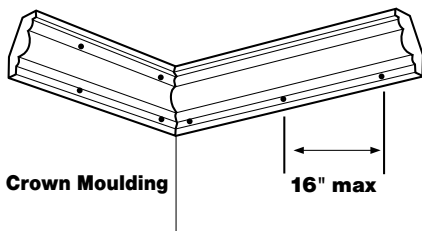
CUTTING AND MACHINING:

Use a fine-tooth hand saw or power saw with a combination blade. Cut into the exposed face of the material. Use only carbide-tipped or diamond-tipped blades with Extira panels. To produce decorative applications, rout, groove or machine Extira panels. The routed or grooved product should not have any surfaces where water can accumulate. Maintain an angle of at least 100 degrees from the vertical to provide positive drainage and to best ensure that moisture does not accumulate on Extira.

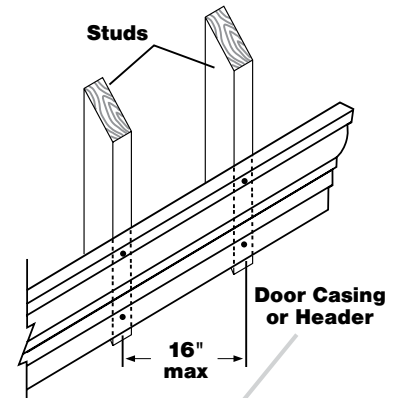
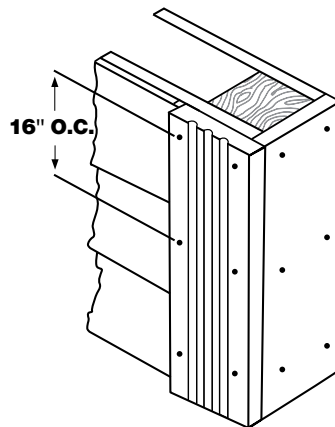


FASTENING REQUIREMENTS:

Extira panels are a non-structural composite product and should not be used where structural lumber properties are required. Extira panels are designed to be applied to structural framing, sheathing and other structural materials.



Door or Window Trim Molding



INSTALLATION GUIDELINES

WHEN USING EXTIRA® PANELS FOR EXTERIOR MOULDINGS AND MILLWORK

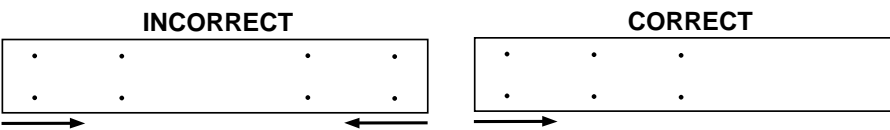
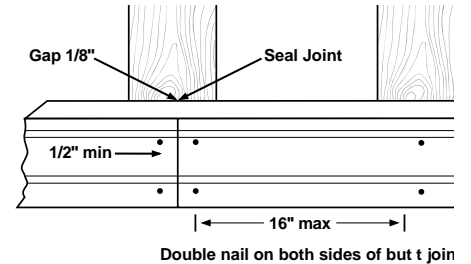
EXTIRA®
by JELD-WEN



BUTT JOINTS:

All joints must fall over a framing member. For runs less than 30', butt joints should lightly touch. Space all butt and scarf joints over 30' 1/8" apart and apply flexible sealant into the full depth of the 1/8" joint. Joints must be double nailed on both sides as noted in the diagram above.

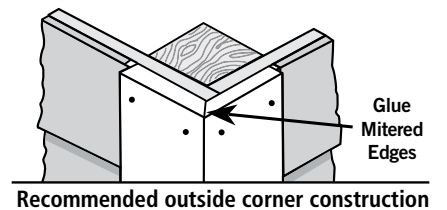
Note: Nail at least 1/2" from edge, but no more than 2" from edge. Do not nail into cut end of Extira panels. For fascia, Extira panels must be double nailed and fastened a maximum 24 inches-on-center. For all other applications, double nail 16" on center.



Fasten Extira panels from one end to the other end. DO NOT nail toward the center from both ends.

SHUTTERS:

Extira panels can be used to make decorative shutters. The shutter must be fastened to the home 24" on center around the perimeter of the shutter as shown in the illustration. Working shutters will not be covered under the Extira warranty due to the inability to provide adequate fastening on the non-hinge side of the shutter.



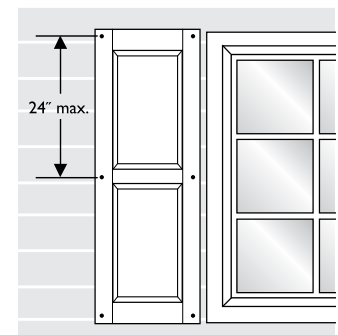
FASTENERS:

Fasteners must be equal or better in performance (such as nail withdrawal, bending strength and corrosion resistance) to 6d or 8d 15 gauge finish nails or headed nails, long enough to penetrate 1 1/4" into structural wood studs or studs and structural sheathing material. Use nails with corrosive resistance equivalent to hot-dipped galvanized nails. For buildings utilizing steel studs, use ET&F fasteners: AST-075 for 5/8" and 3/4" Extira and AST-100 for 1" Extira. For installations near oceans, large bodies of water or in high humidity climates, JELD-WEN, Inc. recommends using stainless steel fasteners on Extira. For these installations, do not use electro-galvanized fasteners, due to poor long term rust resistance.

Tapered or bugle head fasteners are permitted when the heads are properly sealed from moisture.

Nail heads, or any other dents, can be filled with exterior grade spackling putty specifically designed for filling nail holes. Allow putty to dry, sand smooth with 100 grit sandpaper and spot prime before painting. Over time, spackling putty may need to be replaced or touched up.

Use a nail that is appropriate to the style of construction.



CONDITION		CONDITION
Snug		OK
Flush		OK
Visible fiber		Paint
Counter sunk 1/16" - 1/8"		Exterior putty
Counter sunk more than 1/8"		Exterior putty & add nail

INSTALLATION GUIDELINES

WHEN USING EXTIRA® PANELS FOR EXTERIOR MOULDINGS AND MILLWORK

EXTIRA®
by JELD-WEN



FLASHING AND MOISTURE CONTROL:

The structure on which Extira panels are applied should be well ventilated and dry. Do not apply moulding over wet sheathing, or any closer than 6" to finished grade or final landscaping. As with all wood products, Extira panels should not come in direct contact with masonry or concrete. Properly flash and space at least 1/2" from any concrete flatwork (such as porches, patios, or driveways) or horizontal brick ledges. Flatwork should slope so water flows away from Extira panels. In all applications, Extira panels should not stand in water or have water accumulate near them. At foundations or exterior brick veneer, the product should be separated from the masonry by metal flashing, polyethylene film, 30 lb. felt or a 1/4" to 1/2" air space using masonry standoffs. For applications near rooflines when Extira panels are used as trim, such as dormers and chimneys, the trim should be installed with a minimum of 1" clearance between the roofing and the bottom edge of the trim. At the junction of the roofing material and vertical surfaces, flashing is required per the roofing manufacturers' application requirements and local building codes.

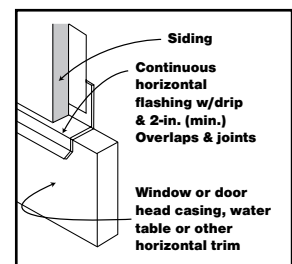
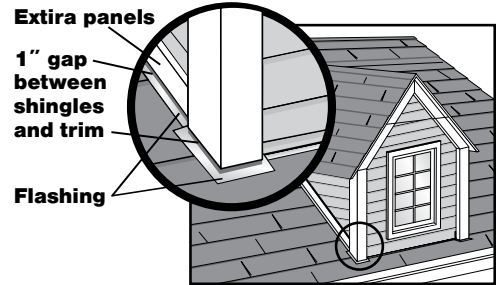
Seal the trim applications to prevent water intrusion. Do not allow water to stand on or leak behind any Extira panels used as trim. Extira panels used as trim in a horizontal application, including window and door headers, must be properly flashed in accordance with the siding manufacturers', window manufacturers', or door manufacturers' application requirements and local building codes.

SEALANT AND ADHESIVES:

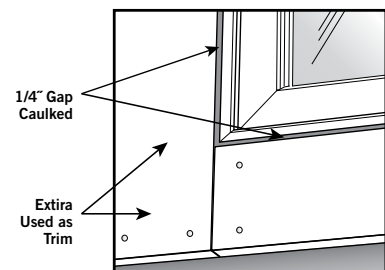
Sealant is required at butt joints and where Extira panels abut siding, windows, doors or other materials. Use only exterior quality sealant that remains flexible over time. Do not use hard-setting caulk. Apply caulk or sealant according to the manufacturer's written instructions. We recommend use of caulks and sealants that meet or exceed ASTM C920. Glues or adhesives can be used on Extira. Consult our Using Extira Bulletin for more information at www.miratecextira.com.

PAINTING/FINISHING REQUIREMENTS:

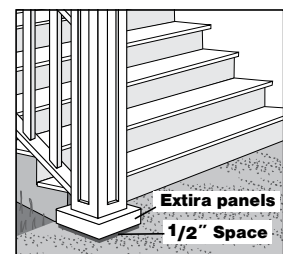
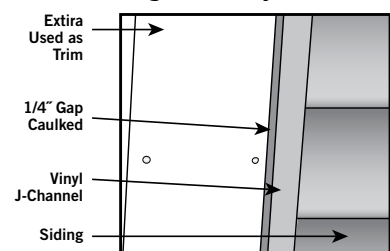
Extira panels are manufactured from wood and must be primed and painted with an exterior coating system in accordance with the following specification within 90 days of installation to fulfill the Extira panel warranty requirements. Use a field finish system recommended by the paint manufacturer for use on a composite wood product. Always follow the paint manufacturer's recommendations for the application and maintenance of field-applied paints. Test the coating system on a small area of Extira panel first before finishing large pieces.



Window Trim



Using with vinyl J-Channel



INSTALLATION GUIDELINES

WHEN USING EXTIRA® PANELS FOR EXTERIOR MOULDINGS AND MILLWORK

EXTIRA®
by JELD-WEN



PRIMER AND PAINT APPLICATION:

1. The surface must be free of dust, dirt, mildew and other foreign materials before priming.
2. Prime and paint all exposed surfaces and field-cut edges, including the bottom edge of Extira panels using a high quality exterior oil/alkyd solvent based or acrylic latex primer recommended by the paint manufacturer for application over composite wood substrates.
3. **A total field-applied dry film paint thickness of a minimum of 4 mils is required on Extira panels.** This requires the application of a primer and two or more unthinned coats of topcoat at the spread rate recommended by the paint manufacturer.

Note: The paint manufacturer may require a specific primer and topcoat combination. Use of primer and/or topcoats should be determined according to the manufacturers recommendations.

JELD-WEN, Inc. does not recommend using the following coatings:

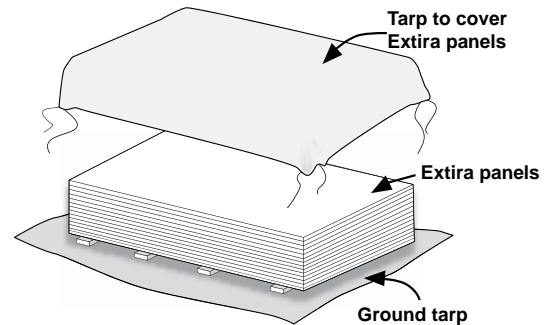
Shake and shingle paints	Vinyl acrylic paint*
Vinyl acetate co-polymer paint	Vinyl acetate paint
Clear coatings	Flat oil paint
Transparent or semi-transparent stains	Opaque solvent stains

* Although vinyl acrylic exterior paints contain acrylic resin and may be readily available, they are generally of lower quality and will not last as long as 100% acrylic paints. If you are unsure, ask your paint supplier.

JELD-WEN, Inc. is not responsible for the performance of finishes. Finish performance is dependent upon coating quality and application methods. These factors are controlled by the finish manufacturer and applicator.

STORAGE:

Inside storage of Extira is recommended and preferred. Cover when stored outside. Keep Extira panels off the ground and dry. Excessive moisture pickup from improper storage may affect the performance of Extira panels. Ensure the material is fully dry before installation. For job site storage, Extira panels should be placed on stringers and stored on concrete, asphalt or a similar surface. For all other instances, a tarp should be placed over the ground cover under the stringers, with the material still under cover.



IMPORTANT: Read and understand all application instructions before installing material. The statements expressed in this technical bulletin are the recommendations for the application of the products as outlined and illustrated under normal conditions of installation. JELD-WEN, Inc. is a manufacturer of building materials. It does not practice architecture or engineering. The recommendations provided in this bulletin represent JELD-WEN, Inc.'s best judgment based on JELD-WEN, Inc.'s experience to date with normal applications. These instructions supplement standard building practices and building code requirements; they are not to be deemed exclusive or exclusionary of these practices and requirements. Unless prior approval is obtained in writing from the Product Performance Department of JELD-WEN, Inc., PO Box 311, Towanda, PA 18848, any deviation from these recommended procedures shall be at risk of the installers.

These application instructions are the minimum requirements for the storage, application, and finishing of the products manufactured by JELD-WEN, Inc.. Where building code requirements or standards are more restrictive, the applicable regulations must be followed. Consult your local Representative or the Product Performance Department for conditions not covered by this bulletin. All drawings are shown for illustration purposes only and are not to scale. Adequate design and bracing of the walls, as well as compliance with these application instructions, are the responsibility of the architect, builder, applicator and painter.



WARNING: Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov/wood.

GENERAL INFORMATION ON FINISHING AND ADHESIVES

EXTIRA[®]
by JELD-WEN



Various manufacturers in the following sections have provided their recommendations for using their products with Extira panels. JELD-WEN provides this information to prospective users who must independently determine the suitability of such materials for its purpose. It is the user's responsibility to test and qualify all materials the user intends to use on Extira panels. This document is not a guideline or direction meant to guarantee any result; it is strictly informational in nature. JELD-WEN, Inc. makes no warranties or representations, express or implied, as to the accuracy, completeness, or any other aspect of the information in this document and JELD-WEN, Inc. assumes no liability in connection with any use of the information. JELD-WEN, Inc. provides this document to you on the condition that you will make your own complete assessment of the information given, prior to using the material. JELD-WEN, Inc. has no knowledge of or control over your use of the information, and it is provided "as is" and without any warranty of any kind. Accordingly, JELD-WEN, Inc. excludes all implied warranties, including but not limited to any warranty of merchantability or fitness for a particular purpose and warranties to the effect that the use of this information will not infringe any patent, copyright or trademark of any third party.

Samples of Extira panels are available for your testing needs. Testing samples may be requested by email to samples@miratecextira.com or through the contact us form on miratecextira.com.

JELD-WEN, Inc. welcomes information from you about your experience with the use of these materials or any other in the secondary treatment of Extira. Feedback may be sent to marketing@miratecextira.com.

FINISHING:

Extira panels must be primed and painted or finished before use. Use a high quality exterior oil/alkyd solvent-based or acrylic latex primer system specifically designed for use on wood composite substrates. The final topcoat should be compatible with the primer system used. Ninety-degree (90°) edges should be eased where possible to improve paint coverage and to extend service life. Final qualification is the responsibility of the end user.

The companies listed below have tested paint systems for use with Extira panels. The following topcoats are not recommended by JELD-WEN, Inc. or most paint manufacturers because of short service life, poor protection against UV light and a higher potential for performance problems:

- Shake and shingle paints, clear coatings, flat oil/alkyd paints topcoats, and vinyl acetate (PVA) base paints.
- Transparent and semi-transparent stains.

FINISHING CONTACT INFORMATION

Please visit the company websites below for support and information:

Akzo Nobel Coatings, Inc.
akzonobel.com

Matthews Paint
matthewspaint.com

Ronan's Paint Corp.
ronanpaints.com

Axalta
axalta.com

One Shot, LLC.
1shot.com

Sherwin Williams
sherwin-williams.com

GENERAL INFORMATION ON FINISHING AND ADHESIVES

EXTIRA[®]
by JELD-WEN



ADHESIVES:

The following companies have tested Extira panels with the products listed below for the specific applications shown. Contact the manufacturer for final overlay compatibility, recommendation on specific usage, adhesive quantities and press conditions before using the product specified. Please verify all information with the finish and adhesive manufacturers to confirm validity.

EXTERIOR APPLICATIONS:

Glue Manufacturer	Glue System	Application
Ashland Performance Materials	Isoset WD3-A322/CX-47 (water based)	HPL
	Isogmp SP 5050D (moisture cure urethane)	HPL
Franklin International	Titebond II	Extira to Extira, wood veneer
	Titebond Heavy Duty Construction Adhesive (solvent based)	Extira to Extira
	Titebond Trowelable Construction Adhesive (solvent based)	Extira to Extira
	Titebond Premium Polyurethane Construction Adhesive	Extira to Extira
	Titebond 811 Advantage Adhesive	Extira to Extira
H.B. Fuller Company	RK3379001 (Precatalyzed PVAc)	HPL, Extira to Extira, and wood veneer
	UR0218MF (liquid moisture-cure urethane)	HPL, Extira to Extira
	NP2075T (hotmelt polyurethane reactive)	HPL, Extira to Extira, and wood veneer
National Casein	MB 330 (melamine powder)	wood veneer
	MUF 4301 (melamine powder)	wood veneer
	WP2271A/K4 (emulsion polymer w/catalyst)	wood veneer

INTERIOR APPLICATIONS:

Glue Manufacturer	Glue System	Application
Wilsonart Adhesives	WA 950/951 (Solvent contact adhesive)	Extira to HPL
	WA H2O (water basted contact adhesive)	Extira to HPL
	WA 3000 (PVA for postforming)*	Extira to HPL
	WA 3132 (Hot press PVA)*	Extira to HPL
National Casein	6500HV (cold press)	Extira to HPL
	3319-1 (cold press)	Extira to HPL
	PC2002 (cold press or hot press)	Extira to HPL

ADHESIVE CONTACT INFORMATION

Please visit the company websites below for support and information:

Ashland Performance Materials
ashland.com

H.B. Fuller Company
hbfuller.comr.com

Wilsonart Adhesives
wilsonart.com/adhesives-products

Franklin International
franklininternational.com

National Casein Company
nationalcasein.com

FIELD PAINTING BASICS:

- Step 1.** Sand all areas to be painted with 180 grit sandpaper and remove sanding dust. This is common for areas that have been cut, routed, or machined. All sharp and 90° edges should be rounded-off to avoid substrate chipping.
- Step 2.** Apply one coat with a brush, spray or roller with a high quality exterior alkyd-oil primer or acrylic latex primer, to a final thickness of 4 wet mils. Using a brush is the preferred method for adequate coverage. All freshly cut and routed edges (raised panel) should be double-coated to ensure a good seal. Dry time (cure) is likely to be within 48 hours, assuming ambient conditions are 50% RH and 77° F. Always follow the paint manufacturer's instructions for finishing.
- Step 3.** Lightly sand the primer coat with 220 grit sandpaper and remove sanding dust. Then, apply the first top coat with a high quality 100% acrylic latex top coat using a brush, spray or roller, typically at a rate of 4 wet mils. Allow at least 24 hours for the first top coat to dry before applying the second coat. Follow all paint manufacturer's recommendations.
- Step 4.** After the topcoat has dried, lightly sand the first top coat. Apply the second and final coat using the same 100% acrylic finish, typically, at a rate of 3 to 4 wet mils with a brush, spray or roller. Follow all paint manufacturer's recommendations.

A minimum field-applied dry film thickness of 4 mils is required on Extira.

If there is no oven or forced heat used in curing the various coats of paint, allow parts to air dry for 7 days before installation. The 7 day wait will ensure fingernail hardness of the paint and will avoid fingerprints. Wrap parts in clear polyethylene during shipping to prevent parts from sticking together or marring.

These recommendations are provided only as a guide for best results. Consult with your paint supplier for specific instructions based on the products you use and your end application.

SUGGESTED PAINT PRODUCTS

Sherwin-Williams[®]

Primers: A-100 Exterior Fast Dry Stain Blocking Alkyd Wood Primer
Multi-Purpose Latex Primer/Sealer
Fast Drying Interior/Exterior Oil-Based Primer

Paints: A-100 Exterior Latex Paint
SuperPaint Exterior Latex
Duration Exterior Acrylic

Valspar[®]

Primers: Valspar[®] All-Weather Exterior Primer Sealer
Valspar[®] All-Purpose Primer-Sealer

Paints: Valspar[®] Reserve Exterior Paint
Valspar[®] Duramax
Valspar[®] Storm Coat

Olympic[®] Paints

Primer: Olympic[®] IconTM Primer
Paint: Olympic[®] One Exterior
Olympic[®] Icon Exterior

Pittsburgh[®] Paints

Paint: Regency Exterior
Weather King[®] Exterior Acrylic Latex Paint
Wonder Shield[®] Exterior Acrylic Latex Paint

Benjamin Moore[®]

Primer: Fresh Start[®] Premium Exterior Primer
Fresh Start[®] Moorwhite[®] Exterior Wood Primer 100
Fresh Start[®] Multi-Purpose Latex Primer

Paint: Regal[®] Select Exterior High Build
Aura[®] Exterior Paint
ben Waterborne Exterior Paint

Behr[®]

Primer: Premium Plus[®] Exterior Multi-Purpose Surface Primer & Sealer
Paint: Behr Marquee[®] Exterior Paint & Primer Series
Premium Plus Ultra[®] Exterior Paint and Primer Series
Premium Plus[®] Exterior Paint

Dutch Boy[®]

Paint: Dura Weather[®] Maxbond™ Door & Trim Paint

Glidden[®]

Primer: Glidden[®] Interior/Exterior Gripper Primer/Sealer
Paint: Glidden[®] High Endurance[®] Plus Exterior
Glidden[®] Premium Collection Exterior House Paint
Glidden[®] Trim, Door & Furniture Exterior Paint



FINISHING:

For signs that require extremely high primer/surface adhesion, such as when using sand mask agents, use an exterior grade surface sealer before applying the prime coat. We suggest an oil-based polyurethane. For maximum surface strength results, use a high quality, solvent or oil-based primer with a surface sealer. Epoxy primers may also perform well. High quality water-based primers will provide long term performance, but are not recommended for applications requiring high primer-to-surface adhesion. If the creation of your sign requires the use of sand masking agents, use a low tack product with a rating around 2.2 lb/inch or less.

Be sure to follow the instructions that the sealer manufacturer provides for use. In general, we suggest that you do not let the sealer cure on the surface. It is important to have good surface penetration to achieve the best result. If there are areas of build-up, they should be lightly sanded before applying the primer application.

SEALERS	
SEALER MANUFACTURER	SEALER SYSTEM
ZAR	203 Gloss
	267 Satin
Harrison Paints	Dura Guard Alkyd Surface Sealer
Smith and Co. Epoxy Products	Multi Prime, Clear Penetrating Epoxy
Cargill Inc.	Dilulin (requires addition of metallic driers)

PRIMERS:

Contact the paint manufacturer for final topcoat compatibility with the selected primer system. Be sure to follow the paint manufacturer's instructions for use.

PRIMERS	
PAINT MANUFACTURER	PRIMER SYSTEM
One Shot, LLC	4411010 High Build Waterborne Primer
Matthews Paints	274 908SP White Epoxy Primer
	274 228SP E-Primer (low VOC)
Ronan Paints	Prime All — Waterborne Acrylic Primer/Stain Kill
	(2 coats recommended, water based)
Zinsser Co., Inc.	Cover-Stain Primer Sealer (oil based)
Harrison Paints	Versa-Seal Primer 249-88 (oil based)
	Versa-Seal Primer 248-88 (water based)

USING EXTIRA FOR SIGNS

Specific Sign Finishes

EXTIRA[®]
by JELD-WEN



Matthews Paint has provided the following instructions for specific sign finishes:

NON-SANDING SYSTEM

SANDING SYSTEM

CONVENTIONAL:

1. Tack off Extira with a clean tack cloth. Avoid using harsh solvents to clean Extira as the solvents may cause the substrate to swell.
2. Apply one to two coats of the 274 908SP White Epoxy Primer mixed per directions. See MPC125 Technical Bulletin for mixing and spraying instructions.
3. Topcoat with conventional Satin MAP or conventional Gloss MAP per directions. See MPC102 Technical Bulletin for Satin MAP, or MPC100 for Gloss MAP.

LOW VOC:

1. Tack off Extira with a clean tack cloth. Avoid using harsh solvents to clean Extira as the solvents may cause the substrate to swell.
2. Apply one to two coats of the 274 228SP E-Prime mixed per directions. See MPC126 Technical Bulletin for mixing and spraying instructions.
3. Topcoat with Low VOC Satin MAP or Low VOC Gloss MAP per directions. See MPC107 Technical Bulletin for Low VOC Satin MAP, or MPC106 for Low VOC Gloss MAP.

CONVENTIONAL:

1. Tack off Extira with a clean tack cloth. Avoid using harsh solvents to clean Extira as the solvents may cause the substrate to swell.
2. Apply one to two coats of the 274 908SP White Epoxy Primer mixed per directions. See MPC125 Technical Bulletin for mixing and spraying instructions.
3. Apply two to three coats of 6001SP Polyester Primer Surfacer mixed per directions. See MPC169 Technical Bulletin for mixing and spraying instructions.
4. Sand the 6001SP to leveling. Final sand with a grit no coarser than 600 before applying a topcoat.
5. Topcoat with conventional Satin MAP or conventional Gloss MAP per directions. See MPC102 Technical Bulletin for Satin MAP, or MPC100 for Gloss MAP.

LOW VOC:

1. Tack off Extira with a clean tack cloth. Avoid using harsh solvents to clean Extira as the solvents may cause the substrate to swell.
2. Apply one to two coats of the 274 228SP E-Prime mixed per directions. See MPC126 Technical Bulletin for mixing and spraying instructions.
3. Apply two to three coats of 6001SP Polyester Primer Surfacer mixed per directions. See MPC169 Technical Bulletin for mixing and spraying instructions.
4. Sand the 6001SP to leveling. Final sand with a grit no coarser than 600 before applying a topcoat.
5. Topcoat with Low VOC Satin MAP or Low VOC Gloss MAP per directions. See MPC107 Technical Bulletin for Low VOC Satin MAP, or MPC106 for Low VOC Gloss MAP.

SANDMASK TAPES:

In general, use a tape with a low grip adhesive, such as a rating of 2.2 lb/inch. The following tapes have produced acceptable results. Test or qualify the tapes with Extira before making a sign. Final qualification is the responsibility of the end user.

SANDMASK TAPES

TAPE MANUFACTURER	PRODUCT
Avery Dennison	SF 100-128-S White Paint Mask
	SF 100-231-S Yellow Paint Mask

CONTACT INFORMATION

Please visit the company websites below for support and information:

3M
3m.com/industrialtapee

Cargill, Inc.
cargill.com

Matthews Paint
matthewspaint.com

Zar/UGL
zar.com

Avery Dennison Graphics & Reflective Products Division NA
averydennison.com

Harrison Paints
harrisonpaint.com

One Shot, LLC.
1shot.com

Zinsser Co., Inc.
zinsser.com

HartCo. Inc.
hartcoservice.com

LIMITED WARRANTY

Effective February 1, 2016 to Current

EXTIRA®
by JELD-WEN



Extira® Treated Exterior Panel Limited Warranty

This warranty is effective for all Extira Products¹ manufactured on or after February 1, 2016 for use in the United States and Canada. Any previous warranties will continue to apply to products sold under the Extira name prior to this date. For additional information, including care and maintenance information refer to www.miratecextira.com.

What This Warranty COVERS...

We warrant to the original owner² that if your Extira Product exhibits a defect in material or workmanship within ten (10) years of the date of original purchase, we will pay for the replacement of the Product, limited to the original purchase price of the failed Product according to the following schedule:

Up to and including the 1st anniversary of the purchase date (Year 1)	100%
Years 2	90%
Years 3	80%
Years 4	70%
Years 5	60%
Years 6	50%
Years 7	40%
Years 8	30%
Years 9	20%
Years 10	10%
After the 10th anniversary of the purchase date	0%

Transferability: This warranty is not transferable.

How to Get Assistance...

If you have a problem with your Extira Product, immediately upon discovery, contact the distributor or dealer from whom you purchased our product or contact us directly:

Mail: Extira Limited Warranty
909 Pinder Avenue
Grinnell, IA 50112

Phone: 888-594-3578

We can respond quickly and efficiently if you provide the following: a) date and location of purchase, b) how to contact you, c) the address where the product can be inspected, and d) a description of the apparent problem and the product (photographs are helpful).

What We Will Do...

Upon receiving your notification, we will send out an acknowledgement, usually within three business days of receipt to the contact identified. We will investigate your claim and will begin to take appropriate action within 30 days after receipt of notification. If your warranty claim is denied, we may charge an inspection fee for an onsite inspection that is required or requested by you.

If your claim is accepted, and we choose to repair or replace the product or a component of the product, the replacement product/component will be provided in the same specification as the original product. Replacement products, components and services are warranted for the balance of the original product or service warranty, or 90 days, whichever is longer.

What This Warranty Does Not Cover...

We are not liable for damage, product failure or poor product performance due to:

- Normal wear and tear, and natural weathering of surfaces or variations in the color or texture of field-finished coating; surface cracks that are less than 1/32" in width and/or 1" in length.
- Exposure to chemicals (e.g. brick wash), a harsh environment (e.g., airborne pollutants, or prolonged contact with or immersion in liquid water), or direct contact with soil.
- Misuse, abuse or failure to properly store, handle, finish and provide maintenance for the Product.
- Alteration or modification of the Product.
- Any cause beyond our reasonable control (e.g. fire, flood, earthquake, other acts of nature, and acts of third parties outside of our control).

- Problems related to: improper field finishing of all exposed surfaces and edges of the panel (See our Finishing Instructions at www.miratecextira.com); variation or unsatisfactory results in sheen or texture resulting from the field application of paint or any other coating material.
- Warp which does not exceed our manufacturing specifications.
- Warp or bowing on any true operational shutters (those fastened to a structure with hinges on only one side).
- Warp or bowing on decorative shutters when mechanically fastened at greater than 24" on center around the perimeter of each side.
- Flaws in structure design and construction; installation into a condition that exceeds product design standards and/or is not in compliance with building codes.
- Hardware or accessories that are not provided by us.

We are also not liable for:

- Cost for labor, removal or disposal of defective product(s), freight, taxes or any other charge related to a failed product, installation or finishing of replacement panels.
- Incidental or consequential damage. Some states/provinces do not allow the exclusion or limitation of incidental or consequential damages, so this may not apply to you.

Important Legal Information -- Please read this carefully. It affects your rights.

This Limited Warranty document sets forth our maximum liability for our products. We shall not be liable for special, indirect, consequential, or incidental damages. Your sole and exclusive remedy with respect to any and all losses or damages resulting from any cause whatsoever shall be as specified above. We make no other warranty or guarantee, either express or implied, including implied warranties of merchantability and fitness for a particular purpose to the original purchaser or to any subsequent user of the Product, except as expressly contained herein. In the event state or provincial law precludes exclusion or limitation of implied warranties, the duration of any such warranties shall be no longer than, and the time and manner of presenting any claim thereon shall be the same as, that provided in the express warranty stated herein. This Limited Warranty document gives you specific legal rights, and you may have other rights that vary from state/province to state/province.

Any dispute, controversy or claim arising out of or relating to this warranty, any alleged breach thereof, or the use or sale of the products to which this warranty applies shall be resolved by mandatory and binding arbitration administered by the American Arbitration Association in accordance with its commercial arbitration rules. Original purchaser agrees that they may assert claims against JELD-WEN in their individual capacity only, and not as a plaintiff or class member in any purported class action proceeding. The warranty provision herein shall be interpreted in accordance with the laws of Oregon (excluding Oregon's conflict of laws principles). If any provision of this warranty is held illegal or unenforceable in a judicial proceeding, such provision shall be severed and shall be inoperative, and the remainder of this warranty shall remain operative and binding on the Parties. Rejection of these dispute resolution provisions must be sent to JELD-WEN at the address provided herein within thirty (30) days of original purchaser's receipt of the Products to which this warranty applies.

No distributor, dealer or representative of Extira Products has the authority to change, modify or expand this warranty. The original purchaser of this Product acknowledges that they have read this warranty, understand it and are bound by its terms and agrees to provide this warranty to the original owner of the structure into which the Product is installed.

¹ "Extira Products" shall refer to exterior treated panels manufactured and marketed by JELD-WEN under the Extira brand name for use in the United States and/or Canada.

² This warranty extends to the original owner (original owner means the contractor/dealer/distributor/purchaser and the initial owner of the structure where the product is initially installed) and is not transferable. The original purchaser of this product acknowledges that they have read this warranty, understand it and are bound by its terms and agrees to provide this warranty to the original owner of the structure into which the product is installed. Should state or provincial law preclude no transferability, then the warranty period is effective as applicable up to ten (10) years from the date of initial purchase.



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EXTIRA[®]
by JELD-WEN



1.800.255.0785 | miratecextira.com

SIMPLE. *elegant*. SOLUTIONS.
 from a company you can trust



Eagle Tile Product Specifications

www.eagleroofing.com



4697 Slate Range

Profile	Weight	Description	Category
Bel Air	Conventional	Range of Charcoal	Conventional

Regions Available

California, Great Plains, Hawaii, Intermountain, Pacific Northwest, Southwest, Western Canada

Ref	Aged Ref. (3 yr)	EMI	Aged EMI. (3 yr)	SRI	Aged SRI (3 yr)	CRRC
0.15	0.17	0.94	0.92	15	16	0918-0046



reSAWN TIMBER co.™

Exclusive Manufacturer + Distributor of Abodo® in the USA

 **ABODO**





CLEAR
Cantilever House
Washington, DC
Architect: Patrick Brian Jones
Designer: Hendrick Interiors

Vulcan Cladding Vertical Grain Fine Sawn Face

reSAWN TIMBER co.'s Abodo Fine Sawn Face Vulcan Cladding provides a unique, textured surface with beautiful grain depth. This fine sawn texture opens the wood grain to allow for optimal coating performance. Vulcan thermally modified wood cladding is created from New Zealand plantation timbers and engineered with a patented vertical grain orientation for superior weathering characteristics. All products except for EGRET, and STERLING are finished with Abodo Protector Oil. EGRET and STERLING are finished with reSAWN's 0-VOC Exterior Oil.



NERO
EXTERIOR CLADDING



WALNUT
EXTERIOR CLADDING



TEAK
EXTERIOR CLADDING



GRAPHITE
EXTERIOR CLADDING



NATURAL
EXTERIOR CLADDING



PEARL
EXTERIOR CLADDING



STRAW
EXTERIOR CLADDING



EGRET
EXTERIOR CLADDING & INTERIOR
WALL/CEILING CLADDING
(WEATHERED 2 MONTHS)



STERLING
EXTERIOR CLADDING & INTERIOR
WALL/CEILING CLADDING



PATINA
EXTERIOR CLADDING
(WEATHERED 2 MONTHS)



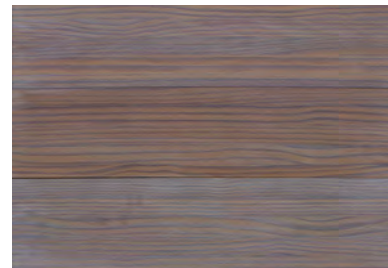
SiOO:X
EXTERIOR CLADDING
(PRE-WEATHERED)

Vulcan Cladding Vertical Grain Smooth Face

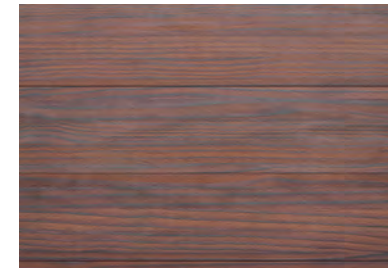
reSAWN TIMBER co.'s Abodo Smooth Face Vulcan Cladding is made using a proprietary brushing technique during manufacturing. Brushing the material opens the wood grain to allow for optimal coating performance. Vulcan thermally modified wood cladding is created from New Zealand plantation timbers and engineered with a patented vertical grain orientation for superior weathering characteristics. The brushing technique also provides a smooth, modern texture on the face of this unique clear vertical grain modified wood. All products except for OSPREY and KERERŪ are finished with Abodo Protector Oil. OSPREY and KERERŪ are finished with reSAWN's 0-VOC Exterior Oil.



TUI
EXTERIOR CLADDING



WARBLER
EXTERIOR CLADDING



WEKA
EXTERIOR CLADDING



MYNAH
EXTERIOR CLADDING



KāREAREA
EXTERIOR CLADDING
(WEATHERED 2 MONTHS)



KERERŪ
EXTERIOR CLADDING & INTERIOR
WALL/CEILING CLADDING



OSPREY
EXTERIOR CLADDING & INTERIOR
WALL/CEILING CLADDING
(WEATHERED 2 MONTHS)

Disclaimer: Product photos are meant to be a general guide to product appearance only. Due to our handcrafted process and wood being a product of nature, the color, grain pattern, character and profile will vary between individual boards on a project and will never be an exact match. Images shown with 2 coat application. Colors are subject to natural weathering - contact reSAWN for weathering guidelines.

Disclaimer: Product photos are meant to be a general guide to product appearance only. Due to our handcrafted process and wood being a product of nature, the color, grain pattern, character and profile will vary between individual boards on a project and will never be an exact match. Images shown with 2 coat application. Colors are subject to natural weathering - contact reSAWN for weathering guidelines.

Vulcan Cladding Flat Sawn Face

reSAWN TIMBER co.'s reSAWN TIMBER co.'s Abodo Flat Sawn Face Vulcan Cladding provides a high-performing exterior cladding with a unique aesthetic. The thermal modification process means Flat Sawn Vulcan Cladding has enhanced stability, reduced resin content, and is naturally durable so does not require any chemical preservatives.



TAUHARA
EXTERIOR CLADDING



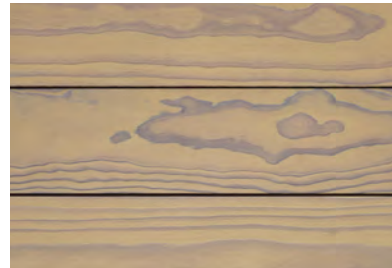
CALDERA
EXTERIOR CLADDING



TARANAKI
EXTERIOR CLADDING



GISBORNE
EXTERIOR CLADDING
(WEATHERED 2 MONTHS)



CANTERBURY
EXTERIOR CLADDING



MANAWATU
EXTERIOR CLADDING
(WEATHERED 2 MONTHS)



WAIKATO
EXTERIOR CLADDING
(WEATHERED 2 MONTHS)

Pre-Finished Vulcan Cladding

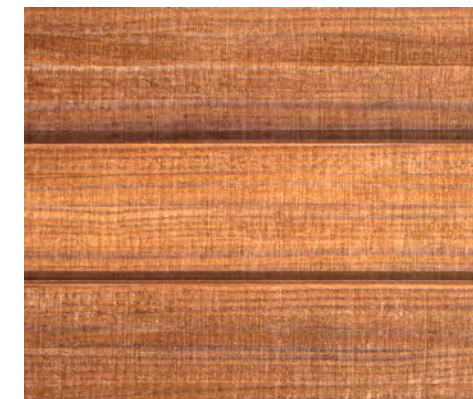
Vulcan Cladding is available pre-finished with **Abodo Protector Oil**, **SiOO:X Surface Treatment**, or **reSAWN's Exterior Oil Finish**.

Abodo Protector Oil: Abodo's Waterborne Protector Oil will nourish and protect external timbers. It uses the latest in waterborne oil technology combining refined plant oils, UV protection, advanced water barrier composition and an enhanced fungicidal package for superior exterior performance. A second coat of finish is required to be applied onsite by the installer post-install.

SiOO:X Surface Treatment: One design (SiOO:X) is pre-finished in SiOO:X natural wood coating. SiOO:X is a patented silicon technology which silvers off to a beautiful, low maintenance finish. Following application on timbers, SiOO:X cures by reacting with atmospheric carbon dioxide and moisture to form an insoluble and flexible silica network within the timber's surface. The formation of this silica network toughens the surface of the timber and forms an effective barrier against insects and rot. In addition to the protective benefits gained, as the mineral silicate cures, over time it will start to turn the timber a beautiful silver/greyish tone, starting from around 10-16 weeks (depending on UV exposure the weathering period may vary). From reSAWN's experience, boards will initially go darker and then lighten over time. The end result is a consistently weathered, light grey timber with a stunning, low maintenance driftwood appearance.

reSAWN's Exterior Oil Finish: STERLING, EGRET, OSPREY and KERERŪ are pre-finished in reSAWN's Exterior Oil Finish. They are appropriate for interior and exterior applications and are pre-finished with a non-toxic, odor-free, one-coat, oil-based sealer for all types of exterior wood. Most oil-based wood sealers have petroleum solvents that are hazardous; this is the first zero VOC oil-based finish to raise the bar and offer a long-lasting wood protection without the off-gassing of toxic chemicals.

VULCAN CLADDING PRE-FINISHED WITH SiOO:X



DAY ONE



WEATHERED 3 MONTHS

Disclaimer: Product photos are meant to be a general guide to product appearance only. Due to our handcrafted process and wood being a product of nature, the color, grain pattern, character and profile will vary between individual boards on a project and will never be an exact match. Images shown with 2 coat application. Colors are subject to natural weathering - contact reSAWN for weathering guidelines.

Vulcan Cladding Vertical Grain Dimensions and Milling:

WB10

STANDARD DIMENSIONS:

+/- 3/4" thick X +/- 5" wide X 6'-16' random lengths

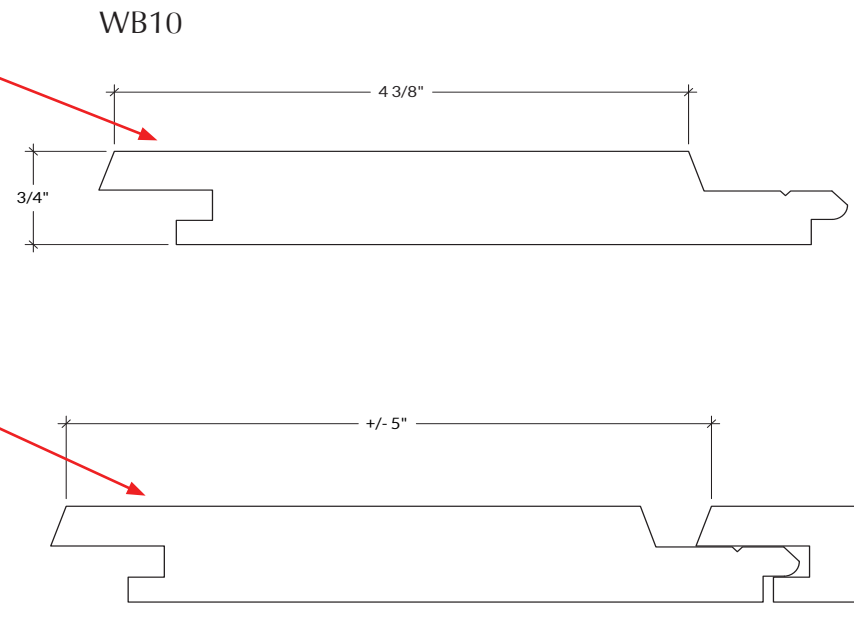
FACE:

- STERLING, GRAPHITE, NERO, PATINA, PEARL, STRAW, TEAK, WALNUT, EGRET, SiOO:X, and NATURAL have a Fine Sawn Face
- MYNAH, TUI, WARBLER, WEKA, OSPREY, KERERŪ, and KĀREAREA have a Smooth Face
- Arrows indicate face of profile - be sure to install correctly

BACK:

Fine Sawn WB10 **backs** are smooth

Smooth Face WB10 **backs** are textured



Vulcan Cladding Vertical Grain Dimensions and Milling:

TONGUE & GROOVE

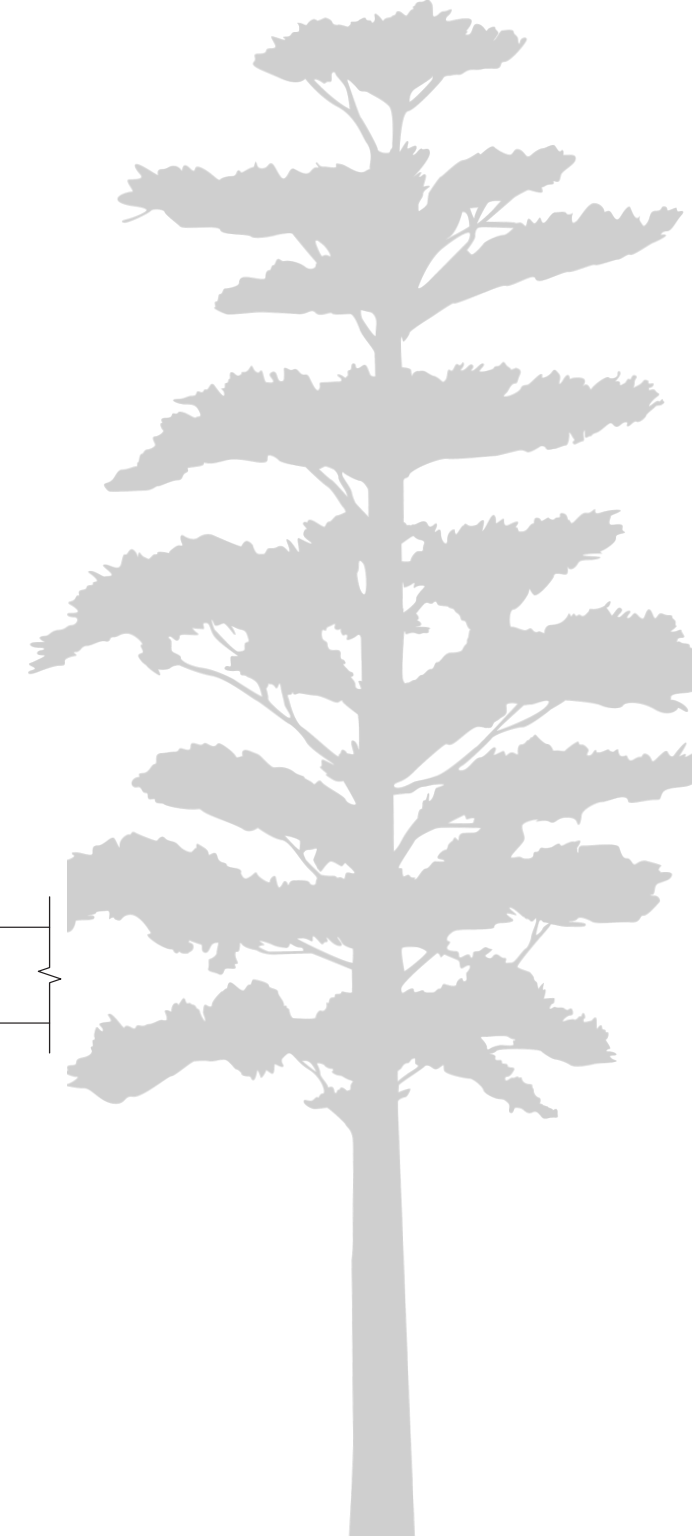
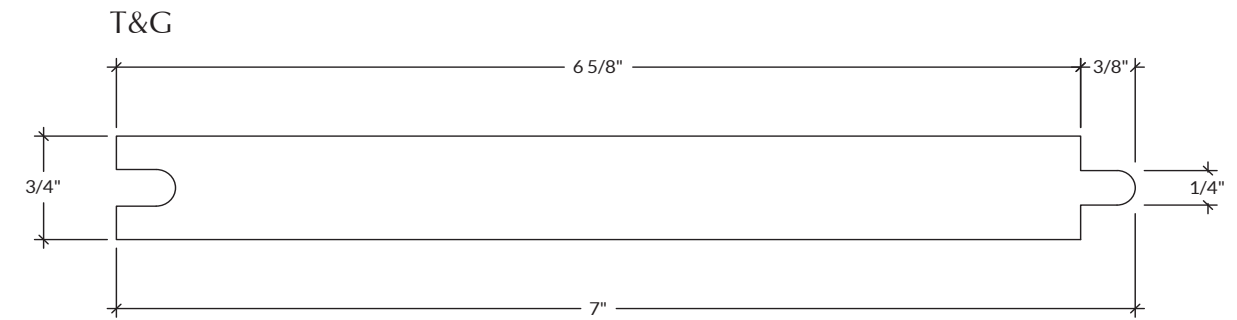
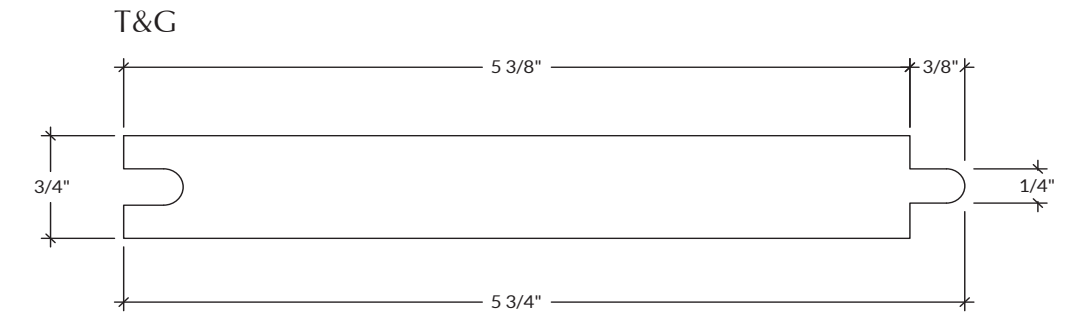
STANDARD DIMENSIONS:

+/- 3/4" thick X +/- 5-3/8" wide X 6'-16' random lengths

+/- 3/4" thick X +/- 6-5/8" wide X 6'-16' random lengths

FACE:

- STERLING, GRAPHITE, NERO, PATINA, PEARL, STRAW, TEAK, WALNUT, EGRET, SiOO:X, and NATURAL have a Fine Sawn Face
- MYNAH, TUI, WARBLER, WEKA, OSPREY, KĀREAREA, and KERERŪ have a Smooth Face
- Be sure to install correctly



Vulcan Cladding Vertical Grain Dimensions and Milling:

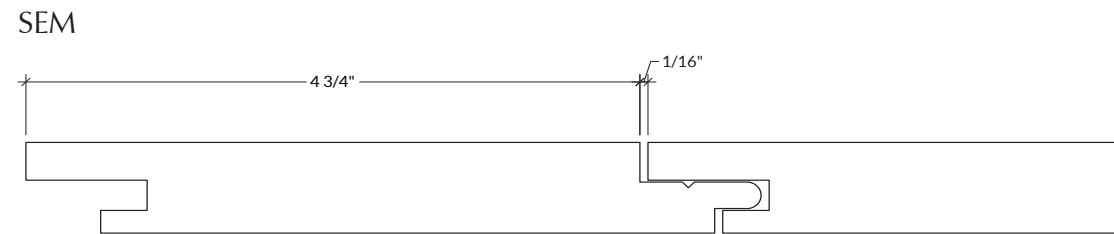
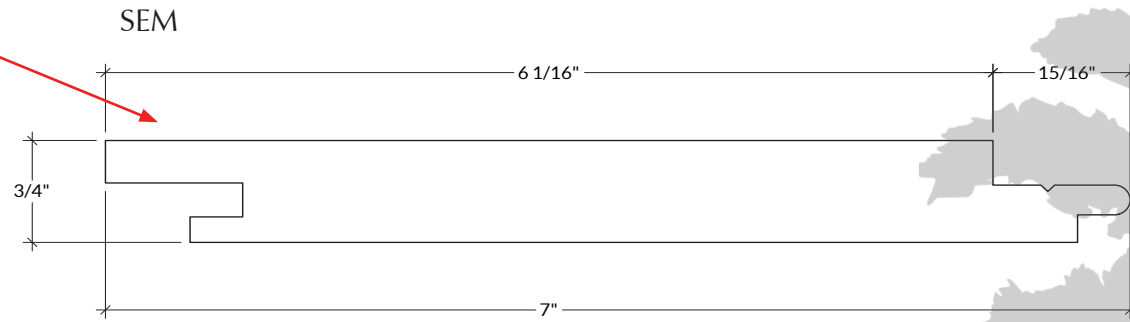
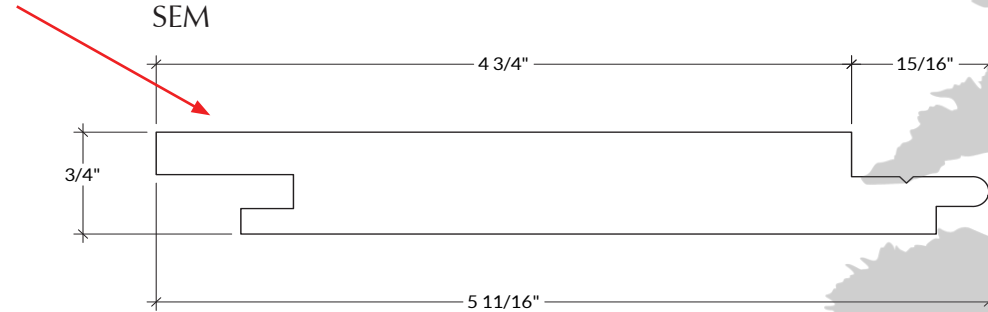
SEM (SQUARE EDGE MODIFIED)

STANDARD DIMENSIONS:

- +/- 3/4" thick X +/- 4-3/4" wide X 6'-16" random lengths
- +/- 3/4" thick X +/- 6-1/6" wide X 6'-16" random lengths

FACE:

- GRAPHITE, NERO, PATINA, PEARL, STRAW, TEAK, WALNUT, SiOO:X, and NATURAL have a Fine Sawn Face
- MYNAH, TUI, WARBLER, WEKA, and KāREAREA have a Smooth Face
- Not available for STERLING, EGRET, KERERŪ and OSPREY
- Arrows indicate face of profile - be sure to install correctly
- These profiles are only approved for VERTICAL wall application only and should not be used in horizontal applications.



Vulcan Cladding Vertical Grain Dimensions and Milling:

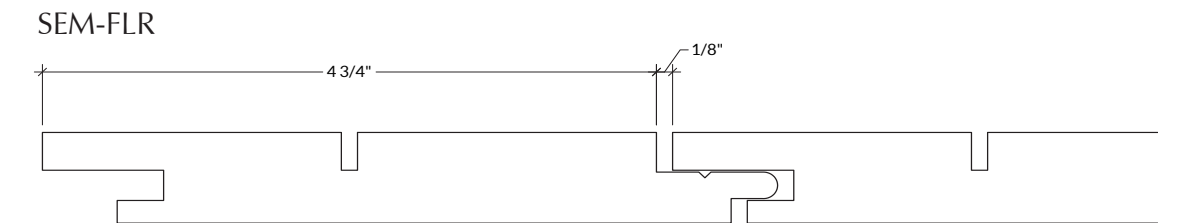
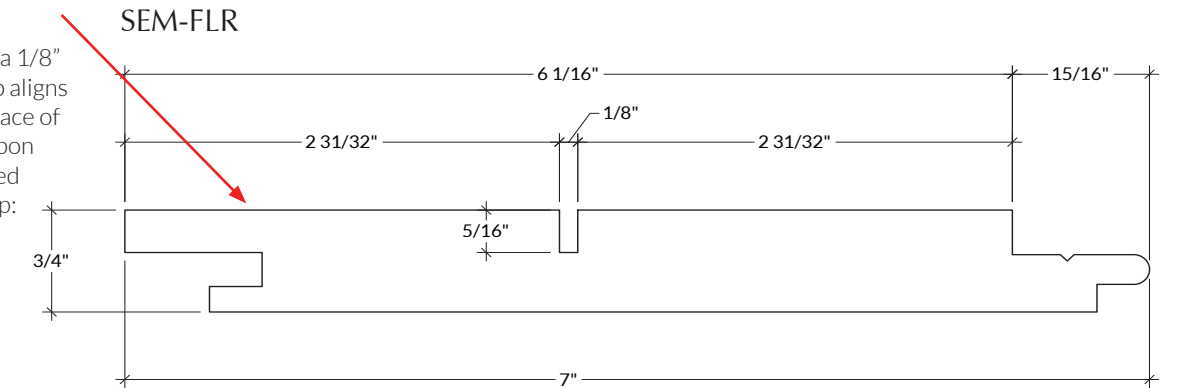
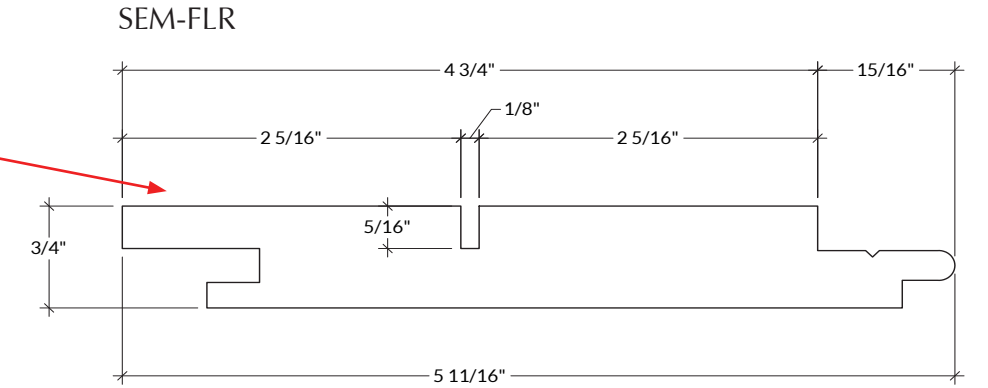
SEM-FLR (SQUARE EDGE MODIFIED - FINE LINE REVEAL)

STANDARD DIMENSIONS:

- +/- 3/4" thick X +/- 4-3/4" wide X 6'-16" random lengths
- +/- 3/4" thick X +/- 6-1/6" wide X 6'-16" random lengths

FACE:

- GRAPHITE, NERO, PATINA, PEARL, STRAW, TEAK, WALNUT, SiOO:X, and NATURAL have a Fine Sawn Face
- MYNAH, TUI, WARBLER, WEKA, and KāREAREA have a Smooth Face
- Not available for STERLING, EGRET, KERERŪ and OSPREY
- Arrows indicate face of profile - be sure to install correctly
- These profiles are only approved for VERTICAL wall application only and should not be used in horizontal applications.
- SEM-FLR profiles should be installed with a 1/8" expansion gap between boards. A 1/8" gap aligns with the width of the fine line cut into the face of the boards ensuring a uniform approach upon completion of installation. Typical shim used by installers to maintain 1/8" expansion gap: BARWALT SHIM



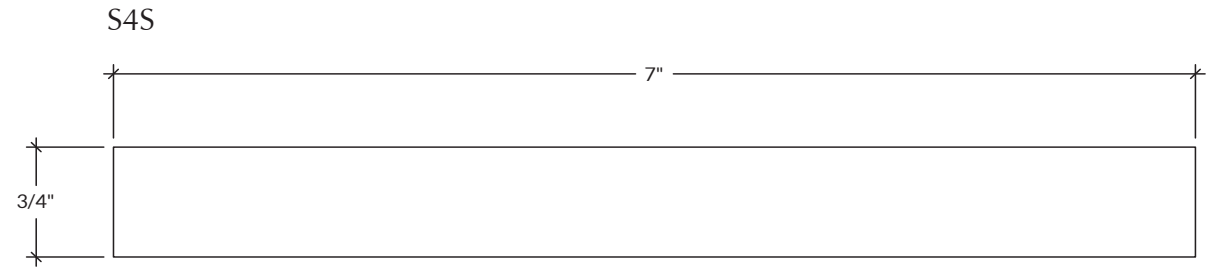
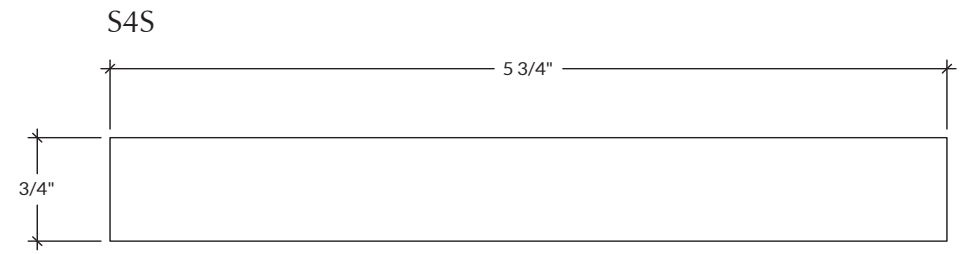
Vulcan Cladding Vertical Grain Dimensions and Milling:

S4S

STANDARD DIMENSIONS:
 +/- 3/4" thick X +/- 5-3/4" wide X 6'-16' random lengths
 +/- 3/4" thick X +/- 7" wide X 6'-16' random lengths

FACE:

- STERLING, GRAPHITE, NERO, PATINA, PEARL, STRAW, TEAK, WALNUT, EGRET, SiOO:X, and NATURAL have a Fine Sawn Face
- MYNAH, TUI, WARBLER, WEKA, OSPREY, KāREAREA, and KERURŪ have a Smooth Face
- Be sure to install correctly



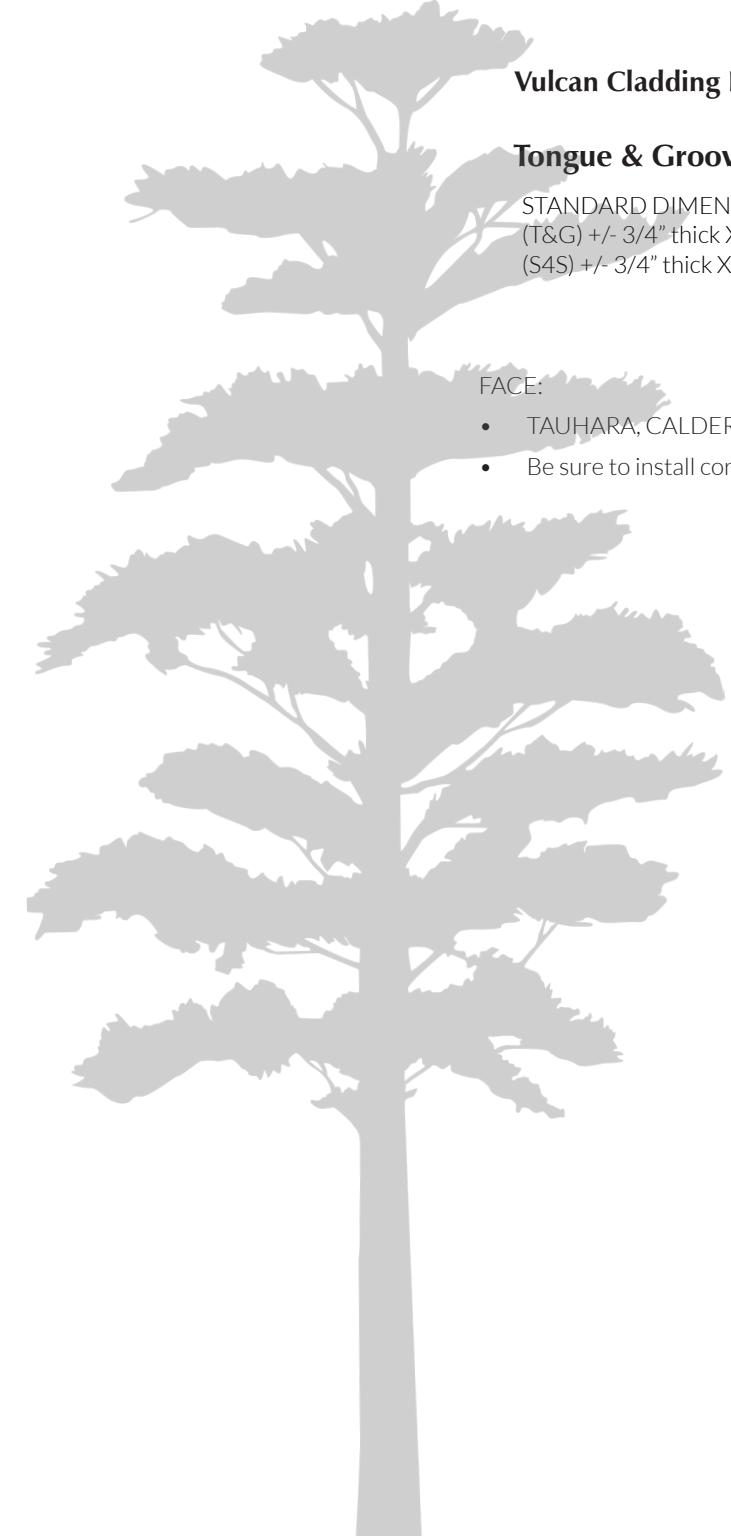
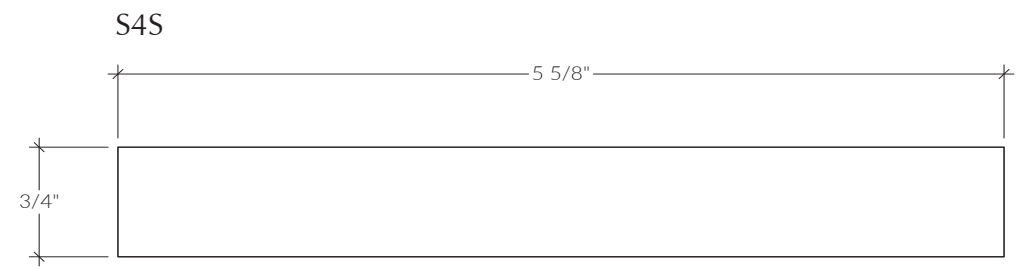
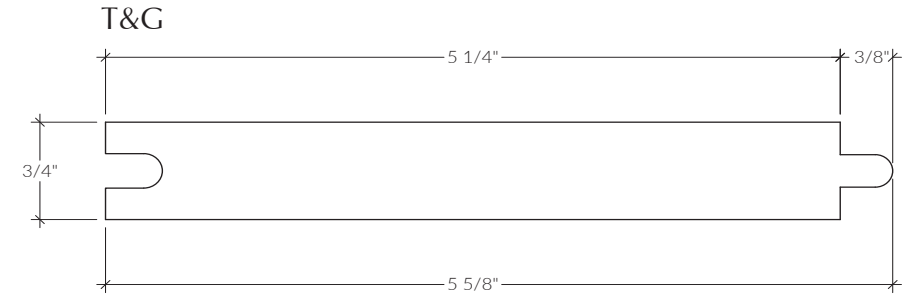
Vulcan Cladding Flat Sawn Dimensions and Milling:

Tongue & Groove, S4S

STANDARD DIMENSIONS:
 (T&G) +/- 3/4" thick X +/- 5-1/4" wide X 6'-16' random lengths
 (S4S) +/- 3/4" thick X +/- 5-5/8" wide X 6'-16' random lengths

FACE:

- TAUHARA, CALDERA, TARANAKI, GISBORNE, CANTERBURY, WAIKATO, and MANAWATU have a Flat Sawn face with a smooth texture
- Be sure to install correctly



Vulcan Cladding Vertical Grain Dimensions and Milling

(WB10) +/- 3/4" thick X +/- 5" wide X 6'-16' random lengths
 (T&G) +/- 3/4" thick X +/- 5-3/8" wide X 6'-16' random lengths
 (T&G) +/- 3/4" thick X +/- 6-5/8" wide X 6'-16' random lengths
 (S4S) +/- 3/4" thick X +/- 5-3/4" wide X 6'-16' random lengths
 (S4S) +/- 3/4" thick X +/- 7" wide X 6'-16' random lengths
 (SEM or SEM-FLR) +/- 3/4" thick X +/- 4-3/4" wide X 6'-16' random lengths
 (SEM or SEM-FLR) +/- 3/4" thick X +/- 6-1/16" wide X 6'-16' random lengths

*NOTE: CUSTOM WIDTH, LENGTHS AND MILLINGS AVAILABLE UPON REQUEST - CONTACT reSAWN TO DISCUSS

Specifications

Patented glue lamination is used for a modern, clean, vertical grain orientation. This provides superior weathering characteristics, greater stability and less surface cracking - this means the wood ages with grace as it's left to weather outdoors.

Species:	Radiata pine (Pinus radiata)
Grade:	Clear Vertical Grain Orientation
Finish:	Low VOC (85g/L)*
Applications:	Exterior applications only**
Dimensional Change:	Expected dimensional change in structure: Width expansion approx. 2%, length expansion approx. 0.25%, thickness expansion approx. 2.5% (from 7% MC to fiber saturation - variation will occur between boards).
Stability:	Approx. 50% more stable than non modified flat sawn radiata pine.
Janka Hardness:	Low (562 lbf)
Flame Spread Class Rating:	C (ASTM E 84)
Flame Spread Index:	80 (ASTM E 84)
Smoke Developed Index:	200 (ASTM E 84)
Durability Class:	1 (EN350-1), Class 2 above ground (AS5604), giving an anticipated service life of 60+ years

*STERLING, EGRET, OSPREY and KERERú are 0 VOC

**STERLING, EGRET, OSPREY and KERERú are available for interior applications

Sustainable Attributes and Possible LEED Credits

Forest Stewardship Council® (FSC®) - a guarantee that forest products come from responsibly managed sources, including forest management and chain of custody.

SS5 - Heat Island Reduction	MRC4 - Building product disclosure and optimization -Material Ingredients
MRC1 - Building Life-Cycle Impact Reduction	MRC 7 - FSC® Certified
MRC2 - Building product disclosure and optimization -Environmental Product Declarations	Red List Free: Free from Red List chemicals as required by the Living Building Challenge
IC1 Innovation	
MRC3 - Building product disclosure and optimization -Sourcing of raw materials	

Vulcan Cladding Flat Sawn Dimensions and Milling

(T&G) +/- 3/4" thick X +/- 5-1/4" wide X 6'-16' random lengths
 (S4S) +/- 3/4" thick X +/- 5-5/8" wide X 6'-16' random lengths

*NOTE: CUSTOM WIDTH, LENGTHS AND MILLINGS AVAILABLE UPON REQUEST - CONTACT reSAWN TO DISCUSS

Specifications

Species:	Radiata pine (Pinus radiata)
Grade:	Select
Finish:	Low VOC (85g/L)
Applications:	Exterior applications only
Dimensional Change: thickness	Expected dimensional change in structure: Width expansion approx. 4%, length expansion approx. 0.25%, expansion approx. 2.5% (from 7% MC to fiber saturation - variation will occur between boards).
Stability:	Vulcan Flat Sawn Cladding is approx. 30% more stable than flat sawn radiata pine..
Janka Hardness:	Low (562 lbf)
Flame Spread Class Rating:	C (ASTM E 84)
Flame Spread Index:	80 (ASTM E 84)
Smoke Developed Index:	200 (ASTM E 84)
Durability Class:	1 (EN350-1), Class 2 above ground (AS5604), giving an anticipated service life of 60+ years

Sustainable Attributes and Possible LEED Credits

Forest Stewardship Council® (FSC®) - a guarantee that forest products come from responsibly managed sources, including forest management and chain of custody.

SS5 - Heat Island Reduction	MRC4 - Building product disclosure and optimization -Material Ingredients
MRC1 - Building Life-Cycle Impact Reduction	MRC 7 - FSC® Certified
MRC2 - Building product disclosure and optimization -Environmental Product Declarations	Red List Free: Free from Red List chemicals as required by the Living Building Challenge
IC1 Innovation	
MRC3 - Building product disclosure and optimization -Sourcing of raw materials	



Vulcan Cladding Product Handling

- Cladding and accessories must be kept clean, dry, under cover and out of the weather prior to installation.
- Timber must be stored horizontally on dunnage that is at least four inches off the ground.
- Extra care must be taken during installation so as not to damage the factory finish of the boards.
- Wear a dust mask and eye protection when cutting timber.
- Do not burn timber that is treated for insect resistance. Dispose of off-cuts in a lined landfill or an approved furnace.

Vulcan Cladding Maintenance

- Wash down every 12 months with gentle detergent, warm water and a soft brush. Do not powerwash.
- If possible, it is recommended to apply an additional coat of oil after approx. 12 months of weathering.
- Make a maintenance check every two summers. Check all weatherboards, junctions, flashings, moldings and replace or remediate as required to maintain weather tightness of the cladding system.
- Re-coat every 2-3 years or as required to maintain color and integrity of coating. Re-coat period may be longer or shorter depending on climatic conditions and/or positioning of cladding to the sun. Preparation with Rejuvenator or other similar oxalic timber cleaner is recommended prior to coating.
- For heavily soiled or moldy areas use Rejuvenator or similar timber cleaner, apply active moldicide and recoat with penetrating oil.
- Contact reSAWN TIMBER co. for more information on maintenance and product weathering.

TEAK

New Fairfield Lake House, CT
Architect: Worrell Yeung



Vulcan Decking Product Offering

Vulcan Decking is created from thermally modified New Zealand plantation timbers. It's treated with an organic preservative system that includes water repellent for superior durability.

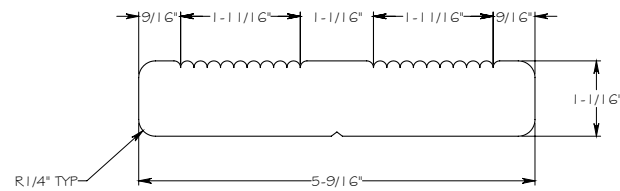
The thermal modification process gives the material an enhanced stability, reduced resin content, and is a beautiful, homogeneous, brown color. The premium grade and reeded face has little to no corrosiveness to most metals and can be coated on site.



Abodo Decking

CLEAR

SHOWN WITH 2 COAT APPLICATION



Decking Overview

Forest Stewardship Council (FSC®) - a guarantee that forest products come from responsibly managed sources, including forest management and chain of custody.

Red List Free: Free from Red List chemicals as required by the Living Building Challenge.

Built to Last Warranty: Vulcan Decking is covered by a 25 year Built to Last Warranty.

Treated with an organic system that includes water repellent for superior durability.

Vulcan Decking is supplied pre-finished with 1-coat of CLEAR Abodo Protector Oil (Abodo's high performance penetrating exterior oil) and requires a second coat to be applied onsite by the installer post-install.

Standard Decking Dimensions and Milling

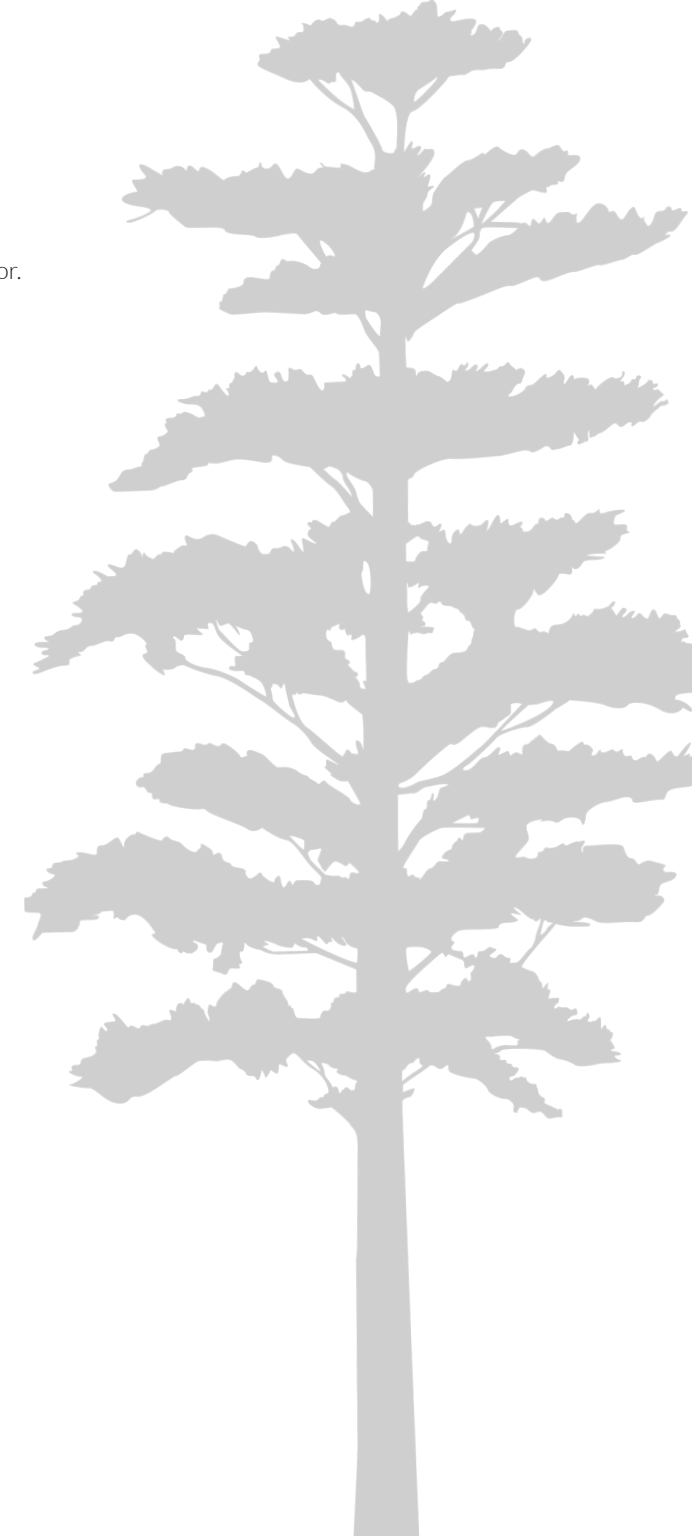
+/- 1-1/16" thick X +/- 5-9/16" wide

DK16 Decking Profile

Decking Specifications

Premium Grade/Graded to the reeded face with mainly clear sections, but with some defects including knots and resin pockets allowed up to 1/3rd of the board width. Reverse face with defects permitted according to Standard Grade.

Species:	Thermally Modified radiata pine (Pinus radiata)
Grade:	Select Grade-Flat Sawn
Finish:	Low VOC (85g/L)
Applications:	Decking
Janka Hardness:	Low (562 lbf)
Durability Class:	1 (EN350-1), Class 2 above ground (AS5604), giving an anticipated service life of 60+ years



Decking Specifications *Continued*

- Weight: 2 lbs/sf (light weight decking).
- ASTM D4442 - Moisture Content.
- Approx. 12% MC (at time of dispatch from factory).
- Thermally modified pine is resistant to most wood boring insects.
- Treated with OPX azole-based preservation system. Durability Class 1 (EN350), H3 (AS1604) and suitable for use Class 3 (EN335).
- Outstanding dimensional stability, which results in lower maintenance frequency and therefore less coating over the lifetime of the product.
- Width expansion approx. 3%, length expansion approx 0.25%, thickness expansion approx 1.5% change in surface* variation may occur between boards. (*Indicative tangential movement from 'dry' 12% MC to 'wet' fiber saturation approx 25% MC).

Abodo Decking Sustainable Attributes and Possible LEED Credits

All Abodo wood is produced from well managed, sustainable sources, including FSC® and other regionally certified woods. Additionally, reSAWN TIMBER co. holds FSC® Chain of Custody Certification. Abodo wood is an environmentally compatible substitute for carbon intensive materials. Environmentally compatible: 100% recyclable and reusable, naturally renewable.

SS5 - Heat Island Reduction

MRC3 - Building product disclosure and optimization – sourcing of raw materials

MRC1 - Building Life-Cycle Impact Reduction

MRC4 - Building product disclosure and optimization – Material Ingredients

MRC2 - Building product disclosure and optimization

Environmental Product Declarations

MR 7 - Certified Wood (FSC®)

IC1 Innovation

Red List Free : Free from Red List chemicals as required by the Living Building Challenge.



Decking Product Handling

- Prior to installation, keep decking boards dry and out of the weather or under plastic wrap, elevated four inches off the ground on dunnage.
- During installation, wear safety glasses, gloves, footwear and ear protection as appropriate.
- When cutting, do not breathe in wood dust - always wear a dust mask.
- Consult with a design professional, engineer or architect when building a deck with elevated or critical structural elements.
- Preservative treated Vulcan should be disposed of in a lined landfill or burned in an approved industrial furnace only.
- Adhere to local building codes and construction standards in all cases.

Decking Maintenance

- After exposure to the weather and foot traffic, the coating will start to fade and tracking marks may start to appear in heavy traffic areas. The coating should be re-applied once it begins to show signs of wear or water stops beading from the surface. Depending on sun exposure the re-coat cycle may be 12-18 months. Love your deck and it'll love you right back.
- Wash down regularly (at least every six months) with mild detergent, warm water and soft brush.
- All wood will go grey after extended exposure to the weather. To maintain color use a brown pigmented deck stain and re-apply on a regular basis.
- Surface cracking or 'checking' may occur after exposure to the weather. This can be reduced by using a quality decking stain and by installing boards with ribbed face up.
- Re-apply coating as required every 12-18 months.
- Mold growth will occur on timber, especially in high humidity conditions. For heavily soiled or moldy areas use Abodo Rejuvenator, a similar timber cleaner or oxygenating cleaner, then apply long-acting mold inhibitor such as Resene Deep Clean.

Contact reSAWN TIMBER co. for more information on maintenance and weathering of products.

Front Cover Image :

SiOO:X
Twin Gables, Watermill, NY
Architect: THE UP STUDIO

**It's Possible™
to fall in love
with your
home again.**

Southwest Product Catalog



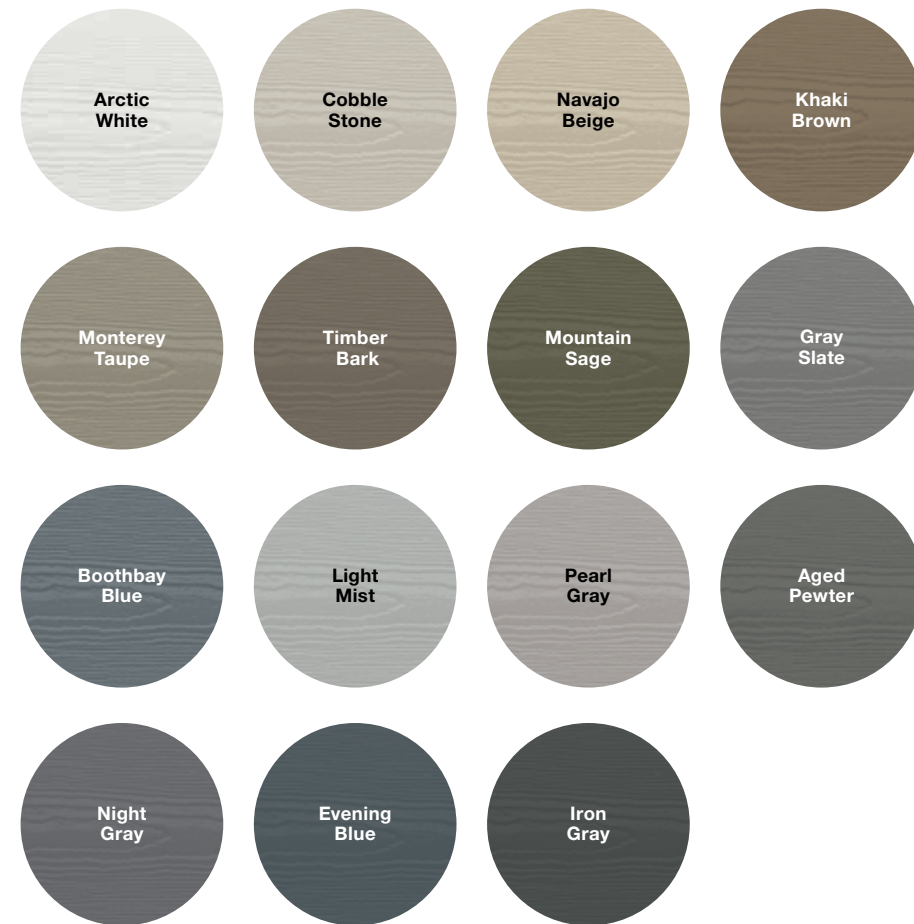
Statement Collection® Products

It's your turn to let your home stand out with our Statement Collection® products. Curated by our design experts, this collection of Hardie® siding and trim products with ColorPlus® Technology finishes are unique to your home's region. This gorgeous selection is locally stocked in your area, making it easier than ever to find the exterior style of your dreams.

COLORPLUS® TECHNOLOGY

ColorPlus® Technology finishes combine distinct beauty and high performance in a way that no other finish does. They're the easiest way to choose a gorgeous pre-finished color for your house, and feel confident in its staying power.

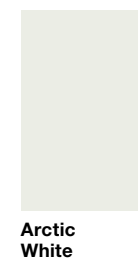
Hardie® Plank, Hardie® Panel, Hardie® Shingle and Hardie® Trim Batten Color Offering



Hardie® Trim Color Offering



Hardie® Soffit Color Offering



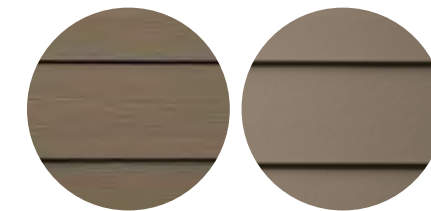
Hardie® Plank

Thickness 5/16 in
Length 12 ft planks

Select Cedarmill® & Smooth

Width 8.25 in

Exposure 7 in

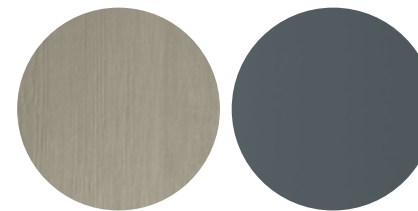


Hardie® Panel

Thickness 5/16 in

Select Cedarmill® & Smooth

Size 4 ft x 10 ft



Hardie® Shingle

Thickness 1/4 in
Length 48 in

Straight Edge Panel

Height 15.25 in

Exposure 7 in



Hardie® Soffit

Thickness 1/4 in

Non-Vented Select Cedarmill®

Width 24 in

Length 8 ft



Hardie® Trim

Length 12 ft

4/4 Rustic Grain

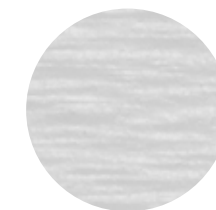
Thickness .75 in

Width 5.5 in

5/4 Rustic Grain

Thickness 1 in

Width 3.5 in 5.5 in 7.25 in 11.25 in



Hardie® Trim

Length 12 ft

4/4 Smooth

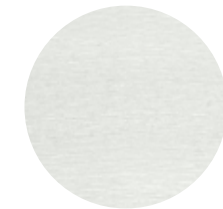
Thickness .75 in

Width 5.5 in

5/4 Smooth

Thickness 1 in

Width 3.5 in 5.5 in



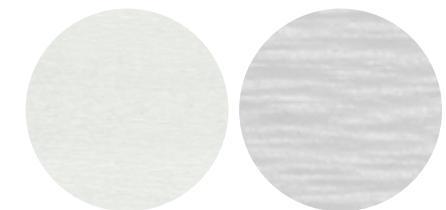
Batten Boards

Smooth & Rustic Grain

Thickness .75 in

Length 12 ft

Width 2.5 in



Scan code to request a sample.

STYLES

find your perfect mix of exterior products



HARDIE® PANEL & HARDIE® TRIM BATTEN



HARDIE® SHINGLE



HARDIE® PLANK



HARDIE® TRIM

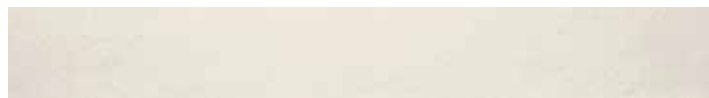


HARDIE® SOFFIT

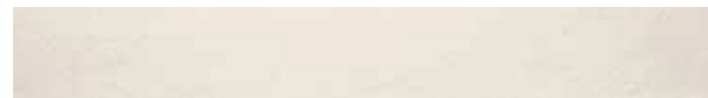
For more detailed product size and availability information, visit jameshardie.com/magnolia.

TEXTURES

choose the texture you prefer



HARDIE® TRIM SMOOTH



HARDIE® SIDING SMOOTH*



HARDIE® TRIM RUSTIC GRAIN



HARDIE® SIDING SELECT CEDARMILL**

* Textures available for siding and soffit. Hardie® Shingle only offered in Select Cedarmill®.

DESIGN *the* HOME YOU'VE ALWAYS IMAGINED

Visualize Hardie® products on a 3D model of your home with HOVER® Design Studio, brought to you by James Hardie.

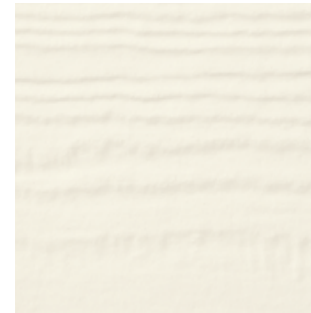
Every home tells a story. What will yours be? Start your free design.



VISUALIZE THE COLLECTION ON YOUR HOME

COLORS

select the hue that's right for you



BIRCH TREE



WEATHERED CLIFFS



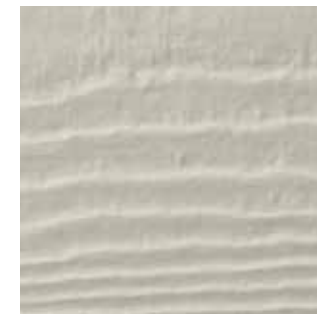
RUSTIC ROAD



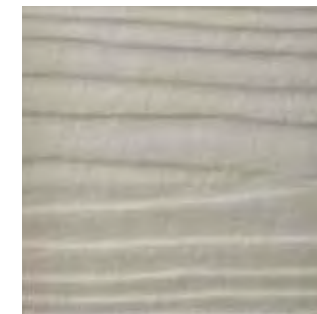
RUGGED PATH



IT'S ABOUT THYME



STONE BEACH



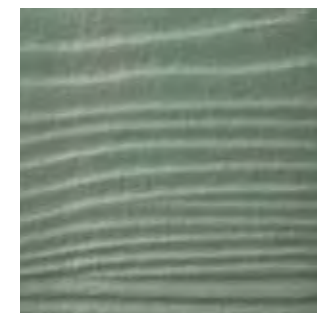
STONE PAVER



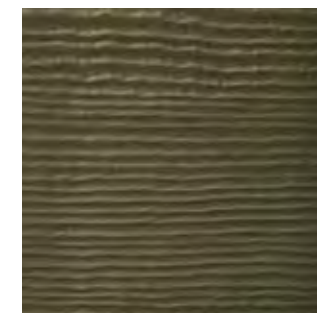
WARM CLAY



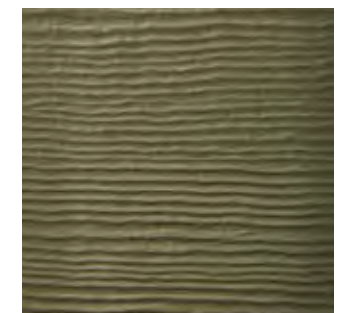
DRIED EUCALYPTUS



CHISELED GREEN



WANDERING GREEN



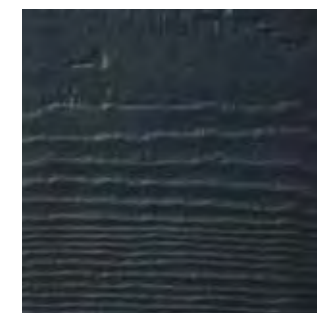
MUDFLATS



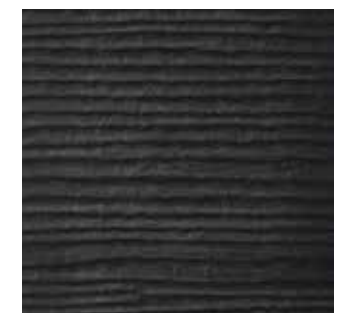
SLATE STEPS



PEPPERY ASH



LAST EMBERS



MIDNIGHT SOOT

All products in this collection come prefinished with ColorPlus® Technology finishes by James Hardie.

A classic look that stands the test of time.

Hardie® Plank

From Victorians to Colonials, Hardie® Plank is the perfect siding for your style, and has the durability and long-lasting beauty that can transform your home exterior. With endless gorgeous color and plank pairings available, you'll discover a Hardie® Plank style that transforms your home's aesthetic.



Hardie® Trim Smooth Arctic White

Hardie® Plank Select Cedarmill® Khaki Brown

Hardie® Plank



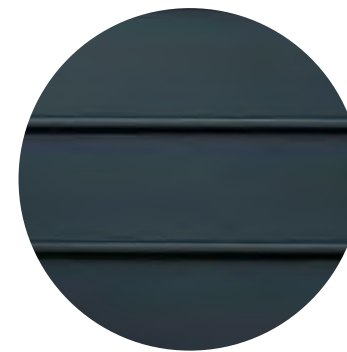
Select Cedarmill®



Smooth



Beaded Select Cedarmill®



Beaded Smooth

	Thickness 5/16 in		Length 12 ft planks			
Width	5.25 in	6.25 in	7.25 in	8.25 in	9.25 in	12 in
Exposure	4 in	5 in	6 in	7 in	8 in	10.75 in
Prime Pcs/Pallet	360	308	252	230	190	152
ColorPlus® Pcs/Pallet	324	280	252	210	—	—
Pcs/Sq.	25.0	20.0	16.7	14.3	12.5	9.3

Select Cedarmill®

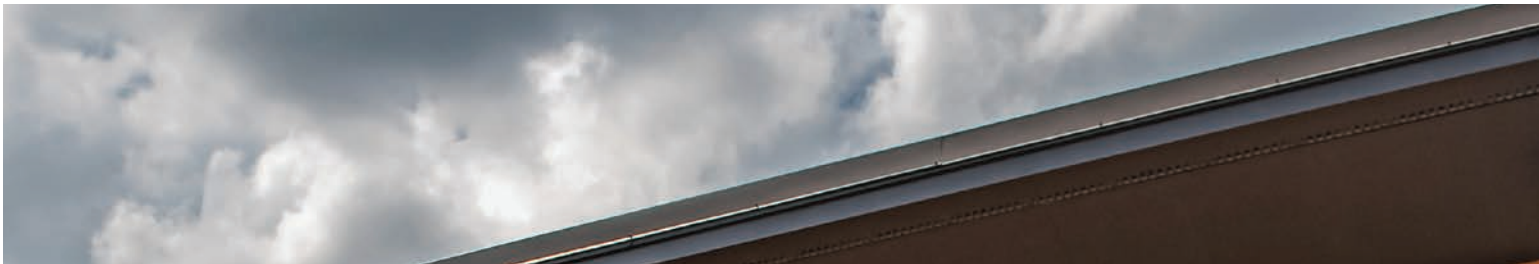
Width	5.25 in	6.25 in	7.25 in	8.25 in	9.25 in	12 in
Statement Collection®				•		
Dream Collection®	•	•	•	•		
Prime	•	•	•	•	•	•

Smooth

Width	5.25 in	6.25 in	7.25 in	8.25 in	9.25 in*	12 in
Statement Collection®				•		
Dream Collection®	•	•	•	•		
Prime	•	•	•	•	•	•

Beaded Select Cedarmill® & Beaded Smooth

Width	8.25 in
Exposure	7 in
ColorPlus® Pcs/Pallet	210
Pcs/Sq.	14.3
Statement Collection®	
Dream Collection®	•
Prime	



| FULL-VIEW ALUMINUM



THE
QUALITY
GARAGE
DOOR™



FULL-VIEW ALUMINUM

A dramatic statement, made to fit your contemporary garage door application. Our full-view aluminum garage doors are expertly engineered of aluminum and glass that will give your home the perfect blend of industrial and ultra modern.

3295 shown in clear anodized with optional frosted glass

KEY FEATURES



INSULATION

Optional insulated section rails are available providing additional thermal protection for your garage space.



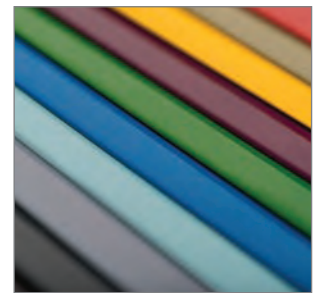
BULB SEAL

Integrated bulb seal eliminates air and water infiltration keeping your interiors protected from the unwanted elements.



SECTION CONSTRUCTION

Rail and stile sections are assembled with through bolts for added strength and longevity.



POWDER COATING

Choose from 188 color options that provide a maintenance free, durable finish.



Enjoy the view but keep the noise out!

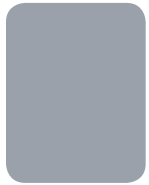
C.H.I Full-View Aluminum doors have been tested and certified for an STC (sound transmission class) Rating of 27.

PERSONALIZING OPTIONS

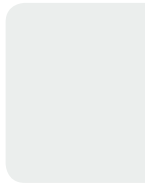
Choose from a variety of personalizing options to complement your home's design and create immediate curb appeal.

FINISH

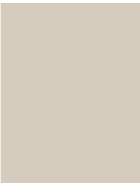
SUPER DURABLE POWDER COAT COLORS All powder coat colors add 1-week lead time



Clear Anodized



White



Almond



Sandstone



Brown



Bronze



Dark Bronze



Gray



Desert Tan

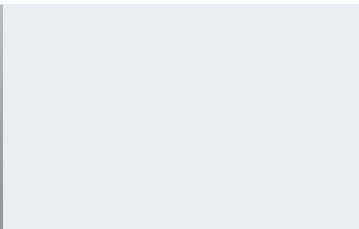


Black

GLASS



Plain



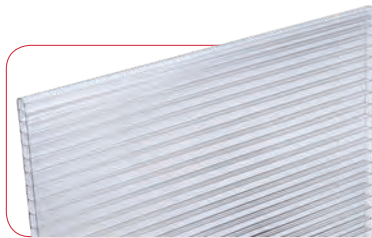
Frosted



Tinted



Obscure






ADDITIONAL GLASS & PANEL OPTIONS

In addition to our standard glass offering, customize your door with specialty glass, solid panels or special materials. Contact your C.H.I. Dealer for options and details.

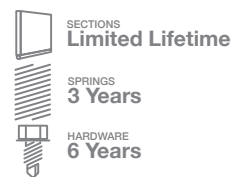


Full-View Aluminum Model Comparison Chart

	BETTER	BEST
Section Construction	2" Thick - Hollow aluminum rails with through bolt assembly and bulb seal between sections	2" Thick - Insulated aluminum rails with through bolt assembly and bulb seal between sections
Section Material	Heavy Duty - Aluminum	Heavy Duty - Aluminum
Insulation Type	No Insulation	Polystyrene Insulation
		
Panel Style / Model Number²		
	3295	3297
<small>Full-View</small>		
Personalizing Options		
Powder Coating¹	188 Colors	188 Colors
Windows	•	•
Solid Panels	Insulated or Non-Insulated	Insulated or Non-Insulated
Glass	•	•
Warranty	Limited Lifetime Warranty	

APPEARANCE PACKAGE

All hardware, including struts and track, is powder coated, creating a complete garage door system with a lasting impression.



¹ Refer to your local C.H.I. Dealer for exact color match. ² Model number indicates insulation type.



DOORVISIONS

Bring your vision to life.

C.H.I. DEALERS

A BETTER BUYING EXPERIENCE

All C.H.I. doors, replacement parts, and accessories are sold only through our network of C.H.I. dealers: dedicated professionals who install and service our doors with the same quality and workmanship we use to manufacture them.

chiohd.com | 1485 Sunrise Drive | Arthur, IL 61911 | USA

Your Local Garage Door Professional



Product Catalog

WINDOWS AND PATIO DOORS

LINCOLN
WINDOWS



Aluminum clad is definitely the most popular exterior choice from Lincoln, offering color flexibility and structural strength while providing a homeowner with a low maintenance exterior. Extruded aluminum .050 thick frame and sash cladding protects homes from the outdoor elements and add structural integrity for maximum functionality. The Aluminum Clad Collection is wide-ranging and includes a full line of windows, patio doors and a multitude of options.

Beauty, durability, variety and performance are all brought to you by the Aluminum Clad Collection and built with pride at Lincoln.

Features

- **Available Product:**
Full product selection.
- **Maintenance:**
Minimal. Periodic soap & water.
- **Structural Performance:**
Superior strength and rigidity for all-weather protection.
- **Thermal Performance:**
High. Good for meeting Energy Star.



Frame and Sash Finishes

We offer eight standard colors, thirty-eight feature colors, seven spray-on anodized colors and have the ability to match from a customer's sample.

All of our standard, feature and custom color options are painted to AAMA 2605 performance requirements. AAMA 2605 high performance paint is the preferred choice of designers, architects and builders. Exceptional color retention and minimal chalking are leading characteristics of this premium paint finish.

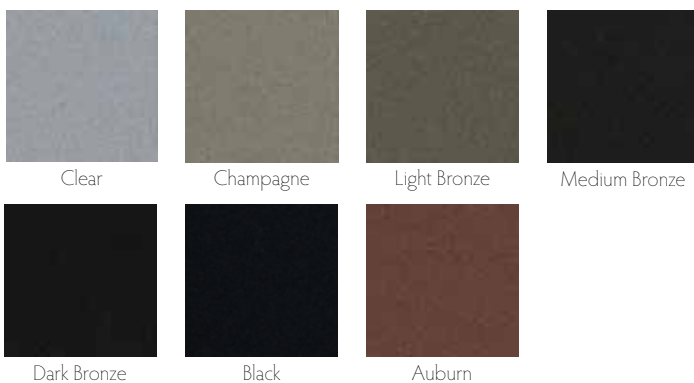
Standard Colors - AAMA 2605



Feature Colors - AAMA 2605



Spray-On Anodized Colors - AAMA 2604



Custom Colors - AAMA 2605



Due to printing limitations, the colors shown are for representation only.

ATTACHMENT 5

Geotechnical Investigation Report

Cal Land Engineering, Inc.
dba Quartech Consultants
Geotechnical, Environmental, and Civil Engineering

August 9, 2022

Mr. David Sun
838 San Nicholas Drive
Walnut, California 91789

Subject: Report of Preliminary Geotechnical Investigation, Proposed Residential Addition,
2089 Hanscom Drive, APN: 5308-022-010, South Pasadena, California, CLE
Project No.: 21-225-011EG

Dear Mr. Sun:

In accordance with your request, Quartech Consultants (QCI) is pleased to submit this Geotechnical Investigation Report for the subject site. The purpose of this report was to evaluate the subsurface conditions and provide recommendations for foundation design and other relevant parameters for the proposed construction.

Based on the findings of QCI's investigation, it is concluded that the proposed development of the subject lot is feasible from a geotechnical viewpoint, provided that recommendations presented herein are incorporated into design, grading and construction.

This opportunity to be of service is sincerely appreciated. If you have any questions pertaining to this report, please contact the undersigned at your convenience.
Respectfully submitted,

CalLand Engineering, Inc. (CLE)
dba Quartech Consultants (QCI)



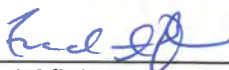
Jack C. Lee, GE 2153





John Tran

Reviewed By:



Fred Aflakian, CEG 2051





Abe Kazemzadeh

**REPORT OF GEOTECHNICAL ENGINEERING
INVESTIGATION**

Proposed Residential Addition

At

**2089 Hanscom Drive
APN: 5308-022-010
South Pasadena, California**

Prepared by
QUARTECH CONSULTANTS
Project No.: 21-225-011 EG
August 9, 2022

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	PURPOSE.....	1
1.2	SCOPE OF SERVICES.....	1
1.3	PROPOSED CONSTRUCTION.....	1
1.4	SITE CONDITIONS.....	1
2.0	SUBSURFACE EXPLORATION AND LABORATORY TESTING.....	2
2.1	SUBSURFACE EXPLORATION.....	2
2.2	LABORATORY TESTING.....	2
3.0	SOIL CONDITIONS.....	2
3.1	SITE GEOLOGY.....	2
3.1.1	<i>Fill (Map Symbol – Af)</i>	2
3.1.2	<i>Siltstone of Monterey Formation (Map Symbol – Tmsl)</i>	3
3.2	GEOLOGICAL STRUCTURES.....	3
3.3	GROUNDWATER.....	3
4.0	SLOPE STABILITY.....	3
4.1	EXISTING SLOPES.....	3
4.2	SURFICIAL SLOPE STABILITY AND LANDSCAPING.....	3
5.0	SEISMICITY.....	4
5.1	FAULTING AND SEISMICITY.....	4
5.2	ESTIMATED EARTHQUAKE GROUND MOTIONS.....	5
5.3	SEISMIC DESIGN CRITERIA.....	5
6.0	CONCLUSIONS.....	6
6.1	SEISMICITY.....	6
6.2	EXCAVATABILITY.....	6
6.3	SURFICIAL SOIL CONDITIONS.....	6
6.4	SEISMIC INDUCED HAZARD.....	6
6.5	SURFICIAL SOIL REMOVAL AND RECOMPACTION.....	7
6.6	GROUNDWATER.....	7
7.0	RECOMMENDATIONS.....	7

7.1	CONVENTIONAL SHALLOW FOUNDATION.....	7
7.1.1	<i>Site Preparation</i>	7
7.1.2	<i>Surficial Materials Removal</i>	7
7.1.3	<i>Treatment of Removal Bottoms</i>	7
7.1.4	<i>Structural Backfill</i>	8
7.1.5	<i>Temporary Excavation</i>	8
7.1.6	<i>Shallow Foundation</i>	8
7.2	DEEPENED FOUNDATION SYSTEM	8
7.3	FOUNDATION SETBACK.....	9
7.4	SETTLEMENT.....	9
7.5	LATERAL PRESSURE.....	9
7.6	RETAINING WALL BACKFILL AND WALL DRAINAGE	10
7.7	FOUNDATION CONSTRUCTION.....	10
7.8	CONCRETE SLABS.....	11
7.9	TEMPORARY TRENCH EXCAVATION AND BACKFILL.....	12
8.0	COROSION POTENTIAL	12
9.0	INSPECTION	12
10.0	INVESTIGATION LIMITATIONS	12

1.0 INTRODUCTION

1.1 Purpose

This report presents a summary of our preliminary geotechnical engineering investigation for the proposed construction at the subject site. The purposes of this investigation were to evaluate the subsurface conditions at the area of construction and to provide recommendations pertinent to grading, foundation design and other relevant parameters of the proposed development.

1.2 Scope of Services

QCI scope of services included:

- Review of available soil and geologic data of the area.
- Due to the limited access of the site, subsurface exploration consisting of logging and sampling of two hand dug test pits to a maximum depth of 5 feet below the existing ground surface. Test pit logs are presented in Appendix A.
- Laboratory testing of representative samples to establish engineering characteristics of the on-site soil. The laboratory test results are presented in Appendices A and B.
- Engineering analyses of the geotechnical data obtained from our background studies, field investigation, and laboratory testing.
- Preparation of this report presenting our findings, conclusions, and recommendations for the proposed construction.

1.3 Proposed Construction

It is anticipated that the subject site would be used for single-family residential addition. The proposed addition is anticipated to be a wood deck and one and/or two-story wood frame structures with concrete slab-on-grade. The proposed addition will be adjacent to the existing residence. Column loads are unknown, but are expected to be light to medium. Minor cut and fill grading operations are anticipated to reach the desired grades.

1.4 Site Conditions

The subject site is located at north side of Hanscom Drive, a relatively short distance east of Randolph Avenue, in the City of South Pasadena, California. Approximate regional location is shown on the attached Site Location Map (Figure 1). The site is currently occupied by an existing residence within the existing relatively level pad. The existing level pad is approximately 26 feet higher than the adjacent Hanscom Drive. Access to the pad is utilizing the existing paved driveway at the southerly portion of the site. A slope graded to approximately 1 to 1

(horizontal to vertical) and less than 26 feet high existed between the level pad and the access driveway. In order to accommodate the grade difference, a retaining wall with maximum height of 5 to 6 feet was constructed between the graded slope and access driveway. No major surface erosions were observed at the time of our field investigation. Detail configuration of the site is presented in the attached Site Plan, Figure 2.

2.0 SUBSURFACE EXPLORATION AND LABORATORY TESTING

2.1 Subsurface Exploration

Two hand excavated test pits were performed at the locations indicated in the attached Site Plan, Figure 2. The test pits were excavated to a maximum depth of 5.5 feet below the existing ground surface. The test pit was supervised and logged by an engineering geologist. Relatively undisturbed and bulk samples were collected for laboratory testing. Logs of test pit are presented in Appendix A.

2.2 Laboratory Testing

Representative samples were tested for the following parameters: in-situ moisture content and density, direct shear strength, percent of fines, Atterberg limits, expansion index, and corrosion potential. Results of our laboratory testing along with a summary of the testing procedures are presented in Appendix B. In-situ moisture and density test results are presented on the trench logs in Appendix A.

3.0 SOIL CONDITIONS

3.1 Site Geology

The earth materials encountered at the subject site include surficial soils overlying bedrock of Monterey Formation. A description of the subsurface materials from top down is provided as follows:

3.1.1 Fill (Map Symbol – Af)

Surficial fill was encountered in both Test Pit No. 1 and 2. The encountered fill depth varied from 3 to 4 feet. The fill is comprised of clayey silt with trace of rock fragments (MH), dark brown, slightly moist to moist and soft to firm with rock fragments up to 4 inches in size. No compaction report pertaining to the placement of these fills were available during our preparation of this report. It is our opinion that the encountered fill should be considered as non-structural fills and are not suitable for the additional fill and foundation support.

3.1.2 Siltstone of Monterey Formation (Map Symbol – Tmsl)

Underlying the surficial fill is bedrock of Monterey Formation. Bedrock mainly consists of siltstone, well bedded, light brown to gray, slightly moist, moderately hard to hard, siliceous, moderately fractured and moderate weathered.

3.2 Geological Structures

Based on our field investigation and the site regional geology, bedrock is generally strikes north-west and dips moderately toward north, which is considered favorable with respect to the site gross slope stability. No major fracturing was observed in bedrock to impact the development adversely. No faulting, adverse folding or other geologic hazards was observed or encountered during our site exploration. Based on our review of the site exploration, it is our understanding that adverse geologic conditions such as landsliding, faulting, and/or other geologic hazards will not affect the proposed residential development.

3.3 Groundwater

No ground water was encountered during our field investigation to a maximum depth of approximately 5.0 feet.

4.0 SLOPE STABILITY

4.1 Existing Slopes

Based on our filed exploration and review of the regional topographic map, the existing slope between the level pad and the adjacent driveway is graded at the slope ratio of 1 to 1 (horizontal to vertical) to a maximum height of less than 26 feet. The existing slope should be grossly stable under the current conditions provided the slopes are properly maintained.

4.2 Surficial Slope Stability and Landscaping

All slopes will be subject to surficial erosion. Therefore, slopes should be protected from surface runoff by means of top-of-slope compacted earth berms or concrete interceptor drains. All slopes should be landscaped with a suitable plant material requiring minimal cultivation and irrigation water in order to thrive. An irrigation system should be installed. Overwatering and subsequent saturation of slope surfaces should be avoided. The slope area outside the proposed construction area should remain intact and the vegetation should be maintained from drying to protect the slope form erosion. Overwatering and subsequent saturation of slope surfaces should be avoided. All roof runoff from proposed residence constructions should be directed to the street or to a drainage conduit.

5.0 SEISMICITY

5.1 Faulting and seismicity

The subject site, like the rest of Southern California, is located within a seismically active region as a result of being located near the active margin between the North American and Pacific tectonic plates. The principal source of seismic activity is movement along the northwest-trending regional faults such as the San Andreas, San Jacinto and Elsinore fault zones. These fault systems produce approximately 5 to 35 millimeters per year of slip between the plates.

We consider the most significant geologic hazard to be the potential for moderate to strong seismic shaking that is likely to occur at the subject site. The subject site is located in the highly seismic Southern California region within the influence of several faults that are considered to be Holocene-active or pre-Holocene faults. A Holocene-active fault is defined by the State of California as a fault that has exhibited surface displacement within the Holocene time (about the last 11,700 years). A pre-Holocene fault is defined by the State as a fault whose history of past movement is older than 11,700 years ago and does not meet the criteria for a Holocene-active fault.

These Holocene-active and pre-Holocene faults are capable of producing potentially damaging seismic shaking at the site. It is anticipated that the subject site will periodically experience ground acceleration as the result of small to moderate magnitude earthquakes. Other active faults without surface expression (blind faults) or other potentially active seismic sources that are not currently zoned and may be capable of generating an earthquake are known to be present under in the region.

The subject site is not included within any Earthquake Fault Zones as created by the Alquist-Priolo Earthquake Fault Zoning Act. Our review of geologic literature pertaining to the site area indicates that there are no known active or potentially active faults located within or immediately adjacent to the subject property.

As indicated in Table 1, Raymond fault zone is considered to have the most significant effect to the site from a design standpoint.

TABLE 1
Characteristics and Estimated Earthquakes for Regional Faults

Fault Name	Approximate Distance to Site (mile)	Maximum Earthquake Magnitude (Mw)
Raymond	1.3	6.8
Verdugo	2.4	6.9
Elysian Park (Upper)	2.5	6.7
Hollywood	3.4	6.7
Santa Monica Connected alt 2	6.3	7.4
Sierra Madre	7.2	7.2
Sierra Madre Connected	7.2	7.3
Puente Hills (LA)	9.0	7.0
Elsinore; W+GI	10.2	7.3
Elsinore; W+GI+T	10.2	7.5
Elsinore; W+GI+T+J	10.2	7.8
Elsinore; W+GI+T+J+CM	10.2	7.9
Elsinore; W	10.2	7.0
Clamshell-Sawpit	11.4	6.7
Newport Inglewood Connected alt 2	12.7	7.5
Newport Inglewood, alt 1	12.9	7.2

Reference: 2008 National Seismic Hazard Maps - Source Parameters

5.2 Estimated Earthquake Ground Motions

In order to estimate the seismic ground motions at the subject site, QCI has utilized the seismic hazard map published by California Geological Survey. According to this report, the peak ground acceleration at the subject site for a 2% and 10% probability of exceedance in 50 years is about 1.093g and 0.593g respectively (USGS, 2008 Deaggregation of Seismic Hazards). Site modified peak ground acceleration (PGAM), corresponding to USGS Design Map Summary Report, ASCE 7-16 Standard, is 1.100g.

5.3 Seismic Design Criteria

Based on our studies on seismicity, there are no known active faults crossing the property. However, the subject site is located in southern California, which is a tectonically active area. Based on ASCE 7-16 Standard (CBC 2019), the following seismic related values may be used.

The Project Structural Engineer should be aware of the information provided below to determine if any additional structural strengthening is warranted.

Seismic Parameters (Latitude: 34.1004542, Longitude: -118.1754183)	Site Class "C"
Mapped 0.2 Sec Period Spectral Acceleration S_s	2.107g
Mapped 1.0 Sec Period Spectral Acceleration S₁	0.728g
Site Coefficient for Site Class "C", F_a	1.2
Site Coefficient for Site Class "C", F_v	1.4
Maximum Considered Earthquake Spectral Response Acceleration Parameter at 0.2 Second, S_{M_s}	2.529g
Maximum Considered Earthquake Spectral Response Acceleration Parameter at 1.0 Second, S_{M₁}	1.019g
Design Spectral Response Acceleration Parameters for 0.2 sec, S_{DS}	1.686g
Design Spectral Response Acceleration Parameters for 1.0 Sec, S_{D1}	0.679g

6.0 CONCLUSIONS

Based on the results of our subsurface investigation and engineering analyses, it is our opinion that the proposed construction is feasible from a geotechnical standpoint, provided the recommendations contained herein are incorporated in the design and construction.

6.1 Seismicity

Based on our studies on seismicity, there are no known active faults crossing the property. However, the site is located in a seismically active region and is subject to seismically induced ground shaking from nearby and distant faults, which is a characteristic of all Southern California.

6.2 Excavatability

Based on our subsurface investigation, excavation of the subsurface materials should be able to be accomplished with conventional earthwork equipment.

6.3 Surficial Soil Conditions

The site is underlain by the previously placed fill. Based on our subsurface investigation, the encountered fill depth varied from 3 to 4 feet. The encountered fills are not suitable for the additional fills and/or foundation support and are subject to the remedial works as discussed in this report.

6.4 Seismic Induced Hazard

Based on our review of the "Seismic Hazard Zones, Los Angeles Quadrangle" by California Geological Services (CGS), it is concluded that the site is not located within the potential seismic induced landslide or liquefaction areas.

6.5 Surficial Soil Removal and Recompaction

Prior to initiating grading operations, any existing vegetation, trash, debris, over-sized materials (greater than 8 inches), and other deleterious materials within construction areas should be removed from the subject site. The existing near surface colluvium is about to remove to reach the required grade.

6.6 Groundwater

Groundwater was not encountered during our field exploration. In our opinion, groundwater will not be a problem during construction.

7.0 RECOMMENDATIONS

Based on the subsurface conditions exposed during field investigation and laboratory testing program, it is our opinion that the proposed additions may be supported by conventional shallow foundation or deepened foundation embedded into competent bedrock. The following recommendations to be incorporated in the design and construction phases of the project:

7.1 Conventional Shallow Foundation

7.1.1 Site Preparation

Prior to initiating grading operations, any existing vegetation, trash, debris, over-sized materials (greater than 8 inches), and other deleterious materials within fill areas should be removed.

7.1.2 Surficial Materials Removal

Within grading limits, existing surficial materials should be removed to expose competent bedrock. Based on the subsurface exploration, removal depth up to 4 feet or 2 feet below the bottom of the foundation, whichever is deeper, may be anticipated. All excavations should be observed by a representative of this office to verify the subgrade conditions and determine if additional removals or other mitigative measures are needed.

7.1.3 Treatment of Removal Bottoms

Soils exposed within areas approved for fill placement should be scarified to a depth of 6 inches, conditioned to near optimum moisture content, then compacted in-place to minimum project standards.

7.1.4 Structural Backfill

The onsite soils may be used as compacted fill provided, they are free of organic materials and debris. Fills should be placed in relatively thin lifts (6 to 8 inches), brought to near optimum moisture content, and then compacted to at least 90 percent relative compaction based on laboratory standard ASTM D-1557-12.

7.1.5 Temporary Excavation

Based on our field exploration and laboratory data obtained to date, it is our opinion that temporary excavation may need to be excavated vertically or near vertically up to 5 feet. It is recommended that temporary excavation of the onsite soils can be cut vertically up to 5 feet and sloped excavations may be made no steeper than 1 to 1 (horizontal to vertical) for the underlying material. Flatter slope cuts may be required if loose soils encountered during excavation. No heavy construction vehicles, equipment, nor surcharge loading should be permitted at the top of the slope. A representative of this office should inspect the temporary excavation to make any necessary modifications or recommendations.

7.1.6 Shallow Foundation

An allowable bearing value of 2000 pounds per square foot (psf) may be used for design of continuous or pad footings with a minimum of 12 inches in width. All footings should be at least 24 inches deep and founded entirely on competent compacted fill approved by the project geotechnical consultants. The bearing value may be increased by one third (1/3) when considering short duration seismic or wind loads.

7.2 Deepened Foundation System

In lieu of the onsite grading operation, the proposed additions and the proposed deck may be supported by deepen foundation or caisson.

Deepen foundation founded at least 12 inches into the competent bedrock. An allowable bearing value of 3000 pounds per square foot (psf) may be used for design of continuous or pad footings with a minimum of 12 inches in width. This bearing value may be increased by 200 psf for each additional foot of depth or width to a maximum value of 3,500 psf.

Caisson and grade beam foundation system may be used for the proposed development. Caissons should be a minimum of 5 feet into competent bedrock and approved by project geotechnical/geologist consultant. Caissons may be designed for an allowable end bearing of 4000 psf for the portion of caissons embedded within the competent bedrock. Caissons should be at least 24 inches in diameter to facilitate cleanout. The base of all caissons excavations should be cleaned of all loose materials. All caissons should be tied in two horizontal directions with grade beams or footings.

All footings should be at least 24 inches deep and founded at least 12 inches into the competent bedrock, whichever is deeper, approved by the project geotechnical consultants. The bearing value may be increased by one third ($1/3$) when considering short duration seismic or wind loads.

7.3 Foundation Setback

All foundations and building should be setback from the adjacent slope face per current City's building code (i.e., $H/3$ but not need to exceed 40 horizontal feet). Additionally, a minimum horizontal setback distance of 10 feet should be maintained between the edge of the foundation and the adjacent slope face. No passive pressure is allowed for the portion of the footing, which maintains less than 10 feet between the edge of the foundation and the adjacent slope face.

7.4 Settlement

Settlement of the footings placed as recommended and subject to no more than allowable loads is not expected to exceed $3/4$ inch. Differential settlement between adjacent columns is not anticipated to exceed $1/2$ inch.

7.5 Lateral Pressure

The active earth pressure to be utilized for cantilever retaining wall designs may be computed as an equivalent fluid having a density of 40 pounds per cubic foot when the slope of the backfill behind the wall is level. These values assume free-draining condition. Passive earth pressure for the residential foundation design may be computed as an equivalent fluid pressure of 400 pounds per cubic foot, with a maximum earth pressure of 3,500 pounds per square foot. An allowable coefficient of friction between soil and concrete of 0.35 may be used with the dead load forces. When combining passive pressure and frictional resistance, the passive pressure component should be reduced by one-third.

Earthquake earth pressure distribution on retaining walls retaining more than 6 feet of soils when the slope of the backfill behind the wall is level may be computed as 33 pcf. Resultant seismic lateral earth pressure can be applied assuming an inverted triangular distribution, with the resultant applied at a height of $2/3H$ measured from the bottom of wall footings. The earthquake-induced pressure should be added to the static earth pressure. Design of walls less than 6 feet in height may neglect the additional seismic pressure.

7.6 Retaining Wall Backfill and Wall Drainage

Walls may be backfilled with onsite soils. A free-drainage, selected backfill (SE of 30 or greater), should be used against the retaining wall to the top of the wall. The upper 18 inches of backfill should consist of native soils. All backfill should be compacted to at least 90 percent of the laboratory maximum dry density (ASTM D-1557-12). Any proposed retaining walls at the site should be provided with backdrains to reduce the potential for the buildup of hydrostatic pressure.

Backdrains should consist of 4-inch (minimum) diameter perforated PVC pipe surrounded by a minimum of 1 cubic foot per lineal foot of clean coarse gravel wrapped in filter fabric (Mirafi 140 or the equivalent) placed at the base of the wall.

The drain should be covered by no less than 18 inches (vertical) of compacted wall backfill soils. The backdrain should outlet through non-perforated PVC pipe or weepholes. Alternatively, commercially available drainage fabric (i.e., J-drain) could be used. The fabric manufacturer's recommendations should be followed in the installation of the drainage fabric backdrain. If there is not enough room for placing the above mentioned drainage systems, an alternative system such as pre-fabricated drainage system AQUADRAIN 100 BD with a 3-inch drain pipe set in gravel behind the wall, to prevent the buildup of hydrostatic pressure. This drainpipe may be connected to a 3-inch drain collector pipe connected to a sump pump.

7.7 Foundation Construction

The planned residential addition and deck may be supported by deepened foundation system founded at least 12 inches into the competent bedrock. It is anticipated that the entire structure will be underlain by onsite soils of medium expansion potential ($EI=87$). In accordance with Section 1808.6.4 of the 2019 California Building Code the soil should be stabilized by presaturation and all footings and slabs should be constructed as follows:

All shallow footings should be founded at a minimum depth of 24 inches below the lowest adjacent grade and founded on competent materials as recommended in Section 7.1 or 7.2 of this report. All continuous footings should have at least two No. 4 reinforcing bars placed within four inches of the top of the footing and two No. 4 bars shall be placed between 3 inches and 4 inches of the bottom of the footing. Foundations for exterior walls and interior bearing walls shall be tied to the floor slabs by reinforcing bars (dowels) having a diameter of not less than ½ inch (No. 4 bar) reinforcing bars and spaced at intervals not exceeding 16 inches on center. The reinforcing bars extend at least 40 bar diameters into the footings and the slabs.

Presaturation of soils is recommended for concrete slab areas. The moisture condition of each slab area should be 120 percent or greater of optimum moisture content to a depth of 24 inches below slab grade prior to pouring of slabs. Presaturation may be facilitated by maintaining the water content prior to foundation construction by periodic spraying and by slowly adding additional water after foundations are in.

7.8 Concrete Slabs

Concrete slabs and flatworks should be a minimum of 5 inches thick and reinforced with a minimum of No. 4 reinforcing bar spaced 16-inch each way or its equivalent. All slab reinforcement should be supported to ensure proper positioning during placement of concrete.

In order to comply with the requirements of the 2019 CalGreen Section 4.505.2.1 within the moisture sensitive concrete slabs, a minimum of 4-inch thick base of ½ inch or larger clean aggregate should be provided with a vapor barrier in direct contact with concrete. A 10-mil Polyethylene vapor retarder, with joints lapped not less than 6 inches, should be placed above the aggregate and in direct contact with the concrete slab. As an alternate method, 3 inches of sand then 10-mil polyethylene membrane and another 3 inches of sand over the membrane and under the concrete may be used, provided this request for an alternative method is approved by City Building Officials.

Should the deepened footings be used to support the proposed addition and no grading operation is performed within the proposed construction area, it is recommended that the structural slabs be used for the proposed addition. The reinforcement of the structural slabs should be determined by the project structural engineer.

7.9 Temporary Trench Excavation and Backfill

All trench excavations should conform to CAL-OSHA and local safety codes. All utilities trench backfill should be brought to near optimum moisture content and then compacted to obtain a minimum relative compaction of 90 percent of ASTM D-1557-12. All temporary excavations should be observed by a field engineer of this office so as to evaluate the suitability of the excavation to the exposed soil conditions.

8.0 COROSION POTENTIAL

Chemical laboratory tests were conducted on the existing onsite near surface materials sampled during QCI's field investigation to aid in evaluation of soil corrosion potential and the attack on concrete by sulfate soils. The testing results are presented in Appendix B. According to 2019 CBC and ACI 318-19, a "negligible" exposure to sulfate can be expected for concrete placed in contact with the onsite soils. Therefore, Type II cement or its equivalent may be used for this project. Based on the resistivity test results, it is estimated that the subsurface soils are severely corrosive to buried metal pipe (900 ohm-cm). It is recommended that any underground steel utilities be blasted and given protective coating. Should additional protective measures be warranted, a corrosion specialist should be consulted.

9.0 INSPECTION

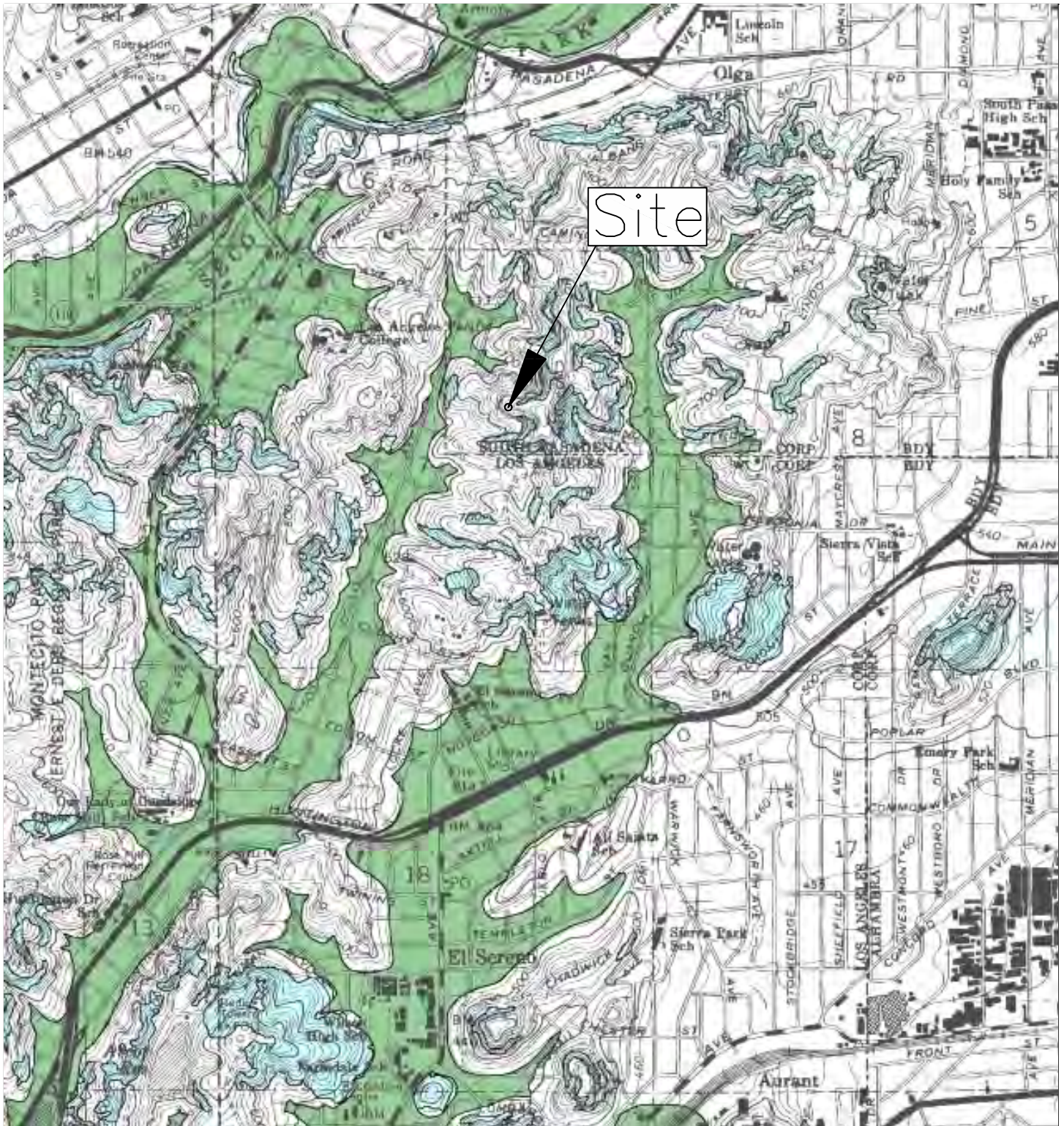
As a necessary requisite to the use of this report, the following inspection is recommended:

- Temporary excavations.
- Removal of surficial and unsuitable soils.
- Backfill placement and compaction.
- Utility trench backfill.

The geotechnical engineer should be notified at least 2 days in advance of the start of construction. A joint meeting between the client, the contractor, and the geotechnical engineer is recommended prior to the start of construction to discuss specific procedures and scheduling.

10.0 INVESTIGATION LIMITATIONS

The materials encountered on the subject site and utilized in our laboratory testing program are believed to be representative of the area. However, soil materials may vary in characteristics between excavations. Since our investigation is based on the site materials observed, selected laboratory testing, and engineering analyses, the conclusions and recommendations are professional opinion. These opinions have been derived in accordance with current standard of practice, and no warranty is expressed or implied.



SCALE 1" = 2000'

LEGEND

Maps modified from "Seismic Hazard Zones, Los Angeles Quadrangle" by CDMG

Area Subjected to Liquefaction Induced Settlement

Calland Engineering, Inc.
dba Quartech Consultants

Geotechnical, Environmental & Civil
Engineering Services

Project Address:

APN: 5308-022-010
2089 Hanscom Drive
South Pasadena, California

Site Location Map



NOT TO SCALE

LEGEND

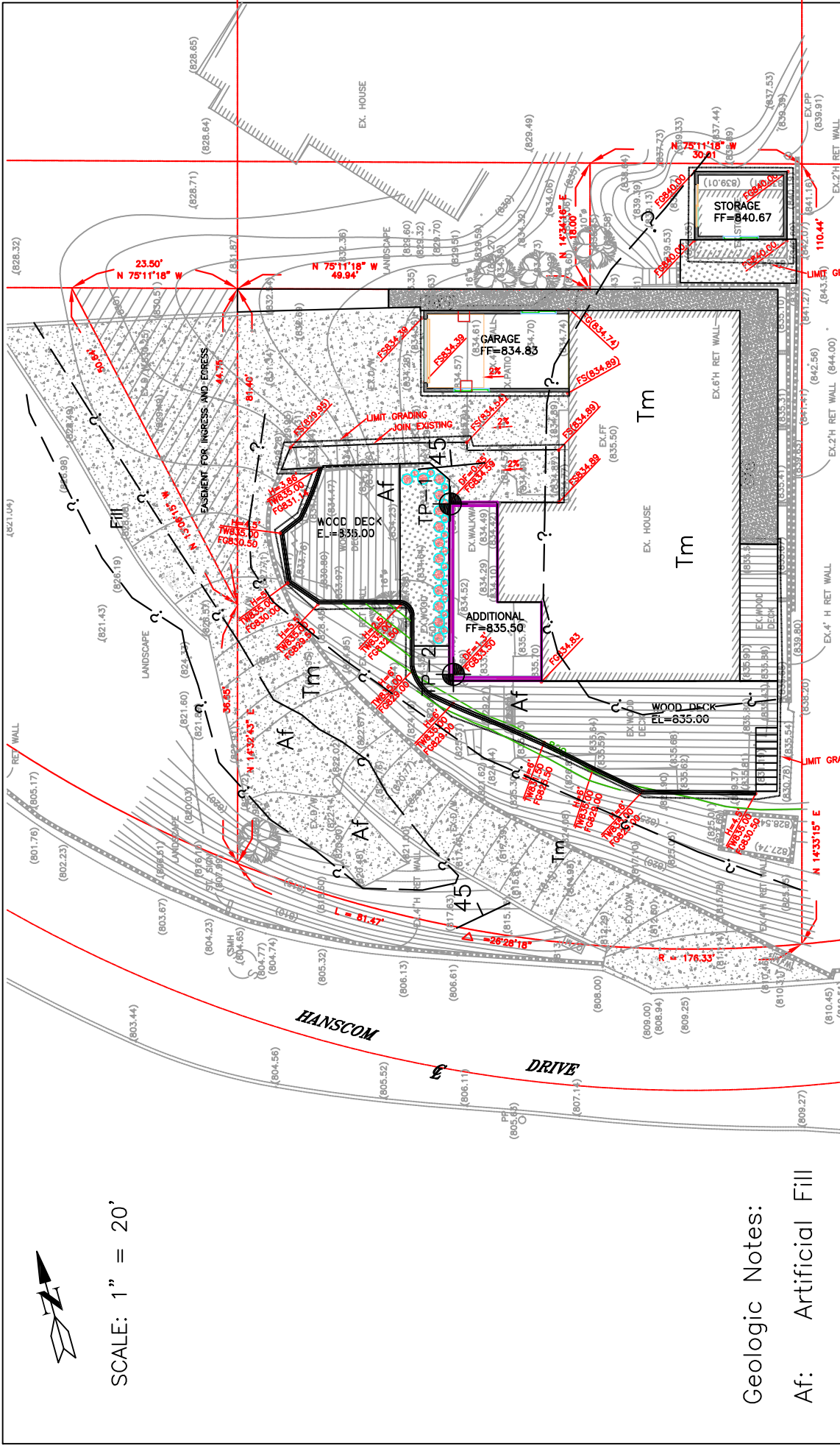
Maps modified from "Geological Map of the Los Angeles Quadrangles" Los Angeles County, CA by Thomas W. Dibblee, Jr., 2001

Monterey Formation
 Tmsl - Gray, micaceous silty shale and siltstone; includes some semi-siliceous to siliceous shale and thin sandstone beds; Mohnian and Luisian Stages (includes upper part of Topanga Formation of Lamar, 1970)

CalLand Engineering, Inc.
 dba Quartech Consultants
 Geotechnical, Environmental & Civil
 Engineering Services

Project Address:
 APN: 5308-022-010
 2089 Hanscom Drive
 South Pasadena, California

Regional Geologic Map



Project Address:
 Calland Engineering, Inc.
 dba Quartech Consultants
 Geotechnical, Environmental & Civil
 Engineering Services

APN: 5308-022-010
 2089 Hanscom Drive
 South Pasadena, California

SITE PLAN

08/22

FIGURE 2



SCALE: 1" = 20'

Geologic Notes:

Af: Artificial Fill

Tmsl: Bedrock of Monterey Formation

45 Strike and Dip of Bedding

TP-1 Approximate Test Pit location

~?) Geologic Contact

APPENDIX A

FIELD INVESTIGATION

Subsurface conditions were explored by excavating two hand dug test pits to a maximum depth of 5.5 feet below the existing ground surface at approximate locations shown on the enclosed Site Plan, Figure 2. Upon completion of excavation, the excavated test pits were backfilled with onsite soils that were removed from the excavations.

The excavating of the test pit was supervised by an engineering geologist, who continuously logged the test boring and visually classified the soils in accordance with the Unified Soil Classification System. Ring samples were taken at frequent intervals. These samples were obtained by driving a sampler with successive blows of 32-pound hammer dropping from a height of 48 inches.

Representative undisturbed samples of the subsurface soils were retained in a series of brass rings, each having an inside diameter of 2.42 inches and a height of 1.00 inch. All ring samples were transported to our laboratory. Bulk surface soil samples were also collected for additional classification and testing.

TEST PIT LOG TP-1

PROJECT LOCATION: 2089 Hansom Drive, South Pasadena, California

DATE DRILLED: 8/24/2021

PROJECT NO.: 21-225-011EG

SAMPLE METHOD: Hand Dug Pit

ELEVATION: N/A

LOGGED BY: FA

Depth (ft)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Description of Material
	Bulk	Undisturbed	Blows/12"				
2	B	R	14	MH	89.1	11.3	0-4', Fill(Af): Clayey silt, dark brown, moist, firm to stiff, trace of rock fragments, angular up to 4-inch in size Percent of fines: 78.7, LL = 53, PL = 37, PI = 16
5		R	60	BR	102.4	14.8	@ 4', Bedrock (Tmsl): Siliceous siltstone, brown, moist, very hard, moderately fracured and moderately weathered (B): N80W, 45N
10							Total Depth: 5.5 feet No Groundwater Pit Backfilled
15							Hammer Driving Weight: 32 lbs Hammer Driving Height: 48 inches
20							
25							
30							
35							

TEST PIT LOG TP-2

PROJECT LOCATION: 2089 Hansom Drive, South Pasadena, California

DATE DRILLED: 8/24/2021

PROJECT NO.: 21-225-011EG

SAMPLE METHOD: Hand Dug Pit

ELEVATION: N/A

LOGGED BY: FA

Depth (ft)	Sample			USCS Symbol	Dry Unit Wt. (pcf)	Moisture (%)	Description of Material
	Bulk	Undisturbed	Blows/12"				
2	B			MH		12.2	0-3', Fill(Af): Clayey silt, dark brown, moist, firm to stiff, trace of rock fragments, angular up to 4-inch in size
5				BR			@ 3', Bedrock (Tmsl): Siliceous siltstone, brown, moist, very hard. moderately fractured and moderately weathered
10							Total Depth: 4.0 feet No Groundwater Pit Backfilled
15							Hammer Driving Weight: 32 lbs Hammer Driving Height: 48 inches
20							
25							
30							
35							

APPENDIX B LABORATORY TESTING

During the subsurface exploration, QCI personnel collected relatively undisturbed ring samples and bulk samples. The following tests were performed on selected soil samples:

Moisture-Density

The moisture content and dry unit weight were determined for each relatively undisturbed soil sample obtained in the test borings in accordance with ASTM D2937 standard. The results of these tests are shown on the boring logs in Appendix A.

Shear Tests

Shear tests were performed in a direct shear machine of strain-control type in accordance with ASTM D3080 standard. The rate of deformation was 0.010 inch per minute. Selected samples were sheared under varying confining loads in order to determine the Coulomb shear strength parameters: internal friction angle and cohesion. The shear test results are presented in the attached plates.

Expansion Index

Laboratory Expansion Index test was conducted on the existing onsite near surface materials sampled during QCI's field investigation to aid in evaluation of soil expansion potential. The test is performed in accordance with ASTM D-4829. The testing result is presented below:

Sample Location	Expansion Index	Expansion Potential
TP-1 @ 0-3'	87	Medium

Corrosion Potential

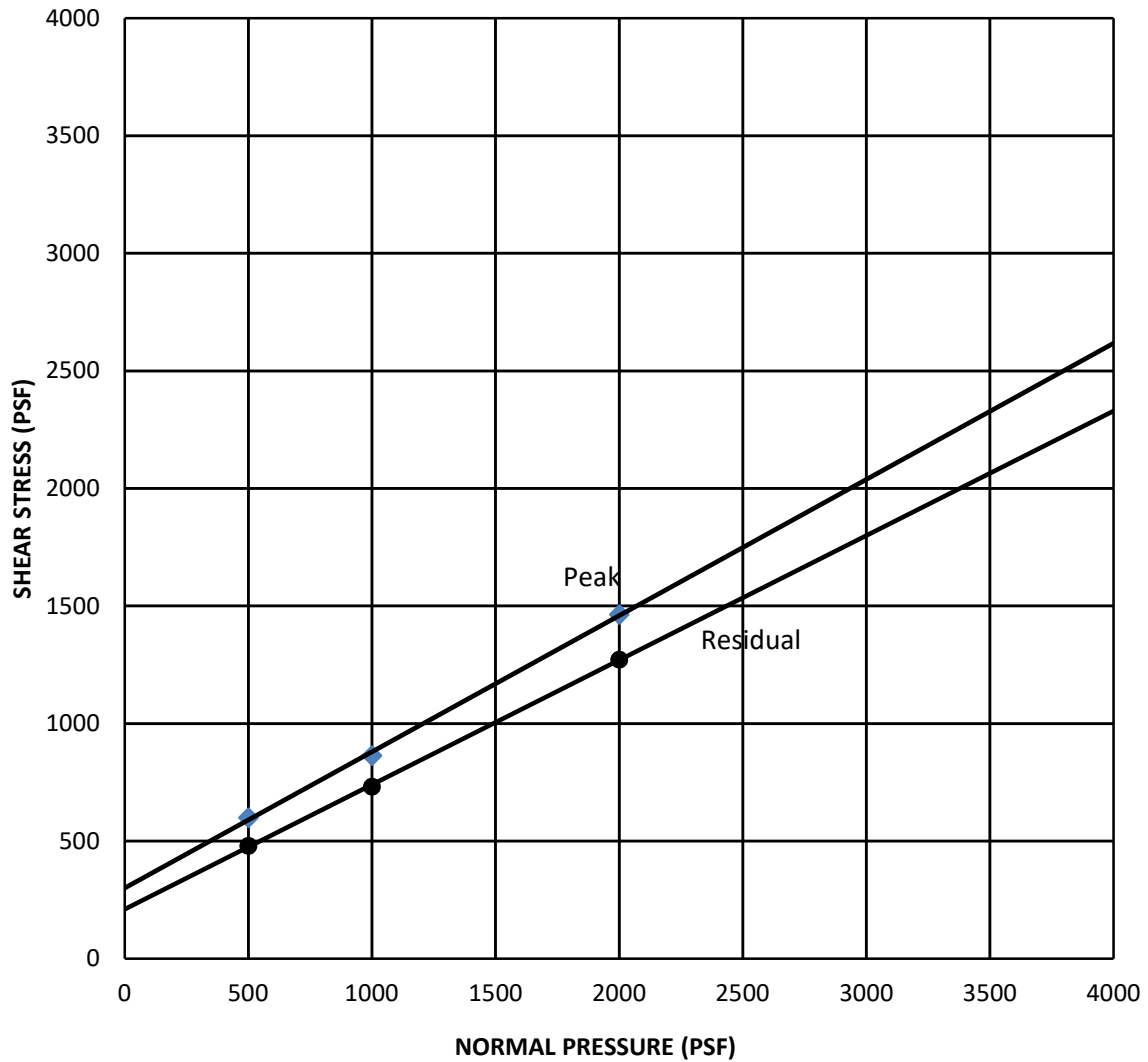
Chemical laboratory tests were conducted on the existing onsite near surface materials sampled during QCI's field investigation to aid in evaluation of soil corrosion potential and the attack on concrete by sulfate soils. These tests are performed in accordance with California Test Method 417, 422, 532, and 643. The testing results are presented below:

Sample Location	pH	Chloride (ppm)	Sulfate (% by weight)	Min. Resistivity (ohm-cm)
TP-1 @ 0-3'	8.40	180	0.016	900

Atterberg Limits

Laboratory Atterberg Limits tests were conducted on the existing onsite materials sampled during QCI's field investigation to aid in evaluation of soil liquefaction potential. These tests are performed in accordance with ASTM D4318. The testing results are presented below:

Sample Location	USCS Class. ASTM D2488	Liquid Limit %ASTM D4318	Plastic Limit %ASTM D4318	Plasticity Index ASTM D4318
TP-1 @ 0-3'	MH	53	37	16



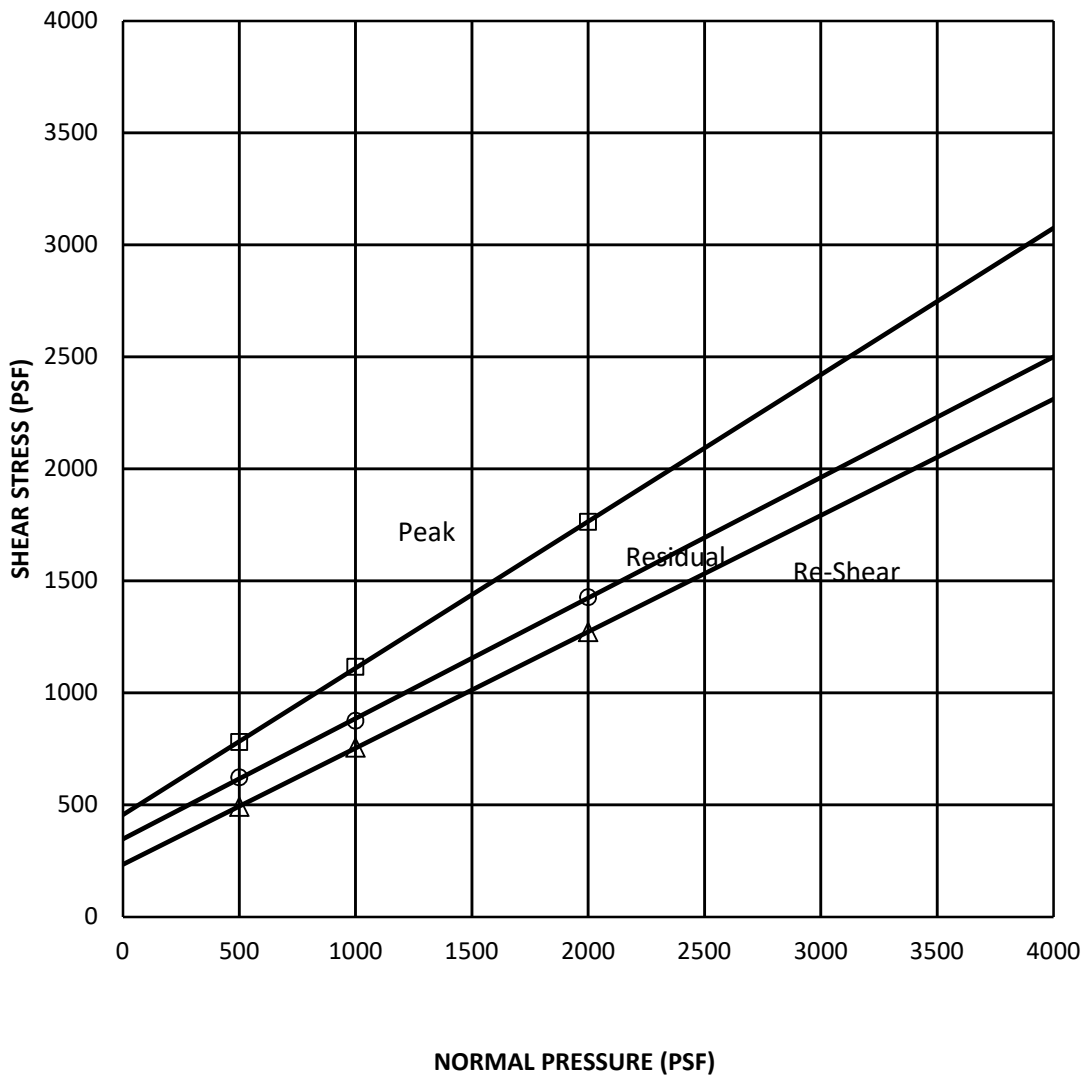
SYMBOL	BORING NO.	SAMPLE NO.	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	COHESION (PSF)	FRICTION ANGLE (DEG)
□	TP-1	N/A	2.0	RING	MH	300	30
●						210	28

Vertical Loads (PSF)	Moisture Content Before Test (%)	Moisture Content After Test (%)
500	11.3	32.6
1000	11.3	32.2
2000	11.3	31.8

Calland Engineering, Inc
dba Quartech Consultants
 Geotechnical, Environmental & Civil
 Engineering Services

Project Address:
 APN: 5308-022-010
 2089 Hanscom Drive
 S. Pasadena, California

DIRECT SHEAR
 (ASTM D3080)



SYMBOL	BORING NO.	SAMPLE NO.	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	COHESION (PSF)	FRICTION ANGLE (DEG)
Δ	TP-1	N/A	4.0	RING	BR	460	33
○						350	28
□						230	27

Vertical Loads (PSF)	Moisture Content Before Test (%)	Moisture Content After Test (%)
500	14.8	23.8
1000	14.8	23.5
2000	14.8	23.1

Calland Engineering, Inc
dba Quartech Consultants
 Geotechnical, Environmental
 & Civil Engineering Services

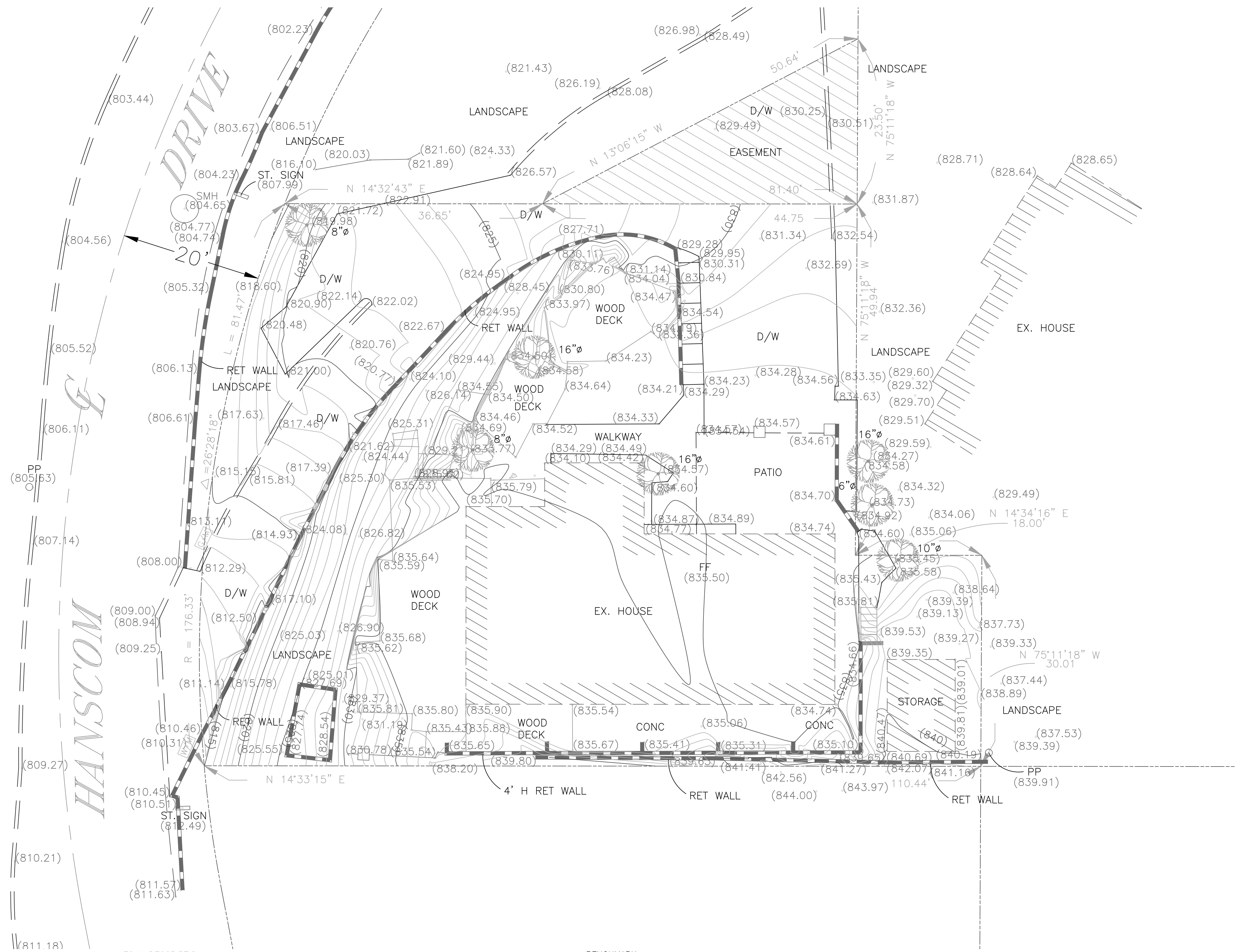
Project Address:
 APN: 5308-022-010
 2089 Hanscom Drive
 S. Pasadena, California

DIRECT SHEAR
 (ASTM D3080)

ATTACHMENT 6

Slope Analysis

SLOPE DENSITY ANALYSIS



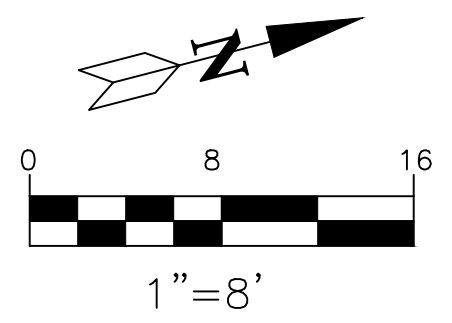
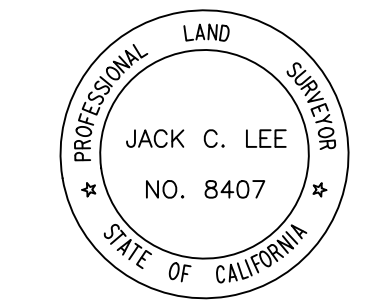
ELEVATION OF CONTOUR (FEET)	LENGTH OF CONTOUR (FEET)
811	17.55
812	36.49
813	43.33
814	56.26
815	62.34
816	101.91
817	98.14
818	96.35
819	98.05
820	102.83
821	97.80
822	96.39
823	94.02
824	91.62
825	89.39
826	90.27
827	91.83
828	102.25
829	108.82
830	124.19
831	152.84
832	164.69
833	164.45
834	201.35
835	233.31
836	141.54
837	133.38
838	124.05
839	114.68
840	57.99
841	23.02
TOTAL LENGTH	3211.13

LEGAL DESCRIPTION:
 PORTIONS OF LOTS 21 AND 22 IN BLOCK 11 OF TRACT NO. 2672, IN THE CITY OF SOUTH PASADENA, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 27 PAGE 29 AND 30, OF MAPS, IN THE CITY OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.
 APN: 5308-022-010
 PROPERTY SIZE: 7741.26 S.F.

BENCHMARK:
 BENCHMARK NO. LY 11535
 L&T IN S CB MEDFORD ST ON C/L PROD MARIANNA AVE (SW/O EASTERN AVE)
 ELEVATION: 404.112' (NAVD 1988)
BASIS OF BEARING:
 NORTH BOUNDARY LINE OF ELKINS ST. N70°31'58"W PER RECORD OF SURVEY, R.S. 194-24

ALLOWABLE AREA (A): 7741.26 SF (0.178 ACRE)
 CONTOUR INTERVAL (I): 1 FOOT
 SUMMATION OF LENGTH OF ALL CONTOURS (L): 3211.13 FEET
 AVERAGE SLOPE: $\frac{0.00229(I \times L)}{A}$
 $\frac{0.00229(1 \times 3211.13)}{7741.26} = 41.31\%$

Jack C. Lee



CALLAND ENGINEERING, INC.
 dba QUARTECH CONSULTANTS
 576 E. LAMBERT ROAD, BREAA, CA 92821
 TEL: (714) 671-1050 FAX: (714) 671-1090

RELEASED

REVISIONS

REVISIONS

PROJECT LOCATION:
 2089 Hanscom Drive,
 South Pasadena, CA 91030

DRAWN: ML
 CHECKED: JY
 DATE: 08-11-2021
 JOB NO.: 20-180-033
 SCALE: 1"=8'
 FILE NAME: Hanscom 2089 Slope.dwg

S-1
 SHEET 1 OF 1 SHT.

ATTACHMENT 7

Landscape Plan



L.I.U. Landscape Inc.
 9422 East Las Tunas Drive
 Temple City, CA 91780
 License # LA1043216
 www.liulandscape.com
 626-888-9915

Project:

David Sun
 2089 Hanscom Dr.
 South Pasadena, CA 91030

OVERALL SITE PLAN

Revisions:

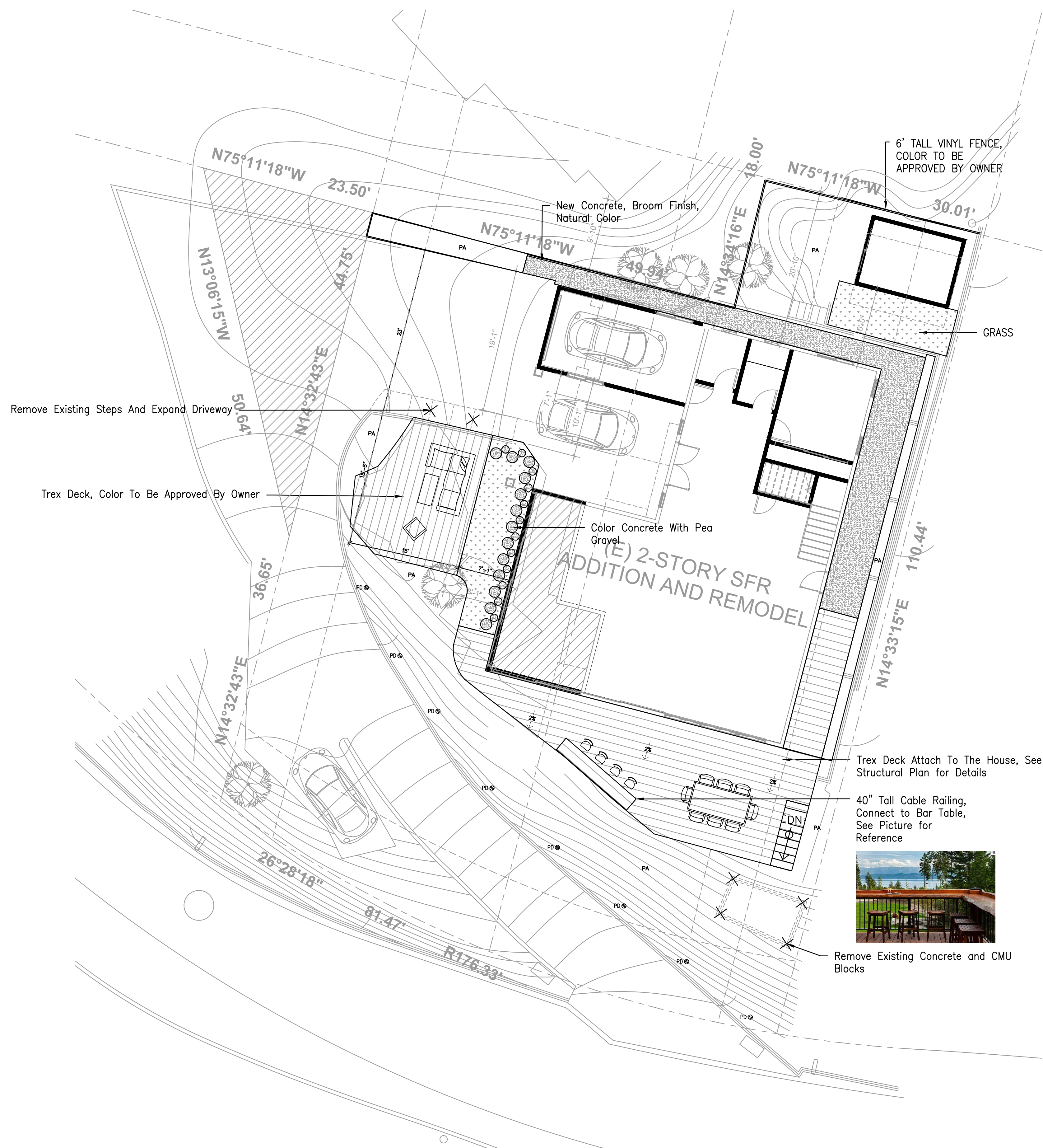
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Submittal Date:

August 18, 2021

Sheet Number:

L1.0



ABBREVIATION LEGEND			
ARCH	ARCHITECT	INV	INVERT
CL	CENTER LINE	HP	HIGH POINT
CLR	CLEAR	LP	LOW POINT
D	DOOR	MFG	MANUFACTURER
DS	DOWNSPOUT	OC	ON CENTER
DWG	DRAWINGS	PA	PLANTING AREA
EQ	EQUAL	QTY	QUANTITY
EX	EXISTING	SJ	SCORE JOINT
FF	FINISH FLOOR	SYM	SYMBOL
FG	FINISH GRADE	TYP	TYPICAL
GC	GROUND COVER	W	WINDOW
HB	HOSE BIB		

SYMBOL LEGEND	
	EXISTING DOWNSPOUT
	EXISTING ELECTRICAL OUTLET
	EXISTING HOSE BIB
	EXISTING SLOPE
	EXISTING TREE TO BE REMOVED
	EXISTING IRRIGATION VALVE
	PROPOSED DOWNSPOUT
	PROPOSED ELECTRICAL OUTLET
	PROPOSED HOSE BIB
	PROPOSED PLANTER DRAIN
	PROPOSED SLOPE
	3" POP UP DRAIN AT SWALE
	NEW SOD
	PLANTING AREA
	STEP DOWN ARROW
	STEP UP ARROW
	ABOVE-GROUND CONVEYANCE
	BELOW-GROUND CONVEYANCE

GENERAL NOTES:
 1) SEE ARCH DWGS FOR BUILDING PLANS AND DETAILS TYP.

SCHEDULE OF ON-SITE MEETINGS:
 CONTRACTOR TO PROVIDE LIU LANDSCAPE INC. AND/OR CLIENT REPRESENTATIVE WITH MIN. 72 HOUR NOTICE (BY EMAIL OR PHONE CALL) WHEN SCHEDULING ON-SITE MEETINGS WITH LIU LANDSCAPE INC. AND/OR CLIENT REPRESENTATIVE FOR THE FOLLOWING ON-SITE MEETINGS. CONTRACTOR TO OVERLAY MEETINGS TO THE BEST OF HIS/HER ABILITY.

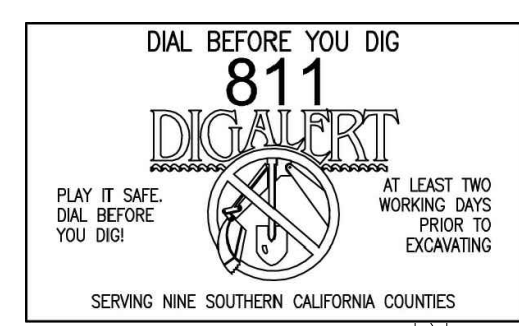
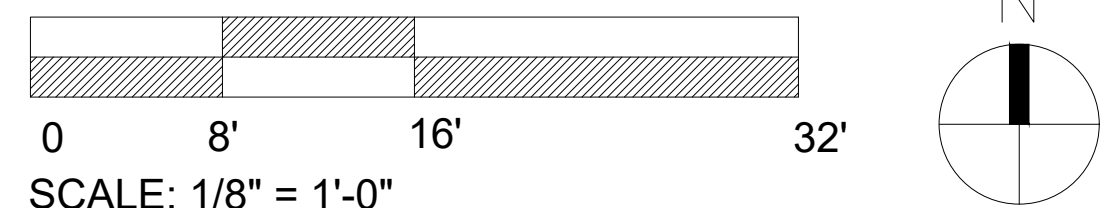
GENERAL:
 A. FINAL SITE REVIEW - 5 DAYS

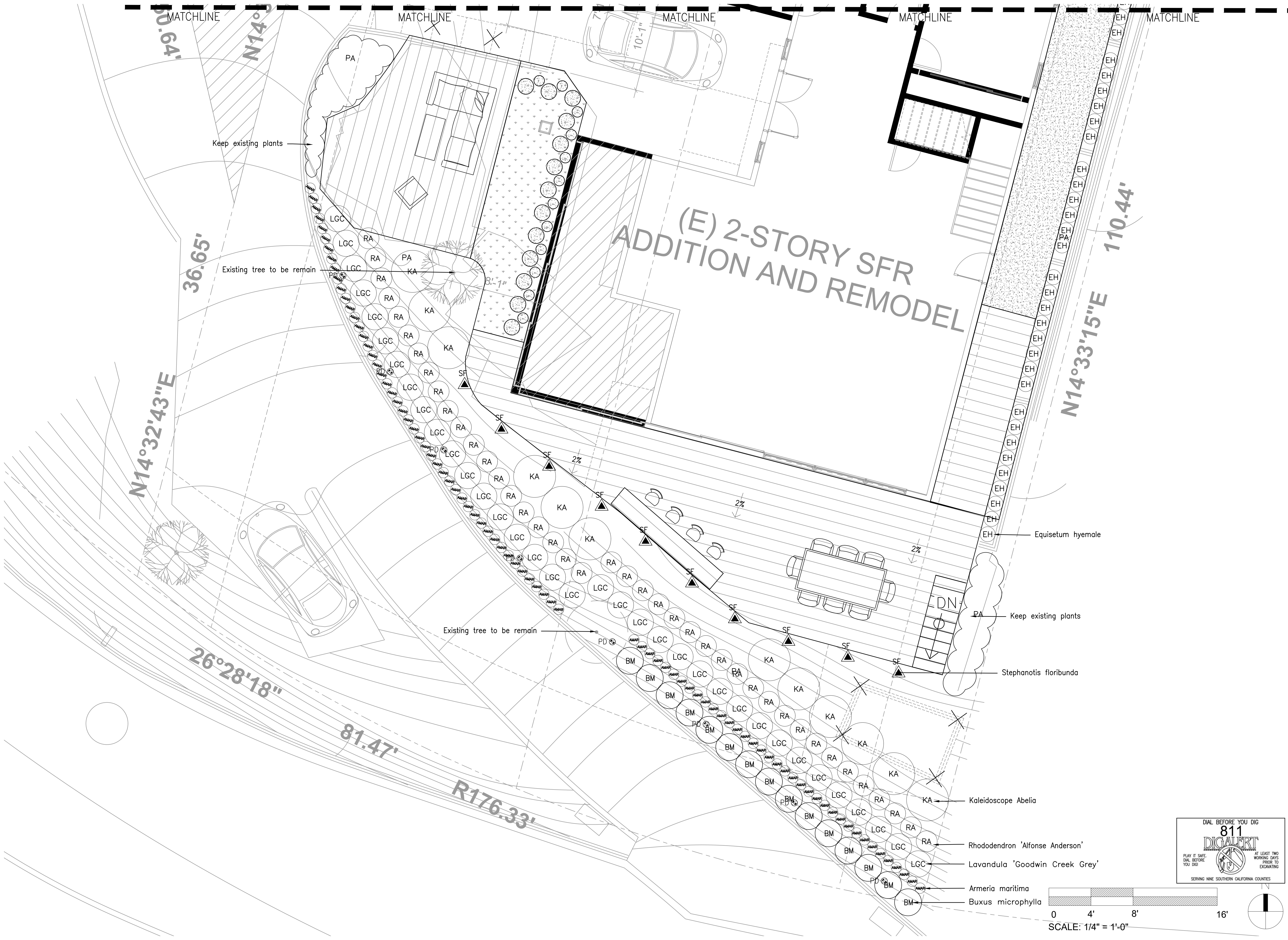
GRADING AND DRAINAGE PHASE:
 A. AFTER COMPLETION OF ROUGH GRADING FOR SWALE AREAS AND LOW MOUNDING AREAS.
 B. ONCE FINAL GRADING HAS BEEN COMPLETED.

HARDSCAPE PHASE:
 A. ONCE HARDSCAPE HAS BEEN MARKED OUT BEFORE FORMS ARE PLACED.
 B. ONCE HARDSCAPE FORMS ARE IN-PLACE, BEFORE CONCRETE IS POURED.
 C. AFTER CONCRETE HAS BEEN POURED.
 D. ONCE BOULDERS HAVE BEEN MARKED OUT.
 E. PLACEMENT OF BOULDERS.
 F. AFTER INSTALLATION OF BOULDERS.

IRRIGATION PHASE:
 A. BALL VALVE AND P.O.C., WYE STRAINER, PRESSURE REGULATOR, FLOW METER, CONTROL VALVE, LOCATIONS - 72 HOURS.
 B. MAINLINE PRESSURE TEST - 72 HOURS
 C. LATERAL LINE AND DRIP LINE INSTALLATION - 72 HOURS
 D. DRIPPER EMISSION TEST - 72 HOURS

PLANTING PHASE:
 A. ONCE PLANTS HAVE BEEN SET OUT PER PLAN - 72 HOURS
 B. ONCE ALL PLANTS HAVE BEEN INSTALLED AND BEFORE MULCH LAYER HAS BEEN APPLIED - 72 HOURS.





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Project:
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 2089 Hanscom Dr.
 South Pasadena, CA 91030

PLANTING PLAN FRONT

Revisions:

Submittal Date:
 August 18, 2021

Sheet Number:
 L3.1

DIAL BEFORE YOU DIG
811
DIG ALERT

PLAY IT SAFE. DIAL BEFORE YOU DIG. AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATING.

SERVING NINE SOUTHERN CALIFORNIA COUNTIES

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

- EH — Equisetum hyemale
- PA — Keep existing plants
- SF — Stephanotis floribunda
- KA — Kaleidoscope Abelia
- RA — Rhododendron 'Alfonse Anderson'
- LGC — Lavandula 'Goodwin Creek Grey'
- BM — Armeria maritima
- BM — Buxus microphylla



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Project:

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 South Pasadena, CA 91030

PLANTING PLAN BACK

Revisions:

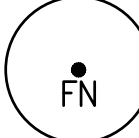
Submittal Date:

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Sheet Number:

L3.2









HEDGE

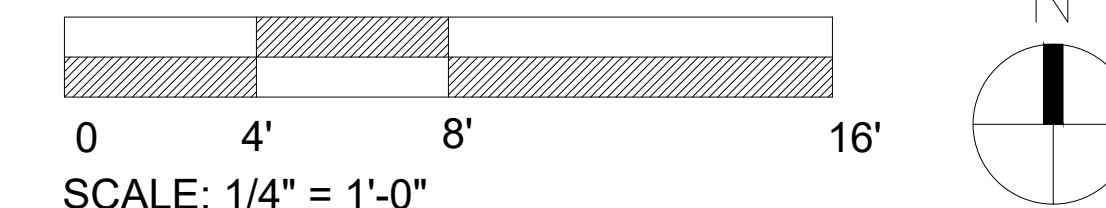
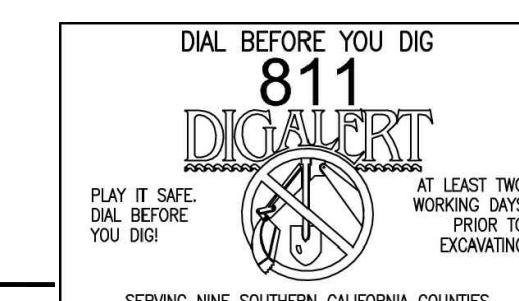
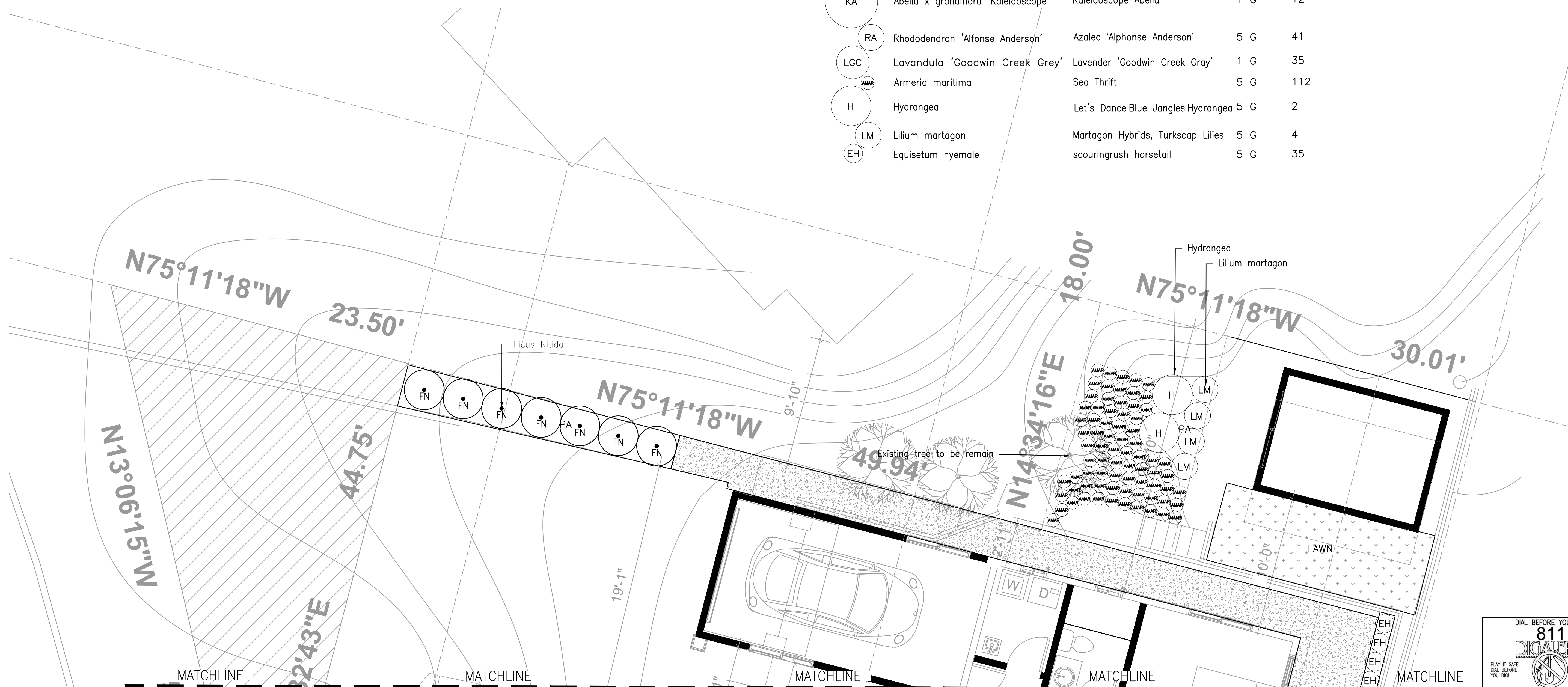
Scientific Name	Common Name	Size	Qty
 Ficus Nitida	Ficus 'Indian Laurel'	24 Box	7

VINE

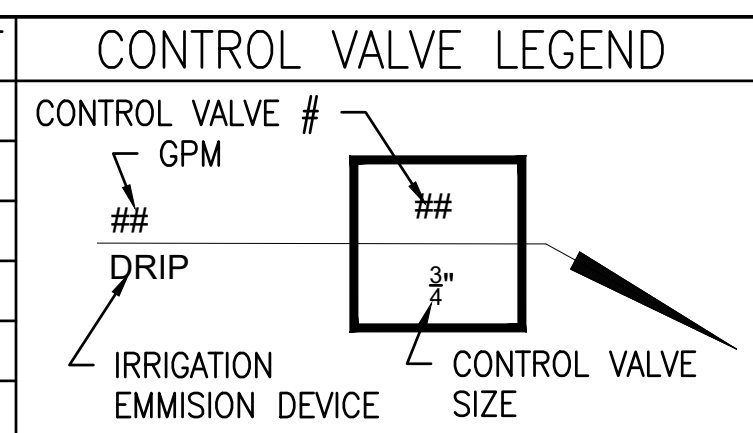
Scientific Name	Common Name	Size	Qty
 Stephanotis floribunda	Madagascar Jasmine	24 Box	10

SHRUB

Scientific Name	Common Name	Size	Qty
 Buxus microphylla	Japanese Boxwood	5 G	15
 Abelia x grandiflora 'Kaleidoscope'	Kaleidoscope Abelia	1 G	12
 Rhododendron 'Alfonse Anderson'	Azalea 'Alphonse Anderson'	5 G	41
 Lavandula 'Goodwin Creek Grey'	Lavender 'Goodwin Creek Gray'	1 G	35
 Armeria maritima	Sea Thrift	5 G	112
 Hydrangea	Let's Dance Blue Jangles Hydrangea	5 G	2
 Liliium martagon	Martagon Hybrids, Turkschap Lilies	5 G	4
 Equisetum hyemale	scouringrush horsetail	5 G	35



PLANT SIZE	EMITTER QTY	EMITTER FLOW RATE	TOTAL GPH
24" BOX	4	0.50 GPH (BLUE)	2
15 GALLON	3	0.50 GPH (BLUE)	1.50
5 GALLON	2	0.50 GPH (BLUE)	1.00
1 GALLON	1	0.50 GPH (BLUE)	0.50

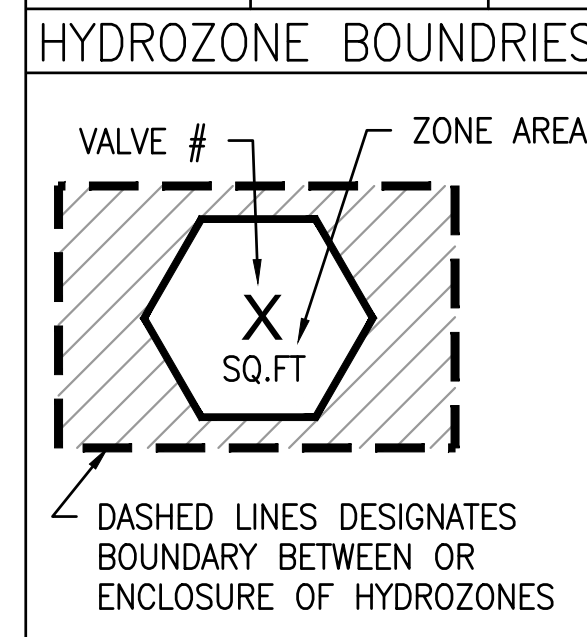


HYDROZONE DESCRIPTION AND LEGEND							
CONTROL VALVE # (HYDROZONE ZONE)	LANDSCAPE AREA (SQ.FT)	W.U.C.O.L.S. PLANT WATER USE RATING	PLANT SIZE	HYDROZONE DESCRIPTION	HYDROZONE EXPOSURE	ZONE PRESSURE	APPLICATION RATE
1	944	LOW/MED	1G,5G	SHRUBS	P SHADE	30 PSI	.6"/HR.
2	164	MED	SOD	GRASS	P SHADE	30 PSI	.6"/HR.
3	215	MED	1G,5G,15G	SHRUBS, HEDGE	P SHADE	30 PSI	.6"/HR.
4	101	MED	SOD	GRASS	P SHADE	30 PSI	.8"/HR.
5	77	LOW	1G,5G,15G	SHRUBS	SHADE	30 PSI	.8"/HR.

GENERAL IRRIGATION NOTES

CONTRACTOR SHALL BE LICENSED; IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO READ, UNDERSTAND, AND ADHERE TO PROJECT NOTES AND SPECIFICATION, PERTAINING TO ALL PLANS, INCLUDING THE FOLLOWING GENERAL AND SITE SPECIFIC NOTES.

- THIS DESIGN IS DIAGRAMMATIC. ALL VALVES, ETC., SHOW WITHIN PAVED AREAS FOR DESIGN CLARIFICATION ONLY, AND SHALL BE INSTALLED IN THE PLANTING AREAS WHERE POSSIBLE, AVOID ANY CONFLICTS BETWEEN THE IRRIGATION SYSTEM AND EXISTING STRUCTURES, UTILITIES AND PLANTING.
- ALL MAINLINE PIPING UNDER PAVING SHALL BE INSTALLED IN SEPARATE SLEEVES, MAIN LINE SLEEVE, CONTROL WIRE SLEEVES SHALL BE OF SUFFICIENT SIZE FOR THE REQUIRED NUMBER OF WIRES UNDER PAVING, OR SIZE AS INDICATED ON PLANS.
- ALL EXTERIOR LOW VOLTAGE WIRE CONNECTIONS SHALL BE FULLY ENCLOSED USING WATERPROOF CONNECTORS.
- EXTEND ALL SLEEVES A MINIMUM OF SIX (6) INCHES BEYOND PAVING EDGES.
- PROVIDE A MINIMUM OF 18" COVER OVER ALL PRESSURE MAINLINE PIPE AND 12" MINIMUM COVER OVER ALL NON-PRESSURE LATERAL LINES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PULLING VALVE WIRING THROUGH SLEEVING WHEN NECESSARY.
- ALL LATERAL LINE PIPING UNDER PAVING SHALL BE PVC SCHEDULE 40 PIPE AND SHALL BE INSTALLED PRIOR TO PAVING.
- EXERCISE EXTREME CARE WHEN EXCAVATING FOR IRRIGATION SYSTEM DUE TO EXISTING UTILITIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BECOME FAMILIAR WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, STRUCTURES, AND UNDERGROUND UTILITIES. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH AND ALL OTHER TRADES ON SITE.



GENERAL DRIP NOTES

- ONLINE DRIP RECOMMENDED FOR SHRUB AND TREE PLANTING. EMITTER QUANTITY PER LEGEND ABOVE.
- INLINE DRIP PIPE RECOMMENDED FOR GROUND COVER AND PLUG PLANTING (ie, SWALES & PARKWAY).

STATIC WATER PRESSURE

- EXISTING STATIC WATER PRESSURE IS 136-170 PSI. THIS IS BASED ON A CALCULATION FROM THE CITY OF LOS ANGELES. CONTRACTOR SHALL VERIFY EXISTING STATIC WATER PRESSURE ONSITE
- SET STATIC WATER PRESSURE AT NEW REGULATOR FOR IRRIGATION SYSTEM @ 150 PSI
- EXISTING WATER METER IS 1"

W.U.C.O.L.S. PLANTS WATER NEEDS RATINGS: MED=MEDIUM, L = LOW, M/L = MEDIUM LOW, L/VL = LOW TO VERY LOW

IRRIGATION EQUIPMENT LEGEND

SYMBOL	DESCRIPTION	SHEET & DETAIL CALL-OUT
	IRRIGATION SYSTEM CONTROLLER: WEATHERMATIC SL1600 SMARTLINE 8 ZONE MODULAR	SEE 1/L7.0
	WEATHER MONITOR: WEATHERMATIC SLW1	SEE 2/L7.0
	1" RP BACKFLOW PREVENTOR W/STRAINER AND PRESSURE REGULATOR FEBCO MODEL 825 YA, ANGLE PATTERN REDUCED PRESSURE ASSEMBLY WITH MODULAR RELIEF VALVE AND CHECK VALVE INTERNAL COMPONENTS: INTEGRAL FLANGED UNION CONNECTIONS AND BALL VALVE	SEE 3/L7.0
	1" BALL VALVE: CONTRACTOR TO SUPPLY AND INSTALL NIBCO, PVC Tru-Bloc TRUE UNION, MODEL 'D' BALL VALVE WITH DUEL THREADED UNIONS OR APPROVED EQUIVALENT. • INSTALL USING NDS PRO-SERIES 14"x19" CORRUGATED VALVE BOX, WITH OVERLAPPING BOLT DOWN LID, SAND COLOR BOX AND COVER PART #314BCB-SAND OR APPROVED EQUIVALENT.	SEE 4/L7.0
	3/4" QUICK COUPLING VALVE ASSEMBLY: RAINBIRD MODEL # 33DLRC, WITH LOCKING COVER	SEE 5/L7.0
	LOW FLOW REMOTE CONTROL VALVES W/PRESSURE REGULATOR & RBY FILTER ASSEMBLY: CONTRACTOR TO SUPPLY AND INSTALL, NEW RAINBIRD CONTROL ZONE KITS WITH PLASTIC GLOBE VALVE AND COMBINED PRESSURE REGULATOR AND FILTER, OR APPROVED EQUIVALENT AS FOLLOWS: • AT CONTROL VALVE 'A1'-USE RAINBIRD MODEL XCZ-100-PRF 1" CONTROL ZONE KITS WITH PLASTIC GLOBE VALVE COMBINED PRESSURE REGULATOR AND FILTER • INSTALL NEW CONTROL VALVES IN NDS PRO-SERIES 14"x19" CORRUGATED VALVE BOX, OR APPROVED EQUIVALENT, WITH OVERLAPPING BOLT DOWN LID, SAND COLOR, BOX AND COVER PART # 314BCB-SAND, OR APPROVED EQUIVALENT.	SEE 6/L7.0
	IRRIGATION MAIN LINE: CONTRACTOR TO SUPPLY AND INSTALL 1" SCH 40 PVC PIPE AND ALL REQUIRED FITTINGS AND MATERIAL, FROM NEW 1" POINT OF CONNECTION AND BALL VALVE. IRRIGATION CONTRACTOR TO CONFIRM LOCATION OF POINT OF CONNECTION WITH CITY REPRESENTATIVE, SEE SITE SPECIFIC NOTES.	SEE 7/L7.0
	UNDERGROUND SLEEVES: 4" DIAMETER SCHEDULE 40 PVC TYP., UNLESS OTHERWISE NOTED. EXTEND 6" BEYOND EDGE OF ALL PAVING AREA	SEE 7/L7.0
	IRRIGATION LATERAL SCHEDULE: 3/4" PVC PLASTIC PIPE AND ALL REQUIRED FITTINGS & MATERIALS FROM DRIP REMOTE CONTROL VALVES	SEE 2/L7.1
	POC IN-LINE DRIP PIPE: SOLID DIAMOND DENOTES CONNECTION TO INLINE DRIP PIPE AT GRADE	--
	POLYLINE POC: SOLID CIRCLE DENOTES CONNECTION BETWEEN SCHEDULE 40 PVC LATERAL STUB UP AND DRIP POLY LINE	--
	BLANK POLY LINE: NETAFIM TECHLINE RW 17MM BLANK POLYETHYLENE, IRRIGATION TUBING (BROWN WITH PURPLE STRIPE) UV RESISTANT OR APPROVED EQUAL. SEE PLAN & NOTES FOR LOCATIONS. POINT SOURCE, ONLINE DRIP EMITTERS: NETAFIM COLOR CODED SPECS SERIES SELF PIERCING EMITTERS W/INTERNAL CHECK VALVE, ANTI-SIPHON, PRESSURE COMPENSATING AND SELF CLEANING. SEE EMITTER FLOW RATE & COUNT LEGEND, THIS SHEET > 0.5 GPH EMITTERS MODEL # SPCV-05, BLUE ON GRADE IN-LINE DRIP IRRIGATION PIPE: NETAFIM TECH LINE CV 17MM BROWN UV RESISTANT POLYETHYLENE DRIPLINE MODEL #TLCV-4-12 WITH 0.4 GPH FLOW. 12" O.C. INSTALL PER DRIP DETAILS, DRIPLINE ROW SPACING 16" O.C.	SEE 8/L7.0 & 1/L7.1
	12" POP-UP TATTAL-TAIL ASSEMBLY: (TWO PER IRRIGATION CIRCUIT), CONTRACTOR TO SUPPLY AND INSTALL, RAINBIRD 1812 12" POP-UP BODY WITH RAINBIRD PA-80 ADAPTER, 1/2" SCH 40 PVC THREADED CAP, RAINBIRD SA-12-5050 SWING JOINT ASSEMBLY, FITTING WITH 1/2" FPT OUTLET, OR APPROVED EQUIVALENT, SEE DETAIL. PLACE VISIBLE LOCATIONS PER L.I.U. LANDSCAPE INC. REPRESENTATIVES APPROVAL. INSTALL PER MFG. NOTE AND SPECIFICATION.	SEE 3/L7.1
	MANUAL LINE FLUSH VALVE: CONTRACTOR TO SUPPLY AND INSTALL, NETAFIM MANUAL SHUT OFF VALVE MODEL# TL5OV, OR APPROVED EQUIVALENT. MOUNTED AT END OF POLYETHYLENE (BLANK) IRRIGATION TUBING RUN. SEE PLAN FOR REFERENCE LOCATIONS, FINAL LOCATION TO BE DETERMINED ON SITE DURING INSTALLATION OF IRRIGATION SYSTEM. INSTALL USING NDS PRO SERIES, 10" DIAMETER X 12"H ROUND SAND COLORED VALVE BOX WITH LID, PART #111 BC SAND, OR APPROVED EQUIVALENT.	SEE 4/L7.1

- DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTION, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE DESIGN. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF L.I.U. LANDSCAPE INC.. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
- ALL THREADED PIPE CONNECTIONS MADE TO SLIP-JOINT PVC PIPE SHALL BE MADE WITH A PVC THREADED COUPLING. ALL THREADED ADAPTERS AND COUPLINGS ARE TO BE 'DURA' DEEP SOCKET TYPE.
- ALL VALVES SHALL BE LOCATED IN GROUND COVER AREAS WHENEVER POSSIBLE. REMOTE CONTROL VALVES SHALL BE INSTALLED IN BELOW GRADE BOXES. USE BROWN COLORED BOXES UNLESS OTHERWISE SPECIFIED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE FINAL CONNECTION OF CONTROL WIRES BETWEEN EXISTING WIRES AND NEW CONTROL VALVES.
- CONTRACTOR SHALL PROVIDE SEPARATE SLEEVE FOR PRESSURIZED MAINLINE AND LATERALS ROUTED UNDER EXISTING WALKWAYS AS NEEDED.
- CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS FOR INSTALLATION AND COORDINATION OF THE IRRIGATION SYSTEM TO INSURE A COMPLETE SYSTEM.
- COVER ALL DRIP LINES WITH MINIMUM 3" THICK LAYER OF APPROVED BARK MULCH
- PRESSURE REGULATION DEVICES ARE REQUIRED IF WATER PRESSURE IS BELOW OR EXCEEDS THE RECOMMENDED PRESSURE OF THE SPECIFIED IRRIGATION DEVICES.
- MANUAL SHUT-OFF VALVES SHALL BE REQUIRED, AS CLOSE AS POSSIBLE TO THE POINT OF CONNECTION OF THE WATER SUPPLY, TO MINIMIZE WATER LOSS IN CASE OF AN EMERGENCY OR ROUTINE REPAIR.
- CHECK VALVES OR ANTI-DRAIN VALVES AREA REQUIRED ON ALL SPRINKLER HEADS WHERE LOW POINT DRAINAGE COULD OCCUR.

ADDITIONAL NOTES:

- A DIAGRAM OF THE IRRIGATION PLAN SHOWING HYDROZONES SHALL BE KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSES.
- AT THE TIME OF FINAL INSPECTION, THE PERMIT APPLICANT MUST PROVIDE THE OWNER OF THE PROPERTY WITH A CERTIFICATE OF COMPLETION, CERTIFICATE OF INSTALLATION, AND A IRRIGATION SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE.
- AN IRRIGATION AUDIT REPORT SHALL BE COMPLETED AT THE TIME OF FINAL INSPECTION.

RECOMMENDED WATERING SCHEDULE

WATER DURING INTIAL PLANTING PERIOD:
SHRUB AND GROUNDCOVERS SYSTEMS: 30 MINUTES 1X PER DAY FOR FIRST 10 DAYS

SPRING WATERING DURING PLANT ESTABLISHMENT
TREE, SHRUB AND GROUNDCOVER SYSTEMS: 30 - 35 MINUTES 2X PER WEEK

SUMMER WATERING AFTER PLANT ESTABLISHMENT
TREE, SHRUB AND GROUNDCOVER SYSTEMS: 45 MINUTES 1X PER WEEK (FOR NATIVE OR DROUGHT TOLERANT PLANTS)

FALL WATERING AFTER PLANT ESTABLISHMENT
TREE, SHRUB AND GROUNDCOVER SYSTEMS: 35-45 MINUTES 2X PER WEEK (FOR NATIVE OR DROUGHT TOLERANT PLANTS)

WINTER WATERING AFTER PLANT ESTABLISHMENT
TREE, SHRUB AND GROUNDCOVER SYSTEMS: 40 MINUTES 1X PER WEEK
(SUPPLEMENTAL WATER ONLY REQUIRED IN DROUGHT CONDITIONS)

NOTE:
1. WATERING SCHEDULE IS PROVIDED AS A GENERAL GUIDELINE. TIME AND DAYS PER WEEK SHALL BE ADJUSTED BASED ON WEATHER CONDITIONS, PLANT TYPE, SOIL, ETC.
2. ESTABLISHMENT IS TYPICALLY FIRST 3-6 MONTHS
3. I AGREE TO COMPLY WITH THE REQUIREMENTS OF THE WATER EFFICIENT LANDSCAPE ORDINANCE AND SUBMIT A COMPLETE LANDSCAPE DOCUMENTATION PACKAGE.

L.I.U. Landscape Inc.
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626-888-9915

Project:

David Sun
2089 Hanscom Dr.
South Pasadena, CA 91030

IRRIGATION LEGEND

Revisions:

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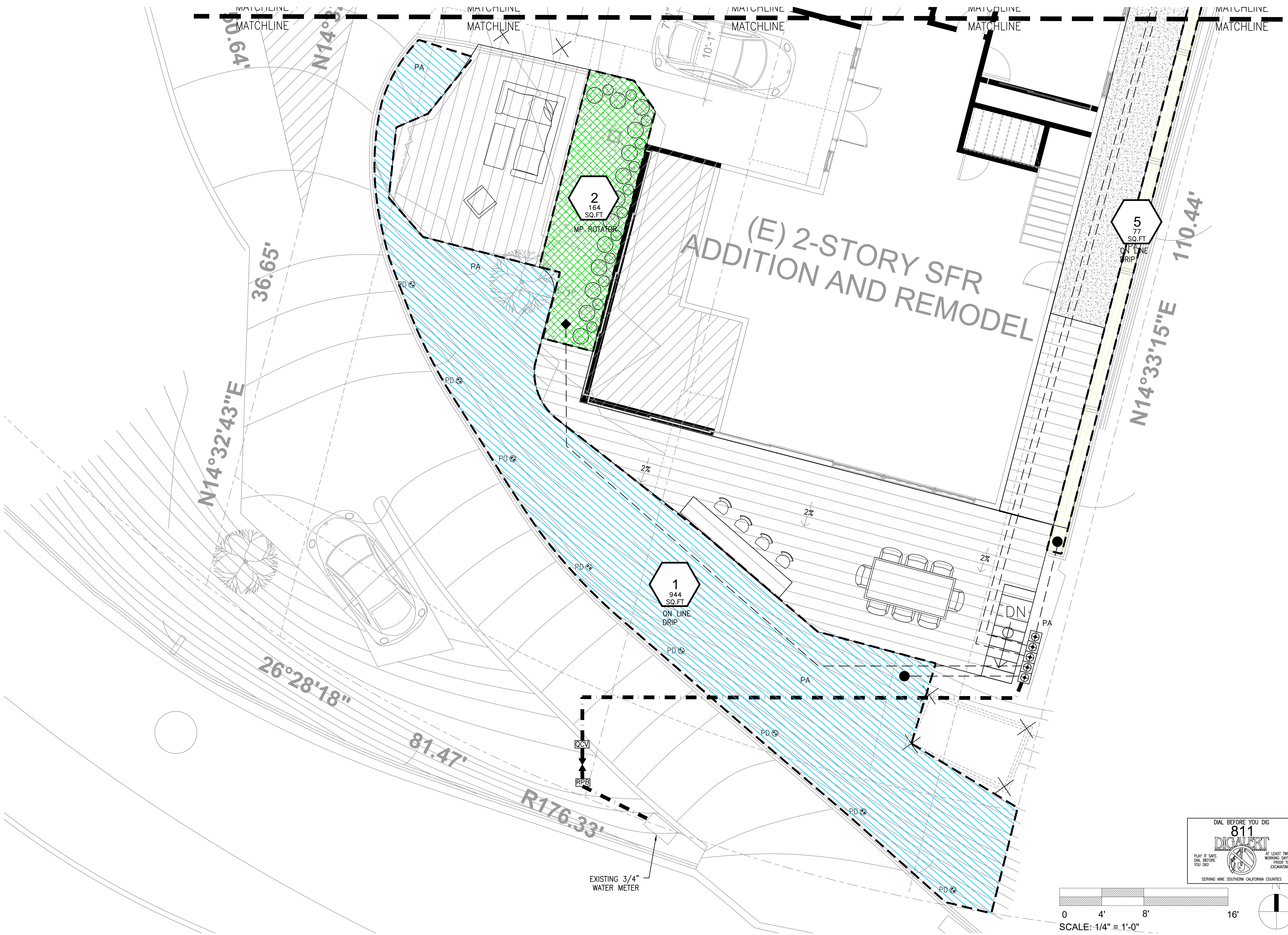
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Submittal Date:
August 18, 2021

Sheet Number:
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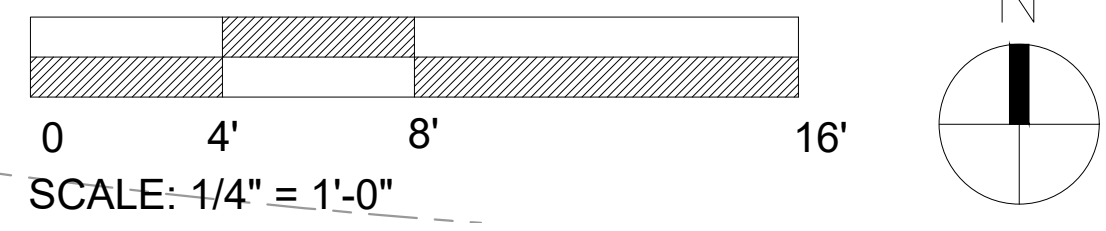
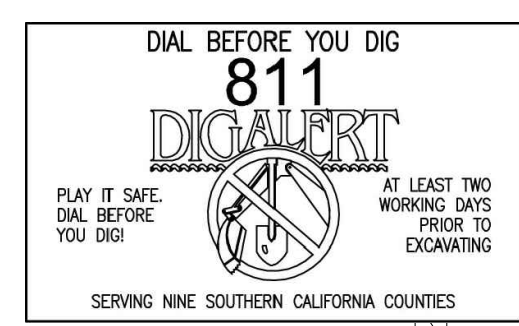
Project:
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IRRIGATION HYDROZONE PLAN FRONT

Revisions:
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Submittal Date:
 August 18, 2021

Sheet Number:
 L6.0



EXISTING 3/4" WATER METER

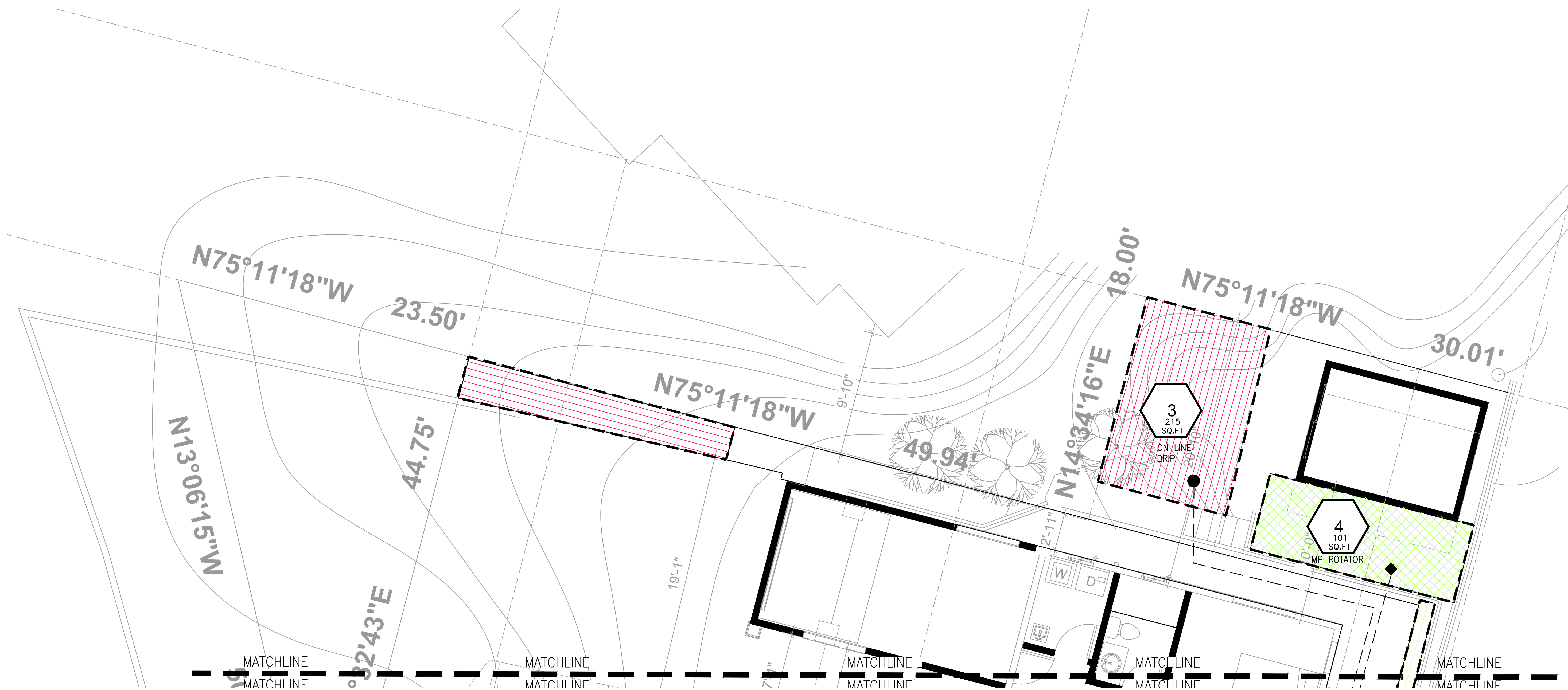


L.I.U. Landscape Inc.
 9422 East Las Tunas Drive
 Temple City, CA 91780
 License # LA1043216
 www.liulandscape.com
 626-888-9915

Project:

David Sun
 2089 Hanscom Dr.
 South Pasadena, CA 91030

IRRIGATION HYDROZONE PLAN BACK



Revisions:

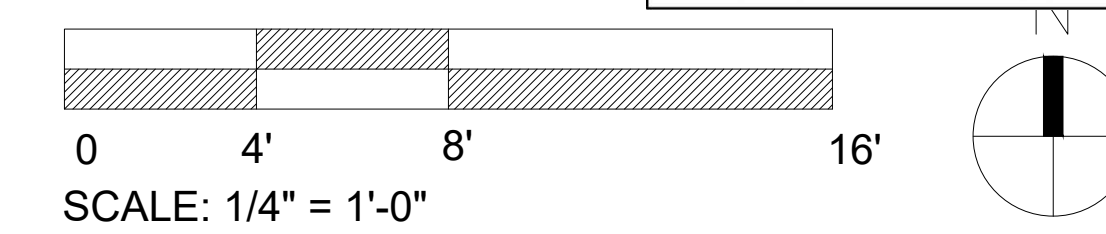
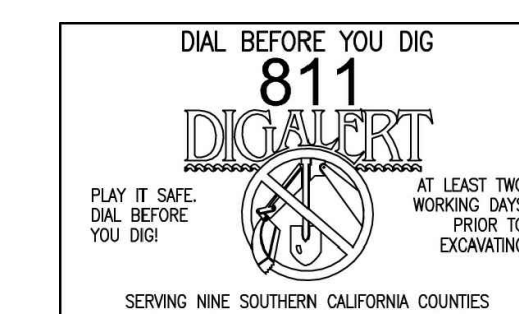
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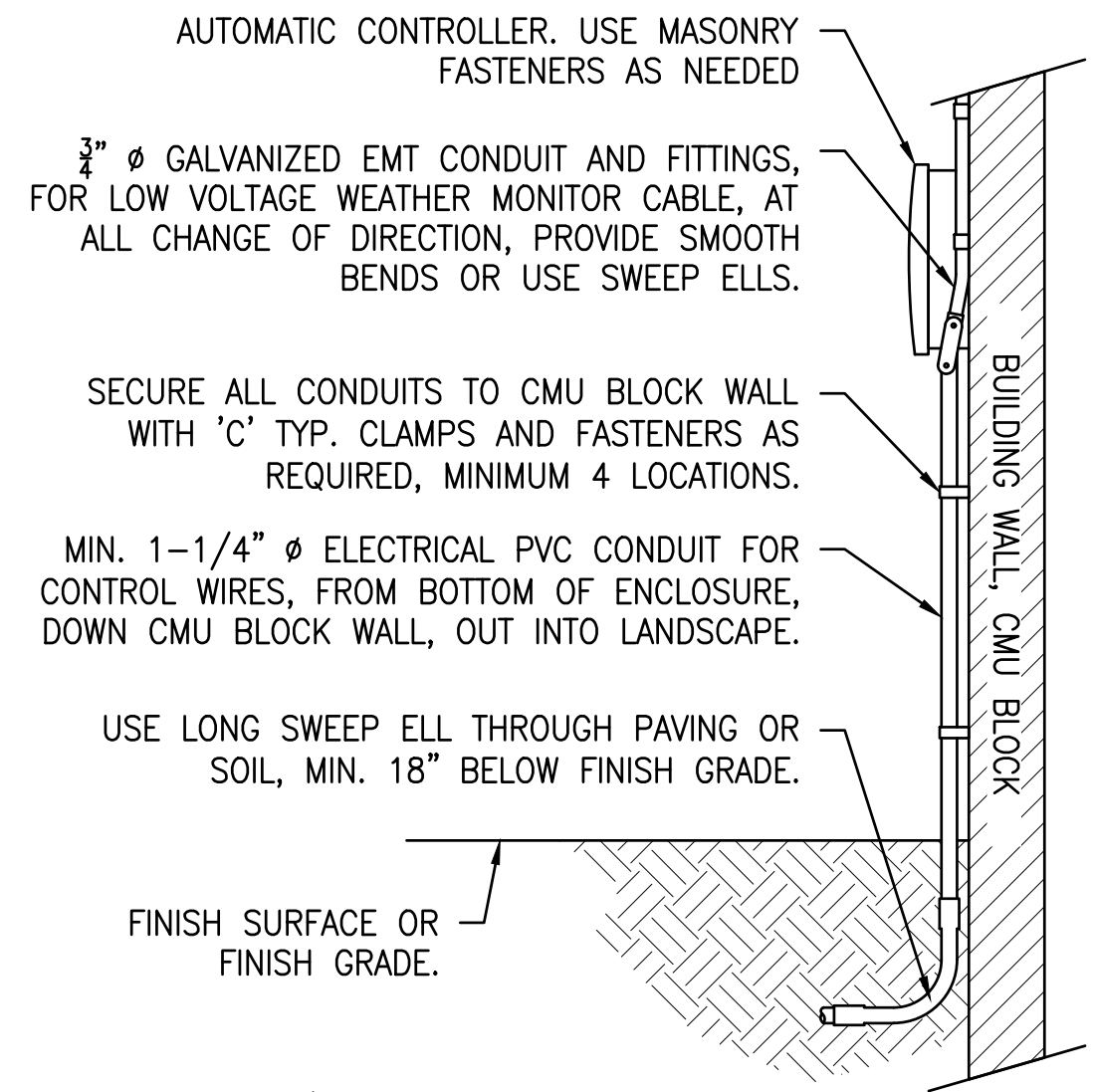
Submittal Date:

August 18, 2021

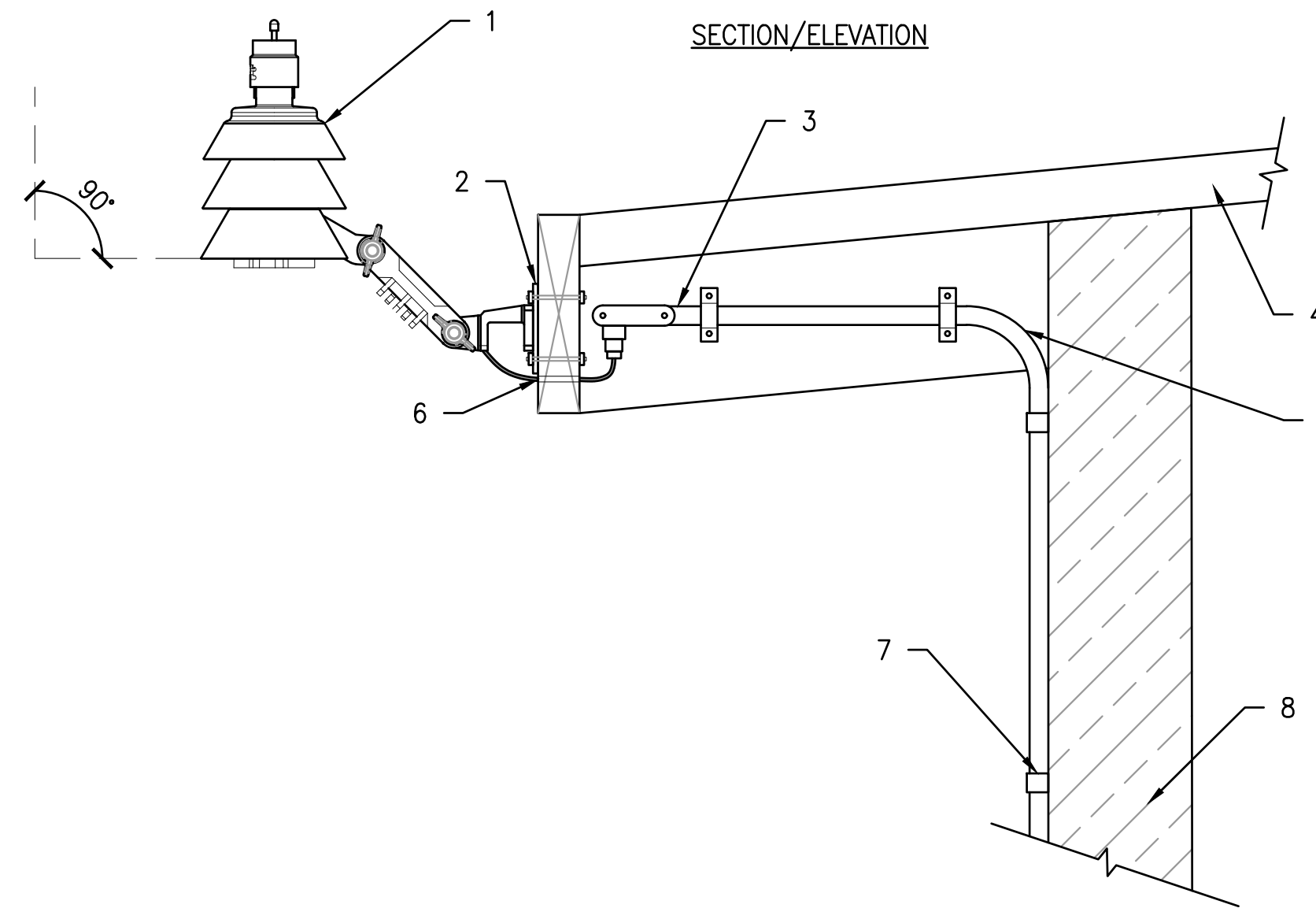
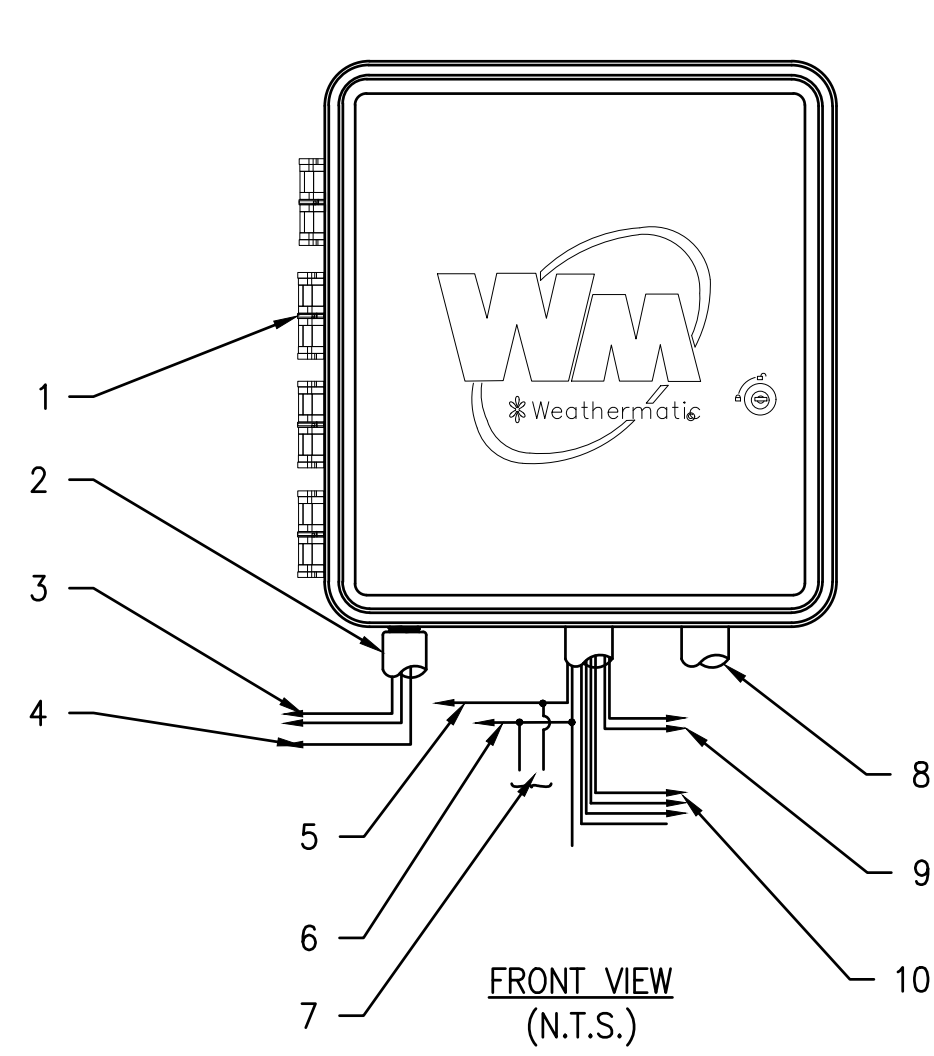
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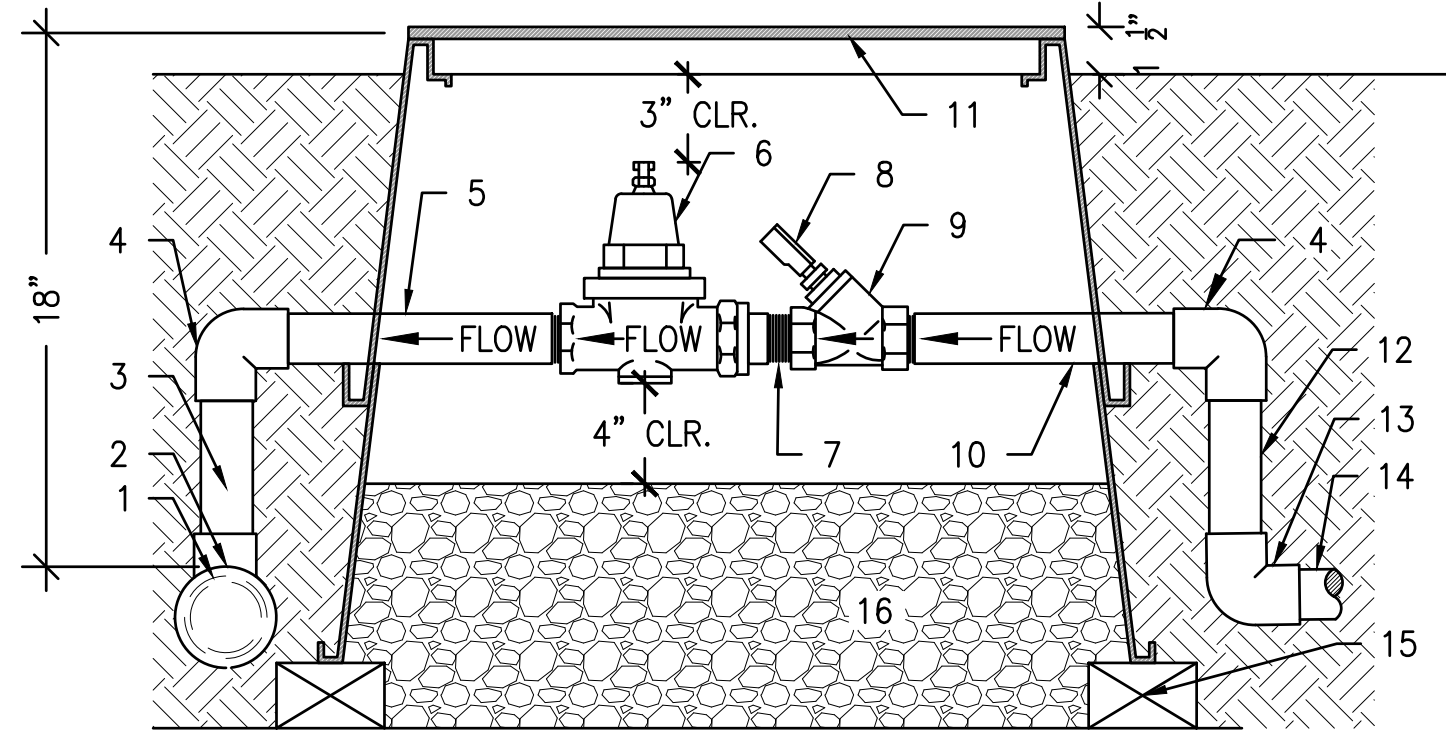
1. WALL MOUNT CONTROLLER
2. CONDUIT 115 A.C.
3. POWER SUPPLY WIRES
4. GROUND WIRE
5. MASTER VALVE WIRE (OPTIONAL)
6. COMMON NEUTRAL WIRE
7. PUMP CIRCUIT WIRES (OPTIONS)
8. CONDUIT 24V A.C.
9. RAIN STAT WIRES (OPTIONAL)
10. VALVE CONTROL WIRES—ONE PER VALVE



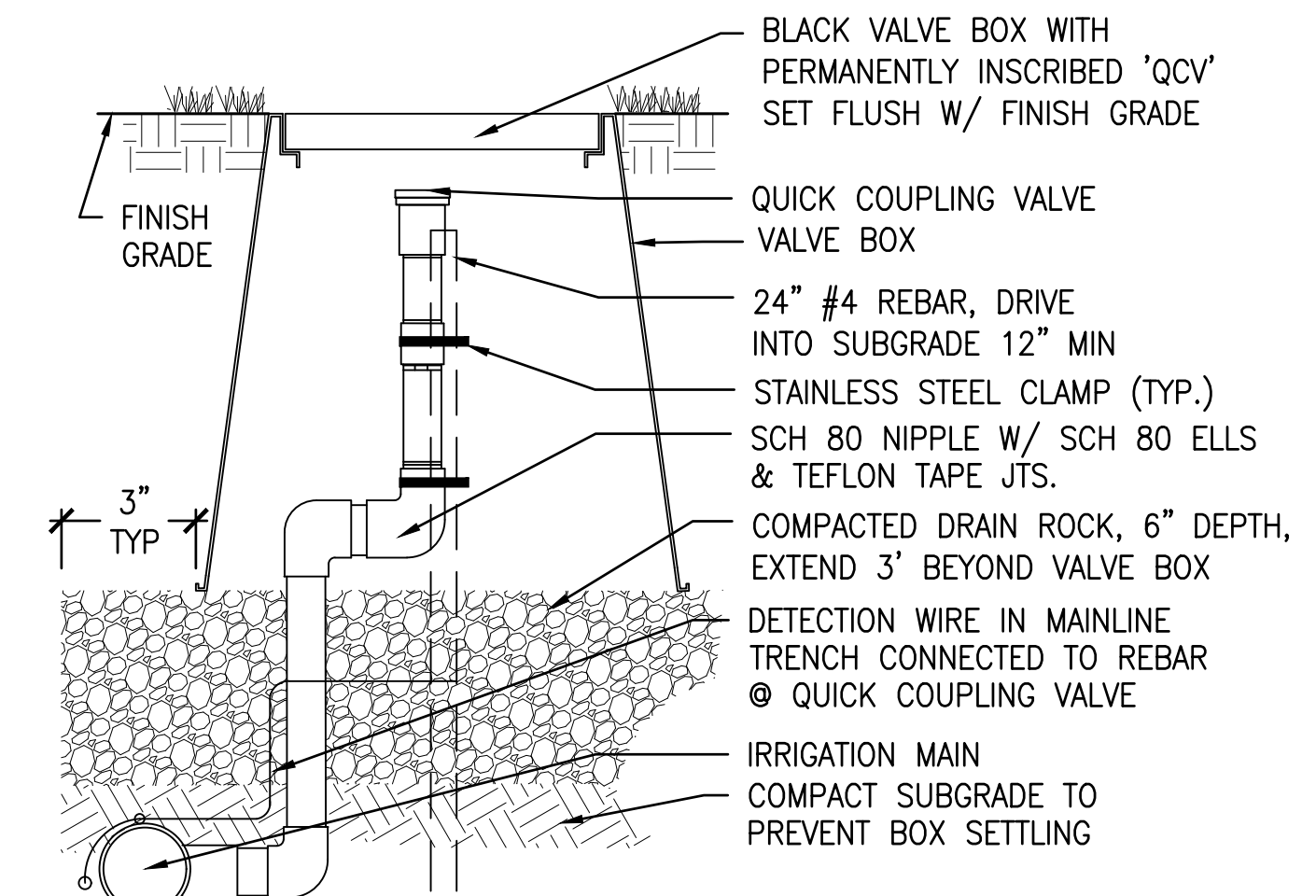
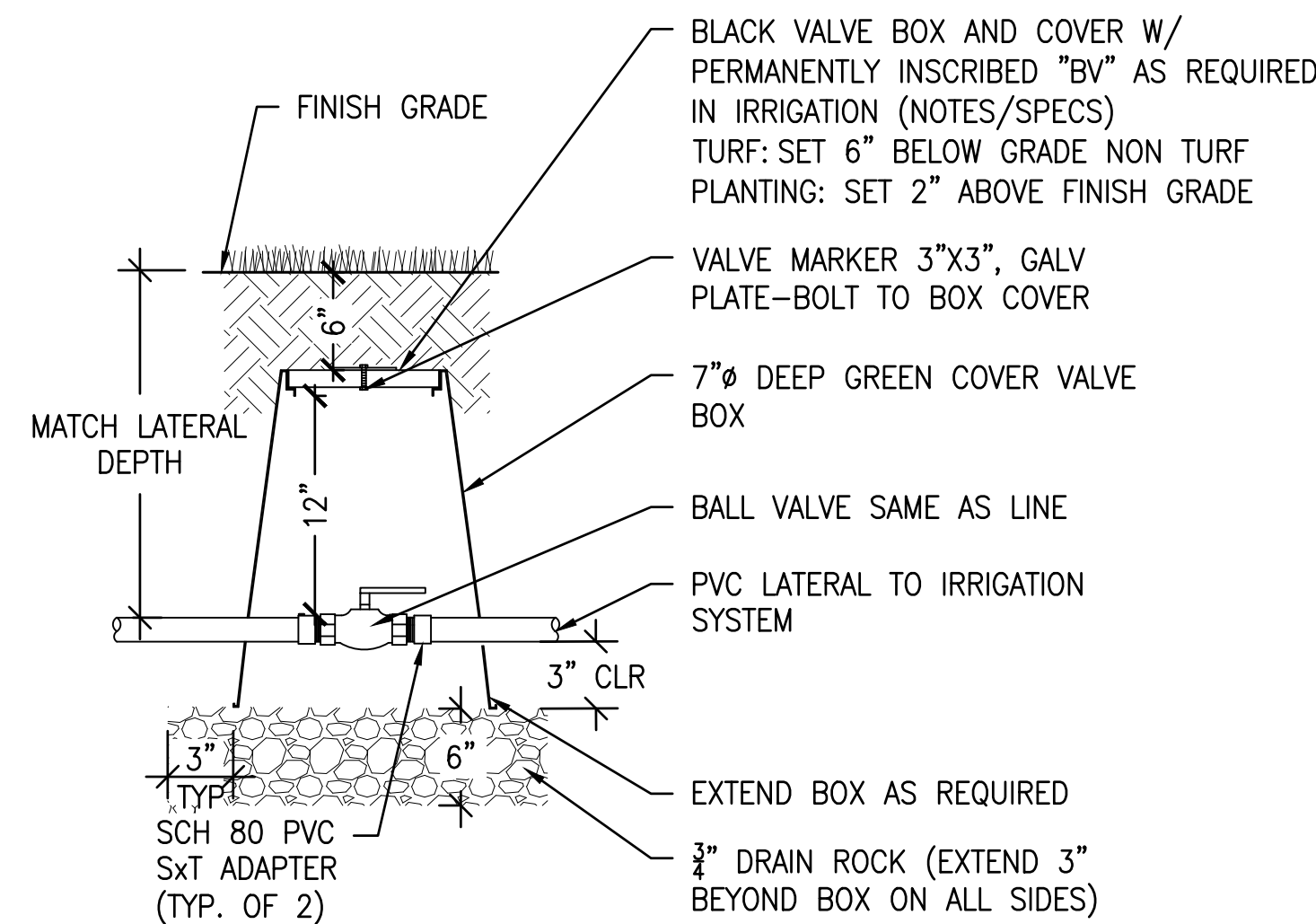
1. NEW WEATHER MONITOR, SEE IRRIGATION LEGENDS AND NOTES FOR MODEL AND MFG.
2. MOUNT WEATHER MONITOR ON BUILDING EAVE AS SHOWN, WITH BRACKET PROVIDED BY MFG. PER DETAILS, NOTES AND MFG. DIRECTIONS. SET MONITOR PLUMB AND LEVEL.
3. 'L' TYPE CONDUIT OUTLET BODY WITH WEATHER TIGHT RUBBER COMPRESSION FITTING AT END OF 3/4" Ø GALVANIZED EMT CONDUIT WITH FITTINGS REQUIRED.
4. BUILDING ROOF.
5. AT ALL CHANGE OF DIRECTIONS IN CONDUIT, PROVIDE SMOOTH BEND OR USE SWEEP ELLS, SIZE TO MATCH.
6. DRILL CLEARANCE HOLE THROUGH WOOD EAVE TO EASILY FEED CABLE FROM WEATHER MONITOR TO NEW CONDUIT.
7. SECURE ALL CONDUITS TO SIDE OF WOOD ROOF RAFTER AND CMU BUILDING WALL WITH TYP. CLAMPS AND FASTENERS AS REQUIRED, CLAMPS, MIN. 4 LOCATIONS.
8. BUILDING WALL, CMU BLOCK.

1 IRRIGATION SYSTEM CONTROLLER
SCALE: 1/2" = 1'

2 WEATHER MONITOR ON BUILDING EVE
SCALE: 1" = 1'



1. SCH 40 PVC LATERAL LINE, SIZE PER PLAN.
2. SCH 80 PVC SLIP X SLIP TEE OR ELL, (WITH REDUCER IF NEEDED), SIZE PER PLAN.
3. SCH 80 PVC SLIP X SLIP NIPPLE, SIZE AND LENGTH AS NEEDED (2 REQUIRED)
4. SCH 80 PVC SLIP X SLIP ELL, SIZE PER PLAN (2 REQUIRED).
5. SCH 80 PVC SLIP X THREAD NIPPLE, SIZE AND LENGTH AS NEEDED (2 REQUIRED).
6. PRESSURE REGULATOR—MFG. AND SIZE PER IRRIG. LEGEND.
7. THREADED BASS NIPPLE, SIZE AND LENGTH AS REQUIRED.
8. PRESSURE GAUGE, MFG. AND MODEL, SEE IRRIG. LEGEND, SET DIAL FACING UP.
9. BRASS WYE STRAINER, MFG., SIZE AND SCREEN IRRIG. LEGEND.
10. SCH 80 PVC SLIP X THREAD NIPPLE, SIZE AND LENGTH REQUIRED.
11. RECTANGULAR PLASTIC VALVE BOX. SIZE AND COLOR PER IRR. LEGEND, HEAT "PR" ON LID IN 2" HIGH BLOCK LETTERS.
12. SCH 80 PVC SLIP X SLIP NIPPLE, SIZE, LENGTH AS REQUIRED.
13. SCH 80 PVC SLIP X SLIP ELL, SIZE PER PLAN.
14. SUPPLY LINE OR FROM EX. P.O.C. — SEE NOTES ON PLAN.
15. BRICK SUPPORTS (1 OF 4).
16. 4" THICK BASE OF 3/4" WASHED GRAVEL.

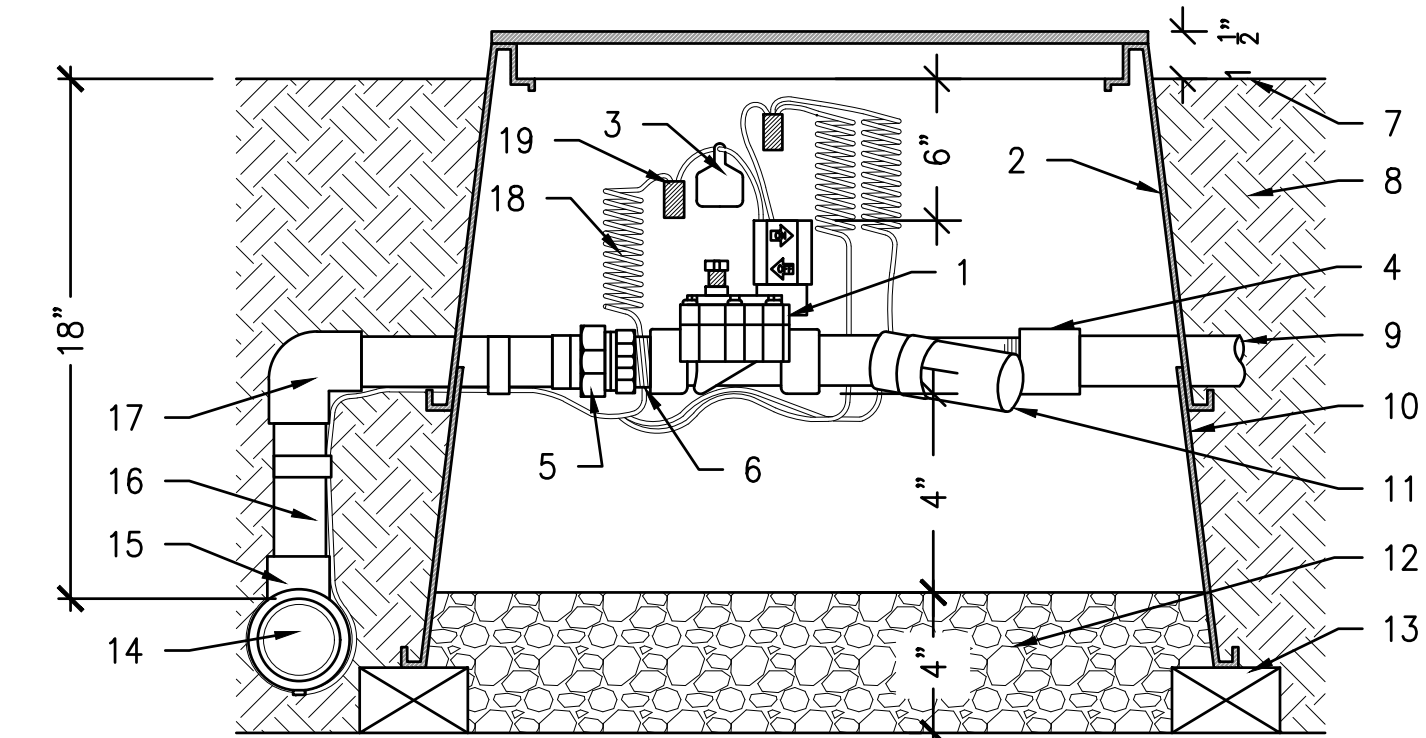


- NOTES:
1. INSTALL TO PREVENT SETTLING.
 2. CENTER QCV IN BOX.
 3. POSITION QCV TO ALLOW CONVENIENT, ACCESSIBLE ACCESS TO QCV KEY & HOSE SWIVEL.

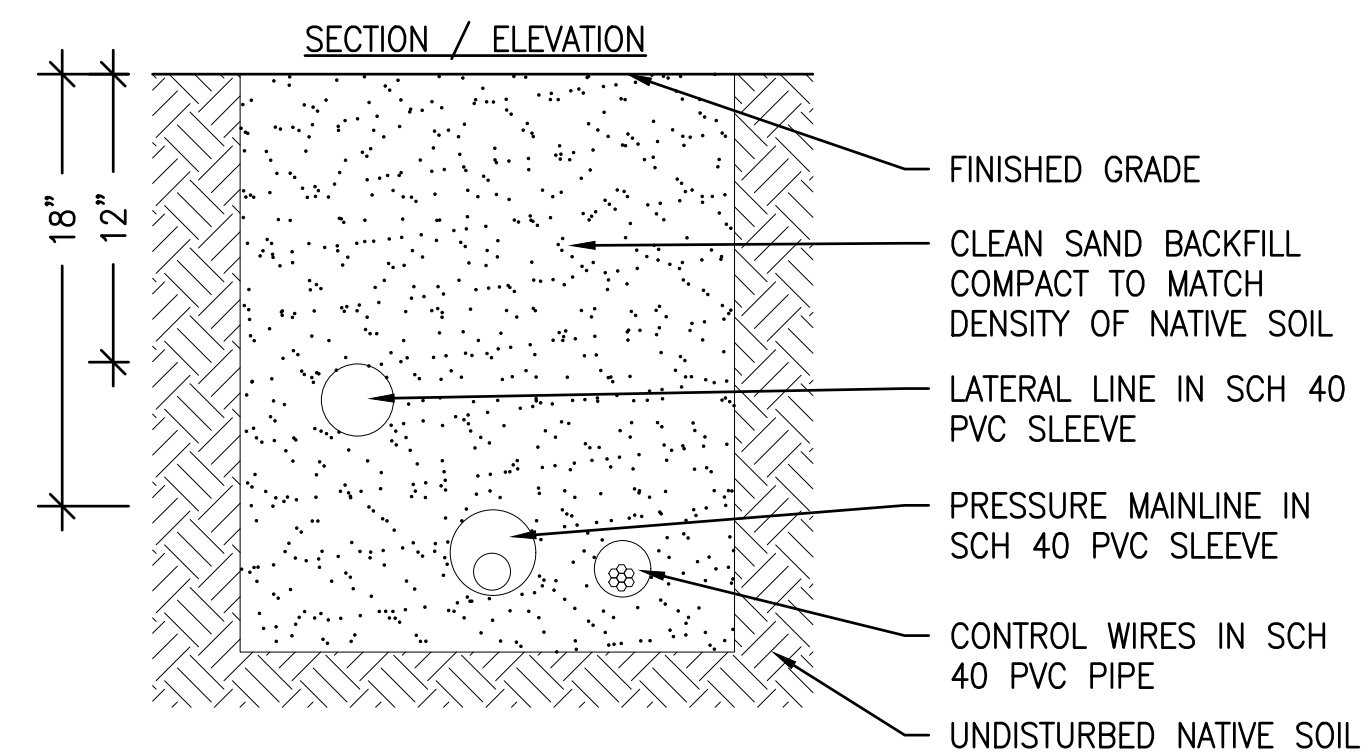
3 PRESSURE REGULATOR WYE STRAINER ASSEMBLY
SCALE: 1 1/2" = 1'

4 BALL VALVE
SCALE: 1 1/2" = 1'

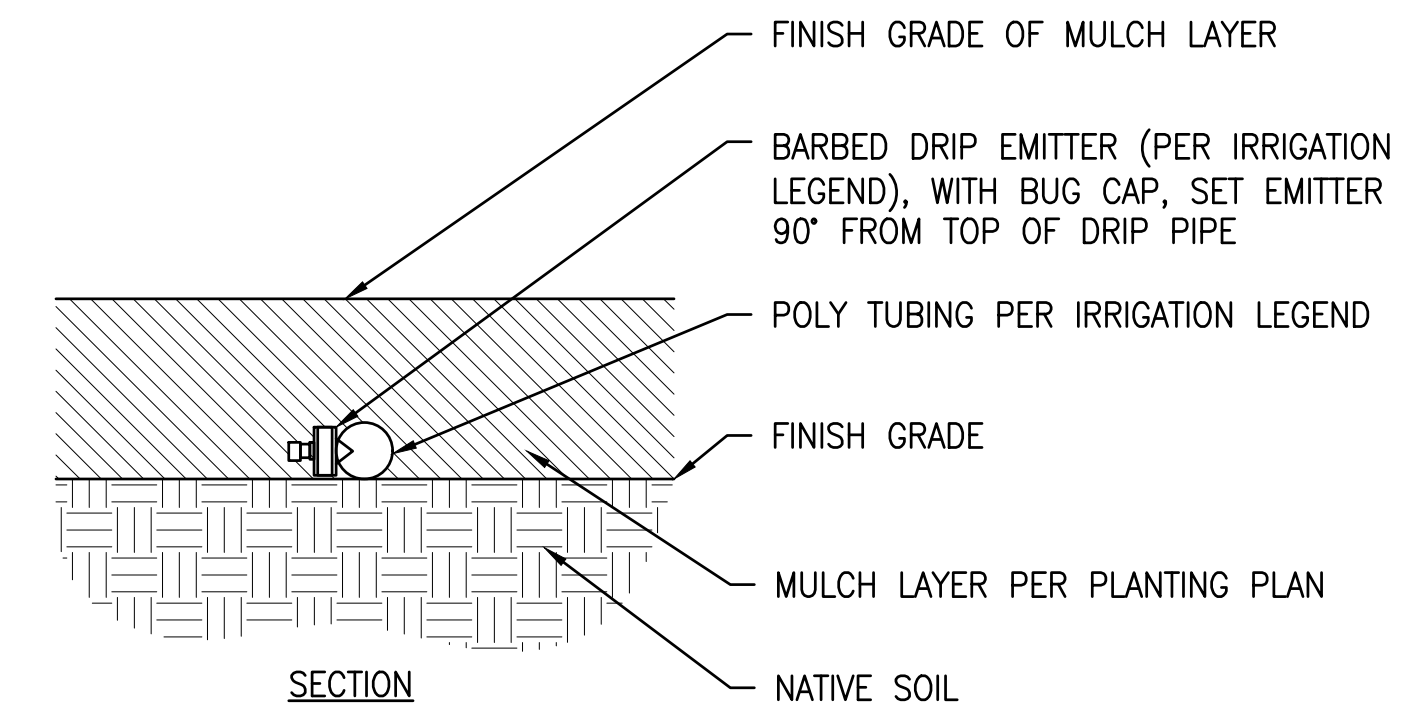
5 QUICK COUPLER VALVE
SCALE: 3" = 1'



1. REMOTE CONTROL VALVE PER LEGEND.
2. RECTANGULAR PLASTIC VALVE BOX SIZE AND COLOR PER IRRIG. LEGEND, HEAT BRAND, STATION NUMBER AND "DZ" ON LID IN 2" HIGH BLOCK LETTERS.
3. (2) I.D. TAGS REQUIRED, 1) PURPLE 'RECYCLED/RECLAIMED WATER TAG AND SECOND TAG, WITH PRINTED STATION NUMBER, SEE SPECIFICATIONS.
4. SCH 40 PVC MALE ADAPTER.
5. SCH 80 PVC UNION (LINE SIZE).
6. SCH 80 PVC CLOSE NIPPLE.
7. FINISH GRADE.
8. NATIVE SOIL.
9. PVC PIPING TO SYSTEM (CONNECT AND ADAPT AS NECESSARY).
10. RECTANGULAR PLASTIC VALVE BOX USED AS EXTENSION (NDS #318B OR APPROVED EQUAL).
11. COMBINED PRESSURE REGULATOR AND Y-FILTER PER LEGEND.
12. FILL BASE OF BOX WITH PEA GRAVEL.
13. COMMON BRICK SUPPORTS (4 REQUIRED).
14. MAINLINE PIPING PER IRRIGATION LEGEND (PLAN SIZE). 14.1. SCH 40 PVC MAINLINE FITTING (OUTLET TO BE VALVE SIZE).
15. SCH 80 PVC ELL (VALVE SIZE).
16. SCH 80 PVC PIPING (VALVE SIZE) LENGTH AS REQUIRED.
17. SCH 80 PVC ELL (VALVE SIZE).
18. #14 UF CONTROL WIRE WITH 30" LENGTH COILED, TAPE TO PIPES PER DET. 'H', RUN TO CONTROLLER (COLOR CODED).
19. WATERPROOF WIRE CONNECTOR (2 REQUIRED).



- NOTES:
1. SIZE ALL SLEEVES PER THE IRRIGATION PLANS. EXTENDED SLEEVES 6" MINIMUM BEYOND EDGE OF HARDSCAPE (AT EACH END) INTO THE PLANTING AREAS.
 2. *SLEEVING UNDER ALL VEHICULAR ACCESS WAYS TO HAVE 36" MINIMUM COVER FROM TOP OF SLEEVE TO BOTTOM OF AGGREGATE BASE.



- INSERT DRIP EMITTER DIRECTLY INTO POLY TUBING. LOCATE EMITTERS JUST INSIDE THE EDGE OF ROOT BALL UNLESS INSTRUCTED OTHERWISE BY THE L.I.U. LANDSCAPE INC. REPRESENTATIVE. REFER TO PLANTING PLAN FOR DEPTH OF MULCH. WHEN ON A SLOPE, INSTALL ON UP-HILL SIDE OF PLANT WHERE DEVICE IS USED ON AN INDIVIDUAL PLANT BASIS.
- NOTES:
1. ON-LINE POINT SOURCE DRIPPER, SEE IRRIGATION PLAN

6 DRIP ZONE CONTROL VALVE
SCALE: 1 1/2" = 1'

7 UNDERGROUND SLEEVING
SCALE: 1 1/2" = 1'

8 DRIP EMITTER ON POLY TUBING
SCALE: 3/4" = 1'



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Project:
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2089 Hanscom Dr.
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IRRIGATION DETAILS

Revisions:

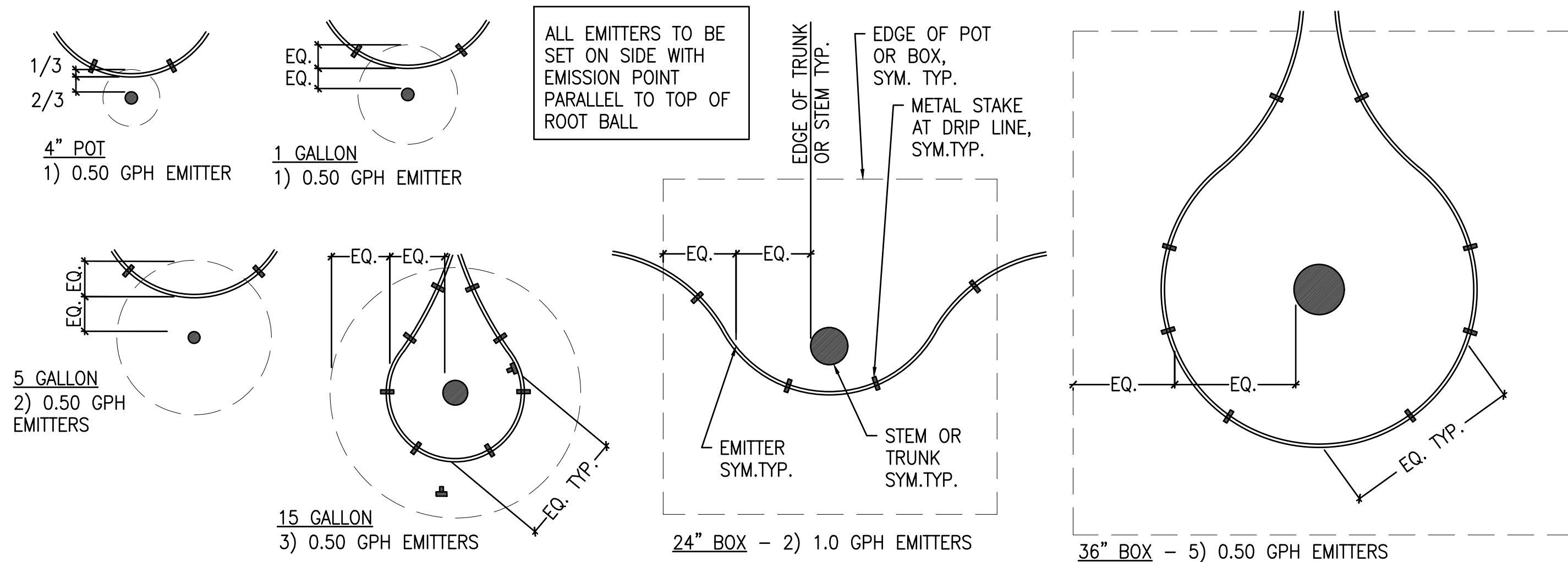
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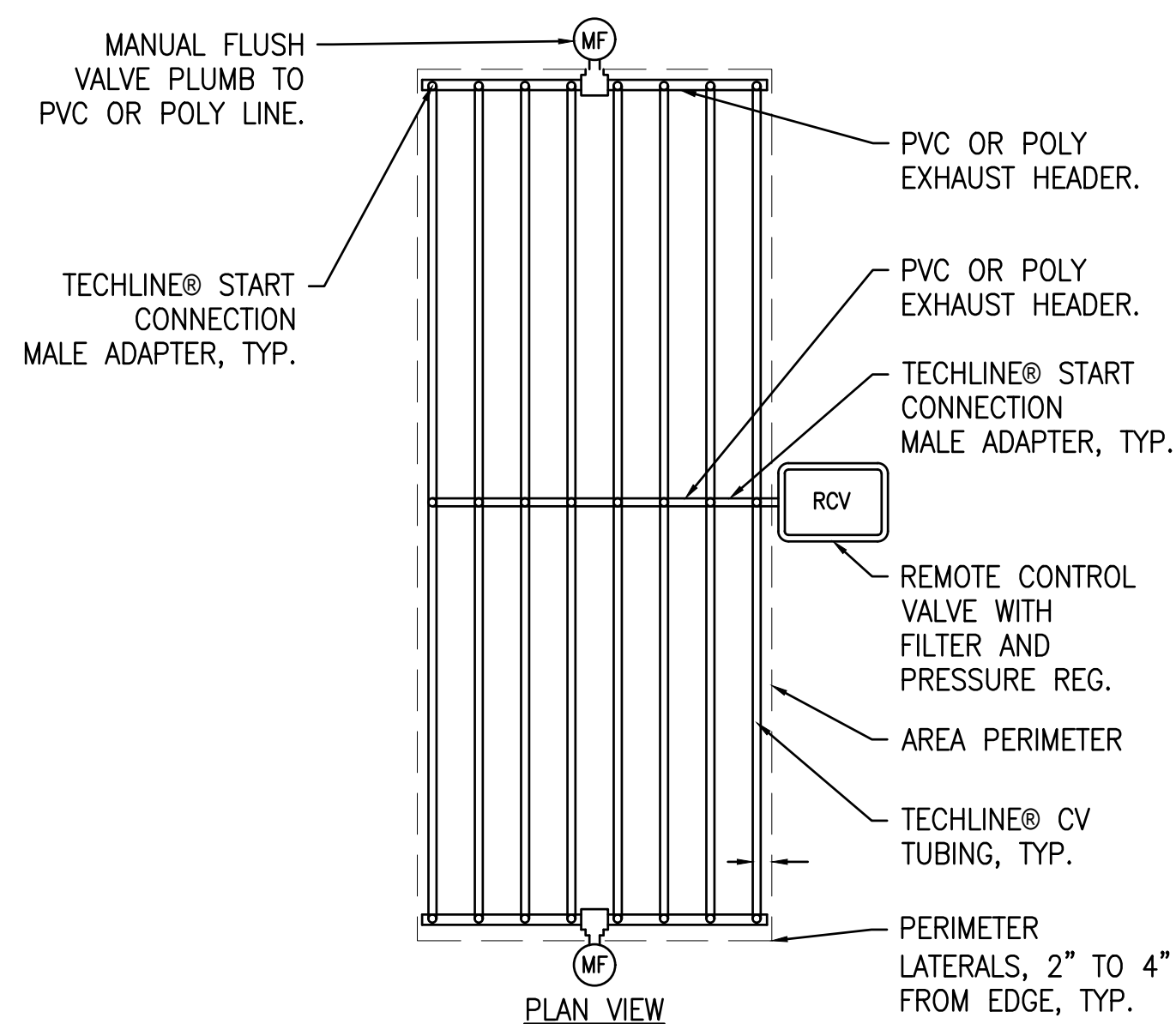
August 18, 2021

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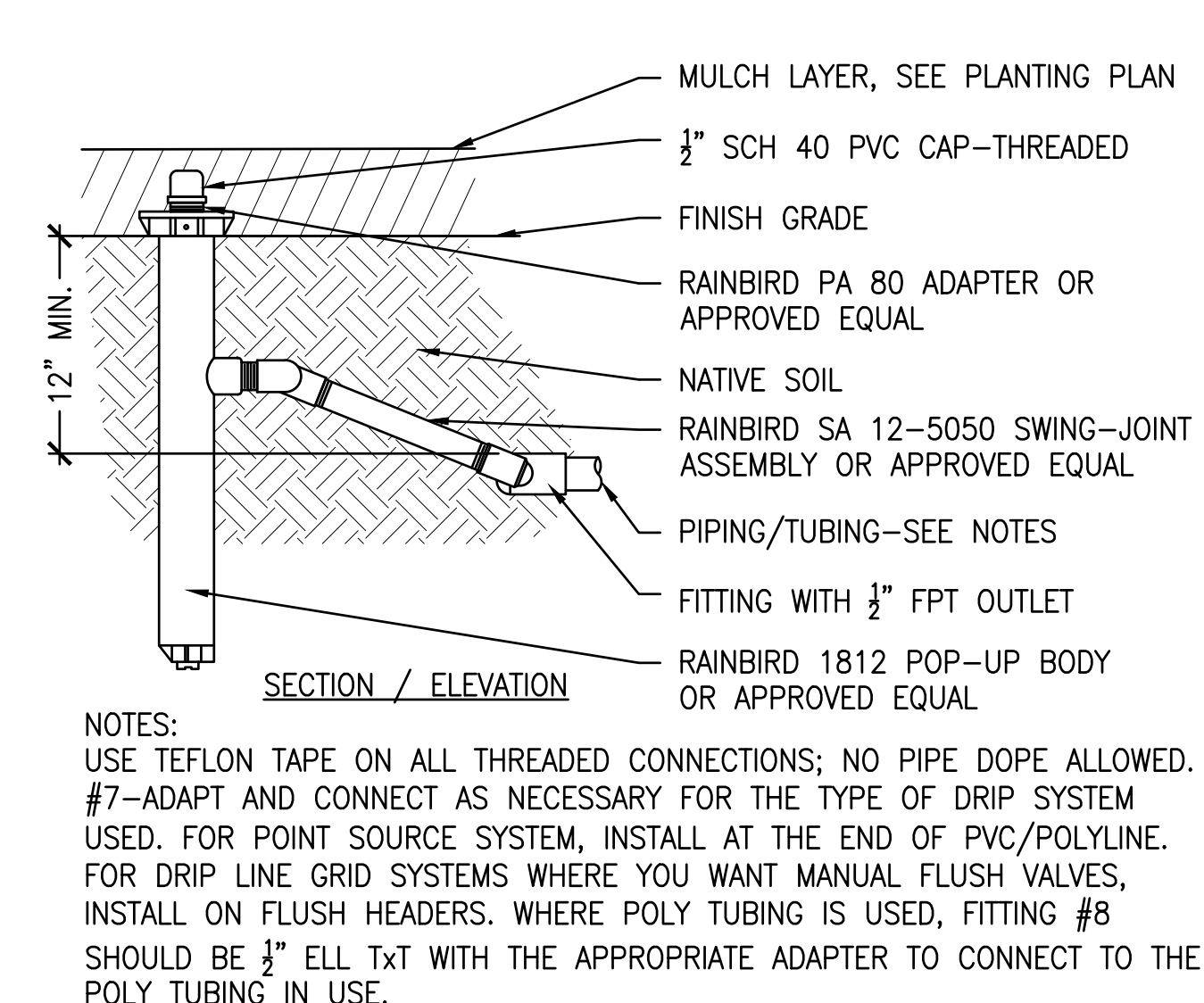
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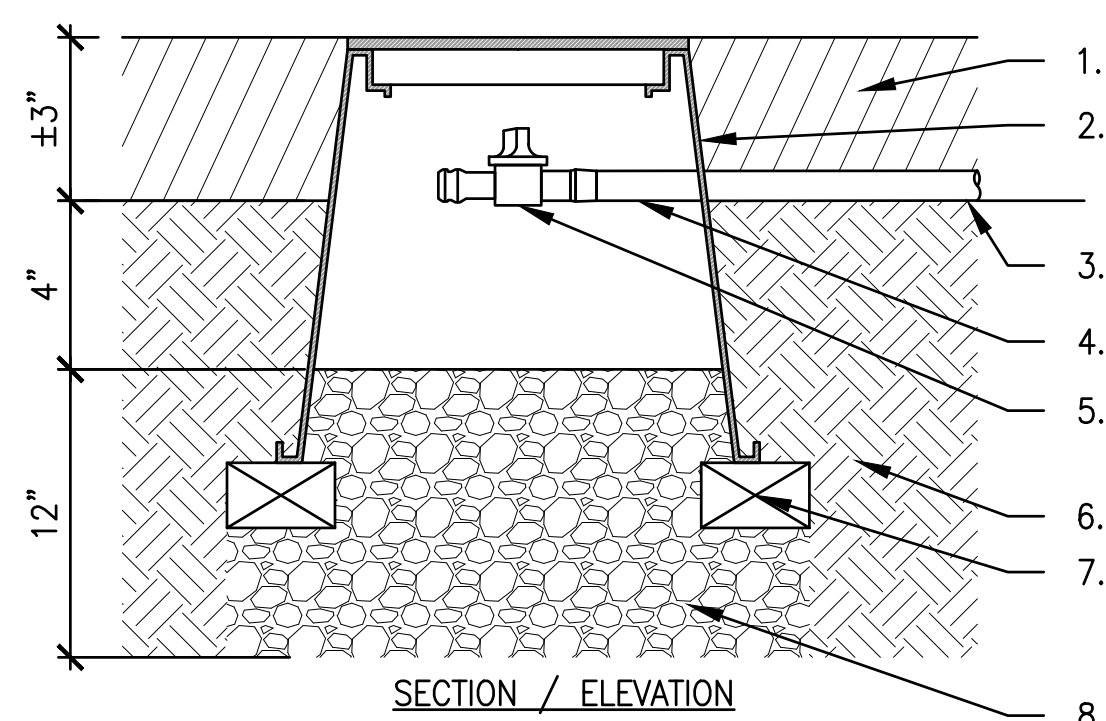
1 ONLINE DRIP EMITTER LAYOUT
SCALE: 3/4" = 1'



2 INLINE DRIP CENTER FEED
SCALE: 3/4" = 1'



3 POP-UP TATTLETALE ASSEMBLY
SCALE: 1" = 1'



4 MANUAL FLUSH VALVE
SCALE: 1 1/2" = 1'



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IRRIGATION DETAILS

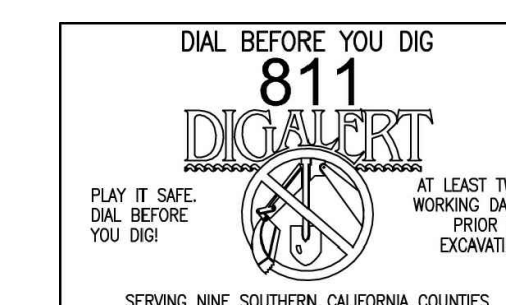
Revisions:

Submittal Date:

August 18, 2021

Sheet Number:

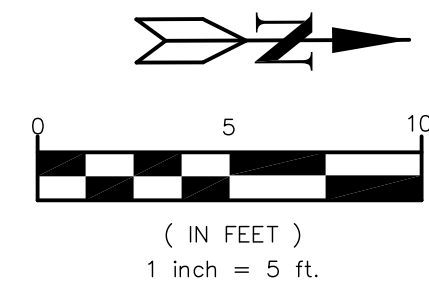
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ATTACHMENT 8

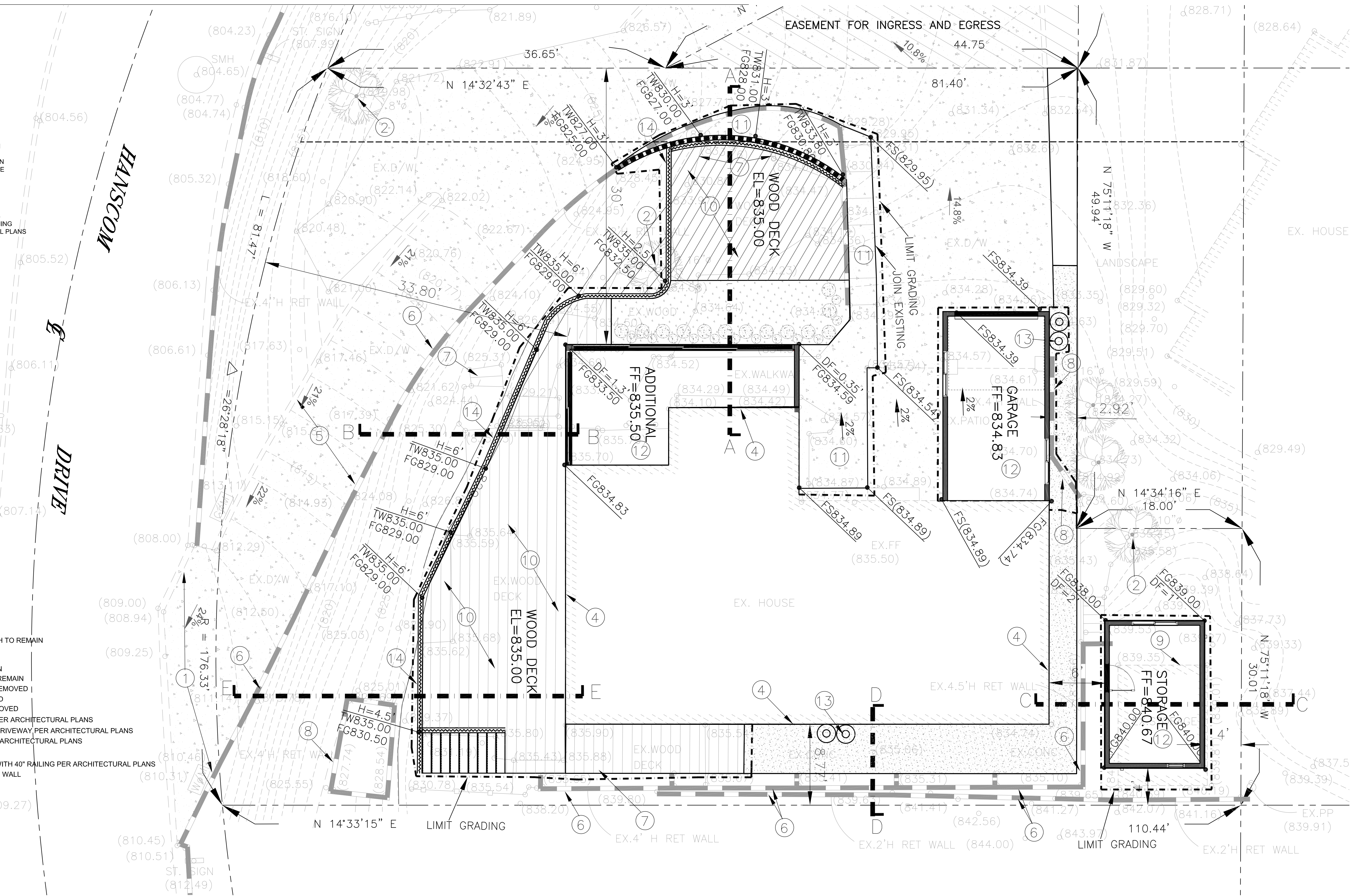
Preliminary Grading & Drainage Plans

PRELIMINARY GRADING AND DRAINAGE PLAN



- LEGEND:**
- (527.63).....EXISTING ELEVATION
 - 520.00.....PROPOSED ELEVATION
 - (530).....EXISTING CONTOUR
 - - - - - EX. DRAINAGE PATTERN
 -PROPOSED STRUCTURE
 -PROPOSED WALL
 - SW.....SIDE WALK
 -LIGHT
 -CENTER LINE
 -PROPERTY LINE
 - ④.....CONSTRUCTION NOTES
 -BUILDING STEM/RETAINING WALL PER STRUCTURAL PLANS
- ABBREVIATIONS:**
- TC.....TOP OF CURB
 - FL.....FLOW LINE
 - FG.....FINISH GRADE
 - FS.....FINISH SURFACE
 - FF.....FLOOR FINISH
 - HP.....HIGH POINT
 - PP.....POWER POLE
 - DW.....DRIVEWAY
 - WM.....WATER METER
 - INV.....INVERT ELEVATION
 - TG.....TOP OF GRATE
 - DS.....DOWNSPOUT

- CONSTRUCTION NOTES:**
- ① EXISTING DRIVEWAY APPROACH TO REMAIN
 - ② EXISTING TREE TO REMAIN
 - ④ EXISTING BUILDING TO REMAIN
 - ⑥ EXISTING DRIVEWAY TO REMAIN
 - ⑥ EXISTING RETAINING WALL TO REMAIN
 - ⑦ EXISTING WOOD DECK TO BE REMOVED
 - ⑧ EXISTING WALL TO BE REMOVED
 - ⑨ EXISTING STORAGE TO BE REMOVED
 - ⑩ CONSTRUCTION WOOD DECK PER ARCHITECTURAL PLANS
 - ⑪ CONSTRUCT NEW CONCRETE DRIVEWAY PER ARCHITECTURAL PLANS
 - ⑫ CONSTRUCTION BUILDING PER ARCHITECTURAL PLANS
 - ⑬ INSTALL RAIN BARREL
 - ⑭ CONSTRUCTION BLOCK WALL WITH 40" RAILING PER ARCHITECTURAL PLANS
 - ⑮ CONSTRUCTION 3' H RETAINING WALL



EARTHWORK QUANTITIES:

CUT: 10 CY
 FILL: 4 CY

SPECIAL NOTE:
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OWNER/CLIENT:

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 837 SAN NICHOLAS DR.
 WALNUT, CA 91789
 310-776-5672

BENCHMARK:

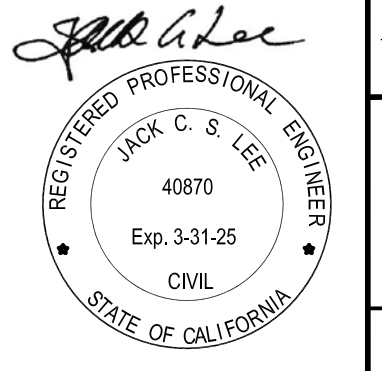
BENCHMARK NO. LY 11535
 L&T IN S CB MEDFORD ST ON C/L
 PROD MARIANNA AVE (SW/O
 EASTERN AVE)
 ELEVATION: 404.112'

LEGAL DESCRIPTION:

PARCEL PORTIONS OF LOTS 21 AND 22 IN BLOCK 11 OF TRACT NO. 2672, IN THE CITY OF SOUTH PASADENA, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 27 PAGE 29 AND 30, OF MAPS, IN THE CITY OFFICE OF THE COUNTY RECORDER OF SAID COUNTY. PARCEL 2 (AN EASEMENT FOR INGRESS AND EGRESS PORTION OF LOT 20 IN BLOCK 11 OF TRACT NO. 2672, IN THE CITY OF SOUTH PASADENA, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 27 PAGE 29 AND 30, OF MAPS, IN THE CITY OFFICE OF THE COUNTY RECORDER OF SAID COUNTY. APN: 53308-022-010

SOIL ENGINEER:

JACK C. LEE, GE 2153
 EXP. DATE: 3-31-2023
 CALLAND ENGINEERING, INC.
 dba QUARTECH CONSULTANTS
 576 E. LAMBERT ROAD
 BREAA, CA 92821
 TEL. NO. (714) 671-1050



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RELEASED

REVISIONS

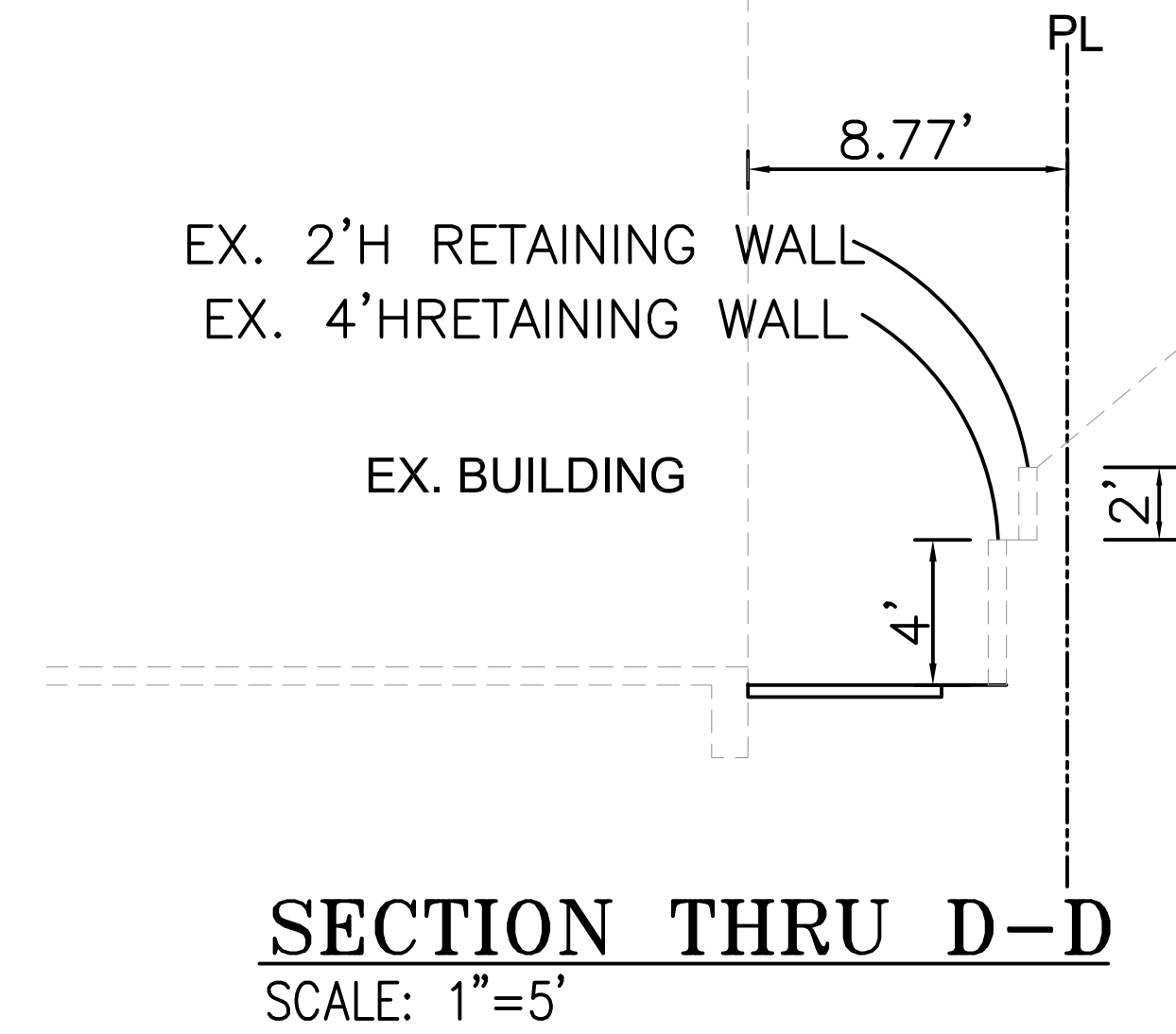
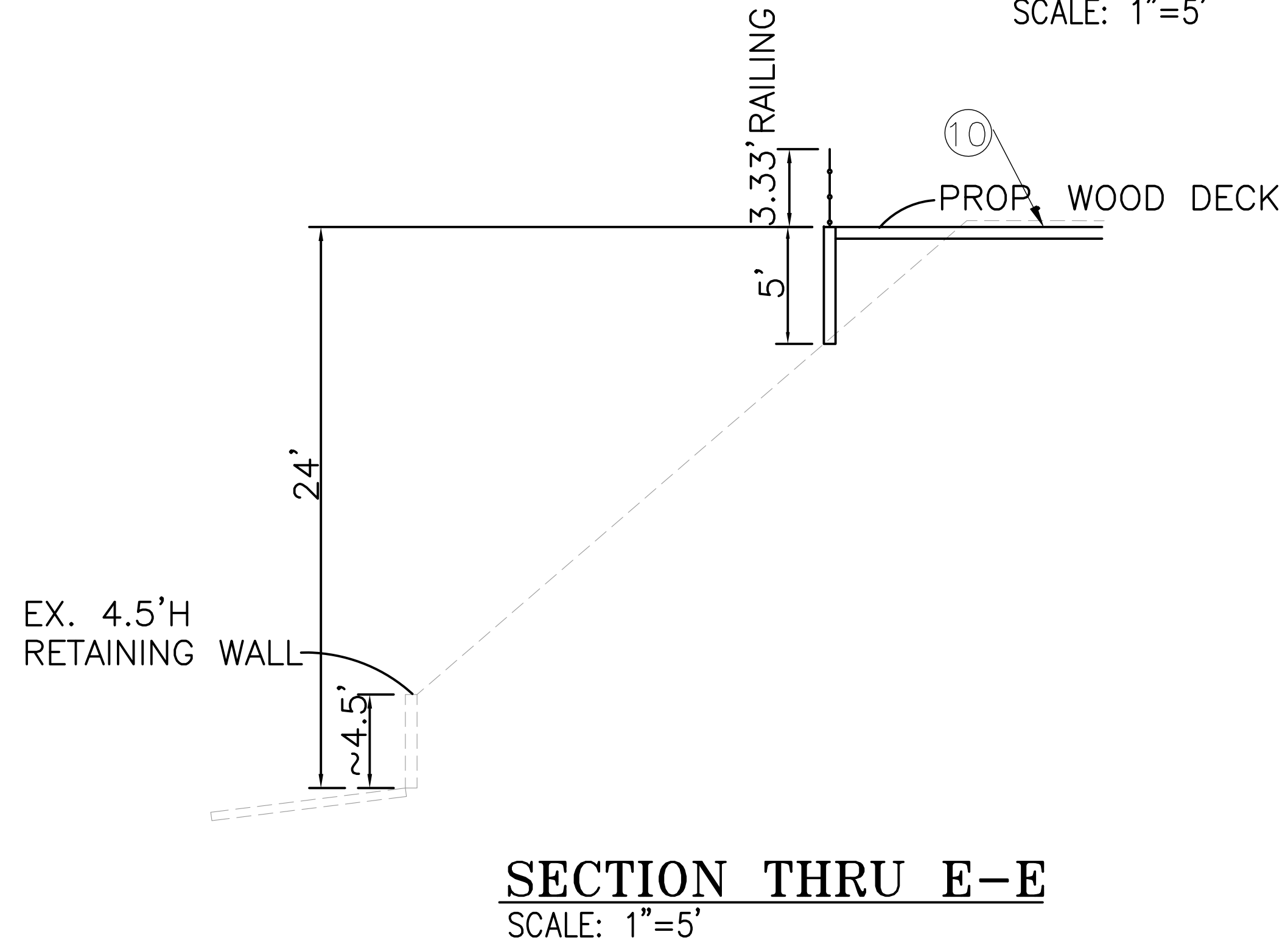
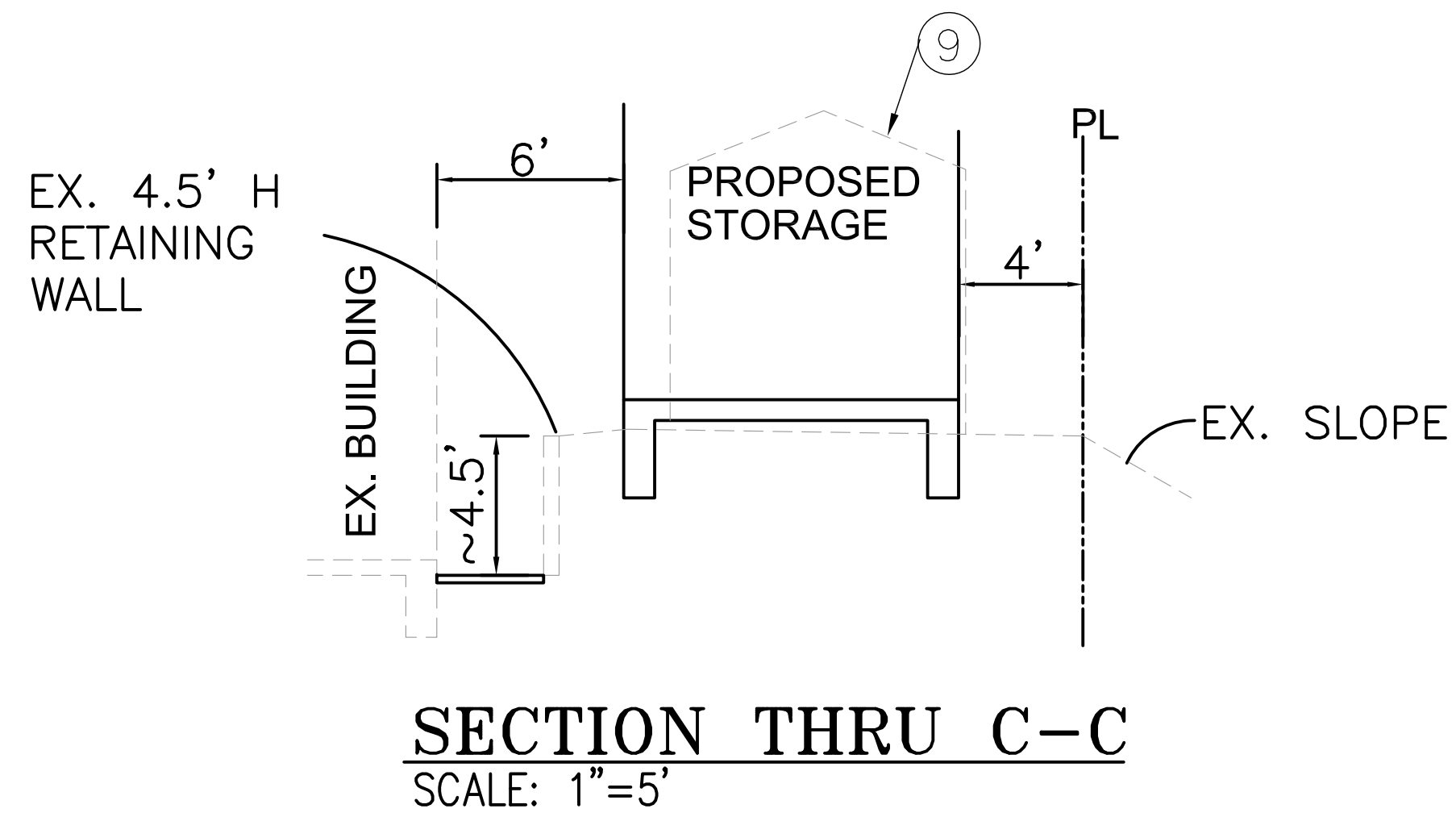
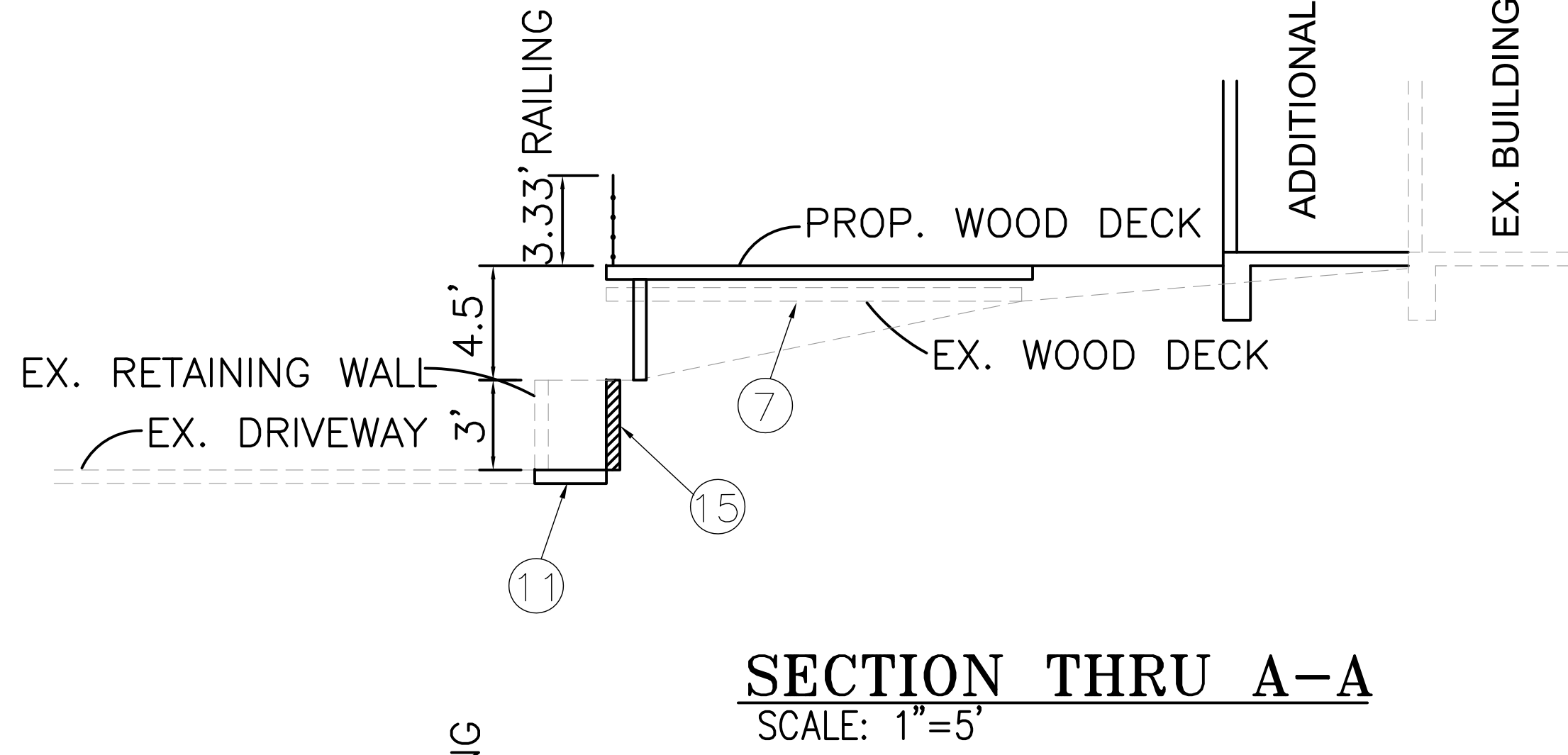
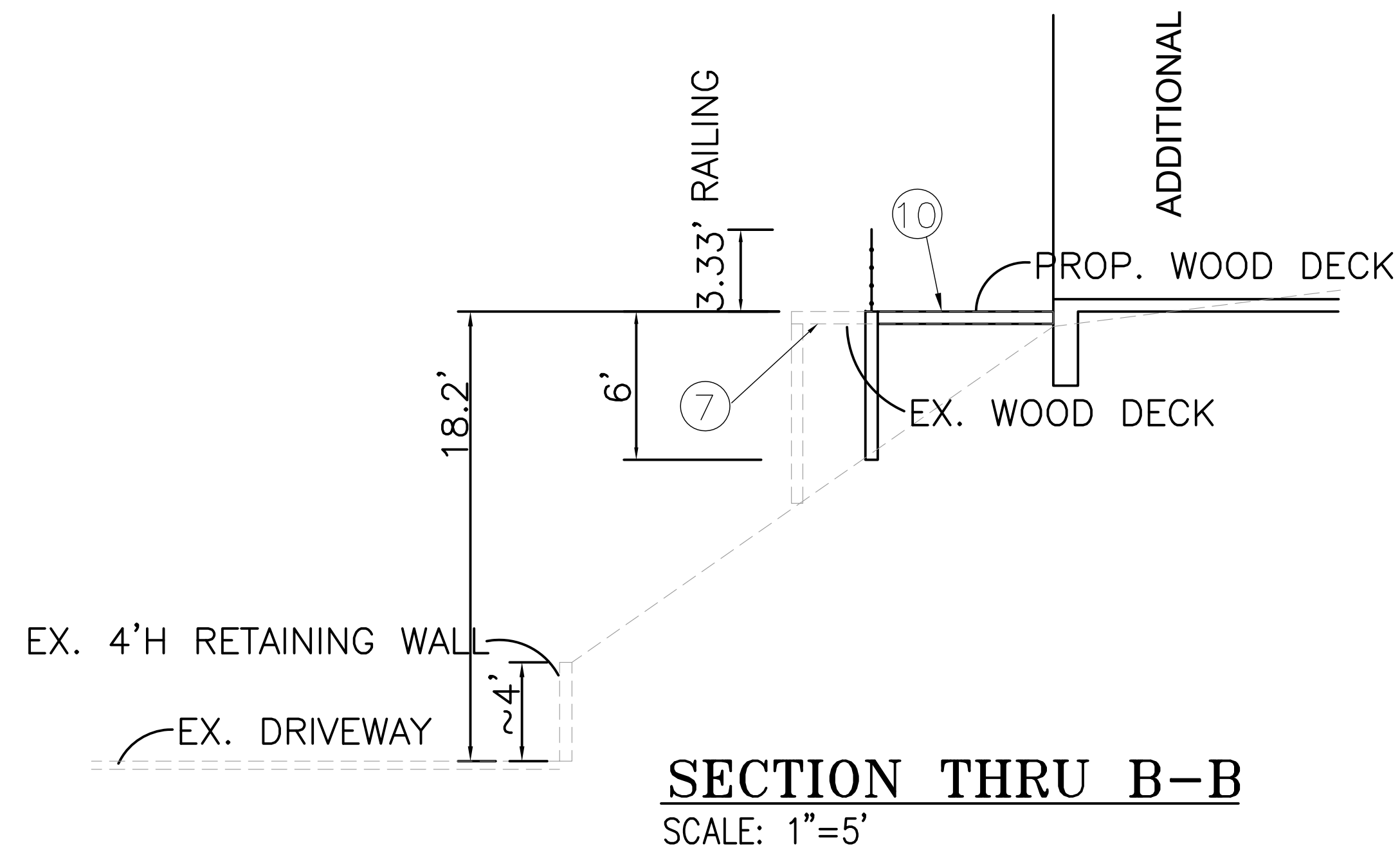
PROJECT LOCATION:
2089 HANSCOM DRIVE SOUTH PASADENA, CA 91030

DRAWN: XY
CHECKED:
DATE: 01/22/2024
JOB NO.: 21-225-011
SCALE: 1"=5'
FILE NAME:

C-1

SHEET 1 OF 3 SHT.

SECTION



- LEGEND:**
- (527.63).....EXISTING ELEVATION
 - 520.00.....PROPOSED ELEVATION
 - (530).....EXISTING CONTOUR
 -EX. DRAINAGE PATTERN
 -PROPOSED STRUCTURE
 -PROPOSED WALL
 - SW.....SIDE WALK
 -LIGHT
 -CENTER LINE
 -PROPERTY LINE
 -CONSTRUCTION NOTES
 -BUILDING STEM/RETAINING WALL PER STRUCTURAL PLANS

- ABBREVIATIONS:**
- TC.....TOP OF CURB
 - FL.....FLOW LINE
 - FG.....FINISH GRADE
 - FS.....FINISH SURFACE
 - FF.....FLOOR FINISH
 - HP.....HIGH POINT
 - PP.....POWER POLE
 - D/W.....DRIVEWAY
 - WM.....WATER METER
 - INV.....INVERT ELEVATION
 - TG.....TOP OF GRATE
 - DS.....DOWNSPOUT

- CONSTRUCTION NOTES:**
- 1 EXISTING DRIVEWAY APPROACH TO REMAIN
 - 2 EXISTING TREE TO REMAIN
 - 4 EXISTING BUILDING TO REMAIN
 - 5 EXISTING DRIVEWAY TO REMAIN
 - 6 EXISTING RETAINING WALL TO REMAIN
 - 7 EXISTING WOOD DECK TO BE REMOVED
 - 8 EXISTING WALL TO BE REMOVED
 - 9 EXISTING STORAGE TO BE REMOVED
 - 10 CONSTRUCTION WOOD DECK PER ARCHITECTURAL PLANS
 - 11 CONSTRUCT NEW CONCRETE DRIVEWAY PER ARCHITECTURAL PLANS
 - 12 CONSTRUCTION BUILDING PER ARCHITECTURAL PLANS
 - 13 INSTALL RAIN BARREL
 - 14 CONSTRUCTION BLOCK WALL PER ARCHITECTURAL PLANS
 - 15 CONSTRUCTION 3' H RETAINING WALL

EARTHWORK QUANTITIES:

CUT: 10 CY
FILL: 4 CY

SPECIAL NOTE:
THE QUANTITIES SHOWN HEREON ARE FOR PERMIT AND BONDING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY QUANTITIES PRIOR TO START OF GRADING.

OWNER/CLIENT:

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837 SAN NICHOLAS DR,
WALNUT, CA 91789

310-776-5672

BENCHMARK:

BENCHMARK NO. LY 11535
L&T IN S CB MEDFORD ST ON C/L
PROD MARIANNA AVE (SW/O
EASTERN AVE)

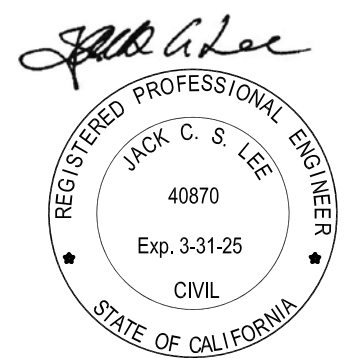
ELEVATION: 404.112'

LEGAL DESCRIPTION:

PARCEL 1
PORTIONS OF LOTS 21 AND 22 IN BLOCK 11 OF TRACT NO. 2672, IN THE CITY OF SOUTH PASADENA, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 27 PAGE 29 AND 30, OF MAPS, IN THE CITY OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.
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APN: 5308-022-010

SOIL ENGINEER:

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EXP. DATE: 3-31-2023
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RELEASED

REVISIONS

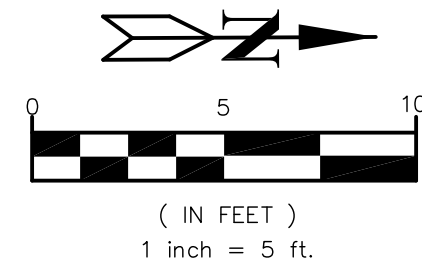
PROJECT LOCATION:
2089 HANSCOM DRIVE
SOUTH PASADENA, CA 91030

DRAWN: XY
CHECKED:
DATE: 01/22/2024
JOB NO.: 21-225-011
SCALE: 1"=5'
FILE NAME:

C-2

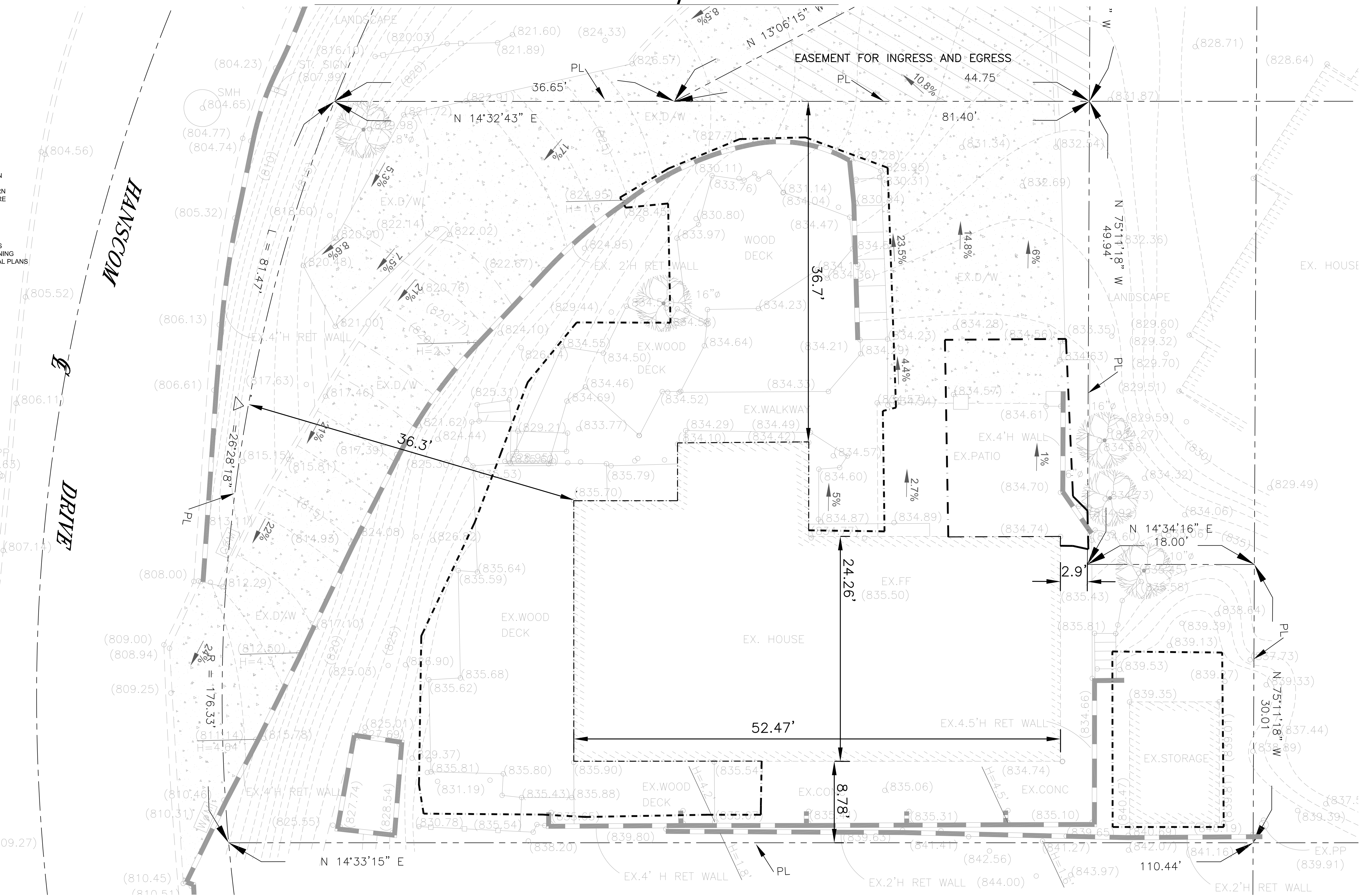
SHEET 2 OF 3 SHT.

EXISTING SITE PLAN/SURVEY



- LEGEND:**
- (527.63).....EXISTING ELEVATION
 - 520.00.....PROPOSED ELEVATION
 - (-530).....EXISTING CONTOUR
 -EX. DRAINAGE PATTERN
 -PROPOSED STRUCTURE
 -PROPOSED WALL
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 -LIGHT
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BENCHMARK:

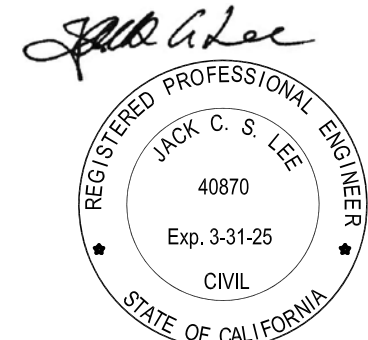
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SOIL ENGINEER:

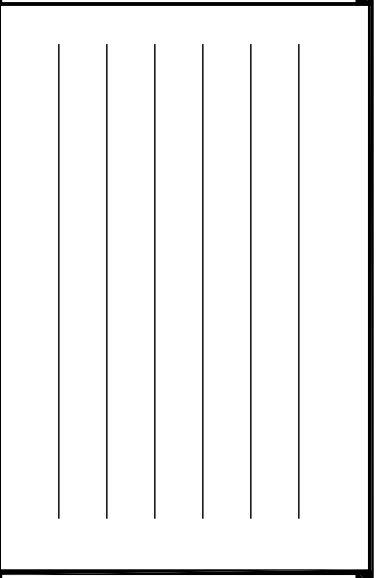
JACK C. LEE, GE 2153
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RELEASED

REVISIONS



PROJECT LOCATION:
 2089 HANSCOM DRIVE
 SOUTH PASADENA, CA 91030

DRAWN: XY
 CHECKED:
 DATE: 01/22/2024
 JOB NO.: 21-225-011
 SCALE: 1"=5'
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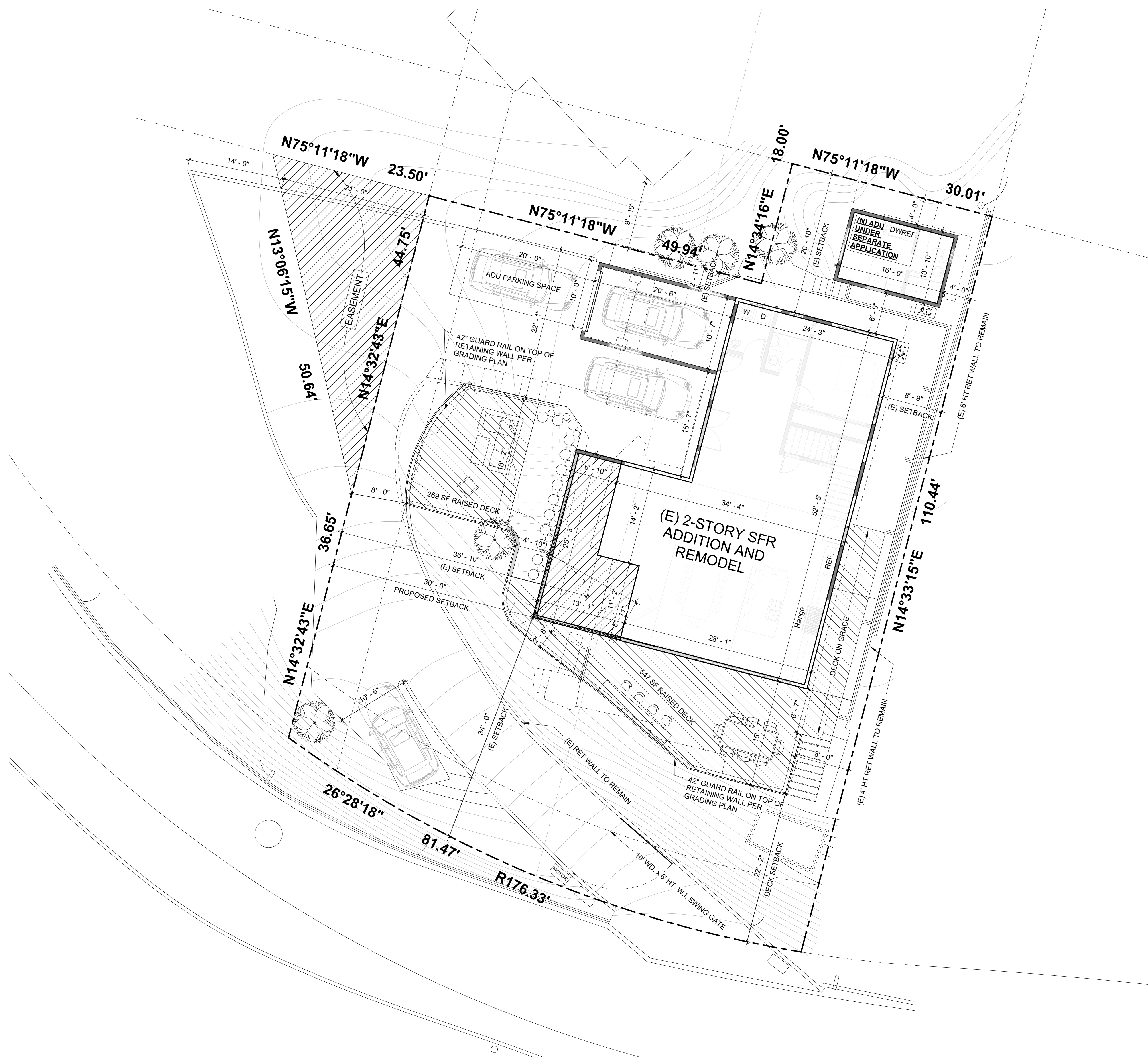
C-3
 SHEET 3 OF 3 SHT.

ATTACHMENT 9

Architectural Plans & Renderings

SINGLE FAMILY RESIDENCE

2089 HANSCOM DR., SOUTH PASADENA, CA 91030



PROJECT DATA

APPLICANT/OWNER
 OWNER: PARADACE.COM DEVELOPMENT
 ADDRESS: 2089 HANSCOM DR., SOUTH PASADENA, CA 91030
 APPLICANT: ERIC C. TSANG
 ADDRESS: 440 E. HUNTINGTON DR., SUITE 356, ARCADIA, CA 91006
 TEL: 909.569.3737
 EMAIL: MAIL@ERIC-DESIGN.COM

PROJECT DESCRIPTION
 PROJECT NAME: HANSCOM RESIDENCE
 PROJECT ADDRESS: 2089 HANSCOM DR., SOUTH PASADENA, CA 91030
 APN: 5308-022-010
 JOB DESCRIPTION: REMODEL AND ADDITION TO (E) SFR
 ZONING: RS
 NUMBER OF STORY: 2
 OCCUPANCY GROUP: R-3/U
 CONSTRUCTION TYPE: V-B
 DEMOLITION: CARPORT & ACCESSORY STRUCTURE

PROJECT DATA
 LOT SIZE: 7,760 SF

EXISTING:
 1ST FLOOR LIVING AREA: 1,458 SF
 2ND FLOOR LIVING AREA: 532 SF
 CARPORT: 284 SF
 ACCESSORY STRUCTURE: 126 SF
 RAISED DECK: 816 SF
 TOTAL LIVING AREA: 1,990 SF
 TOTAL LOT COVERAGE: 2,708 SF
 TOTAL FLOOR AREA: 1,990 SF

PROPOSED TO BE DEMOLISHED:
 2ND FLOOR LIVING AREA: 114 SF
 ACCESSORY STRUCTURE: 126 SF
 CARPORT: 284 SF

PROPOSED REQUEST:
 1ST FLOOR LIVING AREA ADDITION: 234 SF
 2ND FLOOR LIVING AREA ADDITION: 605 SF
 GARAGE: 254 SF
 CARPORT: 130 SF
 ADU: 172 SF
LOT COVERAGE: 3,088 SF / 7,760 SF = 39.8%
TOTAL FLOOR AREA: 2,715 SF / 7,760 SF = 35%
 ALLOWABLE FAR: 7,760 * .35 = 2,716 SF MAX

SLOPE ANALYSIS CALC:
 ALLOWABLE AREA (A): 7,741.26 SF (0.178 ACRE)
 CONTOUR INTERVAL (I): 1 FOOT
 SUMMATION OF LENGTH OF ALL CONTOURS (L): 3,211.13 FT
 ALLOWABLE AREA (A): 7,741.26 SF (0.178 ACRE)
 CONTOUR INTERVAL (I): 1 FOOT
 SUMMATION OF LENGTH OF ALL CONTOURS (L): 3,211.13 FEET
 AVERAGE SLOPE: 0.00229(I X L) / A 0.00229(1 X L) / A 0.00229(1 X 3211.13) / 0.178 = **41.31%**

PROJECT NARRATIVE:
 PROPOSED DEVELOPMENT ON 2089 HANSCOM DR IS TO REMODEL AND EXPAND THE EXISTING 2-STORY SINGLE FAMILY HOUSE. THE TOTAL ADDITION TO THE EXISTING HOUSE ARE 725 SF AND THE ENTIRE EXISTING 1990 SF EXISTING FLOOR AREA ARE PROPOSED FOR REMODELING. SETBACK OF ANY NEW ADDITION WILL FOLLOW THE EXISTING SETBACK OF THE BUILDING AS SHOWN ON A TOPOGRAPHIC SURVEY MAP.

EXISTING GARAGE WILL REMAIN IN PLACE AND A NEW CARPORT PARKING SPACE IS PROPOSED NEXT TO IT TO PROVIDE TOTAL OF 2 OFF-STREET PARKING SPACE FOR THIS DEVELOPMENT. DRIVEWAY WILL REMAIN IN PLACE AND GUEST PARKING WILL ALSO REMAIN IN PLACE.

THE COMPLETED PROJECT WILL CONSIST OF THE FOLLOWING AMENITIES: 3 BEDROOMS, 3 BATHROOMS, LAUNDRY ROOM, OFFICE, LIVING ROOM, DINING ROOM, KITCHEN, AND LOFT. WRAP AROUND BALCONY IS ALSO PROPOSED ON THE 2ND FLOOR ALONG THE SOUTH AND WEST.

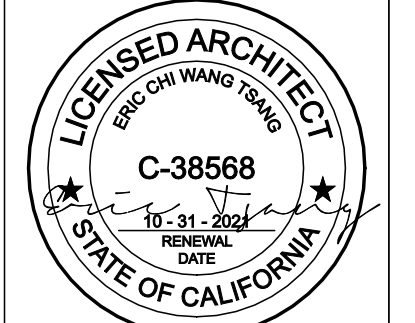
EXISTING 126 SF ACCESSORY STRUCTURE WILL BE RELOCATED AND EXPANDED INTO 172 SF ADU, WITH 4 FOOT SETBACK FROM SIDE AND REAR, AND 6 FOOT SEPARATION FROM MAIN HOUSE.

LANDSCAPE AND HARDSCAPE LAYOUT PROPOSED WITH MINIMAL MODIFICATION TO FOLLOW THE EXISTING CONTOUR AND RETAINING WALL LOCATION. ALL EXISTING MATURE TREES WILL BE PRESERVED AND REMAIN IN PLACE AND SHALL BE PROTECTED DURING CONSTRUCTION.

NO EXISTING TREE ARE PROPOSED TO BE REMOVED

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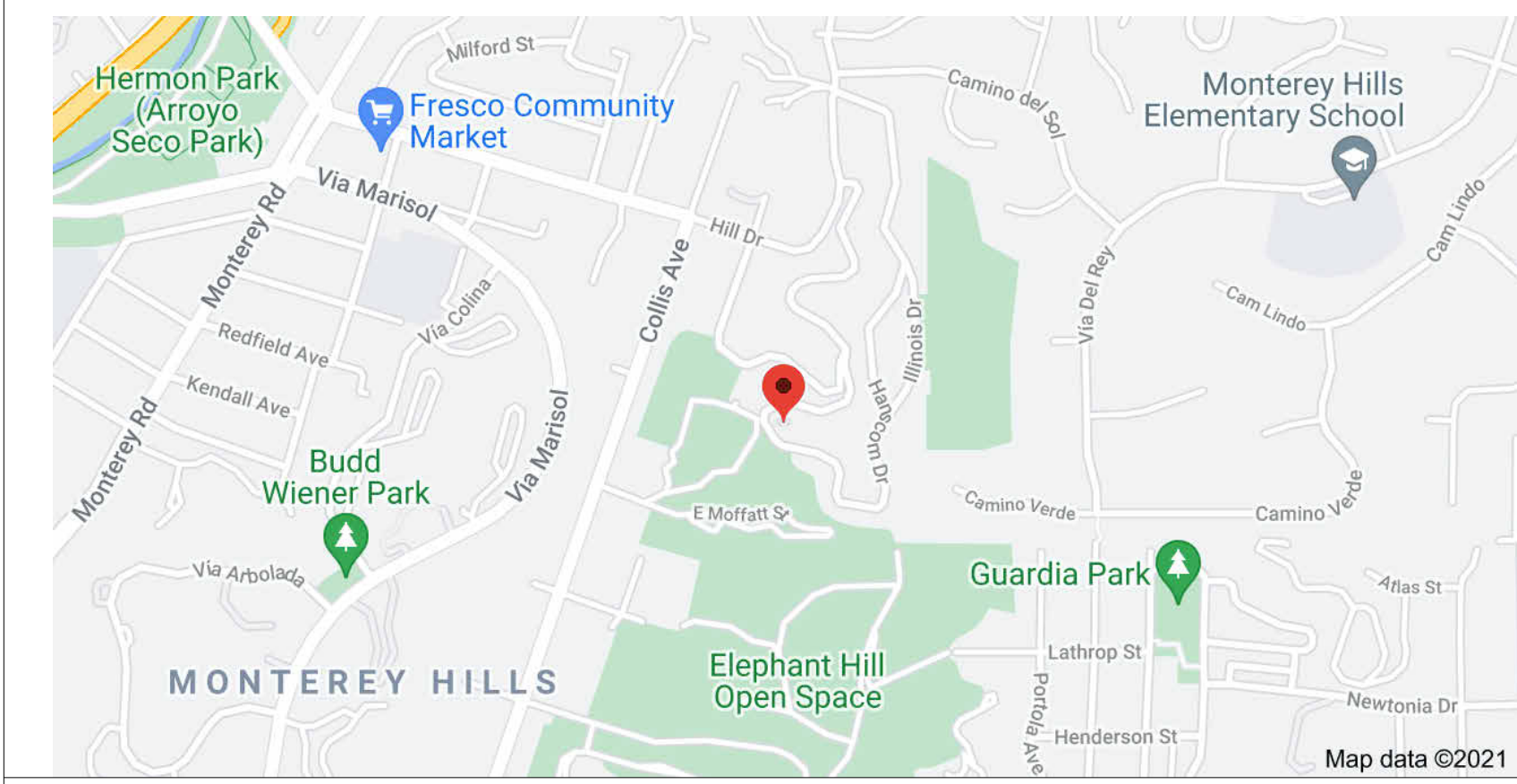
ERIC CHI WANG TSANG, AIA
 440 E. HUNTINGTON DR., # 356,
 ARCADIA, CA 91006
 909.569.3737
 MAIL@ERIC-DESIGN.COM



No.	DESCRIPTION	DATE

PROJECT OWNER:
 PARADACE.COM

VICINITY MAP



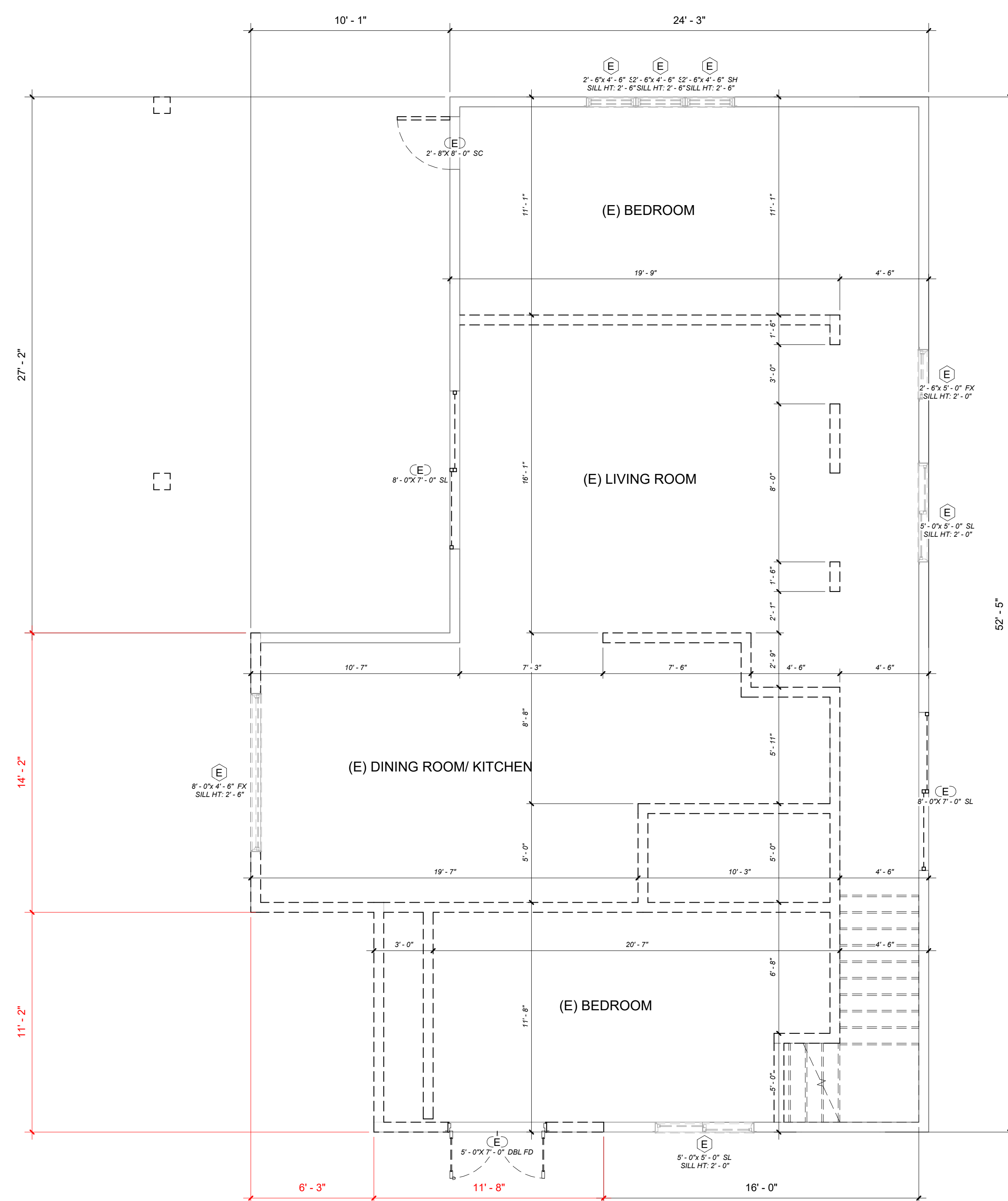
1 PROPOSED SITE PLAN
 1/8" = 1'-0"

HANSCOM RESIDENCE
 2089 HANSCOM DR.,
 SOUTH PASADENA, CA 91030

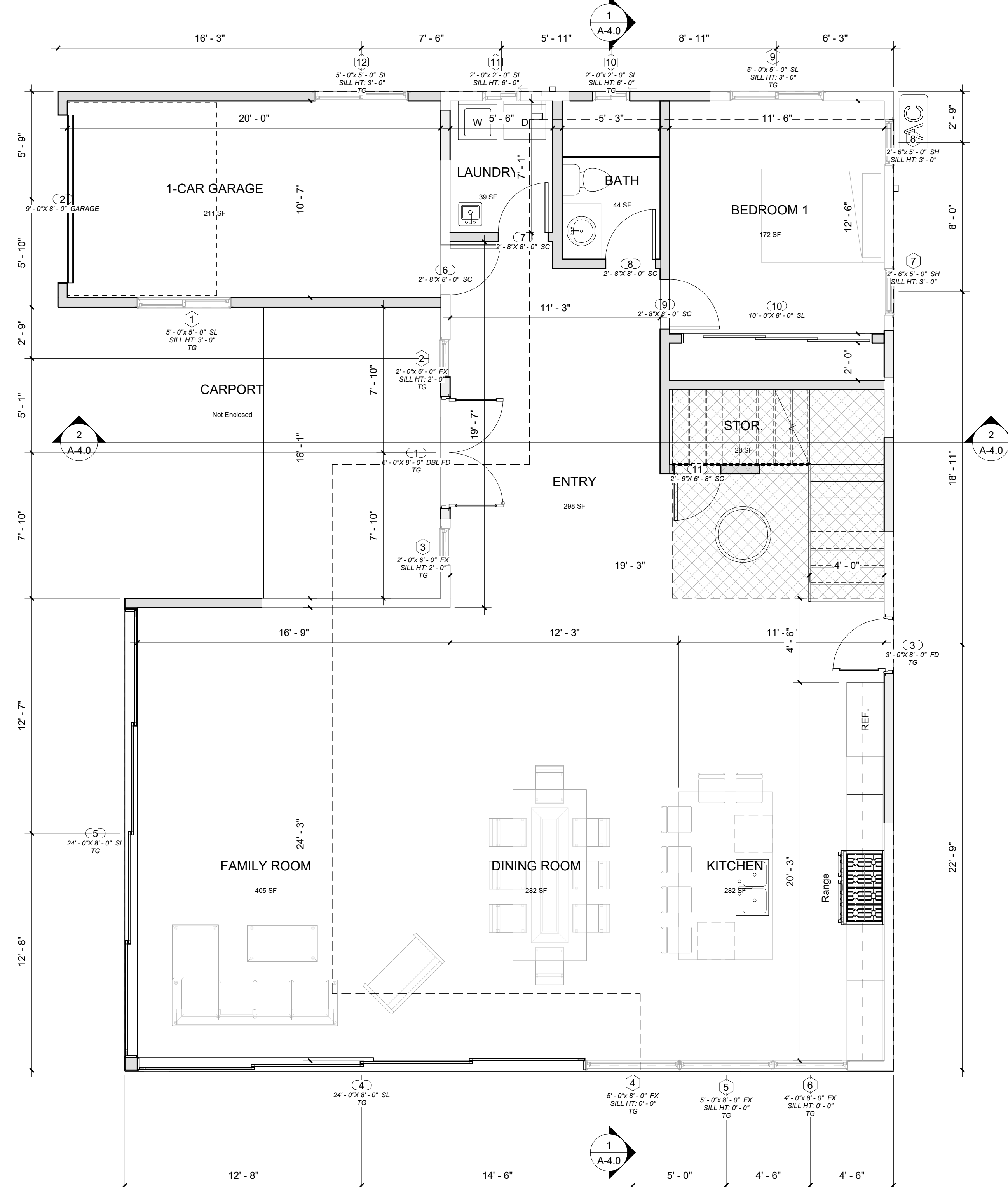
SITE PLAN

SHEET NO.
A-1.0

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1 EXISTING 1ST FLOOR PLAN
1/4" = 1'-0"



2 PROPOSED 1ST FLOOR PLAN
1/4" = 1'-0"

WALL LEGEND

- (E) WALL TO REMAIN
- (N) WALL
- (E) WALL TO BE DEMOLISHED

IN CASE THE NORTH BLOCK WALL HAS CRACKS AFTER REMOVING THE WINDOWS, CONTRACTOR SHALL REPLACE THE ENTIRE WALL WITH NEW WOOD FRAMING

WINDOW SCHEDULE

#	WINDOW TYPE	WD.	HT.	SILL HT.	NOTES
1	SLIDING1	5'-0"	5'-0"	3'-0"	TG
2	FIXED1	2'-0"	6'-0"	2'-0"	TG
3	FIXED1	2'-0"	6'-0"	2'-0"	TG
4	FIXED1	5'-0"	8'-0"	0'-0"	TG
5	FIXED1	5'-0"	8'-0"	0'-0"	TG
6	FIXED1	4'-0"	8'-0"	0'-0"	TG
7	SINGLE HUNG	2'-6"	5'-0"	3'-0"	
8	SINGLE HUNG	2'-6"	5'-0"	3'-0"	
9	SLIDING1	5'-0"	5'-0"	3'-0"	TG
10	SLIDING1	2'-0"	2'-0"	6'-0"	TG
11	SLIDING1	2'-0"	2'-0"	6'-0"	TG
12	SLIDING1	5'-0"	5'-0"	3'-0"	TG
13	FIXED1	5'-0"	4'-6"	3'-0"	
14	FIXED1	5'-0"	4'-6"	3'-0"	
15	SINGLE HUNG	2'-6"	4'-6"	3'-0"	TG
16	SINGLE HUNG	2'-6"	4'-6"	3'-0"	TG
17	FIXED1	5'-0"	4'-6"	3'-0"	TG
18	SINGLE HUNG	2'-6"	4'-6"	3'-0"	TG
19	SLIDING1	2'-0"	2'-0"	5'-6"	TG
20	SLIDING1	2'-0"	2'-0"	5'-6"	TG
21	FIXED1	5'-0"	5'-0"	2'-6"	
22	SLIDING1	2'-0"	2'-0"	5'-6"	TG
23	SINGLE HUNG	2'-6"	4'-6"	3'-0"	
24	SLIDING1	5'-0"	5'-0"	3'-0"	TG
25	SINGLE HUNG	2'-0"	4'-0"	4'-0"	

DOOR SCHEDULE

#	DOOR TYPE	WD.	HT.	NOTES
1	DOUBLE FRENCH	6'-0"	8'-0"	TG
2	2-PANEL GARAGE2	9'-0"	8'-0"	
3	FRENCH (SINGL)	3'-0"	8'-0"	TG
4	STACK SLIDING	24'-0"	8'-0"	TG
5	STACK SLIDING	24'-0"	8'-0"	TG
6	SINGLE FLUSH	2'-8"	8'-0"	
7	SINGLE FLUSH	2'-8"	8'-0"	
8	SINGLE FLUSH	2'-8"	8'-0"	
9	SINGLE FLUSH	2'-8"	8'-0"	
10	SLIDING 3 PANEL	10'-0"	8'-0"	
11	SINGLE FLUSH	2'-6"	6'-8"	
12	4-PANEL SLIDING1	12'-0"	7'-6"	TG
13	FRENCH (SINGL)	3'-0"	7'-6"	TG
14	STACK SLIDING	14'-6"	7'-6"	TG
15	STACK SLIDING	14'-6"	7'-6"	TG
16	SINGLE FLUSH	2'-8"	8'-0"	
17	SINGLE FLUSH	2'-8"	8'-0"	
18	SINGLE FLUSH	2'-6"	6'-8"	
19	SLIDING-2 PANEL	8'-0"	8'-0"	TG
20	SLIDING 3 PANEL	9'-0"	8'-0"	
21	SINGLE FLUSH	2'-6"	8'-0"	
22	SINGLE FLUSH	2'-8"	8'-0"	
23	SINGLE FLUSH	2'-8"	8'-0"	
24	SINGLE FLUSH	2'-8"	8'-0"	
26	FRENCH (SINGL)	3'-0"	8'-0"	
27	SINGLE FLUSH	2'-6"	8'-0"	

ABBREVIATIONS FOR WINDOWS & DOORS

- AW AWNING
- CLST CLOSET
- CS CASEMENT
- DA DOUBLE ACTING DOOR
- DBL DOUBLE
- FD FRENCH DOOR
- HFRD HALF ROUND
- OBSC OBTAINED
- SC SOLID CORE
- SH SINGLE HUNG
- SL SLIDER
- TG TEMPERED GLASS
- TRPL TRIPLE

REMAIN:	DEMOLISHED:
27' -2"	11' -8"
10' -1"	6' -3"
24' -3"	11' -2"
52' -5"	14' -2"
16' -0"	
129' -11"	43' -3"

EXISTING EXTERIOR WALL & FOUNDATION CALCULATION

(E) EXTERIOR WALL & FOUNDATION:	173'-2"
(E) TO REMAIN:	129'-11"
(E) TO BE DEMOLISHED:	43'-3"
(E) TO REMAIN (%):	75 %
(E) TO BE DEMOLISHED (%):	25 %

Eric Tsang Architects

ERIC CHI WANG TSANG, AIA
440 E HUNTINGTON DR., # 356
ARCADIA, CA 91006
909.589.3737
MAIL@ERIC-DESIGN.COM



No.	DESCRIPTION	DATE

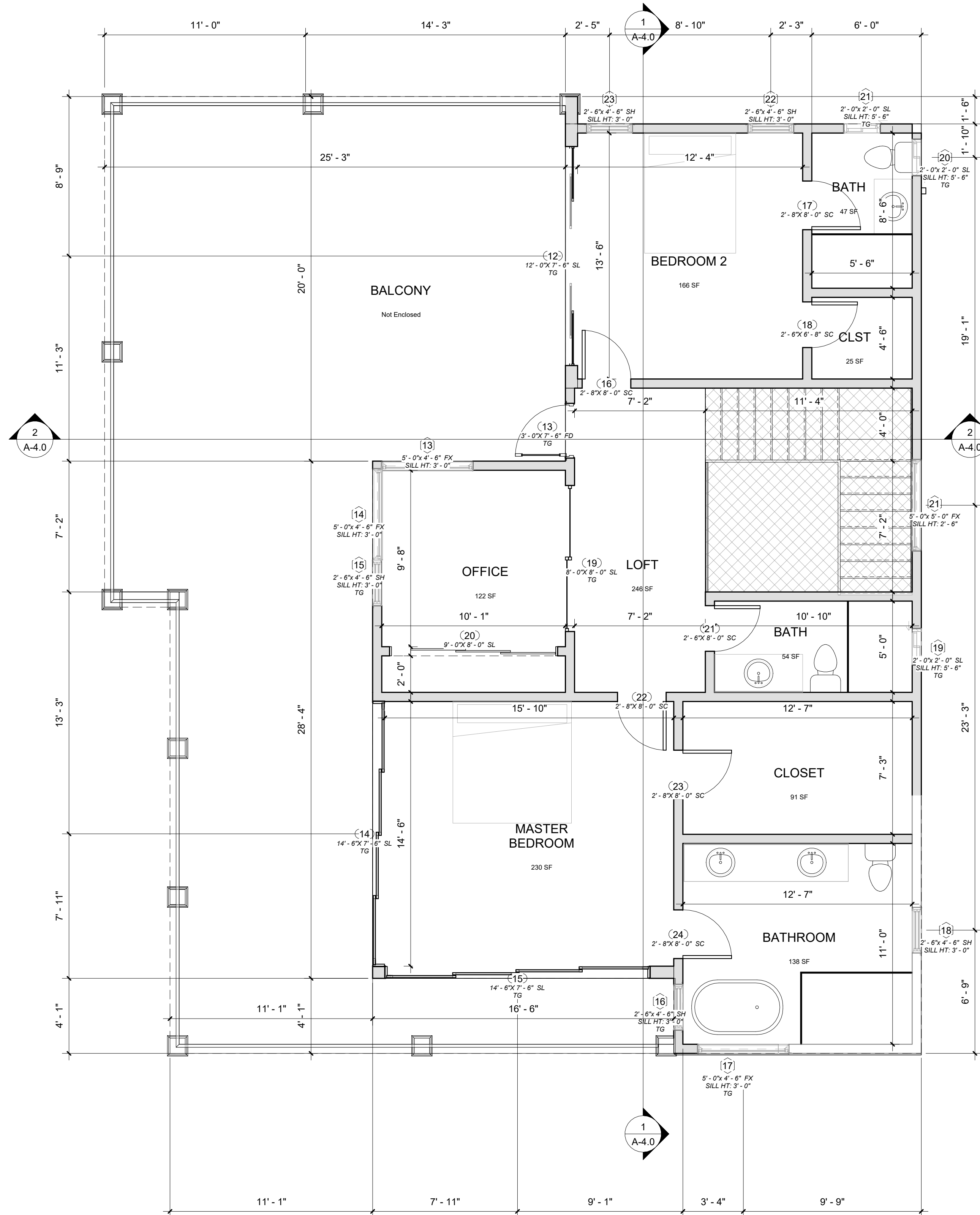
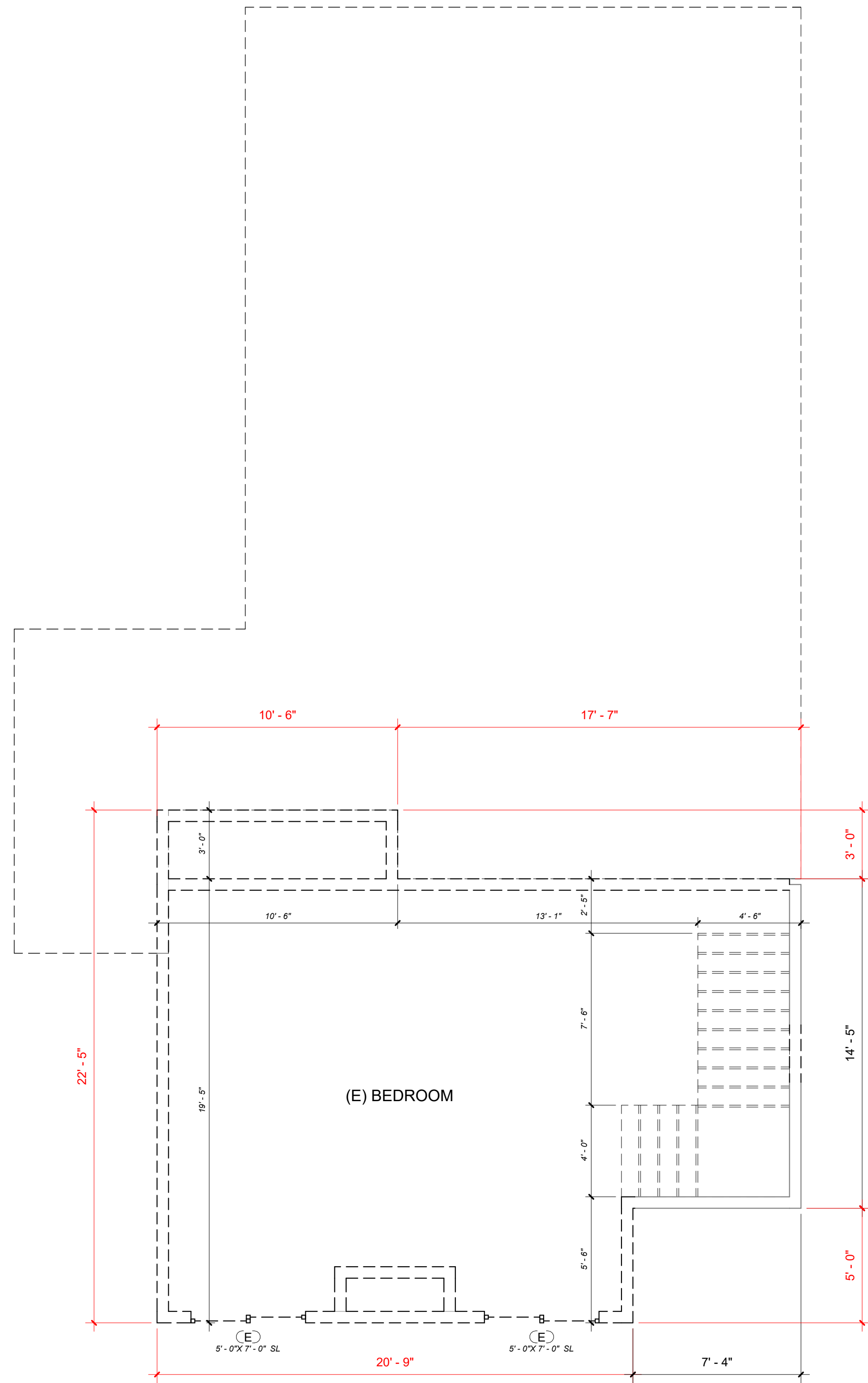
PROJECT OWNER:
PARADACE.COM

HANSCOM RESIDENCE

2089 HANSCOM DR.
SOUTH PASADENA, CA 91030

1ST FLOOR PLAN

SHEET NO.
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WINDOW SCHEDULE

#	WINDOW TYPE	WD.	HT.	SILL HT.	NOTES
1	SLIDING1	5'-0"	5'-0"	3'-0"	TG
2	FIXED1	2'-0"	6'-0"	2'-0"	TG
3	FIXED1	2'-0"	6'-0"	2'-0"	TG
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25	SINGLE HUNG	2'-0"	4'-0"	4'-0"	TG

DOOR SCHEDULE

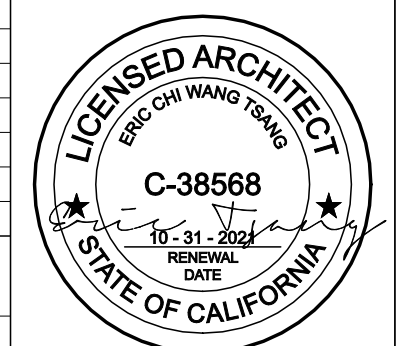
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- OBSC OBSCURED
- SC SOLID CORE
- SH SINGLE HUNG
- SL SLIDER
- TG TEMPERED GLASS
- TRPL TRIPLE

Eric Tsang Architects

ERIC CHI WANG TSANG, AIA
440 E. HUNTINGTON DR., # 356
ARCADIA, CA 91006
909.549.3737
MAIL@ERIC-DESIGN.COM



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HANSCOM RESIDENCE
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REMAIN:	DEMOLISHED:
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EXISTING EXTERIOR WALL & FOUNDATION CALCULATION

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(E) TO BE DEMOLISHED:	43'-3"
(E) TO REMAIN (%):	75 %
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WALL LEGEND

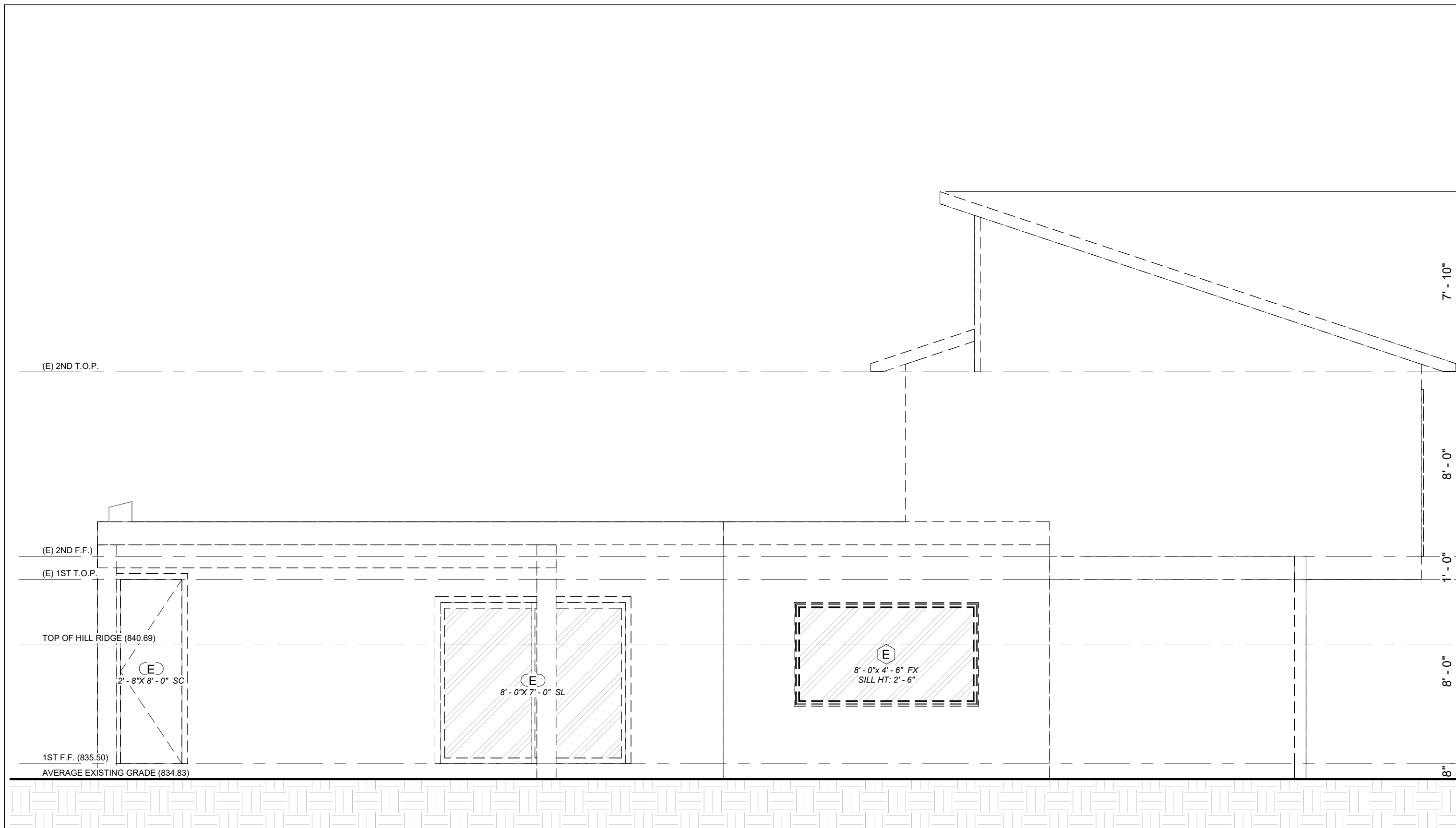
	(E) WALL TO REMAIN
	(N) WALL
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IN CASE THE NORTH BLOCK WALL HAS CRACKS AFTER REMOVING THE WINDOWS, CONTRACTOR SHALL REPLACE THE ENTIRE WALL WITH NEW WOOD FRAMING

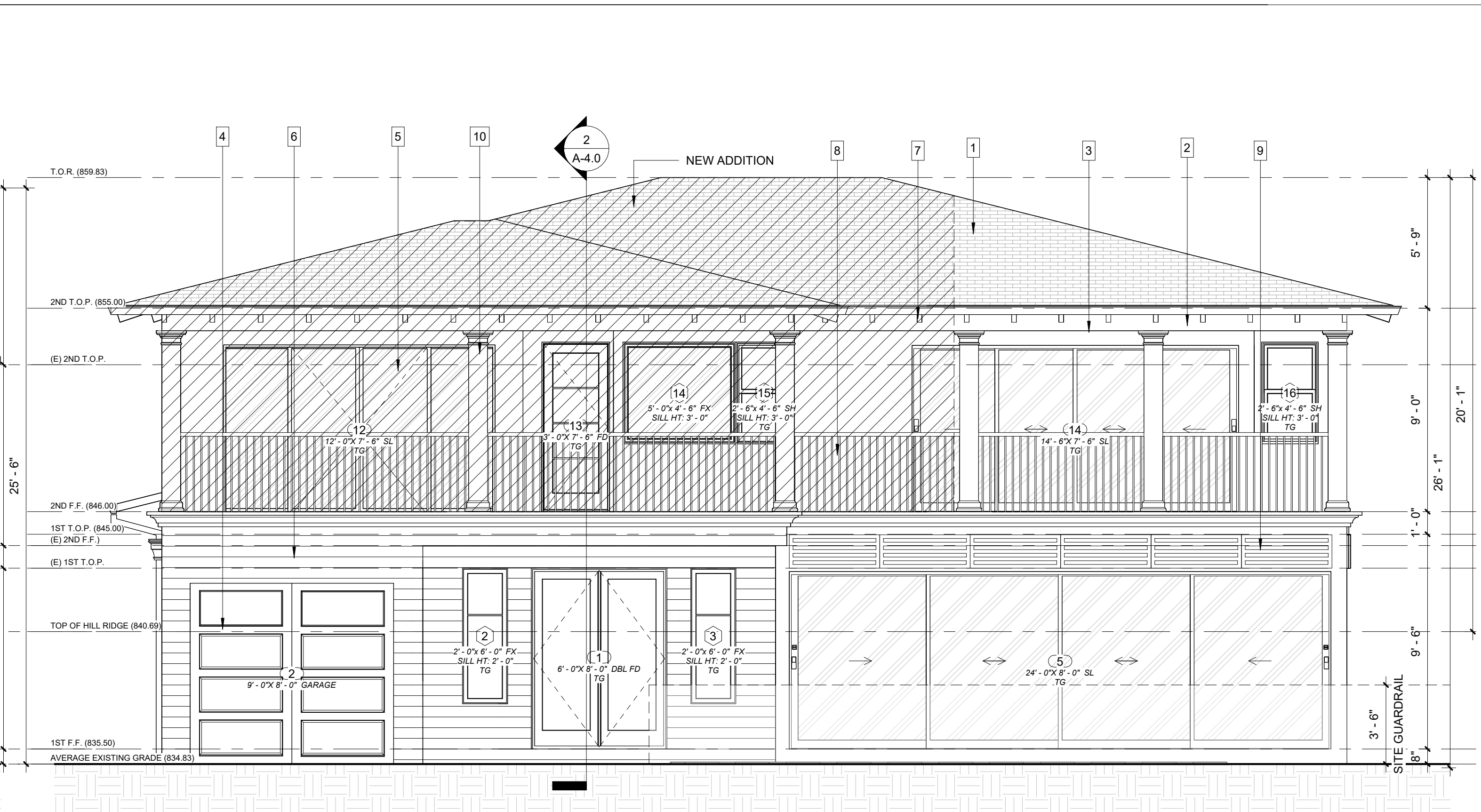
2ND FLOOR PLAN

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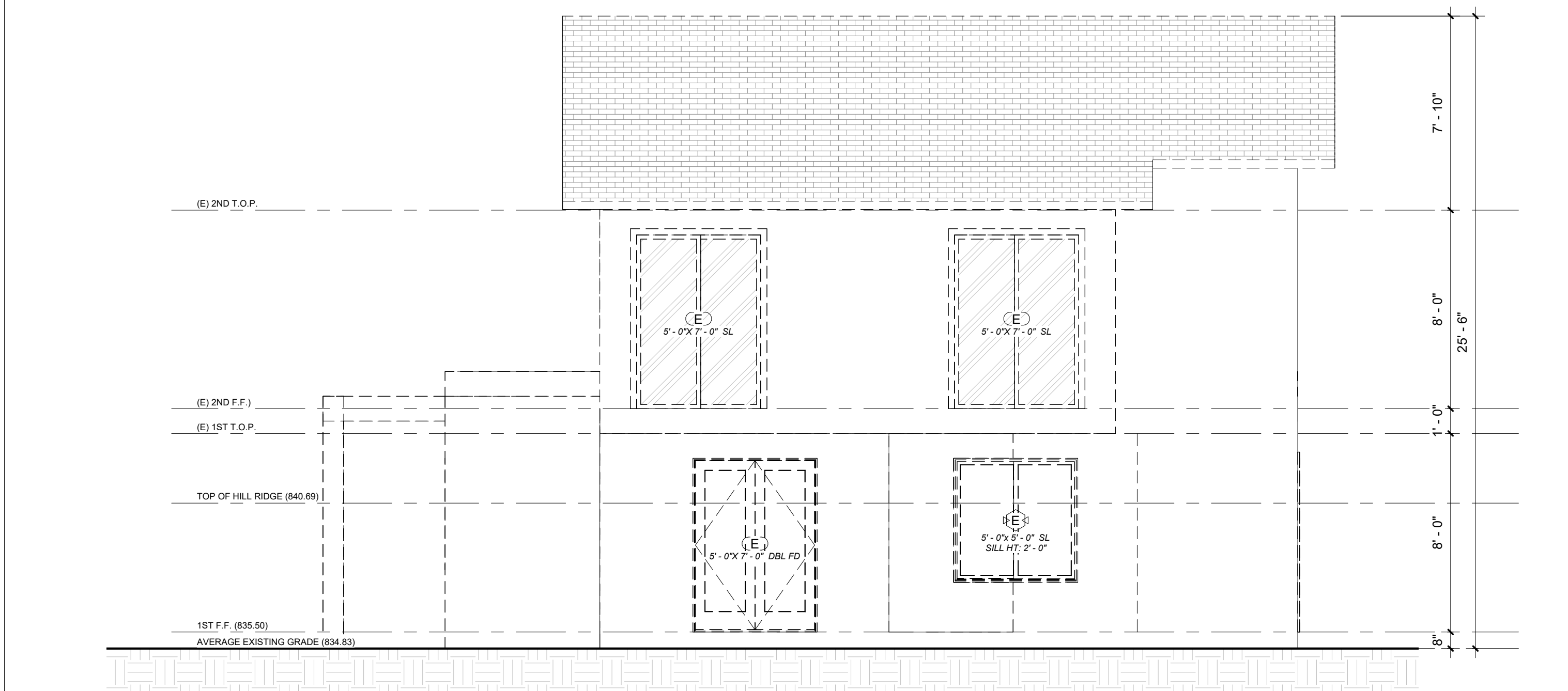
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1 EXISTING WEST ELEVATION
1/4" = 1'-0"



2 PROPOSED WEST ELEVATION
1/4" = 1'-0"



3 EXISTING SOUTH ELEVATION
1/4" = 1'-0"

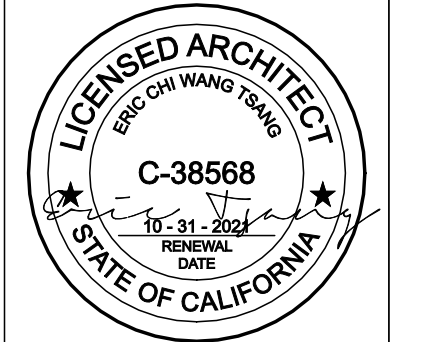


4 PROPOSED SOUTH ELEVATION
1/4" = 1'-0"

- | | | |
|---|--|--|
| 1 CONCRETE ROOFING:
EAGLE ROOFING
BEL-AIR 4697 SLATE RANGE | 5 WOODCLAD DOORS & WINDOWS:
LINCOLN RECESSED SDL
SANTA FE | 9 DECORATIVE LOUVER VENT:
CUSTOM LUMBER WORK
STAINED CEDAR |
| 2 EXTERIOR WALL STUCCO:
OMEGA STUCCO
242 MISTSMOOTH FINISH | 6 FIBER CEMENT SIDING:
JAMES HARDIE LAP SIDING
SMOOTH ARTIC WHITE | 10 WOOD COLUMN:
EXTIRA PANEL
DUNN EDWARDS SWISS COFFEE |
| 3 WOOD SIDING:
RESAWN TIMBER
ABODO TEAK 6" | 7 EXPOSED RAFTER:
WOOD BY LUMBERYARD
SEMI TRANSPARENT STAINED TEAK | |
| 4 GARAGE DOOR -
C.H.I. OVERLAY DOOR
FULLVIEW ALUMINIUM BRONZE | 8 METAL RAILING:
VERTICAL 1/2" SQ STEEL BAR
BLACK 4" GAP | |

Eric Tsang Architects

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909.569.3737
MAIL@ERIC-DESIGN.COM



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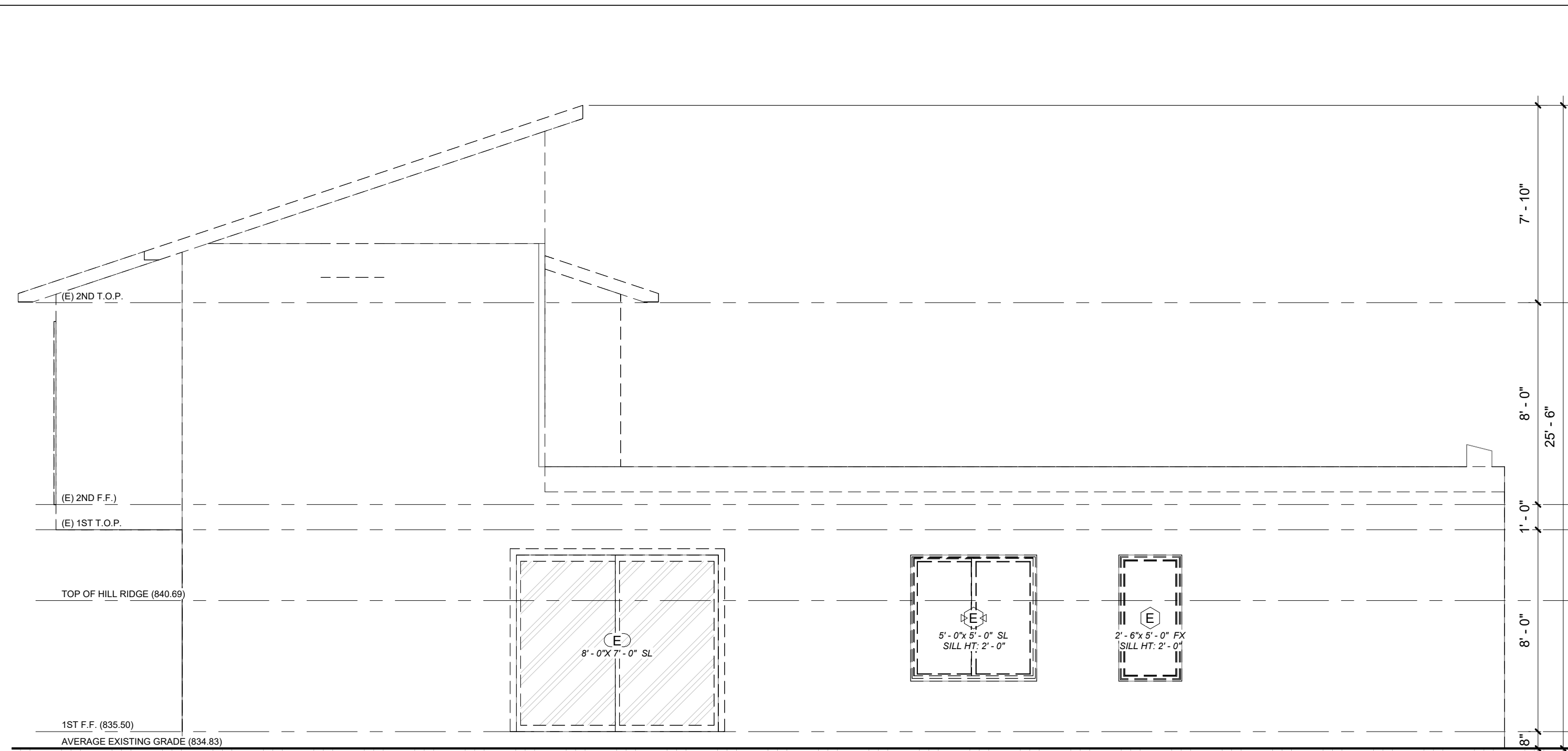
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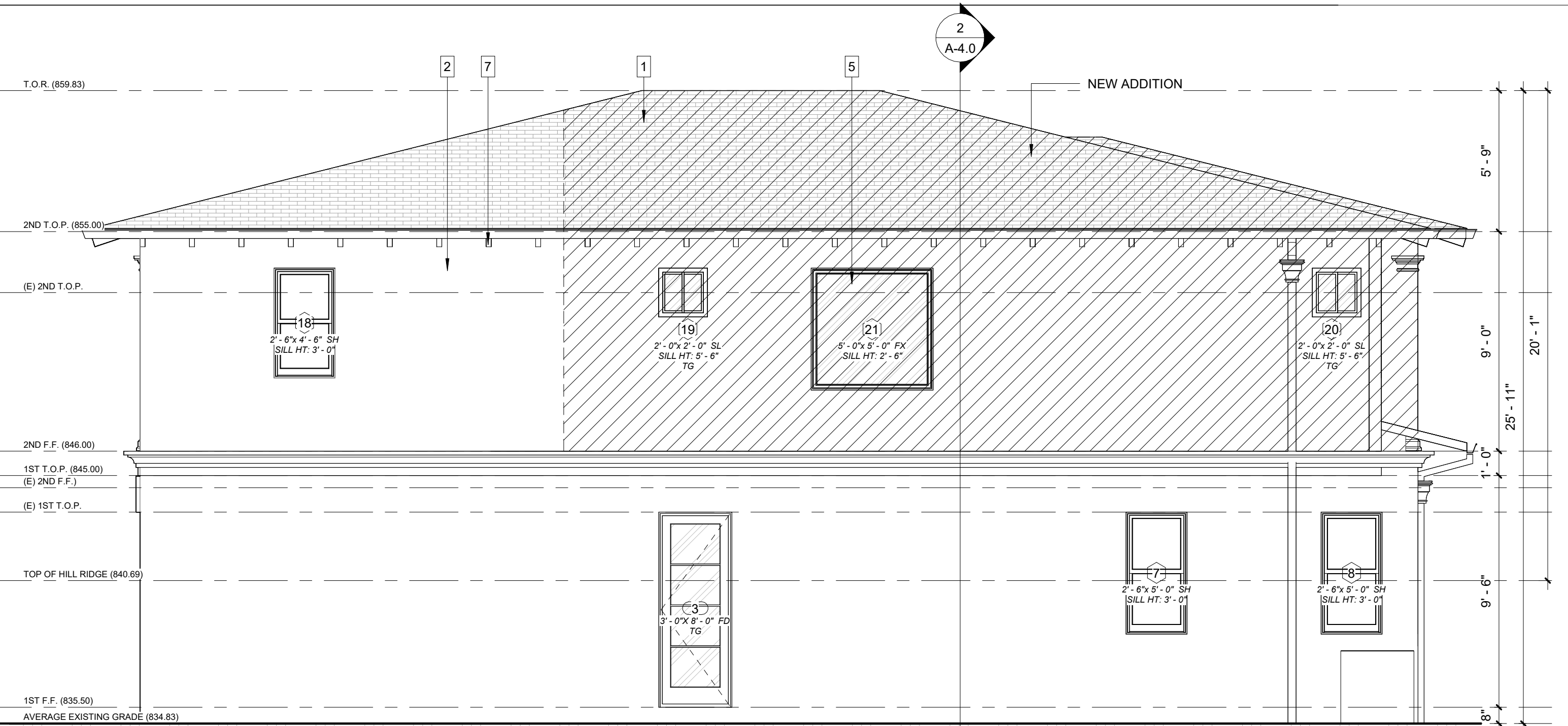
ELEVATION

SHEET NO.

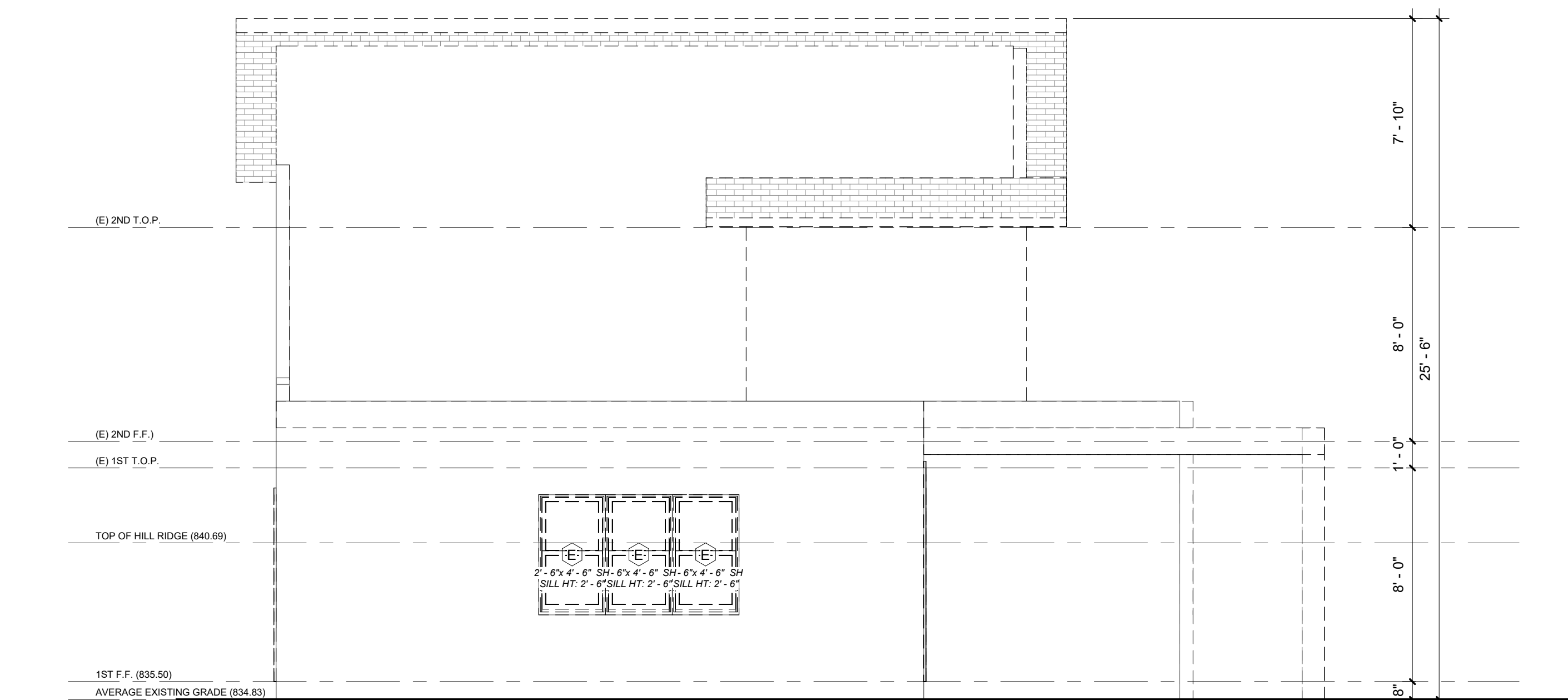
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1 EXISTING EAST ELEVATION
1/4" = 1'-0"



2 PROPOSED EAST ELEVATION
1/4" = 1'-0"



3 EXISTING NORTH ELEVATION
1/4" = 1'-0"

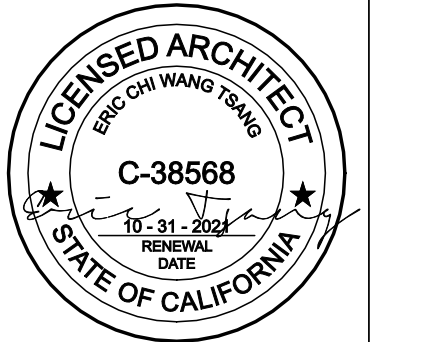


4 PROPOSED NORTH ELEVATION
1/4" = 1'-0"

- | | | |
|---|--|--|
| 1 CONCRETE ROOFING:
EAGLE ROOFING
BEL-AIR 4697 SLATE RANGE | 5 WOODCLAD DOORS & WINDOWS:
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SANTA FE | 9 DECORATIVE LOUVER VENT:
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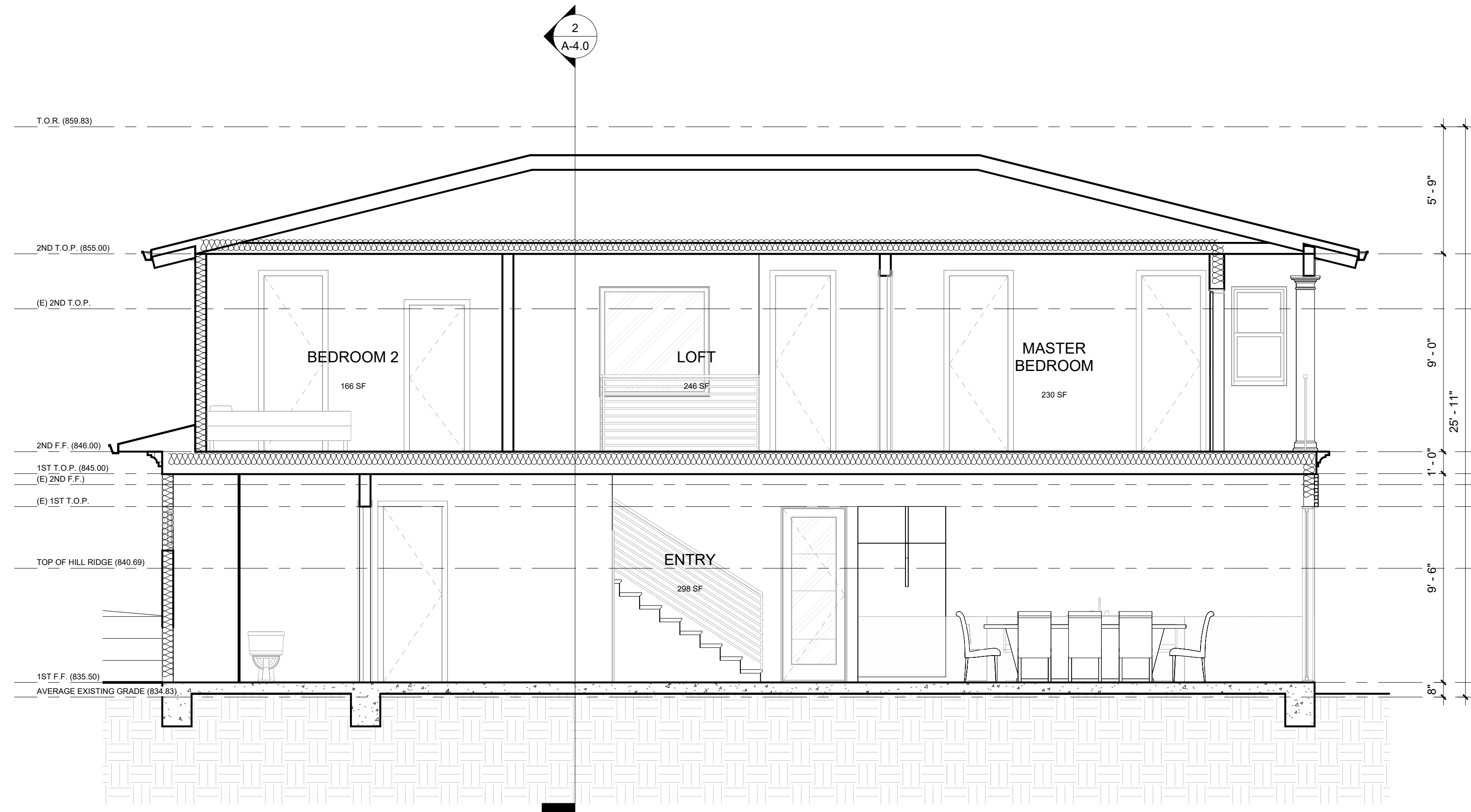
HANSCOM RESIDENCE
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ELEVATION

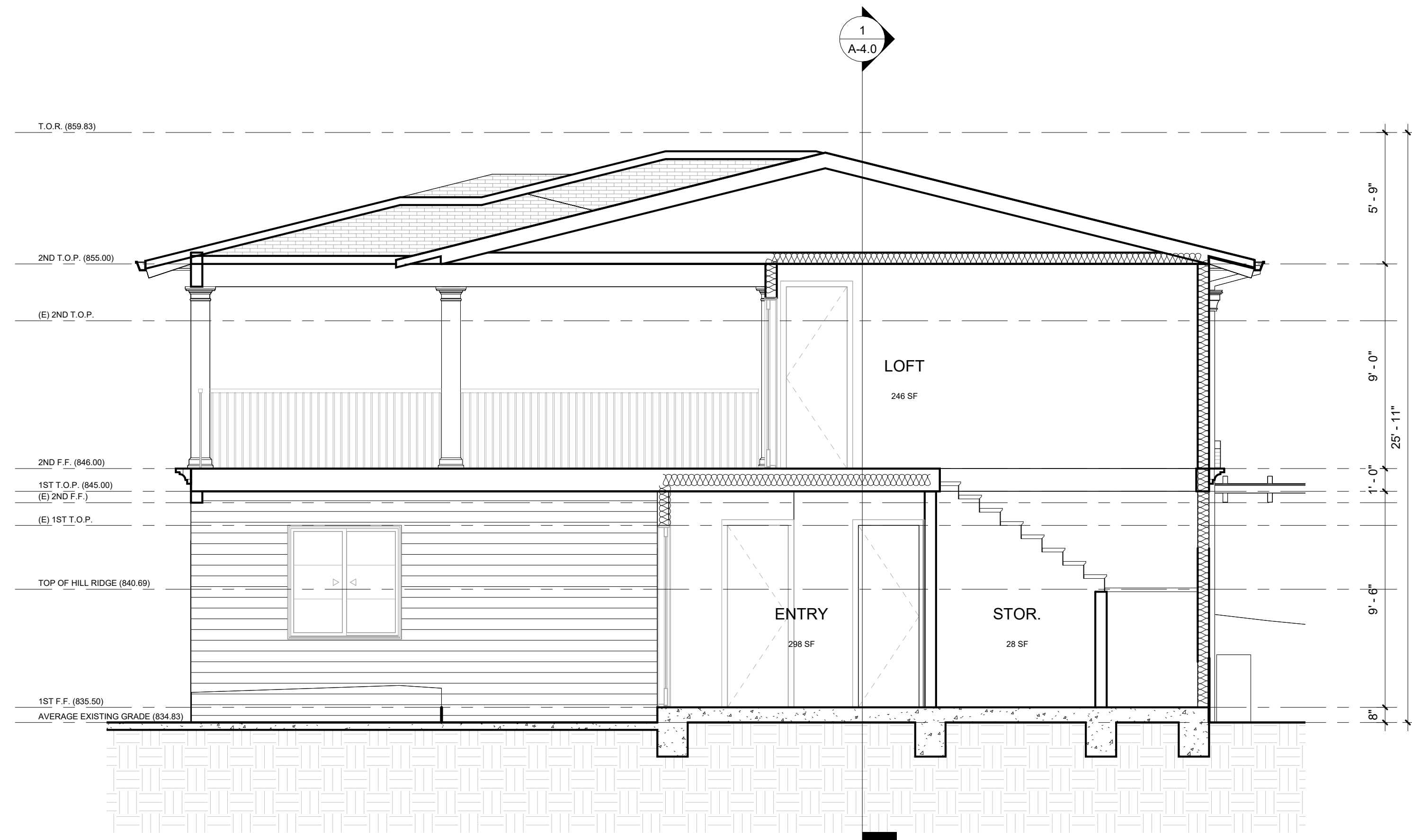
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1 CROSS SECTION
1/4" = 1'-0"



2 LONGITUDINAL SECTION
1/4" = 1'-0"

Eric Tsang Architects

ERIC CHI WANG TSANG, AIA
440 E. HUNTINGTON DR., # 354,
ARCADIA, CA 91006
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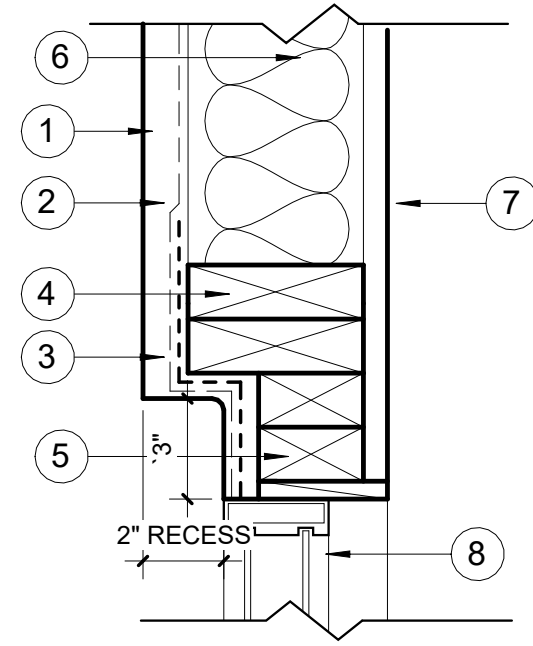
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SECTION

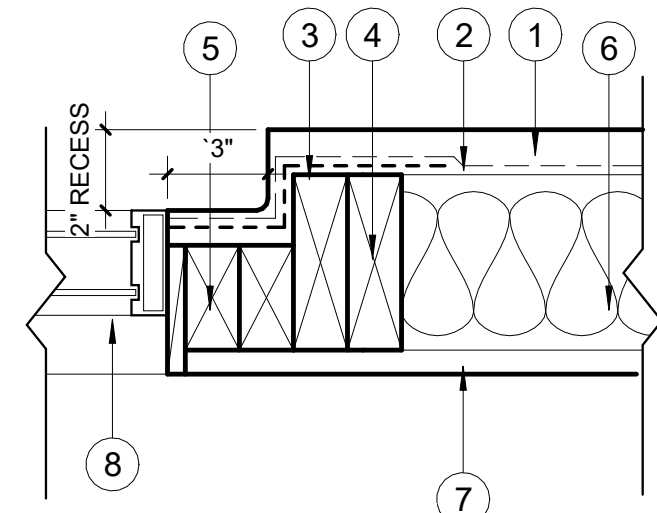
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1. EXTERIOR FINISH PER ELEVATIONS
2. 2 LAYERS GRADE 'D' PAPER
3. 12" WIDE 'MOISTOP' FLASHING PAPER
4. FRAMING PER STR PLAN
5. 2X FURRING
6. INSULATION PER T-24
7. INTERIOR FINISH
8. WINDOW PER WINDOW SCHEDULE



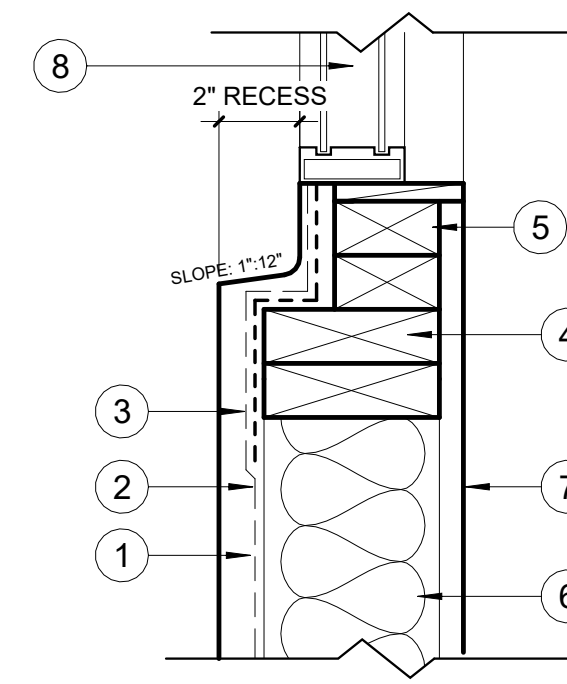
2 RECESS WINDOW HEAD DETAIL
N.T.S.

1. EXTERIOR FINISH PER ELEVATIONS
2. 2 LAYERS GRADE 'D' PAPER
3. 12" WIDE 'MOISTOP' FLASHING PAPER
4. FRAMING PER STR PLAN
5. 2-2X4 FURRING
6. INSULATION PER T-24
7. INTERIOR FINISH
8. WINDOW PER WINDOW SCHEDULE

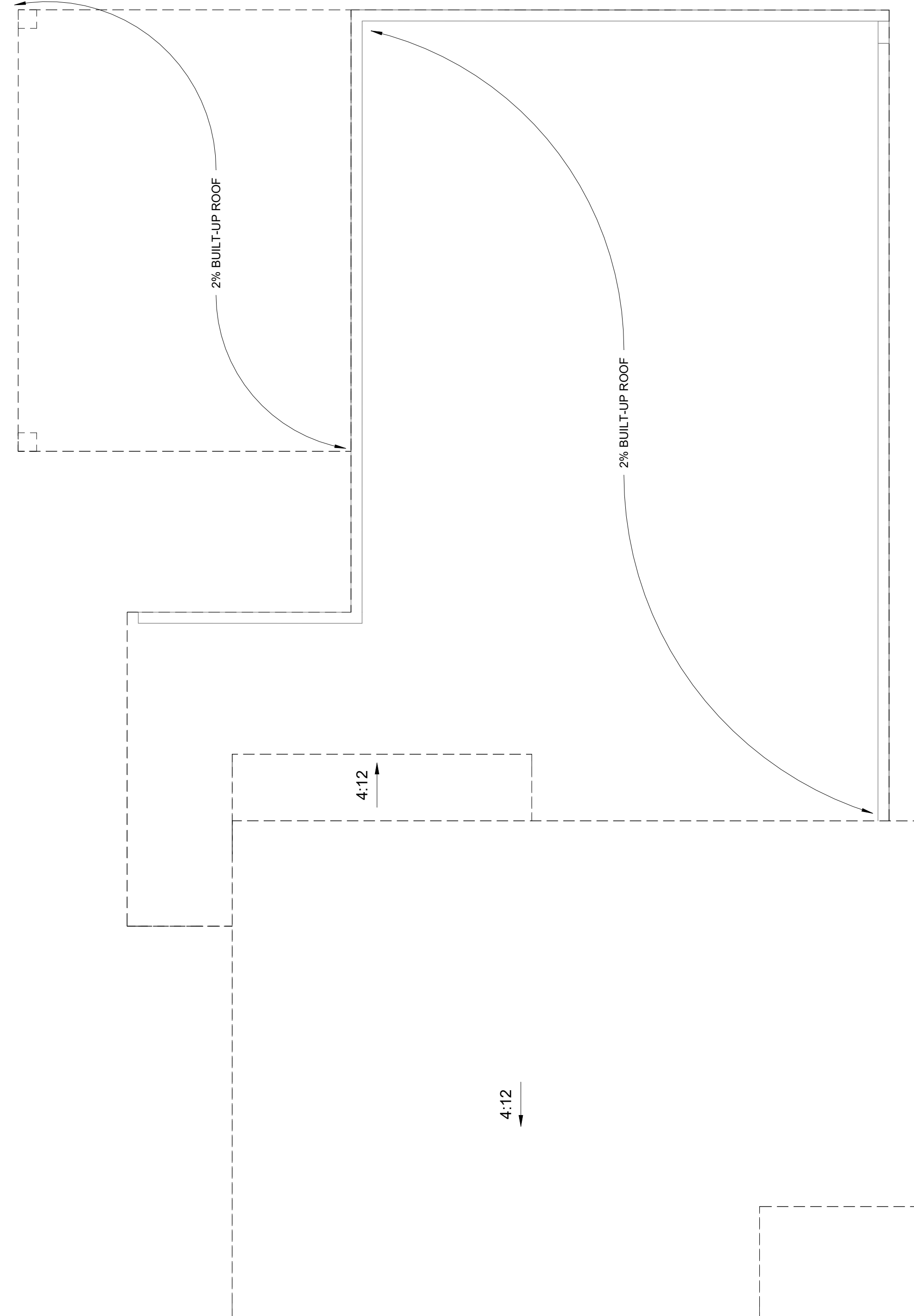


3 RECESS WINDOW JAMB DETAIL
N.T.S.

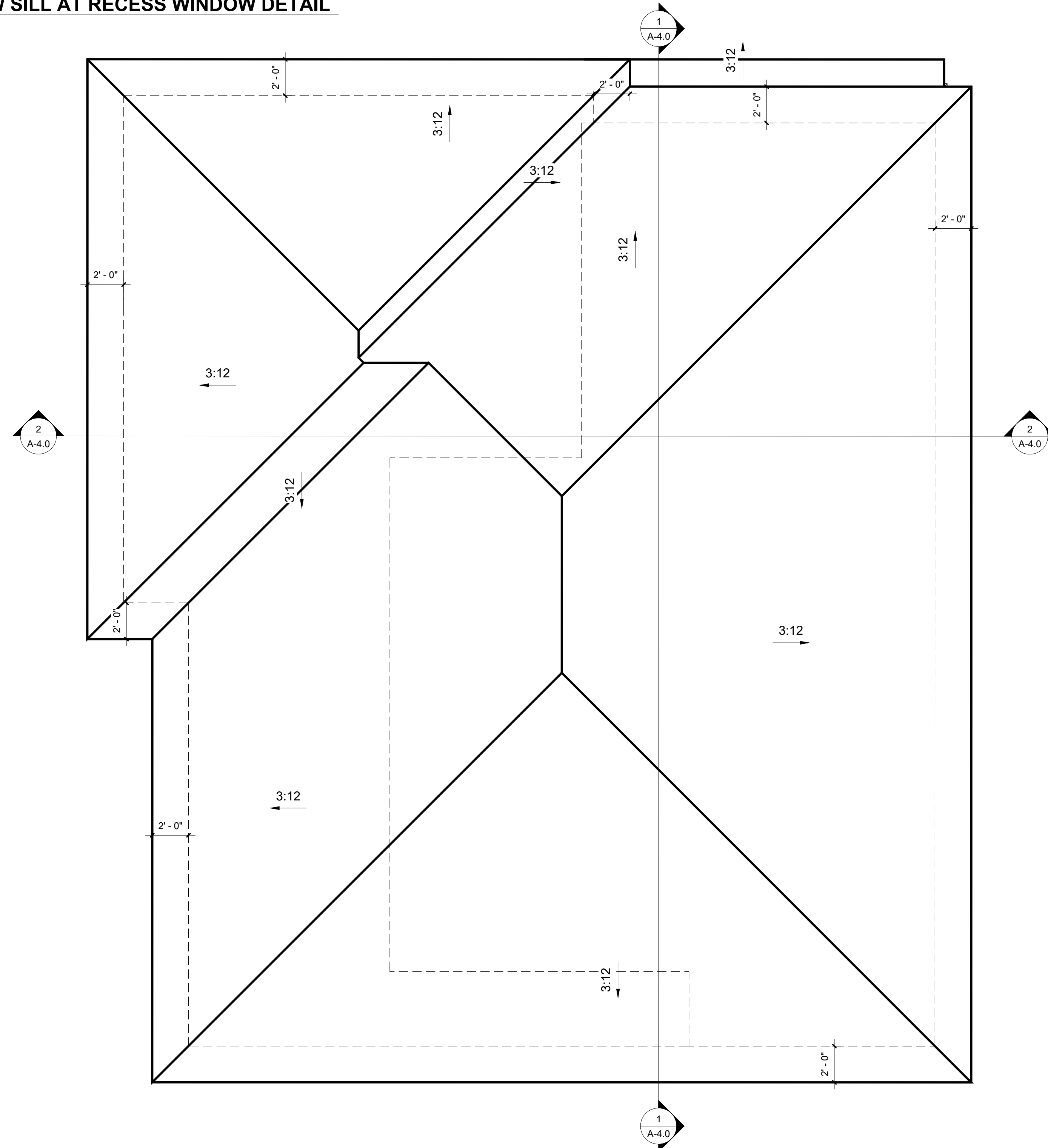
1. EXTERIOR FINISH PER ELEVATIONS
2. 2 LAYERS GRADE 'D' PAPER
3. 12" WIDE 'MOISTOP' FLASHING PAPER
4. FRAMING PER STR PLAN
5. 2X FURRING
6. INSULATION PER T-24
7. INTERIOR FINISH
8. WINDOW PER WINDOW SCHEDULE



4 WINDOW SILL AT RECESS WINDOW DETAIL
N.T.S.



5 EXISTING ROOF PLAN
1/4" = 1'-0"



1 PROPOSED ROOF PLAN
1/4" = 1'-0"

Eric Tsang Architects

ERIC CHI WANG TSANG, AIA
440 E. HUNTINGTON DR., # 354,
ARCADIA, CA 91006
909.569.3737
MAIL@ERIC-DESIGN.COM



No.	DESCRIPTION	DATE

PROJECT OWNER:
PARADACE.COM

HANSCOM RESIDENCE

2089 HANSCOM DR.
SOUTH PASADENA, CA 91030

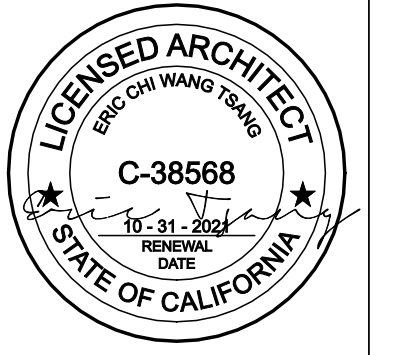
ROOF PLAN AND
TYPICAL DETAILS

SHEET NO.
A-5.0



Eric Tsang Architects

ERIC CHI WANG TSANG, AIA
 440 E. HUNTINGTON DR., # 356,
 ARCADIA, CA 91006
 909.569.3737
 MAIL@ERIC-DESIGN.COM



No.	DESCRIPTION	DATE

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 PARADACE.COM

MATERIAL SELECTION

1 CONCRETE ROOFING

EAGLE ROOFING
 BEL-AIR
 4697 SLATE RANGE



2 EXTERIOR WALL STUCCO

OMEGA STUCCO
 242 MIST
 SMOOTH FINISH



242 MIST ◆ | BASE 2

3 WOOD SIDING

RESAWN TIMBER
 ABODO TEAK 6"



4 GARAGE DOOR

C.H.I. OVERLAY DOOR
 FULLVIEW ALUMINIUM BRONZE



5 WOOD CLAD DOOR & WINDOW

LINCOLN RECESSED SDL
 SANTA FE



6 FIBER CEMENT SIDING

JAMES HARDIE LAP SIDING
 SMOOTH ARTIC WHITE



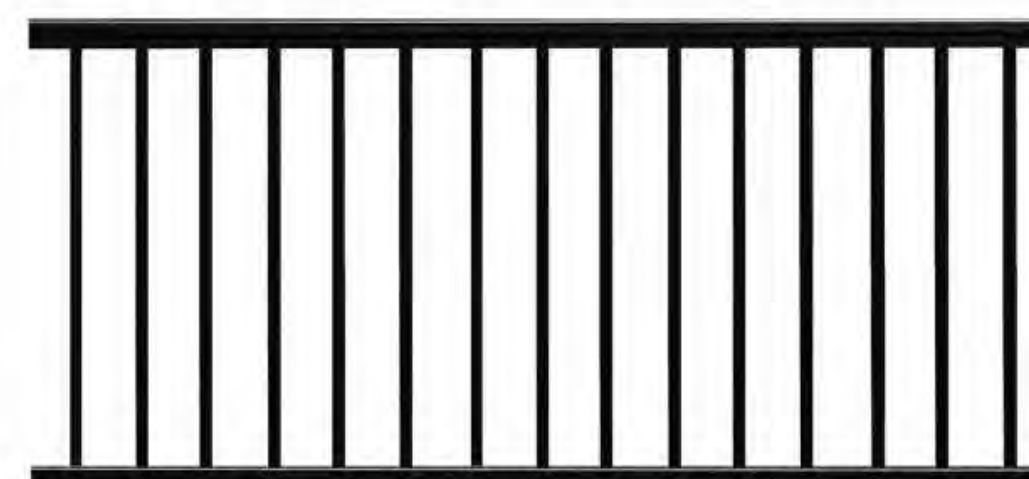
7 EXPOSED RAFTER

WOOD BY LUMBERYARD
 SEMI TRANSPARENT STAINED TEAK



8 METAL RAILING

VERTICAL 1/2" SQ STEEL BAR
 BLACK 4" GAP



9 DECORATIVE LOUVER VENT

CUSTOM LUMBER WORK
 STAINED CEDAR



10 WOOD COLUMN

EXTIRA PANEL
 DUNN EDWARDS SWISS COFFEE



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 SOUTH PASADENA, CA 91030

MATERIAL SELECTION

SHEET NO.

A-6.0